TASCAM

SCHEMATIC DIAGRAM

回路図

Linear PCM Recoder DR-22WL

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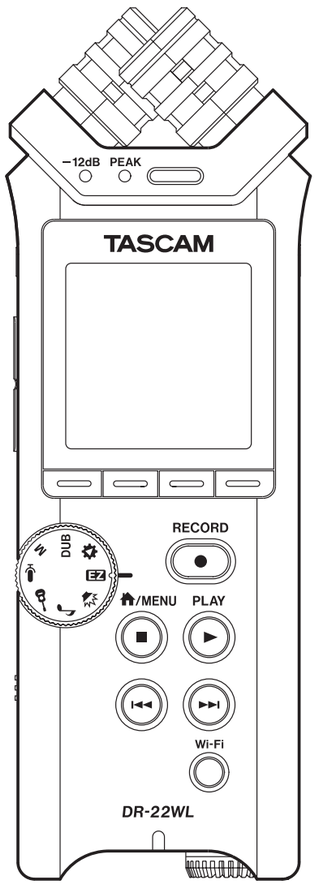
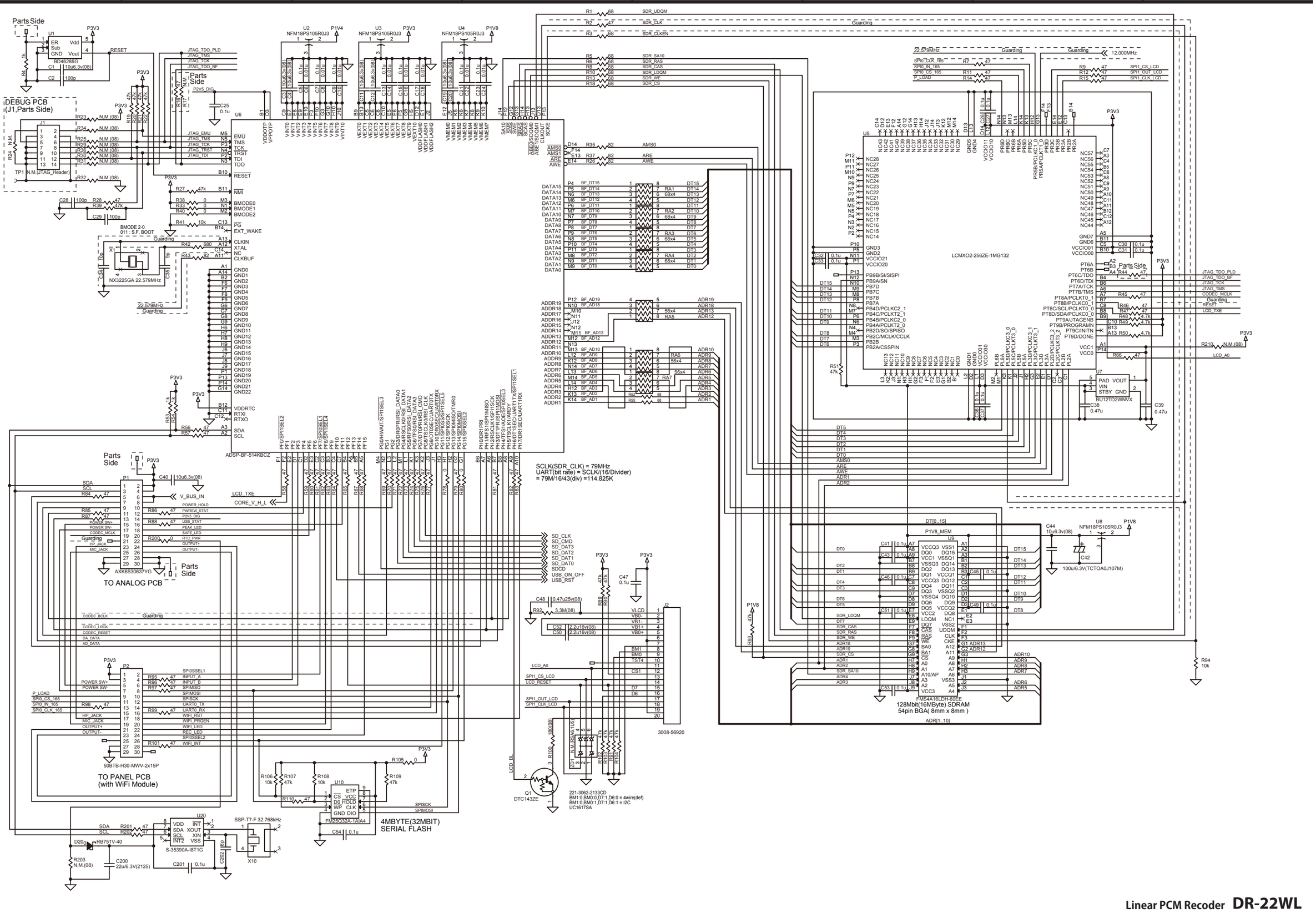
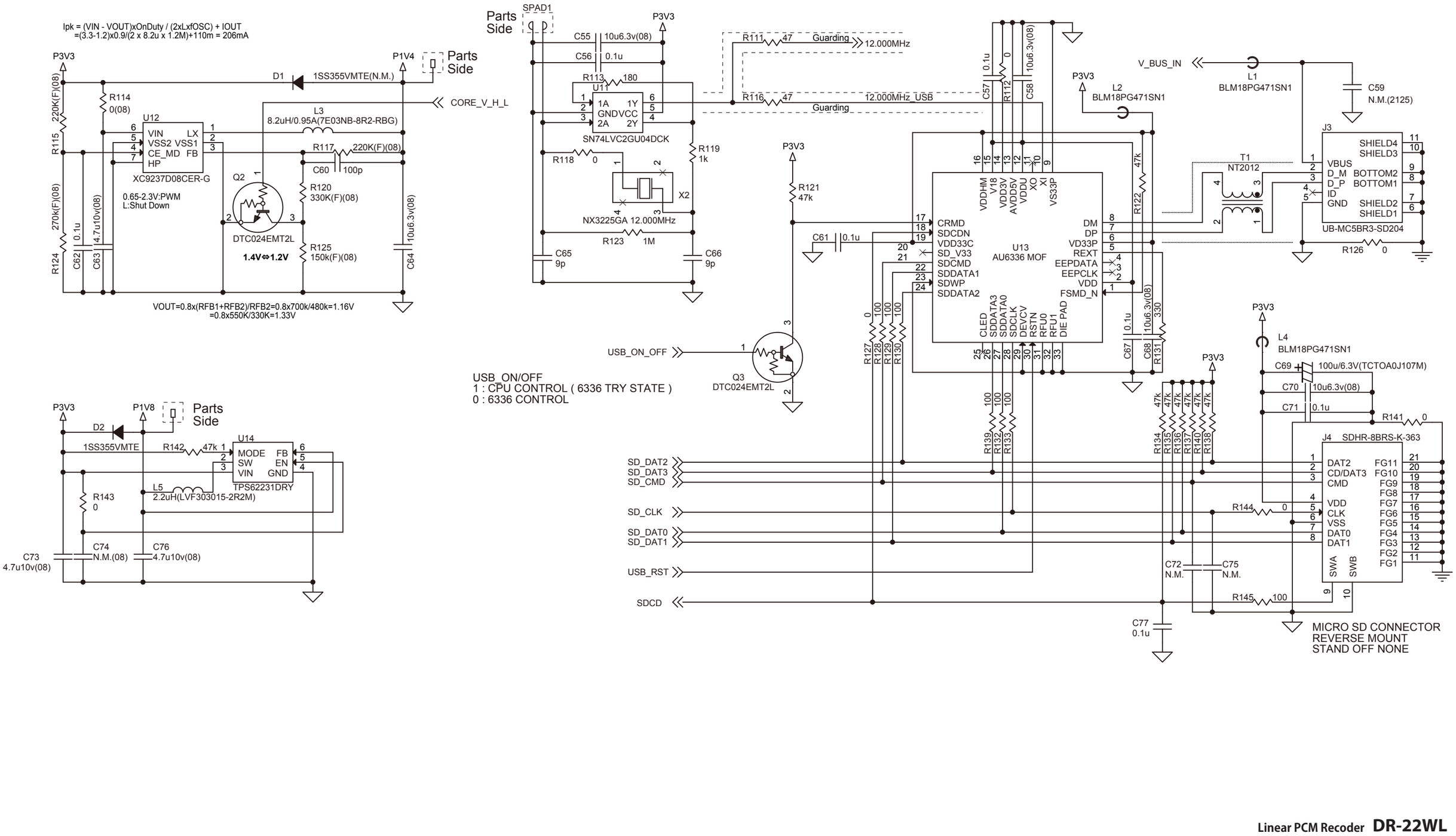
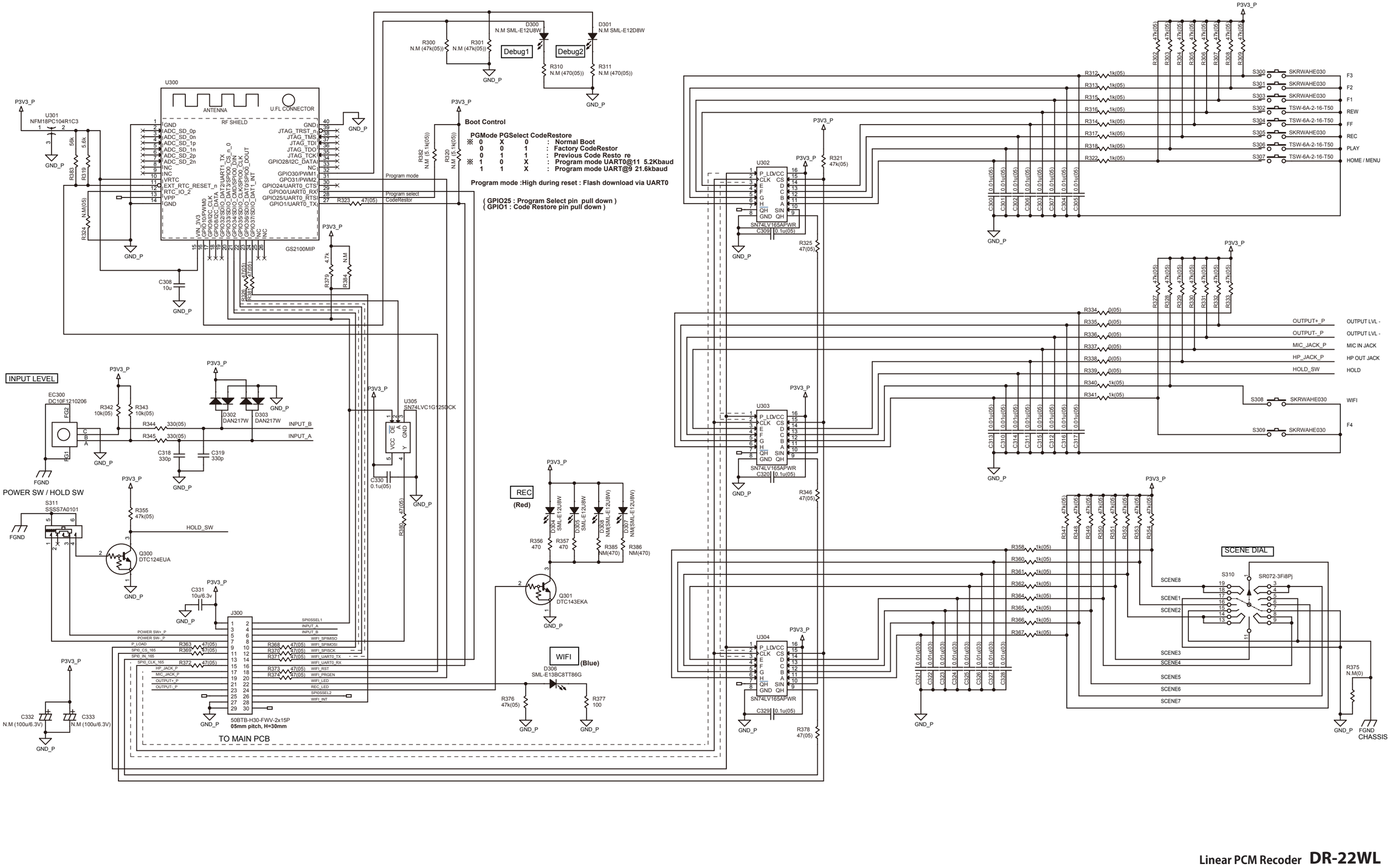
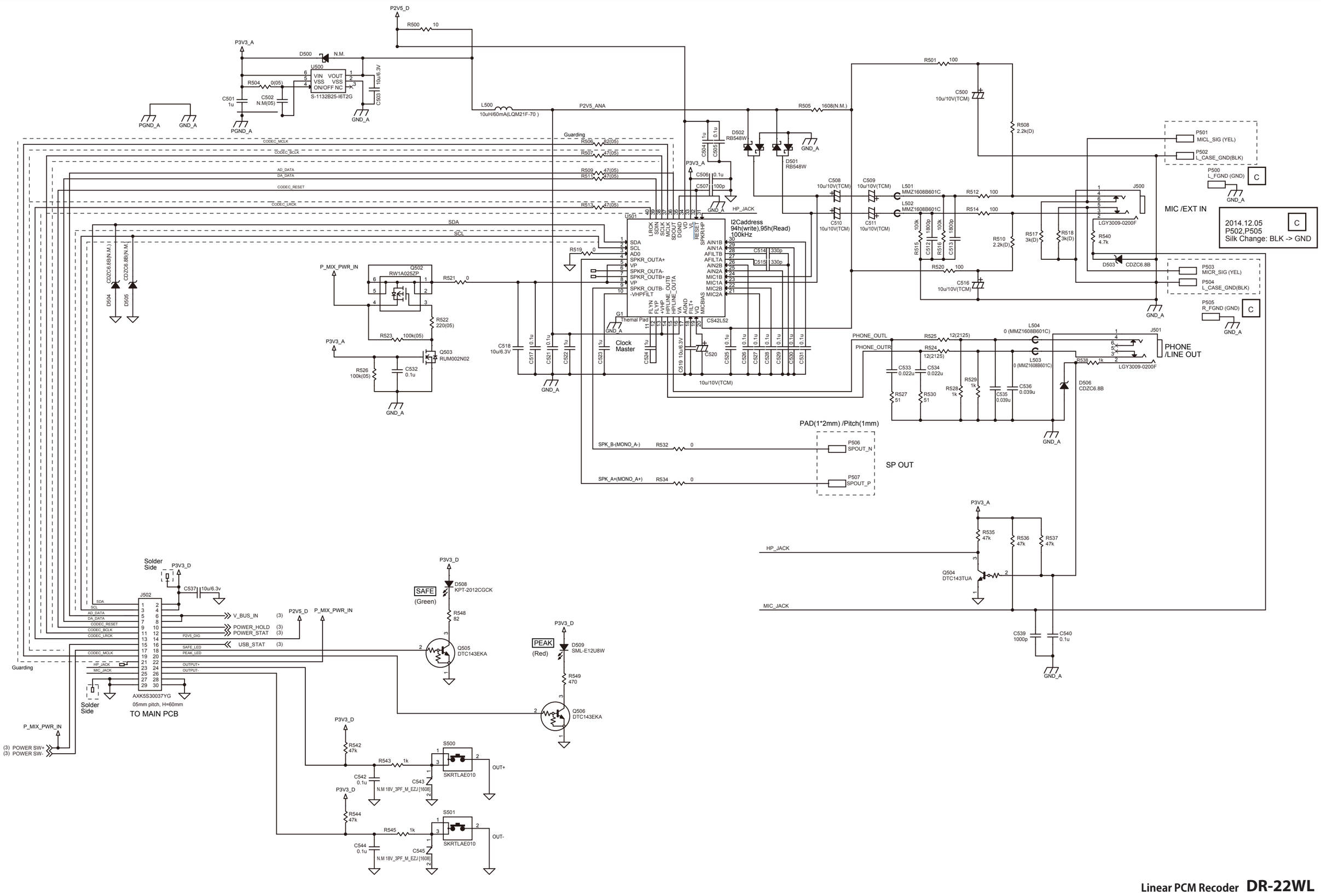


1st Issue, : Mar, 2015

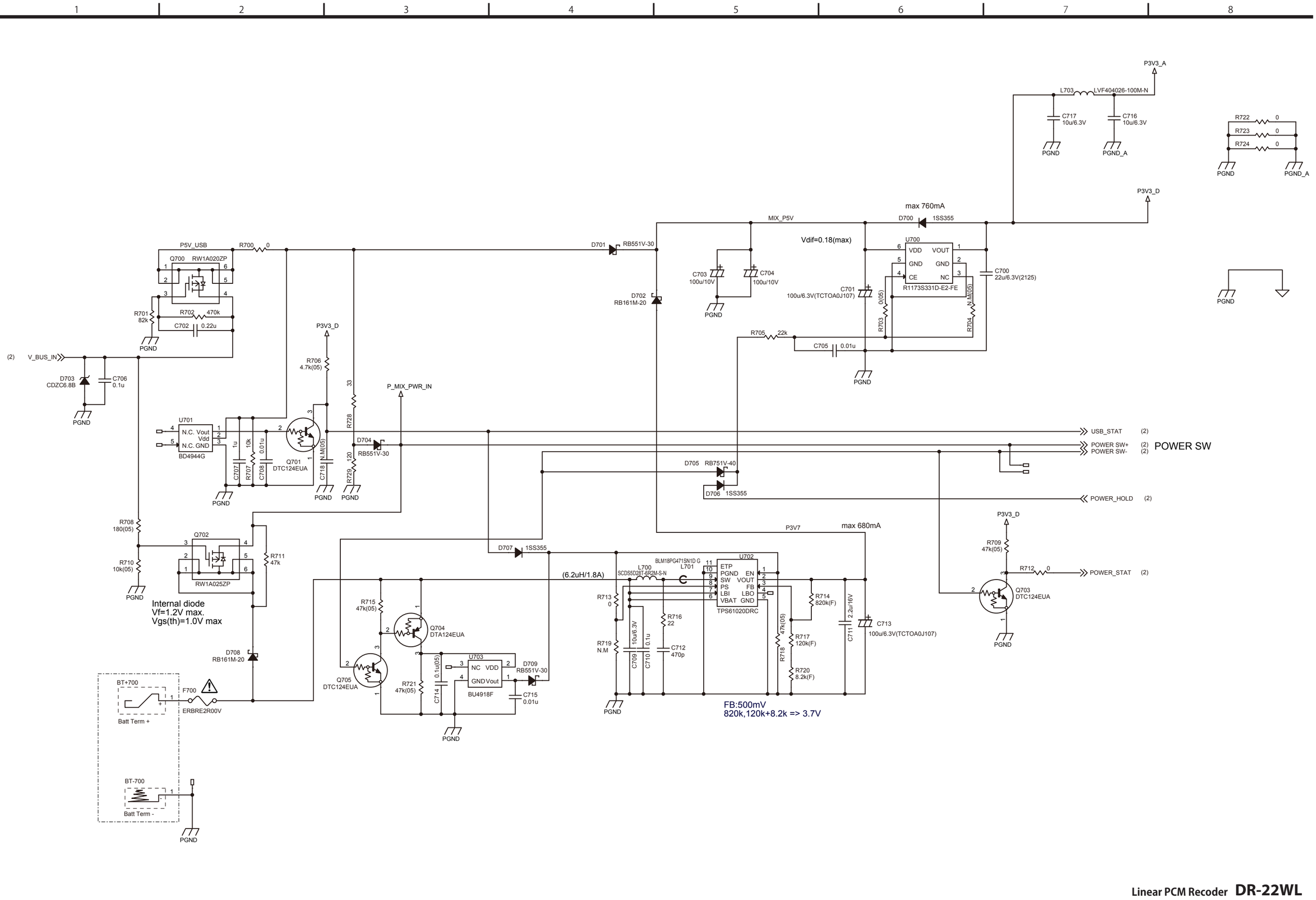

Parts Side
DEBUG PCB (J1,Parts Side)
TP1 N.M.(JTAG_Header)
BMODE 2-0
011 : S.F. BOOT
NX3225GA 22.579MHz
22.579MHz
Guarding
ADSP-BF-514KBCZ
SCLK(SDR_CLK) = 79MHz
UART(bit rate) = SCLK/(16/Divider)
= 79M/16/43(div) =114.825K
4MBYTE(32MBIT)
SERIAL FLASH
SSP-T7-F 32.768kHz
S-35390A-I8T1G
RB751V-40
AXK6S3063/YG
TO ANALOG PCB
50BTB-H30-MWV-2x15P
TO PANEL PCB
(with WiFi Module)
DTC143ZE
221-3062-2133CD
BM1:0,BM0:0,DT:1,D6:0 = 4wire(def)
BM1:0,BM0:1,DT:1,D6:1 = I2C
UC1617SA
3008-56920
LCMXO2-256ZE-1MG132
PMS4A16LDH-60EE
128Mbit(16MByte) SDRAM
54pin BGA(8mm x 8mm)
BU12TD2WNVX
12.000MHz
22.579MHz


Ipk = (VIN - VOUT)xOnDuty / (2xLxfOSC) + IOUT
=(3.3-1.2)x0.9/(2 x 8.2u x 1.2M)+110m = 206mA
P3V3
P1V4
Parts Side
D1
1SS355VMTE(N.M.)
CORE_V_H_L
R114
0(08)
L3
8.2uH/0.95A(7E03NB-8R2-RBG)
U12
VIN LX
VSS2 VSS1
CE_MD FB
HP
XC9237D08CER-G
R115 220K(F)(08)
R117 220K(F)(08)
C60 100p
R120
330K(F)(08)
0.65-2.3V:PWM
L:Shut Down
Q2
DTC024EMT2L
1.4V⇔1.2V
R125
150k(F)(08)
R124 270K(F)(08)
C62 0.1u
C63 4.7u10v(08)
C64 10u6.3v(08)
VOUT=0.8x(RFB1+RFB2)/RFB2=0.8x700k/480k=1.16V
=0.8x550K/330K=1.33V
SPAD1
C55 10u6.3v(08)
C56 0.1u
R113 180
U11
1A 1Y
GND VCC
2A 2Y
SN74LVC2GU04DCK
R118 0
X2
NX3225GA 12.000MHz
R123 1M
C65 9p
C66 9p
R119 1k
R111 47 Guarding 12.000MHz
R116 47 12.000MHz_USB Guarding
USB_ON_OFF
Q3
DTC024EMT2L
USB_ON/OFF
1 : CPU CONTROL (6336 TRY STATE)
0 : 6336 CONTROL
P3V3
R121 47k
C61 0.1u
U13
AU6336 MOF
CRMD
SDCDN
VDD33C
SD_V33
SDCMD
SDDATA1
SDWP
SDDATA2
VDDHM
V18
VDD3V
AVDD5V
VDDU
XO
XI
VS33P
DM
DP
VD33P
REXT
EEPDATA
EEPCLK
VDD
FSMD_N
CLED
SDDATA3
SDDATA0
SDCLK
DEVCV
RSTN
RFU0
RFU1
DIE PAD
R127 0
R128 100
R129 100
R130 100
R139 100
R132 100
R133 100
C57 0.1u
R112 0
C58 10u6.3v(08)
C67 0.1u
C68 10u6.3v(08)
R131 330
R122 47k
V_BUS_IN
L1
BLM18PG471SN1
L2
BLM18PG471SN1
T1
NT2012
J3
SHIELD4
SHIELD3
VBUS
D_M BOTTOM2
D_P BOTTOM1
ID
GND SHIELD2
SHIELD1
UB-MC5BR3-SD204
C59
N.M.(2125)
R126 0
L4
BLM18PG471SN1
C69 100u/6.3V(TCTOA0J107M)
C70 10u6.3v(08)
C71 0.1u
R141 0
J4 SDHR-8BRS-K-363
DAT2
CD/DAT3
CMD
VDD
CLK
VSS
DAT0
DAT1
SWA
SWB
FG11
FG10
FG9
FG8
FG7
FG6
FG5
FG4
FG3
FG2
FG1
R134 47k
R135 47k
R136 47k
R137 47k
R140 47k
R138 47k
R144 0
R145 100
C72 N.M.
C75 N.M.
C77 0.1u
MICRO SD CONNECTOR
REVERSE MOUNT
STAND OFF NONE
SD_DAT2
SD_DAT3
SD_CMD
SD_CLK
SD_DAT0
SD_DAT1
USB_RST
SDCD
P3V3
P1V8
Parts Side
D2
1SS355VMTE
R142 47k
U14
MODE FB
SW EN
VIN GND
TPS62231DRY
L5
2.2uH(LVF303015-2R2M)
R143 0
C73 4.7u10v(08)
C74 N.M.(08)
C76 4.7u10v(08)


U300
ANTENNA
U.FL CONNECTOR
RF SHIELD
GS2100MIP
U301
NFM18PC104R1C3
P3V3_P
GND_P
FGND
R383 56k
R319 5.6k
R324 N.M(05)
C308 10u
R323 47(05)
R382 N.M (5.1k(05))
R320 N.M (5.1k(05))
R379 4.7k
R384 N.M
R326 47(05)
R327 47(05)
Boot Control
PGMode PGSelect CodeRestore
※ 0 X 0 : Normal Boot
0 0 1 : Factory CodeRestor
0 1 1 : Previous Code Resto re
※ 1 0 X : Program mode UART0@11 5.2Kbaud
1 1 X : Program mode UART@9 21.6kbaud
Program mode :High during reset : Flash download via UART0
(GPIO25 : Program Select pin pull down)
(GPIO1 : Code Restore pin pull down)
Program mode
Program select
CodeRestor
D300
N.M SML-E12U8W
D301
N.M SML-E12D8W
Debug1
Debug2
R300 N.M (47k(05))
R301 N.M (47k(05))
R310 N.M (470(05))
R311 N.M (470(05))
INPUT LEVEL
EC300
DC10F1210206
R342 10k(05)
R343 10k(05)
R344 330(05)
R345 330(05)
D302 DAN217W
D303 DAN217W
INPUT_B
INPUT_A
C318 330p
C319 330p
U305
SN74LVC1G1250CK
C330 0.1u(05)
R380 47(05)
POWER SW / HOLD SW
S311
SSSS7A0101
R355 47k(05)
HOLD_SW
Q300
DTC124EUA
C331 10u/6.3v
J300
50BTB-H30-FWV-2x15P
05mm pitch, H=30mm
TO MAIN PCB
SPI0SSEL1
INPUT_A
INPUT_B
WIFI_SPIMISO
WIFI_SPIMOSI
WIFI_SPISCK
WIFI_UART0_TX
WIFI_UART0_RX
WIFI_RST
WIFI_PRGEN
WIFI_LED
REC_LED
SPI0SSEL2
WIFI_INT
REC
(Red)
D304 SML-E12U8W
D305 SML-E12U8W
D308 NM(SML-E12U8W)
D307 NM(SML-E12U8W)
R356 470
R357 470
R385 NM(470)
R386 NM(470)
Q301
DTC143EKA
WIFI
(Blue)
D306
SML-E13BC8TT86G
R376 47k(05)
R377 100
C332 N.M (100u/6.3V)
C333 N.M (100u/6.3V)
U302
U303
U304
SN74LV165APWR
C309 0.1u(05)
C320 0.1u(05)
C329 0.1u(05)
R321 47(05)
R325 47(05)
R346 47(05)
R378 47(05)
R312 1k(05)
R313 1k(05)
R315 1k(05)
R316 1k(05)
R314 1k(05)
R317 1k(05)
R318 1k(05)
R322 1k(05)
S300 SKRWAHE030 F3
S301 SKRWAHE030 F2
S303 SKRWAHE030 F1
S302 TSW-6A-2-16-T50 REW
S304 TSW-6A-2-16-T50 FF
S305 SKRWAHE030 REC
S306 TSW-6A-2-16-T50 PLAY
S307 TSW-6A-2-16-T50 HOME / MENU
R334 0(05)
R335 0(05)
R336 0(05)
R337 0(05)
R338 0(05)
R339 0(05)
R340 1k(05)
R341 1k(05)
OUTPUT+_P OUTPUT LVL -
OUTPUT-_P OUTPUT LVL -
MIC_JACK_P MIC IN JACK
HP_JACK_P HP OUT JACK
HOLD_SW HOLD
S308 SKRWAHE030 WIFI
S309 SKRWAHE030 F4
SCENE DIAL
S310
SR072-3FI8Pj
SCENE8
SCENE1
SCENE2
SCENE3
SCENE4
SCENE5
SCENE6
SCENE7
R375 N.M(0)
CHASSIS


P2V5_D
R500 10
P3V3_A
D500 N.M.
U500
VIN VOUT
VSS VSS
ON/OFF NC
S-1132B25-I6T2G
R504 0(05)
C501 1u
C502 N.M(05)
C503 10u/6.3V
PGND_A
GND_A
L500 10uH/60mA(LQM21F-70)
P2V5_ANA
R501 100
C500 10u/10V(TCM)
R505 1608(N.M.)
R508 2.2k(D)
D502 RB548W
D501 RB548W
C504 1u
C505 0.1u
C506 0.1u
C507 100p
HP_JACK
Guarding
R506 82(05)
R507 47(05)
R509 47(05)
R511 47(05)
R513 47(05)
CODEC_MCLK
CODEC_BCLK
AD_DATA
DA_DATA
CODEC_RESET
CODEC_LRCK
SDA
SCL
U501
LRCK SDIN SCLK MCLK SDOUT DGND VL RESET SPK/HP
SDA SCL AD0 SPKR_OUTA+ VP SPKR_OUTA- SPKR_OUTB+ VP SPKR_OUTB- -VHPFILT
AIN1B AIN1A AFILTB AFILTA AIN2B AIN2A MIC1B MIC1A MIC2B MIC2A
FLYN FLYP VHP VA VCOM FILT+ VQ MICBIAS
G1 Themal Pad
CS42L52
I2Caddress
94h(write),95h(Read)
100kHz
R519 0
C514 330p
C515 330p
C508 10u/10V(TCM)
C509 10u/10V(TCM)
C510 10u/10V(TCM)
C511 10u/10V(TCM)
L501 MMZ1608B601C
L502 MMZ1608B601C
R512 100
R514 100
R510 2.2k(D)
R515 100k
C512 1800p
R516 100k
C513 1800p
R517 3k(D)
R518 3k(D)
R520 100
C516 10u/10V(TCM)
J500
LGY3009-0200F
R540 4.7k
D503 CDZC6.8B
P501 MICL_SIG (YEL)
P502 L_CASE_GND(BLK)
P500 L_FGND (GND)
MIC /EXT IN
2014.12.05
P502,P505
Silk Change: BLK -> GND
P503 MICR_SIG (YEL)
P504 L_CASE_GND(BLK)
P505 R_FGND (GND)
D504 CDZC6.8B(N.M.)
D505 CDZC6.8B(N.M.)
P_MIX_PWR_IN
Q502 RW1A025ZP
R521 0
R522 220(05)
R523 100k(05)
Q503 RUM002N02
R526 100k(05)
C532 0.1u
C518 10u/6.3V
C517 0.1u
C521 0.1u
C522 1u
C523 1u
C524 1u
C519 10u/6.3V
C520 10u/10V(TCM)
C525 0.1u
C526 0.1u
C527 0.1u
C528 0.1u
C529 0.1u
C530 0.1u
C531 0.1u
Clock Master
PHONE_OUTL
PHONE_OUTR
R525 12(2125)
R524 12(2125)
C533 0.022u
C534 0.022u
R527 51
R530 51
R528 1k
R529 1k
C535 0.039u
C536 0.039u
L504 0 (MMZ1608B601C)
L503 0 (MMZ1608B601C)
R538 1k
J501
LGY3009-0200F
PHONE /LINE OUT
D506 CDZC6.8B
PAD(1*2mm) /Pitch(1mm)
SPK_B-(MONO_A-)
R532 0
P506 SPOUT_N
SP OUT
SPK_A+(MONO_A+)
R534 0
P507 SPOUT_P
P3V3_A
R535 47k
R536 47k
R537 47k
HP_JACK
Q504 DTC143TUA
MIC_JACK
C539 1000p
C540 0.1u
Solder Side
P3V3_D
C537 10u/6.3v
J502
SDA SCL AD_DATA DA_DATA CODEC_RESET CODEC_BCLK CODEC_LRCK CODEC_MCLK HP_JACK MIC_JACK
V_BUS_IN (3)
POWER_HOLD (3)
POWER_STAT (3)
P2V5_DIG
USB_STAT (3)
SAFE_LED
PEAK_LED
OUTPUT+
OUTPUT-
AXK5S30037YG
05mm pitch, H=60mm
TO MAIN PCB
P2V5_D
P_MIX_PWR_IN
SAFE
(Green)
D508 KPT-2012CGCK
R548 82
Q505 DTC143EKA
PEAK
(Red)
D509 SML-E12U8W
R549 470
Q506 DTC143EKA
(3) POWER SW+
(3) POWER SW-
R542 47k
R543 1k
C542 0.1u
C543 N.M 18V_3PF_M_EZJ [1608]
S500 SKRTLAE010
OUT+
R544 47k
R545 1k
C544 0.1u
C545 N.M 18V_3PF_M_EZJ [1608]
S501 SKRTLAE010
OUT-

AUDIO PCB (2/2) (POWER)



TASCAM

XRI Specification Document

(eXtended Recording Information)
Ver.0001

TEAC

Rev.1.00

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XRI (eXtended Recording Information) Specification Document

XRI (eXtended Recording Information) Specification Document

1. Purpose

By adding various recording settings and position information to files during recording, checking recording settings and locations after the fact becomes possible.
Making recording settings for the same conditions can be simplified by loading the saved XRI data into the recording device.

2. Compatible file format

The BWF format is compatible.

3. XRI data storage location

XRI data is saved Text,freestring(T=<…>) in the CodingHistory inside the BWF file bext-chunk.

4. Extent of XRI standard

Even when functions are similar, setting items differ between devices. For this reason, only the recording format and some tags are standardized. Other tags and data names depend on the recording device.
We recommend that you make tag and data names the same as the names of the setting items and parameters of the recording device.

5. XRI format

5-1.

- **5-1-1. The character code is ASCII.**
- **5-1-2. XRI data is classified into "XRI identifiers", "required items", "device dependent items" and "channel dependent items".**
- **5-1-3. "XRI identifiers" and "required items" must always be included.**
- **5-1-4. "Device dependent items" and "channel dependent items" are optional.**
- **5-1-5. Each item is comprised of a tag and data.**
- **5-1-6. Use a <CR/LF> as a delimiter for each item.**
- **5-1-7. Use "=" as a separator between tags and data.**
- **5-1-8. The same item must not occur multiple times.**
- **5-1-9. After the last item,set to NULL (0x00).**
- **5-1-10. If specification changes occur that cause compatibility problems, we will update the XRI VERSION.**

5-2.

- **5-2-1. An "XRI identifier" is composed of an "XRI character string" and the "XRI size".**
- **5-2-2. The "XRI identifier" is entered before the "XRI data".**

5-3.

- **5-3-1. "Device dependent items" and "channel dependent items" can be in any order.**
- **5-3-2. The tag names of "XRI identifiers" and "required items" are reserved words and must not be used as tag names for "device dependent items" and "channel dependent items".**
- **5-3-3. Depending on the number of channels necessary, information from multiple channels can be included in a single tag for "channel dependent items".**
- **5-3-4. Use "," as a separator within data.**
- **5-3-5. The maximum channel number that can be input is 64.**
- **5-3-6. The data length for each channel must be 32 bytes or less.**

Note: in this specification document spaces (ASCII code 0x20) are indicated with a "␣".

6. XRI identifier and XRI Size details

XRI identifiers and XRI Size standard format
XRI_xxxx<CR/LF>

"XRI identifier" and "XRI Size details" are entered before "XRI data".

6-1. XRI identifier and XRI Size

Tag name	Explanation
XRI identifier	Always "XRI_"
XRI Size	Bytes (size from XRI identifier to end of XRI data – 8)
Storage format	
XRI identifiers are stored in ASCII format as "XRI_". XRI Size is written as a hex value in ASCII format. (Always 4 bytes.)	
Sample data	
XRI_006F<CR/LF>	

7. Required tag details

Required tag standard format
Tag name= data<CR/LF>

Always include required tag items.

7-1. XRI Version

Tag name	Explanation
XRI_VER	Enter the XRI format version.
Data storage format	
The XRI Version is written as a hex value in ASCII format. The data length is fixed at 4 bytes.	
Sample data	
XRI_VER=0001<CR/LF>	

7-2. Recorder Maker

Tag name	Explanation
MAKER	Enter the name of the recording device manufacturer.
Data storage format	
Use ASCII format. The data length must be 32 bytes or less.	
Sample data	
MAKER=TASCAM<CR/LF>	

7-3. Recorder Model

Tag name	Explanation
MODEL	Enter the name of the recording device.
Data storage format	
Use ASCII format. The data length must be 32 bytes or less.	
Sample data	
MODEL=DR-44WL<CR/LF>	

7-4. Recorder F/W Version

Tag name	Explanation
FW_VER	Enter the firmware version of the recording device.
Data storage format	
Use ASCII format. The data length must be 32 bytes or less.	
Sample data	
FW_VER=1.20<CR/LF>	

8. Device dependent tag details (DR-22WL/DR-44WL reference)

Note: Device dependent tags can be defined for each device.

Device dependent tag standard format
Tag name=data<CR/LF>

The tag name must be 32 bytes or less.
The data length must be 32 bytes or less.

8-1. Latitude

Tag name	Explanation
LATITUDE	Enter the latitude of the recording location.
Data storage format	
Enter a decimal value in ASCII format. Enter a value within ±90.00000. The highest precision is 0.00001.	
Sample data	
LATITUDE=+35.62497<CR/LF>	

8-2. Longitude

Tag name	Explanation
LONGITUDE	Enter the longitude of the recording location.
Data storage format	
Enter a decimal value in ASCII format. Enter a value within ±180.00000. The highest precision is 0.00001.	
Sample data	
LONGITUDE=+139.42473<CR/LF>	

9. Channel dependent tag details (DR-22WL/DR-44WL reference)

Note: Channel dependent tags can be defined for each device.

Channel dependent tag standard format
Tag name=Ch1:data,Ch2:data…<CR/LF>

The tag name must be 32 bytes or less.
The data length must be 32 bytes or less.

Channels are channels input during recording.
The maximum number of channels that can be input is 64.
The data length for each channel must be 32 bytes or less.

9-1. Input Source

Tag name	Explanation
SOURCE	Enter the input source.
Data storage format	
The format is "Ch:parameter". To enter multiple channels, use "Ch:parameter,Ch:parameter…" as the format. Enter a decimal value in ASCII format for the channel number. Enter parameters from 9-1-1 in ASCII format.	
Sample data	Explanation of sample
SOURCE=1:INT MIC,2:INT MIC<CR/LF>	Ch 1/2 built-in mic

9-1-1. Input Source Parameter

Input Source	Explanation
INT_MIC	Built-in mic
EXT_MIC	External mic input
LINE_IN	Line input

9-2. Input Level

Tag name	Explanation
LEVEL	Enter the Input Level setting.
Data storage format	
The format is "Ch:parameter". To enter multiple channels, use "Ch:parameter,Ch: parameter…" as the format. Enter a decimal value in ASCII format for the channel number. Enter parameters from 9-2-1 in ASCII format.	
Sample data	Explanation of sample
LEVEL=1:31,2:54<CR/LF>	Ch1: input level 31, Ch2: input level 54

9-2-1. Input Level Parameter

Input Level	Explanation
0–100	Enter a decimal value in ASCII format for the input level.

9-3. Low Cut

Tag name	Explanation
LOW_CUT	Enter the Low Cut Filter setting value.
Data storage format	
The format is "Ch:parameter". To enter multiple channels, use "Ch:parameter,Ch: parameter…" as the format. Enter a decimal value in ASCII format for the channel number. Enter parameters from 9-3-1 in ASCII format.	
Sample data	Explanation of sample
LOW_CUT=1:40,2:40<CR/LF>	Low Cut Filter for channels 1 and 2 set to 40 Hz.

9-3-1. Low Cut Parameter

Low Cut	Explanation
OFF	Low Cut Off
0–220	The low-cut filter frequency unit is Hz. Enter a decimal value in ASCII format.

9-4. Level Control

Tag name	Explanation
LEVEL_CTRL	Enter the Level Control setting.
Data storage format	
The format is "Ch:parameter". To enter multiple channels, use "Ch:parameter,Ch: parameter…" as the format. Enter a decimal value in ASCII format for the channel number. Enter parameters from 9-4-1 in ASCII format.	
Sample data	Explanation of sample
LEVEL_CTRL=1:PEAK,2:PEAK<CR/LF>	Ch1/2 Peak Reduction Algorithm

9-4-1. Level Control Parameter

Level Control	Explanation
OFF	Level Control Off
PEAK	Peak Reduction Algorithm
LIMITER	Limiter On
AUTO	Auto Algorithm

9-5. Effect

Tag name	Explanation
EFFECT	Enter the Effect setting.
Data storage format	
The format is "Ch:parameter". To enter multiple channels, use "Ch:parameter,Ch: parameter…" as the format. Enter a decimal value in ASCII format for the channel number. Enter parameters from 9-5-1 in ASCII format.	
Sample data	Explanation of sample
EFFECT=1:OFF,2:OFF<CR/LF>	Ch1/2 Effect Off

9-5-1. Effect Parameter

Effect	Explanation
OFF	Effect Off
ON	Effect On

10. XRI samples

Stereo file example

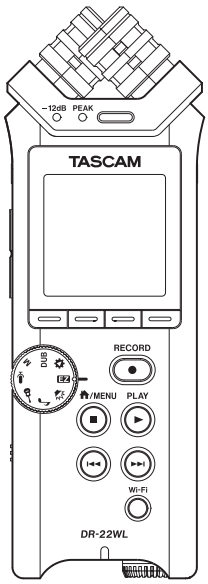
		Number of bytes
XRI_00D2<CR/LF>	XRI Size = 210Byte	10
XRI_VER=0001<CR/LF>	XRI Version 0001	14
MAKER=TASCAM<CR/LF>	Maker name: TASCAM	14
MODEL=DR-44WL<CR/LF>	Recording device: DR-44WL	15
FW_VER=1.20<CR/LF>	Device firmware version: 1.20	13
LATITUDE=+35.62497<CR/LF>	Latitude: +35.62497	20
LONGITUDE=+139.42473<CR/LF>	Longitude: +139.42473	22
SOURCE=3:EXT_MIC,4:EXT_MIC<CR/LF>	Ch3/4 external mic	28
LEVEL=3:31 AM,4:54 AM<CR/LF>	Ch3 Input Level 31, Ch4 Input Level 54	17
LOW_CUT=3:40 AM,4:40 AM<CR/LF>	Ch3/4 Low Cut Filter 40 Hz.	19
LEVEL_CTRL=3:PEAK,4:PEAK<CR/LF>	Ch3/4 Peak Reduction Algorithm	26
EFFECT=3:OFF,4:OFF<CR/LF>	Ch3/4 Effect Off	20
		Total 218

4-channel poly file example

		Number of bytes
XRI_00F2<CR/LF>	XRI Size = 242Byte	10
XRI_VER=0001<CR/LF>	XRI Version 0001	14
MAKER=TASCAM<CR/LF>	Maker name: TASCAM	14
MODEL=DR-xxWL<CR/LF>	Recording device: DR-xxWL	15
FW_VER=1.20<CR/LF>	Device firmware version: 1.20	13
SOURCE=1:INT_MIC,2:INT_MIC,3:EXT_MIC, 4:EXT_MIC<CR/LF>	Ch1/2 built-in mic Ch3/4 external mic	48
LEVEL=1:31,2:54,3:21,4:22<CR/LF>	Ch1 Input Level 31, Ch2 Input Level 54, Ch3 Input Level 21, Ch4 Input Level 22	27
LOW_CUT=1:40,2:80,3:120,4:220	Ch1 LowCut 40Hz, Ch2 LowCut 80Hz, Ch3 LowCut 120Hz, Ch4 LowCut 220Hz	31
LEVEL_CTRL=1:LIMITER,2:LIMITER,3:PEAK,4:PEAK	Ch1 Limiter On, Ch2 Limiter On, Ch3 Peak Reduction, Ch4 Peak Reduction	46
EFFECT=1:OFF,2:OFF,3:OFF,4:OFF<CR/LF>	Ch1/2/3/4 Effect Off	32
		Total 250

Revision history

Revision	Date (year. month. day.)	Revision purpose
Rev.1.00	2015.10.01	Ver. 0001 first edition



TASCAM

SERVICE MANUAL

DR-22WL

Linear PCM Recorder

CONTENTS

目次

INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Effective : Jun, 2015

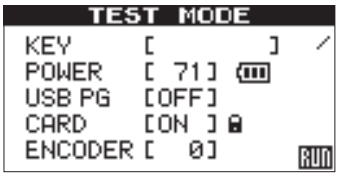
S-0273

1. Test Mode

テストモード

1. How to enter test mode

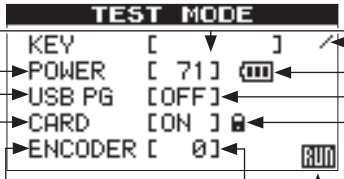
While holding down the **F4**+**REW** keys, switch the power on.
The LCD shows the following message.



1. テストモードの起動方法

F4+**REW**キーを押しながら電源を投入する。
LCDに下記を表示する。

2. Displays explained



- Shows the name of a key pressed.
- Power supply voltage (255 steps)
  shown when powered on batery.
  shown when connected to an AC outlet.
- USB connection
- Card detection
  Shows when the card's protection SW is set to ON.
- This value changes by INPUT LEVEL volume is turned.
- Operation indicator
- Event acceptance indicator. This indicator reacts when keys are operated for example.

2. 画面の説明

- 押されたキーを表示。
- 電源供給電圧 [255(段階)] 表示
  バッテリー時 アイコン表示 : "[battery]"
  AC接続時 アイコン表示 : "[usb]"
- USB 接続 表示
- カード検出
  カードのプロテクトSWがONのとき "[lock]" マークを表示。
- INPUT LEVEL ボリュームが回されると値が変わる。
- 動作インジケーター
- イベント受付インジケータ。キーなど操作すると反応。

3. Checking LEDs

SAFE LED : turns on when the **F1** key is pressed.
OVER LED : turns on when the **F2** key is pressed.
REC LED : turns on when the **REC** key is pressed.
WIFI LED : turns on when the **WIFI** key is pressed.
All LED turn on when the **PLAY** key is pressed.

3. LED

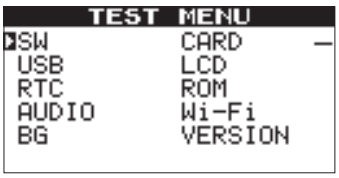
SAFE LED : **F1** キーで点灯する
OVER LED : **F2** キーで点灯する
REC LED : **REC** キーで点灯する
WIFI LED : **WIFI** キーで点灯する
PLAY キーで全て点灯する。

4. Menu

Pressing the MENU key reveals the following menu.
Options are selectable using the **F2** , **F3** key and **INPUT LEVEL** volume.
F4 : mode selection
MENU : back to the TOP screen

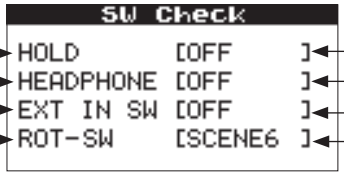
4. MENU

MENUキーを押すと下記メニューを表示する。
"F2"キー、**"F3"キー**、**"INPUT LEVEL"ボリューム**操作で項目の移動をする。
F4 : 項目の選択
MENU : TOP画面へ



1) **SW**
Selecting **SW** and pressing the **ENTER/MARK** key gets you to the following menu:

1) **SW**
"SW"を選択して**ENTER/MARK**キーを押すと下記メニューを表示する。

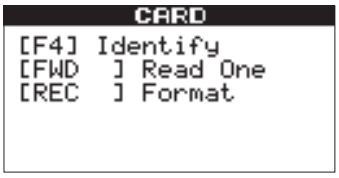


- Hold SW
- Headphone Jack SW
- EXT IN SELECT SW
- MIC ANGLE SW

- HOLD SW
- ヘッドフォンジャックSW
- EXT IN SELECT SW
- MIC ANGLE SW

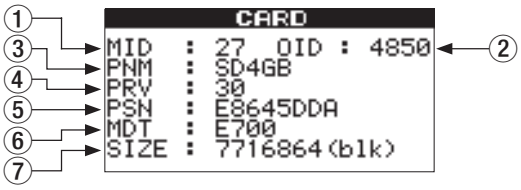
2) **CARD**

Selecting **CARD** and pressing the **F4** key gets you to the following menu:



Identify : Read in data

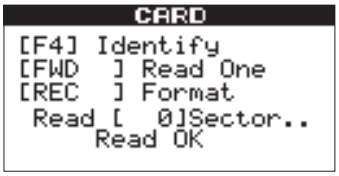
Pressing the **F4** key indicates the following information:



①	**MID**	Manufacturer ID	メーカー ID
②	**OID**	OEM/Application ID	OEM・アプリケーションID
③	**PNM**	Product name	製品名
④	**PRV**	Product revision	製品リビジョン
⑤	**PSN**	Product serial number	シリアル番号
⑥	**MDT**	Manufacturing date	製造日付
⑦	**SIZE**	Raw Size	カード容量

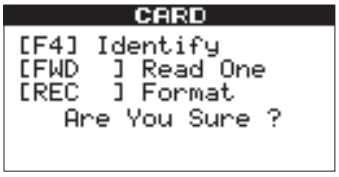
Read One : Read in data from the card per sector

At each press of the ►►I key, data is read in from the card per sector.



Forma : Card formatting

At a press of the **REC** key, the following screen appears:



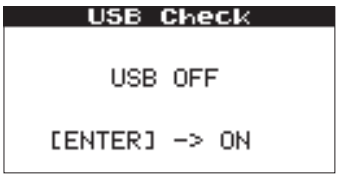
If **F4** key is pressed at this screen, the card starts being formatted. Upon completion of the formatting process, "**Complete**" is displayed.

Pressing **MENU** key brings you back to the top screen:

3) **USB Check**

Select "**USB**" and press the **F4** key.

Each time the **ENTER(F4)** key is pressed, the indication alternates between ON and OFF:



2) **CARD**

"CARD" を選択して**F4**キーを押すと下記メニューを表示する。

Identify : カードから情報の読み込み

F4 キーを押すと下記の情報を表示する。

Read One : カードから1セクタ読み込み

►►I キーを押すと、押すたびにカードから1セクター毎のデータの読み込みを行なう。

Format : カードフォーマット

REC キーを押すと下記画面を表示する。

ここで**F4**キーを押すとFormatを実行し、実行後に"**Complete**"を表示して終了する。

MENU キーでTop画面へ戻る。

3) **USB Check**

"**USB**"を選択して**F4**キーを押す。

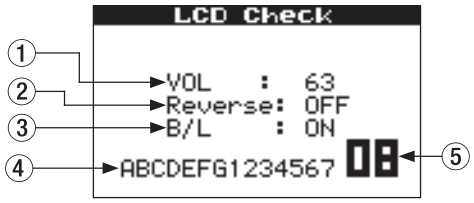
ENTER(F4) キーを押すたびにON/OFFを繰り返す。

4) **LCD Check**

Select "**LCD**" and press **F4** key and the following are displayed:

4) **LCD Check**

"**LCD**"を選択して**F4**キーを押すと下記画面を表示する。



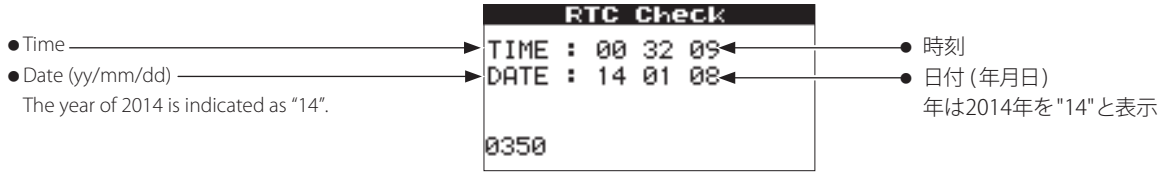
①	**VOL**	: Contrast adjustment ("**+**"key : up, "**-**" : down)	コントラスト調整 : **F2** キーでアップ、**F1** キーでダウン
②	**Reverse**	: **RECORD**key : Reverse	ハイライト表示 : **RECORD** キーで 反転。
③	**B/L**	: **PLAY**key : Back light ON/OFF	バックライト機能 : **PLAY** キーで ON/OFF
④	**ABCDEFG1234567**	: Characters for after-image check	残像確認用キャラクタ
⑤	**08**	: **F4** key : All dots are displayed	**F4** キーで全てのドットを表示

5) **RTC Check**

Select **"RTC"** and press **F4** key and the following are displayed:
Real-time clock indication. (Date and time indication only)

5) **RTC Check**

"**RTC**"を選択して**F4**キーを押すと下記画面を表示する。
リアルタイムクロック表示(日時の表示のみ)。

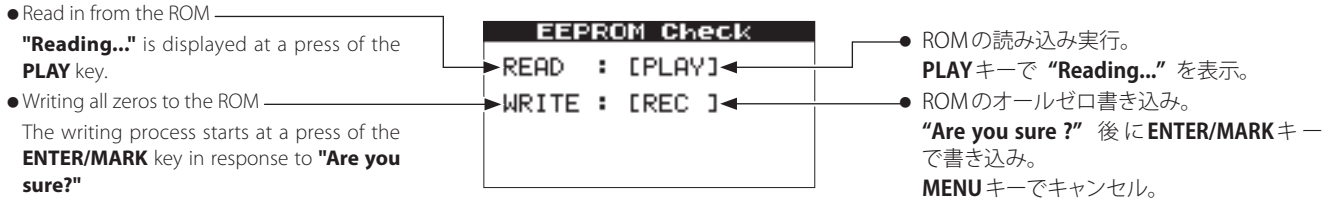


6) **ROM Check**

Select **"ROM"** and press **F4** key and the following are displayed:
If errors occur during either the read or the write, the following are displayed:

6) **ROM Check**

"**ROM**"を選択して**F4**キーを押すと下記画面を表示する。
READ/WRITE共にエラーの場合には下記を表示する。



"Timeout Err"	: No response from the EEPROM
"Error"	: Errors at data send/receive time
"Verify Err"	: Errors in verification during the write process

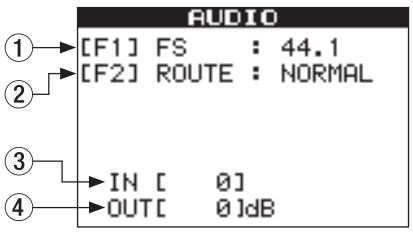
"Timeout Err"	: EEPROMの応答なし
"Error"	: データ送信/受信時のエラー
"Verify Err"	: Write時のベリファイエラー

7) **AUDIO Check**

Select **"AUDIO"** and press the **F4** key.

7) **AUDIO Check**

"**AUDIO**"を選択して**F4**キーを押す。



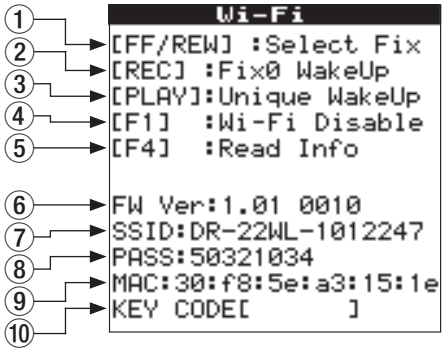
①	**[F1] FS**	Sampling frequency setting. Use the **F1** key to select 44.1kHz, 48kHz or 96kHz.	サンプリング周波数選択 : **F1** キーで選択 [44.1KHz / 48kHz / 96kHz]
②	**[F2] ROUTE**	Input routing setting. Use the **F2** key to select NORMAL or THRU.	入力経路設定 : **F2** キーで選択 [NORMAL / THRU]
③	**IN [0dB]**	CODEC INPUT PGA setting.Use the **INPUT LEVEL** volume to select 0, 1, 2, ..., 89 or 90.	CODEC INPUT PGA設定 : **INPUT LEVEL** ボリュームで選択 [0 / 1 / 2 /... / 89 / 90]
④	**OUT [0dB]**	CODEC master volume setting. Use the **OUTPUT LEVEL +** / **-** keys to select -102dB, -101dB, -100dB, ..., 11dB or 12dB.	CODEC Master Volume設定 : **OUTPUT LEVEL +** / **−**キーで選択 [-102dB / -101dB / -100dB /... / 11dB / 12dB]

8) **Wifi**

Select **"Wi-Fi"** and press **F4** key and the following are displayed:

8) **Wifi**

"Wi-Fi"を選択して**F4**キーを押すと下記画面を表示する。



①	**[FF/REW]**	Select a fixed SSID.	固定SSIDの選択をします(FIX 0 ～ FIX 5)。
②	**[REC]**	Start the WiFi in the specified fixed SSID.	指定された固定SSIDでWiFiを起動します。
③	**[PLAY]**	Start the WiFi in SSID stored in the unit.	機器に保存されているSSIDでWiFiを起動します。
④	**[F1]**	Disable the WiFi.	WiFiをDisableします。
⑤	**[F4]**	Read the firmware version / SSID of the WiFi module.	WiFiモジュールのファームウェアバージョン / SSIDを読み込みます。
⑥	**FW**	Display the firmware version of WiFi module.	WiFiモジュールのファームウェアバージョンを表示します。
⑦	**SSID**	Display the current SSID.	現在のSSIDを表示します。
⑧	**PASS**	Display the current password.	現在のパスワードを表示します。
⑨	**MAC**	Display MAC ID of the unit.	機器MAC IDを表示します。
⑩	**KEY CODE**	Display the received locate Key during the remote control operation. Receivable KEYCODE are only "STOP", "REC", and "PLAY".	リモコン動作時に受信したロケートKeyを表示します。 受信可能KEYCODEは"**STOP**"、"**REC**"、"**PLAY**"のみ。

9) **BG**

Select "**BG**" and press **F4** key:

Background samples

FF (►►I) : Previous; **REW** (I◄◄) : Next

9) **BG**

"**BG**"を選択して**F4**キーを押す。

背景サンプル

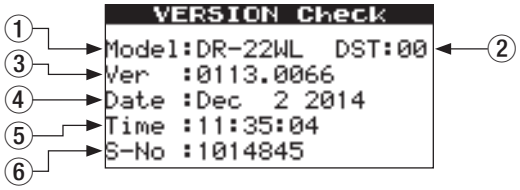
FF (►►I) : 後 **REW** (I◄◄) : 前

10) **VERSION Check**

Select **"VERSION"** and press **F4** key and the following are displayed:

10) **VERSION Check**

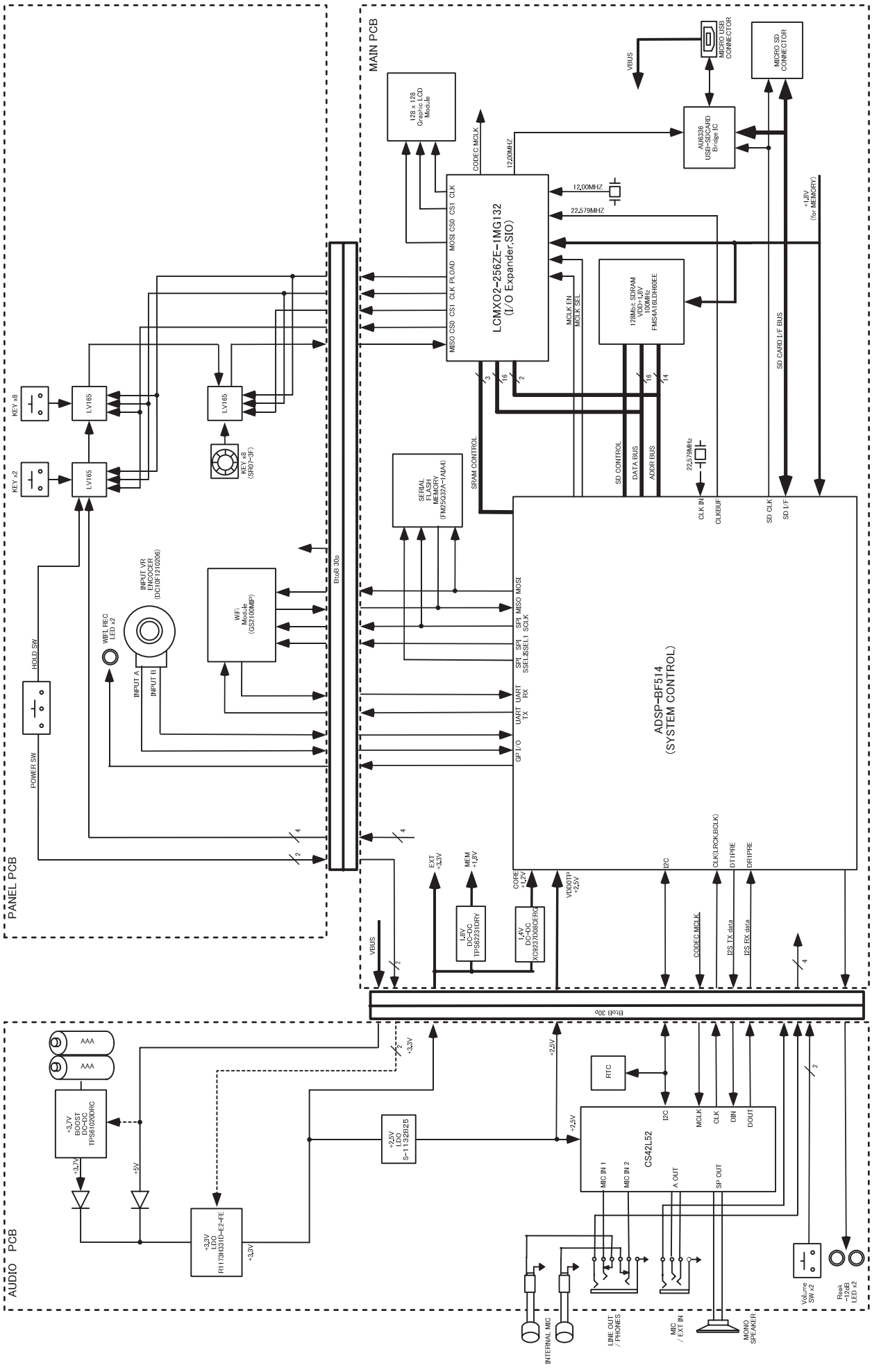
"VERSION"を選択して**F4**キーを押すと下記画面を表示する。



①	**Model**	Model Name	モデル名
②	**DST**	Display of FW destination 00 : Default 01 : Fixed to Chinese	ファームウェア仕向け先表示 00：デフォルト 01：中国固定
③	**Ver**	Version of the system firmware. The last 4 digits indicate a build number.	システムファームウェアのバージョン (後半の4桁はビルド番号)
④	**Date**	on which the system firmware was built.	ファームウェアビルド日付
⑤	**Time**	which the system firmware was built.	ファームウェアビルド時刻
⑥	**S-No**	Serial number of the unit.	機器シリアルNo

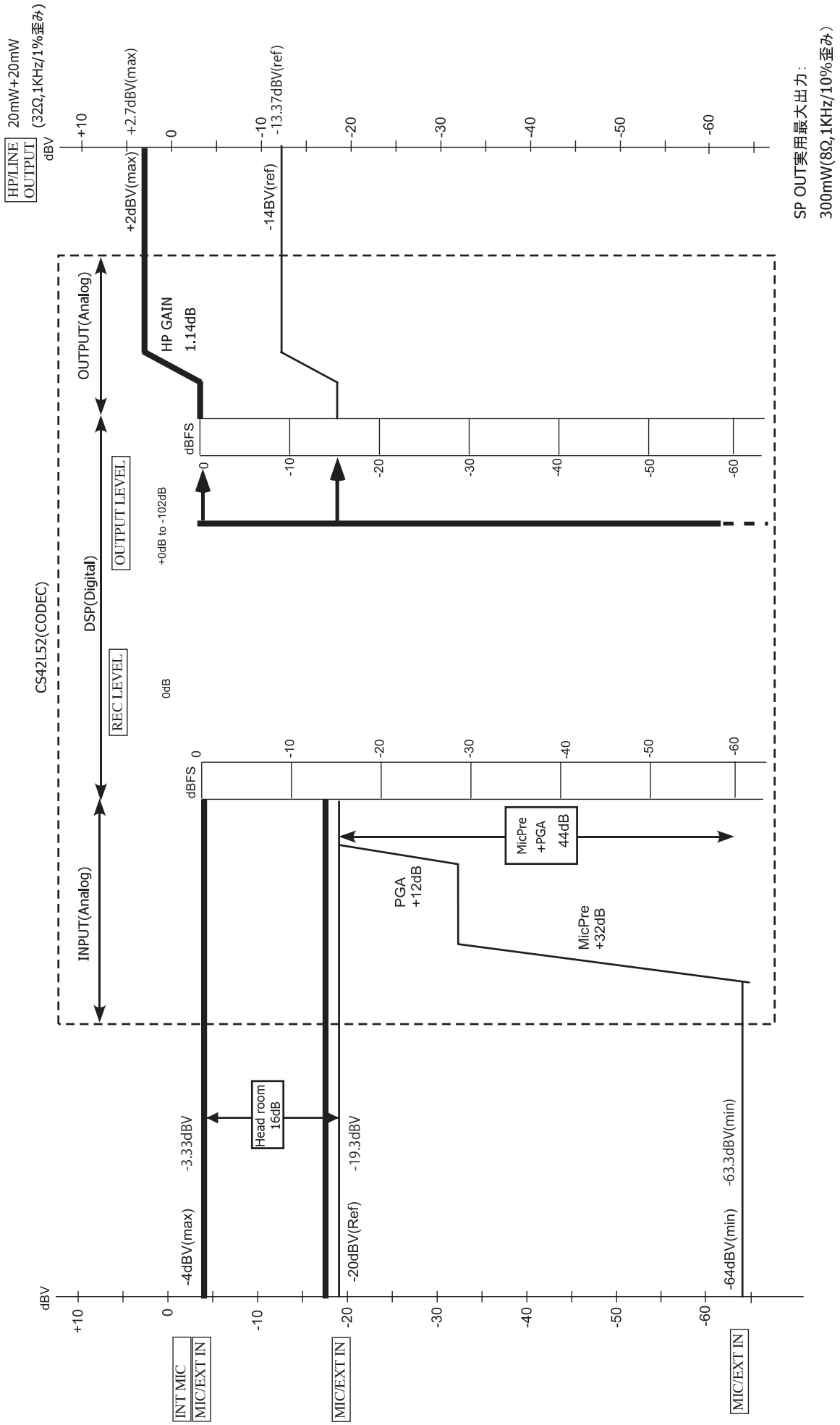
2. Block Diagram

ブロックダイアグラム



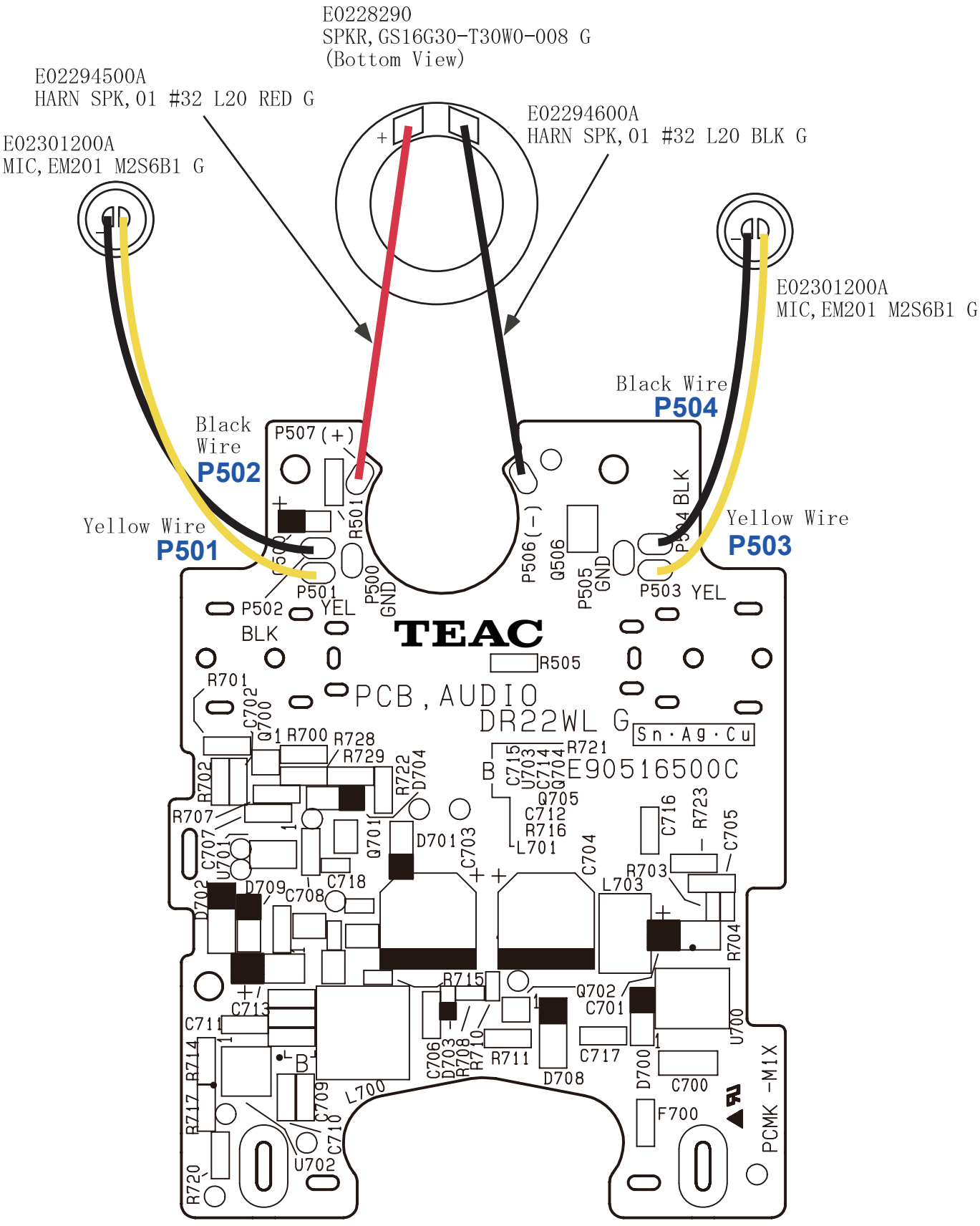
3. Level Diagram

レベルダイアグラム



4. Wiring Diagram

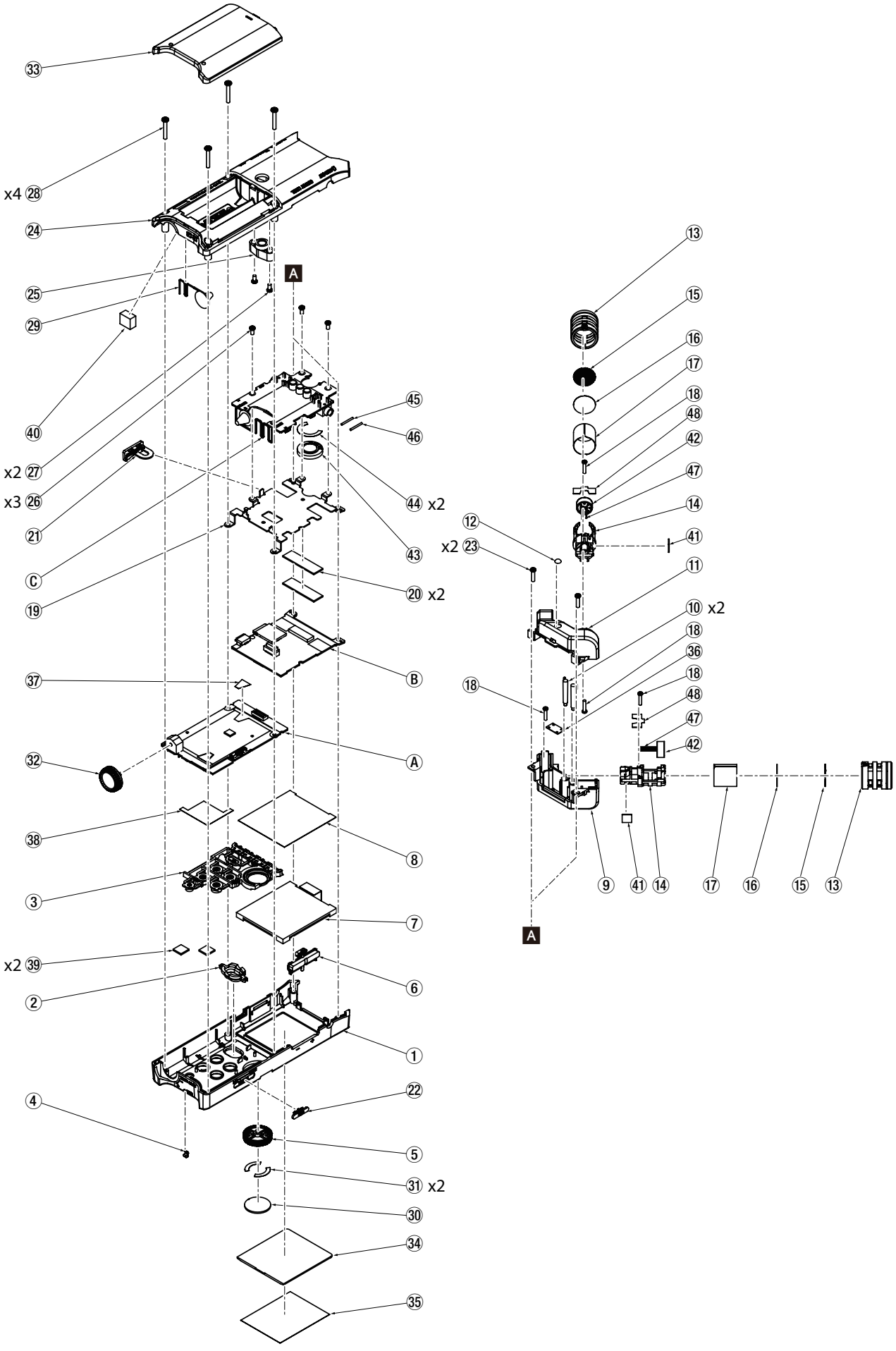
ワイヤリングダイアグラム



E95516500A
PCB ASSY,AUDIO DR22WL G

5. Exploded Views and Parts List

分解図とパーツリスト



CAUTION Part with numbers in parentheses ( ) cannot be ordered.

