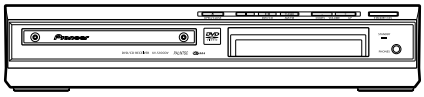
Pioneer sound.vision.soul

Service Manual



ORDER NO.
RRV2497

DVD / CD RECEIVER

XV-S100DV

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Region No.	Remarks
	XV-S100DV			
MYXJN	◯	AC220-230V	2	
NVXJN	◯	AC230V	2	

CONTENTS

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T – IZK AUG. 2001 Printed in Japan

1. SAFETY INFORMATION

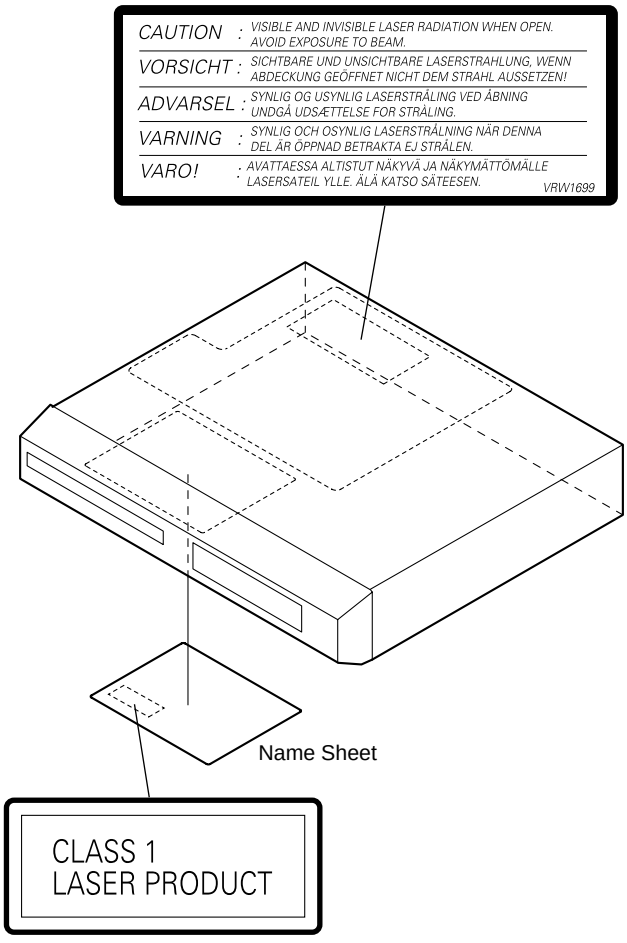
WARNING !

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1.
A SPECIALLY INSTRUCTED PERSON SHOULD DO SERVICING OPERATION OF THE APPARATUS.

LASER DIODE CHARACTERISTICS

FOR DVD :	MAXIMUM OUTPUT POWER	: 5 mW
	WAVELENGTH	: 650 nm
FOR CD :	MAXIMUM OUTPUT POWER	: 5 mW
	WAVELENGTH	: 780 nm

LABEL CHECK



Additional Laser Caution

1. Loading-status detection switch (S101 on the LOAB assy) are detected by the microprocessor (IC601 in the DVDM assy).
   • To permit the laser diode to oscillate, it is required to set the loading-status detection switch for the clamp position (the center terminal of S101 is shorted to +3V). The 650 nm laser diode for DVD oscillation will continue if pin 19 of IC101 is shorted to +3V (fault condition) in the DVDM assy. The 780 nm laser diode for CD oscillates if pin 20 of IC101 is shorted to +3V in the DVDM assy.
   In the test mode ∗ , the laser diode oscillates when microprocessor detects a PLAY signal, or when the PLAY key is pressed (S5925 ON in the DISPLAY assy), with the above requirements satisfied.

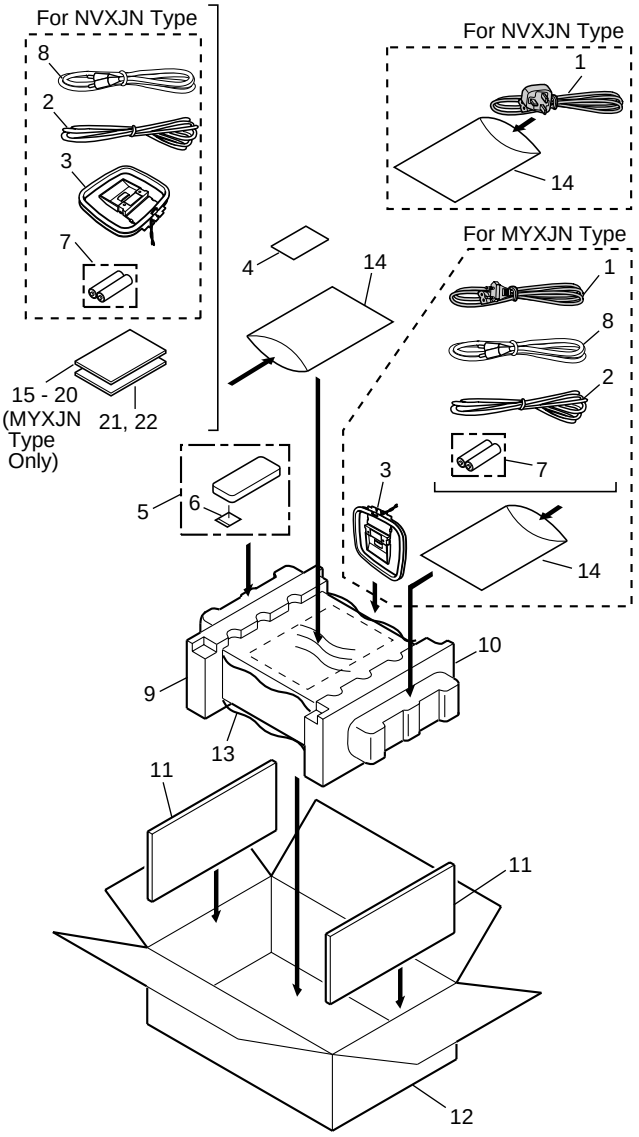
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

∗ : See page 66.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PACKING PARTS LIST

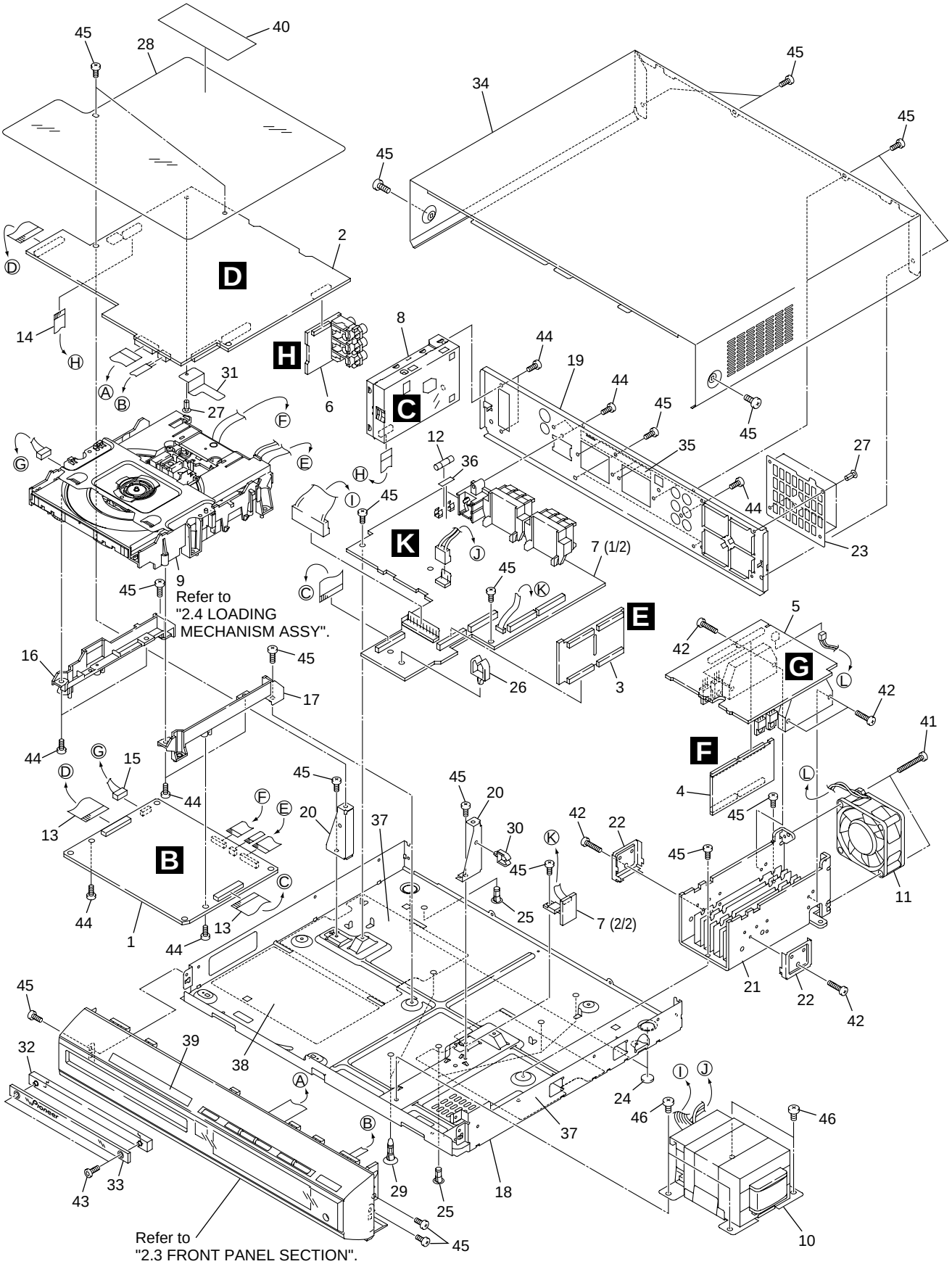
Mark	No.	Description	Part No.
⚠	1	Power Cord	See Contrast table (2)
	2	FM Antenna	ADH7005
	3	AM Loop Antenna	ATB7009
NSP	4	Warranty Card	ARY7022
	5	Remote Control Unit	AXD7315
	6	Battery Cover	XZN3117
NSP	7	Dry Cell Battery (R6P, AA)	VEM-013
	8	Video Cord (L = 1.5m)	VDE1053
	9	Pad L	AHA7360
	10	Pad R	AHA7361
	11	Spacer	AHB7059
	12	Packing Case	AHD8038
	13	Packing Sheet	AHG7065
NSP	14	Polyethylene Bag ($230 \times 340 \times 0.03$)	Z21-038
	15	Operating Instructions (German / Italian)	See Contrast table (2)
	16	Operating Instructions (German / Italian)	See Contrast table (2)
	17	Operating Instructions (Dutch / Spanish)	See Contrast table (2)
	18	Operating Instructions (Dutch / Spanish)	See Contrast table (2)
	19	Operating Instructions (Swedish / Portuguese)	See Contrast table (2)
	20	Operating Instructions (Swedish / Portuguese)	See Contrast table (2)
	21	Operating Instructions (English/French)	ARE7290
	22	Operating Instructions (English/French)	ARE7291

(2) CONTRAST TABLE

XV-S100DV/MYXJN and NVXJN types are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			MYXJN Type	NVXJN Type	
⚠	1	Power Cord	ADG1154	ADG1156	
	15	Operating Instructions (German / Italian)	ARC7366	Not used	
	16	Operating Instructions (German / Italian)	ARC7367	Not used	
	17	Operating Instructions (Dutch / Spanish)	ARC7368	Not used	
	18	Operating Instructions (Dutch / Spanish)	ARC7369	Not used	
	19	Operating Instructions (Swedish / Portuguese)	ARC7370	Not used	
	20	Operating Instructions (Swedish / Portuguese)	ARC7371	Not used	

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

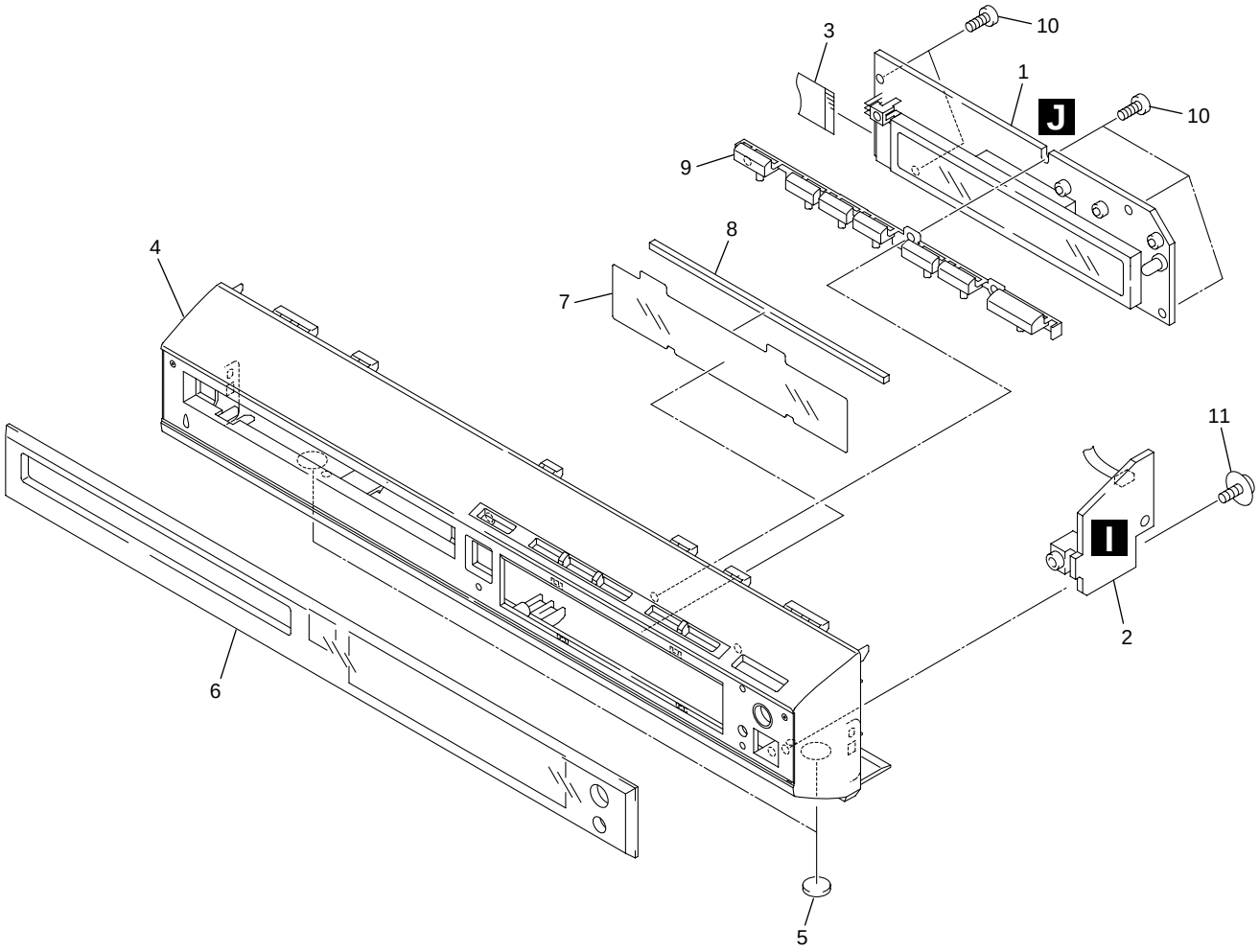
Mark	No.	Description	Part No.
	1	DVDM Assy	VWS1499
	2	CONTROL Assy	AWU7856
	3	TRADE 1 Assy	AWU7858
	4	TRADE 2 Assy	AWU7859
	5	AMP Assy	AWU7935
	6	JACK Assy	AWU7862
	7	POWER Assy	AWU7860
	8	FM/AM TUNER Module	AXQ7229
NSP	9	Loading Mechanism Assy	VWT1188
⚠	10	Power Transformer (T1)	ATS7311
	11	DC FAN Motor	AXM7014
⚠	12	Fuse (FU1 : 1.6A)	REK1024
	13	30P Flexible Cable / 60V	ADD7325
	14	13P Flexible Cable / 60V	ADD7326
	15	Connector Assy	PG05KK-E10
	16	Adapter 12 L	ANW7231
	17	Adapter 12 R	ANW7232
NSP	18	Chassis	ANA7130
	19	Rear Panel	See Contrast table (2)
	20	Angle DCS	ANG7361
NSP	21	Heat Sink	ANH7141
	22	FET Bracket	XNG3016
	23	Rear Plate	AAK7911
	24	Leg	AEB7090
	25	PCB Holder	AEC7057
	26	Wire Saddle	AEC7297
	27	Nyron Rivet	AEC7318
	28	PCB Cover	AEC7348
	29	Locking Card Spacer	AEC7372
	30	Mini Clamp	AEC7373
	31	Jack Barrier	AEC7374
	32	Tray Mold	AAK7907
	33	Tray Panel	AAK7909
	34	Bonnet	AZN7884
	35	Terminal Sheet	AAK7912
NSP	36	Fuse Card	AAX2377
	37	Cover Sheet	AAX7878
	38	Name Sheet	AAX7879
	39	Getter Label DCS	AAX7882
	40	Label	VRW1699
	41	Screw	BBZ30P300FZK
	42	Screw	BBZ30P140FMC
	43	Screw	ABA7060
	44	Screw	BPZ30P100FZK
	45	Screw	BBZ30P080FNI
	46	Screw	BBZ40P060FMC

(2) CONTRAST TABLE

XV-S100DV/MYXJN and NVXJN types are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			MYXJN Type	NVXJN Type	
	19	Rear Panel	ANC8009	ANC8008	

2.3 FRONT PANEL SECTION



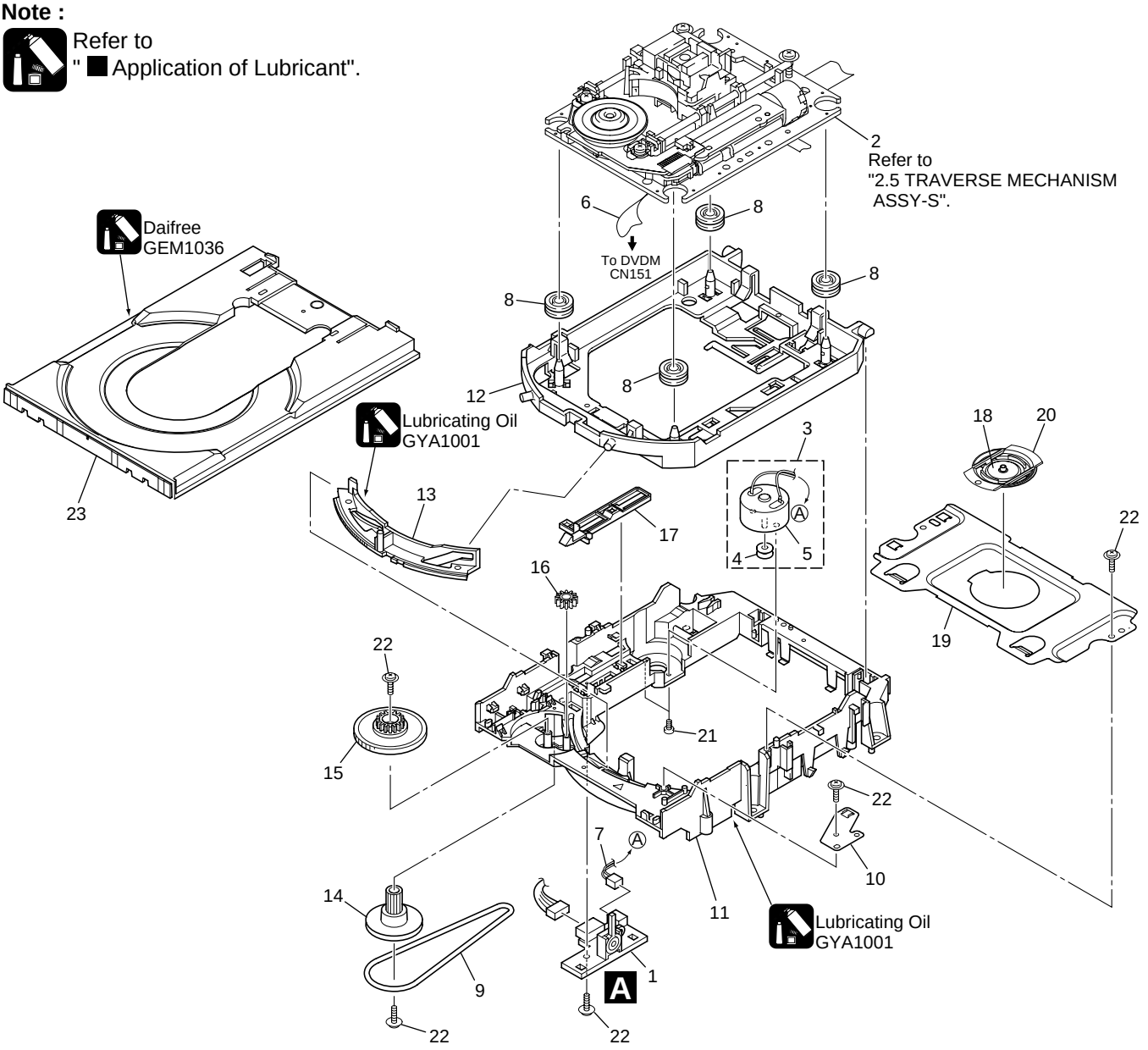
● FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	DISPLAY Assy	AWU7861
	2	HP Assy	AWU7863
	3	15P Flexible Cable / 60V	ADD7327
	4	Front Panel	AMB7766
	5	Leg	AEB7090
	6	Display Window	AAK7941
	7	FL Filter	AAK7910
	8	FL Spacer	AEB7238
	9	Button DCS	AAD7648
	10	Screw	BPZ30P100FZK
	11	Screw	ABA1005

2.4 LOADING MECHANISM ASSY

Note :

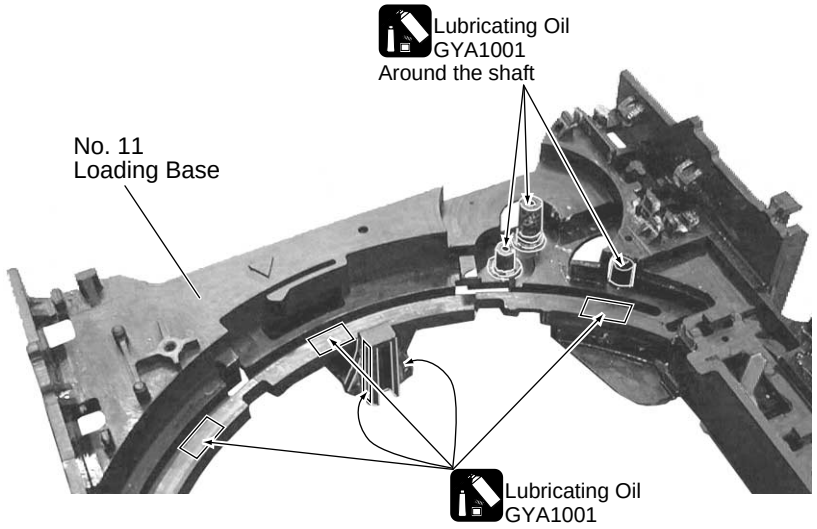
Refer to
" ■ Application of Lubricant".

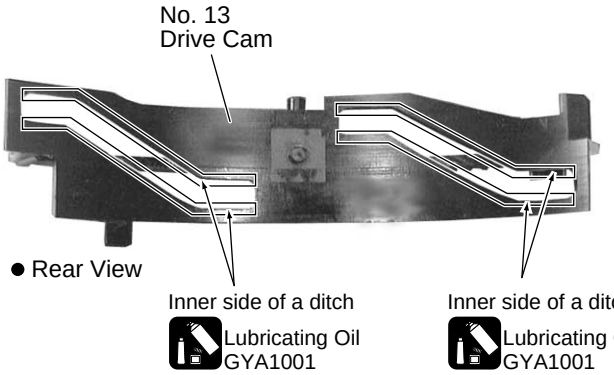


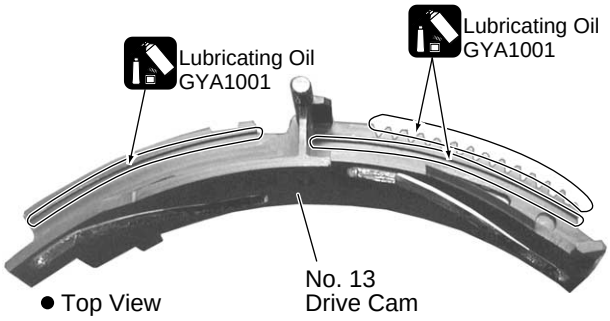
• LOADING MECHANISM ASSY PARTS LIST

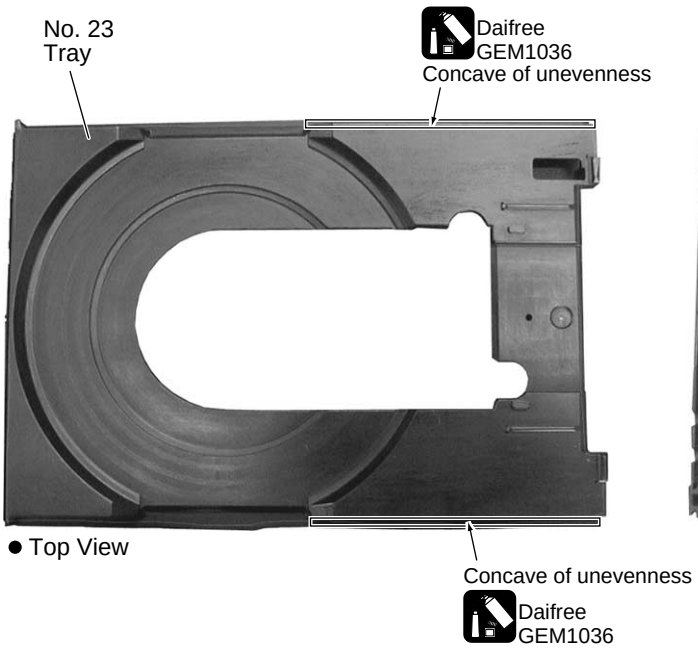
Mark	No.	Description	Part No.
NSP	1	LOAB Assy	VWG2279
	2	Traverse Mechanism Assy-S	VXX2782
	3	Loading Motor Assy	VXX2505
	4	Motor Pulley	PNW1634
	5	Carriage DC Motor / 0.3W	PXM1027
	6	Flexible Cable (26P)	VDA1864
	7	Connector Assy 2P	VKP2253
	8	Float Rubber	VEB1327
	9	Belt	VEB1330
	10	Stabilizer	VNE2253
	11	Loading Base	VNL1917
	12	Float Base DVD	VNL1918
	13	Drive Cam	VNL1919
	14	Gear Pulley	VNL1921
	15	Loading Gear	VNL1922
	16	Drive Gear	VNL1923
	17	SW Lever	VNL1925
	18	Clamper Plate	VNE2251
	19	Bridge	VNE2252
	20	Clamper	VNL1924
	21	Screw	JGZ17P028FMC
	22	Screw	Z39-019
	23	Tray	VNL1920

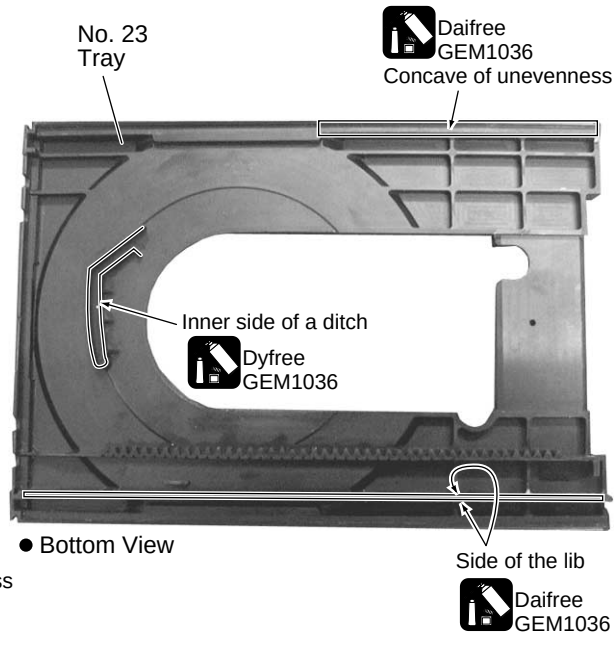
Application of Lubricant



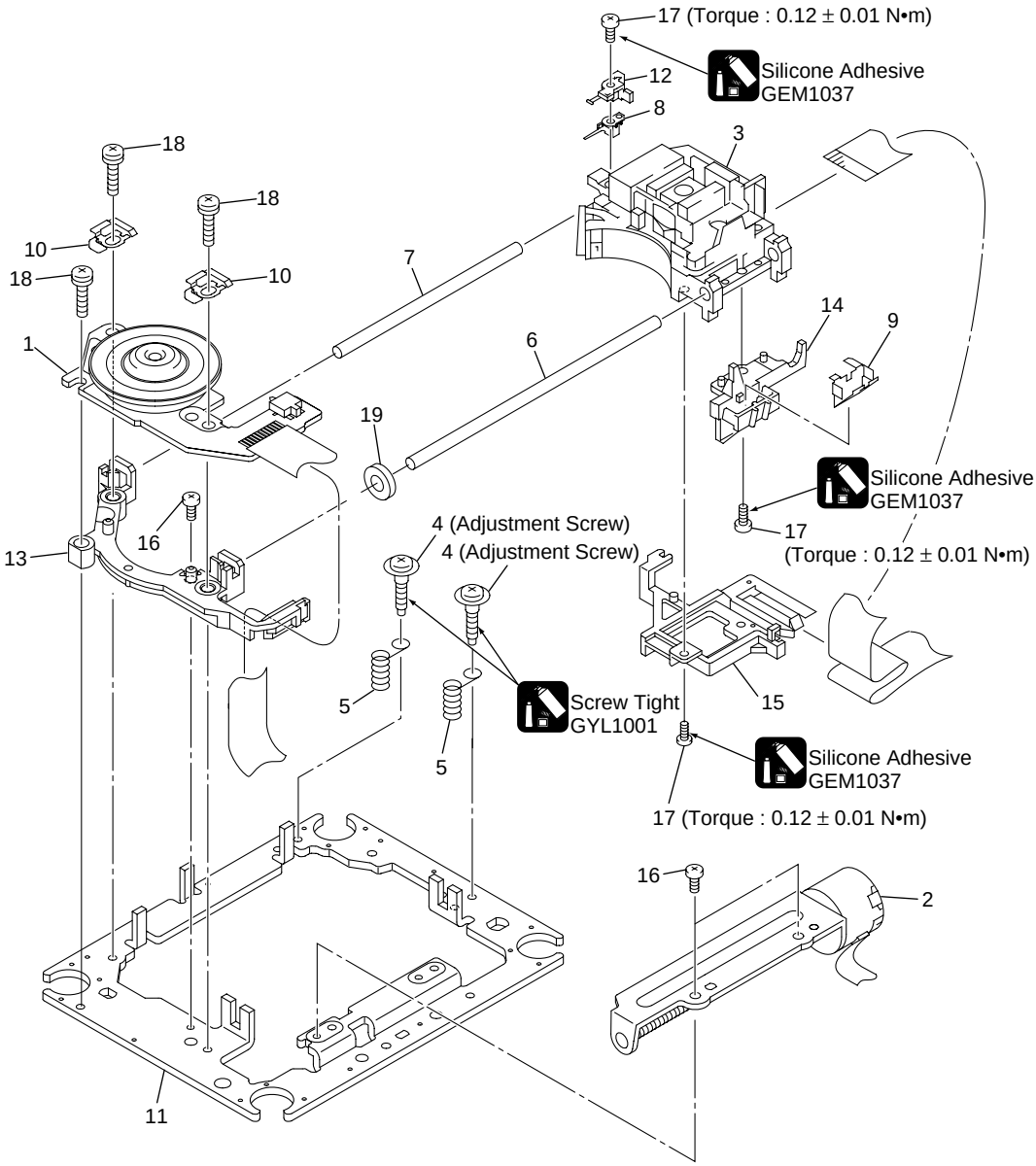








2.5 TRAVERSE MECHANISM ASSY-S

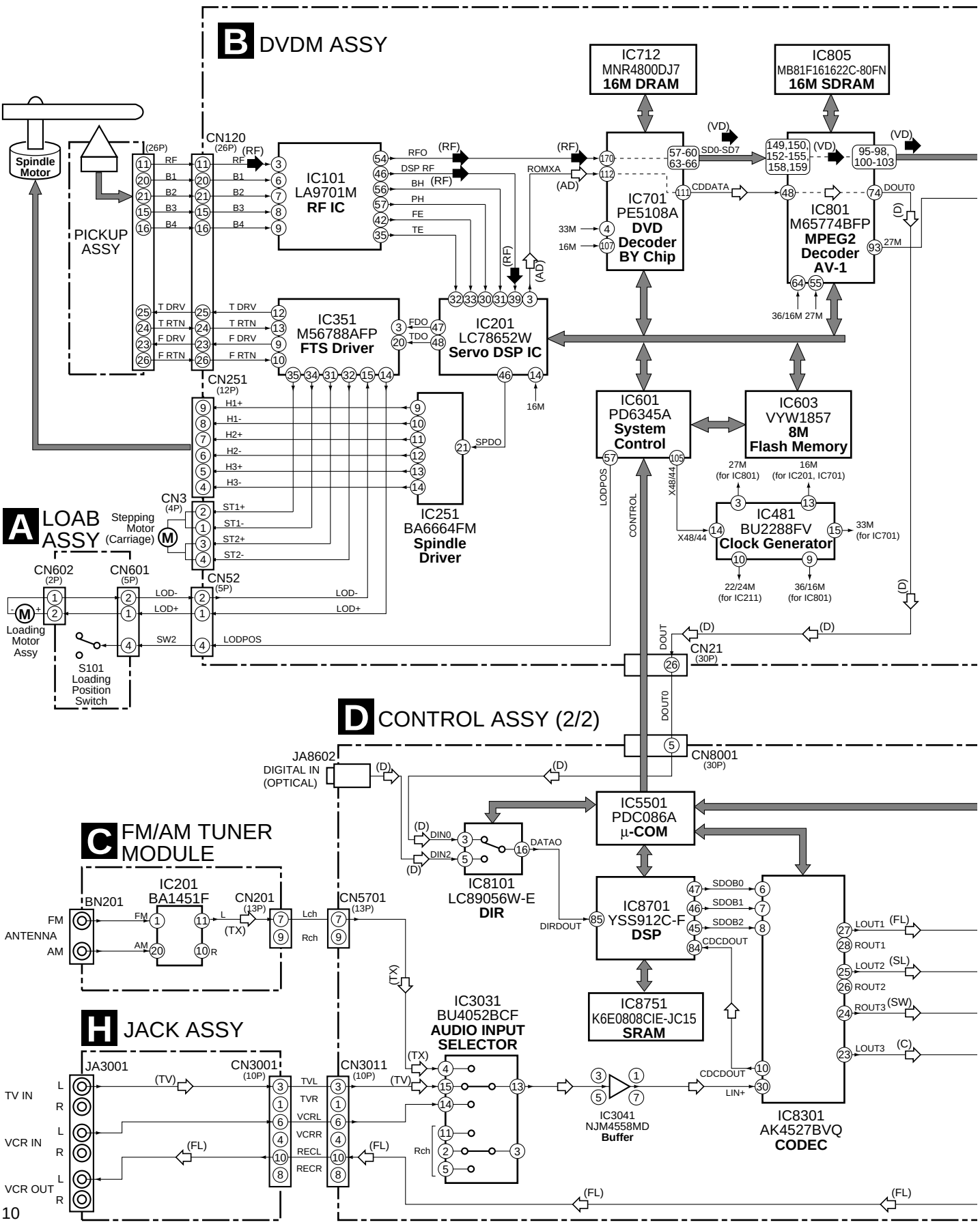


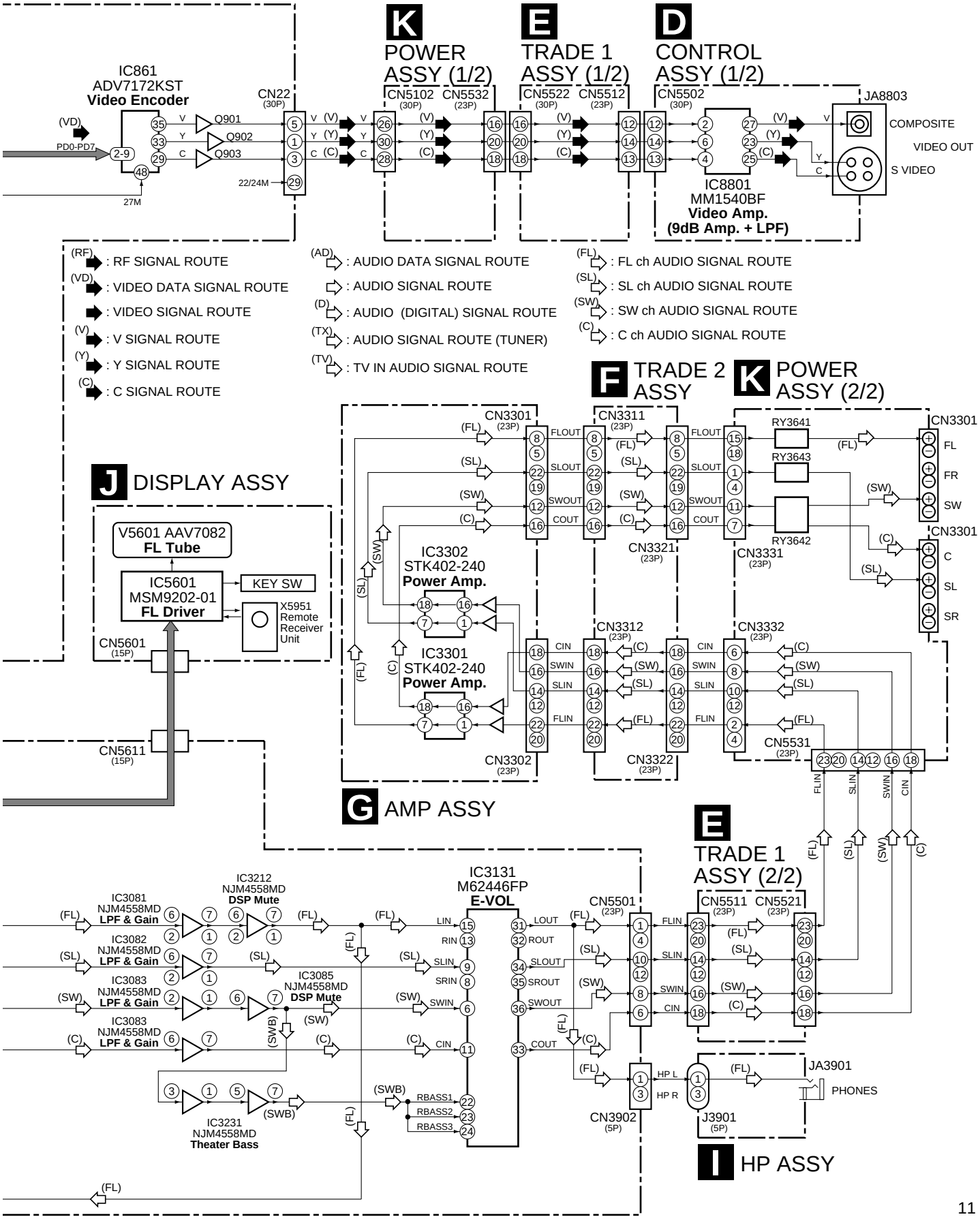
• TRAVERSE MECHANISM ASSY-S PARTS LIST

Mark	No.	Description	Part No.
	1	Spindle Motor	VXM1088 (or VXM1089)
	2	Stepping Motor (CARRIAGE)	VXM1090 (or VXM1091)
	3	Pickup Assy-S	OXX8003
	4	Skew Screw	VBA1080
	5	Skew Spring	VBH1335
	6	Guide Bar	VLL1514
	7	Sub Guide Bar	VLL1515
	8	Hold Spring	VNC1017
	9	Joint Spring	VNC1019
	10	Support Spring	VNC1020
NSP	11	Mechanism Chassis	VNE2248
	12	Slider	VNL1811
	13	Spacer	VNL1913
	14	Joint	VNL1914
	15	FFC Holder	VNL1915
	16	Screw	BBZ20P050FZK
	17	Screw	OBA8009
	18	Screw	PMA26P100FMC
	19	Damper Sheet	VEB1335

