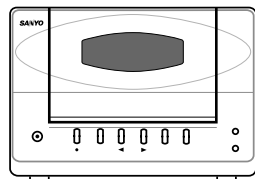


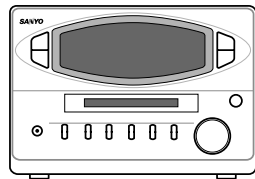
Service Manual

Separate Mini Component System

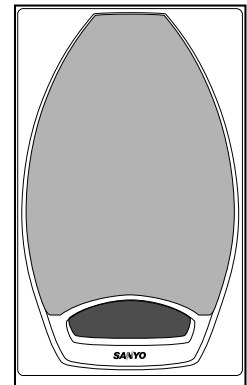
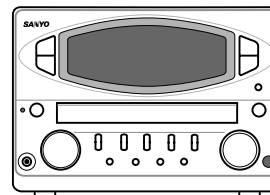
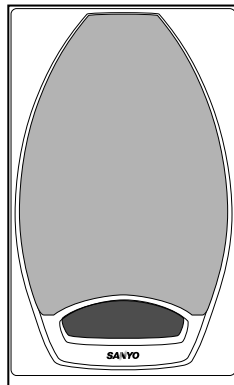
DC-M3 (XE)



(RD-M3: OPTION))



(MDG-M3: OPTION)



Specifications

PRODUCT CODE No.

129 585 03 (XE)

CD/TUNER /AMPLIFIER SECTION

Reception frequency FM : 87.5 - 108 MHz
 AM : 522 - 1,611 kHz
 Output power 20W x 2 (at 6 ohm, 10% distortion)
 Inputs VIDEO(AUDIO)IN : 500 mV/50k ohms
 Outputs OPTICAL DIGITAL OUT : Optical
 SPEAKERS : 6 ohms
 PHONES : 8 - 32 ohms
 SUB WOOFER OUT : 10k ohms
 Power requirements AC 230V, 50 Hz
 Power consumption 80W
 1.1W (Ecology On standby mode)
 15W (Ecology Off standby mode)
 Dimensions 190 (W) x 132.5 (H) x 316 (D) mm
 Weight 4.5 kg
 Channels 2-channel stereo
 Sampling frequency 44.1 kHz
 Pick-up Optical 3-beam semiconductor laser
 Laser output 0.6 mW (Continuous wave max.)

Wave length 790 nm
 Frequency response 20 Hz to 20 kHz
 Wow/flutter Below measurable limits

SPEAKER SYSTEM

Type 2 way acoustic bass tube
 Built-in magnetic stray field compensation
 Unit used Woofer : 10 cm cone type
 Tweeter : 3.5 cm balance driver
 Maximum power-handling capacity 50W (peak)
 Nominal impedance 6 ohms
 Dimensions 160 (W) x 265 (H) x 258 (D) mm
 Weight 2.9 kg (per speaker)

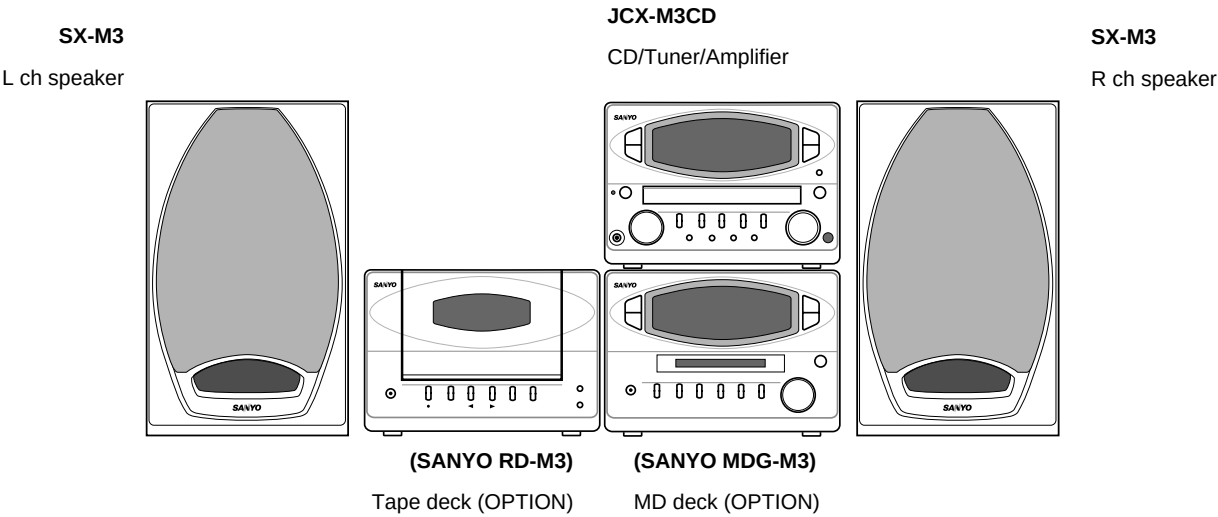
Specifications subject to change without notice.

This service manual consists of "JCX-M3CD" (CD/Tuner/Amplifier : 129 584 01), "RB-M3RD" (Remote control : 645 040 1923) and "SX-M3" (Speaker system : 165 015 01) .

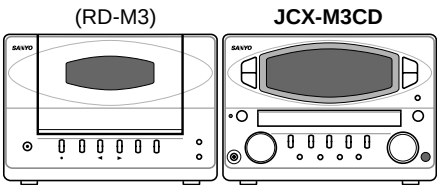
SYSTEM VARIETIES

There are several system varieties with optional equipment as below.

