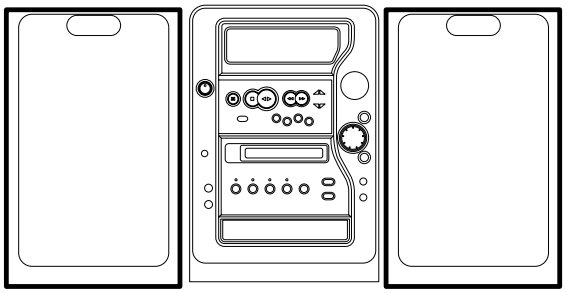
aiwa SERVICE

XR-MDK505 HRJ(S)



SERVICE MANUAL

MD/CD STEREO SYSTEM

BASIC TAPE MECHANISM : 2ZM-1 R11NM
BASIC CD MECHANISM : 3ZG-3 E3NM
BASIC MD MECHANISM : AZG-4 YA

SYSTEM	SPEAKER	REMOTE CONTROL
XR-MDK505	SX-M510 Y	RC-AAT18

If requiring information about the MD mechanism, see Service Manual of AZG-4YA, (S/M Code No.09-001-341-2N2).

aiwa

S/M Code No. 09-00A-351-2N1

DATA

TABLE OF CONTENTS

SPECIFICATIONS

Main unit

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

AM tuner section

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

Amplifier section

Power output	Rated: 25 W + 25 W (6 ohms, T.H.D.1%, 1 kHz) Reference: 30 W + 30 W (6 ohms, T.H.D. 10%, 1 kHz)
Inputs	AUX/VIDEO IN: 600 mV CD DIGITAL IN (OPTICAL) Sampling frequency: 48 kHz/32 kHz Optical input level: more than –21 dBm
Outputs	SUPER WOOFER: 1.2 V SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo mini jack): accepts headphones of 32 ohms or more VIDEO OUT: 1Vp-p, 75 ohms

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	CrO_2 tape: 50 Hz to 16000 Hz Normal tape: 50 Hz to 15000 Hz
Signal-to-noise ratio	45 dB (Dolby B NR ON, CrO_2 tape peak level)
Recording system	AC bias
Heads	Recording/playback head × 1, erase head × 1

Compact disc player section

Laser	Semiconductor laser (λ = 780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

MD recorder section

Scanning method	Non-contact optical scanner (Semiconductor laser application)
Recording system	Magnetic polarity modulation overwrite system
Rotation speed	Approx. 400 to 900 rpm (CLV)
Sampling frequency	44.1 kHz
No. of channels	Stereo: 2 channels Monaural: 1 channel
A-D, D-A converter	1-bit
Frequency	20 to 20000 Hz +0.5 - –1.5 dB
Wow and flatter	Unmeasurable

General

Power requirements	120/220-240 V AC, switchable, 50/60 Hz
Power consumption	90 W
Standby power consumption	1.0 W (power-economizing mode set to ON or AUTO) 20 W (power-economizing mode set to OFF)
Dimensions of main unit (W × H × D)	175 × 257 × 333 mm
Weight of main unit	6.5 kg

Speaker system

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer: 130 mm cone type Tweeter: 22 mm dome type
Impedance	6 ohms
Output sound pressure level	86 dB/W/m
Dimensions (W × H × D)	155 × 254 × 210 mm
Weight	2.6 kg

- Design and specifications are subject to change without notice.
- The word “BBE” and the “BBE symbol” are trademarks of BBE Sound, Inc.
- Under license from BBE Sound, Inc.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- “DOLBY”, and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

ACCESSORIES LIST

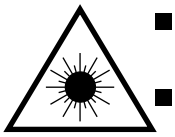
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CB4-901-010		IB,H(EC)M
2	8A-CB4-951-010		RC UNIT,RC-AAT18
3	87-006-225-010		AM LOOP ANT NC2
4	87-043-115-010		ANT,FEEDER FM
5	87-050-103-010		CORD,PIN 1PY1.5M
6	87-A91-017-010		PLUG,CONVERSION JT-0476

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION
L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

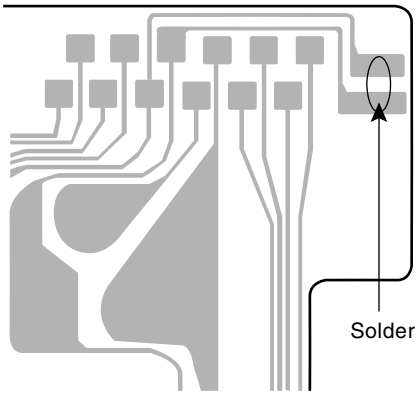
Precaution to replace Optical block

(KSS-213F, KMS-260B)

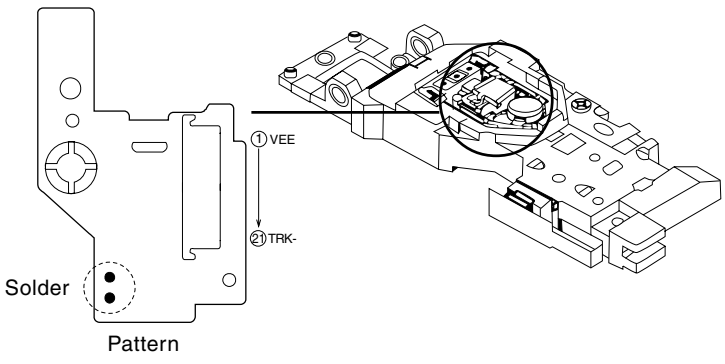
Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the figure below.

CD PICK-UP Assy P.W.B
(KSS-213F)



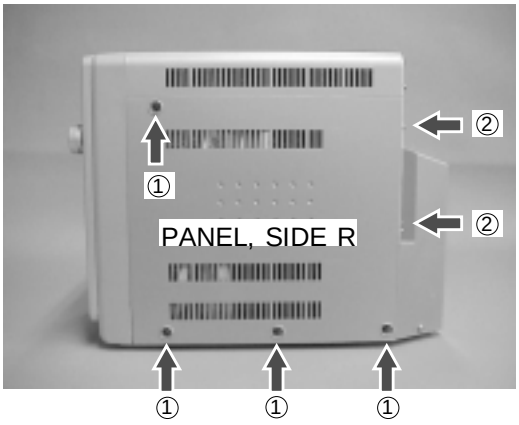
MD PICK-UP Assy P.W.B
(KMS-260B)



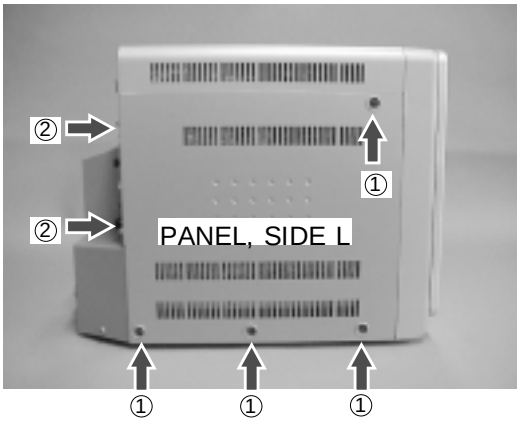
DISASSEMBLY INSTRUCTION -1/4

1. Removing the outside appearance parts

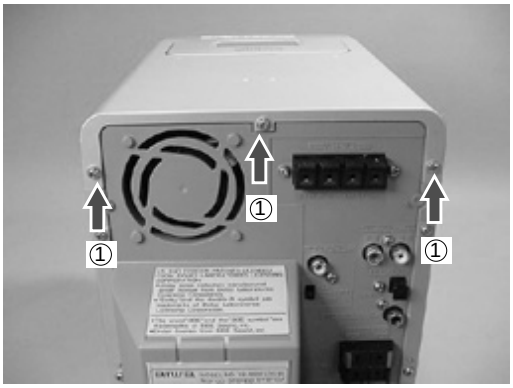
1) Remove the six screws (① -4, ② -2) and remove the PANEL, SIDE R.

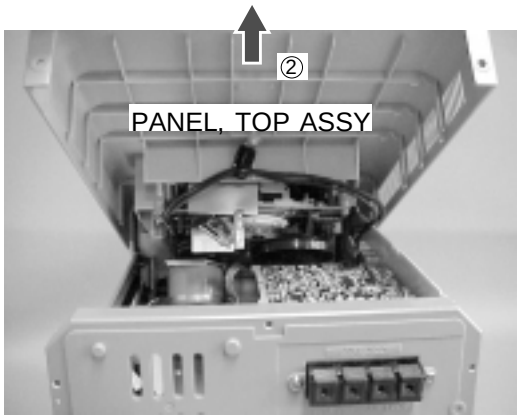


2) Remove the six screws (① -4, ② -2) and remove the PANEL, SIDE L.

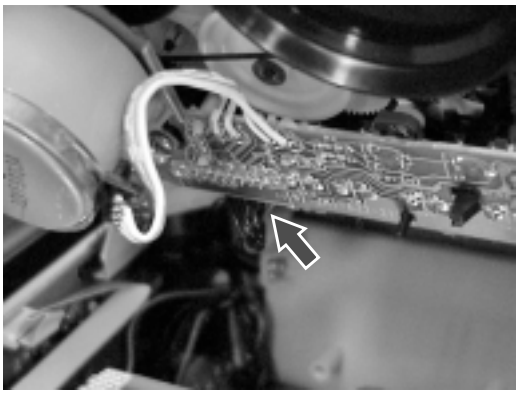


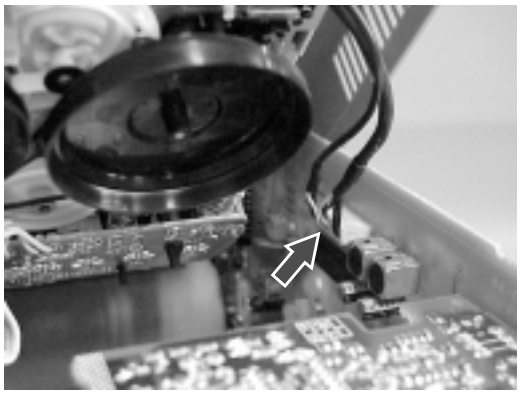
3) Remove the three screw ① and lift up the PANEL, TOP ASSY ② .



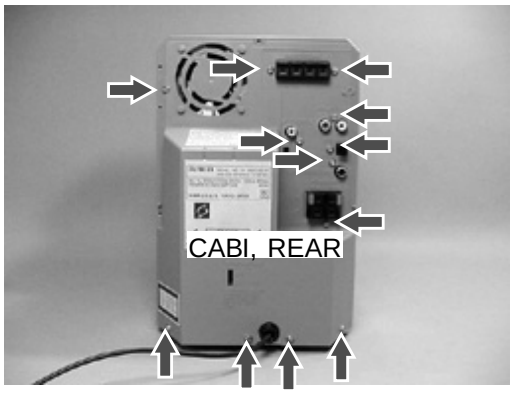


4) Remove the two connectors and remove the PANEL, TOP ASSY.

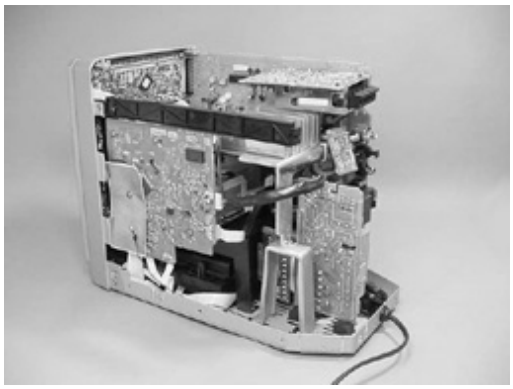




5) Remove the 12 screws and remove the CABI, REAR.
Remove the connector from FAN from MAIN C.B.

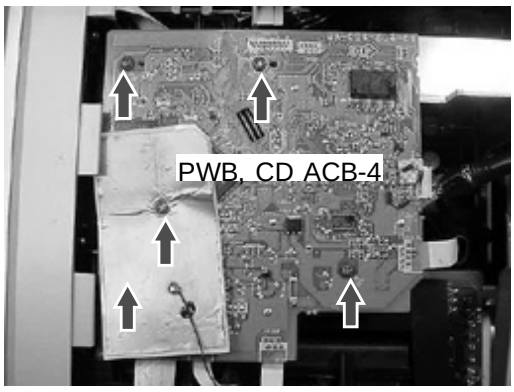


6) This is the state after the outside appearance parts are removed.



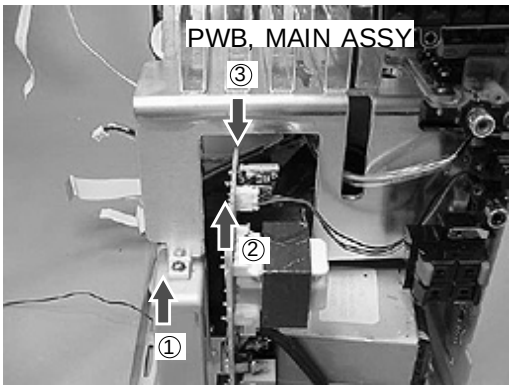
2. Removing the PWB, CD ACB-4

1) Remove the five screws, pull out the FFC and other parts, then remove the PWB, CD ACB-4.
The one screw is behind the shield paper.

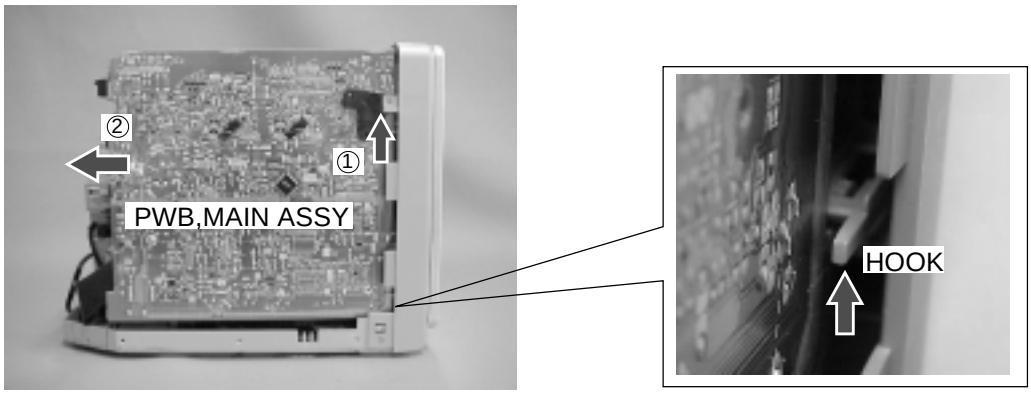


3. Removing the PWB, MAIN ASSY

1) Remove the screw ①, then remove the connector ② and the FFC ③ of the MD block.

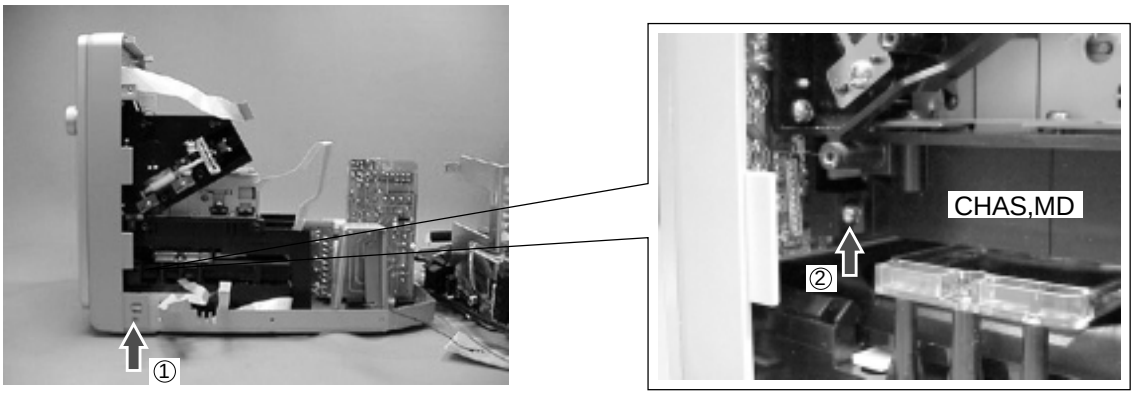


2) Remove the screw 1 and remove the PWB, MAIN ASSY in the direction of the arrow ② .
(The board is hooked.While lifting up the HOOK, remove the board.)

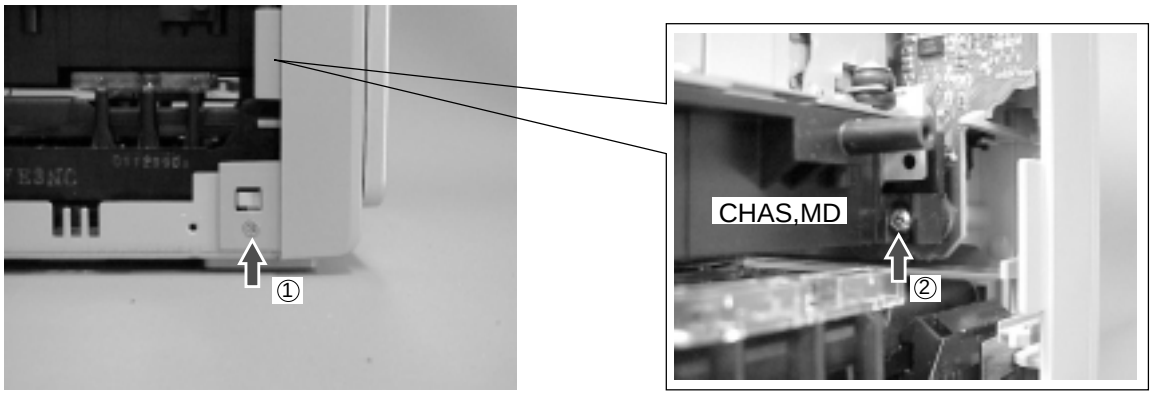


4. Removing the FRONT block

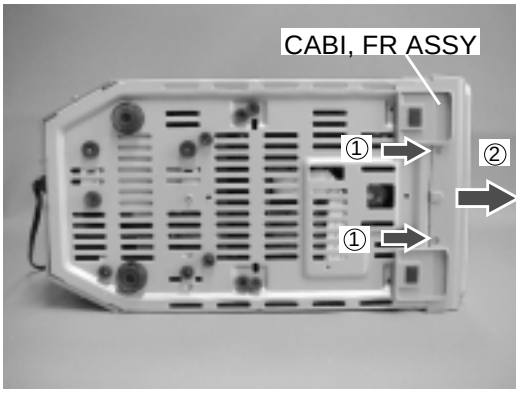
1) Remove the screw ① securing the CAB, FR ASSY and remove the screw ② securing the CHAS, MD.



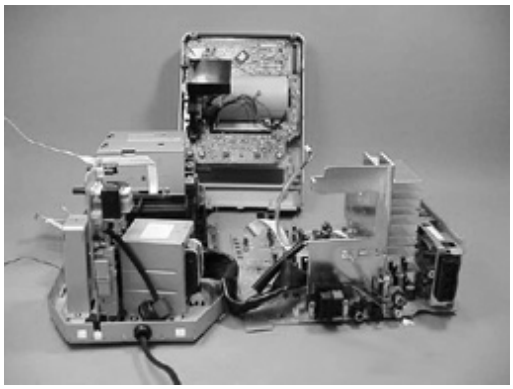
2) Remove the screw ① securing the CAB, FR ASSY and remove the screw ② securing the CHAS, MD.



3) Remove the two screws ① and remove the CABI, FR ASSY in the direction of arrow ② .

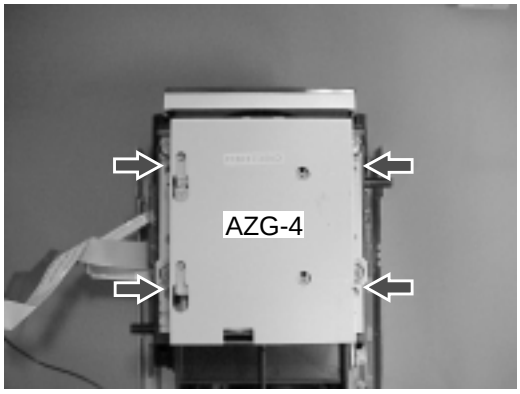


4) This is the state after the PWB, MAIN ASSY and CABI, FRONT ASSY are removed.



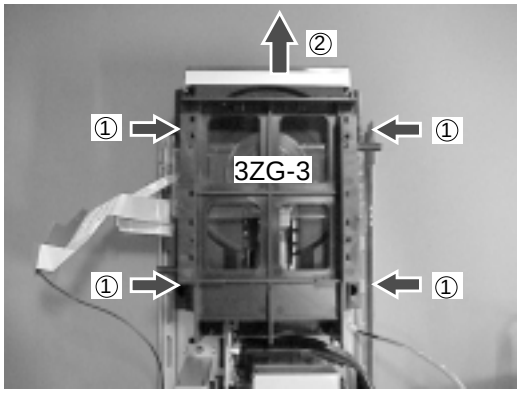
5. Removing the MD block (AZG-4)

1) Remove the four screws and remove the MD block.

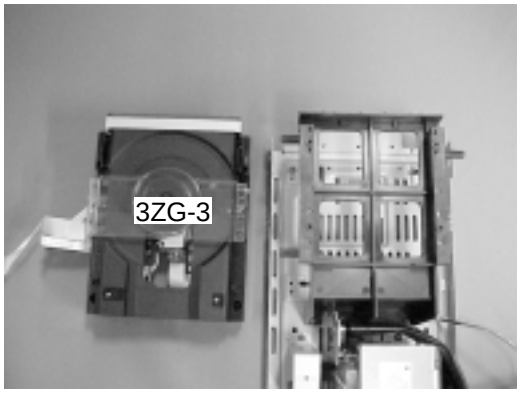


6. Removing the CD block (3ZG-3)

1) Remove the four screws ① and remove the CD block ②.



2) This is the state after the CD block is removed.



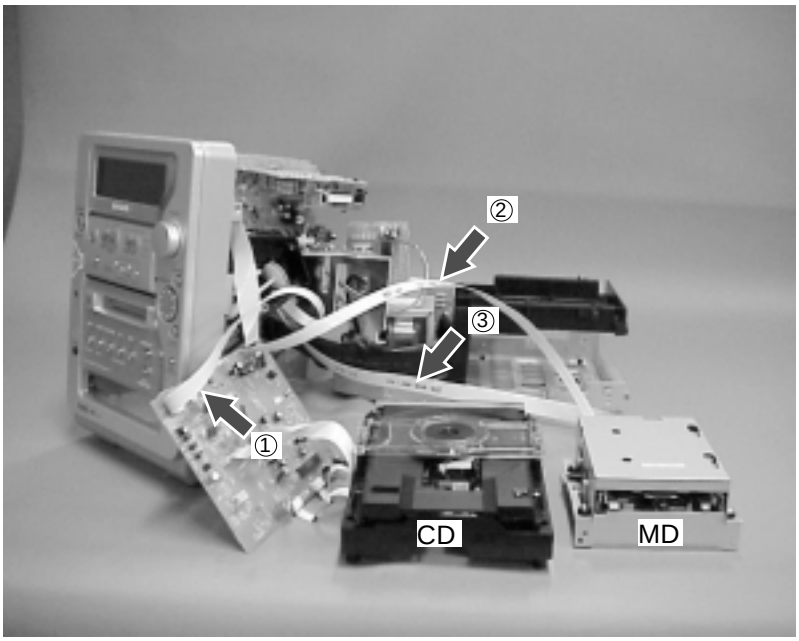
SERVICE JIG AND TOOLS

Using the FFC for extension enables the CD/MD mechanism to be repaired when the power supply is turned on.
(Refer to the below figure.)

① FFC, 8P-1.25 88-908-401-110

② FFC, 8P-1.0 SV-J00-043-010

③ FFC, 14P-1.0 SV-J00-044-010



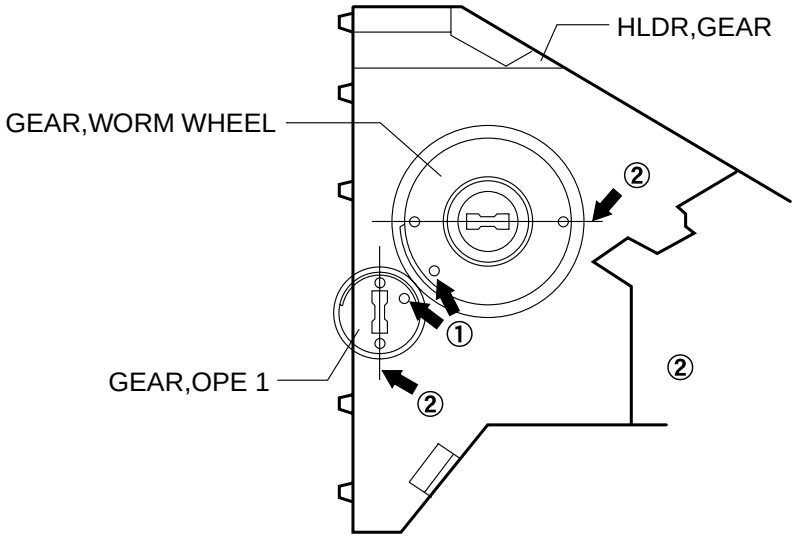
NOTES DURING RE-ASSEMBLING

When assemble the magical change panel, adjust the phase of the gear.

1. Phase adjustment of the GEAR, OPE 1 and GEAR, WORM WHEEL.

1) Align holes ①.

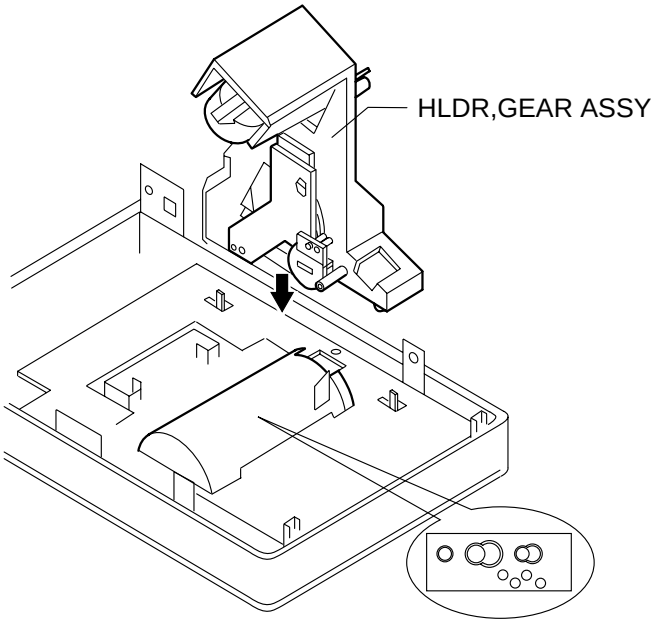
2) Then, move the position of the holes of each gear as shown by ② in the illustration.



2. Installation Procedure of HLDR, GEAR ASSY

1) Position the panel side so that it faces front as shown in the illustration.

2) Install the HLDR, GEAR ASSY.



Position the HLDR GEAR ASSY
so that it faces the front.

CD TEST MODE

1. How to Active CD Test Mode
   While pressing the CD function button, insert the AC plug to the outlet.
   When the test mode starts, all indicators in the display will light.

2. How to Cancel CD Test Mode
   Press other function button or power button, or disconnect the AC plug.

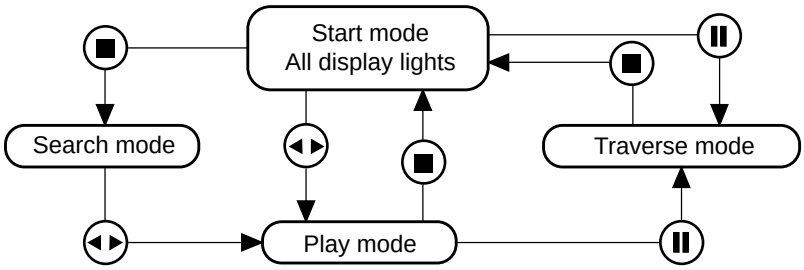
3. CD Test Mode functions

No	MODE	Operation	FL display	Operation	Checking item
1	Start mode		All light		• FL item • Microprocessor
2	Search mode	■	CD	• LD lights • Continuous focus search *1 *2	• APC circuit • Laser current • Focus search waveform • Focus error waveform (FOK and FZC are not monitored inthe search mode)
3	Play mode	◀▶	Normal time display (spectrum analyzer)	• Normal playback • If TOC cannot be read, focus search of 2 is continued	• Focus servo • Tracking servo • Sled servo • Spindle servo • FOK • RF waveform
4	Traverse mode	⏸	Normal time display	• Turning off/on repeats each time tracking servo OFF/ON ⏸ is pressed	• Tracking servo • Traverse waveform
5	Sled mode	◀◀ ▶▶	CD TEST (00 00 00)	• Pickup moves to the outermost track *3 • Pickup moves to the innermost track (normal)	• Sled circuit • Mechanism

* Note 1: The driver IC (IC501) heats up and the protection circuit starts working when the focus search is continued for 10 minutes or longer. There can be a case that operations cannot be preformed correctly.
In such a case, turn off the main power. After cooling down, restart the unit.

* Note 2: When checking the lens operation by eye, slightly open the CD cover by hand: The search mode will be released if the CD cover is opened by pressing the OPEN button.