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

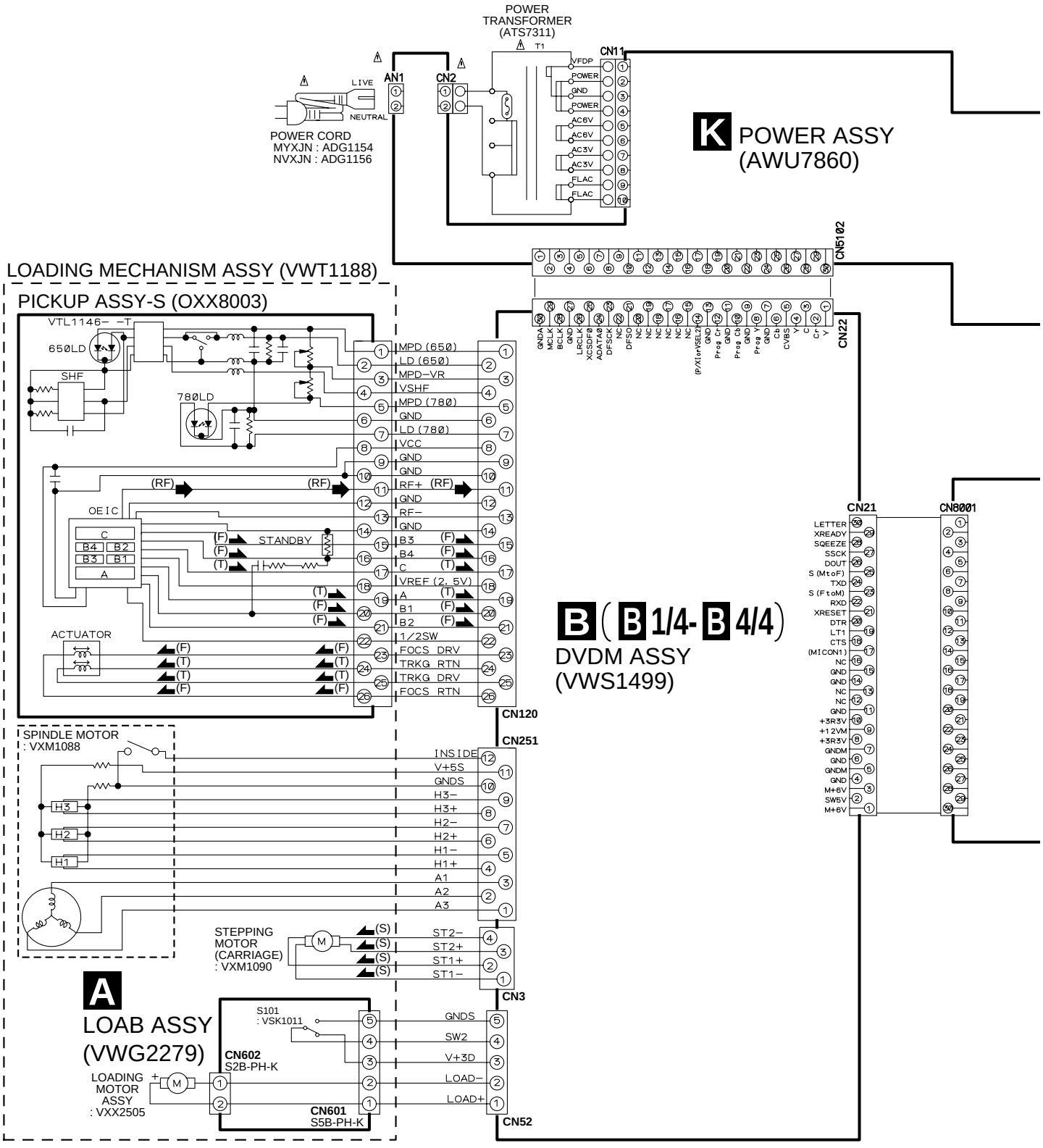
3.1 BLOCK DIAGRAM

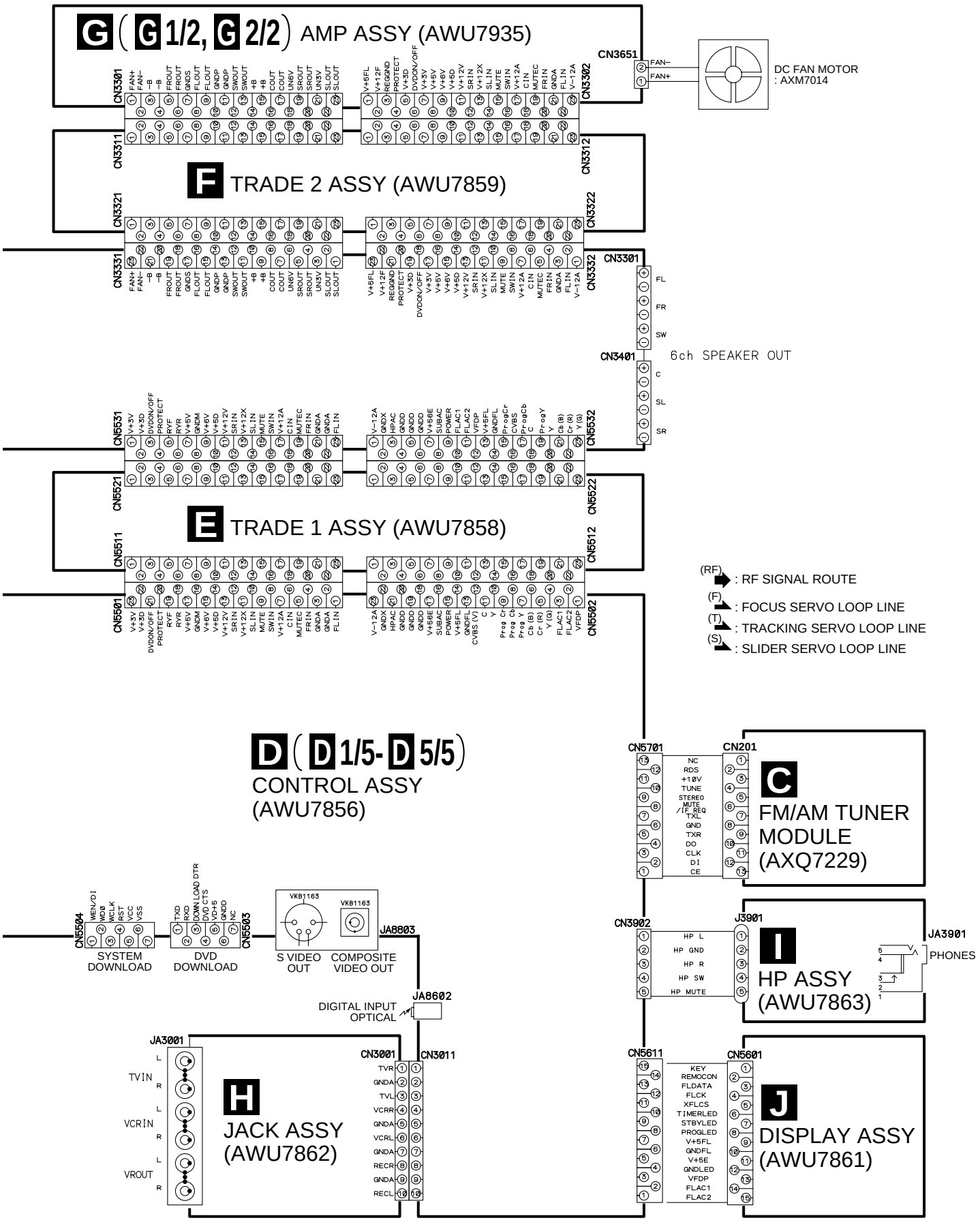



K POWER ASSY (1/2)
E TRADE 1 ASSY (1/2)
D CONTROL ASSY (1/2)
IC861
ADV7172KST
Video Encoder
CN22 (30P)
CN5102 (30P)
CN5532 (23P)
CN5522 (30P)
CN5512 (23P)
CN5502 (30P)
JA8803
COMPOSITE VIDEO OUT
S VIDEO
IC8801
MM1540BF
Video Amp.
(9dB Amp. + LPF)
(RF) : RF SIGNAL ROUTE
(VD) : VIDEO DATA SIGNAL ROUTE
: VIDEO SIGNAL ROUTE
(V) : V SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(AD) : AUDIO DATA SIGNAL ROUTE
: AUDIO SIGNAL ROUTE
(D) : AUDIO (DIGITAL) SIGNAL ROUTE
(TX) : AUDIO SIGNAL ROUTE (TUNER)
(TV) : TV IN AUDIO SIGNAL ROUTE
(FL) : FL ch AUDIO SIGNAL ROUTE
(SL) : SL ch AUDIO SIGNAL ROUTE
(SW) : SW ch AUDIO SIGNAL ROUTE
(C) : C ch AUDIO SIGNAL ROUTE
F TRADE 2 ASSY
K POWER ASSY (2/2)
J DISPLAY ASSY
V5601 AAV7082
FL Tube
IC5601
MSM9202-01
FL Driver
KEY SW
X5951
Remote Receiver Unit
CN5601 (15P)
CN5611 (15P)
CN3301 (23P)
CN3311 (23P)
CN3321 (23P)
CN3331 (23P)
CN3312 (23P)
CN3332 (23P)
CN3302 (23P)
CN3322 (23P)
IC3302
STK402-240
Power Amp.
IC3301
STK402-240
Power Amp.
RY3641
RY3643
RY3642
CN5531 (23P)
G AMP ASSY
E TRADE 1 ASSY (2/2)
IC3212
NJM4558MD
DSP Mute
IC3081
NJM4558MD
LPF & Gain
IC3082
NJM4558MD
LPF & Gain
IC3083
NJM4558MD
LPF & Gain
IC3085
NJM4558MD
DSP Mute
IC3231
NJM4558MD
Theater Bass
IC3131
M62446FP
E-VOL
CN5501 (23P)
CN5511 (23P)
CN5521 (23P)
CN3902 (5P)
J3901 (5P)
JA3901
PHONES
I HP ASSY

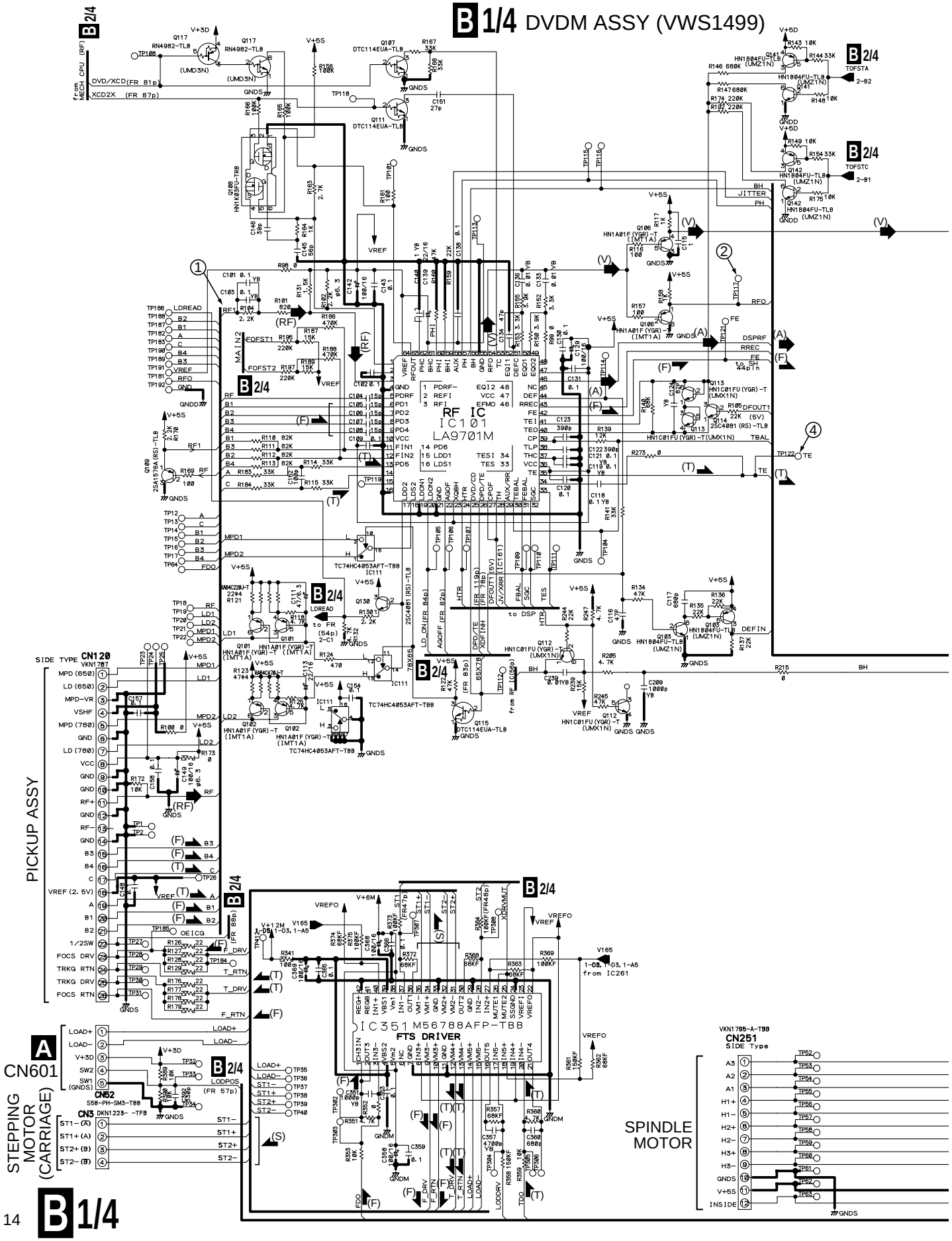
3.2 LOAB ASSY and OVERALL WIRING DIAGRAM

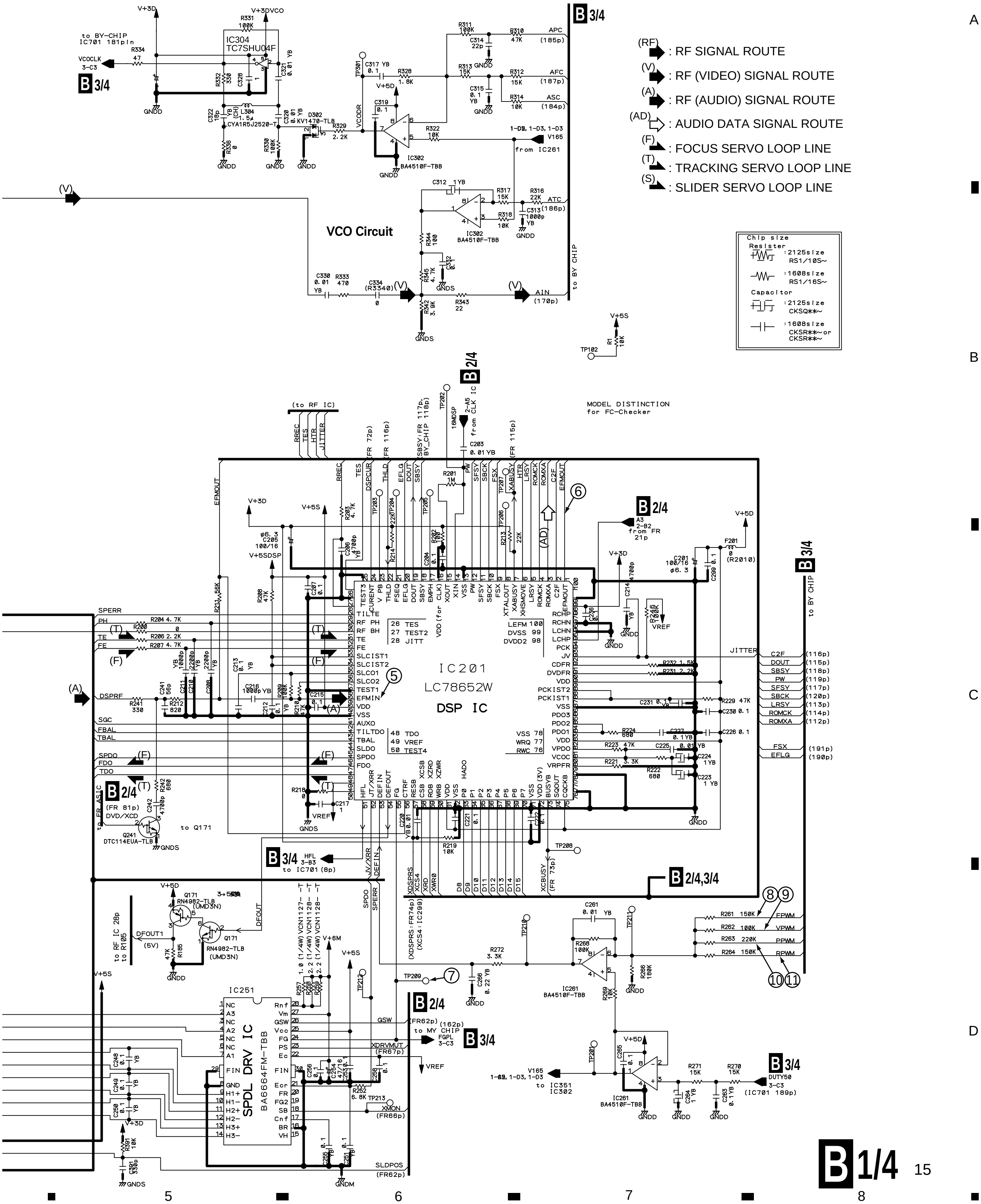
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



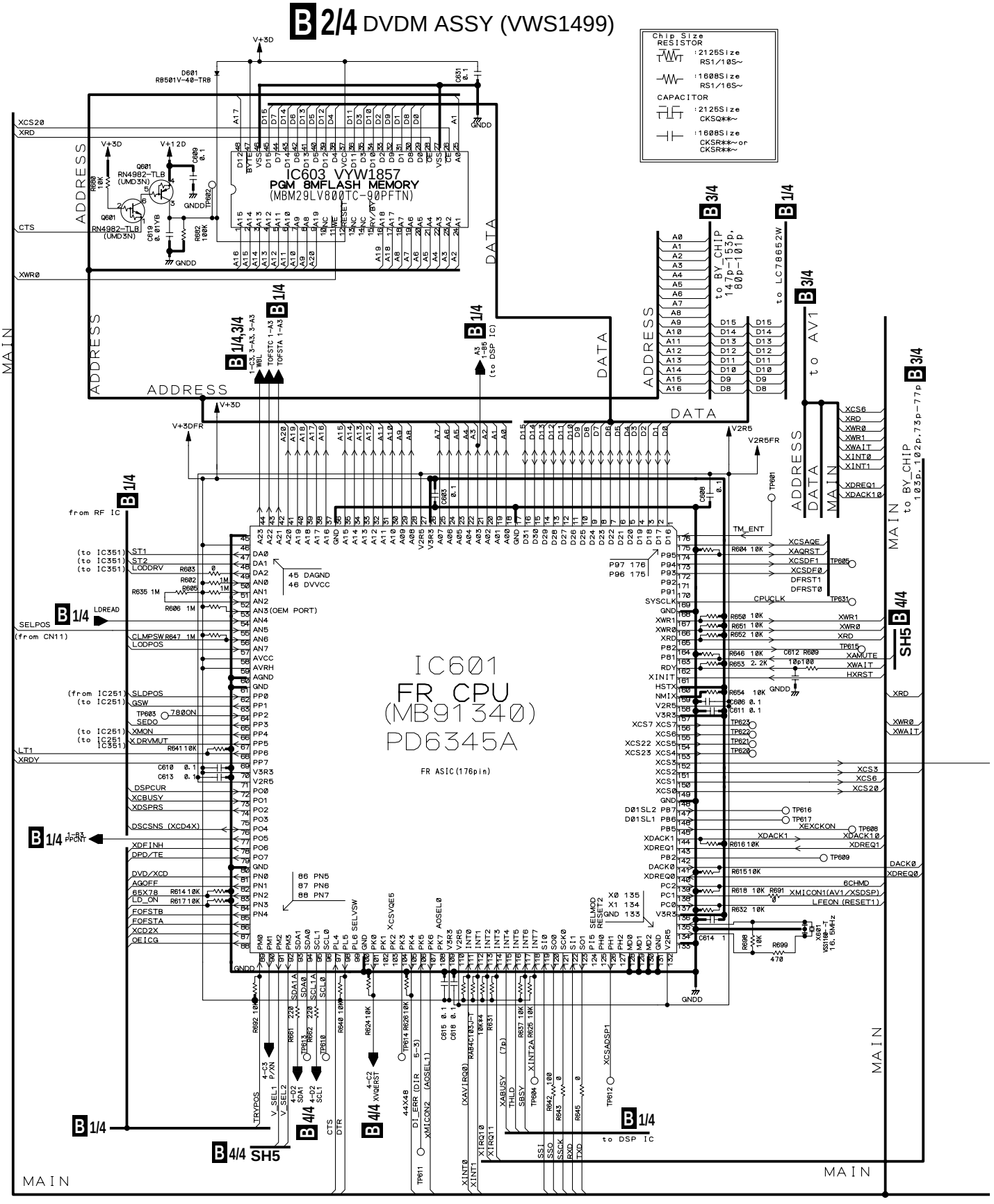

G (G 1/2, G 2/2) AMP ASSY (AWU7935)
CN3651
FAN–
FAN+
DC FAN MOTOR
: AXM7014
CN3301
CN3302
CN3311
CN3312
F TRADE 2 ASSY (AWU7859)
CN3321
CN3322
CN3331
CN3332
CN3301
FL
FR
SW
CN3401
6ch SPEAKER OUT
C
SL
SR
CN5531
CN5532
CN5521
CN5522
E TRADE 1 ASSY (AWU7858)
CN5511
CN5512
CN5501
CN5502
(RF) : RF SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : SLIDER SERVO LOOP LINE
D (D 1/5- D 5/5)
CONTROL ASSY
(AWU7856)
CN5701
CN201
NC
RDS
+10V
TUNE
STEREO
MUTE
/IF_REQ
TXL
GND
TXR
DO
CLK
DI
CE
C
FM/AM TUNER
MODULE
(AXQ7229)
CN5504
WEN/DI
WD0
WCLK
RST
VCC
VSS
SYSTEM
DOWNLOAD
TXD
RXD
DOWN LOAD DTR
DVD CTS
VD+5
GND
NC
CN5503
DVD
DOWNLOAD
VKB1163
VKB1163
JA8803
S VIDEO
OUT
COMPOSITE
VIDEO OUT
CN3902
J3901
HP L
HP GND
HP R
HP SW
HP MUTE
I
HP ASSY
(AWU7863)
JA3901
PHONES
JA8602
DIGITAL INPUT
OPTICAL
JA3001
TVIN
VCRIN
VROUT
H
JACK ASSY
(AWU7862)
CN3001
CN3011
TVR
GNDA
TVL
VCRR
GNDA
VCRL
GNDA
RECR
GNDA
RECL
CN5611
CN5601
KEY
REMOCON
FLDATA
FLCK
XFLCS
TIMERLED
STBYLED
PROGLED
V+5FL
GNDFL
V+5E
GNDLED
VFDP
FLAC1
FLAC2
J
DISPLAY ASSY
(AWU7861)

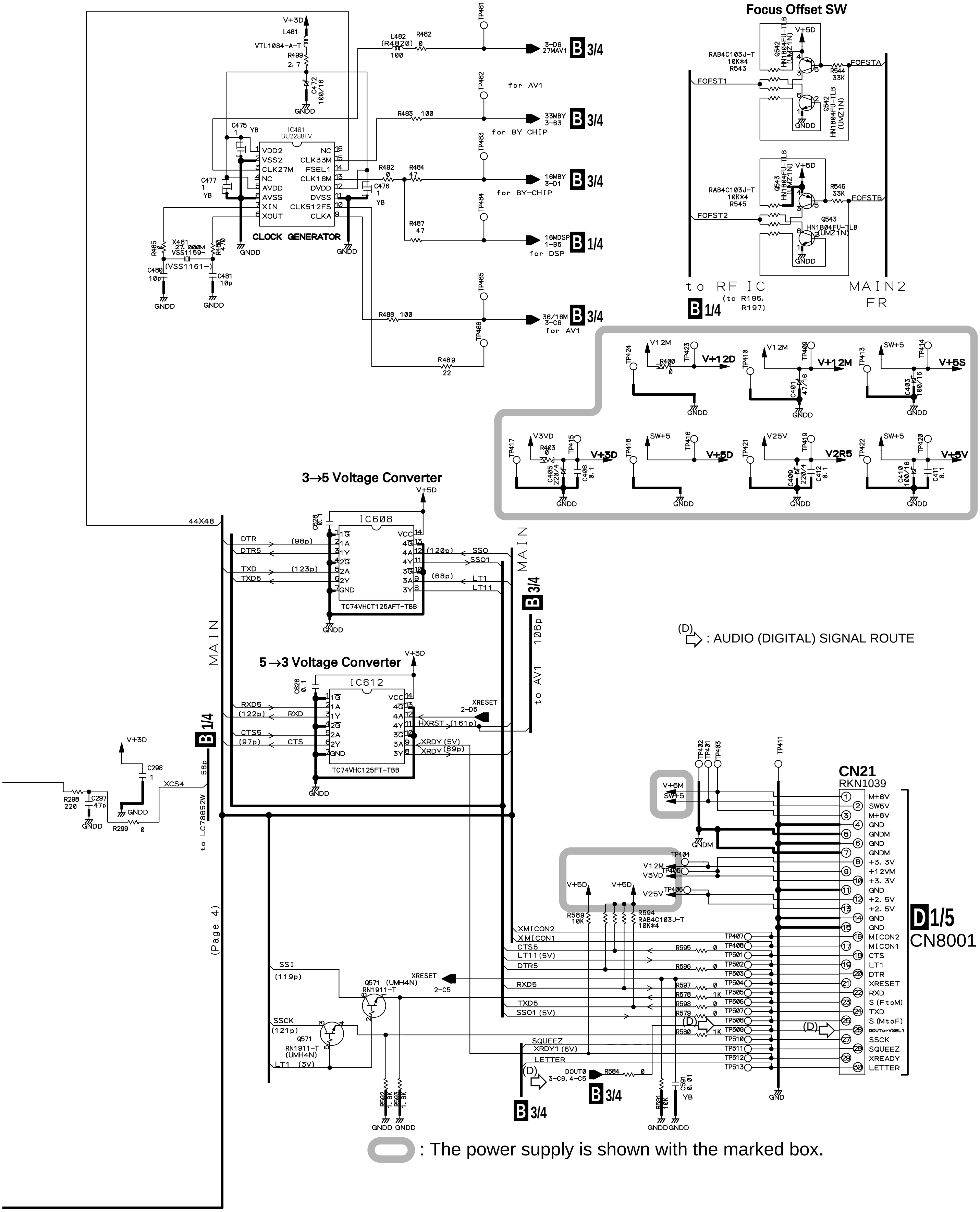
3.3 DVDM ASSY (1/4)




B 3/4
VCO Circuit
IC304
TC7SHU04F
IC302
BA4510F-TBB
(RF) : RF SIGNAL ROUTE
(V) : RF (VIDEO) SIGNAL ROUTE
(A) : RF (AUDIO) SIGNAL ROUTE
(AD) : AUDIO DATA SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : SLIDER SERVO LOOP LINE
Chip size
Resister
:2125size RS1/10S~
:1608size RS1/16S~
Capacitor
:2125size CKSQ**~
:1608size CKSR**~or CKSR**~
to BY CHIP
MODEL DISTINCTION
for FC-Checker
IC201
LC78652W
DSP IC
B 2/4
B 2/4,3/4
IC261
BA4510F-TBB
IC251
SPDL DRV IC
BA6664FM-TBB
B 1/4

3.4 DVDM ASSY (2/4)

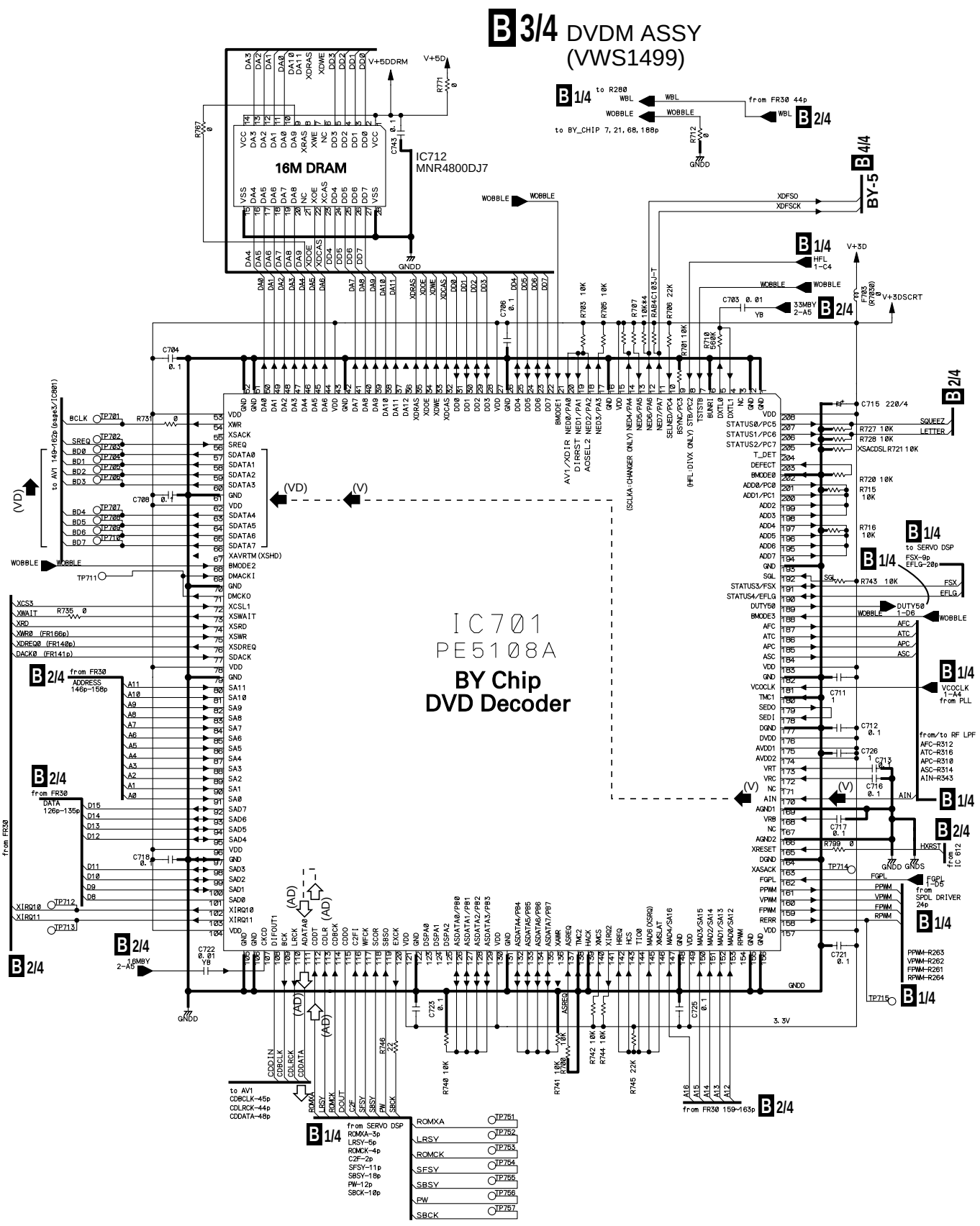


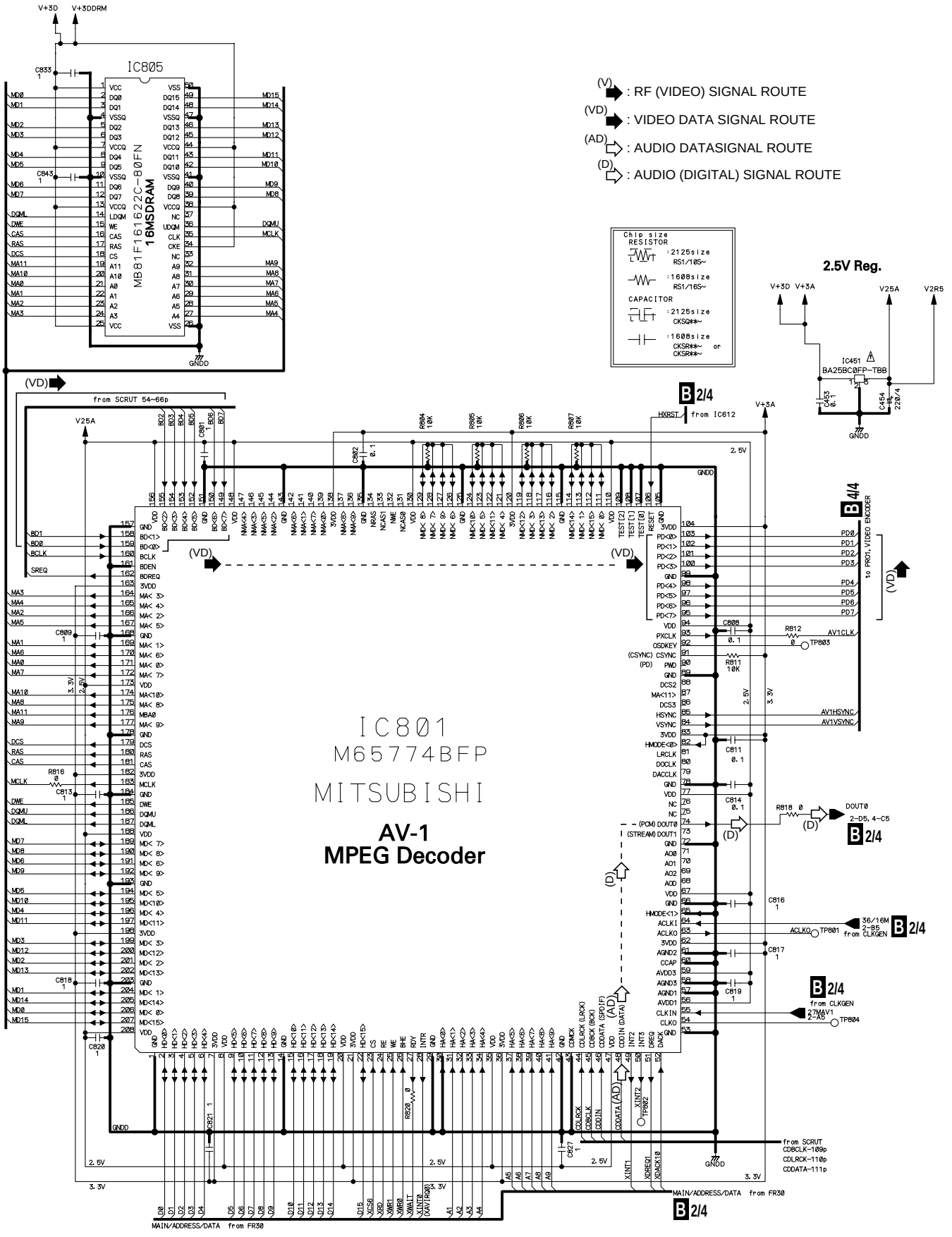


(D) : AUDIO (DIGITAL) SIGNAL ROUTE

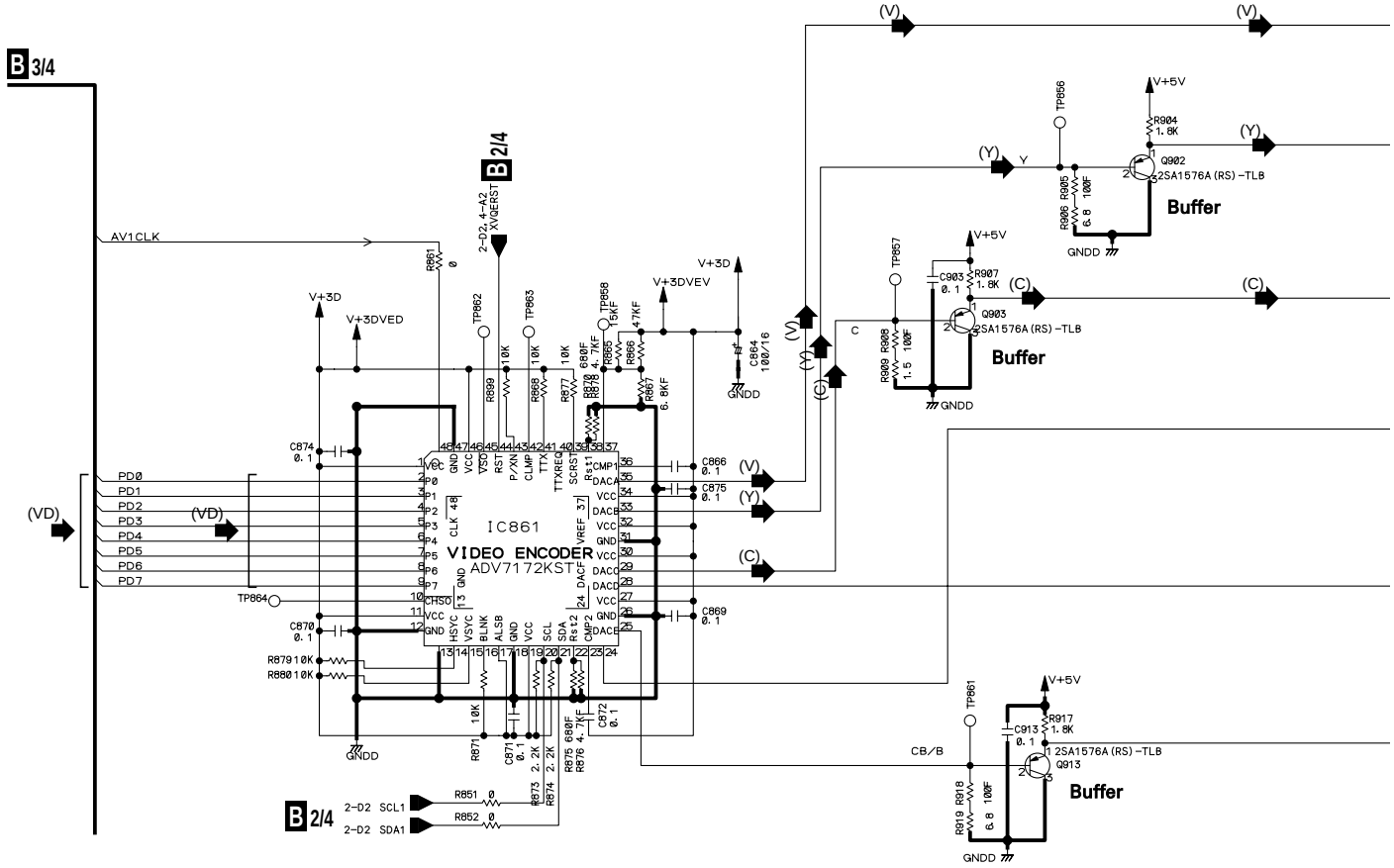
: The power supply is shown with the marked box.

3.5 DVDM ASSY (3/4)




(V) : RF (VIDEO) SIGNAL ROUTE
(VD) : VIDEO DATA SIGNAL ROUTE
(AD) : AUDIO DATASIGNAL ROUTE
(D) : AUDIO (DIGITAL) SIGNAL ROUTE
IC805
MB81F161622C-80FN
16MSDRAM
IC801
M65774BFP
MITSUBISHI
AV-1
MPEG Decoder
2.5V Reg.
IC451
BA25BC0FP-TBB
Chip size
RESISTOR
CAPACITOR
V+3D
V+3DDRM
V+3A
V25A
V2R5
2.5V
3.3V
GNDD
from SCRUT 54~66p
from IC612
to PRO1, VIDEO ENCODER
from CLKGEN
from SCRUT
CDBCLK-109p
CDLRCK-110p
CDDATA-111p
MAIN/ADDRESS/DATA from FR30
B 2/4
B 4/4
B 3/4

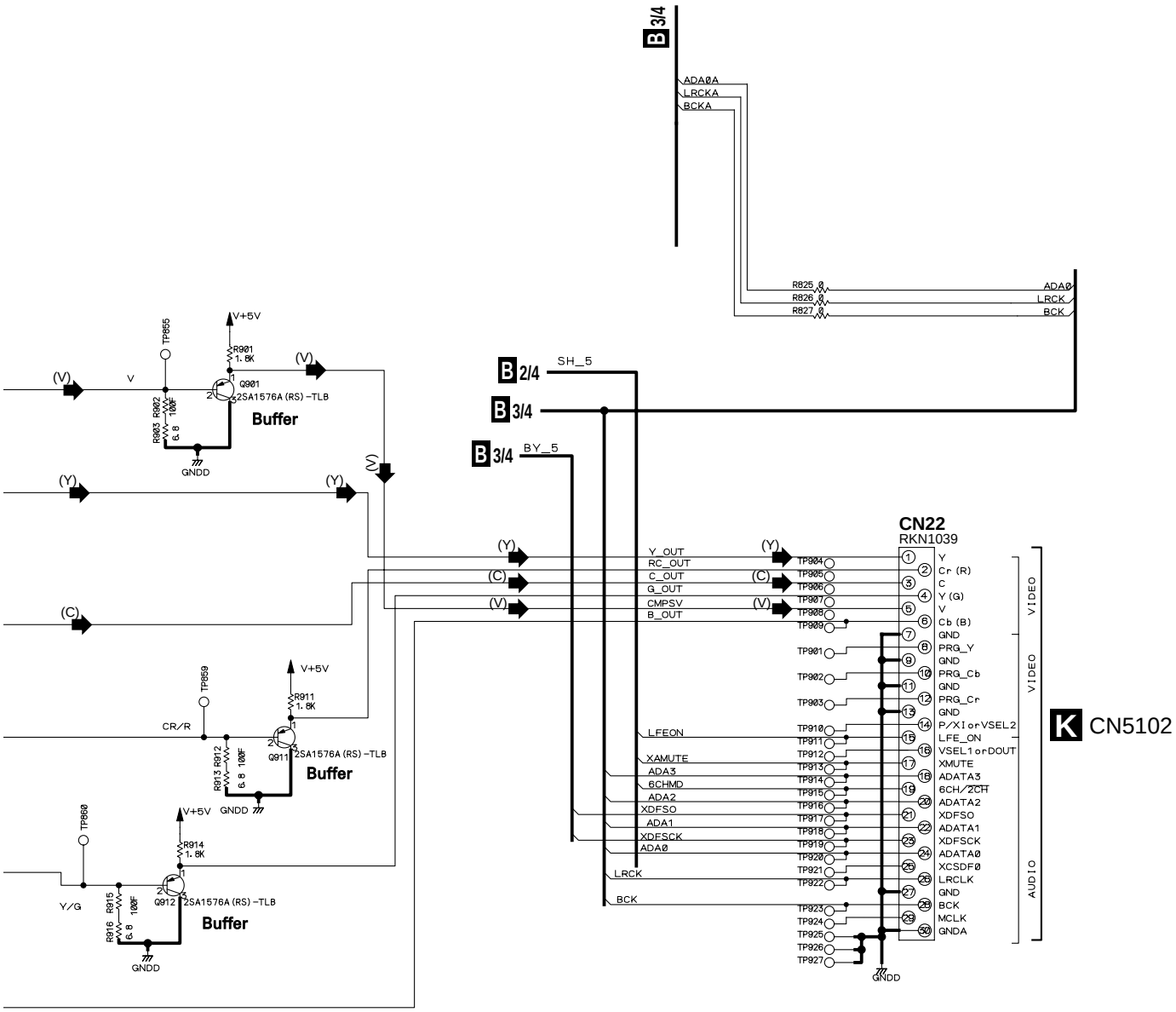
3.6 DVDM ASSY (4/4)



B 4/4 DVDM ASSY (VWS1499)

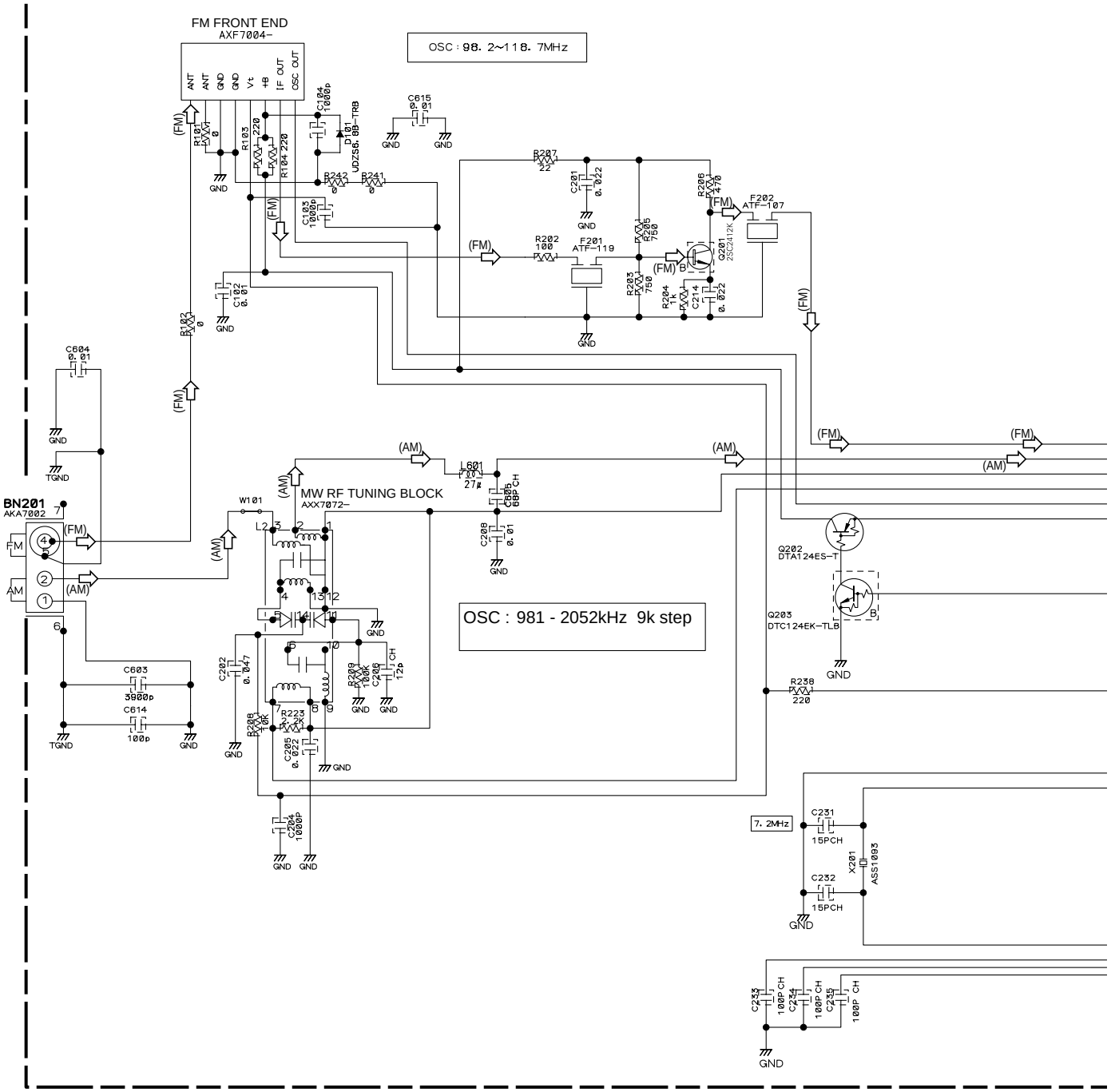
(VD) : VIDEO DATA SIGNAL ROUTE
(V) : V SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE

CHIP SIZE
RESISTOR
: 2125size RS1/10S~
: 1608size RS1/16S~
CAPACITOR
: 2125size CKSQ**~
: 1608size CCSR**~or CKSR**~



3.7 FM/AM TUNER MODULE

C FM/AM TUNER MODULE (AXQ7229)