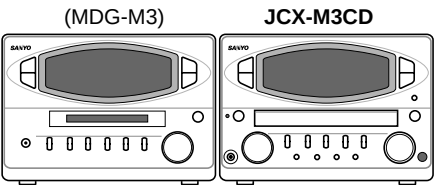
Example 1



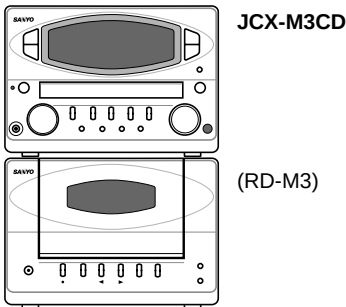
Example 2



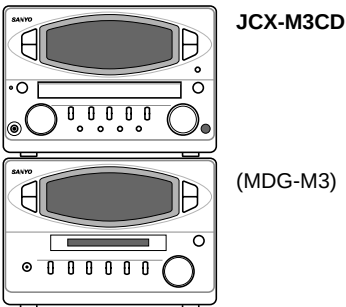
Example 3



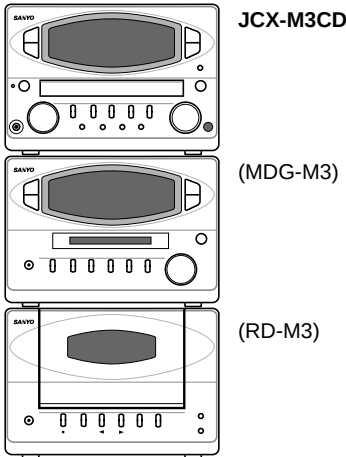
Example 4



Example 5

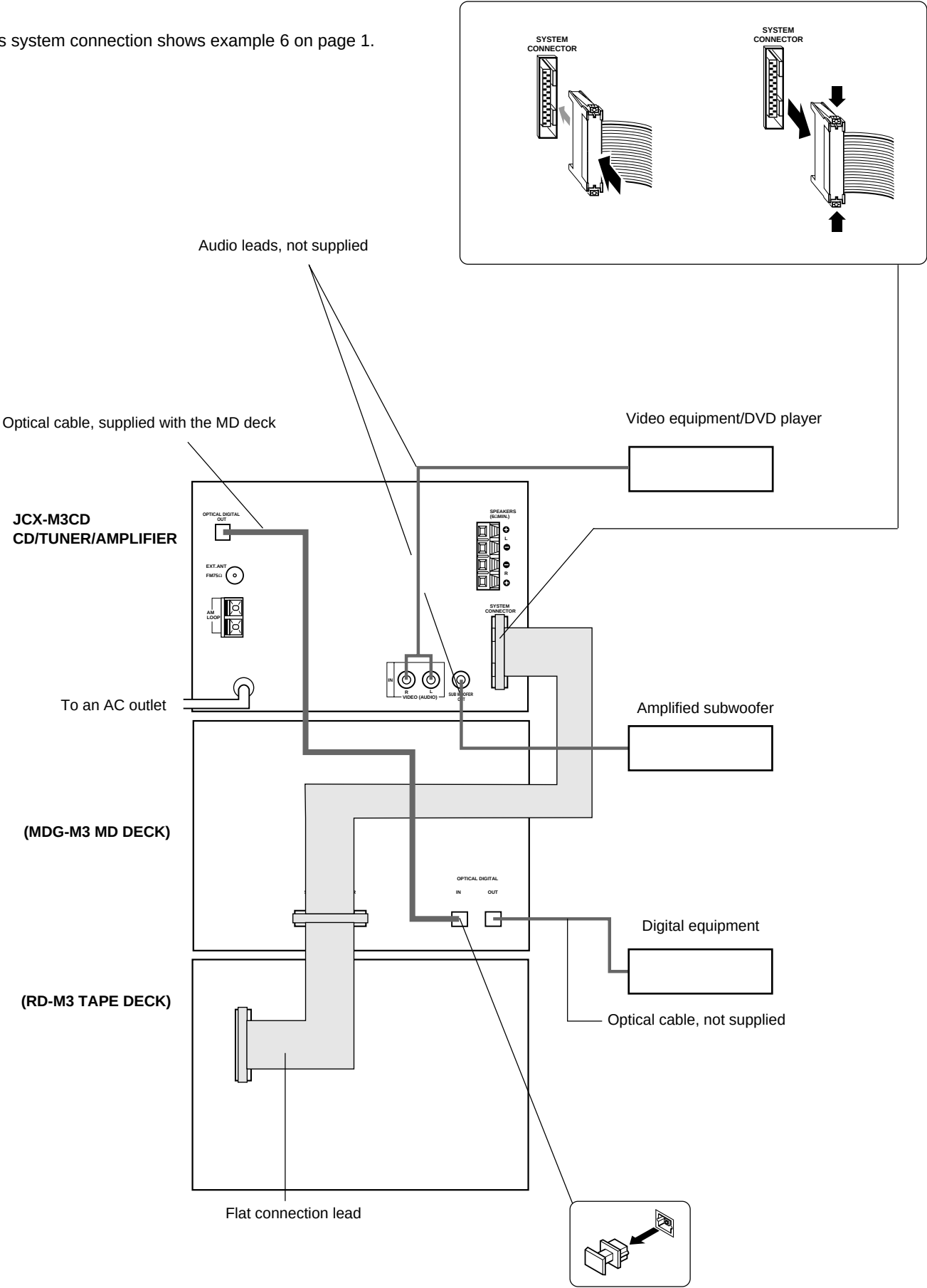


Example 6



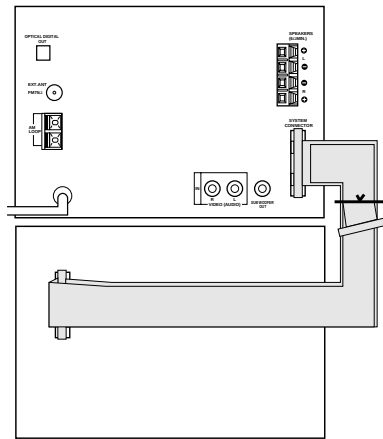
SYSTEM CONNECTIONS

This system connection shows example 6 on page 1.



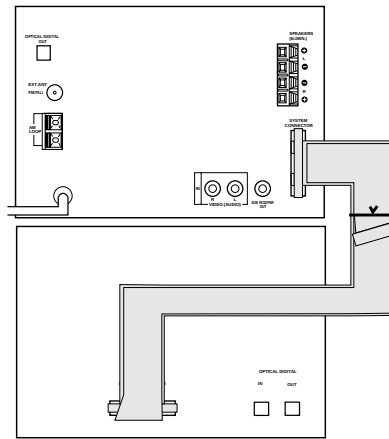
SYSTEM CONNECTIONS

JCX-M3CD CD/TUNER/AMPLIFIER

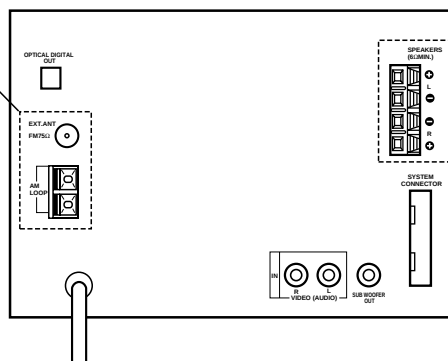
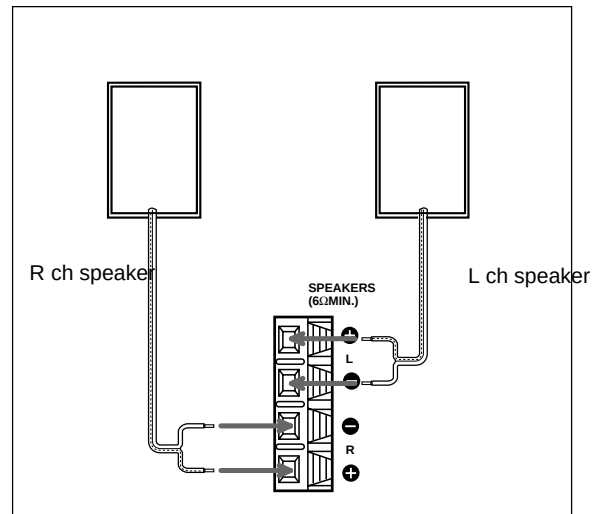
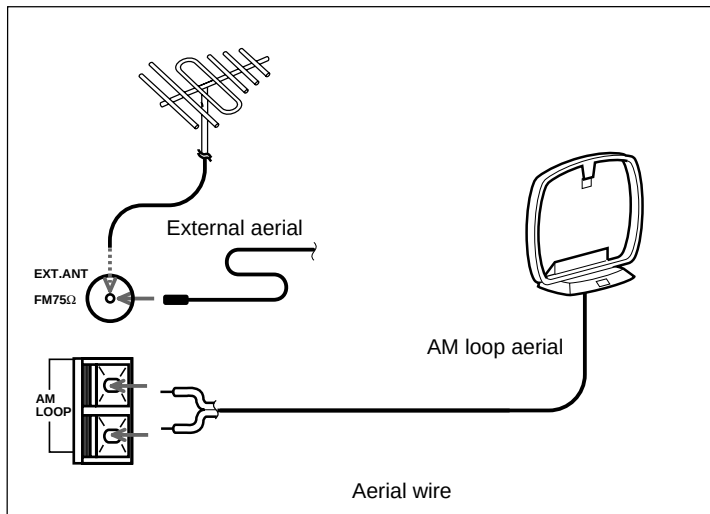
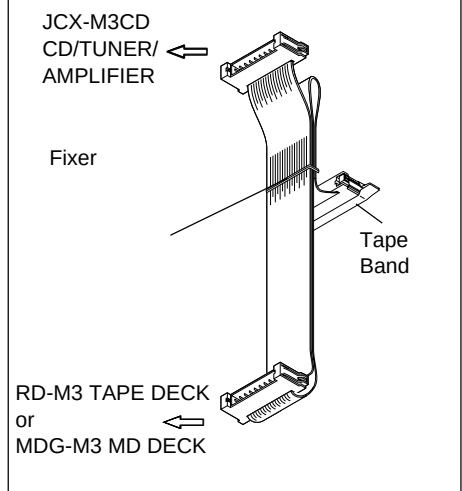


(RD-M3 TAPE DECK)

JCX-M3CD CD/TUNER/AMPLIFIER



(MDG-M3 MD DECK)

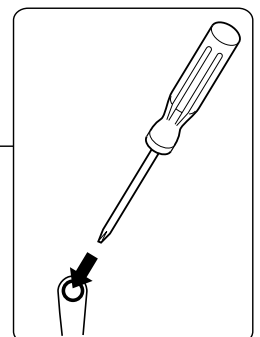
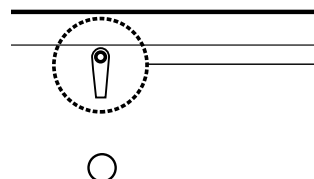


JCX-M3CD
CD/TUNER/AMPLIFIER

WHAT TO DO IF

If the operation of the system or display is not normal.

1. Disconnect the mains lead.
2. Press the **RESET** button (bottom of the CD/Tuner/Amplifier) for at least 30 seconds.
3. Connect the mains lead.
4. Resume the operation.

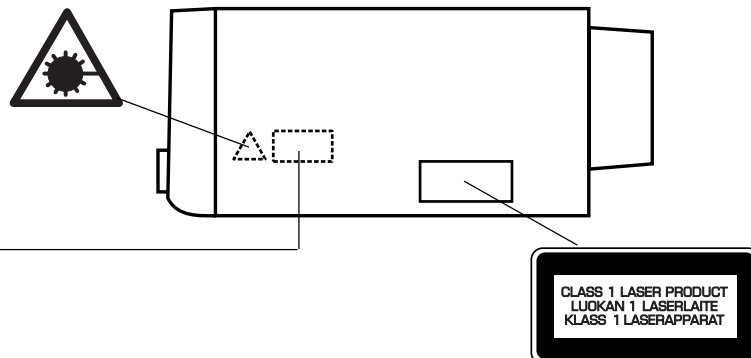


LASER BAEM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

(CD/TUNER/AMPLIFIER)

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING – OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.



SERVICE MODE

Preparation

Press the unit's BASS and STOP keys at the same time. (This initiates service mode entry status.)

Next, press another key on the unit to switch to the corresponding service mode.

The unit enters a service mode only if another key is pressed within one second.

KEY	SERVICE MODE
JOG_MODE	Key Connection Checking
TIMER	FLD Checking
FWD	CD Laser Output Measurement

1. Key connection check

1. To enter this mode, press JOG_MODE key in the service mode entry state.
2. In this mode, the key code (two-digit) of a key now being pressed is displayed on the seven-segment minute indicator, and the number of unit keys (two-digit) that have been pressed after this mode was entered on the seven-segment second indicator.
3. The unit keys that have once been pressed are not counted.
4. Press POWER key of the remote controller to exit this mode.

2. FLD check

1. To enter this mode, press TIMER key in the service mode entry state.
2. In this mode, all FL and LEDs are lit.
3. In this mode, press POWER key of the remote controller to enter the key connection checking mode.
4. Press the POWER key of the unit to exit this mode.

3. Measurement of CD laser output

1. To enter this mode, press FWD key in the service mode entry state in the CD function.
2. In this mode, every push of FWD key repeats turning on and off the laser (only at STOP). (While laser is on, "FM" is displayed.)
3. The mode is deselected when power is turned off or CD is played back.

CD PICK-UP MAINTENANCE

Pick-up (Optical lens) Cleaning

Clean the lens with the specified cleaning disc or moisten a cotton swab with isopropyl alcohol and cleaning paper.

Specified cleaning disc : LC-1 (Part code : 645 026 1961 manufactured by SANYO.)

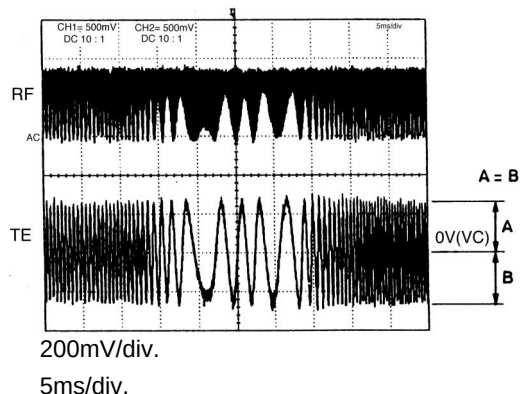
Regarding procedure of cleaning with moisten cotton swab, please refer to the attached as follows.