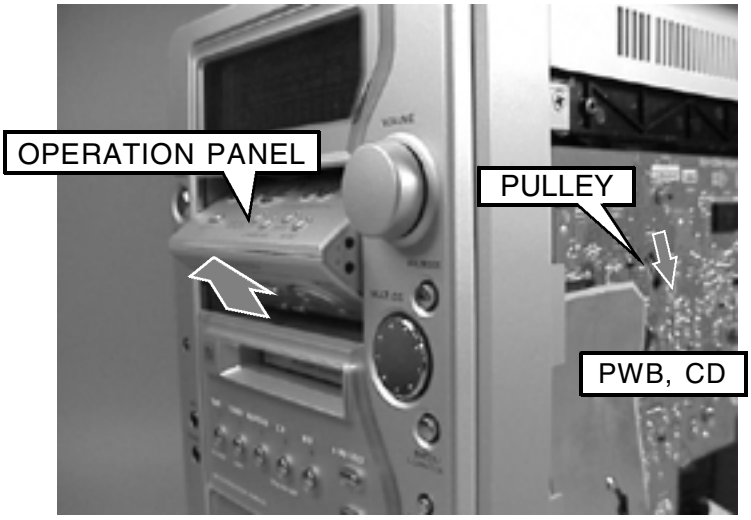
4. Overview of Operation
   The each mode can be operated one after another using each button in the order that is shown by arrow mark in the illustration from the Start mode.



Key Operation in Test Mode and MD Electrical Adjustment:

After the test mode has started, the operation panel will not turn. Perform key operation using either of the following procedures:

- Key operation on remote control
- Turn the pulley on PWB, CD so that key operation on MD EDIT STAGE on the operation panel is possible. (See the figure below)



The test mode has the following contents:

1. Starting MD Test Mode
2. Checking MD Test Mode and Audio Output
3. Releasing MD Test Mode
4. Switching to Servo Standby Mode
5. Checking Sled Feed Operation
6. Checking Laser Power
7. Checking Loading Mechanism Operation and Detection Switch
8. Checking Servo Operation
   8-1 Checking focus search/spindle kick 1
   8-2 Checking focus search/spindle kick 2 (checking S-curve)
   8-3 Checking focus servo and sled error (EF balance)
   8-4 Checking all servo on
9. Checking Address and Error Rate
10. Erasing U-TOC (User TOC)

1. Starting MD Test Mode

While holding down the “MD” function key, plug the power cord into AC outlet.

Cautions: 1) While the test mode is started, the abnormality in mechanism is ignored and operation is performed: If any abnormality is detected in operation, immediately unplug the power cord.

2) During test mode, normal playback or recording is not possible.

2. Checking MD Test Mode and Audio Output

1) After the test mode has started, the display will be as follows, and the test mode can be used.

2) Checking audio output

A 1kHz, -17dB (140mV) signal is output from the MD mechanism output (D/A OUT). The speaker output level is determined by the sound volume before the test mode has started.

3. Releasing MD Test Mode

1) Press the MD EJECT key to remove the disc.

2) Unplug the power cord from the AC outlet.

* If the test mode is released using the procedure other than above, the operation may not be normal when power is turned on again. In this case, unplug the power cord.

4. Switching to Servo Standby Mode

Pressing the STOP key after starting test mode will switch to the servo standby mode (ALL SV OFF will light in the display): This mode will be switched to each mode. Pressing the STOP key in each mode will return the display to ALL SV OFF.

5. Checking Sled Feed Operation

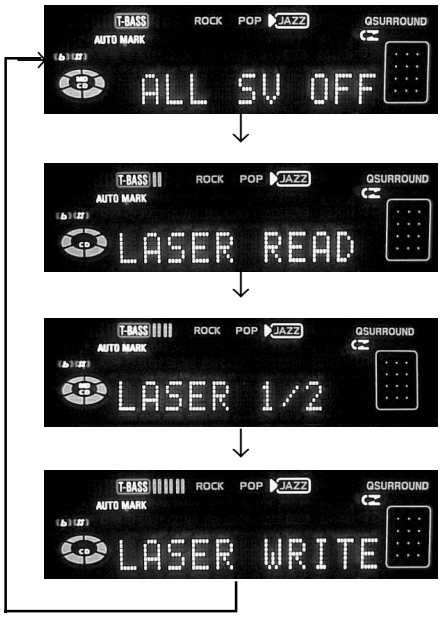
Press the B-SKIP or F-SKIP key in the “ALL SV OFF” status: The lens and pickup will move to the inner or outer circumference. If the INSIDE LIMIT SW is pressed when the pickup moves to the innermost circumference, “JAZZ” will light.

Pickup moves to outer circumference

Pickup moves to inner circumference
(“JAZZ” will lighton the innermost circumference)

6. Checking Laser Power

1) Each time the MD EDIT key is pressed in the “ALL SV OFF” status, laser power can be switched.The display will switch as follows:



ALL SV OFF: Laser off

LASER READ: Laser read power (approx. 0.68 mW)

LASER1/2: Laser 1/2 read power (approx. 0.34 mW)

LASER WRITE: Laser write power (approx. 6.8 mW)

2) After checking, press the MD EDIT key to set to the “ALL SV OFF” status.

7. Checking Loading Mechanism Operation and Detection Switch

7-1 Checking loading mechanism operation

Each time the CD → MD key or MD EJECT key is pressed after MO disc is inserted in the "ALL SV OFF" status, OWH can be moved down or up.

CD → MD key: OWH down (during loading)

MD EJECT key: OWH up (during loading)/unloading

* Caution: Do not move down OWH when inserting pre-mastered disc, such as test disc (TGYS-1) or prerecorded disc.

7-2 Checking detection switch

The display shows REFLECT SW, REC PROTECT SW, INSIDE LIMIT SW and disc mode (PIT, MO) selection.

"JAZZ" lights: INSIDE LIMIT SW is on. Pickup is on the innermost circumference.
"POP" lights: REFLECT SW is on. When high reflectance disc (test disc, etc.) is inserted.
"AUTO MARK" lights: Disc mode PIT is selected

"ROCK" lights: REC PROTECT SW is on. When MO disc is inserted (REC PROTECT)
"TIME MARK" lights: Disc mode GRV is selected

8. Checking Servo Operation

8-1 Checking focus search/spindle kick 1

1) Press the PLAY key in the "ALL SV OFF" status and with no disc inserted: Focus search and spindle kick will be simultaneously performed. The display will show "FOCUS SRCH".
2) After checking, press the STOP key to set to the "ALL SV OFF" status.

8-2 Checking focus search/spindle kick 2 (checking S-curve)

1) Press the "TUNER" function key in the "ALL SV OFF" status:
Focus search and spindle kick will be simultaneously performed. The display will show "FOCUS CHECK". Since this operation will be repeated whether disc is inserted or not, the S-curve can be checked with a disc inserted.
2) After checking, press the STOP key to set to the "ALL SV OFF" status.

8-3 Checking focus servo and sled error (EF balance)

1) Insert disc.

2) Press the MD MODE key to set the disc mode as follows to match the disc.

- PIT DISC: “SELECT PIT” lights in the display
- MO DISC: “SELECT GRV” lights in the display

3) Press the PLAY key.

If the focus servo is normal, “FOCUS SRCH” will light in the display and then “FOCUS ON!” will light, after which the focus servo will turn on.

4) Press the DISPLAY button while “FOCUS ON!” is lit: “S.ERR=$**” will light in the display, and DC offset check of EF balance will be possible.

S.ERR: Sled error (EF balance, DC offset). Normal if the value varies in the range of 70-89 centering on $80.

5) After checking, press the STOP key to set to the “ALL SV OFF” status.

8-4 Checking all servo on

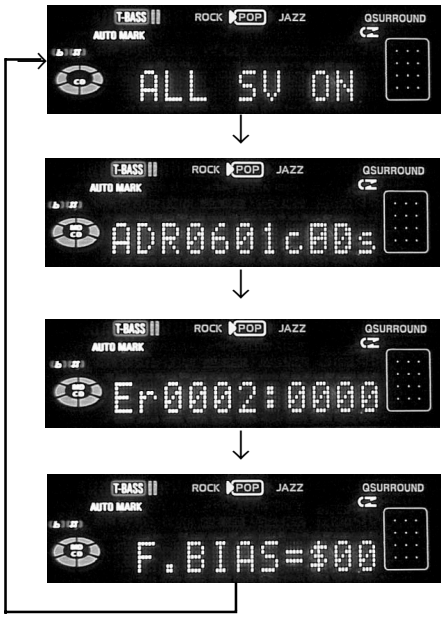
1) Press the ENTER key while “FOCUS ON!” is lit: The tracking/sled servo will turn on, and all servo will operate.

If all servo is normal, “ALL SV ON” will light in the display.

2) After checking, press the STOP key to set to the “ALL SV OFF” status.

9. Checking Address and Error Rate

1) Press the DISPLAY key while “ALL SV ON” is lit: The address and error rate can be checked.



Address display: Displays the address being read with all servo on.

Error rate display: Error rate displayed in 4 digits on the left (normal with 0030 or less)

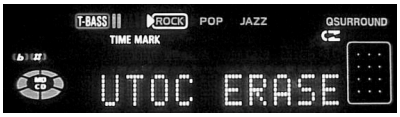
Focus bias: Fixed to “F.BIAS=$00”

2) Refer to the adjustment item for recording/playback error rate.
Press the T-BASS key on remote control: The recording address can be switched: Pressing T-BASS while “ALL SV OFF” is lit in the display will switch the address between 600C and 30C (nothing will light in the display).
The disc inner circumference can be checked using 30C, and the outer circumference can be checked using 600C.

10. Erasing U-TOC (User TOC)

This procedure erases the disc with which “U-TOC ERROR”, etc. lights in the display to make it blank.

1) Insert MO disc.
2) Press the F-SKIP or B-SKIP key to move the pickup to the middle position of disc.
3) Press the MD MODE key to cause “SELECT GRV” to light in the display.
4) Press the PLAY key to cause “FOCUS ON!” to light in the display.
5) Press the ENTER key to cause “ALL SV ON” to light in the display.
6) Press the TAPE REC/REC MUTE key: “UTOC ERASE” will light in the display.



7) When “ALL SV OFF” lights in the display, U-TOC erasure will be complete.

MD Electrical Adjustment

Perform all adjustments and checks of MD block in the test mode. If “NO Adjust” lights in the display, perform all adjustments.

* For key operation, refer to “Key operation in test mode and MD electrical adjustment”.

Test equipment and jigs:

Thermometer (centigrade display), laser power meter (measurable up to 10 mW), test disc: TGYS-1 (or prerecorded disc), MDW-74 (or equivalent)

Before starting adjustment:

Use disc without scratches or dirt for adjustment. (If disc has scratches or dirt, adjustment may not be possible.)

Do not perform adjustment with the MD mechanism turned over or tilted.

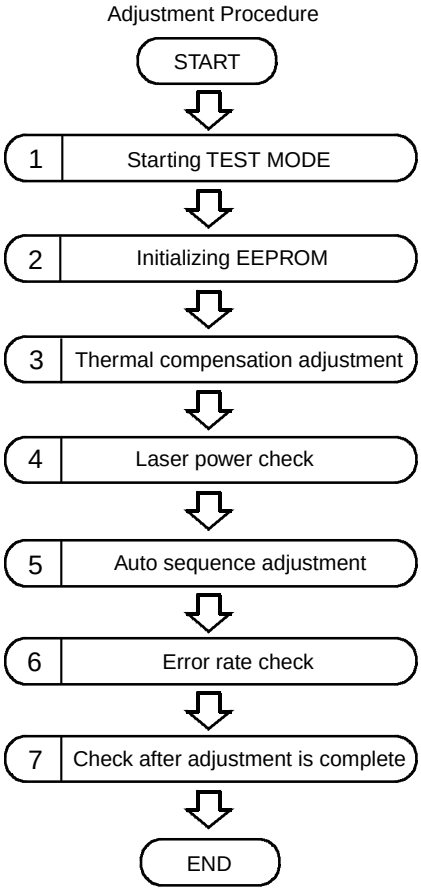
Adjustment procedure:

The following shows a flowchart of the whole adjustment procedure:

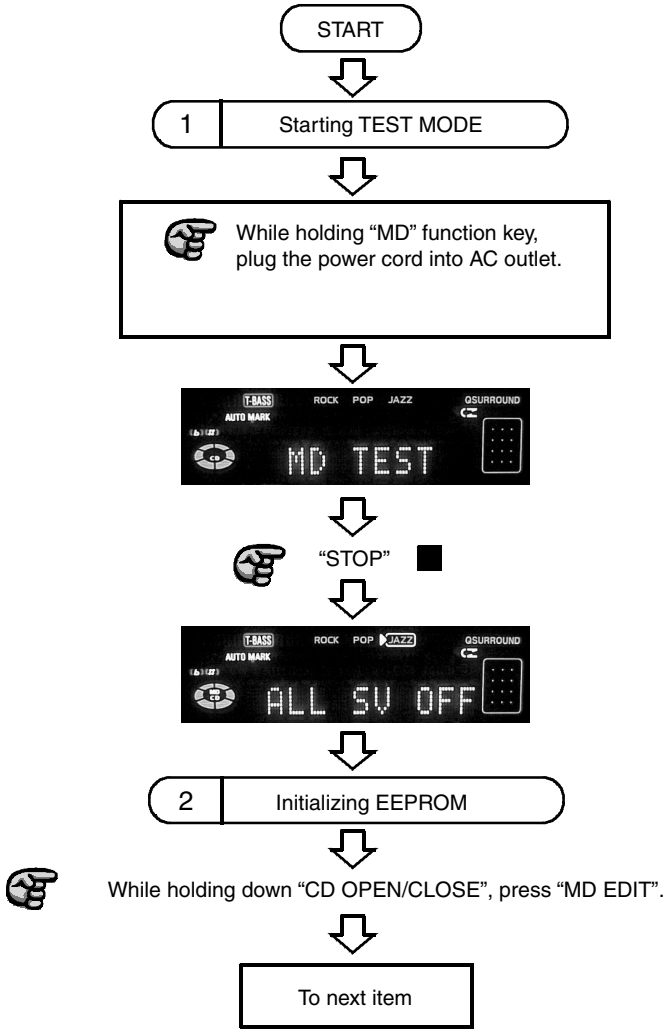
For adjustment procedure, follow 1-7 in flowchart.

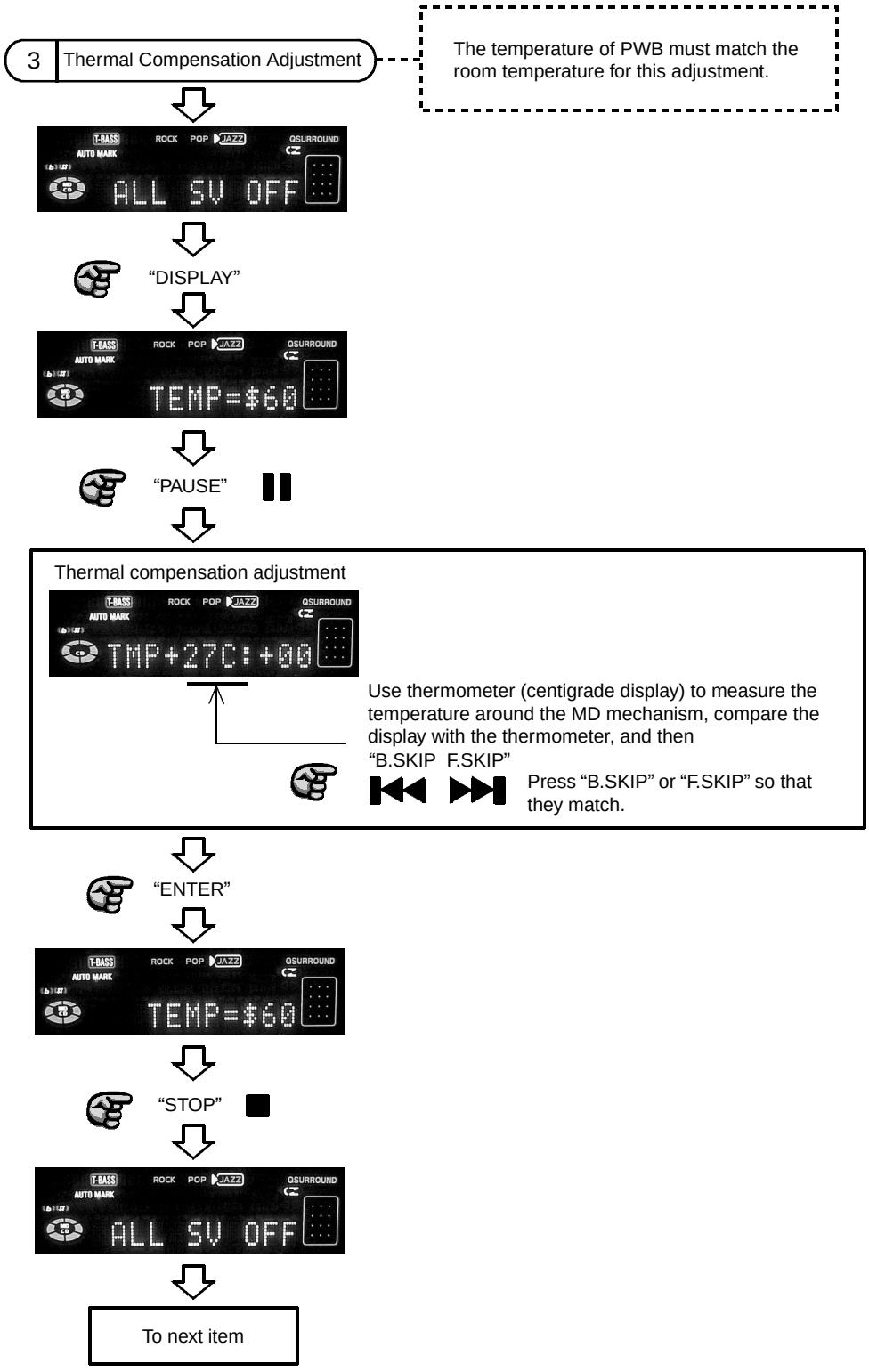
Mark in procedure

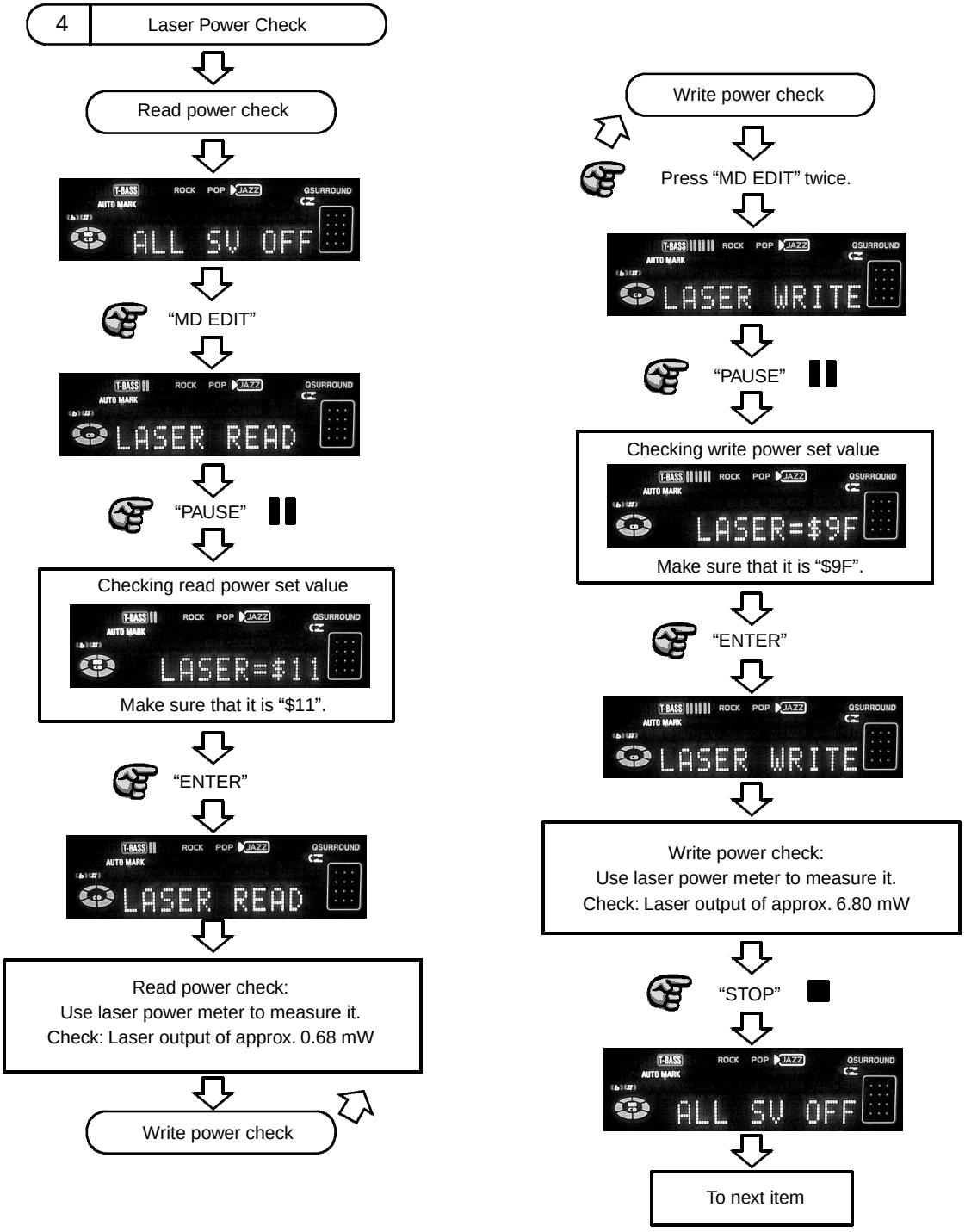
Mark  shows key operation.



Adjustment Procedure Flowchart

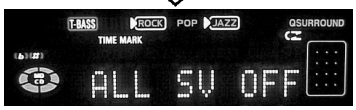



3 Thermal Compensation Adjustment
The temperature of PWB must match the room temperature for this adjustment.
ALL SV OFF
"DISPLAY"
TEMP=$60
"PAUSE"
Thermal compensation adjustment
TMP+27C:+00
Use thermometer (centigrade display) to measure the temperature around the MD mechanism, compare the display with the thermometer, and then
"B.SKIP F.SKIP"
Press "B.SKIP" or "F.SKIP" so that they match.
"ENTER"
TEMP=$60
"STOP"
ALL SV OFF
To next item


4
Laser Power Check
Read power check
ALL SV OFF
"MD EDIT"
LASER READ
"PAUSE"
Checking read power set value
LASER=$11
Make sure that it is "$11".
"ENTER"
LASER READ
Read power check:
Use laser power meter to measure it.
Check: Laser output of approx. 0.68 mW
Write power check
Write power check
Press "MD EDIT" twice.
LASER WRITE
"PAUSE"
Checking write power set value
LASER=$9F
Make sure that it is "$9F".
"ENTER"
LASER WRITE
Write power check:
Use laser power meter to measure it.
Check: Laser output of approx. 6.80 mW
"STOP"
ALL SV OFF
To next item

5 Auto Sequence Adjustment

MO disc adjustment



Load MDW-74.

"MD MODE"

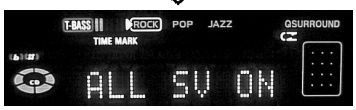
"TIME MARK" lights

"MD" function

Checking MO disc adjustment values

"PLAY" ◀▶

"ENTER"



This indication shows that adjustment has failed.

"STOP" ■

Press "DISPLAY" twice.

Checking adjustment values (IVR, EF balance)

EF balance value check
Within 09-15 (hexadecimal)

IVR value check
Within 04-0A (hexadecimal)

"DISPLAY"

Checking adjustment values (focus/tracking/sled gain)

Sled gain value check
Within 0C-30 (hexadecimal)

Tracking gain value check
Within 0C-30 (hexadecimal)

Focus gain value check
Within 1A-50 (hexadecimal)

"STOP" ■

"MD EJECT" ⏏

Remove the disc.

To next item

5 Auto Sequence Adjustment (continued)

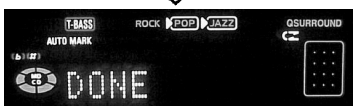
PIT disc adjustment

Load TGYS-1.

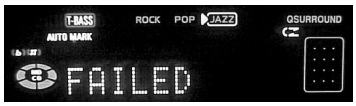
"MD MODE"

"AUTO MARK" lights

"MD FUNCTION"



Checking PIT disc adjustment values



This indication shows that adjustment has failed.

PIT disc checking adjustment values

"STOP" ■

Press "DISPLA" twice.

Checking adjustment values (IVR, EF balance)

EF balance value check
Within 09-15 (hexadecimal)

IVR value check
Within 14-19 (hexadecimal)

"DISPLAY"

Checking adjustment values (focus/tracking/sled gain)

Sled gain value check
Within 0C-3F (hexadecimal)

Tracking gain value check
Within 0C-3F (hexadecimal)

Focus gain value check
Within 1A-50 (hexadecimal)

"STOP" ■

"MD EJECT" ⏏

Remove the disc.

To next item

6 Error Rate Check

Playback error rate check

Load TGYS-1.

"MD MODE"

"AUTO MARK" lights.

"B.SKIP F.SKIP"

To move the pickup to the middle position of disc

"AUX/D-IN" function

Address display

"DISPLAY"

Playback error rate check

0030 or less

"STOP"

"MD EJECT"

Remove the disc.

To next item

6 Error Rate Check (continued)

Recording/playback error rate check

Load MDW-74.

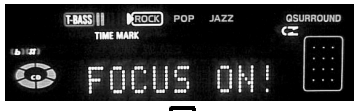
"MD MODE"

"TIME MARK" lights.

"B.SKIP F.SKIP"

To move the pickup to the middle position of disc

"CD" function



Address display
Recording starts automatically from 600C.

Make a recording of approx. 15-30 seconds.

"STOP" ■

"AUX/D-IN" function

Press "DISPLAY" when 600C has elapsed.

Recording/playback error rate check

00030 or less

"STOP" ■

"EJECT" ⏏

Remove the disc.

To next item

7 Check After Adjustment is Complete

Press “POWER” twice, and make sure that “No Adjus” does not light when power is on.