注 意 "( )"付き品番は、発注できません。

REF.NO.	PARTS NO.	DESCRIPTION .	Qty.	REMARKS
1	M03694100C	CASE,TOP DR22 G	1	
2	M03695200A	LENS,REC DR22 G	1	
3	M03695100B	BUTTON,DR22 G	1	
4	M03695300B	LENS,WIFI DR22 G	1	
5	M03694800B	KNOB,DIAL BASE DR22 G	1	
6	M03341000B	BUTTON,VOL DR40 G	1	
7	E02282500A	LCD,221-3062-2133CD G	1	
8	M03733800A	SHEET,PET 41X46XT02 BK G	1	
9	M03694400B	COVER,MIC TOP DR22 G	1	
10	M03695400B	LENS,PEAK DR22 G	2	
11	M03694500A	COVER,MIC BTM DR22 G	1	
12	M02757710A	FOOT,D40*H15 PT7 G	1	
13	M03694300A	CASE,MIC DR22 G	2	
14	M03696100C	HOLDER,MIC DR22 G	2	
15	M03492200A	PLATE,MIC IM2X G	2	
16	M03492400A	SHEET,MIC IM2X G	2	
17	M03696200A	SHEET,MESH DR22 G	2	
18	B00326200A	SCREW,MPPR 1.7*8FCM G	4	
19	M03695500A	CHASSIS,DR22 G	1	
20	M01643200A	SHEET,PANEL FRONT G	2	
21	M03694600A	COVER,MICRO SD DR22 G	1	
22	M03341100A	KNOB,SLIDE DR40 G	1	
23	B00198808A	SCREW,BPP 2*8FZC G	2	
24	M03694200D	CASE,BTM DR22 G	1	
25	M03695600A	ESCUTCHEON,TRIPOD DR22 G	1	
26	B00303605A	SCREW,MPBR 2*5 FNI G	3	
27	B00303605A	SCREW,MPBR 2*5 FNI G	2	
28	B00325800A	SCREW,BPB M2*5*9 FZB G	4	
29	M03700400A	SPRING,BAT JOINT 44 G	1	
30	M03694900A	KNOB,DIAL COVER DR22 G	1	
31	M02944500A	TAPE,RING DP004 G	2	
32	M03695000B	KNOB,INPUT DR22 G	1	
33	M03694700C	COVER,BATTERY DR22 G	1	
34	M03695700A	WINDOW,DR22 G	1	
35	M03125500A	SHEET,WIN COVER DR-07R G	1	
36	M03717800A	SHEET,SPEAKER DR22 G	1	
37	M03733900A	SHEET,BATTERY DR22 G	1	
38	M03726900A	SHEET,SHIELD WIFI DR22 G	1	
39	M03725700A	CUSHION,GASKET 1X7X7 G	2	
40	M03736300A	CUSHION,PORON H32 5X9X8 G	1	

CAUTION Part with numbers in parentheses ( ) cannot be ordered.

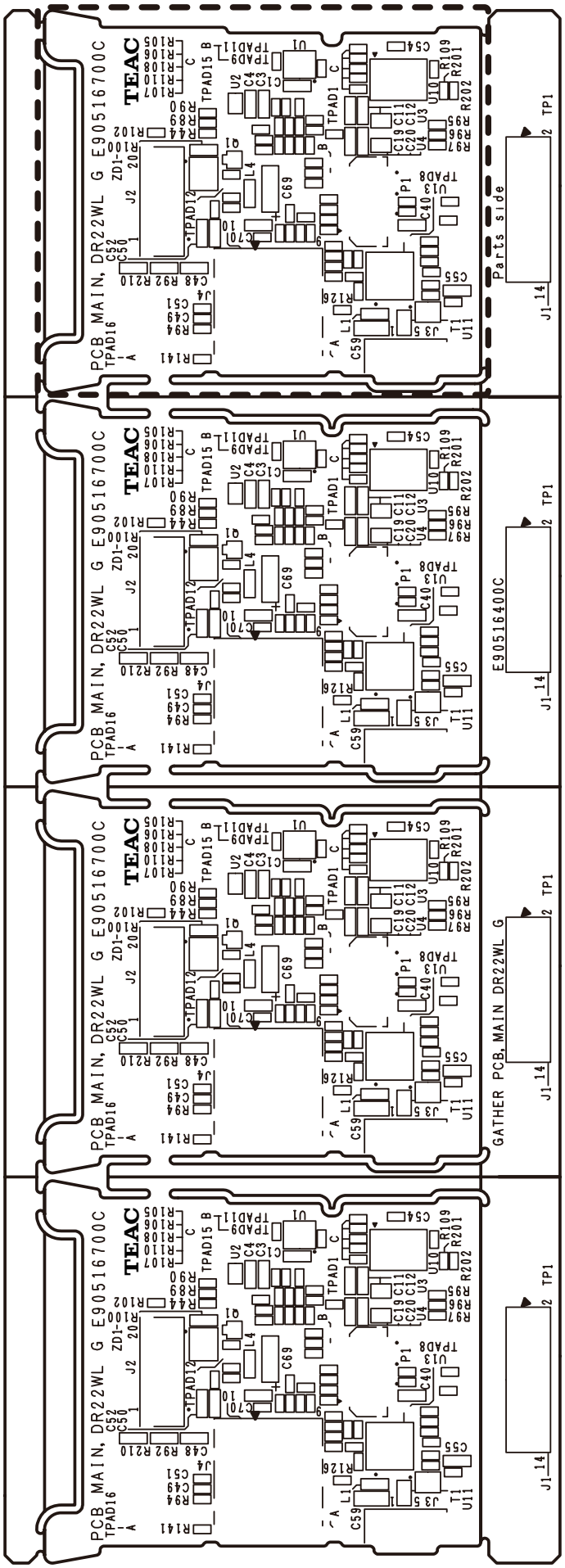
注 意 "( )"付き品番は、発注できません。

REF.NO.	PARTS NO.	DESCRIPTION .	Qty.	REMARKS
41	M03325400A	SHEET,HM 6*6 G	3	
42	E02301200A	MIC,EM201M2S6B1 G	2	
43	E0228290	SPKR,GS16G30-T30W0-008 G	1	
44	M02944500A	TAPE,RING DP004 G	2	
45	E02294500A	HARN SPK,01#32 L20 RED G	1	
46	E02294600A	HARN SPK,01#32 L20 BLK G	1	
47	E01749200A	WIRE,MIC G_ P3P5 DR05 G	2	
48	M03736900B	SHEET,SHIELD WIRE DR22 G	2	
A	(E95516600A)	PCB ASSY,PANEL DR22WL G	1	Refer to page 16 (GATHER PCB, PANEL DR22WL G)
B	**E95516700A**	**PCB ASSY,MAIN DR22WL G**	1	
C	(E95516500A)	PCB ASSY,AUDIO DR22WL G	1	Refer to page 16 (GATHER PCB, PANEL DR22WL G)

6. PC Boards and Parts List

基板図とパーツリスト

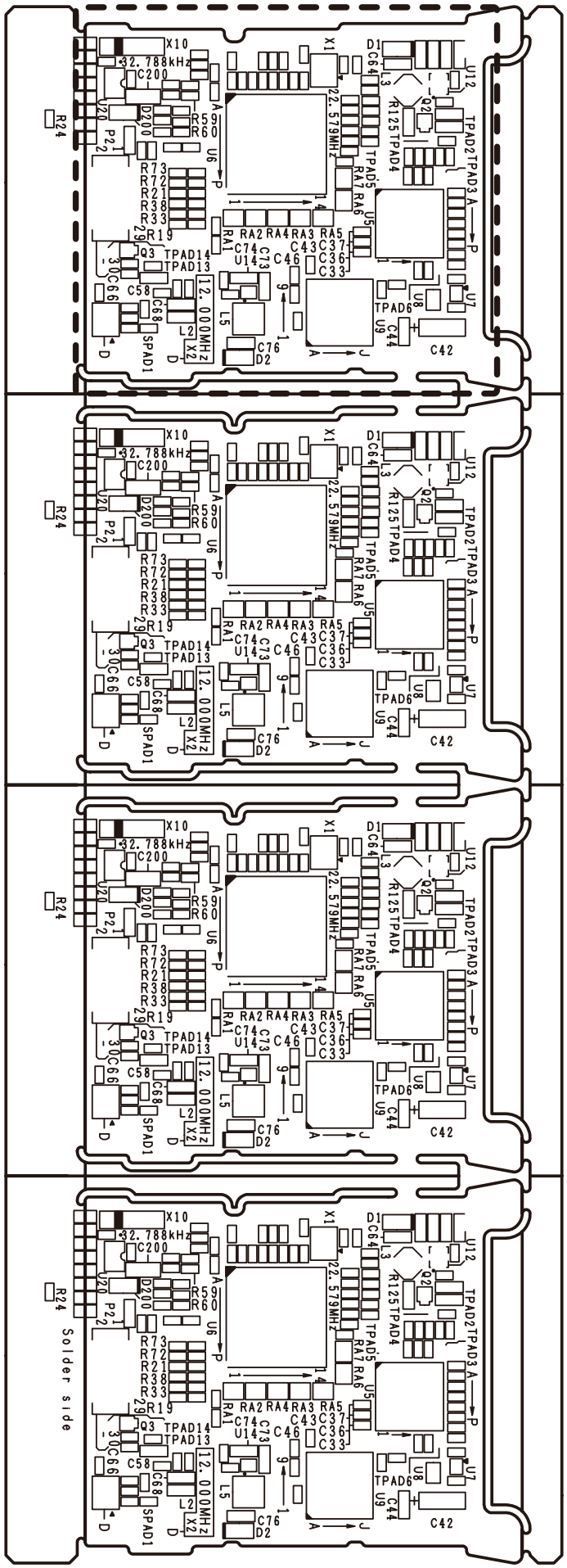
GATHER PCB,MAIN DR22WL G (Side A)



CAUTION The portion in the dashed box consists of service parts that need to be ordered using part numbers in Bold.

注意 破線部分は、太字品番で発注する補修部品になります。

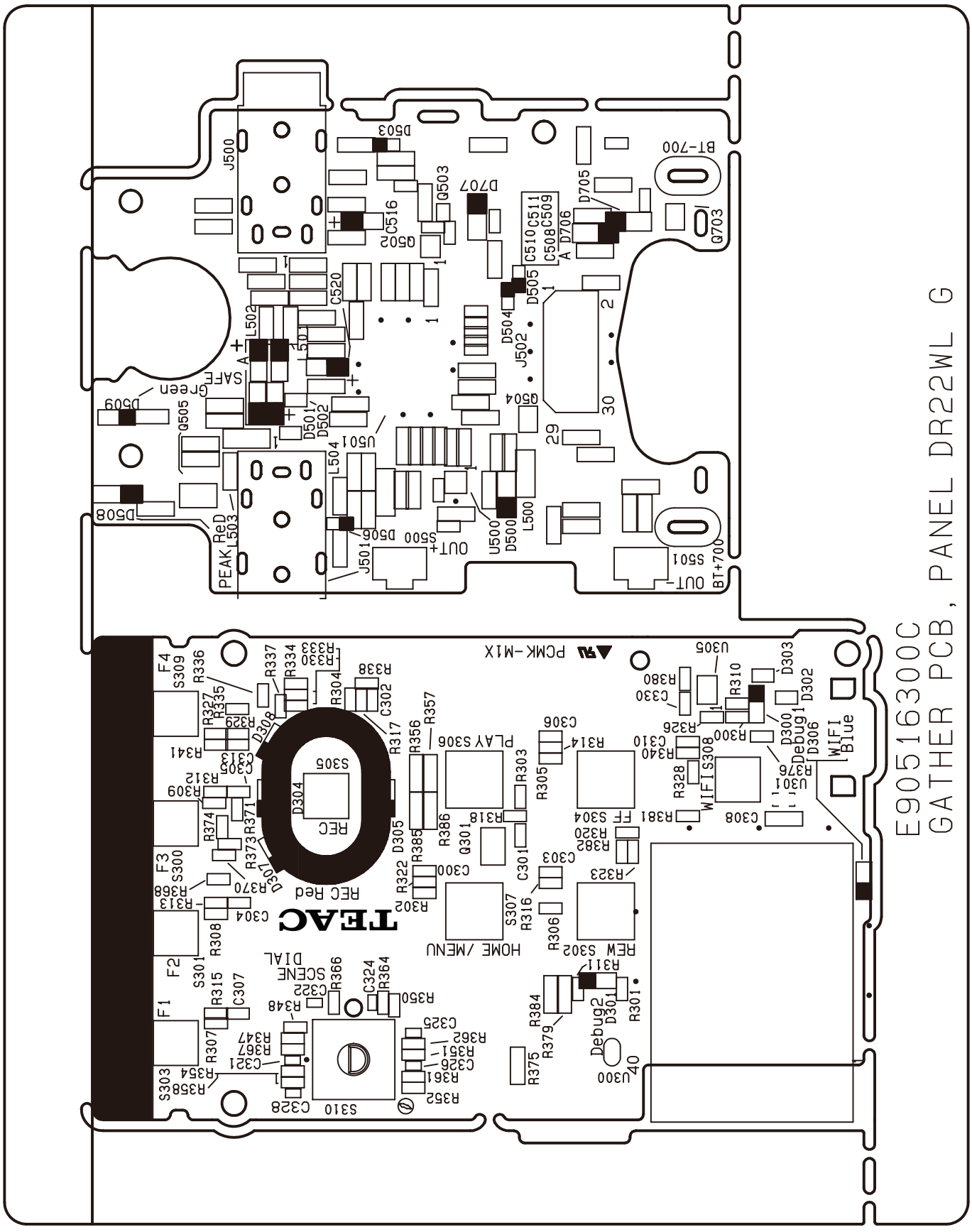
GATHER PCB,MAIN DR22WL G (Side B)



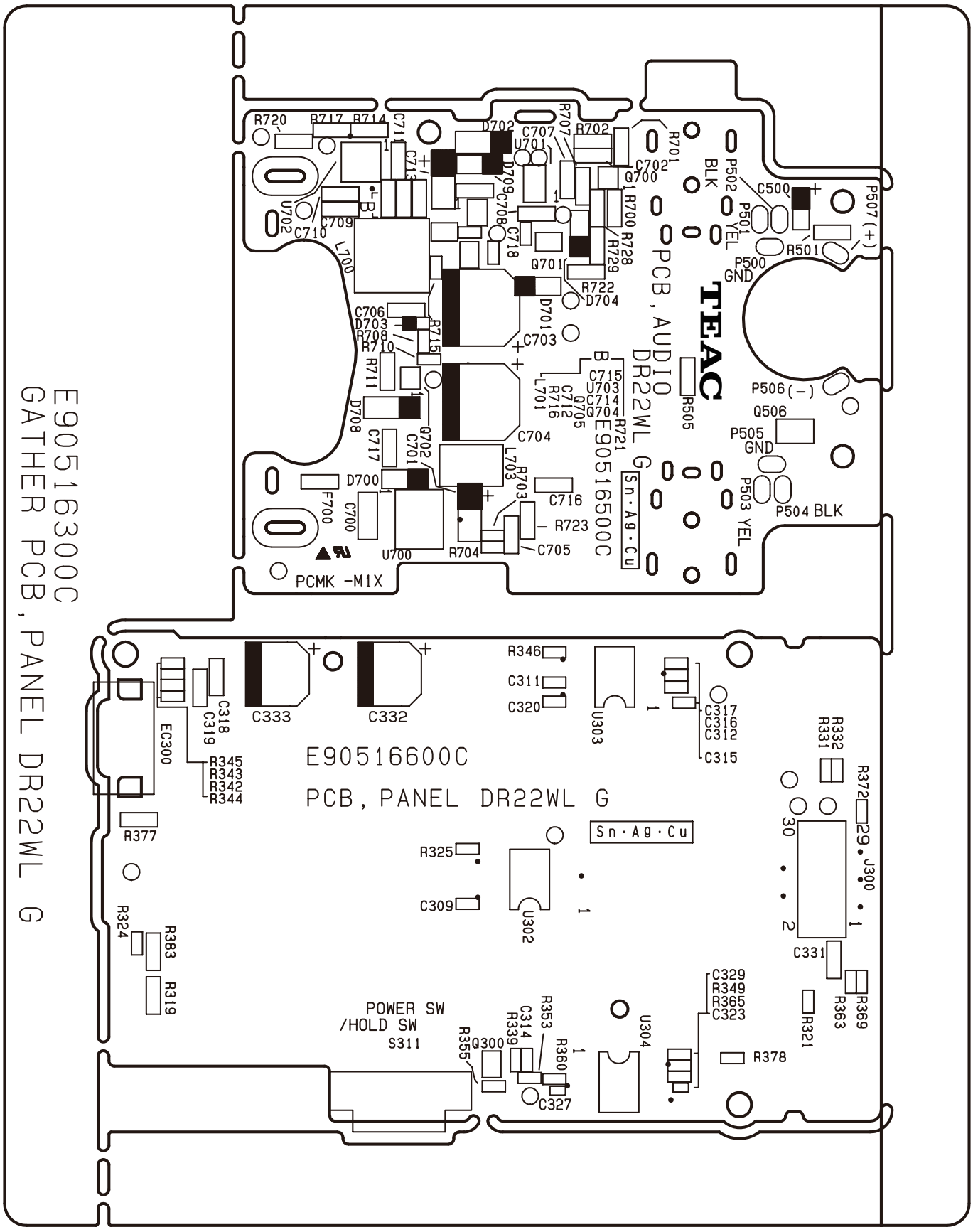
CAUTION The portion in the dashed box consists of service parts that need to be ordered using part numbers in Bold.

注意 破線部分は、太字品番で発注する補修部品になります。

GATHER PCB,PANEL DR22WL G (Side A)



GATHER PCB,PANEL DR22WL G (Side B)



CAUTION Part with numbers in parentheses ( ) cannot be ordered. If you want to order service parts, be sure to use "Child" part numbers (numbers in Bold), which refer to individual parts of a parent part.

注 意 "( )" 付き品番は、発注できません。補修部品を発注する際は、太字品番で発注してください。

GATHER PCB, MAIN DR22WL G
メイン 基板

PARTS NO.	DESCRIPTION.	REMARKS
E95516700A	PCB ASSY,MAIN DR22WL G	
(E95516400A)	GATHER PCBA,MAIN DR22WL G	
(E95516454A)	GA PCBA,MAIN CHI DR22WL G	[CHI]

GATHER PCB, PANEL DR22WL G
パネル 基板

PARTS NO.	DESCRIPTION.	REMARKS
E95516300A	GATHER PCBA,PANEL DR22WLG	
E95516354A	GA PCBA,PANEL CHI DR22WLG	[CHI]
(E95516500A)	PCB ASSY,AUDIO DR22WL G	
(E95516600A)	PCB ASSY,PANEL DR22WL G	

7. Safety parts
安全部品

Items

REF.NO.	PARTS NO.	DESCRIPTION.	QTY	REMARKS
F700	**E0178564**	FUSE,ERBRE2R00V G	1	⚠

8. Included Accessories

付属品

Included Accessories

REF.NO.	PARTS NO.	DESCRIPTION .	REMARKS
	D01235000B	OWNERS MNL,DR22WL A G	
	D01235054A	OWNERS MNL,DR22WL C G	[CHI]
	D01244700A	SHEET,INS JE DR44WL22L G	
	T0019710	MICROSD,PTA02038 GT	
	E0225260	CABLE ASSY,MICROUSB 08N G	

NOTES

- **PC boards shown are viewed from parts side.**
- **Parts marked with * require longer delivery time.**
- **The parts with no reference number or no parts number in the exploded views are not supplied.**
- **As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.**
- **⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.**
- **Parts of [ ] mark can be used only with the version designated.**

  [JPN] : JAPAN [T/C] : U.S.A./CANADA [KOR] : KOREA
  [EUR] : EUROPE [UK] : U.K.
  [AUS] : AUSTRALIA [TM] :TAIWAN
  [CHI] : CHINA [EX/BR] : BRAZIL
  [EX/T/C] : U.S.A./CANADA/SOUTH AMERICA

注意

- **プリント基板図は部品面を示しています。**
- ***印の部品は納期が若干かかります。あらかじめご了承ください。**
- **分解図に部番のない部品および品番のない部品は供給できません。**
- **標準の抵抗、コンデンサーは省略してあります。回路図を参照してください。**
- **⚠ 印は安全重要部品です。交換する時は必ず指定の部品を使用してください。**
- **仕向先**

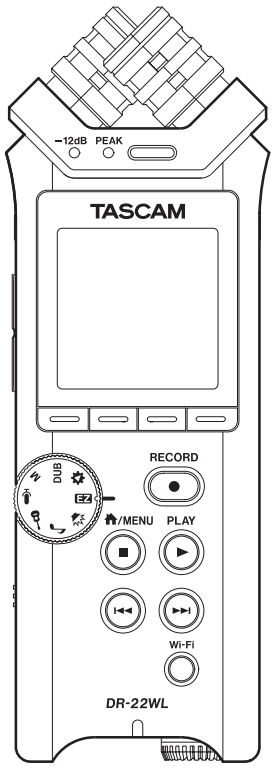
  [JPN] : JAPAN [T/C] : U.S.A./CANADA [KOR] : KOREA
  [EUR] : EUROPE [UK] : U.K.
  [AUS] : AUSTRALIA [TM] :TAIWAN
  [CHI] : CHINA [EX/BR] : BRAZIL
  [EX/T/C] : U.S.A./CANADA/SOUTH AMERICA

TASCAM

SERVICE MANUAL

DR-22WL

Linear PCM Recorder



Exploded Views and Parts List

INSTRUCTIONS FOR SERVICE PERSONNEL

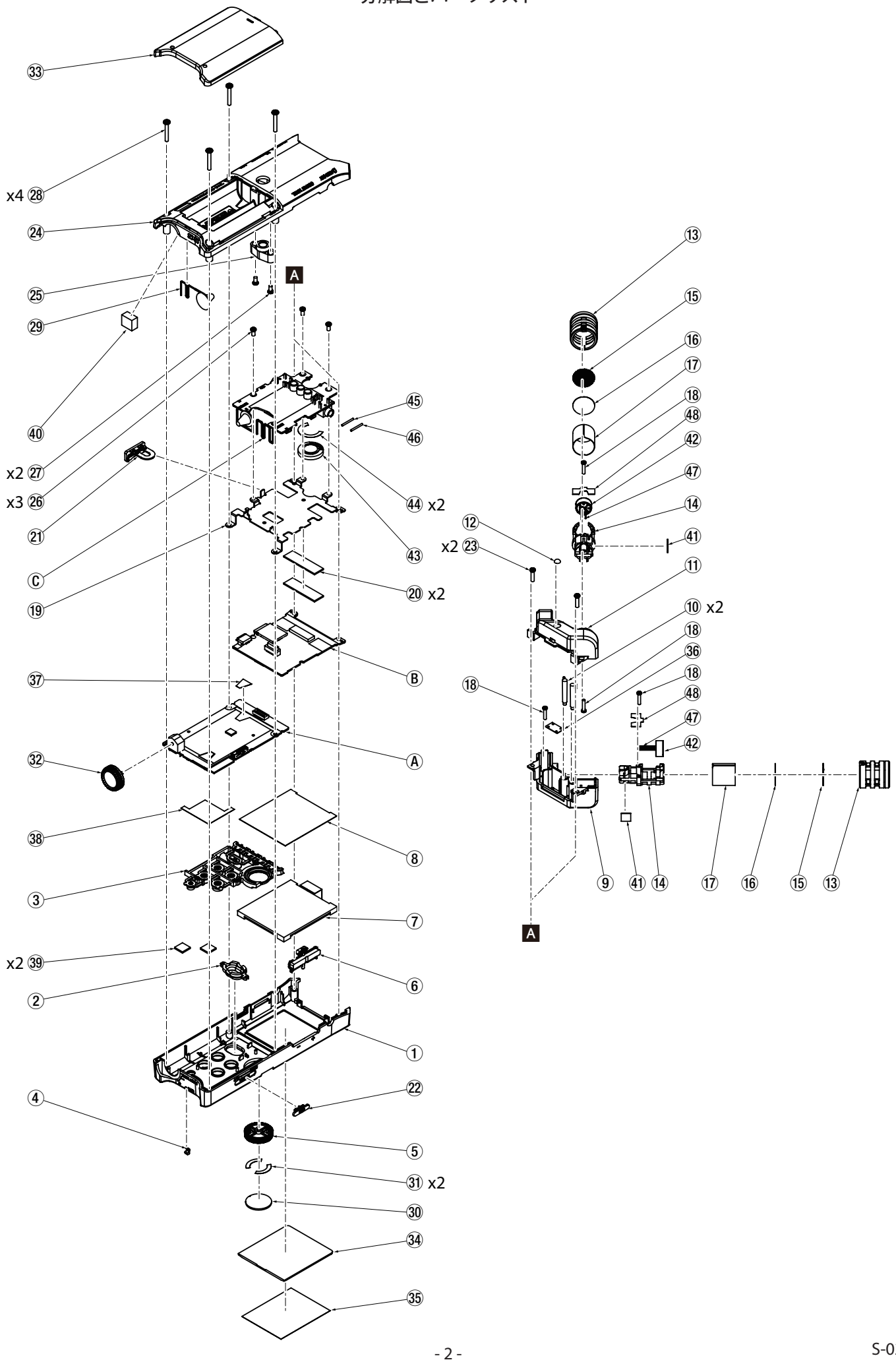
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Effective : Mar, 2015

S-0273

Exploded Views and Parts List

分解図とパーツリスト



CAUTION Part with numbers in parentheses ( ) cannot be ordered.
注 意 "( )"付き品番は、発注できません。

REF.NO.	PARTS NO.	DESCRIPTION	QTY.	REMARKS
1	M03694100C	CASE,TOP DR22 G	1	
2	M03695200A	LENS,REC DR22 G	1	
3	M03695100B	BUTTON,DR22 G	1	
4	M03695300B	LENS,WIFI DR22 G	1	
5	M03694800B	KNOB,DIAL BASE DR22 G	1	
6	M03341000B	BUTTON,VOL DR40 G	1	
7	E02282500A	LCD,221-3062-2133CD G	1	
8	M03733800A	SHEET,PET 41X46XT02 BK G	1	
9	M03694400B	COVER,MIC TOP DR22 G	1	
10	M03695400B	LENS,PEAK DR22 G	2	
11	M03694500A	COVER,MIC BTM DR22 G	1	
12	M02757710A	FOOT,D40*H15 PT7 G	1	
13	M03694300A	CASE,MIC DR22 G	2	
14	M03696100C	HOLDER,MIC DR22 G	2	
15	M03492200A	PLATE,MIC IM2X G	2	
16	M03492400A	SHEET,MIC IM2X G	2	
17	M03696200A	SHEET,MESH DR22 G	2	
18	B00326200A	SCREW,MPPR 1.7*8FCM G	4	
19	M03695500A	CHASSIS,DR22 G	1	
20	M01643200A	SHEET,PANEL FRONT G	2	
21	M03694600A	COVER,MICRO SD DR22 G	1	
22	M03341100A	KNOB,SLIDE DR40 G	1	
23	B00198808A	SCREW,BPP 2*8FZC G	2	
24	M03694200D	CASE,BTM DR22 G	1	
25	M03695600A	ESCUTCHEON,TRIPOD DR22 G	1	
26	B00303605A	SCREW,MPBR 2*5 FNI G	3	
27	B00303605A	SCREW,MPBR 2*5 FNI G	2	
28	B00325800A	SCREW,BPB M2*5*9 FZB G	4	
29	M03700400A	SPRING,BAT JOINT 44 G	1	
30	M03694900A	KNOB,DIAL COVER DR22 G	1	
31	M02944500A	TAPE,RING DP004 G	2	
32	M03695000B	KNOB,INPUT DR22 G	1	
33	M03694700C	COVER,BATTERY DR22 G	1	
34	M03695700A	WINDOW,DR22 G	1	
35	M03125500A	SHEET,WIN COVER DR-07R G	1	
36	M03717800A	SHEET,SPEAKER DR22 G	1	
37	M03733900A	SHEET,BATTERY DR22 G	1	
38	M03726900A	SHEET,SHIELD WIFI DR22 G	1	
39	M03725700A	CUSHION,GASKET 1X7X7 G	2	
40	M03736300A	CUSHION,PORON H32 5X9X8 G	1	

CAUTION Part with numbers in parentheses ( ) cannot be ordered.
注意 "( )"付き品番は、発注できません。

REF.NO.	PARTS NO.	DESCRIPTION	QTY.	REMARKS
41	M03325400A	SHEET,HM 6*6 G	3	
42	E02301200A	MIC,EM201M2S6B1 G	2	
43	E0228290	SPKR,GS16G30-T30W0-008 G	1	
44	M02944500A	TAPE,RING DP004 G	2	
45	E02294500A	HARN SPK,01#32 L20 RED G	1	
46	E02294600A	HARN SPK,01#32 L20 BLK G	1	
47	E01749200A	WIRE,MIC G_ P3P5 DR05 G	2	
48	M03736900B	SHEET,SHIELD WIRE DR22 G	2	
A	(E95516600A)	PCB ASSY,PANEL DR22WL G	1	*1
B	E95516700A	PCB ASSY,MAIN DR22WL G	1	
C	(E95516500A)	PCB ASSY,AUDIO DR22WL G	1	*1

*1 : These PCBAs are supplied by a PCBA below.
E95516300A GATHER PCBA,PANEL DR22WLG
E95516354A GA PCBA,PANEL CHI DR22WLG [CHI]

NOTES

- **PC boards shown are viewed from parts side.**
- **Parts marked with * require longer delivery time.**
- **The parts with no reference number or no parts number in the exploded views are not supplied.**
- **As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.**
- **⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.**
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注意

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- **標準の抵抗、コンデンサーは省略してあります。回路図を参照してください。**
- **⚠ 印は安全重要部品です。交換する時は必ず指定の部品を使用してください。**
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  [EX/T/C] : U.S.A./CANADA/SOUTH AMERICA

Contents

Most recent information

We request that you always use the latest firmware version for this unit. For information about the latest firmware, check the TEAC Global Site (**http://teac-global.com/**).

New functions

Additions in version 1.10

- A metronome function has been added.
- An AUTO DIVIDE function, which allows division at all marks at once, has been added.
- A time setting via Wi-Fi function has been added.
- A firmware updating via Wi-Fi function has been added.

Maintenance items

Fixes in version 1.10

- Operation stability has been improved.
- Wi-Fi connection stability has been improved.

Checking the firmware version

Check the firmware version used by your DR-22WL before updating it.

1. Turn the unit on.
2. Press the **HOME/MENU/■** button to open the MENU screen REC page.
3. Press the **F1** TAB button to open the INFO screen.
4. Use the **F2** ▲ or **F3** ▼ button to select VERSION and press the **F4** ENTER button.

   The VERSION screen opens.

   Check the "system" (firmware version) and "Wi-Fi" (Wi-Fi firmware version) shown here.

   If the "system" and "Wi-Fi" shown here are the same or newer than the versions that you are planning to use to update, there is no need to update.

Procedures for updating the firmware

CAUTION

Before conducting a firmware update, make sure that the unit has sufficient battery power or power is being supplied by the AC adapter (TASCAM PS-P515U; sold separately). If the remaining battery charge is too low, the unit will not allow the update to start.

1. Download the latest firmware from the TEAC Global Site (**http://teac-global.com/**). If the downloaded file is in ZIP format or another compressed file type, decompress it.
2. Turn the unit on and use the included USB cable to connect the unit to the computer. The computer will recognize the unit as an external drive (external storage device).
3. Copy the downloaded firmware to the "UTILITY" folder on the DR-44WL ("DR-22WL_XX.110" for system version 1.10 and "DR-22WL_WIFIXX.101" for Wi-Fi version 1.01).
4. After copying completes, use the proper procedures to disconnect the unit from the computer, and then turn the unit off.

■ Updating the program

5. While pressing the **⌂/MENU/■** and **►►I** buttons, turn the unit on.

   The unit will launch in PROGRAM UPDATE mode and the update file will be shown on the screen.

NOTE

This screen shows the firmware update files (system and Wi-Fi) in the "UTILITY" folder on the unit.

The firmware copied in step 3 above should be shown.

If there is no update file, `No Update File` ***will appear on the screen***

6. Use the **F2** ▲ and **F3** ▼ buttons to select the system firmware and press the **F4** ENTER button.

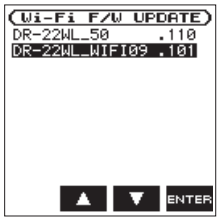
   The current version number will be shown on the left and the update version number will be shown on the right.

7. Press the **F4** ENTER button to start the program update.
8. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
9. Refer to "Checking the firmware version" and confirm that the `system` shows the latest firmware version.

■ Updating the Wi-Fi

10. While pressing the **Wi-Fi** and **►►I** buttons, turn the unit on.

    The unit will launch in Wi-Fi F/W UPDATE mode and the update file will be shown on the screen.



11. Use the **F2** ▲ and **F3** ▼ buttons to select the Wi-Fi firmware and press the **F4** ENTER button.

12. The current version number will be shown on the left and the update version number will be shown on the right.
13. Press the **F4** ENTER button to start the Wi-Fi update.
14. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
15. Refer to "Checking the firmware version" and confirm that the `Wi-Fi` shows the latest firmware version.

    This completes the update of the unit.
16. Connect the unit to a computer by USB and delete the firmware update file in the "UTILITY" folder on the unit.

Contents

Most recent information

We request that you always use the latest firmware version for this unit. For information about the latest firmware, check the TEAC Global Site (**http://teac-global.com/**).

New functions

Additions in version 1.20

- File operations have been added to the Quick menu
  PROTECT: function to protect files
  CLR ALL MARKS: function to delete all marks in a file
- A folder operation has been added to the quick menu
  FOLDER DELETE: function to delete empty folders
- Ability to add marks manually during playback
- Ability to clear specified marks
- Function that adds marks automatically when the PEAK indicator lights
- Ability to skip marks by type
- Ability to record XRI information
- Ability to show XRI information
- Ability to delete XRI information

Additions in version 1.10

- A metronome function has been added.
- An AUTO DIVIDE function, which allows division at all marks at once, has been added.
- A time setting via Wi-Fi function has been added.
- A firmware updating via Wi-Fi function has been added.

Maintenance items

Fixes in version 1.21

- Operation stability has been improved.

Fixes in version 1.20

- Operation stability has been improved.
- Stability has been improved when using DR CONTROL.

Fixes in version 1.14

- "CARD FULL" would occur even when an SD card had enough open space. This has been fixed.
- Operation stability has been improved.
- Stability has been improved when using DR CONTROL.

Fixes in version 1.13

- Operation when using DR CONTROL has been improved.
- Wi-Fi connection stability has been improved.
- Operation stability has been improved.

Fixes in version 1.12

- Stability when controlling the unit using the dedicated DR CONTROL application has been improved.
- The process of reading WAV files has been improved.

Fixes in version 1.11

- The precision of the remaining battery indicator when using Ni-MH batteries has been improved.
- The remaining battery restriction when starting to use Wi-Fi has been improved.
- The saving of settings when turning the unit off has been improved.

Fixes in version 1.10

- Operation stability has been improved.
- Wi-Fi connection stability has been improved.

Checking the firmware version

Check the firmware version used by your DR-22WL before updating it.

1. Turn the unit on.
2. Press the **⌂/MENU/■** button to open the MENU screen.
3. Press the **F1** button to open the INFO screen.
4. Use the **F2** ▲ or **F3** ▼ button to select VERSION and press the **F4** ENTER button.
   The VERSION screen opens.
   Check the "system" (firmware version) and "Wi-Fi" (Wi-Fi firmware version) shown here.
   If the "system" and "Wi-Fi" shown here are the same or newer than the versions that you are planning to use to update, there is no need to update.

Procedures for updating the firmware

CAUTION

Before conducting a firmware update, make sure that the unit has sufficient battery power or power is being supplied by the AC adapter (TASCAM PS-P515U; sold separately). If the remaining battery charge is too low, the unit will not allow the update to start.

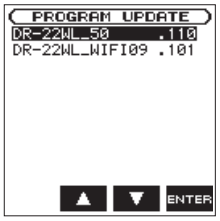
Updating the firmware using just the main unit

CAUTION

Firmware version 1.13 is necessary to update to firmware version 1.14 or later. Update the firmware to version 1.13 in advance. An error will occur and the update will not complete properly if you try to update to version 1.14 or later from version 1.12 or earlier.
The same update procedures can be used for both version 1.13 and 1.14.

1. Download the latest firmware from the TEAC Global Site (**http://teac-global.com/**). If the downloaded file is in ZIP format or another compressed file type, decompress it.
2. Turn the unit on and use the included USB cable to connect the unit to the computer. The computer will recognize the unit as an external drive (external storage device).
3. Copy the downloaded firmware ("DR-22WL_c_XX.114" for SYSTEM version 1.14) to the "UTILITY" folder on the DR-22WL.
4. After copying completes, use the proper procedures to disconnect the unit from the computer, and then turn the unit off.
5. While pressing the **⌂/MENU/■** and **►►I** buttons, turn the unit on.

   The unit will launch in PROGRAM UPDATE mode and the update file will be shown on the screen.



NOTE

This screen shows the firmware update files in the "UTILITY" folder on the unit.

The firmware copied in step 3 above should be shown.

If there is no update file, `No Update File` ***will appear on the screen***

6. Use the **F2** ▲ and **F3** ▼ buttons to select the system firmware and press the **F4** ENTER button.

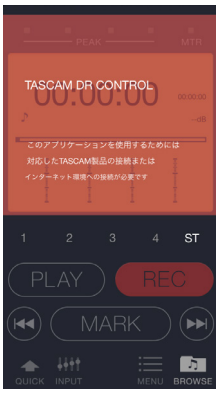
   The current version number will be shown on the left and the update version number will be shown on the right.

7. Press the **F4** ENTER button to start the program update.
8. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
9. Refer to "Checking the firmware version" and confirm that the `system` shows the latest firmware version.

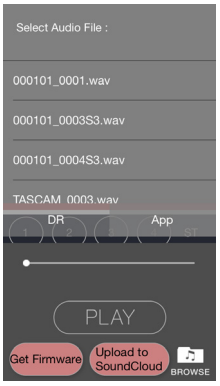
Updating the firmware using the dedicated application

You can use the free dedicated application (TASCAM DR CONTROL) to update the unit's firmware. This example explains how to use TASCAM DR CONTROL installed on a smartphone.

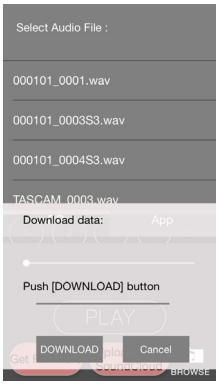
1. Connect the smart phone that has TASCAM DR CONTROL installed to an external access point by Wi-Fi.
2. Launch TASCAM DR CONTROL.
3. Press the "BROWSE" button on the application screen.



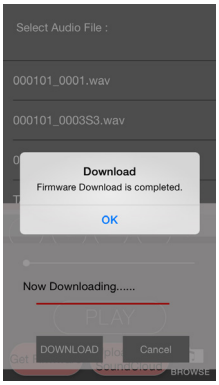
4. Press the "Get Firmware" button on the application screen.



5. Press the "DOWNLOAD" button on the application screen.

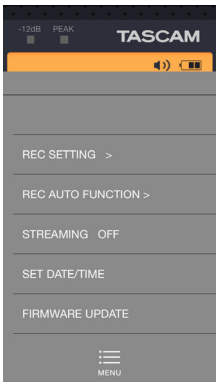


6. When the "Firmware Download is completed." message appears on the application screen, press the "OK" button.



7. Disconnect the smart phone with TASCAM DR CONTROL from the external access point, and connect it to the DR–22WL by Wi-Fi.
8. Launch TASCAM DR CONTROL.
9. Press the "MENU" button on the application screen.

10. Press "FIRM UPDATE" on the application screen. Firmware updating starts on the DR-22WL.



After updating completes, the DR-22WL will automatically turn off.

Contents

Most recent information

We request that you always use the latest firmware version for this unit. For information about the latest firmware, check the TEAC Global Site (**http://teac-global.com/**).

New functions

Additions in version 1.20

- File operations have been added to the Quick menu
  PROTECT: function to protect files
  CLR ALL MARKS: function to delete all marks in a file
- A folder operation has been added to the quick menu
  FOLDER DELETE: function to delete empty folders
- Ability to add marks manually during playback
- Ability to clear specified marks
- Function that adds marks automatically when the PEAK indicator lights
- Ability to skip marks by type
- Ability to record XRI information
- Ability to show XRI information
- Ability to delete XRI information

Additions in version 1.10

- A metronome function has been added.
- An AUTO DIVIDE function, which allows division at all marks at once, has been added.
- A time setting via Wi-Fi function has been added.
- A firmware updating via Wi-Fi function has been added.

Maintenance items

Fixes in version 1.20

- Operation stability has been improved.
- Stability has been improved when using DR CONTROL.

Fixes in version 1.14

- "CARD FULL" would occur even when an SD card had enough open space. This has been fixed.
- Operation stability has been improved.
- Stability has been improved when using DR CONTROL.

Fixes in version 1.13

- Operation when using DR CONTROL has been improved.
- Wi-Fi connection stability has been improved.
- Operation stability has been improved.

Fixes in version 1.12

- Stability when controlling the unit using the dedicated DR CONTROL application has been improved.
- The process of reading WAV files has been improved.

Fixes in version 1.11

- The precision of the remaining battery indicator when using Ni-MH batteries has been improved.
- The remaining battery restriction when starting to use Wi-Fi has been improved.
- The saving of settings when turning the unit off has been improved.

Fixes in version 1.10

- Operation stability has been improved.
- Wi-Fi connection stability has been improved.

Checking the firmware version

Check the firmware version used by your DR-22WL before updating it.

1. Turn the unit on.
2. Press the **⌂/MENU/■** button to open the MENU screen.
3. Press the **F1** button to open the INFO screen.
4. Use the **F2** ▲ or **F3** ▼ button to select VERSION and press the **F4** ENTER button.
   The VERSION screen opens.
   Check the "system" (firmware version) and "Wi-Fi" (Wi-Fi firmware version) shown here.
   If the "system" and "Wi-Fi" shown here are the same or newer than the versions that you are planning to use to update, there is no need to update.

Procedures for updating the firmware

CAUTION

Before conducting a firmware update, make sure that the unit has sufficient battery power or power is being supplied by the AC adapter (TASCAM PS-P515U; sold separately). If the remaining battery charge is too low, the unit will not allow the update to start.

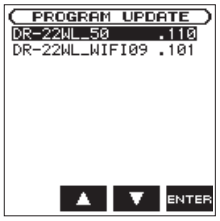
Updating the firmware using just the main unit

CAUTION

Firmware version 1.13 is necessary to update to firmware version 1.14 or later. Update the firmware to version 1.13 in advance. An error will occur and the update will not complete properly if you try to update to version 1.14 or later from version 1.12 or earlier.
The same update procedures can be used for both version 1.13 and 1.14.

1. Download the latest firmware from the TEAC Global Site (**http://teac-global.com/**). If the downloaded file is in ZIP format or another compressed file type, decompress it.
2. Turn the unit on and use the included USB cable to connect the unit to the computer. The computer will recognize the unit as an external drive (external storage device).
3. Copy the downloaded firmware ("DR-22WL_c_XX.114" for SYSTEM version 1.14) to the "UTILITY" folder on the DR-22WL.
4. After copying completes, use the proper procedures to disconnect the unit from the computer, and then turn the unit off.
5. While pressing the **⌂/MENU/■** and **►►I** buttons, turn the unit on.

   The unit will launch in PROGRAM UPDATE mode and the update file will be shown on the screen.



NOTE

This screen shows the firmware update files in the "UTILITY" folder on the unit.

The firmware copied in step 3 above should be shown.

If there is no update file, `No Update File` ***will appear on the screen***

6. Use the **F2** ▲ and **F3** ▼ buttons to select the system firmware and press the **F4** ENTER button.

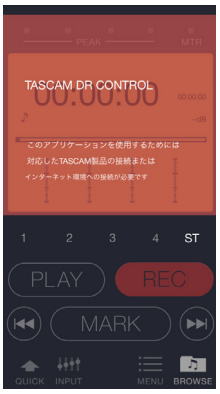
   The current version number will be shown on the left and the update version number will be shown on the right.

7. Press the **F4** ENTER button to start the program update.
8. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
9. Refer to "Checking the firmware version" and confirm that the `system` shows the latest firmware version.

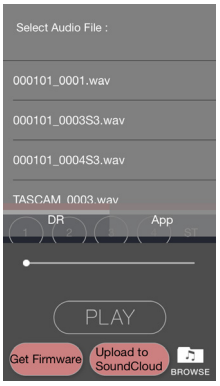
Updating the firmware using the dedicated application

You can use the free dedicated application (TASCAM DR CONTROL) to update the unit's firmware. This example explains how to use TASCAM DR CONTROL installed on a smartphone.

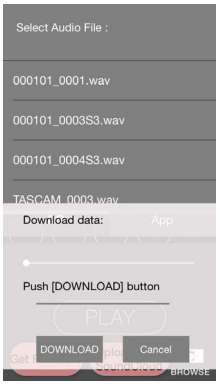
1. Connect the smart phone that has TASCAM DR CONTROL installed to an external access point by Wi-Fi.
2. Launch TASCAM DR CONTROL.
3. Press the "BROWSE" button on the application screen.



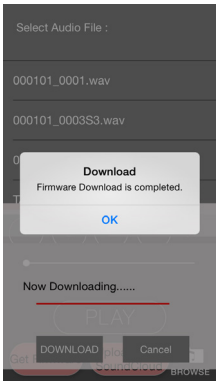
4. Press the "Get Firmware" button on the application screen.



5. Press the "DOWNLOAD" button on the application screen.

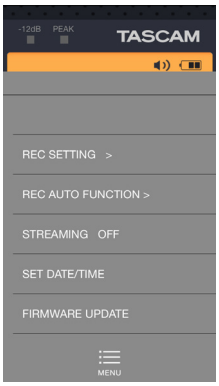


6. When the "Firmware Download is completed." message appears on the application screen, press the "OK" button.



7. Disconnect the smart phone with TASCAM DR CONTROL from the external access point, and connect it to the DR–22WL by Wi-Fi.
8. Launch TASCAM DR CONTROL.
9. Press the "MENU" button on the application screen.

10. Press "FIRM UPDATE" on the application screen. Firmware updating starts on the DR-22WL.



After updating completes, the DR-22WL will automatically turn off.

Contents

Most recent information

We request that you always use the latest firmware version for this unit. For information about the latest firmware, check the TEAC Global Site (**http://teac-global.com/**).

New functions

Additions in version 1.10

- A metronome function has been added.
- An AUTO DIVIDE function, which allows division at all marks at once, has been added.
- A time setting via Wi-Fi function has been added.
- A firmware updating via Wi-Fi function has been added.

Maintenance items

Fixes in version 1.14

- "CARD FULL" would occur even when an SD card had enough open space. This has been fixed.
- Operation stability has been improved.
- Stability has been improved when using DR CONTROL.

Fixes in version 1.13

- Operation when using DR CONTROL has been improved.
- Wi-Fi connection stability has been improved.
- Operation stability has been improved.

Fixes in version 1.12

- Stability when controlling the unit using the dedicated DR CONTROL application has been improved.
- The process of reading WAV files has been improved.

Fixes in version 1.11

- The precision of the remaining battery indicator when using Ni-MH batteries has been improved.
- The remaining battery restriction when starting to use Wi-Fi has been improved.
- The saving of settings when turning the unit off has been improved.

Fixes in version 1.10

- Operation stability has been improved.
- Wi-Fi connection stability has been improved.

Checking the firmware version

Check the firmware version used by your DR-22WL before updating it.

1. Turn the unit on.
2. Press the **⌂/MENU/■** button to open the MENU screen.
3. Press the **F1** TAB button to open the INFO screen.
4. Use the **F2** ▲ or **F3** ▼ button to select VERSION and press the **F4** ENTER button.

   The VERSION screen opens.

   Check the "system" (firmware version) and "Wi-Fi" (Wi-Fi firmware version) shown here.

   If the "system" and "Wi-Fi" shown here are the same or newer than the versions that you are planning to use to update, there is no need to update.

Procedures for updating the firmware

CAUTION

Before conducting a firmware update, make sure that the unit has sufficient battery power or power is being supplied by the AC adapter (TASCAM PS-P515U; sold separately). If the remaining battery charge is too low, the unit will not allow the update to start.

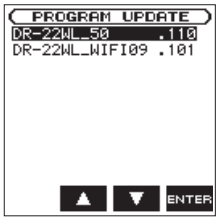
Updating the firmware using just the main unit

CAUTION

Firmware version 1.13 is necessary to update to firmware version 1.14 or later. Update the firmware to version 1.13 in advance. An error will occur and the update will not complete properly if you try to update to version 1.14 or later from version 1.12 or earlier.
The same update procedures can be used for both version 1.13 and 1.14.

1. Download the latest firmware from the TEAC Global Site (**http://teac-global.com/**). If the downloaded file is in ZIP format or another compressed file type, decompress it.
2. Turn the unit on and use the included USB cable to connect the unit to the computer. The computer will recognize the unit as an external drive (external storage device).
3. Copy the downloaded firmware ("DR-22WL_c_XX.114" for SYSTEM version 1.14) to the "UTILITY" folder on the DR-22WL.
4. After copying completes, use the proper procedures to disconnect the unit from the computer, and then turn the unit off.
5. While pressing the **⌂/MENU/■** and **►►I** buttons, turn the unit on.

   The unit will launch in PROGRAM UPDATE mode and the update file will be shown on the screen.



NOTE

This screen shows the firmware update files in the "UTILITY" folder on the unit.

The firmware copied in step 3 above should be shown.

If there is no update file, `No Update File` ***will appear on the screen***

6. Use the **F2** ▲ and **F3** ▼ buttons to select the system firmware and press the **F4** ENTER button.

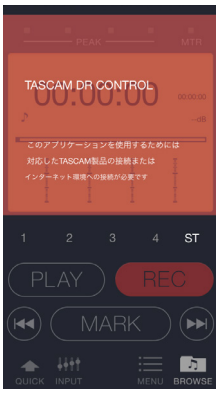
   The current version number will be shown on the left and the update version number will be shown on the right.

7. Press the **F4** ENTER button to start the program update.
8. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
9. Refer to "Checking the firmware version" and confirm that the `system` shows the latest firmware version.

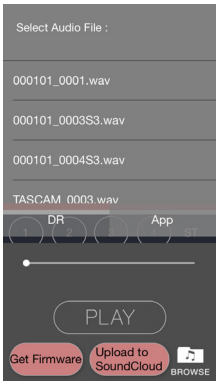
Updating the firmware using the dedicated application

You can use the free dedicated application (TASCAM DR CONTROL) to update the unit's firmware. This example explains how to use TASCAM DR CONTROL installed on a smartphone.

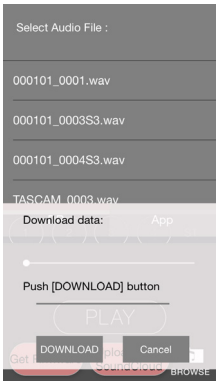
1. Connect the smart phone that has TASCAM DR CONTROL installed to an external access point by Wi-Fi.
2. Launch TASCAM DR CONTROL.
3. Press the "BROWSE" button on the application screen.



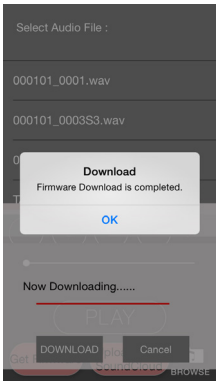
4. Press the "Get Firmware" button on the application screen.



5. Press the "DOWNLOAD" button on the application screen.

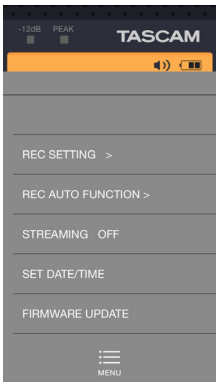


6. When the "Firmware Download is completed." message appears on the application screen, press the "OK" button.



7. Disconnect the smart phone with TASCAM DR CONTROL from the external access point, and connect it to the DR–22WL by Wi-Fi.
8. Launch TASCAM DR CONTROL.
9. Press the "MENU" button on the application screen.

10. Press "FIRM UPDATE" on the application screen. Firmware updating starts on the DR-22WL.



After updating completes, the DR-22WL will automatically turn off.

Contents

Most recent information

We request that you always use the latest firmware version for this unit. For information about the latest firmware, check the TEAC Global Site (**http://teac-global.com/**).

New functions

Additions in version 1.10

- A metronome function has been added.
- An AUTO DIVIDE function, which allows division at all marks at once, has been added.
- A time setting via Wi-Fi function has been added.
- A firmware updating via Wi-Fi function has been added.

Maintenance items

Fixes in version 1.13

- Operation when using DR CONTROL has been improved.
- Wi-Fi connection stability has been improved.
- Operation stability has been improved.

Fixes in version 1.12

- Stability when controlling the unit using the dedicated DR CONTROL application has been improved.
- The process of reading WAV files has been improved.

Fixes in version 1.11

- The precision of the remaining battery indicator when using Ni-MH batteries has been improved.
- The remaining battery restriction when starting to use Wi-Fi has been improved.
- The saving of settings when turning the unit off has been improved.

Fixes in version 1.10

- Operation stability has been improved.
- Wi-Fi connection stability has been improved.

Checking the firmware version

Check the firmware version used by your DR-22WL before updating it.

1. Turn the unit on.
2. Press the **⌂/MENU/■** button to open the MENU screen.
3. Press the **F1** button to open the INFO screen.
4. Use the **F2** ▲ or **F3** ▼ button to select VERSION and press the **F4** ENTER button.

   The VERSION screen opens.

   Check the "system" (firmware version) and "Wi-Fi" (Wi-Fi firmware version) shown here.

   If the "system" and "Wi-Fi" shown here are the same or newer than the versions that you are planning to use to update, there is no need to update.

Procedures for updating the firmware

CAUTION

Before conducting a firmware update, make sure that the unit has sufficient battery power or power is being supplied by the AC adapter (TASCAM PS-P515U; sold separately). If the remaining battery charge is too low, the unit will not allow the update to start.

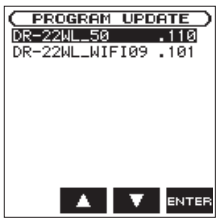
Updating the firmware using just the main unit

1. Download the latest firmware from the TEAC Global Site (**http://teac-global.com/**). If the downloaded file is in ZIP format or another compressed file type, decompress it.
2. Turn the unit on and use the included USB cable to connect the unit to the computer. The computer will recognize the unit as an external drive (external storage device).
3. Copy the downloaded firmware to the "UTILITY" folder on the DR-44WL ("DR-22WL_XX.110" for system version 1.10 and "DR-22WL_WIFIXX.101" for Wi-Fi version 1.01).
4. After copying completes, use the proper procedures to disconnect the unit from the computer, and then turn the unit off.

■ Updating the program

5. While pressing the **⌂/MENU/■** and **►►I** buttons, turn the unit on.

   The unit will launch in PROGRAM UPDATE mode and the update file will be shown on the screen.



NOTE

This screen shows the firmware update files (system and Wi-Fi) in the "UTILITY" folder on the unit.

The firmware copied in step 3 above should be shown.

If there is no update file, `No Update File` ***will appear on the screen***

6. Use the **F2** ▲ and **F3** ▼ buttons to select the system firmware and press the **F4** ENTER button.

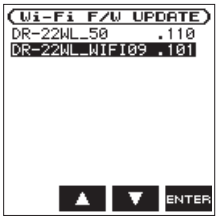
   The current version number will be shown on the left and the update version number will be shown on the right.

7. Press the **F4** ENTER button to start the program update.
8. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
9. Refer to "Checking the firmware version" and confirm that the `system` shows the latest firmware version.

■ Updating the Wi-Fi

10. While pressing the **Wi-Fi** and **►►I** buttons, turn the unit on.

    The unit will launch in Wi-Fi F/W UPDATE mode and the update file will be shown on the screen.



11. Use the **F2** ▲ and **F3** ▼ buttons to select the Wi-Fi firmware and press the **F4** ENTER button.

12. The current version number will be shown on the left and the update version number will be shown on the right.
13. Press the **F4** ENTER button to start the Wi-Fi update.
14. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
15. Refer to "Checking the firmware version" and confirm that the `Wi-Fi` shows the latest firmware version.

    This completes the update of the unit.

16. Connect the unit to a computer by USB and delete the firmware update file in the "UTILITY" folder on the unit.

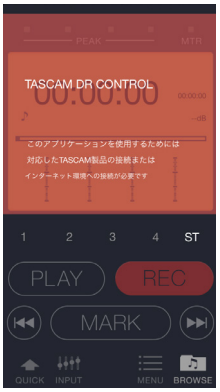
Updating the firmware using the dedicated application

You can use the free dedicated application (TASCAM DR CONTROL) to update the unit's firmware. This example explains how to use TASCAM DR CONTROL installed on a smartphone.

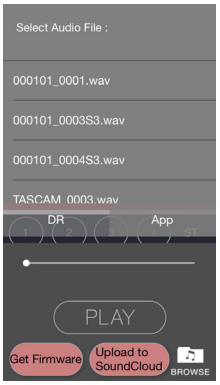
NOTE

Since the current Android version of the application (TASCAM DR CONTROL for Android) is a beta version, it does not include a firmware update function. If you do not see the firmware update function in the application, check the TEAC Global Site (http://teac-global.com/) for information about the newest version of TASCAM DR CONTROL.

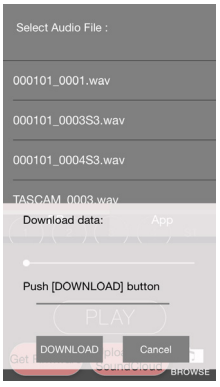
1. Connect the smart phone that has TASCAM DR CONTROL installed to an external access point by Wi-Fi.
2. Launch TASCAM DR CONTROL.
3. Press the "BROWSE" button on the application screen.



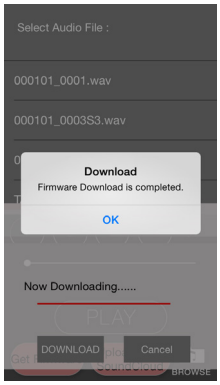
4. Press the "Get Firmware" button on the application screen.



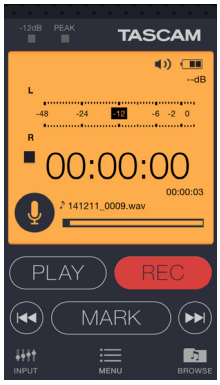
5. Press the "DOWNLOAD" button on the application screen.



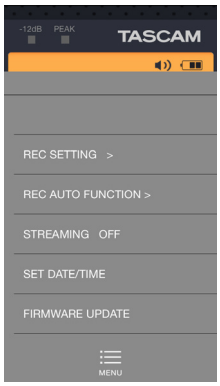
6. When the "Firmware Download is completed." message appears on the application screen, press the "OK" button.



7. Disconnect the smart phone with TASCAM DR CONTROL from the external access point, and connect it to the DR–22WL by Wi-Fi.
8. Launch TASCAM DR CONTROL.
9. Press the "MENU" button on the application screen.



10. Press "FIRM UPDATE" on the application screen. Firmware updating starts on the DR-22WL.



After updating completes, the DR-22WL will automatically turn off.

Contents

Most recent information

We request that you always use the latest firmware version for this unit. For information about the latest firmware, check the TEAC Global Site (**http://teac-global.com/**).

New functions

Additions in version 1.10

- A metronome function has been added.
- An AUTO DIVIDE function, which allows division at all marks at once, has been added.
- A time setting via Wi-Fi function has been added.
- A firmware updating via Wi-Fi function has been added.

Maintenance items

Fixes in version 1.12

- Stability when controlling the unit using the dedicated DR CONTROL application has been improved.
- The process of reading WAV files has been improved.

Fixes in version 1.11

- The precision of the remaining battery indicator when using Ni-MH batteries has been improved.
- The remaining battery restriction when starting to use Wi-Fi has been improved.
- The saving of settings when turning the unit off has been improved.

Fixes in version 1.10

- Operation stability has been improved.
- Wi-Fi connection stability has been improved.

Checking the firmware version

Check the firmware version used by your DR-22WL before updating it.

1. Turn the unit on.
2. Press the **⌂/MENU/■** button to open the MENU screen.
3. Press the **F1** button to open the INFO screen.
4. Use the **F2** or **F3** button to select VERSION and press the **F4** button.

   The VERSION screen opens.

   Check the "system" (firmware version) and "Wi-Fi" (Wi-Fi firmware version) shown here.

   If the "system" and "Wi-Fi" shown here are the same or newer than the versions that you are planning to use to update, there is no need to update.

Procedures for updating the firmware

CAUTION

Before conducting a firmware update, make sure that the unit has sufficient battery power or power is being supplied by the AC adapter (TASCAM PS-P515U; sold separately). If the remaining battery charge is too low, the unit will not allow the update to start.

1. Download the latest firmware from the TEAC Global Site (**http://teac-global.com/**). If the downloaded file is in ZIP format or another compressed file type, decompress it.
2. Turn the unit on and use the included USB cable to connect the unit to the computer. The computer will recognize the unit as an external drive (external storage device).
3. Copy the downloaded firmware to the "UTILITY" folder on the DR-44WL ("DR-22WL_XX.110" for system version 1.10 and "DR-22WL_WIFIXX.101" for Wi-Fi version 1.01).
4. After copying completes, use the proper procedures to disconnect the unit from the computer, and then turn the unit off.

■ Updating the program

5. While pressing the **⌂/MENU/■** and **►►I** buttons, turn the unit on.

   The unit will launch in PROGRAM UPDATE mode and the update file will be shown on the screen.

NOTE

This screen shows the firmware update files (system and Wi-Fi) in the "UTILITY" folder on the unit.

The firmware copied in step 3 above should be shown.

If there is no update file, `No Update File` ***will appear on the screen***

6. Use the **F2** ▲ and **F3** ▼ buttons to select the system firmware and press the **F4** ENTER button.

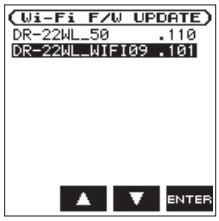
   The current version number will be shown on the left and the update version number will be shown on the right.

7. Press the **F4** ENTER button to start the program update.
8. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
9. Refer to "Checking the firmware version" and confirm that the `system` shows the latest firmware version.

■ Updating the Wi-Fi

10. While pressing the **Wi-Fi** and **►►I** buttons, turn the unit on.

    The unit will launch in Wi-Fi F/W UPDATE mode and the update file will be shown on the screen.



11. Use the **F2** ▲ and **F3** ▼ buttons to select the Wi-Fi firmware and press the **F4** ENTER button.

12. The current version number will be shown on the left and the update version number will be shown on the right.
13. Press the **F4** ENTER button to start the Wi-Fi update.
14. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
15. Refer to "Checking the firmware version" and confirm that the `Wi-Fi` shows the latest firmware version.

    This completes the update of the unit.
16. Connect the unit to a computer by USB and delete the firmware update file in the "UTILITY" folder on the unit.

Contents

Most recent information

We request that you always use the latest firmware version for this unit. For information about the latest firmware, check the TEAC Global Site (**http://teac-global.com/**).

New functions

Additions in version 1.10

- A metronome function has been added.
- An AUTO DIVIDE function, which allows division at all marks at once, has been added.
- A time setting via Wi-Fi function has been added.
- A firmware updating via Wi-Fi function has been added.

Maintenance items

Fixes in version 1.11

- The precision of the remaining battery indicator when using Ni-MH batteries has been improved.
- The remaining battery restriction when starting to use Wi-Fi has been improved.
- The saving of settings when turning the unit off has been improved.

Fixes in version 1.10

- Operation stability has been improved.
- Wi-Fi connection stability has been improved.

Checking the firmware version

Check the firmware version used by your DR-22WL before updating it.

1. Turn the unit on.
2. Press the **⌂/MENU/■** button to open the MENU screen REC page.
3. Press the **F1** TAB button to open the INFO screen.
4. Use the **F2** ▲ or **F3** ▼ button to select VERSION and press the **F4** ENTER button.

   The VERSION screen opens.

   Check the "system" (firmware version) and "Wi-Fi" (Wi-Fi firmware version) shown here.

   If the "system" and "Wi-Fi" shown here are the same or newer than the versions that you are planning to use to update, there is no need to update.

Procedures for updating the firmware

CAUTION

Before conducting a firmware update, make sure that the unit has sufficient battery power or power is being supplied by the AC adapter (TASCAM PS-P515U; sold separately). If the remaining battery charge is too low, the unit will not allow the update to start.

1. Download the latest firmware from the TEAC Global Site (**http://teac-global.com/**). If the downloaded file is in ZIP format or another compressed file type, decompress it.
2. Turn the unit on and use the included USB cable to connect the unit to the computer. The computer will recognize the unit as an external drive (external storage device).
3. Copy the downloaded firmware to the "UTILITY" folder on the DR-44WL ("DR-22WL_XX.110" for system version 1.10 and "DR-22WL_WIFIXX.101" for Wi-Fi version 1.01).
4. After copying completes, use the proper procedures to disconnect the unit from the computer, and then turn the unit off.

■ Updating the program

5. While pressing the **⌂/MENU/■** and **►►I** buttons, turn the unit on.

   The unit will launch in PROGRAM UPDATE mode and the update file will be shown on the screen.

NOTE

This screen shows the firmware update files (system and Wi-Fi) in the "UTILITY" folder on the unit.

The firmware copied in step 3 above should be shown.

If there is no update file, `No Update File` ***will appear on the screen***

6. Use the **F2** ▲ and **F3** ▼ buttons to select the system firmware and press the **F4** ENTER button.

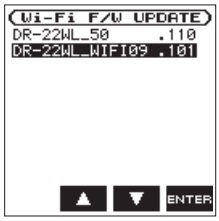
   The current version number will be shown on the left and the update version number will be shown on the right.

7. Press the **F4** ENTER button to start the program update.
8. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
9. Refer to "Checking the firmware version" and confirm that the `system` shows the latest firmware version.

■ Updating the Wi-Fi

10. While pressing the **Wi-Fi** and **►►I** buttons, turn the unit on.

    The unit will launch in Wi-Fi F/W UPDATE mode and the update file will be shown on the screen.



11. Use the **F2** ▲ and **F3** ▼ buttons to select the Wi-Fi firmware and press the **F4** ENTER button.

12. The current version number will be shown on the left and the update version number will be shown on the right.
13. Press the **F4** ENTER button to start the Wi-Fi update.
14. After the update completes, `Update Complete` will appear at the bottom of the screen. Then, the unit will turn off automatically. Turn it on again.
15. Refer to "Checking the firmware version" and confirm that the `Wi-Fi` shows the latest firmware version.

    This completes the update of the unit.
16. Connect the unit to a computer by USB and delete the firmware update file in the "UTILITY" folder on the unit.