1. Cotton swab wrapped with Cleaning paper.
2. Add the isopropyl alcohol.
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

CD ADJUSTMENTS

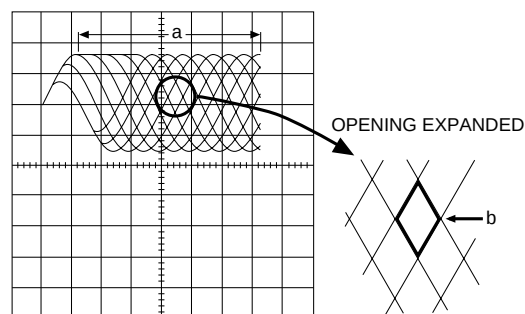
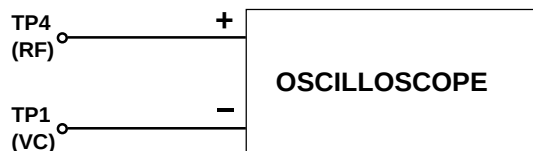
1. Confirm the tracking balance

1. Connect an Oscilloscope to TP2 (TE) and TP1 (VC).
2. Turn on the POWER switch.
3. Set the test disc. (DISC 1)
4. Press "STOP" button and "FM MODE" button simultaneously.
Within 1 second after pressing the "PLAY/PAUSE" button.
(SERVICE MODE : Tracking balance adjustment mode)
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V (VC).



2. Checking the "eye" pattern

1. Switch "ON" the POWER.
2. Connect an oscilloscope to TP4 (RF) and TP1 (VC).
3. Load the test disc.
4. Press the PLAY button.
5. Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
6. Press the STOP button.
7. Turn off the POWER switch.

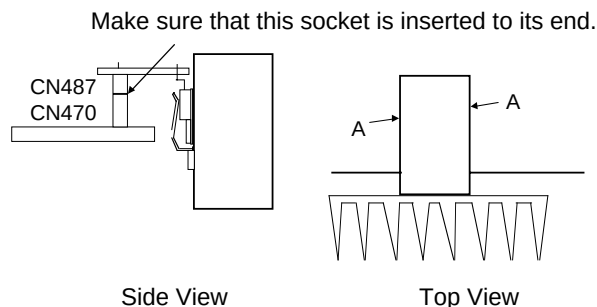


HOW TO ASSEMBLE/REMOVE POWER IC P.W.B

When assembling or removing power IC P.W.B, any stress should not be added on IC terminals.

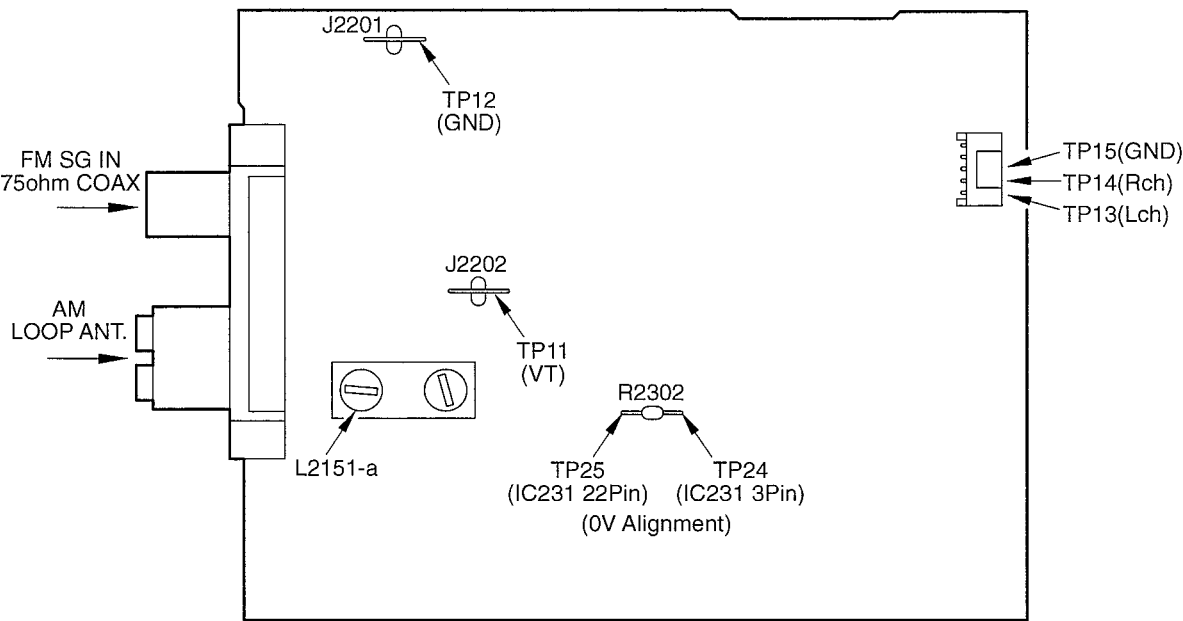
At assembling : After connecting CN478 to CN470, fix heatsink on the frame of power transformer with two screws.

At removing : Remove two screw fixing heatsink and hold "A" places as shown, then remove or connect socket.



TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- MODE : ST (Stereo)
- Speaker impedance : 6 ohm
- TUNING
 - FM : 87.5 - 108.0MHz (50kHz step)
 - AM : 522 - 1611KHz (9kHz step)



RF Level : dBμV EMF open, Output Level : about 200mV at TP13,14 & 15
Antenna : 75 unbalanced , Modulation : 1 kHz
Deviation : ±22.5kHz(MONO) ±22.5kHz(STEREO) ±6.75kHz(PILOT)

1. FM

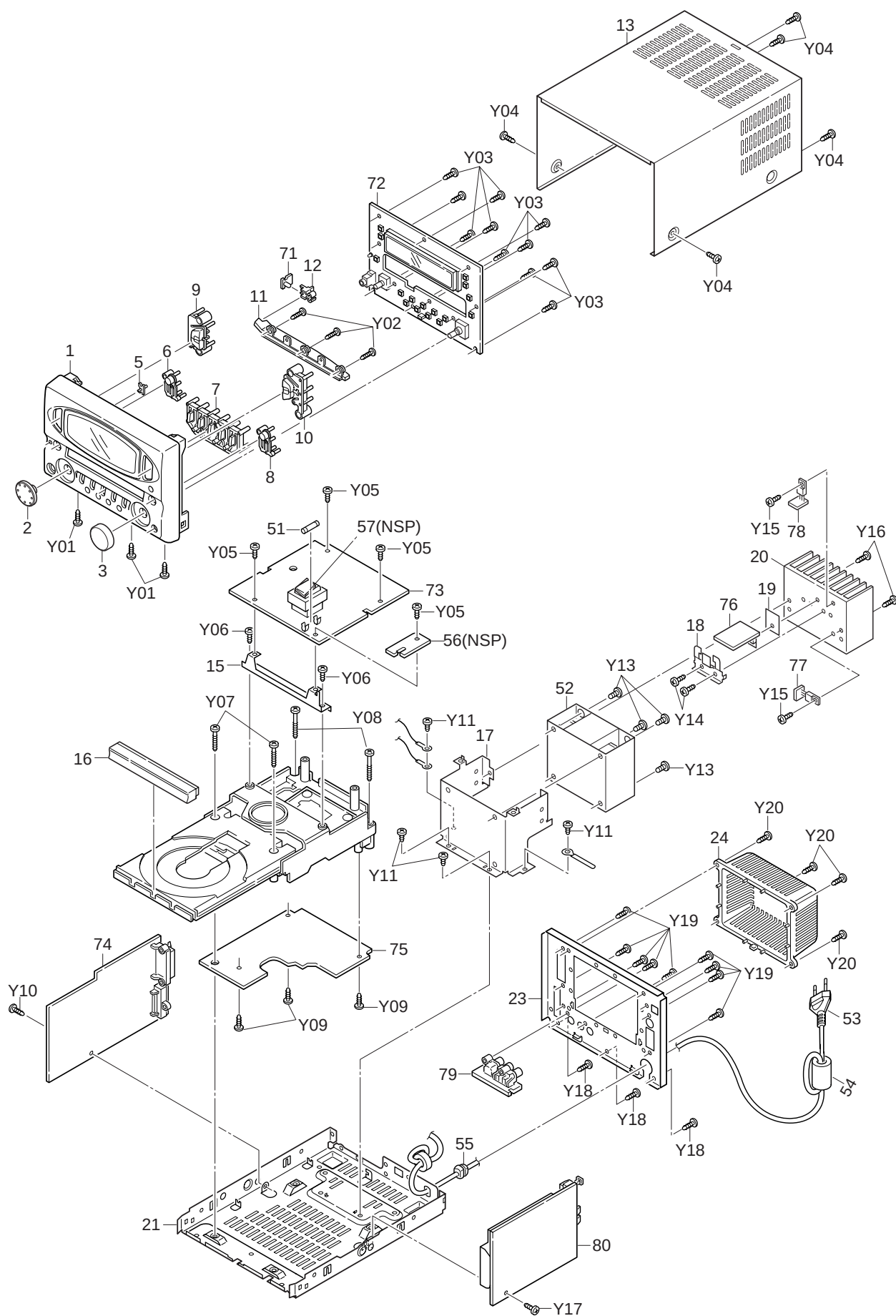
Step	Adjusting Circuit	Connection		SG Frequency	Adjustment parts	Confirmation & Adjustment	Remarks
		Input	Output				
1	IF(0V) alignment	FM Antenna SG=66dB μV	IC231 3,22 Pin (TP24,25)	98.0 MHz	XF233	Align voltage between pin 3 and pin 22 of IC231 so as to be 0.0±0.05V.	
2	Cover voltage	---	TP11(H), TP12(E)	87.5 MHz	---	Make sure voltage is more than 0.8V.(avg.=2.0V)	
		---		108.0 MHz	---	Make sure voltage is less than 9.0V.(avg.=7.5V)	
3	Tracking	FM Antenna	TP13(L) , TP14(R), TP15(E)	90.0 MHz	---	Make sure S/N=30 sens. is within 26dB μV.	
				106.0MHz	---	Make sure S/N=30 sens. is within 24dB μV.	