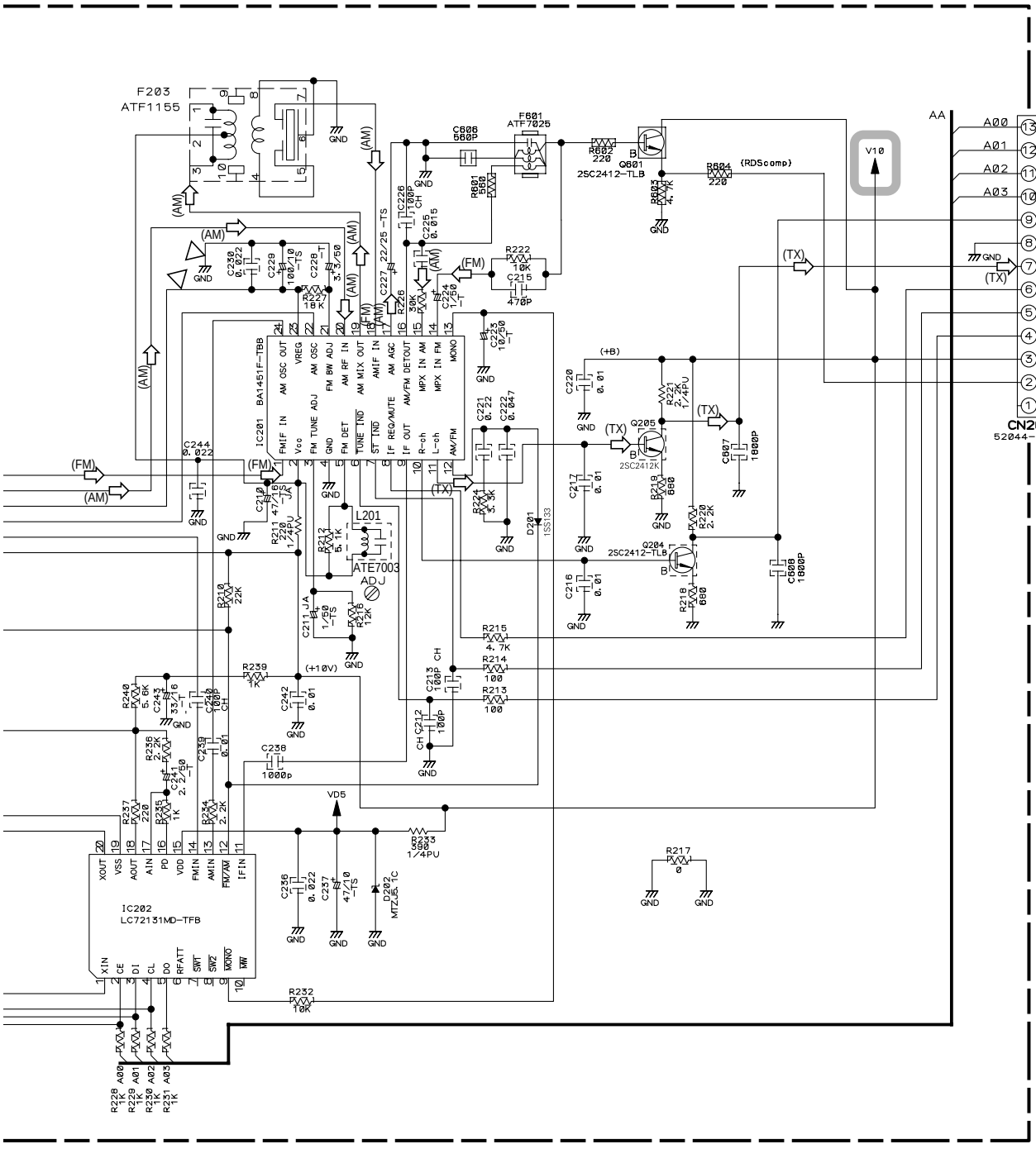


Notes

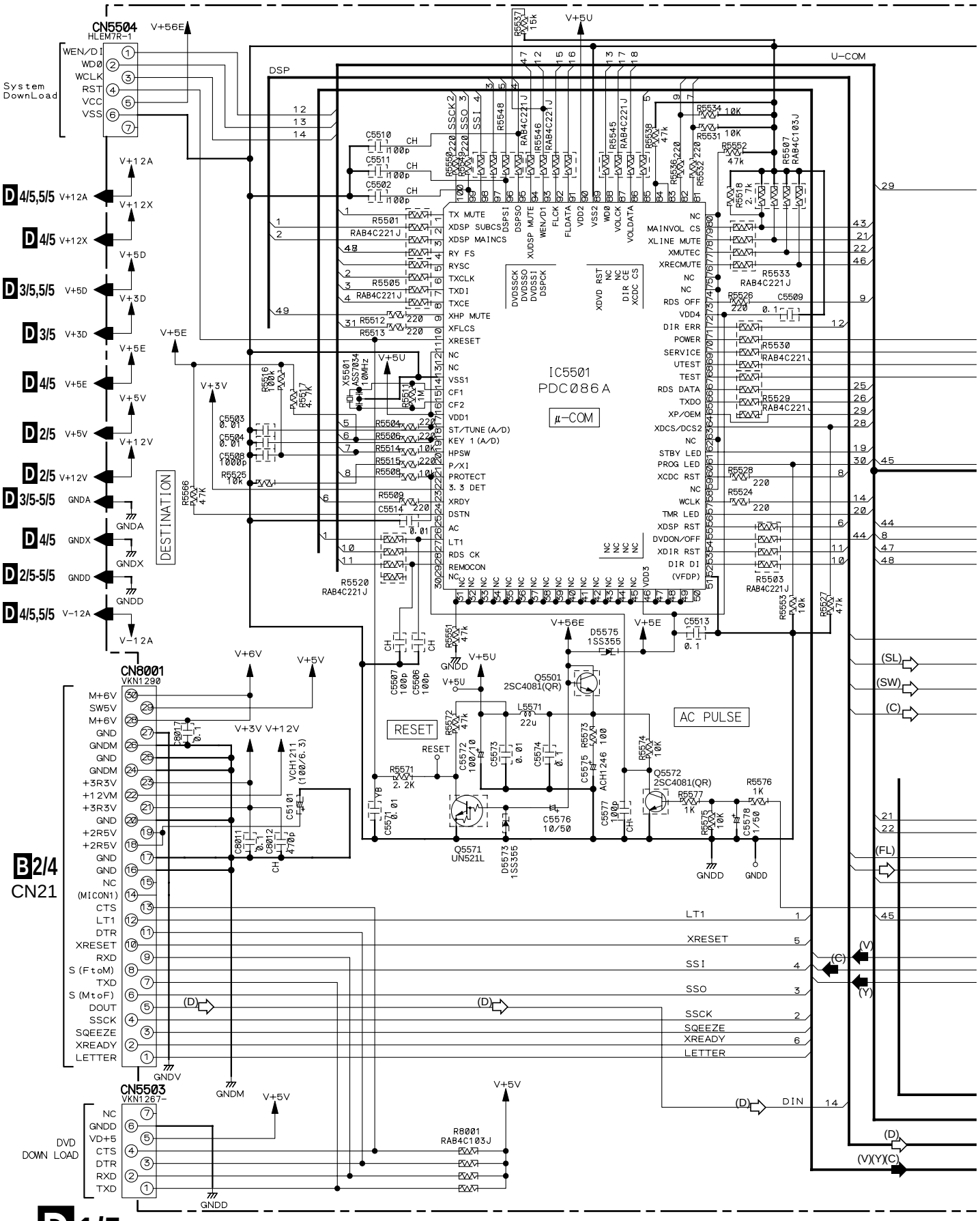
1. RESISTORS
   Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K;KΩ, M;MΩ.
2. CAPACITORS
   Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P;PF.
3. DIODES
   No mark diode is 1SS133.

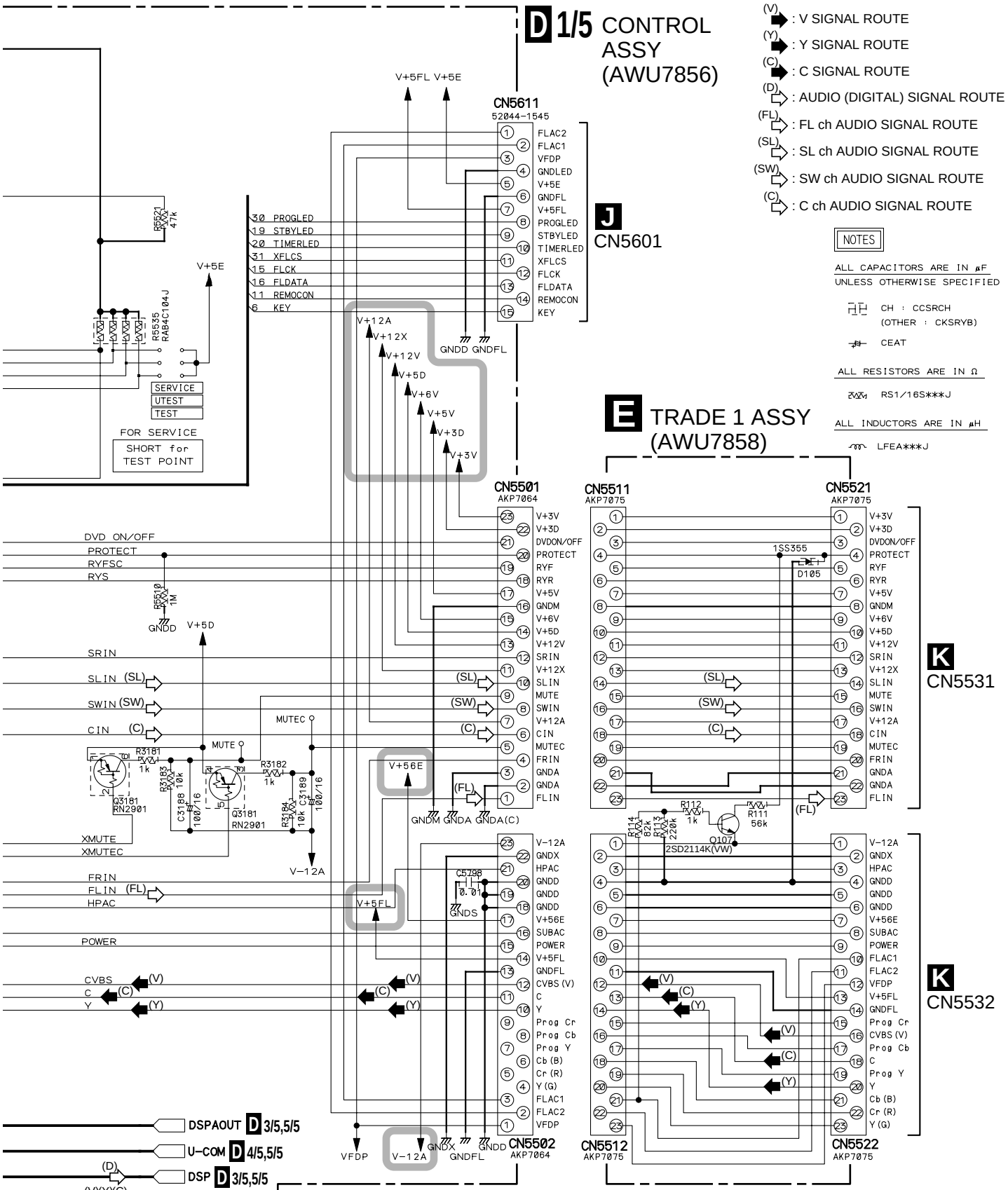
: The power supply is shown with the marked box.

(TX) : AUDIO SIGNAL ROUTE (TUNER)
(AM) : AM SIGNAL ROUTE
(FM) : FM SIGNAL ROUTE

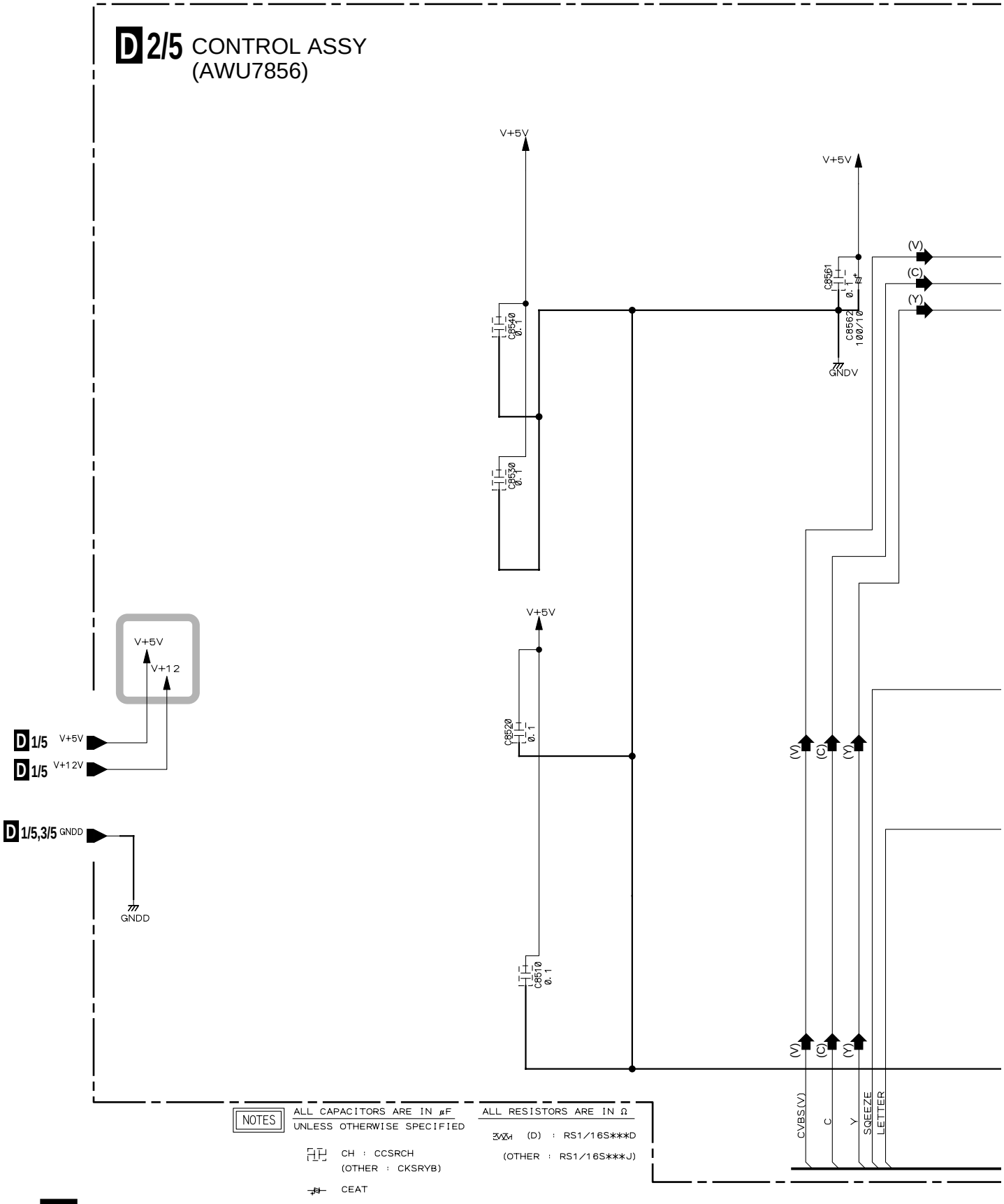


3.8 CONTROL (1/5) and TRADE 1 ASSYS

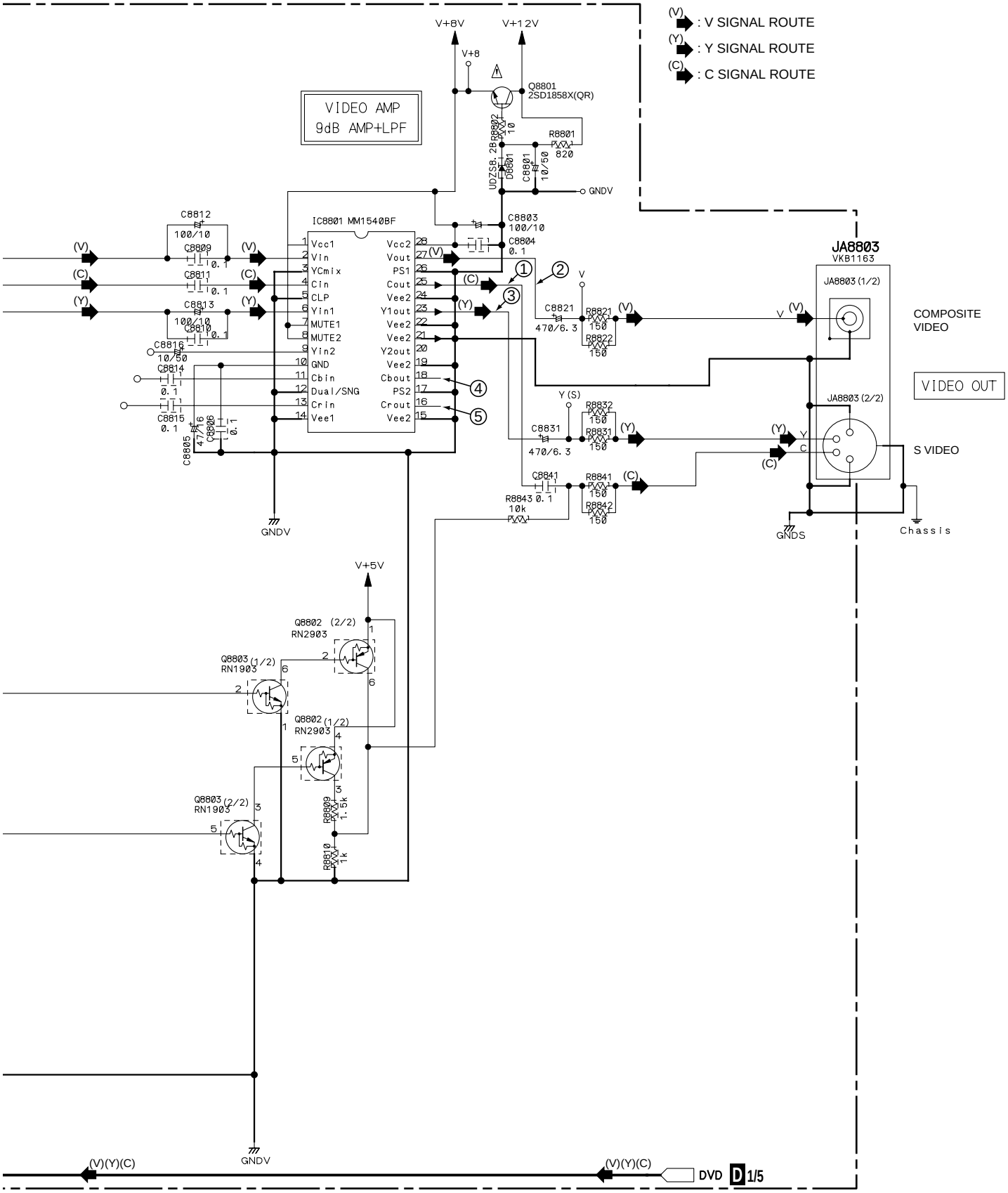



D 1/5 CONTROL ASSY (AWU7856)
(V) : V SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(D) : AUDIO (DIGITAL) SIGNAL ROUTE
(FL) : FL ch AUDIO SIGNAL ROUTE
(SL) : SL ch AUDIO SIGNAL ROUTE
(SW) : SW ch AUDIO SIGNAL ROUTE
(C) : C ch AUDIO SIGNAL ROUTE
NOTES
ALL CAPACITORS ARE IN µF
UNLESS OTHERWISE SPECIFIED
CH : CCSRCH
(OTHER : CKSRYB)
CEAT
ALL RESISTORS ARE IN Ω
RS1/16S***J
ALL INDUCTORS ARE IN µH
LFEA***J
CN5611
52044-1545
FLAC2
FLAC1
VFDP
GNDLED
V+5E
GNDFL
V+5FL
PROGLED
STBYLED
TIMERLED
XFLCS
FLCK
FLDATA
REMOCON
KEY
J
CN5601
V+5FL V+5E
V+12A
V+12X
V+12V
V+5D
V+6V
V+5V
V+3D
V+3V
GNDD GNDFL
R5521 47k
R5535 RAB4C104J
V+5E
SERVICE
UTEST
TEST
FOR SERVICE
SHORT for TEST POINT
E TRADE 1 ASSY (AWU7858)
CN5501
AKP7064
CN5511
AKP7075
CN5521
AKP7075
V+3V
V+3D
DVDON/OFF
PROTECT
RYF
RYR
V+5V
GNDM
V+6V
V+5D
V+12V
SRIN
V+12X
SLIN
MUTE
SWIN
V+12A
CIN
MUTEC
FRIN
GNDA
GNDA
FLIN
DVD ON/OFF
PROTECT
RYFSC
RYS
R5510 1M
GNDD
V+5D
SRIN
SLIN (SL)
SWIN (SW)
CIN (C)
MUTEC
MUTE
R3181 1k
R3182 1k
R3183 10k
R3184 10k
C3188 100/16
C3189 100/16
Q3181 RN2901
Q3181 RN2901
XMUTE
XMUTEC
V-12A
1SS355
D105
R112 1k
R111 56k
R114 82k
R113 220k
Q107 2SD2114K(VW)
K
CN5531
K
CN5532
V+56E
GNDM GNDA GNDA(C)
FRIN
FLIN (FL)
HPAC
POWER
V+5FL
C5798 0.01
GNDS
V-12A
GNDX
HPAC
GNDD
GNDD
GNDD
V+56E
SUBAC
POWER
V+5FL
GNDFL
CVBS (V)
C
Y
Prog Cr
Prog Cb
Prog Y
Cb (B)
Cr (R)
Y (G)
FLAC1
FLAC2
VFDP
FLAC1
FLAC2
VFDP
V+5FL
GNDFL
Prog Cr
CVBS (V)
Prog Cb
C
Prog Y
Y
Cb (B)
Cr (R)
Y (G)
CVBS
C
Y
(V)
(C)
(Y)
VFDP
V-12A
GNDX
GNDFL
GNDD
CN5502
AKP7064
CN5512
AKP7075
CN5522
AKP7075
DSPAOUT D 3/5,5/5
U-COM D 4/5,5/5
DSP D 3/5,5/5
DVD D 2/5
: The power supply is shown with the marked box.

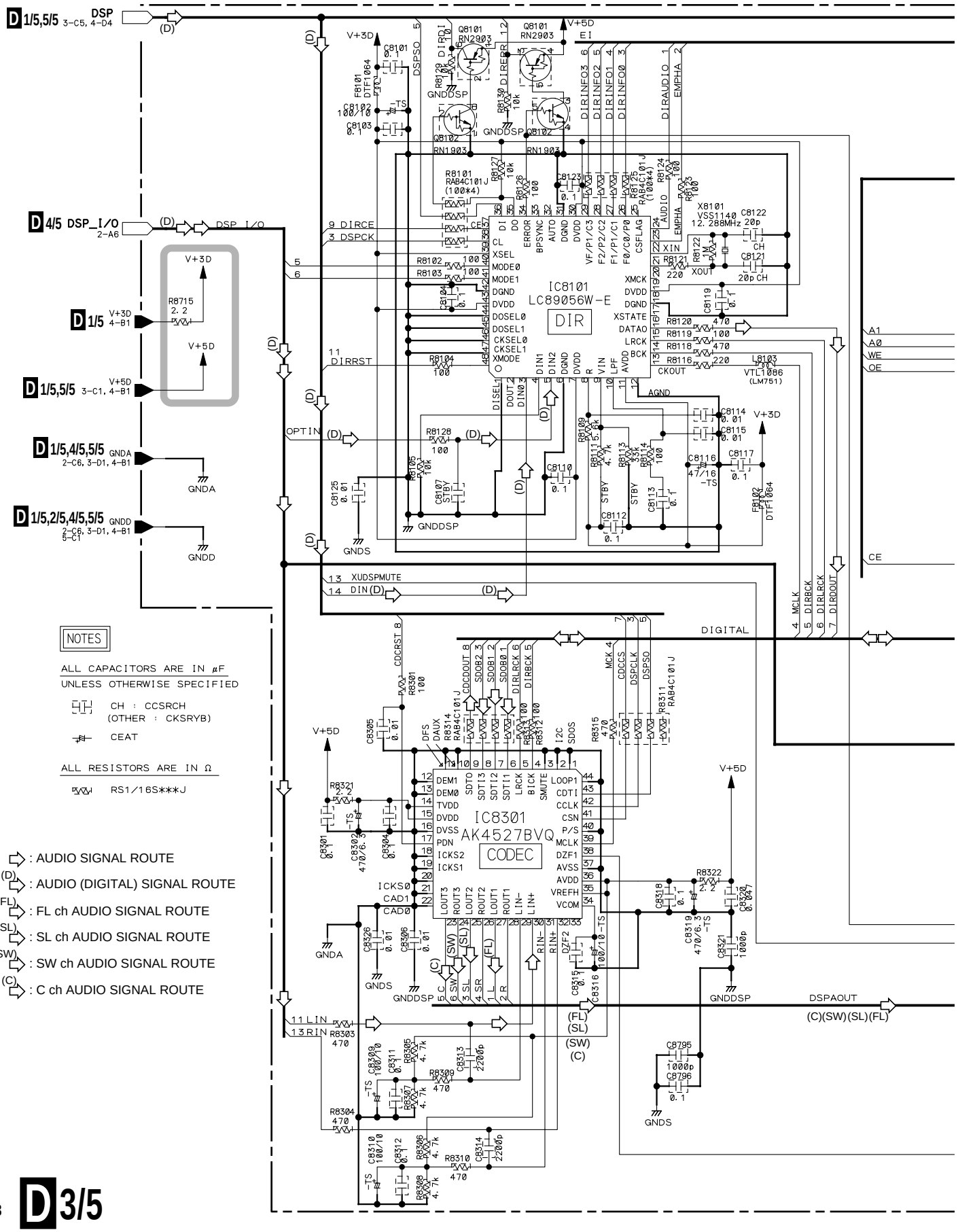
3.9 CONTROL ASSY (2/5)



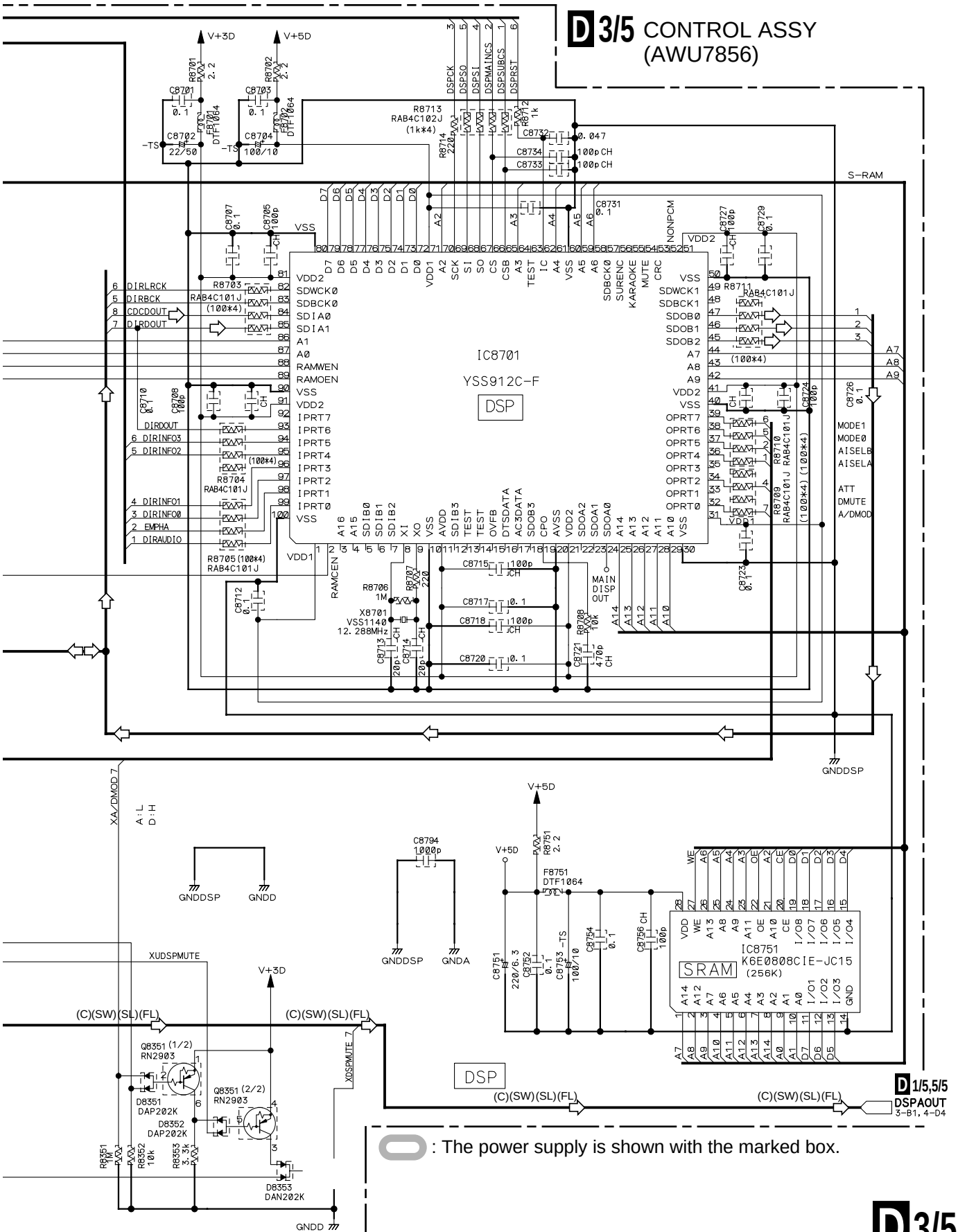
: The power supply is shown with the marked box.



3.10 CONTROL ASSY (3/5)

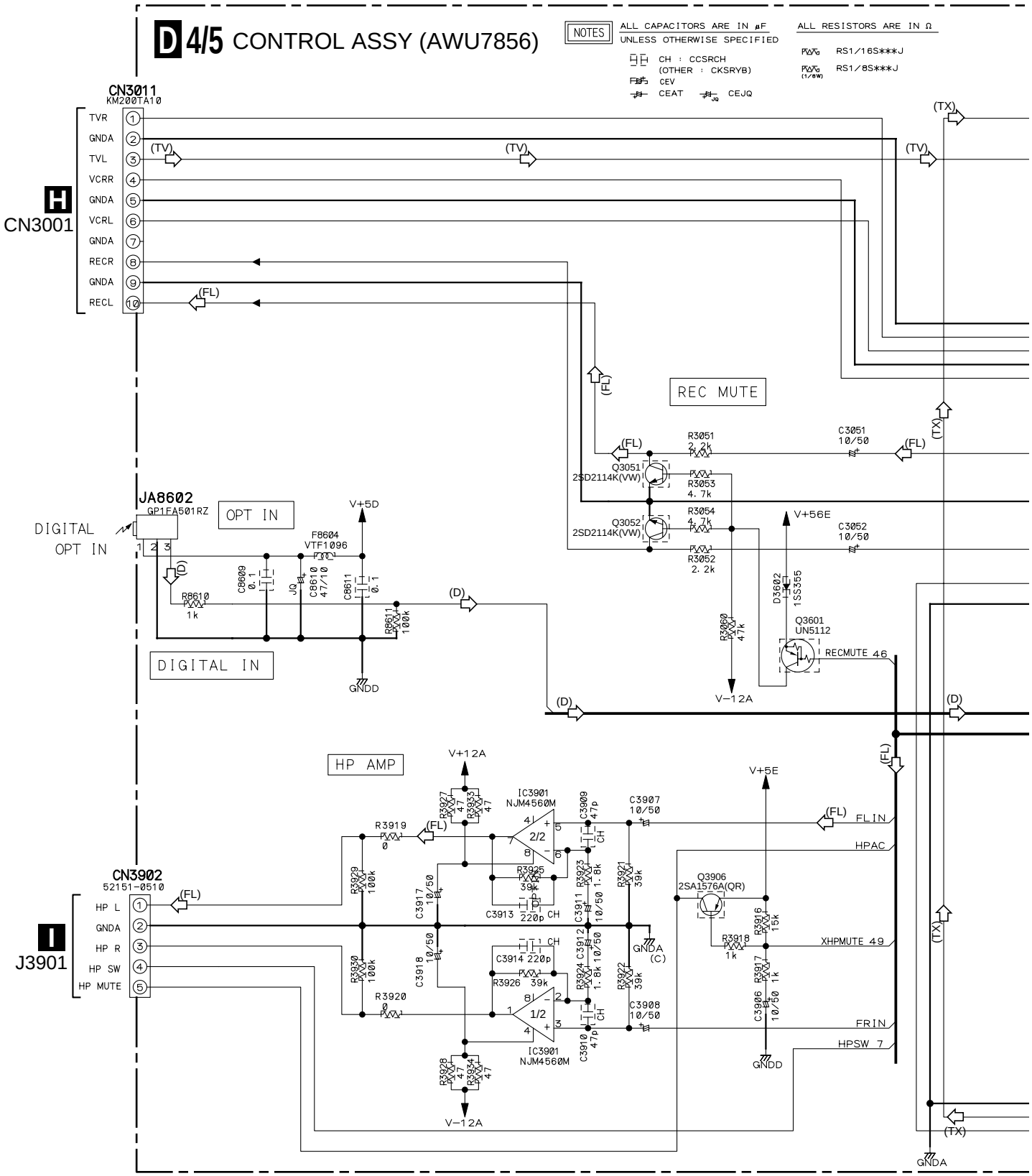


D 3/5 CONTROL ASSY (AWU7856)



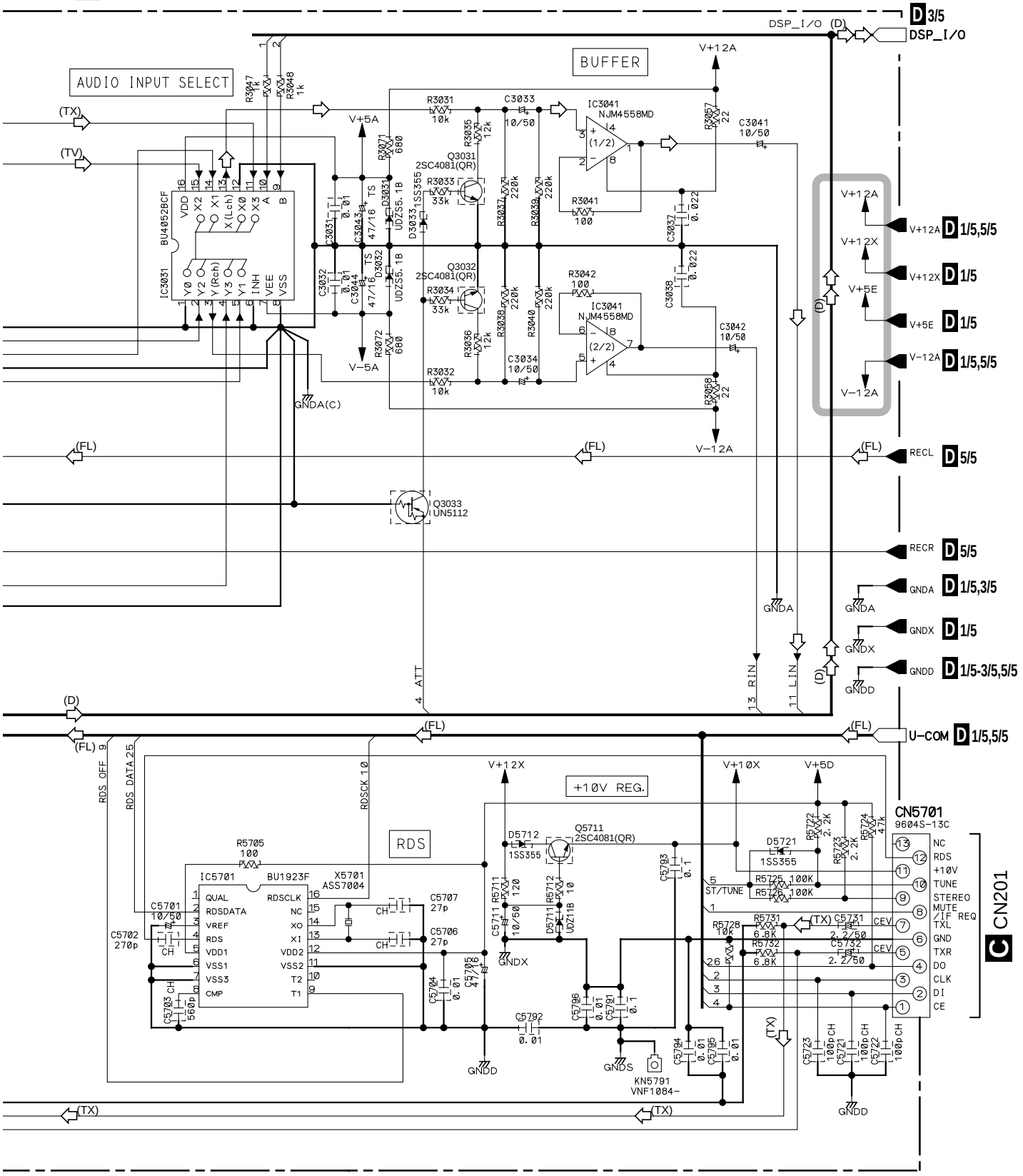
: The power supply is shown with the marked box.

3.11 CONTROL ASSY (4/5)



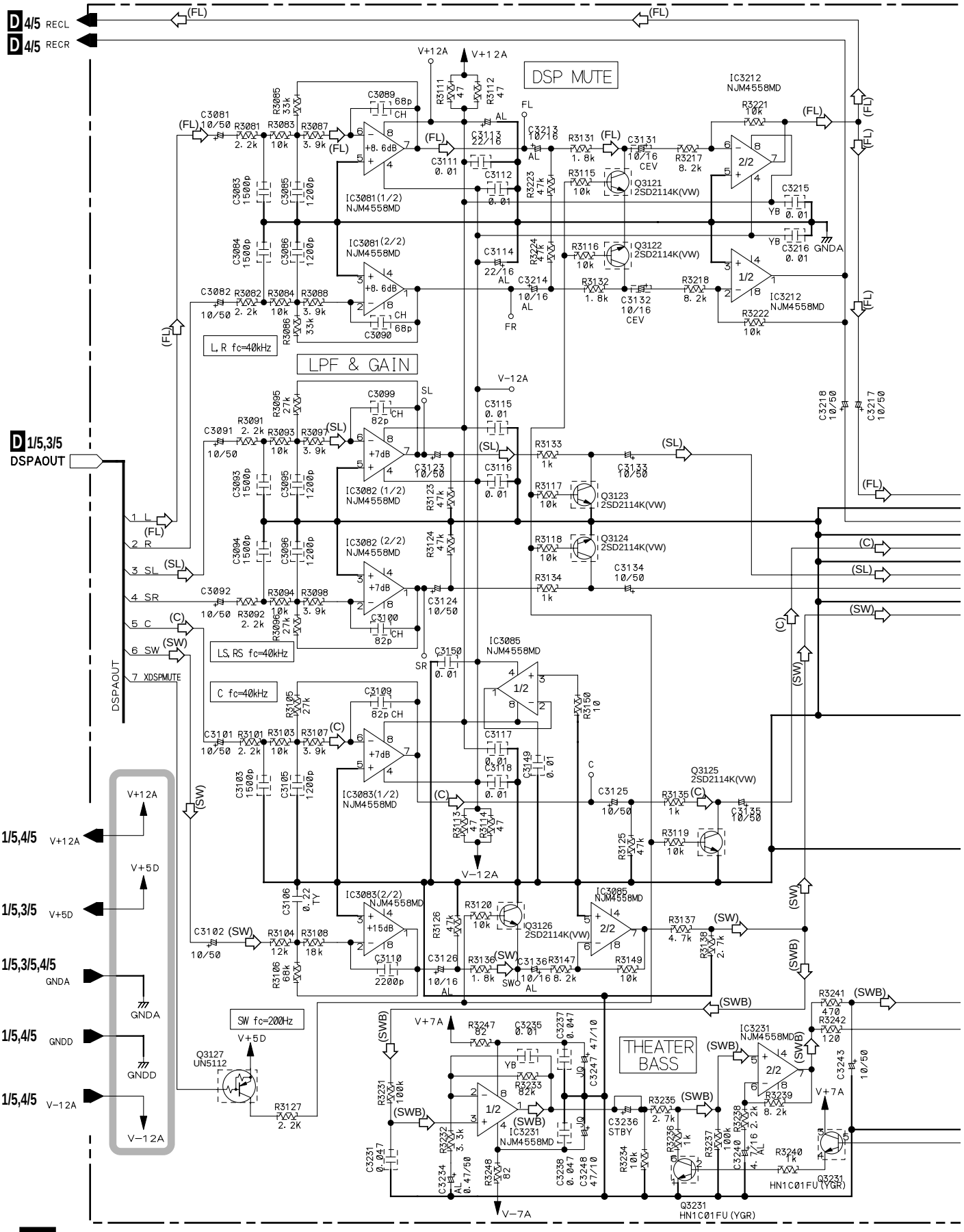
: AUDIO SIGNAL ROUTE
(D) : AUDIO (DIGITAL) SIGNAL ROUTE
(TV) : TV IN SIGNAL ROUTE (L ch)
(FL) : FL ch AUDIO SIGNAL ROUTE
(TX) : TX SIGNAL ROUTE (L ch)

: The power supply is shown with the marked box.