END

ELECTRICAL MAIN PARTS LIST - 1/7

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-020-454-010		IC,DN6851
	87-A20-547-010		C-IC,CXA1992AR
	87-A21-021-040		C-IC,BU2099FV
	87-A21-573-010		IC,SPS-448-1-E
	87-A20-455-010		IC,HA12211
	87-A20-355-010		IC,CXA1553P
	87-017-917-080		IC,BU4066BCF
	87-A21-103-040		C-IC,MM1454XFBE
	87-070-289-040		IC,BU 2092F
	87-A20-870-010		IC,GP1F37R
	87-A20-971-040		C-IC,SN74LV14APW
	87-A20-919-040		C-IC,BA5915FP
	87-A20-917-010		C-IC,CXD2540Q-1/2
	8A-CB4-612-030		C-IC,LC876572V-5S43
	8A-CG6-640-030		C-IC,UPD78016FGC-XXX
	87-017-760-080		IC,M51943BML
	87-A20-602-040		C-IC,M5291FP
	87-A20-925-040		C-IC,BA05FP
	87-A20-905-040		C-IC,BA033FP
	87-001-982-010		IC,TA7291S
	87-A21-452-030		C-IC,BD3876AKS2
	87-A20-920-010		C-IC,CL680-D1
	87-A20-921-040		C-IC,SN74LVU04APW
	87-A20-962-040		C-IC,MSM54V16258B/BSL
	84-ZG1-695-040		C-IC,LH5V2RN1
	87-A20-975-040		C-IC,SN74LV74APW
	87-A20-918-040		C-IC,SM5878AM
	87-A20-613-040		C-IC,BU9262AFS
	87-A20-974-040		C-IC,LC74781M-9017
	87-070-127-110		IC,LC72131 D
	87-A20-913-010		IC,LA1837NL
	87-A20-561-040		C-IC,M65847AFP
TRANSISTOR			
	89-213-702-010		TR,2SB1370E(1.8W)
	87-A30-137-010		TR,2SD2494
	87-A30-138-010		TR,2SB1625
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-076-080		C-TR,2SC3052F
	87-A30-047-080		TR,CSD655E
	87-A30-075-080		C-TR,2SA1235F
	87-A30-234-080		TR,CSC4115BC
	87-026-610-080		TR,KTC3198GR
	87-026-580-080		C-TR,DTA123JK
	87-A30-107-070		C-TR,CMBT5401
	87-A30-087-080		C-FET,2SK2158
	87-A30-074-080		C-TR,RT1P 141C
	87-026-609-080		TR,KTA1266GR
	87-A30-190-080		TR,CC5551
	87-A30-106-070		C-TR,CMBT5551
	87-A30-105-080		C-TR,RT1P 441C
	87-A30-257-080		C-TR,2SD1306E
	87-A30-240-080		TR,CSA1585BC
	87-A30-159-080		C-TR,KTA1298Y
	87-A30-084-080		TR,CSB1058B
	87-A30-142-040		C-TR,DTA123EKA
	87-026-235-080		CHIP-TR,DTC114EK
	87-026-297-080		C-TR,DTA144TK
	87-A30-071-080		C-TR,RT1N 144C
	89-111-625-080		C-TR,2SA1162GR(0.15W)
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP TR,2SC2712GR
	87-A30-450-080		CHIP-TRANSISTER,DTA124XKA
	87-A30-117-010		TR,2SA1357Y
	87-A30-447-040		C-TR,DTA114EKA
	87-A30-072-080		C-TR,RT1P 144C
	89-327-143-080		C-TR,2SC2714O
	87-026-470-080		C-TR,HN1C03FB
	87-A30-427-080		C-TR,DTC114EKA
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
	87-A40-270-080		C-DIODE,MC2838
	87-A40-269-080		C-DIODE,MC2836
	87-070-274-080		DIODE,1N4003 SEM
	87-070-022-010		DIODE,IN5402 (RECT)
	87-A40-650-080		ZENER,MTZJ6.8A
	87-A40-004-080		ZENER,MTZJ16A
	87-070-322-080		ZENER,MTZJ 36D
	87-A40-341-080		ZENER,MTZJ 36 A
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-335-080		ZENER,MTZJ11C T-72
	87-A40-250-040		C-DIODE,DAN217
	87-A40-488-080		DIODE,1SS244
	87-A40-437-080		ZENER,MTZJ4.3B
	87-A40-002-080		ZENER,MTZJ5.1C
	87-A40-234-080		ZENER,MTZJ5.6A
	87-017-932-080		ZENER,MTJ6.2B
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-304-080		ZENER,DZ6.2M
	87-020-027-080		CHIP-DIODE 1SS184
	87-A40-003-080		ZENER,MTZJ 4.3C
	87-017-024-040		C-DIODE,DA204K
	87-A40-180-040		C-DIODE,SB07-015C
	87-017-149-080		ZENER,HZS6A2L
MAIN C.B			
C104	87-012-368-080		C-CAP,S 0.1-50 F
C105	87-012-368-080		C-CAP,S 0.1-50 F
C106	87-010-196-080		CHIP CAPACITOR,0.1-25
C107	87-010-196-080		CHIP CAPACITOR,0.1-25
C108	87-010-196-080		CHIP CAPACITOR,0.1-25
C109	87-010-196-080		CHIP CAPACITOR,0.1-25
C110	87-010-928-000		CAP,E 4700-25 M SMG
C111	87-012-140-080		CAP 470P
C113	87-010-408-080		CAP, ELECT 47-50V
C114	87-010-112-080		CAP, ELECT 100-16V
C115	87-010-235-080		CAP,E 470-16 SME
C116	87-012-368-080		C-CAP,S 0.1-50 F
C117	87-012-368-080		C-CAP,S 0.1-50 F
C118	87-016-658-000		CAP,E 4700-35 M SMG
C119	87-016-658-000		CAP,E 4700-35 M SMG
C131	87-010-263-080		CAP, ELECT 100-10V
C132	87-010-405-080		CAP, ELECT 10-50V
C133	87-010-194-080		CAP, CHIP 0.047
C134	87-010-194-080		CAP, CHIP 0.047
C161	87-010-260-080		CAP, ELECT 47-25V
C162	87-010-403-080		CAP, ELECT 3.3-50V
C163	87-010-197-080		CAP, CHIP 0.01 DM
C171	87-010-260-080		CAP, ELECT 47-25V
C172	87-010-260-080		CAP, ELECT 47-25V
C173	87-010-260-080		CAP, ELECT 47-25V
C174	87-010-260-080		CAP, ELECT 47-25V
C175	87-A10-944-080		CAP,E 100-100 M SMG
C176	87-010-263-080		CAP, ELECT 100-10V
C181	87-010-196-080		CHIP CAPACITOR,0.1-25
C182	87-A11-233-090		CAP,E 4700-16 105 KMG
C183	87-010-196-080		CHIP CAPACITOR,0.1-25
C186	87-016-080-090		CAP,E3300-16 SMG
C191	87-010-196-080		CHIP CAPACITOR,0.1-25
C192	87-010-196-080		CHIP CAPACITOR,0.1-25
C193	87-010-196-080		CHIP CAPACITOR,0.1-25
C194	87-010-196-080		CHIP CAPACITOR,0.1-25
C201	87-010-260-080		CAP, ELECT 47-25V
C202	87-010-260-080		CAP, ELECT 47-25V

ELECTRICAL MAIN PARTS LIST - 2/7

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C203	87-A10-946-080		C-CAP,S 220P-100 J CH
C204	87-A10-946-080		C-CAP,S 220P-100 J CH
C209	87-010-178-080		CHIP CAP 1000P
C210	87-010-178-080		CHIP CAP 1000P
C211	87-012-368-080		C-CAP,S 0.1-50 F
C212	87-012-368-080		C-CAP,S 0.1-50 F
C213	87-010-195-080		C-CAP,S 0.068-25 F
C214	87-010-195-080		C-CAP,S 0.068-25 F
C215	87-010-178-080		CHIP CAP 1000P
C216	87-012-368-080		C-CAP,S 0.1-50 F
C217	87-010-182-080		C-CAP,S 2200P-50 B
C218	87-010-182-080		C-CAP,S 2200P-50 B
C219	87-012-368-080		C-CAP,S 0.1-50 F
C220	87-012-368-080		C-CAP,S 0.1-50 F
C221	87-010-186-080		CAP,CHIP 4700P
C222	87-010-186-080		CAP,CHIP 4700P
C223	87-010-401-080		CAP, ELECT 1-50V
C224	87-010-401-080		CAP, ELECT 1-50V
C261	87-010-197-080		CAP, CHIP 0.01 DM
C262	87-010-197-080		CAP, CHIP 0.01 DM
C265	87-010-546-080		CAP, ELECT 0.33-50V
C266	87-010-546-080		CAP, ELECT 0.33-50V
C267	87-010-260-080		CAP, ELECT 47-25V
C277	87-010-197-080		CAP, CHIP 0.01 DM
C303	87-012-157-080		C-CAP,S 330P-50 CH
C304	87-012-157-080		C-CAP,S 330P-50 CH
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C311	87-010-198-080		C-CAP,S 0.022-25VBK
C312	87-010-198-080		C-CAP,S 0.022-25VBK
C315	87-010-181-080		CAP,CHIP S 1800P
C316	87-010-181-080		CAP,CHIP S 1800P
C317	87-A10-201-080		C-CAP,S0.33-16 KB
C318	87-A10-201-080		C-CAP,S0.33-16 KB
C319	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C320	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C321	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C322	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-370-080		CAP,E 330-6.3 SME
C327	87-010-404-080		CAP, ELECT 4.7-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V
C332	87-010-196-080		CHIP CAPACITOR,0.1-25
C335	87-010-401-080		CAP, ELECT 1-50V
C336	87-010-401-080		CAP, ELECT 1-50V
C337	87-010-196-080		CHIP CAPACITOR,0.1-25
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P
C354	87-010-175-080		CAP 560P
C355	87-010-178-080		CHIP CAP 1000P
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		CAP, CHIP 0.01 DM
C358	87-010-183-080		C-CAP,S 2700P-50 B
C359	87-010-183-080		C-CAP,S 2700P-50 B
C360	87-010-183-080		C-CAP,S 2700P-50 B
C370	87-010-196-080		CHIP CAPACITOR,0.1-25
C371	87-010-179-080		CAP,CHIP S B1200P
C372	87-010-179-080		CAP,CHIP S B1200P
C373	87-010-180-080		C-CAP,S 1500P-50 B
C374	87-010-180-080		C-CAP,S 1500P-50 B
C375	87-010-545-080		CAP, ELECT 0.22-50V
C376	87-010-545-080		CAP, ELECT 0.22-50V
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C381	87-010-197-080		CAP, CHIP 0.01 DM
C382	87-010-318-080		C-CAP,S 47P-50 CH
C383	87-010-197-080		CAP, CHIP 0.01 DM
C384	87-010-402-080		CAP, ELECT 2.2-50V
C385	87-010-184-080		CHIP CAPACITOR 3300P(K)
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C388	87-012-156-080		C-CAP,S 220P-50 CH
C389	87-010-380-080		CAP, ELECT 47-16V
C401	87-010-401-080		CAP, ELECT 1-50V
C402	87-010-263-080		CAP, ELECT 100-10V
C403	87-010-260-080		CAP, ELECT 47-25V
C410	87-010-260-080		CAP, ELECT 47-25V
C411	87-010-265-080		CAP, ELECT 33-16 M 11L
C461	87-010-402-080		CAP, ELECT 2.2-50V
C462	87-010-400-080		CAP, ELECT 0.47-50V
C491	87-010-404-080		CAP, ELECT 4.7-50V
C492	87-010-404-080		CAP, ELECT 4.7-50V
C501	87-010-374-080		CAP, ELECT 47-10V
C502	87-010-374-080		CAP, ELECT 47-10V
C511	87-010-180-080		C-CER 1500P
C512	87-010-180-080		C-CER 1500P
C515	87-010-318-080		C-CAP,S 47P-50 CH
C516	87-010-318-080		C-CAP,S 47P-50 CH
C517	87-010-318-080		C-CAP,S 47P-50 CH
C518	87-010-318-080		C-CAP,S 47P-50 CH
C521	87-010-956-080		CHIP-CAP,S 0.068-25B
C522	87-016-369-080		C-CAP,S 0.033-25 B K
C524	87-010-401-080		CAP, ELECT 1-50V
C525	87-016-081-080		C-CAP,S 0.1-16 RK
C526	87-016-081-080		C-CAP,S 0.1-16 RK
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-404-080		CAP, ELECT 4.7-50V
C532	87-010-404-080		CAP, ELECT 4.7-50V
C535	87-A11-590-080		C-CAP,S 0.047-16 K B
C536	87-A11-590-080		C-CAP,S 0.047-16 K B
C537	87-010-400-080		CAP, ELECT 0.47-50V
C538	87-010-400-080		CAP, ELECT 0.47-50V
C539	87-010-185-080		C-CAP,S 3900P-50 B
C540	87-010-185-080		C-CAP,S 3900P-50 B
C541	87-A10-307-080		CAP,M 0.1-50 J
C542	87-A10-307-080		CAP,M 0.1-50 J
C543	87-A10-307-080		CAP,M 0.1-50 J
C544	87-A10-307-080		CAP,M 0.1-50 J
C545	87-016-081-080		C-CAP,S 0.1-16 RK
C546	87-016-081-080		C-CAP,S 0.1-16 RK
C547	87-010-401-080		CAP, ELECT 1-50V
C549	87-010-401-080		CAP, ELECT 1-50V
C550	87-010-401-080		CAP, ELECT 1-50V
C551	87-010-402-080		CAP, ELECT 2.2-50V
C552	87-010-402-080		CAP, ELECT 2.2-50V
C561	87-010-407-080		CAP, ELECT 33-50V
C562	87-010-407-080		CAP, ELECT 33-50V
C563	87-012-158-080		C-CAP,S 390P-50 CH
C564	87-A12-001-080		CAP, ELECT 2200-10 M SMG
C565	87-010-403-080		CAP, ELECT 3.3-50V
C579	87-010-322-080		C-CAP,S 100P-50 CH
C581	87-010-404-080		CAP, ELECT 4.7-50V
C582	87-010-404-080		CAP, ELECT 4.7-50V
C595	87-010-400-080		CAP, ELECT 0.47-50V
C603	87-010-544-080		CAP, ELECT 0.1-50V
C604	87-010-544-080		CAP, ELECT 0.1-50V
C605	87-010-408-080		CAP, ELECT 47-50V
C607	87-010-405-080		CAP, ELECT 10-50V
C608	87-010-405-080		CAP, ELECT 10-50V
C609	87-010-196-080		CHIP CAPACITOR,0.1-25
C610	87-010-384-080		CAP, ELECT 100-25V
C611	87-010-197-080		CAP, CHIP 0.01 DM
C612	87-010-197-080		CAP, CHIP 0.01 DM
C701	87-010-263-080		CAP, ELECT 100-10V
C702	87-010-196-080		CHIP CAPACITOR,0.1-25
C703	87-010-319-080		C-CAP,S 56P-50 CH
C704	87-010-319-080		C-CAP,S 56P-50 CH
C705	87-012-393-080		C-CAP,S 0.22-16 R K
C706	87-010-197-080		CAP, CHIP 0.01 DM
C707	87-010-180-080		C-CER 1500P

ELECTRICAL MAIN PARTS LIST - 3/7

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C708	87-010-213-080		C-CAP,S 0.015-25 B
C709	87-010-213-080		C-CAP,S 0.015-25 B
C710	87-010-197-080		CAP, CHIP 0.01 DM
C711	87-010-181-080		CAP,CHIP S 1800P
C712	87-010-196-080		CHIP CAPACITOR,0.1-25
C713	87-010-544-080		CAP, ELECT 0.1-50V
C714	87-010-374-080		CAP, ELECT 47-10V
C717	87-010-183-080		C-CAP,S 2700P-50 B
C718	87-010-183-080		C-CAP,S 2700P-50 B
C731	87-010-405-080		CAP, ELECT 10-50V
C732	87-010-196-080		CHIP CAPACITOR,0.1-25
C733	87-010-196-080		CHIP CAPACITOR,0.1-25
C734	87-012-156-080		C-CAP,S 220P-50 CH
C735	87-010-178-080		CHIP CAP 1000P
C736	87-010-196-080		CHIP CAPACITOR,0.1-25
C738	87-010-318-080		C-CAP,S 47P-50 CH
C741	87-010-178-080		CHIP CAP 1000P
C742	87-010-183-080		C-CAP,S 2700P-50 B
C743	87-010-194-080		CAP, CHIP 0.047
C751	87-010-112-080		CAP, ELECT 100-16V
C752	87-010-320-080		CHIP CAP 68P
C753	87-010-546-080		CAP, ELECT 0.33-50V
C757	87-010-408-080		CAP, ELECT 47-50V
C758	87-010-186-080		CAP,CHIP 4700P
C760	87-010-196-080		CHIP CAPACITOR,0.1-25
C761	87-010-178-080		CHIP CAP 1000P
C801	87-A10-060-080		C-CAP,S 0.18-16 K B
C802	87-A10-060-080		C-CAP,S 0.18-16 K B
C803	87-012-154-080		C-CAP,S 150P-50 CH
C804	87-012-154-080		C-CAP,S 150P-50 CH
C805	87-012-145-080		CAP, CHIP S 270P CH
C806	87-012-145-080		CAP, CHIP S 270P CH
C807	87-010-183-080		C-CAP,S 2700P-50 B
C809	87-010-196-080		CHIP CAPACITOR,0.1-25
C810	87-010-177-080		C-CAP,S 820P-50 SL
C811	87-010-177-080		C-CAP,S 820P-50 SL
C812	87-010-196-080		CHIP CAPACITOR,0.1-25
C813	87-010-374-080		CAP, ELECT 47-10V
C814	87-010-196-080		CHIP CAPACITOR,0.1-25
C815	87-010-263-080		CAP, ELECT 100-10V
C817	87-010-183-080		C-CAP,S 2700P-50 B
C821	87-016-460-080		C-CAP,S 0.22-16 B
C822	87-016-460-080		C-CAP,S 0.22-16 B
C823	87-016-460-080		C-CAP,S 0.22-16 B
C827	87-010-196-080		CHIP CAPACITOR,0.1-25
C901	87-010-196-080		CHIP CAPACITOR,0.1-25
C902	87-010-178-080		CHIP CAP 1000P
C903	87-010-178-080		CHIP CAP 1000P
C904	87-010-196-080		CHIP CAPACITOR,0.1-25
C905	87-012-140-080		CAP 470P
C906	87-010-196-080		CHIP CAPACITOR,0.1-25
C907	87-010-197-080		CAP, CHIP 0.01 DM
CN301	87-A60-624-010		CONN,7P V 2MM JMT
CN401	87-A60-619-010		CONN,2P V 2MM JMT
CN501	87-099-719-010		CONN,30P TYK-B(X)
CN502	87-A60-423-010		CONN,14P V TOC-B
CN503	87-A60-133-010		CONN,8P V FE
CN571	87-099-570-010		CONN,13P TUC-P13P-B1
CNA101	8A-CJ4-640-010		CONN ASSY,3P V AC1
CNA901	8Z-CL4-656-010		CONN ASSY,2P V DTL SHLD
FB901	87-A50-322-080		C-COIL,S BK2125 LM252
FFC502	8A-CJ4-648-110		FF-CABLE,14P 1.0
FFC503	88-908-201-110		FF-CABLE,8P 1.25
H101	87-A90-511-010		HLDR,WIRE 2.5-10P
J201	87-A60-420-010		JACK,3.5 ST (MSC)
J202	87-099-801-010		JACK,PIN 1P BLK
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)
J501	87-A60-354-010		JACK,PIN 2P MSP -242V-05
J751	87-A60-420-010		JACK,3.5 ST (MSC)
L201	87-003-383-010		COIL,1UH-S
L202	87-003-383-010		COIL,1UH-S
L203	87-003-098-080		COIL,2.2UH
L205	87-003-098-080		COIL,2.2UH
L206	87-003-098-080		COIL,2.2UH
L301	87-A50-049-010		COIL,TRAP 85K(COI)
L302	87-A50-049-010		COIL,TRAP 85K(COI)
L351	87-007-342-010		COIL,OSC 85K BIAS
L563	87-A50-517-080		COIL,10UHK FLR88
L590	87-008-372-080		FILTER, EMI BL OIRNI
L701	87-005-448-080		COIL 220UH,K
R215	87-A00-258-080		RES,M/F 0.22-1W J
R216	87-A00-258-080		RES,M/F 0.22-1W J
R217	87-A00-258-080		RES,M/F 0.22-1W J
R218	87-A00-258-080		RES,M/F 0.22-1W J
R219	87-A00-258-080		RES,M/F 0.22-1W J
R220	87-A00-258-080		RES,M/F 0.22-1W J
SFR303	87-A90-557-080		SFR,33K H HOKU
SFR304	87-A90-557-080		SFR,33K H HOKU
SFR305	87-024-436-080		SFR,47K RH063EC
SFR306	87-024-436-080		SFR,47K RH063EC
SFR351	87-024-436-080		SFR,47K RH063EC
SFR352	87-024-436-080		SFR,47K RH063EC
TH251	87-A91-042-080		C-THMS,100K 55001
TH252	87-A91-042-080		C-THMS,100K 55001
W101	8Z-CL4-658-010		F-CABLE,10P 2.5 300MM
FRONT C.B			
C161	87-010-196-080		CHIP CAPACITOR,0.1-25
C162	87-010-322-080		C-CAP,S 100P-50 CH
C164	87-010-178-080		CHIP CAP 1000P
C201	87-010-316-080		C-CAP,S 33P-50 CH
C203	87-010-313-080		CAP, CHIP 18P
C204	87-018-209-080		CAP, CER 0.1-50V
C205	87-010-196-080		CHIP CAPACITOR,0.1-25
C206	87-018-209-080		CAP, CER 0.1-50V
C207	87-018-209-080		CAP, CER 0.1-50V
C231	87-010-560-040		CAP,E 10-50 GAS
C232	87-010-178-080		CHIP CAP 1000P
C241	87-016-526-080		C-CAP,S 0.47-16 BK
C242	8A-CJ4-635-010		CAP,E 470-10 SRG3.5PITCH
C243	87-010-196-080		CHIP CAPACITOR,0.1-25
C246	87-012-393-080		C-CAP,S 0.22-16 R K
C250	87-015-883-080		CHIP CAPACITOR, 0.022 (D)
C301	87-010-374-040		CAP,E 47-10
C351	87-010-197-080		CAP, CHIP 0.01 DM
C352	87-010-197-080		CAP, CHIP 0.01 DM
C353	87-010-197-080		CAP, CHIP 0.01 DM
C354	87-010-197-080		CAP, CHIP 0.01 DM
C371	87-010-552-040		CAP,E 22-16 GAS
C372	87-010-552-040		CAP,E 22-16 GAS
C373	87-A12-078-040		CAP,E 47-35 SMG
C996	87-010-405-080		CAP, ELECT 10-50V
CN101	87-099-720-010		CONN,30P TYK-B(P)
CN102	87-A60-984-010		CONN,17P V TOC-B
CN301	87-A60-626-010		CONN,9P V 2MM JMT
CNA303	8A-CJ4-641-010		CONN ASSY,8P H SW
CNA304	8A-CJ4-649-010		CONN ASSY,4P V FR
CNA401	88-802-092-420		CONN ASSY,9P RED
D151	87-A40-317-080		LED,SLR-342VCT31 RED
D152	87-A40-317-080		LED,SLR-342VCT31 RED
D153	87-A40-317-080		LED,SLR-342VCT31 RED
D154	87-A40-317-080		LED,SLR-342VCT31 RED
D155	87-A40-317-080		LED,SLR-342VCT31 RED
D156	87-A40-317-080		LED,SLR-342VCT31 RED
D161	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB
D162	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB
D163	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB
FFC102	8A-CJ4-651-010		FF-CABLE,17P 1.0
FL301	8A-CJ4-604-010		FL,13-ST-44GNK ACJ-4

ELECTRICAL MAIN PARTS LIST - 4/7

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
L201	87-A50-333-010		COIL,OSC 9.43MHZ
R301	87-022-341-080		C-RES,S 560-1/10W F
R302	87-022-341-080		C-RES,S 560-1/10W F
R303	87-022-198-080		C-RES,S680 1/10WF
R304	87-022-198-080		C-RES,S680 1/10WF
R305	87-022-343-080		C-RES,S 820-1/10W F
R306	87-022-344-080		C-RES,S 1K-1/10W F
R307	87-022-345-080		C-RES,S 1.2K-1/10W F
R308	83-212-858-080		C-RES,1.5K-1/10W F
R309	83-212-859-080		C-RES,S 1.8K-1/10W F
R310	87-022-348-080		C-RES,S 2.2K-1/10W F
R311	87-022-349-080		C-RES,S 2.7K-1/10W F
R317	87-022-355-080		C-RES,S10K-1/10W F
R322	87-022-357-080		C-RES,S 15K-1/10W F
R337	87-022-355-080		C-RES,S10K-1/10W F
S301	87-A90-095-080		SW,TACT EVQ11G04M
S302	87-A90-095-080		SW,TACT EVQ11G04M
S303	87-A90-095-080		SW,TACT EVQ11G04M
S304	87-A90-095-080		SW,TACT EVQ11G04M
S305	87-A90-095-080		SW,TACT EVQ11G04M
S306	87-A90-095-080		SW,TACT EVQ11G04M
S307	87-A90-095-080		SW,TACT EVQ11G04M
S308	87-A90-095-080		SW,TACT EVQ11G04M
S309	87-A90-095-080		SW,TACT EVQ11G04M
S310	87-A90-095-080		SW,TACT EVQ11G04M
S311	87-A90-095-080		SW,TACT EVQ11G04M
S312	87-A90-095-080		SW,TACT EVQ11G04M
S352	87-A91-687-010		SW,RTRY RE012104PV-VOL
SW351	87-A91-753-010		SW,RTRY EC12E12504-JOG
X201	87-XMN-602-010		VIB,PIEZO PKM13EPY
VCD C.B			
C1	87-010-805-080		CAP, S 1-16
C2	87-010-553-040		CAP,E 47-16 GAS
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-016-669-080		C-CAP,S 0.1-25 K B
C104	87-016-669-080		C-CAP,S 0.1-25 K B
C105	87-010-497-040		CAP,E 4.7-35 GAS
C106	87-016-369-080		C-CAP,S 0.033-25 B K
C107	87-010-197-080		CAP, CHIP 0.01 DM
C108	87-010-494-040		CAP,E 1-50 GAS
C109	87-010-981-040		CAP,E 22-35 5L SRE
C110	87-010-213-080		C-CAP,S 0.015-50 B
C111	87-010-555-040		CAP,E 100-10 GAS
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-016-369-080		C-CAP,S 0.033-25 B K
C114	87-016-369-080		C-CAP,S 0.033-25 B K
C115	87-016-369-080		C-CAP,S 0.033-25 B K
C116	87-012-158-080		C-CAP,S 390P-50 CH
C117	87-010-312-080		C-CAP,S 15P-50 CH
C118	87-010-494-040		CAP,E 1-50 GAS
C119	87-010-154-080		C-CAP,S 10P-50 CH
C120	87-010-992-080		C-CAP,S 0.047-25 B
C121	87-010-992-080		C-CAP,S 0.047-25 B
C123	87-016-669-080		C-CAP,S 0.1-25 K B
C125	87-010-198-080		CAP, CHIP 0.022
C126	87-016-669-080		C-CAP,S 0.1-25 K B
C127	87-010-555-040		CAP,E 100-10 GAS
C130	87-010-555-040		CAP,E 100-10 GAS
C131	87-010-555-040		CAP,E 100-10 GAS
C132	87-010-178-080		CHIP CAP 1000P
C133	87-010-555-040		CAP,E 100-10 GAS
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-196-080		CHIP CAPACITOR,0.1-25
C138	87-010-184-080		CHIP CAPACITOR 3300P(K)
C139	87-010-197-080		CAP, CHIP 0.01 DM
C140	87-016-044-040		CAP,E 100-16
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-196-080		CHIP CAPACITOR,0.1-25
C151	87-010-555-040		CAP,E 100-10 GAS
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-189-040		CAP,E 220-10
C154	87-010-197-080		CAP, CHIP 0.01 DM
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
C156	87-010-194-080		CAP, CHIP 0.047
C157	87-010-194-080		CAP, CHIP 0.047
C158	87-012-156-080		C-CAP,S 220P-50 CH
C159	87-A10-369-080		C-CAP,S 0.47-16 K B
C162	87-010-178-080		CHIP CAP 1000P
C201	87-010-196-080		CHIP CAPACITOR,0.1-25
C206	87-010-322-080		C-CAP,S 100P-50 CH
C207	87-010-322-080		C-CAP,S 100P-50 CH
C208	87-010-322-080		C-CAP,S 100P-50 CH
C209	87-010-322-080		C-CAP,S 100P-50 CH
C210	87-010-196-080		CHIP CAPACITOR,0.1-25
C211	87-010-555-040		CAP,E 100-10 GAS
C213	87-010-197-080		CAP, CHIP 0.01 DM
C214	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-016-251-040		CAP,E 220-16 SMG
C302	87-012-140-080		CAP 470P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-384-040		CAP,E 100-25 SME
C305	87-010-982-040		CAP,E 33-25 GAS
C306	87-016-044-040		CAP,E 100-16 GAS
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C308	87-010-555-040		CAP,E 100-10 GAS
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-555-040		CAP,E 100-10 GAS
C311	87-010-196-080		CHIP CAPACITOR,0.1-25
C312	87-010-178-080		CHIP CAP 1000P
C320	87-010-197-080		CAP, CHIP 0.01 DM
C401	87-010-196-080		CHIP CAPACITOR,0.1-25
C402	87-016-044-040		CAP,E 100-16 GAS
C403	87-010-196-080		CHIP CAPACITOR,0.1-25
C404	87-010-196-080		CHIP CAPACITOR,0.1-25
C431	87-010-197-080		CAP, CHIP 0.01 DM
C433	87-010-196-080		CHIP CAPACITOR,0.1-25
C434	87-010-197-080		CAP, CHIP 0.01 DM
C435	87-016-044-040		CAP,E 100-16 GAS
C495	87-010-196-080		CHIP CAPACITOR,0.1-25
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-010-154-080		CAP CHIP 10P
C505	87-010-154-080		CAP CHIP 10P
C506	87-010-197-080		CAP, CHIP 0.01 DM
C508	87-010-555-040		CAP,E 100-10 GAS
C509	87-010-196-080		CHIP CAPACITOR,0.1-25
C510	87-010-555-040		CAP,E 100-10 GAS
C511	87-010-196-080		CHIP CAPACITOR,0.1-25
C512	87-010-197-080		CAP, CHIP 0.01 DM
C513	87-010-197-080		CAP, CHIP 0.01 DM
C514	87-010-197-080		CAP, CHIP 0.01 DM
C518	87-010-322-080		C-CAP,S 100P-50 CH
C519	87-012-145-080		CAP, CHIP S 270P CH
C520	87-012-157-080		C-CAP,S 330P-50 CH
C521	87-012-154-080		C-CAP,S 150P-50 CH
C523	87-010-197-080		CAP, CHIP 0.01 DM
C524	87-010-197-080		CAP, CHIP 0.01 DM
C525	87-010-197-080		CAP, CHIP 0.01 DM
C526	87-010-197-080		CAP, CHIP 0.01 DM
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C529	87-010-197-080		CAP, CHIP 0.01 DM
C530	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-197-080		CAP, CHIP 0.01 DM