SG Modulation : 1kHz, 30%
Antenna, IRE Loop, Distance: 60 cm
RF Level : dBμV EMF open
Output Level : about 200mV at TP13,TP14,TP15

2. AM

Step	Adjusting Circuit	Connection		SG Frequency	Adjustment parts	Confirmation & Adjustment	Remarks
		Input	Output				
1	Cover voltage	---	TP11(H), TP12(E)	522 kHz	---	Make sure voltage is more than 0.8V.(avg.=1.1V)	
		---		1611kHz	---	Make sure voltage is less than 9.0V.(avg.=5.5V)	
2	Tracking	Loop Antenna	TP13(L) , TP14(R), TP15(E)	603 kHz	L2151-a	Make sure S/N=20 sens. is within 85dB μV/m.	Adjust L2151-a so as to be Output MAX at 603kHz.
				1404 kHz		Make sure S/N=30 sens. is within 82dB μV/m.	

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL Δ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY Δ , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μ F type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 310 7293	CARTON CASE, INNER SLEEVE
	614 309 5217	CUSHION, FRONT
	614 309 5224	CUSHION, BACK
	614 310 7118	INSTRUCTION MANUAL
	614 313 3513	INSTRUCTION MANUAL (GREEK)
	645 041 1533	POLY SHEET-0750X0500*NC, SET
	645 040 9943	BATTERY COVER, SERVICE PARTS
	645 005 1227	ASSY, ANTENNA, LOOP
	614 229 4635	ANTENNA, FM
or	614 308 5515	ANTENNA, FM
	645 040 1923	REMOCON, RB-M3RD
	645 040 1787	ASSY, CABLE, SYSTEM 19P
	614 311 5090	ASSY, BOX, SPEAKER
	614 311 5106	ASSY, GRILLE

REF.NO.	PART NO.	DESCRIPTION
Y05	411 021 3503	SCR S-TPG BIN 3X10, SUB TRANS PWB
Y06	411 021 3503	SCR S-TPG BIN 3X10, HOLDER PWB
Y07	411 098 4403	SCR S-TPG BIN 3X25, CD MECHA FIX FRONT
Y08	411 122 3709	SCR S-TPG BIN 3X35, CD MECHA FIX BACK
Y09	411 021 3503	SCR S-TPG BIN 3X10, CD MECHA-CD PWB
Y10	411 021 3503	SCR S-TPG BIN 3X10, MAIN PWB
Y11	411 021 5705	SCR S-TPG BIN 3X6, HOLDER TRANS-BOTTOM
Y13	411 001 4209	SCR S-TPG BIN 4X8, TRANS
Y14	411 021 3503	SCR S-TPG BIN 3X10, POWER-IC
Y15	411 021 3503	SCR S-TPG BIN 3X10, +MB, +12V REG
Y16	411 021 3503	SCR S-TPG BIN 3X10, HEAT SINK
Y17	411 021 3503	SCR S-TPG BIN 3X10, TUNER PWB
Y18	411 021 3701	SCR S-TPG BIN 3X10, BOTTOM-REAR
Y19	411 021 3701	SCR S-TPG BIN 3X10, REAR-ELECT PARTS
Y20	411 021 3701	SCR S-TPG BIN 3X10, COVER FIX

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 309 4586	ASSY, CABINET, FRONT
2	614 310 5336	KNOB, VOLUME, MULTI JOG
3	614 309 5095	KNOB, ROTARY, VOLUME
5	614 309 4715	BUTTON, POWER
6	614 302 0530	DEC, WINDOW LED, POWER
7	614 309 4739	BUTTON, PLAY
8	614 309 4722	BUTTON, OPEN/CLOSE
9	614 309 4678	BUTTON, LEFT, BAND/TUNE MODE
10	614 309 4692	BUTTON, RIGHT, INPUT/SUPER BASS
11	614 309 4975	DEC, WINDOW, LED, LIGHTING
12	614 309 5088	HOLDER, LED, LIGHTING
13	614 309 4531	ASSY, CABINET, AFTER BENDING
15	614 309 5071	HOLDER, PWB, SUB TRANS PWB
16	614 309 4982	DEC, ESCUTCHEON, CD TRAY
17	614 309 5064	HOLDER, TRANS/HEAT SINK/S-T-PWB
18	614 312 0223	MOUNTING, POWER IC
19	614 310 8887	SPACER, RUBBER, POWER IC
20	614 310 7668	HEAT SINK, POWER IC, REGULATOR
21	614 309 4616	ASSY, CABINET, BOTTOM
23	614 309 5149	PANEL, REAR
24	614 310 7194	ASSY, COVER
	614 129 1901	FIXER, AC CORD
	614 284 1884	FIXER, AC CORD
	614 129 9136	LUG, FOR CD-TU WIRE

ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	Δ 423 016 9803	FUSE 250V 0.63A FU499
52	Δ 645 040 0902	TRANS, POWER
53	Δ 645 016 9939	CORD, POWER-1.74MK
or	Δ 614 255 2513	POWER CORD
54	645 037 3060	CORE, CLAMP, LINE-NOISE
55	645 013 6498	CORE, FERRITE, AC-EMC
56	Δ 614 310 8900	PWB, DRESSING, DRESSING (N.S.P)
57	Δ 614 312 7031	PWB, INSULATOR, INSULATOR (N.S.P)
CN135	614 309 4159	ASSY, WIRE, CD-TUNER (OPT OUT)
CN191	645 041 1786	FLEXIBLE FLAT CABLE, PICK UP
CN691	645 040 1770	FLEXIBLE FLAT CABLE, FRONT-PRE

LED P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 309 4272	ASSY, PWB, ILLUMINATION (Only Initial)
CN651	614 035 4911	SOCKET, DIP 2P, LED
or	645 012 7786	SOCKET, DIP 2P, LED
D6501	407 212 8907	LED HLMP-BB01-J0B00

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 021 3503	SCR S-TPG BIN 3X10, FRONT-BOTTOM FIX
Y02	411 021 1202	SCR S-TPG BIN 2X8, DEC WINDOW LED
Y03	411 021 3503	SCR S-TPG BIN 3X10, FRONT PWB FIX
Y04	411 021 3701	SCR S-TPG BIN 3X10, CABINET

PARTS LIST

FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
72	614 309 0625	ASSY,PWB,FRONT (Only Initial)	or	405 011 8609	TR 2SC1740S-S
BR601	614 305 2241	HOLDER,FL,FL_MOUNT	or	405 020 7402	TR 2SC945A-P
C6093	403 304 4802	DL-ELECT 0.047F Z 5.5V	or	405 020 7204	TR 2SC945A-K
or	403 262 8607	DL-ELECT 0.047F Z 5.5V	Q6006	405 143 8706	TR KTC3199-GR
CN479	645 012 0008	JACK,PHONE D3.6,HEADPHONE	or	405 017 9600	TR 2SC3330-T
CN488	614 273 3905	CORD,1P CONNECTOR, FRONT-CHASSIS	or	405 017 9709	TR 2SC3330-U
CN489	614 020 1246	SOCKET,5P	or	405 019 3705	TR 2SC536-G-AUD-SPA
CN499	614 309 6184	ASSY,WIRE,HEADPHONE	or	405 011 8500	TR 2SC1740S-R
CN601	645 012 5553	SOCKET,FPC 22P,FRONT-AMP	or	405 011 8609	TR 2SC1740S-S
CN602	614 035 4959	SOCKET,DIP 6P,FRONT-TU	or	405 020 7402	TR 2SC945A-P
or	645 012 7823	SOCKET,DIP 6P,FRONT-TU	or	405 020 7204	TR 2SC945A-K
CN603	614 035 5017	SOCKET,DIP 12P,FRONT-CD	Q6007	405 141 3505	TR KTA1266-Y
or	645 012 7885	SOCKET,DIP 12P,FRONT-CD	or	405 141 3406	TR KTA1266-GR
CN604	614 035 4911	SOCKET,DIP 2P,LED	or	405 004 4502	TR 2SA608-F-NP
or	645 012 7786	SOCKET,DIP 2P,LED	or	405 004 5004	TR 2SA608-G-NP
CN612	614 297 8856	CORD,6P CONNECTOR,FRONT-TU	or	405 006 3909	TR 2SA952-K
or	614 309 4135	ASSY,WIRE,FRONT-TU	or	405 006 4005	TR 2SA952-L
CN613	614 309 4111	ASSY,WIRE,FRONT-CD	Q6008	405 000 6104	TR DTC144ES
D6001	407 012 4406	DIODE 1SS133	or	405 146 1209	TR KRC104M
D6002	407 099 4603	ZENER DIODE MTZJ3.9B	Q6009	405 000 6104	TR DTC144ES
D6004	408 032 5404	LED SLP-9118C-51H-S-T1	or	405 146 1209	TR KRC104M
D6011	407 012 4406	DIODE 1SS133	Q6010	405 000 2205	TR DTA144ES
D6091	407 012 4406	DIODE 1SS133	or	405 146 1308	TR KRA104M
DS601	407 217 1101	PHOTO DIODE SPS-442-1G,IR	Q6011	405 000 6104	TR DTC144ES
FL601	645 040 1794	FLOURESCENT TUBE,FL	or	405 146 1209	TR KRC104M
IC601	410 384 0808	IC M38B57MCH-B252FP, MICRO-CONTROLLER	R4790	401 009 5605	CARBON 330 JA 1/2W
L4790	645 001 4550	INDUCTOR,10U K	R4890	401 009 5605	CARBON 330 JA 1/2W
L4791	645 001 4550	INDUCTOR,10U K	S6001	645 026 4771	SWITCH,ROTARY(ENCODER), VOLUME
L4891	645 001 4550	INDUCTOR,10U K	S6002	645 040 1763	SWITCH,ROTARY(ENCODER), MULTIJOG
L6091	645 001 4550	INDUCTOR,10U K	S6091	614 215 9828	SWITCH,TACT,RESETSW
or	645 031 7835	INDUCTOR,10U K	S6101	614 240 1002	SWITCH,TACT
Q6001	405 143 8706	TR KTC3199-GR	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 017 9600	TR 2SC3330-T	or	614 220 5471	SWITCH,TACT
or	405 017 9709	TR 2SC3330-U	S6102	614 240 1002	SWITCH,TACT
or	405 019 3705	TR 2SC536-G-AUD-SPA	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 011 8500	TR 2SC1740S-R	or	614 220 5471	SWITCH,TACT
or	405 011 8609	TR 2SC1740S-S	S6103	614 240 1002	SWITCH,TACT
or	405 020 7402	TR 2SC945A-P	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 020 7204	TR 2SC945A-K	or	614 220 5471	SWITCH,TACT
Q6002	405 143 6504	TR KTA1267-GR	S6104	614 240 1002	SWITCH,TACT
or	405 004 4601	TR 2SA608-F-SPA	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 004 5103	TR 2SA608-G-SPA	or	614 220 5471	SWITCH,TACT
or	405 006 1806	TR 2SA933S-R	S6105	614 240 1002	SWITCH,TACT
or	405 006 1905	TR 2SA933S-S	or	645 006 5958	SWITCH,PUSH 1P-1T
Q6003	405 141 3505	TR KTA1266-Y	or	614 220 5471	SWITCH,TACT
or	405 141 3406	TR KTA1266-GR	S6106	614 240 1002	SWITCH,TACT
or	405 004 4502	TR 2SA608-F-NP	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 004 5004	TR 2SA608-G-NP	or	614 220 5471	SWITCH,TACT
or	405 006 3909	TR 2SA952-K	S6107	614 240 1002	SWITCH,TACT
or	405 006 4005	TR 2SA952-L	or	645 006 5958	SWITCH,PUSH 1P-1T
Q6004	405 143 8706	TR KTC3199-GR	or	614 220 5471	SWITCH,TACT
or	405 017 9600	TR 2SC3330-T	S6108	614 240 1002	SWITCH,TACT
or	405 017 9709	TR 2SC3330-U	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 019 3705	TR 2SC536-G-AUD-SPA	or	614 220 5471	SWITCH,TACT
or	405 011 8500	TR 2SC1740S-R	S6109	614 240 1002	SWITCH,TACT
or	405 011 8609	TR 2SC1740S-S	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 020 7402	TR 2SC945A-P	or	614 220 5471	SWITCH,TACT
or	405 020 7204	TR 2SC945A-K	S6110	614 240 1002	SWITCH,TACT
Q6005	405 143 8706	TR KTC3199-GR	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 017 9600	TR 2SC3330-T	or	614 220 5471	SWITCH,TACT
or	405 017 9709	TR 2SC3330-U	S6111	614 240 1002	SWITCH,TACT
or	405 019 3705	TR 2SC536-G-AUD-SPA	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 011 8500	TR 2SC1740S-R	or	614 220 5471	SWITCH,TACT
			S6114	614 240 1002	SWITCH,TACT