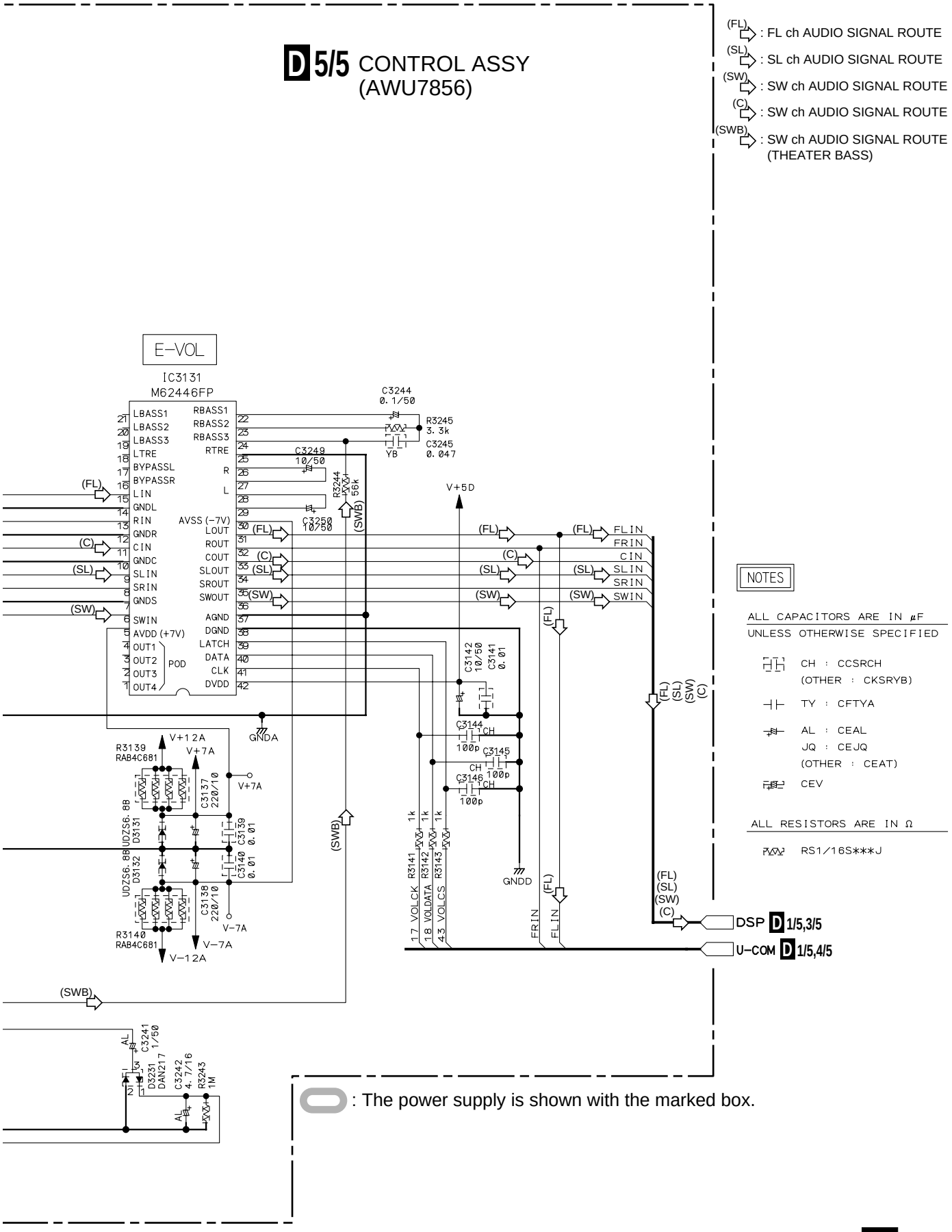


D 4/5

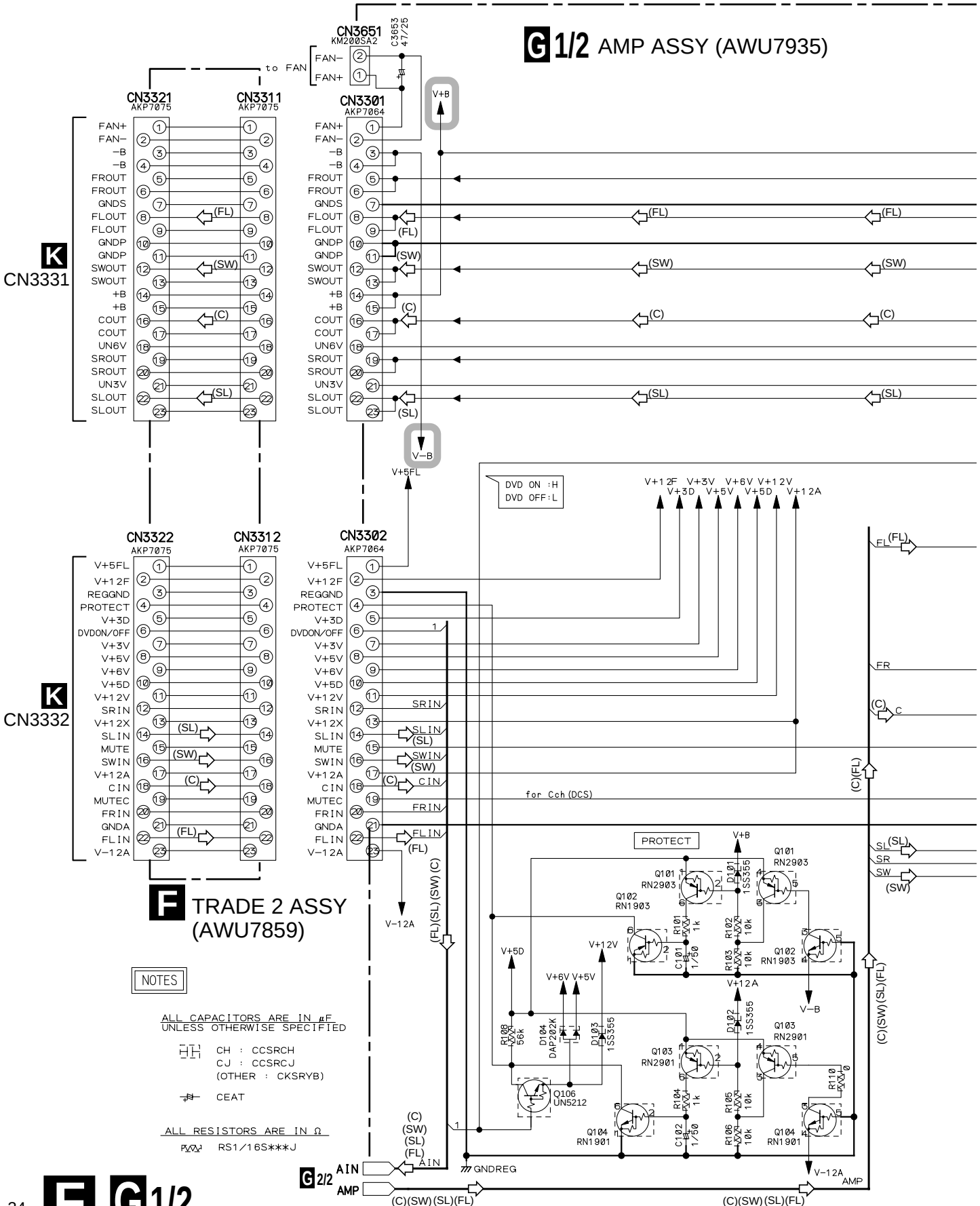
3.12 CONTROL ASSY (5/5)



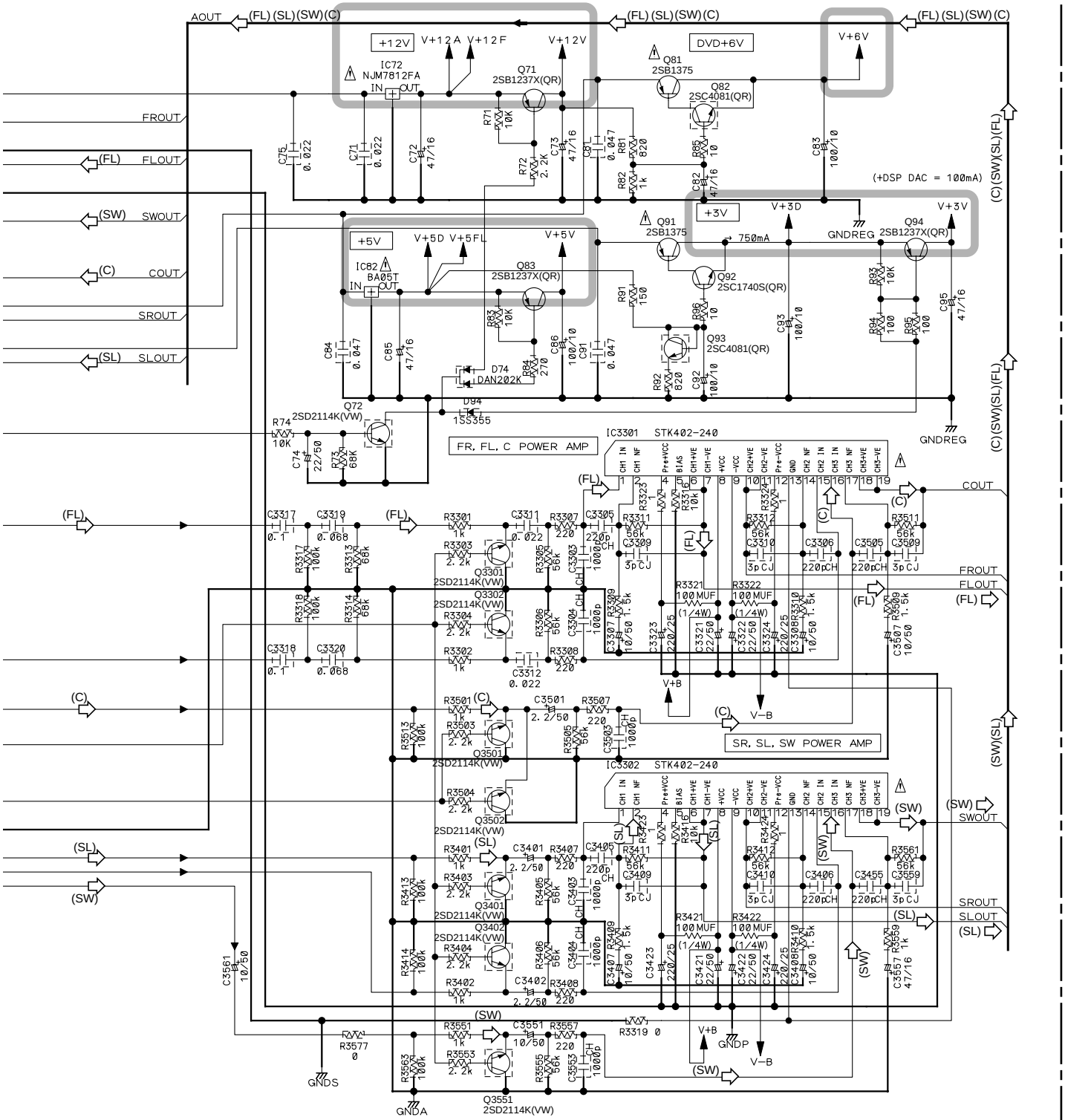
D 5/5 CONTROL ASSY (AWU7856)



3.13 TRADE 2 and AMP (1/2) ASSYS



: The power supply is shown with the marked box.



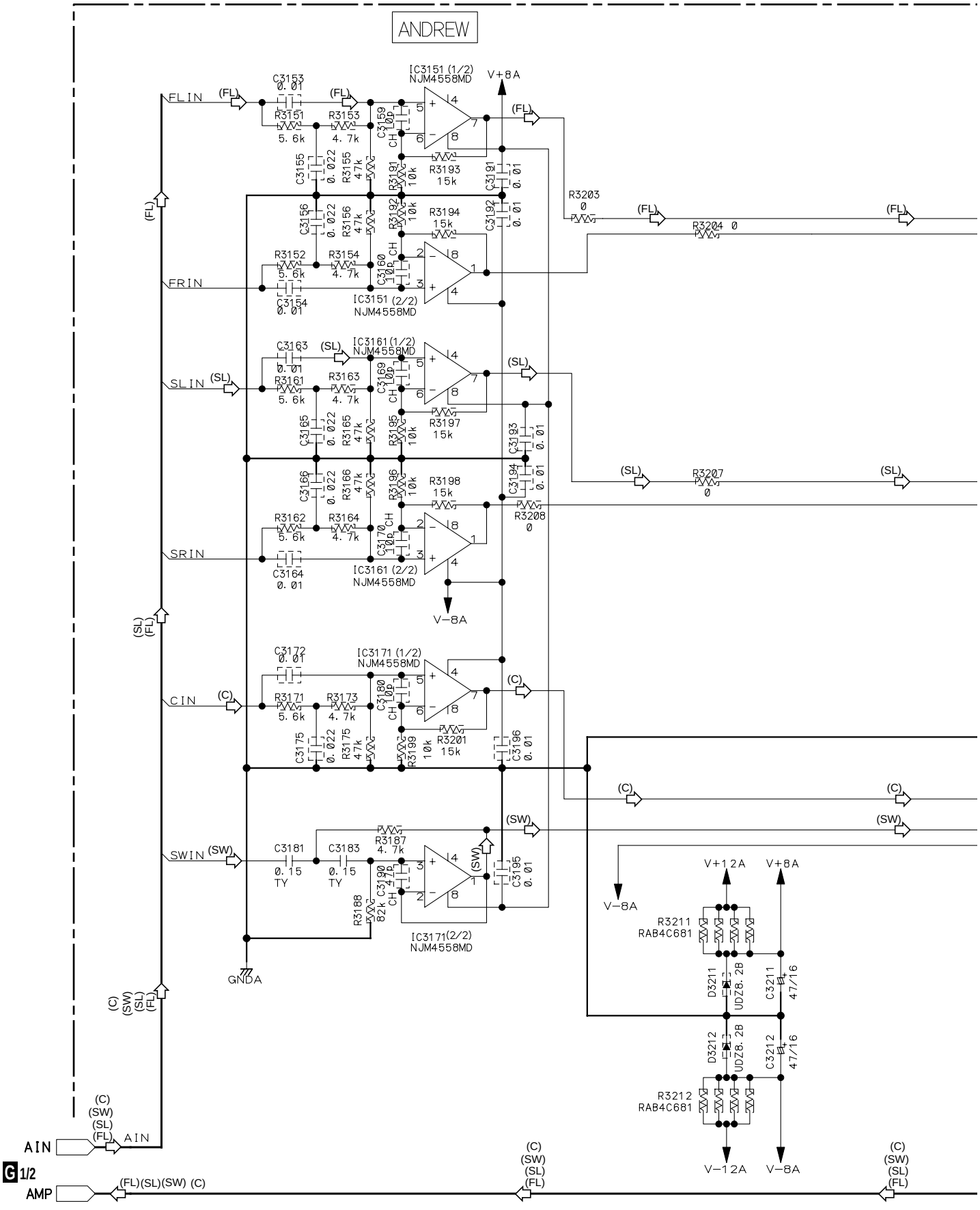
(FL) : FL ch AUDIO SIGNAL ROUTE

(SL) : SL ch AUDIO SIGNAL ROUTE

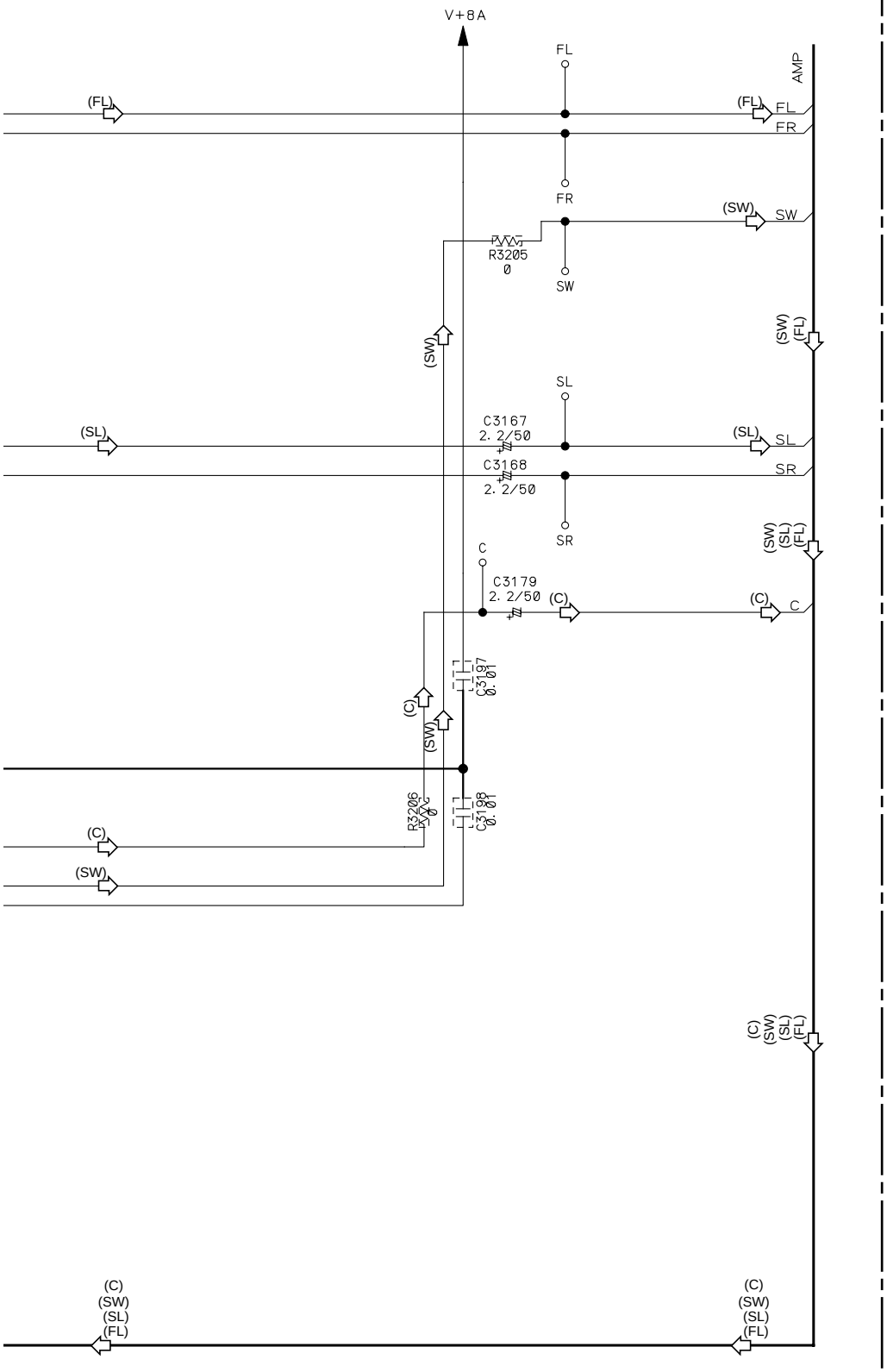
(SW) : SW ch AUDIO SIGNAL ROUTE

(C) : C ch AUDIO SIGNAL ROUTE

3.14 AMP ASSY (2/2)



G 2/2 AMP ASSY (AWU7935)



(FL) : FL ch AUDIO SIGNAL ROUTE

(SL) : SL ch AUDIO SIGNAL ROUTE

(SW) : SW ch AUDIO SIGNAL ROUTE

(C) : C ch AUDIO SIGNAL ROUTE

NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED

CH : CCSRCH
(OTHER : CKSRYB)

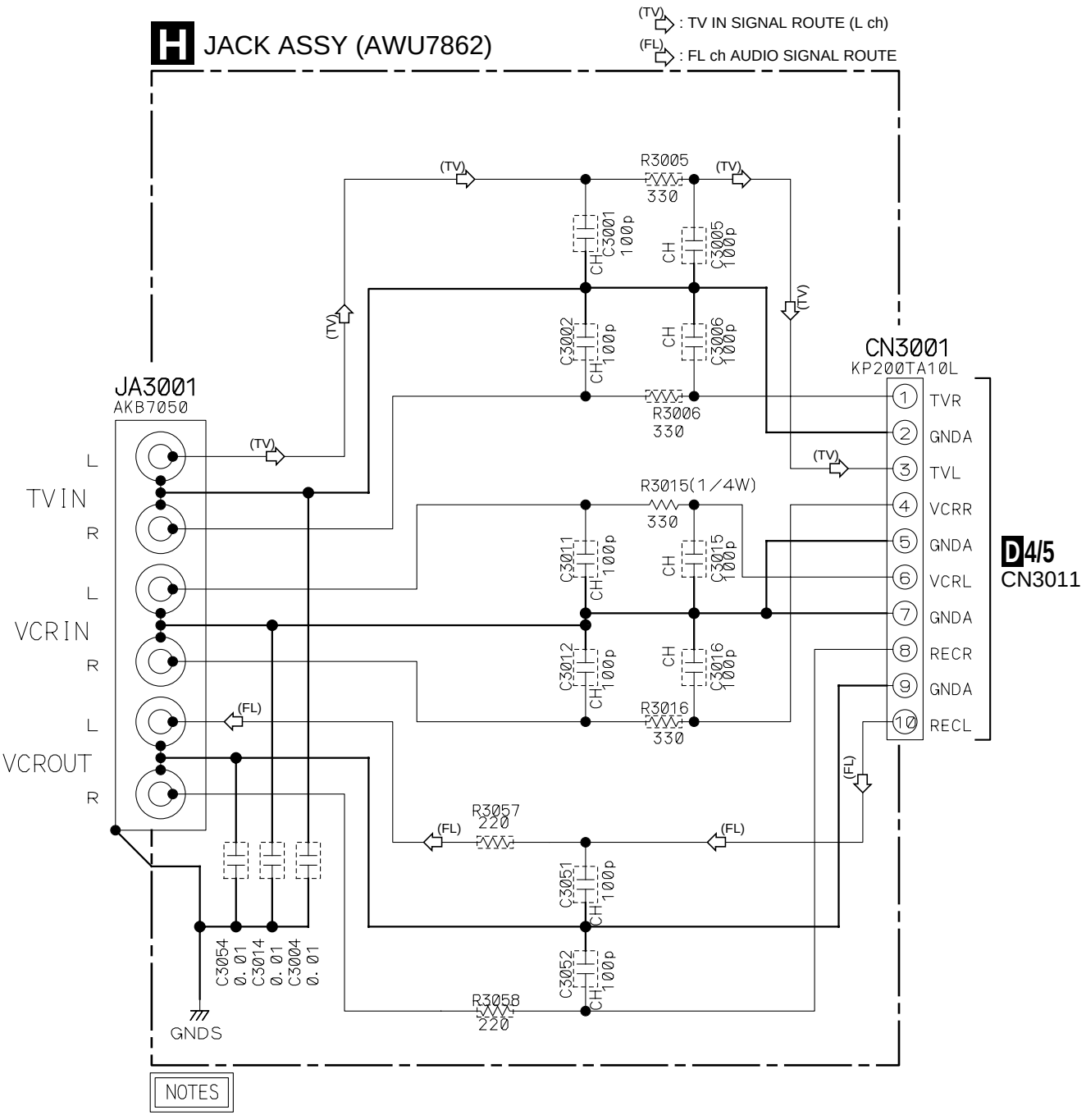
TY : CFTYA

CEAT

ALL RESISTORS ARE IN Ω

RS1/16S***J

3.15 JACK ASSY



NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED

CH : CCSRCH
(OTHER : CKSRYB)

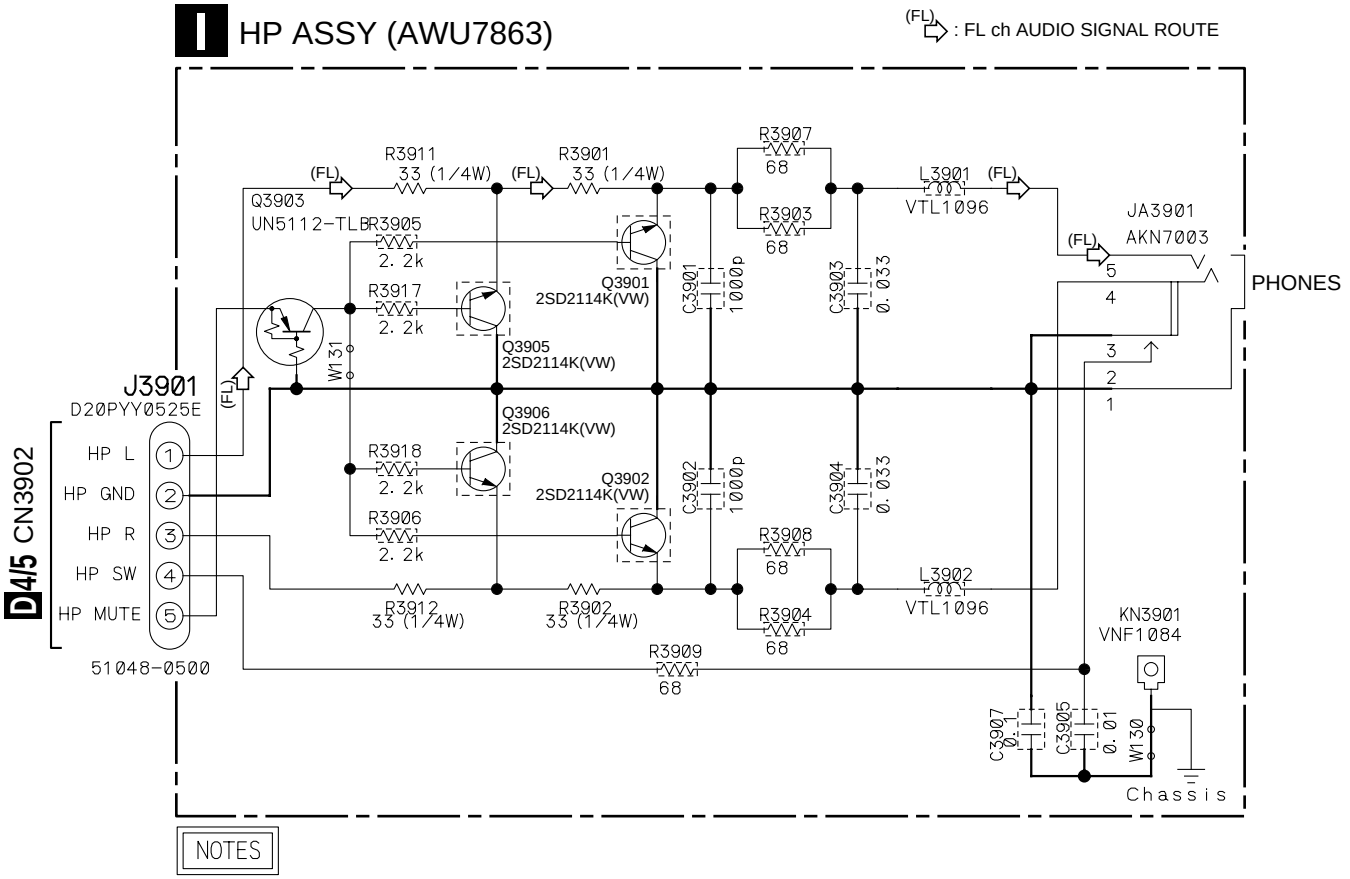
AL : CEAL
(OTHER : CEAT)

ALL RESISTORS ARE IN Ω

RS1/16S***J

RD1/4PU***J (1/4W)

3.16 HP ASSY



NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED

CH : CCSRCH
(OTHER : CKSRYB)

AL : CEAL
(OTHER : CEAT)

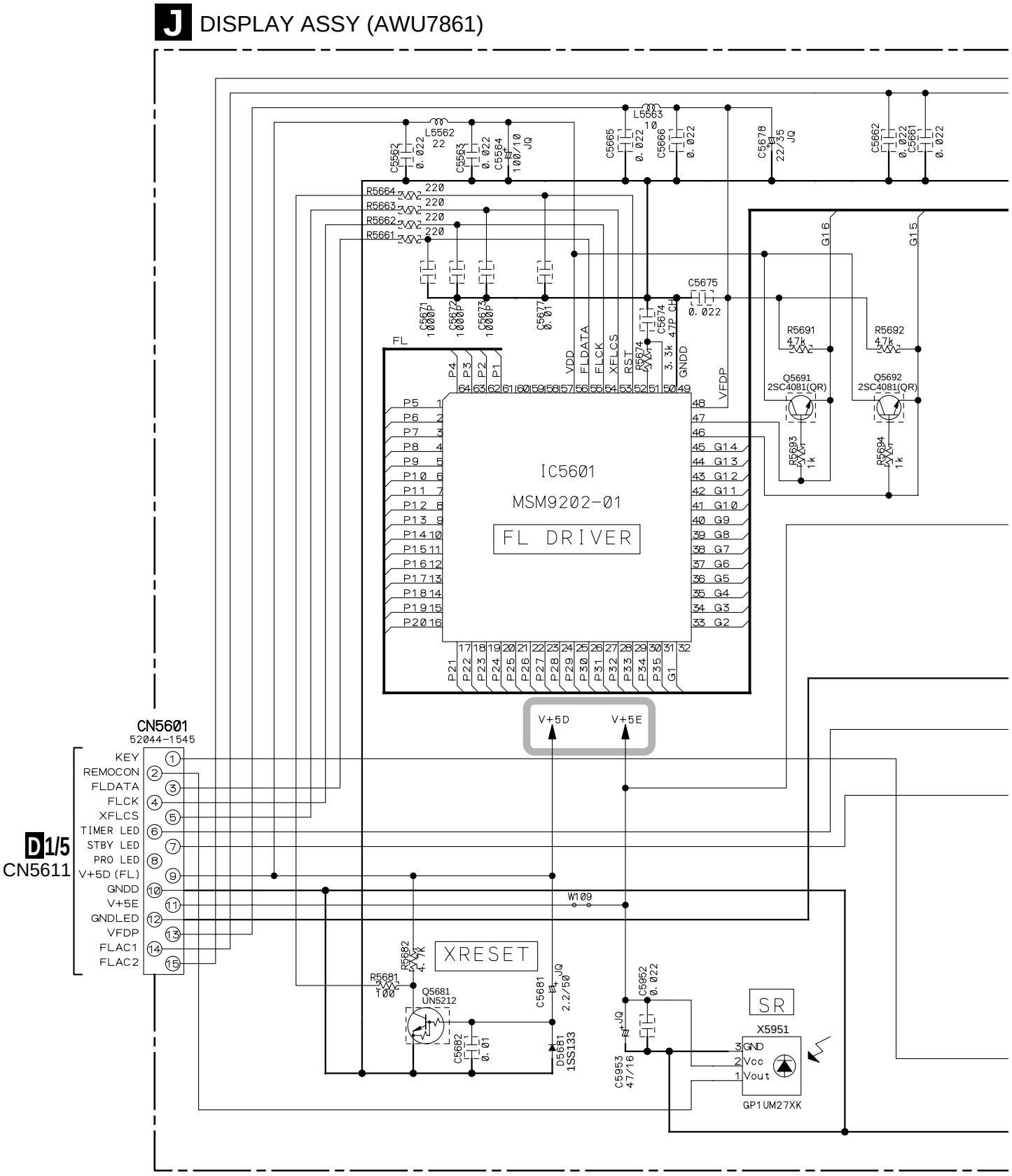
ALL RESISTORS ARE IN Ω

RS1/16S***J

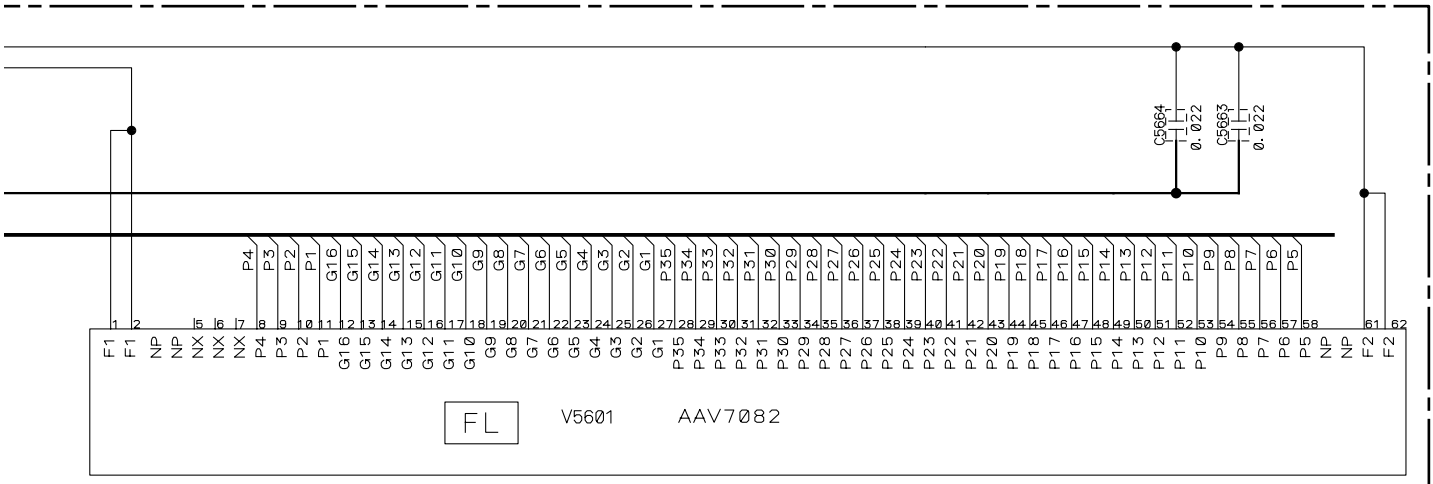
RD1/4PU***J (1/4W)

3.17 DISPLAY ASSY

J DISPLAY ASSY (AWU7861)

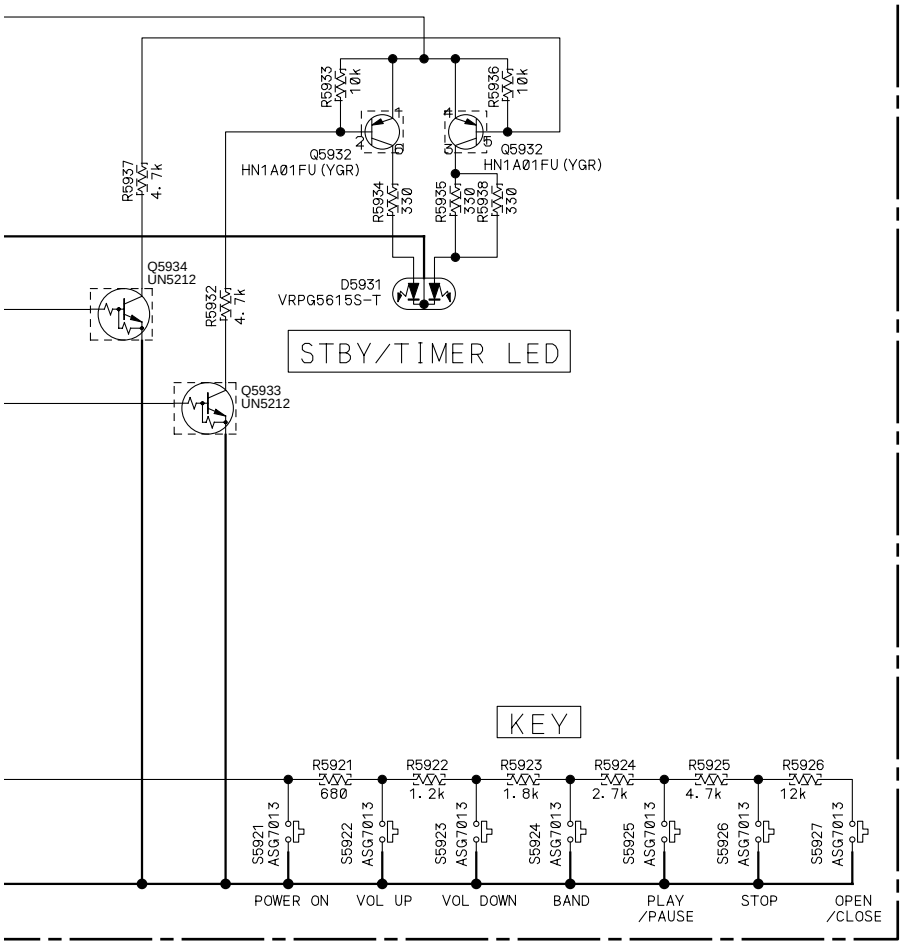


: The power supply is shown with the marked box.



AEB7242

(FL spacer)
5671



NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED

CH : CCSRCH
(OTHER : CKSRYB)

JQ : CEJQ

ALL RESISTORS ARE IN Ω

RS1/16S***J

ALL INDUCTORS ARE IN μH

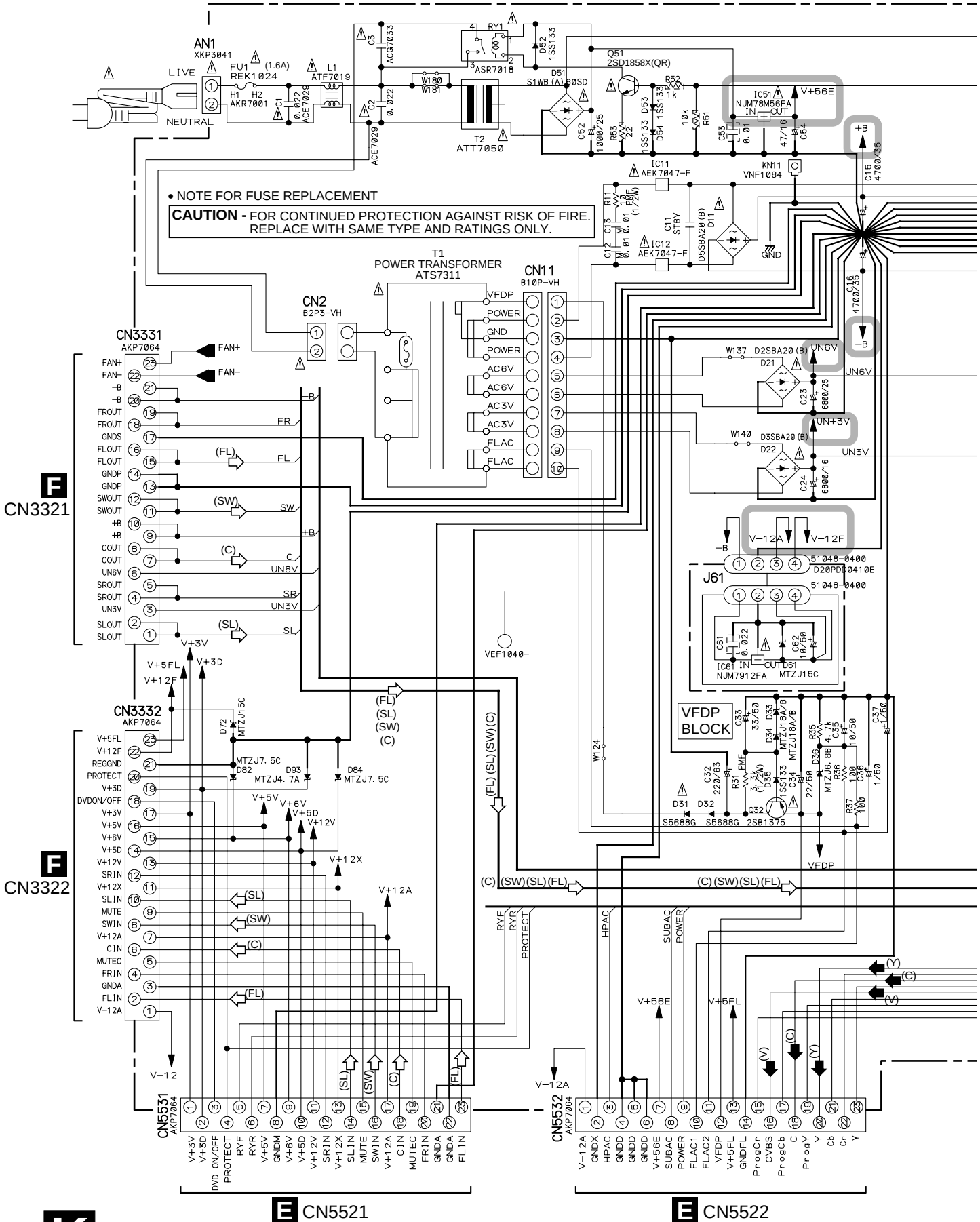
LAU***J

NO MARK DIODE

1SS133

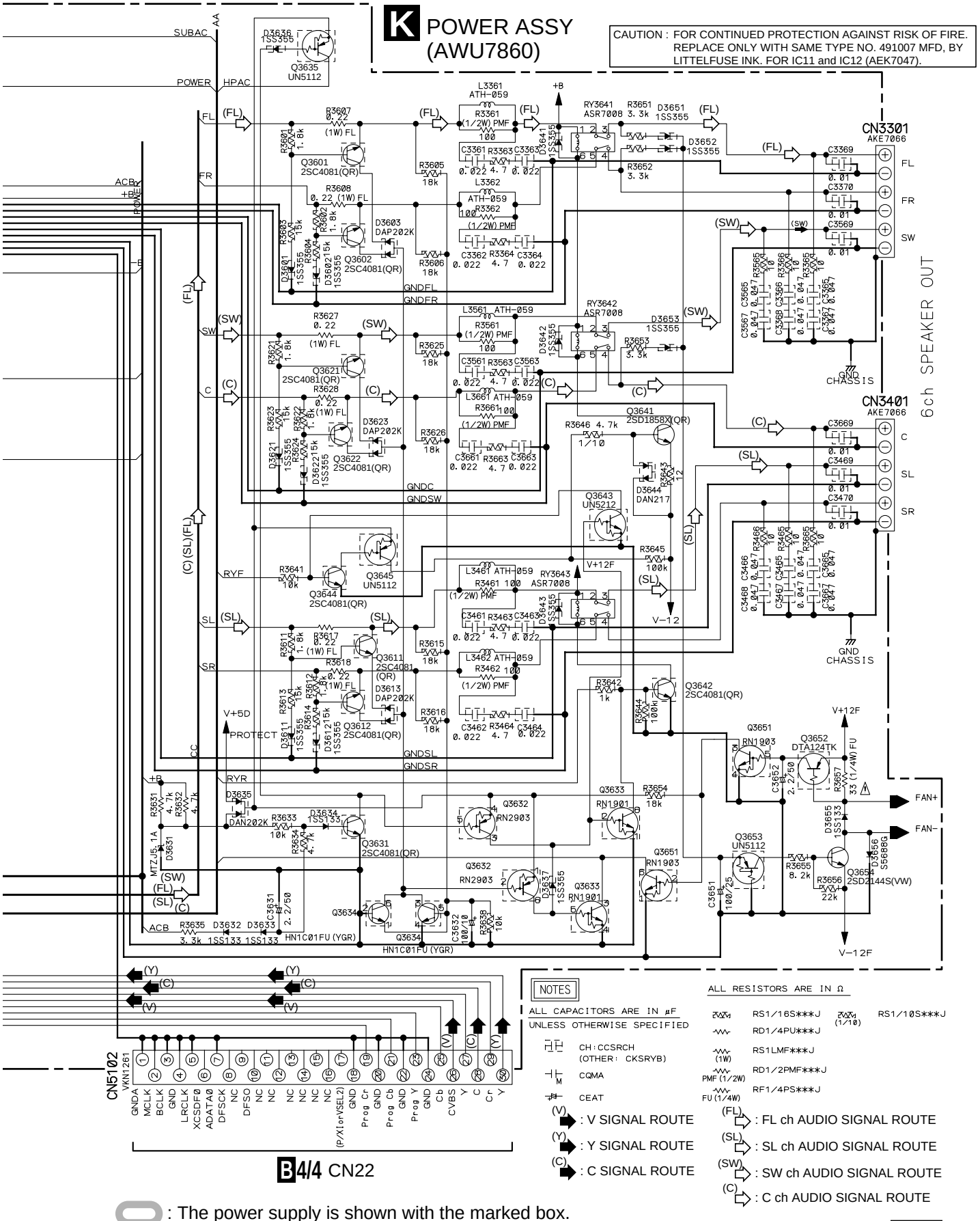
SWITCHES
S5921 : STANDBY / ON
S5922 : + (UP)] VOLUME
S5923 : – (DOWN)]
S5924 : TUNER (AM/FM)
S5925 : ▶/II (PLAY/PAUSE)
S5926 : ■ (STOP)
S5927 : ⏏ (OPEN/CLOSE)

3.18 POWER ASSY



K POWER ASSY (AWU7860)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491007 MFD, BY LITTELFUSE INK. FOR IC11 and IC12 (AEK7047).



: The power supply is shown with the marked box.

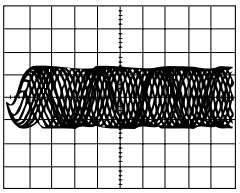
■ WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.

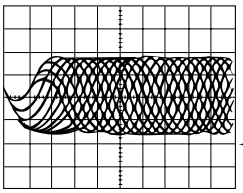
B DVDM ASSY

Measurement condition : No. 1 to 4 and 6 to 11 : MJK1, Title 1-chp 1
No. 5 : CD, ABEX-784 Track 1

① Foot of R104 (RF)
V: 100mV/div. H: 0.2µsec/div.

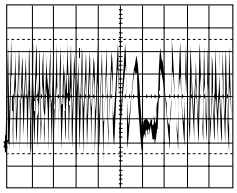


② TP117 (RFO)
V: 500mV/div. H: 0.1µsec/div.

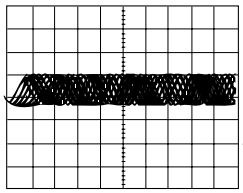


③

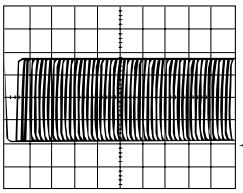
④ TP122 (Tracking Error)
(AI-Inner Tracking Off)
V: 500mV/div. H: 2msec/div.



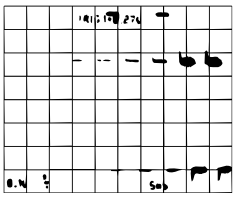
⑤ IC201 - pin 39 (EFM before slice)
V: 1V/div. H: 1µsec/div.



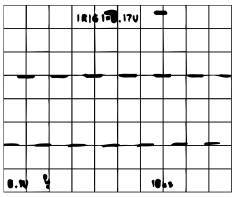
⑥ IC201 - pin 1 (EFM)
V: 1V/div. H: 0.2µsec/div.



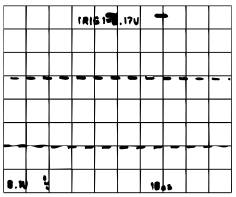
⑦ TP209 (FG)
V: 1V/div. H: 5msec/div.



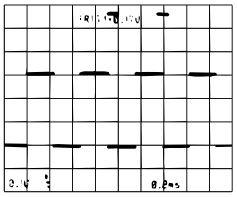
⑧ Foot of R261 (FPWM)
V: 1V/div. H: 5msec/div.



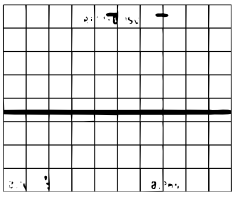
⑨ Foot of R262 (VPWM)
V: 1V/div. H: 5msec/div.



⑩ Foot of R263 (PPWM)
V: 1V/div. H: 5msec/div.