ELECTRICAL MAIN PARTS LIST - 5/7

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C532	87-010-553-040		CAP,E 47-16 GAS
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-555-040		CAP,E 100-10 GAS
C535	87-010-197-080		CAP, CHIP 0.01 DM
C536	87-010-549-040		CAP,E 47-6.3 GAS
C537	87-010-197-080		CAP, CHIP 0.01 DM
C538	87-010-196-080		CHIP CAPACITOR,0.1-25
C539	87-010-196-080		CHIP CAPACITOR,0.1-25
C540	87-010-553-040		CAP,E 47-16 GAS
C541	87-010-197-080		CAP, CHIP 0.01 DM
C542	87-010-318-080		C-CAP,S 47P-50 CH
C544	87-010-197-080		CAP, CHIP 0.01 DM
C546	87-010-197-080		CAP, CHIP 0.01 DM
C560	87-010-318-080		C-CAP,S 47P-50 CH
C601	87-010-313-080		CAP, CHIP 18P
C602	87-010-313-080		CAP, CHIP 18P
C603	87-010-196-080		CHIP CAPACITOR,0.1-25
C604	87-010-178-080		CHIP CAP 1000P
C605	87-010-178-080		CHIP CAP 1000P
C606	87-010-178-080		CHIP CAP 1000P
C607	87-010-178-080		CHIP CAP 1000P
C608	87-010-178-080		CHIP CAP 1000P
C609	87-010-178-080		CHIP CAP 1000P
C610	87-010-560-040		CAP,E 10-50 GAS
C611	87-010-560-040		CAP,E 10-50 GAS
C651	87-010-992-080		C-CAP,S 0.047-25 B
C722	87-010-371-040		CAP,E 470-6.3
C749	87-010-494-040		CAP,E 1-50 GAS
C750	87-010-555-040		CAP,E 100-10 GAS
C751	87-012-153-080		C-CAP,S 120P-50 CH
C752	87-A10-369-080		C-CAP,S 0.47-16 K B
C754	87-010-197-080		CAP, CHIP 0.01 DM
C756	87-010-197-080		CAP, CHIP 0.01 DM
C757	87-A11-167-080		C-CAP,S 27P-50 F CH
C758	87-A11-167-080		C-CAP,S 27P-50 F CH
C775	87-012-274-080		C-CAP,U 1000P-50 K B
C776	87-010-197-080		CAP, CHIP 0.01 DM
C777	87-010-322-080		C-CAP,S 100P-50 CH
CN101	87-A61-511-010		CONN,16P H(RB)
CN103	87-A60-154-010		CONN,6P H FE
CN301	87-A60-156-010		CONN,8P H FE
CN401	87-A60-153-010		CONN,5P H FE
CN403	87-A61-283-010		CONN,17P V FWN-BTRK
CN801	87-099-854-010		CONN,6P V S2M-6W
CN901	87-A60-422-010		CONN,8P V TOC-B
CN902	87-A60-109-010		CONN,2P V S2M-2W
FFC1	8A-CJ4-657-010		FF-CABLE,16P 1.0 320MM
FFC2	88-906-101-110		FF-CABLE 6P-1.25
FFC3	88-905-251-110		FF-CABLE 5P 1.25
FFC901	8A-CJ4-658-010		FF-CABLE,8P 1.0 300MM
L101	87-005-196-080		COIL,10UH
L102	87-005-448-080		COIL 220UH,K
L152	87-005-153-080		COIL,47UH
L202	87-005-153-080		COIL,47UH
L301	87-A50-095-010		COIL,68UH RCR875D
L302	87-005-426-080		COIL,3.3UH K FLR50
L502	87-005-204-080		COIL,47UH
L503	87-005-189-080		COIL 2.7UH
L504	87-005-187-080		COIL,1.8UH
L505	87-005-204-080		COIL,47UH
L506	87-005-204-080		COIL,47UH
L507	87-005-204-080		COIL,47UH
L708	87-005-817-080		C-COIL, 33UH J FLC32
L801	87-005-786-080		F-BEAD,-3.4-7.5 BL03RN2-R62T2
L802	87-005-786-080		F-BEAD,-3.4-7.5 BL03RN2-R62T2
L901	87-003-142-080		COIL,3.3UH KLAL02
PR301	87-026-689-080		PROTECTOR,1A 491SERIES 60V
R105	87-022-365-080		C-RES,S 100K-1/10W F
R112	87-022-362-080		C-RES,S 56K-1/10W F
R130	87-022-363-080		C-RES,S 68K-1/10W F
R131	87-022-360-080		C-RES,S 39K-1/10W F
R132	87-022-360-080		C-RES,S 39K-1/10W F
R135	87-022-363-080		C-RES,S 68K-1/10W F
R173	87-022-350-080		C-RES,S 3.3K-1/10WF
R174	87-022-350-080		C-RES,S 3.3K-1/10WF
R175	87-022-350-080		C-RES,S 3.3K-1/10WF
R176	87-022-350-080		C-RES,S 3.3K-1/10WF
R177	87-022-863-080		C-RES,S 27K-1/10W F
R178	87-022-863-080		C-RES,S 27K-1/10W F
R507	87-A00-408-080		C-RES,S 2K-1/10W D
X201	87-A70-124-080		VIB,CER 8.0MHZ
X501	87-A70-125-080		VIB,XTAL 27MHZ 50PPM
X601	87-030-270-080		VIB,XTAL 16.9344MHZ
FACE-A C.B			
C824	87-010-197-080		CAP, CHIP 0.01 DM
CN801	87-A60-619-010		CONN,2P V 2MM JMT
S818	8A-CJ4-215-010		PLATE,OPE 1
S819	8A-CJ4-215-010		PLATE,OPE 1
FACE-B C.B			
C801	87-010-322-080		C-CAP,S 100P-50 CH
C802	87-010-322-080		C-CAP,S 100P-50 CH
C803	87-010-497-040		CAP,E 4.7-35 GAS
C821	87-010-196-080		CHIP CAPACITOR,0.1-25
C826	87-010-197-080		CAP, CHIP 0.01 DM
C827	87-018-134-080		CAP,TC U 0.01-16 NY
C829	87-010-197-080		CAP, CHIP 0.01 DM
C830	87-010-197-080		CAP, CHIP 0.01 DM
C831	87-010-197-080		CAP, CHIP 0.01 DM
C834	87-010-197-080		CAP, CHIP 0.01 DM
C835	87-010-197-080		CAP, CHIP 0.01 DM
CNA301	8A-CJ4-644-010		CONN ASSY,9P H PANEL
CNA801	8A-CJ4-650-010		CONN ASSY,2P V FACE A
CNA802	8A-CJ4-653-010		CONN ASSY,5P V FACE C
D831	87-A40-496-040		LED,SLR-342PCT31 GRN
D832	87-A40-496-040		LED,SLR-342PCT31 GRN
D833	87-A40-496-040		LED,SLR-342PCT31 GRN
D834	87-A40-496-040		LED,SLR-342PCT31 GRN
D835	87-A40-496-040		LED,SLR-342PCT31 GRN
R801	87-022-341-080		C-RES,S 560-1/10W F
R802	87-022-341-080		C-RES,S 560-1/10W F
R803	87-022-198-080		C-RES,S680 1/10WF
R804	87-022-198-080		C-RES,S680 1/10WF
R805	87-022-343-080		C-RES,S 820-1/10W F
R806	87-022-344-080		C-RES,S 1K-1/10W F
R807	87-022-345-080		C-RES,S 1.2K-1/10W F
R811	83-212-859-080		C-RES,S 1.8K-1/10W F
R891	83-212-858-080		C-RES,1.5K-1/10W F
R892	87-022-198-080		C-RES,S680 1/10WF
R893	87-022-360-080		C-RES,S 39K-1/10WF
S801	87-A90-095-080		SW,TACT EVQ11G04M
S802	87-A90-095-080		SW,TACT EVQ11G04M
S803	87-A90-095-080		SW,TACT EVQ11G04M
S804	87-A90-095-080		SW,TACT EVQ11G04M
S805	87-A90-095-080		SW,TACT EVQ11G04M
S806	87-A90-095-080		SW,TACT EVQ11G04M
S807	87-A90-095-080		SW,TACT EVQ11G04M
S808	87-A90-095-080		SW,TACT EVQ11G04M
S809	87-A90-095-080		SW,TACT EVQ11G04M
S810	87-A90-095-080		SW,TACT EVQ11G04M
S813	8A-CJ4-217-010		PLATE,OPE 2B
S814	8A-CJ4-217-010		PLATE,OPE 2B
S815	8A-CJ4-216-010		PLATE,OPE 2A
FACE-C C.B			
C825	87-010-197-080		CAP, CHIP 0.01 DM

ELECTRICAL MAIN PARTS LIST - 6/7

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C851	87-010-197-080		CAP, CHIP 0.01 DM
C852	87-010-197-080		CAP, CHIP 0.01 DM
CN802	87-A60-622-010		CONN,5P V 2MM JMT
R861	87-022-343-080		C-RES,S 820-1/10W F
R862	83-212-859-080		C-RES,S 1.8K-1/10W F
R863	87-022-348-080		C-RES,S 2.2K-1/10W F
R864	87-022-349-080		C-RES,S 2.7K-1/10W F
R865	83-212-860-080		C-RES,3.9K-1/10W F
S816	8A-CJ4-217-010		PLATE,OPE 2B
S817	8A-CJ4-217-010		PLATE,OPE 2B
S851	87-A91-698-010		SW,RTRY EC12E12403
S861	87-A90-095-080		SW,TACT EVQ11G04M
S862	87-A90-095-080		SW,TACT EVQ11G04M
S863	87-A90-095-080		SW,TACT EVQ11G04M
S864	87-A90-095-080		SW,TACT EVQ11G04M
S865	87-A90-095-080		SW,TACT EVQ11G04M
SW-1 C.B			
C901	87-010-264-040		CAP,E 100-10 5L
C902	87-010-264-040		CAP,E 100-10 5L
CN303	87-A60-672-010		CONN,8P H 2MM JMT
CNA901	8A-CJ4-646-010		CONN ASSY,2P V SW-2
S902	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLBO
S903	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLBO
S904	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLBO
SW-2 C.B			
S901	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLBO
PT1 C.B			
C1	87-010-387-080		CAP,E 470-25 SME
⚠C3	87-A10-479-080		CAP,CER 2200P-250 M E KH
⚠C4	87-A10-479-080		CAP,CER 2200P-250 M E KH
C5	87-010-403-080		CAP, ELECT 3.3-50V
CN1	87-A60-620-010		CONN,3P V 2MM JMT
⚠PT1	8A-CJ4-606-010		PT,H ACJ-4
⚠PT2	8A-NF8-663-010		PT,SUB ANF-8 (H)KAMI
⚠RY2	87-A91-339-010		RELAY,AC DC12V G5PA-2
⚠S1	87-A90-234-010		SW,SL 1-2-2 SWS2201
⚠T1	87-A60-317-010		TERMINAL, 1P MSC
⚠T2	87-A60-317-010		TERMINAL, 1P MSC
PT2 C.B			
H51	87-A90-511-010		HLDR,WIRE 2.5-10P
⚠PR51	87-A90-094-080		PROTECTOR,4A 491SERIES 60V
⚠PR52	87-A90-094-080		PROTECTOR,4A 491SERIES 60V
⚠PR53	87-026-681-080		PROTECTOR,5A 60V 491
⚠PR54	87-026-681-080		PROTECTOR,5A 60V 491
⚠PR55	87-026-681-080		PROTECTOR,5A 60V 491
⚠PR56	87-026-681-080		PROTECTOR,5A 60V 491
DECK C.B			
CN1	87-009-352-010		CONN,9P PH H
CRD1	82-ZM1-625-010		RBN-CORD,4P-55
M1	87-045-347-010		MOT,SHU2L 70
SFR1	87-024-581-010		SFR,3.3K DIA6V K0A
SOL1	82-ZM3-628-010		SOL ASSY,23 SO
SW2	87-036-110-010		PUSH SWITCH
SW3	87-036-110-010		PUSH SWITCH
SW4	87-036-110-010		PUSH SWITCH
SW5	87-036-110-010		PUSH SWITCH
SW6	87-A90-248-010		SW,MICRO ESE11SH2CXQ
RELAY C.B			
CON301	8A-CJ4-647-010		CONN ASSY,7P V RPH SHILD
CD LOAD C.B			
CN2	87-099-210-010		CONN,5P 6216H
M1	87-045-305-010		MOTOR,RF-500TB DC-5V(2MA)
SW1	87-036-110-010		PUSH SWITCH
SW2	87-036-110-010		PUSH SWITCH
CD DRIVE C.B			
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW-17310MVP0
VIDEO OUT C.B			
C802	87-010-196-080		CHIP CAPACITOR,0.1-25
CNA801	8A-CB4-601-010		CONN ASSY,6P V
J801	87-009-502-010		JACK,PIN 1P YEL W/O SW
L803	87-005-786-080		F-BEAD,-3.4-7.5 BL03RN2-R62T2
L804	87-005-786-080		F-BEAD,-3.4-7.5 BL03RN2-R62T2
S801	87-A90-300-010		SW,SL SSAA 1-3 B
TUNER C.B			
C0701	87-010-381-080		CAP,E 330-16 M SME
C0702	87-010-404-080		CAP,E 4.7-50 M 11L SME
C0703	87-012-286-080		C-CAP,U 0.01-25 K B
C0704	87-012-286-080		C-CAP,U 0.01-25 K B
C0705	87-A10-592-080		C-CAP,S 0.015-50 J B
C0706	87-A10-592-080		C-CAP,S 0.015-50 J B
C0709	87-012-195-080		C-CAP,U 100P-50 J CH
C0711	87-010-260-080		CAP,E 47-25 M 11L SME
C0712	87-010-831-080		C-CAP,U 0.1-16 Z F
C0714	87-012-286-080		C-CAP,U 0.01-25 K B
C0717	87-012-286-080		C-CAP,U 0.01-25 K B
C0719	87-012-286-080		C-CAP,U 0.01-25 K B
C0720	87-012-195-080		C-CAP,U 100P-50 J CH
C0721	87-012-176-080		C-CAP,U 15P-50 J CH
C0722	87-012-176-080		C-CAP,U 15P-50 J CH
C0723	87-012-274-080		C-CAP,U 1000P-50 K B
C0725	87-012-274-080		C-CAP,U 1000P-50 K B
C0727	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
C0728	87-010-248-080		CAP,E 220-10 M 11L SME
C0729	87-012-274-080		C-CAP,U 1000P-50 K B
C0731	87-012-286-080		C-CAP,U 0.01-25 K B
C0733	87-010-987-080		C-CAP,S 1500P-50 J CH
C0734	87-010-987-080		C-CAP,S 1500P-50 J CH
C0735	87-010-987-080		C-CAP,S 1500P-50 J CH
C0736	87-010-987-080		C-CAP,S 1500P-50 J CH
C0737	87-A10-592-080		C-CAP,S 0.015-50 J B
C0738	87-A10-592-080		C-CAP,S 0.015-50 J B
C0751	87-010-220-080		C-CAP,S 0.018-25 K B
C0752	87-010-220-080		C-CAP,S 0.018-25 K B
C0756	87-012-286-080		C-CAP,U 0.01-25 K B
C0757	87-012-188-080		C-CAP,U 47P-50 J CH
C0758	87-012-167-080		C-CAP,U 5P-50 C CH
C0763	87-010-829-080		C-CAP,U 0.047-16 Z F
C0764	87-012-337-080		C-CAP,U 56P-50 J CH GRM
C0765	87-012-286-080		C-CAP,U 0.01-25 K B
C0768	87-012-286-080		C-CAP,U 0.01-25 K B
C0769	87-010-260-080		CAP,E 47-25 M 11L SME
C0770	87-010-829-080		C-CAP,U 0.047-16 Z F
C0771	87-010-383-080		CAP,E 33-25 M 11L SME
C0772	87-010-829-080		C-CAP,U 0.047-16 Z F
C0773	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
C0774	87-010-263-080		CAP,E 100-10 M 11L SME
C0775	87-010-404-080		CAP,E 4.7-50 M 11L SME
C0776	87-012-286-080		C-CAP,U 0.01-25 K B

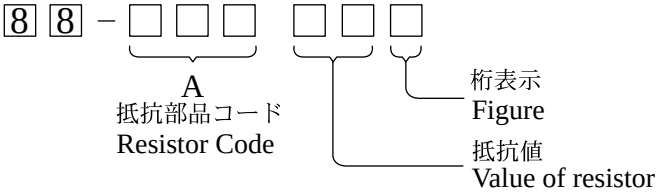
ELECTRICAL MAIN PARTS LIST - 7/7

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C0777	87-010-400-080		CAP,E 0.47-50 M 11L SME
C0778	87-010-401-080		CAP,E 1-50 M 11L SME
C0779	87-010-401-080		CAP,E 1-50 M 11L SME
C0780	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
C0781	87-010-405-080		CAP,E 10-50 M 11L SME
C0782	87-010-405-080		CAP,E 10-50 M 11L SME
C0783	87-012-286-080		C-CAP,U 0.01-25 K B
C0784	87-012-286-080		C-CAP,U 0.01-25 K B
C0785	87-010-401-080		CAP,E 1-50 M 11L SME
C0786	87-010-401-080		CAP,E 1-50 M 11L SME
C0789	87-012-275-080		C-CAP,U 1200P-50 K B GRM
C0790	87-012-275-080		C-CAP,U 1200P-50 K B GRM
C0791	87-010-405-080		CAP,E 10-50 M 11L SME
C0793	87-012-273-080		C-CAP,U 820P-50 K B
C0794	87-010-406-080		CAP,E 22-50 M 11L SME
C0795	87-010-596-080		C-CAP,S 0.047-16 K R C2012
C0796	87-010-403-080		CAP,E 3.3-50 M 11L SME
C0799	87-010-829-080		C-CAP,U 0.047-16 Z F
C0812	87-012-286-080		C-CAP,U 0.01-25 K B
C0820	87-010-260-080		CAP,E 47-25 M 11L SME
C0821	87-012-286-080		C-CAP,U 0.01-25 K B
C0822	87-012-286-080		C-CAP,U 0.01-25 K B
C0823	87-012-286-080		C-CAP,U 0.01-25 K B
C0828	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
C0829	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
C0959	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
C0960	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
C0961	87-012-170-080		C-CAP,U 8P-50 D CH
C0963	87-010-196-080		C-CAP,S 0.1-25 Z F C2012
CF0801	87-008-261-010		FLTR,CF SFE10.7MA5
CF0802	87-008-261-010		FLTR,CF SFE10.7MA5
CN0701	87-A60-700-010		CONN,13P H GRY TUC-P13X-C1
FFE0801	A8-8ZA-194-030		8ZA-1 FEMUNM
J0801	87-A60-702-010		TERMINAL,ANT 4P CJ-9036
L0771	87-A50-266-010		COIL,FM DET-2N(TOK)
L0772	87-A91-110-010		FLTR,PCFJZH-450 (TOK)
L0981	8Z-ZA1-667-010		COIL,AM PACK 4F(TOK)
X0721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

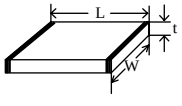
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

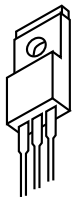


チップ抵抗
Chip resistor

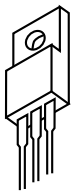
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

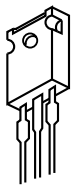
CC5551
CSA1585
CSB1058
CSC4115
CSD655
KTA1266
KTC3198



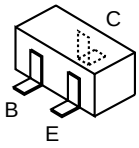
2SB1370



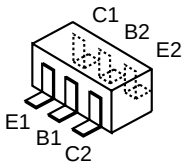
2SB1625
2SD2494



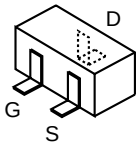
2SA1357



2SA1162
2SA1235
2SC2712
2SC2714
2SC3052
2SD1306
CMBT5401
CMBT5551
DTA114EK
DTA123EK
DTA123JK
DTA124XK
DTA144TK
DTC114EK
DTC114EK
DTC124XK
KTA1298
RT1N141C
RT1N144C
RT1P141C
RT1P144C
RT1P441C

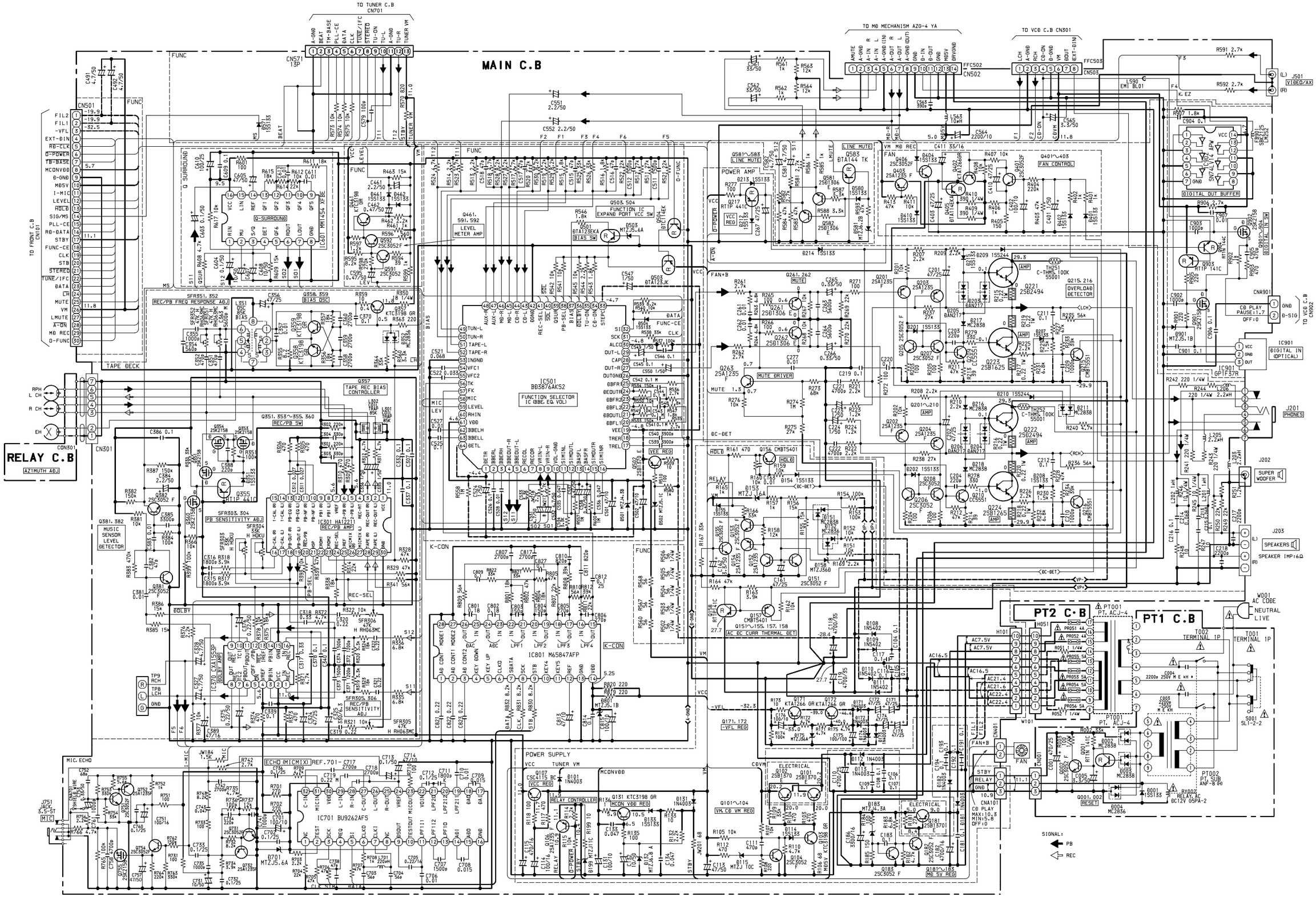


HN1C03



2SK2158

SCHEMATIC DIAGRAM - 1 (MAIN SECTION)



MAIN C.B

TO TUNER C.B CON701 → CN571

TO MD MECHANISM AZG-4YA → FFC502 (14 1) → CN502

TO VCD C.B CN301 → FFC503 (8 1) → CN503

TO RELAY C.B CON301 → CN301

TO FRONT C.B CN101

J501 VIDEO/AUX — R, L

TO VCD C.B CN902 — 1 <BLK>, 2 <WHT>

IC901 DIGITAL IN (OPTICAL)