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6115	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6116	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6117	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6118	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
TA601	614 112 1383	DOUBLE FACE,FL_MOUNT
X6001	645 032 1627	OSC,CRYSTAL 32.768KHZ,XTAL
X6002	614 215 5561	RESONATOR,CERAM
or	645 013 7532	OSC,CERAMIC 4.19MHZ

PRE AMPLIFIER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 309 3091	ASSY,PWB, PRE AMP (Only Initial)
C4508	403 058 5209	POLYESTER 0.15U K 50V
C4509	403 058 5209	POLYESTER 0.15U K 50V
C4590	403 057 1202	POLYESTER 0.01U M 50V
C4591	403 057 1202	POLYESTER 0.01U M 50V
C4592	403 057 1202	POLYESTER 0.01U M 50V
C4593	403 057 1202	POLYESTER 0.01U M 50V
C4608	403 058 5209	POLYESTER 0.15U K 50V
C4609	403 058 5209	POLYESTER 0.15U K 50V
CN400	645 012 5553	SOCKET,FPC 22P
CN421	614 035 4942	SOCKET,DIP 5P
CN422	645 005 9292	PLUG,5P
CN423	645 026 1916	CORD,TERMINAL
CN426	645 026 8960	PLUG,12P
CN438	614 239 5455	SOCKET, SYSTEM-CONNECTOR
CN455	645 008 5314	TERMINAL,SPEAKER-OUT
CN456	645 005 8110	PLUG,4P
CN457	645 005 8554	SOCKET,6P
CN458	645 006 1820	PLUG,5P
CN459	645 005 9292	PLUG,5P
CN482	614 309 6177	ASSY,WIRE,TUNER-PREAMP
D4370	△ 407 148 6701	DIODE 1A3-I
IC415	409 467 0101	IC LA2615
IC451	409 474 6103	IC LC75342M
LG401	645 023 8987	FIXER
LG402	645 023 8987	FIXER
LG403	645 023 8987	FIXER
LG404	645 023 8987	FIXER
LG405	645 023 8987	FIXER
LG406	614 129 9082	LUG
PR457	△ 645 014 2475	PROTECTOR,0.75A 125V
PR459	△ 645 014 2574	PROTECTOR,3A 125V
	645 029 0015	FUSE HOLDER,F502

AMPLIFIER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 309 3107	ASSY,PWB, POWER-AMP (Only Initial)
C4705	403 059 8209	POLYESTER 0.22U K 50V
C4706	403 059 8209	POLYESTER 0.22U K 50V

REF.NO.	PART NO.	DESCRIPTION
C4805	403 059 8209	POLYESTER 0.22U K 50V
C4806	403 059 8209	POLYESTER 0.22U K 50V
C4909	403 329 6102	ELECT 1000U M 35V
C4910	403 329 6201	ELECT 2200U M 35V
or	403 325 0203	ELECT 2200U M 35V
C4911	403 329 6102	ELECT 1000U M 35V
C4974	△ 403 349 3303	CERAMIC 0.01U M 250V
or	△ 404 000 1607	CERAMIC 0.01U F 400V
C4975	403 200 6900	ELECT 1000U M 16V
or	403 313 4602	ELECT 1000U M 16V
CN440	△ 645 005 9315	PLUG,2P
CN470	645 005 8493	SOCKET,10P
CN491	645 006 1806	PLUG,3P
CN492	645 026 8977	SOCKET,12P
CN493	645 006 2018	PLUG,6P
CN494	645 005 7373	PLUG,3P
CN495	614 221 8273	TERMINAL
CN496	645 005 7373	PLUG,3P
D4400	407 012 4406	DIODE 1SS133
D4401	407 099 5402	ZENER DIODE MTZJ6.2B
D4470	407 099 4603	ZENER DIODE MTZJ3.9B
D4471	407 012 4406	DIODE 1SS133
D4475	△ 407 148 6701	DIODE 1A3-I
D4901	△ 407 196 5800	DIODE 1N5402BD82
D4902	△ 407 196 5800	DIODE 1N5402BD82
D4903	△ 407 196 5800	DIODE 1N5402BD82
D4904	△ 407 196 5800	DIODE 1N5402BD82
D4905	407 099 6805	ZENER DIODE MTZJ13B
D4906	407 099 6805	ZENER DIODE MTZJ13B
D4907	△ 407 148 6701	DIODE 1A3-I
D4930	407 099 5402	ZENER DIODE MTZJ6.2B
D4950	407 012 4406	DIODE 1SS133
D4951	407 012 4406	DIODE 1SS133
D4952	407 099 9905	ZENER DIODE MTZJ33B
D4953	407 099 5204	ZENER DIODE MTZJ5.1B
D4954	407 012 4406	DIODE 1SS133
D4955	407 012 4406	DIODE 1SS133
D4970	△ 407 148 6701	DIODE 1A3-I
D4971	△ 407 148 6701	DIODE 1A3-I
D4972	△ 407 148 6701	DIODE 1A3-I
D4973	△ 407 148 6701	DIODE 1A3-I
FCL41	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
FCL42	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
HS491	614 215 9347	HEAT SINK,Q4930
L4970	△ 645 017 8061	INDUCTOR,181M
or	△ 645 038 6053	INDUCTOR,181U
LG441	645 023 8987	FIXER
LG442	645 023 8987	FIXER
PR491	△ 645 025 5137	PROTECTOR,7A 125V
PR492	△ 645 025 5137	PROTECTOR,7A 125V
PR493	△ 645 014 2468	PROTECTOR,0.63A 125V
PR495	△ 645 014 2451	PROTECTOR,0.25A 125V
PT497	△ 645 041 0277	TRANS,POWER
Q4400	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4401	△ 405 141 1402	TR KTD863-GR
or	△ 405 023 5009	TR 2SD400-E-MP
or	△ 405 023 5306	TR 2SD400-F-MP
Q4470	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
Q4471	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4770	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4771	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4773	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4902	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4904	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4905	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4906	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4907	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4930	△ 405 138 6403	TR KTD2058Y
Q4950	△ 405 141 3604	TR KTA1273-Y
or	△ 405 009 5207	TR 2SB927-S
or	△ 405 009 5306	TR 2SB927-T
R4707	△ 402 078 5107	FUSIBLE RES 4.7 JA 1/4W
or	△ 402 081 2605	FUSIBLE RES 4.7 J- 1/4W
R4807	△ 402 078 5107	FUSIBLE RES 4.7 JA 1/4W
or	△ 402 081 2605	FUSIBLE RES 4.7 J- 1/4W
R4900	△ 402 081 2506	FUSIBLE RES 1 J- 1/2W
R4901	△ 402 081 2506	FUSIBLE RES 1 J- 1/2W
R4904	△ 402 083 3501	RESISTOR 1.5K J- 1W
R4907	△ 402 083 3303	FUSIBLE RES 33 J- 1/2W
RY440	645 035 6575	RELAY
or	645 030 5597	RELAY
SA001	411 021 6405	SCR S-TPG BIN 3X8, FOR Q4930
WR440	614 017 8203	TERMINAL BOARD
WR441	614 017 8203	TERMINAL BOARD