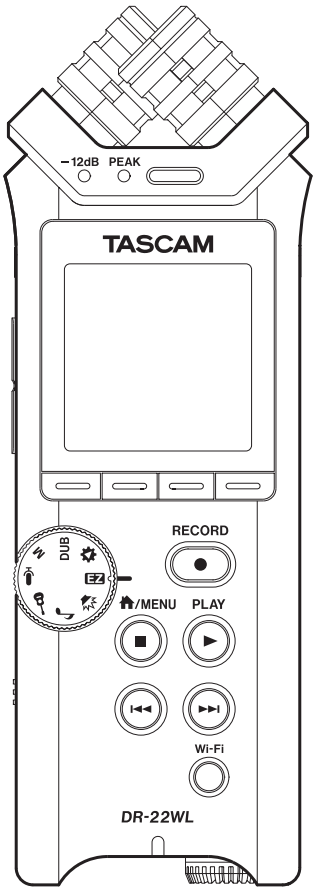
TASCAM

D01244520A

DR-22WL

Linear PCM Recorder

REFERENCE MANUAL



Hi-Res AUDIO

Wi Fi CERTIFIED

BLACKFIN PROCESSOR by Analog Devices

Contents

1 – Introduction

Features

- Compact audio recorder that uses microSD/microSDHC/microSDXC cards as recording media
- Built-in with high performance directional stereo microphones in XY positions
- Built-in Wi-Fi feature to use smartphone as remote control, transfer files from the PCM recorder, and playback audio
- Scene dial allows for easy recording
- Two overdubbing modes for sound dubbing
- Practice mode with features useful for instrument practice, such as I/O loop for repeated playback, VSA to adjust playback speed without changing the pitch, key-change and fine-tune to adjust the pitch
- 44.1/48/96 kHz, 16/24-bit, linear PCM (WAV/BWF format) recording possible
- 32–320 kbps MP3 format recording possible (compatible with ID3 tag v2.4)
- Overdubbing allows playback and input signals to be mixed and recorded together as a new file
- Built-in 0.3 W monaural output speaker
- Built-in reverb function can be used during recording and playback
- Auto-record function starts recording automatically when a set sound input level is detected
- Track incrementing function allows a recording to be split by creating a new file when desired
- Pre-recording (PRE REC) function allows the unit to record the 2 seconds of sound before recording is activated
- Peak reduction function is available to reduce the level automatically in case of excessively large input
- Limiter function is available to reduce the level automatically in case of excessively large input
- Low cut filter reduces low-frequency noise
- Self-timer function to start recording after a set period of time
- DIVIDE function allows files to be split where desired (only for WAV files)
- MARK function convenient for moving to specific locations
- File name format can be set to use a user-defined word or the date
- Resume function memorizes the playback position before the unit is turned off
- 3.5mm (1/8") jack for external stereo microphone input (provides plug-in power) or external stereo line input
- 3.5mm (1/8") line/headphones output jack
- 128 x 128 pixel LCD with backlight
- Micro-B type USB 2.0 port
- Operates on 2 AA batteries, AC adapter (sold separately: TASCAM PS- P515U), or USB bus power
- Tripod attachment screw-hole built into unit
- USB cable included

This product has a Blackfin® 16/32-bit embedded processor made by Analog Devices, Inc. This processor controls digital signal processing.
Inclusion of this Blackfin® processor in the product increases its performance and reduces its power consumption.

Conventions used in this manual

The following conventions are used in this manual:

- Buttons, connectors, and other parts of the DR-22WL are indicated by bold letters, such as "**MENU** button"
- Words that appear on the DR-22WL display are enclosed with quotation marks (_), such as DATE/TIME
- Text displayed on the display of the unit appears like this: ON.
- "MicroSD/microSDHC/microSDXC memory cards" are collectively called as "microSD card".
- Text shown on the computer display is enclosed with a bracket "_", such as "OK".
- The selected folder is indicated as the "current folder".
- Computer or portable audio devices that are connected via Wi-Fi with the DR-22WL are indicated as the "Wi-Fi device".
- Additional information is provided as necessary in tips, notes and cautions

TIP

These are tips about how to use the unit.

NOTE

These include additional explanations and special cases.

CAUTION

Failure to follow these instructions could result in injury, equipment damage or lost data, for example.

About microSD cards

The DR-22WL uses microSD cards for recording and playback.
Memory cards that you can use with the DR-22WL are microSD cards of 64 MB to 2 GB, microSDHC cards of 4GB to 32GB, and microSDXC cards of 64GB to 128GB.
Please refer to the TEAC Global Site (**http://teac-global.com**) to learn more on the list of compatible SD cards, or contact the TASCAM customer support service.

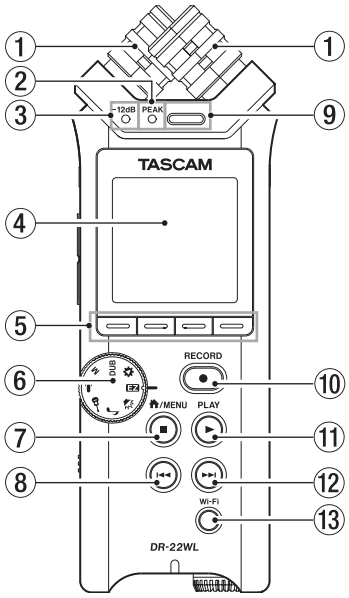
Precautions

microSD cards are precision devices. Please refer to the below when using memory cards to prevent memory and/or card damage:

- Do not leave a memory card in extremely hot or cold places
- Do not leave a memory card in extremely humid places
- Do not spill any liquids on the memory card
- Do not bend the card or subject it to any excessive force
- Do not subject the card to any physical shock
- Do not remove the card while the unit is accessing data, or recording, playing, or making data transfer
- Always store the memory card in a case

2 – Names and functions of parts

Top panel



① **Built-in stereo microphone**
This is a X-Y stereo and electret condenser microphone.
The built-in microphone becomes inactive when an external microphone or external input is connected to the **MIC/EXT IN** jack on the right-side panel.

② **PEAK indicator**
This will light in red immediately before the input noise increases to a distortion level (-2dB).

③ **–12dB indicator**
This will light in green when the input noise exceeds the –12dB level.

④ **Display**
Displays a variety of information.

⑤ **Function buttons**
Function of individual buttons changes according to what is shown on display.
The displayed icon at the bottom of the screen indicates the current function.

NOTE
For your convenience, this manual indicates the four function buttons as **F1**, **F2**, **F3**, and **F4** starting from the left.

⑥ **Scene dial**
Use this dial to change the unit setting according to the scene. (See "Scene recording mode" on page 16.)

⑦ **/MENU/■ button**
To display the MENU screen, press this button in home screen.
To return to the home screen, press this button in any screen display.

⑧ **◄◄ Fast rewind button**
Press this button while in play or stop mode to return to the beginning of a track.
Press and hold this button to search backwards.
Press this button and the **F2** button simultaneously to return to the previous mark.

⑨ **Built-in mono speaker**
Use this built-in speaker to listen to recordings.
No sound will play when:

- In recording standby
- Headphone is connected
- In recording mode
- Speaker output setting is turned off

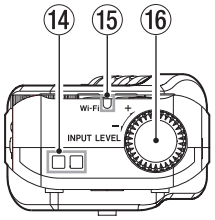
⑩ **RECORD button/REC indicator**
When you press this button during stop mode, the **REC** indicator flashes and the DR-22WL will go into recording standby mode.
When you press this button during the recording standby mode, the **REC** indicator lights and the DR-22WL starts recording.
When you press this button during recording, the **REC** indicator flashes.
In EASY mode, recording begins when you press this button during stop mode.

⑪ **PLAY button**
To start playback in home screen, press this button while in stop mode.
If you want to pause, press the button again.
When you select a file or folder in BROWSE screen and press the PLAY button, the unit will return to the home screen and start playing the selected file or folder from the beginning.

⑫ **►►I Fast forward button**
Press this button in playback or stop mode to skip to the next track.
Press and hold this button for fast forward search.
To move to the next mark, press this button and the **F2** button at the same time.

⑬ **Wi-Fi button**
Use this button to turn on/off the Wi-Fi function.

Front panel

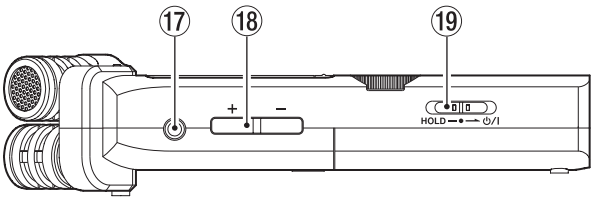


⑭ **Strap holder**
A strap can be attached to this holder.

⑮ **Wi-Fi indicator**
This indicator lights while the Wi-Fi module is in access.

⑯ **INPUT LEVEL volume**
Turn this dial to adjust the input level.
The input level setting will pop-up on display when making an adjustment.

Left side panel

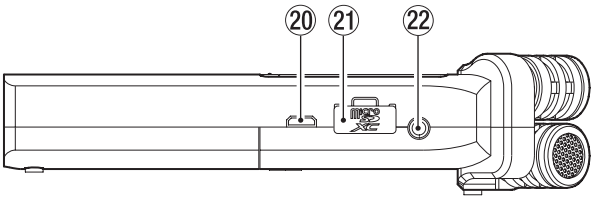


⑰ **🎧/LINE OUT jack**
A headphone or a line input jack of an external device (via stereo mini-jack cable) can be connected to this jack.

⑱ **OUTPUT LEVEL (+/–) buttons**
These buttons adjust the output sound level of the built-in speaker or the **🎧/LINE OUT** jack.
Volume level will pop-up on the bottom of the display while making adjustment.

⑲ **HOLD/⏻/❙switch**
To turn the power on/off, slide and hold the switch towards the ⏻/❙icon.
When you slide the switch towards the **HOLD** side, all the functions of the buttons are locked.

Right side panel



⑳ **USB port**
Use the supplied USB cable to connect the DR-22WL with a computer. (See "8 – Connecting with a computer" on page 32.)
Power can be supplied by using this USB cable or from an AC adapter (sold separately: GPE053B).

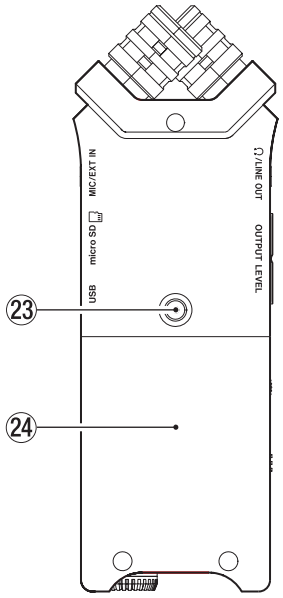
CAUTION

Connect the DR-22WL directly be connected directly with the computer, not through a USB hub.

㉑ **microSD card slot**
Insert or remove a microSD card.

㉒ **MIC/EXT IN jack**
Connect an external stereo microphone or external input to this jack. It is compatible with plug-in power.
The built-in microphone is disable when an external microphone is connected to the **MIC/EXT IN** jack.

Bottom panel

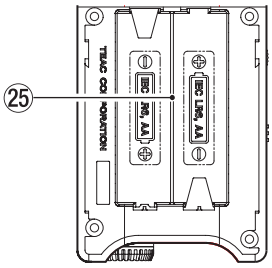


㉓ **Tripod attachment screw-hole (1/4 inch)**
A tripod can be attached to the DR-22WL.

CAUTION

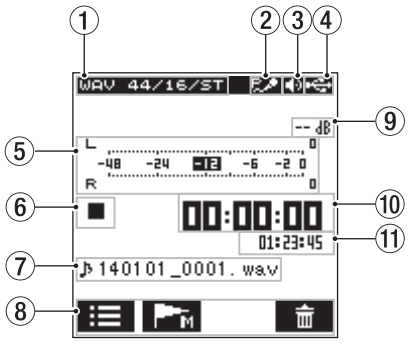
- ***Ensure the tripod or microphone stand screws are securely fastened to prevent the unit from falling off.***
- ***When attaching this unit to a tripod or microphone stand, ensure to place it on a level surface.***

㉔ **Battery compartment cover**



㉕ **Battery case**
Insert batteries (two AA size) in this compartment to power the unit. (See "Using AA size batteries" on page 11.)

Home Screen



① **Playback file type message**
Format type, sampling rate, bit rate, stereo/mono setting of the playback file are shown.

② **Plug-in power on/off message**
The plug-in power status (on/off) is displayed in icon view.

Icon	On/off status
Blank	Plug-in power function off
	Plug-in power function on

③ **Monitor output message**
: output from built-in speaker
: output from headphone

④ **Power supply status message**
When power is supplied from the batteries, the current battery level is displayed in bars (, ,).
When the battery level is low, the will flash and the power will be switched off (standy mode).
The will be displayed when using either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power.

NOTE

When attempting recording or other operations that consume large amount of power, a warning message of `BatteryLow` ***may pop-up.***

⑤ **Level meter**
Displays the level of the playback sound.

⑥ **Recorder status message**
The recording status is indicated in the following icons:

Indicator	Meaning
■	Stop
❚❚	Pause
►	Playback
►►	Fast forward
◄◄	Rewind
►►I	Skip forward to the beginning of the next file
I◄◄	Skip backward to the beginning of either the current or preceding file

⑦ **Recorder status message**
The name or tag information of the file currently in play is displayed.
The ID3 tag information is displayed instead when included in the MP3 file.

NOTE

ID3 tag information contains titles and artist names, which can be stored in MP3 files.

⑧ **Function buttons status message**
Below icons are displayed while in stop or playback mode.

Icon	Function
	Display browse screen
	Mark function (set/clear)
	Delete file

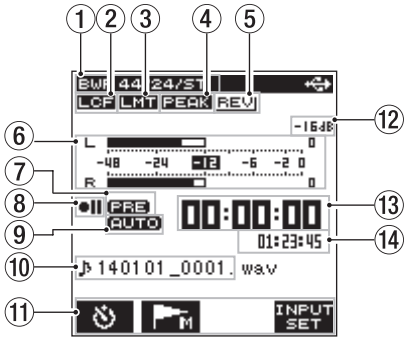
⑨ **Peak decibel (dB) message**
Displays the maximum playback level in decibel reading per set amount of time.

⑩ **Elapsed time message**
Displays the elapsed time (hours: minutes: seconds) of the current file.

⑪ **Remaining time message**
Displays the remaining time (hours: minutes: seconds) of the current file.

Recording Screen

The below recording screen is displayed in recording or recording standby mode.



① **Recording mode message**
Displays the format, sampling rate, and stereo/mono of the recording file.

② **Low-cut filter on/off status message**
Displays the low-cut filter on/off status.
The message is highlighted when the low-cut filter is set at `40Hz/80Hz/120Hz/220Hz`.
Blank: low-cut filter is off
LCF: low-cut filter is on

③ **Limiter function on/off message**
Displays the limiter function on/off status.
Blank: limiter function is off
LMT: limiter function is on

④ **Peak reduction function on/off status message**
Displays the peak reduction on/off status.
Blank: peak reduction function is off
PEAK: peak reduction function is on

⑤ **Reverb on/off status message**
Displays the reverb on/off status.

Icon	On/off status
Blank	Reverb is off
REV	Reverb is on (sound effects recording)
REV	Reverb is on (SEND status)

⑥ **Level meter**
Displays the input sound level.
When the AUTO REC function is turned on, the level meter will display sounds within the level that activates the AUTO REC function.

⑦ **PRE-REC function setting status message**
Displays the PRE-REC function on/off status.

Blank: PRE-REC is off

PRE : PRE-REC function is on

⑧ **Recording status message**
The recording status is indicated in the following icons:

Indicator	Meaning
● II	Recording standby or recording pause mode
●	In recording mode
5S	Begins recording in five seconds
10S	Begins recording in ten seconds

⑨ **AUTO-REC function setting status message**
Displays the AUTO-REC function on/off status.

Blank: AUTO-REC off

AUTO : AUTO-REC function on

⑩ **File name message**
Displays the file name automatically assigned to the recording file.

⑪ **Function buttons message**
The following icons will be displayed while in recording standby, recording, or recording pause mode:

Icon	Function
	Self-timer function
M	Mark function (set mark)
INPUT SET	Display input setting screen
TRK INC	Activate the track increment
PEAK CLR	Clear peak hold

⑫ **Peak decibel (dB) message**
Displays the peak input level in decibel reading.

OVER will be displayed when recording is above the peak level (–2dB or more).

⑬ **Elapsed recording time**
Displays the elapsed recording time of a recorded file (hours: minutes: seconds).

⑭ **Remaining recording time**
Displays the remaining recording time for the microSD card (hours: minutes: seconds).

Menu item list

Press the ⌂/**MENU**/■ button to display the REC page of the menu screen.

The menu screen consists of four pages each separated by types of menu items.

REC: make basic recording settings
TOOL: make function settings useful for playback files
SETUP: make configuration settings for the DR-22WL
INFO: displays file and media information

Menu items are as follows:

Menu item	Function	Ref. page
REC	Make recording settings	page 17 page 18 page 21 page 22
TOOL	Configure settings for different functions	page 13 page 24 page 30 page 30 page 31
SETUP	Various system settings	page 12 page 35 page 37
INFO	Displays a variety of information.	page 36

Using menus

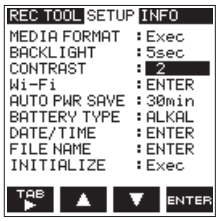
The following explains the menus, using the display contrast setting as an example.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.

2. Press the **F1** TAB button to display various menu pages.

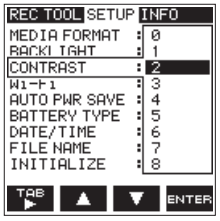
SETUP page is selected

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item you want to set.



CONTRAST item is selected

4. Press the **F4** ENTER button to open the parameter display.



5. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ENTER button to finalize the setting.
6. Repeat the **2.** to **5.** steps to set each items.
7. Press the **⌂/MENU/■** button to return to the home screen.

Basic operations

Use the following buttons to operate the various screens.

⌂/MENU/■ button

The menu screen will pop up when you press this button in stop or pause mode.

To return to the home screen, press this button in any screen display.

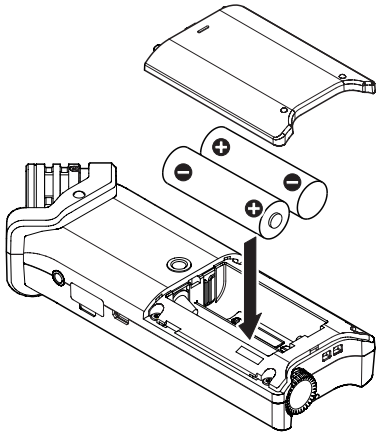
Powering the unit

Power sources

The DR-22WL operates on two AA batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately), or the supplied USB cable (USB bus power).
Use either alkaline batteries or Ni-MH batteries.

Using AA size batteries

Remove the battery compartment cover on the back of the unit, insert two AA batteries with the ⊕ and ⊖ ends in the right position, and close the cover.



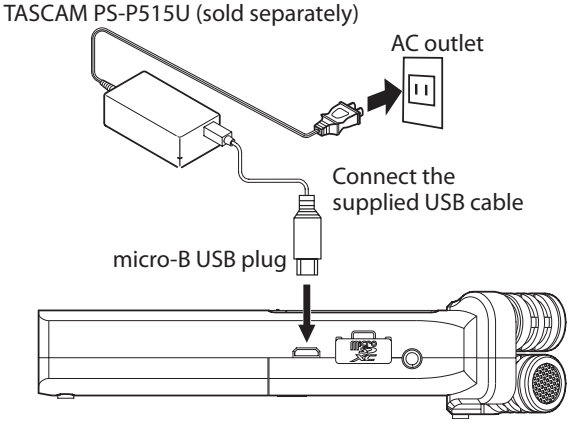
Select the same type of batteries to get an accurate reading of the remaining battery power and required minimum power for operation. (See "Battery type settings" on page 37.)

CAUTION

- ***Do not use Manganese dry cell batteries.***
- ***Ni-MH batteries will not be recharged with this unit; use a separate battery recharger instead.***
- ***The supplied alkaline batteries are for testing and may not last long.***

Using an AC adapter (sold separately)

Use the supplied USB cable to connect the USB port of the unit and the dedicated AC adapter (TASCAM PS- P515U; sold separately) as illustrated below.



NOTE

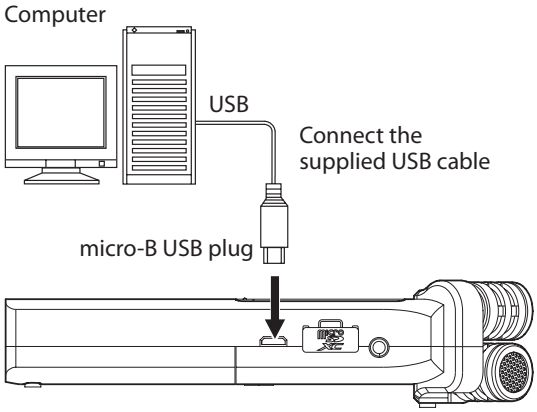
When both batteries and the AC adapter are attached to the unit, power will be supplied from the AC adapter.

CAUTION

- ***Use only the dedicated AC adapter (TASCAM PS- P515U; sold separately). The use of another adapter may cause malfunction, fire or electric shock.***
- ***Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.***

Using USB bus power

Use the supplied USB cable to connect the unit and the computer as illustrated below.



When you connect a USB cable while the unit power is on, or turn on the power after making a connection, the USB SELECT screen will pop up, prompting the user to select either to operate the unit with USB bus power or make a USB connection with the computer.

Use the **F2** ▲ button and the **F3** ▼ button to select (highlight) the BUS POWER, then press **F4** ENTER button to supply power from the USB port and display the home screen.

NOTE

Power is supplied from the USB port when USB cable is connected to the unit inserted with batteries (USB bus power prioritized).

CAUTION

- ***Depending on the USB bus power specifications of the computer, the DR-22WL may not operate with a USB connection. If this occurs, please use the dedicated AC adapter (TASCAM PS-P515U; sold separately) instead.***
- ***This unit is not compatible with the computer's power-save mode or sleep-mode. Please turn off these modes when operating the unit from the computer's USB bus power.***

Turning the power on and off (standby mode)

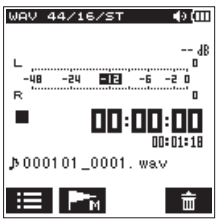
CAUTION

- ***When you turn the power switch off while supplying power from the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power connected to a computer, the unit will go to a standby mode.***
- ***Before turning the power switch on and off, turn the volume down for the sound system connected to the unit.***
- ***Do not wear headphones when turning the power switch on and off (standby mode); the noise may cause damage to your ears and/or headphones.***

Starting up the unit

In power off mode, slide and hold the **HOLD**/ ⏻ / I switch (located at left-side of the panel) toward the ⏻ / I direction, and release the switch when the TASCAM DR-22WL (start-up screen) appears.
The DR-22WL starts up and the home screen is displayed.

Start-up screen



Home screen

CAUTION

When turn the power on for the first time (or when the built-in clock is reset due to no battery power), the DATE/TIME screen will appear before the home screen to set date/time. (See "Setting the date/time" on page 12.)

Shutting down (standby mode)

In power on mode, slide and hold the **HOLD**/ ⏻ / I switch (located at left-side of the panel) toward the ⏻ / I direction, and release the switch when the TASCAM DR-22WL shutting down appears.
The power turns off when the shut-down process is completed.

CAUTION

Always use the* HOLD/ ⏻ / I *switch to turn the power off. In power on mode, all recorded data and settings will be lost if you remove the batteries, disconnect the power cable of the dedicated AC adapter (TASCAM PS-P515U; sold separately), or plug-off the USB cable for USB bus power. Any lost data and/or settings cannot be restored.

Resume function

The DR-22WL is equipped with a resume function to locate the previous position (or time) when the power was turned off.
Turn the power on and press the **PLAY** button to playback from the previous file position (time) when the power was turned off.

NOTE

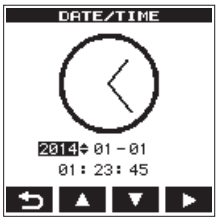
The position is recorded in the microSD card. The resume function does not work if the microSD card is replaced or formatted.

Setting the date/time

The DR-22WL uses its internal clock to record the date and time to the recorded files.

1. Press the **MENU**/■ button to display the REC page in menu screen.
2. Press the **F1** button to display the SETUP page.
3. Use both the **F2** ▲ and **F3** ▼ buttons to select (highlight) the DATE/TIME item parameters.

4. Press the **F4** button to display the DATE/TIME screen.



5. Press the **F4** ▶ button to move the cursor (highlighted area), and use the **F2** ▲ and **F3** ▼ buttons to change settings.
6. Press the **F1** button to finalize the settings. The screen will return to the SETUP page.

NOTE

The file name will include the set date/time. (See "Setting the file name type" on page 38.)

CAUTION

Without the use of the batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately) or USB bus power, the date and time setting can be made only for a few minutes. When using batteries, we recommend to replace them before they are completely drained.

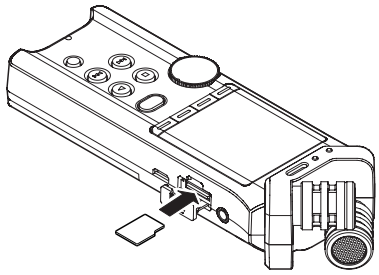
Inserting and removing microSD cards

Inserting the SD card

NOTE

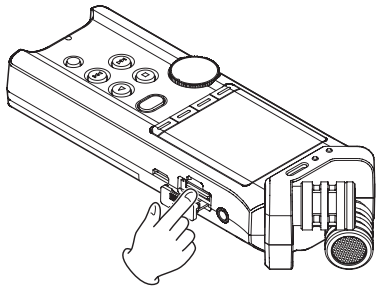
A microSD card is already installed at the time of purchase. You can immediately start recording and playing tracks without the need to remove and insert the microSD card.

1. Open the microSD card slot cover on the right side panel.
2. Insert the microSD Card into the slot (as illustrated below) until it clicks into place.



Removing the card

1. Open the microSD card slot cover.
2. Gently press and release the microSD card; the card should pop out.



CAUTION

- ***Do not remove the microSD card while the unit is accessing data for recording, playback, etc.***
- ***Do not remove the microSD card from the unit when connected via USB cable to a computer.***
- ***The DR-22WL is compatible with microSD/microSDHC/ microSDXC standards.***
- ***Please refer to the TEAC Global Site (*http://teac-global.com*) to learn more on the list of compatible SD cards.***

Setup the microSD card for use

To use a microSD card, it must be formatted first by the DR-22WL.

1. Confirm that a microSD card is inserted and turn the power on.
2. The following message appears when a new card or a card formatted by another device is inserted into the unit.

3. Press the **F4** ENTER button to start formatting.

CAUTION

Formatting will delete all data from the card.

4. When formatting is complete, it will return to the home screen. You may format the card whenever required.

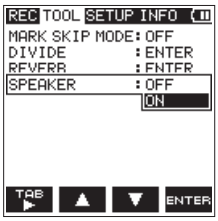
CAUTION

Before formatting, make sure the unit is connected to either a dedicated AC adapter (TASCAM PS-P515U; sold separately), a computer via USB bus power, or fully-charged batteries.

Turning the built-in speaker on/off

The factory setting for the built-in speaker output is selected as ON. To turn it off, open the TOOL screen and select OFF for the SPEAKER setting.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the SPEAKER item and press the **F4** ENTER button.



4. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ENTER button to finalize the setting.

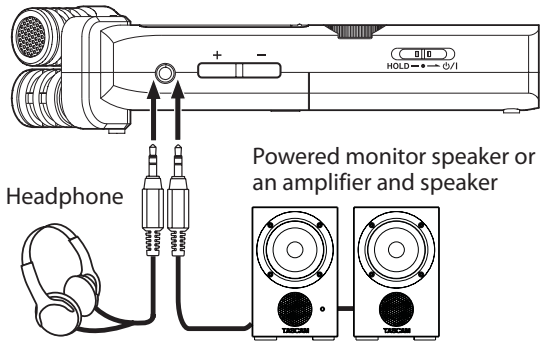
   Options: OFF, (default setting)
5. When setting is completed, press the **⌂/MENU/■** button to return to the home screen.

NOTE

In a recording standby or recording mode, or when a headphone or a speaker system is connected to the DR-22WL, the built-in speaker will not emit sound even when the SPEAKER setting is ON.

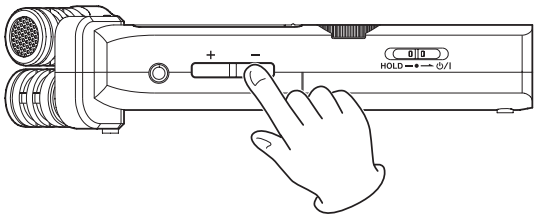
Connecting a monitor device

Headphone: connect the headphone to the ∩ **/LINE OUT** jack.
External monitor system (powered monitor speaker or an amplifier and speaker): connect the external monitor system to the ∩ **/LINE OUT** jack.



Adjusting the playback volume

In home screen mode, use the **OUTPUT LEVEL (+/–)** button at left side panel to adjust the sound from the built-in speaker and the
∩ **/LINE OUT** jack.
A volume level indicator will pull up at the bottom of the display.



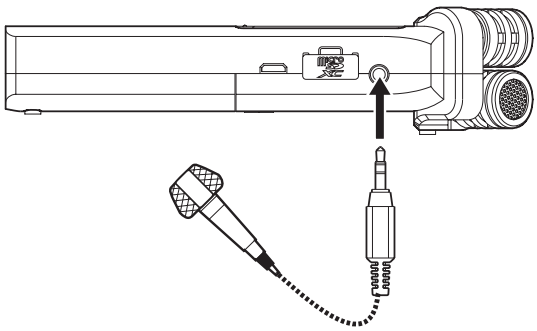
Input settings

Recording with the built-in microphone

Point the built-in microphone toward the sound source and place the unit on a stable surface with minimum vibration.

Recording with an external microphone (MIC IN)

Connect the external microphone to the **MIC/EXT IN** jack at left side panel.



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

Select the **F3** YES button for plug-in-power microphones, or **F2** NO button for other microphone types.

* Plug-in-power means that a power is delivered from the recorder to the microphone

NOTE

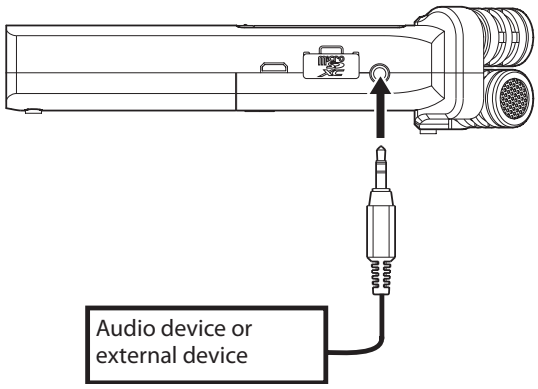
Point the external microphone toward the sound source and place the unit on a stable surface with minimum vibration.

CAUTION

- ***Do not select*** ON ***unless a plug-in-power microphone is connected to the unit. Otherwise, this may cause damage to the connected microphone. Refer to the microphone manual for more details.***
- ***When connecting a dynamic microphone or a battery-operated external microphone, select*** OFF ***for the*** MIC POWER ***setting. When set as*** ON***, it may cause damage to the connected microphone.***

Recording from an external device (LINE IN)

Connect a stereo mini-plug cable to the output of an external audio device (i.e. headphone jack of a portable CD player).



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

Select NO for an external device.

CAUTION

If the input sound is still distorted after adjusting the input level of the unit, reduce the playback sound of the external device.

In addition to the built-in microphone, an external microphone or external audio devices (i.e. CD player) can also be used for recordings.
Recordings can be made in MP3 (32k -320kbps, 44.1k/48kHz) and WAV/BWF (44.1k/48k/96kHz, 16/24-bit) audio formats.
Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible softwares.
In addition, the DR-22WL can mix input signals while playing an audio file and record a new file (overdubbing function).

Selecting the recording mode

■ Simple recording mode

Select the **scene dial** to EZ.
The simple recording mode allows users to quickly start recording by pressing the **RECORD** button just once; it automatically adjusts the recording level. This feature is useful for beginners and others wanting to make a quick-recording.

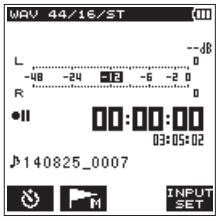
■ Manual mode

Select the **scene dial** to **M**.
The manual mode allows to adjust the recording level manually, suited for a higher-quality recording. This feature is especially useful for those who wants to make fine-tuned recording.

Recording

The following operation steps presume that the input source setting is completed and the home screen is displayed.

1. Press the **RECORD** button to set the recording standby mode.

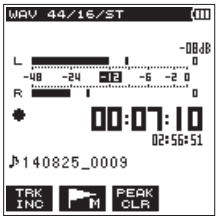


The bottom of the recording screen displays the recording file name, the input source, the recording audio file type, and the sampling rate. Users can confirm these information before starting recording.

NOTE

When the* scene dial *is set at "EZ", recording begins when you press the* RECORD *button once.

2. Press the **RECORD** button again to start recording.



When recording starts, the **REC** indicator lights, and displays the elapsed recording time and the remaining recording time.
To pause, press the **RECORD** button while recording.
Press the **RECORD** button again to resume recording.
If you press the **⌂/MENU/■** button while in pause mode, the recorded audio file up to the pause point will be created.

3. Press the **⌂/MENU/■** button to stop recording.
The recording stops and returns to the beginning of the file.

NOTE

- ***In recording standby mode, the speaker will not emit sound. Use a headphone to listen to the input sound and make level adjustments. In recording mode, operating the* OUTPUT LEVEL *button to adjust sound will not affect the recording level.***
- ***To avoid recording the* RECORD *button operation sound, the DR-22WL begins recording about 0.3 seconds (fixed time) after pressing the* RECORD *button. (REC DELAY)***

CAUTION

Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.

Scene recording mode

The DR-22WL offers pre-set scenes that adjusts recording to the most-suited level. Turn the **scene dial** and to set the following scene:

■ (LOUD)

Suited for recording band performance and other scenes with large sound volume.

■ ♪ (MUSIC)

Suited for recording voices, such as concert or group sining.

■ (INSTRUMENT)

Suited for recording near musical instruments, such as an acoustic guitar and wind instruments.

■ (INTERVIEW)

Suited for recording an interview or take voice memos during meetings.

NOTE

Recording level, low-cut filter, or level control are still adjustable in scene recording mode.
However, level control cannot be adjusted in scene mode. Settings are not stored and will be removed when scene mode is changed.

Selecting a folder to store files

The DR-22WL allows you to specify folders to store the recorded files. The recorded file will be saved in the current (currently selected) folder. (See "5 – Operating files and folders (browse screen)" on page 26.)

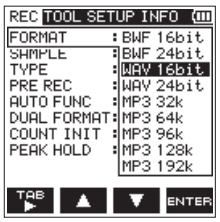
If no folder is specified, the file will be stored in the **"MUSIC"** folder.

Recording format settings (FORMAT/SAMPLE/TYPE)

Select the desired audio file type before you start recording.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the FORMAT item and press the **F4** ENTER button.

   Open the parameter list for the FORMAT item.



3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the file type.

   Options: BWF 16bit, BWF 24bit, WAV 16bit (default value), WAV 24bit, MP3 32k, MP3 64k, MP3 96k, MP3 128k, MP3 192k, MP3 256k, MP3 320k

NOTE

- ***The WAV format offers higher quality recording than MP3 files;***
- ***On the other hand, the MP3 format can record for longer hours.***
- ***With MP3 format, recording with higher values offers better quality.***
- ***Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible devices and computer softwares.***

4. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the SAMPLE RATE item and press the **F4** ENTER button.

   Open the parameter list for the SAMPLE RATE item.

6. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the sampling rate.

   Options: 44.1k (default value), 48k, 96k

NOTE

96k cannot be selected for a MP3 format file.

TIPS

Selecting the WAV 16bit and 44.1kHz will allow you to record in CD-quality.

7. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
8. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the TYPE item and press the **F4** ENTER button.

   Open the parameter list for the TYPE item.

9. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) either the stereo file or mono file.

   Options: STEREO (default value), MONO

NOTE

- ***When MONO is selected, the L-channel signal will be recorded.***
- ***Selecting the WAV format MONO will extend the recording hours by two times than the STEREO type, allowing for longer recording hours.***

10. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
11. Press the **⌂/MENU/■** button to return to the home screen.

Adjusting the input level

Before you start recording, ensure to adjust the input level to prevent the recorded file from distortion or canceled by noise, which can occur from excessively large or quiet input volume.

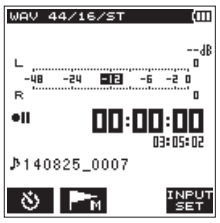
Use the limiter/peak reduction functions as necessary, in addition to making manual adjustments.

TIPS

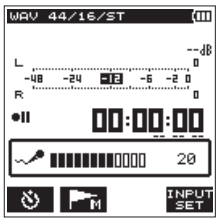
In addition to adjusting the INPUT level, try changing the distance and angle between the microphone and the sound source. The angle and distance of the microphone can also change the sound quality.

1. Press the **RECORD** button to set the recording standby mode.

   The **REC** indicator will flash and displays the recording screen.



2. Use the **INPUT LEVEL** volume to adjust the input level. The input level setting meter will pop-up at the bottom of the display.



   To obtain higher quality, it is recommended to set at the maximum recording level. As a guideline, adjust the input level until the **–12dB** indicator lights in green to obtain the optimum level. To prevent possible distortion from excessively large input volume, reduce the input level when the **PEAK** indicator lights in red.

NOTE

- ***Press the ⌂/MENU/■ button to cancel the recording standby mode.***
- ***In a recording standby or recording mode, the speaker will not emit sound even when the*** SPEAKER ***setting is*** ON.

If you need to monitor sound to adjust the input level and make recordings, connect the headphone to the Ω**/LINE OUT** jack.

To adjust monitor sound, go to home screen and use the **OUTPUT LEVEL** button. Adjusting the monitor sound will not affect the recording quality.

TIPS

Use the peak hold function for easier monitoring of sound level. (See "Setting the peak hold function" on page 18.)

Setting the peak hold function

1. Press the ⌂**/MENU/**■ button to display the REC page in menu screen.
2. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the PEAK HOLD item and press the **F4** ENTER button.

   Open the parameter list for the PEAK HOLD item.

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the peak hold mode.

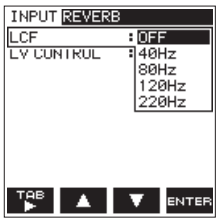
   Options: OFF (default value), 1sec, HOLD

4. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
5. Press the ⌂**/MENU/**■ button to return to the home screen.

Setting the Low Cut Filter

The Low Cut Filter function can reduce noise from air-conditioners, projector fans and unwanted wind noise.

1. Press the **RECORD** button to set the recording standby mode.
   The **REC** indicator will flash and displays the recording screen.
2. Press the **F4** INPUT SET button to display the input setting screen.
3. Press the **F1** TAB button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LCF item and press the **F4** ENTER button.
   Open the parameter list for the LCF item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the cut-off frequency during microphone input.
   Options: OFF (default value), 40Hz, 80Hz, 120Hz, 220Hz
6. Press the **F4** ENTER button to finalize the selected cut-off frequency for the Low Cut Filter.
7. Press the **⌂/MENU/■** button to return to the recording screen.

NOTE

The Low-Cut Function can be set and changed in recording standby and recording modes.

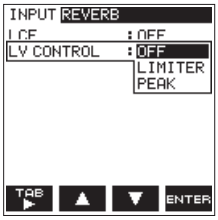
TIPS

- ***Setting it to larger value can reduce more noise in the low-frequency range, but this is not recommended when recording music.***
- ***The DR-22WL has a built-in reverb, which can be added to the input source as desired. (See "Reverb function" on page 30.)***

Using the level control function

You can set the recording level for microphone input.

1. Press the **RECORD** button to set the recording standby mode.
   The **REC** indicator will flash and displays the recording screen.
2. Press the **F4** INPUT SET button to display the input setting screen.
3. Press the **F1** TAB button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LV CONTROL item and press the **F4** ENTER button.
   Open the parameter list for the LV CONTROL item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the function.
   Options: OFF (default value), LIMITER, PEAK
6. Press the **F4** ENTER button to finalize the selected function.
7. Press the **⌂/MENU/■** button to return to the recording screen.
   The selected function is shown with an icon in the recording screen.

NOTE

When the limiter function is ON, the LMT icon will appear on the recording screen.

When the limiter function is ON, the PEAK icon will appear on the recording screen.

■ LIMITER

The limiter functions only at excessive input level.
This function is useful for musical instrument performance and musical recordings.

■ PEAK REDUCTION

This function automatically reduce the recording level to an appropriate value when input signal is too high. It is useful when you cannot preset the recording level or unable to make adjustments during recordings.

CAUTION

- ***Distortion might occur if the input sound is too loud even when the limiter is on. If this occurs, reduce the input level manually or move the microphone farther away from the sound source.***
- ***In microphone input mode, PEAK indicator will light when distortion occurs in the analog circuitry. In line input mode, PEAK indicator will not light even when distortion occurs in the analog circuitry.***

NOTE

When level control function is ON, you can still adjust the recording level by using the* INPUT LEVEL *volume. The* INPUT LEVEL *volume will not work in EZ and INTERVIEW modes.

Switching files during recording (track increment)

During recording, you can switch to a new recording file either manually or at a set time, and continue to make recording in the new file. (Track increment function)

Manual track increment during recording

During recording, you can easily update a file manually and continue to make recording.

1. During recording, press the **F1** TRK INC button.

NOTE

Numbers at the end of file name will increment each time when a new file is created.

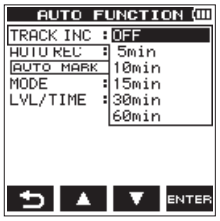
CAUTION

- ***The maximum total number of folders and files you can create is 5,000.***
- ***Files with a recording time of less than two seconds cannot be created.***
- ***The number of the new file will increment if its name is the same as the existing file.***
- ***Track increment function is not available during overdubbing.***

Automatic track increment at specified time

During recording, the DR-22WL will automatically switch recording from the current file to a new file when it reaches a certain time specified in the TRACK INC of the AUTO FUNCTION screen.
Follow the below steps to set the maximum time for automatic increment:

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.
   AUTO FUNCTION screen is displayed.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the TRACK INC item and press the **F4** ENTER button.



4. Use the **F2** ▲ and the **F3** ▼ buttons to select the automatic track increment time.
   Options: OFF (default value), 5min, 10min, 15min, 30min, 60min
5. Press the **F4** ENTER button to finalize the selected time.
6. When setting is completed, press the **⌂/MENU/■** button to return to the home screen.

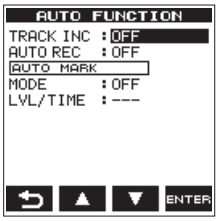
CAUTION

The maximum total number of folders and files you can create is 5,000.

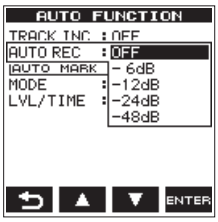
Automatic recording (AUTO REC)

This function automatically start and pause recordings, update files, or add cue marks according to the input sound level.

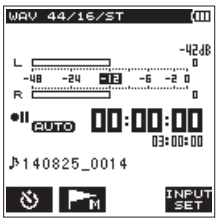
1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.
   AUTO FUNCTION screen is displayed.



3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO REC item and press the **F4** ENTER button.



4. Use the **F2** ▲ and **F3** ▼ buttons to select a level that activates the AUTO REC function (a level that recognize incoming signal).
   Options: OFF (default value), -6dB, -12dB, -24dB, -48dB
5. Press the **F4** ENTER button to finalize the selected level that activates the AUTO REC function.
6. Press the **⌂/MENU/■** button to return to the home screen.
7. Press the **RECORD** button to set the recording standby mode.
   The level meter will display sounds within the level that activates the AUTO REC function and the AUTO icon will appear on the right side of the recorder status display.



Recording starts automatically when the input signal exceeds the threshold set in the LEVEL item.

NOTE

- ***In standby mode, the* REC *indicator will flash faster than in the recording mode.***
- ***When the input sound is below the threshold level set in the* LEVEL *item for five seconds or longer, the unit will go into standby mode and resumes recording when the input sound exceeds the threshold level.***

8. When you need to stop recording, press the **/MENU/■** button.

CAUTION

- ***Overdubbing will not work when the AUTO REC function is ON.***
- ***Self-timer will not work when the AUTO REC function is ON.***

Start recording from slightly before pressing RECORD (PRE REC)

PRE REC function will allow you to start recording up to two seconds before the desired timing, by recording an input signal (up to two seconds) during the recording standby mode.

1. Press the **/MENU/■** button to display the REC page in menu screen.
2. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the PRE REC item and press the **F4** ENTER button.

   Open the parameter list for the PRE REC item.

3. Use the **F2** ▲ and **F3** ▼ buttons to turn on the PRE REC function.

   Options: OFF (default value), ON
4. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
5. Press the **/MENU/■** button to return to the home screen.

TIPS

By combining PRE REC with the AUTO REC function, you will not miss an opportunity to start recording.

NOTE

- ***If you start recording within two seconds from when the record standby mode is turned ON, recording will begin from the record standby mode.***
- ***PRE REC function will not work when self-timer function is set or during overdubbing.***

Using the SELF TIMER for recording

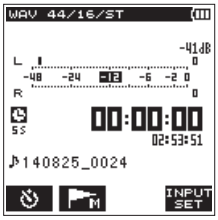
Similar to a camera, the DR-22WL has a SELF TIMER function to begin recording after a set period of time.

1. In stop or playback mode, press the **RECORD** button to initiate the recording standby mode, then press the **F1** button.
2. The SELF TIMER icon and time (below the icon) will appear in the recording status display.

   Each time you press the **F1** button, the setting changes as below:

   Time display below the icon

   No display (OFF) → 5S (5 sec.) → 10S (10 sec.) → no display (OFF)



3. After you select the time, press the **RECORD** button or the **/MENU/■** button.

   Recording will start after the set time period.

NOTE

- ***SELF-TIMER function will not work when recording is on pause.***
- ***SELF-TIMER function can be used in the AUTO-REC function. When recording begins, the AUTO-REC function is prioritized.***

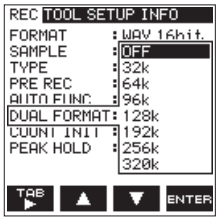
Recording in two formats (DUAL FORMAT REC)

The DR-22WL can transfer files to a smart phone via Wi-Fi. (See "Connect the DR-22WL and smart phone via Wi-Fi" on page 33.)

WAV/BWF delivers a high-quality sound but unfit to transfer via Wi-Fi due to its large file size. The DR-22WL can make simultaneous recordings in WAV/BWF format and MP3 format (smaller file size) for Wi-Fi transfer.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in DUAL FORMAT item and press the **F4** ENTER button.

   Open the parameter list for the DUAL FORMAT item.



3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the file type.

   Options: OFF (default value), 32k, 64k, 96k, 128k, 192k, 256k, 320k
4. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.

NOTE

DUAL FORMAT recording is available only in WAV 16bit/BWF 16bit with sampling rate of 44.1k/48kHz formats.

Mixing the input sound to the playback for recording (overdubbing)

The DR-22WL can mix the input sound while playing the recorded track to create a new file.

The unit offers two overdubbing modes.

■ OVERDUB

This mode mixes the input sound to the playback file.

Users can monitor with a headphone and overdub the sounds.

■ AIRDUB

This mode records group singing or musical performance with the accompaniment music playback (similar to karaoke).

This mode can output only the playback sound from the output jack, so users can connect the unit to an external monitor system and record a new sound source to the playback file.

NOTE

- *Speaker will not emit sound in overdubbing mode.*
- *Pause will not work in overdubbing mode (***RECORD** *button is disabled).*
- *The overdubbed file is created in playback format regardless of the recording format setting.*
- *Overdubbing will not work when the PRE REC function is ON. PRE REC function is disabled during overdubbing.*

Select files for overdubbing with an input sound

Select the file for overdubbing with either the ⏮/⏭ button or in browse screen.

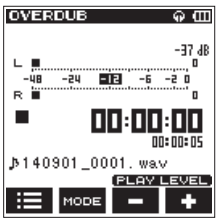
NOTE

Please refer to the 5 – Operating files and folders (browse screen) 26 for selecting files in browse screen.

Start overdubbing

1. In home screen, set the **scene dial** to DUB.

   The OVERDUB screen is displayed and the input sound is recorded.

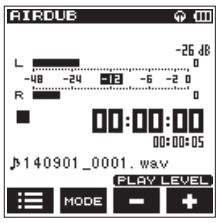


NOTE

In pause or playback mode, when you set the **scene dial** *to* DUB*, the DR-22WL will make a force stop and display the* OVERDUB *screen.*

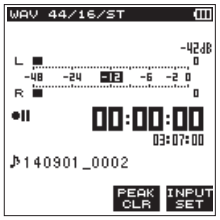
2. To switch to the overdubbing mode, press the **F2** MODE button. The overdubbing and airdubbing modes will appear in turn on the screen.

   After selecting, either the OVERDUB or the AIRDUB screen will be displayed.

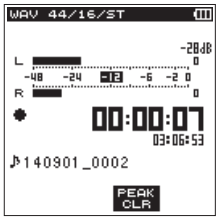


AIRDUB mode

3. Press the **PLAY** button to play the file for overdubbing, and use the **F3** − and **F4** + buttons to adjust the playback volume.
4. Press the **RECORD** button to set the recording standby mode.



5. Press again the **RECORD** button.
   Overdubbing will start.



   When recording starts, the **REC** indicator lights, and the recording screen displays the elapsed recording time and the remaining recording time.

   When a file that can be playbacked is not selected, a pop-up message of No PB File will appear.
6. To finish recording, press the **⌂/MENU/■** button.

Create cue marks during recording

In recording or recording standby mode, the DR-22WL can create cue marks to a file to quickly locate the marked position and start playback. (See "Moving to the cue mark position" on page 24.)

You can either manually set the cue mark, or automatically set the cue mark level or time to minimize the operation noise.

NOTE

The unit will not move to the cue mark position in recording or recording standby mode.

Manual cue marking during recording

In recording or recording standby mode, press the **F2** M button to create a cue mark.

A pull-up cue mark no. message will appear above the icon.

NOTE

- ***Up to 99 cue marks can be created and stored in each file.***
- ***Cue marks that are created during the recording of WAV file in BWF format by this unit are stored in the file. You can use the cue marks in softwares compatible with BWF format.***

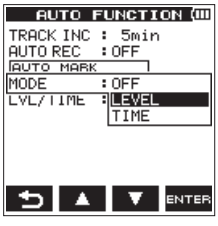
Add cue marks automatically to recording

If you turn the AUTO MARK function ON, cue marks will be added automatically.

■ Add cue marks automatically according to set levels

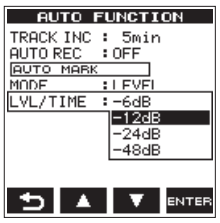
1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.

   AUTO FUNCTION screen is displayed.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** ENTER button.
4. Use the **F2** ▲ and **F3** ▼ buttons to set the automatic cue mark mode to LEVEL.



   Options: OFF (default value), LEVEL, TIME
5. Press the **F4** ENTER button to finalize the set mode.

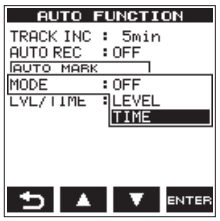
6. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the LVL/TIME of the AUTO MARK item and press the **F4** ENTER button.



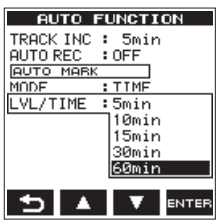
7. Use the **F2** ▲ and **F3** ▼ buttons to set a level to automatically add cue marks.
   Options: −6dB, −12dB (default value), −24dB, −48dB
8. Press the **F4** ENTER button to finalize the set mode.
9. Press the **⌂/MENU/■** button to return to the home screen.

■ Add cue marks automatically according to set time

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.
   AUTO FUNCTION screen is displayed.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** ENTER button.
4. Use the **F2** ▲ and **F3** ▼ buttons to set the automatic cue mark mode to TIME.



   Options: OFF (default value), LEVEL, TIME
5. Press the **F4** ENTER button to finalize the set mode.
6. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the LVL/TIME in the AUTO MARK item, and press the **F4** ENTER button.



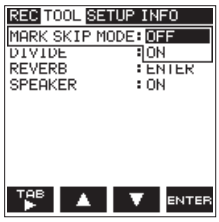
7. Use the **F2** ▲ and **F3** ▼ buttons to set a time to automatically add cue marks.
   Options: 5min, 10min, 15min, 30min, 60min (default value)
8. Press the **F4** ENTER button to finalize the set time.
9. Press the **⌂/MENU/■** button to return to the home screen.

Moving to the cue mark position

In stop or playback mode, you can move to cue marks created in the selected file.

You can use this function to go to the beginning of a song, similar to an index.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in MARK SKIP MODE item and press the **F4** ENTER button.



4. Use the **F2** ▲ and **F3** ▼ buttons to set the mode to ON, and press the **F4** ENTER button.
   Options: OFF (default value), ON
5. When setting is completed, press the **⌂/MENU/■** button to return to the home screen.
6. In stop or playback mode, press together the **F2** button and either the ⏮ button or the ⏭ button.

NOTE

You cannot move to a cue mark of a different file.

Recording duration

The table below shows the maximum recording time per file format for microSD/microSDHC/microSDXC cards:

File format (recording setting)			microSD/microSDHC/microSDXC cards capacity			
			1GB	4GB	8GB	32GB
WAV/BWF 16 bit (STEREO)		44.1kHz	1 hour 41 minutes	6 hour 44 minutes	13 hour 28 minutes	53 hour 52 minutes
		48kHz	1 hour 33 minutes	6 hour 12 minutes	12 hour 24 minutes	49 hour 36 minutes
		96kHz	46 minutes	3 hour 06 minutes	6 hour 12 minutes	24 hour 48 minutes
WAV/BWF 24 bit (STEREO)		44.1kHz	1 hour 07 minutes	4 hour 30 minutes	9 hour 00 minutes	35 hour 44 minutes
		48kHz	1 hour 02 minutes	4 hour 08 minutes	8 hour 16 minutes	33 hour 04 minutes
		96kHz	31 minutes	2 hour 04 minutes	4 hour 08 minutes	16 hour 32 minutes
MP3 (STEREO/MONO)	32 kbps	44.1kHz/48kHz	74 hour 32 minutes	298 hour 08 minutes	596 hour 16 minutes	
	64 kbps	44.1kHz/48kHz	37 hour 16 minutes	149 hour 04 minutes	298 hour 08 minutes	
	96 kbps	44.1kHz/48kHz	24 hour 50 minutes	99 hour 20 minutes	198 hour 40 minutes	
	128 kbps	44.1kHz/48kHz	18 hour 38 minutes	74 hour 32 minutes	149 hour 04 minutes	
	192 kbps	44.1kHz/48kHz	12 hour 25 minutes	49 hour 40 minutes	99 hour 20 minutes	
	256 kbps	44.1kHz/48kHz	9 hour 19 minutes	37 hour 16 minutes	74 hour 32 minutes	
	320 kbps	44.1kHz/48kHz	7 hour 27 minutes	29 hour 48 minutes	59 hour 36 minutes	

- The recording times shown above are estimates, and may differ depending on the microSD/microSDHC/microSDXC card in use.
- The recording times shown above are the total possible recording times for the microSD/microSDHC/microSDXC cards, and not the continuous recording times.
- Mono recording in WAV format will double the maximum recording times specified above.

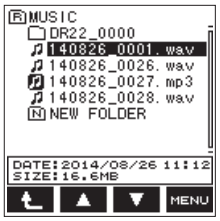
5 – Operating files and folders (browse screen)

In browse screen, you can browse the MUSIC folder (stores audio files), delete files and folders, or create a new folder in the microSD card.

TIPS

You can also connect the DR-22WL with a computer via USB, or directly insert the microSD card to the computer to change configuration of folders or delete files in the MUSIC folder. In addition, you can change file names from the computer.

To display the browse screen, press the **F1** button in stop/pause mode.



Prior to displaying the browse screen, the unit will display the files and folders selected in home screen.

Navigating in the browse screen

Folders and music files are displayed in a layered-tree type in the browse screen.

The DR-22WL can create up to two layers in each folder.

- Use the **F2** and **F3** buttons to select (highlight) the file and/or folder.
- While selecting the file and/or folder, press the **F1** button to move up to the next layer.
- While selecting the file and/or folder, press the **F4** MENU button to display the pop-up menu.
- While selecting a file, press the **PLAY** button to return to the home screen and playback the selected file.

  The folder that contains the above file becomes the current folder (currently selected folder), and the recorded files will be saved in this folder.
- While selecting a file, press the **PLAY** button to return to the home screen and playback the first file in the holder.

  This folder becomes the current folder (currently selected folder), and new recorded files will be saved in this folder.

Icon display on the browse screen

Below are descriptions for each of the icons displayed in the browse screen.

■ MUSIC folder ( ) MUSIC

When the browse screen displays the ROOT layer, the MUSIC folder will appear at the most top.

■ Audio file ( )

This is an audio file.

■ Currently selected audio file ( )

This is the currently selected audio file.

■ Folder ( )

This folder contains a sub-folder.

■ Folder ( )

This folder contains no sub-folder.

■ Folder in display ( )

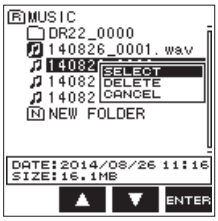
Contents of this folder is currently in display.

■ New folder ( )

A new folder will be created.

File operations

Select (highlight) the desired audio file in the browse screen, and press the **F4** MENU button. The below pop-up menu will appear.



Use the **F2** and **F3** buttons to select (highlight) an item, and press the **F4** MENU button. The following action will start according to the selected item.

■ SELECT

Returns to the home screen and playback the selected file.

■ DELETE

A pop-up message appears to confirm that the deletion of the selected file.

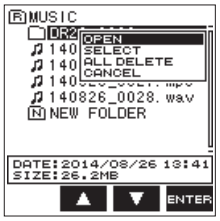
To delete the file, press the **F3** YES button. To cancel delete, press the **F2** NO button.

■ CANCEL

Action for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Folder operations

Select (highlight) the desired file in the browse screen, and press the **F4** MENU button. The following pop-up message menu will appear.



Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) an item, and press the **F4** MENU button. The following action will start according to the selected item.

■ OPEN

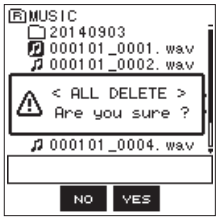
This will open the selected folder.

■ SELECT

Returns to the Home Screen and selects the first file in the folder. In addition, the recorded files are saved in the selected folder.

■ ALL DELETE

A pop-up message appears to confirm deletion of all files in the selected folder.



To delete the file, press the **F3** YES button. To cancel delete, press the **F2** NO button.

NOTE

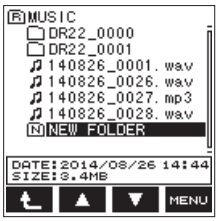
Read-only files and unrecognized files by the DR-22WL will not be deleted.

■ CANCEL

The operation for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Creating a new folder

A NEW FOLDER is available at the bottom of each folder.



1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the NEW FOLDER and press the **F4** MENU button.
   A quick menu will pop-up on screen.
   It shows a message to confirm creation of a new folder.

2. To create a new folder, press the **F3** YES button. To cancel creation of a new folder, press the **F2** NO button.

NOTE

The DR-22WL is not designed to handle folders with three or more layers, and therefore the NEW FOLDER does not exist in a folder with two layers.

A newly created folder becomes the current folder (currently selected folder), and recorded files are saved in this folder.

Playback

To start playback in home screen mode, press the **PLAY** button in stop mode.

NOTE

You can also select and playback a file in the browse screen.

Pausing

To stop playback, press the **⌂/MENU/■** button. (PAUSE)
When playback was stopped in the middle of a file, the status icon ■ will appear on screen.
To resume playback from the stop position, press the **PLAY** button.

Stopping

To pause playback, press the **⌂/MENU/■** button.
When playback was paused at the beginning of a file, the status icon ■ will appear on screen.
To return to the beginning of the file, press the **⌂/MENU/■** button. (STOP)

Rewinding and fast-forwarding (search)

To make fast-rewind/fast-forward search in home screen, press and hold the I◄◄ button/►►I button in stop or playback mode.

NOTE

Search speed will increase if you keep holding the I◄◄ button/►►I button.

Selecting a playback file (skip)

In home screen, press either the I◄◄ button or the ►►I button to select the file you want to play.
When you are in the middle of a file and want to return to the beginning, press the I◄◄ button. To skip to the previous file, press the I◄◄ button.
To skip to the next file, press the ►►I button at the beginning of in the middle of a file.

Special playback (practice mode)

Practice mode is useful for practicing musical instruments.
To use the practice mode while in stop/pause/playback mode, set the **scene dial** to "⚙" in home screen. The PRACTICE screen will appear with a practice mode.

Loop playback, playback speed change, and key change can be made in this mode.

Press the **F1** ☰ button to select the file from the browse screen you want to playback.

NOTE

- ***In practice mode, you can monitor and adjust the input sound. (See "Adjusting the input level" on page 18.)***
- ***File skip will not work in practice mode.***

Loop playback

Loop playback allows you to repeat playback of the entire or part of a file.

■ Set the IN and OUT points

1. In PRACTICE screen, press the **F3** SEL button to select (highlight) the LOOP item, and press the **F4** ENTER button to set loop playback.

2. Move to the loop playback IN point, and press the **F2** IN button.
   This position is set as IN (start) point.
   The ⌜ icon will light at the top of the playback position display bar.
3. Press the **F3** OUT button at the loop playback OUT point.
   This position is set as OUT (end) point, and the unit will playback the section between the loop playback IN and OUT points.
   The ⌟ icon will light at the top of the playback position display bar.

■ Delete the IN and OUT points

In stop mode, press the I◄◄ button or the ►►I button to skip to the IN (start) and OUT (end) points.
Skip to the IN (start) and OUT (end) points, and press the **F2** IN or the **F3** OUT buttons to cancel each of the points.
To delete the OUT (end) point, move to the OUT point and press again the **F3** OUT button.

■ Loop playback

Press the **F1** ON button to enable the loop playback function.
You can disable the playback function by pressing the **F1** OFF button, but the setting will be saved.

Loop playback will start as follows, depending on the IN (start) and OUT (end) points:

Set only the IN (start) point	Loop playback from IN point → end of the file
Set only the OUT (end) point	Loop playback from the beginning of the file → OUT point
Set both IN/OUT points	Loop playback between IN - OUT points
No settings of IN/OUT points	Loop playback from the beginning until the end of the file

NOTE

- *The* I/O Too Short *pop-up message will appear when the IN-OUT points are too close. Please reset by spacing at least one second in between.*
- *MP3 files with VBR format may affect the accuracy of the IN and OUT points settings.*
- *Press the* **F1** OFF *button to turn on/off the loop playback.*

Changing the playback speed (VSA)

The DR-22WL has a built-in VSA (Variable Speed Audition) function to change the playback speed without changing its pitch.

CAUTION

The VSA function will not work when you select a file recorded with a sampling rate of 96kHz.

1. In PRACTICE screen, press the **F3** SEL button to select (highlight) the SPEED item, and press the **F4** ENTER button to enable the playback speed change option.

2. Use the **F2** ▲ and the **F3** ▼ buttons to change the playback speed value.
   Options: ×0.5 - ×2.0 (per ×0.1)
3. Press the **F4** ↩ button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

NOTE

Press the* F1** OFF ***button (or the* F1** ON ***button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Changing keys

The DR-22WL can change the playback key (pitch) with its key control function.
The key control function offers KEY and FINE TUNE modes. The KEY mode can adjust in ± 6 half-tone, and the FINE TUNE mode can adjust in ±50 cents.

1. In the PRACTICE screen, press the **F3** SEL button to select (highlight) either the KEY or FINE items, then press the **F4** ENTER button to enable the key change setting.

Pop-up display of the KEY item

Pop-up display of the FINE item

2. Use the **F2** ▲ and the **F3** ▼ buttons to change the key value.
   Options:
   When KEY is selected : ♭6 - ♯6 (per half-tone)
   When FINE is selected : –50 - +50 (per cent)
3. Press the **F4** ↩ button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

NOTE

Press the* F1** OFF ***button (or the* F1** ON ***button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Dividing the selected file (DIVIDE)

A recorded file can be divided into two at a desired position.

1. Use the I◄◄ button, the ►►I button, or the browse screen to select the file you want to divide.
2. Press the **⌂/MENU/■** button to display the REC page in menu screen.
3. Use the **F1** TAB button to display the TOOL page.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in DIVIDE item and press the **F4** ENTER button.
   The DIVIDE screen is displayed.

5. Use the **F2** ◄ and **F3** ► buttons to finalize the dividing section, and press the **F4** ENTER button to finalize the setting.
   The following pop-up window appears.

6. Press the **F3** YES button to divide the file.
   If you press the **F2** NO button**,** the file will not divide and return to the DIVIDE screen.

NOTE

- ***You can also decide the dividing section in playback mode by pressing the* PLAY *button.***
- ***In browse screen, press the* PLAY *button to switch between playback and pause. Press the I◄◄ button to go to the beginning of the file, or press the ►►I button to go to the end of the file. To make a fine adjustment of the dividing point, press together the* F2 ◄ *and the* F3 ► *button. Long-press these buttons for sequential movement.***
- ***When a file is divided, names will be created ending with either* a *or* b*.***
  (Example)
  File name before division
  140826_0001.wav
  File name after division
  140826_0001a.wav (before the dividing point)
  140826_0001b.wav (after the dividing point)

CAUTION

- ***MP3 files cannot be divided.***
- ***Division may not be available when microSD card does not have sufficient capacity.***
- ***File name with more than two hundred characters cannot be divided.***
- ***File cannot be divided when there is a file name identical to that of the post-divided file.***

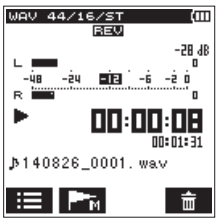
TIPS

You can add cue marks during recording at the position you want to divide. (See "Create cue marks during recording" on page 23.)

Reverb function

The DR-22WL has a built-in reverb function to record and playback with reverb.

When reverb function is ON, the REV icon will appear at the top of the home screen.



Setting the reverb function

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in REVERB item and press the **F4** ENTER button.
   The REVERB screen is displayed.

NOTE

You can set and adjust reverb in record standby mode as well, from the* REVERB *page of the input setting screen.

4. The following settings are made in the REVERB screen.
   REVERB:
   Set the reverb on/off status (default value: OFF).
   TYPE:
   See the reverb type from the pre-set items. See 31 Reverb pre-set list for more details on reverb pre-set items.
   LEVEL:
   You can change the reverb output level selected in the TYPE item. Settings can be selected from 0 - 100. (default value: 70)
   MODE:
   Set the reverb mode.

MODE (options)	Icon	Detail
MONITOR (default value)	REV	Reverb state
REC	REV	SEND state

5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ENTER button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.

7. Press the **F4** ENTER button to finalize the setting and return to the item setting item status.
8. Repeat the 5.-7. steps as necessary.
9. When setting is completed, press the **⌂/MENU/■** button.

CAUTION

Reverb function will not work (but able to make settings) when the setting or the selected playback file's sampling rate is 96kHz.

NOTE

The reverb function on/off setting is available also in recording standby mode; press* F4 INPUT SET *button and make setting in the* REVERB *page of the input setting screen.

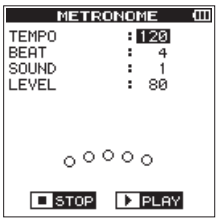
Reverb pre-set list

Pre-set name	Effect
HALL 1 (default value)	A bright effect, like a spacious hall
HALL 2	A warm effect, like a spacious hall
ROOM	Small room effect
STUDIO	Studio effect
PLATE 1	Bright plate reverb
PLATE 2	Warm plate reverb

Metronome function (compatible with V1.10)

The DR-22WL has a built-in metronome, useful for practicing musical instruments.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the METRONOME item and press the **F4** ENTER button.
   The METRONOME screen is displayed.



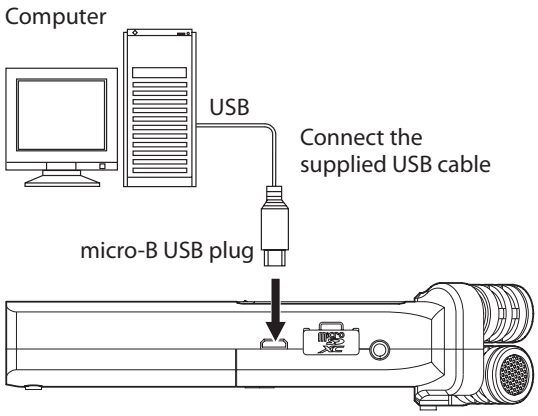
4. The following settings are available in the METRONOME screen:
   TEMPO
   Set speed between 20 - 250 (BPM).
   (default value: 120)
   BEAT
   Set beat between 0 - 9. (default value: 4)
   This will accent the first beat.
   SOUND
   Set beat between 1 - 2. (default value: 1)
   LEVEL:
   Set the metronome volume 0 - 10.
   (default value: 5)
5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ENTER button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.
7. Press the **F4** ENTER button to finalize the setting and return to the item setting item status.
8. Repeat the 5.-7. steps as necessary.
9. Press the play button to start the metronome.
   Press the **⌂/MENU/■** button to stop the metronome.
10. Press the **⌂/MENU/■** button again to close the metronome function.

8 – Connecting with a computer

By connecting this unit with a computer using the USB cable, you can transfer audio files on the microSD card in the unit to a computer, as well as transfer audio files on the computer to the microSD card in the unit.

This unit can handle audio files of the following formats.

WAV : 44.1k/48k/96kHz, 16/24 bit
BWF : 44.1k/48k/96kHz, 16/24 bit
MP3 : 44.1k/48kHz, 32k/64k/96k/128k/192k/256k/320kbps



NOTE

- ***Instead of connecting the DR-22WL a computer via USB, you can remove the microSD card from the unit and insert directly (or with a card adapter) to the computer and make the same operation.***
- ***Both WAV and BWF files will have the ".wav" extension.***

CAUTION

- ***The DR-22WL will not operate when STORAGE is selected (highlighted) under USB connection.***
- ***Please make a direct connection with the computer without using a hub.***

When you make a USB connection before or after turning ON the unit's main power, the USB SELECT screen will appear and prompt you to select the USB bus power or make a USB connection with the computer.

Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the STORAGE; if you press the **F4** ENTER button**,** the unit will connect with the computer and displays the USB connected message.

Make sure that the microSD card is inserted properly to the DR-22WL.

NOTE

When you make a USB connection while the batteries are inserted to the unit, the USB port will supply power (USB bus power prioritized).

If USB connection is made when the microSD card is not inserted correctly, a pop-up message of Can't Save Data will appear.

When you turn on the "computer", the screen will display the DR-22WL as a external drive with a volume label of "DR-22WL".

Transferring files to a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Open the "MUSIC" folder and drag & drop the file you want to transfer to the desired location.

Transferring files from a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Drag & drop the audio file from the computer to the "MUSIC" folder.

TIPS

- ***You can manage the "MUSIC" folder on computer screen.***
- ***You can create a sub-folder in the "MUSIC" folder. The DR-22WL can create up to two layers. The DR-22WL cannot recognize sub-folders and files located at the third layer level or below.***
- ***The DR-22WL can be set to playback only a specific folder. You may find it useful to organize musics per category and players.***
- ***If you name the sub-folders and music tracks, these names will appear on the home screen or browse screen of this unit.***

Disconnecting from a computer

When disconnecting the DR-22WL from the computer, make sure to follow the correct steps and remove the USB cable.

The power turns off when the shut-down process is completed.

Refer to the computer's operation manual for instructions on unmounting from the computer.

Connect the DR-22WL and smart phone via Wi-Fi

CAUTION

The DR-22WL designs are in conformance with the laws and regulations of the countries and regions in which this unit is sold, and labeled as required.

The DR-22WL is approved in the following countries and regions:

United States, Canada, Europe (EU member states), Australia, New Zealand, Japan

Use of wireless functions maybe restricted in countries other than listed above. Please ensure to check the local laws before use.