TO PT1 C.B CN001 — 1 <RED>, 3 <BLK>, <BLK>

J202 SUPER WOOFER

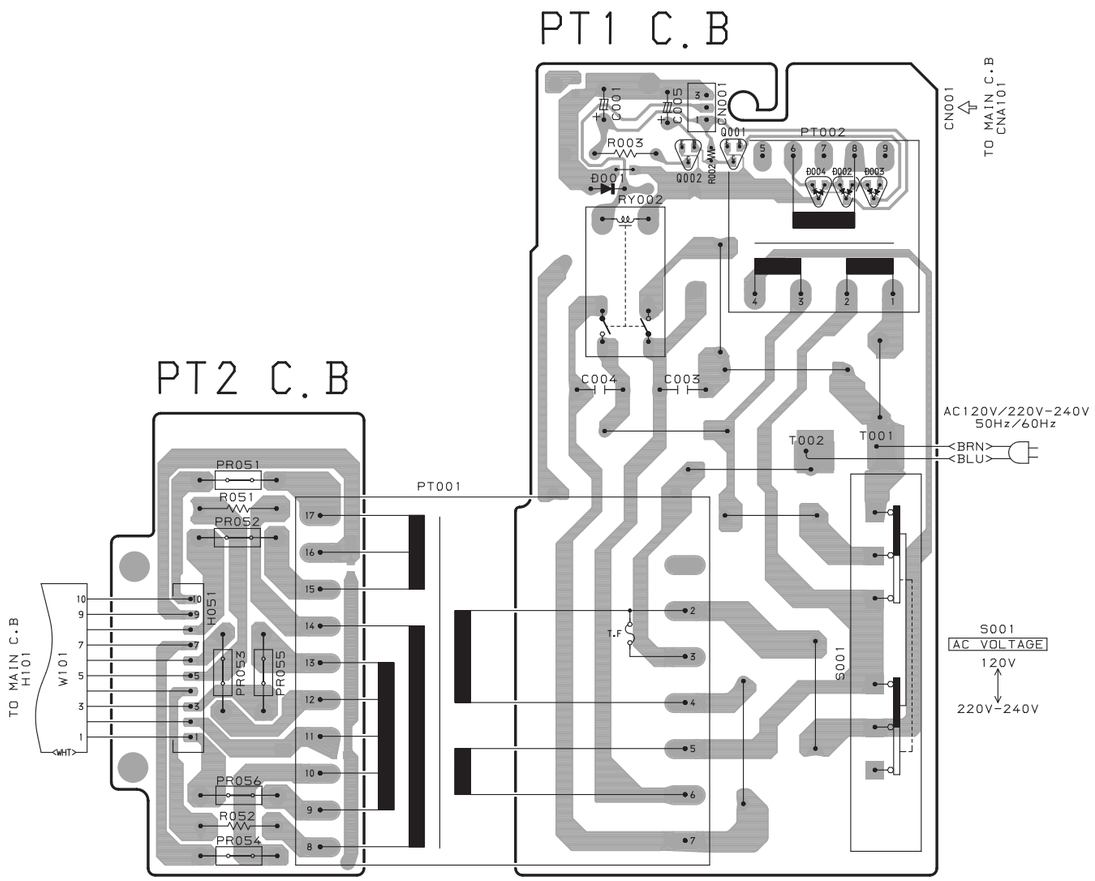
J203 SPEAKERS — SPEALER IMP:6Ω — R, L

TO PT2 C.B H05I — <BLK> — W101

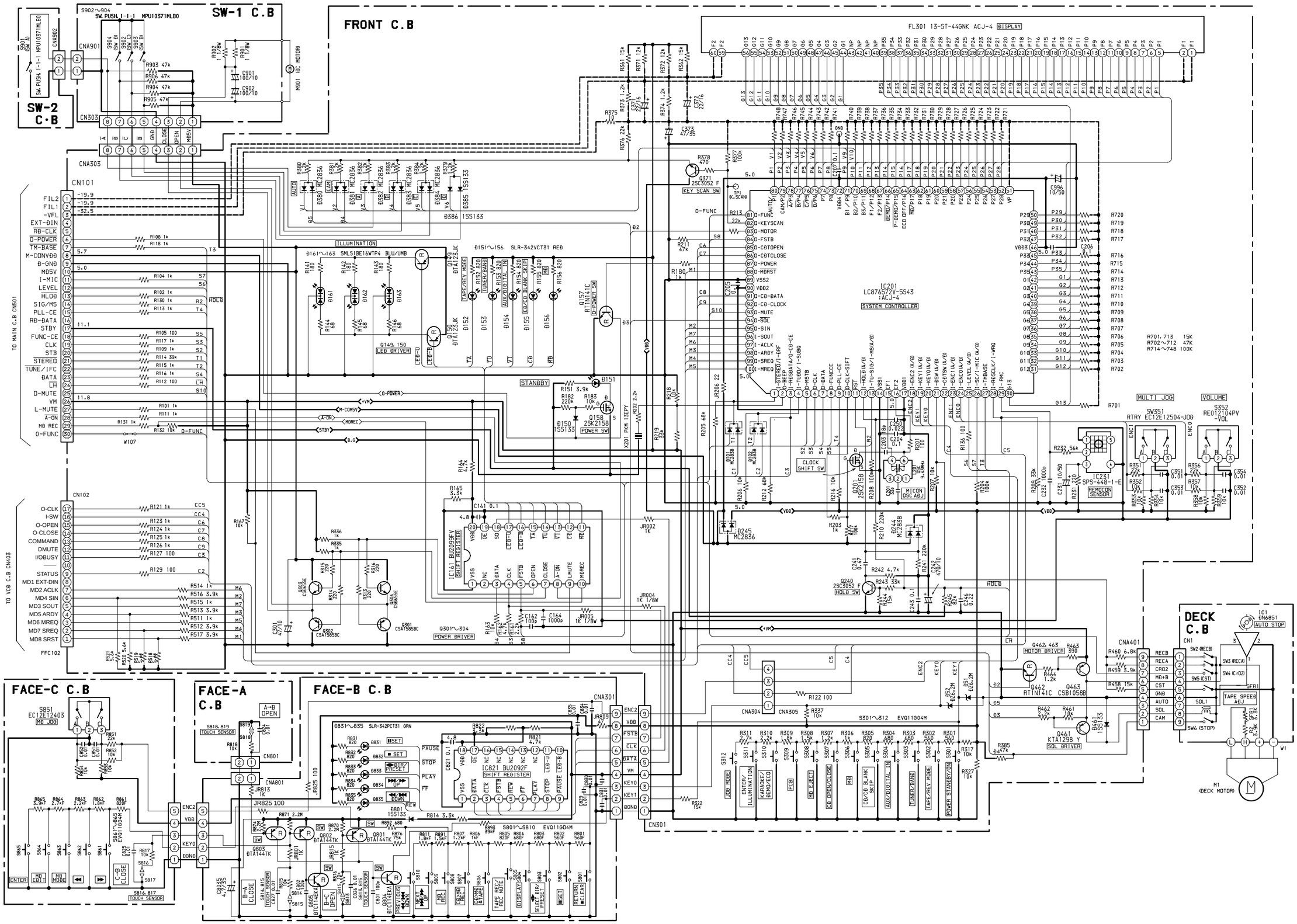
FAN — <BLK>, <RED>

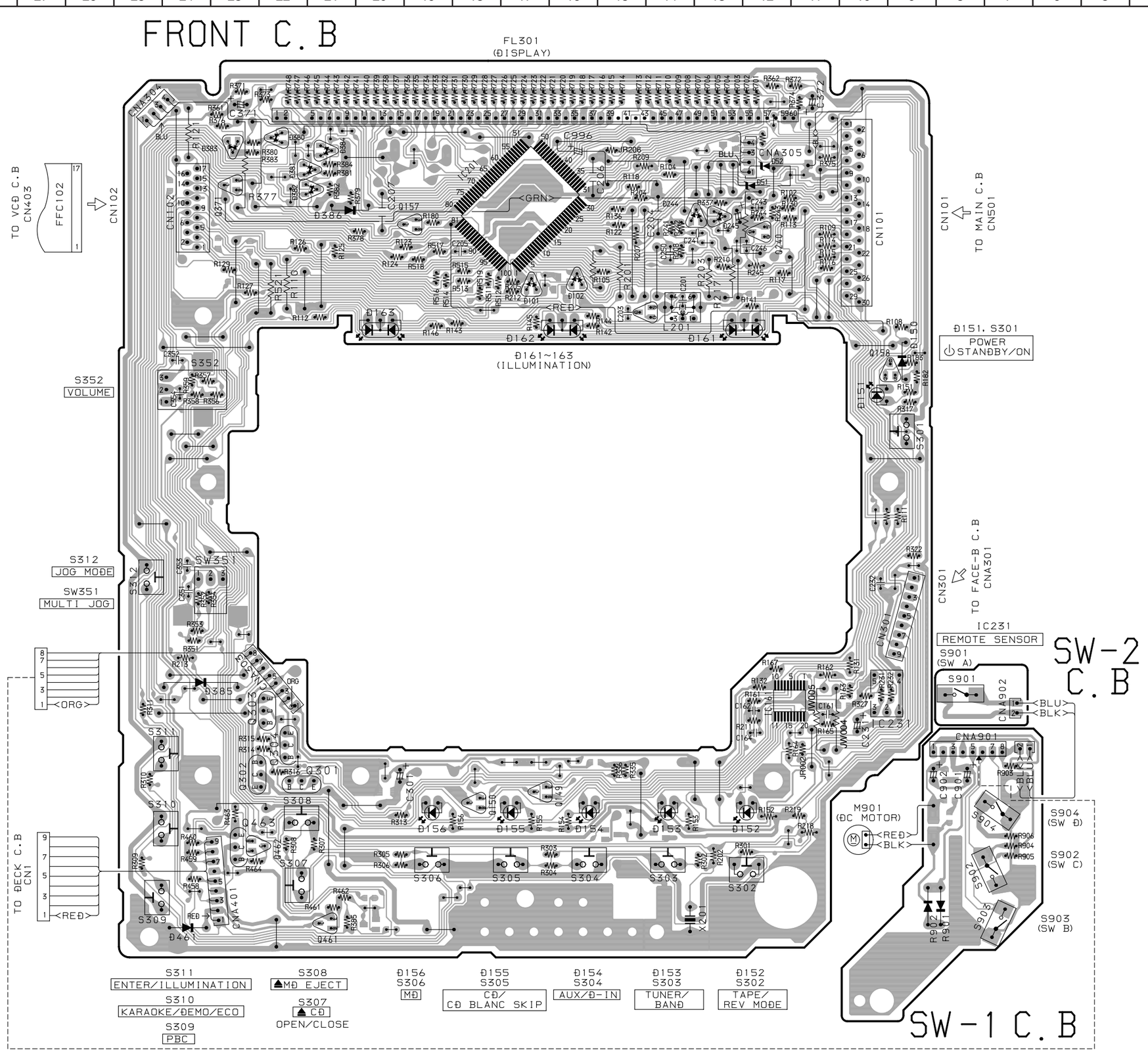
J751 MIC

J201 PHONES


PT1 C.B
CN001
TO MAIN C.B
CNA101
C001
C005
LCN001
Q001
Q002
PT002
D004
D002
D003
D001
RY002
R003
C004
C003
T002
T001
AC120V/220V-240V
50Hz/60Hz
BRN
BLU
PT2 C.B
PT001
PR051
R051
PR052
H051
PR053
PR055
PR056
R052
PR054
T.F
S001
S001
AC VOLTAGE
120V
220V-240V
TO MAIN C.B
H101
W101
WHT

SCHEMATIC DIAGRAM - 2 (FRONT SECTION)

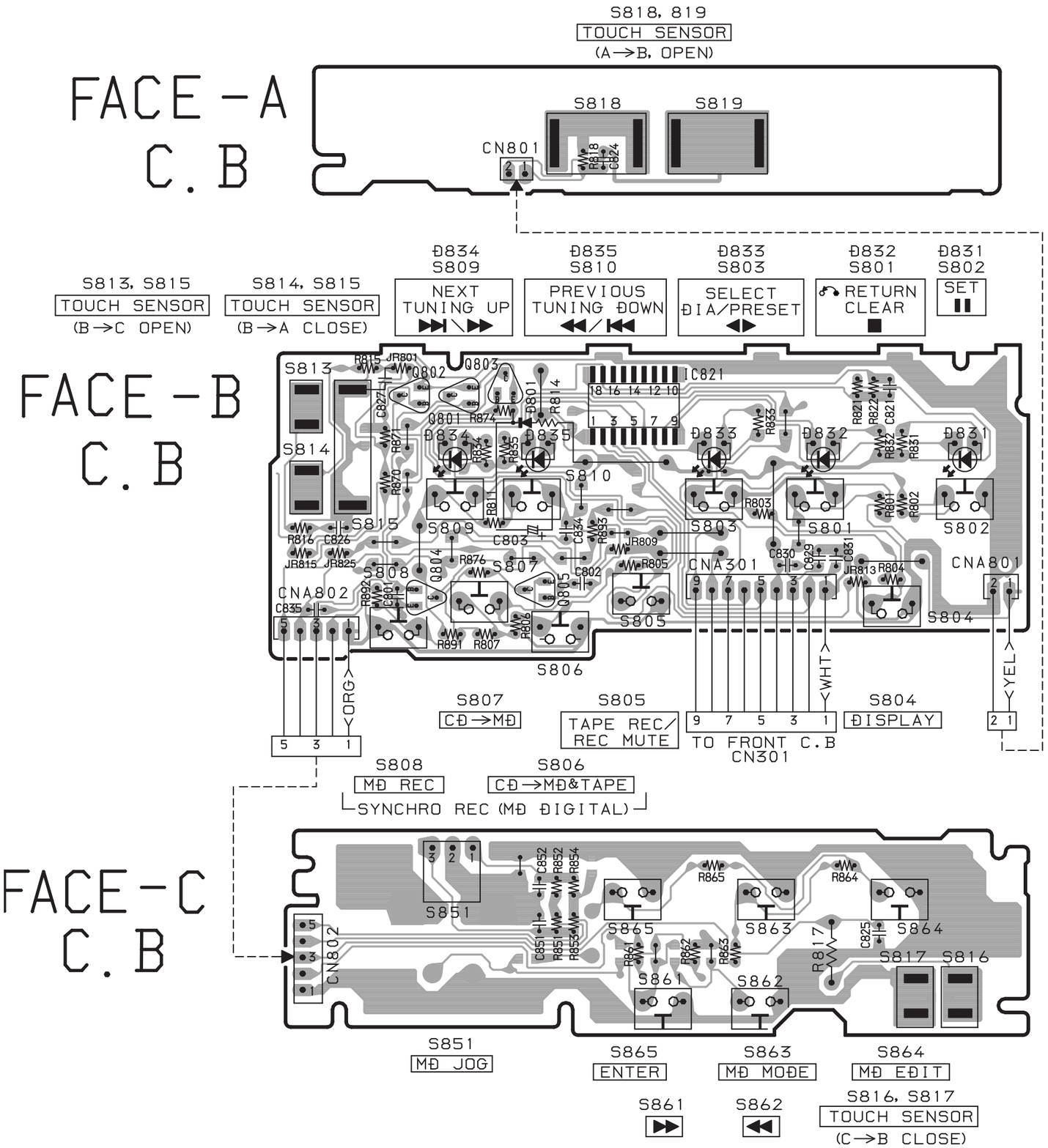



FRONT C.B
FL301
(DISPLAY)
TO VCD C.B
CN403
FFC102
CN102
CN101
TO MAIN C.B
CN501
D151, S301
POWER
STANDBY/ON
S352
VOLUME
D161~163
(ILLUMINATION)
S312
JOG MODE
SW351
MULTI JOG
TO DECK C.B
CN1
CN301
TO FACE-B C.B
CNA301
IC231
REMOTE SENSOR
S901
(SW A)
SW-2
C.B
M901
(DC MOTOR)
S904
(SW D)
S902
(SW C)
S903
(SW B)
S311
ENTER/ILLUMINATION
S310
KARAOKE/DEMO/ECO
S309
PBC
S308
MD EJECT
S307
CD
OPEN/CLOSE
D156
S306
MD
D155
S305
CD/
CD BLANC SKIP
D154
S304
AUX/D-IN
D153
S303
TUNER/
BAND
D152
S302
TAPE/
REV MODE
SW-1 C.B

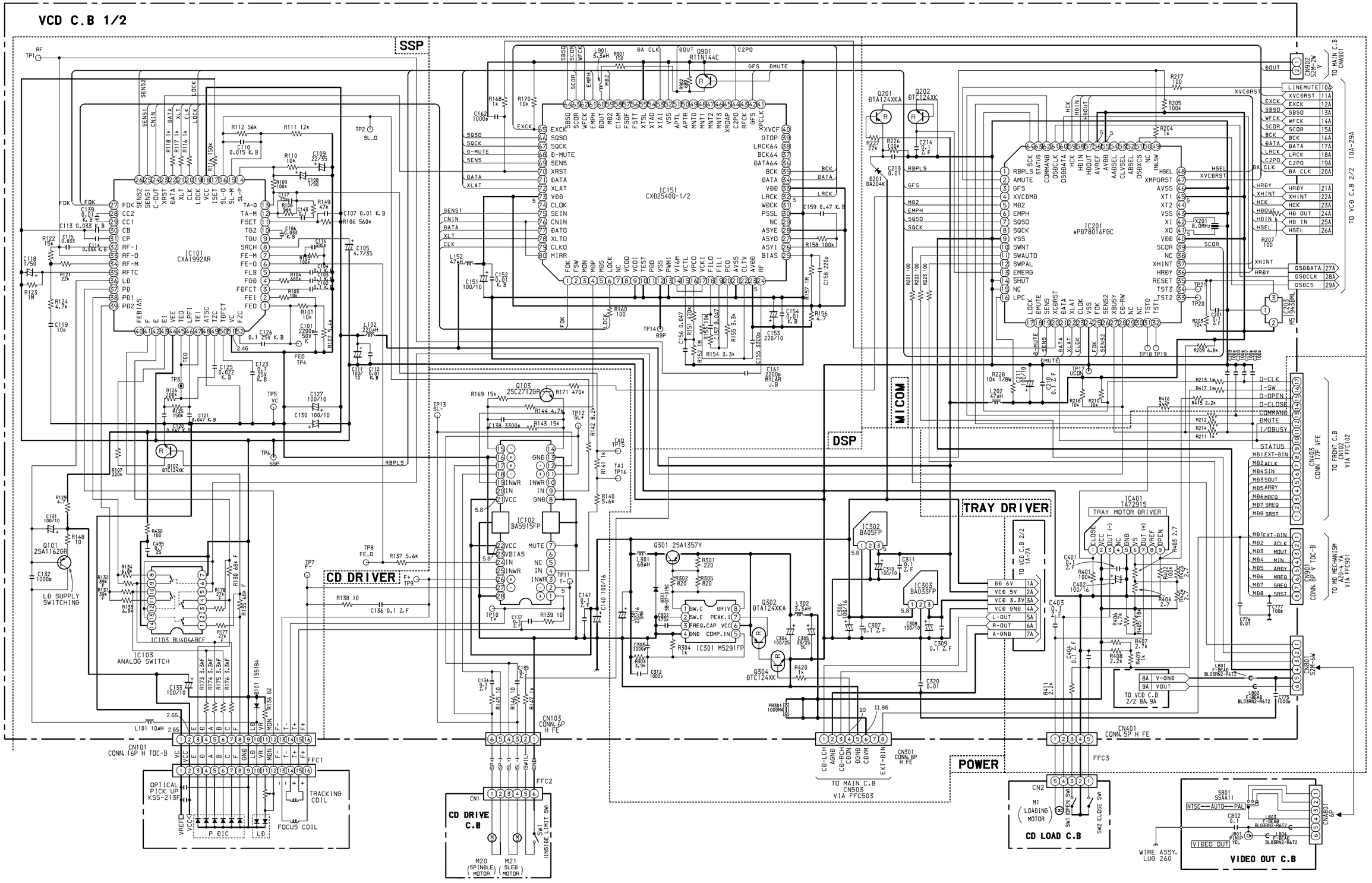
FACE-A
C.B

FACE-B
C.B

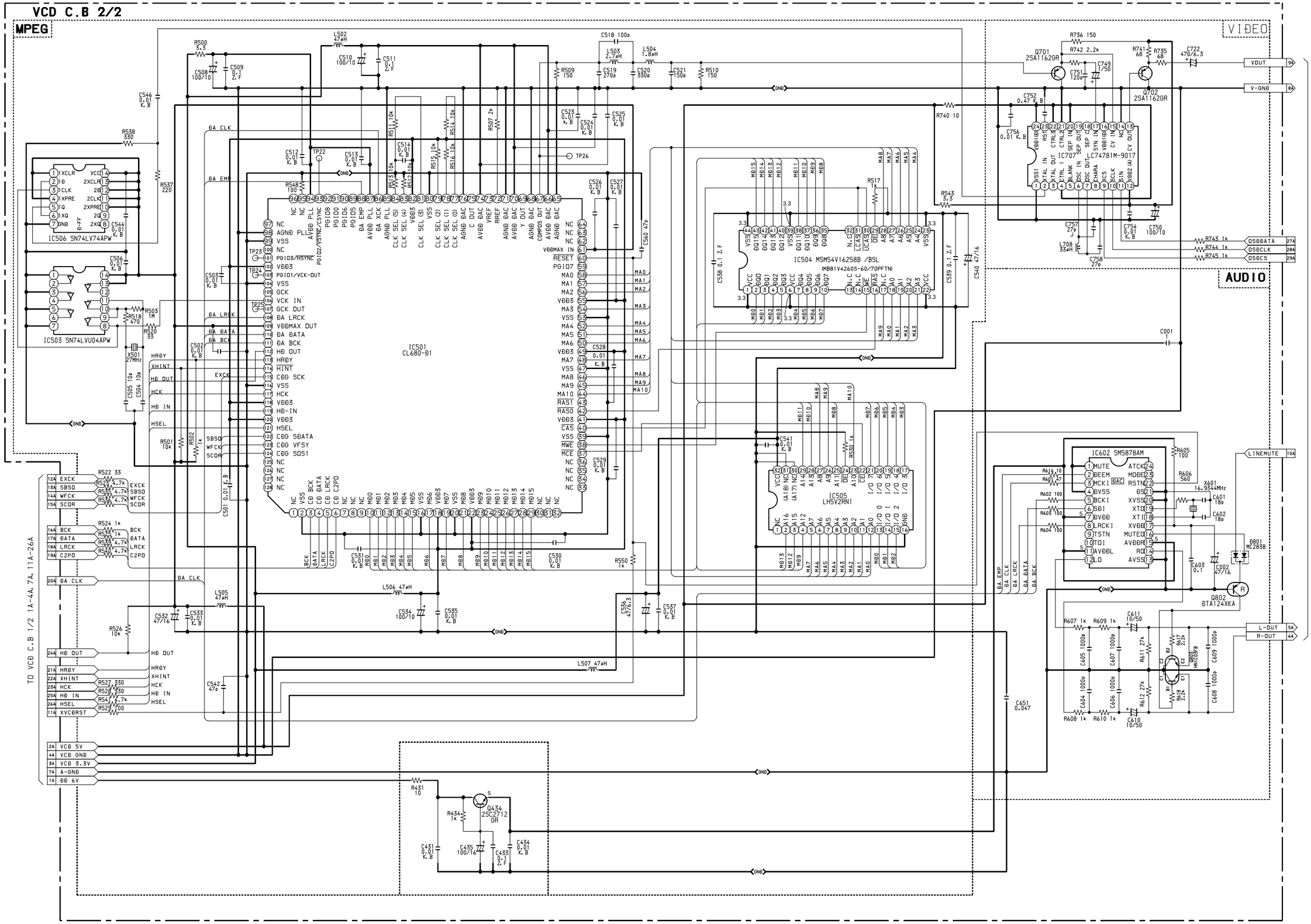
FACE-C
C.B



SCHEMATIC DIAGRAM - 3 (VCD-1/2 SECTION)



SCHEMATIC DIAGRAM - 4 (VCD-2/2 SECTION)



VCD C.B

VCD C.B

TO FRONT C.B CN102

FFC102

FFC901

TO MD MECHANISM AZG-4YA

TO MAIN C.B CN901

TO MAIN C.B CN503

FFC503

VIDEO OUT C.B

VIDEO OUT C.B

TO CHASSIS

NTSC ↔ AUTO ↔ PAL

J801 VIDEO OUT

CD DRIVE C.B

PICK UP ASSY KSS-213F

FFC1

CD LOAD C.B

SW1 (OPEN)

SW2 (CLOSE)

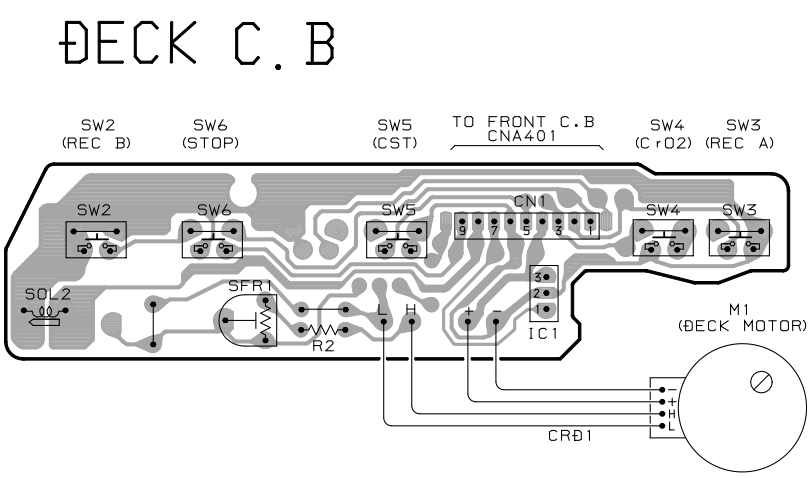
(LOADING MOTOR)

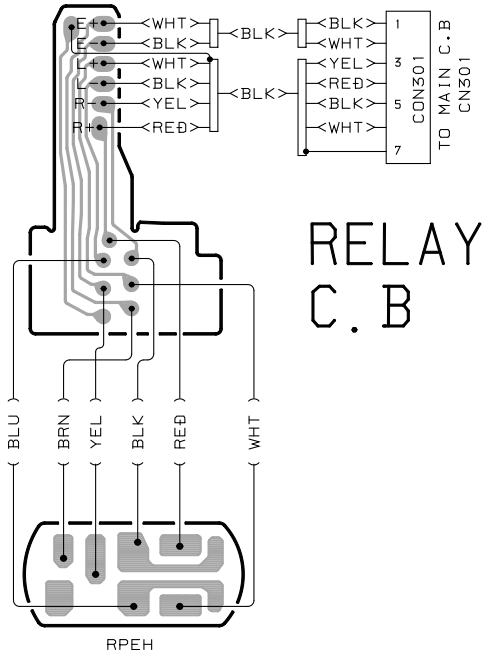
FFC3

M21 (SLED MOTOR)

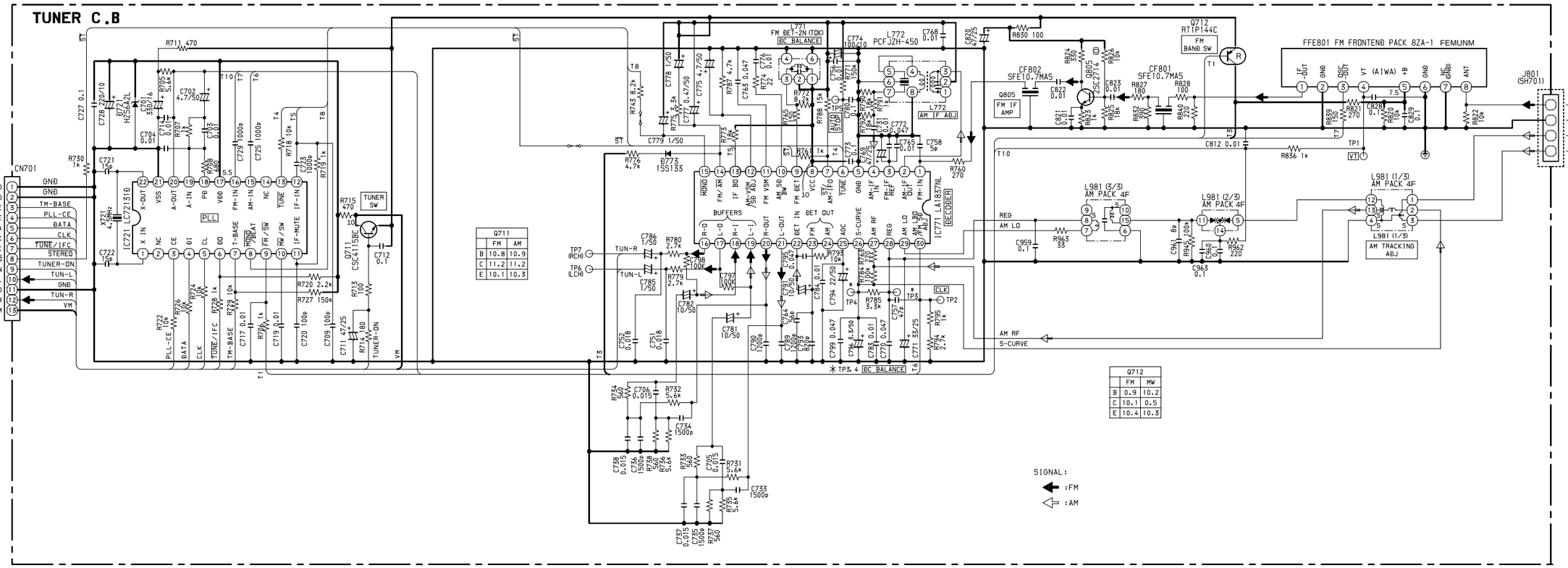
M20 (SPINDLE MOTOR)

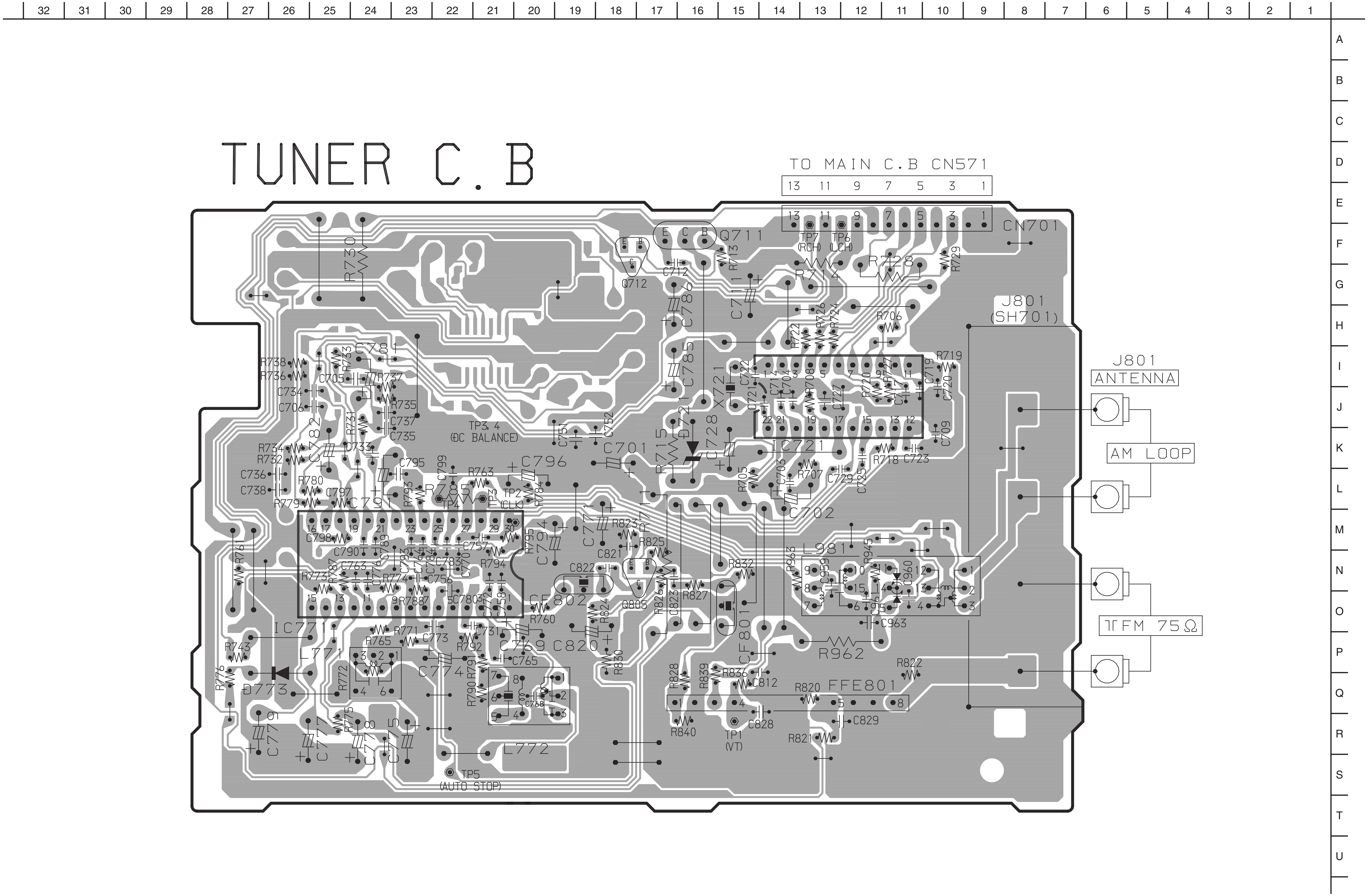
SW1 INSIDE LIMIT SWITCH


ĐECK C.B
SW2 (REC B)
SW6 (STOP)
SW5 (CST)
TO FRONT C.B CNA401
SW4 (C rO2)
SW3 (REC A)
SW2
SW6
SW5
CN1
SW4
SW3
SOL2
SFR1
R2
L
H
+
-
IC1
M1
(ĐECK MOTOR)
CRĐ1


E+
E-
L+
L-
R-
R+
WHT
BLK
BLK
WHT
BLK
YEL
REĐ
BLK
BLK
YEL
REĐ
BLK
WHT
CON301
TO MAIN C.B CN301
RELAY C.B
BLU
BRN
YEL
BLK
REĐ
WHT
RPEH