CD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 309 3541	ASSY,PWB,CD (Only Initial)
CN111	645 039 1972	SOCKET,FPC 15P
CN113	614 035 4959	SOCKET,DIP 6P
CN114	614 035 4942	SOCKET,DIP 5P
CN122	645 006 0991	PLUG,12P
CN123	614 035 4942	SOCKET,DIP 5P
CN126	614 309 4142	ASSY,WIRE,CD-AMP

REF.NO.	PART NO.	DESCRIPTION
CN127	614 309 4135	ASSY,WIRE,BASE-MECHA
CN128	614 309 4142	ASSY,WIRE,LOADING-MECHA
CN131	645 005 8226	PLUG,3P
D1371	407 099 5105	ZENER DIODE MTZJ4.7B
D1480	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
D1601	△ 407 148 6701	DIODE 1A3-I
D1602	△ 407 148 6701	DIODE 1A3-I
D1603	△ 407 148 6701	DIODE 1A3-I
D1604	△ 407 148 6701	DIODE 1A3-I
D1981	407 099 5204	ZENER DIODE MTZJ5.1B
IC101	409 396 8100	IC LA9241ML
IC102	409 435 2106	IC LC78622NE
IC103	△ 409 372 9602	IC LA6541
IC132	△ 409 408 1303	IC LB1641L
L1451	645 001 4550	INDUCTOR,10U K
PR101	△ 645 014 2482	PROTECTOR,0.315A 125V
PR132	△ 645 014 2499	PROTECTOR,0.4A 125V
Q1301	405 008 7202	TR 2SB810-E
or	405 008 7301	TR 2SB810-F
or	405 008 6809	TR 2SB808-F-SPA
Q1401	△ 405 141 3604	TR KTA1273-Y
or	△ 405 009 5207	TR 2SB927-S
or	△ 405 001 9302	TR 2SA1020-Y
Q1771	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
Q1773	405 000 0508	TR DTA114ES
or	405 110 5400	TR KRA102M-A
Q1781	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
Q1783	405 000 0508	TR DTA114ES
or	405 110 5400	TR KRA102M-A
R1371	△ 402 083 3600	RESISTOR 15 J- 2W
SH101	614 313 2424	SHIELD, FOR RF_JITTER
X1451	645 020 9024	OSC,CRYSTAL 16.9344MHZ

POWER IC P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 309 3138	ASSY,PWB,POWER IC (Only Initial)
CN487	645 006 1868	PLUG,10P
IC487	△ 409 441 6402	IC TDA7265

REGULATOR P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
77	614 309 3145	ASSY,PWB, VOL REG (Only Initial)
CN419	614 035 4928	SOCKET,DIP 3P
or	614 237 9769	SOCKET
CN420	614 309 9482	ASSY,WIRE
Q4190	△ 405 138 6403	TR KTD2058Y

PARTS LIST

REGULATOR 2 P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
78	614 311 4901	ASSY,PWB,VOL REG2 (Only Initial)	Q2310	405 143 8706	TR KTC3199-GR
CN417	614 035 4928	SOCKET,DIP 3P	or	405 017 9600	TR 2SC3330-T
or	614 237 9769	SOCKET	or	405 017 9709	TR 2SC3330-U
CN427	614 309 9482	ASSY,WIRE	or	405 019 3705	TR 2SC536-G-AUD-SPA
Q4170	△ 405 138 6403	TR KTD2058Y	or	405 011 8500	TR 2SC1740S-R
			or	405 011 8609	TR 2SC1740S-S
			or	405 020 7402	TR 2SC945A-P
			or	405 020 7204	TR 2SC945A-K
			Q2451	405 151 5209	TR KRA107M
			or	405 000 0904	TR DTA114YS
			or	405 078 2404	TR BN1A4P
			or	405 036 3702	TR 2SA1564

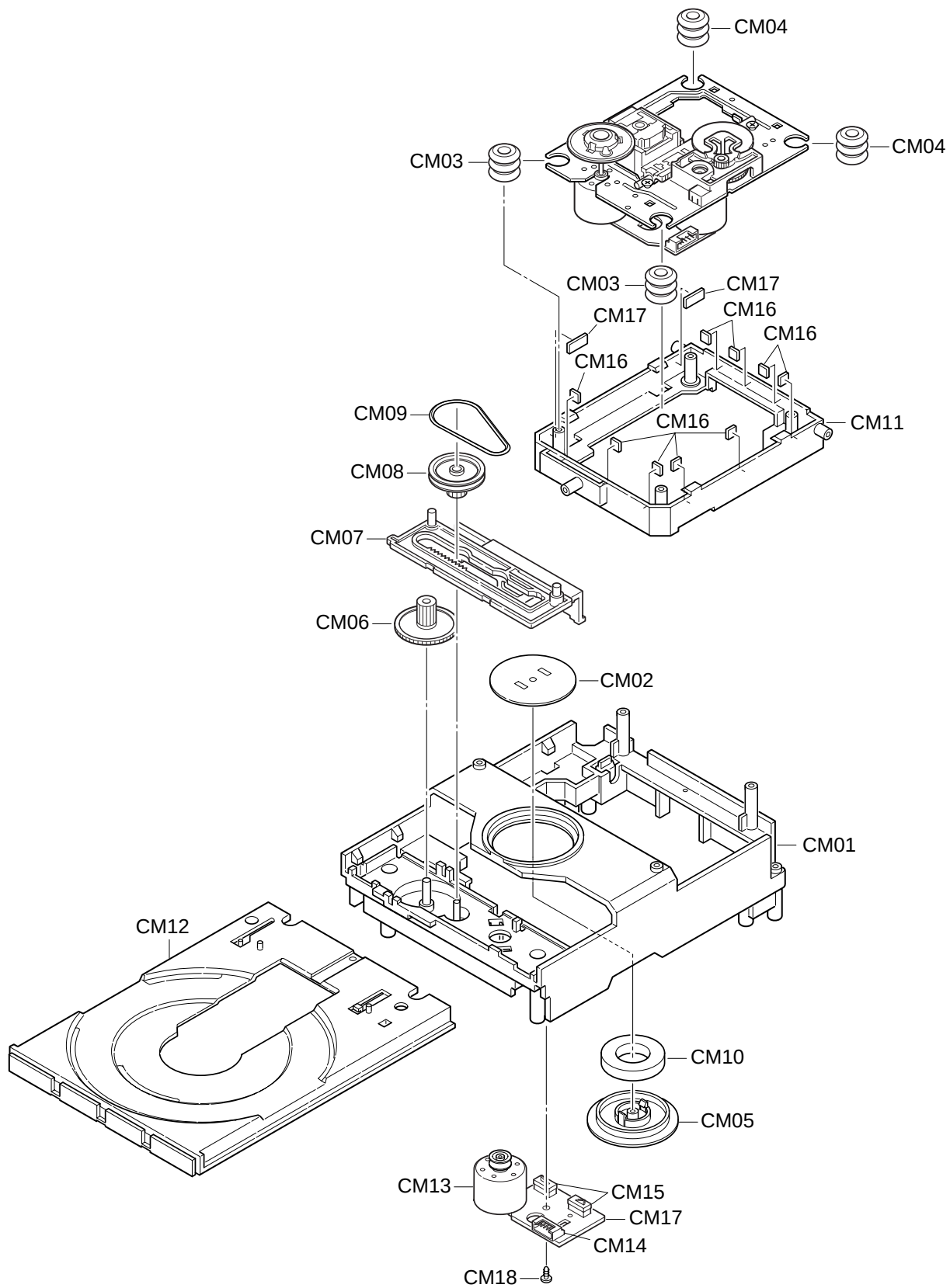
AUDIO TERMINAL P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
79	614 309 3121	ASSY,PWB,VIDEO IN(Only Initial)	Q2502	405 151 5209	TR KRA107M
CN452	645 040 5105	JACK,RCA-2,VIDEODVDIN	or	405 000 0904	TR DTA114YS
CN453	645 033 3057	JACK,RCA,WOOFEROUT	or	405 078 2404	TR BN1A4P
CN462	614 310 0157	ASSY,WIRE	or	405 036 3702	TR 2SA1564
LG462	614 129 9082	LUG	Q2701	405 143 8706	TR KTC3199-GR
			or	405 017 9600	TR 2SC3330-T
			or	405 017 9709	TR 2SC3330-U
			or	405 019 3705	TR 2SC536-G-AUD-SPA
			or	405 011 8500	TR 2SC1740S-R
			or	405 011 8609	TR 2SC1740S-S
			or	405 020 7402	TR 2SC945A-P
			or	405 020 7204	TR 2SC945A-K