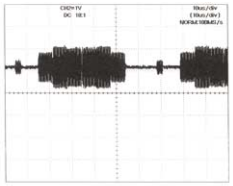
⑪ Foot of R264 (RPWM)
V: 1V/div. H: 5msec/div.



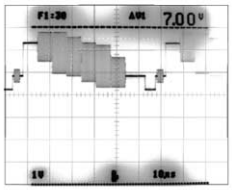
D CONTROL ASSY

Measurement condition : DVD-REF-A1, T2-Chap.19

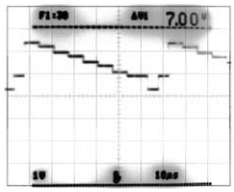
① IC8801 - pin 25 (C)
V: 1V/div. H: 10µsec/div.



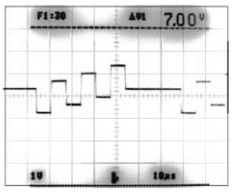
② IC8801 - pin 27 (V)
V: 1V/div. H: 10µsec/div.



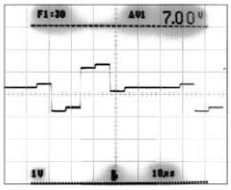
③ IC8801 - pin 23 (Y)
V: 1V/div. H: 10µsec/div.



④ IC8801 - pin 18 (Cb)
V: 1V/div. H: 10µsec/div.



⑤ IC8801 - pin 16 (Cr)
V: 1V/div. H: 10µsec/div.



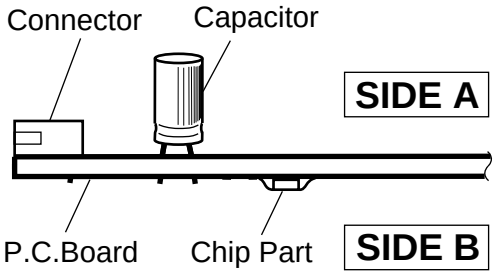
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

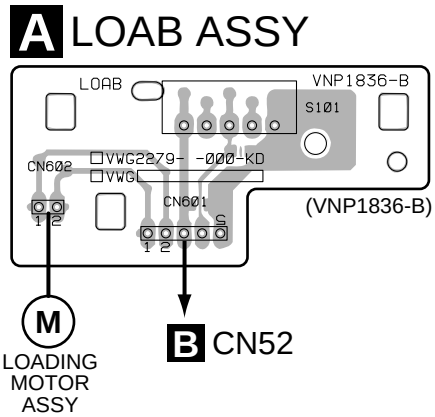
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

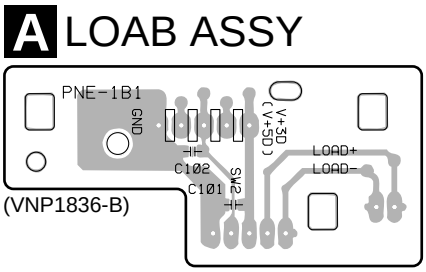
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 LOAB ASSY

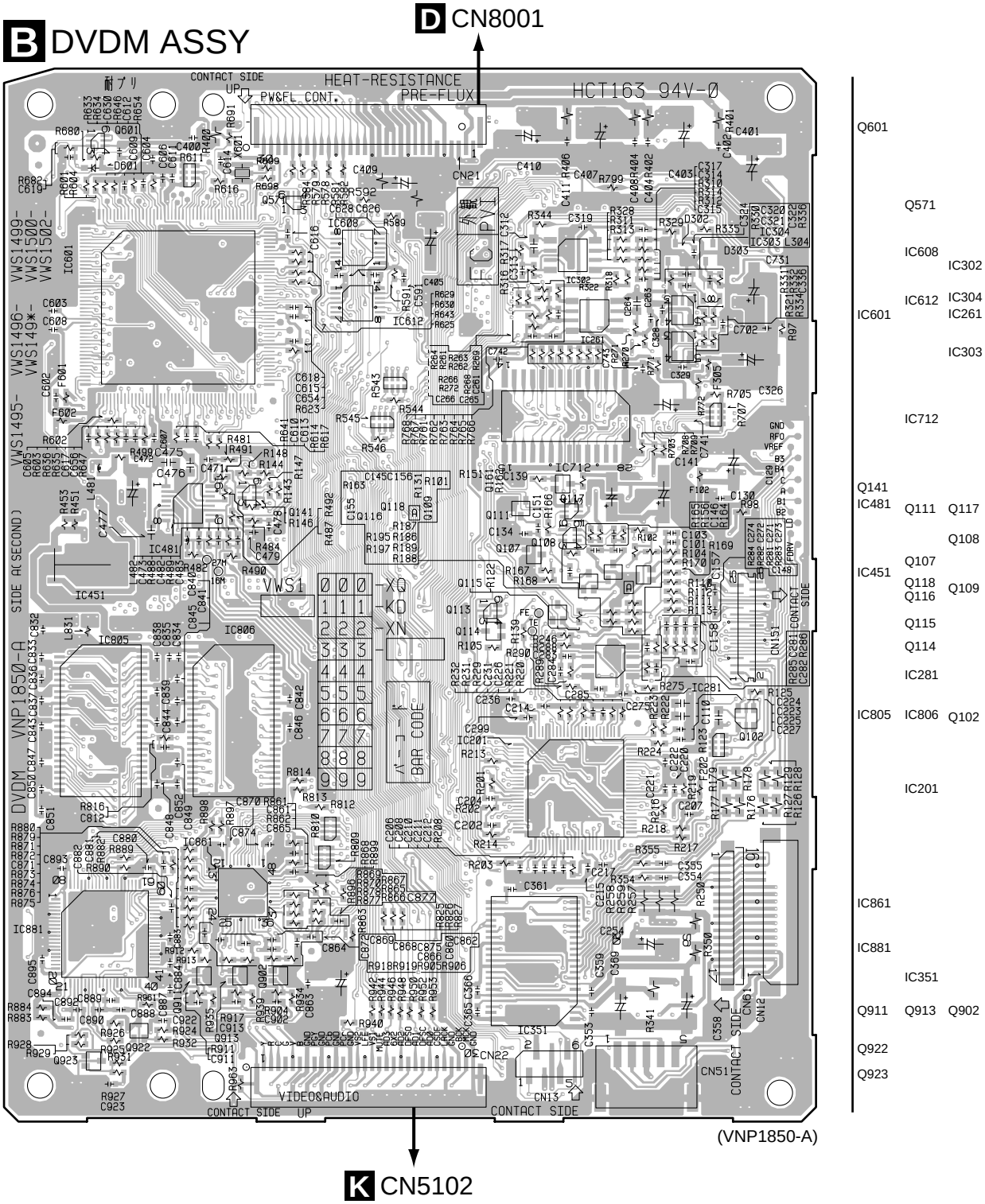


SIDE A



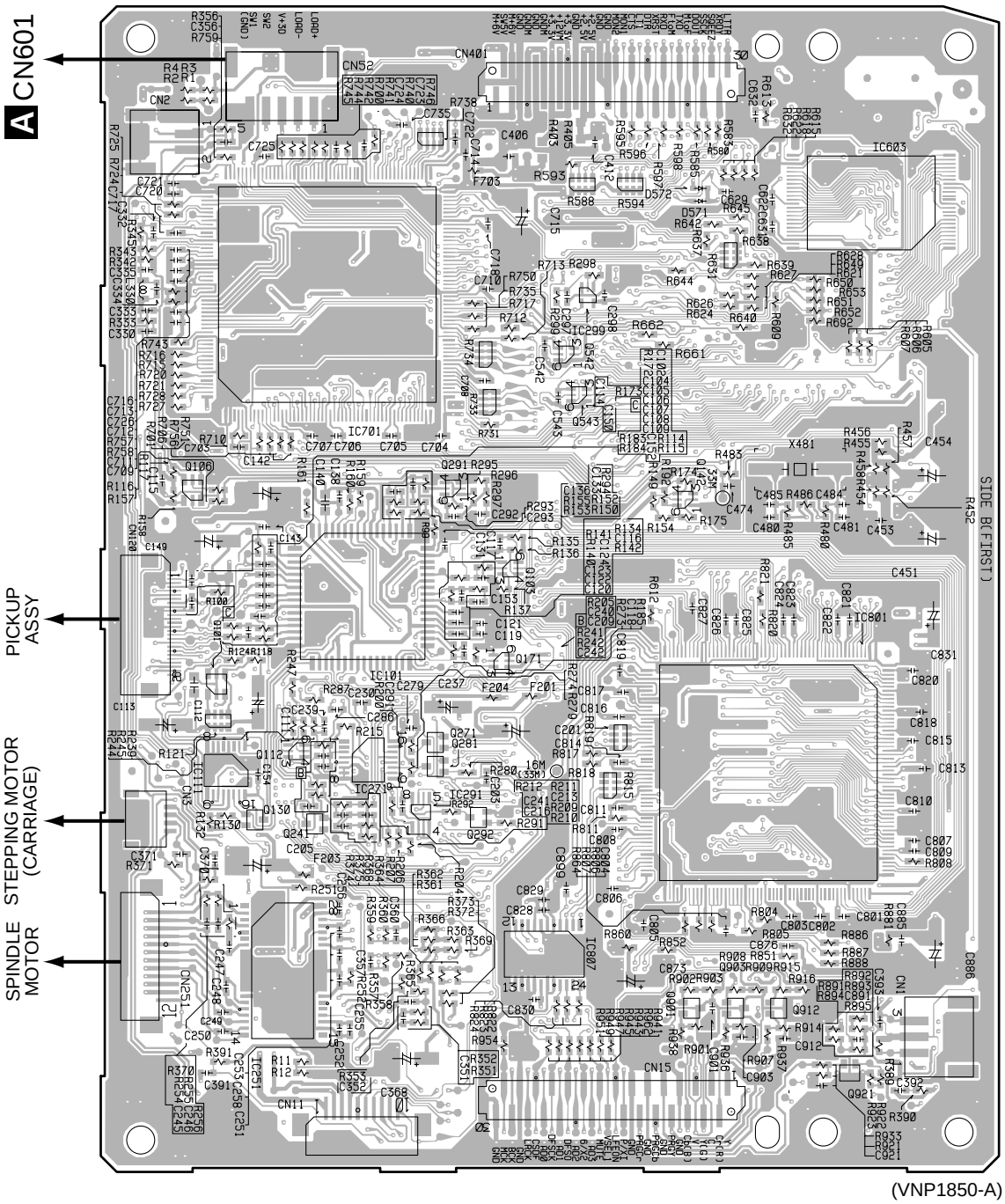
SIDE B

4.2 DVDM ASSY



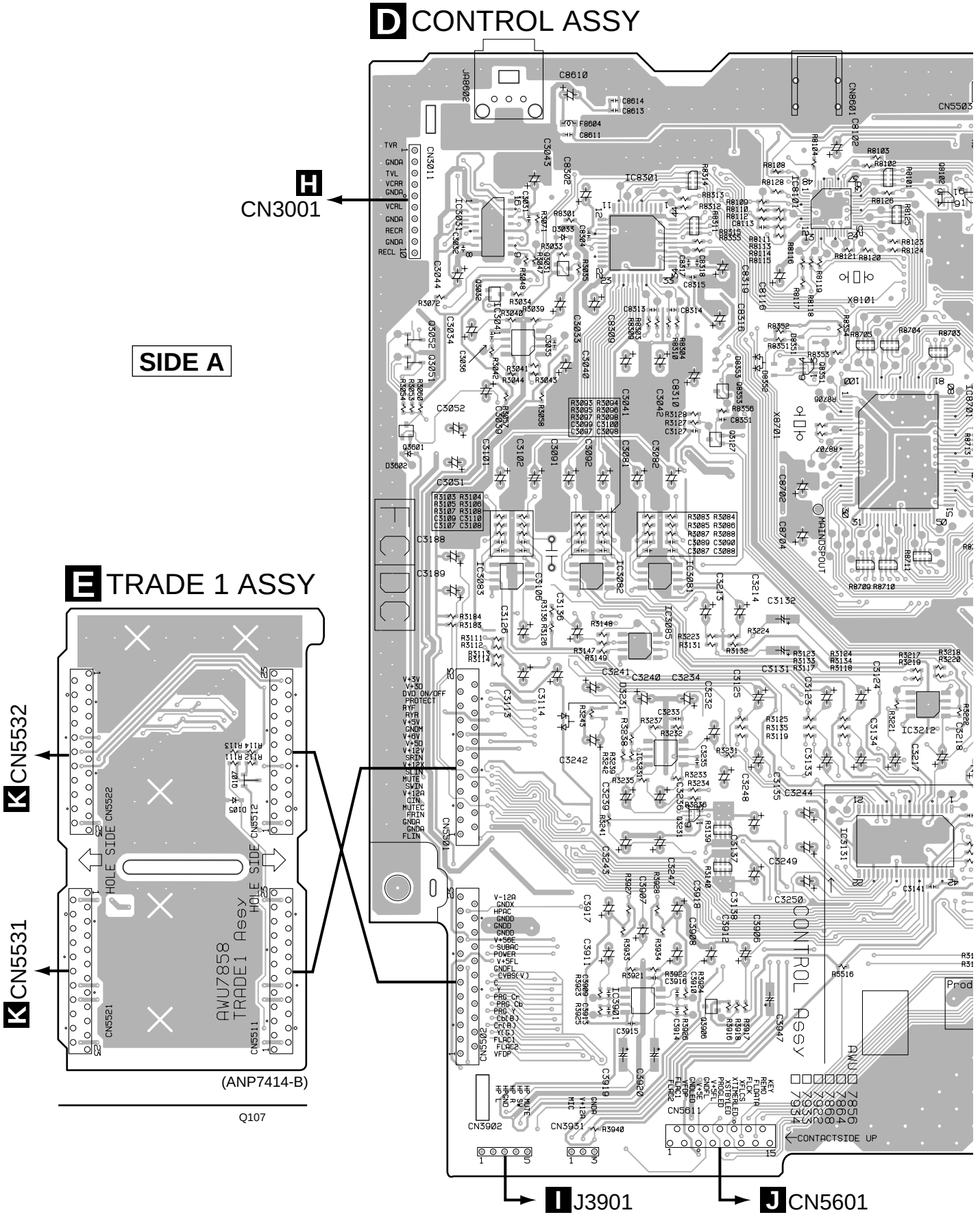
SIDE A

B DVDM ASSY

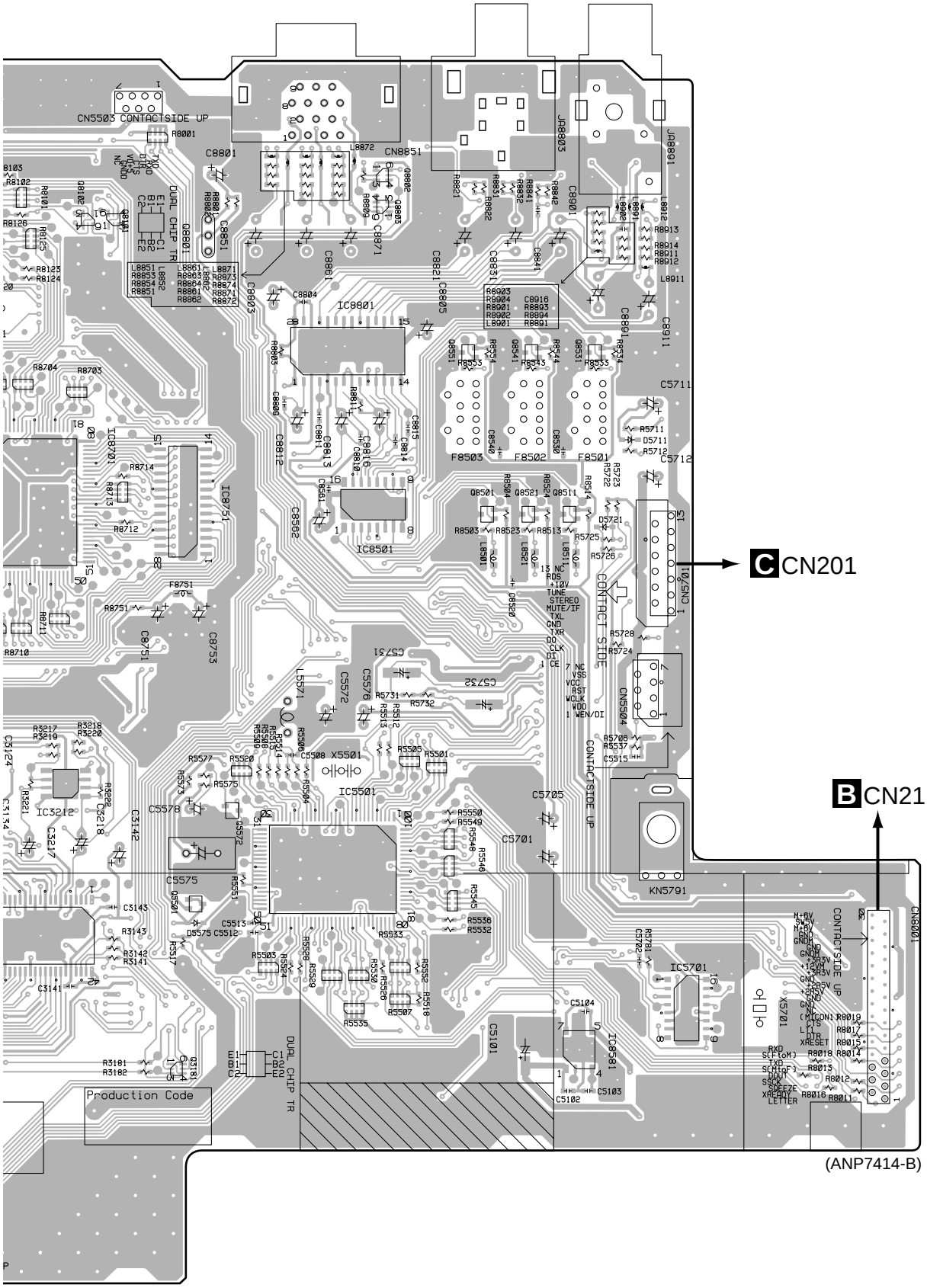


SIDE B

4.3 CONTROL and TRADE 1 ASSYS

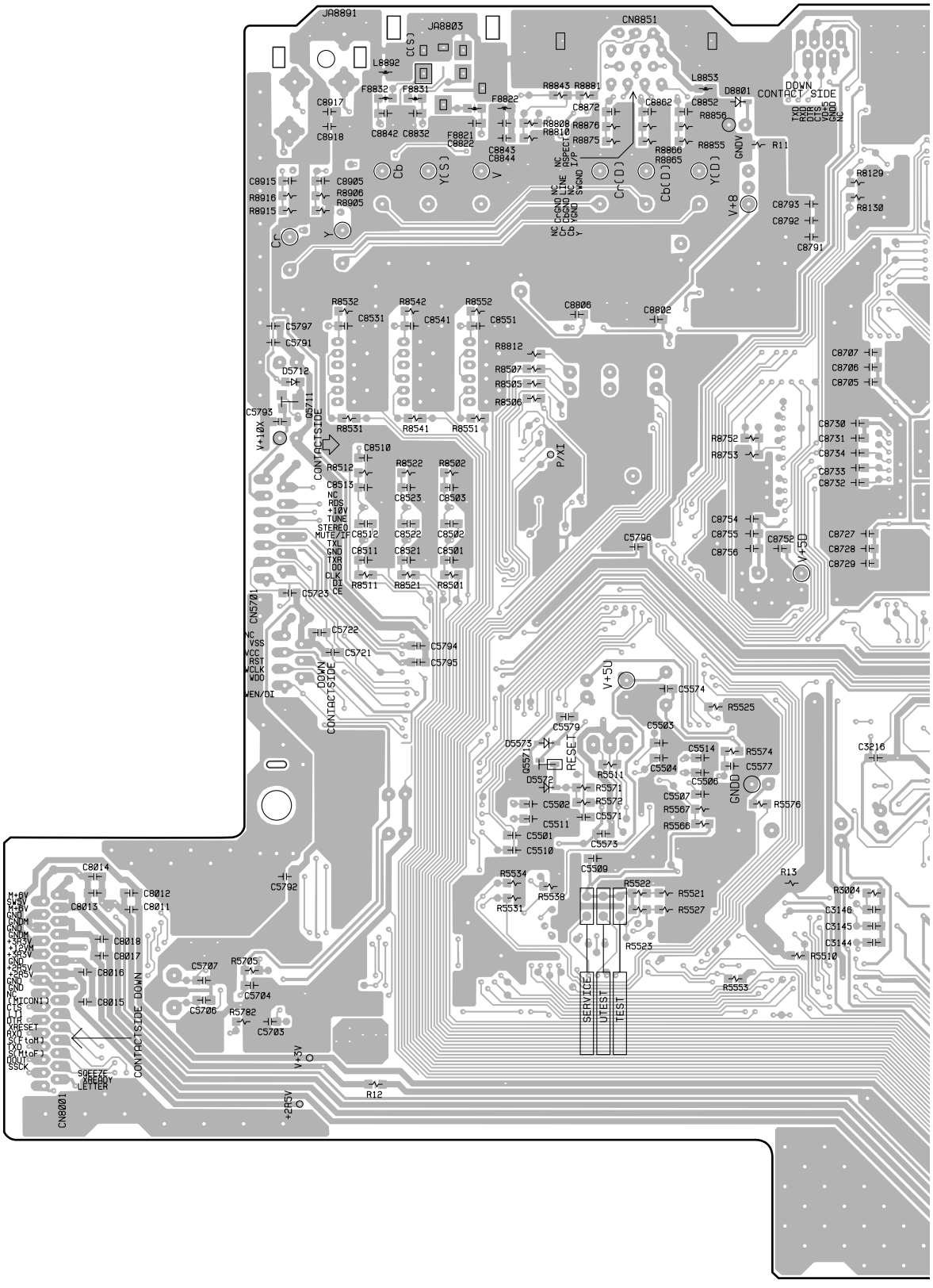


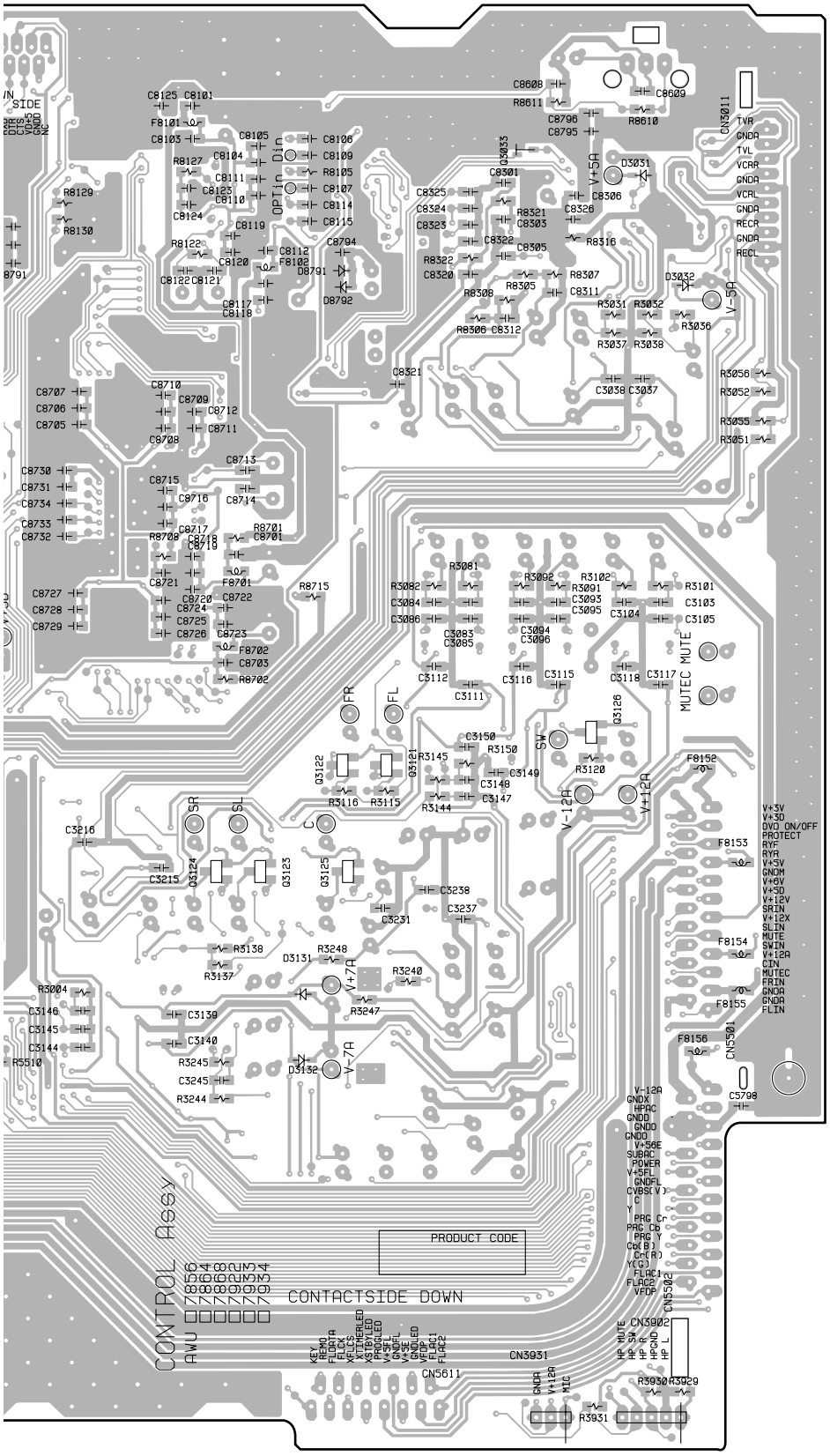
XV-S100DV



			A
Q8802			
Q8803			
Q8102	Q8101		
IC8101	Q8801		
IC3031			
IC8301			
Q3031			
Q3032			
IC8801	Q8551 Q8541	Q8531	
Q3052	IC3041		
Q3051	Q8351		
Q8353			
			B
Q3601			
Q3127			
IC8701	IC8751		
Q8501	IC8501 Q8521	Q8511	
IC3083	IC3082	IC3081	
IC3085			
IC3212			
Q5572			
IC3251			
IC5501			C
Q3231	Q5501		
IC3131			
IC5701			
IC8581			
Q3181			
IC3091	Q3906		
			D

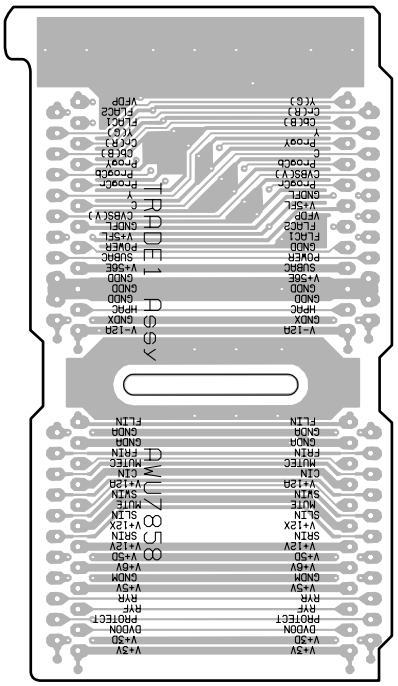
D CONTROL ASSY





(ANP7414-B)

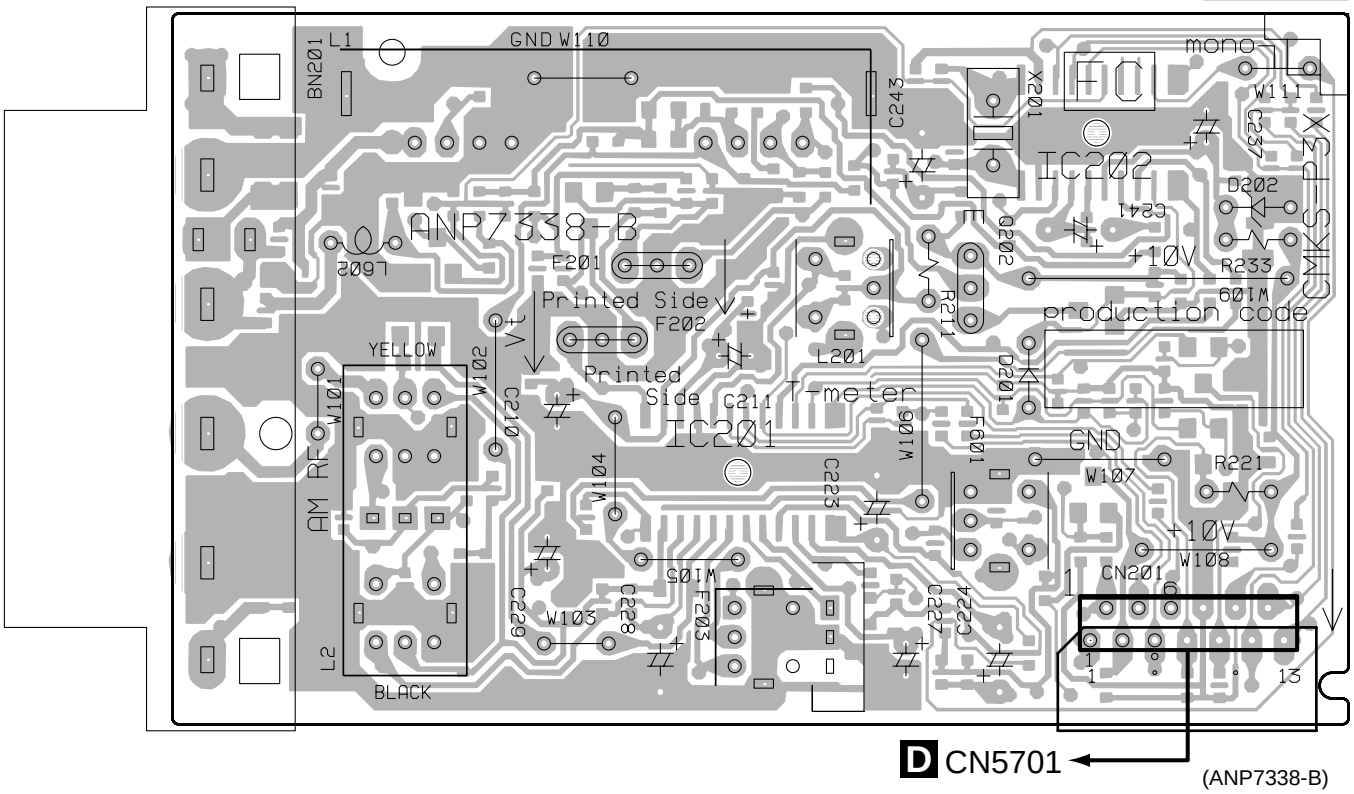
E TRADE 1 ASSY



(ANP7414-B)

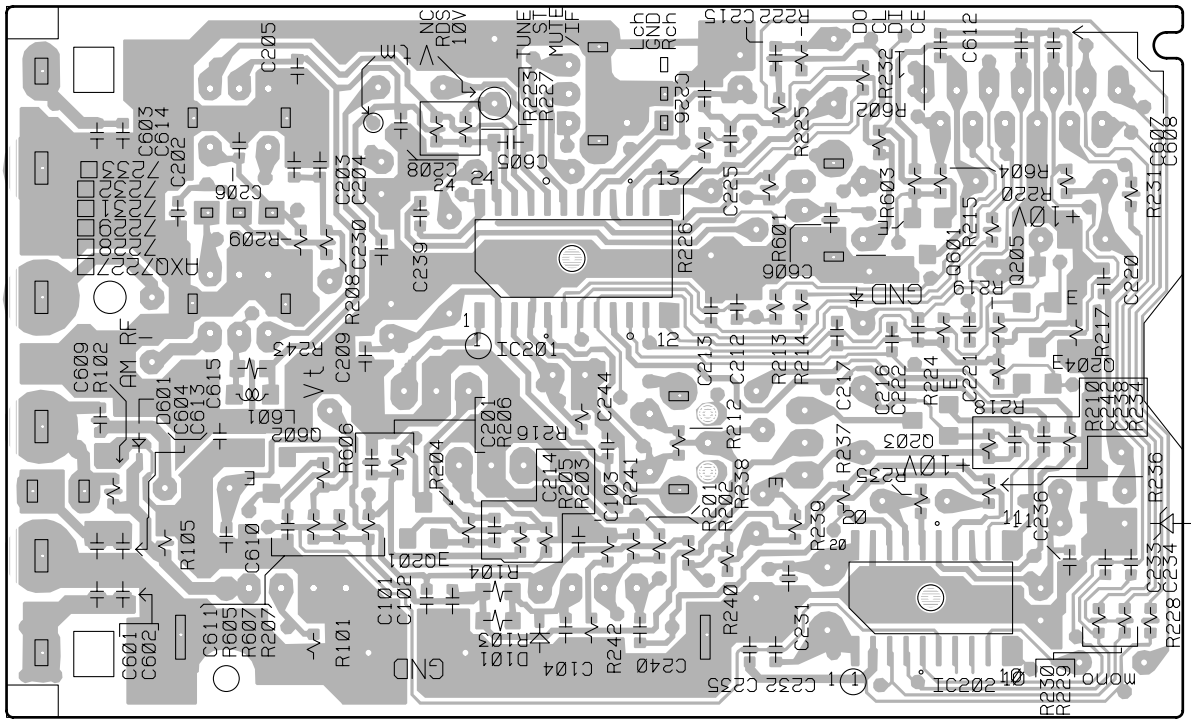
4.4 FM/AM TUNER MODULE

C FM/AM TUNER MODULE **SIDE A**



Q202

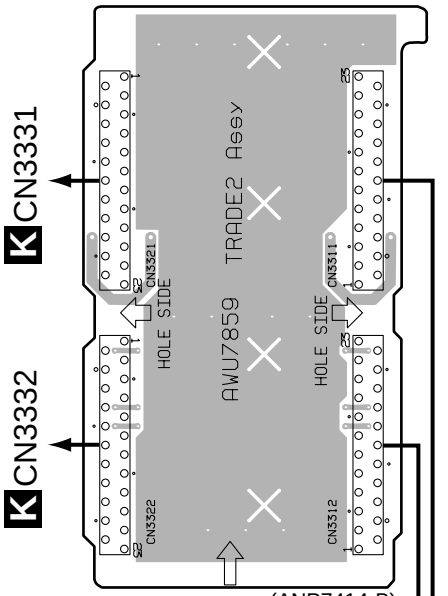
C FM/AM TUNER MODULE **SIDE B**



Q201 IC201 Q203 IC202 Q205 Q204

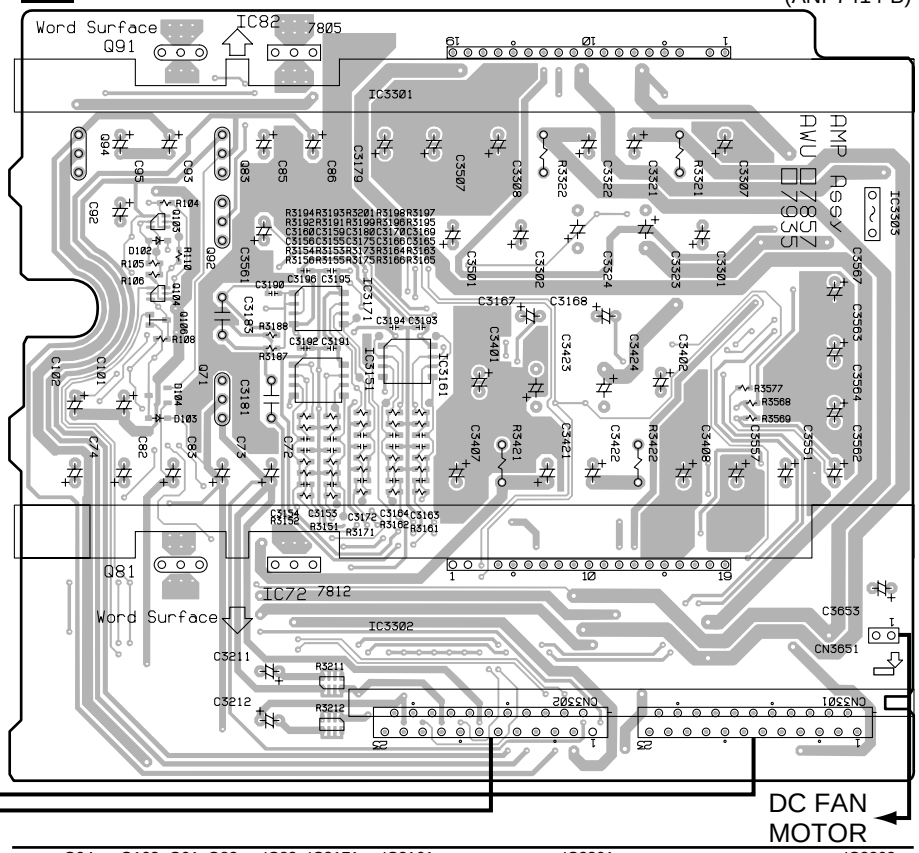
4.5 TRADE 2 and AMP ASSYS

F TRADE 2 ASSY



G AMP ASSY

(ANP7414-B)



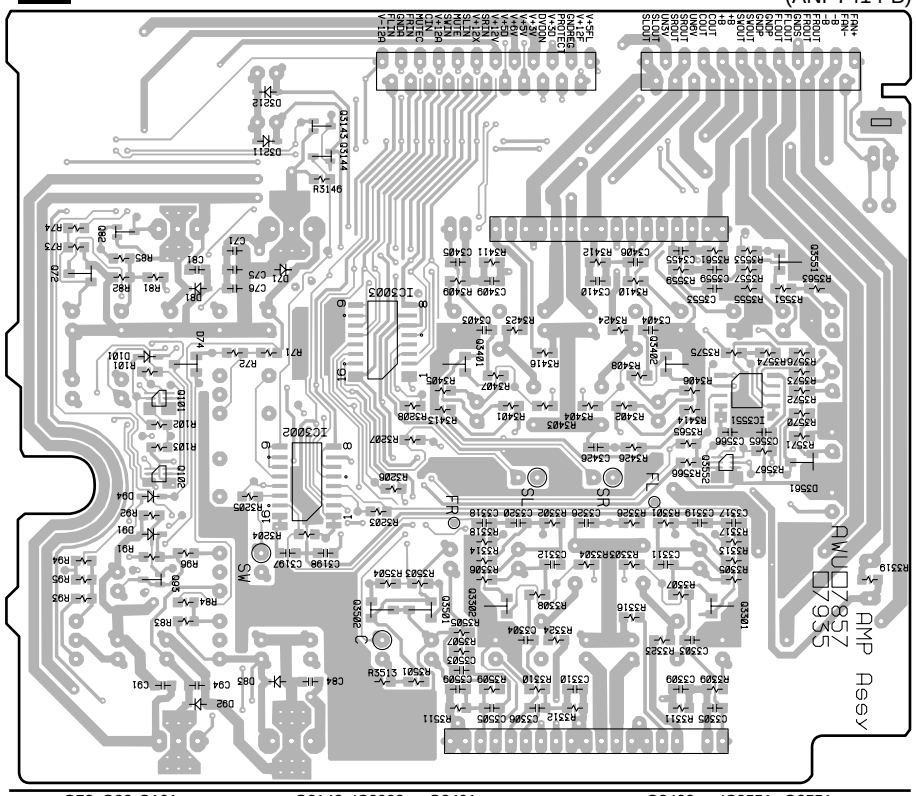
Q94 Q103 Q104 Q106 Q91 Q81 Q83 Q92 Q71 IC82 IC72 IC3171 IC3151 IC3161 IC3301 IC3302 IC3303

SIDE A

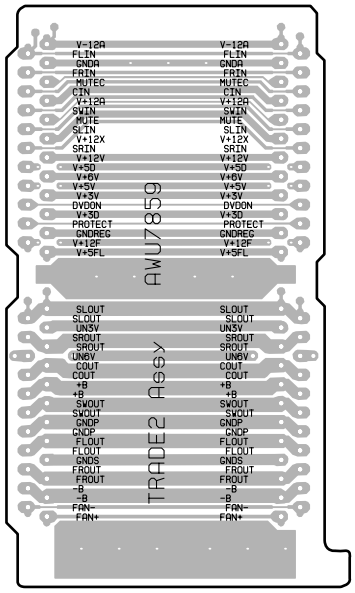
SIDE B

G AMP ASSY

(ANP7414-B)



F TRADE 2 ASSY

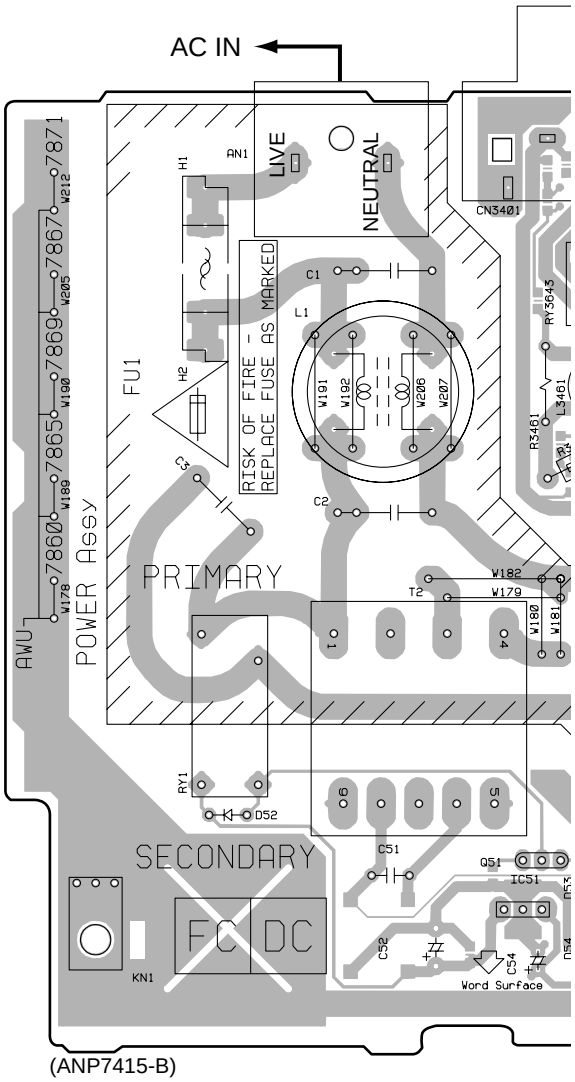


(ANP7414-B)

Q72 Q82 Q101 Q93 Q102 Q3143 IC3003 Q3401 IC3002 Q3144 Q3502 Q3501 Q3302 Q3402 IC3551 Q3551 Q3301 Q3552

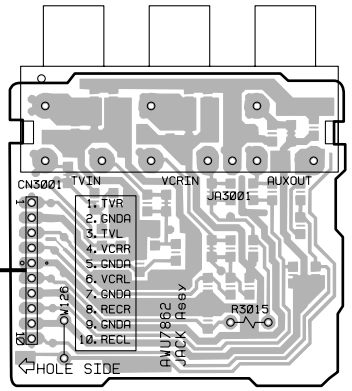
4.6 JACK, HP, DISPLAY and POWER ASSYS

K POWER ASSY



(ANP7415-B)

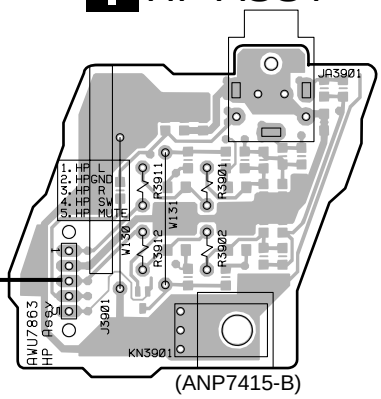
H JACK ASSY



D CN3011

(ANP7415-B)