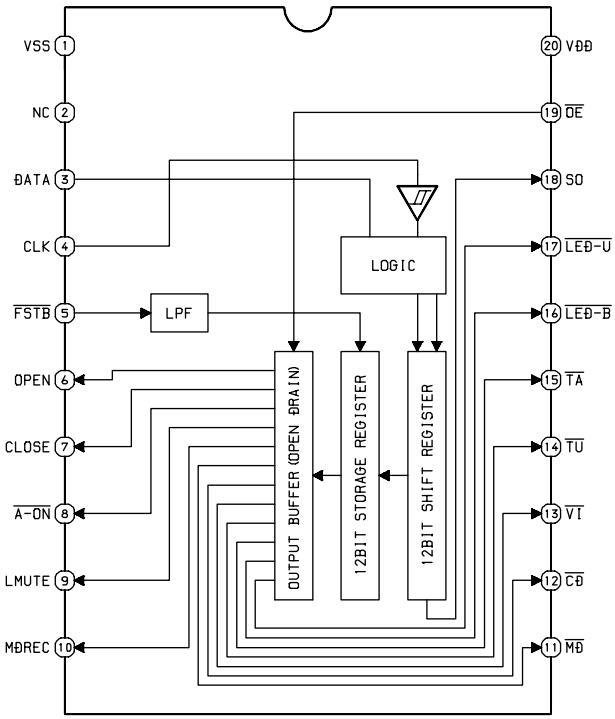
SCHEMATIC DIAGRAM - 5 (TUNER SECTION)



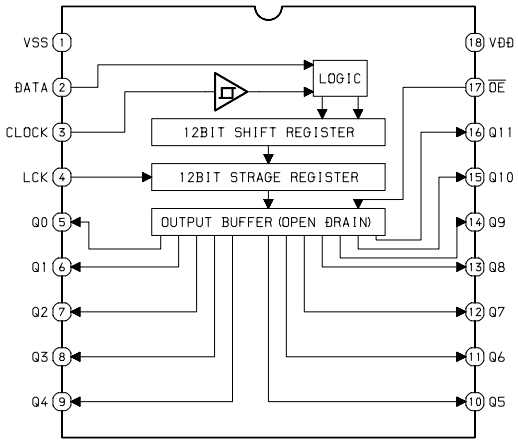

TUNER C.B
TO MAIN C.B CN571
13 11 9 7 5 3 1
CN701
J801 (SH701)
J801 ANTENNA
AM LOOP
FM 75Ω
IC721
IC771
FFE801
L981
TP3, 4 (DC BALANCE)
TP7 (RCH) TP6 (LCH)
TP2 (CLK)
TP5 (AUTO STOP)
TP1 (VT)

IC BLOCK DIAGRAM - 1/5

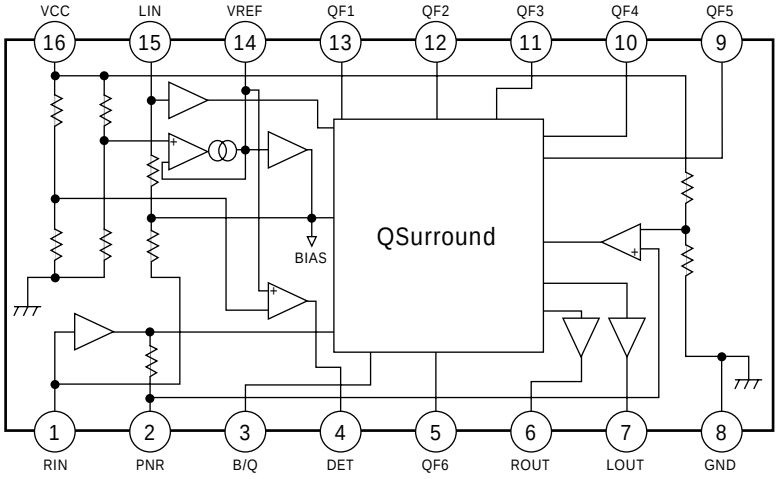
IC, BU2099FV



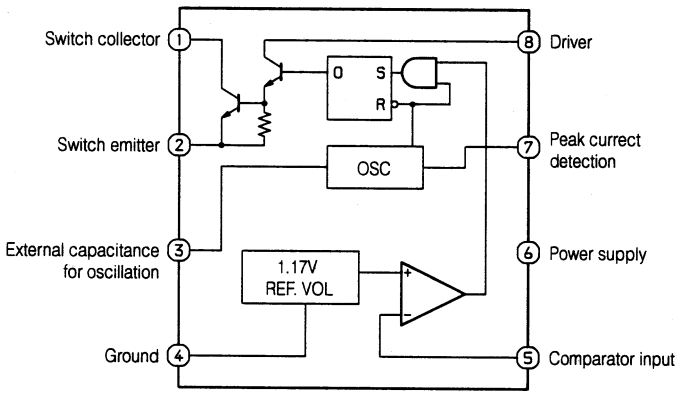
IC, BU2092F



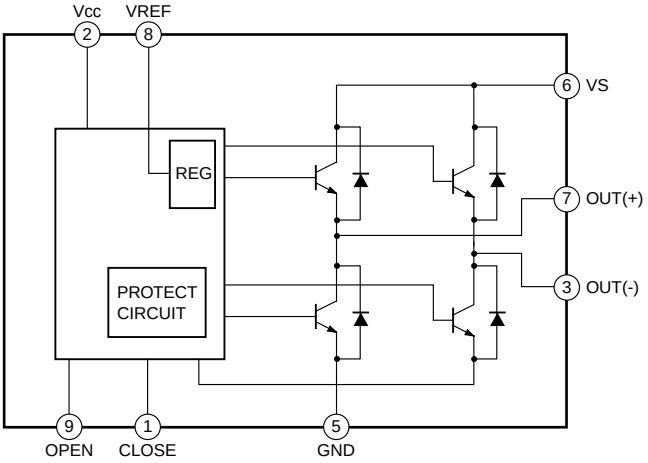
IC, MM1454XFBE



IC, M5291FP

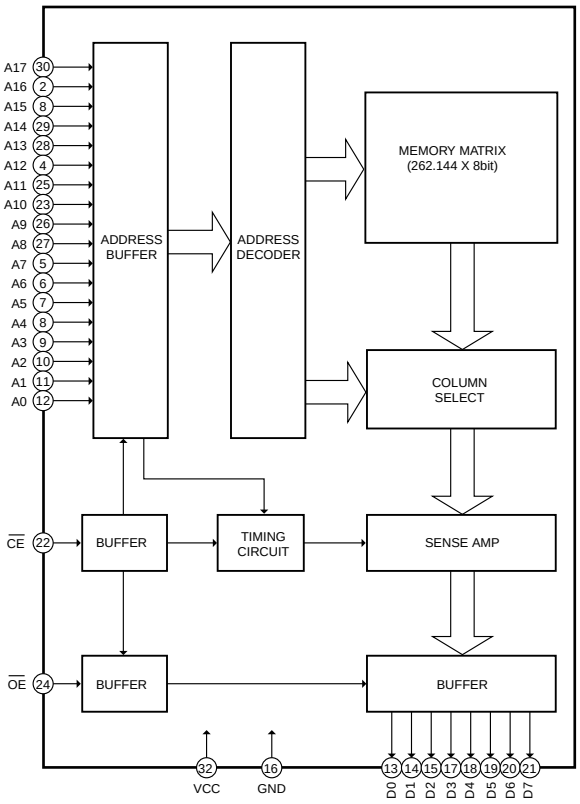


IC, TA7291S

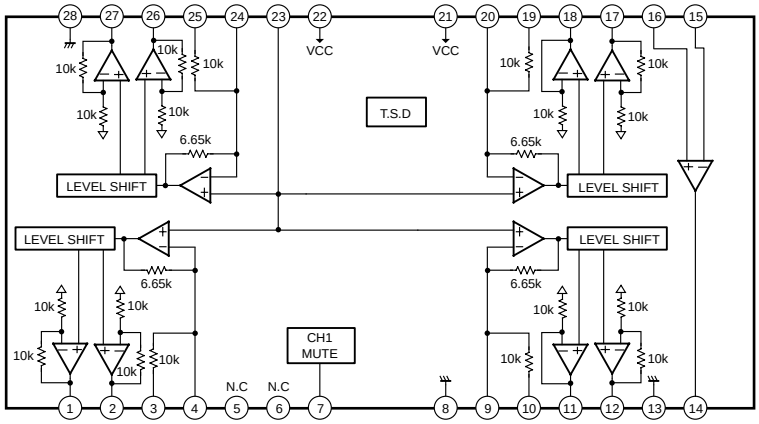


IC BLOCK DIAGRAM - 2/5

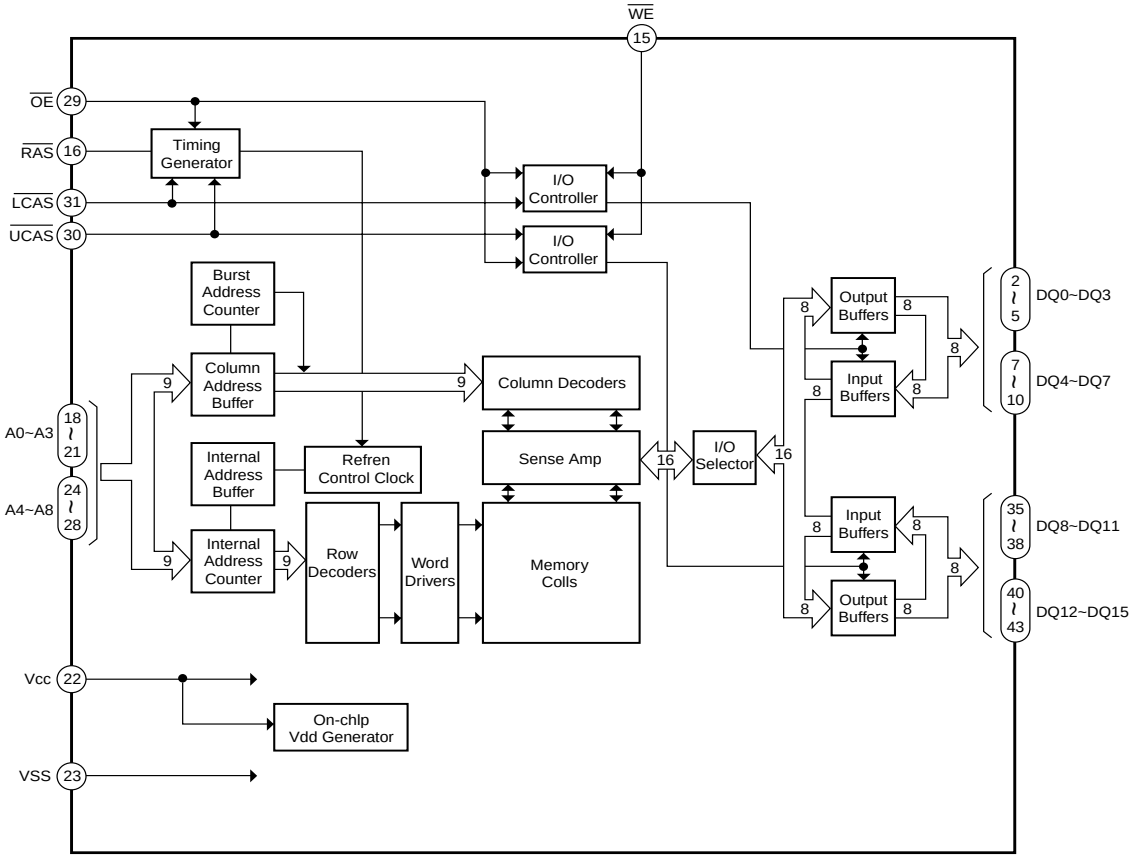
IC, LH5V2RN1



IC, BA5915FP

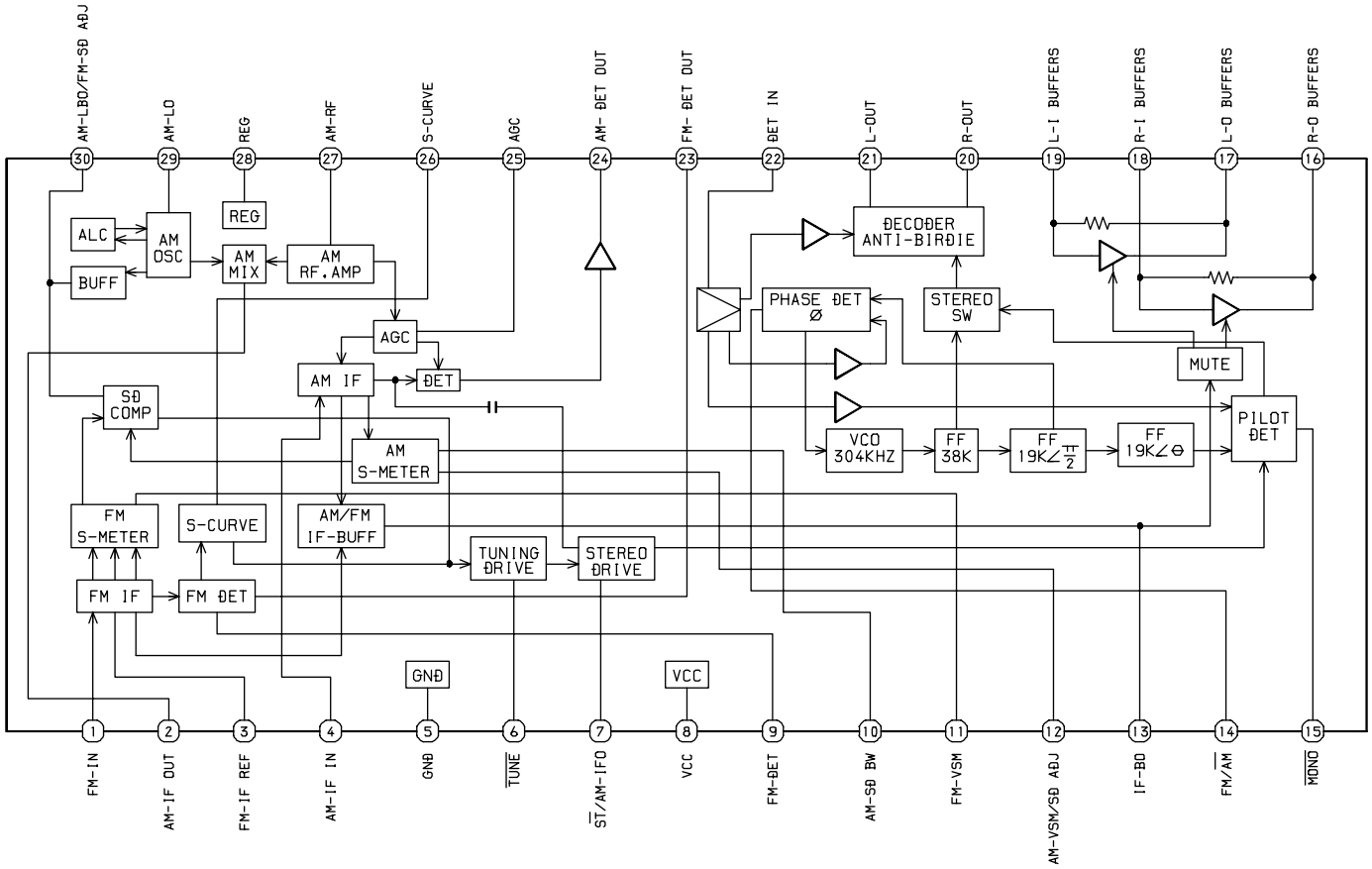


IC, MSM54V16258B/BSL

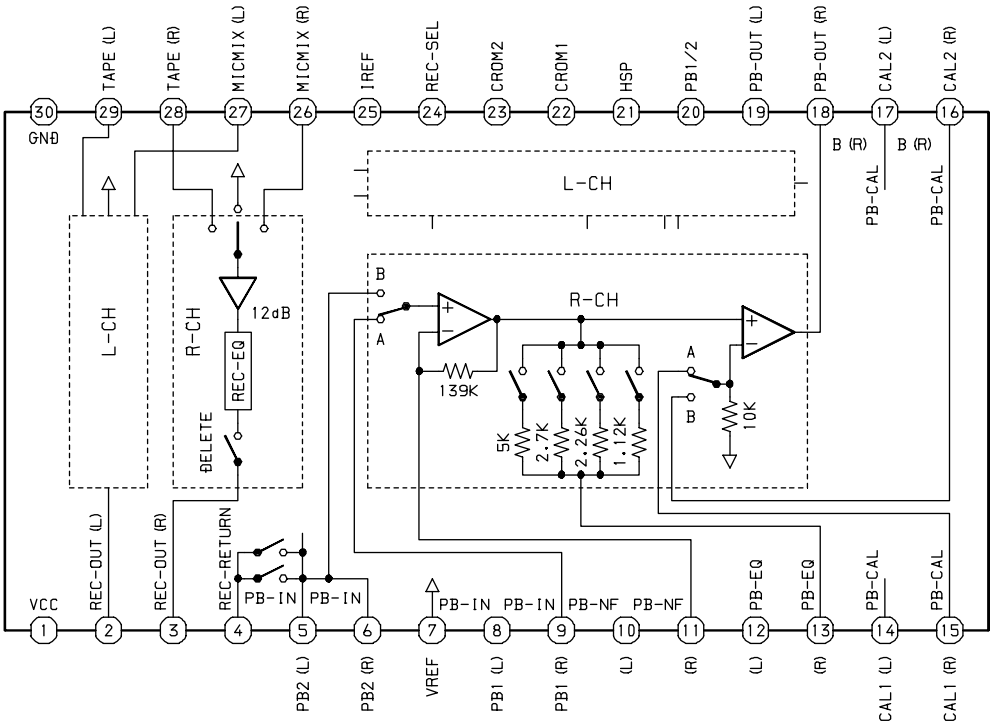


IC BLOCK DIAGRAM - 3/5

IC, LA1837NL

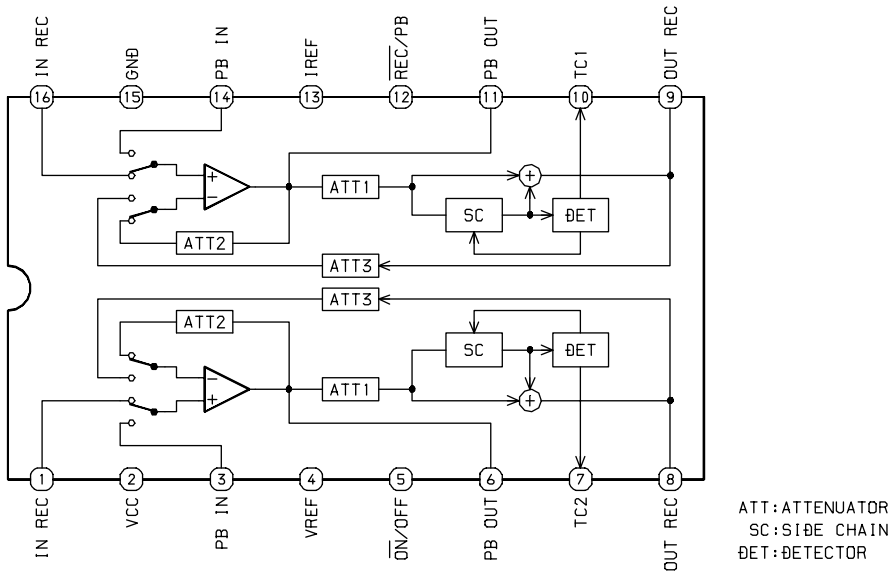


IC, HA12211

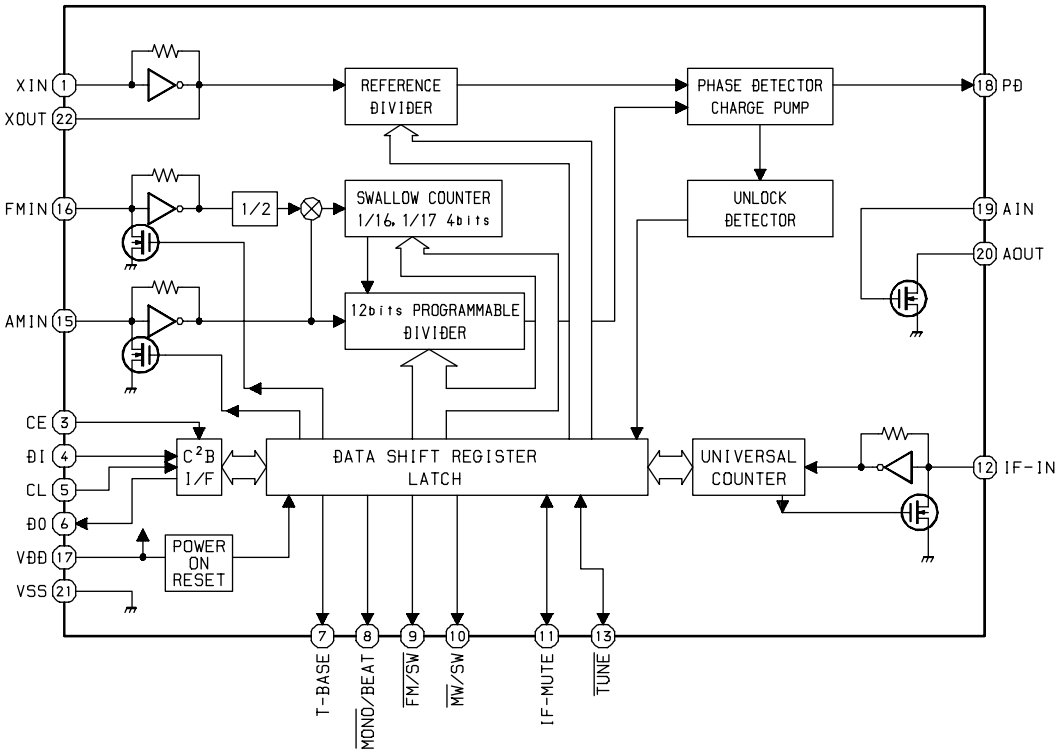


IC BLOCK DIAGRAM - 4/5

IC, CXA1553P

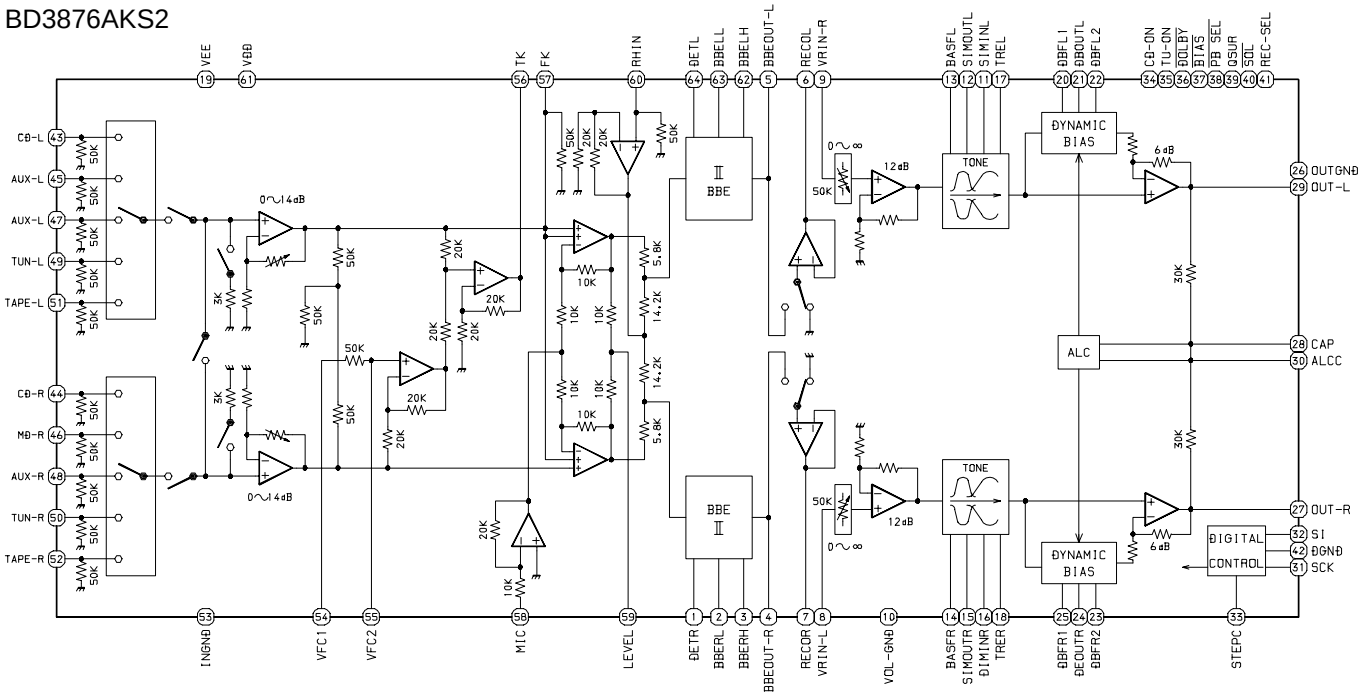


IC, LC72131D

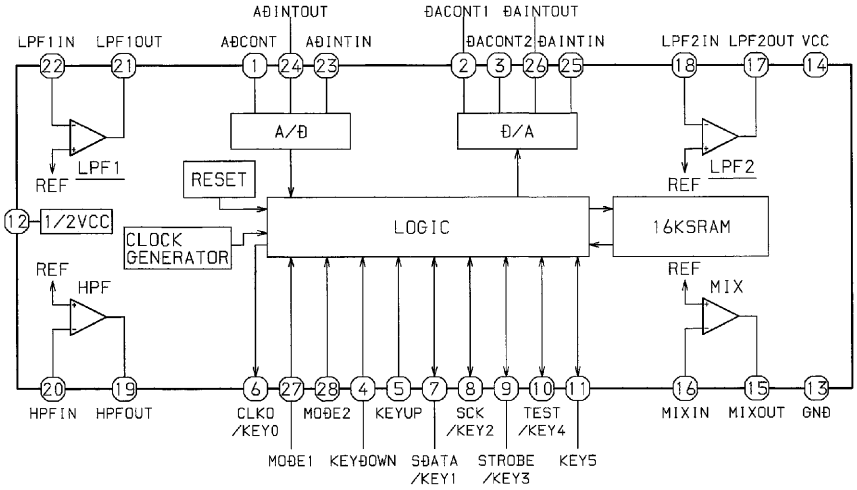


IC BLOCK DIAGRAM - 5/5

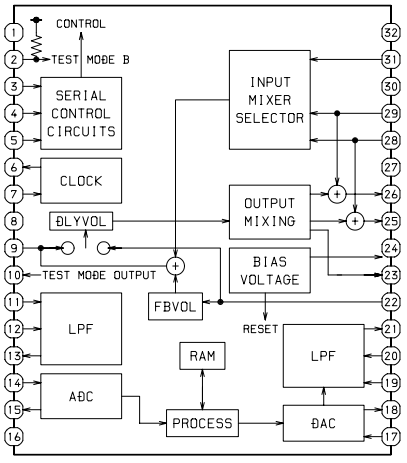
IC, BD3876AKS2



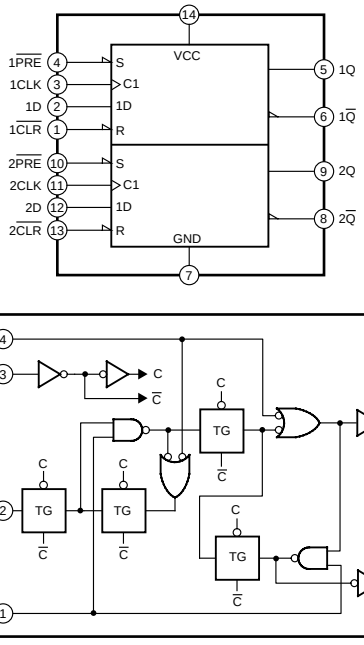
IC, M658474AFP



IC, BU9262AFS



IC, SN74LV74APW



IC DESCRIPTION - 1/7 (CXA1992AR)-1/2

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FEO	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TAM	I	Tracking amplifier inverted input.
13	TAO	O	Tracking drive output.
14	SLP	I	Sled amplifier non-inverted input.
15	SLM	I	Sled amplifier inverted input.
16	SLO	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	VCC	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (No pull-up resistance) (Connected to VC)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	COUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.
32	RFI	I	Input terminal by capacity combination of RF summing amplifier.
33	RFO	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.