TUNER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
80	614 309 3114	ASSY,PWB,TUNER (Only Initial)	or	405 020 7402	TR 2SC945A-P
C2457	403 259 0508	NP-ELECT 1U M 50V	Q2801	405 143 8706	TR KTC3199-GR
CN168	645 005 8226	PLUG,3P	or	405 017 9600	TR 2SC3330-T
or	645 009 6433	PLUG,3P	or	405 017 9709	TR 2SC3330-U
CN169	614 240 5703	OPTO CONNECTOR	or	405 019 3705	TR 2SC536-G-AUD-SPA
CN201	614 255 5750	TERMINAL	or	405 011 8500	TR 2SC1740S-R
or	645 032 6394	TERMINAL	or	405 011 8609	TR 2SC1740S-S
CN241	645 006 0922	PLUG,5P	or	405 020 7402	TR 2SC945A-P
or	645 009 6457	PLUG,5P	or	405 020 7204	TR 2SC945A-K
CN242	645 006 0939	PLUG,6P	R2301	△ 401 017 0708	CARBON 270 JA 1/4W
or	645 009 6464	PLUG,6P	R2311	△ 401 017 0708	CARBON 270 JA 1/4W
D2151	407 012 4406	DIODE 1SS133	SH202	614 310 3400	SHIELD
D2301	407 063 9108	ZENER DIODE MTZJ6.8B	U2101	645 033 5327	TUNER,FM
D2451	407 012 4406	DIODE 1SS133	X2451	645 023 4965	OSC,CRYSTAL 7.2MHZ
D2452	407 153 7502	ZENER DIODE GZS3.0B	X2501	645 035 8326	OSC,CRYSTAL 4.332MHZ
D2453	407 012 4406	DIODE 1SS133	XF221	614 240 2917	FILTER,CERAM
D2454	407 012 4406	DIODE 1SS133	or	645 010 0079	CERAMIC FILTER 10.70MHZ
D2466	407 012 4406	DIODE 1SS133	or	614 254 3214	FILTER
D2467	407 012 4406	DIODE 1SS133	XF222	614 240 2917	FILTER,CERAM
IC231	409 474 3201	IC LA1844ML	or	645 010 0079	CERAMIC FILTER 10.70MHZ
IC241	409 439 4502	IC LC72121M-D	or	614 254 3214	FILTER
IC251	409 447 3900	IC LC72722	XF231	614 246 0849	FILTER
L2151	645 023 0127	TUNER	XF233	645 039 9923	TRANS,IF 10.7MHZ
L2451	645 001 4581	INDUCTOR,100U K			
or	645 031 7842	INDUCTOR,100U K			
L2501	645 001 4581	INDUCTOR,100U K			
or	645 031 7842	INDUCTOR,100U K			
L2502	645 001 4581	INDUCTOR,100U K			
or	645 031 7842	INDUCTOR,100U K			
LG201	645 023 8987	FIXER			
Q2140	405 143 8706	TR KTC3199-GR			
or	405 017 9600	TR 2SC3330-T			
or	405 017 9709	TR 2SC3330-U			
or	405 019 3705	TR 2SC536-G-AUD-SPA			
or	405 011 8500	TR 2SC1740S-R			
or	405 011 8609	TR 2SC1740S-S			
or	405 020 7402	TR 2SC945A-P			
or	405 020 7204	TR 2SC945A-K			
Q2201	405 151 4202	TR KTC3193-O			
or	405 151 4103	TR KTC3193-Y			
or	405 016 0806	TR 2SC2839-E			

EXPLODED VIEW (CD MECHANISM)

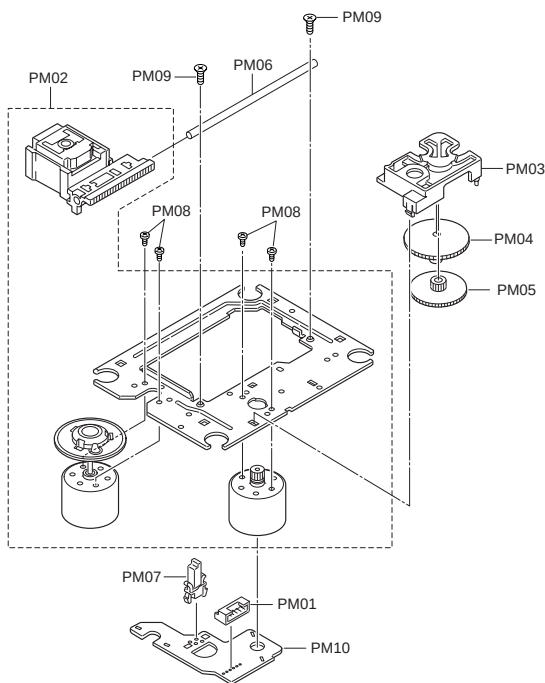


PARTS LIST

CD MECHANISM (CD11FT-SASH... Only Initial)

REF.NO.	PART NO.	DESCRIPTION
CM01	620 231 4594	CHASSIS,FRAME
CM02	620 231 4648	PLATE,MAGNET
CM03	620 229 0393	CUSHION,RUBBER
CM04	620 229 0409	CUSHION,RUBBER
CM05	620 231 4631	HOLDER,MAGNET
CM06	620 231 4686	GEAR,DRIVE
CM07	620 231 4693	GEAR,SLIDE
CM08	620 231 4662	PULLEY,GEAR
CM09	620 231 4655	BELT,SQUARE
CM10	620 231 7274	MAGNET
CM11	620 231 4624	LIFTER,MECHA
CM12	620 231 4617	TABLE,LOADING
CM13	620 232 5507	ASSY,MOTOR,LOADING
CM14	620 022 0460	PLUG 5P
CM15	620 232 2124	SWITCH,PUSH2-1
CM16	620 232 8386	CUSHION
CM17	620 232 6603	PWB,MOTOR
CM18	411 021 6405	SCR S-TPG BIN 3X8

EXPLODED VIEW (CD MECHANISM)

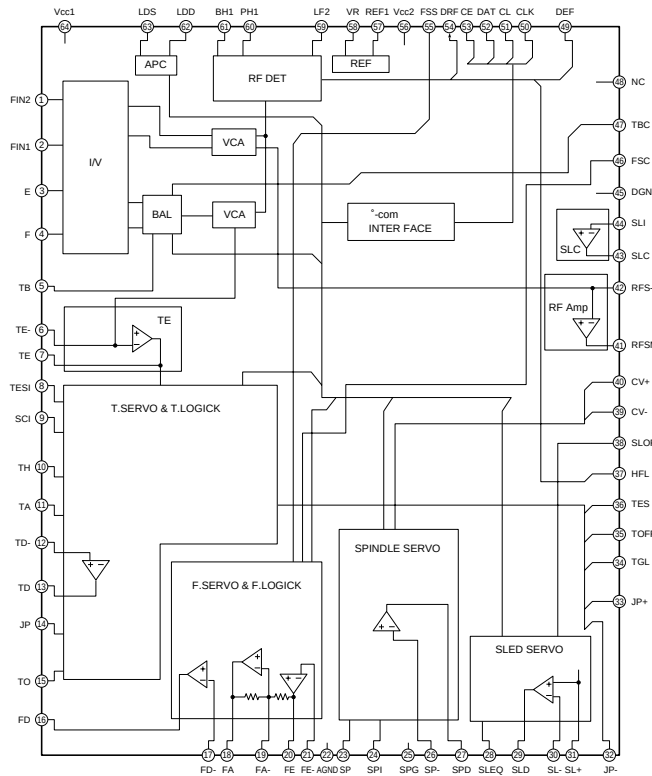


CD BASE MECHANISM(CDDA11-SASH...Only Initial)

REF.NO.	PART NO.	DESCRIPTION
PM01	620 021 8436	PLUG 6P
PM02	620 233 0853	ASSY MOTOR,BASE CHASSIS ASSY
PM03	620 236 3776	COVER,GEAR
PM04	620 230 8753	GEAR MIDDLE,RELAY GEAR
PM05	620 230 8760	GEAR DRIVE
PM06	620 231 0596	SHAFT SLIDE,PICK RAIL
PM07	620 233 0860	SWITCH LEAG,LIMIT SWITCH
PM08	411 104 8401	SCR PAN PCS 2X3
PM09	411 027 5402	SCR S-TPG FLT 2.6X6
PM10	620 236 0836	PWB,MOTOR

IC BLOCK DIAGRAM & DESCRIPTION

IC101 LA9241ML (Servo Signal Processor)

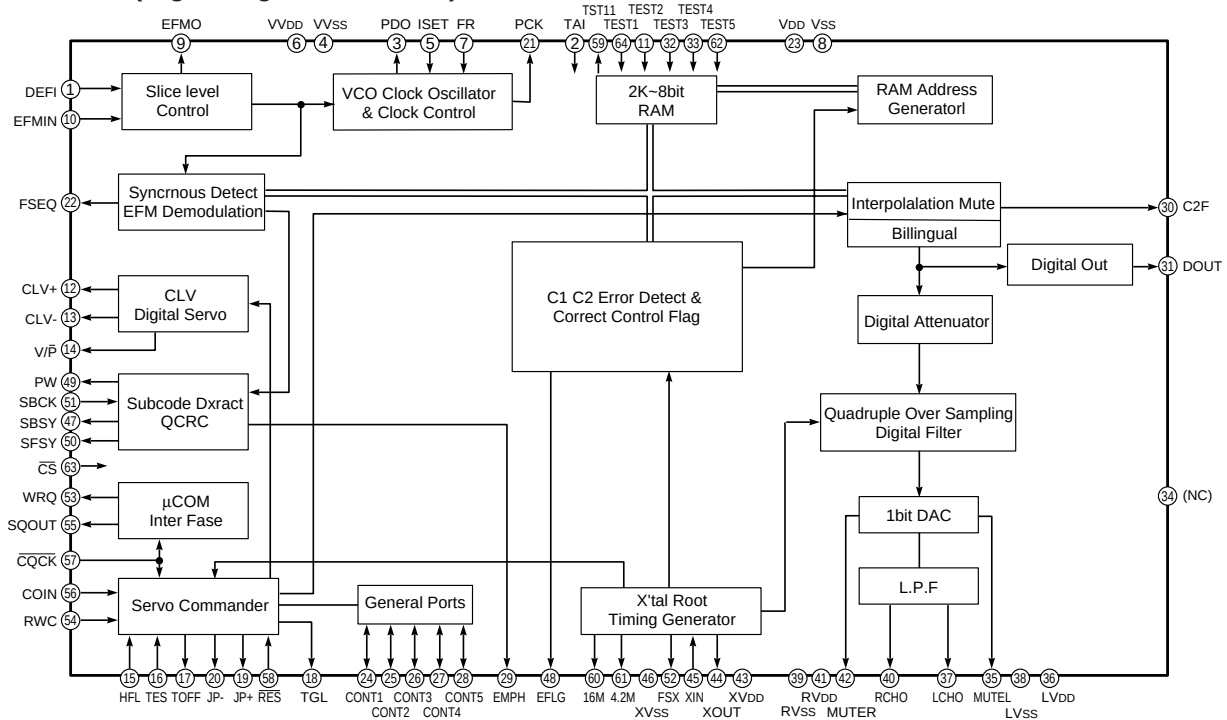


No.	Pin Name	I/O	Function
1	FIN2	I	Connection Pin for Photo Diode of Pickup.
2	FIN1	I	FIN2 + FIN1 = RF, FIN2 - FIN1 = FE
3	E	I	Connection Pin for Photo Diode of Pickup.
4	F	I	E - F = TE
5	TB	I	Input Pin for DC ingredient of TE Signal.
6	TE-	I	Connection Pin for Gain Setting Resistor of TE Signal to TE Signal Pin.
7	TE	O	Output Pin for Tracking Error Signal.
8	TESI	I	Input Pin for Track Error Sense Comparator. TE Signal through Band Pass, and Inputted.
9	SCI	I	Input Pin for Shock Detection.
10	TH	I	Connection Pin for Time Constant Setting of Tracking Gain.
11	TA	O	Output Pin for TA Amplifier.
12	TD-	I	Connection Pin for Constant Tracking Phase Compensation, Consist of between TD and VR.
13	TD	I	Connection Pin for Constant of Tracking Phase Compensation.
14	JP	I	Connection Pin for Amplitude Setting of Tracking Jump (Kick Pulse) Signal.
15	TO	O	Output Pin for Tracking Control Signal.
16	FD	O	Output Pin for Focusing Control Signal.
17	FD-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD and FA.
18	FA+	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD- and FA-.
19	FA-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FA and FE.
20	FE	O	Output Pin for Focusing Error Signal.
21	FE-	I	Connection Pin for Gain Setting Resistor of FE Signal to FE Signal Pin.
22	AGND	-	Ground for Analog Signal.