TIPS

The battery will drain faster during Wi-Fi use.

Running out of batteries during data transfer will terminate the process and may result in transfer failure.

We recommend to use either the AC adapter or USB bus power during Wi-Fi use.

The DR-22WL is designed for remote control with the use of an exclusive application (DR CONTROL), free of charge.

Transport control such as playback and stop, as well as input level adjustment and file transfer can be made via Wi-Fi.

How to download and install the exclusive application (DR CONTROL)

1. Connect your smart phone to the Internet.
2. Search the exclusive application (DR CONTROL) and download from either Google Play (Android smart phone) or App Store (iOS device) for installation.

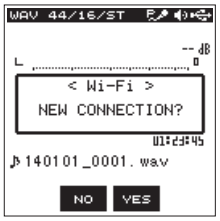
Connecting the DR-22WL to a smart phone via Wi-Fi for the first time

The DR-22WL can make a Wi-Fi/peer-to-peer connection with a smart phone via Wi-Fi, without the use of a router or other external devices. No Wi-Fi network environment is required. It can make direct connection with your smart phone.

* During Wi-Fi/peer-to-peer connection, the smart phone cannot connect to an external Wi-Fi network.

■ When using an iOS terminal

1. Press the **Wi-Fi** button of the DR-22WL; the **Wi-Fi** indicator will start to flash.
   A pop-up message appears on the display.
2. To make peer-to-peer connection with the smart phone for the first time, press the **F3** YES button.

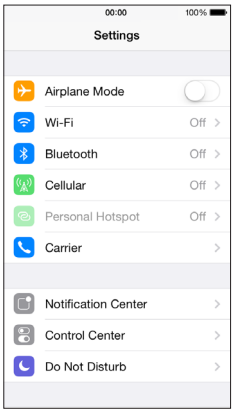


3. The "SSID" and "encryption key" will be displayed and the unit automatically switches to WPS mode.

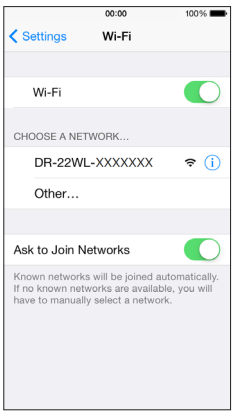
NOTE

The WPS mode is a standard for easy connection between wireless LAN devices. The DR-22WL adopts a push button method for Android devices.

4. In your iOS device, select "setting" → "Wi-Fi".



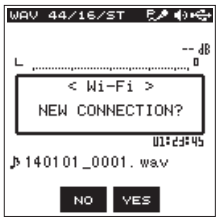
5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.



6. The password input screen will appear on your iOS device; enter the encryption key displayed in the DR-22WL.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

■ When using an Android device

1. Press the **Wi-Fi** button of the DR-22WL; the **Wi-Fi** indicator will start to flash.
   A pop-up message appears on the display.
2. To make peer-to-peer connection with the smart phone for the first time, press the **F3** YES button.

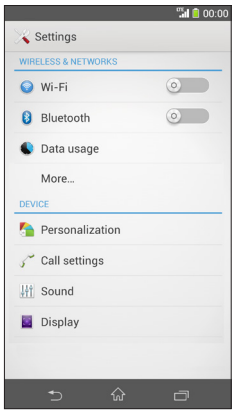


3. The "SSID" and "encryption key" will be displayed and the unit automatically switches to WPS mode.

NOTE

The WPS mode is a standard for easy connection between wireless LAN devices. This unit adopts the PIN code system for iOS terminals.

4. In your Android device, select the "setting" → "Wi-Fi".



5. When you turn on Wi-Fi on an Android device, a Wi-Fi device SSID list and WPS mark will appear. Select the SSID shown on the display of the unit.

6. When a password input screen appears on the Android device, input the password shown on this unit's display.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

NOTE

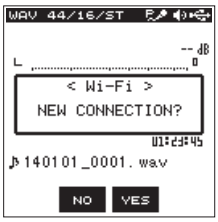
The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

Connecting the DR-22WL to a smart phone via Wi-Fi (from second time onward)

When you establish a connection between the DR-22WL and your smart phone for the first time and need to connect them again, you only need to select the SSID from the second time onward.

■ When using an iOS terminal

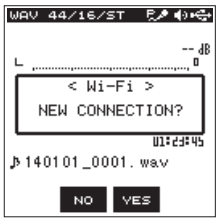
1. Press the **Wi-Fi** button of the DR-22WL; the **Wi-Fi** indicator will start to flash.
   A pop-up message appears on the display.
2. Your smart phone already made a peer-to-peer connection; simply press the **F2** NO button.



3. Pop-up message on the display disappears and the DR-22WL switches to a standby mode to connect to your smart phone.
4. In your iOS device, select "setting" w "Wi-Fi".
5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.
6. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

■ When using an Android device

1. Press the **Wi-Fi** button of the DR-22WL; the **Wi-Fi** indicator will start to flash.
   A pop-up message appears on the display.
2. Your smart phone already made a peer-to-peer connection; simply press the **F2** NO button.



3. Pop-up message on the display disappears and the DR-22WL switches to a standby mode to connect to your smart phone.
4. In your Android device, select the "setting" w "Wi-Fi".
5. When you turn the Wi-Fi on on your Android terminal, a Wi-Fi device SSID list appears. Select the SSID shown on the display of the unit.
6. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

NOTE

The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

Using a smart phone to remote control the DR-22WL

The exclusive application (DR CONTROL) uses the same interface of the DR-22WL, so the remote control operation is basically the same as operating this unit. Familiarizing yourself with the DR-22W operation method will assist you in using the "DR CONTROL" application.

1. When Wi-Fi connection is established between the DR-22WL and your smart phone, tap the installed "DR CONTROL" application.
2. When the "DR CONTROL" application is launched, the following screen will appear on your smart phone to remotely control the DR-22WL.

Detailed descriptions, on the "DR CONTROL" application, including the "DR CONTROL reference manual", can be downloaded from the TEAC Global Site (**http://teac-global.com**).

File transfer from the DR-22WL to a smart phone

1. Tap the "Browse" button on the "DR CONTROL" screen.
2. The "Browse" screen displays a list of files from the DR-22WL; select the file you want to transfer.
3. Detail screen on the selected file will appear; tap the "Copy" button.
4. A confirmation screen for file copy will appear; press the "YES" button to start file transfer from the DR-22WL to your smart phone.

Changing password

The password for Wi-Fi connection can be changed for security purpose.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Press the **F1** TAB button to display the SETUP page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the Wi-Fi item parameters.

4. Press the **F4** ENTER button to display the Wi-Fi screen.

5. Each time when you press the **F4** button**,** the password will change.
6. Press the **F1** button to set the password. The screen will return to the SETUP page.

View information (INFORMATION)

The INFO page of the menu screen lists various information on the DR-22WL.
Follow the below steps to display the information:

1. Press the ⌂/**MENU**/■ button to display the REC page in menu screen.
2. Use the **F1** TAB button to display the INFO page.

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item parameter of the information, and press the **F4** ENTER button.
   Below information will be displayed:
   FILE INFO **screen:**
   Displays information about the currently loaded audio file.
   CARD INFO **screen:**
   Displays information on the inserted microSD card.
   VERSION **screen:**
   Displays system settings and firmware version of the unit.
4. To return to the INFO page of the menu screen, press the **F4** ⮌ button.

File information screen (FILE INFO)

The FILE INFO screen displays the currently loaded audio file.

■ **FORMAT**

Displays the file type.
CBR/VBR will be displayed for MP3 files. (CBR: Constant Bit Rate, VBR: Variable Bit Rate)

■ **SAMPLE**

Displays the file's sampling rate.

■ **BIT WIDTH/BIT RATE**

Displays the file's bit width.
Bit rate (kbps) will be displayed for MP3 files.

■ **TYPE**

Displays whether the file is stereo or mono.

■ **SIZE**

File size

■ **DATE**

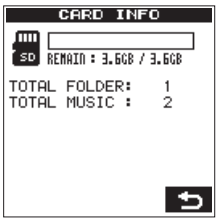
Date of file creation

■ **TIME**

Displays the recorded time.

Card information screen (CARD INFO)

The CARD INFO screen displays information on the inserted microSD card.



■ **REMAIN SIZE**

Displays available free space of the microSD card.

■ **TOTAL FOLDER**

Displays the total number of folders in the music folder.

■ **TOTAL MUSIC**

Displays the number of playable files in the music folder.

System information screen (VERSION)

The VERSION screen displays system settings and firmware version of the DR-22WL.

■ **SYSTEM**

Displays the system's firmware version.

■ **Wi-Fi**

Displays the Wi-Fi connection status.

Configuration (SYSTEM)

The SYSTEM page allows you to make various settings for optimum use of the DR-22WL according to usage environment and conditions, as well as resetting the unit and formatting the microSD card.

Follow the below steps to display the SYSTEM page.

1. Press the **⌂/MENU/■** button to display the REC page in menu screen.
2. Use the **F1** TAB button to display the SETUP page.

Use the **F2** ▲ button, the **F3** ▼ button, and the **F4** ENTER button to make settings for different items.

The following settings of different items can be made in the SYSTEM page.

Auto power save function setting

Use the AUTO PWR SAVE item to set the time for automatic turn-off in battery operation, counting from the last operation.

Options: OFF (no automatic turn-off), 3min, 5min, 10min, 30min (default value)

Backlight setting

Use the BACKLIGHT item to set the time for automatic turn-off of back-light in battery operation, counting from the last operation.

Options: OFF (light-off), 5sec (default value), 10sec, 15sec, 30sec

Adjusting the display contrast

Use the CONTRAST item to adjust the display contrast.

Options: 1 - 20 (default value: 2)

Battery type settings

Use the BATTERY TYPE item to set the battery type. This setting is used to display the remaining battery power and to calculate the minimum capacity for normal operation.

Options: ALKAL (alkaline batteries, default value), Ni-MH (nickel-metal hydride batteries)

Restoring the DR-22WL to factory settings

Use the INITIALIZE item to execute initialization; this will restore the unit to factory settings.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the INITIALIZE item and press the **F4** ENTER button.
   The following confirmation message will pop-up:

2. Press the **F3** YES button to execute initialization.
   Press the **F2** NO button to cancel the process.

Formatting the microSD card

Use the MEDIA FORMAT item to format the microSD card. Formatting will delete all music files in the microSD card, and the **"MUSIC"** folder, the **"UTILITY"** folder, and the **"dr-1.sys"** will be created automatically.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the MEDIA FORMAT item, and press the **F4** ENTER button.
   The following confirmation message will pop-up:

2. Press the **F3** YES button to format the microSD card.
   Press the **F2** NO button to cancel the process.

CAUTION

When formatting the microSD card, make sure that the DR-22WL is connected to either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power from a computer, or operating on fully-charged batteries.

Formatting may not complete successfully if the battery runs out.

Setting the file name type

The DR-22WL can set name types of the recording files.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the FILE NAME item and press the **F4** ENTER button.
   The FILE NAME screen will be displayed.

2. Use the ⏮ button and the ⏭ button, the **F2** ▲ button and the **F3** ▼ button, and the **F4** ENTER button to make settings for different items.
   The following settings for each item can be made in this screen.
3. To return to the SYSTEM page of the menu screen, press the **F4** ⮌ button.

■ File name type

In the TYPE item, select either the DATE or WORD options.

Options:

DATE (default value): dates will be included in file name
Example: 140101_0000.wav

WORD : the six characters set in WORD will be included in file name
Example: TASCAM_0000.wav

NOTE

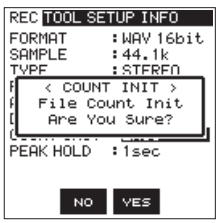
The internal clock of the unit is used to set dates. (See "Setting the date/time" on page 12.)

■ Setting characters (WORD)

In the WORD item, use either the ⏮ button or the ⏭ button to move the cursor, and use the **F2** ▲ and the **F3** ▼ buttons to set characters.
In addition to alphabets and numbers, the following characters can be used: ! # $ % & ' ( ) + , - . ; = @ ^ _ ' { } ~

■ Initializing the numbers (COUNT)

In REC page of the menu screen, select the parameter (highlight) the COUNT INIT item, and press the **F4** ENTER button. The following confirmation message will appear:



To execute, press the **F3** YES button. All newly created files will be assigned with numbers set in the WORD item, starting from the 0001 count.

The following is a list of the pop-up messages.

The DR-22WL displays these pop-up messages according to the situation; refer to this list to learn more details and/or solutions.

Message	Details and solutions
Battery Empty	The batteries are empty. Replace the batteries.
Cannot overdub! See REC setting	Overdubbing in 96kHz WHV file with MP3 format is not possible. Select the WAV format for recording.
Can't Divide	The selected division point is not appropriate for DIVIDE action (the beginning and end of the track).
Card Error	The card cannot be recognized. Replace the card.
Card Full	The card has no empty space. Erase unnecessary files or transfer them to a computer.
Current File MP3	MP3 files cannot be divided.
Dup File Name	The name of the DIVIDE file to be created is identical to the name of the file that already exists in the same folder. The DIVIDE function adds "a" or "b" to the end of the file name. Before using the DIVIDE function, connect the DR-22WL to a computer and edit the file name.
File Full	The total number of folders and files exceeded the limit (5000). Delete unnecessary folders and files or move them to a computer.
File Name ERR	More than 200 characters has been added to the file name due to the DIVIDE function. The DIVIDE function adds "a" or "b" to the end of the file name. Before choosing the DIVIDE function, connect the unit to a computer and edit the file name to less than 198 characters.
File Not Found	The file cannot be found or damaged. Check the target file.
File Not Found Make Sys File	System files required to operate the DR-22WL is missing. To create system files, press the **PLAY** button while this message is displayed.
File Protected	The file is read-only and cannot be deleted.
Format Error Format CARD	The microSD card is not formatted properly or damaged. This message also appears when a computer under USB connection formatted the card, or when an unformatted card is inserted to the unit. Cards must be formatted with the DR-22WL. Insert a different card, or press the **F4** ENTER button to start formatting. Formatting will delete all data on the microSD card.
Invalid Card Change Card	The card may not work properly. Replace the card.
Invalid SysFile Make Sys File	The system file required to operate this unit is invalid. To create new system files, press the **F4** ENTER button while this message is displayed.
I/O Too Short	The IN (start) and OUT (end) points are too close. Re-set by spacing at least one second in between.
Layer too Deep	Folders can be created only up to two layers. You cannot create a new folder inside this folder.
Max File Size	File size is larger than the designated size, or the recording time exceeded 24 hours.
MBR Error Init CARD	The card is not formatted properly or damaged. Insert a different card, or press the **F4** ENTER button to start formatting. Formatting will delete all data on the microSD card.
No MUSIC File	There is no playback file and the DIVIDE function cannot be executed.
No Card	No card is inserted in the DR-22WL; no recording can be made.
No PB File	There are no files available for playback. The file may be damaged.
Non-Supported	The file type is not supported. Please refer to the 8 – Connecting with a computer 32 for compatible file types.
Write Timeout	Writing to the card timed out. Back up files to a computer and format the card.
Can't Save Data	Restart the unit when this error message appears. If the power cannot be turned off, remove the batteries, disconnect the AC adapter (TASCAM PS-P515U; sold separately), or disconnect the USB cable when in bus power supply. If these error messages appear frequently, please contact the TEAC Repair Center.
Device Error	
File Error	
Not Continued	
Player Error	
Writing Failed	
Sys Rom Err	
System Err 50	
System Error 1	
System Error 2	
System Error 3	
System Error 4	
System Error 5	
System Error 6	
System Error 7	
System Error 8	
System Error 9	

12 – Troubleshooting

When the DR-22WL does not operate properly, check the followings before make a repair request. If you still have a problem, contact either the store you purchased the DR-22WL or the TEAC repair center (see the back cover for contact details).

■ The power does not turn on

- Are batteries low?
- Are batteries inserted correctly with the ⊕, ⊖ terminals aligned correctly?
- Is the AC adapter (TASCAM PS-P515U; sold separately) securely connected to the outlet? Is the USB connector connected securely?
- Is the USB cable connecting the computer for USB bus power securely connected?
- Is the USB hub in use with computer connection for USB bus power?
- Is the **HOLD/ ⏻ /** switch set at **HOLD**?

■ The DR-22WL turn the power off automatically

- Is the automatic power saving function on? (See "Auto power save function setting" on page 37.)
  - The DR-22WL is in compliance with the European Standby Power Regulations (ErP), and therefore, the automatic power saving function will work whether the unit is being powered by an AC adapter or batteries. Select "OFF" if you do not want to use the auto power saving function (the factory default setting is "30 min").

■ The unit does not function.

- Is the **HOLD/ ⏻ /** switch set at **HOLD**?
- Is the unit connected to a computer via USB cable (USB Connected)?

■ The microSD card is not recognized.

- Check that the microSD card is inserted correctly.

■ The DR-22WL don't play back

- If the file is WAV format, check whether its sampling rate is compatible with the unit.
- If the file is MP3 format, check whether the bit rate is compatible with the unit.

■ The built-in speaker does not emit sound

- Is a headphone connected to the unit?
- Is the SPEAKER item set as OFF?
- Is the unit in recording or recording standby mode?

■ The monitor system does not emit sound

- Is the monitoring system securely connected?
- Is the monitoring system volume at minimum level?
- Is the OUTPUT LEVEL setting of the unit at minimum level?

■ The DR-22WL is not recording

- Check the connection again.
- Check the input settings again.
- Is the recording level too low?
- Does the microSD card has free space?
- Check whether the number of files has reached the maximum level.

■ The input level is too low

- Is the input level setting too low?
- Is the output level of the connected device too low?

■ The sound I want to record is distorted

- Is the input level setting too high?
- Is reverb setting ON?

■ Playback sound is not natural

- Is the playback speed changed?
- Is the level control function ON?
- Is reverb setting ON?

■ The file cannot be deleted

- Is the file a copy of a read-only file set by a computer?

■ The computer does not display the unit's files

- Is the DR-22WL connect to a computer via USB port?
- Is USB hub in use?
- Is the unit in recording or recording standby mode?

■ The DR-22WL cannot make a Wi-Fi connection or communication is interrupted

- Check that the Wi-Fi device is turned ON and/or the Wi-Fi function is ON.
- Is the distance to the Wi-Fi device too far?
  Is there any obstacles in between, for example a wall?
  When a Wi-Fi device is located at the rear side of the DR-22WL, the unit itself maybe the cause of interruption.
  Try changing the positions of the Wi-Fi device and the unit.
- Turn OFF and restart the DR-22WL.
- Delete the "DR-22WL" registered information in the Wi-Fi device, and follow the steps in "Connecting the unit to a Wi-Fi device."

Rating

■ **Recording media**

microSD card (64 MB–2 GB)
microSDHC card (4 GB–32 GB)
microSDXC card (64 GB–128 GB)

■ **Recording/playback formats**

BWF: 44.1k/48k/96kHz, 16/24 bit
WAV: 44.1k/48k/96kHz, 16/24 bit
MP3: 44.1k/48 kHz, 32k/64k/96k/128k/192k/256k/320kbps

■ **Number of channels**

2 channels (stereo)

Input/output ratings

Analog audio input and output ratings

■ **MIC/EXT IN jack (can provide plug-in power)**

Connector: 1/8" (3.5 mm) stereo mini jack
Input impedance: 25 kΩ
Reference input level: –20dBV
Maximum input level: –4dBV

■ **🎧/LINE OUT jack**

Connector: 1/8" (3.5 mm) stereo mini jack
Output impedance: 12 Ω
Reference output level: –14dBV (with 10kΩ load)
Maximum output level: +2dBV (with 10kΩ load)
Maximum output: 20mW+20mW (with 32Ω load)

■ **Built-in speaker**

0.3W (mono)

Control input/output ratings

■ **USB port**

Connector: Mini-B type
Format: USB 2.0 HIGH SPEED mass storage class

Audio performance

■ **Frequency response**

20-20 kHz +1/-3 dB (EXT IN to LINE OUT, Fs44.1 kHz, JEITA)
20-22kHz +1/-3 dB (EXT IN to LINE OUT, Fs48kHz, JEITA)
20-40kHz +1/-3 dB (EXT IN to LINE OUT, Fs96kHz, JEITA)

■ **Distortion**

0.05% or less (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

■ **S/N ratio**

92dB or above (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

Note) Based on JEITA: JEITA CP-2150

Requirements for connected computers

Please visit the TEAC Global Site (**http://teac-global.com**) to learn the latest compatible OS.

■ **Windows machine**

Pentium 300MHz or more
128MB or more memory
USB port (USB2.0 is recommended)

■ **Macintosh machine**

Power PC, iMac, G3, or G4 with 266MHz or above
64MB or more memory
USB port (USB2.0 is recommended)

■ **Recommended USB host controller**

Intel chip set

■ **Supported operating systems**

Windows: Windows XP, Windows Vista, Windows 7, Windows 8 (including 8.1)
Macintosh: Mac OS X 10.2 or later

Wi-Fi

■ **Wireless standard**

Based on IEEE 802.11b/g/n (2.4GHz only)

■ **Wireless communication mode**

Simple access point (Limited AP)

■ **Security**

WPA2-PSK (WPS2.0 compatible)

13 – Specifications

General

■ Power supply

2 AA batteries (alkaline or NiMH)
USB bus power from a computer
Dedicated AC adapter (TASCAM PS-P515U; sold separately)

■ Power consumption

1.7W (maximum)

■ Battery operation time (continuous operation)

- Alkaline batteries (EVOLTA)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 17.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 11 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 11 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 11 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

- Using NiMH batteries (eneloop)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 13.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 12 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13.5 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 10 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 10 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

■ Dimensions

52.2 × 155 × 36.6mm (W x H x D)

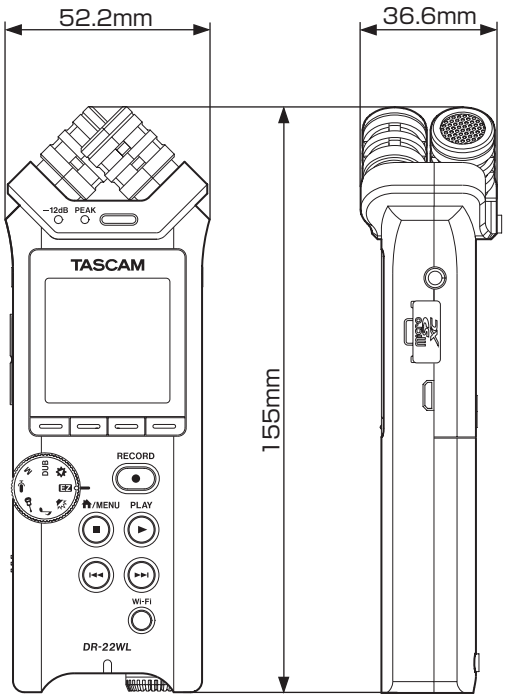
■ Weight

170 g/123 g (with batteries/without batteries)

■ Operating temperature

0°C–40°C

Dimensional drawings



- Illustrations in this manual may be different from the actual product.
- To improve the product, specifications and external appearance may change without prior notice.

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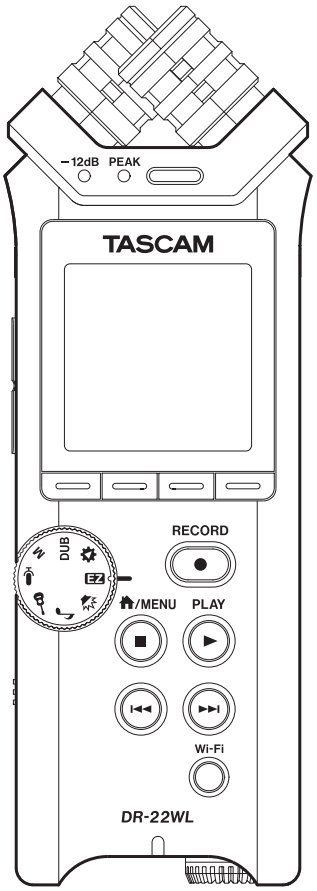
TASCAM

D01244520B

DR-22WL

Linear PCM Recorder

REFERENCE MANUAL



Hi-Res AUDIO

Wi Fi CERTIFIED

BLACKFIN PROCESSOR by Analog Devices

Contents

1 – Introduction

Features

- Compact audio recorder that uses microSD/microSDHC/microSDXC cards as recording media
- Built-in with high performance directional stereo microphones in XY positions
- Built-in Wi-Fi feature to use smartphone as remote control, transfer files from the PCM recorder, and playback audio
- Scene dial allows for easy recording
- Two overdubbing modes for sound dubbing
- Practice mode with features useful for instrument practice, such as I/O loop for repeated playback, VSA to adjust playback speed without changing the pitch, key-change and fine-tune to adjust the pitch
- 44.1/48/96 kHz, 16/24-bit, linear PCM (WAV/BWF format) recording possible
- 32–320 kbps MP3 format recording possible (compatible with ID3 tag v2.4)
- Overdubbing allows playback and input signals to be mixed and recorded together as a new file
- Built-in 0.3 W monaural output speaker
- Built-in reverb function can be used during recording and playback
- Automatic recording function starts recording automatically when a set sound input level is detected
- Track incrementing function allows a recording to be split by creating a new file when desired
- Pre-recording function allows the unit to record the 2 seconds of sound before recording is activated
- Peak reduction function is available to reduce the level automatically in case of excessively large input
- Limiter function is available to reduce the level automatically in case of excessively large input
- Low cut filter reduces low-frequency noise
- Self-timer function to start recording after a set period of time
- DIVIDE function allows files to be split where desired (only for WAV files)
- MARK function convenient for moving to specific locations
- File name format can be set to use a user-defined word or the date
- Resume function memorizes the playback position before the unit is turned off
- 3.5mm (1/8") jack for external stereo microphone input (provides plug-in power) or external stereo line input
- 3.5mm (1/8") line/headphones output jack
- 128 x 128 pixel LCD with backlight
- Micro-B type USB 2.0 port
- Operates on 2 AA batteries, AC adapter (sold separately: TASCAM PS- P515U), or USB bus power
- Tripod attachment screw-hole built into unit
- USB cable included

This product has a Blackfin® 16/32-bit embedded processor made by Analog Devices, Inc. This processor controls digital signal processing.
Inclusion of this Blackfin® processor in the product increases its performance and reduces its power consumption.

Conventions used in this manual

The following conventions are used in this manual:

- Buttons, connectors and other physical parts of this unit are written using a bold font like this: **MENU** button.
- When we show messages, for example, that appears on the unit's display, the typeface looks like this: INPUT.
- microSD, microSDHC and microSDXC memory cards are called "microSD cards".
- Information shown on the computer display is written like this "OK".
- The selected folder is indicated as the "current folder".
- Computer or portable audio devices that are connected via Wi-Fi with the DR-22WL are indicated as the "Wi-Fi device".
- Additional information is provided as necessary in tips, notes and cautions

TIP

These are tips about how to use the unit.

NOTE

These include additional explanations and special cases.

CAUTION

Failure to follow these instructions could result in injury, equipment damage or lost data, for example.

About microSD cards

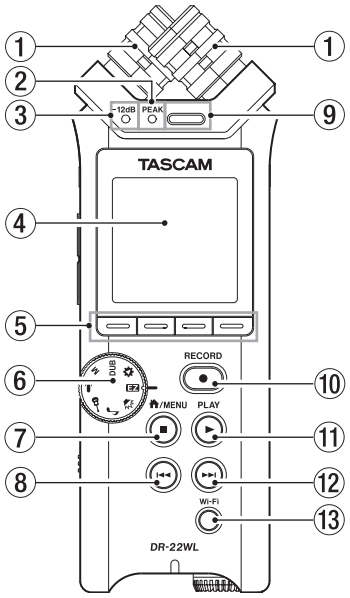
The DR-22WL uses microSD cards for recording and playback.
Memory cards that you can use with the DR-22WL are microSD cards of 64 MB to 2 GB, microSDHC cards of 4GB to 32GB, and microSDXC cards of 48GB to 128GB.
Please refer to the TEAC Global Site (**http://teac-global.com**) to learn more on the list of compatible SD cards, or contact the TASCAM customer support service.

Precautions

microSD cards are precision devices. Please refer to the below when using memory cards to prevent memory and/or card damage:

- Do not leave a memory card in extremely hot or cold places
- Do not leave a memory card in extremely humid places
- Do not spill any liquids on the memory card
- Do not bend the card or subject it to any excessive force
- Do not subject the card to any physical shock
- Do not remove the card while the unit is accessing data, or recording, playing, or making data transfer
- Always store the memory card in a case

Top panel



① **Built-in stereo microphone**
This is an XY directional stereo electret condenser microphone.
The built-in microphone becomes inactive when an external microphone or external input is connected to the **MIC/EXT IN** jack on the right-side panel.

② **PEAK indicator**
This will light in red immediately before the input noise increases to a distortion level (-2dB).

③ **–12dB indicator**
This will light in green when the input noise exceeds the –12dB level.

④ **Display**
Displays a variety of information.

⑤ **Function buttons**
Function of individual buttons changes according to what is shown on display.
The displayed icon at the bottom of the screen indicates the current function.

NOTE

For your convenience, this manual indicates the four function buttons as **F1**, **F2**, **F3**, and **F4** starting from the left.

⑥ **Scene dial**
Use this dial to change the unit setting according to the scene. (See "Scene recording mode" on page 15.)

⑦ **⌂/MENU/■ button**
To display the MENU screen, press this button in home screen.
To return to the home screen, press this button in any screen display.
Press this button during recording to stop recording. Press this button during playback or recording standby to pause or stop (depending on the position in the file).

⑧ **I◄◄ Fast rewind button**
Press this button while in play or stop mode to return to the beginning of a track.
Press and hold this button to search backwards.
When the MARK SKIP MODE is set to ON on the TOOL menu page, press this button while pressing and holding the **F2** button to move to the previous mark. (See "Moving to the cue mark position" on page 23.)

⑨ **Built-in mono speaker**
Use this built-in speaker to listen to recordings.
No sound will play when:

- In recording standby
- Headphone is connected
- In recording mode
- Speaker output setting is turned off

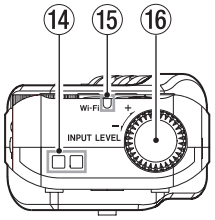
⑩ **RECORD button/RECORD indicator**
When you press this button during stop mode, the **RECORD** indicator (around **RECORD** button) flashes and the DR-22WL will go into recording standby mode.
When you press this button during the recording standby mode, the **RECORD** indicator lights and the DR-22WL starts recording.
When you press this button during recording, the **RECORD** indicator flashes.
When the scene dial is set to **EZ**, press when stopped to start recording.

⑪ **PLAY button**
When the home screen is open and playback is stopped, press this button to start playback.
When you select a file or folder in BROWSE screen and press the PLAY button, the unit will return to the home screen and start playing the selected file or folder from the beginning.

⑫ **►►I Fast forward button**
Press this button in playback or stop mode to skip to the next track.
Press and hold this button for fast forward search.
When the MARK SKIP MODE is set to ON on the TOOL menu page, press this button while pressing and holding the **F2** button to move to the next mark. (See "Moving to the cue mark position" on page 23.)

⑬ **Wi-Fi button**
Use this button to turn on/off the Wi-Fi function.

Front panel

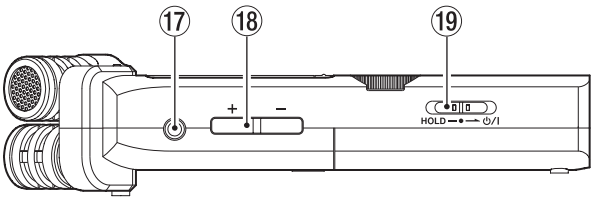


⑭ **Strap holder**
A strap can be attached to this holder.

⑮ **Wi-Fi indicator**
This indicator lights while the Wi-Fi module is in access.

⑯ **INPUT LEVEL volume**
Turn this dial to adjust the input level.
The input level setting will pop-up on display when making an adjustment.

Left side panel

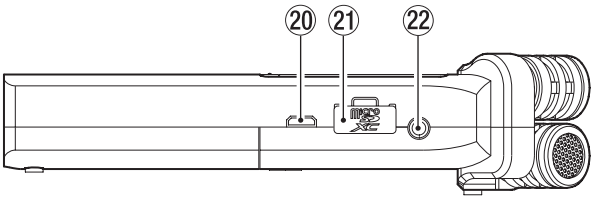


⑰ **🎧/LINE OUT jack**
A headphone or a line input jack of an external device (via stereo mini-jack cable) can be connected to this jack.

⑱ **OUTPUT LEVEL (+/–) buttons**
These buttons adjust the output sound level of the built-in speaker or the **🎧/LINE OUT** jack.
Volume level will pop-up on the bottom of the display while making adjustment.

⑲ **HOLD/⏻/❙switch**
To turn the power on/off, slide and hold the switch towards the ⏻/❙icon.
When you slide the switch towards the **HOLD** side, all the functions of the buttons are locked.

Right side panel



⑳ **USB port**
Use the supplied USB cable to connect the DR-22WL with a computer. (See "8 – Connecting with a computer" on page 32.)
Power can be supplied by using this USB cable or from an AC adapter (sold separately: PS-P515U).

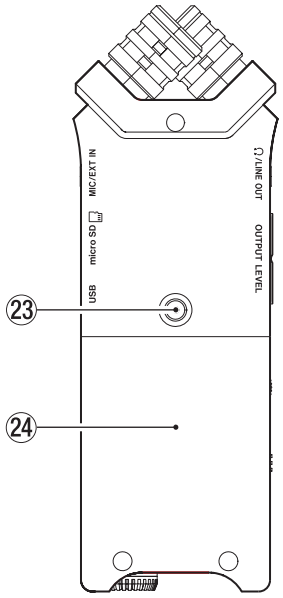
CAUTION

Connect the DR-22WL directly be connected directly with the computer, not through a USB hub.

㉑ **microSD card slot**
Insert or remove a microSD card.

㉒ **MIC/EXT IN jack**
Connect an external stereo microphone or external input to this jack. It is compatible with plug-in power.
The built-in microphone is disable when an external microphone is connected to the **MIC/EXT IN** jack.

Bottom panel

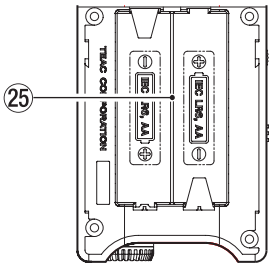


㉓ **Tripod attachment screw-hole (1/4 inch)**
A tripod can be attached to the DR-22WL.

CAUTION

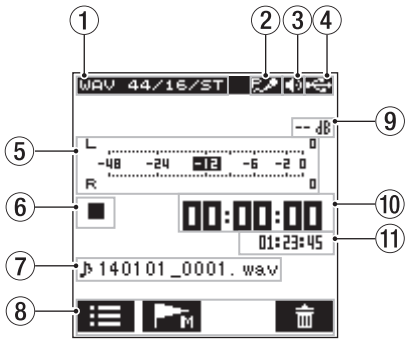
- ***Ensure the tripod or microphone stand screws are securely fastened to prevent the unit from falling off.***
- ***When attaching this unit to a tripod or microphone stand, ensure to place it on a level surface.***

㉔ **Battery compartment cover**



㉕ **Battery case**
Insert batteries (two AA size) in this compartment to power the unit. (See "Using AA size batteries" on page 10.)

Home Screen



① **Playback file type message**
Format type, sampling rate, bit rate, stereo/mono setting of the playback file are shown.

② **Plug-in power on/off message**
The plug-in power status (on/off) is displayed in icon view. (See "Recording with an external microphone (MIC IN)" on page 14.)

Icon	On/off status
Blank	Plug-in power function off
	Plug-in power function on

③ **Monitor output message**
: output from built-in speaker
: output from headphone

④ **Power supply status message**
When power is supplied from the batteries, the current battery level is displayed in bars (, ,).
When the battery level is low, the will flash and the power will be switched off (standy mode).
The will be displayed when using either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power.

NOTE
When attempting recording or other operations that consume large amount of power, a warning message of `BatteryLow` ***may pop-up.***

⑤ **Level meter**
Displays the level of the playback sound.

⑥ **Recorder status message**
The recording status is indicated in the following icons:

Indicator	Meaning
■	Stop
❚❚	Pause
►	Playback
►►	Fast forward
◄◄	Rewind
►►I	Skip forward to the beginning of the next file
I◄◄	Skip backward to the beginning of either the current or preceding file

⑦ **File name**
The name or tag information of the file currently in play is displayed.
The ID3 tag information is displayed instead when included in the MP3 file.

NOTE
ID3 tag information contains titles and artist names, which can be stored in MP3 files.

⑧ **Function buttons status message**
Below icons are displayed while in stop or playback mode.

Icon	Function
	Display browse screen
	Mark function (set/clear)
	Delete file

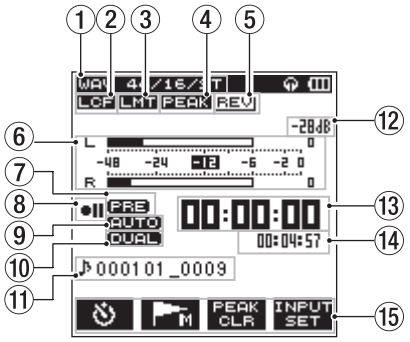
⑨ **Peak decibel (dB) message**
Displays the maximum playback level in decibel reading per set amount of time.

⑩ **Elapsed time message**
Displays the elapsed time (hours: minutes: seconds) of the current file.

⑪ **Remaining time message**
Displays the remaining time (hours: minutes: seconds) of the current file.

Recording Screen

The below recording screen is displayed in recording or recording standby mode.



① **Recording mode message**
Displays the format, sampling rate, and stereo/mono of the recording file. (See "Recording format settings (FORMAT/SAMPLE/TYPE)" on page 16.)

② **Low-cut filter on/off status message**
Displays the low-cut filter on/off status.
The message is highlighted when the low-cut filter is set at `40Hz/80Hz/120Hz/220Hz`.
Blank: low-cut filter is off
LCF: low-cut filter is on

③ **Limiter function on/off message**
Displays the limiter function on/off status. (See "Setting the Low Cut Filter" on page 18.)
Blank: limiter function is off
LMT: limiter function is on

④ **Peak reduction function on/off status message**
Displays the peak reduction on/off status. (See "Using the level control function" on page 18.)
Blank: peak reduction function is off
PEAK: peak reduction function is on

⑤ **Reverb on/off status message**
Displays the reverb on/off status.

Icon	On/off status
Blank	Reverb is off
REV	Reverb is on (Reverb sound added to input sound)
REV	Reverb is on (Reverb sound added to output sound)

⑥ **Level meter**
Displays the input sound level.
When the AUTO REC function is turned on, the level meter will display sounds within the level that activates the AUTO REC function.

⑦ **Prerecording function on/off status**
Displays the Prerecording function on/off status. (See "Start recording from slightly before pressing RECORD (PRE REC)" on page 20.)

Blank: Prerecording is off

PRE : Prerecording function is on

⑧ **Recording status message**
The recording status is indicated in the following icons:

Indicator	Meaning
● II	Recording standby or recording pause mode
●	In recording mode
5S	Begins recording in five seconds
10S	Begins recording in ten seconds

⑨ **Automatic recording function on/off status**
Displays the Automatic recording function on/off status. (See "Automatic recording (AUTO REC)" on page 19.)

Blank: Automatic recording off

AUTO : Automatic recording function on

NOTE

AUTO is displayed when the scene mode is EZ or 🎙.
In this case, level control is automatic.

⑩ **Dual format recording function on/off status**
This shows whether dual format recording is on or off.
Blank: dual format recording function off
DUAL : dual format recording function on

⑪ **File name message**
Displays the file name automatically assigned to the recording file.

⑫ **Peak decibel (dB) message**
Displays the peak input level in decibel reading.
OVER will be displayed when recording is above the peak level (–2dB or more).

⑬ **Elapsed recording time**
Displays the elapsed recording time of a recorded file (hours: minutes: seconds).

⑭ **Remaining recording time**
Displays the remaining recording time for the microSD card (hours: minutes: seconds).

⑮ **Function buttons message**
The following icons will be displayed while in recording standby, recording, or recording pause mode:

Icon	Function
	Self-timer function
M	Mark function (set mark)
INPUT SET	Display input setting screen
TRK INC	Activate the track increment
PEAK CLR	Clear peak hold

Menu item list

Press the ⌂/**MENU**/■ button to display the menu screen.

The menu screen consists of four pages each separated by types of menu items.

REC: make basic recording settings
TOOL: make function settings useful for playback files
SETUP: make configuration settings for the DR-22WL
INFO: displays file and media information

Menu items are as follows:

Menu item	Function		Ref. page
REC	Make recording settings		
		FORMAT SAMPLE TYPE	page 16
		PRE REC	page 20
		AUTO FUNC	page 19
		DUAL FORMAT	page 21
		COUNT INIT	page 40
		PEAK HOLD	page 17
TOOL	Make settings for various functions.		
		MARK SKIP MODE	page 23
		DIVIDE	page 29
		AUTO DIVIDE	page 29
		REVERB	page 30
		SPEAKER	page 12
		METRONOME	page 30
SETUP	Make various settings.		
		MEDIA FORMAT	page 39
		BACKLIGHT	page 39
		CONTRAST	page 39
		Wi-Fi	page 37
		AUTO PWR SAVE	page 39
		BATTERY TYPE	page 39
		DATE/TIME	page 11
		FILE NAME	page 40
		INITIALIZE	page 39
INFO	View various types of information.		
		FILE INFO	page 38
		CARD INFO	
		VERSION	

Using menus

The following explains the menus, using the display contrast setting as an example.

1. Press the ⌂/**MENU**/■ button to display the menu screen.

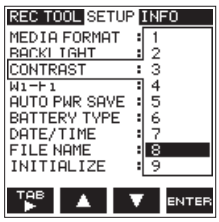
2. Press the **F1** TAB button to display various menu pages.

SETUP page is selected

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item you want to set.

CONTRAST item is selected

4. Press the **F4** ENTER button to open the parameter display.



5. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ENTER button to finalize the setting.
6. Repeat the 2. to 5. steps to set each items.
7. Press the ⌂/**MENU**/■ button to return to the home screen.

Basic operations

Use the following buttons to operate the various screens.

⌂/**MENU**/■ button

The menu screen will pop up when you press this button in stop or pause mode.

To return to the home screen, press this button in any screen display.

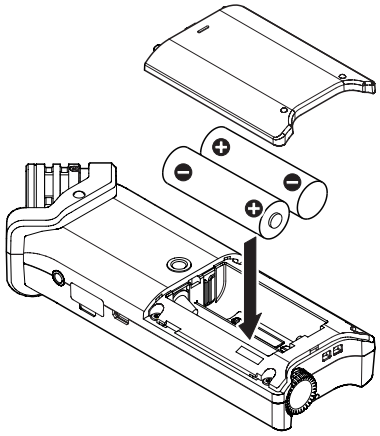
Powering the unit

Power sources

The DR-22WL operates on two AA batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately), or the supplied USB cable (USB bus power).
Use either alkaline batteries or Ni-MH batteries.

Using AA size batteries

Remove the battery compartment cover on the back of the unit, insert two AA batteries with the ⊕ and ⊖ ends in the right position, and close the cover.



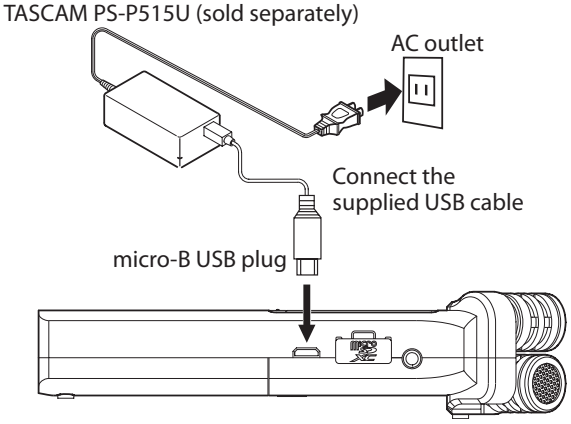
Select the same type of batteries to get an accurate reading of the remaining battery power and required minimum power for operation. (See "Battery type settings" on page 39.)

CAUTION

- ***Do not use Manganese dry cell batteries.***
- ***Ni-MH batteries will not be recharged with this unit; use a separate battery recharger instead.***
- ***The supplied alkaline batteries are for testing and may not last long.***

Using an AC adapter (sold separately)

Use the supplied USB cable to connect the USB port of the unit and the dedicated AC adapter (TASCAM PS- P515U; sold separately) as illustrated below.



NOTE

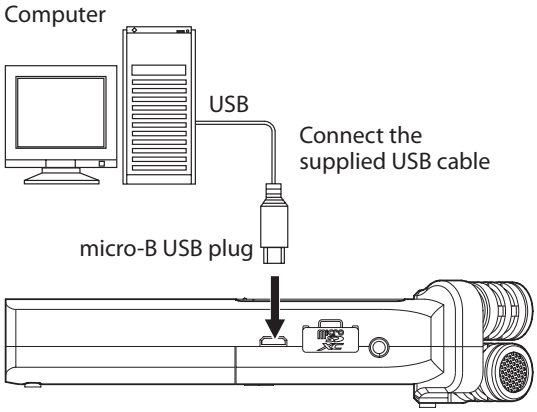
When both batteries and the AC adapter are attached to the unit, power will be supplied from the AC adapter.

CAUTION

- ***Use only the dedicated AC adapter (TASCAM PS- P515U; sold separately). The use of another adapter may cause malfunction, fire or electric shock.***
- ***Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.***

Using USB bus power

Use the supplied USB cable to connect the unit and the computer as illustrated below.



When you connect a USB cable while the unit power is on, or turn on the power after making a connection, the USB SELECT screen will pop up, prompting the user to select either to operate the unit with USB bus power or make a USB connection with the computer.

Use the **F2** ▲ button and the **F3** ▼ button to select (highlight) the BUS POWER, then press **F4** ENTER button to supply power from the USB port and display the home screen.

NOTE

Power is supplied from the USB port when USB cable is connected to the unit inserted with batteries (USB bus power prioritized).

CAUTION

- ***Depending on the USB bus power specifications of the computer, the DR-22WL may not operate with a USB connection. If this occurs, please use the dedicated AC adapter (TASCAM PS-P515U; sold separately) instead.***
- ***This unit is not compatible with the computer's power-save mode or sleep-mode. Please turn off these modes when operating the unit from the computer's USB bus power.***

Turning the power on and off (standby mode)

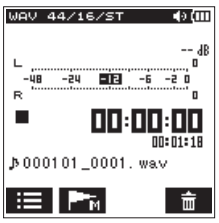
CAUTION

- ***When you turn the power switch off while supplying power from the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power connected to a computer, the unit will go to a standby mode.***
- ***Before turning the power switch on and off, turn the volume down for the sound system connected to the unit.***
- ***Do not wear headphones when turning the power switch on and off (standby mode); the noise may cause damage to your ears and/or headphones.***

Starting up the unit

In power off mode, slide and hold the **HOLD**/ ⏻ / I switch (located at left-side of the panel) toward the ⏻ / I direction, and release the switch when the TASCAM DR-22WL (start-up screen) appears.
The DR-22WL starts up and the home screen is displayed.

Start-up screen



Home screen

CAUTION

When turn the power on for the first time (or when the built-in clock is reset due to no battery power), the DATE/TIME screen will appear before the home screen to set date/time. (See "Setting the date/time" on page 11.)

Shutting down (standby mode)

In power on mode, slide and hold the **HOLD**/ ⏻ / I switch (located at left-side of the panel) toward the ⏻ / I direction, and release the switch when the TASCAM DR-22WL shutting down appears.
The power turns off when the shut-down process is completed.

CAUTION

Always use the* HOLD/ ⏻ / I *switch to turn the power off. In power on mode, all recorded data and settings will be lost if you remove the batteries, disconnect the power cable of the dedicated AC adapter (TASCAM PS-P515U; sold separately), or plug-off the USB cable for USB bus power. Any lost data and/or settings cannot be restored.

Resume function

The DR-22WL is equipped with a resume function to locate the previous position (or time) when the power was turned off.
Turn the power on and press the **PLAY** button to playback from the previous file position (time) when the power was turned off.

NOTE

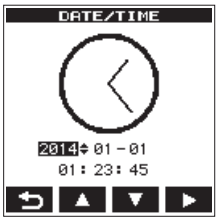
The position is recorded in the microSD card. The resume function does not work if the microSD card is replaced or formatted.

Setting the date/time

The DR-22WL uses its internal clock to record the date and time to the recorded files.

1. Press the ⌂/**MENU**/ ■ button to display the menu screen.
2. Press the **F1** button to display the SETUP page.
3. Use both the **F2** ▲ and **F3** ▼ buttons to select (highlight) the DATE/TIME item parameters.

4. Press the **F4** button to display the DATE/TIME screen.



5. Press the **F4** ▶ button to move the cursor (highlighted area), and use the **F2** ▲ and **F3** ▼ buttons to change settings.
6. Press the **F1** button to finalize the settings. The screen will return to the SETUP page.

NOTE

The file name will include the set date/time. (See "Setting the file name type" on page 40.)

CAUTION

Without the use of the batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately) or USB bus power, the date and time setting can be made only for a few minutes. When using batteries, we recommend to replace them before they are completely drained.

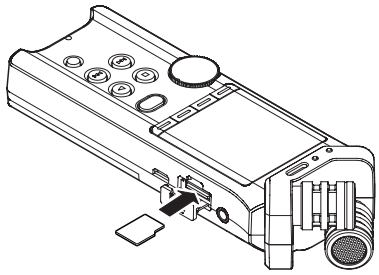
Inserting and removing microSD cards

Inserting the SD card

NOTE

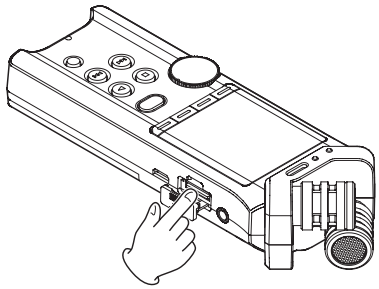
A microSD card is already installed at the time of purchase. You can immediately start recording and playing tracks without the need to remove and insert the microSD card.

1. Open the microSD card slot cover on the right side panel.
2. Insert the microSD Card into the slot (as illustrated below) until it clicks into place.



Removing the card

1. Open the microSD card slot cover.
2. Gently press and release the microSD card; the card should pop out.



CAUTION

- ***Do not remove the microSD card while the unit is accessing data for recording, playback, etc.***
- ***Do not remove the microSD card from the unit when connected via USB cable to a computer.***
- ***The DR-22WL is compatible with microSD/microSDHC/ microSDXC standards.***
- ***Please refer to the TEAC Global Site (*http://teac-global.com*) to learn more on the list of compatible SD cards.***

Setup the microSD card for use

To use a microSD card, it must be formatted first by the DR-22WL.

1. Confirm that a microSD card is inserted and turn the power on.
2. The following message appears when a new card or a card formatted by another device is inserted into the unit.

micro SD/SDHC card

micro SDXC card

3. Press the **F4** ENTER button to start formatting.

CAUTION

Formatting will delete all data from the card.

4. When formatting is complete, it will return to the home screen. You may format the card whenever required.

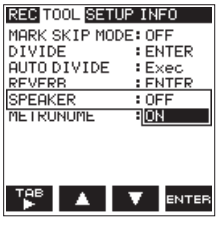
CAUTION

Before formatting, make sure the unit is connected to either a dedicated AC adapter (TASCAM PS-P515U; sold separately), a computer via USB bus power, or fully-charged batteries.

Turning the built-in speaker on/off

The factory setting for the built-in speaker output is selected as ON. To turn the built-in speaker output off, set the SPEAKER item to OFF on the TOOL menu page.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the SPEAKER item and press the **F4** ENTER button.
   This shows the SPEAKER item parameters.



4. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ENTER button to finalize the setting.

   Options: OFF, ON (default setting)

5. When setting is completed, press the ⌂/**MENU**/■ button to return to the home screen.

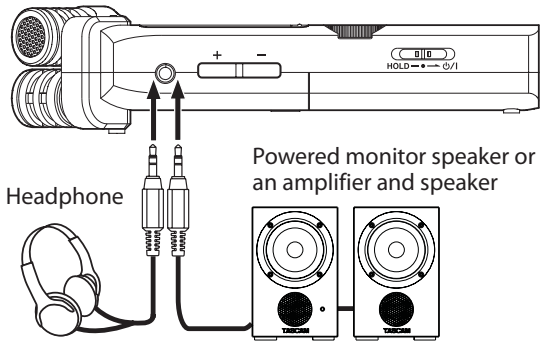
NOTE

In a recording standby or recording mode, or when a headphone or a speaker system is connected to the DR-22WL, the built-in speaker will not emit sound even when the SPEAKER ***setting is*** ON.

Connecting a monitor device

To listen with headphones, connect them to the ∩/**LINE OUT** jack on the left side of the unit.

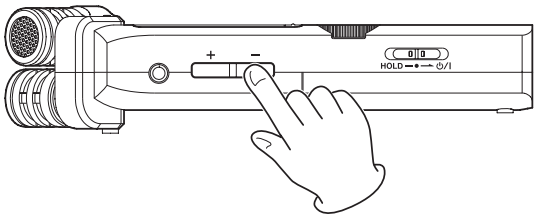
To listen with an external monitoring system (powered monitor speakers or an amplifier and speakers), connect it to the ∩/**LINE OUT** jack.



Adjusting the playback volume

Use the **OUTPUT LEVEL (+/–)** buttons on the left side of the unit to adjust the volume of output through the built-in speaker and ∩/**LINE OUT** connector.

When doing this, a volume position pop-up appears at the bottom of the display.



When increasing the volume, this pop-up message might appear: INCREASE YOUR RISK OF HEARING DAMAGE.

This warning appears when the volume is set above a level recommended by the European Union (EU) to avoid hearing damage (EU volume limit regulation).

Reconnecting headphones will reset the volume to its default value.

NOTE

You can continue to adjust the volume even after the pop-up message appears.

When you raise or lower the volume again, the pop-up message will disappear.

CAUTION

Listening at high volumes could cause hearing damage. If the surroundings are noisy, the sound of playback might seem quieter than it actually is.

Start playback of the audio and check the volume before putting on headphones, for example.

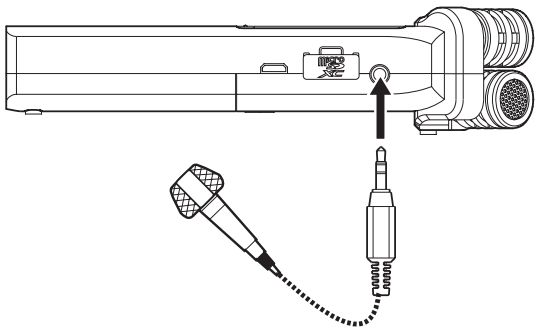
Input settings

Recording with the built-in microphone

Point the built-in microphone toward the sound source and place the unit on a stable surface with minimum vibration.

Recording with an external microphone (MIC IN)

Connect the external microphone to the **MIC/EXT IN** jack at right side panel.



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

Select the **F3** YES button for plug-in-power microphones, or **F2** NO button for other microphone types.

* Plug-in-power means that a power is delivered from the recorder to the microphone

NOTE

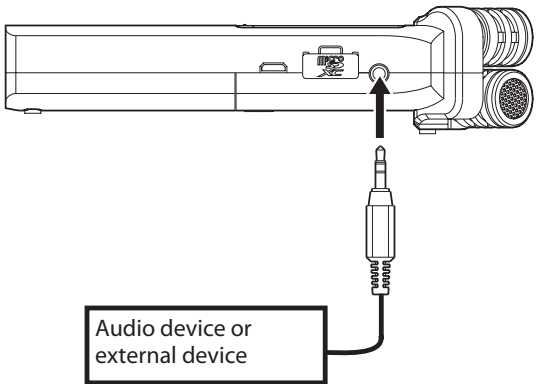
Point the external microphone toward the sound source and place the unit on a stable surface with minimum vibration.

CAUTION

- ***When not using a mic that requires plug-in power, do not enable it by selecting the* F3 YES *button. Doing so could damage connected equipment. See the mic operation manual for details.***
- ***When connecting a dynamic mic or external mic that has its own battery, do not enable plug-in power by selecting the* F3 YES *button. If plug-in power is turned ON, it could damage such microphones.***

Recording from an external device (LINE IN)

Connect a stereo mini-plug cable to the output of an external audio device (i.e. headphone jack of a portable CD player).



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

When an external device is connected, select **F2** NO button (disable plug-in power).

CAUTION

If the input sound is still distorted after adjusting the input level of the unit, reduce the playback sound of the external device.

In addition to the built-in microphone, an external microphone or external audio devices (i.e. CD player) can also be used for recordings.

Recordings can be made in MP3 (32k -320kbps, 44.1k/48kHz) and WAV/BWF (44.1k/48k/96kHz, 16/24-bit) audio formats.

Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible softwares.

In addition, the DR-22WL can mix input signals while playing an audio file and record a new file (overdubbing function).

Selecting the recording mode

■ EZ (EASY recording mode)

Select the **scene dial** to EZ.

The simple recording mode allows users to quickly start recording by pressing the **RECORD** button just once; it automatically adjusts the recording level. This feature is useful for beginners and others wanting to make a quick-recording.

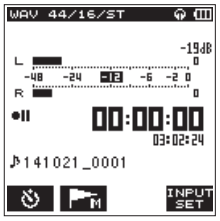
■ M (MANUAL recording mode)

Select the **scene dial** to M.

The manual mode allows to adjust the recording level manually, suited for a higher-quality recording. This feature is especially useful for those who wants to make fine-tuned recording.

Recording

1. Press the **RECORD** button to set the recording standby mode.
   The indicator around the **RECORD** button flashes and the recording screen opens.

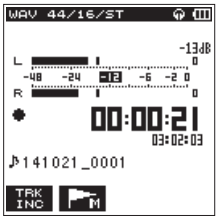


   The bottom of the recording screen displays the recording file name, the recording audio file type, and the sampling rate. Users can confirm these information before starting recording.

NOTE

When the* scene dial *is set at "EZ", recording begins when you press the* RECORD *button once.

2. Press the **RECORD** button again to start recording.



   When recording starts, the **RECORD** indicator lights, and displays the elapsed recording time and the remaining recording time.

   To pause, press the **RECORD** button while recording.

   Press the **RECORD** button again to resume recording.

   If you press the **/MENU/■** button while in pause mode, the recorded audio file up to the pause point will be created.

3. Press the **/MENU/■** button to stop recording.
   The recording stops and returns to the beginning of the file.

NOTE

- ***In recording standby mode, the speaker will not emit sound. Use a headphone to listen to the input sound and make level adjustments. In recording mode, operating the* OUTPUT LEVEL (+/–) *button to adjust sound will not affect the recording level.***
- ***To avoid recording the* RECORD *button operation sound, the DR-22WL begins recording about 0.3 seconds (fixed time) after pressing the* RECORD *button. (REC DELAY)***

CAUTION

Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.

Scene recording mode

The DR-22WL offers pre-set scenes that adjusts recording to the most-suited level. Turn the **scene dial** and to set the following scene:

■ (LOUD)

Suited for recording band performance and other scenes with large sound volume.

■ ♪ (MUSIC)

Suited for recording voices, such as concert or group sining.

■ (INSTRUMENT)

Suited for recording near musical instruments, such as an acoustic guitar and wind instruments.

■ (INTERVIEW)

Suited for recording an interview or take voice memos during meetings.

NOTE

Recording level, low-cut filter, or level control are still adjustable in scene recording mode.

However, level control cannot be adjusted in scene mode. Settings are not stored and will be removed when scene mode is changed.

Selecting a folder to store files

Recorded files will be saved in the current folder. If no setting is made, they will be saved in the MUSIC folder. To change to the folder that you want, follow the instructions in "5 – Using files and folders (browse screen)" on page 25 to designate it.
When an SD card is initialized, the MUSIC folder will be set as the current folder.

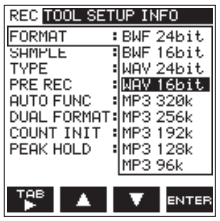
Recording format settings (FORMAT/SAMPLE/TYPE)

Select the desired audio file type before you start recording.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC menu page.

FORMAT setting

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the FORMAT item and press the **F4** ENTER button.
   Open the parameter list for the FORMAT item.



4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the file type.
   Options: BWF 16bit, BWF 24bit, WAV 16bit (default value), WAV 24bit, MP3 32k, MP3 64k, MP3 96k, MP3 128k, MP3 192k, MP3 256k, MP3 320k

NOTE

- *BWF is a format for broadcasting that has the same sound quality as the standard WAV format. It also uses the same ".wav" file extension as WAV files. In this manual, we distinguish these file types by using the terms BWF and WAV.*
- *The WAV format offers higher quality recording than MP3 files;*
- *On the other hand, the MP3 format can record for longer hours.*
- *With MP3 format, recording with higher values offers better quality.*
- *Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible devices and computer softwares.*

5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.

SAMPLE setting

6. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the SAMPLE item and press the **F4** ENTER button.
   Open the parameter list for the SAMPLE item.

7. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the sampling rate.
   Options: 44.1k (default value), 48k, 96k

NOTE

96k cannot be selected for a MP3 format file.

TIPS

Selecting the WAV 16bit and 44.1kHz will allow you to record in CD-quality.

8. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.

TYPE setting

9. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the TYPE item and press the **F4** ENTER button.
   Open the parameter list for the TYPE item.

10. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) either the stereo file or mono file.
    Options: STEREO (default value), MONO

NOTE

- *When MONO is selected, left and right channel signals will be recorded separately .*
- *Selecting the WAV format MONO will extend the recording hours by two times than the STEREO type, allowing for longer recording hours.*

11. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
12. Press the **⌂/MENU/■** button to return to the home screen.

Adjusting the input level

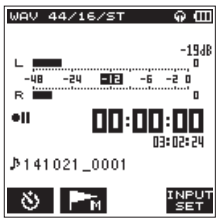
Before you start recording, ensure to adjust the input level to prevent the recorded file from distortion or canceled by noise, which can occur from excessively large or quiet input volume.

Use the limiter/peak reduction functions as necessary, in addition to making manual adjustments.

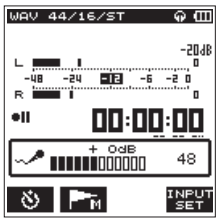
TIPS

In addition to adjusting the INPUT level, try changing the distance and angle between the microphone and the sound source. The angle and distance of the microphone can also change the sound quality.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator (around **RECORD** button) will flash and displays the recording screen.



2. Use the **INPUT LEVEL** volume to adjust the input level. The input level setting meter will pop-up at the bottom of the display.



   To obtain higher quality, it is recommended to set at the maximum recording level. As a guideline, adjust the input level until the **–12dB** indicator lights in green to obtain the optimum level. To prevent possible distortion from excessively large input volume, reduce the input level when the **PEAK** indicator lights in red.

NOTE

- ***Press the ⌂/MENU/■ button to cancel the recording standby mode.***
- ***In a recording standby or recording mode, the speaker will not emit sound even when the*** SPEAKER ***setting is*** ON.

If you need to monitor sound to adjust the input level and make recordings, connect the headphone to the Ω**/LINE OUT** jack.

To adjust monitor sound, go to home screen and use the **OUTPUT LEVEL (+/–)** button. Adjusting the monitor sound will not affect the recording quality.

Setting the peak hold function

Using the peak hold function makes monitoring the levels easier.

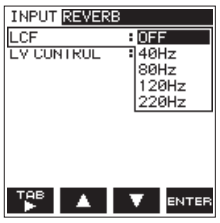
1. Press the ⌂**/MENU/**■ button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the PEAK HOLD item and press the **F4** ENTER button.
   Open the parameter list for the PEAK HOLD item.

4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the peak hold mode.
   Options:
   OFF: Peak levels are not held.
   1sec (default): Peak levels are held for one second.
   HOLD: Peak levels are held until the peak clear (PEAK CLR) button is pressed.
5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
6. Press the ⌂**/MENU/**■ button to return to the home screen.

Setting the Low Cut Filter

The Low Cut Filter function can reduce noise from air-conditioners, projector fans and unwanted wind noise.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4** INPUT SET button to display the input setting screen.
3. Press the **F1** TAB button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LCF item and press the **F4** ENTER button.
   Open the parameter list for the LCF item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the cut-off frequency.
   Options: OFF (default value), 40Hz, 80Hz, 120Hz, 220Hz
6. Press the **F4** ENTER button to finalize the selected cut-off frequency for the Low Cut Filter.
7. Press the **⌂/MENU/■** button to return to the recording screen.

NOTE

- ***When the low-cut filter is on, the LCF icon appears on the recording screen.***
- ***The low-cut filter can be set and changed when in recording standby.***

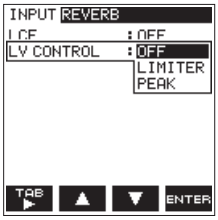
TIPS

- ***Setting it to larger value can reduce more noise in the low-frequency range, but this is not recommended when recording music.***
- ***The DR-22WL has a built-in reverb, which can be added to the input source as desired. (See "Reverb function" on page 30.)***

Using the level control function

You can set the recording level for microphone input.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4** INPUT SET button to display the input setting screen.
3. Press the **F1** TAB button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LV CONTROL item and press the **F4** ENTER button.
   Open the parameter list for the LV CONTROL item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the function.
   Options: OFF (default value), LIMITER, PEAK
6. Press the **F4** ENTER button to finalize the selected function.
7. Press the **⌂/MENU/■** button to return to the recording screen.
   The selected function is shown with an icon in the recording screen.

NOTE

The selected mode is shown with an icon in the recording screen.

- ***When the limiter function is ON, the LMT icon will appear on the recording screen.***
- ***When the peak reduction function is ON, the PEAK icon will appear on the recording screen.***

■ LIMITER

The limiter functions only at excessive input level.
This function is useful for musical instrument performance and musical recordings.

■ PEAK (PEAK REDUCTION)

This function automatically reduce the recording level to an appropriate value when input signal is too high. It is useful when you cannot preset the recording level or unable to make adjustments during recordings.

CAUTION

Distortion might occur if the input sound is too loud even when the limiter is on. In such a case, lower the input level or increase the distance between the mic and the sound source.

NOTE

When level control function is ON, you can still adjust the recording level by using the* INPUT LEVEL *volume. This function cannot be used, however, when the scene dial is set to EZ or 🎤.

Switching files during recording (track increment)

During recording, you can switch to a new recording file either manually or at a set time, and continue to make recording in the new file. (Track increment function)

Manual track increment during recording

During recording, you can easily update a file manually and continue to make recording.

1. During recording, press the **F1** TRK INC button.

NOTE

Numbers at the end of file name will increment each time when a new file is created.

CAUTION

- ***The maximum total number of folders and files you can create is 5,000.***
- ***Files with a recording time of less than two seconds cannot be created.***
- ***The number of the new file will increment if its name is the same as the existing file.***
- ***Track increment function is not available during overdubbing.***

Automatic track increment at specified time

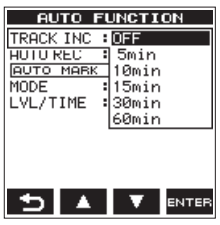
Without pausing recording, a new file can be created automatically during recording when the time set using the TRACK INC item on the AUTO FUNCTION screen is reached (track increment function).

Follow the below steps to set the maximum time for automatic increment:

1. Press the ⌂/MENU/■ button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.

   AUTO FUNCTION screen is displayed.
4. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the TRACK INC item and press the **F4** ENTER button.

   This shows the TRACK INC item parameters.



5. Use the **F2** ▲ and the **F3** ▼ buttons to select the automatic track increment time.

   Options: OFF (default value), 5min, 10min, 15min, 30min, 60min
6. Press the **F4** ENTER button to finalize the selected time.

CAUTION

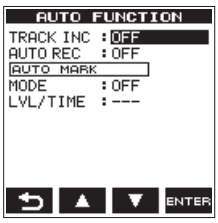
The maximum total number of folders and files you can create is 5,000.

Automatic recording (AUTO REC)

When the auto record function is on, the unit can respond to input sound levels and start and pause recording and create new files automatically.

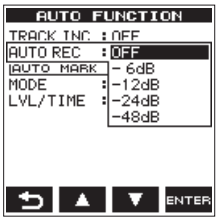
1. Press the ⌂/MENU/■ button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.

   AUTO FUNCTION screen is displayed.



4. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO REC item and press the **F4** ENTER button.

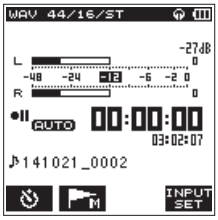
   This shows the AUTO REC item parameters.



5. Use the **F2** ▲ and **F3** ▼ buttons to select a level that activates the AUTO REC function (a level that recognize incoming signal).

   Options: OFF (default value), -6dB, -12dB, -24dB, -48dB
6. Press the **F4** ENTER button to finalize the selected level that activates the AUTO REC function.
7. Press the ⌂/MENU/■ button to return to the home screen.
8. Press the **RECORD** button to set the recording standby mode.

   The level meter will display sounds within the level that activates the AUTO REC function and the AUTO icon will appear on the right side of the recorder status display.



Recording starts automatically when the input signal exceeds the threshold set in the LEVEL item.

NOTE

- ***When in recording standby, the* RECORD *indicator flashes faster than when recording.***
- ***When recording, if the input signal level falls below the level set with the* LEVEL *item for more than 5 seconds, the unit pauses recording and creates a new file. When the input***

signal level becomes higher than the set level again, it starts recording to a new file.

- *When new files are created, incremental numbers are added to the end of each file name.*

9. When you need to stop recording, press the **⌂/MENU/■** button.

CAUTION

- *A new file cannot be created if the total number of folders and files would exceed 5000.*
- *Files shorter than 2 seconds cannot be created. If the sampling frequency is 96 kHz, files shorter than 4 seconds cannot be created.*
- *If the name of a newly created file would be the same as that of an existing file, the number will be incremented until the new file has a unique name.*

TIP

By using this in combination with the PRE REC function, you can record events without losing the beginnings of sounds.

Start recording from slightly before pressing RECORD (PRE REC)

PRE REC function will allow you to start recording up to two seconds before the desired timing, by recording an input signal (up to two seconds) during the recording standby mode.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the PRE REC item and press the **F4** ENTER button.

   Open the parameter list for the PRE REC item.

4. Use the **F2** ▲ and **F3** ▼ buttons to turn on the PRE REC function.

   Options: OFF (default value), ON
5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
6. Press the **⌂/MENU/■** button to return to the home screen.

TIPS

By combining PRE REC with the AUTO REC function, you will not miss an opportunity to start recording.

NOTE

- *When the pre-recording function is on, the PRE icon appears on the right of the recorder operation status area on the recording screen.*
- *If you start recording within two seconds from when the record standby mode is turned ON, recording will begin from the record standby mode.*
- *PRE REC function will not work during overdubbing.*

Using the SELF TIMER for recording

Similar to a camera, the DR-22WL has a SELF TIMER function to begin recording after a set period of time.

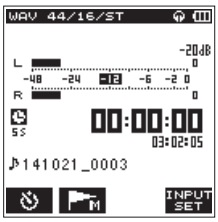
1. Press the **RECORD** button to enter recording standby.

   The indicator around the **RECORD** button flashes and the recording screen opens.
2. Press the **F1** button to turn the self-timer on, making its icon appear in the recorder operation status area.