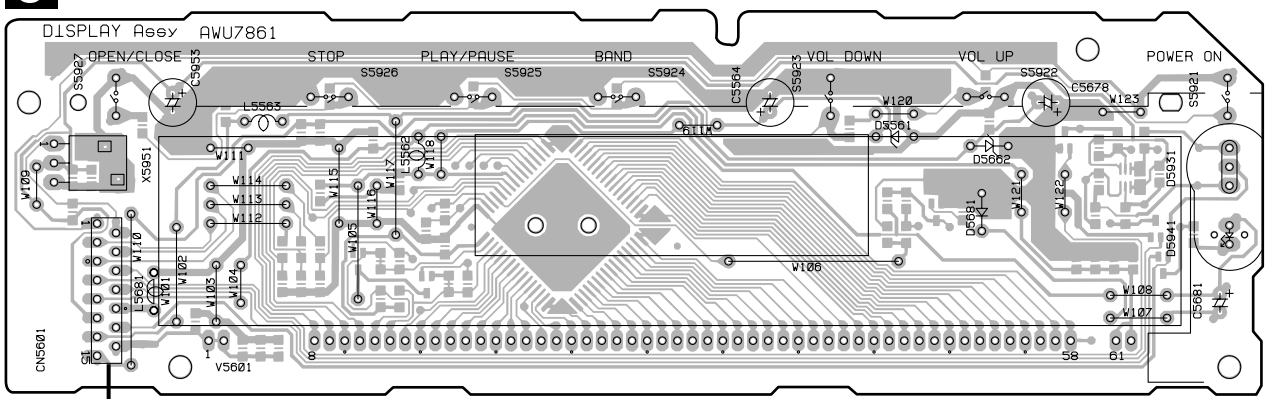
I HP ASSY



D CN3902

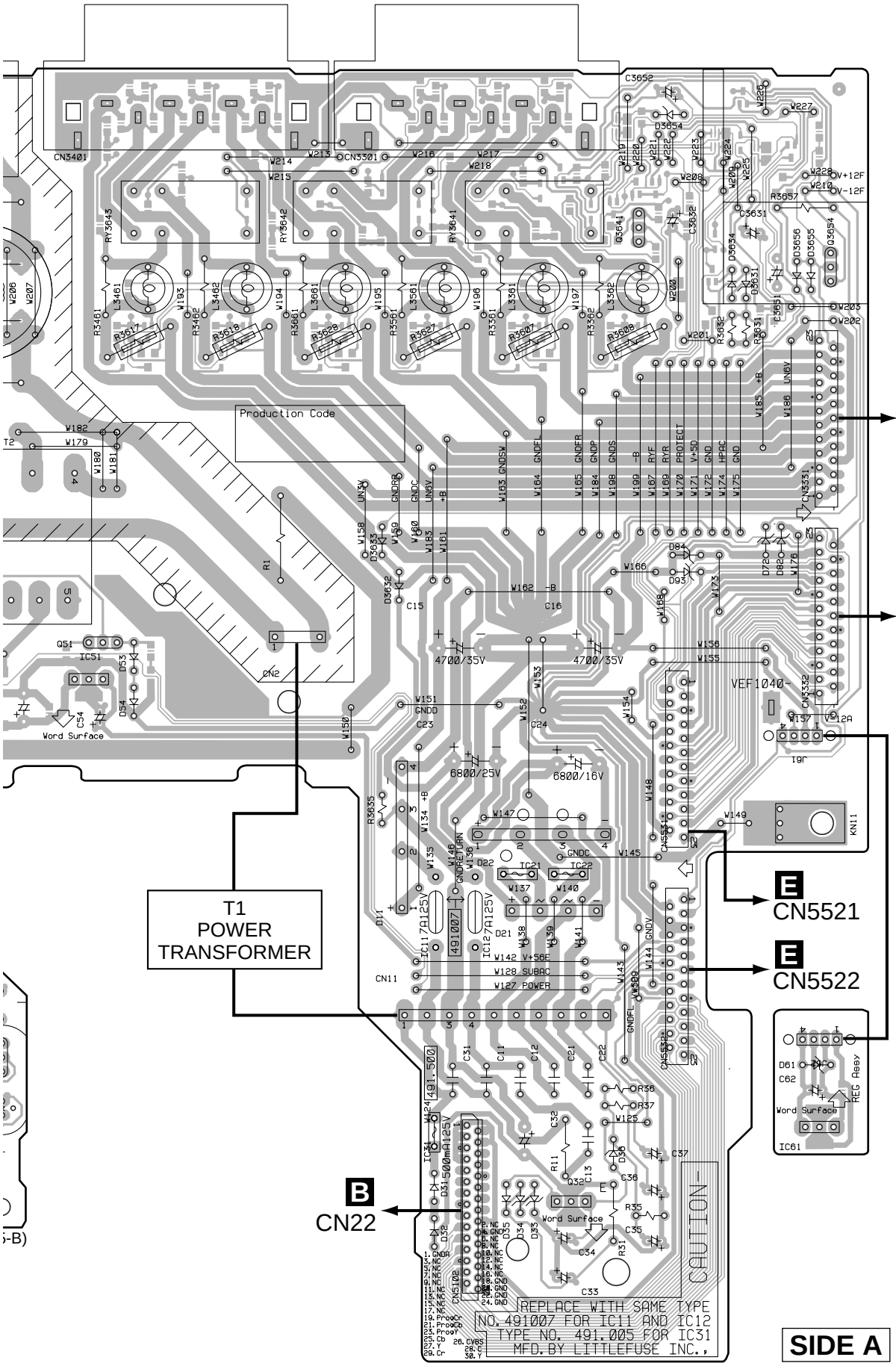
(ANP7415-B)

J DISPLAY ASSY

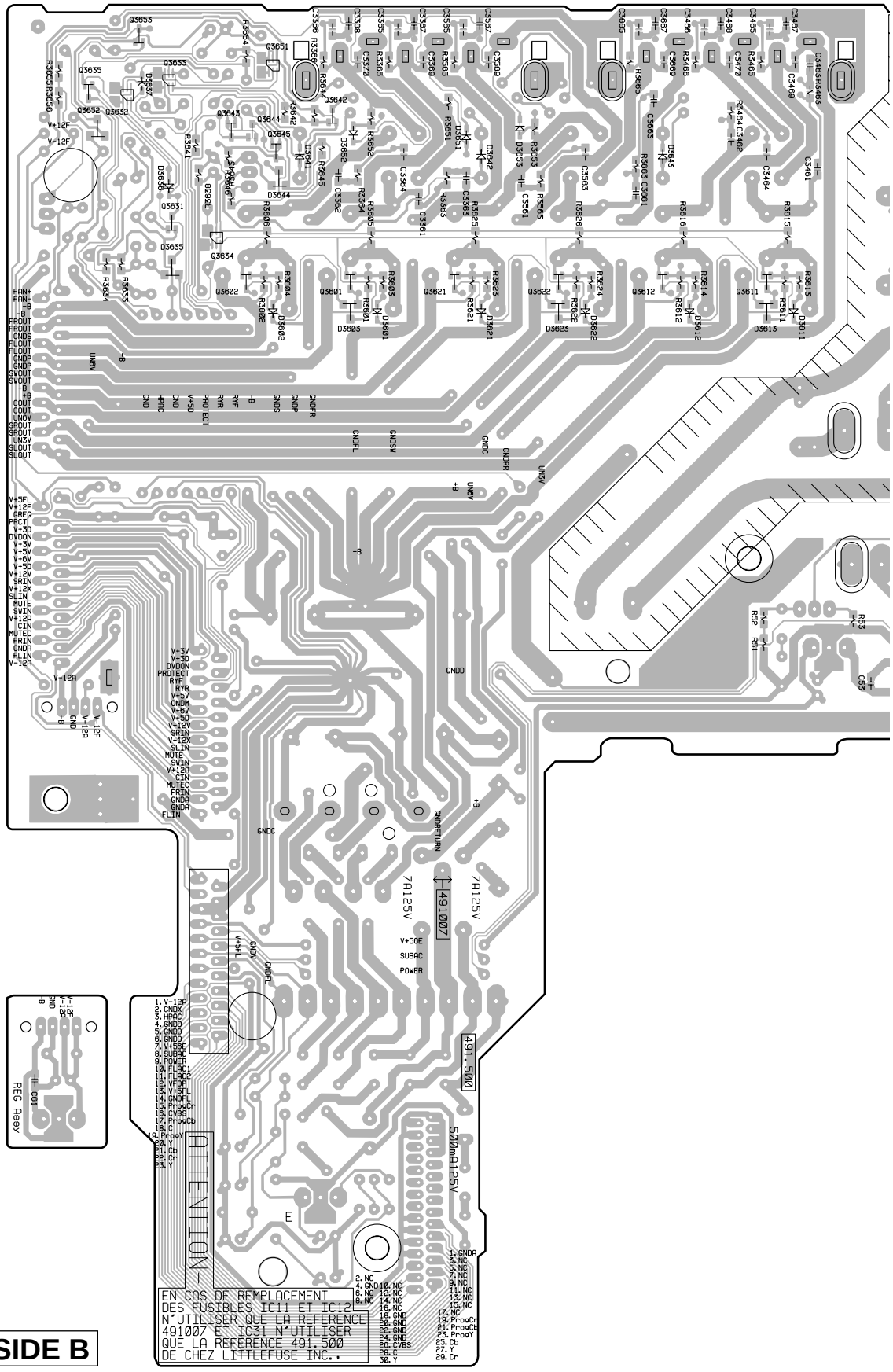


D CN5611

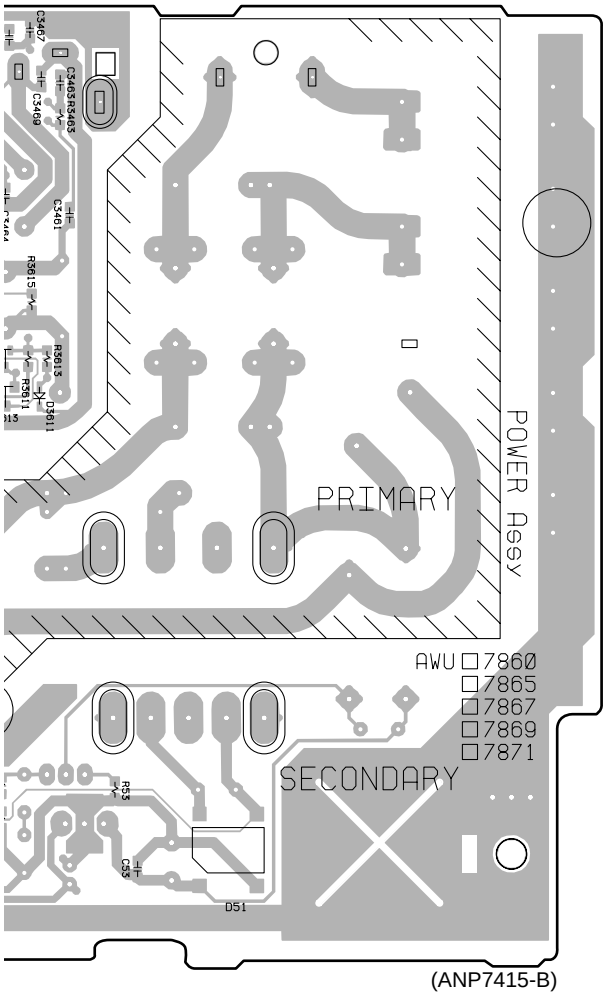
(ANP7415-B)



Q3641
Q3654
Q51
IC51
IC21 IC22
IC11 IC12
IC32 IC61
Q32

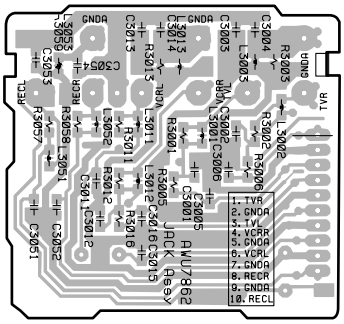

Q3653
Q3651
Q3633
Q3635 Q3632
Q3642
Q3652 Q3643 Q3644
Q3645
Q3631
Q3634
Q3601 Q3622 Q3611
Q3602 Q3621 Q3612
SIDE B
ATTENTION -
EN CAS DE REMPLACEMENT
DES FUSIBLES IC11 ET IC12
N'UTILISER QUE LA REFERENCE
491007 ET IC31 N'UTILISER
QUE LA REFERENCE 491.500
DE CHEZ LITTLEFUSE INC.
7A125V
491007
7A125V
491.500
500mA125V
REG Assy

K POWER ASSY



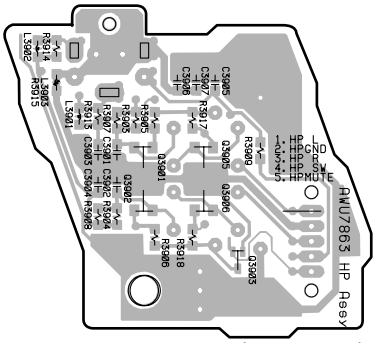
(ANP7415-B)

H JACK ASSY



(ANP7415-B)

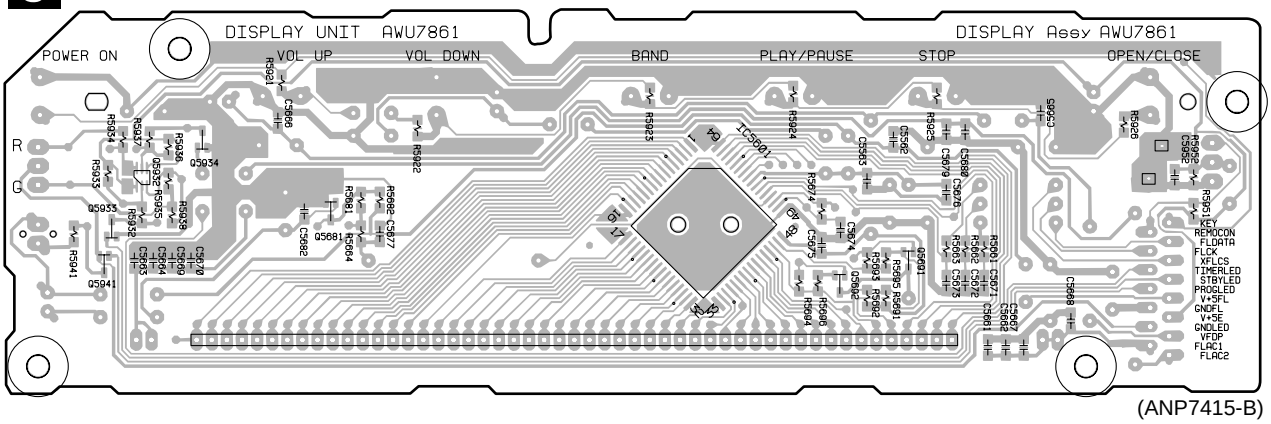
I HP ASSY



Q3901 Q3905
Q3902 Q3906
Q3903

(ANP7415-B)

J DISPLAY ASSY



(ANP7415-B)

Q5932 Q5934 Q5681 IC5601 Q5602 Q5691
Q5933
Q5941

5. PCB PARTS LIST

NOTES: ●*Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
●*The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.
LIST OF ASSEMBLIES			
NSP		LOADING MECHANISM ASSY	VWT1188
NSP		└LOAB ASSY	VWG2279
		DVDM ASSY	VWS1499
		FM/AM TUNER MODULE	AXQ7229
NSP		DCS MAIN ASSY	AWM7634
		├CONTROL ASSY	AWU7856
		├TRADE 1 ASSY	AWU7858
		├TRADE 2 ASSY	AWU7859
		└AMP ASSY	AWU7935
NSP		DCS COMPLEX ASSY	AWM7635
		├JACK ASSY	AWU7862
		├HP ASSY	AWU7863
		├DISPLAY ASSY	AWU7861
		└POWER ASSY	AWU7860
A LOAB ASSY			
SWITCH			
	S101		VSK1011
OTHERS			
	CN602	KR CONNECTOR	S2B-PH-K
	CN601	KR CONNECTOR	S5B-PH-K
		PC BOARD LOAB	VNP1836
B DVDM ASSY			
SEMICONDUCTORS			
	IC861		ADV7172KST
	IC451		BA25BC0FP
	IC261,IC302		BA4510F
	IC251		BA6664FM
	IC481		BU2288FV
	IC101		LA9701M
	IC201		LC78652W
	IC351		M56788AFP
	IC801		M65774BFP
	IC805		MB81F161622C-80FN
	IC712		MNR4800DJ7
	IC601		PD6345A
	IC701		PE5108A
	IC111		TC74HC4053AFT
	IC612		TC74VHC125FT
	IC608		TC74VHCT125AFT
	IC304		TC7SHU04F
	IC603		VYW1857
	Q109,Q901-Q903,Q911-Q913		2SA1576A
	Q114,Q130		2SC4081
	Q107,Q111,Q115,Q241		DTC114EUA
	Q101,Q102,Q106		HN1A01F
	Q103,Q141,Q142,Q542,Q543		HN1B04FU
	Q112,Q113		HN1C01FU
	Q108		HN1K03FU
	Q571		RN1911
	Q117,Q171,Q601		RN4982
	D302		KV1470
	D601		RB501V-40
COILS			
	L304		LCYA1R5J2520
	L481	CHIP BEAD	VTL1084
CAPACITORS			
	C480,C481,C612		CCSRCH100D50
	C152		CCSRCH101J50
	C104-C108		CCSRCH150J50
	C322		CCSRCH180J50
	C314		CCSRCH220J50
	C151		CCSRCH270J50
	C391,C392		CCSRCH331J50
	C146		CCSRCH390J50
	C122,C123		CCSRCH391J50
	C116,C134,C297		CCSRCH470J50
	C145,C241		CCSRCH560J50
	C117,C360		CCSRCH681J50
	C124		CCSRCH820J50
	C129,C142,C149,C201,C205		CEV101M16
	C358,C368,C369,C403,C410		CEV101M16
	C472,C864		CEV101M16
	C113,C139		CEV220M16
	C405,C409,C454,C715		CEV221M4
	C254,C401		CEV470M16
	C111		CEV470M6R3

Mark	No.	Description	Part No.
	C140,C223,C224,C264,C312		CKSQYB105K10
	C475-C477		CKSQYB105K10
	C209,C211,C216,C313,C351		CKSRYB102K50
	C133,C136,C203,C220,C225		CKSRYB103K50
	C239,C261,C320,C321,C330		CKSRYB103K50
	C591,C619,C703,C722		CKSRYB103K50
	C101,C103,C118,C119,C121		CKSRYB104K16
	C212,C213,C227,C231		CKSRYB104K16
	C248-C251,C255,C263,C315		CKSRYB104K16
	C317,C406,C411,C412,C453		CKSRYB104K16
	C208,C210		CKSRYB222K50
	C266		CKSRYB224K10
	C206,C214,C242,C357		CKSRYB472K50
	C102,C109,C120,C130,C131		CKSRYF104Z25
	C138,C143,C148,C154		CKSRYF104Z25
	C157,C158,C204,C207,C215		CKSRYF104Z25
	C221,C222,C226,C230,C236		CKSRYF104Z25
	C253,C256,C258,C265,C299		CKSRYF104Z25
	C319,C332,C353,C359		CKSRYF104Z25
	C365,C366,C603,C606		CKSRYF104Z25
	C608-C611,C613,C615,C618		CKSRYF104Z25
	C626,C628,C631,C704,C706		CKSRYF104Z25
	C708,C712,C713,C716-C718		CKSRYF104Z25
	C721,C723,C725,C743,C802		CKSRYF104Z25
	C808,C811,C814,C866		CKSRYF104Z25
	C869-C872,C874,C875,C903		CKSRYF104Z25
	C913		CKSRYF104Z25
	C115,C217,C328,C614,C711		CKSRYF105Z10
	C726,C801,C809,C813		CKSRYF105Z10
	C816-C821,C827,C833,C843		CKSRYF105Z10
RESISTORS			
	R543,R545,R594,R631,R707		RAB4C103J
	R121		RAB4C220J
	R123		RAB4C470J
	R400,R403		RS1/10S0R0J
	R341		RS1/10S101J
	R126-R129,R176-R179		RS1/10S220J
	R902,R905,R908,R912,R915		RS1/16S1000F
	R918		RS1/16S1000F
	R364,R369,R373,R375		RS1/16S1003F
	R865		RS1/16S1502F
	R358,R361		RS1/16S1503F
	R876,R878		RS1/16S4701F
	R866		RS1/16S4702F
	R870,R875		RS1/16S6800F
	R867		RS1/16S6801F
	R357,R362,R363,R368,R372		RS1/16S6802F
	R374		RS1/16S6802F
	R257 (1Ω)		VCN1127
	R258,R259 (2.2Ω)		VCN1128
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN3	4P FFC CONNECTOR	DKN1223
	CN21,CN22	30P CONNECTOR	RKN1039
	CN52	PH CONNECTOR	S5B-PH-SM3
	9007	FLEXIBLE CABLE (07P)	VDA1681
	CN120	FLEXIBLE CONNECTOR	VKN1787
	CN251	12P FFC CONNECTOR	VKN1795
	X481	CRYSTAL RESONATOR (27.000MHz)	VSS1159
	X601	CERAMIC RESONATOR (16.5MHz)	VSS1160

Mark	No.	Description	Part No.
C	**FM/AM TUNER MODULE**		
SEMICONDUCTORS			
	IC201		BA1451F
	IC202		LC72131MD-TFB
	Q201,Q204,Q205,Q601		2SC2412K
	Q202		DTA124ES
	Q203		DTC124EK
	D201		1SS133
	D202		MTZJ5.1C
	D101		UDZS6.8B
COILS AND FILTERS			
	L201	FM DET. COIL	ATE7003
	F202	FL CERAMIC FILTER	ATF-107
	F201	FM CERAMIC FILTER	ATF-119
	F203	AM CERAMIC FILTER	ATF1155
	F601	ANTIBIRDY FILTER	ATF7025
	L601		LCTA270J2520
CAPACITORS			
	C605		CCSQCH680J50
	C212,C213,C226,C233-C235		CCSRCH101J50
	C240,C614		CCSRCH101J50
	C206		CCSRCH120J50
	C231,C232		CCSRCH150J50
	C223		CEAT100M50
	C229		CEAT101M10
	C224		CEAT1R0M50
	C227		CEAT220M25
	C241		CEAT2R2M50
	C243		CEAT330M16
	C228		CEAT3R3M50
	C237		CEAT470M10
	C211		CEJA1R0M50
	C210		CEJA470M16
	C103,C104,C204,C238		CKSRYB102K50
	C102,C208,C216,C217,C220		CKSRYB103K50
	C239,C242,C604,C615		CKSRYB103K50
	C225		CKSRYB153K50
	C607,C608		CKSRYB182K50
	C201,C205,C214,C230,C236		CKSRYB223K50
	C244		CKSRYB223K50
	C221		CKSRYB224K10
	C603		CKSRYB392K50
	C215		CKSRYB471K50
	C202,C222		CKSRYB473K16
	C606		CKSRYB561K50
RESISTORS			
	R211		RD1/4PU221J
	R221		RD1/4PU222J
	R233		RD1/4PU391J
	R103,R104		RS1/10S221J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN201	13P FFC CONNECTOR	52044-1345
	BN201	2P TERMINAL with PAL	AKA7002
		SHIELD CASE T	ANK7072
		SHIELD CASE B	ANK7073
	X201	CRYSTAL RESONATOR (7.2MHz)	ASS1093

Mark	No.	Description	Part No.

D CONTROL ASSY

SEMICONDUCTORS

	IC8301		AK4527BVQ
	IC5701		BU1923F
	IC3031		BU4052BCF
	IC8751		K6E0808C1E-JC15
	IC8101		LC89056W-E
	IC3131		M62446FP
	IC8801		MM1540BF
	IC3041,IC3081-IC3083,IC3085		NJM4558MD
	IC3212,IC3231		NJM4558MD
	IC3901		NJM4560M
	IC5501		PDC086A
	IC8701		YSS912C
	Q3906		2SA1576A
	Q3031,Q3032,Q5501,Q5572,Q5711		2SC4081
⚠	Q8801		2SD1858X
	Q3051,Q3052,Q3121-Q3126		2SD2114K
	Q3231		HN1C01FU
	Q8102,Q8803		RN1903
	Q3181		RN2901
	Q8101,Q8351,Q8802		RN2903
	Q3033,Q3127,Q3601		UN5112
	Q8353		UN5212
	Q5571		UN521L
	D3033,D3602,D5573,D5575,D5712		1SS355
	D5721		1SS355
	D8353		DAN202K
	D3231		DAN217
	D8351,D8352		DAP202K
	D5711		UDZ11B
	D3031,D3032		UDZS5.1B
	D3131,D3132		UDZS6.8B
	D8801		UDZS8.2B

COILS AND FILTERS

	F8101,F8102,F8701,F8702,F8751	CHIP BEAD	DTF1064
	L5571		LFEA220J
	F8604	CHIP SOLID INDUCTOR	VTF1096
	L8103	CHIP BEAD	VTL1086

CAPACITORS

	C5575	ACH1246
	C3144-C3146,C5502,C5506,C5507	CCSRCH101J50
	C5510,C5511,C5577,C5721-C5723	CCSRCH101J50
	C8705,C8708,C8715,C8718,C8724	CCSRCH101J50
	C8727,C8733,C8734,C8756	CCSRCH101J50
	C8121,C8122,C8713,C8714	CCSRCH200J50
	C3913,C3914	CCSRCH221J50
	C5706,C5707	CCSRCH270J50
	C5702	CCSRCH271J50
	C3909,C3910	CCSRCH470J50
	C8012,C8721	CCSRCH471J50
	C5703	CCSRCH561J50
	C3089,C3090	CCSRCH680J50
	C3099,C3100,C3109	CCSRCH820J50
	C3126,C3136,C3213,C3214	CEAL100M16
	C3241	CEAL1R0M50
	C3113,C3114	CEAL220M16
	C3240,C3242	CEAL4R7M16
	C3234	CEALR47M50
	C3033,C3034,C3041,C3042	CEAT100M50
	C3051,C3052,C3081,C3082	CEAT100M50
	C3091,C3092,C3101,C3102	CEAT100M50
	C3123-C3125,C3133-C3135,C3142	CEAT100M50
	C3217,C3218,C3243,C3249,C3250	CEAT100M50
	C3906-C3908,C3911,C3912	CEAT100M50
	C3917,C3918,C5576,C5701,C5711	CEAT100M50
	C8801,C8816	CEAT100M50
	C5572,C8102,C8309,C8310,C8316	CEAT101M10
	C8562,C8704,C8753,C8803	CEAT101M10
	C8812,C8813	CEAT101M10
	C3188,C3189	CEAT101M16
	C5578	CEAT1R0M50
	C8702	CEAT220M50
	C3137,C3138	CEAT221M10
	C8751	CEAT221M6R3
	C3043,C3044,C5705,C8116,C8805	CEAT470M16
	C8302,C8319,C8821,C8831	CEAT471M6R3
	C3244	CEATR10M50
	C3247,C3248,C8610	CEJQ470M10
	C3131,C3132	CEV100M16
	C5731,C5732	CEV2R2M50
	C3106	CFTYA224J50
	C5508,C8321,C8794,C8795	CKSRYB102K50
	C3031,C3032,C3111,C3112	CKSRYB103K50
	C3115-C3118,C3139-C3141	CKSRYB103K50
	C3149,C3150,C3215,C3216,C3235	CKSRYB103K50
	C5503,C5504,C5514,C5571,C5573	CKSRYB103K50
	C5704,C5792,C5794-C5796,C5798	CKSRYB103K50
	C8114,C8115,C8125,C8305,C8306	CKSRYB103K50
	C8326	CKSRYB103K50
	C5509,C5513,C5574,C5791,C5793	CKSRYB104K16
	C8011,C8017,C8101,C8103,C8104	CKSRYB104K16
	C8110,C8112,C8113,C8117,C8119	CKSRYB104K16
	C8123,C8301,C8304,C8311,C8312	CKSRYB104K16
	C8315,C8318,C8510,C8520,C8530	CKSRYB104K16
	C8540,C8561,C8609,C8611,C8701	CKSRYB104K16
	C8703,C8707,C8710,C8712,C8717	CKSRYB104K16
	C8720,C8723,C8726,C8729,C8731	CKSRYB104K16
	C8752,C8754,C8796,C8804,C8806	CKSRYB104K16
	C8809-C8811,C8814,C8815,C8841	CKSRYB104K16
	C3085,C3086,C3095,C3096,C3105	CKSRYB122K50
	C3083,C3084,C3093,C3094,C3103	CKSRYB152K50
	C3110,C8313,C8314	CKSRYB222K50
	C3037,C3038	CKSRYB223K50
	C3231,C3237,C3238,C3245,C8320	CKSRYB473K25
	C8732	CKSRYB473K25
	C5101 (100µF/6.3V)	VCH1211

RESISTORS

	R8101,R8125,R8311,R8314	RAB4C101J
	R8703-R8705,R8709-R8711	RAB4C101J
	R8713	RAB4C102J
	R5507,R8001	RAB4C103J
	R5535	RAB4C104J
	R5501,R5503,R5505,R5520	RAB4C221J
	R5529,R5530,R5533,R5545,R5546	RAB4C221J
	R5548	RAB4C221J
	R3139,R3140	RAB4C681J
	Other Resistors	RS1/16S□□□J

Mark	No.	Description	Part No.
OTHERS			
	CN5611	15P FFC CONNECTOR	52044-1545
	CN5701	13P FFC CONNECTOR	9604S-13C
	CN5501,CN5502	23P PLUG	AKP7064
	X5701	CRYSTAL RESONATOR	ASS7004
	X5501	CERAMIC RESONATOR (10MHz)	ASS7034
	JA8602		GP1FA501RZ
	CN5504	FFC CONNECTOR 07P	HLEM7R-1
	CN3011	10P PLUG	KM200TA10
	JA8803		VKB1163
	CN5503	7P FFC CONNECTOR	VKN1267
	CN8001	30P FFC CONNECTOR	VKN1290
	KN5791	EARTH METAL FITTING	VNF1084
	X8101,X8701	CRYSTAL RESONATOR (12.288MHz)	VSS1140

E TRADE 1 ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	Q107		2SD2114K
	D105		1SS355
RESISTORS			
	All Resistors		RS1/16S□□□J
OTHERS			
	CN5511,CN5512,CN5521,CN5522	23P SOCKET	AKP7075

F TRADE 2 ASSY

Mark	No.	Description	Part No.
OTHERS			
	CN3311,CN3312,CN3321,CN3322	23P SOCKET	AKP7075

G AMP ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC82		BA05T
	IC3151,IC3161,IC3171		NJM4558MD
⚠	IC72		NJM7812FA
⚠	IC3301,IC3302		STK402-240
	Q71,Q83,Q94		2SB1237X
⚠	Q81,Q91		2SB1375
	Q92		2SC1740S
	Q82,Q93		2SC4081
	Q3301,Q3302,Q3401,Q3402		2SD2114K
	Q3501,Q3502,Q3551,Q72		2SD2114K
	Q104		RN1901
	Q102		RN1903
	Q103		RN2901
	Q101		RN2903
	Q106		UN5212
	D101-D103,D94		1SS355
	D74		DAN202K
	D104		DAP202K
	D3211,D3212		UDZS8.2B

Mark	No.	Description	Part No.
CAPACITORS			
	C3159,C3160,C3169,C3170,C3180		CCSRCH100D50
	C3305,C3306,C3405,C3406,C3455		CCSRCH221J50
	C3505		CCSRCH221J50
	C3190		CCSRCH470J50
	C3309,C3310,C3409,C3410,C3509		CCSRCJ3R0C50
	C3559		CCSRCJ3R0C50
	C3307,C3308,C3407,C3408,C3507		CEAT100M50
	C3551,C3561		CEAT100M50
	C83,C86,C92,C93		CEAT101M10
	C101,C102		CEAT1R0M50
	C3321,C3322,C3421,C3422,C74		CEAT220M50
	C3323,C3324,C3423,C3424		CEAT221M25
	C3167,C3168,C3179,C3401,C3402		CEAT2R2M50
	C3501		CEAT2R2M50
	C3211,C3212,C3557,C72,C73		CEAT470M16
	C82,C85,C95		CEAT470M16
	C3653		CEAT470M25
	C3181,C3183		CFTYA154J50
	C3303,C3304,C3403,C3404,C3503		CKSRYB102K50
	C3553		CKSRYB102K50
	C3153,C3154,C3163,C3164,C3172		CKSRYB103K50
	C3191-C3198		CKSRYB103K50
	C3317,C3318		CKSRYB104K16
	C3155,C3156,C3165,C3166,C3175		CKSRYB223K50
	C3311,C3312,C71,C75		CKSRYB223K50
	C81,C84,C91		CKSRYB473K25
	C3319,C3320		CKSRYB683K16
RESISTORS			
	R3211,R3212		RAB4C681J
	R3321,R3322,R3421,R3422		RD1/4MUF101J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN3301,CN3302	23P PLUG	AKP7064
	CN3651	2P PLUG	KM200SA2

H JACK ASSY

Mark	No.	Description	Part No.
CAPACITORS			
	C3001,C3002,C3005,C3006		CCSRCH101J50
	C3011,C3012,C3015,C3016		CCSRCH101J50
	C3051,C3052		CCSRCH101J50
	C3004,C3014,C3054		CKSRYB103K50
RESISTORS			
	R3015		RD1/4PU331J
	Other Resistors		RS1/16S□□□J
OTHERS			
	JA3001	6P PIN JACK	AKB7050
	CN3001	10P SOCKET	KP200TA10L

Mark	No.	Description	Part No.

I HP ASSY

SEMICONDUCTORS

	Q3901,Q3902,Q3905,Q3906		2SD2114K
	Q3903		UN5112

COILS

	L3901,L3902	CHIP BEAD	VTL1096

CAPACITORS

	C3901,C3902		CKSRYB102K50
	C3905		CKSRYB103K50
	C3907		CKSRYB104K16
	C3903,C3904		CKSRYB333K25

RESISTORS

	R3901,R3902,R3911,R3912		RD1/4PU330J
	Other Resistors		RS1/16S□□□J

OTHERS

	3902	5P CABLE HOLDER	51048-0500
	JA3901	MINI JACK	AKN7003
	J3901	5P JUMPER WIRE	D20PYY0525E
	KN3901	EARTH METAL FITTING	VNF1084

J DISPLAY ASSY

SEMICONDUCTORS

	IC5601		MSM9202-01
	Q5691,Q5692		2SC4081
	Q5932		HN1A01FU
	Q5681,Q5933,Q5934		UN5212
	D5681		1SS133
	D5931		VRPG5615S

COILS

	L5563		LAU100J
	L5562		LAU220J

SWITCHES

	S5921-S5927		ASG7013

CAPACITORS

	C5674		CCSRCH470J50
	C5681		CEJQ2R2M50
	C5564		CEJQ101M10
	C5678		CEJQ220M35
	C5953		CEJQ470M16
	C5671-C5673		CKSRYB102K50
	C5677,C5682		CKSRYB103K50
	C5562,C5563,C5661-C5666,C5675		CKSRYB223K50
	C5952		CKSRYB223K50

RESISTORS

	All Resistors		RS1/16S□□□J

OTHERS

	CN5601	15P FFC CONNECTOR	52044-1545
	V5601	FL TUBE	AAV7082
	5671	FL SPACER	AEB7242
	X5951	REMOTE RECEIVER UNIT	GP1UM27XK

Mark	No.	Description	Part No.

K POWER ASSY

SEMICONDUCTORS

⚠	IC11,IC12	PROTECTOR(7A)	AEK7047
⚠	IC51		NJM78M56FA
⚠	IC61		NJM7912FA
⚠	Q32		2SB1375
	Q3601,Q3602,Q3611,Q3612		2SC4081
	Q3621,Q3622,Q3631,Q3642,Q3644		2SC4081
	Q3641		2SD1858X
⚠	Q51		2SD1858X
	Q3654		2SD2144S
	Q3652		DTA124TK
	Q3634		HN1C01FU
	Q3633		RN1901
	Q3651		RN1903
	Q3632		RN2903
	Q3635,Q3645,Q3653		UN5112
	Q3643		UN5212
	D35,D3632-D3634,D3655		1SS133
	D52-D54		1SS133
	D3601,D3602,D3611,D3612		1SS355
	D3621,D3622,D3636,D3637		1SS355
	D3641-D3643,D3651-D3653		1SS355
⚠	D21		D2SBA20(B)
⚠	D22		D3SBA20(B)
⚠	D11		D5SBA20(B)
	D3635		DAN202K
	D3644		DAN217
	D3603,D3613,D3623		DAP202K
	D61,D72		MTZJ15C
	D33,D34		MTZJ18A
	D93		MTZJ4.7A
	D3631		MTZJ5.1A
	D36		MTZJ6.8B
	D82,D84		MTZJ7.5C
⚠	D51		S1WB(A)60SD
	D31,D32,D3656		S5688G

COILS

⚠	L1	LINE FILTER	ATF7019
	L3361,L3362,L3461,L3462,L3561	AF CHOKE COIL	ATH-059
	L3661	AF CHOKE COIL	ATH-059

TRANSFORMERS

⚠	T2		ATT7050

RELAYS

	RY3641-RY3643		ASR7008
⚠	RY1		ASR7018

CAPACITORS

⚠	C1,C2 (0.022µF)		ACE7029
⚠	C3		ACG7033
	C35,C62		CEAT100M50
	C3632		CEAT101M10
	C3651		CEAT101M25
	C52		CEAT102M25
	C36,C37		CEAT1R0M50
	C34		CEAT220M50
	C32		CEAT221M63
	C3631,C3652		CEAT2R2M50

Mark	No.	Description	Part No.
	C33		CEAT330M50
	C54		CEAT470M16
	C15,C16		CEAT472M35
	C24		CEAT682M16
	C23		CEAT682M25
	C3369,C3370,C3469,C3470,C3569		CKSRYB103K50
	C3669,C53		CKSRYB103K50
	C3361-C3364,C3461-C3464,C3561		CKSRYB223K50
	C3563,C3661,C3663,C61		CKSRYB223K50
	C3365-C3368,C3465-C3468,C3565		CKSRYB473K25
	C3567,C3665,C3667		CKSRYB473K25
	C12,C13		CQMA103J50

RESISTORS

	R11		RD1/2PMF100J
	R3361,R3362,R3461,R3462,R3561		RD1/2PMF101J
	R3661		RD1/2PMF101J
	R31		RD1/2PMF332J
	R36,R37		RD1/4PU101J
	R3635		RD1/4PU332J
	R35,R3631,R3632		RD1/4PU472J
⚠	R3657		RF1/4PS330J
	R3646		RS1/10S472J
	R3607,R3608,R3617,R3618		RS1LMFR22J
	R3627,R3628		RS1LMFR22J
	Other Resistors		RS1/16S□□□J

OTHERS

	61	4P CABLE HOLDER	51048-0400
	CN3301,CN3401	6P APEAKER TERMINAL	AKE7066
	CN3331,CN3332,CN5531,CN5532	23P PLUG	AKP7064
	H1,H2	FUSE CLIP	AKR7001
	CN11	10P VH CONNECTOR	B10P-VH
⚠	CN2	2P VH CONNECTOR	B2P3-VH
	J61	4P JUMPER WIRE	D20PDD0410E
	11	PCB BINDER	VEF1040
	CN5102	30P FFC CONNECTOR	VKN1261
	KN11	EARTH METAL FITTING	VNF1084
⚠	AN1	1P AC INLET	XKP3041

6. ADJUSTMENT

6.1 DVD SECTION

6.1.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanism Part]

❶ Tangential and Radial Height Coarse Adjustment

❷ DVD Jitter Adjustment

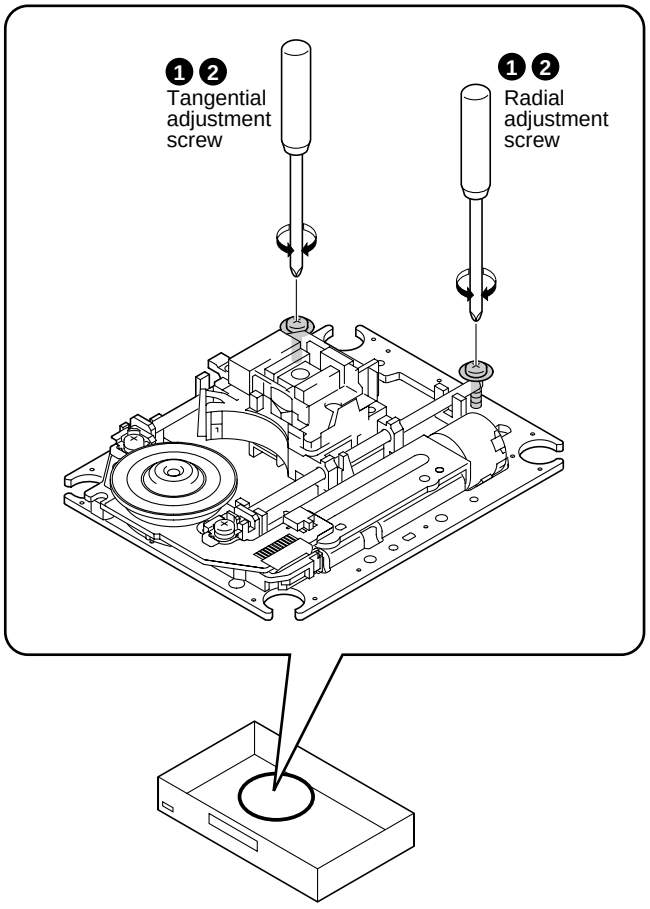
❸ Initialize the Focus Sweep Setting

[Electrical Part]

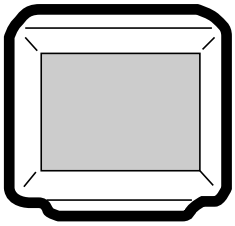
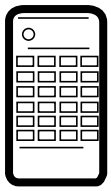
Electrical adjustments are not required.

■ Adjustment Points (Mechanism Part)

Cautions: After adjustment, adjustment screw locks with the Screw tight.



6.1.2 JIGS AND MEASURING INSTRUMENTS

 ⊕ Screwdriver (large)	 ⊕ Screwdriver (medium)
 TV monitor	 Test mode remote control unit (GGF1067)
 ⊕ Precise screwdriver	 DVD test disc (GGV1025)
Screw tight (GYL1001)	

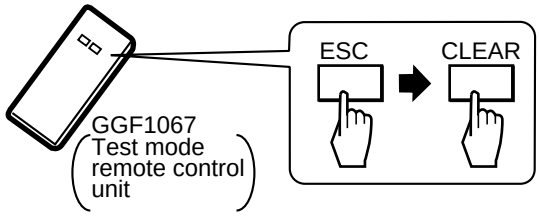
6.1.3 NECESSARY ADJUSTMENT POINTS

When	Adjustment Points	
■ Exchange Parts of Mechanism Assy		
Exchange the Pickup	Mechanical point	❶, ❷, ❸ ＊ After adjustment, screw locks with the Screw tight.
	Electric point	———
Exchange the Traverse Mechanism	Mechanical point	❸
	Electric point	———
Exchange the Spindle Motor	Mechanical point	❷, ❸ ＊ After adjustment, screw locks with the Screw tight.
	Electric point	———
■ Exchange PCB Assy		
Exchange PC Board LOAB, DVDM ASSY	Mechanical point	———
	Electric point	———

＊

Purpose: To set the sweep which was correct with the individual Traverse mechanism.

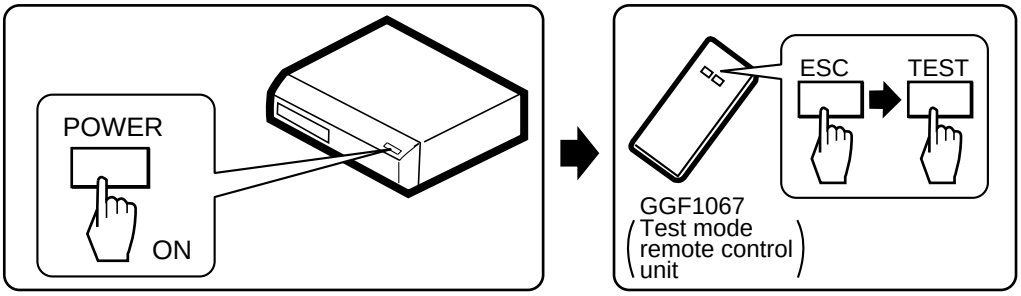
Be sure to perform the following step finally when replaced Pickup, Traverse Mechanism and Spindle Motor.



(It is necessary when performed adjustment procedure ❷.)