Pin No.	Pin Name	I/O	Description
34	RFM	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF-M and RF-O terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38 ~ 39	PD1 ~ PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier. (Not used)
41 ~ 42	F ~ E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	–	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment) (Not used)
44	VEE	–	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC DESCRIPTION - 2/7 (LC876572V-5S43)-1/2

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{I-STEREO}}$/I-DRF	I	MONO/STE change
2	O-BEEP	O	Beep output for panel turn control
3	I-RDSDATA/O-CD-CE	I/O	RDS DATA/CD latch output
4	I-TUDO/I-SUBQ	I	Tuner ON/CD SUBQ data input
5	O-MSTB	O	Main IC control output
6	O-CLK	O	Clock output to TUNER PLL IC (LC72131D).
7	O-DATA	O	Data output to TUNER PLL IC (LC72131D).
8	O-FUNCCE	O	Function latch output
9	PLL CE	O	Tuner PLL latch output
10	$\overline{\text{O-CLK SHIFT}}$	O	Clock shift output for FM-BEAT.
11	$\overline{\text{RESET}}$	I	Micon reset (L = ON)
12	I-$\overline{\text{HOLD}}$ (A/D)	I	Power failure detection/HOLD input.
13	I-TU-SIG/I-MS(A/D)	I	Not used
14	VSS1	–	Ground
15	CF1	I	Crystal oscillator input for system clock (9.43MHz).
16	CF2	O	Crystal oscillator output for system clock (9.43MHz).
17	VDD1	–	Power supply (+5.6V).
18	I-ENC2 (A/D)	I	Encoder A/D level input 2.
19	I-KEY1 (A/D)	I	Tact key A/D level input 1.
20	I-KEY0 (A/D)	I	Tact key A/D level input 0.
21	I-DSW (A/D)	I	A/D input from deck switch.
22	I-CDTSW (A/D)	I	CD MECHA sw matrix
23	I-ENC1 (A/D)	I	Encoder A/D level input 1.
24	I-ENC0 (A/D)	I	Encoder A/D level input 0.
25	I-LEVEL (A/D)	I	Level input
26	I-SC/I-MIC (A/D)	I	Detect MIC level
27	I-TMBASE	I	Time base input from TUNER PLL IC (LC72131D).
28	I-RDSCLK/I-WRQ	I	RDS clock
29	I-RMC	I	Remote control signal input.
30 ~ 42	G13 ~G1	O	For FL output
43 ~ 45	P35 ~ P33	O	For FL output
46	VDD3	–	Power supply (+5.6V).
47 ~ 50	P32 ~ P29	O	For FL output
51	VP	–	Connected to VFL
52 ~ 62	P28 ~ P18	O	For FL output
63	$\overline{\text{MD}}$/P17	I	Initial setting selector. "L" = MD/for FL output
64	ECO OFF/P16	I	Eco mode
65	$\overline{\text{P-DEMO}}$/P15	O	P-demo mode/for FL output
66	$\overline{\text{DEMO}}$/P14	O	Demo mode/for FL output
67	F2/P13	O	Feature change/for FL output
68	F1/P12	O	Feature change/for FL output

Pin No.	Pin Name	I/O	Description
69	B3/P11	O	Tuner suffix change/for FL output
70	B2/P10	O	Tuner suffix change/for FL output
71	B1/P9	O	Tuner suffix change/for FL output
72	VDD4	–	Power supply (+5.6V).
73	P8	O	For FL output
74	P7	O	For FL output
75	$\overline{D}$/P6	O	Turn panel D/for FL output
76	$\overline{C}$/P5	O	Turn panel C/for FL output
77	$\overline{B}$/P4	O	Turn panel B/for FL output
78	$\overline{A}$/P3	O	Turn panel A/for FL output
79	CAM/P2	O	CAM position/for FL output
80	AUTO/P1	O	Auto stop/for FL output
81	O-FUNK	O	CD tray (open) control output. "H" = OPEN.
82	O-KEYSCAN	O	CD tray (close) control output. "H" = CLOSE.
83	O-MOTOR	O	Motor control
84	O-FSTB	O	Function LED control output
85	O-CDTOPEN	O	CD tray control output
86	O-CDTCLOSE	O	CD tray control output
87	O-POWER	O	Main AC ON/OFF control output. "H" = POWER ON.
88	O-$\overline{\text{MDRST}}$	O	Reset output to MD unit.
89	VSS2	–	Ground
90	VDD2	–	Power supply (+5.6V).
91	O-CD-DATA	O	CD data output
92	O-CD-CLK	O	CD clock output
93	O-MUTE	O	Audio mute control output for POWER AMP input signal. "H" = MUTE ON.
94	O-$\overline{\text{SOL}}$	O	Deck plunger control output
95	O-SIN	O	Serial data control output to MD unit. (Not used)
96	I-SOUT	I	Serial data control input from MD unit. (Not used)
97	I-ACLK	I	Latch clock input from MD unit. (Not used)
98	O-ARDY	O	Serial data ready port control output to MD unit. (Not used)
99	O-SREQ	O	Serial data transfer request control output to MD unit. (Not used)
100	I-MREQ	I	Serial data transfer request control input from MD unit. (Not used)

IC DESCRIPTION -3/7 (CL680-D1)-1/3

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	Ground
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No used
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No used
37	$\overline{\text{MCE}}$	—	ROM chip enable.
38	$\overline{\text{MWE}}$	O	DRAM write enable.
39	VSS	—	Ground
40	$\overline{\text{CAS}}$	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	$\overline{\text{RASO}}$	O	DRAM/ROM interface.
43	$\overline{\text{RASI}}$	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O.
60	$\overline{\text{RESET}}$	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No used
65	AGND DAC	—	Analog ground.
66	A VDD DAC	—	Analog power supply (DAC) : 3.3V.
67	COMP OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT.
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input.
73	V REF	I	Voltage reference input.
74	AVDD DAC	—	Analog power supply (DAC) 3.3V.
75	C OUT	O	Video signal “C”out.
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input.
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input.
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O. (Not used)
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC}}$/CSYNC	O	$\overline{\text{VSYNC}}$/CSYNC output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock. (Not used)
96	PROC_CK	O	Processor clock. (Not used)
97	AUD_XCK	O	Audio XCK. (Not used)
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz)
106	VCK IN	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG SDATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125-128	NC	—	Not used

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC	—	Not used.
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS	—	Ground
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS	—	Analog Ground
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD	—	Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC	—	Not used
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD	—	Power supply (5V).
34	DATA	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two's complement, MSB first) when PSSL=0.
35	BCK	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DATA64	O	DA14 output when PSSL=1. 64-bit slot serial data (two's complement, LSB first) when PSSL=0.
37	BCK64	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	LRCK64	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	GTOP	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	XVCF	O	DA10 output when PSSL=1. XVCF output when PSSL=0.
41	XPCLK	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	GFS	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	RFCK	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	C2PO	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	XRAOF	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	MNT3	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	MNT2	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	MNT1	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	MNT0	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS	—	Ground
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	O	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	D-MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD	—	Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136µ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal).
2	Xtal IN	I	External X'tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc).
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X'tal generator mode is selected by this selector terminal. L: X'tal generator mode, H: External clock input.
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ($\overline{RST}$ terminal = L), the X'tal clock signal is output. (It is not output when reset by the reset command).
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ($\overline{RST}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command).
9	$\overline{CS}$	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply).
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply (+5V digital power supply).
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal.
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal).
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connectedto VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.
22	CTRL3	I	Controls whether or not to input the $\overline{VSYNC}$ signal to the SEPIN input. L: to input the $\overline{VSYNC}$ signal. H: not to input the $\overline{VSYNC}$ signal.

IC DESCRIPTION - 5/7 (LC74781M-9017)-2/2

Pin No.	Pin Name	I/O	Description
23	$\overline{\text{RST}}$	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input).
24	VDD1	—	Power supply. (+5V digital power supply).

IC DESCRIPTION - 6/7 (SM5878AM)-1/1

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	MCKI	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	SDI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. (“H” or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X’tal system VDD terminal.
18	XTI	I	X’tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X’tal oscillator terminal.
20	XVSS	—	X’tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

IC DESCRIPTION - 7/7 (μPD78016FGC)-1/2

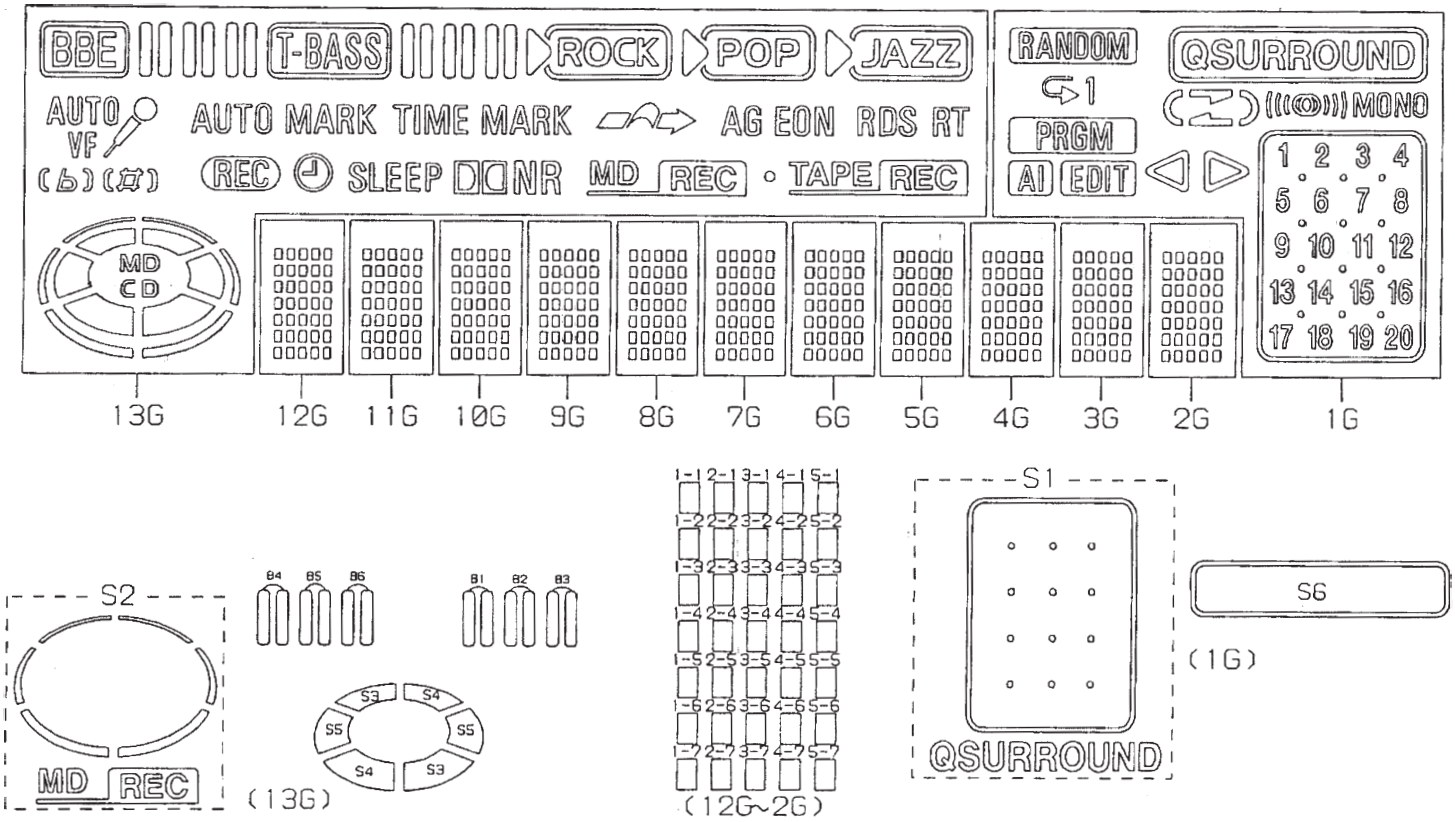
Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE (H=MUTE ON).
3	GFS	I	GFS.
4	XVCDMD	O	AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP).
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	Ground
10	SWNT	I	SW TV OUT MODE (L=NTSC).
11	SWAUTO	I	SW TV OUT MODE (L=NTSC/PAL AUTO).
12	SWPAL	I	SW TV OUT MODE (L=PAL).
13	EMERG	I	POWER EMERGENCY STOP (L≠3sec=STOP).
14	$\overline{\text{SHUT}}$	I	Shutter (L = USE)
15	NC	I	Not used
16	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”.
17	LOCK	O	GFS (FRAME SYNC) LOCK (NO USE=H).
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	Ground
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	CDRW	O	CD-RW (H: CD-R)
29	NC	—	Not used
30	NC	—	Not used
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	XHINT FROM CL680.
38	NC	—	Not used
39	SCOR	I/O	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK.

IC DESCRIPTION - 7/7 (µPD78016FGC)-2/2

Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK.
43	VSS	—	Ground
44	XT2	—	Not used.
45	XT1	I	5.0VDD.
46	AVSS	—	Ground
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW .
50	NC	—	Not used.
51	OSDXCS	O	OSD CHIP SELECT.
52	ABSEL	I	CXA1992A/B SELECT (L=CXA1992A).
53	CLVSEL	I	CLV MODE SELECT (H=CLV-N).
54	AADSEL	I	AUTO ADJUST SELECT (H=AUTO ON).
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN FROM CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST .
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

FLDISPLAY 1/2

GRID ASSIGNMENT

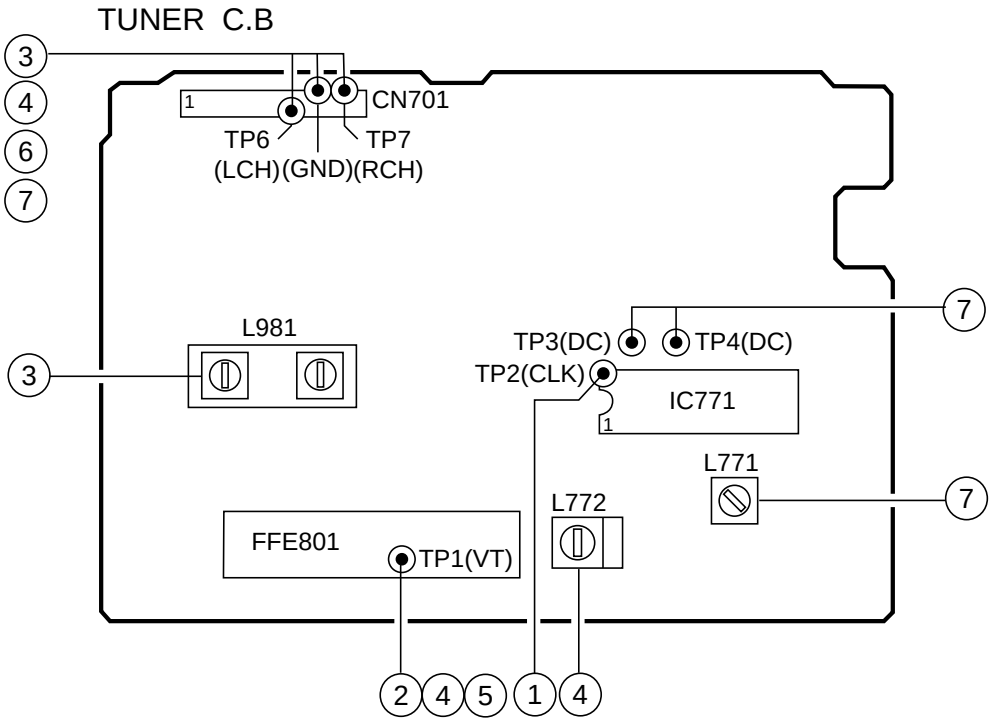


FL DISPLAY 2/2 ANODE CONNECTION

	13G	12G~2G	1G
P1	TAPE REC	1-1	▷
P2	○	2-1	◁
P3	S2	3-1	MONO
P4	RT	4-1	((◎))
P5	RDS	5-1	)
P6	EON	1-2	⇀
P7	AG	2-2	(
P8	⇨	3-2	S6
P9	ROCK POP JAZZ	4-2	EDIT
P10	(JAZZ)	5-2	AI
P11	(POP)	1-3	PRGM
P12	(ROCK)	2-3	1
P13	NR	3-3	↪
P14	SLEEP	4-3	RANDOM
P15	◷	5-3	1
P16	REC	1-4	2
P17	TIME MARK	2-4	3
P18	AUTO MARK	3-4	4
P19	B3	4-4	5
P20	B2	5-4	6
P21	B1	1-5	7
P22	T-BASS	2-5	8
P23	B6	3-5	9
P24	B5	4-5	10
P25	B4	5-5	11
P26	BBE	1-6	12
P27	AUTO	2-6	13
P28	VF	3-6	14
P29	(♯)	4-6	15
P30	(♭)	5-6	16
P31	MD	1-7	17
P32	CD	2-7	18
P33	S3	3-7	19
P34	S4	4-7	20
P35	S5	5-7	S1

ADJUSTMENT -1/3

<TUNER SECTION>



1. Clock Frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : Set to MW 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602kHz and check that the test point is less than 8.0V. Then set to MW 531kHz and check that the test point is more than 0.6V.

3. MW Tracking Adjustment
   Settings : • Test point : TP6 (Lch), TP7 (Rch)
   • Adjustment location : L981 (1/3)
   Method : Set to MW 999kHz and adjust L981 (1/3) so that the test point becomes maximum.

4. AM IF Adjustment
   Settings : • Test point : TP6 (Lch), TP7 (Rch)
   • Adjustment location :
   L772 ..... 450kHz

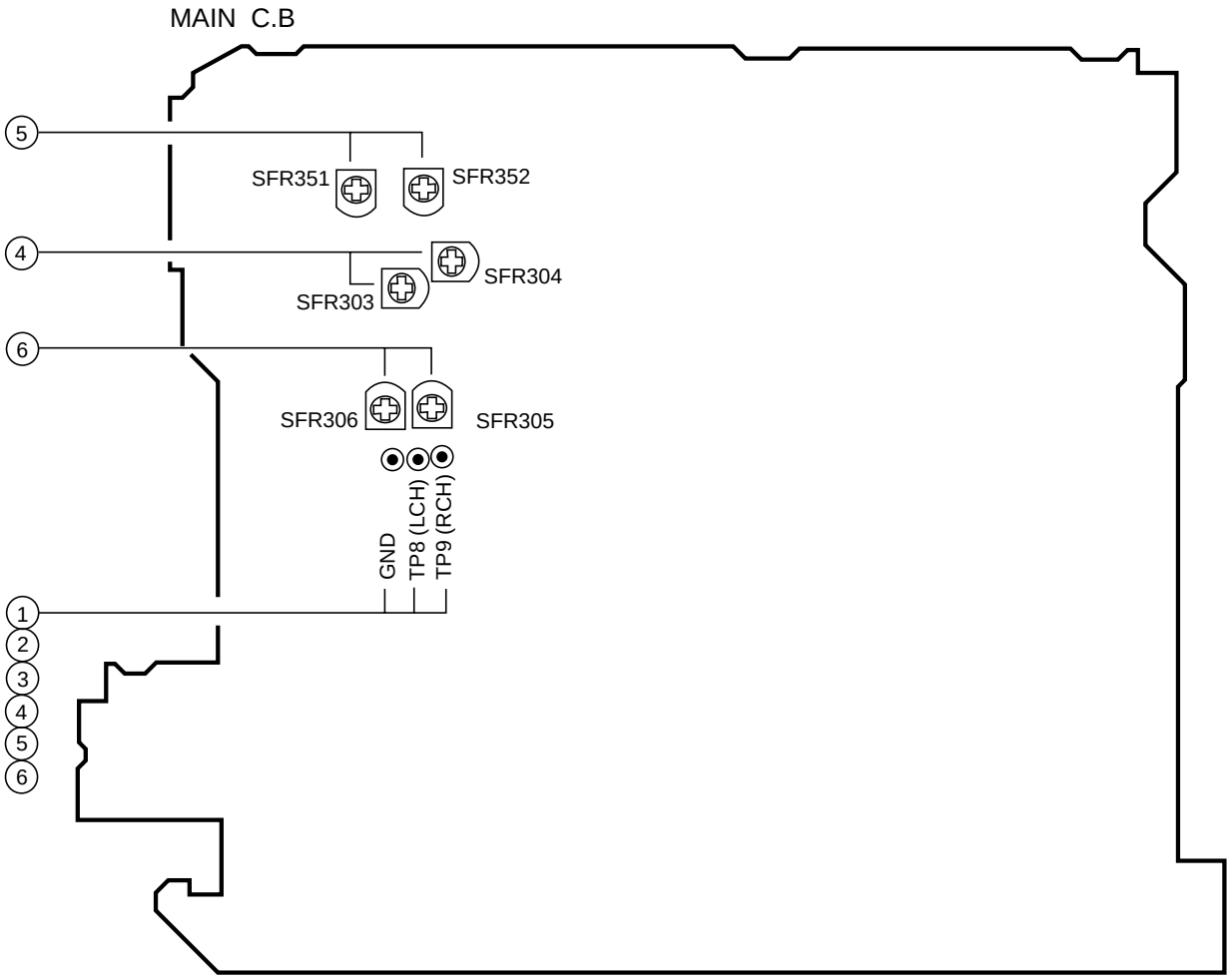
5. FM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 108.0MHz and check that the test point is less than 8.0V. Then set to FM 87.5 MHz and check that the test point is more than 0.5V.

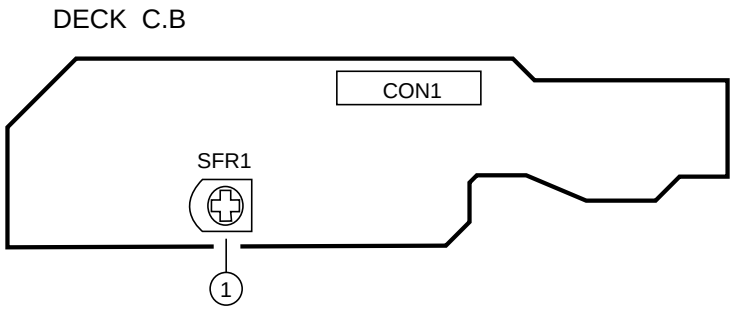
6. FM Tracking Check
   Settings : • Test point : TP6 (Lch), TP7 (Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 13dBμV.

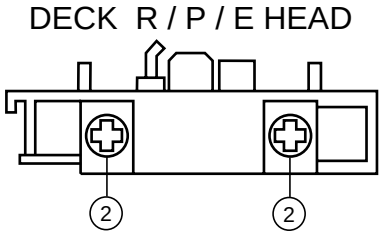
7. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3,TP4 (DC balance)
   TP6 (Lch), TP7 (Rch) (Distortion)
   • Adjustment location : L771
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%.

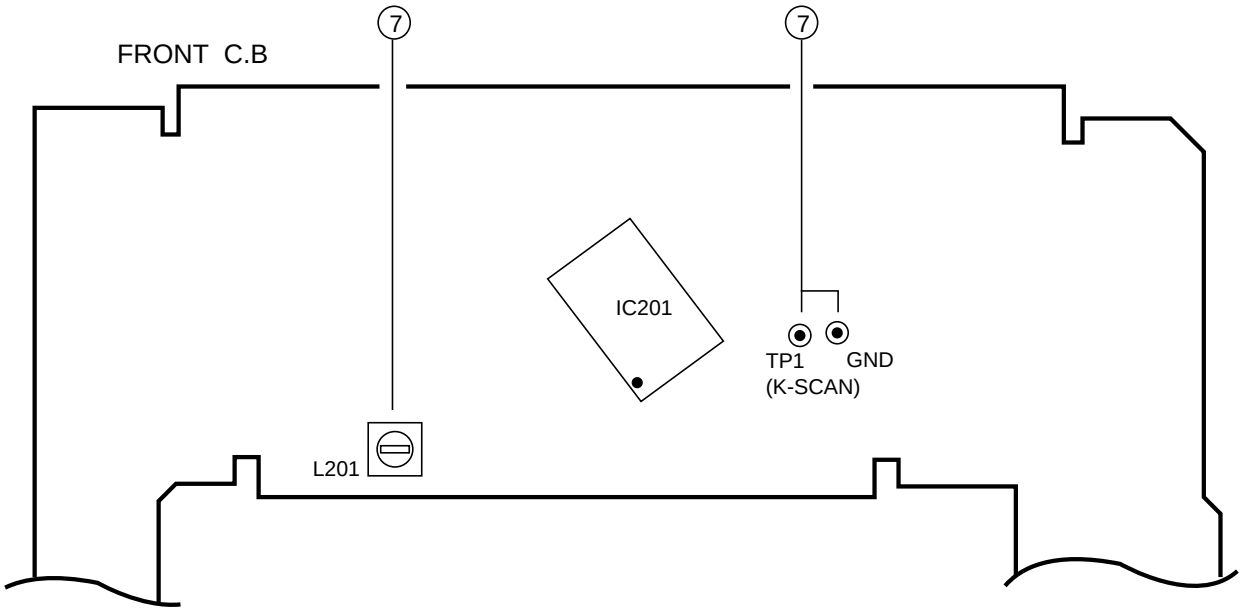
ADJUSTMENT -2/3

<DECK, FRONT SECTION>









< DECK SECTION >

1. Tape Speed Adjustment
   Settings : • Test tape : TTA–100
   • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : SFR1
   Method : Play back (FWD) the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz and ± 45Hz (REV) with respect to forward speed.

2. Head Azimuth Adjustment
   Settings : • Test tape : TTA–300
   • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : Head azimuth adjustment screw
   Method : Play back (FWD) the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV play mode.

3. PB Frequency Response Check
   Settings : • Test tape : TTA–300
   • Test point :TP8 (Lch), TP9 (Rch)
   Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is 0dB ± 3dB.

4. PB Sensitivity Adjustment
   Settings : • Test tape : TTA–200
   • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : SFR303 (Lch)
   SFR304 (Rch)
   Method : Play back the test tape and adjust SFRs so that the output level of the test points becomes 245mV ± 10mV.

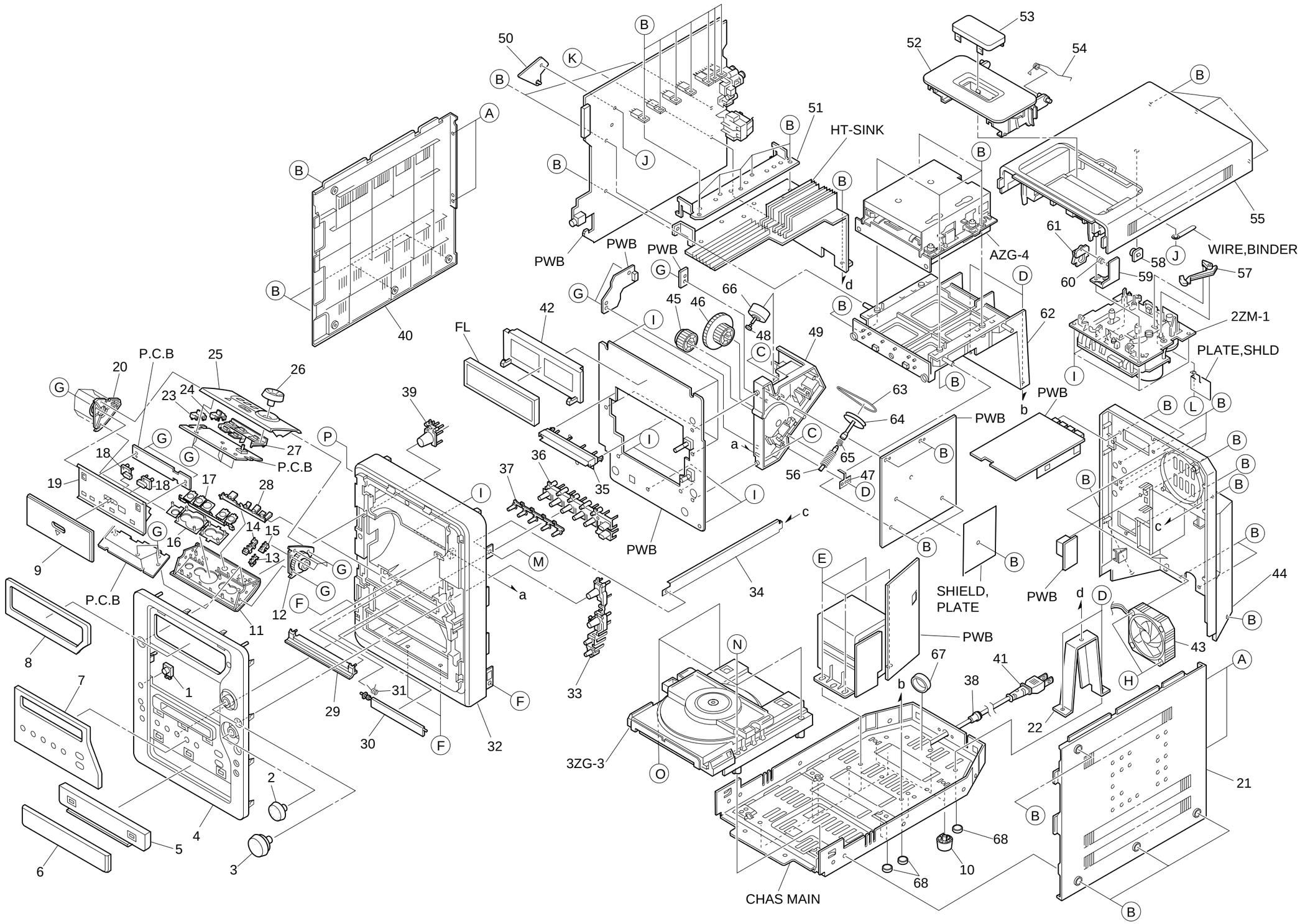
5. REC/PB Frequency Response Adjustment
   Settings : • Test tape : TTA–602
   • Test point : TP8 (Lch), TP9 (Rch)
   • Input signal : 1kHz / 10kHz (LINE IN)
   • Adjustment location : SFR351 (Lch)
   SFR352 (Rch)
   Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 0dB (17mV). Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

6. REC/PB Sensitivity Adjustment
   Settings : • Test tape : TTA–602
   • Test point : TP8 (Lch), TP9 (Rch)
   • Input signal : 1kHz (LINE IN)
   • Adjustment location : SFR305 (Lch)
   SFR306 (Rch)
   Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 0dB (170mV). Record and play back the 1kHz signals and adjust SFRs so that the output becomes 0dB ± 0.5dB.