   The time is shown below the self-timer icon. Each time you press the **F1** button, the setting changes as follows.

   Time display below the icon

   No display (OFF) → 5S (5 sec.) → 10S (10 sec.) → no display (OFF)



3. After setting the time, press the **RECORD** button. The **RECORD** indicator will flash more quickly until recording starts after the set amount of time passes.

NOTE

- *SELF-TIMER function will not work when recording is on pause.*
- *SELF-TIMER function can be used in the Automatic recording function. When recording begins, the Automatic recording function is prioritized.*

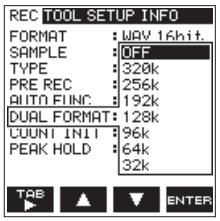
Recording in two formats (DUAL FORMAT REC)

The DR-22WL can transfer files to a smart phone via Wi-Fi. (See "Connect the DR-22WL and smart phone via Wi-Fi" on page 33.)

WAV/BWF delivers a high-quality sound but unfit to transfer via Wi-Fi due to its large file size. The DR-22WL can make simultaneous recordings in WAV/BWF format and MP3 format (smaller file size) for Wi-Fi transfer.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC menu page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in DUAL FORMAT item and press the **F4** ENTER button.

   Open the parameter list for the DUAL FORMAT item.



4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the file type.

   Options: OFF (default value), 32k, 64k, 96k, 128k, 192k, 256k, 320k
5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.

NOTE

- *When dual format recording is on, the DUAL icon appears to the right of the recorder operation status indicator on the Recording Screen.*
- *DUAL FORMAT recording is available only in WAV 16bit/BWF 16bit with sampling rate of 44.1k/48kHz formats.*

Mixing the input sound to the playback for recording (overdubbing)

The DR-22WL can mix the input sound while playing the recorded track to create a new file.

The unit offers two overdubbing modes.

■ OVERDUB

This mode mixes the input sound to the playback file.

Users can monitor with a headphone and overdub the sounds.

■ AIRDUB

This mode records group singing or musical performance with the accompaniment music playback (similar to karaoke).

Since only the playback sound is output from the output jacks in this mode, you can use it to play along with an already recorded performance output from a connected external monitoring system, for example, and record this new performance together with the sound playing back.

NOTE

- *The recording format of the playback file is used when in an overdubbing mode (FORMAT, SAMPLE, TYPE). When the playback file format is mono, the inputs will also be treated as mono (left and right). When the playback file format is stereo, the inputs will also be treated as stereo. Open the* FILE INFO *screen if you want to check the playback file format. (See "File information screen (FILE INFO)" on page 38.)*
- *Speaker will not emit sound in overdubbing mode.*
- *Pause will not work in overdubbing mode (***RECORD** *button is disabled).*
- *The overdubbed file is created in playback format regardless of the recording format setting.*
- *When in an overdubbing mode, the self-timer, pre-recording, automatic recording and dual format recording functions cannot be used.*

Select files for overdubbing with an input sound

Select the file for overdubbing with either the ⏮/⏭ button or in browse screen.

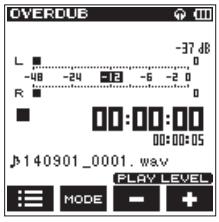
NOTE

Please refer to the page 25 for selecting files in browse screen.

Start overdubbing

1. In home screen, set the **scene dial** to **DUB**.

   The OVERDUB screen is displayed and the input sound is recorded.

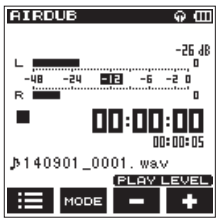


NOTE

In pause or playback mode, when you set the **scene dial** *to* **DUB**, *the DR-22WL will make a force stop and display the* OVERDUB *screen.*

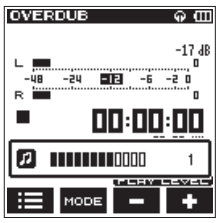
2. To switch to the overdubbing mode, press the **F2** MODE button. The overdubbing and airdubbing modes will appear in turn on the screen.

   After selecting, either the OVERDUB or the AIRDUB screen will be displayed.



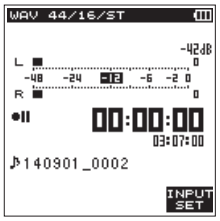
AIRDUB mode

3. Press the **PLAY** button to play the file for overdubbing, and use the **F3** − and **F4** + buttons to adjust the playback volume.



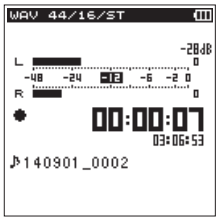
4. Press the **RECORD** button to set the recording standby mode.

   The indicator around the **RECORD** button flashes.



5. Press again the **RECORD** button.

   Overdubbing will start.



   When recording starts, the **RECORD** indicator lights, and the recording screen displays the elapsed recording time and the remaining recording time.

   When a file that can be playbacked is not selected, a pop-up message of No PB File will appear.

6. To finish recording, press the **⌂/MENU/■** button.

Create cue marks during recording

In recording or recording standby mode, the DR-22WL can create cue marks to a file to quickly locate the marked position and start playback. (See "Moving to the cue mark position" on page 23.)

You can either manually set the cue mark, or automatically set the cue mark level or time to minimize the operation noise.

NOTE

The unit will not move to the cue mark position in recording or recording standby mode.

Manual cue marking during recording

In recording or recording standby mode, press the **F2** button to create a cue mark.

A pull-up cue mark no. message will appear above the icon.

NOTE

- ***Up to 99 cue marks can be created and stored in each file.***
- ***Cue marks that are created during the recording of WAV file in BWF format by this unit are stored in the file. You can use the cue marks in softwares compatible with BWF format.***

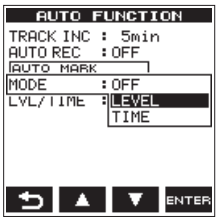
Add cue marks automatically to recording

If you turn the AUTO MARK function ON, cue marks will be added automatically.

■ Add cue marks automatically according to set levels

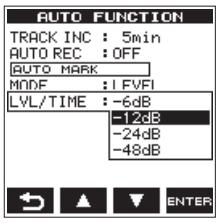
1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.

   AUTO FUNCTION screen is displayed.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** ENTER button.
5. Use the **F2** ▲ and **F3** ▼ buttons to set the automatic cue mark mode to LEVEL.



   Options: OFF (default value), LEVEL, TIME
6. Press the **F4** ENTER button to finalize the set mode.

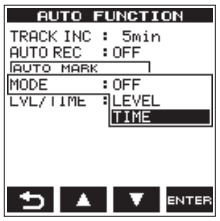
7. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the LVL/TIME of the AUTO MARK item and press the **F4** ENTER button.
   This shows the LVL/TIME item parameters.



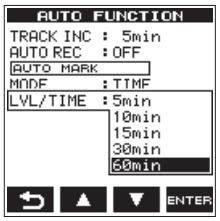
8. Use the **F2** ▲ and **F3** ▼ buttons to set a level to automatically add cue marks.
   Options: −6dB, −12dB (default value), −24dB, −48dB
9. Press the **F4** ENTER button to finalize the set mode.
10. Press the **HOME/MENU/■** button to return to the home screen.

■ Add cue marks automatically according to set time

1. Press the **HOME/MENU/■** button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.
   AUTO FUNCTION screen is displayed.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** ENTER button.
5. Use the **F2** ▲ and **F3** ▼ buttons to set the automatic cue mark mode to TIME.



   Options: OFF (default value), LEVEL, TIME
6. Press the **F4** ENTER button to finalize the set mode.
7. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the LVL/TIME in the AUTO MARK item, and press the **F4** ENTER button.
   This shows the LVL/TIME item parameters.



8. Use the **F2** ▲ and **F3** ▼ buttons to set a time to automatically add cue marks.
   Options: 5min, 10min, 15min, 30min, 60min (default value)
9. Press the **F4** ENTER button to finalize the set time.
10. Press the **HOME/MENU/■** button to return to the home screen.

Moving to the cue mark position

In stop or playback mode, you can move to cue marks created in the selected file.

You can use this function to go to the beginning of a song, similar to an index.

1. Press the **HOME/MENU/■** button to display the menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in MARK SKIP MODE item and press the **F4** ENTER button.
   This shows the MARK SKIP MODE item parameters.

4. Use the **F2** ▲ and **F3** ▼ buttons to set the mode to ON, and press the **F4** ENTER button.
   Options: OFF (default value), ON
5. When setting is completed, press the **HOME/MENU/■** button to return to the home screen.
6. In stop or playback mode, press together the **F2** button and either the ⏮ button or the ⏭ button.

NOTE

You cannot move to a cue mark of a different file.

Recording duration

The table below shows the maximum recording time per file format for microSD/microSDHC/microSDXC cards:

File format (recording setting)			microSD/microSDHC/microSDXC cards capacity			
			1GB	4GB	8GB	32GB
WAV/BWF 16 bit (STEREO)		44.1kHz	1 hour 34 minutes	6 hour 17 minutes	12 hour 35 minutes	50 hour 23 minutes
		48kHz	1 hour 26 minutes	5 hour 47 minutes	11 hour 34 minutes	46 hour 17 minutes
		96kHz	43 minutes	2 hour 53 minutes	5 hour 47 minutes	23 hour 08 minutes
WAV/BWF 24 bit (STEREO)		44.1kHz	1 hour 02 minutes	4 hour 11 minutes	8 hour 23 minutes	33 hour 35 minutes
		48kHz	57 minutes	3 hour 51 minutes	7 hour 42 minutes	30 hour 51 minutes
		96kHz	28 minutes	1 hour 55 minutes	3 hour 51 minutes	15 hour 25 minutes
MP3 (STEREO/MONO)	32 kbps	44.1kHz/48kHz	69 hour 26 minutes	277 hour	555 hour	2222 hour
	64 kbps	44.1kHz/48kHz	34 hour 43 minutes	138 hour	277 hour	1111 hour
	96 kbps	44.1kHz/48kHz	23 hour 08 minutes	92 hour 35 minutes	185 hour	740 hour
	128 kbps	44.1kHz/48kHz	17 hour 21 minutes	69 hour 26 minutes	138 hour	555 hour
	192 kbps	44.1kHz/48kHz	11 hour 34 minutes	46 hour 17 minutes	92 hour 35 minutes	370 hour
	256 kbps	44.1kHz/48kHz	8 hour 40 minutes	34 hour 43 minutes	69 hour 26 minutes	277 hour
	320 kbps	44.1kHz/48kHz	6 hour 56 minutes	27 hour 46 minutes	55 hour 33 minutes	222 hour

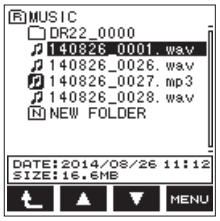
- The recording times shown above are theoretical values. Times may differ depending on the microSD/microSDHC/microSDXC card in use.
- The recording times shown above are the total possible recording times for the microSD/microSDHC/microSDXC cards, and not the continuous recording times.
- Mono recording in WAV format will double the maximum recording times specified above.

In browse screen, you can browse the MUSIC folder (stores audio files), delete files and folders, or create a new folder in the microSD card.

TIPS

You can also connect the DR-22WL with a computer via USB, or directly insert the microSD card to the computer to change configuration of folders or delete files in the MUSIC folder. In addition, you can change file names from the computer.

To display the browse screen, press the **F1** button in stop/pause mode.



Prior to displaying the browse screen, the unit will display the files and folders selected in home screen.

Navigating in the browse screen

Folders and music files are displayed in a layered-tree type in the browse screen.

The DR-22WL can create up to two layers in each folder.

- Use the **F2** and **F3** buttons to select (highlight) the file and/or folder.
- While selecting the file and/or folder, press the **F1** button to move up to the next layer.
- While selecting the file and/or folder, press the **F4** button to display the pop-up menu.
- While selecting a file, press the **PLAY** button to return to the home screen and playback the selected file.

  The folder that contains the above file becomes the current folder (currently selected folder), and the recorded files will be saved in this folder.

Icon display on the browse screen

Below are descriptions for each of the icons displayed in the browse screen.

■ MUSIC folder ( )

When the browse screen displays the ROOT layer, the MUSIC folder will appear at the most top.

■ Audio file ( )

This is an audio file.

■ Currently selected audio file ( )

This is the currently selected audio file.

■ Folder ( )

This folder contains a sub-folder.

■ Folder ( )

This folder contains no sub-folder.

■ Folder in display ( )

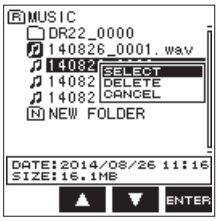
Contents of this folder is currently in display.

■ New folder ( )

A new folder will be created.

File operations

Select (highlight) the desired audio file in the browse screen, and press the **F4** button. The below pop-up menu will appear.



Use the **F2** and **F3** buttons to select (highlight) an item, and press the **F4** button. The following action will start according to the selected item.

■ SELECT

Returns to the home screen and playback the selected file.

■ DELETE

A pop-up message appears to confirm that the deletion of the selected file.

To delete the file, press the **F3** button. To cancel delete, press the **F2** button.

NOTE

When the home screen is open, press the F4 button to open a pop-up message confirming deletion of the selected file.

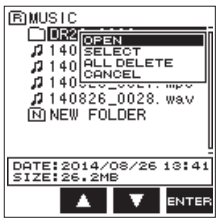
Press the F3 button to delete the file, or press the F2 button to cancel the deletion.

■ **CANCEL**

Action for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Folder operations

Select (highlight) the desired file in the browse screen, and press the **F4** button. The following pop-up message menu will appear.



Use the **F2** and **F3** buttons to select (highlight) an item, and press the **F4** button. The following action will start according to the selected item.

■ **OPEN**

This will open the selected folder.

■ **SELECT**

Returns to the Home Screen and selects the first file in the folder. In addition, the recorded files are saved in the selected folder.

■ **ALL DELETE**

A pop-up message appears to confirm deletion of all files in the selected folder.

To delete the file, press the **F3** button. To cancel delete, press the **F2** button.

NOTE

Read-only files and unrecognized files by the DR-22WL will not be deleted.

■ **CANCEL**

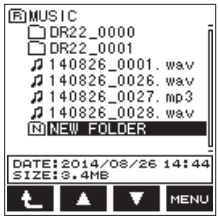
The operation for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Moving up a folder level

Press the **F1** button to move up a folder level.

Creating a new folder

A NEW FOLDER is available at the bottom of each folder.



1. Use the **F2** and **F3** buttons to select (highlight) the NEW FOLDER and press the **F4** button.
   A quick menu will pop-up on screen.
   It shows a message to confirm creation of a new folder.

2. To create a new folder, press the **F3** button. To cancel creation of a new folder, press the **F2** button.

NOTE

The DR-22WL is not designed to handle folders with three or more layers, and therefore the NEW FOLDER does not exist in a folder with two layers.

A newly created folder becomes the current folder (currently selected folder), and recorded files are saved in this folder.

Playback

To start playback in home screen mode, press the **PLAY** button in stop mode.

NOTE

You can also select and playback a file in the browse screen.

Pausing/stopping playback

To stop playback, press the **/MENU/ ■** button. (PAUSE)
When playback was stopped in the middle of a file, the status icon ❚❚ will appear on screen.

If you press the ⏮ or ⏭ button to move to the beginning of a file and stop playback, ■ is shown.
To resume playback from the stop position, press the **PLAY** button.

Rewinding and fast-forwarding (search)

During playback when the home screen is open, press and hold the ⏮/⏭ button to search backward/forward.

NOTE

Search speed will increase if you keep holding the ⏮/⏭ button.

Selecting a playback file (skip)

In home screen, press either the ⏮ button or the ⏭ button to select the file you want to play.
When you are in the middle of a file and want to return to the beginning, press the ⏮ button. To skip to the previous file, press the ⏮ button.
To skip to the next file, press the ⏭ button at the beginning of in the middle of a file.

Special playback (practice mode)

Practice mode is useful for practicing musical instruments.
To use the practice mode while in stop/pause/playback mode, set the **scene dial** to "⚙" in home screen. The PRACTICE screen will appear with a practice mode.

Loop playback, playback speed change, and key change can be made in this mode.

Press the **F1** ☰ button to select the file from the browse screen you want to playback.
To exit practice mode, change the **scene dial** to a different setting.

NOTE

- ***In practice mode, you can monitor and adjust the input sound. (See "Adjusting the input level" on page 17.)***
- ***File skip will not work in practice mode.***

Loop playback

Loop playback allows you to repeat playback of the entire or part of a file.

■ Set the IN and OUT points

1. In PRACTICE screen, press the **F3** SEL button to select (highlight) the LOOP item, and press the **F4** ENTER button to set loop playback.

2. Move to the loop playback IN point, and press the **F2** IN button.
   This position is set as IN (start) point.
   The ⌜ icon will light at the top of the playback position display bar.
3. Press the **F3** OUT button at the loop playback OUT point.
   This position is set as OUT (end) point, and the unit will playback the section between the loop playback IN and OUT points.
   The ⌟ icon will light at the top of the playback position display bar.

NOTE

- ***The I/O Too Short pop-up message will appear when the IN-OUT points are too close. Please reset by spacing at least one second in between.***
- ***MP3 files with VBR format may affect the accuracy of the IN and OUT points settings.***

■ Delete the IN and OUT points

In stop mode, press the I◄◄ button or the ►►I button to skip to the IN (start) and OUT (end) points.

When stopped, skip to an IN (start) point and press the **F2** IN button to clear that point.

When stopped, skip to an OUT (end) point and press the **F3** OUT button to clear that point.

■ Loop playback

Press the **F1** ON button to enable the loop playback function.
You can disable the playback function by pressing the **F1** OFF button, but the setting will be saved.

Loop playback will start as follows, depending on the IN (start) and OUT (end) points:

Set only the IN (start) point	Loop playback from IN point → end of the file
Set only the OUT (end) point	Loop playback from the beginning of the file → OUT point
Set both IN/OUT points	Loop playback between IN - OUT points
No settings of IN/OUT points	Loop playback from the beginning until the end of the file

NOTE

Press the* F1 OFF *button to turn on/off the loop playback.

Changing the playback speed (VSA)

The DR-22WL has a built-in VSA (Variable Speed Audition) function to change the playback speed without changing its pitch.

CAUTION

The VSA function will not work when you select a file recorded with a sampling rate of 96kHz.

1. In PRACTICE screen, press the **F3** SEL button to select (highlight) the SPEED item, and press the **F4** ENTER button to enable the playback speed change option.

2. Use the **F2** ▲ and the **F3** ▼ buttons to change the playback speed value.
   Options: ×0.5 - ×2.0 (per ×0.1) (default: x1.0)
3. Press the **F4** ⮌ button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

NOTE

Press the* F1 OFF *button (or the* F1 ON *button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Changing keys

The DR-22WL can change the playback key (pitch) with its key control function.
The key control function offers KEY and FINE TUNE modes. The KEY mode can adjust in ± 6 half-tone, and the FINE TUNE mode can adjust in ±50 cents.

1. In the PRACTICE screen, press the **F3** SEL button to select (highlight) either the KEY or FINE items, then press the **F4** ENTER button to enable the key change setting.

Pop-up display of the KEY item

Pop-up display of the FINE item

2. Use the **F2** ▲ and the **F3** ▼ buttons to change the key value.
   Options:
   When KEY is selected : ♭6 - ♯6 (per half-tone) (default: 0)
   When FINE is selected : –50 - +50 (per cent) (default: 0)
3. Press the **F4** ⮌ button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

NOTE

Press the* F1 OFF *button (or the* F1 ON *button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Dividing a file

A recorded file can be divided into two manually or at a mark position.

CAUTION

- ***MP3 files cannot be divided.***
- ***If the microSD card has insufficient open space, division might not be possible.***
- ***Division is not possible if the file name would become more than 200 characters long.***
- ***Division is not possible if a file that already exists has the same name as the name that would be given to a new file created by division.***

Dividing the selected file (DIVIDE)

A recorded file can be divided into two at a desired position.

1. Use the I◄◄ button, the ►►I button, or the browse screen to select the file you want to divide.
2. Press the **⌂/MENU/■** button to display the menu screen.
3. Use the **F1** TAB button to display the TOOL page.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in DIVIDE item and press the **F4** ENTER button.
   The DIVIDE screen is displayed.

5. Use the **F2** ◄ and **F3** ► buttons to finalize the dividing section, and press the **F4** ENTER button to finalize the setting.
   The following pop-up window appears.

6. Press the **F3** YES button to divide the file and return to the home screen.
   If you press the **F2** NO button**,** the file will not divide and return to the DIVIDE screen.
7. When finished, press the **⌂/MENU/■** button.

NOTE

- ***When the DIVIDE screen is open, you can press the* PLAY *button and set the divide position while playing the track.***
- ***When the DIVIDE screen is open, press the* PLAY *button to start/pause playback and press the I◄◄/►►I button to move to the beginning/end of the track. Use the* F2 ◄ *and* F3 ► *buttons to adjust the division point in fine increments. Press and hold these buttons to change the position continuously.***
- ***When a file is divided, names will be created ending with either a or b.***
  (Example)
  File name before division
  140826_0001.wav
  File name after division
  140826_0001a.wav (before the dividing point)
  140826_0001b.wav (after the dividing point)

CAUTION

- ***MP3 files cannot be divided.***
- ***Division may not be available when microSD card does not have sufficient capacity.***
- ***File name with more than two hundred characters cannot be divided.***
- ***File cannot be divided when there is a file name identical to that of the post-divided file.***

TIPS

You can add cue marks during recording at the position you want to divide. (See "Create cue marks during recording" on page 22.)

Dividing the selected file automatically (AUTO DIVIDE)

Use the AUTO DIVIDE function to automatically divide an already recorded file at positions where marks have been added.

NOTE

See "Create cue marks during recording" on page 22 for details about how to add marks.

1. Select a file to be divided using the I◄◄ and ►►I buttons or the BROWSE screen.
2. Press the **⌂/MENU/■** button to open the menu screen.
3. Press the F1 TAB button to open the TOOL menu page.
4. Use the F2 ▲ or F3 ▼ button to select the AUTO DIVIDE item parameter and press the F4 ENTER button.
   The following pop-up message will appear.

5. Press the **F3** YES button to divide the file.
   To return to the TOOL page without dividing the file, press the **F2** NO button.
6. When finished, press the **⌂/MENU/■** button.

CAUTION

If the length of time between any two marks is less than two seconds, automatic division is not possible.

NOTE

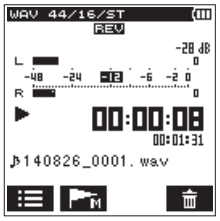
- ***After dividing a file, new files with "_1", "_2" and "_3" added to the end of the original file name are created in order.***
  Example: 2 marks
  File name before division
  140826_0001.wav
  File name after division
  140826_0001_1.wav
  140826_0001_2.wav
  140826_0001_3.wav
- ***When used together with the automatic marking function, long recordings can automatically be divided into files with***

individual songs. (See "Add cue marks automatically to recording" on page 22.)

Reverb function

This unit has a built-in reverb that can be applied to the input sound or the output sound.

When reverb function is ON, the REV icon will appear at the top of the home screen.



Setting the reverb function

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in REVERB item and press the **F4** ENTER button.
   The REVERB screen is displayed.

NOTE

You can set and adjust reverb in record standby mode as well, from the REVERB page of the input setting screen.

4. The following settings are made in the REVERB screen.
   REVERB:
   Set the reverb on/off status (default value: OFF).
   TYPE:
   See the reverb type from the pre-set items. See 30 Reverb pre-set list for more details on reverb pre-set items.
   LEVEL:
   Adjust the reverb output level. Settings can be selected from 0 - 100. (default value: 70)
   MODE:
   Set the reverb mode.

MODE (options)	Icon	Detail
MONITOR (default value)	REV	You can add reverb to the output sound. This does not affect the sound recorded.
REC	REV	You can add reverb to the input sound. You can record sound with reverb added.

5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ENTER button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.
7. Press the **F4** ENTER button to finalize the setting and return to the item setting item status.
8. Repeat the 4.-7. steps as necessary.
9. When setting is completed, press the **⌂/MENU/■** button.

CAUTION

Reverb function will not work (but able to make settings) when the setting or the selected playback file's sampling rate is 96kHz.

NOTE

The reverb function on/off setting is available also in recording standby mode; press F4 INPUT SET button and make setting in the REVERB page of the input setting screen.

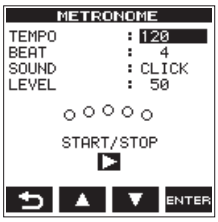
Reverb pre-set list

Pre-set name	Effect
HALL 1 (default value)	A bright effect, like a spacious hall
HALL 2	A warm effect, like a spacious hall
ROOM	Small room effect
STUDIO	Studio effect
PLATE 1	Bright plate reverb
PLATE 2	Warm plate reverb

Metronome function (compatible with V1.10)

The DR-22WL has a built-in metronome, useful for practicing musical instruments.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the METRONOME item and press the **F4** ENTER button.
   The METRONOME screen is displayed.



4. The following settings are available in the METRONOME screen:
   TEMPO
   Set speed between 20 - 250 (BPM).
   (default value: 120)
   BEAT
   Set beat between 0 - 9. (default value: 4)
   This will accent the first beat.
   SOUND
   You can set the metronome sound to CLICK, STICK or BELL. (Default: CLICK)
   LEVEL:
   Set the metronome volume 0 - 100.
   (default value: 50)

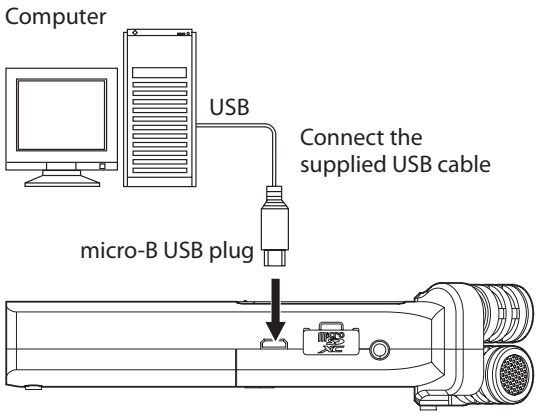
5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ENTER button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.
7. Press the **F4** ENTER button to finalize the setting and return to the item setting item status.
8. Repeat the 5.-7. steps as necessary.
9. Press the **PLAY** button to start the metronome. When the metronome is operating, press the **PLAY** button to stop it.
10. Press the **F1** ↩ button to return to the TOOL page.

8 – Connecting with a computer

By connecting this unit with a computer using the USB cable, you can transfer audio files on the microSD card in the unit to a computer, as well as transfer audio files on the computer to the microSD card in the unit.

This unit can handle audio files of the following formats.

WAV : 44.1k/48k/96kHz, 16/24 bit
BWF : 44.1k/48k/96kHz, 16/24 bit
MP3 : 44.1k/48kHz, 32k/64k/96k/128k/192k/256k/320kbps



NOTE

- ***Instead of connecting the DR-22WL a computer via USB, you can remove the microSD card from the unit and insert directly (or with a card adapter) to the computer and make the same operation.***
- ***Both WAV and BWF files will have the ".wav" extension.***

CAUTION

- ***The DR-22WL will not operate when STORAGE is selected (highlighted) under USB connection.***
- ***Please make a direct connection with the computer without using a hub.***

When you make a USB connection before or after turning ON the unit's main power, the USB SELECT screen will appear and prompt you to select the USB bus power or make a USB connection with the computer.

Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the STORAGE; if you press the **F4** ENTER button, the unit will connect with the computer and displays the USB connected message.

Make sure that the microSD card is inserted properly to the DR-22WL.

NOTE

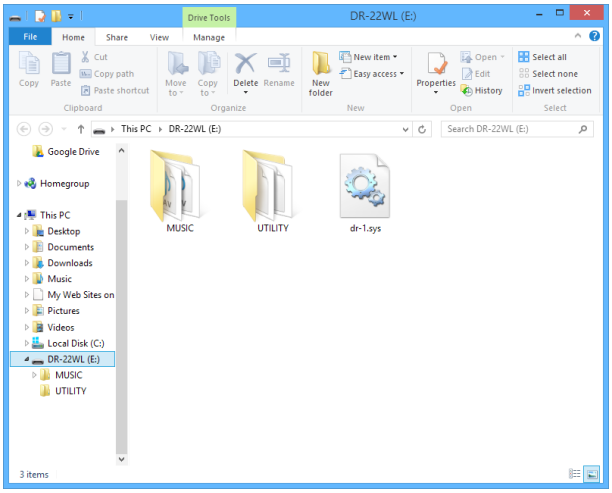
When you make a USB connection while the batteries are inserted to the unit, the USB port will supply power (USB bus power prioritized).

If USB connection is made when the microSD card is not inserted correctly, a pop-up message of Can't Save Data will appear.

When you turn on the "computer", the screen will display the DR-22WL as a external drive with a volume label of "DR-22WL".

Transferring files to a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Open the "MUSIC" folder and drag & drop the file you want to transfer to the desired location.



Transferring files from a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Drag & drop the audio file from the computer to the "MUSIC" folder.

TIPS

- ***You can manage the "MUSIC" folder on computer screen.***
- ***You can create a sub-folder in the "MUSIC" folder. The DR-22WL can create up to two layers. The DR-22WL cannot recognize sub-folders and files located at the third layer level or below.***
- ***If you name the sub-folders and music tracks, these names will appear on the home screen or browse screen of this unit.***

Disconnecting from a computer

When disconnecting the DR-22WL from the computer, make sure to follow the correct steps and remove the USB cable.

The power turns off when the shut-down process is completed.

Refer to the computer's operation manual for instructions on unmounting from the computer.

Connect the DR-22WL and smart phone via Wi-Fi

CAUTION

The DR-22WL designs are in conformance with the laws and regulations of the countries and regions in which this unit is sold, and labeled as required.

The DR-22WL is approved in the following countries and regions:

United States, Canada, Europe (EU member states), Australia, New Zealand, Japan

The use of wireless functions in a country other than those listed above could result in a violation of that country's wireless transmission laws.

Our company will bear no responsibility for use in countries other than those listed above.

TIPS

The battery will drain faster during Wi-Fi use.

Running out of batteries during data transfer will terminate the process and may result in transfer failure.

We recommend to use either the AC adapter or USB bus power during Wi-Fi use.

The DR-22WL is designed for remote control with the use of an exclusive application (TASCAM DR CONTROL), free of charge. Transport control such as playback and stop, as well as input level adjustment and file transfer can be made via Wi-Fi.

How to download and install the exclusive application (TASCAM DR CONTROL)

1. Connect your smart phone to the Internet.
2. Search the exclusive application (TASCAM DR CONTROL) and download from either Google Play (Android smart phone) or App Store (iOS device) for installation.

Connecting the DR-22WL to a smart phone via Wi-Fi for the first time

The DR-22WL can make a Wi-Fi/peer-to-peer connection with a smart phone via Wi-Fi, without the use of a router or other external devices. No Wi-Fi network environment is required. It can make direct connection with your smart phone.

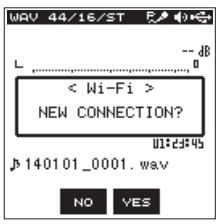
NOTE

When this unit and a smartphone are connected by Wi-Fi, connection with other Wi-Fi networks will not be possible.

■ When using an iOS terminal

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a new smartphone, so press the **F3** YES button.

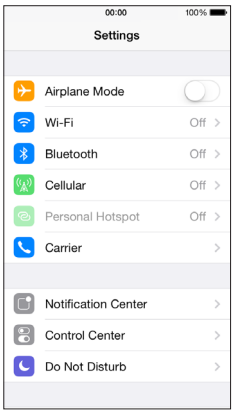


3. "SSID" and "PASSWORD" appear on the display.

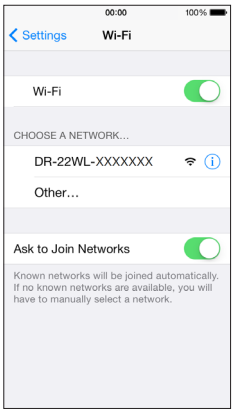
NOTE

The "SSID" is the name of the wireless LAN access point (wireless LAN device).

4. In your iOS device, select "setting" → "Wi-Fi".



5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.

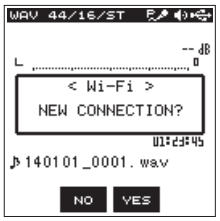


6. A password input screen appears on the iOS device. Enter the password shown on the display of the unit.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

■ When using an Android device

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a new smartphone, so press the **F3** YES button.

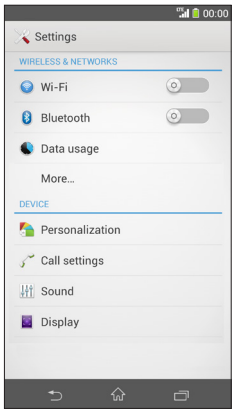


3. "SSID" and "PASSWORD" appear on the display.

NOTE

The "SSID" is the name of the wireless LAN access point (wireless LAN device).

4. In your Android device, select the "setting" ➝ "Wi-Fi".



5. When you turn on Wi-Fi on an Android device, a Wi-Fi device SSID list and WPS mark will appear. Select the SSID shown on the display of the unit.

6. A password input screen appears on the Android device. Enter the password shown on the display of the unit.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

NOTE

The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

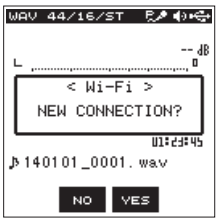
Connecting the DR-22WL to a smart phone via Wi-Fi (from second time onward)

When you establish a connection between the DR-22WL and your smart phone for the first time and need to connect them again, you only need to select the SSID from the second time onward.

■ When using an iOS terminal

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a previously connected smartphone, so press the **F2** NO button.

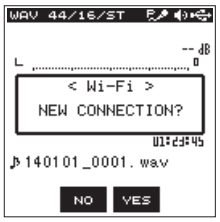


3. The pop-up message on the display disappears and the unit waits for a connection with a smartphone.
4. In your iOS device, select "settings" ➝ "Wi-Fi".
5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.
6. A Wi-Fi connection between the unit and your smartphone is established and the **Wi-Fi** indicator is lit.

■ When using an Android device

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a previously connected smartphone, so press the **F2** NO button.



3. The pop-up message on the display disappears and the waits for a connection with a smartphone.
4. In your Android device, select the "settings" ➝ "Wi-Fi".
5. When you turn on Wi-Fi on your Android device, a Wi-Fi device SSID list appears. Select the SSID shown on the display of the unit.
6. A Wi-Fi connection between the unit and your smartphone is established and the **Wi-Fi** indicator is lit.

NOTE

The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

Using a smart phone to remote control the DR-22WL

The exclusive application (TASCAM DR CONTROL) uses the same interface of the DR-22WL, so the remote control operation is basically the same as operating this unit. Familiarizing yourself with the DR-22W operation method will assist you in using the "TASCAM DR CONTROL" application.

1. When Wi-Fi connection is established between the DR-22WL and your smart phone, tap the installed "TASCAM DR CONTROL" application.
2. When the "TASCAM DR CONTROL" application is launched, the following screen will appear on your smart phone to remotely control the DR-22WL.

Detailed descriptions, on the "TASCAM DR CONTROL" application, including the "TASCAM DR CONTROL reference manual", can be downloaded from the TEAC Global Site (**http://teac-global.com**).

File transfer from the DR-22WL to a smart phone

1. Tap the "Browse" button on the "TASCAM DR CONTROL" screen.
2. The "Browse" screen displays a list of files from the DR-22WL; select the file you want to transfer.
3. Detail screen on the selected file will appear; tap the "Copy" button.
4. A confirmation screen for file copy will appear; press the "YES" button to start file transfer from the DR-22WL to your smart phone.

Connecting this unit to a computer by Wi-Fi

Transferring files from this unit to a computer is possible using the free TASCAM DR FILE TRANSFER software designed for this purpose. You can transfer recorded files by Wi-Fi.

Downloading and installing the TASCAM DR FILE TRANSFER software

1. Connect the computer to the Internet.
2. Download TASCAM DR FILE TRANSFER from the TEAC Global Site (http://teac-global.com/) and install it.

Connecting this unit to a computer by Wi-Fi for the first time

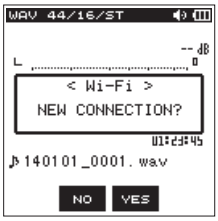
Since a direct Wi-Fi connection is used between the unit and the computer, no router or other external device is necessary. A Wi-Fi network is not necessary either. The connection can be made with just this unit and the computer.

NOTE

When this unit and a computer are connected by Wi-Fi, the computer cannot be connected with other Wi-Fi networks.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. Since it is a new connection, press the **F3** YES button.

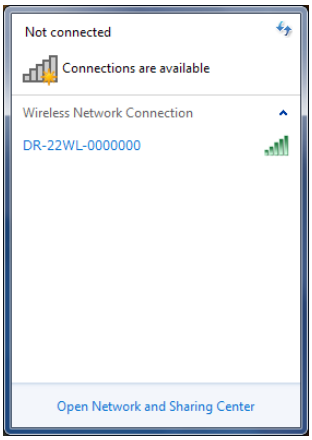


3. "SSID" and "PASSWORD" appear on the display.

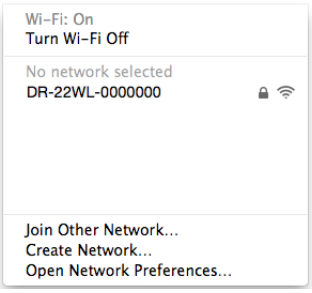
NOTE

The "SSID" is the name of the wireless LAN access point (wireless LAN device).

4. Click the wireless connection icon in the computer taskbar/menu bar (Windows/Mac) to open a list of wireless networks.

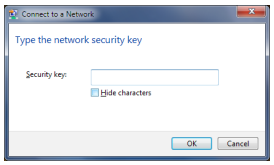


Windows



Mac

5. Select the SSID shown on the unit's display.
6. When the security key input screen appears on the computer, input the password shown on the display of the unit.



Windows

When the password input screen appears on the computer, input the password shown on the display of the unit.

Mac

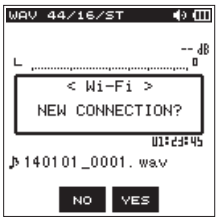
7. The **Wi-Fi** indicator on the unit lights when the Wi-Fi connection is established between the unit and the computer.

Connecting this unit to a computer by Wi-Fi after the first time

After the unit and the computer have been connected once, they can be connected again just by selecting the SS ID.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. Since the unit has been connected to the computer previously, press the **F2** NO button.



3. When the pop-up message disappears from the display, the unit is waiting to connect to the computer.
4. Click the wireless connection icon in the computer taskbar/menu bar (Windows/Mac) to open a list of wireless networks.
5. Select the SSID shown on the unit's display.
6. The Wi-Fi indicator on the unit lights when the Wi-Fi connection is established between the unit and a computer.

Transferring files from the unit to a computer

For details about the software download the TASCAM DR FILE TRANSFER Owner's Manual from the TEAC Global Site (http://teac-global.com/).

Changing password

The password for Wi-Fi connection can be changed for security purpose.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to display the SETUP page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the Wi-Fi item parameters.

4. Press the **F4** ENTER button to display the Wi-Fi screen.

5. Each time when you press the **F4** PW button**,** the password will change.
6. Press the **F1** button to set the password. The screen will return to the SETUP page.

View information (INFORMATION)

The INFO page of the menu screen lists various information on the DR-22WL.
Follow the below steps to display the information:

1. Press the ⌂/**MENU**/■ button to display the menu screen.
2. Use the **F1** TAB button to display the INFO page.

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item parameter of the information, and press the **F4** ENTER button.
   Below information will be displayed:

   FILE INFO **screen:**
   Displays information about the currently loaded audio file.

   CARD INFO **screen:**
   Displays information on the inserted microSD card.

   VERSION **screen:**
   Displays system settings and firmware version of the unit.
4. To return to the INFO page of the menu screen, press the **F4** ⮌ button.

File information screen (FILE INFO)

The FILE INFO screen displays the currently loaded audio file.

■ **FORMAT**

Displays the file type.
CBR/VBR will be displayed for MP3 files. (CBR: Constant Bit Rate, VBR: Variable Bit Rate)

■ **SAMPLE**

Displays the file's sampling rate.

■ **BIT WIDTH/BIT RATE**

Displays the file's bit width.
Bit rate (kbps) will be displayed for MP3 files.

■ **TYPE**

Displays the file type (stereo/mono).

■ **SIZE**

Displays the file size.

■ **DATE**

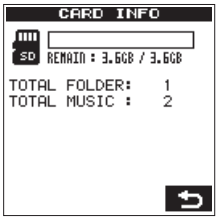
Displays the date of file creation .

■ **TIME**

Displays the recorded time.

Card information screen (CARD INFO)

The CARD INFO screen displays information on the inserted microSD card.



■ **REMAIN**

Displays available free space of the microSD card.

■ **TOTAL FOLDER**

Displays the total number of folders in the music folder.

■ **TOTAL MUSIC**

Displays the number of playable files in the music folder.

System information screen (VERSION)

The VERSION screen displays system settings and firmware version of the DR-22WL.

■ **system**

Displays the system's firmware version.

■ **Wi-Fi**

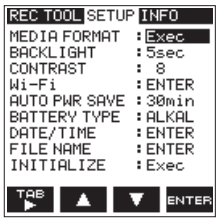
Displays the Wi-Fi firmware version.

System Settings (SETUP)

The SETUP page allows you to make various settings for optimum use of the DR-22WL according to usage environment and conditions, as well as resetting the unit and formatting the microSD card.

Follow the below steps to display the SETUP page.

1. Press the **⌂/MENU/ ■** button to display the menu screen.
2. Use the **F1** TAB button to display the SETUP page.



Use the **F2** ▲ button, the **F3** ▼ button, and the **F4** ENTER button to make settings for different items.

The following settings of different items can be made in the SETUP page.

Auto power save function setting

Use the AUTO PWR SAVE item to set the time for automatic turn-off, counting from the last operation.

Options: OFF (no automatic turn-off), 3min, 5min, 10min, 30min (default value)

Backlight setting

Use the BACKLIGHT item to set the time for automatic turn-off of back-light in battery operation, counting from the last operation.

Options: OFF (light-off), 5sec (default value), 10sec, 15sec, 30sec

Adjusting the display contrast

Use the CONTRAST item to adjust the display contrast.

Options: 1 - 20 (default value: 2)

Battery type settings

Use the BATTERY TYPE item to set the battery type. This setting is used to display the remaining battery power and to calculate the minimum capacity for normal operation.

Options: ALKAL (alkaline batteries, default value), Ni-MH (nickel-metal hydride batteries)

Restoring the DR-22WL to factory settings

Use the INITIALIZE item to execute initialization; this will restore the unit to factory settings.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the INITIALIZE item and press the **F4** ENTER button.
   The following confirmation message will pop-up:

2. Press the **F3** YES button to execute initialization.
   Press the **F2** NO button to cancel the process.

Formatting the microSD card

Use the MEDIA FORMAT item to format the microSD card. Formatting will delete all music files in the microSD card, and the "MUSIC" folder, the "UTILITY" folder, and the "dr-1.sys" will be created automatically.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the MEDIA FORMAT item, and press the **F4** ENTER button.
   The following confirmation message will pop-up:

2. Press the **F3** YES button to format the microSD card.
   Press the **F2** NO button to cancel the process.

CAUTION

When formatting the microSD card, make sure that the DR-22WL is connected to either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power from a computer, or operating on fully-charged batteries.

Formatting may not complete successfully if the battery runs out.

Setting the file name type

The DR-22WL can set name types of the recording files.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the FILE NAME item and press the **F4** ENTER button.
   The FILE NAME screen will be displayed.

2. Use the ⏮ button and the ⏭ button, the **F2** ▲ button and the **F3** ▼ button, and the **F4** ENTER button to make settings for different items.
   The following settings for each item can be made in this screen.
3. To return to the SYSTEM page of the menu screen, press the **F4** ⮌ button.

■ File name type

In the TYPE item, select either the DATE or WORD options.

Options:

DATE (default value): dates will be included in file name
Example: 140101_0000.wav

WORD : the six characters set in WORD will be included in file name
Example: TASCAM_0000.wav

NOTE

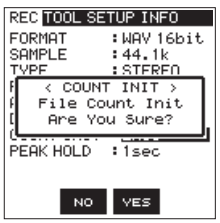
The internal clock of the unit is used to set dates. (See "Setting the date/time" on page 11.)

■ Setting characters (WORD)

In the WORD item, use either the ⏮ button or the ⏭ button to move the cursor, and use the **F2** ▲ and the **F3** ▼ buttons to set characters.
In addition to alphabets and numbers, the following characters can be used: ! # $ % & ' ( ) + , - . ; = @ ^ _ ' { } ~

■ Initializing the numbers (COUNT)

In REC page of the menu screen, select the parameter (highlight) the COUNT INIT item, and press the **F4** ENTER button. The following confirmation message will appear:



Press the **F3** YES button to reset the number that follows the characters to "0001".

The following is a list of the pop-up messages.

The DR-22WL displays these pop-up messages according to the situation; refer to this list to learn more details and/or solutions.

Message	Details and solutions
Battery Empty	The batteries are empty. Replace the batteries.
Cannot overdub! See REC setting	Overdubbing in 96kHz WHV file with MP3 format is not possible. Select the WAV format for recording.
Can't Divide	The selected division point is not appropriate for DIVIDE action (the beginning and end of the track).
Card Error	The card cannot be recognized. Replace the card.
Card Full	The card has no empty space. Erase unnecessary files or transfer them to a computer.
Current File MP3	MP3 files cannot be divided.
Dup File Name	The name of the DIVIDE file to be created is identical to the name of the file that already exists in the same folder. The DIVIDE function adds "a" or "b" to the end of the file name. Before using the DIVIDE function, connect the DR-22WL to a computer and edit the file name.
File Full	The total number of folders and files exceeded the limit (5000). Delete unnecessary folders and files or move them to a computer.
File Name ERR	More than 200 characters has been added to the file name due to the DIVIDE function. The DIVIDE function adds "a" or "b" to the end of the file name. Before choosing the DIVIDE function, connect the unit to a computer and edit the file name to less than 198 characters.
File Not Found	The file cannot be found or damaged. Check the target file.
File Not Found Make Sys File	System files required to operate the DR-22WL is missing. To create system files, press the **PLAY** button while this message is displayed.
File Protected	The file is read-only and cannot be deleted.
Format Error Format CARD	The microSD card is not formatted properly or damaged. This message also appears when a computer under USB connection formatted the card, or when an unformatted card is inserted to the unit. Cards must be formatted with the DR-22WL. Insert a different card, or press the **F4** ENTER button to start formatting. Formatting will delete all data on the microSD card.
Invalid Card Change Card	The card may not work properly. Replace the card.
Invalid SysFile Make Sys File	The system file required to operate this unit is invalid. To create new system files, press the **F4** ENTER button while this message is displayed.
I/O Too Short	The IN (start) and OUT (end) points are too close. Re-set by spacing at least one second in between.
Layer too Deep	Folders can be created only up to two layers. You cannot create a new folder inside this folder.
Low battery, Wi-Fi OFF	The battery charge is low, so Wi-Fi cannot be used. Replace the batteries with new ones.
Max File Size	File size is larger than the designated size, or the recording time exceeded 24 hours.
MBR Error Init CARD	The card is not formatted properly or damaged. Insert a different card, or press the **F4** ENTER button to start formatting. Formatting will delete all data on the microSD card.
No MUSIC File	There is no playback file.
No Card	A SD card is not set. Insert a recordable SD card.
No PB File	There are no files available for playback. The file may be damaged.
Non-Supported	The file type is not supported. Please refer to the 8 – Connecting with a computer 32 for compatible file types.
Write Timeout	Writing to the card timed out. Back up files to a computer and format the card.
Can't Save Data	Restart the unit when this error message appears. If the power cannot be turned off, remove the batteries, disconnect the AC adapter (TASCAM PS-P515U; sold separately), or disconnect the USB cable when in bus power supply. If these error messages appear frequently, please contact the TEAC Repair Center.
Device Error	
File Error	
Not Continued	
Player Error	
Writing Failed	
Sys Rom Err	
System Err 50	
System Error 1	
System Error 2	
System Error 3	
System Error 4	
System Error 5	
System Error 6	
System Error 7	
System Error 8	
System Error 9	

12 – Troubleshooting

When the DR-22WL does not operate properly, check the followings before make a repair request. If you still have a problem, contact either the store you purchased the DR-22WL or the TEAC repair center (see the back cover for contact details).

■ The power does not turn on

- Are batteries low?
- Are batteries inserted correctly with the ⊕, ⊖ terminals aligned correctly?
- Is the AC adapter (TASCAM PS-P515U; sold separately) securely connected to the outlet? Is the USB connector connected securely?
- Is the USB cable connecting the computer for USB bus power securely connected?
- Is the USB hub in use with computer connection for USB bus power?

■ The DR-22WL turn the power off automatically

- Is the automatic power saving function on? (See "Auto power save function setting" on page 39.)
  - The DR-22WL is in compliance with the European Standby Power Regulations (ErP), and therefore, the automatic power saving function will work whether the unit is being powered by an AC adapter or batteries. Select "OFF" if you do not want to use the auto power saving function (the factory default setting is "30 min").

■ The unit does not function.

- Is the **HOLD/ ⏻ /** switch set at **HOLD**?
- Is the unit connected to a computer via USB cable (USB Connected)?

■ The microSD card is not recognized.

- Check that the microSD card is inserted correctly.

■ The DR-22WL don't play back

- If the file is WAV format, check whether its sampling rate is compatible with the unit.
- If the file is MP3 format, check whether the bit rate is compatible with the unit.

■ The built-in speaker does not emit sound

- Is a headphone connected to the unit?
- Is the SPEAKER item set as OFF?
- Is the unit in recording or recording standby mode?

■ The monitor system does not emit sound

- Is the monitoring system securely connected?
- Is the monitoring system volume at minimum level?
- Is the OUTPUT LEVEL setting of the unit at minimum level?

■ The DR-22WL is not recording

- Check the connection again.
- Check the input settings again.
- Is the recording level too low?
- Does the microSD card has free space?
- Check whether the number of files has reached the maximum level.

■ The input level is too low

- Is the input level setting too low?
- Is the output level of the connected device too low?

■ The sound I want to record is distorted

- Is the input level setting too high?
- Is reverb setting ON?

■ Playback sound is not natural

- Is the playback speed changed?
- Is the level control function ON?
- Is reverb setting ON?

■ The file cannot be deleted

- Is the file a copy of a read-only file set by a computer?

■ The computer does not display the unit's files

- Is the DR-22WL connect to a computer via USB port?
- Is USB hub in use?
- Is the unit in recording or recording standby mode?

■ The DR-22WL cannot make a Wi-Fi connection or communication is interrupted

- Check that the Wi-Fi device is turned ON and/or the Wi-Fi function is ON.
- Is the distance to the Wi-Fi device too far?
  Is there any obstacles in between, for example a wall?
  When a Wi-Fi device is located at the rear side of the DR-22WL, the unit itself maybe the cause of interruption.
  Try changing the positions of the Wi-Fi device and the unit.
- Turn OFF and restart the DR-22WL.
- Delete the "DR-22WL" registered information in the Wi-Fi device, and follow the steps in "Connecting the unit to a Wi-Fi device."

Rating

■ **Recording media**

microSD card (64 MB–2 GB)
microSDHC card (4 GB–32 GB)
microSDXC card (48 GB–128 GB)

■ **Recording/playback formats**

BWF: 44.1k/48k/96kHz, 16/24 bit
WAV: 44.1k/48k/96kHz, 16/24 bit
MP3: 44.1k/48 kHz, 32k/64k/96k/128k/192k/256k/320kbps

■ **Number of channels**

2 channels (stereo)

Input/output ratings

Analog audio input and output ratings

■ **MIC/EXT IN jack (can provide plug-in power)**

Connector: 1/8" (3.5 mm) stereo mini jack
Input impedance: 25 kΩ
Reference input level: –20dBV
Maximum input level: –4dBV

■ **🎧/LINE OUT jack**

Connector: 1/8" (3.5 mm) stereo mini jack
Output impedance: 12 Ω
Reference output level: –14dBV (with 10kΩ load)
Maximum output level: +2dBV (with 10kΩ load)
Maximum output: 20mW+20mW (with 32Ω load)

■ **Built-in speaker**

0.3W (mono)

Control input/output ratings

■ **USB port**

Connector: Micro-B type
Format: USB 2.0 HIGH SPEED mass storage class

Audio performance

■ **Frequency response**

20-20 kHz +1/-3 dB (EXT IN to LINE OUT, Fs44.1 kHz, JEITA)
20-22kHz +1/-3 dB (EXT IN to LINE OUT, Fs48kHz, JEITA)
20-40kHz +1/-3 dB (EXT IN to LINE OUT, Fs96kHz, JEITA)

■ **Distortion**

0.05% or less (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

■ **S/N ratio**

92dB or above (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

Note) Based on JEITA: JEITA CP-2150

Requirements for connected computers

Please visit the TEAC Global Site (**http://teac-global.com**) to learn the latest compatible OS.

■ **Windows**

Pentium 300MHz or more
128MB or more memory
USB port (USB2.0 is recommended)

■ **Mac**

Power PC, iMac, G3, or G4 with 266MHz or above
64MB or more memory
USB port (USB2.0 is recommended)

■ **Recommended USB host controller**

Intel chip set

■ **Supported operating systems**

Windows: Windows XP, Windows Vista, Windows 7, Windows 8 (including 8.1)
Macintosh: Mac OS X 10.2 or later

Wi-Fi

■ **Wireless standard**

Based on IEEE 802.11b/g/n (2.4GHz only)

■ **Wireless communication mode**

Simple access point (Limited AP)

■ **Security**

WPA2-PSK (WPS2.0 compatible)

13 – Specifications

General

■ **Power supply**

2 AA batteries (alkaline or NiMH)
USB bus power from a computer
Dedicated AC adapter (TASCAM PS-P515U; sold separately)

■ **Current consumption**

0.5 A (maximum)

■ **Battery operation time (continuous operation)**

• Alkaline batteries (EVOLTA)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 17.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 11 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 11 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 11 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

• Using NiMH batteries (eneloop)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 13.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 12 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13.5 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 10 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 10 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

■ **Dimensions**

52.2 × 155 × 36.6mm (W x H x D)

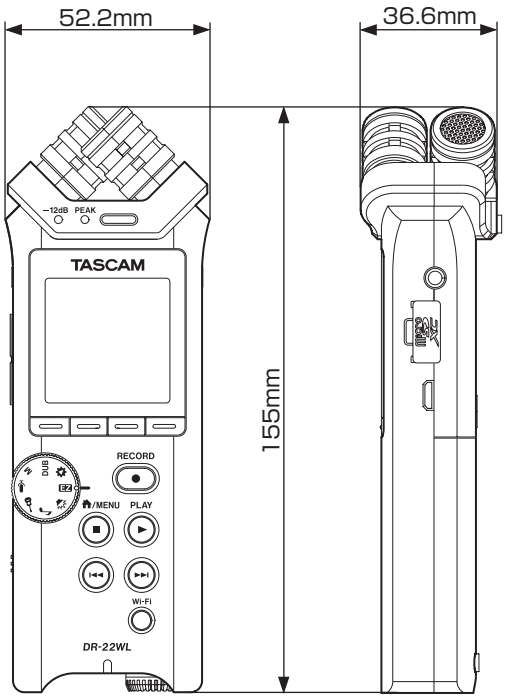
■ **Weight**

170 g/123 g (with batteries/without batteries)

■ **Operating temperature**

0°C–40°C

Dimensional drawings



• Illustrations in this manual may be different from the actual product.
• To improve the product, specifications and external appearance may change without prior notice.

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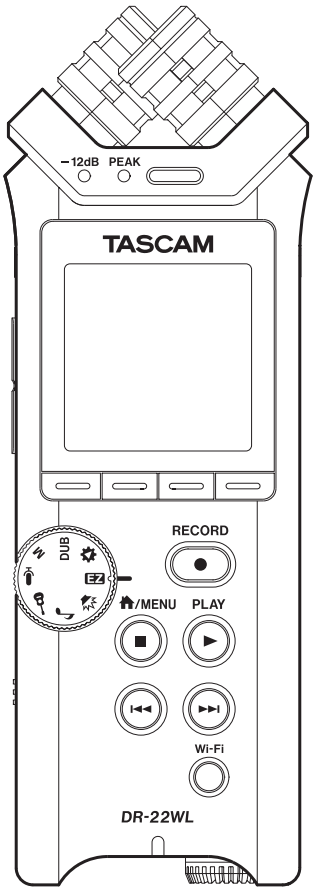
TASCAM

D01244520C

DR-22WL

Linear PCM Recorder

REFERENCE MANUAL



Hi-Res AUDIO

Wi Fi CERTIFIED

BLACKFIN PROCESSOR by Analog Devices

Contents

1 – Introduction

Features

- Compact audio recorder that uses microSD/microSDHC/microSDXC cards as recording media
- Built-in with high performance directional stereo microphones in XY positions
- Built-in Wi-Fi feature to use smartphone as remote control, transfer files from the PCM recorder, and playback audio
- Scene dial allows for easy recording
- Two overdubbing modes for sound dubbing
- Practice mode with features useful for instrument practice, such as I/O loop for repeated playback, VSA to adjust playback speed without changing the pitch, key-change and fine-tune to adjust the pitch
- 44.1/48/96 kHz, 16/24-bit, linear PCM (WAV/BWF format) recording possible
- 32–320 kbps MP3 format recording possible (compatible with ID3 tag v2.4)
- Overdubbing allows playback and input signals to be mixed and recorded together as a new file
- Built-in 0.3 W monaural output speaker
- Built-in reverb function can be used during recording and playback
- Automatic recording function starts recording automatically when a set sound input level is detected
- Track incrementing function allows a recording to be split by creating a new file when desired
- Pre-recording function allows the unit to record the 2 seconds of sound before recording is activated
- Peak reduction function is available to reduce the level automatically in case of excessively large input
- Limiter function is available to reduce the level automatically in case of excessively large input
- Low cut filter reduces low-frequency noise
- Self-timer function to start recording after a set period of time
- DIVIDE function allows files to be split where desired (only for WAV files)
- MARK function convenient for moving to specific locations
- File name format can be set to use a user-defined word or the date
- Resume function memorizes the playback position before the unit is turned off
- 3.5mm (1/8") jack for external stereo microphone input (provides plug-in power) or external stereo line input
- 3.5mm (1/8") line/headphones output jack
- 128 x 128 pixel LCD with backlight
- Micro-B type USB 2.0 port
- Operates on 2 AA batteries, AC adapter (sold separately: TASCAM PS- P515U), or USB bus power
- Tripod attachment screw-hole built into unit
- USB cable included

This product has a Blackfin® 16/32-bit embedded processor made by Analog Devices, Inc. This processor controls digital signal processing.
Inclusion of this Blackfin® processor in the product increases its performance and reduces its power consumption.

Conventions used in this manual

The following conventions are used in this manual:

- Buttons, connectors and other physical parts of this unit are written using a bold font like this: **MENU** button.
- When we show messages, for example, that appears on the unit's display, the typeface looks like this: INPUT.
- microSD, microSDHC and microSDXC memory cards are called "microSD cards".
- Information shown on the computer display is written like this "OK".
- The selected folder is indicated as the "current folder".
- Computer or portable audio devices that are connected via Wi-Fi with the DR-22WL are indicated as the "Wi-Fi device".
- Additional information is provided as necessary in tips, notes and cautions

TIP

These are tips about how to use the unit.

NOTE

These include additional explanations and special cases.

CAUTION

Failure to follow these instructions could result in injury, equipment damage or lost data, for example.

About microSD cards

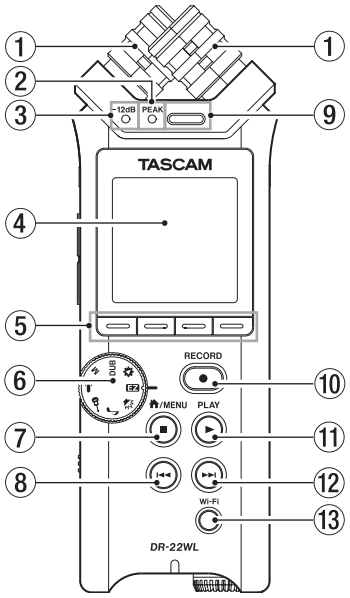
The DR-22WL uses microSD cards for recording and playback.
Memory cards that you can use with the DR-22WL are microSD cards of 64 MB to 2 GB, microSDHC cards of 4GB to 32GB, and microSDXC cards of 48GB to 128GB.
Please refer to the TEAC Global Site (**http://teac-global.com**) to learn more on the list of compatible SD cards, or contact the TASCAM customer support service.

Precautions

microSD cards are precision devices. Please refer to the below when using memory cards to prevent memory and/or card damage:

- Do not leave a memory card in extremely hot or cold places
- Do not leave a memory card in extremely humid places
- Do not spill any liquids on the memory card
- Do not bend the card or subject it to any excessive force
- Do not subject the card to any physical shock
- Do not remove the card while the unit is accessing data, or recording, playing, or making data transfer
- Always store the memory card in a case

Top panel



① **Built-in stereo microphone**
This is an XY directional stereo electret condenser microphone.
The built-in microphone becomes inactive when an external microphone or external input is connected to the **MIC/EXT IN** jack on the right-side panel.

② **PEAK indicator**
This will light in red immediately before the input noise increases to a distortion level (-2dB).

③ **–12dB indicator**
This will light in green when the input noise exceeds the –12dB level.

④ **Display**
Displays a variety of information.

⑤ **Function buttons**
Function of individual buttons changes according to what is shown on display.
The displayed icon at the bottom of the screen indicates the current function.

NOTE

For your convenience, this manual indicates the four function buttons as **F1**, **F2**, **F3**, and **F4** starting from the left.

⑥ **Scene dial**
Use this dial to change the unit setting according to the scene. (See "Scene recording mode" on page 15.)

⑦ **⌂/MENU/■ button**
To display the MENU screen, press this button in home screen.
To return to the home screen, press this button in any screen display.
Press this button during recording to stop recording. Press this button during playback or recording standby to pause or stop (depending on the position in the file).

⑧ **I◄◄ Fast rewind button**
Press this button while in play or stop mode to return to the beginning of a track.
Press and hold this button to search backwards.
When the MARK SKIP MODE is set to ON on the TOOL menu page, press this button while pressing and holding the **F2** button to move to the previous mark. (See "Moving to the cue mark position" on page 23.)

⑨ **Built-in mono speaker**
Use this built-in speaker to listen to recordings.
No sound will play when:

- In recording standby
- Headphone is connected
- In recording mode
- Speaker output setting is turned off

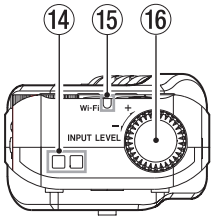
⑩ **RECORD button/RECORD indicator**
When you press this button during stop mode, the **RECORD** indicator (around **RECORD** button) flashes and the DR-22WL will go into recording standby mode.
When you press this button during the recording standby mode, the **RECORD** indicator lights and the DR-22WL starts recording.
When you press this button during recording, the **RECORD** indicator flashes.
When the scene dial is set to **EZ**, press when stopped to start recording.

⑪ **PLAY button**
When the home screen is open and playback is stopped, press this button to start playback.
When you select a file or folder in BROWSE screen and press the PLAY button, the unit will return to the home screen and start playing the selected file or folder from the beginning.

⑫ **►►I Fast forward button**
Press this button in playback or stop mode to skip to the next track.
Press and hold this button for fast forward search.
When the MARK SKIP MODE is set to ON on the TOOL menu page, press this button while pressing and holding the **F2** button to move to the next mark. (See "Moving to the cue mark position" on page 23.)

⑬ **Wi-Fi button**
Use this button to turn on/off the Wi-Fi function.

Front panel

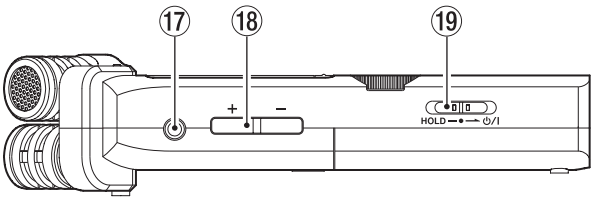


⑭ **Strap holder**
A strap can be attached to this holder.

⑮ **Wi-Fi indicator**
This indicator lights while the Wi-Fi module is in access.

⑯ **INPUT LEVEL volume**
Turn this dial to adjust the input level.
The input level setting will pop-up on display when making an adjustment.

Left side panel

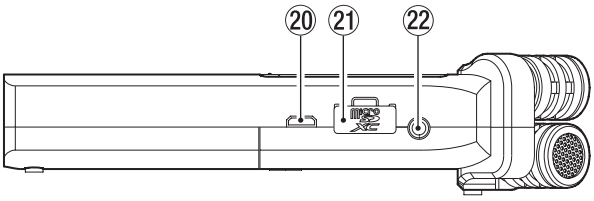


⑰ **🎧/LINE OUT jack**
A headphone or a line input jack of an external device (via stereo mini-jack cable) can be connected to this jack.

⑱ **OUTPUT LEVEL (+/–) buttons**
These buttons adjust the output sound level of the built-in speaker or the **🎧/LINE OUT** jack.
Volume level will pop-up on the bottom of the display while making adjustment.

⑲ **HOLD/⏻/❙switch**
To turn the power on/off, slide and hold the switch towards the ⏻/❙icon.
When you slide the switch towards the **HOLD** side, all the functions of the buttons are locked.

Right side panel



⑳ **USB port**
Use the supplied USB cable to connect the DR-22WL with a computer. (See "8 – Connecting with a computer" on page 32.)
Power can be supplied by using this USB cable or from an AC adapter (sold separately: PS-P515U).

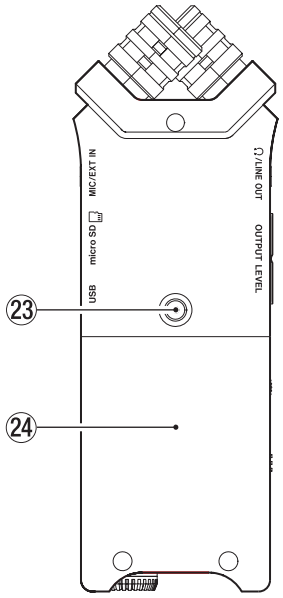
CAUTION

Connect the DR-22WL directly be connected directly with the computer, not through a USB hub.

㉑ **microSD card slot**
Insert or remove a microSD card.

㉒ **MIC/EXT IN jack**
Connect an external stereo microphone or external input to this jack. It is compatible with plug-in power.
The built-in microphone is disable when an external microphone is connected to the **MIC/EXT IN** jack.

Bottom panel

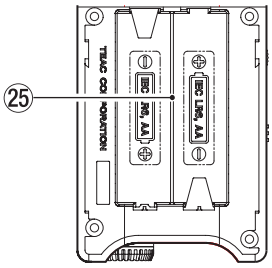


㉓ **Tripod attachment screw-hole (1/4 inch)**
A tripod can be attached to the DR-22WL.

CAUTION

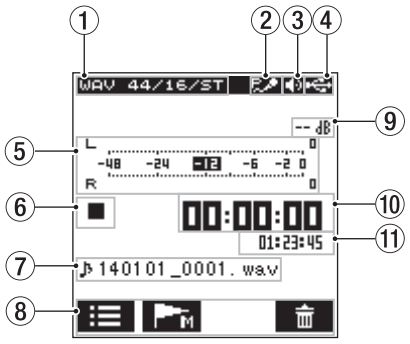
- ***Ensure the tripod or microphone stand screws are securely fastened to prevent the unit from falling off.***
- ***When attaching this unit to a tripod or microphone stand, ensure to place it on a level surface.***

㉔ **Battery compartment cover**



㉕ **Battery case**
Insert batteries (two AA size) in this compartment to power the unit. (See "Using AA size batteries" on page 10.)

Home Screen



① **Playback file type message**
Format type, sampling rate, bit rate, stereo/mono setting of the playback file are shown.

② **Plug-in power on/off message**
The plug-in power status (on/off) is displayed in icon view. (See "Recording with an external microphone (MIC IN)" on page 14.)

Icon	On/off status
Blank	Plug-in power function off
	Plug-in power function on

③ **Monitor output message**
: output from built-in speaker
: output from headphone

④ **Power supply status message**
When power is supplied from the batteries, the current battery level is displayed in bars (, ,).
When the battery level is low, the will flash and the power will be switched off (standy mode).
The will be displayed when using either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power.

NOTE
When attempting recording or other operations that consume large amount of power, a warning message of `BatteryLow` ***may pop-up.***

⑤ **Level meter**
Displays the level of the playback sound.

⑥ **Recorder status message**
The recording status is indicated in the following icons:

Indicator	Meaning
■	Stop
❚❚	Pause
►	Playback
►►	Fast forward
◄◄	Rewind
►►I	Skip forward to the beginning of the next file
I◄◄	Skip backward to the beginning of either the current or preceding file

⑦ **File name**
The name or tag information of the file currently in play is displayed.
The ID3 tag information is displayed instead when included in the MP3 file.

NOTE
ID3 tag information contains titles and artist names, which can be stored in MP3 files.

⑧ **Function buttons status message**
Below icons are displayed while in stop or playback mode.

Icon	Function
	Display browse screen
	Mark function (set/clear)
	Delete file

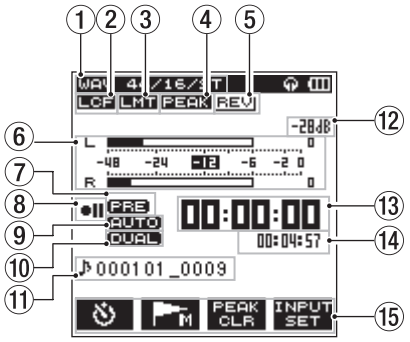
⑨ **Peak decibel (dB) message**
Displays the maximum playback level in decibel reading per set amount of time.

⑩ **Elapsed time message**
Displays the elapsed time (hours: minutes: seconds) of the current file.

⑪ **Remaining time message**
Displays the remaining time (hours: minutes: seconds) of the current file.

Recording Screen

The below recording screen is displayed in recording or recording standby mode.



① **Recording mode message**
Displays the format, sampling rate, and stereo/mono of the recording file. (See "Recording format settings (FORMAT/SAMPLE/TYPE)" on page 16.)

② **Low-cut filter on/off status message**
Displays the low-cut filter on/off status.
The message is highlighted when the low-cut filter is set at `40Hz/80Hz/120Hz/220Hz`.
Blank: low-cut filter is off
LCF: low-cut filter is on

③ **Limiter function on/off message**
Displays the limiter function on/off status. (See "Setting the Low Cut Filter" on page 18.)
Blank: limiter function is off
LMT: limiter function is on

④ **Peak reduction function on/off status message**
Displays the peak reduction on/off status. (See "Using the level control function" on page 18.)
Blank: peak reduction function is off
PEAK: peak reduction function is on

⑤ **Reverb on/off status message**
Displays the reverb on/off status.

Icon	On/off status
Blank	Reverb is off
REV	Reverb is on (Reverb sound added to input sound)
REV	Reverb is on (Reverb sound added to output sound)

⑥ **Level meter**
Displays the input sound level.
When the AUTO REC function is turned on, the level meter will display sounds within the level that activates the AUTO REC function.