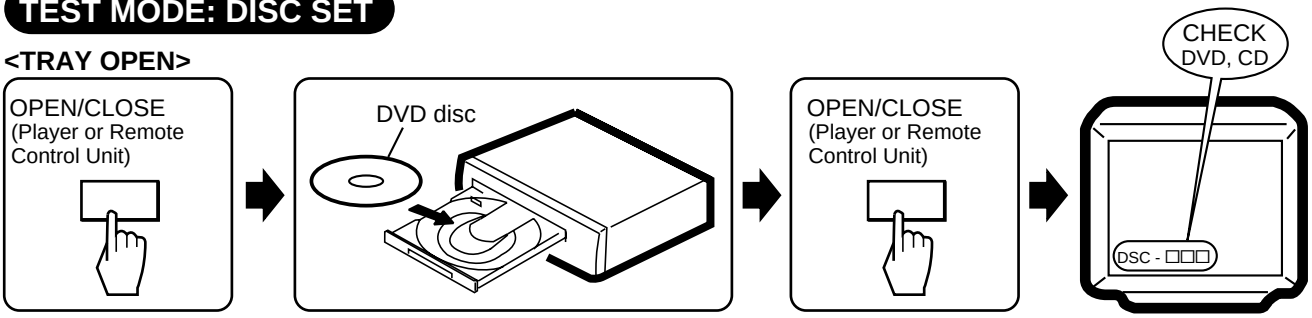
6.1.4 TEST MODE

TEST MODE: ON



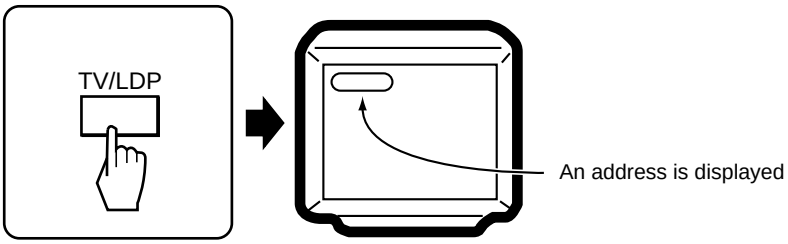
TEST MODE: DISC SET

<TRAY OPEN>



TEST MODE: PLAY

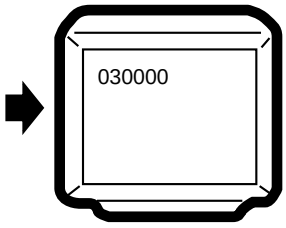
<PLAY>



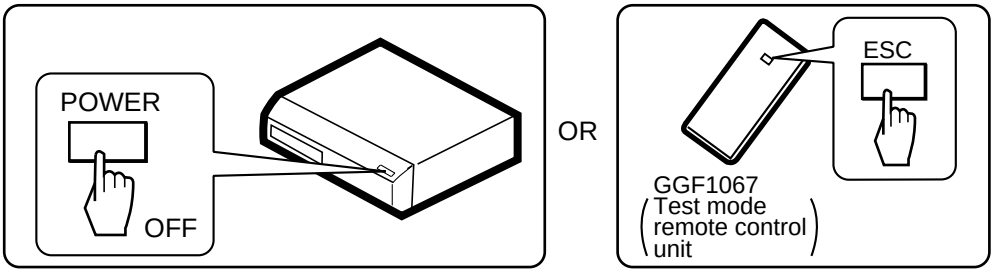
< When playback with the target address of disc (DVD)>

For example, when playback with # 30000

During PLAY [+10] ➡ [3] ➡ [0] ➡ [0] ➡ [0] ➡ [0] ➡ [CHP/TIM] Press keys in order



TEST MODE: OFF

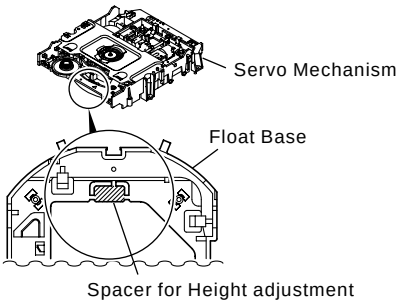


6.1.5 MECHANISM ADJUSTMENT

1 Tangential and Radial Height Coarse Adjustment

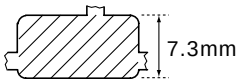
START

- Remove the servo mechanism.
- Remove a Spacer for height adjustment attached to the back side (shaded area) of the Servo Mechanism (Float Base) with nippers.

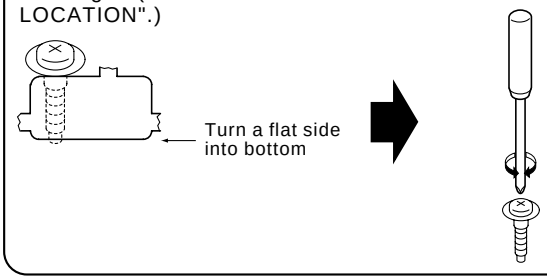


Note:
Turn the Short switch to Short side when removing the Pickup Flexible Cable.
(Refer to "7.1.6 DISASSEMBLY".)

Cautions:
Because there is not a Spacer for height adjustment in adjustment after the second time, will keep it at need.
(This parts is Traverse mechanism exclusive use of a model for 2001 years)



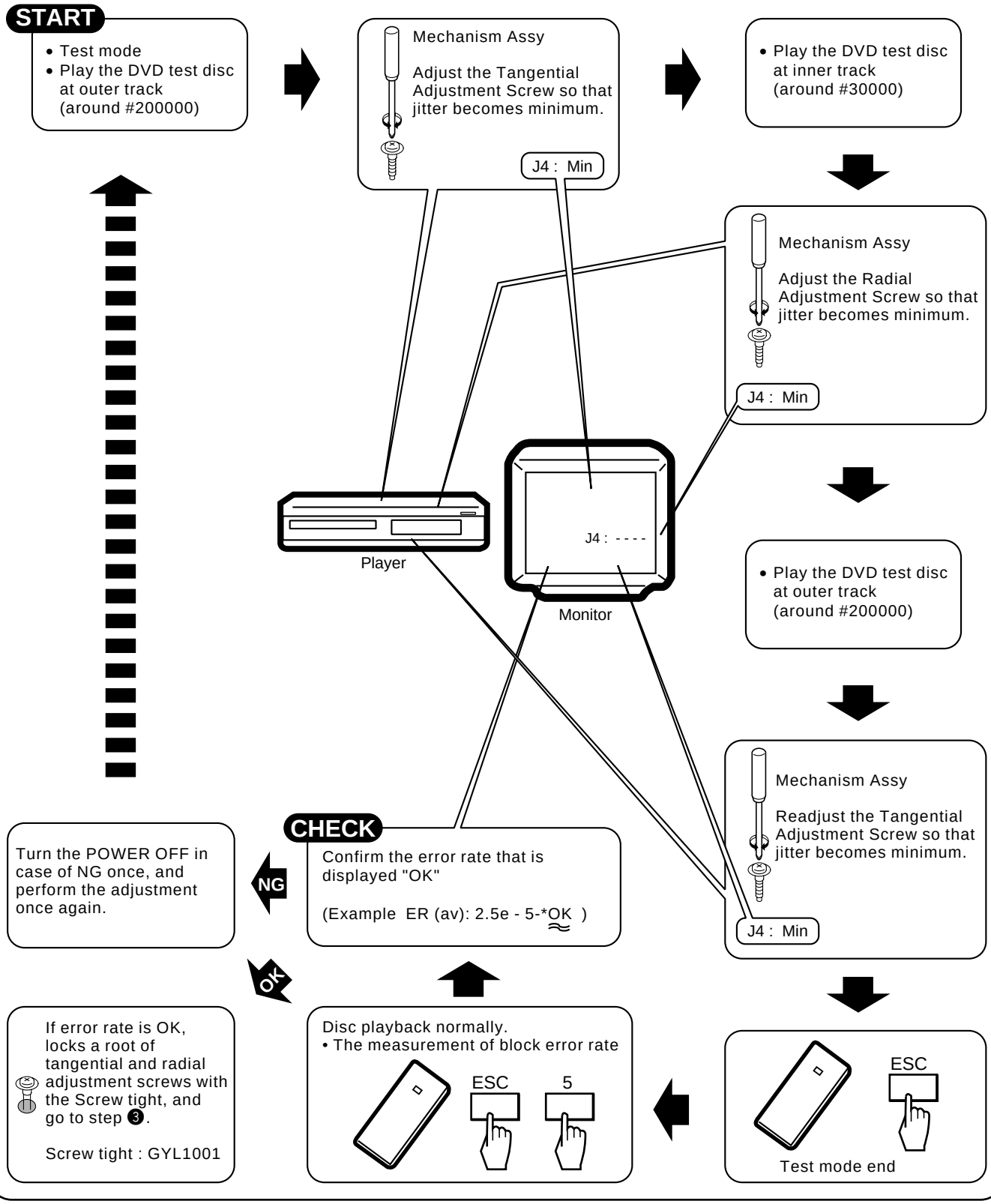
Put a spacer between a Tangential (or Radial) adjustment screw and Mechanism Base and turn each screw to adjust the height. (Refer to "6.1.1 ADJUSTMENT ITEMS AND LOCATION".)



❷ DVD Jitter Adjustment

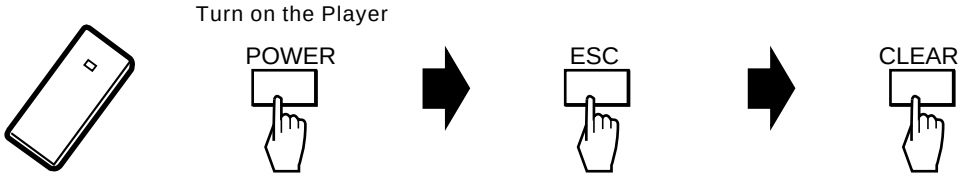
• Playback method of inner and outer address for the purpose is refererd to "6.1.4 TEST MODE".
• Jitter indication of the monitor is refererd to "7.1.3 TEST MODE SCREEN DISPLAY".

Use disc: GGV1025



❸ Initialize the Focus Sweep Setting

Purpose: To set the sweep which was correct with the individual Traverse mechanism.



Note: Be sure to perform this step when replaced the Pickup or Traverse mechanism.

6.2 TUNER SECTION

■ AM Tuner Section

• There is no adjustment in the AM tuner.

■ FM Tuner Section

• Set the mode selector to FM BAND.
• Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	ANT. Input level and signal condition			Adjustment	
		Frequency (MHz)	Modulation	Input Level (dBμV)	Adjust point	Contents
1	T-METER Adjustment	98	OFF	80	L201	Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point Vtm) gets within 0 ± 50mV.

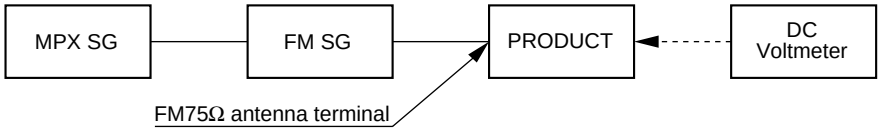


Fig.1 Adjustment Wiring Diagram

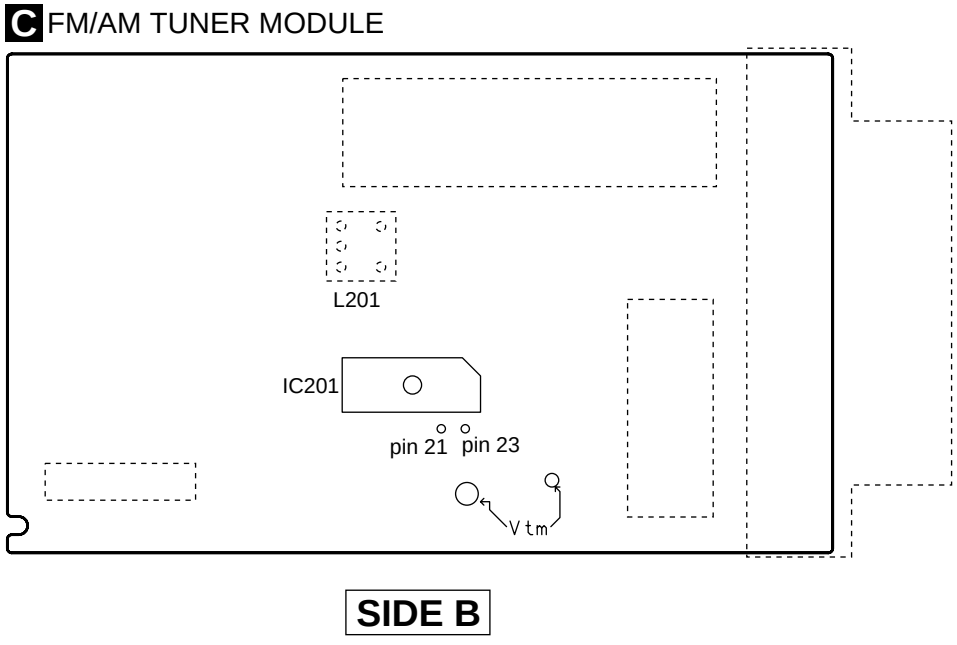


Fig.2 Adjustment Point

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 SELF-DIAGNOSTIC FUNCTION OF PICKUP DEFECTIVE

This unit can confirm the laser diode current value (DVD: 650nm, CD: 780nm) of pickup on the Test Mode screen. (Press the [ESC] → [TEST] keys in order on the test mode remote control unit (GGF1067) to enter the test mode.)

It's effective in case of the following condition.

Symptom

- Indicates "No Disc" in FL display.
- Player does not playback, etc..

Procedure of Self-Diagnosis

① Enter the Test mode.

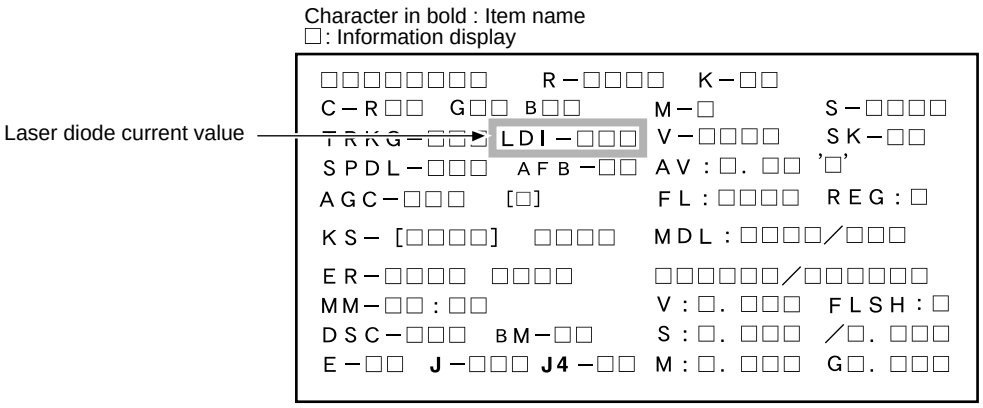
② When diagnosing the 650nm laser diode:
Press the [TEST] → [1] keys in order, and turn on the laser diode (It light-up for nine seconds.).
When diagnosing the 780nm laser diode:
Press the [TEST] → [4] keys in order, and turn on the laser diode (It light-up for nine seconds.).

(When let it turn on once again after performed ② once,
After pressed [REP.B] key once
650nm: Press the [TEST] → [1] keys in order
780nm: Press the [TEST] → [4] keys in order)

③ Confirm the indicated value of the laser diode current (LDI). (Refer to following figure.)

④ **When indicated value is more than 100, pickup is defective. → Replacement is necessary**
Replace the Traverse Mechanism Assy or Pickup.

Note : When a DVD disc or a CD disc is played in the test mode, this function is effective.

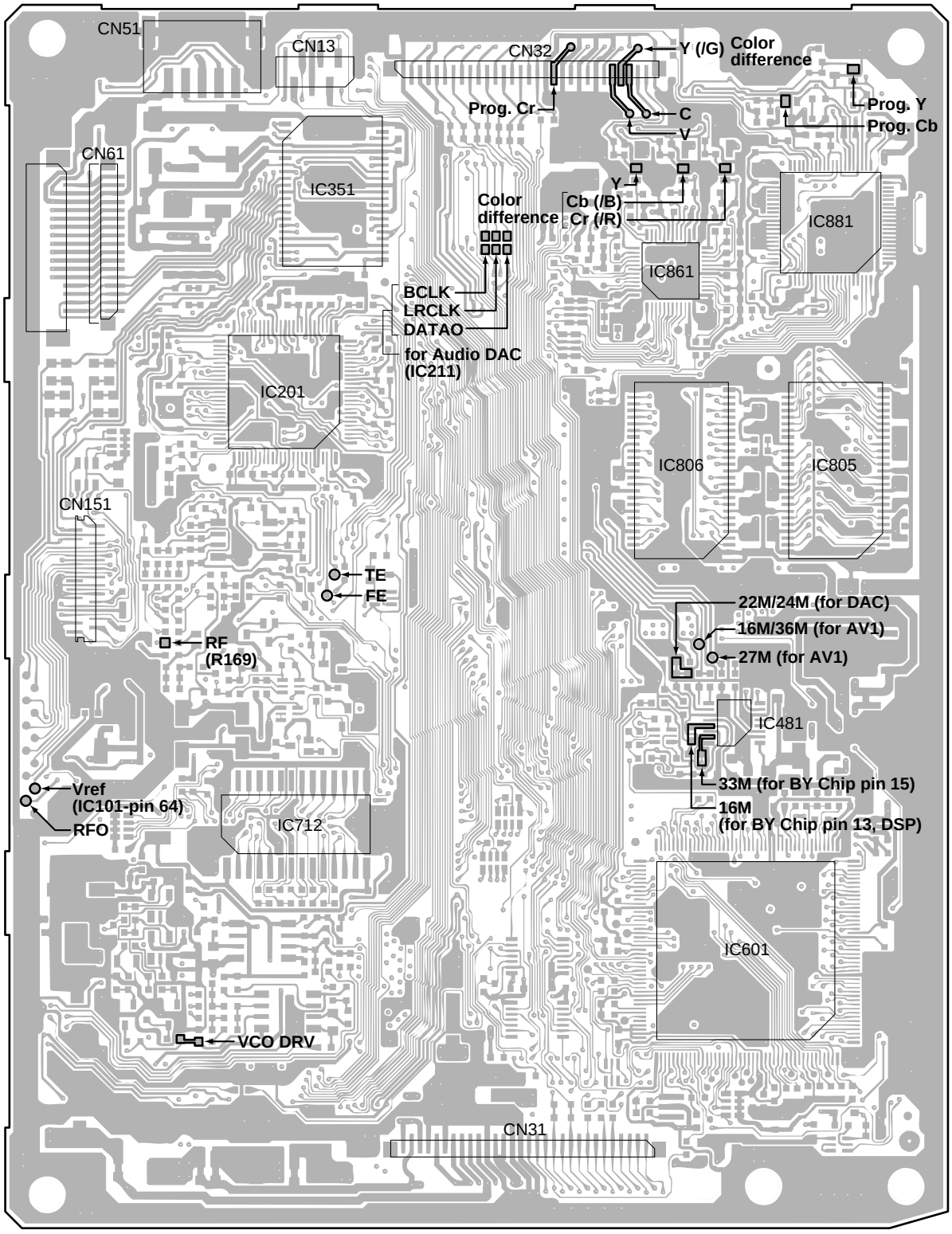


Test Mode Screen Display

7.1.2 TEST POINTS LOCATION

This model has not test terminal.
Please use following points on the DVDM Assy when checking RF, FE and TE, etc..

DVDM ASSY



SIDE A

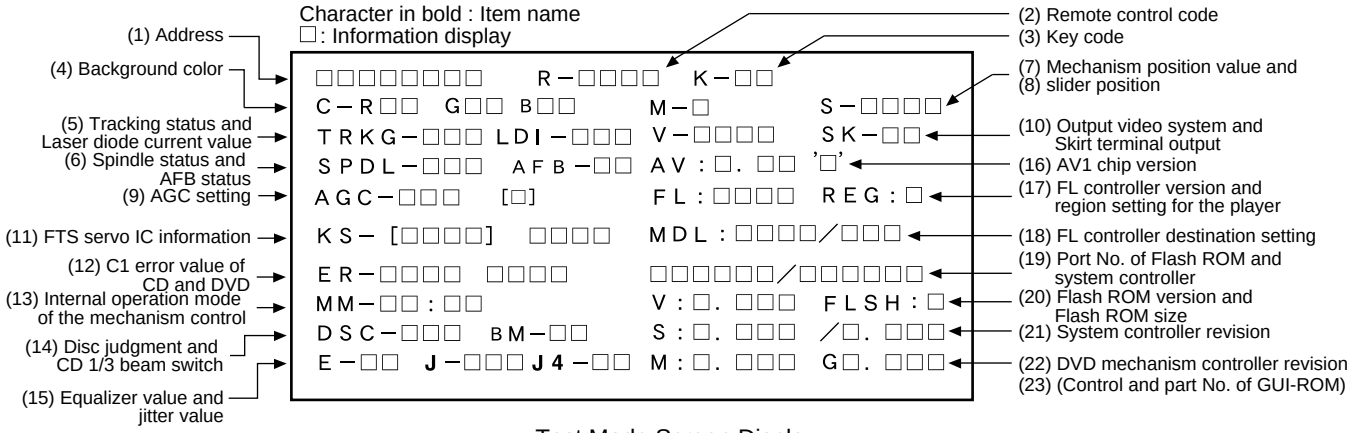
7.1.3 TEST MODE SCREEN DISPLAY

■ TEST MODE SCREEN DISPLAY

When the test mode is entered, press the ESC button and the TEST button in order of the test mode remote control unit (GGF1067).

Consecutive double-OSD display is supported during test mode. The screen is composed 10 lines with a maximum of 32 characters per line. It can't be used with the debugging display mode together.

• Screen Composition



Test Mode Screen Display
(First Screen Display)

Caution :
The first screen and second screen switch by pressing [DISPLAY] key of the remote control unit.
It is only a version display part on the lower right of the screen those contents of display change.
ATB : ON/OFF information display and AGC manual setting display deleted with the second generation.
The displays of Tilt error value, Tilt servo status and pickup DVD/CLD display deleted with the third generation becomes LD part is deleted.

• Description of Each Item on the Display

(1) Address indication

The address being traced is displayed in number.
DVD : ID indication (hexadecimal number, 8 digits) [＊＊＊＊＊＊＊＊]
CD : A-TIME (min. sec.) [0 0 0 0 ＊＊＊＊]
(Note : For DVDs, decimal-number indication is possible.)

(2) Code indication of the remote control unit [R – ＊＊＊＊]

The code for the key pressed on the remote control unit, which is received by the FL controller, is displayed while the key is pressed. In the case of the double code, the second code will be displayed.

(3) Key code indication for the main unit [K – ＊＊]

The code for the key pressed on the main unit, which is received by the system controller, is displayed while the key is pressed.

(4) Background color indication [C – R＊＊ G＊＊ B＊＊]

(5) ① Tracking status [TRKG – ＊＊＊]

Tracking on [ON]
Tracking off [OFF]

② Laser diode current value [LDI – ＊＊＊]

(6) ① Spindle status [SPDL – ＊＊＊]

Spindle accelerator and brake, free-runnimg	[A/B]
FG servo	[FG]
Rough, velocity phase servo	[SRV]
Offset addition, rough, velocity phase servo	[O_S]

② AFB status [AFB – ＊＊]

ON	[ON]
OFF	[OFF]

(7) Mechanism position value [M – ＊]

Position code	[1] to [3]

(8) Slider position [S – ＊＊＊＊]

CD TOC area	[IN]
CD active area	[CD]

(9) AGC setting [AGC – ＊＊]

AGC on	[AGC-ON]
AGC off	[AGC-OFF]

(10) Output video system [V – ＊＊＊＊]

NTSC system	[NTSC]
PAL system	[PAL]
Auto-setting	[AUTO]

Skirt terminal output [SK – ＊＊]

VIDEO	[00]
S-VIDEO	[01]
RGB	[02]

Note : Display only the model which can do the output setting of skirt terminal.

(11) FTS servo IC information

DSP coefficient indication [KS – [＊＊＊＊] ＊＊＊＊]
Displays the address (four digits) of the specified coefficient and the setting value (four digits) with [TEST] and [9] keys.

(12) Error rate indication

① C1 error value of CD [ER – C1 ＊＊＊＊]
② C1 error value of DVD [ER – ＊＊＊＊ ＊＊＊＊]

(13) Internal operation mode of mechanism controller [MM – ＊＊ : ＊＊]

Internal mechanism mode (2 digits) and internal mechanism step (2 digits) of the mechanism controller

(14) ① Disk sensing [DSC – ＊＊＊]

The type of discs loaded is displayed.
[DVD], [CD], [VCD], [ ]

② **CD 1/3 beam switch [BM – ＊＊]**

(15) ① Equalizer value [E – ＊＊]

② **Jitter value [J – ＊＊]**

Make the jitter four times, and renew it in every 0.5 second. [J4 – ＊＊]
CD is effective only in the jitter value.

(16) Version of the AV-1 chip [AV : ＊ . ＊＊' ＊']

(17) ① Version of the FL controller [FL : ＊＊＊＊]

② **Region setting of the player [REG : ＊]**

Setting value [1] to [6]

(18) Destination setting of the FL controller [MDL : ＊＊＊＊ / ＊＊＊]

Four charactors in the front represent the type of model : three charactors in the back represent the destination code.
J : /J, K : /KU, /KC, /KU/KC, R : /RAM, /RL, /RD, /LB, WY : /WY

(19) The part number of the flash ROM and system controller [＊＊＊＊＊＊ / ＊＊＊＊＊＊＊]

① Part number of the flash ROM <Front>
(Example) VYW1536-A = W1536A
(Example) PD6256A9 = 6256A9
② Part number of the system controller <Back>
(Example) PD3381T1 = 3381T1

(20) ① Version of the flash ROM [V : ＊ . ＊＊＊]

② **Flash ROM size [FLSH = ＊]**

(21) Revision of the system controller [S : ＊ . ＊＊＊ / ＊ . ＊＊]

① Revision number of the external ROM part (flash ROM) of the system controller <Front>
② Revision of the internal ROM part of the system controller <Back>

(22) Revision of the DVD mechanism controller [M : ＊ . ＊＊＊]

Revision number of the external ROM part (flash ROM) of the DVD mechanism controller

(23) Control and part numbers of the GUI-ROM [G : ＊＊＊＊]

No GUI model displays as "—— / ——".
OEM model displays the part number of GUI-ROM [G : ＊＊＊＊]

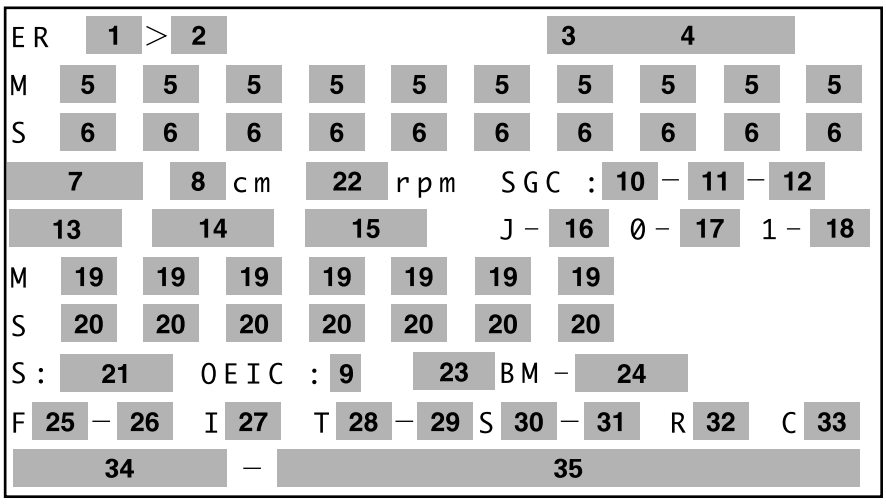
■ DEBUGGING SCREEN SPECIFICATION FOR THE MECHANISM CONTROLLER

• This specifications is subject to change without notice.

① Indication Method of The Mechanism Controller Debugging Screen

A debugging screen of the mechanism controller is indicated when pressing the test mode remote control unit [GGF1067] in order of the ESC and CHP/TM buttons.
Releace from debugging screen display of the mechanism controller with the ESC button.

② Screen Layout



③ Indication Contents

1. The error that became the trigger that an error of 2 occurred.
   There are many cases same as 2.

2. The error number that transferred to the system controller
   Refer to the error list about contents of error number.

3. Code read in state (it does not support in this unit)
   When X is indicated, ID or subcode are not able to read in.
   When X is not indicated, they are able to read in.

4. ID or subcode (it does not support in this unit)
   Subcode indicates the A time.

5. Inside mode of the mechanism controller when an error of 1 occurred
   It can indicate to a maximum 10 mode. Indicate it in order of an old mode from the left, and go right, and become a new mode. Indicate only a nest share of the mode.

6. Processing step of inside mode of 5
   It can grasp the mode reaching an error and transition of step by watching 5 and 6 and it can specify the occurrence place of most errors.

7. Disk information in the mechanism controller
   ? : Indistinctness
   NO : There is no disc
   DVD 1 : DVD single layer
   DVD 2 : DVD dual layer
   CD : CD
   CDR : CD-R or CD-RW
   CDR P : PRD of CD-R or CD-RW

8. As a result of 8cm /12cm distinction
   ? : Indistinctness (undistinction)
   8 : 8 cm
   12 : 12 cm

9. OEIC gain (it does not support in this unit)
   H : OEIC HIGH gain
   L : OEIC LOW gain

10. SGC gain for LD of 780nm
    It indicates a step using in the mechanism controller inside with a hexadecimal number.
    Set the gain so that S curve becomes 1.8V (p-p) in disc distinction.

11. SGC gain for LD of 650nm For L0.
    It indicates a step using in the mechanism controller inside with a hexadecimal number. Set a gain so that S curve becomes 1.8V (p-p) in disc distinction.

12. SGC gain for LD of 650nm For L1.
    It indicates a step using in the mechanism controller inside with a hexadecimal number. Set a gain so that a S curve becomes 1.8V (p-p) in disc distinction.

13. RF count value for disc distinction
    RF count value to use the disc distinction. It compares threshold value of 14 and 15 and distinguishes the disc.

14. Disc distinction threshold value (DVD and CD)
    Threshold value of the disc distinction. Distinguish it from DVD if bigger than this value, and distinguish it from CD if small.

15. Disc distinction threshold value (CD and unrecorded disc)
    Threshold value of the disc distinction. Distinguish it from CD if bigger than this value, and distinguish it from an unrecorded disc if small.

16. Current jitter value
    Indicate the value that was read in from the MY-CHIP in DVD, and indicate the value that was read in from the servo DSP in CD.

17. Focus balance setting value of L0

18. Focus balance setting value of L1

19. Current mechanism controller inside mode
    (it does not support in this unit)
    It can indicate to a maximum 10 modes. Indicate only a nest share of the mode.

20. Processing step of 11 inside modes
    (it does not support in this unit)
    It can grasp the current mode, the mode reaching it and transition of step by watching 19 and 20.

21. Spindle control state of MY-CHIP
    (it does not support in this unit)
    OFF : Motor off condition
    A/B : Accelerator and brakes
    FG : FG servo
    RVP : Rough speed phase servo
    ORVP : Rough speed phase servo of offset addition

22. Rotation number of spindle motor
    Do not FG read in ? indication (during spindle stop).

23. Tracking error generation system
    (it does not support in this unit)
    1: 1 beam (DPD)
    3: 3 beams

24. TZC count value (it does not support in this unit)
    The value that counted the number of TZC for one rotation in the tracking open state.
    When this value is more than 512 with CD, set it in 1 beam because the eccentric is large.
    DVD does not measure it because it is 1 beam fixed (indication is 0000).

25. It indicates the frequency that entered the focus backup
    Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.

26. It indicates focus backup limit frequency with the hexadecimal number
    Initial value is 14H, it does decrement whenever enter the focus backup and it gives up backup if it became 0. Then the error is generated. After reverted from the backup, When not enter the backup and pass fixed time (1500ms), return to initial value again.

27. It indicates the frequency that entered the internal circumference plunging into backup of the sled
    Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.

28. It indicates the frequency that entered the tracking overrun backup
    Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.

29. It indicates the limit frequency of tracking overrun backup with a hexadecimal number
    Initial value is 03H, it does decrement whenever enter the tracking overrun backup and it gives up backup if it became 0.

30. It indicates the frequency that entered sled overrun backup
    Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.

31. It indicates the limit frequency of sled overrun backup with a hexadecimal number
    Initial value is 03H, it does decrement whenever enter the sled overrun backup and it gives up backup if it became 0.

32. It indicates the frequency that entered the tracking close NG backup
    Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Next of FF is be a 1 byte counter in 00.
    The hexadecimal number indication which indicates the frequency that reads

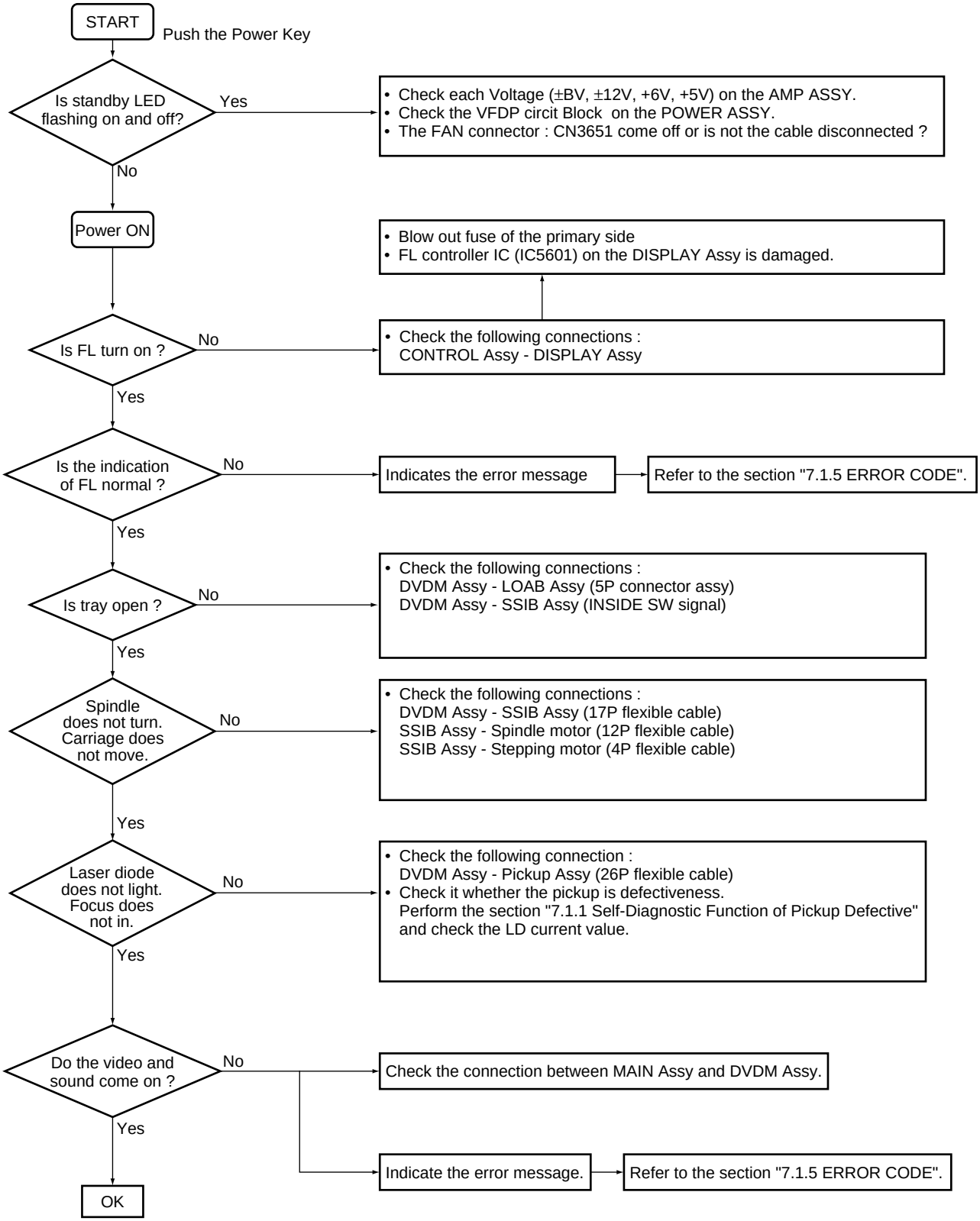
33. ID/subQ, and entered NG backup
    Hexadecimal number indication. A counter does not reset it till cuts it off after turning it on. Due to a 1 byte counter, next of FF becomes 00.

34. An address to indicate in 35
    Set it by using RS232.I
    (an address) Set it with DA.

35. Contents of an address indicated in 34.

7.1.4 TROUBLE SHOOTING

- No Power ON
- FL is not turned ON
- FL indication is unusual



7.1.5 ERROR CODE

Error codes that are displayed on the FL display without using the remote control unit

FL Display	Possible causes	Operation of the unit
AV1 VER	AV-1 chip is not a match with the program of system controller	The sound may not out with the specific audio.
CPU AERR	CPU address error (Hardware is unusual.)	No operation
DMA AERR	DMA address error (Hardware is unusual.)	No operation
FLASH ID	Difference in versions of the internal ROM of the system controller and of the flash ROM, or bus line failure or reverse installation	No operation
FLASH WRP	Write protect error of the flash ROM	No operation
FLASH SIG	Difference in part number of the flash ROM (When the ROM which could't be used was used.)	No operation
FLASH SUM	Check sum error of the flash ROM (It exceeds the regular size.) or reverse installation (Hardware is unusual.)	No operation
FLASH SIZE	Size error of the flash ROM (Use 4 or 8 M-bit.)	No operation
ILLGAL	The system controller fetched a code other than an operation code (Hardware is unusual.)	No operation
RESERVE	Undefined interrupt (Hardware is unusual.)	No operation
SLOT	Inappropriate slot command issued (Hardware is unusual.)	No operation
SDSP PWER	Access error to the servo DSP or clock does not oscillation (Hardware is unusual.)	Accept only OFF operation of the POWER key of the main unit. Remote control unit is impossible.

Error codes that are displayed on the FL display by using the remote control unit (Mechanism controller error)

To display: ESC + DISPLAY + DISPLAY; Location of the display: At the two digits of center of the FL display
To display the error history: ESC + DISPLAY + One shot; Location of the display: TV screen

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
11	Search timeout	Search could not be complete within 7 seconds.	Search could not be complete within 7 seconds, and it could not enter the target area within 7 seconds by VCD scan.	CD : Stops, DVD : Continues operation
12	Search retry error	A search could not be completed after 3 retries, search backup was executed 4 times, or in a case of timeout (6 seconds) while the unit was tracing 11 tracks or more beyond the target while the search operation was converging.	Backup against slider skip was executed 4 times during a search, or slider skip twice resulted in starting from the read-in point.	CD : Stops, DVD : Continues operation
19	Tracing timeout while converging	Timeout (10.5 seconds) while tracing at the stage of convergence of a search.		Stop
1B	Index 0 search error		During Track (Index) Search, the search for the beginning of a program could not be completed within 3 seconds (20 seconds in the case of Index Search) after positioning based on the TOC data was completed.	Stop
1C	Wobble distinction error	Distinguished RW disc without wobble.		Read the RW control data.
22	Timeout of slider inner circumference	Inside switch could not ON within 3 seconds.		Stop
23	Timeout of slider outer circumference	Inside switch could not OFF within 2 seconds.		Stop

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
33	No FOK pulse during playback CLVA	When the focus was deviated continuously 20 times.		Adjusts focus at the innermost circumference and tries to return to its position where the error was generated (for 3 times),then opens. If the same error persists after one retry, the tray opens. (No FOK pulse)
38	Disc-type-sensing error	If normal starting was impossible in the following three cases, disc-type sensing will be retried if other errors occure excepting C5 error. However, when the focus error "33" was occured continuously 3 times, it is finished as "38 error" at the moment: (1) startup with the first disc-type-sensing result, (2) forced startup with another disc by designating the disc type, (3) forced startup with the original disc by designating the disc type.		Open
39	SGC converge timeout	SGC could not converge during detects the peak		Open
41	Spindle timeout	The unit did not enter Stop mode within 10 seconds of issuance of a Stop command.		Stop
48	Spindle FG transition timeout	The spindle could not converge into within ± 12% of the target FG rotation speed within 10 seconds after spindle kick. The first time after startup (the first time after disc distinction), it doesn't become the number of the target rotation within five seconds. The first time after startup, detects the abnormal rotation number of high-speed continuously 3 loops. DVD: 5 to 9 mS , CD: 40 to 60 mS		Stops. (FG timeout)
49	Spindle PLL transition timeout	After the second times after startup, it doesn't become the number of the target rotation within five seconds. Detects the abnormal high-speed or low-speed rotations. DVD: 5 to 9 mS , CD: 40 to 60 mS		Stops. ("73" is displayed during starting process.)
4A	Spindle lock timeout	Spindle could not lock more than 1.5 seconds before start the AFB.		Stops. ("73" is displayed during starting process.)
51	Auto sequence timeout of peak detection	ABUSY did not return within 1 second after the DDTCT (peak detection) command was sent.		Stop
52	Auto sequence timeout of focus jump down	ABUSY did not return within 30 mS after the FJMPD (Focus jump 1 to 0) command was sent.		Stop
53	Auto sequence timeout of focus jump up	ABUSY did not return within 30 mS after the FJMPU (Focus jump 0 to 1) command was sent.		Stop
54	Auto sequence timeout of play AGC	ABUSY did not return within 50 mS after the GSUMON (play-AGC-measuring) command was sent.		Stop
55	Auto sequence timeout of disc-type-sensing	ABUSY did not return within 2 seconds after the DJSRT (disc-sensing) command was sent.		Stop
56	Auto sequence timeout of ATB2	ABUSY did not return within 1 second after the TBLOFS (Internal ATB after the completion of external ATB) command was sent.		Stop
57	Auto sequence timeout of tracking servo ON	ABUSY did not return within 500 mS after the TSON (tracking servo ON) command was sent.		Stop
58	Auto sequence timeout of ATB1	ABUSY did not return within 200 mS after the TBL (external ATB) command was sent.		Stop
59	Auto sequence timeout of focus gain adjustment	ABUSY did not return within 2 seconds after the FGN (focus gain adjustment) command was sent.		Stop
5A	Auto sequence timeout of tracking gain adjustment	ABUSY did not return within 2 seconds after TGN (tracking gain adjustment) command was sent.		Stop
5B	Auto sequence timeout of offset adjustment	ABUSY did not return within 1 second after the CMDAVE (offset adjustment) command was sent.		Stop

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
5C	Auto sequence timeout of modulation factor measurement	ABUSY did not return within 200 mS after the ADJMIR (modulation factor measurement) command was sent.		Stop
5D	Auto sequence timeout of auto focus bias	ABUSY did not return within 2 seconds after the AFB (auto focus bias) command was sent.		Stop
5F	Auto sequence already busy	A command could not be sent because ABUSY was low. ABUSY did not return within 200 mS after TLV command was sent.		Stop
62	Pause retry error	Pause mode could not be restored within three retries after it had been released.		Continues operation
71	ID can not read during tracing	An ID could not be read for 1 second or more.		Stop
72	Subcode check failure during playback		No frame could be read for 3 seconds or more.	Stop
73	ID can not read at the startup	An ID could not be read within 1 second after the AFB adjustment had been finished.		Opens (ID readout failure)
74	Subcode check failure during startup		No subcode could be read within 3 seconds after AFB adjustment had been finished.	Opens (Subcode readout failure).
81	Timeout for reading TOC of the mechanism controller		TOC readout took 30 seconds or more.	Stop
82	Timeout for reading TOC of the system controller		Reading TOC of the system controller took 30 seconds or more.	Stop
A1	Communication timeout of DSP command	A command could not be issued to DSP because Command Busy (XCBUSY) was in force (XCBUSY = L) for a specified time (about 200 mS).		Open
A2	Communication timeout for reading DSP coefficient	Command Busy (XCBUSY) was in force for a specified time (about 200 mS) before and after a coefficient read command was issued to DSP, or the address echo-back after command issuance did not match the setup address.		Open
A3	Communication timeout for writing DSP coefficient	Command Busy (XCBUSY) was in force for a specified time (about 1024 mS) before and after the coefficient write command was issued to DSP.		Open
A4	Communication timeout for continuously writing DSP coefficient	Command Busy (XCBUSY) was in force for 200 µS during continuous coefficient writing, or before and after a continuous write command was issued to DSP.		Open
B1	Timeout error for backup	In the tracing state during the backup sequence, codes could not be read for 1 second or more. In the backup sequence, tracking ON sequence of the servo DSP could not be completed even if more than 500 mS after the tracking ON command was issued.		Stops
B2	Retry error for backup	Tracing impossible after retring the tracking ON for 3 times in the backup sequence.		Stops
B3	Retry error for trace	During tracing, runaway was detected after three iterations of backup operations for detecting runaway.		Stops
C3	Detection of tracking overcurrent	During playback, the overcurrent detection port was at L for 300 ms or more continuously.		Stops (the mechanical controller operates independently).
(C5)	Short-circuit test corresponding error	While the power was on, the overcurrent detection port was at L for 40 ms or more continuously.		Turns off the power instantly (No indication on the FL display and no writing to flash memory)
E3	Violation against digital copy guard			Stops

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
F5	Tray being pushed	The tray switch that had been Open mode was forcibly changed to a mode other than Open by an external force.		Closes
F8	Loading timeout	Loading, unloading or clamping could not be completed within a specified time (about 5 seconds).		Reverses the loading direction. It timeout is repeated upon retry, the unit stops.
FC	Focus	The following error occured eight times. (1) Focus ON sequence could not be completed even if more than two seconds after the focus ON command (to the servo DSP) was sent. (2) Focus IN sequence was finished, actually focus IN was not completed.		Stops wherever possible then opens (stops in the case of side B).