< FRONT SECTION >

7. µ-CON OSC Adjustment
   Settings : • Test point : TP1 (K-SCAN) and GND
   • Adjustment location : L201
   Method : Insert AC plug with pressing of TUNER and DISPLAY key. Adjust L201 so that the frequency across the test point is 194.898Hz ± 0.194Hz.

MECHANICAL EXPLODED VIEW 1/1



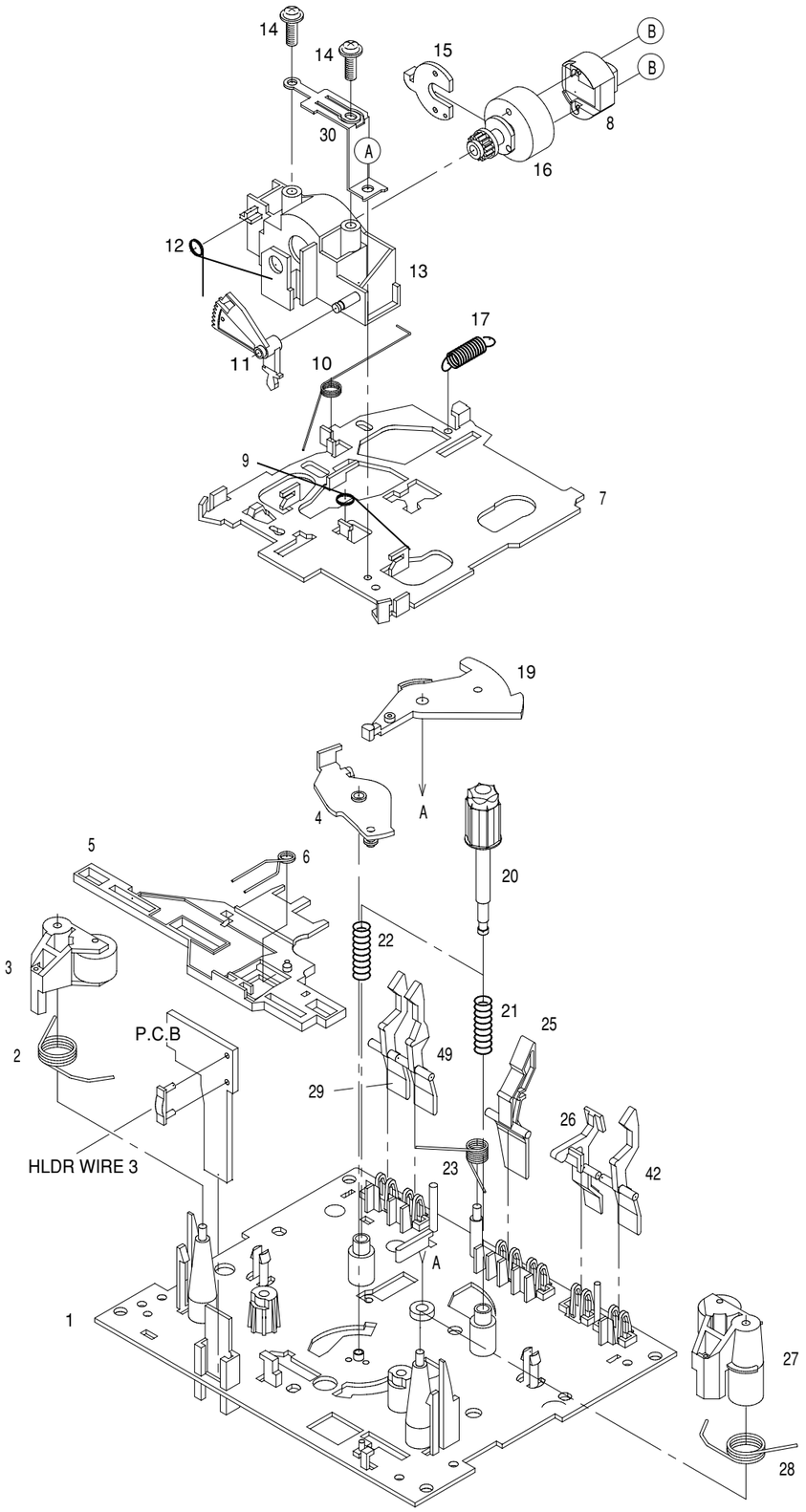
MECHANICAL MAIN PARTS LIST 1/1

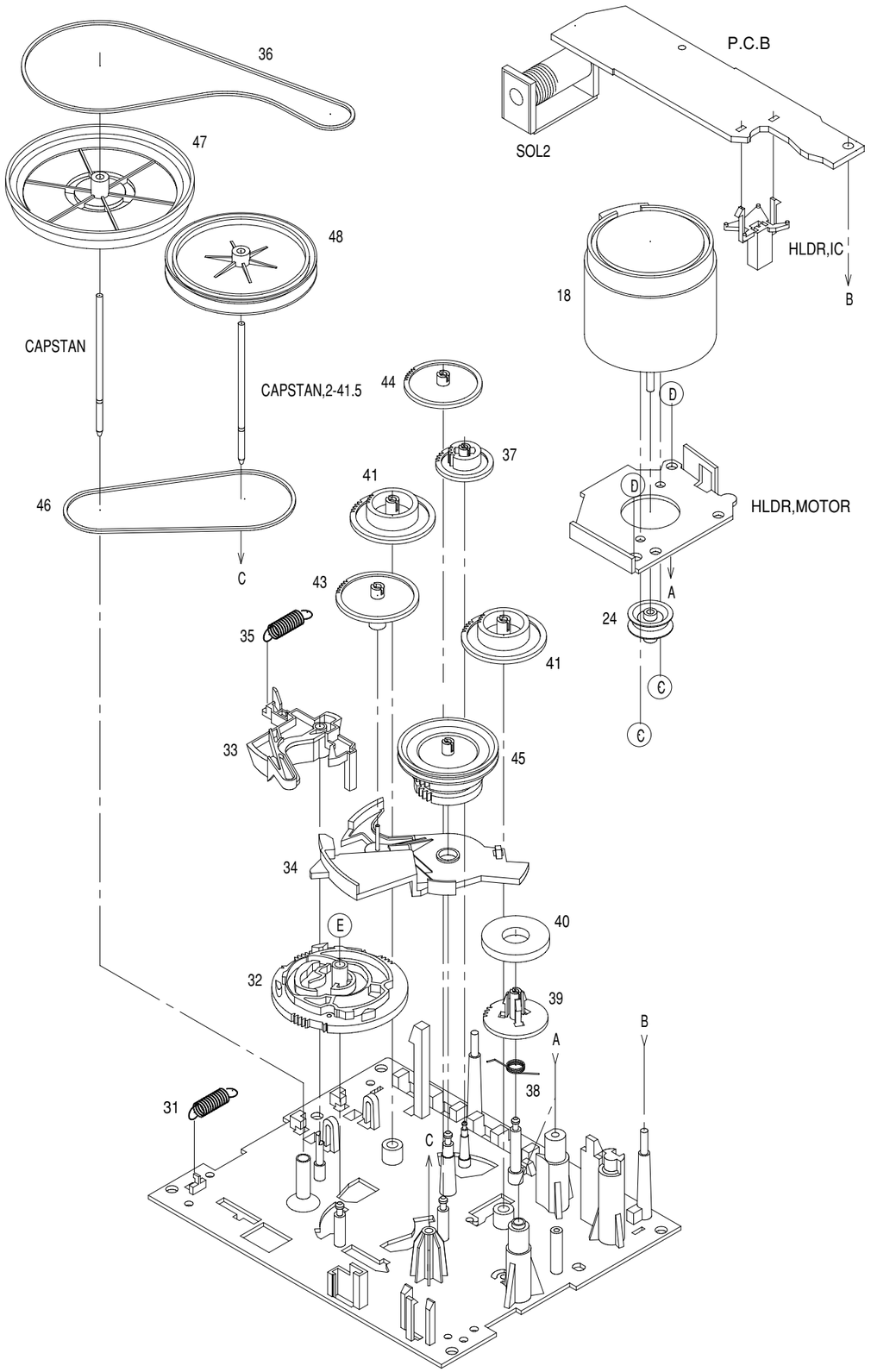
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJ4-042-010		WINDOW,SENSOR
2	8A-CJ4-017-010		KNOB,RTRY JOG
3	8A-CJ4-016-110		KNOB,RTRY MAIN
4	8A-CB4-001-010		PANEL,FR(B4)
5	8A-CJ4-015-110		PANEL,TRAY
6	8A-CB4-004-010		WINDOW,TRAY(B4)
7	8A-CB4-003-010		WINDOW,FUN(B4)
8	8A-CJ4-012-010		WINDOW,DISPLAY
9	8A-CJ4-039-010		WINDOW,OPE
10	8A-CJ4-080-010		FOOT ASSY,H10
11	8A-CB4-002-010		PANEL,OPE 2(B4)
12	8A-CJ4-213-010		HLDR,CONTROL
13	8A-CJ4-048-010		KEY,OPEN 2C
14	8A-CJ4-028-010		KEY,OPEN 2
15	8A-CJ4-047-010		KEY,OPEN 2B
16	8A-CJ4-026-110		RING,PLAY
17	8A-CJ4-040-010		KEY ASSY,PLAY
18	8A-CJ4-027-010		KEY,OPEN 1
19	8A-CJ4-009-110		PANEL,OPE 1
20	8A-CJ4-214-010		HLDR,CONTROL 2
21	8A-CJ4-006-110		PANEL,SIDE R
22	8A-CJ4-210-110		HLDR,HT-SINK
23	8A-CJ4-031-010		KEY,OPEN 3
24	8A-CJ4-030-010		KEY,OPEN
25	8A-CJ4-011-010		PANEL,OPE 3
26	8A-CJ4-044-110		KNOB,RTRY JOG 2
27	8A-CJ4-045-010		KEY,MD EDIT (J4)
28	8A-CJ4-032-010		KEY,REC
29	8A-CJ4-046-010		REFLECTOR,CONTROL
30	8Z-CC3-006-010		PLATE,DISC
31	8A-CJ4-226-010		SPR-T,FLAP (ACJ-4)
32	8A-CJ4-001-110		CABI,FR
33	8A-CJ4-020-010		KEY,JOG
34	8A-CJ4-239-010		HLDR,CABI JOINT
35	8A-CJ4-204-010		GUIDE,LED CONTROL
36	8A-CJ4-021-010		KEY,FUN
37	8A-CJ4-029-010		REFLECTOR,FUN
⚠ 38	87-085-185-010		BUSHING, AC CORD (E)
39	8A-CJ4-041-010		KEY ASSY,POWER
40	8A-CJ4-005-110		PANEL,SIDE L
⚠ 41	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI
42	8A-CJ4-201-010		GUIDE,FL
43	87-A90-796-010		FAN,F614R-12MC-15-300MM
44	8A-CB4-005-010		CABI,REAR HR (B4)
45	8A-CJ4-203-110		GEAR,OPE 1
46	8A-CJ4-205-110		GEAR,WORM-WHEEL
47	86-ZG1-232-010		SPR-P,WORM
48	81-ZG1-212-010		PULLY,LOAD MO
49	8A-CJ4-206-210		HLDR,GEAR
50	8A-CJ4-219-010		HLDR,PWB(MOLD)
51	8A-CJ4-202-010		HLDR,TR EX
52	8A-CJ4-007-110		BOX,CASS
53	8A-CJ4-008-010		WINDOW,CASS
54	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
55	8A-CJ4-004-010		PANEL,TOP
56	84-ZG1-256-010		GEAR,WORM N2
57	82-ZM1-263-110		LVR,EJECT L
58	87-NF8-220-010		DMPR,150
59	87-NF4-216-010		HLDR,LOCK 1
60	86-NF9-224-010		SPR-C,LOCK
61	82-NF5-229-010		PLATE,LOCK
62	8Z-CL4-203-010		CHAS,MD
63	86-ZG1-225-010		BELT,SQ1.2-32.9
64	86-ZG1-221-010		PULLEY,TT
65	86-ZG1-231-010		SPR-C,WORM
66	87-A90-036-010		MOT ASSY,RF-300CA-11
67	87-003-317-010		F-BEAD,F0H2515-LG7
68	8Z-CE3-206-010		CUSH,PL 9.2-4.2-5
A	87-067-761-010		TAPPING SCREW, BVT2+3-10
B	87-067-703-010		TAPPING SCREW, BVT2+3-10
C	87-067-581-010		TAPPING SCREW, BVT2+3-15
D	87-067-584-010		TAPPING SCREW, BVT2+3-6
E	87-067-585-010		TAPPING SCREW, BVTT+4-6
F	87-591-095-410		TAPPING SCREW, QIT+3-8 (GLD)
G	87-067-868-010		V+1.7-4 HL BLK
H	87-067-822-010		BVT2+3-20 W/O SLOT
I	87-078-060-010		BVIT3PB+3-10
J	87-067-579-010		TAPPING SCREW, BVT2+3-8
K	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
L	87-067-421-010		VTT+2-4
M	87-721-095-410		QT2+3-8GLD W/O SLOT
N	87-B10-314-010		BVIT3+3-6 R W/O
O	86-NF8-223-010		W-P,4.2-6.8-0.25 W/A
P	87-721-096-410		QT2+3-10 GLD

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

TAPE MECHANISM EXPLODED VIEW 1/1 <2ZM-1 R11NM>

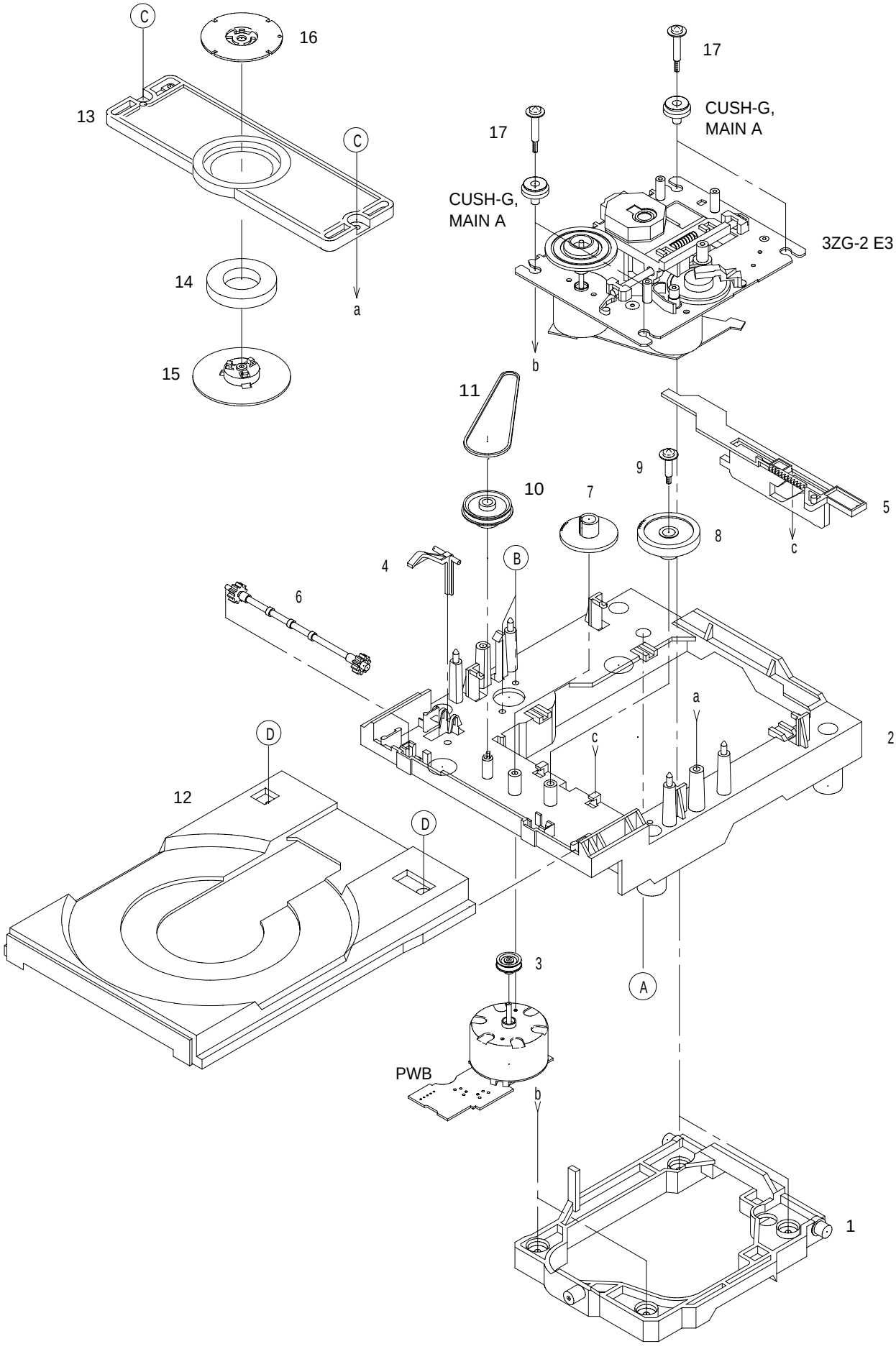




TAPE MECHANISM PARTS LIST - 1/1 <2ZM-1 R11NM>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM1-327-310		CHAS ASSY,RM
2	82-ZM1-258-210		SPR-T,PINCH L
3	82-ZM1-341-210		LVR ASSY,PINCH L2
4	82-ZM1-333-210		PLATE,LINK2
5	82-ZM1-266-310		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-910		CHAS,HEAD
8	87-A91-176-010		HEAD,RPH HADKH56
9	82-ZM1-269-210		SPR-T,BRG
10	82-ZM1-219-110		SPR-T,LINK
11	82-ZM1-210-110		GEAR,H T
12	82-ZM1-213-010		SPR-T,HEAD
13	82-ZM1-207-910		GUIDE,TAPE
14	82-ZM1-283-310		S-SCREW,AZIMUTH
15	82-ZM1-314-110		PLATE,HEAD
16	82-ZM1-208-310		HLDR,HEAD
17	82-ZM1-218-010		SPR-E,HB
18	87-045-347-010		MOT,SHU2L 70
19	82-ZM1-222-210		LVR,PLAY
20	82-ZM1-217-410		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-410		SPR-C,BT L
23	82-ZM1-257-010		SPR-T,CAS
24	82-ZM1-247-210		PULLEY,MOTOR
25	82-ZM1-242-010		LVR,CAS
26	82-ZM1-243-010		LVR,STOP
27	82-ZM1-344-210		LVR ASSY,PINCH R2
28	82-ZM1-259-210		SPR-T,PINCH R
29	82-ZM1-240-110		LVR,REC(*)
30	82-ZM1-298-010		SPR-P EARTH
31	82-ZM1-255-310		SPR-E,LVR DIR
32	82-ZM1-221-310		GEAR,CAM(*)
33	82-ZM1-227-310		LVR,TRIG
34	82-ZM1-224-410		LVR,FR
35	82-ZM1-305-210		SPR-E,TRIG 2
36	82-ZM1-340-010		BELT,SBU MAIN2
37	82-ZM1-223-010		GEAR,PLAY
38	82-ZM1-322-010		SPR-T,FR 60
39	82-ZM1-220-210		GEAR,IDLER
40	82-ZM3-616-010		RING MAGNET 4
41	82-ZM1-216-510		GEAR,REEL
42	82-ZM1-241-310		LVR,MC
43	82-ZM1-225-210		GEAR,FR
44	82-ZM1-226-010		GEAR,REW
45	82-ZM3-333-310		SLIP DISK ASSY 2
46	82-ZM1-338-110		BELT,FR 4
47	82-ZM1-349-110		FLY-WHL,R W
48	82-ZM1-348-110		FLY-WHL,L W
A	82-ZM1-315-010		S-SCREW GUIDE TAPE
B	80-ZM6-207-010		V+1.6-7
C	87-251-070-410		U+2.6-3
D	87-741-073-410		UT2+2.6-6 GLD
E	87-B10-008-010		W-P,2.08-8-0.4-SLIP
F	82-ZM1-247-210		PULLEY,MOTOR

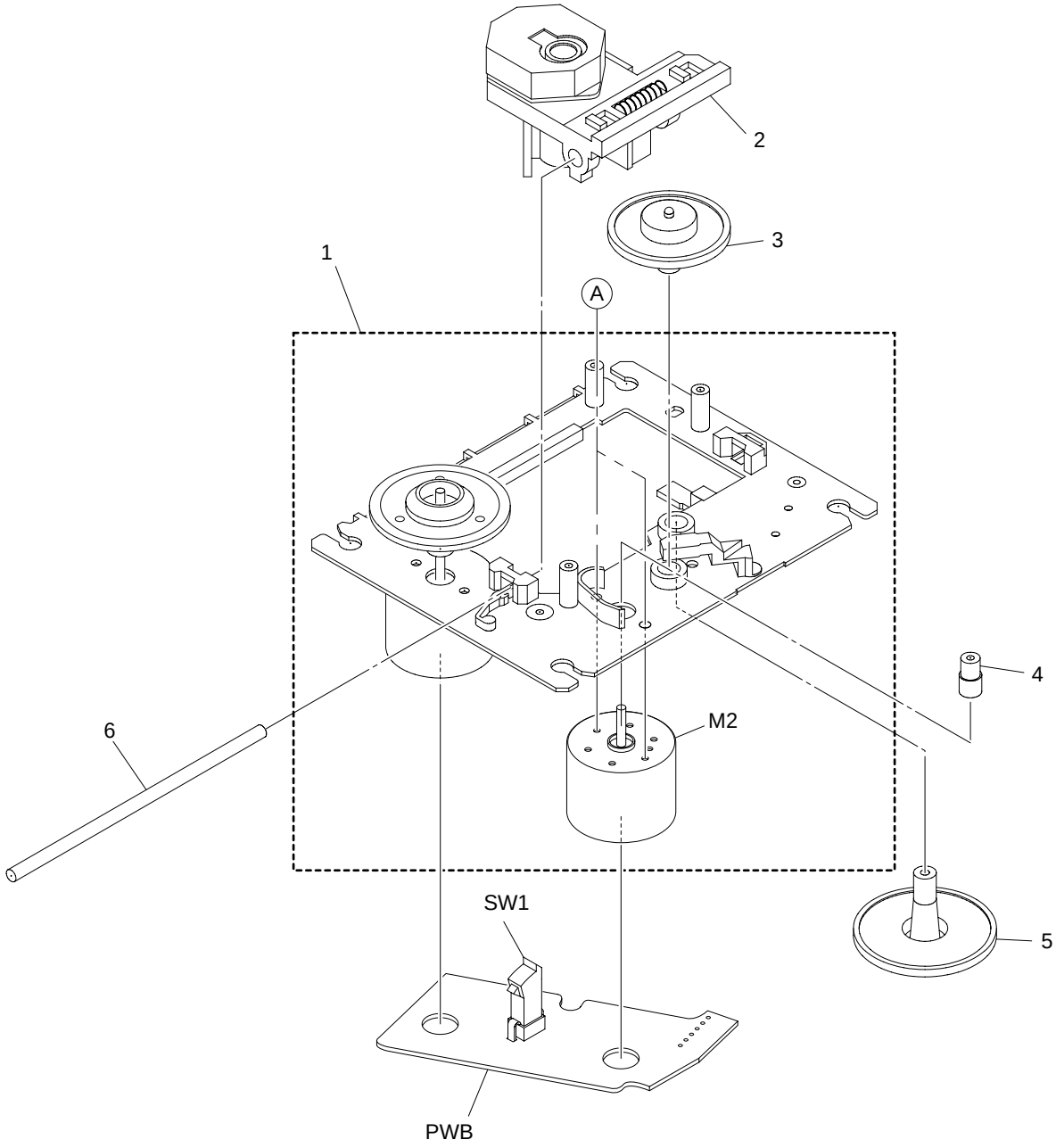
CD MECHANISM EXPLODED VIEW - 1/2 <3ZG-3 E3NM>



CD MECHANISM PARTS LIST - 1/2 <3ZG-3 E3NM>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG3-224-510		HLDR M2
2	83-ZG3-228-610		CHAS,L6
3	83-ZG3-208-010		PULLEY,MOTOR
4	83-ZG3-213-010		LVR,SW
5	83-ZG3-209-610		CAM,SLIDE
6	83-ZG3-207-010		GEAR,TRAY
7	83-ZG3-204-210		GEAR,C
8	83-ZG3-205-010		GEAR,D
9	83-ZG3-217-010		S-SCREW,GEAR D
10	83-ZG3-220-210		GEAR,PULLEY 2
11	83-ZG3-214-010		BELT,L
12	83-ZG3-229-410		TRAY,CD 2
13	83-ZG3-210-110		HLDR,CHUCK
14	83-ZG3-602-010		RING,MAG
15	83-ZG3-212-010		CAP,DISC
16	83-ZG3-211-010		PLATE,DISC
17	81-ZG1-254-010		S-SCREW,MECH HLDR
A	87-067-945-110		VFT2+3-12(F10)
B	87-251-071-410		U+2.6-4
C	87-512-074-210		SCREW, 2+2.6-8
D	87-352-075-210		VT2+2.6-10

CD MECHANISM EXPLODED VIEW - 2/2 <3ZG-2 E3>



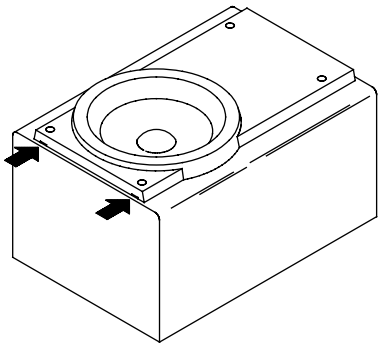
CD MECHANISM MAIN PARTS LIST - 2/2 <3ZG-2 E3>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-262-010		CHAS ASSY,E3
2	87-A90-836-010		PICKUP,KSS-213F
3	83-ZG2-235-010		GEAR,A3
4	83-ZG2-236-010		GEAR,MOTOR 3
5	83-ZG2-205-310		GEAR,B
6	83-ZG2-253-010		SHAFT,SLIDE 5
A	87-261-032-210		V+2-3

GENERAL SPEAKER DISASSEMBLY INSTRUCTIONS (FOR REFERENCE)

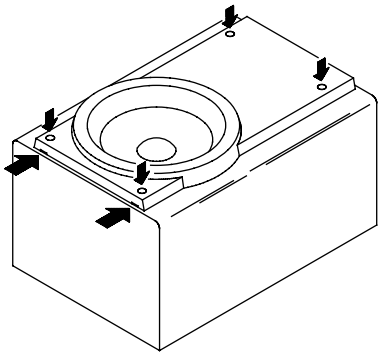
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



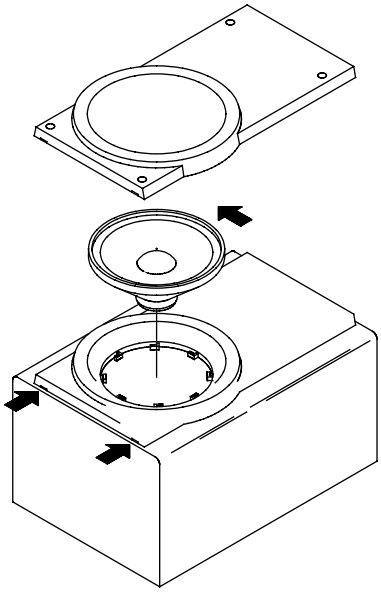
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

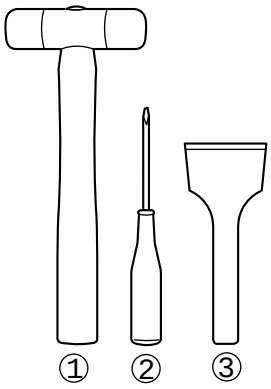


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwisedirection while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

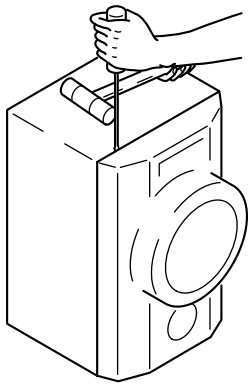


Fig-1

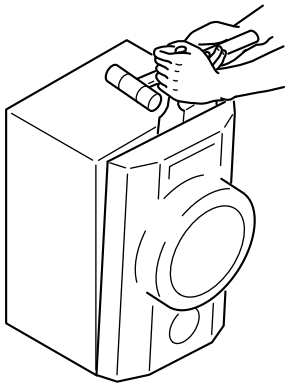


Fig-2

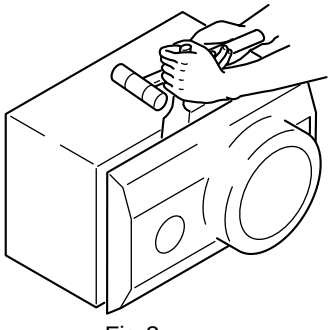


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER MAIN PARTS LIST 1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJ4-403-010		PANEL,FR
2	8A-CJ4-404-010		PANEL,SP
3	8A-CJ4-405-010		PANEL,RING TW
4	8A-CJ4-406-010		GRILLE,FRAME ASSY L
5	8A-CJ4-410-010		SPKR,W 130
6	8A-CJ5-417-010		SPKR, TW 25
7	8A-CJ4-501-010		CORD,SP

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110-8710, JAPAN TEL:03 (3827) 3111

737004 Printed in Singapore