⑦ **Prerecording function on/off status**
Displays the Prerecording function on/off status. (See "Start recording from slightly before pressing RECORD (PRE REC)" on page 20.)

Blank: Prerecording is off

PRE : Prerecording function is on

⑧ **Recording status message**
The recording status is indicated in the following icons:

Indicator	Meaning
● II	Recording standby or recording pause mode
●	In recording mode
5S	Begins recording in five seconds
10S	Begins recording in ten seconds

⑨ **Automatic recording function on/off status**
Displays the Automatic recording function on/off status. (See "Automatic recording (AUTO REC)" on page 19.)

Blank: Automatic recording off

AUTO : Automatic recording function on

NOTE

AUTO is displayed when the scene mode is EZ or 🎙.
In this case, level control is automatic.

⑩ **Dual format recording function on/off status**
This shows whether dual format recording is on or off.
Blank: dual format recording function off
DUAL : dual format recording function on

⑪ **File name message**
Displays the file name automatically assigned to the recording file.

⑫ **Peak decibel (dB) message**
Displays the peak input level in decibel reading.
OVER will be displayed when recording is above the peak level (–2dB or more).

⑬ **Elapsed recording time**
Displays the elapsed recording time of a recorded file (hours: minutes: seconds).

⑭ **Remaining recording time**
Displays the remaining recording time for the microSD card (hours: minutes: seconds).

⑮ **Function buttons message**
The following icons will be displayed while in recording standby, recording, or recording pause mode:

Icon	Function
	Self-timer function
M	Mark function (set mark)
INPUT SET	Display input setting screen
TRK INC	Activate the track increment
PEAK CLR	Clear peak hold

Menu item list

Press the ⌂/**MENU**/■ button to display the menu screen.

The menu screen consists of four pages each separated by types of menu items.

REC: make basic recording settings
TOOL: make function settings useful for playback files
SETUP: make configuration settings for the DR-22WL
INFO: displays file and media information

Menu items are as follows:

Menu item	Function		Ref. page
REC	Make recording settings		
		FORMAT SAMPLE TYPE	page 16
		PRE REC	page 20
		AUTO FUNC	page 19
		DUAL FORMAT	page 21
		COUNT INIT	page 40
		PEAK HOLD	page 17
TOOL	Make settings for various functions.		
		MARK SKIP MODE	page 23
		DIVIDE	page 29
		AUTO DIVIDE	page 29
		REVERB	page 30
		SPEAKER	page 12
		METRONOME	page 30
SETUP	Make various settings.		
		MEDIA FORMAT	page 39
		BACKLIGHT	page 39
		CONTRAST	page 39
		Wi-Fi	page 37
		AUTO PWR SAVE	page 39
		BATTERY TYPE	page 39
		DATE/TIME	page 11
		FILE NAME	page 40
		INITIALIZE	page 39
INFO	View various types of information.		
		FILE INFO	page 38
		CARD INFO	
		VERSION	

Using menus

The following explains the menus, using the display contrast setting as an example.

1. Press the ⌂/**MENU**/■ button to display the menu screen.

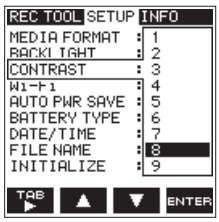
2. Press the **F1** TAB button to display various menu pages.

SETUP page is selected

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item you want to set.

CONTRAST item is selected

4. Press the **F4** ENTER button to open the parameter display.



5. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ENTER button to finalize the setting.
6. Repeat the 2. to 5. steps to set each items.
7. Press the ⌂/**MENU**/■ button to return to the home screen.

Basic operations

Use the following buttons to operate the various screens.

⌂/**MENU**/■ button

The menu screen will pop up when you press this button in stop or pause mode.

To return to the home screen, press this button in any screen display.

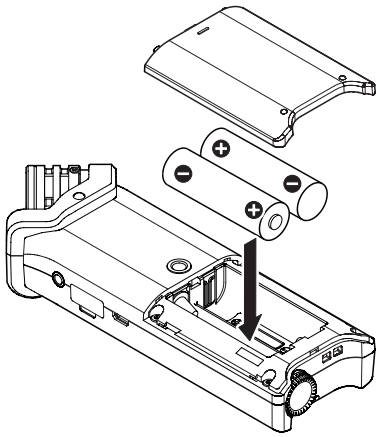
Powering the unit

Power sources

The DR-22WL operates on two AA batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately), or the supplied USB cable (USB bus power).
Use either alkaline batteries or Ni-MH batteries.

Using AA size batteries

Remove the battery compartment cover on the back of the unit, insert two AA batteries with the ⊕ and ⊖ ends in the right position, and close the cover.



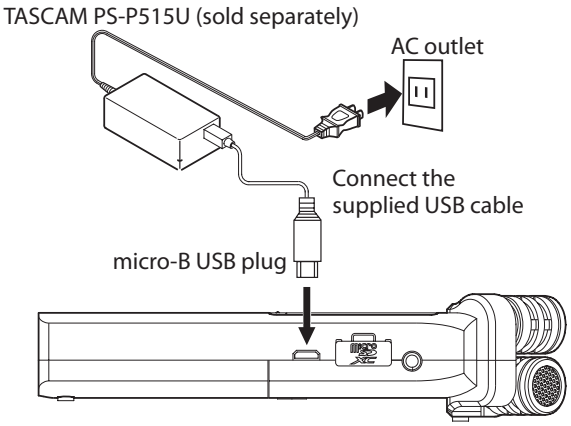
Select the same type of batteries to get an accurate reading of the remaining battery power and required minimum power for operation. (See "Battery type settings" on page 39.)

CAUTION

- ***Do not use Manganese dry cell batteries.***
- ***Ni-MH batteries will not be recharged with this unit; use a separate battery recharger instead.***
- ***The supplied alkaline batteries are for testing and may not last long.***

Using an AC adapter (sold separately)

Use the supplied USB cable to connect the USB port of the unit and the dedicated AC adapter (TASCAM PS- P515U; sold separately) as illustrated below.



NOTE

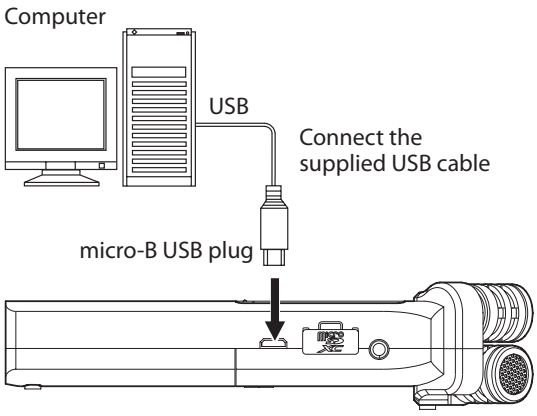
When both batteries and the AC adapter are attached to the unit, power will be supplied from the AC adapter.

CAUTION

- ***Use only the dedicated AC adapter (TASCAM PS- P515U; sold separately). The use of another adapter may cause malfunction, fire or electric shock.***
- ***Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.***

Using USB bus power

Use the supplied USB cable to connect the unit and the computer as illustrated below.



When you connect a USB cable while the unit power is on, or turn on the power after making a connection, the USB SELECT screen will pop up, prompting the user to select either to operate the unit with USB bus power or make a USB connection with the computer.

Use the **F2** ▲ button and the **F3** ▼ button to select (highlight) the BUS POWER, then press **F4** ENTER button to supply power from the USB port and display the home screen.

NOTE

Power is supplied from the USB port when USB cable is connected to the unit inserted with batteries (USB bus power prioritized).

CAUTION

- ***Depending on the USB bus power specifications of the computer, the DR-22WL may not operate with a USB connection. If this occurs, please use the dedicated AC adapter (TASCAM PS-P515U; sold separately) instead.***
- ***This unit is not compatible with the computer's power-save mode or sleep-mode. Please turn off these modes when operating the unit from the computer's USB bus power.***

Turning the power on and off (standby mode)

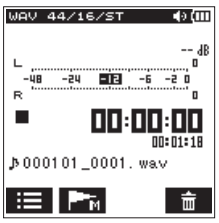
CAUTION

- ***When you turn the power switch off while supplying power from the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power connected to a computer, the unit will go to a standby mode.***
- ***Before turning the power switch on and off, turn the volume down for the sound system connected to the unit.***
- ***Do not wear headphones when turning the power switch on and off (standby mode); the noise may cause damage to your ears and/or headphones.***

Starting up the unit

In power off mode, slide and hold the **HOLD**/ ⏻ / I switch (located at left-side of the panel) toward the ⏻ / I direction, and release the switch when the TASCAM DR-22WL (start-up screen) appears.
The DR-22WL starts up and the home screen is displayed.

Start-up screen



Home screen

CAUTION

When turn the power on for the first time (or when the built-in clock is reset due to no battery power), the DATE/TIME screen will appear before the home screen to set date/time. (See "Setting the date/time" on page 11.)

Shutting down (standby mode)

In power on mode, slide and hold the **HOLD**/ ⏻ / I switch (located at left-side of the panel) toward the ⏻ / I direction, and release the switch when the TASCAM DR-22WL shutting down appears.
The power turns off when the shut-down process is completed.

CAUTION

Always use the* HOLD/ ⏻ / I *switch to turn the power off. In power on mode, all recorded data and settings will be lost if you remove the batteries, disconnect the power cable of the dedicated AC adapter (TASCAM PS-P515U; sold separately), or plug-off the USB cable for USB bus power. Any lost data and/or settings cannot be restored.

Resume function

The DR-22WL is equipped with a resume function to locate the previous position (or time) when the power was turned off.
Turn the power on and press the **PLAY** button to playback from the previous file position (time) when the power was turned off.

NOTE

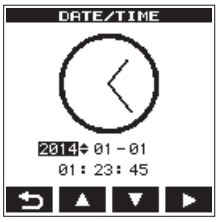
The position is recorded in the microSD card. The resume function does not work if the microSD card is replaced or formatted.

Setting the date/time

The DR-22WL uses its internal clock to record the date and time to the recorded files.

1. Press the ⌂/**MENU**/ ■ button to display the menu screen.
2. Press the **F1** button to display the SETUP page.
3. Use both the **F2** ▲ and **F3** ▼ buttons to select (highlight) the DATE/TIME item parameters.

4. Press the **F4** button to display the DATE/TIME screen.



5. Press the **F4** ▶ button to move the cursor (highlighted area), and use the **F2** ▲ and **F3** ▼ buttons to change settings.
6. Press the **F1** button to finalize the settings. The screen will return to the SETUP page.

NOTE

The file name will include the set date/time. (See "Setting the file name type" on page 40.)

CAUTION

Without the use of the batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately) or USB bus power, the date and time setting can be made only for a few minutes. When using batteries, we recommend to replace them before they are completely drained.

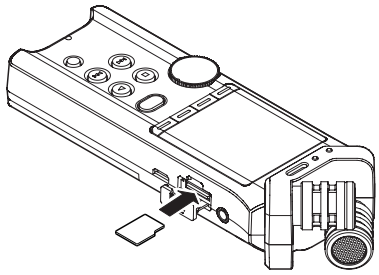
Inserting and removing microSD cards

Inserting the SD card

NOTE

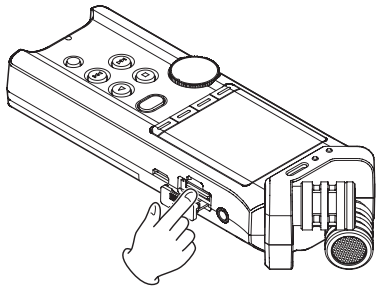
A microSD card is already installed at the time of purchase. You can immediately start recording and playing tracks without the need to remove and insert the microSD card.

1. Open the microSD card slot cover on the right side panel.
2. Insert the microSD Card into the slot (as illustrated below) until it clicks into place.



Removing the card

1. Open the microSD card slot cover.
2. Gently press and release the microSD card; the card should pop out.



CAUTION

- ***Do not remove the microSD card while the unit is accessing data for recording, playback, etc.***
- ***Do not remove the microSD card from the unit when connected via USB cable to a computer.***
- ***The DR-22WL is compatible with microSD/microSDHC/ microSDXC standards.***
- ***Please refer to the TEAC Global Site (*http://teac-global.com*) to learn more on the list of compatible SD cards.***

Setup the microSD card for use

To use a microSD card, it must be formatted first by the DR-22WL.

1. Confirm that a microSD card is inserted and turn the power on.
2. The following message appears when a new card or a card formatted by another device is inserted into the unit.

micro SD/SDHC card

micro SDXC card

3. Press the **F4** ENTER button to start formatting.

CAUTION

Formatting will delete all data from the card.

4. When formatting is complete, it will return to the home screen. You may format the card whenever required.

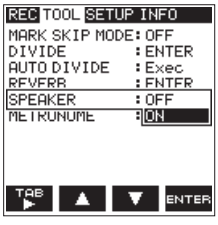
CAUTION

Before formatting, make sure the unit is connected to either a dedicated AC adapter (TASCAM PS-P515U; sold separately), a computer via USB bus power, or fully-charged batteries.

Turning the built-in speaker on/off

The factory setting for the built-in speaker output is selected as ON. To turn the built-in speaker output off, set the SPEAKER item to OFF on the TOOL menu page.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the SPEAKER item and press the **F4** ENTER button.
   This shows the SPEAKER item parameters.



4. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ENTER button to finalize the setting.

   Options: OFF, ON (default setting)

5. When setting is completed, press the ⌂/**MENU**/■ button to return to the home screen.

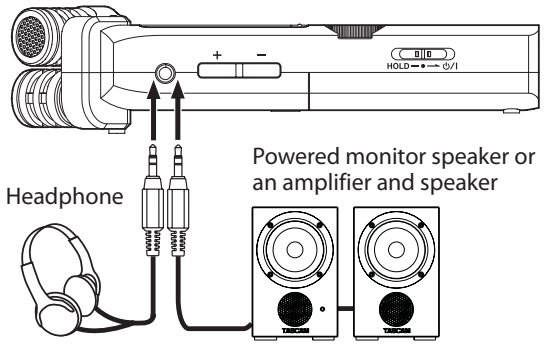
NOTE

In a recording standby or recording mode, or when a headphone or a speaker system is connected to the DR-22WL, the built-in speaker will not emit sound even when the SPEAKER ***setting is*** ON.

Connecting a monitor device

To listen with headphones, connect them to the ∩/**LINE OUT** jack on the left side of the unit.

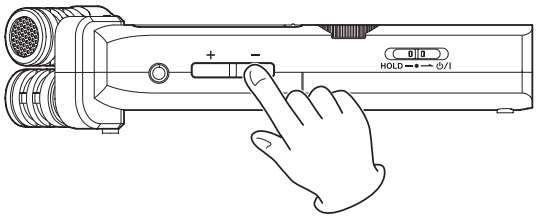
To listen with an external monitoring system (powered monitor speakers or an amplifier and speakers), connect it to the ∩/**LINE OUT** jack.



Adjusting the playback volume

Use the **OUTPUT LEVEL (+/–)** buttons on the left side of the unit to adjust the volume of output through the built-in speaker and ∩/**LINE OUT** connector.

When doing this, a volume position pop-up appears at the bottom of the display.



When increasing the volume, this pop-up message might appear: INCREASE YOUR RISK OF HEARING DAMAGE.

This warning appears when the volume is set above a level recommended by the European Union (EU) to avoid hearing damage (EU volume limit regulation).

Reconnecting headphones will reset the volume to its default value.

NOTE

You can continue to adjust the volume even after the pop-up message appears.

When you raise or lower the volume again, the pop-up message will disappear.

CAUTION

Listening at high volumes could cause hearing damage. If the surroundings are noisy, the sound of playback might seem quieter than it actually is.

Start playback of the audio and check the volume before putting on headphones, for example.

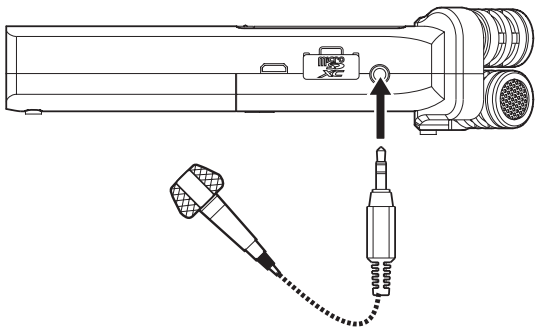
Input settings

Recording with the built-in microphone

Point the built-in microphone toward the sound source and place the unit on a stable surface with minimum vibration.

Recording with an external microphone (MIC IN)

Connect the external microphone to the **MIC/EXT IN** jack at right side panel.



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

Select the **F3** YES button for plug-in-power microphones, or **F2** NO button for other microphone types.

* Plug-in-power means that a power is delivered from the recorder to the microphone

NOTE

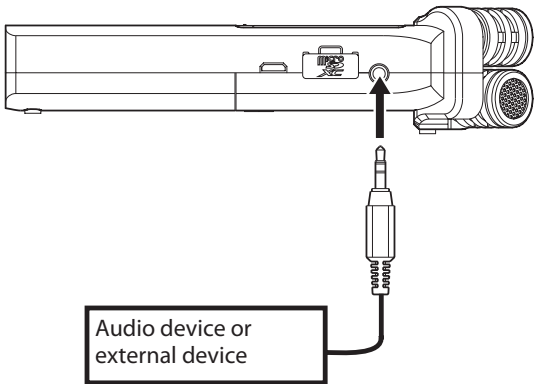
Point the external microphone toward the sound source and place the unit on a stable surface with minimum vibration.

CAUTION

- ***When not using a mic that requires plug-in power, do not enable it by selecting the* F3 YES *button. Doing so could damage connected equipment. See the mic operation manual for details.***
- ***When connecting a dynamic mic or external mic that has its own battery, do not enable plug-in power by selecting the* F3 YES *button. If plug-in power is turned ON, it could damage such microphones.***

Recording from an external device (LINE IN)

Connect a stereo mini-plug cable to the output of an external audio device (i.e. headphone jack of a portable CD player).



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

When an external device is connected, select **F2** NO button (disable plug-in power).

CAUTION

If the input sound is still distorted after adjusting the input level of the unit, reduce the playback sound of the external device.

In addition to the built-in microphone, an external microphone or external audio devices (i.e. CD player) can also be used for recordings.

Recordings can be made in MP3 (32k -320kbps, 44.1k/48kHz) and WAV/BWF (44.1k/48k/96kHz, 16/24-bit) audio formats.

Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible softwares.

In addition, the DR-22WL can mix input signals while playing an audio file and record a new file (overdubbing function).

Selecting the recording mode

■ EZ (EASY recording mode)

Select the **scene dial** to EZ.

The simple recording mode allows users to quickly start recording by pressing the **RECORD** button just once; it automatically adjusts the recording level. This feature is useful for beginners and others wanting to make a quick-recording.

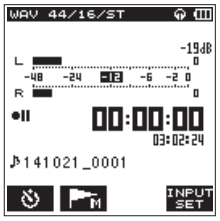
■ M (MANUAL recording mode)

Select the **scene dial** to M.

The manual mode allows to adjust the recording level manually, suited for a higher-quality recording. This feature is especially useful for those who wants to make fine-tuned recording.

Recording

1. Press the **RECORD** button to set the recording standby mode.
   The indicator around the **RECORD** button flashes and the recording screen opens.

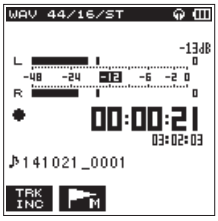


   The bottom of the recording screen displays the recording file name, the recording audio file type, and the sampling rate. Users can confirm these information before starting recording.

NOTE

When the* scene dial *is set at "EZ", recording begins when you press the* RECORD *button once.

2. Press the **RECORD** button again to start recording.



   When recording starts, the **RECORD** indicator lights, and displays the elapsed recording time and the remaining recording time.

   To pause, press the **RECORD** button while recording.

   Press the **RECORD** button again to resume recording.

   If you press the **/MENU/■** button while in pause mode, the recorded audio file up to the pause point will be created.

3. Press the **/MENU/■** button to stop recording.
   The recording stops and returns to the beginning of the file.

NOTE

- ***In recording standby mode, the speaker will not emit sound. Use a headphone to listen to the input sound and make level adjustments. In recording mode, operating the* OUTPUT LEVEL (+/–) *button to adjust sound will not affect the recording level.***
- ***To avoid recording the* RECORD *button operation sound, the DR-22WL begins recording about 0.3 seconds (fixed time) after pressing the* RECORD *button. (REC DELAY)***

CAUTION

Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.

Scene recording mode

The DR-22WL offers pre-set scenes that adjusts recording to the most-suited level. Turn the **scene dial** and to set the following scene:

■ (LOUD)

Suited for recording band performance and other scenes with large sound volume.

■ ♪ (MUSIC)

Suited for recording voices, such as concert or group sining.

■ (INSTRUMENT)

Suited for recording near musical instruments, such as an acoustic guitar and wind instruments.

■ (INTERVIEW)

Suited for recording an interview or take voice memos during meetings.

NOTE

Recording level, low-cut filter, or level control are still adjustable in scene recording mode.

However, level control cannot be adjusted in scene mode. Settings are not stored and will be removed when scene mode is changed.

Selecting a folder to store files

Recorded files will be saved in the current folder. If no setting is made, they will be saved in the MUSIC folder. To change to the folder that you want, follow the instructions in "5 – Using files and folders (browse screen)" on page 25 to designate it.
When an SD card is initialized, the MUSIC folder will be set as the current folder.

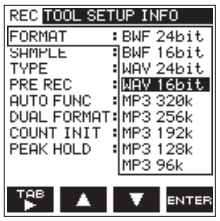
Recording format settings (FORMAT/SAMPLE/TYPE)

Select the desired audio file type before you start recording.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC menu page.

FORMAT setting

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the FORMAT item and press the **F4** ENTER button.
   Open the parameter list for the FORMAT item.



4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the file type.
   Options: BWF 16bit, BWF 24bit, WAV 16bit (default value), WAV 24bit, MP3 32k, MP3 64k, MP3 96k, MP3 128k, MP3 192k, MP3 256k, MP3 320k

NOTE

- *BWF is a format for broadcasting that has the same sound quality as the standard WAV format. It also uses the same ".wav" file extension as WAV files. In this manual, we distinguish these file types by using the terms BWF and WAV.*
- *The WAV format offers higher quality recording than MP3 files;*
- *On the other hand, the MP3 format can record for longer hours.*
- *With MP3 format, recording with higher values offers better quality.*
- *Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible devices and computer softwares.*

5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.

SAMPLE setting

6. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the SAMPLE item and press the **F4** ENTER button.
   Open the parameter list for the SAMPLE item.

7. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the sampling rate.
   Options: 44.1k (default value), 48k, 96k

NOTE

96k cannot be selected for a MP3 format file.

TIPS

Selecting the WAV 16bit and 44.1kHz will allow you to record in CD-quality.

8. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.

TYPE setting

9. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the TYPE item and press the **F4** ENTER button.
   Open the parameter list for the TYPE item.

10. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) either the stereo file or mono file.
    Options: STEREO (default value), MONO

NOTE

- *When MONO is selected, left and right channel signals will be recorded separately .*
- *Selecting the WAV format MONO will extend the recording hours by two times than the STEREO type, allowing for longer recording hours.*

11. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
12. Press the **⌂/MENU/■** button to return to the home screen.

Adjusting the input level

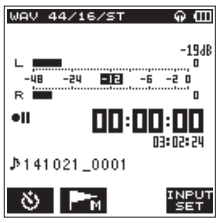
Before you start recording, ensure to adjust the input level to prevent the recorded file from distortion or canceled by noise, which can occur from excessively large or quiet input volume.

Use the limiter/peak reduction functions as necessary, in addition to making manual adjustments.

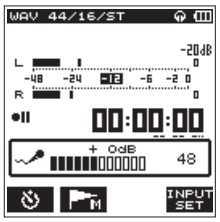
TIPS

In addition to adjusting the INPUT level, try changing the distance and angle between the microphone and the sound source. The angle and distance of the microphone can also change the sound quality.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator (around **RECORD** button) will flash and displays the recording screen.



2. Use the **INPUT LEVEL** volume to adjust the input level. The input level setting meter will pop-up at the bottom of the display.



   To obtain higher quality, it is recommended to set at the maximum recording level. As a guideline, adjust the input level until the **–12dB** indicator lights in green to obtain the optimum level. To prevent possible distortion from excessively large input volume, reduce the input level when the **PEAK** indicator lights in red.

NOTE

- ***Press the ⌂/MENU/■ button to cancel the recording standby mode.***
- ***In a recording standby or recording mode, the speaker will not emit sound even when the*** SPEAKER ***setting is*** ON.

If you need to monitor sound to adjust the input level and make recordings, connect the headphone to the Ω**/LINE OUT** jack.

To adjust monitor sound, go to home screen and use the **OUTPUT LEVEL (+/–)** button. Adjusting the monitor sound will not affect the recording quality.

Setting the peak hold function

Using the peak hold function makes monitoring the levels easier.

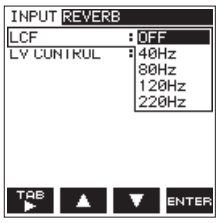
1. Press the ⌂**/MENU/**■ button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the PEAK HOLD item and press the **F4** ENTER button.
   Open the parameter list for the PEAK HOLD item.

4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the peak hold mode.
   Options:
   OFF: Peak levels are not held.
   1sec (default): Peak levels are held for one second.
   HOLD: Peak levels are held until the peak clear (PEAK CLR) button is pressed.
5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
6. Press the ⌂**/MENU/**■ button to return to the home screen.

Setting the Low Cut Filter

The Low Cut Filter function can reduce noise from air-conditioners, projector fans and unwanted wind noise.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4** INPUT SET button to display the input setting screen.
3. Press the **F1** TAB button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LCF item and press the **F4** ENTER button.
   Open the parameter list for the LCF item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the cut-off frequency.
   Options: OFF (default value), 40Hz, 80Hz, 120Hz, 220Hz
6. Press the **F4** ENTER button to finalize the selected cut-off frequency for the Low Cut Filter.
7. Press the **⌂/MENU/■** button to return to the recording screen.

NOTE

- ***When the low-cut filter is on, the LCF icon appears on the recording screen.***
- ***The low-cut filter can be set and changed when in recording standby.***

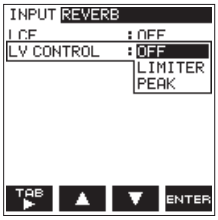
TIPS

- ***Setting it to larger value can reduce more noise in the low-frequency range, but this is not recommended when recording music.***
- ***The DR-22WL has a built-in reverb, which can be added to the input source as desired. (See "Reverb function" on page 30.)***

Using the level control function

You can set the recording level for microphone input.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4** INPUT SET button to display the input setting screen.
3. Press the **F1** TAB button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LV CONTROL item and press the **F4** ENTER button.
   Open the parameter list for the LV CONTROL item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the function.
   Options: OFF (default value), LIMITER, PEAK
6. Press the **F4** ENTER button to finalize the selected function.
7. Press the **⌂/MENU/■** button to return to the recording screen.
   The selected function is shown with an icon in the recording screen.

NOTE

The selected mode is shown with an icon in the recording screen.

- ***When the limiter function is ON, the LMT icon will appear on the recording screen.***
- ***When the peak reduction function is ON, the PEAK icon will appear on the recording screen.***

■ LIMITER

The limiter functions only at excessive input level.
This function is useful for musical instrument performance and musical recordings.

■ PEAK (PEAK REDUCTION)

This function automatically reduce the recording level to an appropriate value when input signal is too high. It is useful when you cannot preset the recording level or unable to make adjustments during recordings.

CAUTION

Distortion might occur if the input sound is too loud even when the limiter is on. In such a case, lower the input level or increase the distance between the mic and the sound source.

NOTE

When level control function is ON, you can still adjust the recording level by using the* INPUT LEVEL *volume. This function cannot be used, however, when the scene dial is set to EZ or 🎤.

Switching files during recording (track increment)

During recording, you can switch to a new recording file either manually or at a set time, and continue to make recording in the new file. (Track increment function)

Manual track increment during recording

During recording, you can easily update a file manually and continue to make recording.

1. During recording, press the **F1** TRK INC button.

NOTE

Numbers at the end of file name will increment each time when a new file is created.

CAUTION

- ***The maximum total number of folders and files you can create is 5,000.***
- ***Files with a recording time of less than two seconds cannot be created.***
- ***The number of the new file will increment if its name is the same as the existing file.***
- ***Track increment function is not available during overdubbing.***

Automatic track increment at specified time

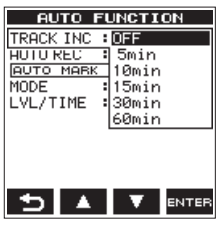
Without pausing recording, a new file can be created automatically during recording when the time set using the TRACK INC item on the AUTO FUNCTION screen is reached (track increment function).

Follow the below steps to set the maximum time for automatic increment:

1. Press the ⌂/MENU/■ button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.

   AUTO FUNCTION screen is displayed.
4. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the TRACK INC item and press the **F4** ENTER button.

   This shows the TRACK INC item parameters.



5. Use the **F2** ▲ and the **F3** ▼ buttons to select the automatic track increment time.

   Options: OFF (default value), 5min, 10min, 15min, 30min, 60min
6. Press the **F4** ENTER button to finalize the selected time.

CAUTION

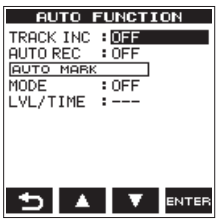
The maximum total number of folders and files you can create is 5,000.

Automatic recording (AUTO REC)

When the auto record function is on, the unit can respond to input sound levels and start and pause recording and create new files automatically.

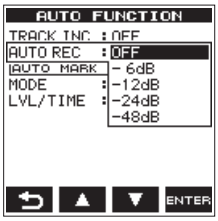
1. Press the ⌂/MENU/■ button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.

   AUTO FUNCTION screen is displayed.



4. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO REC item and press the **F4** ENTER button.

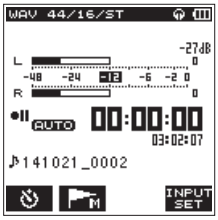
   This shows the AUTO REC item parameters.



5. Use the **F2** ▲ and **F3** ▼ buttons to select a level that activates the AUTO REC function (a level that recognize incoming signal).

   Options: OFF (default value), -6dB, -12dB, -24dB, -48dB
6. Press the **F4** ENTER button to finalize the selected level that activates the AUTO REC function.
7. Press the ⌂/MENU/■ button to return to the home screen.
8. Press the **RECORD** button to set the recording standby mode.

   The level meter will display sounds within the level that activates the AUTO REC function and the AUTO icon will appear on the right side of the recorder status display.



Recording starts automatically when the input signal exceeds the threshold set in the LEVEL item.

NOTE

- ***When in recording standby, the* RECORD *indicator flashes faster than when recording.***
- ***When recording, if the input signal level falls below the level set with the* LEVEL *item for more than 5 seconds, the unit pauses recording and creates a new file. When the input***

signal level becomes higher than the set level again, it starts recording to a new file.

- *When new files are created, incremental numbers are added to the end of each file name.*

9. When you need to stop recording, press the **⌂/MENU/■** button.

CAUTION

- *A new file cannot be created if the total number of folders and files would exceed 5000.*
- *Files shorter than 2 seconds cannot be created. If the sampling frequency is 96 kHz, files shorter than 4 seconds cannot be created.*
- *If the name of a newly created file would be the same as that of an existing file, the number will be incremented until the new file has a unique name.*

TIP

By using this in combination with the PRE REC function, you can record events without losing the beginnings of sounds.

Start recording from slightly before pressing RECORD (PRE REC)

PRE REC function will allow you to start recording up to two seconds before the desired timing, by recording an input signal (up to two seconds) during the recording standby mode.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the PRE REC item and press the **F4** ENTER button.

   Open the parameter list for the PRE REC item.

4. Use the **F2** ▲ and **F3** ▼ buttons to turn on the PRE REC function.

   Options: OFF (default value), ON
5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.
6. Press the **⌂/MENU/■** button to return to the home screen.

TIPS

By combining PRE REC with the AUTO REC function, you will not miss an opportunity to start recording.

NOTE

- *When the pre-recording function is on, the PRE icon appears on the right of the recorder operation status area on the recording screen.*
- *If you start recording within two seconds from when the record standby mode is turned ON, recording will begin from the record standby mode.*
- *PRE REC function will not work during overdubbing.*

Using the SELF TIMER for recording

Similar to a camera, the DR-22WL has a SELF TIMER function to begin recording after a set period of time.

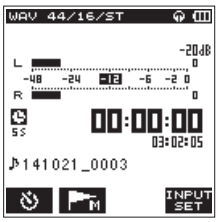
1. Press the **RECORD** button to enter recording standby.

   The indicator around the **RECORD** button flashes and the recording screen opens.
2. Press the **F1** button to turn the self-timer on, making its icon appear in the recorder operation status area.

   The time is shown below the self-timer icon. Each time you press the **F1** button, the setting changes as follows.

   Time display below the icon

   No display (OFF) → 5S (5 sec.) → 10S (10 sec.) → no display (OFF)



3. After setting the time, press the **RECORD** button. The **RECORD** indicator will flash more quickly until recording starts after the set amount of time passes.

NOTE

- *SELF-TIMER function will not work when recording is on pause.*
- *SELF-TIMER function can be used in the Automatic recording function. When recording begins, the Automatic recording function is prioritized.*

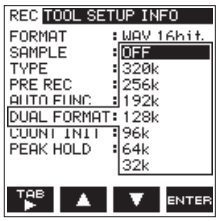
Recording in two formats (DUAL FORMAT REC)

The DR-22WL can transfer files to a smart phone via Wi-Fi. (See "Connect the DR-22WL and smart phone via Wi-Fi" on page 33.)

WAV/BWF delivers a high-quality sound but unfit to transfer via Wi-Fi due to its large file size. The DR-22WL can make simultaneous recordings in WAV/BWF format and MP3 format (smaller file size) for Wi-Fi transfer.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC menu page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in DUAL FORMAT item and press the **F4** ENTER button.

   Open the parameter list for the DUAL FORMAT item.



4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the file type.

   Options: OFF (default value), 32k, 64k, 96k, 128k, 192k, 256k, 320k
5. Press the **F4** ENTER button to finalize the setting and return to the item selection mode.

NOTE

- *When dual format recording is on, the DUAL icon appears to the right of the recorder operation status indicator on the Recording Screen.*
- *DUAL FORMAT recording is available only in WAV 16bit/BWF 16bit with sampling rate of 44.1k/48kHz formats.*

Mixing the input sound to the playback for recording (overdubbing)

The DR-22WL can mix the input sound while playing the recorded track to create a new file.

The unit offers two overdubbing modes.

■ OVERDUB

This mode mixes the input sound to the playback file.

Users can monitor with a headphone and overdub the sounds.

■ AIRDUB

This mode records group singing or musical performance with the accompaniment music playback (similar to karaoke).

Since only the playback sound is output from the output jacks in this mode, you can use it to play along with an already recorded performance output from a connected external monitoring system, for example, and record this new performance together with the sound playing back.

NOTE

- *The recording format of the playback file is used when in an overdubbing mode (FORMAT, SAMPLE, TYPE). When the playback file format is mono, the inputs will also be treated as mono (left and right). When the playback file format is stereo, the inputs will also be treated as stereo. Open the* FILE INFO *screen if you want to check the playback file format. (See "File information screen (FILE INFO)" on page 38.)*
- *Speaker will not emit sound in overdubbing mode.*
- *Pause will not work in overdubbing mode (***RECORD** *button is disabled).*
- *The overdubbed file is created in playback format regardless of the recording format setting.*
- *When in an overdubbing mode, the self-timer, pre-recording, automatic recording and dual format recording functions cannot be used.*

Select files for overdubbing with an input sound

Select the file for overdubbing with either the ⏮/⏭ button or in browse screen.

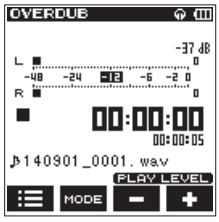
NOTE

Please refer to the page 25 for selecting files in browse screen.

Start overdubbing

1. In home screen, set the **scene dial** to **DUB**.

   The OVERDUB screen is displayed and the input sound is recorded.

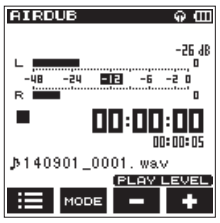


NOTE

In pause or playback mode, when you set the **scene dial** *to* **DUB**, *the DR-22WL will make a force stop and display the* OVERDUB *screen.*

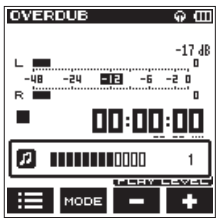
2. To switch to the overdubbing mode, press the **F2** MODE button. The overdubbing and airdubbing modes will appear in turn on the screen.

   After selecting, either the OVERDUB or the AIRDUB screen will be displayed.



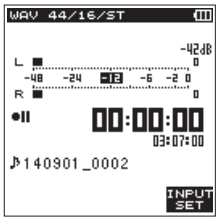
AIRDUB mode

3. Press the **PLAY** button to play the file for overdubbing, and use the **F3** − and **F4** + buttons to adjust the playback volume.



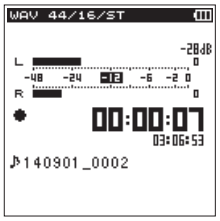
4. Press the **RECORD** button to set the recording standby mode.

   The indicator around the **RECORD** button flashes.



5. Press again the **RECORD** button.

   Overdubbing will start.



   When recording starts, the **RECORD** indicator lights, and the recording screen displays the elapsed recording time and the remaining recording time.

   When a file that can be playbacked is not selected, a pop-up message of No PB File will appear.

6. To finish recording, press the **⌂/MENU/■** button.

Create cue marks during recording

In recording or recording standby mode, the DR-22WL can create cue marks to a file to quickly locate the marked position and start playback. (See "Moving to the cue mark position" on page 23.)

You can either manually set the cue mark, or automatically set the cue mark level or time to minimize the operation noise.

NOTE

The unit will not move to the cue mark position in recording or recording standby mode.

Manual cue marking during recording

In recording or recording standby mode, press the **F2** button to create a cue mark.

A pull-up cue mark no. message will appear above the icon.

NOTE

- ***Up to 99 cue marks can be created and stored in each file.***
- ***Cue marks that are created during the recording of WAV file in BWF format by this unit are stored in the file. You can use the cue marks in softwares compatible with BWF format.***

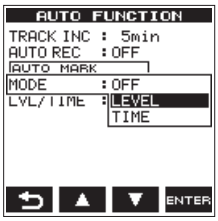
Add cue marks automatically to recording

If you turn the AUTO MARK function ON, cue marks will be added automatically.

■ Add cue marks automatically according to set levels

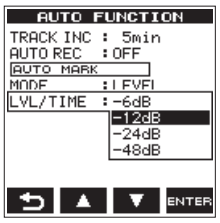
1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.

   AUTO FUNCTION screen is displayed.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** ENTER button.
5. Use the **F2** ▲ and **F3** ▼ buttons to set the automatic cue mark mode to LEVEL.



   Options: OFF (default value), LEVEL, TIME
6. Press the **F4** ENTER button to finalize the set mode.

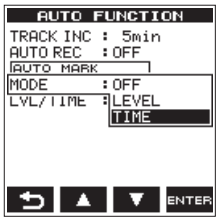
7. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the LVL/TIME of the AUTO MARK item and press the **F4** ENTER button.
   This shows the LVL/TIME item parameters.



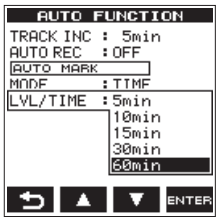
8. Use the **F2** ▲ and **F3** ▼ buttons to set a level to automatically add cue marks.
   Options: −6dB, −12dB (default value), −24dB, −48dB
9. Press the **F4** ENTER button to finalize the set mode.
10. Press the **HOME/MENU/■** button to return to the home screen.

■ Add cue marks automatically according to set time

1. Press the **HOME/MENU/■** button to display the menu screen.
2. Press the **F1** TAB button to open the REC menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ENTER button.
   AUTO FUNCTION screen is displayed.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** ENTER button.
5. Use the **F2** ▲ and **F3** ▼ buttons to set the automatic cue mark mode to TIME.



   Options: OFF (default value), LEVEL, TIME
6. Press the **F4** ENTER button to finalize the set mode.
7. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the LVL/TIME in the AUTO MARK item, and press the **F4** ENTER button.
   This shows the LVL/TIME item parameters.



8. Use the **F2** ▲ and **F3** ▼ buttons to set a time to automatically add cue marks.
   Options: 5min, 10min, 15min, 30min, 60min (default value)
9. Press the **F4** ENTER button to finalize the set time.
10. Press the **HOME/MENU/■** button to return to the home screen.

Moving to the cue mark position

In stop or playback mode, you can move to cue marks created in the selected file.

You can use this function to go to the beginning of a song, similar to an index.

1. Press the **HOME/MENU/■** button to display the menu screen.
2. Use the **F1** TAB button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in MARK SKIP MODE item and press the **F4** ENTER button.
   This shows the MARK SKIP MODE item parameters.

4. Use the **F2** ▲ and **F3** ▼ buttons to set the mode to ON, and press the **F4** ENTER button.
   Options: OFF (default value), ON
5. When setting is completed, press the **HOME/MENU/■** button to return to the home screen.
6. In stop or playback mode, press together the **F2** button and either the ⏮ button or the ⏭ button.

NOTE

You cannot move to a cue mark of a different file.

Recording duration

The table below shows the maximum recording time per file format for microSD/microSDHC/microSDXC cards:

File format (recording setting)			microSD/microSDHC/microSDXC cards capacity			
			1GB	4GB	8GB	32GB
WAV/BWF 16 bit (STEREO)		44.1kHz	1 hour 34 minutes	6 hour 17 minutes	12 hour 35 minutes	50 hour 23 minutes
		48kHz	1 hour 26 minutes	5 hour 47 minutes	11 hour 34 minutes	46 hour 17 minutes
		96kHz	43 minutes	2 hour 53 minutes	5 hour 47 minutes	23 hour 08 minutes
WAV/BWF 24 bit (STEREO)		44.1kHz	1 hour 02 minutes	4 hour 11 minutes	8 hour 23 minutes	33 hour 35 minutes
		48kHz	57 minutes	3 hour 51 minutes	7 hour 42 minutes	30 hour 51 minutes
		96kHz	28 minutes	1 hour 55 minutes	3 hour 51 minutes	15 hour 25 minutes
MP3 (STEREO/MONO)	32 kbps	44.1kHz/48kHz	69 hour 26 minutes	277 hour	555 hour	2222 hour
	64 kbps	44.1kHz/48kHz	34 hour 43 minutes	138 hour	277 hour	1111 hour
	96 kbps	44.1kHz/48kHz	23 hour 08 minutes	92 hour 35 minutes	185 hour	740 hour
	128 kbps	44.1kHz/48kHz	17 hour 21 minutes	69 hour 26 minutes	138 hour	555 hour
	192 kbps	44.1kHz/48kHz	11 hour 34 minutes	46 hour 17 minutes	92 hour 35 minutes	370 hour
	256 kbps	44.1kHz/48kHz	8 hour 40 minutes	34 hour 43 minutes	69 hour 26 minutes	277 hour
	320 kbps	44.1kHz/48kHz	6 hour 56 minutes	27 hour 46 minutes	55 hour 33 minutes	222 hour

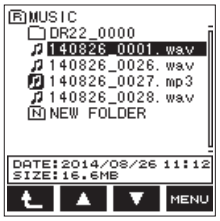
- The recording times shown above are theoretical values. Times may differ depending on the microSD/microSDHC/microSDXC card in use.
- The recording times shown above are the total possible recording times for the microSD/microSDHC/microSDXC cards, and not the continuous recording times.
- Recording automatically stops if recording time exceeds 24 hours.
- Mono recording in WAV format will double the maximum recording times specified above.

In browse screen, you can browse the MUSIC folder (stores audio files), delete files and folders, or create a new folder in the microSD card.

TIPS

You can also connect the DR-22WL with a computer via USB, or directly insert the microSD card to the computer to change configuration of folders or delete files in the MUSIC folder. In addition, you can change file names from the computer.

To display the browse screen, press the **F1** button in stop/pause mode.



Prior to displaying the browse screen, the unit will display the files and folders selected in home screen.

Navigating in the browse screen

Folders and music files are displayed in a layered-tree type in the browse screen.

The DR-22WL can create up to two layers in each folder.

- Use the **F2** and **F3** buttons to select (highlight) the file and/or folder.
- While selecting the file and/or folder, press the **F1** button to move up to the next layer.
- While selecting the file and/or folder, press the **F4** button to display the pop-up menu.
- While selecting a file, press the **PLAY** button to return to the home screen and playback the selected file.

  The folder that contains the above file becomes the current folder (currently selected folder), and the recorded files will be saved in this folder.

Icon display on the browse screen

Below are descriptions for each of the icons displayed in the browse screen.

■ MUSIC folder ( )

When the browse screen displays the ROOT layer, the MUSIC folder will appear at the most top.

■ Audio file ( )

This is an audio file.

■ Currently selected audio file ( )

This is the currently selected audio file.

■ Folder ( )

This folder contains a sub-folder.

■ Folder ( )

This folder contains no sub-folder.

■ Folder in display ( )

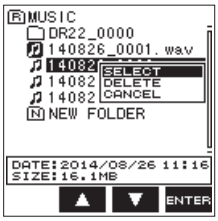
Contents of this folder is currently in display.

■ New folder ( )

A new folder will be created.

File operations

Select (highlight) the desired audio file in the browse screen, and press the **F4** button. The below pop-up menu will appear.



Use the **F2** and **F3** buttons to select (highlight) an item, and press the **F4** button. The following action will start according to the selected item.

■ SELECT

Returns to the home screen and playback the selected file.

■ DELETE

A pop-up message appears to confirm that the deletion of the selected file.

To delete the file, press the **F3** button. To cancel delete, press the **F2** button.

NOTE

When the home screen is open, press the F4 button to open a pop-up message confirming deletion of the selected file.

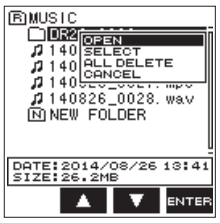
Press the F3 button to delete the file, or press the F2 button to cancel the deletion.

■ **CANCEL**

Action for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Folder operations

Select (highlight) the desired file in the browse screen, and press the **F4** button. The following pop-up message menu will appear.



Use the **F2** and **F3** buttons to select (highlight) an item, and press the **F4** button. The following action will start according to the selected item.

■ **OPEN**

This will open the selected folder.

■ **SELECT**

Returns to the Home Screen and selects the first file in the folder. In addition, the recorded files are saved in the selected folder.

■ **ALL DELETE**

A pop-up message appears to confirm deletion of all files in the selected folder.

To delete the file, press the **F3** button. To cancel delete, press the **F2** button.

NOTE

Read-only files and unrecognized files by the DR-22WL will not be deleted.

■ **CANCEL**

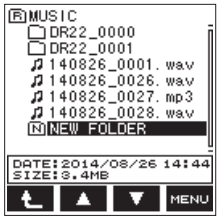
The operation for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Moving up a folder level

Press the **F1** button to move up a folder level.

Creating a new folder

A NEW FOLDER is available at the bottom of each folder.



1. Use the **F2** and **F3** buttons to select (highlight) the NEW FOLDER and press the **F4** button.
   A quick menu will pop-up on screen.
   It shows a message to confirm creation of a new folder.

2. To create a new folder, press the **F3** button. To cancel creation of a new folder, press the **F2** button.

NOTE

The DR-22WL is not designed to handle folders with three or more layers, and therefore the NEW FOLDER does not exist in a folder with two layers.

A newly created folder becomes the current folder (currently selected folder), and recorded files are saved in this folder.

Playback

To start playback in home screen mode, press the **PLAY** button in stop mode.

NOTE

You can also select and playback a file in the browse screen.

Pausing/stopping playback

To stop playback, press the **/MENU/ ■** button. (PAUSE)
When playback was stopped in the middle of a file, the status icon ❚❚ will appear on screen.

If you press the ⏮ or ⏭ button to move to the beginning of a file and stop playback, ■ is shown.
To resume playback from the stop position, press the **PLAY** button.

Rewinding and fast-forwarding (search)

During playback when the home screen is open, press and hold the ⏮/⏭ button to search backward/forward.

NOTE

Search speed will increase if you keep holding the ⏮/⏭ button.

Selecting a playback file (skip)

In home screen, press either the ⏮ button or the ⏭ button to select the file you want to play.
When you are in the middle of a file and want to return to the beginning, press the ⏮ button. To skip to the previous file, press the ⏮ button.
To skip to the next file, press the ⏭ button at the beginning of in the middle of a file.

Special playback (practice mode)

Practice mode is useful for practicing musical instruments.
To use the practice mode while in stop/pause/playback mode, set the **scene dial** to "⚙" in home screen. The PRACTICE screen will appear with a practice mode.

Loop playback, playback speed change, and key change can be made in this mode.

Press the **F1** ☰ button to select the file from the browse screen you want to playback.
To exit practice mode, change the **scene dial** to a different setting.

NOTE

- ***In practice mode, you can monitor and adjust the input sound. (See "Adjusting the input level" on page 17.)***
- ***File skip will not work in practice mode.***

Loop playback

Loop playback allows you to repeat playback of the entire or part of a file.

■ Set the IN and OUT points

1. In PRACTICE screen, press the **F3** SEL button to select (highlight) the LOOP item, and press the **F4** ENTER button to set loop playback.

2. Move to the loop playback IN point, and press the **F2** IN button.
   This position is set as IN (start) point.
   The ⌜ icon will light at the top of the playback position display bar.
3. Press the **F3** OUT button at the loop playback OUT point.
   This position is set as OUT (end) point, and the unit will playback the section between the loop playback IN and OUT points.
   The ⌟ icon will light at the top of the playback position display bar.

NOTE

- ***The I/O Too Short pop-up message will appear when the IN-OUT points are too close. Please reset by spacing at least one second in between.***
- ***MP3 files with VBR format may affect the accuracy of the IN and OUT points settings.***

■ Delete the IN and OUT points

In stop mode, press the I◄◄ button or the ►►I button to skip to the IN (start) and OUT (end) points.

When stopped, skip to an IN (start) point and press the **F2** IN button to clear that point.

When stopped, skip to an OUT (end) point and press the **F3** OUT button to clear that point.

■ Loop playback

Press the **F1** ON button to enable the loop playback function.
You can disable the playback function by pressing the **F1** OFF button, but the setting will be saved.

Loop playback will start as follows, depending on the IN (start) and OUT (end) points:

Set only the IN (start) point	Loop playback from IN point → end of the file
Set only the OUT (end) point	Loop playback from the beginning of the file → OUT point
Set both IN/OUT points	Loop playback between IN - OUT points
No settings of IN/OUT points	Loop playback from the beginning until the end of the file

NOTE

Press the* F1 OFF *button to turn on/off the loop playback.

Changing the playback speed (VSA)

The DR-22WL has a built-in VSA (Variable Speed Audition) function to change the playback speed without changing its pitch.

CAUTION

The VSA function will not work when you select a file recorded with a sampling rate of 96kHz.

1. In PRACTICE screen, press the **F3** SEL button to select (highlight) the SPEED item, and press the **F4** ENTER button to enable the playback speed change option.

2. Use the **F2** ▲ and the **F3** ▼ buttons to change the playback speed value.
   Options: ×0.5 - ×2.0 (per ×0.1) (default: x1.0)
3. Press the **F4** ⮌ button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

NOTE

Press the* F1 OFF *button (or the* F1 ON *button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Changing keys

The DR-22WL can change the playback key (pitch) with its key control function.
The key control function offers KEY and FINE TUNE modes. The KEY mode can adjust in ± 6 half-tone, and the FINE TUNE mode can adjust in ±50 cents.

1. In the PRACTICE screen, press the **F3** SEL button to select (highlight) either the KEY or FINE items, then press the **F4** ENTER button to enable the key change setting.

Pop-up display of the KEY item

Pop-up display of the FINE item

2. Use the **F2** ▲ and the **F3** ▼ buttons to change the key value.
   Options:
   When KEY is selected : ♭6 - ♯6 (per half-tone) (default: 0)
   When FINE is selected : –50 - +50 (per cent) (default: 0)
3. Press the **F4** ⮌ button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

NOTE

Press the* F1 OFF *button (or the* F1 ON *button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Dividing a file

A recorded file can be divided into two manually or at a mark position.

CAUTION

- ***MP3 files cannot be divided.***
- ***If the microSD card has insufficient open space, division might not be possible.***
- ***Division is not possible if the file name would become more than 200 characters long.***
- ***Division is not possible if a file that already exists has the same name as the name that would be given to a new file created by division.***

Dividing the selected file (DIVIDE)

A recorded file can be divided into two at a desired position.

1. Use the I◄◄ button, the ►►I button, or the browse screen to select the file you want to divide.
2. Press the **⌂/MENU/■** button to display the menu screen.
3. Use the **F1** TAB button to display the TOOL page.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in DIVIDE item and press the **F4** ENTER button.
   The DIVIDE screen is displayed.

5. Use the **F2** ◄ and **F3** ► buttons to finalize the dividing section, and press the **F4** ENTER button to finalize the setting.
   The following pop-up window appears.

6. Press the **F3** YES button to divide the file and return to the home screen.
   If you press the **F2** NO button**,** the file will not divide and return to the DIVIDE screen.
7. When finished, press the **⌂/MENU/■** button.

NOTE

- ***When the DIVIDE screen is open, you can press the* PLAY *button and set the divide position while playing the track.***
- ***When the DIVIDE screen is open, press the* PLAY *button to start/pause playback and press the I◄◄/►►I button to move to the beginning/end of the track. Use the* F2 ◄ *and* F3 ► *buttons to adjust the division point in fine increments. Press and hold these buttons to change the position continuously.***
- ***When a file is divided, names will be created ending with either a or b.***
  (Example)
  File name before division
  140826_0001.wav
  File name after division
  140826_0001a.wav (before the dividing point)
  140826_0001b.wav (after the dividing point)

CAUTION

- ***MP3 files cannot be divided.***
- ***Division may not be available when microSD card does not have sufficient capacity.***
- ***File name with more than two hundred characters cannot be divided.***
- ***File cannot be divided when there is a file name identical to that of the post-divided file.***

TIPS

You can add cue marks during recording at the position you want to divide. (See "Create cue marks during recording" on page 22.)

Dividing the selected file automatically (AUTO DIVIDE)

Use the AUTO DIVIDE function to automatically divide an already recorded file at positions where marks have been added.

NOTE

See "Create cue marks during recording" on page 22 for details about how to add marks.

1. Select a file to be divided using the I◄◄ and ►►I buttons or the BROWSE screen.
2. Press the **⌂/MENU/■** button to open the menu screen.
3. Press the F1 TAB button to open the TOOL menu page.
4. Use the F2 ▲ or F3 ▼ button to select the AUTO DIVIDE item parameter and press the F4 ENTER button.
   The following pop-up message will appear.

5. Press the **F3** YES button to divide the file.
   To return to the TOOL page without dividing the file, press the **F2** NO button.
6. When finished, press the **⌂/MENU/■** button.

CAUTION

If the length of time between any two marks is less than two seconds, automatic division is not possible.

NOTE

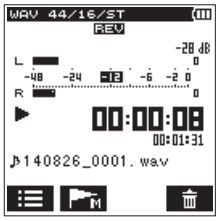
- ***After dividing a file, new files with "_1", "_2" and "_3" added to the end of the original file name are created in order.***
  Example: 2 marks
  File name before division
  140826_0001.wav
  File name after division
  140826_0001_1.wav
  140826_0001_2.wav
  140826_0001_3.wav
- ***When used together with the automatic marking function, long recordings can automatically be divided into files with***

individual songs. (See "Add cue marks automatically to recording" on page 22.)

Reverb function

This unit has a built-in reverb that can be applied to the input sound or the output sound.

When reverb function is ON, the REV icon will appear at the top of the home screen.



Setting the reverb function

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in REVERB item and press the **F4** ENTER button.
   The REVERB screen is displayed.

NOTE

You can set and adjust reverb in record standby mode as well, from the REVERB page of the input setting screen.

4. The following settings are made in the REVERB screen.
   REVERB:
   Set the reverb on/off status (default value: OFF).
   TYPE:
   See the reverb type from the pre-set items. See 30 Reverb pre-set list for more details on reverb pre-set items.
   LEVEL:
   Adjust the reverb output level. Settings can be selected from 0 - 100. (default value: 70)
   MODE:
   Set the reverb mode.

MODE (options)	Icon	Detail
MONITOR (default value)	REV	You can add reverb to the output sound. This does not affect the sound recorded.
REC	REV	You can add reverb to the input sound. You can record sound with reverb added.

5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ENTER button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.
7. Press the **F4** ENTER button to finalize the setting and return to the item setting item status.
8. Repeat the 4.-7. steps as necessary.
9. When setting is completed, press the **⌂/MENU/■** button.

CAUTION

Reverb function will not work (but able to make settings) when the setting or the selected playback file's sampling rate is 96kHz.

NOTE

The reverb function on/off setting is available also in recording standby mode; press F4 INPUT SET button and make setting in the REVERB page of the input setting screen.

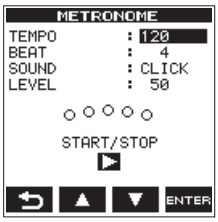
Reverb pre-set list

Pre-set name	Effect
HALL 1 (default value)	A bright effect, like a spacious hall
HALL 2	A warm effect, like a spacious hall
ROOM	Small room effect
STUDIO	Studio effect
PLATE 1	Bright plate reverb
PLATE 2	Warm plate reverb

Metronome function (compatible with V1.10)

The DR-22WL has a built-in metronome, useful for practicing musical instruments.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the METRONOME item and press the **F4** ENTER button.
   The METRONOME screen is displayed.



4. The following settings are available in the METRONOME screen:
   TEMPO
   Set speed between 20 - 250 (BPM).
   (default value: 120)
   BEAT
   Set beat between 0 - 9. (default value: 4)
   This will accent the first beat.
   SOUND
   You can set the metronome sound to CLICK, STICK or BELL. (Default: CLICK)
   LEVEL:
   Set the metronome volume 0 - 100.
   (default value: 50)

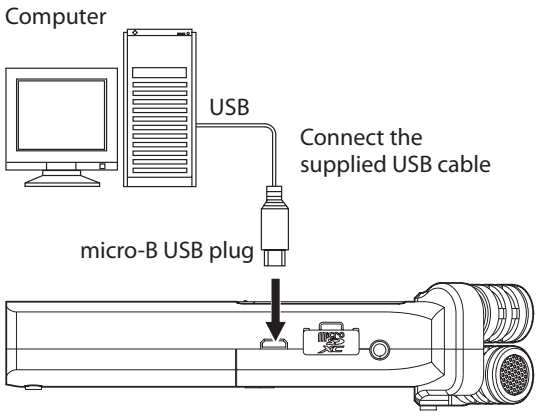
5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ENTER button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.
7. Press the **F4** ENTER button to finalize the setting and return to the item setting item status.
8. Repeat the 5.-7. steps as necessary.
9. Press the **PLAY** button to start the metronome. When the metronome is operating, press the **PLAY** button to stop it.
10. Press the **F1** ↩ button to return to the TOOL page.

8 – Connecting with a computer

By connecting this unit with a computer using the USB cable, you can transfer audio files on the microSD card in the unit to a computer, as well as transfer audio files on the computer to the microSD card in the unit.

This unit can handle audio files of the following formats.

WAV : 44.1k/48k/96kHz, 16/24 bit
BWF : 44.1k/48k/96kHz, 16/24 bit
MP3 : 44.1k/48kHz, 32k/64k/96k/128k/192k/256k/320kbps



NOTE

- ***Instead of connecting the DR-22WL a computer via USB, you can remove the microSD card from the unit and insert directly (or with a card adapter) to the computer and make the same operation.***
- ***Both WAV and BWF files will have the ".wav" extension.***

CAUTION

- ***The DR-22WL will not operate when STORAGE is selected (highlighted) under USB connection.***
- ***Please make a direct connection with the computer without using a hub.***

When you make a USB connection before or after turning ON the unit's main power, the USB SELECT screen will appear and prompt you to select the USB bus power or make a USB connection with the computer.

Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the STORAGE; if you press the **F4** ENTER button, the unit will connect with the computer and displays the USB connected message.

Make sure that the microSD card is inserted properly to the DR-22WL.

NOTE

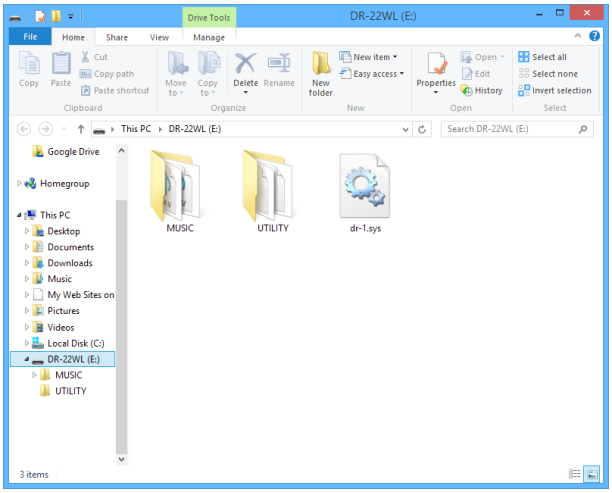
When you make a USB connection while the batteries are inserted to the unit, the USB port will supply power (USB bus power prioritized).

If USB connection is made when the microSD card is not inserted correctly, a pop-up message of Can't Save Data will appear.

When you turn on the "computer", the screen will display the DR-22WL as a external drive with a volume label of "DR-22WL".

Transferring files to a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Open the "MUSIC" folder and drag & drop the file you want to transfer to the desired location.



Transferring files from a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Drag & drop the audio file from the computer to the "MUSIC" folder.

TIPS

- ***You can manage the "MUSIC" folder on computer screen.***
- ***You can create a sub-folder in the "MUSIC" folder. The DR-22WL can create up to two layers. The DR-22WL cannot recognize sub-folders and files located at the third layer level or below.***
- ***If you name the sub-folders and music tracks, these names will appear on the home screen or browse screen of this unit.***

Disconnecting from a computer

When disconnecting the DR-22WL from the computer, make sure to follow the correct steps and remove the USB cable.

The power turns off when the shut-down process is completed.

Refer to the computer's operation manual for instructions on unmounting from the computer.

Connect the DR-22WL and smart phone via Wi-Fi

CAUTION

The DR-22WL designs are in conformance with the laws and regulations of the countries and regions in which this unit is sold, and labeled as required.

The DR-22WL is approved in the following countries and regions:

United States, Canada, Europe (EU member states), Australia, New Zealand, Japan

The use of wireless functions in a country other than those listed above could result in a violation of that country's wireless transmission laws.

Our company will bear no responsibility for use in countries other than those listed above.

TIPS

The battery will drain faster during Wi-Fi use.

Running out of batteries during data transfer will terminate the process and may result in transfer failure.

We recommend to use either the AC adapter or USB bus power during Wi-Fi use.

The DR-22WL is designed for remote control with the use of an exclusive application (TASCAM DR CONTROL), free of charge. Transport control such as playback and stop, as well as input level adjustment and file transfer can be made via Wi-Fi.

How to download and install the exclusive application (TASCAM DR CONTROL)

1. Connect your smart phone to the Internet.
2. Search the exclusive application (TASCAM DR CONTROL) and download from either Google Play (Android smart phone) or App Store (iOS device) for installation.

Connecting the DR-22WL to a smart phone via Wi-Fi for the first time

The DR-22WL can make a Wi-Fi/peer-to-peer connection with a smart phone via Wi-Fi, without the use of a router or other external devices. No Wi-Fi network environment is required. It can make direct connection with your smart phone.

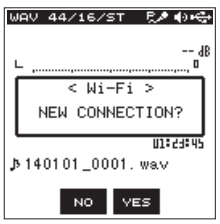
NOTE

When this unit and a smartphone are connected by Wi-Fi, connection with other Wi-Fi networks will not be possible.

■ When using an iOS terminal

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a new smartphone, so press the **F3** YES button.

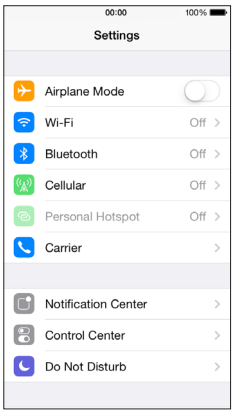


3. "SSID" and "PASSWORD" appear on the display.

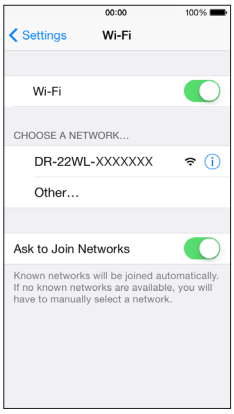
NOTE

The "SSID" is the name of the wireless LAN access point (wireless LAN device).

4. In your iOS device, select "setting" → "Wi-Fi".



5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.

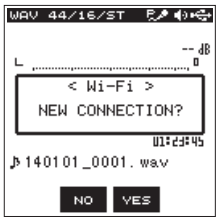


6. A password input screen appears on the iOS device. Enter the password shown on the display of the unit.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

■ When using an Android device

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a new smartphone, so press the **F3** YES button.

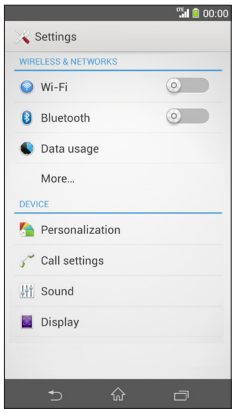


3. "SSID" and "PASSWORD" appear on the display.

NOTE

The "SSID" is the name of the wireless LAN access point (wireless LAN device).

4. In your Android device, select the "setting" ➝ "Wi-Fi".



5. When you turn on Wi-Fi on an Android device, a Wi-Fi device SSID list and WPS mark will appear. Select the SSID shown on the display of the unit.

6. A password input screen appears on the Android device. Enter the password shown on the display of the unit.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

NOTE

The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

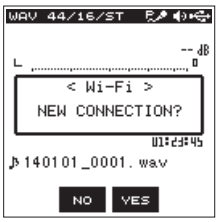
Connecting the DR-22WL to a smart phone via Wi-Fi (from second time onward)

When you establish a connection between the DR-22WL and your smart phone for the first time and need to connect them again, you only need to select the SSID from the second time onward.

■ When using an iOS terminal

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a previously connected smartphone, so press the **F2** NO button.

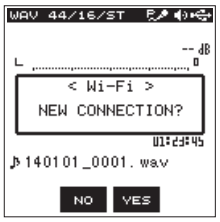


3. The pop-up message on the display disappears and the unit waits for a connection with a smartphone.
4. In your iOS device, select "settings" ➝ "Wi-Fi".
5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.
6. A Wi-Fi connection between the unit and your smartphone is established and the **Wi-Fi** indicator is lit.

■ When using an Android device

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a previously connected smartphone, so press the **F2** NO button.



3. The pop-up message on the display disappears and the waits for a connection with a smartphone.
4. In your Android device, select the "settings" ➝ "Wi-Fi".
5. When you turn on Wi-Fi on your Android device, a Wi-Fi device SSID list appears. Select the SSID shown on the display of the unit.
6. A Wi-Fi connection between the unit and your smartphone is established and the **Wi-Fi** indicator is lit.

NOTE

The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

Using a smart phone to remote control the DR-22WL

The exclusive application (TASCAM DR CONTROL) uses the same interface of the DR-22WL, so the remote control operation is basically the same as operating this unit. Familiarizing yourself with the DR-22W operation method will assist you in using the "TASCAM DR CONTROL" application.

1. When Wi-Fi connection is established between the DR-22WL and your smart phone, tap the installed "TASCAM DR CONTROL" application.
2. When the "TASCAM DR CONTROL" application is launched, the following screen will appear on your smart phone to remotely control the DR-22WL.

Detailed descriptions, on the "TASCAM DR CONTROL" application, including the "TASCAM DR CONTROL reference manual", can be downloaded from the TEAC Global Site (**http://teac-global.com**).

File transfer from the DR-22WL to a smart phone

1. Tap the "Browse" button on the "TASCAM DR CONTROL" screen.
2. The "Browse" screen displays a list of files from the DR-22WL; select the file you want to transfer.
3. Detail screen on the selected file will appear; tap the "Copy" button.
4. A confirmation screen for file copy will appear; press the "YES" button to start file transfer from the DR-22WL to your smart phone.

Connecting this unit to a computer by Wi-Fi

Transferring files from this unit to a computer is possible using the free TASCAM DR FILE TRANSFER software designed for this purpose. You can transfer recorded files by Wi-Fi.

Downloading and installing the TASCAM DR FILE TRANSFER software

1. Connect the computer to the Internet.
2. Download TASCAM DR FILE TRANSFER from the TEAC Global Site (http://teac-global.com/) and install it.

Connecting this unit to a computer by Wi-Fi for the first time

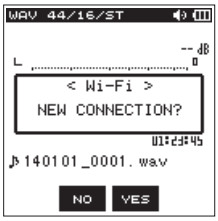
Since a direct Wi-Fi connection is used between the unit and the computer, no router or other external device is necessary. A Wi-Fi network is not necessary either. The connection can be made with just this unit and the computer.

NOTE

When this unit and a computer are connected by Wi-Fi, the computer cannot be connected with other Wi-Fi networks.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. Since it is a new connection, press the **F3** YES button.

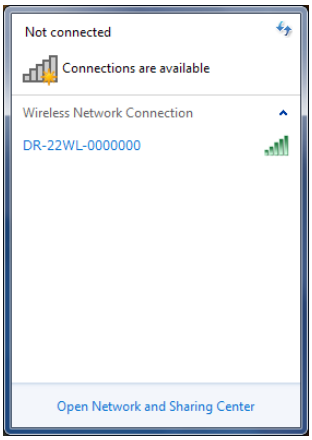


3. "SSID" and "PASSWORD" appear on the display.

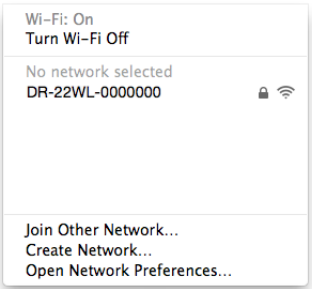
NOTE

The "SSID" is the name of the wireless LAN access point (wireless LAN device).

4. Click the wireless connection icon in the computer taskbar/menu bar (Windows/Mac) to open a list of wireless networks.

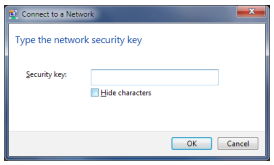


Windows



Mac

5. Select the SSID shown on the unit's display.
6. When the security key input screen appears on the computer, input the password shown on the display of the unit.



Windows

When the password input screen appears on the computer, input the password shown on the display of the unit.

Mac

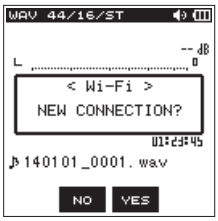
7. The **Wi-Fi** indicator on the unit lights when the Wi-Fi connection is established between the unit and the computer.

Connecting this unit to a computer by Wi-Fi after the first time

After the unit and the computer have been connected once, they can be connected again just by selecting the SS ID.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

   A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. Since the unit has been connected to the computer previously, press the **F2** NO button.