Error codes that are displayed on the FL display by using the remote control unit (Device error)
To display : ESC + DISPLAY + DISPLAY ; Location of the display : At the two digits of left of the FL display

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
bit3=1 08 etc.	AV1 access error (read, write NG)			No operation or it becomes debugging indication if the power is able to ON.
bit2=1 04 etc.	MY CHIP access error			
bit1=1 01 etc.	SRAM access error			

7.1.6 DISASSEMBLY

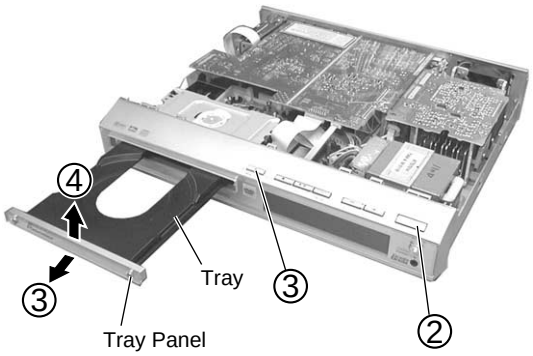
■ DIAGNOSIS OF PCBs

Note

When diagnosing the unit, be sure to use three connection cables for service.
(Part No. : GGD1222 × 2, GGD1266 × 1)

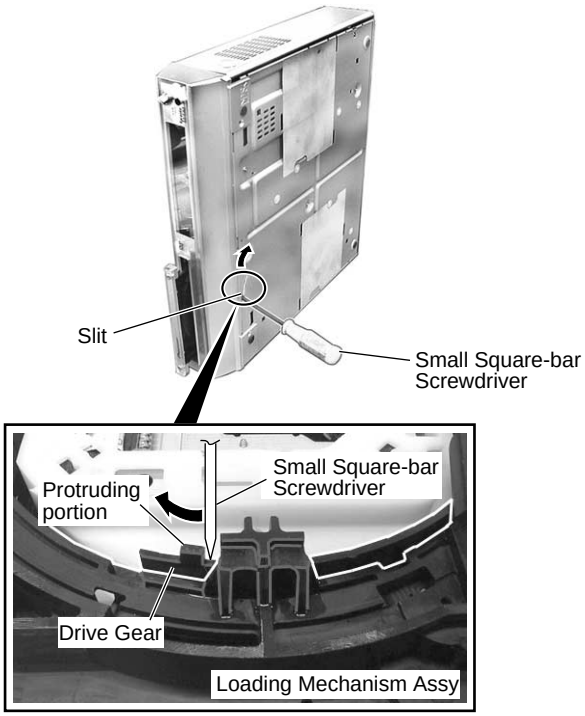
1 Bonnet and Tray Panel

① Remove the Bonnet (Screws × 6)
② Power ON
③ Tray open (⏏)
④ Remove the Tray Panel



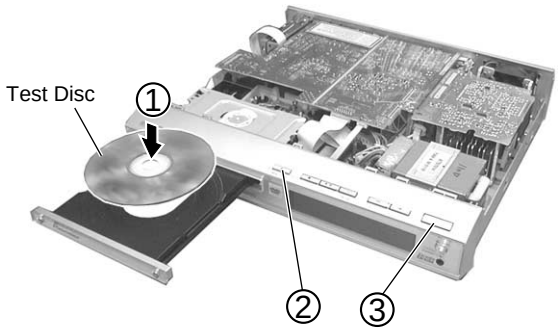
☞How to Open the Tray by Manual Operating

In the reverse state, pass a small screwdriver through a slit and slide a protruding portion of the Drive Gear of the Loading Mechanism Assy to the direction of arrow.
If the Tray moved toward the front about 2 or 3 cm, pull out the Tray by hands.



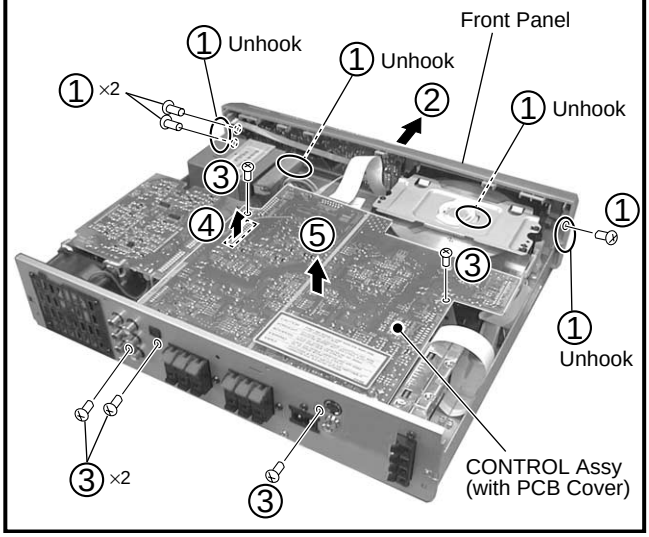
2 Test Disc Set

① Set the Test Disc
② Tray close (⏏) → Clamp the Test Disc
③ Power OFF
④ Pull out the Power Cord from the outlet



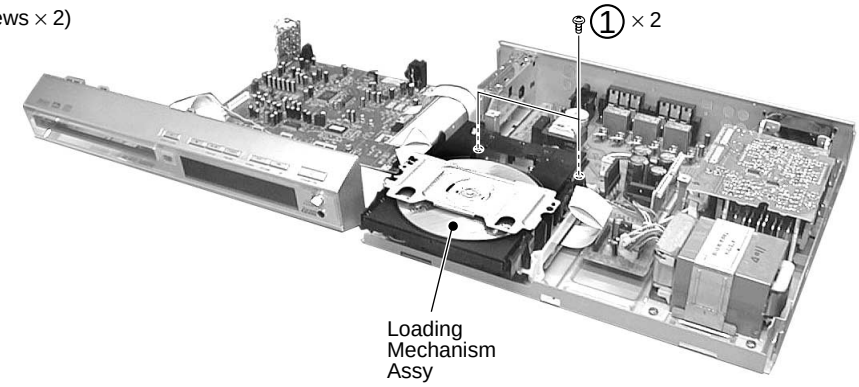
3 Front Panel and CONTROL Assy

① Remove the Screws × 3 and Unhook × 4
② Remove the Front Panel
③ Remove the Screws × 5
④ Remove the Connector
⑤ Remove the CONTROL Assy



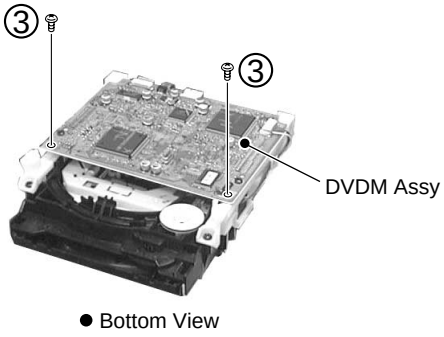
4 Diagnosis of DVDM Assy

① Remove the Loading Mechanism Assy (Screws × 2)



② Reverse the Loading Mechanism Assy and DVDM Assy

③ Remove the DVDM Assy (Screws × 2)



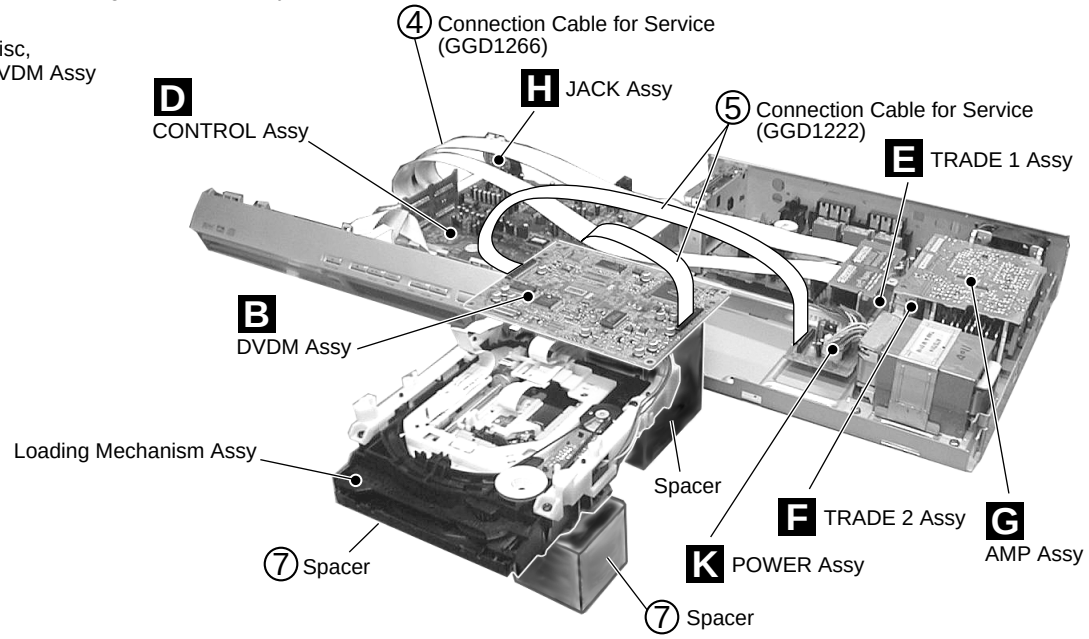
④ Connect the Connection Cable for Service (GGD1266) between CONTROL Assy and TRADE 1 Assy.

⑤ Connect two Connection Cables for Service (GGD1222) between DVDM Assy , POWER Assy and CONTROL Assy.

⑥ Arrange as figure below.

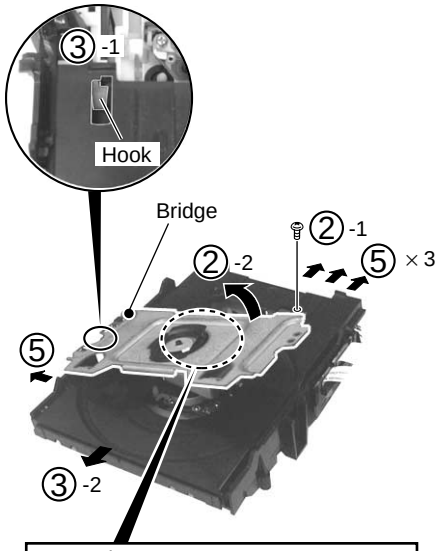
⑦ Put in spacers under the Loading Mechanism Assy not to rub the Clamper.

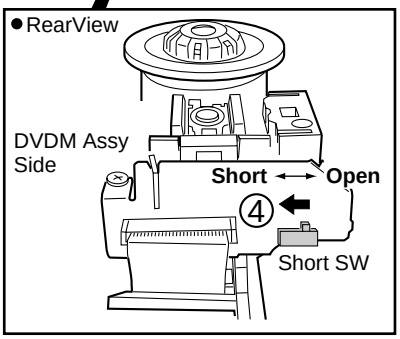
⑧ Playback the Test Disc, and diagnosis the DVDM Assy



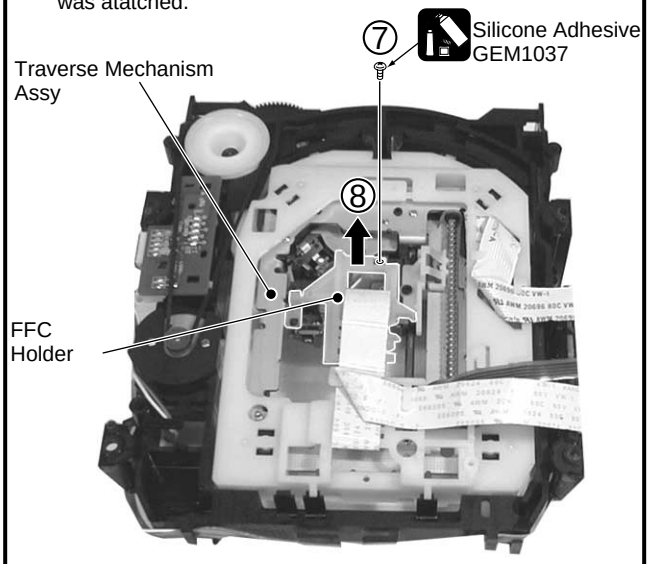
Disassembly of the Traverse Mechanism Assy and the Pickup Assy

① Remove the Tray Panel, Bonnet, Front Panel, CONTROL Assy and Loading Mechanism Assy.
② Remove the Bridge (Screw ×1).
③ Pull out the Tray and remove it while unhooking a Hook.
④ Turn the Short SW to Short side.
⑤ Remove four connectors.





⑥ Remove the DVDM Assy (Screws ×2).
⑦ Remove a screw.
Cautions:
Screw is locked with Silicone Bond.
Please lock it with Silicone Bond when installs it.
⑧ Remove the FFC Holder with the state which Flexible Cable was atatched.



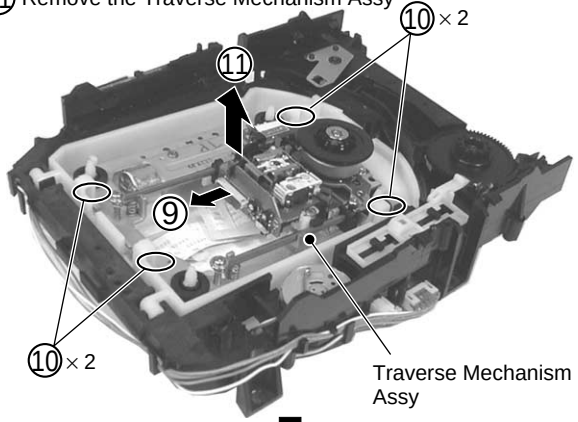
● Bottom View

Pickup Assy

Traverse Mechanism Assy

● When Removing The Traverse Mechanism Assy

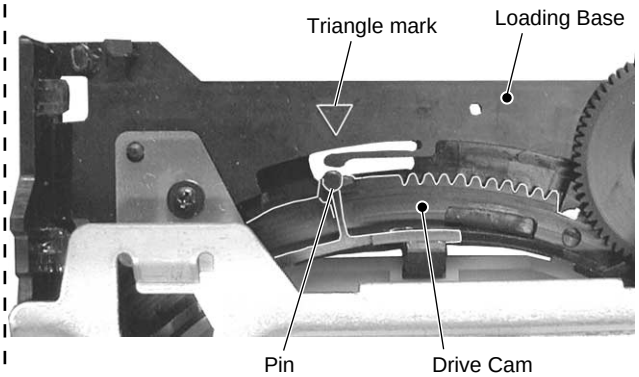
⑨ Remove the Pickup Flexible Cable
⑩ Unhook (×4)
⑪ Remove the Traverse Mechanism Assy



Exchange

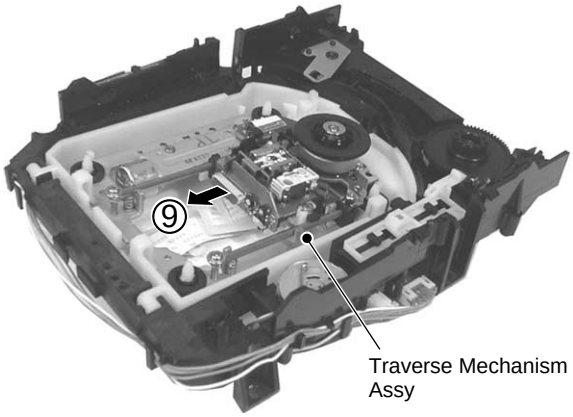
☞Caution in the tray insertion

In the Tray insertion, insert it after matching a triangle mark of the Loading Base and a position of pin of the Drive Cam.



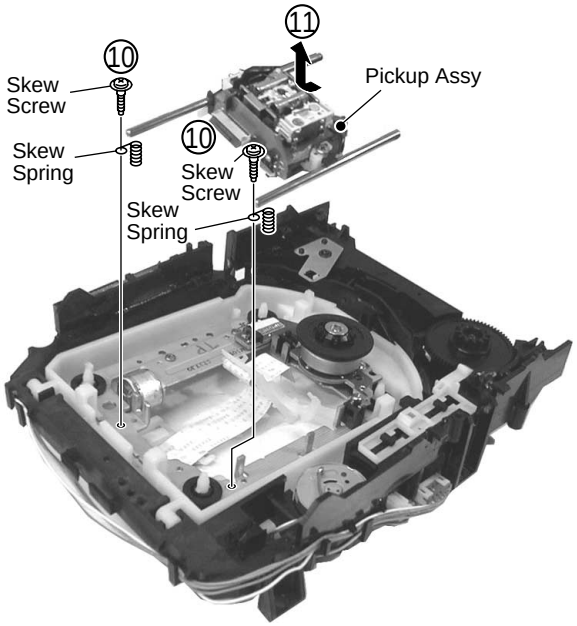
● **When Removing The Pickup Assy**

⑨ Remove the Pickup Flexible Cable.



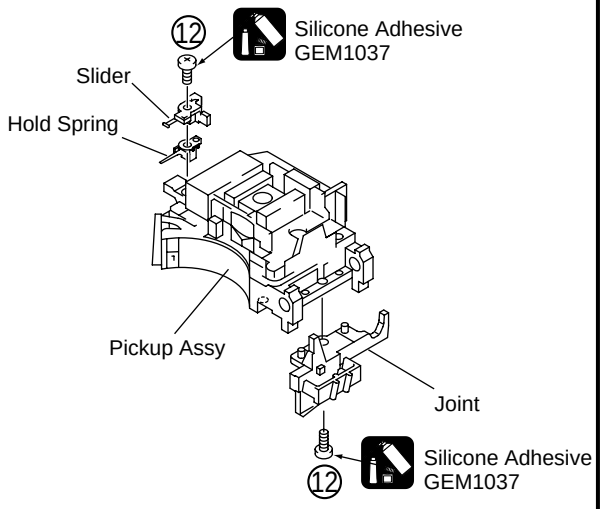
⑩ Remove two Skew Screws and two Skew Springs.

⑪ Remove the Pickup Assy.



⑫ Remove two screws.

Cautions:
Screw is locked with Silicone Bond.
Please lock it with Silicone Bond when installs it.

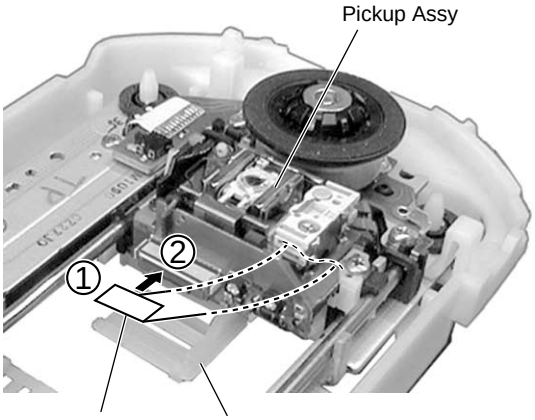


Exchange

☞Styling the Pickup Flexible Cable

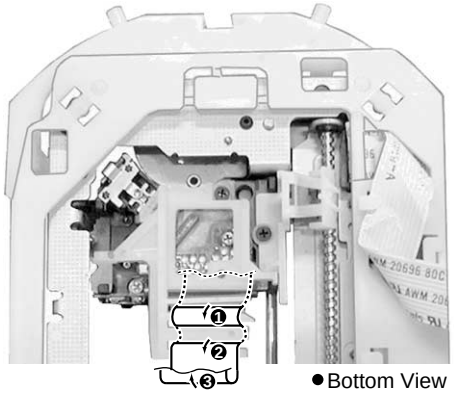
① Fold a edge of lining part of the Pickup Flexible Cable.

② Insert the Pickup Flexible Cable in connector, and lock it surely.



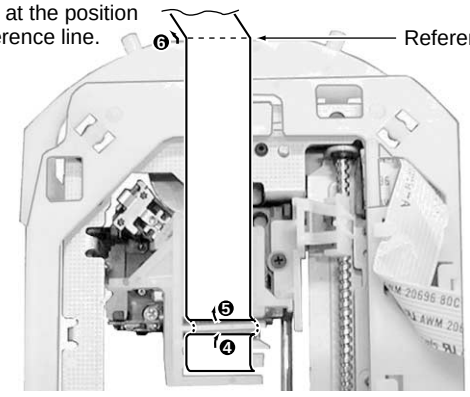
Caution:
Move the Pickup to the innermost of the disc.

③ Perform the styling as shown in figure below.

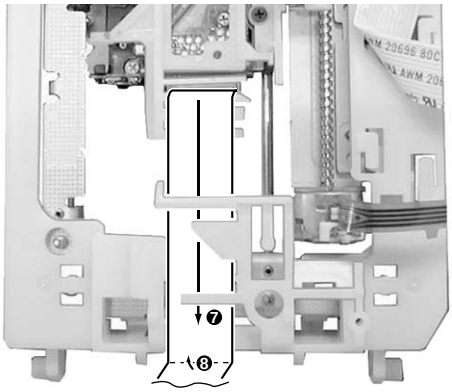


● Bottom View

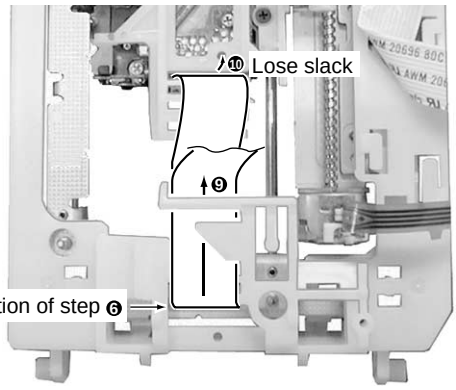
Fold it at the position of reference line.



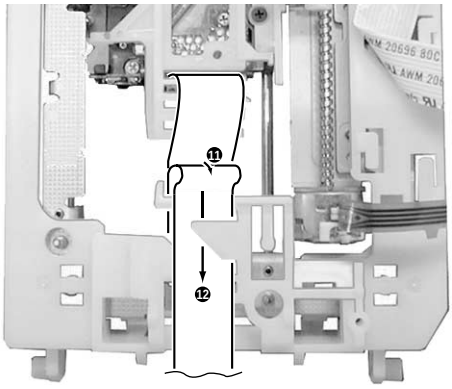
● Bottom View



● Bottom View



● Bottom View



● Bottom View

7.2 PARTS

7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ PDC086A (CONTROL ASSY : IC5501)

• DCS Microcomputer

● Pin Function

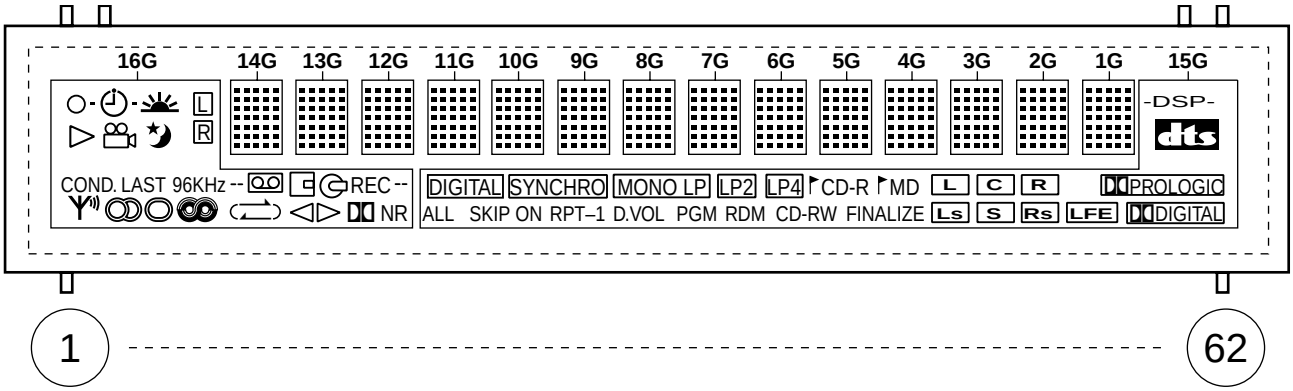
No.	Mark	Pin Name	I/O	Pin Function	Active
1	P16 / T1PWML	TX MUTE	O	Tuner Mute	H
2	P17 / T1PWMH / BUZ	XDSP SUB CS	O	YSS912 sub DSP control CS	L
3	P30	XDSP MAIN CS	O	YSS912 sub DSP control CS	L
4	P31	RYFSC	O	FRONT/CENTER/SW Relay ON/OFF	
5	P32	RYR	O	REAR Relay ON/OFF	
6	P33	TXCLK	O	TX module control clock	H
7	P34	TXDI	O	TX module control data	H
8	P35	TXCE	O	TX module control chip enable	H
9	P36	XHPMUTE	O	HP mute ON/OFF	
10	P37	XFL CS	O	FL driver chip enable	L
11	RES	XRESET	I	Reset	L
12	XT1 / AN10	(NC)	–	Not used, Connect to VDD1	–
13	XT2 / AN11	(NC)	–	Not used (open)	–
14	VSS1	GND	–	Ground	–
15	CF1	CF1	–	Ceramic resonator connected terminal	–
16	CF2	CF2			–
17	VDD1	VDD	–	Power supply	–
18	P80 / AN0	ST/TUNE	I	STEREO/TUNED detect input	A/D
19	P81 / AN1	KEY	I	KEY input	A/D
20	P82 / AN2	HP DET	I	Headphones jack detection	H
21	P83 / AN3	P/X1	O	Not used	
22	P84 / AN4	PROTECT	I	FAN detect	H
23	P85 / AN5	3.3DET	I	DVD 3.3V detect signal input	H
24	P86 / AN6	XRDY	O	DVD microcomputer communication ready signal output	
25	P87 / AN7 / MICIN	DSTN	I	Destination switch	A/D
26	P70 / INT0 / T0LCP / AN8	ACPULSE	I	AC pulse input	A/D
27	P71 / INT1 / T0HCP / AN9	LT1	I	DVD microcomputer communication latch input	
28	P72 / INT2 / T0IN	RDSCLK	I	Clock input from RDS data (without RDS : Low output)	
29	P73 / INT3 / T0IN	RMC	I	Remote control signal input	L
30	S0 / T0	(NC)	O	Open	–
31	S1 / T1	(NC)			–
32	S2 / T2	(NC)			–
33	S3 / T3	(NC)			–
34	S4 / T4	(NC)			–
35	S5 / T5	(NC)			–
36	S6 / T6	(NC)			–
37	S7 / T7	(NC)			–
38	S8 / T8	(NC)			–
39	S9 / T9	(NC)	O	Not used (Open)	–
40	S10 / T10	(NC)			–
41	S11 / T11	(NC)			–
42	S12 / T12	(NC)			–
43	S13 / T13	(NC)			–
44	S14 / T14	(NC)			–
45	S15 / T15	(NC)			–

No.	Mark	Pin Name	I/O	Pin Function	Active
46	VDD3	VDD	–	Power supply	–
47	S16 / PC0	(NC)	O	Not used (Open)	–
48	S17 / PC1	(NC)			–
49	S18 / PC2	(NC)			–
50	S19 / PC3	(NC)			–
51	VP	GND	–		–
52	S20 / PC4	DIR DI	I	Data input from DI	
53	S21 / PC5	XDIR RST	O	DIR reset	L
54	S22 / PC6	DVD ON/OFF	O	DVD power control	H
55	S23 / PC7	XDSP RST	O	YSS912 reset	L
56	S24 / PD0	XTMRLED	O	Timer standby display LED control	H
57	S25 / PD1	WCLK	I	Flash ROM rewrite	
58	S26 / PD2	(NC)	O	Not used (Open)	
59	S27 / PD3	XCDC RST	O	CODEC reset	L
60	S28 / PD4	PROGRE LED	O	LED ON/OFF for progressive	H
61	S29 / PD5	STBYLED	O	Standby display LED control	H
62	S30 / PD6	NC	O	Not used	
63	S31 / PD7	XDCS/DCS2		Not used	
64	S32 / PE0	XP/OEM	O	Not used (Open)	
65	S33 / PE1	TXDO	I	Data input from TX module	
66	S34 / PE2	RDSDATA	I	Data input from RDS decoder	
67	S35 / PE3	TEST	I	Test mode detection jumper	
68	S36 / PE4	UTEST	I	Unit test mode detection jumper	
69	S37 / PE5	SERVICE	I	Service mode detection jumper	
70	S38 / PE6	POWER	O	System power supply control	
71	S39 / PE7	DIR ERR	I	Error input from DIR	
72	VDD4	VDD	–	Power supply	–
73	S40 / PF0	RDS OFF	O	RDS ON/OFF	
74	S41 / PF1	(NC)	O	Not used (Open)	
75	S42 / PF2	(NC)			
76	S43 / PF3	XRECMUTE	O	REC mute ON/OFF for REC mode	
77	S44 / PF4	XMUTEC	O	Mute ON/OFF for C-ch	
78	S45 / PF5	XLINE MUTE	O	System audio mute	
79	S46 / PF6	MAIN VOL CS	O	Main volume chip select	
80	S47 / PF7	(NC)	O	Not used (Open)	
81	S48 / PG0	XCDC CS	O	CODEC chip select	
82	S49 / PG1	DIR CE	O	DIR chip enable	
83	S50 / PG2	(NC)	O	Not used (Open)	
84	S51 / PG3	(NC)			
85	P00	XDVD RST	O	DVD reset	
86	P01	VOL DATA	O	Voilume data	
87	P02	VOL CLK	O	Volume clock	
88	P03	WD0	O	WD0 for Flash ROM rewrite	
89	VSS2	GND	–	Ground	–
90	VDD2	VDD	–	Power supply	–
91	P04	FL DATA	O	FL driver control data	
92	P05	FL CK	O	FL driver control clock	
93	P06	WEN/D1	O	WEN/D1 for Flash ROM rewrite	
94	P07	XUDSP MUTE	O	DSP mute (Assy mute)	
95	P10 / SO0	DSP SO	O	YSS912 communication data output signal	
96	P11 / SI0 / SB0	DSP SI	I	YSS912 communication data input signal	
97	P12 / SCK0	DSP CK	O	YSS912 communication clock signal	
98	P13 / SO1	DVD SSI	O	DVD microcomputer communication data output (AMP side output)	
99	P14 / SI1 / SB1	DVD SSO	I	DVD microcomputer communication data input (AMP side input)	
100	P15 / SCK1	DVD SSCK	O	DVD microcomputer communication clock output	–

7.2.2 DISPLAY

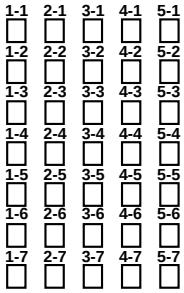
■ AAV7082 (DISPLAY ASSY : V5601)

• FL DISPLAY



● Anode Connection

	16G	15G	14G - 1G
P1	L R	-DSP-	1-1
P2		dts	2-1
P3		PROLOGIC	3-1
P4		DIGITAL	4-1
P5		LFE	5-1
P6		Rs	1-2
P7		S	2-2
P8	COND.	Ls	3-2
P9		R	4-2
P10		C	5-2
P11	LAST	L	1-3
P12		FINALIZE	2-3
P13		MD	3-3
P14		CD-R	4-3
P15		W	5-3
P16	96KHz	–R	1-4
P17	◀	CD	2-4
P18	▶	RDM	3-4
P19	NR	PGM	4-4
P20	-- REC --	LP4	5-4
P21		LP2	1-5
P22		D.VOL	2-5
P23		MONO LP	3-5
P24	▷	–1	4-5
P25	–	RPT	5-5
P26	–	SYNCHRO	1-6
P27	–	ON	2-6
P28	–	SKIP	3-6
P29	–	DIGITAL	4-6
P30	–	ALL	5-6
P31	–	–	1-7
P32	–	–	2-7
P33	–	–	3-7
P34	–	–	4-7
P35	–	–	5-7



● Pin Connection

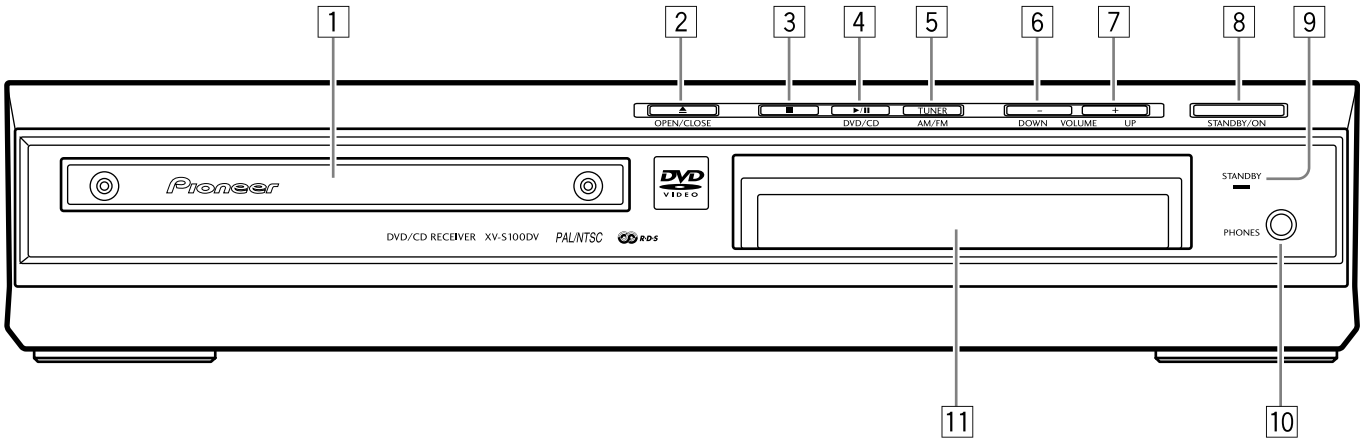
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Connection	F1	F1	NP	NP	NX	NX	NX	P4	P3	P2	P1	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	P35	P34	P33	P32
Pin No.	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
Connection	P31	P30	P29	P28	P27	P26	P25	P24	P23	P22	P21	P20	P19	P18	P17	916	P15	P14	913	P12	P11	P10	P9	P8	P7	P6	P5	NP	NP	F2	F2

F1, F2 : Filament 1G~16G : Grid NP : No Pin NX : No extend pin DL : Datum Line

8. PANEL FACILITIES AND SPECIFICATIONS

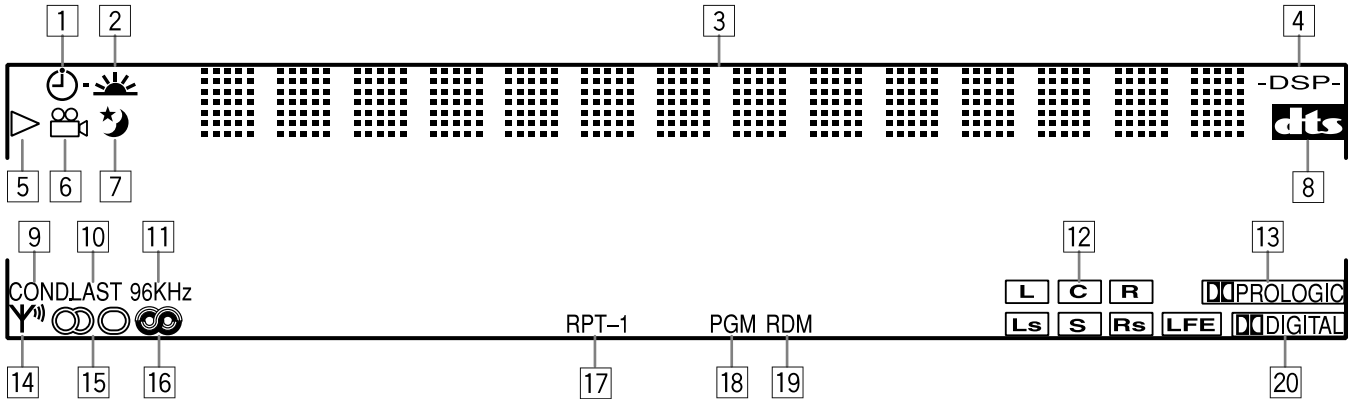
8.1 PANEL FACILITIES

■ Front Panel



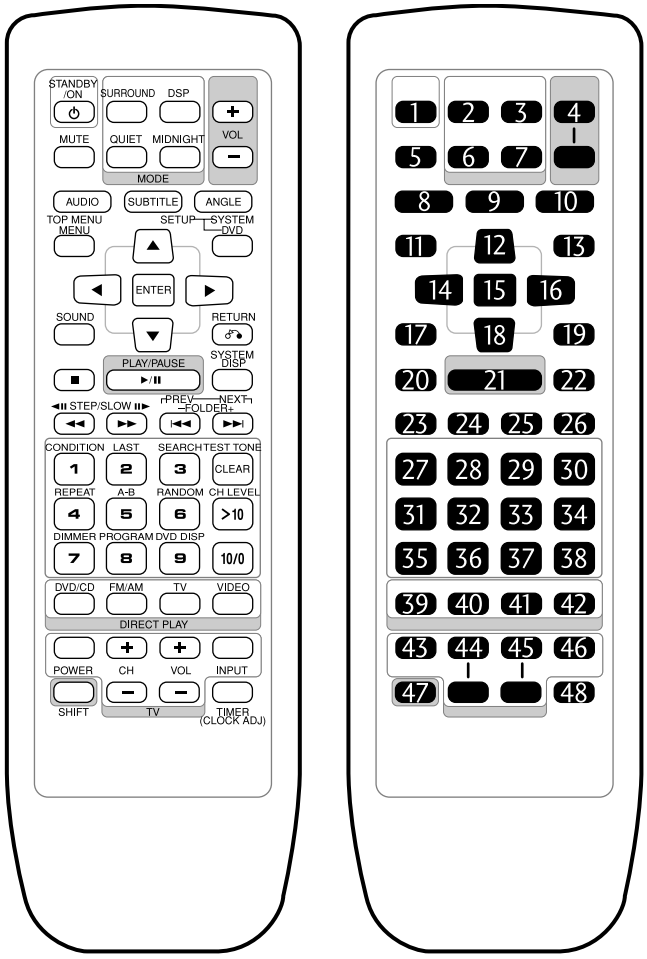
1 Disc tray
2 ⏏ OPEN/CLOSE press to open/close the disc tray
3 ■ (stop)
4 ▶/❚❚ DVD/CD
5 TUNER/ FM/AM
6 VOLUME DOWN press to lower the volume
7 VOLUME UP press to raise the volume
8 STANDBY/ON
9 STANDBY indicator lights when the system is in standby
10 PHONES jack
11 Display

■ Display



1 Timer
2 Wake up timer
3 Character display
4 - DSP -
5 ▷ Lights when a disc is playing
6 Multi-angle scene
7 Sleep timer
8 dts Lights when playing a DVD with DTS sound
9 COND. Condition memory
10 LAST Last memory
11 96kHz Lights when playing a disc with 96kHz audio
12 Active channel indicators
13 PRO LOGIC Lights when playing a Dolby Pro Logic source
14 Indicates strength of broadcast signal
15 Auto stereo/mono mode
16 RDS
17 RPT, RPT-1 Repeat play mode
18 PGM Program play
19 RDM Random play
20 DOLBY DIGITAL Lights when playing a Dolby Digital source

■ Remote Control Unit



1 STANDBY/ON ⏻
2 SURROUND
3 DSP
4 VOL +/– press to raise/lower the volume
5 MUTE Press to mute/restore the sound
6 QUIET
7 MIDNIGHT
8 AUDIO
9 SUBTITLE
10 ANGLE
11 MENU | TOP MENU
12 ▲ Cursor up
13 DVD SETUP | SYSTEM SETUP
14 ◄ Cursor left
15 ENTER
16 ► Cursor right
17 SOUND
18 ▼ Cursor down
19 RETURN
20 ■ Stop
21 PLAY/PAUSE ►/❚❚
22 SYSTEM DISP
23 ◄◄ | ◄❚❚ STEP/SLOW
24 ►► | ❚❚► STEP/SLOW
25 |◄◄ | –PREV | –FOLDER
26 ►►| | +PREV | +FOLDER
27 1 | CONDITION
28 2 | LAST
29 3 | SEARCH
30 CLEAR | TEST TONE
31 4 | REPEAT
32 5 | A–B
33 6 | RANDOM
34 >10 Use to select numbers over 10 | CH.LEVEL
35 7 | DIMMER
36 8 | PROGRAM
37 9 | DVD DISP
38 10/0 Use as 10 or 0
39 DVD/CD
40 FM/AM
41 TV
42 VIDEO
43 POWER
44 CH+/–
45 VOL+/–
46 INPUT
47 SHIFT Press to access button functions marked in orange
48 TIMER (CLOCK ADJ)

8.2 SPECIFICATIONS

Amplifier Section

Continuous power output (DIN)
- Front ..... 18 W, per channel (1 kHz, 1 % T.H.D., 6 Ω)
- Rear ..... 18 W, per channel (1 kHz, 1% T.H.D., 6 Ω)
- Center ..... 18 W, per channel (1 kHz, 1% T.H.D., 6 Ω)
- Subwoofer ..... 18W (100Hz, 1% T.H.D., 6Ω)

Continuous power output (RMS)
- Front ..... 25 W, per channel (1 kHz, 10 % T.H.D., 6 Ω)
- Rear ..... 25 W, per channel (1 kHz, 10 % T.H.D., 6 Ω)
- Center ..... 25 W, per channel (1 kHz, 10 % T.H.D., 6 Ω)
- Subwoofer ..... 25 W (100Hz, 10% T.H.D., 6Ω)

• Above specifications are applicable when the power supply is 230V.

DVD Player (Audio)Section

Frequency response
- 48 kHz sampling ..... 4 Hz to 22 kHz
- 96 kHz sampling ..... 4 Hz to 44 kHz

Wow & flutter ..... Below measurable levels (±0.001% W.PEAK)

DVD Player (Video) Section

Output level ..... 1 Vp-p (75 Ω)
Video Y output level ..... 1 Vp-p (75 Ω)
Video C output level ..... 286 mVp-p (75 Ω)

DVD (Other jacks) Section

Digital coaxial input (PCM/DD/DTS) ..... Coaxial connector

Tuner Section

FM tuner
- Frequency range ..... 87.5 MHz to 108.0 MHz
- Antenna ..... 75 Ω unbalanced

AM tuner
- Frequency range ..... 531 kHz to 1,602 kHz (9 kHz step)
- Antenna ..... loop antenna (supplied)

Power Supply Section

Power requirements ..... AC 220 V to 230 V, 50/60 Hz
..... AC 230 V, 50/60 Hz (UK model only)
Power consumption ..... 115 W
Power consumption in standby mode ..... 1 W

Miscellaneous

Dimensions ..... 360 (W) x 332 (D) x 75 (H) mm
Weight ..... 5.4 kg

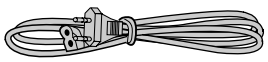
Supplied Items

Remote control 1
AA/R6P dry cell batteries 2
AM loop antenna 1
FM antenna 1
Video cord (yellow) 1
Power cord 1
Operating instructions 1
Warranty card 1

Note: Specifications and design subject to possible modification without notice, due improvements.

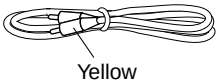
● Accessories

- Power cord (MYXJN : ADG1154)

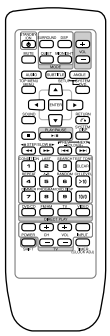


- FM Antenna (ADH7005)

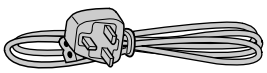
- Video Cord (L = 1.5m)(VDE1053)



- Remote Control Unit (AXD7315)



- Power cord (NVXJN : ADG1156)



- AM Loop Antenna (ATB7009)

- Dry Cell Battery (R6P, AA)