3. When the pop-up message disappears from the display, the unit is waiting to connect to the computer.
4. Click the wireless connection icon in the computer taskbar/menu bar (Windows/Mac) to open a list of wireless networks.
5. Select the SSID shown on the unit's display.
6. The Wi-Fi indicator on the unit lights when the Wi-Fi connection is established between the unit and a computer.

Transferring files from the unit to a computer

For details about the software download the TASCAM DR FILE TRANSFER Owner's Manual from the TEAC Global Site (http://teac-global.com/).

Changing password

The password for Wi-Fi connection can be changed for security purpose.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to display the SETUP page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the Wi-Fi item parameters.

4. Press the **F4** ENTER button to display the Wi-Fi screen.

5. Each time when you press the **F4** PW button**,** the password will change.
6. Press the **F1** button to set the password. The screen will return to the SETUP page.

View information (INFORMATION)

The INFO page of the menu screen lists various information on the DR-22WL.
Follow the below steps to display the information:

1. Press the ⌂/**MENU**/■ button to display the menu screen.
2. Use the **F1** TAB button to display the INFO page.

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item parameter of the information, and press the **F4** ENTER button.
   Below information will be displayed:

   FILE INFO **screen:**
   Displays information about the currently loaded audio file.

   CARD INFO **screen:**
   Displays information on the inserted microSD card.

   VERSION **screen:**
   Displays system settings and firmware version of the unit.
4. To return to the INFO page of the menu screen, press the **F4** ⮌ button.

File information screen (FILE INFO)

The FILE INFO screen displays the currently loaded audio file.

■ **FORMAT**

Displays the file type.
CBR/VBR will be displayed for MP3 files. (CBR: Constant Bit Rate, VBR: Variable Bit Rate)

■ **SAMPLE**

Displays the file's sampling rate.

■ **BIT WIDTH/BIT RATE**

Displays the file's bit width.
Bit rate (kbps) will be displayed for MP3 files.

■ **TYPE**

Displays the file type (stereo/mono).

■ **SIZE**

Displays the file size.

■ **DATE**

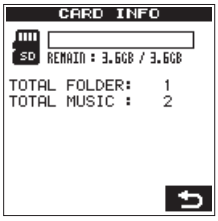
Displays the date of file creation .

■ **TIME**

Displays the recorded time.

Card information screen (CARD INFO)

The CARD INFO screen displays information on the inserted microSD card.



■ **REMAIN**

Displays available free space of the microSD card.

■ **TOTAL FOLDER**

Displays the total number of folders in the music folder.

■ **TOTAL MUSIC**

Displays the number of playable files in the music folder.

System information screen (VERSION)

The VERSION screen displays system settings and firmware version of the DR-22WL.

■ **system**

Displays the system's firmware version.

■ **Wi-Fi**

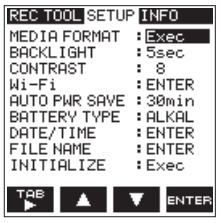
Displays the Wi-Fi firmware version.

System Settings (SETUP)

The SETUP page allows you to make various settings for optimum use of the DR-22WL according to usage environment and conditions, as well as resetting the unit and formatting the microSD card.

Follow the below steps to display the SETUP page.

1. Press the **⌂/MENU/ ■** button to display the menu screen.
2. Use the **F1** TAB button to display the SETUP page.



Use the **F2** ▲ button, the **F3** ▼ button, and the **F4** ENTER button to make settings for different items.

The following settings of different items can be made in the SETUP page.

Auto power save function setting

Use the AUTO PWR SAVE item to set the time for automatic turn-off, counting from the last operation.

Options: OFF (no automatic turn-off), 3min, 5min, 10min, 30min (default value)

Backlight setting

Use the BACKLIGHT item to set the time for automatic turn-off of back-light in battery operation, counting from the last operation.

Options: OFF (light-off), 5sec (default value), 10sec, 15sec, 30sec

Adjusting the display contrast

Use the CONTRAST item to adjust the display contrast.

Options: 1 - 20 (default value: 2)

Battery type settings

Use the BATTERY TYPE item to set the battery type. This setting is used to display the remaining battery power and to calculate the minimum capacity for normal operation.

Options: ALKAL (alkaline batteries, default value), Ni-MH (nickel-metal hydride batteries)

Restoring the DR-22WL to factory settings

Use the INITIALIZE item to execute initialization; this will restore the unit to factory settings.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the INITIALIZE item and press the **F4** ENTER button.
   The following confirmation message will pop-up:

2. Press the **F3** YES button to execute initialization.
   Press the **F2** NO button to cancel the process.

Formatting the microSD card

Use the MEDIA FORMAT item to format the microSD card. Formatting will delete all music files in the microSD card, and the "MUSIC" folder, the "UTILITY" folder, and the "dr-1.sys" will be created automatically.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the MEDIA FORMAT item, and press the **F4** ENTER button.
   The following confirmation message will pop-up:

2. Press the **F3** YES button to format the microSD card.
   Press the **F2** NO button to cancel the process.

CAUTION

When formatting the microSD card, make sure that the DR-22WL is connected to either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power from a computer, or operating on fully-charged batteries.

Formatting may not complete successfully if the battery runs out.

Setting the file name type

The DR-22WL can set name types of the recording files.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the FILE NAME item and press the **F4** ENTER button.
   The FILE NAME screen will be displayed.

2. Use the ⏮ button and the ⏭ button, the **F2** ▲ button and the **F3** ▼ button, and the **F4** ENTER button to make settings for different items.
   The following settings for each item can be made in this screen.
3. To return to the SYSTEM page of the menu screen, press the **F4** ⮌ button.

■ File name type

In the TYPE item, select either the DATE or WORD options.

Options:

DATE (default value): dates will be included in file name
Example: 140101_0000.wav

WORD : the six characters set in WORD will be included in file name
Example: TASCAM_0000.wav

NOTE

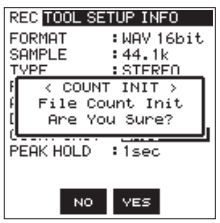
The internal clock of the unit is used to set dates. (See "Setting the date/time" on page 11.)

■ Setting characters (WORD)

In the WORD item, use either the ⏮ button or the ⏭ button to move the cursor, and use the **F2** ▲ and the **F3** ▼ buttons to set characters.
In addition to alphabets and numbers, the following characters can be used: ! # $ % & ' ( ) + , - . ; = @ ^ _ ' { } ~

■ Initializing the numbers (COUNT)

In REC page of the menu screen, select the parameter (highlight) the COUNT INIT item, and press the **F4** ENTER button. The following confirmation message will appear:



Press the **F3** YES button to reset the number that follows the characters to "0001".

The following is a list of the pop-up messages.

The DR-22WL displays these pop-up messages according to the situation; refer to this list to learn more details and/or solutions.

Message	Details and solutions
Battery Empty	The batteries are empty. Replace the batteries.
Cannot overdub! See REC setting	Overdubbing in 96kHz WHV file with MP3 format is not possible. Select the WAV format for recording.
Can't Divide	The selected division point is not appropriate for DIVIDE action (the beginning and end of the track).
Card Error	The card cannot be recognized. Replace the card.
Card Full	The card has no empty space. Erase unnecessary files or transfer them to a computer.
Current File MP3	MP3 files cannot be divided.
Dup File Name	The name of the DIVIDE file to be created is identical to the name of the file that already exists in the same folder. The DIVIDE function adds "a" or "b" to the end of the file name. Before using the DIVIDE function, connect the DR-22WL to a computer and edit the file name.
File Full	The total number of folders and files exceeded the limit (5000). Delete unnecessary folders and files or move them to a computer.
File Name ERR	More than 200 characters has been added to the file name due to the DIVIDE function. The DIVIDE function adds "a" or "b" to the end of the file name. Before choosing the DIVIDE function, connect the unit to a computer and edit the file name to less than 198 characters.
File Not Found	The file cannot be found or damaged. Check the target file.
File Not Found Make Sys File	System files required to operate the DR-22WL is missing. To create system files, press the **PLAY** button while this message is displayed.
File Protected	The file is read-only and cannot be deleted.
Format Error Format CARD	The microSD card is not formatted properly or damaged. This message also appears when a computer under USB connection formatted the card, or when an unformatted card is inserted to the unit. Cards must be formatted with the DR-22WL. Insert a different card, or press the **F4** ENTER button to start formatting. Formatting will delete all data on the microSD card.
Invalid Card Change Card	The card may not work properly. Replace the card.
Invalid SysFile Make Sys File	The system file required to operate this unit is invalid. To create new system files, press the **F4** ENTER button while this message is displayed.
I/O Too Short	The IN (start) and OUT (end) points are too close. Re-set by spacing at least one second in between.
Layer too Deep	Folders can be created only up to two layers. You cannot create a new folder inside this folder.
Low battery, Wi-Fi OFF	The battery charge is low, so Wi-Fi cannot be used. Replace the batteries with new ones.
Max File Size	File size is larger than the designated size, or the recording time exceeded 24 hours.
MBR Error Init CARD	The card is not formatted properly or damaged. Insert a different card, or press the **F4** ENTER button to start formatting. Formatting will delete all data on the microSD card.
No MUSIC File	There is no playback file.
No Card	A SD card is not set. Insert a recordable SD card.
No PB File	There are no files available for playback. The file may be damaged.
Non-Supported	The file type is not supported. Please refer to the 8 – Connecting with a computer 32 for compatible file types.
Write Timeout	Writing to the card timed out. Back up files to a computer and format the card.
Can't Save Data	Restart the unit when this error message appears. If the power cannot be turned off, remove the batteries, disconnect the AC adapter (TASCAM PS-P515U; sold separately), or disconnect the USB cable when in bus power supply. If these error messages appear frequently, please contact the TEAC Repair Center.
Device Error	
File Error	
Not Continued	
Player Error	
Writing Failed	
Sys Rom Err	
System Err 50	
System Error 1	
System Error 2	
System Error 3	
System Error 4	
System Error 5	
System Error 6	
System Error 7	
System Error 8	
System Error 9	

12 – Troubleshooting

When the DR-22WL does not operate properly, check the followings before make a repair request. If you still have a problem, contact either the store you purchased the DR-22WL or the TEAC repair center (see the back cover for contact details).

■ The power does not turn on

- Are batteries low?
- Are batteries inserted correctly with the ⊕, ⊖ terminals aligned correctly?
- Is the AC adapter (TASCAM PS-P515U; sold separately) securely connected to the outlet? Is the USB connector connected securely?
- Is the USB cable connecting the computer for USB bus power securely connected?
- Is the USB hub in use with computer connection for USB bus power?

■ The DR-22WL turn the power off automatically

- Is the automatic power saving function on? (See "Auto power save function setting" on page 39.)
  - The DR-22WL is in compliance with the European Standby Power Regulations (ErP), and therefore, the automatic power saving function will work whether the unit is being powered by an AC adapter or batteries. Select "OFF" if you do not want to use the auto power saving function (the factory default setting is "30 min").

■ The unit does not function.

- Is the **HOLD/ ⏻ /** switch set at **HOLD**?
- Is the unit connected to a computer via USB cable (USB Connected)?

■ The microSD card is not recognized.

- Check that the microSD card is inserted correctly.

■ The DR-22WL don't play back

- If the file is WAV format, check whether its sampling rate is compatible with the unit.
- If the file is MP3 format, check whether the bit rate is compatible with the unit.

■ The built-in speaker does not emit sound

- Is a headphone connected to the unit?
- Is the SPEAKER item set as OFF?
- Is the unit in recording or recording standby mode?

■ The monitor system does not emit sound

- Is the monitoring system securely connected?
- Is the monitoring system volume at minimum level?
- Is the OUTPUT LEVEL setting of the unit at minimum level?

■ The DR-22WL is not recording

- Check the connection again.
- Check the input settings again.
- Is the recording level too low?
- Does the microSD card has free space?
- Check whether the number of files has reached the maximum level.

■ The input level is too low

- Is the input level setting too low?
- Is the output level of the connected device too low?

■ The sound I want to record is distorted

- Is the input level setting too high?
- Is reverb setting ON?

■ Playback sound is not natural

- Is the playback speed changed?
- Is the level control function ON?
- Is reverb setting ON?

■ The file cannot be deleted

- Is the file a copy of a read-only file set by a computer?

■ The computer does not display the unit's files

- Is the DR-22WL connect to a computer via USB port?
- Is USB hub in use?
- Is the unit in recording or recording standby mode?

■ The DR-22WL cannot make a Wi-Fi connection or communication is interrupted

- Check that the Wi-Fi device is turned ON and/or the Wi-Fi function is ON.
- Is the distance to the Wi-Fi device too far?
  Is there any obstacles in between, for example a wall?
  When a Wi-Fi device is located at the rear side of the DR-22WL, the unit itself maybe the cause of interruption.
  Try changing the positions of the Wi-Fi device and the unit.
- Turn OFF and restart the DR-22WL.
- Delete the "DR-22WL" registered information in the Wi-Fi device, and follow the steps in "Connecting the unit to a Wi-Fi device."

Rating

■ **Recording media**

microSD card (64 MB–2 GB)
microSDHC card (4 GB–32 GB)
microSDXC card (48 GB–128 GB)

■ **Recording/playback formats**

BWF: 44.1k/48k/96kHz, 16/24 bit
WAV: 44.1k/48k/96kHz, 16/24 bit
MP3: 44.1k/48 kHz, 32k/64k/96k/128k/192k/256k/320kbps

■ **Number of channels**

2 channels (stereo)

Input/output ratings

Analog audio input and output ratings

■ **MIC/EXT IN jack (can provide plug-in power)**

Connector: 1/8" (3.5 mm) stereo mini jack
Input impedance: 25 kΩ
Reference input level: –20dBV
Maximum input level: –4dBV

■ **🎧/LINE OUT jack**

Connector: 1/8" (3.5 mm) stereo mini jack
Output impedance: 12 Ω
Reference output level: –14dBV (with 10kΩ load)
Maximum output level: +2dBV (with 10kΩ load)
Maximum output: 20mW+20mW (with 32Ω load)

■ **Built-in speaker**

0.3W (mono)

Control input/output ratings

■ **USB port**

Connector: Micro-B type
Format: USB 2.0 HIGH SPEED mass storage class

Audio performance

■ **Frequency response**

20-20 kHz +1/-3 dB (EXT IN to LINE OUT, Fs44.1 kHz, JEITA)
20-22kHz +1/-3 dB (EXT IN to LINE OUT, Fs48kHz, JEITA)
20-40kHz +1/-3 dB (EXT IN to LINE OUT, Fs96kHz, JEITA)

■ **Distortion**

0.05% or less (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

■ **S/N ratio**

92dB or above (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

Note) Based on JEITA: JEITA CP-2150

Requirements for connected computers

Please visit the TEAC Global Site (**http://teac-global.com**) to learn the latest compatible OS.

■ **Windows**

Pentium 300MHz or more
128MB or more memory
USB port (USB2.0 is recommended)

■ **Mac**

Power PC, iMac, G3, or G4 with 266MHz or above
64MB or more memory
USB port (USB2.0 is recommended)

■ **Recommended USB host controller**

Intel chip set

■ **Supported operating systems**

Windows: Windows XP, Windows Vista, Windows 7, Windows 8 (including 8.1)
Macintosh: Mac OS X 10.2 or later

Wi-Fi

■ **Wireless standard**

Based on IEEE 802.11b/g/n (2.4GHz only)

■ **Wireless communication mode**

Simple access point (Limited AP)

■ **Security**

WPA2-PSK (WPS2.0 compatible)

13 – Specifications

General

■ **Power supply**

2 AA batteries (alkaline or NiMH)
USB bus power from a computer
Dedicated AC adapter (TASCAM PS-P515U; sold separately)

■ **Current consumption**

0.5 A (maximum)

■ **Battery operation time (continuous operation)**

• Alkaline batteries (EVOLTA)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 17.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 11 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 11 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 11 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

• Using NiMH batteries (eneloop)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 13.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 12 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13.5 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 10 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 10 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

■ **Dimensions**

52.2 × 155 × 36.6mm (W x H x D)

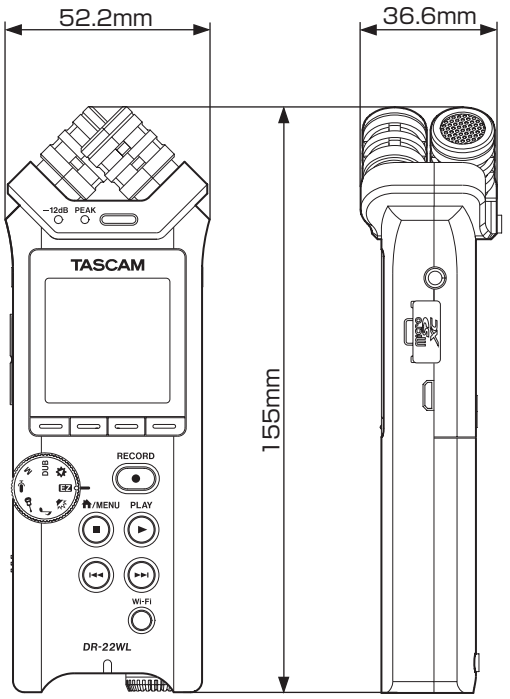
■ **Weight**

170 g/123 g (with batteries/without batteries)

■ **Operating temperature**

0°C–40°C

Dimensional drawings



• Illustrations in this manual may be different from the actual product.
• To improve the product, specifications and external appearance may change without prior notice.

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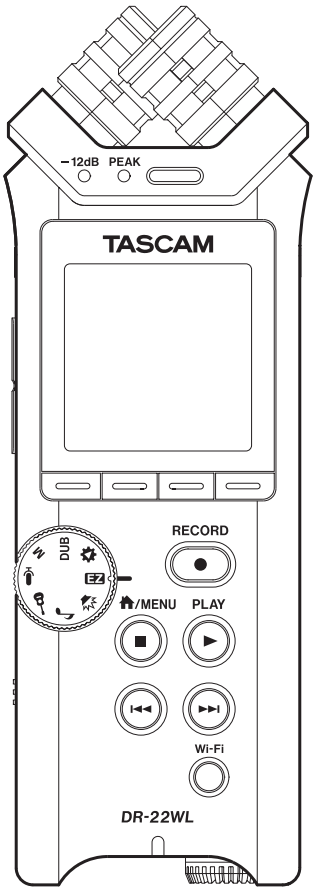
TASCAM

D01244520D

DR-22WL

Linear PCM Recorder

REFERENCE MANUAL



Hi-Res AUDIO

Wi Fi CERTIFIED

BLACKFIN PROCESSOR by Analog Devices

Contents

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1 – Introduction

Features

- Compact audio recorder that uses microSD/microSDHC/microSDXC cards as recording media
- Built-in with high performance directional stereo microphones in XY positions
- Built-in Wi-Fi feature to use smartphone as remote control, transfer files from the PCM recorder, and playback audio
- Scene dial allows for easy recording
- Two overdubbing modes for sound dubbing
- Practice mode with features useful for instrument practice, such as I/O loop for repeated playback, VSA to adjust playback speed without changing the pitch, key-change and fine-tune to adjust the pitch
- 44.1/48/96 kHz, 16/24-bit, linear PCM (WAV/BWF format) recording possible
- 32–320 kbps MP3 format recording possible (compatible with ID3 tag v2.4)
- Overdubbing allows playback and input signals to be mixed and recorded together as a new file
- Built-in 0.3 W monaural output speaker
- Built-in reverb function can be used during recording and playback
- Automatic recording function starts recording automatically when a set sound input level is detected
- Track incrementing function allows a recording to be split by creating a new file when desired
- Pre-recording function allows the unit to record the 2 seconds of sound before recording is activated
- Peak reduction function is available to reduce the level automatically in case of excessively large input
- Limiter function is available to reduce the level automatically in case of excessively large input
- Low cut filter reduces low-frequency noise
- SELF TIMER function to start recording after a set period of time
- DIVIDE function allows files to be split where desired (only for WAV files)
- MARK function convenient for moving to specific locations
- File name format can be set to use a user-defined word or the date
- Resume function memorizes the playback position before the unit is turned off
- 3.5mm (1/8") jack for external stereo microphone input (provides plug-in power) or external stereo line input
- 3.5mm (1/8") line/headphones output jack
- 128 x 128 pixel LCD with backlight
- Micro-B type USB 2.0 port
- Operates on 2 AA batteries, AC adapter (sold separately: TASCAM PS-P520E), or USB bus power
- Tripod attachment screw-hole built into unit
- USB cable included

This product has a Blackfin® 16/32-bit embedded processor made by Analog Devices, Inc. This processor controls digital signal processing.
Inclusion of this Blackfin® processor in the product increases its performance and reduces its power consumption.

Conventions used in this manual

The following conventions are used in this manual:

- Buttons, connectors and other physical parts of this unit are written using a bold font like this: **MENU** button.
- When we show messages, for example, that appears on the unit's display, the typeface looks like this: INPUT.
- microSD, microSDHC and microSDXC memory cards are called "microSD cards".
- Information shown on the computer display is written like this "OK".
- The selected folder is indicated as the "current folder".
- Computer or portable audio devices that are connected via Wi-Fi with the DR-22WL are indicated as the "Wi-Fi device".
- Additional information is provided as necessary in tips, notes and cautions

TIP

These are tips about how to use the unit.

NOTE

These include additional explanations and special cases.

CAUTION

Failure to follow these instructions could result in injury, equipment damage or lost data, for example.

About microSD cards

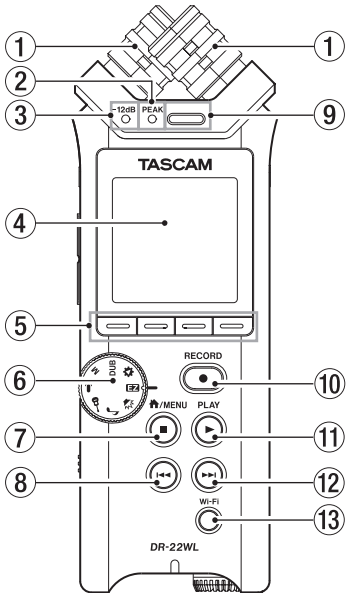
The DR-22WL uses microSD cards for recording and playback.
Memory cards that you can use with the DR-22WL are microSD cards of 64 MB to 2 GB, microSDHC cards of 4GB to 32GB, and microSDXC cards of 48GB to 128GB.
A list of SD cards that have been confirmed for use with this unit can be found on our web site. Please access to a product page of this product from the TEAC Global Site (http://teac-global.com) to find the list or contact the TASCAM customer support service.

Precautions

microSD cards are precision devices. Please refer to the below when using memory cards to prevent memory and/or card damage:

- Do not leave a memory card in extremely hot or cold places
- Do not leave a memory card in extremely humid places
- Do not spill any liquids on the memory card
- Do not bend the card or subject it to any excessive force
- Do not subject the card to any physical shock
- Do not remove the card while the unit is accessing data, or recording, playing, or making data transfer
- Always store the memory card in a case

Top panel



① **Built-in stereo microphone**
This is an XY directional stereo electret condenser microphone.
The built-in microphone becomes inactive when an external microphone or external input is connected to the **MIC/EXT IN** jack on the right-side panel.

② **PEAK indicator**
This will light in red immediately before the input noise increases to a distortion level (−2dB).

③ **−12dB indicator**
This will light in green when the input noise exceeds the −12dB level.

④ **Display**
Displays a variety of information.

⑤ **Function buttons**
Function of individual buttons changes according to what is shown on display.
The displayed icon at the bottom of the screen indicates the current function.

NOTE

For your convenience, this manual indicates the four function buttons as **F1**, **F2**, **F3**, and **F4** starting from the left.

⑥ **Scene dial**
Use this dial to change the unit setting according to the scene. (See "Scene recording mode" on page 15.)

⑦ **⌂/MENU/■ button**
To display the MENU screen, press this button in home screen.
To return to the home screen, press this button in any screen display.
Press this button during recording to stop recording. Press this button during playback or recording standby to pause or stop (depending on the position in the file).

⑧ **⏮ Fast rewind button**
Press this button while in play or stop mode to return to the beginning of a track.
Press and hold this button to search backwards.
When the MARK SKIP MODE on the menu screen TOOL page is not set to OFF, press this button while pressing the **F2** button to move to the previous mark. (See "Moving to the cue mark position" on page 29.)

⑨ **Built-in mono speaker**
Use this built-in speaker to listen to recordings.
No sound will play when:
- In recording standby
- Headphone is connected
- In recording mode
- Speaker output setting is turned off

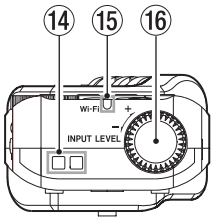
⑩ **RECORD button/RECORD indicator**
When you press this button during stop mode, the **RECORD** indicator (around **RECORD** button) flashes and the DR-22WL will go into recording standby mode.
When you press this button during the recording standby mode, the **RECORD** indicator lights and the DR-22WL starts recording.
When you press this button during recording, the **RECORD** indicator flashes.
When the scene dial is set to **EZ**, press when stopped to start recording.

⑪ **PLAY button**
When the home screen is open and playback is stopped, press this button to start playback.
When you select a file or folder in browse screen and press the PLAY button, the unit will return to the home screen and start playing the selected file or folder from the beginning.

⑫ **⏭ Fast forward button**
Press this button in playback or stop mode to skip to the next track.
Press and hold this button for fast forward search.
When the MARK SKIP MODE on the menu screen TOOL page is not set to OFF, press this button while pressing the **F2** button to move to the next mark. (See "Moving to the cue mark position" on page 29.)

⑬ **Wi-Fi button**
Use this button to turn on/off the Wi-Fi function.

Front panel

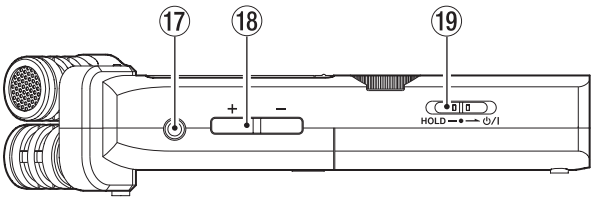


⑭ **Strap holder**
A strap can be attached to this holder.

⑮ **Wi-Fi indicator**
This indicator lights while the Wi-Fi module is in access.

⑯ **INPUT LEVEL volume**
Turn this dial to adjust the input level.
The input level setting will pop-up on display when making an adjustment.

Left side panel

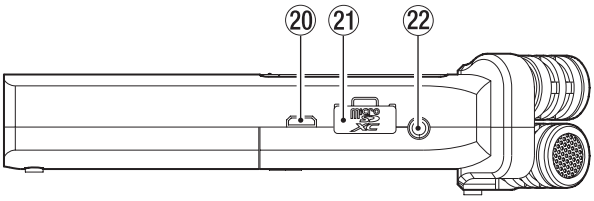


⑰ **🎧/LINE OUT jack**
A headphone or a line input jack of an external device (via stereo mini-jack cable) can be connected to this jack.

⑱ **OUTPUT LEVEL (+/–) buttons**
These buttons adjust the output sound level of the built-in speaker or the **🎧/LINE OUT** jack.
Volume level will pop-up on the bottom of the display while making adjustment.

⑲ **HOLD/⏻/❙switch**
To turn the power on/off, slide and hold the switch towards the ⏻/❙icon.
When you slide the switch towards the **HOLD** side, all the functions of the buttons are locked.

Right side panel



⑳ **USB port**
Use the supplied USB cable to connect the DR-22WL with a computer. (See "8 – Connecting with a computer" on page 34.)
Power can be supplied by using this USB cable or from an AC adapter (sold separately: PS-P520E).

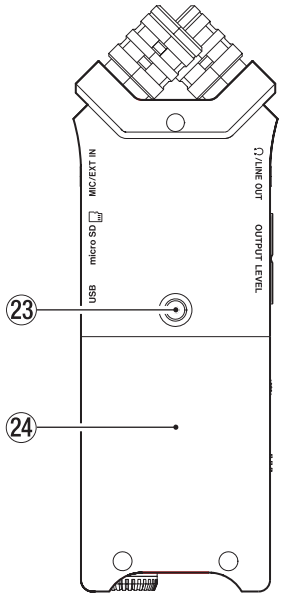
CAUTION

Connect the DR-22WL directly be connected directly with the computer, not through a USB hub.

㉑ **microSD card slot**
Insert or remove a microSD card.

㉒ **MIC/EXT IN jack**
Connect an external stereo microphone or external input to this jack. It is compatible with plug-in power.
The built-in microphone is disable when an external microphone is connected to the **MIC/EXT IN** jack.

Bottom panel

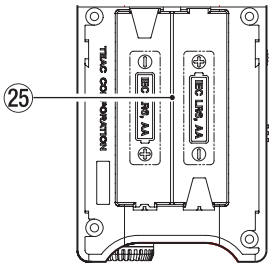


㉓ **Tripod attachment screw-hole (1/4 inch)**
A tripod can be attached to the DR-22WL.

CAUTION

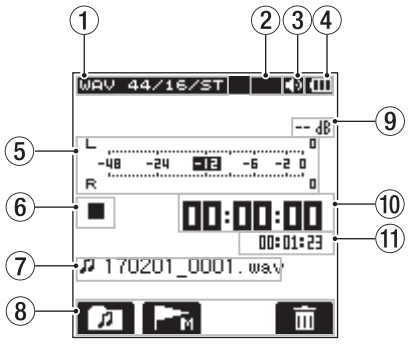
- ***Ensure the tripod or microphone stand screws are securely fastened to prevent the unit from falling off.***
- ***When attaching this unit to a tripod or microphone stand, ensure to place it on a level surface.***

㉔ **Battery compartment cover**



㉕ **Battery case**
Insert batteries (two AA size) in this compartment to power the unit. (See "Using AA size batteries" on page 10.)

Home Screen



① **Playback file type message**
Format type, sampling rate, bit rate, stereo/mono setting of the playback file are shown.

② **Plug-in power on/off message**
The plug-in power status (on/off) is displayed in icon view. (See "Recording with an external microphone (MIC IN)" on page 14.)

Icon	On/off status
Blank	Plug-in power function off
	Plug-in power function on

③ **Monitor output message**
: output from built-in speaker
: output from headphone

④ **Power supply status message**
When power is supplied from the batteries, the current battery level is displayed in bars (, ,).
When the battery level is low, the will flash and the power will be switched off (standy mode).
The will be displayed when using either the dedicated AC adapter (TASCAM PS-P520E; sold separately) or the USB bus power.

NOTE

When attempting recording or other operations that consume large amount of power, a warning message of `Battery Low` ***may pop-up.***

⑤ **Level meter**
Displays the level of the playback sound.

⑥ **Recorder status message**
The recording status is indicated in the following icons:

Indicator	Meaning
■	Stop
❚❚	Pause
►	Playback
►►	Fast forward
◄◄	Rewind
►►I	Skip forward to the beginning of the next file
I◄◄	Skip backward to the beginning of either the current or preceding file

⑦ **File name**
The name or tag information of the file currently in play is displayed.
The ID3 tag information is displayed instead when included in the MP3 file.

NOTE

ID3 tag information contains titles and artist names, which can be stored in MP3 files.

⑧ **Function buttons status message**
Below icons are displayed while in stop or playback mode.

Icon	Function
	Display browse screen
	Mark function (set/clear)
	Delete file

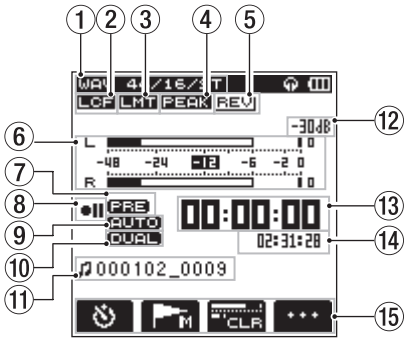
⑨ **Peak decibel (dB) message**
Displays the maximum playback level in decibel reading per set amount of time.

⑩ **Elapsed time message**
Displays the elapsed time (hours: minutes: seconds) of the current file.

⑪ **Remaining time message**
Displays the remaining time (hours: minutes: seconds) of the current file.

Recording Screen

The below recording screen is displayed in recording or recording standby mode.



① **Recording mode message**
Displays the format, sampling rate, and stereo/mono of the recording file. (See "Recording format settings (FORMAT/SAMPLE/TYPE)" on page 16.)

② **Low-cut filter on/off status message**
Displays the low-cut filter on/off status.
The message is highlighted when the low-cut filter is set at `40Hz` / `80Hz` / `120Hz` / `220Hz`.
Blank: low-cut filter is off
LCF: low-cut filter is on

③ **Limiter function on/off message**
Displays the limiter function on/off status. (See "Setting the Low Cut Filter" on page 18.)
Blank: limiter function is off
LMT: limiter function is on

④ **Peak reduction function on/off status message**
Displays the peak reduction on/off status. (See "Using the level control function" on page 18.)
Blank: peak reduction function is off
PEAK: peak reduction function is on

⑤ **Reverb on/off status message**
Displays the reverb on/off status.

Icon	On/off status
Blank	Reverb is off
REV	Reverb is on (Reverb sound added to input sound)
REV	Reverb is on (Reverb sound added to output sound)

⑥ **Level meter**
Displays the input sound level.
When the AUTO REC function is turned on, the level meter will display sounds within the level that activates the AUTO REC function.

⑦ **Prerecording function on/off status**
Displays the Prerecording function on/off status. (See "Start recording from slightly before pressing record (PRE REC)" on page 20.)

Blank: Prerecording is off
PRE : Prerecording function is on

⑧ **Recording status message**
The recording status is indicated in the following icons:

Indicator	Meaning
● II	Recording standby or recording pause mode
●	In recording mode
5S	Begins recording in five seconds
10S	Begins recording in ten seconds

⑨ **Automatic recording function on/off status**
Displays the Automatic recording function on/off status. (See "Automatic recording (AUTO REC)" on page 19.)

Blank: Automatic recording off
AUTO : Automatic recording function on

NOTE

AUTO is displayed when the scene mode is EZ or 🎤.
In this case, level control is automatic.

⑩ **Dual format recording function on/off status**
This shows whether dual format recording is on or off.
Blank: dual format recording function off
DUAL : dual format recording function on

⑪ **File name message**
Displays the file name automatically assigned to the recording file.

⑫ **Peak decibel (dB) message**
Displays the peak input level in decibel reading.
OVER will be displayed when recording is above the peak level (–2dB or more).

⑬ **Elapsed recording time**
Displays the elapsed recording time of a recorded file (hours: minutes: seconds).

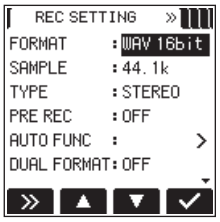
⑭ **Remaining recording time**
Displays the remaining recording time for the microSD card (hours: minutes: seconds).

⑮ **Function buttons message**
The following icons will be displayed while in recording standby, recording, or recording pause mode:

Icon	Function
	Self-timer function
M	Mark function (set mark)
	Display input setting screen
	Activate the track increment
CLR	Clear peak hold

Menu item list

Press the ⌂/**MENU**/■ button to display the menu screen.



The menu screen consists of four pages each separated by types of menu items.

REC SETTING: make basic recording settings
TOOL: make function settings useful for playback files
SETUP: make configuration settings for the DR-22WL
INFORMATION: displays file and media information

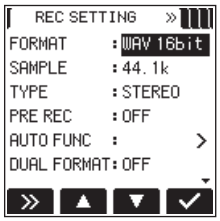
Menu items are as follows:

Menu item	Function		Ref. page
REC SETTING	Make recording settings		
		FORMAT SAMPLE TYPE	page 16
		PRE REC	page 20
		AUTO FUNC	page 19
		DUAL FORMAT	page 21
		COUNT INIT	page 43
		PEAK HOLD	page 17
TOOL	Make settings for various functions.		
		MARK SKIP MODE	page 29
		XRI MODE	page 32
		DIVIDE	page 31
		AUTO DIVIDE	page 31
		REVERB	page 32
		SPEAKER	page 13
		METRONOME	page 33
SETUP	Make various settings.		
		MEDIA FORMAT	page 42
		BACKLIGHT	page 42
		CONTRAST	page 42
		Wi-Fi	page 35 page 37 page 39
		AUTO PWR SAVE	page 42
		BATTERY TYPE	page 42
		DATE/TIME	page 11
		FILE NAME	page 43
		INITIALIZE	page 42
INFORMATION	View various types of information.		
		XRI	page 33
		FILE INFO	page 41
		CARD INFO	
		VERSION	

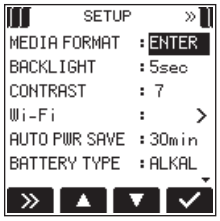
Using menus

The following explains the menus, using the display contrast setting as an example.

1. Press the ⌂/**MENU**/■ button to display the menu screen.

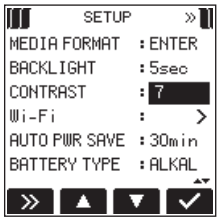


2. Press the **F1** » button to display various menu pages.



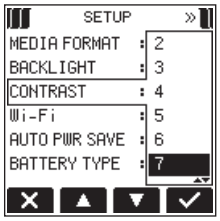
SETUP page is selected

3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item you want to set.



CONTRAST item is selected

4. Press the **F4** ✓ button to open the parameter display.



5. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ✓ button to finalize the setting.
   Press the **F1** ✕ button to cancel a change.
6. Repeat the 2. to 5. steps to set each items.
7. Press the ⌂/**MENU**/■ button to return to the home screen.

Basic operations

Use the following buttons to operate the various screens.

⌂/**MENU**/■ button

The menu screen will pop up when you press this button in stop or pause mode.

To return to the home screen, press this button in any screen display.

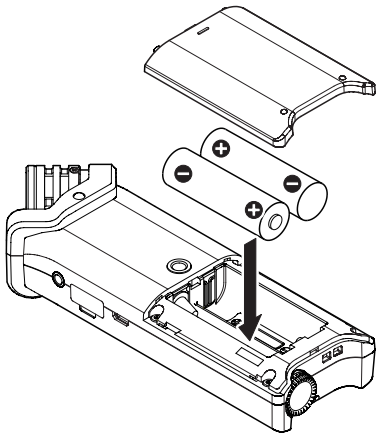
Powering the unit

Power sources

The DR-22WL operates on two AA batteries, the dedicated AC adapter (TASCAM PS-P520E; sold separately), or the supplied USB cable (USB bus power).
Use either alkaline batteries or Ni-MH batteries.

Using AA size batteries

Remove the battery compartment cover on the back of the unit, insert two AA batteries with the ⊕ and ⊖ ends in the right position, and close the cover.



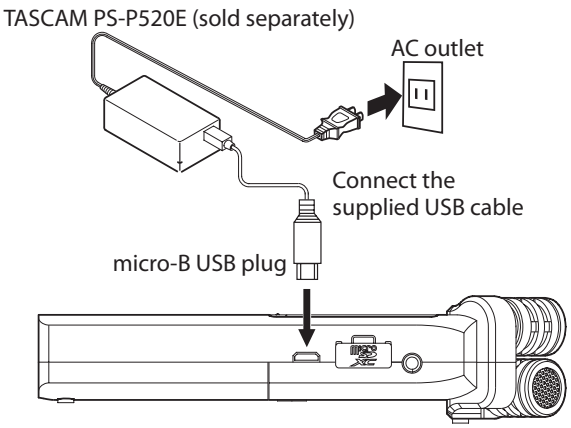
Select the same type of batteries to get an accurate reading of the remaining battery power and required minimum power for operation. (See "Battery type settings" on page 42.)

CAUTION

- ***Do not use Manganese dry cell batteries.***
- ***Ni-MH batteries will not be recharged with this unit; use a separate battery recharger instead.***
- ***The supplied alkaline batteries are for testing and may not last long.***

Using an AC adapter (sold separately)

Use the supplied USB cable to connect the USB port of the unit and the dedicated AC adapter (TASCAM PS-P520E; sold separately) as illustrated below.



NOTE

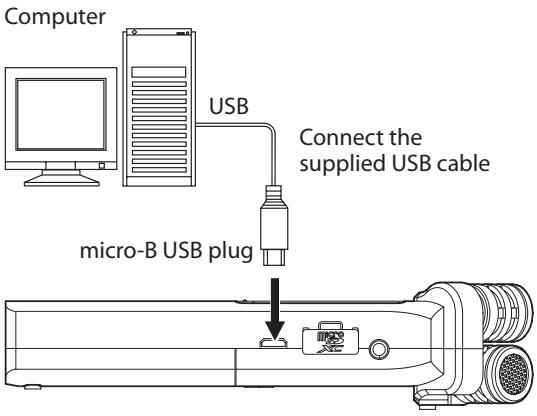
When both batteries and the AC adapter are attached to the unit, power will be supplied from the AC adapter.

CAUTION

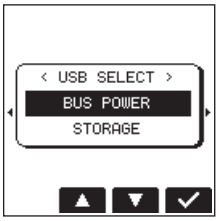
- ***Use only the dedicated AC adapter (TASCAM PS-P520E; sold separately). The use of another adapter may cause malfunction, fire or electric shock.***
- ***Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.***

Using USB bus power

Use the supplied USB cable to connect the unit and the computer as illustrated below.



When you connect a USB cable while the unit power is on, or turn on the power after making a connection, the USB SELECT screen will pop up, prompting the user to select either to operate the unit with USB bus power or make a USB connection with the computer.



Use the **F2** ▲ button and the **F3** ▼ button to select (highlight) the BUS POWER, then press **F4** ✓ button to supply power from the USB port and display the home screen.

NOTE

Power is supplied from the USB port when USB cable is connected to the unit inserted with batteries (USB bus power prioritized).

CAUTION

- ***Depending on the USB bus power specifications of the computer, the DR-22WL may not operate with a USB connection. If this occurs, please use the dedicated AC adapter (TASCAM PS-P520E; sold separately) instead.***
- ***This unit is not compatible with the computer's power-save mode or sleep-mode. Please turn off these modes when operating the unit from the computer's USB bus power.***

Turning the power on and off (standby mode)

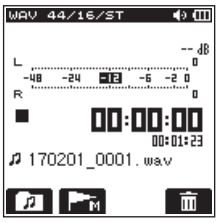
CAUTION

- ***When you turn the power switch off while supplying power from the dedicated AC adapter (TASCAM PS-P520E; sold separately) or the USB bus power connected to a computer, the unit will go to a standby mode.***
- ***Before turning the power switch on and off, turn the volume down for the sound system connected to the unit.***
- ***Do not wear headphones when turning the power switch on and off (standby mode); the noise may cause damage to your ears and/or headphones.***

Starting up the unit

In power off mode, slide and hold the **HOLD/** ⏻ **/ I** switch (located at left-side of the panel) toward the ⏻ **/ I** direction, and release the switch when the TASCAM DR-22WL (start-up screen) appears.
The DR-22WL starts up and the home screen is displayed.

Start-up screen



Home screen

CAUTION

When turn the power on for the first time (or when the built-in clock is reset due to no battery power), the DATE/TIME screen will appear before the home screen to set date/time. (See "Setting the date/time" on page 11.)

Shutting down (standby mode)

In power on mode, slide and hold the **HOLD/** ⏻ **/ I** switch (located at left-side of the panel) toward the ⏻ **/ I** direction, and release the switch when the TASCAM DR-22WL shutting down··· appears.
The power turns off when the shut-down process is completed.

CAUTION

Always use the* HOLD/ ⏻ / I *switch to turn the power off.
In power on mode, all recorded data and settings will be lost if you remove the batteries, disconnect the power cable of the dedicated AC adapter (TASCAM PS-P520E; sold separately), or plug-off the USB cable for USB bus power. Any lost data and/or settings cannot be restored.

Resume function

The DR-22WL is equipped with a resume function to locate the previous position (or time) when the power was turned off.
Turn the power on and press the **PLAY** button to playback from the previous file position (time) when the power was turned off.

NOTE

The position is recorded in the microSD card. The resume function does not work if the microSD card is replaced or formatted.

Selecting the language

You can change the language shown on the display. The first time you turn the unit on after purchasing it, the LANGUAGE screen will open. You can set the language used on this screen. You can also change this setting with the SYSTEM screen LANGUAGE item.

1. Use both the **F2** ▲ and **F3** ▼ buttons to move the cursor and select the language.

   Options

English:	use English
日本語:	use Japanese
Français:	use French
Español:	use Spanish
Deutsch:	use German
Italiano:	use Italian
Русский:	use Russian

2. After making the selection, press the **F4** ✓ button to confirm it.

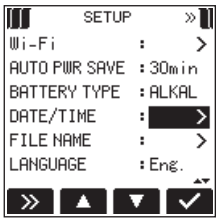
If you accidentally select the wrong language

Slide the **HOLD/** ⏻ **/ I** switch to turn the power off. Then, slide the **HOLD/** ⏻ **/ I** switch while pressing and holding the **MENU** button to turn the unit on again.
The language selection menu where you can set the language appears.

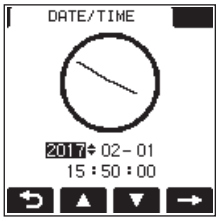
Setting the date/time

The DR-22WL uses its internal clock to record the date and time to the recorded files.

1. Press the **⌂/MENU/** ■ button to display the menu screen.
2. Press the **F1** » button to display the SETUP page.
3. Use both the **F2** ▲ and **F3** ▼ buttons to select (highlight) the DATE/TIME item parameters.



4. Press the **F4** button to display the DATE/TIME screen.



5. Press the **F4** button to move the cursor (highlighted area), and use the **F2** and **F3** buttons to change settings.
6. Press the **F1** button to finalize the settings. The screen will return to the SETUP page.

NOTE

The file name will include the set date/time. (See "Setting the file name type" on page 43.)

CAUTION

Without the use of the batteries, the dedicated AC adapter (TASCAM PS-P520E; sold separately) or USB bus power, the date and time setting can be made only for a few minutes.

When using batteries, we recommend to replace them before they are completely drained.

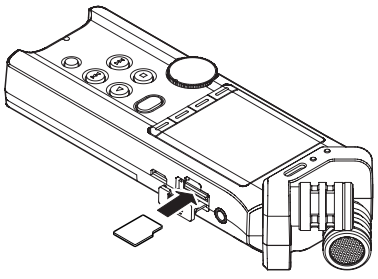
Inserting and removing microSD cards

Inserting the SD card

NOTE

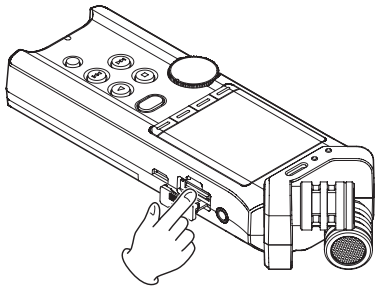
A microSD card is already installed at the time of purchase. You can immediately start recording and playing tracks without the need to remove and insert the microSD card.

1. Open the microSD card slot cover on the right side panel.
2. Insert the microSD Card into the slot (as illustrated below) until it clicks into place.



Removing the card

1. Open the microSD card slot cover.
2. Gently press and release the microSD card; the card should pop out.



CAUTION

- ***Do not remove the microSD card while the unit is accessing data for recording, playback, etc.***
- ***Do not remove the microSD card from the unit when connected via USB cable to a computer.***
- ***The DR-22WL is compatible with microSD/microSDHC/ microSDXC standards.***
- ***A list of SD cards that have been confirmed for use with this unit can be found on our web site. Please access to a product page of this product from the TEAC Global Site (**http://teac-global.com**) to find the list or contact the TASCAM customer support service.***

Setup the microSD card for use

To use a microSD card, it must be formatted first by the DR-22WL.

1. Confirm that a microSD card is inserted and turn the power on.
2. The following message appears when a new card or a card formatted by another device is inserted into the unit.

micro SD/SDHC card

micro SDXC card

3. Press the **F4** button to start formatting.

CAUTION

Formatting will delete all data from the card.

4. When formatting is complete, it will return to the home screen. You may format the card whenever required.

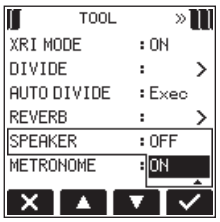
CAUTION

Before formatting, make sure the unit is connected to either a dedicated AC adapter (TASCAM PS-P520E; sold separately), a computer via USB bus power, or fully-charged batteries.

Turning the built-in speaker on/off

The factory setting for the built-in speaker output is selected as ON. To turn the built-in speaker output off, set the SPEAKER item to OFF on the TOOL menu page.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** » button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the SPEAKER item and press the **F4** ✓ button.
   This shows the SPEAKER item parameters.



4. Use the **F2** ▲ and **F3** ▼ buttons to change settings, and press the **F4** ✓ button to finalize the setting.
   Options: OFF, ON (default setting)
5. When setting is completed, press the **⌂/MENU/■** button to return to the home screen.

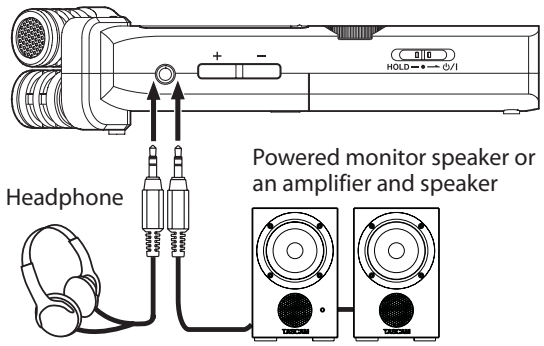
NOTE

In a recording standby or recording mode, or when a headphone or a speaker system is connected to the DR-22WL, the built-in speaker will not emit sound even when the SPEAKER setting is ON.

Connecting a monitor device

To listen with headphones, connect them to the **∩/LINE OUT** jack on the left side of the unit.

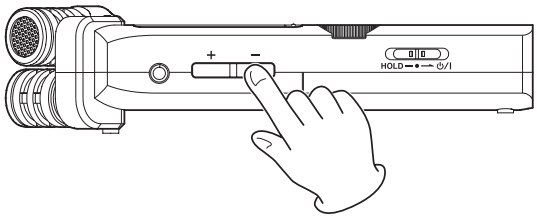
To listen with an external monitoring system (powered monitor speakers or an amplifier and speakers), connect it to the **∩/LINE OUT** jack.

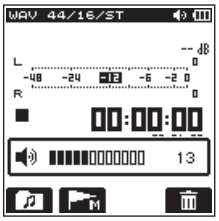


Adjusting the playback volume

Use the **OUTPUT LEVEL (+/–)** buttons on the left side of the unit to adjust the volume of output through the built-in speaker and **∩/LINE OUT** connector.

When doing this, a volume position pop-up appears at the bottom of the display.





When increasing the volume, this pop-up message might appear: INCREASE YOUR RISK OF HEARING DAMAGE.

This warning appears when the volume is set above a level recommended by the European Union (EU) to avoid hearing damage (EU volume limit regulation).

Reconnecting headphones will reset the volume to its default value.

NOTE

You can continue to adjust the volume even after the pop-up message appears.

When you raise or lower the volume again, the pop-up message will disappear.

CAUTION

Listening at high volumes could cause hearing damage. If the surroundings are noisy, the sound of playback might seem quieter than it actually is.

Start playback of the audio and check the volume before putting on headphones, for example.

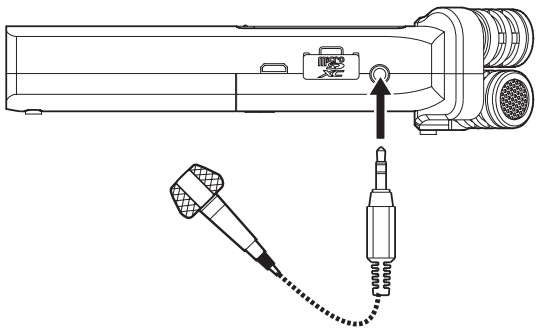
Input settings

Recording with the built-in microphone

Point the built-in microphone toward the sound source and place the unit on a stable surface with minimum vibration.

Recording with an external microphone (MIC IN)

Connect the external microphone to the **MIC/EXT IN** jack at right side panel.



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

Select the **F3** ✓ button for plug-in-power microphones, or **F2** ✕ button for other microphone types.

* Plug-in-power means that a power is delivered from the recorder to the microphone

NOTE

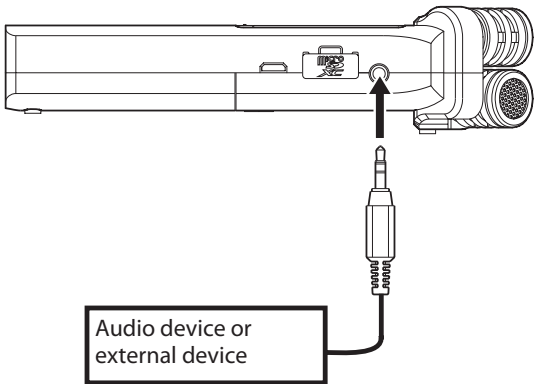
Point the external microphone toward the sound source and place the unit on a stable surface with minimum vibration.

CAUTION

- ***When not using a mic that requires plug-in power, do not enable it by selecting the* F3 ✓ *button. Doing so could damage connected equipment. See the mic operation manual for details.***
- ***When connecting a dynamic mic or external mic that has its own battery, do not enable plug-in power by selecting the* F3 ✓ *button. If plug-in power is turned ON, it could damage such microphones.***

Recording from an external device (LINE IN)

Connect a stereo mini-plug cable to the output of an external audio device (i.e. headphone jack of a portable CD player).



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.

When an external device is connected, select **F2** ✕ button (disable plug-in power).

CAUTION

If the input sound is still distorted after adjusting the input level of the unit, reduce the playback sound of the external device.

In addition to the built-in microphone, an external microphone or external audio devices (i.e. CD player) can also be used for recordings.
Recordings can be made in MP3 (32k -320kbps, 44.1k/48kHz) and WAV/BWF (44.1k/48k/96kHz, 16/24-bit) audio formats.
Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible softwares.
In addition, the DR-22WL can mix input signals while playing an audio file and record a new file (overdubbing function).

Selecting the recording mode

■ EZ (SCENE : EASY)

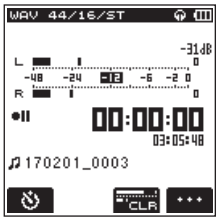
Select the **scene dial** to EZ.
The simple recording mode allows users to quickly start recording by pressing the **RECORD** button just once; it automatically adjusts the recording level. This feature is useful for beginners and others wanting to make a quick-recording.

■ M (SCENE : MANUAL)

Select the **scene dial** to M.
The manual mode allows to adjust the recording level manually, suited for a higher-quality recording. This feature is especially useful for those who wants to make fine-tuned recording.

Recording

1. Press the **RECORD** button to set the recording standby mode.
   The indicator around the **RECORD** button flashes and the recording screen opens.

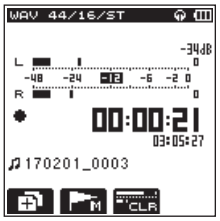


   The bottom of the recording screen displays the recording file name, the recording audio file type, and the sampling rate. Users can confirm these information before starting recording.

NOTE

When the* scene dial *is set at "EZ", recording begins when you press the* RECORD *button once.

2. Press the **RECORD** button again to start recording.



   When recording starts, the **RECORD** indicator lights, and displays the elapsed recording time and the remaining recording time.
   To pause, press the **RECORD** button while recording.
   Press the **RECORD** button again to resume recording.
   If you press the **⌂/MENU/■** button while in pause mode, the recorded audio file up to the pause point will be created.

3. Press the **⌂/MENU/■** button to stop recording.
   The recording stops and returns to the beginning of the file.

NOTE

- ***In recording standby mode, the speaker will not emit sound. Use a headphone to listen to the input sound and make level adjustments. In recording mode, operating the* OUTPUT LEVEL (+/–) *button to adjust sound will not affect the recording level.***
- ***To avoid recording the* RECORD *button operation sound, the DR-22WL begins recording about 0.3 seconds (fixed time) after pressing the* RECORD *button.***

CAUTION

Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.

Scene recording mode

The DR-22WL offers pre-set scenes that adjusts recording to the most-suited level. Turn the **scene dial** and to set the following scene:

■ (SCENE : LOUD)

Suited for recording band performance and other scenes with large sound volume.

■ ♪ (SCENE : MUSIC)

Suited for recording voices, such as concert or group sining.

■ (SCENE : INSTRUMENT)

Suited for recording near musical instruments, such as an acoustic guitar and wind instruments.

■ (SCENE : INTERVIEW)

Suited for recording an interview or take voice memos during meetings.

NOTE

Recording level, low-cut filter, or level control are still adjustable in scene recording mode.
However, level control cannot be adjusted in scene mode. Settings are not stored and will be removed when scene mode is changed.

Selecting a folder to store files

Recorded files will be saved in the current folder. If no setting is made, they will be saved in the MUSIC folder. To change to the folder that you want, follow the instructions in "5 – Using files and folders (browse screen)" on page 25 to designate it.
When an SD card is initialized, the MUSIC folder will be set as the current folder.

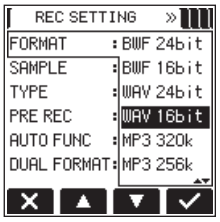
Recording format settings (FORMAT/SAMPLE/TYPE)

Select the desired audio file type before you start recording.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1 »** button to open the REC SETTING menu page.

FORMAT setting

3. Use the **F2 ▲** and **F3 ▼** buttons to select (highlight) the FORMAT item and press the **F4 ✓** button.
   Open the parameter list for the FORMAT item.



4. Use the **F2 ▲** and **F3 ▼** buttons to select (highlight) the file type.
   Options: BWF 16bit, BWF 24bit, WAV 16bit (default value), WAV 24bit, MP3 32k, MP3 64k, MP3 96k, MP3 128k, MP3 192k, MP3 256k, MP3 320k

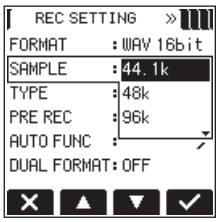
NOTE

- ***BWF is a format for broadcasting that has the same sound quality as the standard WAV format. It also uses the same ".wav" file extension as WAV files. In this manual, we distinguish these file types by using the terms BWF and WAV.***
- ***The WAV format offers higher quality recording than MP3 files;***
- ***On the other hand, the MP3 format can record for longer hours.***
- ***With MP3 format, recording with higher values offers better quality.***
- ***Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible devices and computer softwares.***

5. Press the **F4 ✓** button to finalize the setting and return to the item selection mode.

SAMPLE setting

6. Use the **F2 ▲** and **F3 ▼** buttons to select (highlight) the SAMPLE item and press the **F4 ✓** button.
   Open the parameter list for the SAMPLE item.



7. Use the **F2 ▲** and **F3 ▼** buttons to select (highlight) the sampling rate.
   Options: 44.1k (default value), 48k, 96k

NOTE

96k cannot be selected for a MP3 format file.

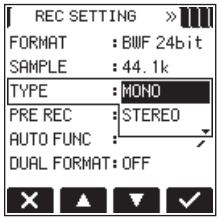
TIPS

Selecting the WAV 16bit and 44.1kHz will allow you to record in CD-quality.

8. Press the **F4 ✓** button to finalize the setting and return to the item selection mode.

TYPE setting

9. Use the **F2 ▲** and **F3 ▼** buttons to select (highlight) the TYPE item and press the **F4 ✓** button.
   Open the parameter list for the TYPE item.



10. Use the **F2 ▲** and **F3 ▼** buttons to select (highlight) either the stereo file or mono file.
    Options: STEREO (default value), MONO

NOTE

- ***When MONO is selected, left and right channel signals will be recorded separately .***
- ***Selecting the WAV format MONO will extend the recording hours by two times than the STEREO type, allowing for longer recording hours.***

11. Press the **F4 ✓** button to finalize the setting and return to the item selection mode.
12. Press the **⌂/MENU/■** button to return to the home screen.

Adjusting the input level

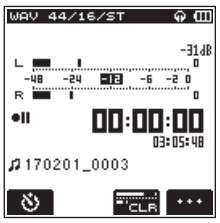
Before you start recording, ensure to adjust the input level to prevent the recorded file from distortion or canceled by noise, which can occur from excessively large or quiet input volume.

Use the limiter/peak reduction functions as necessary, in addition to making manual adjustments.

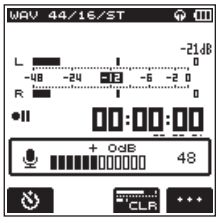
TIPS

In addition to adjusting the input level, try changing the distance and angle between the microphone and the sound source. The angle and distance of the microphone can also change the sound quality.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator (around **RECORD** button) will flash and displays the recording screen.



2. Use the **INPUT LEVEL** volume to adjust the input level. The input level setting meter will pop-up at the bottom of the display.



   To obtain higher quality, it is recommended to set at the maximum recording level. As a guideline, adjust the input level until the **–12dB** indicator lights in green to obtain the optimum level. To prevent possible distortion from excessively large input volume, reduce the input level when the **PEAK** indicator lights in red.

NOTE

- ***Press the ⌂/MENU/■ button to cancel the recording standby mode.***
- ***In a recording standby or recording mode, the speaker will not emit sound even when the*** SPEAKER ***setting is*** ON.

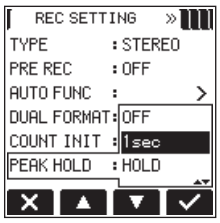
If you need to monitor sound to adjust the input level and make recordings, connect the headphone to the Ω**/LINE OUT** jack.

To adjust monitor sound, go to home screen and use the **OUTPUT LEVEL (+/–)** button. Adjusting the monitor sound will not affect the recording quality.

Setting the peak hold function

Using the peak hold function makes monitoring the levels easier.

1. Press the ⌂**/MENU/**■ button to display the menu screen.
2. Press the **F1** » button to open the REC SETTING menu page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the PEAK HOLD item and press the **F4** ✓ button.
   Open the parameter list for the PEAK HOLD item.

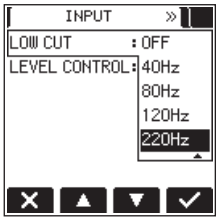


4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the peak hold mode.
   Options:
   OFF: Peak levels are not held.
   1sec (default): Peak levels are held for one second.
   HOLD: Peak levels are held until the peak clear (CLR) button is pressed.
5. Press the **F4** ✓ button to finalize the setting and return to the item selection mode.
6. Press the ⌂**/MENU/**■ button to return to the home screen.

Setting the Low Cut Filter

The Low Cut Filter function can reduce noise from air-conditioners, projector fans and unwanted wind noise.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4** ··· button to display the input setting screen.
3. Press the **F1** » button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LOW CUT item and press the **F4** ✓ button.
   Open the parameter list for the LOW CUT item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the cut-off frequency.
   Options: OFF (default value), 40Hz, 80Hz, 120Hz, 220Hz
6. Press the **F4** ✓ button to finalize the selected cut-off frequency for the Low Cut Filter.
7. Press the ⌂/**MENU**/■ button to return to the recording screen.

NOTE

- ***When the low-cut filter is on, the LCF icon appears on the recording screen.***
- ***The low-cut filter can be set and changed when in recording standby.***

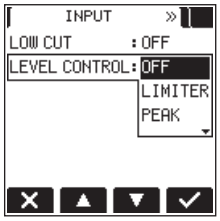
TIPS

- ***Setting it to larger value can reduce more noise in the low-frequency range, but this is not recommended when recording music.***
- ***The DR-22WL has a built-in reverb, which can be added to the input source as desired. (See "Reverb function" on page 32.)***

Using the level control function

You can set the recording level for microphone input.

1. Press the **RECORD** button to set the recording standby mode.
   The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4** ··· button to display the input setting screen.
3. Press the **F1** » button to display the INPUT page of the input setting screen.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the LEVEL CONTROL item and press the **F4** ✓ button.
   Open the parameter list for the LEVEL CONTROL item.



5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the function.
   Options: OFF (default value), LIMITER, PEAK
6. Press the **F4** ✓ button to finalize the selected function.
7. Press the ⌂/**MENU**/■ button to return to the recording screen.
   The selected function is shown with an icon in the recording screen.

NOTE

The selected mode is shown with an icon in the recording screen.

- ***When the limiter function is ON, the LMT icon will appear on the recording screen.***
- ***When the peak reduction function is ON, the PEAK icon will appear on the recording screen.***

■ LIMITER

The limiter functions only at excessive input level.
This function is useful for musical instrument performance and musical recordings.

■ PEAK

This function automatically reduce the recording level to an appropriate value when input signal is too high. It is useful when you cannot preset the recording level or unable to make adjustments during recordings.

CAUTION

Distortion might occur if the input sound is too loud even when the limiter is on. In such a case, lower the input level or increase the distance between the mic and the sound source.

NOTE

When level control function is ON, you can still adjust the recording level by using the* INPUT LEVEL *volume. This function cannot be used, however, when the scene dial is set to EZ or 🎤.

Switching files during recording (track increment)

During recording, you can switch to a new recording file either manually or at a set time, and continue to make recording in the new file. (Track increment function)

Manual track increment during recording

During recording, you can easily update a file manually and continue to make recording.

1. During recording, press the **F1** button.

NOTE

Numbers at the end of file name will increment each time when a new file is created.

CAUTION

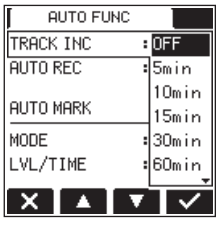
- ***The maximum total number of folders and files you can create is 5,000.***
- ***Files with a recording time of less than two seconds cannot be created.***
- ***The number of the new file will increment if its name is the same as the existing file.***
- ***Track increment function is not available during overdubbing.***

Automatic track increment at specified time

Without pausing recording, a new file can be created automatically during recording when the time set using the TRACK INC item on the AUTO FUNCTION screen is reached (track increment function).

Follow the below steps to set the maximum time for automatic increment:

1. Press the **/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC SETTING menu page.
3. Use the **F2** and the **F3** buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** button.
   AUTO FUNCTION screen is displayed.
4. Use the **F2** and the **F3** buttons to select (highlight) the parameter of the TRACK INC item and press the **F4** button.
   This shows the TRACK INC item parameters.



5. Use the **F2** and the **F3** buttons to select the automatic track increment time.
   Options: OFF (default value), 5min, 10min, 15min, 30min, 60min
6. Press the **F4** button to finalize the selected time.

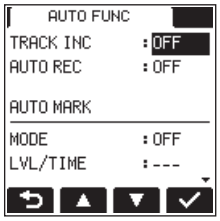
CAUTION

The maximum total number of folders and files you can create is 5,000.

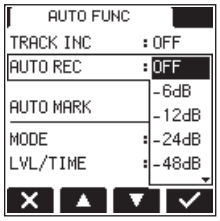
Automatic recording (AUTO REC)

When the auto record function is on, the unit can respond to input sound levels and start and pause recording and create new files automatically.

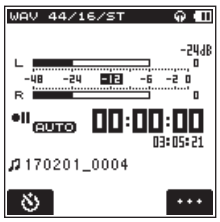
1. Press the **/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC SETTING menu page.
3. Use the **F2** and the **F3** buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** button.
   AUTO FUNCTION screen is displayed.



4. Use the **F2** and the **F3** buttons to select (highlight) the parameter of the AUTO REC item and press the **F4** button.
   This shows the AUTO REC item parameters.



5. Use the **F2** and **F3** buttons to select a level that activates the AUTO REC function (a level that recognize incoming signal).
   Options: OFF (default value), -6dB, -12dB, -24dB, -48dB
6. Press the **F4** button to finalize the selected level that activates the AUTO REC function.
7. Press the **/MENU/■** button to return to the home screen.
8. Press the **RECORD** button to set the recording standby mode.
   The level meter will display sounds within the level that activates the AUTO REC function and the AUTO icon will appear on the right side of the recorder status display.



Recording starts automatically when the input signal exceeds the threshold set in the LEVEL item.

NOTE

- ***When in recording standby, the* RECORD *indicator flashes faster than when recording.***
- ***When recording, if the input signal level falls below the level set with the* LEVEL *item for more than 5 seconds, the unit pauses recording and creates a new file. When the input signal level becomes higher than the set level again, it starts recording to a new file.***

- *When new files are created, incremental numbers are added to the end of each file name.*

9. When you need to stop recording, press the **⌂/MENU/■** button.

CAUTION

- *A new file cannot be created if the total number of folders and files would exceed 5000.*
- *Files shorter than 2 seconds cannot be created. If the sampling frequency is 96 kHz, files shorter than 4 seconds cannot be created.*
- *If the name of a newly created file would be the same as that of an existing file, the number will be incremented until the new file has a unique name.*

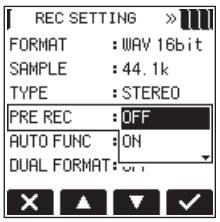
TIP

By using this in combination with the PRE REC function, you can record events without losing the beginnings of sounds.

Start recording from slightly before pressing record (PRE REC)

PRE REC function will allow you to start recording up to two seconds before the desired timing, by recording an input signal (up to two seconds) during the recording standby mode.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** » button to open the REC SETTING menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the PRE REC item and press the **F4** ✓ button.
   Open the parameter list for the PRE REC item.



4. Use the **F2** ▲ and **F3** ▼ buttons to turn on the PRE REC function.
   Options: OFF (default value), ON
5. Press the **F4** ✓ button to finalize the setting and return to the item selection mode.
6. Press the **⌂/MENU/■** button to return to the home screen.

TIPS

By combining PRE REC with the AUTO REC function, you will not miss an opportunity to start recording.

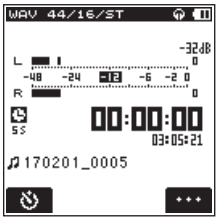
NOTE

- *When the pre-recording function is on, the PRE icon appears on the right of the recorder operation status area on the recording screen.*
- *If you start recording within two seconds from when the record standby mode is turned ON, recording will begin from the record standby mode.*
- *PRE REC function will not work during overdubbing.*

Using the SELF TIMER for recording

Similar to a camera, the DR-22WL has a SELF TIMER function to begin recording after a set period of time.

1. Press the **RECORD** button to enter recording standby.
   The indicator around the **RECORD** button flashes and the recording screen opens.
2. Press the **F1** button to turn the self-timer on, making its icon appear in the recorder operation status area.
   The time is shown below the self-timer icon. Each time you press the **F1** button, the setting changes as follows.
   Time display below the icon
   No display (OFF) → 5S (5 sec.) → 10S (10 sec.) → no display (OFF)



3. After setting the time, press the **RECORD** button. The **RECORD** indicator will flash more quickly until recording starts after the set amount of time passes.

NOTE

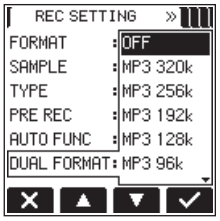
- *SELF TIMER function will not work when recording is on pause.*
- *SELF TIMER function can be used in the Automatic recording function. When recording begins, the Automatic recording function is prioritized.*

Recording in two formats (DUAL FORMAT)

The DR-22WL can transfer files to a smart phone via Wi-Fi. (See "Connect the DR-22WL and smart phone via Wi-Fi" on page 35.)

WAV/BWF delivers a high-quality sound but unfit to transfer via Wi-Fi due to its large file size. The DR-22WL can make simultaneous recordings in WAV/BWF format and MP3 format (smaller file size) for Wi-Fi transfer.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC SETTING menu page.
3. Use the **F2** and **F3** buttons to select (highlight) the parameter in DUAL FORMAT item and press the **F4** button.
   Open the parameter list for the DUAL FORMAT item.



4. Use the **F2** and **F3** buttons to select (highlight) the file type.
   Options: OFF (default value), MP3 32k, MP3 64k, MP3 96k, MP3 128k, MP3 192k, MP3 256k, MP3 320k
5. Press the **F4** button to finalize the setting and return to the item selection mode.

NOTE

- *When dual format recording is on, the DUAL icon appears to the right of the recorder operation status indicator on the Recording Screen.*
- *Dual format recording is available only in WAV 16bit/BWF 16bit with sampling rate of 44.1k/48kHz formats.*

Mixing the input sound to the playback for recording (overdubbing)

The DR-22WL can mix the input sound while playing the recorded track to create a new file.
The unit offers two overdubbing modes.

■ OVERDUB

This mode mixes the input sound to the playback file.
Users can monitor with a headphone and overdubbing the sounds.

■ AIRDUB

This mode records group singing or musical performance with the accompaniment music playback (similar to karaoke).
Since only the playback sound is output from the output jacks in this mode, you can use it to play along with an already recorded performance output from a connected external monitoring system, for example, and record this new performance together with the sound playing back.

NOTE

- *The recording format of the playback file is used when in an overdubbing mode (FORMAT, SAMPLE, TYPE). When the playback file format is mono, the inputs will also be treated as mono (left and right). When the playback file format is stereo, the inputs will also be treated as stereo. Open the FILE INFO screen if you want to check the playback file format. (See "File information screen (FILE INFO)" on page 41.)*
- *Speaker will not emit sound in overdubbing mode.*
- *Pause will not work in overdubbing mode (**RECORD** button is disabled).*
- *The overdubbed file is created in playback format regardless of the recording format setting.*
- *When in an overdubbing mode, the self-timer, pre-recording, automatic recording and dual format recording functions cannot be used.*

Select files for overdubbing with an input sound

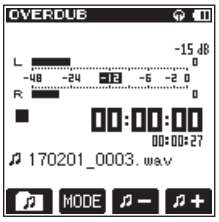
Select the file for overdubbing with either the ⏮/⏭ button or in browse screen.

NOTE

Please refer to the page 25 for selecting files in browse screen.

Start overdubbing

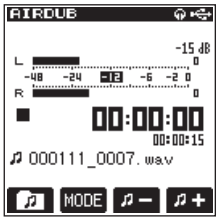
1. In home screen, set the **scene dial** to **DUB**.
   The OVERDUB screen is displayed and the input sound is recorded.



NOTE

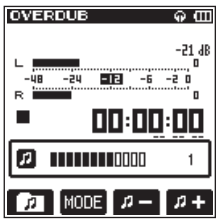
*In pause or playback mode, when you set the **scene dial** to **DUB**, the DR-22WL will make a force stop and display the OVERDUB screen.*

2. To switch to the overdubbing mode, press the **F2** MODE button. The overdubbing and AIRDUB modes will appear in turn on the screen.
   After selecting, either the OVERDUB or the AIRDUB screen will be displayed.

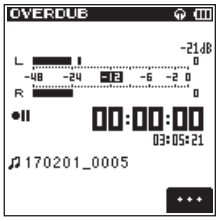


AIRDUB mode

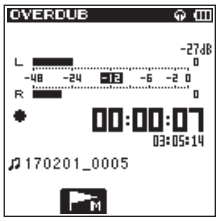
3. Press the **PLAY** button to play the file for overdubbing, and use the **F3** and **F4** buttons to adjust the playback volume.



4. Press the **RECORD** button to set the recording standby mode.
   The indicator around the **RECORD** button flashes.



5. Press again the **RECORD** button.
   Overdubbing will start.



   When recording starts, the **RECORD** indicator lights, and the recording screen displays the elapsed recording time and the remaining recording time.
6. To finish recording, press the **⌂/MENU/■** button.

Create cue marks during recording

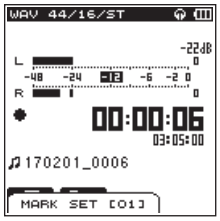
In recording or recording standby mode, the DR-22WL can create cue marks to a file to quickly locate the marked position and start playback. (See "Moving to the cue mark position" on page 29.)
You can either manually set the cue mark, or automatically set the cue mark level or time to minimize the operation noise.

NOTE

The unit will not move to the cue mark position in recording or recording standby mode.

Manual cue marking during recording

In recording or recording standby mode, press the **F2** button to create a cue mark.
A pull-up cue mark no. message will appear above the icon.



NOTE

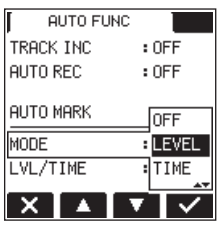
- ***Up to 99 cue marks can be created and stored in each file.***
- ***Cue marks that are created during the recording of WAV file in BWF format by this unit are stored in the file. You can use the cue marks in softwares compatible with BWF format.***

Add cue marks automatically to recording

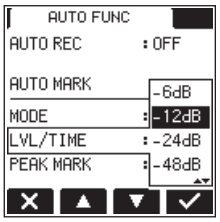
If you turn the AUTO MARK function ON, cue marks will be added automatically.

■ Add cue marks automatically according to set levels

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to open the REC SETTING menu page.
3. Use the **F2** and the **F3** buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** button.
   AUTO FUNCTION screen is displayed.
4. Use the **F2** and **F3** buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** button.
5. Use the **F2** and **F3** buttons to set the automatic cue mark mode to LEVEL.



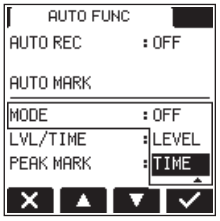
   Options: OFF (default value), LEVEL, TIME
6. Press the **F4** button to finalize the set mode.
7. Use the **F2** and **F3** buttons to select (highlight) the LVL/TIME of the AUTO MARK item and press the **F4** button.
   This shows the LVL/TIME item parameters.



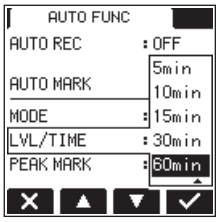
8. Use the **F2** ▲ and **F3** ▼ buttons to set a level to automatically add cue marks.
   Options: -6dB, -12dB (default value), -24dB, -48dB
9. Press the **F4** ✓ button to finalize the set mode.
10. Press the **⌂/MENU/■** button to return to the home screen.

■ Add cue marks automatically according to set time

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** » button to open the REC SETTING menu page.
3. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the parameter of the AUTO FUNC item and press the **F4** ✓ button.
   AUTO FUNCTION screen is displayed.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE in the AUTO MARK item, and press the **F4** ✓ button.
5. Use the **F2** ▲ and **F3** ▼ buttons to set the automatic cue mark mode to TIME.



   Options: OFF (default value), LEVEL, TIME
6. Press the **F4** ✓ button to finalize the set mode.
7. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the LVL/TIME in the AUTO MARK item, and press the **F4** ✓ button.
   This shows the LVL/TIME item parameters.

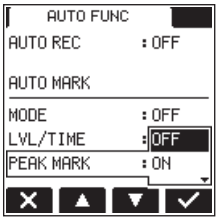


8. Use the **F2** ▲ and **F3** ▼ buttons to set a time to automatically add cue marks.
   Options: 5min, 10min, 15min, 30min, 60min (default value)
9. Press the **F4** ✓ button to finalize the set time.
10. Press the **⌂/MENU/■** button to return to the home screen.

Adding marks automatically when the PEAK indicator lights

The unit can add marks automatically when the **PEAK** indicator lights during recording.

1. Press the **⌂/MENU/■** button to open the menu screen.
2. Press the **F1** » button to open the REC SETTING page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select AUTO FUNC, and press the **F4** ✓ button.
   The AUTO FUNCTION screen opens.
4. Use the **F2** ▲ and **F3** ▼ buttons to select PEAK MARK, and press the **F4** ✓ button.
   The PEAK MARK parameters will be shown.



5. Use the **F2** ▲ and **F3** ▼ buttons to turn the PEAK MARK function ON.
   Options: OFF (default), ON
6. Press the **F4** ✓ button to confirm the setting.
7. After completing the setting, press the **⌂/MENU/■** button to return to the Home Screen.

NOTE

- ***Marks are added two seconds before a* PEAK *indicator lights.***
- ***For 10 seconds after a mark is added because a* PEAK *indicator lit, no other mark will be added if the* PEAK *indicator lights again or an automatic mark would normally be added according to the* LEVEL *setting.***
- ***Marks added because of a* PEAK *indicator lighting will not cause division when the automatic division function is used.***

Recording duration

The table below shows the maximum recording time per file format for microSD/microSDHC/microSDXC cards:

File format (recording setting)			microSD/microSDHC/microSDXC cards capacity			
			1GB	4GB	8GB	32GB
WAV/BWF 16 bit (STEREO)		44.1kHz	1 hour 34 minutes	6 hour 17 minutes	12 hour 35 minutes	50 hour 23 minutes
		48kHz	1 hour 26 minutes	5 hour 47 minutes	11 hour 34 minutes	46 hour 17 minutes
		96kHz	43 minutes	2 hour 53 minutes	5 hour 47 minutes	23 hour 08 minutes
WAV/BWF 24 bit (STEREO)		44.1kHz	1 hour 02 minutes	4 hour 11 minutes	8 hour 23 minutes	33 hour 35 minutes
		48kHz	57 minutes	3 hour 51 minutes	7 hour 42 minutes	30 hour 51 minutes
		96kHz	28 minutes	1 hour 55 minutes	3 hour 51 minutes	15 hour 25 minutes
MP3 (STEREO/MONO)	32 kbps	44.1kHz/48kHz	69 hour 26 minutes	277 hour	555 hour	2222 hour
	64 kbps	44.1kHz/48kHz	34 hour 43 minutes	138 hour	277 hour	1111 hour
	96 kbps	44.1kHz/48kHz	23 hour 08 minutes	92 hour 35 minutes	185 hour	740 hour
	128 kbps	44.1kHz/48kHz	17 hour 21 minutes	69 hour 26 minutes	138 hour	555 hour
	192 kbps	44.1kHz/48kHz	11 hour 34 minutes	46 hour 17 minutes	92 hour 35 minutes	370 hour
	256 kbps	44.1kHz/48kHz	8 hour 40 minutes	34 hour 43 minutes	69 hour 26 minutes	277 hour
	320 kbps	44.1kHz/48kHz	6 hour 56 minutes	27 hour 46 minutes	55 hour 33 minutes	222 hour

- The recording times shown above are theoretical values. Times may differ depending on the microSD/microSDHC/microSDXC card in use.
- The recording times shown above are the total possible recording times for the microSD/microSDHC/microSDXC cards, and not the continuous recording times.
- If the recording time exceeds 24 hours, a new file will be created automatically and recording will continue without pause.
- Recording automatically stops if recording time exceeds 24 hours.
- Mono recording in WAV format will double the maximum recording times specified above.

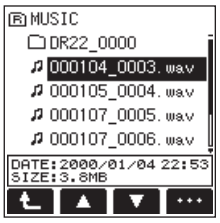
5 – Using files and folders (browse screen)

In browse screen, you can browse the MUSIC folder (stores audio files), delete files and folders, or create a new folder in the microSD card.

TIPS

You can also connect the DR-22WL with a computer via USB, or directly insert the microSD card to the computer to change configuration of folders or delete files in the MUSIC folder. In addition, you can change file names from the computer.

To display the browse screen, press the **F1** button in stop/pause mode.



Prior to displaying the browse screen, the unit will display the files and folders selected in home screen.

Navigating in the browse screen

Folders and music files are displayed in a layered-tree type in the browse screen.

The DR-22WL can create up to two layers in each folder.

- Use the **F2** and **F3** buttons to select (highlight) the file and/or folder.
- While selecting the file and/or folder, press the **F1** button to move up to the next layer.
- While selecting the file and/or folder, press the **F4** button to display the pop-up menu.
- While selecting a file, press the **PLAY** button to return to the home screen and playback the selected file.

  The folder that contains the above file becomes the current folder (currently selected folder), and the recorded files will be saved in this folder.

Icon display on the browse screen

Below are descriptions for each of the icons displayed in the browse screen.

■ MUSIC folder ( )

When the browse screen displays the ROOT layer, the MUSIC folder will appear at the most top.

■ Audio file ( )

This is an audio file.

■ Currently selected audio file ( )

This is the currently selected audio file.

■ Folder ( )

This folder contains a sub-folder.

■ Folder ( )

This folder contains no sub-folder.

■ Folder in display ( )

Contents of this folder is currently in display.

■ New folder ( )

A new folder will be created.

File operations

Select (highlight) the desired audio file in the browse screen, and press the **F4** button. The below pop-up menu will appear.

Use the **F2** and **F3** buttons to select (highlight) an item, and press the **F4** button. The following action will start according to the selected item.

Press the **F1** button to close the pop-up menu.

■ SELECT

Returns to the home screen and playback the selected file.

■ DELETE

A pop-up message appears to confirm that the deletion of the selected file.

To delete the file, press the **F3** button. To cancel delete, press the **F2** button.

NOTE

When the home screen is open, press the F4 button to open a pop-up message confirming deletion of the selected file.

Press the* F3 *button to delete the file, or press the* F2 *button to cancel the deletion.

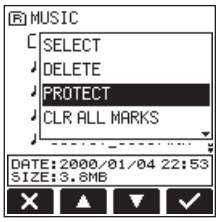
■ CANCEL

Action for the selected (highlighted) file is canceled, and the pop-up menu is closed.

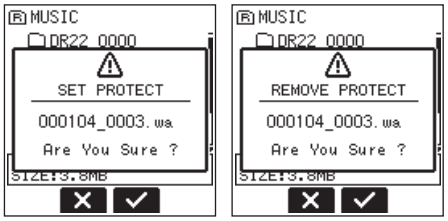
Protecting files

This function protects files to change them to read-only.

1. Select a file to protect on the browse screen.
2. Press the **F4** ··· button to open the pop-up menu.
3. Use the **F2** ▲ and **F3** ▼ buttons to select PROTECT.



4. Press the **F4** ✓ button.
   A PROTECT pop-up message appears to confirm that you want to protect the selected file.
   If the file has already been protected, unprotect will appear instead.



5. Press the **F3** ✓ button to protect the file and return to the browse screen. If the file has already been protected, this will remove protection from it before returning to the browse screen.
   Press the **F2** ✕ button to cancel changing the protection status and return to the browse screen.

NOTE

An icon appears on the left side of the browse screen when protected.

Clearing all marks

1. Select the file for which to clear all marks on the browse screen.
2. Press the **F4** ··· button to open the pop-up menu.
3. Use the **F2** ▲ and **F3** ▼ buttons to select CLR ALL MARKS.

4. Press the **F4** ✓ button.
   The following confirmation pop-up message appears.

5. Press the **F3** ✓ button.
   Press the **F2** ✕ button to cancel mark clearing.

Folder operations

Select (highlight) the desired file in the browse screen, and press the **F4** ··· button. The following pop-up message menu will appear.

Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) an item, and press the **F4** ··· button. The following action will start according to the selected item.
Press the **F1** ✕ button to close the pop-up menu.

■ OPEN

This will open the selected folder.

■ SELECT

Returns to the Home Screen and selects the first file in the folder. In addition, the recorded files are saved in the selected folder.

■ ALL DELETE

A pop-up message appears to confirm deletion of all files in the selected folder.

To delete the file, press the **F3** ✓ button. To cancel delete, press the **F2** ✕ button.

NOTE

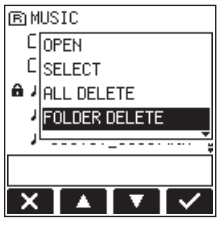
Read-only files and unrecognized files by the DR-22WL will not be deleted.

■ CANCEL

The operation for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Deleting empty folders

1. Select the folder that you want to delete on the browse screen.
2. Press the **F4** ··· button to open the pop-up menu.
3. Use the **F2** ▲ and **F3** ▼ buttons to select FOLDER DELETE.



4. Press the **F4** ✓ button.
   The following confirmation pop-up message appears.

NOTE

If the folder is not empty, NOT EMPTY ***will appear.***

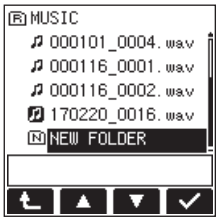
5. Press the **F3** ✓ button to delete the empty folder.
   Press the **F2** ✕ button to cancel deleting the empty folder.

Moving up a folder level

Press the **F1** ↩ button to move up a folder level.

Creating a new folder

A NEW FOLDER is available at the bottom of each folder.



1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the NEW FOLDER and press the **F4** ··· button.
   A quick menu will pop-up on screen.
   It shows a message to confirm creation of a new folder.

2. To create a new folder, press the **F3** ✓ button. To cancel creation of a new folder, press the **F2** ✕ button.

NOTE

The DR-22WL is not designed to handle folders with three or more layers, and therefore the NEW FOLDER ***does not exist in a folder with two layers.***

A newly created folder becomes the current folder (currently selected folder), and recorded files are saved in this folder.

Playback

To start playback in home screen mode, press the **PLAY** button in stop mode.

NOTE

You can also select and playback a file in the browse screen.

Pausing/stopping playback

To stop playback, press the **⌂/MENU/ ■** button. (pause)
When playback was stopped in the middle of a file, the status icon ❚❚ will appear on screen.

If you press the ⏮ or ⏭ button to move to the beginning of a file and stop playback, ■ is shown.
To resume playback from the stop position, press the **PLAY** button.

Rewinding and fast-forwarding (search)

During playback when the home screen is open, press and hold the ⏮/⏭ button to search backward/forward.

NOTE

Search speed will increase if you keep holding the ⏮/⏭ button.

Selecting a playback file (skip)

In home screen, press either the ⏮ button or the ⏭ button to select the file you want to play.
When you are in the middle of a file and want to return to the beginning, press the ⏮ button. To skip to the previous file, press the ⏮ button.
To skip to the next file, press the ⏭ button at the beginning of in the middle of a file.

Special playback (practice mode)

Practice mode is useful for practicing musical instruments.
To use the practice mode while in stop/pause/playback mode, set the **scene dial** to "⚙" in home screen. The PRACTICE screen will appear with a practice mode.

Loop playback, playback speed change, and key change can be made in this mode.
Press the **F1** button to select the file from the browse screen you want to playback.
To exit practice mode, change the **scene dial** to a different setting.

Press the **F2** button to turn input signal monitoring on/off.
When monitoring is off, the 🎙× icon appears at the top of the screen. The input signal volume can be adjusted. ***(See "Adjusting the input level" on page 17.)***

NOTE

File skip will not work in practice mode.

Loop playback

Loop playback allows you to repeat playback of the entire or part of a file.

■ Set the IN and OUT points

1. In PRACTICE screen, press the **F3** button to select (highlight) the LOOP item, and press the **F4** button to set loop playback.

2. Move to the loop playback IN point, and press the **F2** button.
   This position is set as IN (start) point.
   The ⌜ icon will light at the top of the playback position display bar.
3. Press the **F3** button at the loop playback OUT point.
   This position is set as OUT (end) point, and the unit will playback the section between the loop playback IN and OUT points.
   The ⌟ icon will light at the top of the playback position display bar.

NOTE

- ***The I,'O Too Short pop-up message will appear when the IN-OUT points are too close. Please reset by spacing at least one second in between.***
- ***MP3 files with VBR format may affect the accuracy of the IN and OUT points settings.***

■ Delete the IN and OUT points

In stop mode, press the ⏮ button or the ⏭ button to skip to the IN (start) and OUT (end) points.

When stopped, skip to an IN (start) point and press the **F2** button to clear that point.

When stopped, skip to an OUT (end) point and press the **F3** button to clear that point.

■ Loop playback

Press the **F1** button to turn the loop playback function on/off. When the loop playback function is on, the 🔁 icon appears at the top of the screen. The settings are saved even when the loop playback function is off.
Loop playback will start as follows, depending on the IN (start) and OUT (end) points:

Set only the IN (start) point	Loop playback from IN point → end of the file
Set only the OUT (end) point	Loop playback from the beginning of the file → OUT point
Set both IN/OUT points	Loop playback between IN - OUT points
No settings of IN/OUT points	Loop playback from the beginning until the end of the file

Changing the playback speed (VSA)

The DR-22WL has a built-in VSA (Variable Speed Audition) function to change the playback speed without changing its pitch.

CAUTION

The VSA function will not work when you select a file recorded with a sampling rate of 96kHz.

1. In PRACTICE screen, press the **F3** button to select (highlight) the SPEED item, and press the **F4** button to enable the playback speed change option.

2. Use the **F2** and the **F3** buttons to change the playback speed value.
   Options: x0.5 - x2.0 (per x0.1) (default: x1.0)
3. Press the **F4** button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

NOTE

Press the* F1 *button to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Changing keys

The DR-22WL can change the playback key (pitch) with its key control function.

The key control function offers KEY and FINE TUNE modes. The KEY mode can adjust in ± 6 half-tone, and the FINE TUNE mode can adjust in ±50 cents.

1. In the PRACTICE screen, press the **F3** button to select (highlight) either the KEY or FINE items, then press the **F4** button to enable the key change setting.

Pop-up display of the KEY item

Pop-up display of the FINE item

2. Use the **F2** and the **F3** buttons to change the key value.
   Options:
   When KEY is selected : ♭6 - ♯6 (per half-tone) (default: 0)
   When FINE is selected : –50 - +50 (per cent) (default: 0)
3. Press the **F4** button to finalize the setting and return to the item selection mode.
4. Press the **PLAY** button for playback.

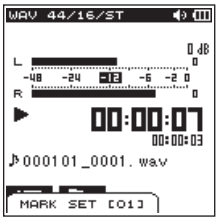
NOTE

Press the* F1 *button to simultaneously turn on/off the speed change and key change (KEY, FINE) settings Settings will be stored.

Adding marks manually during playback

Press the **F2** button during playback to add a mark at that position.

The number of the added mark will be shown on a pull-up at the bottom of the display.



Clearing specified marks

Pause at the position of a mark. Then, press the **F2** button to clear that mark.

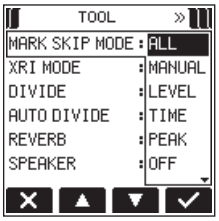
Moving to the cue mark position

In stop or playback mode, you can move to cue marks created in the selected file.

You can use this function to go to the beginning of a song, similar to an index.

Multiple types of marks can be added to files (MARK, LEVEL, TIME and PEAK). With this function, you can set what type of mark to use when moving between them.

1. Press the **/MENU/** ■ button to open the menu screen.
2. Press the **F1** button to open the TOOL page.
3. Use the **F2** and **F3** buttons to select MARK SKIP MODE, and press the **F4** button.
   The MARK SKIP MODE options will be shown.



4. Use the **F2** ▲ and **F3** ▼ buttons to select the MARK SKIP MODE.
   Options:
   - ALL (default): Move between all marks
   - MARK: Move only between marks added manually
   - LEVEL: Move only between marks added using the automatic mark function LEVEL setting
   - TIME: Move only between marks added using the automatic mark function TIME setting
   - PEAK: Move only between marks added when a **PEAK** indicator lit
   - OFF: Do not move between marks
5. Press the **F4** ✓ button to confirm the setting.
6. When finished, press the **⌂/MENU/■** button to return to the Home Screen.
7. In stop or playback mode, press together the **F2** button and either the I◄◄ button or the ►►I button.

NOTE

You cannot move to a cue mark of a different file.

Dividing a file

A recorded file can be divided into two manually or at a mark position.

CAUTION

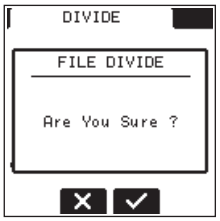
- ***MP3 files cannot be divided.***
- ***If the microSD card has insufficient open space, division might not be possible.***
- ***Division is not possible if the file name would become more than 200 characters long.***
- ***Division is not possible if a file that already exists has the same name as the name that would be given to a new file created by division.***

Dividing the selected file (DIVIDE)

A recorded file can be divided into two at a desired position.

1. Use the I◄◄ button, the ►►I button, or the browse screen to select the file you want to divide.
2. Press the **⌂/MENU/■** button to display the menu screen.
3. Use the **F1** » button to display the TOOL page.
4. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in DIVIDE item and press the **F4** ✓ button.
   The DIVIDE screen is displayed.

5. Use the **F2** ← and **F3** → buttons to finalize the dividing section, and press the **F4** ✓ button to finalize the setting.
   The following pop-up window appears.



6. Press the **F3** ✓ button to divide the file and return to the home screen.
   If you press the **F2** ✕ button**,** the file will not divide and return to the DIVIDE screen.
7. When finished, press the **⌂/MENU/■** button.

NOTE

- ***When the DIVIDE screen is open, you can press the* PLAY *button and set the divide position while playing the track.***
- ***When the DIVIDE screen is open, press the* PLAY *button to start/pause playback and press the I◄◄/►►I button to move to the beginning/end of the track. Use the* F2 ← *and* F3 → *buttons to adjust the division point in fine increments. Press and hold these buttons to change the position continuously.***
- ***When a file is divided, names will be created ending with either a or b.***
  (Example)
  File name before division
  140826_0001.wav
  File name after division
  140826_0001a.wav (before the dividing point)
  140826_0001b.wav (after the dividing point)

CAUTION

- ***MP3 files cannot be divided.***
- ***Division may not be available when microSD card does not have sufficient capacity.***
- ***File name with more than two hundred characters cannot be divided.***
- ***File cannot be divided when there is a file name identical to that of the post-divided file.***

TIPS

You can add cue marks during recording at the position you want to divide. (See "Create cue marks during recording" on page 22.)

Dividing the selected file automatically (AUTO DIVIDE)

Use the AUTO DIVIDE function to automatically divide an already recorded file at positions where marks have been added.

NOTE

See "Create cue marks during recording" on page 22 for details about how to add marks.

1. Select a file to be divided using the I◄◄ and ►►I buttons or the browse screen.
2. Press the **⌂/MENU/■** button to open the menu screen.
3. Press the **F1** » button to open the TOOL menu page.
4. Use the **F2** ▲ or **F3** ▼ button to select the AUTO DIVIDE item parameter and press the **F4** ✓ button.
   The following pop-up message will appear.

5. Press the **F3** ✓ button to divide the file.
   To return to the TOOL page without dividing the file, press the **F2** ✕ button.
6. When finished, press the **⌂/MENU/■** button.

CAUTION

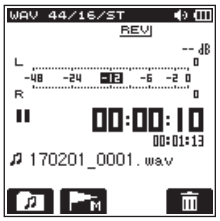
If the length of time between any two marks is less than two seconds, automatic division is not possible.

NOTE

- ***After dividing a file, new files with "_1", "_2" and "_3" added to the end of the original file name are created in order.***
  Example: 2 marks
  File name before division
  140826_0001.wav
  File name after division
  140826_0001_1.wav
  140826_0001_2.wav
  140826_0001_3.wav
- ***When used together with the automatic marking function, long recordings can automatically be divided into files with individual songs. (See "Add cue marks automatically to recording" on page 22.)***

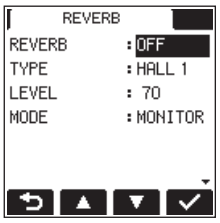
Reverb function

This unit has a built-in reverb that can be applied to the input sound or the output sound.
When reverb function is ON, the REV icon will appear at the top of the home screen.



Setting the reverb function

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** » button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter in REVERB item and press the **F4** ✓ button.
   The REVERB screen is displayed.



NOTE

You can set and adjust reverb in record standby mode as well, from the REVERB page of the input setting screen.

4. The following settings are made in the REVERB screen.

REVERB:

Set the reverb on/off status (default value: OFF).

TYPE:

See the reverb type from the pre-set items. See page 32 for more details on reverb pre-set items.

LEVEL:

Adjust the reverb output level. Settings can be selected from 0 - 100. (default value: 70)

MODE:

Set the reverb mode.

MODE (options)	Icon	Detail
MONITOR (default value)	REV	You can add reverb to the output sound. This does not affect the sound recorded.
REC	REV	You can add reverb to the input sound. You can record sound with reverb added.

5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ✓ button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.
7. Press the **F4** ✓ button to finalize the setting and return to the item setting item status.
8. Repeat the 4.-7. steps as necessary.
9. When setting is completed, press the **⌂/MENU/■** button.

CAUTION

Reverb function will not work (but able to make settings) when the setting or the selected playback file's sampling rate is 96kHz.

NOTE

The reverb function on/off setting is available also in recording standby mode; press F4 ··· button and make setting in the REVERB page of the input setting screen.

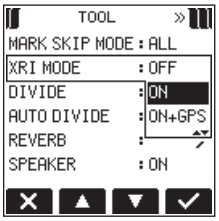
Reverb pre-set list

Pre-set name	Effect
HALL 1 (default value)	A bright effect, like a spacious hall
HALL 2	A warm effect, like a spacious hall
ROOM	Small room effect
STUDIO	Studio effect
PLATE 1	Bright plate reverb
PLATE 2	Warm plate reverb

Setting the XRI information recording function

When recording in the BWF file format, the unit can also record XRI information (eXtended Recording Information), which includes the input volume and other recording settings.

1. Press the **⌂/MENU/■** button to open the menu screen.
2. Press the **F1** » button to open the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select XRI MODE, and press the **F4** ✓ button.
   The XRI MODE options will be shown.



4. Use the **F2** ▲ and **F3** ▼ buttons to set the XRI information recording mode.
   Options:
   OFF: XRI information not recorded
   ON (default): Record XRI information
   ON+GPS: Record XRI and GPS information
5. Press the **F4** ✓ button to confirm the setting.
6. When finished, press the **⌂/MENU/■** button to return to the Home Screen.

CAUTION

GPS information is acquired from the dedicated app (DR CONTROL). This information cannot be acquired when using the unit without the app. Information acquired is as follows.

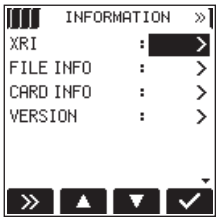
LATITUDE*: Latitude data*
LONGITUDE*: Longitude data*

Viewing XRI information

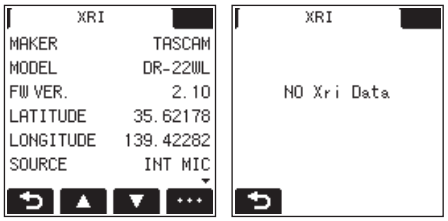
You can check XRI and GPS information recorded in a BWF-compliant WAV file on the XRI screen.

Follow these procedures to open the XRI screen.

1. Use the ⏮ and ⏭ buttons or the browse screen to select the file with information that you want to view.
2. While the Home Screen is open when stopped, press the **⌂/MENU/■** button to open the menu screen.
3. Press the **F1** » button to open the INFORMATION page.
4. Use the **F2** ▲ and **F3** ▼ buttons to select the XRI parameter.



5. Press the **F4** ✓ button to open the XRI screen that shows the following XRI information.
   If no information has been recorded, NO Xri Data is shown.

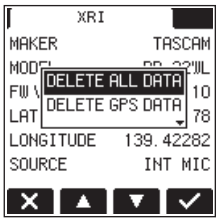


6. Press the **F1** ↩ button to return to the INFORMATION menu page.

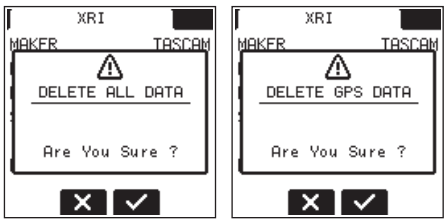
Deleting XRI information

You can delete XRI and GPS information.

1. When the XRI screen is open, press the **F4** ··· button to open the pop-up menu.



2. Use the **F2** ▲ and **F3** ▼ buttons to select which information to delete.
   Options:
   DELETE ALL DATA: Delete XRI and GPS information.
   DELETE GPS DATA: Delete only GPS information.
3. Press the **F4** ✓ button.
   The following confirmation pop-up message appears.

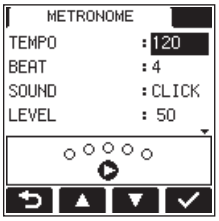


4. Press the **F3** ✓ button to clear the selected type of information.
   Press the **F2** ✕ button to cancel clearing the selected type of information.
5. When finished, press the **⌂/MENU/■** button to return to the Home Screen.

Metronome function

The DR-22WL has a built-in metronome, useful for practicing musical instruments.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** » button to display the TOOL page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the METRONOME item and press the **F4** ✓ button.
   The METRONOME screen is displayed.



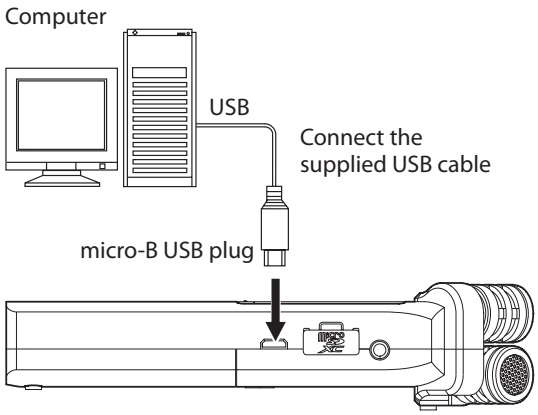
4. The following settings are available in the METRONOME screen:
   TEMPO
   Set speed between 20 - 250 (BPM).
   (default value: 120)
   BEAT
   Set beat between 0 - 9. (default value: 4)
   This will accent the first beat.
   SOUND
   You can set the metronome sound to CLICK, STICK or BELL. (Default: CLICK)
   LEVEL
   Set the metronome volume 0 - 100.
   (default value: 50)
5. Use the **F2** ▲ and the **F3** ▼ buttons to select (highlight) the setting parameter and press the **F4** ✓ button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the desired option/value.
7. Press the **F4** ✓ button to finalize the setting and return to the item setting item status.
8. Repeat the 5.-7. steps as necessary.
9. Press the **PLAY** button to start the metronome. When the metronome is operating, press the **PLAY** button to stop it.
10. Press the **F1** ↩ button to return to the TOOL page.

8 – Connecting with a computer

By connecting this unit with a computer using the USB cable, you can transfer audio files on the microSD card in the unit to a computer, as well as transfer audio files on the computer to the microSD card in the unit.

This unit can handle audio files of the following formats.

WAV : 44.1k/48k/96kHz, 16/24 bit
BWF : 44.1k/48k/96kHz, 16/24 bit
MP3 : 44.1k/48kHz, 32k/64k/96k/128k/192k/256k/320kbps



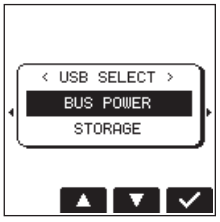
NOTE

- ***Instead of connecting the DR-22WL a computer via USB, you can remove the microSD card from the unit and insert directly (or with a card adapter) to the computer and make the same operation.***
- ***Both WAV and BWF files will have the ".wav" extension.***

CAUTION

- ***The DR-22WL will not operate when STORAGE is selected (highlighted) under USB connection.***
- ***Please make a direct connection with the computer without using a hub.***

When you make a USB connection before or after turning ON the unit's main power, the USB SELECT screen will appear and prompt you to select the USB bus power or make a USB connection with the computer.



Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the STORAGE; if you press the **F4** ✓ button, the unit will connect with the computer and displays the USB connected message.

Make sure that the microSD card is inserted properly to the DR-22WL.

NOTE

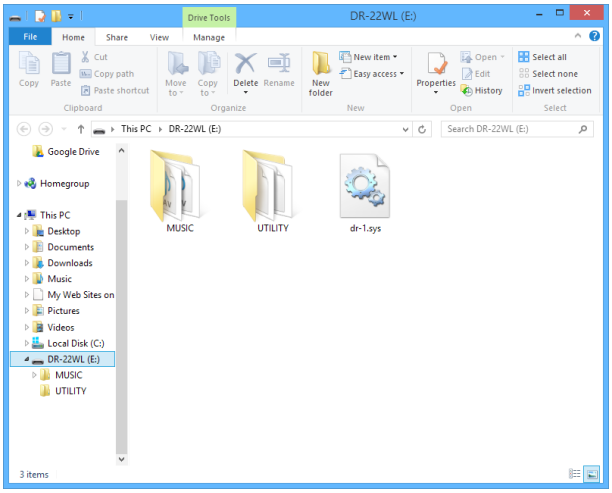
When you make a USB connection while the batteries are inserted to the unit, the USB port will supply power (USB bus power prioritized).

If USB connection is made when the microSD card is not inserted correctly, a pop-up message of Can't Save Data will appear.

When you turn on the "computer", the screen will display the DR-22WL as a external drive with a volume label of "DR-22WL".

Transferring files to a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Open the "MUSIC" folder and drag & drop the file you want to transfer to the desired location.



Transferring files from a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Drag & drop the audio file from the computer to the "MUSIC" folder.

TIPS

- ***You can manage the "MUSIC" folder on computer screen.***
- ***You can create a sub-folder in the "MUSIC" folder. The DR-22WL can create up to two layers. The DR-22WL cannot recognize sub-folders and files located at the third layer level or below.***
- ***If you name the sub-folders and music tracks, these names will appear on the home screen or browse screen of this unit.***

Disconnecting from a computer

When disconnecting the DR-22WL from the computer, make sure to follow the correct steps and remove the USB cable.

The power turns off when the shut-down process is completed.

Refer to the computer's operation manual for instructions on unmounting from the computer.

Connect the DR-22WL and smart phone via Wi-Fi

CAUTION

The DR-22WL designs are in conformance with the laws and regulations of the countries and regions in which this unit is sold, and labeled as required.

The DR-22WL is approved in the following countries and regions:

United States, Canada, Europe (EU member states), Australia, New Zealand, Japan

The use of wireless functions in a country other than those listed above could result in a violation of that country's wireless transmission laws.

Our company will bear no responsibility for use in countries other than those listed above.

TIPS

The battery will drain faster during Wi-Fi use.

Running out of batteries during data transfer will terminate the process and may result in transfer failure.

We recommend to use either the AC adapter or USB bus power during Wi-Fi use.

The DR-22WL is designed for remote control with the use of an exclusive application (DR CONTROL), free of charge.

Transport control such as playback and stop, as well as input level adjustment and file transfer can be made via Wi-Fi.

How to download and install the exclusive application (DR CONTROL)

1. Connect your smart phone to the Internet.
2. Search the exclusive application (DR CONTROL) and download from either Google Play (Android smart phone) or App Store (iOS device) for installation.

Selecting the Wi-Fi mode

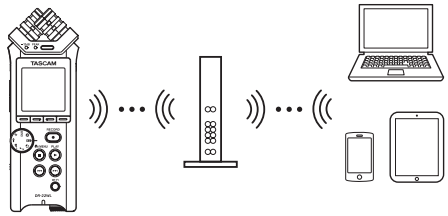
You can choose from two connection modes according to the use conditions.

■ TO DEVICE mode

This unit operates as an access point, and computers, smartphones and other external devices can connect to it by Wi-Fi.

■ VIA ROUTER mode

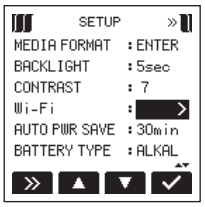
This unit can connect to computers, smartphones and other external devices by Wi-Fi through an existing Wi-Fi router. This allows more flexibility. This also enables simultaneous connection to the Internet, allowing easier file sharing and location information checking, for example.



Connecting the unit directly to external devices (smartphones, tablets and computers) by Wi-Fi (TO DEVICE mode)

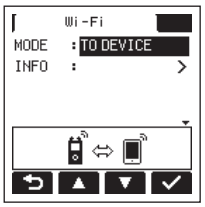
■ Setting the Wi-Fi mode to TO DEVICE

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to display the SETUP page.
3. Use the **F2** and **F3** buttons to select (highlight) the Wi-Fi item parameters.



4. Press the **F4** button to display the Wi-Fi screen.
5. Use the **F2** and **F3** buttons to select (highlight) the MODE item parameters and press the **F4** button.
6. Use the **F2** and **F3** buttons to set the Wi-Fi mode to TO DEVICE .

   Options: TO DEVICE (default value),VIA ROUTER



Connecting the DR-22WL to a smart phone via Wi-Fi for the first time

The DR-22WL can make a Wi-Fi/peer-to-peer connection with a smart phone via Wi-Fi, without the use of a router or other external devices. No Wi-Fi network environment is required. It can make direct connection with your smart phone.

NOTE

When this unit and a smartphone are connected by Wi-Fi, connection with other Wi-Fi networks will not be possible.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

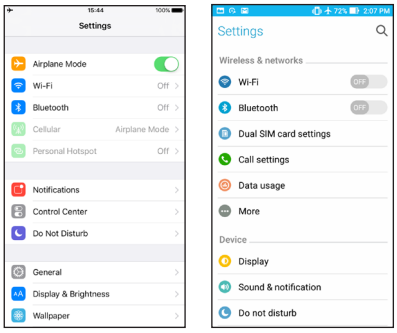
   A CONNECT NEW? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a new smartphone, so press the **F3** button.

3. SSID and PASSWORD appear on the display.

NOTE

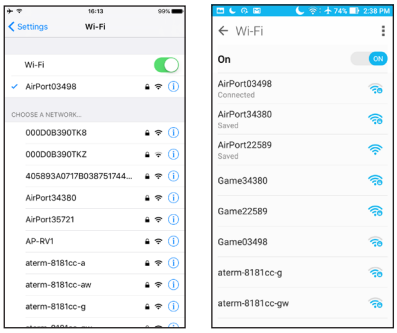
The SSID is the name of the wireless LAN access point (wireless LAN device).

4. Select "**Settings**" ➝ "**Wi-Fi**" on the device.



iOS device example Android device example

5. When Wi-Fi is enabled on for your device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-44WL.



iOS device example Android device example

6. A password input screen appears on the device. Enter the password shown on the display of the unit.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

NOTE

The above description on operating the device are for reference only. Please refer to your smart phone's operation manual for more details.

Connecting the DR-22WL to a smart phone via Wi-Fi (from second time onward)

When you establish a connection between the DR-22WL and your smart phone for the first time and need to connect them again, you only need to select the SSID from the second time onward.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.
   A CONNECT NEW? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a previously connected smartphone, so press the **F2** ✕ button.

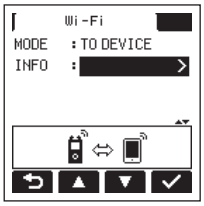
3. The pop-up message on the display disappears and the unit waits for a connection with a smartphone.
4. In your device, select "**Settings**" ➝ "**Wi-Fi**".
5. When Wi-Fi is enabled on for your device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.
6. A Wi-Fi connection between the unit and your smartphone is established and the **Wi-Fi** indicator is lit.

NOTE

The above description on operating the device are for reference only. Please refer to your smart phone's operation manual for more details.

■ Checking connection information

1. When the Wi-Fi screen is open, use the **F2** ▲ and **F3** ▼ buttons to select the INFO item, and press the **F4** ✓ button to select the parameter.



2. Press the **F4** ✓ button to open the INFORMATION Screen.

SSID and PASSWORD information appears.
The SSID is used to identify this unit on the Wi-Fi network.
The PASSWORD is necessary when connecting to this unit by Wi-Fi.

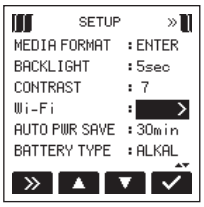
NOTE

Press the* F4 *button to change the password.

Connecting the unit to external devices (smartphones, tablets and computers) by Wi-Fi (VIA ROUTER mode)

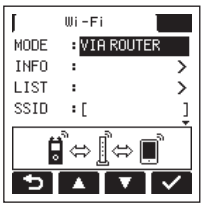
■ Setting the Wi-Fi mode to VIA ROUTER

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** button to display the SETUP page.
3. Use the **F2** and **F3** buttons to select (highlight) the Wi-Fi item parameters.



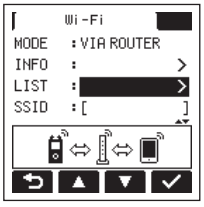
4. Press the **F4** button to display the Wi-Fi screen.
5. Use the **F2** and **F3** buttons to select (highlight) the MODE item parameters and press the **F4** button.
6. Use the **F2** and **F3** buttons to set the Wi-Fi mode to VIA ROUTER.

   Options: TO DEVICE (default value), VIA ROUTER



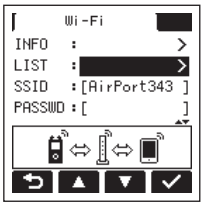
■ Connecting the unit to an external router

1. When the Wi-Fi screen is open, use the **F2** and **F3** buttons to select the LIST item, and press the **F4** button to select the parameter.



2. Press the **F4** button to open the SSID LIST Screen.

3. From the list shown on the SSID LIST screen, use the **F2** and **F3** buttons to select the router you want to connect, and press the **F4** button to set it.
4. The selected SSID will be shown for the SSID item.



NOTE

The SSID can also be input directly using the Wi-Fi screen SSID item.

To do this, at the SSID item, use the ⏮ and ⏭ buttons to move the cursor, and use the F2 and F3 buttons to set the characters.

Press the F4 button to confirm the SSID.

5. When the Wi-Fi screen is open, use the **F2** and **F3** buttons to select the PASSWD item, and press the **F4** button.
6. At the PASSWD item, use the ⏮ and ⏭ buttons to move the cursor, and use the **F2** and **F3** buttons to set the router password (encryption key).

   Press the **F4** button to confirm the router password (encryption key).

   - The following message appears when connection with the router has succeeded. The **Wi-Fi** indicator on the unit lights.

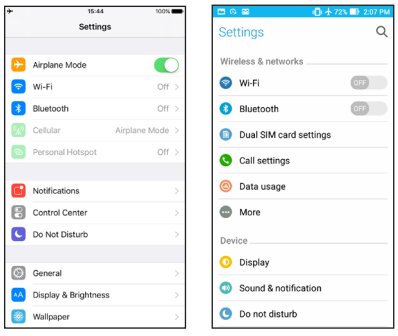
   - The following message appears if connection with the router fails. Input the correct password.

NOTE

- ***In many cases, the router password (encryption key) is on a label on the router itself or in its operation manual, for example.***
- ***After connection with a router has succeeded once, reconnection will be possible by just pressing the Wi-Fi button on this unit. Passwords for the two most recent connections are stored in this unit.***

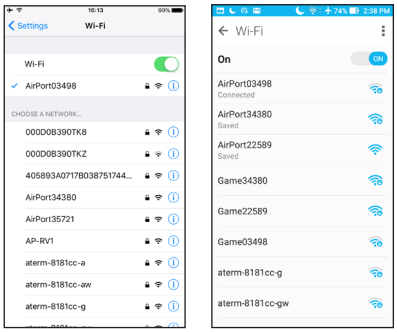
■ Connecting a smartphone or other device to an external router

1. Select **"Settings"** → **"Wi-Fi"** on the device.



iOS device example Android device example

2. When the device Wi-Fi is turned on, a Wi-Fi device SSID list will appear. Select the SSID of the external router to use.

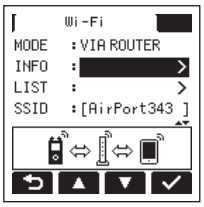


iOS device example Android device example

3. Input the password for that external router.
   A Wi-Fi connection between the smartphone and the external router will be established.

■ Checking the Wi-Fi connection information

1. When the Wi-Fi screen is open, use the **F2** ▲ and **F3** ▼ buttons to select the INFO item, and press the **F4** ✓ button to select the parameter.



2. Press the **F4** ✓ button to open the INFORMATION Screen.

NAME, MAC ADDRESS, and IP ADDRESS information is shown.
NAME shows the name to select when using DR CONTROL to operate this unit.
MAC ADDRESS shows the MAC address assigned to the unit.
IP ADDRESS is the number on the Wi-Fi network assigned by the router.

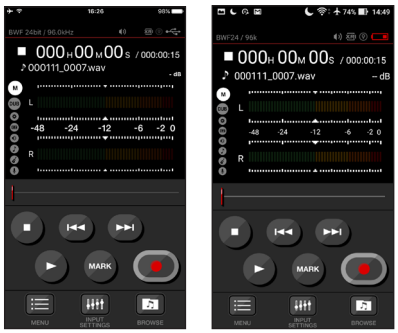
Launching DR CONTROL

1. After completing the Wi-Fi connection, launch the DR CONTROL app (installed beforehand) on the smartphone or other device.

NOTE

Always use the latest version of DR CONTROL.

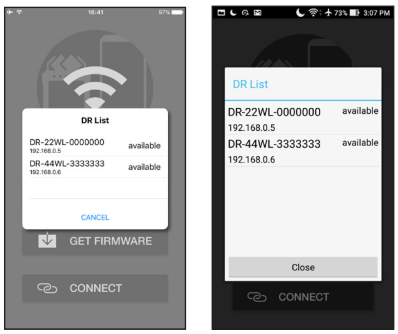
2. A screen like the following will appear when the app launches, and remote operation of the device will be enabled.



iOS device example Android device example

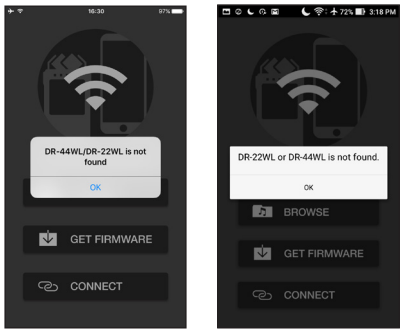
■ When multiple DR-44WL/DR-22WL units are connected to the same router in VIA ROUTER mode

1. A little while after the app launches, **"DR List"** will appear. Select the DR-22WL that you want to control.



iOS device example Android device example

2. If **"DR is not found"** appears, touch the **"OK"** button, then touch the **"CONNECT"** button to reacquire the list.



iOS device example Android device example

Please refer to your smart phone's operation manual for more details.
Detailed descriptions, on the "DR CONTROL" application, including the "DR CONTROL reference manual", can be downloaded from the TEAC Global Site (**http://teac-global.com**).

Connecting this unit to a computer by Wi-Fi

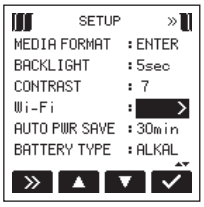
Transferring files from this unit to a computer is possible using the free TASCAM DR FILE TRANSFER software designed for this purpose. You can transfer recorded files by Wi-Fi.

Downloading and installing the TASCAM DR FILE TRANSFER software

1. Connect the computer to the Internet.
2. Download TASCAM DR FILE TRANSFER from the TEAC Global Site (http://teac-global.com/) and install it.

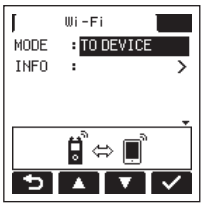
Connecting the unit directly to a computer by Wi-Fi (TO DEVICE mode)

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Press the **F1** » button to display the SETUP page.
3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the Wi-Fi item parameters.



4. Press the **F4** ✓ button to display the Wi-Fi screen.
5. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the MODE item parameters and press the **F4** ✓ button.
6. Use the **F2** ▲ and **F3** ▼ buttons to set the Wi-Fi mode to TO DEVICE .

   Options: TO DEVICE (default value),VIA ROUTER



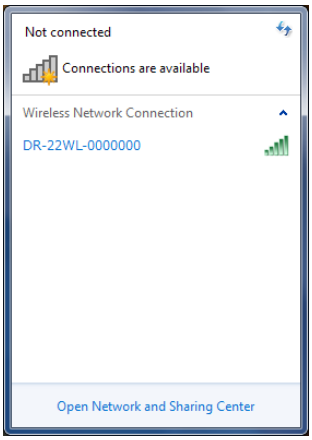
7. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.
   A CONNECT NEW? pop-up message appears on the display to determine whether or not the connection is new.
8. Since it is a new connection, press the **F3** ✓ button.

9. SSID and PASSWORD appear on the display.

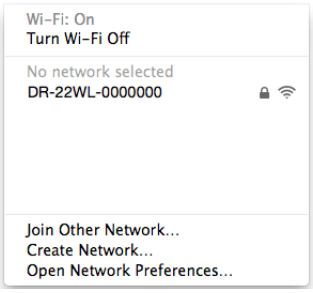
NOTE

The SSID is the name of the wireless LAN access point (wireless LAN device).

10. Click the wireless connection icon in the computer taskbar/ menu bar (Windows/Mac) to open a list of wireless networks.

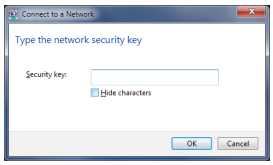


Windows



Mac

11. Select the SSID shown on the unit's display.
12. When the security key input screen appears on the computer, input the password shown on the display of the unit.



Windows

When the password input screen appears on the computer, input the password shown on the display of the unit.

Mac

13. The **Wi-Fi** indicator on the unit lights when the Wi-Fi connection is established between the unit and the computer.

Connecting this unit to a computer by Wi-Fi after the first time

After the unit and the computer have been connected once, they can be connected again just by selecting the SS ID.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.
   A CONNECT NEW? pop-up message appears on the display to determine whether or not the connection is new.
2. Since the unit has been connected to the computer previously, press the **F2** ✕ button.

3. When the pop-up message disappears from the display, the unit is waiting to connect to the computer.
4. Click the wireless connection icon in the computer taskbar/ menu bar (Windows/Mac) to open a list of wireless networks.
5. Select the SSID shown on the unit's display.
6. The Wi-Fi indicator on the unit lights when the Wi-Fi connection is established between the unit and a computer.

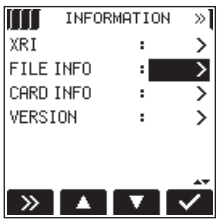
TIPS

For instructions about connecting a DR-44WL in VIA ROUTER mode to a computer using a Wi-Fi connection through a router and other details about the software, download the TASCAM DR FILE TRANSFER Owners Manual from the TEAC Global Site (http://teac-global.com).

View information (INFORMATION)

The INFO page of the menu screen lists various information on the DR-22WL.
Follow the below steps to display the information:

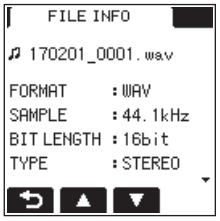
1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** » button to display the INFO page.



3. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the item parameter of the information, and press the **F4** ✓ button.
   Below information will be displayed:
   FILE INFO screen:
   Displays information about the currently loaded audio file.
   CARD INFO screen:
   Displays information on the inserted microSD card.
   VERSION screen:
   Displays system settings and firmware version of the unit.
4. To return to the INFO page of the menu screen, press the **F1** ↩ button.

File information screen (FILE INFO)

The FILE INFO screen displays the currently loaded audio file.



■ FORMAT

Displays the file type.
CBR/VBR will be displayed for MP3 files. (CBR: Constant Bit Rate, VBR: Variable Bit Rate)

■ SAMPLE

Displays the file's sampling rate.

■ BIT LENGTH/BIT RATE

Displays the file's bit length.
Bit rate (kbps) will be displayed for MP3 files.

■ TYPE

Displays the file type (stereo/mono).

■ SIZE

Displays the file size.

■ DATE

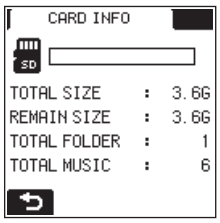
Displays the date of file creation .

■ TIME

Displays the recorded time.

Card information screen (CARD INFO)

The CARD INFO screen displays information on the inserted microSD card.



■ TOTAL SIZE

Shows the total microSD card capacity.

■ REMAIN SIZE

Displays available free space of the microSD card.

■ TOTAL FOLDER

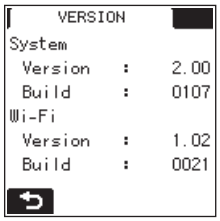
Displays the total number of folders in the music folder.

■ TOTAL MUSIC

Displays the number of playable files in the music folder.

System information screen (VERSION)

The VERSION screen displays system settings and firmware version of the DR-22WL.



■ System

Displays the system's firmware version.

■ Wi-Fi

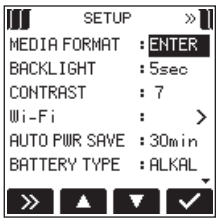
Displays the Wi-Fi firmware version.

System Settings (SETUP)

The SETUP page allows you to make various settings for optimum use of the DR-22WL according to usage environment and conditions, as well as resetting the unit and formatting the microSD card.

Follow the below steps to display the SETUP page.

1. Press the **⌂/MENU/■** button to display the menu screen.
2. Use the **F1** » button to display the SETUP page.



Use the **F2** ▲ button, the **F3** ▼ button, and the **F4** ✓ button to make settings for different items.

The following settings of different items can be made in the SETUP page.

Auto power save function setting

Use the AUTO PWR SAVE item to set the time for automatic turn-off, counting from the last operation.

Options: OFF (no automatic turn-off), 3min, 5min, 10min, 30min (default value)

Backlight setting

Use the BACKLIGHT item to set the time for automatic turn-off of back-light in battery operation, counting from the last operation.

Options: OFF (light-off), 5sec (default value), 10sec, 15sec, 30sec

Adjusting the display contrast

Use the CONTRAST item to adjust the display contrast.

Options: 1 - 20 (default value: 2)

Battery type settings

Use the BATTERY TYPE item to set the battery type. This setting is used to display the remaining battery power and to calculate the minimum capacity for normal operation.

Options: ALKAL (alkaline batteries, default value), Ni-MH (nickel-metal hydride batteries)

Setting the language

Use the LANGUAGE item to set the language shown on the display.

1. Use the **F2** ▲ and **F3** ▼ buttons to select the LANGUAGE item and press the **F4** ✓ button.

   Options

Eng.:	use English
日本語:	use Japanese
Fran.:	use French
Espaň:	use Spanish
Deu.:	use German
Ital.:	use Italian
Рус.:	use Russian

2. Use the **F2** ▲ and **F3** ▼ buttons to move the cursor and select the language.
3. Press the **F4** ✓ button to open a pop-up confirmation window.

4. Press the **F4** ✓ button to confirm the language selection. To cancel language selection, press the **F2** ✕ button.

Restoring the DR-22WL to factory settings

Use the INITIALIZE item to execute initialization; this will restore the unit to factory settings.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the INITIALIZE item and press the **F4** ✓ button.

   The following confirmation message will pop-up:

2. Press the **F3** ✓ button to execute initialization.
   Press the **F2** ✕ button to cancel the process.

Formatting the microSD card

Use the MEDIA FORMAT item to format the microSD card.

Formatting will delete all music files in the microSD card, and the "MUSIC" folder, the "UTILITY" folder, and the "dr-1.sys" will be created automatically.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the MEDIA FORMAT item, and press the **F4** ✓ button.
2. Use the **F2** ▲ and **F3** ▼ buttons to select the formatting method.

   Options: QUICK, ERASE
3. Press the **F4** ✓ button. The following pop-up message will appear.

4. Press the **F3** ✓ button to format the microSD card.
   Press the **F2** ✕ button to cancel the process.

NOTE

- ***Using the* ERASE *formatting option might restore an SD card that has decreased writing performance due to repeated use.***
- ERASE *formatting checks for memory errors as it formats, so it takes more time compared to* QUICK *formatting.*

CAUTION

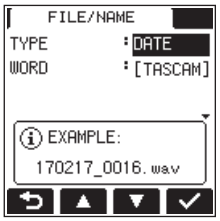
When formatting the microSD card, make sure that the DR-22WL is connected to either the dedicated AC adapter (TASCAM PS-P520E; sold separately) or the USB bus power from a computer, or operating on fully-charged batteries.

Formatting may not complete successfully if the battery runs out.

Setting the file name type

The DR-22WL can set name types of the recording files.

1. Use the **F2** ▲ and **F3** ▼ buttons to select (highlight) the parameter of the FILE NAME item and press the **F4** ✓ button.
   The FILE NAME screen will be displayed.



2. Use the ⏮ button and the ⏭ button, the **F2** ▲ button and the **F3** ▼ button, and the **F4** ✓ button to make settings for different items.
   The following settings for each item can be made in this screen.
3. To return to the SYSTEM page of the menu screen, press the **F1** ↩ button.

■ File name type

In the TYPE item, select either the DATE or WORD options.

Options:

DATE (default value)	: dates will be included in file name Example: 140101_0000.wav
WORD	: the six characters set in WORD will be included in file name Example: TASCAM_0000.wav

NOTE

The internal clock of the unit is used to set dates. (See "Setting the date/time" on page 11.)

■ Setting characters (WORD)

In the WORD item, use either the ⏮ button or the ⏭ button to move the cursor, and use the **F2** ▲ and the **F3** ▼ buttons to set characters.

In addition to alphabets and numbers, the following characters can be used: ! # $ % & ' ( ) + , - . ; = @ ^ _ ' { } ~

■ Initializing the numbers (COUNT INIT)

In REC SETTING page of the menu screen, select the parameter (highlight) the COUNT INIT item, and press the **F4** ✓ button. The following confirmation message will appear:

Press the **F3** ✓ button to reset the number that follows the characters to "0001".

11 – Messages

The following is a list of the pop-up messages.

The DR-22WL displays these pop-up messages according to the situation; refer to this list to learn more details and/or solutions.

Message	Details and solutions
Battery Empty	The batteries are empty. Replace the batteries.
Can´t Divide	The selected division point is not appropriate for DIVIDE action (the beginning and end of the track).
Card Error	The card cannot be recognized. Replace the card.
Card Full	The card has no empty space. Erase unnecessary files or transfer them to a computer.
Current File MP3	MP3 files cannot be divided.
Dup File Name	The name of the DIVIDE file to be created is identical to the name of the file that already exists in the same folder. The DIVIDE function adds "a" or "b" to the end of the file name. Before using the DIVIDE function, connect the DR-22WL to a computer and edit the file name.
File Full	The total number of folders and files exceeded the limit (5000). Delete unnecessary folders and files or move them to a computer.
File Name ERR	More than 200 characters has been added to the file name due to the DIVIDE function. The DIVIDE function adds "a" or "b" to the end of the file name. Before choosing the DIVIDE function, connect the unit to a computer and edit the file name to less than 198 characters.
File Not Found	The file cannot be found or damaged. Check the target file.
File Not Found Make Sys File	System files required to operate the DR-22WL is missing. To create system files, press the **PLAY** button while this message is displayed.
File Protected	The file is read-only and cannot be deleted.
Format Error Format CARD	The microSD card is not formatted properly or damaged. This message also appears when a computer under USB connection formatted the card, or when an unformatted card is inserted to the unit. Cards must be formatted with the DR-22WL. Insert a different card, or press the **F4** ✓ button to start formatting. Formatting will delete all data on the microSD card.
Invalid Card Change Card	The card may not work properly. Replace the card.
Invalid SysFile Make Sys File	The system file required to operate this unit is invalid. To create new system files, press the **F4** ✓ button while this message is displayed.
I/O Too Short	The IN (start) and OUT (end) points are too close. Re-set by spacing at least one second in between.

Message	Details and solutions
Low battery Wi-Fi OFF	The battery charge is low, so Wi-Fi cannot be used. Replace the batteries with new ones.
Max File Size	The file is larger than the designated size, or the recording time has exceeded 24 hours when the total number of folders and files was already at the limit (5000)
MBR Error Init CARD	The card is not formatted properly or damaged. Insert a different card, or press the **F4** ✓ button to start formatting. Formatting will delete all data on the microSD card.
No MUSIC File	There is no playback file.
No Card	A SD card is not set. Insert a recordable SD card.
Non-Supported	The file type is not supported. Please refer to the 8 – Connecting with a computer 34 for compatible file types.
Write Timeout	Writing to the card timed out. Back up files to a computer and format the card.
Can´t Save Data	Restart the unit when this error message appears. If the power cannot be turned off, remove the batteries, disconnect the AC adapter (TASCAM PS-P520E; sold separately), or disconnect the USB cable when in bus power supply. If the error message continues to appear frequently, please contact the store where you purchased this unit or a TASCAM customer support service.
Device Error	
File Error	
Not Continued	
Player Error	
Writing Failed	
Sys Rom Err	
System Err XX (XX is a number.)	

12 – Troubleshooting

When the DR-22WL does not operate properly, check the followings before make a repair request. If these measures do not solve the problem, please contact the store where you purchased this unit or TEAC customer support service.

■ The power does not turn on

- Are batteries low?
- Are batteries inserted correctly with the ⊕, ⊖ terminals aligned correctly?
- Is the AC adapter (TASCAM PS-P520E; sold separately) securely connected to the outlet? Is the USB connector connected securely?
- Is the USB cable connecting the computer for USB bus power securely connected?
- Is the USB hub in use with computer connection for USB bus power?

■ The DR-22WL turn the power off automatically

- Is the automatic power saving function on? (See "Auto power save function setting" on page 42.)
  - The DR-22WL is in compliance with the European Standby Power Regulations (ErP), and therefore, the automatic power saving function will work whether the unit is being powered by an AC adapter or batteries. Select OFF if you do not want to use the auto power saving function (the factory default setting is "30 min").

■ The unit does not function.

- Is the **HOLD/** ⏻ **/** | switch set at **HOLD**?
- Is the unit connected to a computer via USB cable (USB Connected)?

■ The microSD card is not recognized.

- Check that the microSD card is inserted correctly.

■ The DR-22WL don't play back

- If the file is WAV format, check whether its sampling rate is compatible with the unit.
- If the file is MP3 format, check whether the bit rate is compatible with the unit.

■ The built-in speaker does not emit sound

- Is a headphone connected to the unit?
- Is the SPEAKER item set as OFF?
- Is the unit in recording or recording standby mode?

■ The monitor system does not emit sound

- Is the monitoring system securely connected?
- Is the monitoring system volume at minimum level?
- Is the output level setting of the unit at minimum level?

■ The DR-22WL is not recording

- Check the connection again.
- Check the input settings again.
- Is the recording level too low?
- Does the microSD card has free space?
- Check whether the number of files has reached the maximum level.

■ The input level is too low

- Is the input level setting too low?
- Is the output level of the connected device too low?

■ The sound I want to record is distorted

- Is the input level setting too high?
- Is reverb setting ON?

■ Playback sound is not natural

- Is the playback speed changed?
- Is the level control function ON?
- Is reverb setting ON?

■ The file cannot be deleted

- Is the file a copy of a read-only file set by a computer?

■ The computer does not display the unit's files

- Is the DR-22WL connect to a computer via USB port?
- Is USB hub in use?
- Is the unit in recording or recording standby mode?

■ The DR-22WL cannot make a Wi-Fi connection or communication is interrupted

- Check that the Wi-Fi device is turned ON and/or the Wi-Fi function is ON.
- Is the distance to the Wi-Fi device too far?
  Is there any obstacles in between, for example a wall?
  When a Wi-Fi device is located at the rear side of the DR-22WL, the unit itself maybe the cause of interruption.
  Try changing the positions of the Wi-Fi device and the unit.
- Turn OFF and restart the DR-22WL.
- Delete the "DR-22WL" registered information in the Wi-Fi device, and follow the steps in "Connecting the unit to a Wi-Fi device."
- Relaunch the DR CONTROL application.
- When using VIA ROUTER mode:
  - Disconnect other devices that are connected to the Wi-Fi router.
  - Move the Wi-Fi router to a different location.

■ The wrong language was set accidentally.

Slide the **HOLD/** ⏻ **/** | switch to turn the power off. Then, slide the **HOLD/** ⏻ **/** | switch while pressing and holding the **MENU** button to turn the unit on again.

The language selection menu will appear, and you will be able to select the language.

13 – Specifications

Rating

■ **Recording media**

microSD card (64 MB-2 GB)
microSDHC card (4 GB-32 GB)
microSDXC card (48 GB-128 GB)

■ **Recording/playback formats**

BWF: 44.1k/48k/96kHz, 16/24 bit
WAV: 44.1k/48k/96kHz, 16/24 bit
MP3: 44.1k/48 kHz, 32k/64k/96k/128k/192k/256k/320kbps

■ **Number of channels**

2 channels (stereo)

Input/output ratings

Analog audio input and output ratings

■ **MIC/EXT IN jack (can provide plug-in power)**

Connector: 1/8″ (3.5 mm) stereo mini jack
Input impedance: 25 kΩ
Reference input level: –20dBV
Maximum input level: –4dBV

■ **🎧/LINE OUT jack**

Connector: 1/8″ (3.5 mm) stereo mini jack
Output impedance: 12 Ω
Reference output level: –14dBV (with 10kΩ load)
Maximum output level: +2dBV (with 10kΩ load)
Maximum output: 20mW+20mW (with 32Ω load)

■ **Built-in speaker**

0.3W (mono)

Control input/output ratings

■ **USB port**

Connector: Micro-B type
Format: USB 2.0 HIGH SPEED mass storage class

Audio performance

■ **Frequency response**

20-20 kHz +1/–3 dB (EXT IN to LINE OUT, Fs44.1 kHz, JEITA)
20-22kHz +1/–3 dB (EXT IN to LINE OUT, Fs48kHz, JEITA)
20-40kHz +1/–3 dB (EXT IN to LINE OUT, Fs96kHz, JEITA)

■ **Distortion**

0.05% or less (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

■ **S/N ratio**

92dB or above (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

Note) Based on JEITA: JEITA CP-2150

Wi-Fi

■ **Wireless standard**

Based on IEEE 802.11b/g/n (2.4GHz only)

■ **Wireless communication mode**

TO DEVICE mode
Simple access point (Limited AP)

VIA ROUTER mode
Infrastructure (Station)

■ **Security**

WPA2-PSK (WPS2.0 compatible)

General

■ Power supply

2 AA batteries (alkaline or NiMH)
USB bus power from a computer
Dedicated AC adapter (TASCAM PS-P520E; sold separately)

■ Current consumption

0.5 A (maximum)

■ Battery operation time (continuous operation)

- Alkaline batteries (EVOLTA)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 17.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 11 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 11 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 11 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

- Using NiMH batteries (eneloop)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 13.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 12 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13.5 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 10 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 10 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

NOTE

The battery operation times (during continuous operation) could vary depending on the media being used.

■ Dimensions

52.2 × 155 × 36.6mm (W x H x D)

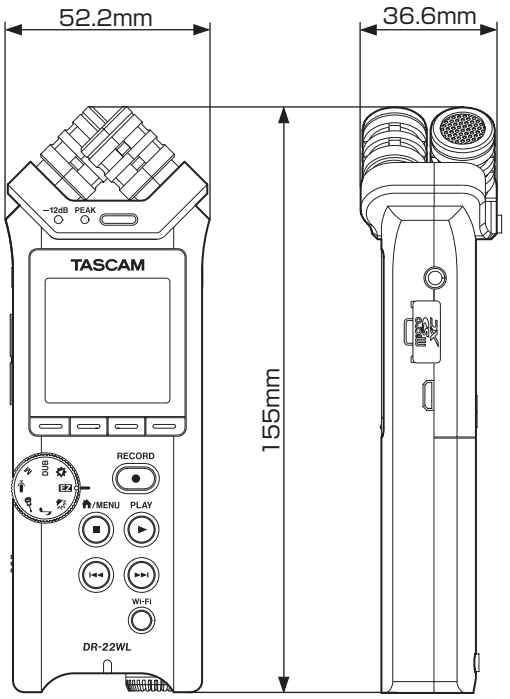
■ Weight

170 g/123 g (with batteries/without batteries)

■ Operating temperature

0°C–40°C

Dimensional drawings



- Illustrations in this manual may be different from the actual product.
- To improve the product, specifications and external appearance may change without prior notice.

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