No.	Pin Name	I/O	Function
23	SP	O	Output Pin for Single End of Input Signal of the CV+, CV- Pin.
24	SPI	I	Input Pin for Spindle Amplifier.
25	SPG	I	Connection Pin for Gain Setting Resistor, when Spindle 12 cm Mode.
26	SP-	I	Connection Pin for Constant of Spindle Phase Compensation with SPD Pin.
27	SPD	O	Output Pin for Spindle Control Signal.
28	SLEQ	I	Connection Pin for Constant of Sled Phase Compensation.
29	SLD	O	Output Pin for Sled Control Signal.
30	SL-	I	Input Pin for Sled Signal from Micro Processor.
31	SL+	I	
32	JP-	I	Input Pin for Tracking Jump Signal from Digital Signal Processor.
33	JP+	I	
34	TGL	I	Input Pin for Tracking Gain Control Signal from Digital Signal Processor. TGL = H : Gain Low
35	TOFF	I	Input Pin for Tracking Off Control Signal from Digital Signal Processor. TOFF = H : OFF
36	TES	O	Output Pin for Track Error Sense Signal to Digital Signal Processor.
37	HFL	I	High Frequency Level Signal Use Detection Main-Beam Position is on the pit or mirror.
38	SLOF	I	Input Pin for Sled Servo Off Control.
39	CV-	I	Input Pin for Constant Linear Velocity Error Signal from Digital Signal Processor.
40	CV+	I	
41	RFSM	O	Output Pin for RF Signal.
42	RFS-	I	Connection Pin for Gain Setting of RF and Constant Setting of 3T Compensation of the EFM Signal with RFSM Pin.
43	SLC	O	Slice Level Control Signal is Output Pin. It Control Level of Data-Slice by Digital Signal Processor of the RF Waveform.
44	SLI	I	Input Pin for Level Control of Data-Slice by Digital Signal Processor.
45	DGND	-	Ground for Digital Signal.
46	FSC	O	Output Pin for Focus Search Smooth Condenser
47	TBC	O	Connection Pin for Variable Range Setting of EF Balance.
48	NC	-	No Connect
49	DEF	O	Output Pin for Defect Detection of Disc.
50	CLK	I	Input Pin for Reference Clock Pulse. (4.23 MHz of Digital Signal Processor)
51	CL	I	Input Pin of Clock Pulse for Command from Micro Processor.
52	DAT	I	Input Pin of Data for Command from Micro Processor.
53	CE	I	Input Pin of Chip Enable for Command from Micro Processor.
54	DRF	O	Output Pin for Detect of RF Level.
55	FSS	I	Select Pin for Focus Search Mode
56	VCC2	-	VCC for Servo and Digital Root.
57	REFI	I	Bus Control Connection Pin for Reference Voltage.
58	VR	O	Output Pin for Reference Voltage.
59	LF2	I	Connection Pin for Time Constant Setting of Detect Detection of the Disc.
60	PH1	I	Capacitor Connection Pin for Peak-hold of RF Signal.
61	BH1	I	Capacitor Connection Pin for Bottom-hold of RF Signal.
62	LDD	O	Output Pin of APC (Automatic Power Control) Circuit.
63	LDS	I	Input Pin of APC (Automatic Power Control) Circuit.
64	VCC1	I	VCC for RF Root.

IC BLOCK DIAGRAM & DESCRIPTION

IC102 LC78622NE (Digital Signal Processor)

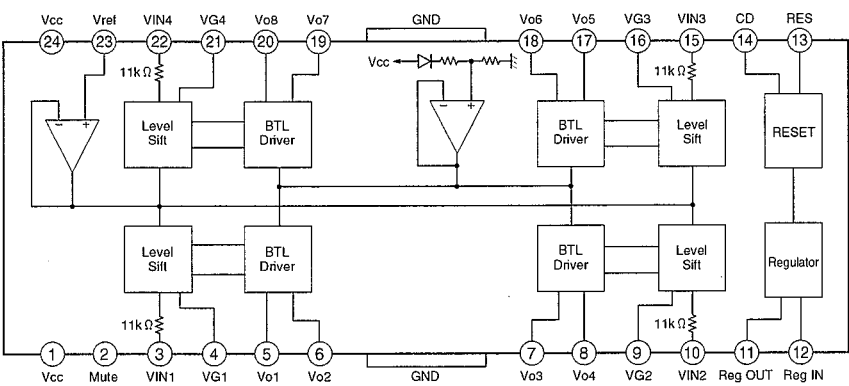


No.	Pin Name	I/O	Function
1	DEFI	I	Input terminal for detect signal of defect
2	TAI	I	Input terminal for test.
3	PDO	O	The phase comparison output terminal for external VCO control.
4	VVSS	-	Ground terminal for built-in VCO
5	ISET	I	Resistance connection terminal for electric current adjustment of PDO output.
6	VVDD	-	Built-in VCO power supply terminal.
7	FR	I	VCO frequency range adjustment.
8	VSS	-	Ground for Digital
9	EFMO	O	EFM signal output terminal for slice level control.
10	EFMIN	I	EFM signal input terminal for slice level control.
11	TEST2	I	TEST pin. Normal time is non connection.
12	CLV+	O	Output terminal for Disc motor control.
13	CLV-	O	Output terminal for Disc motor control.
14	V/P	O	Change of rough servo / phase control Rough servo : "H", Phase control : "L"
15	HFL	I	Input terminal of track search signal.
16	TES	I	Input terminal of tracking error signal.
17	TOFF	O	Output terminal of tracking off.
18	TGL	O	Output terminal for change of tracking gain.
19	JP+	O	Output terminal for tracking jump control.
20	JP-	O	Output terminal for tracking jump control.
21	PCK	O	Clock monitor output terminal for EFM data playback. (4.3218 MHz)
22	FSEQ	O	Output terminal for detect of SYNC signal.
23	DVDD	-	+5V
24	CONT1	I/O	This output can control at serial control from micro processor.
25	CONT2	I/O	
26	CONT3	I/O	
27	CONT4	I/O	
28	CONT5	I/O	
29	EMPH	O	Output terminal of de-emphasis monitor . "H" : de-emphasis
30	C2F	O	Output terminal of C2 flag
31	DOUT	O	Output terminal of digital out
32	TEST3	I	Test pin.

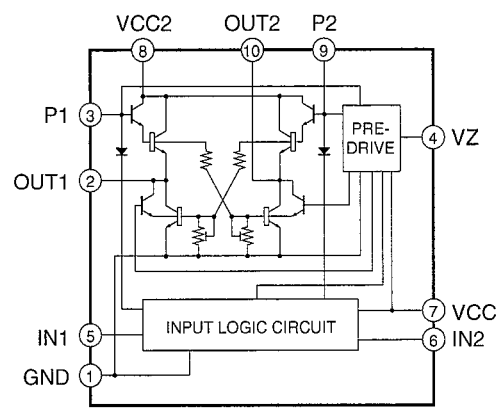
No.	Pin Name	I/O	Function
33	TEST4	I	Test pin.
34	NC	-	Non connection.
35	MUTEL	O	Mute output terminal for L-ch
36	LVDD	-	Power supply for L-ch
37	LCHO	O	Output terminal for L-ch
38	LVSS	-	GND for L-ch
39	RVSS	-	GND for R-ch
40	RCHO	O	Output terminal for R-ch
41	RVDD	-	Power supply for R-ch
42	MUTER	O	Mute output terminal for R-ch
43	XVDD	-	Power supply of crystal oscillation
44	XOUT	O	Connection terminal of crystal oscillation (16.9344MHz)
45	XIN	I	Connection terminal of crystal oscillation (16.9344MHz)
46	XVSS	-	GND of crystal oscillation
47	SBSY	O	Output terminal for synchronizing signal of sub-cord block
48	EFLG	O	Output terminal for correction monitor of C1, C2, Single and Double
49	PW	O	Output terminal for sub-cord of P, Q, R, S, T, U and W
50	SFSY	O	Output terminal for synchronizing signal of sub-cord frame
51	SBCK	I	Input terminal for readout clock of sub-cord
52	FSX	O	Output terminal of Synchronizing signal (7.35kHz)
53	WRQ	O	Output terminal for standby of sub-cord Q output
54	RWC	I	Input terminal of read / write control
55	SQOUT	O	Output terminal of sub-cord Q
56	COIN	I	Input terminal of command from micro processor
57	CQCK	I	Clock input for reading sub-cord from SQOUT
58	RES	I	Reset (turn on : L)
59	TST11	O	Test pin
60	16M	O	16.9344MHz
61	4.2M	O	4.2336MHz
62	TEST5	I	Test pin
63	CS	I	Chip select terminal
64	TEST1	I	Test pin

IC BLOCK DIAGRAM & DESCRIPTION

IC103 LA6541 (Pick-up Actuator & CD Mechanism Motor)

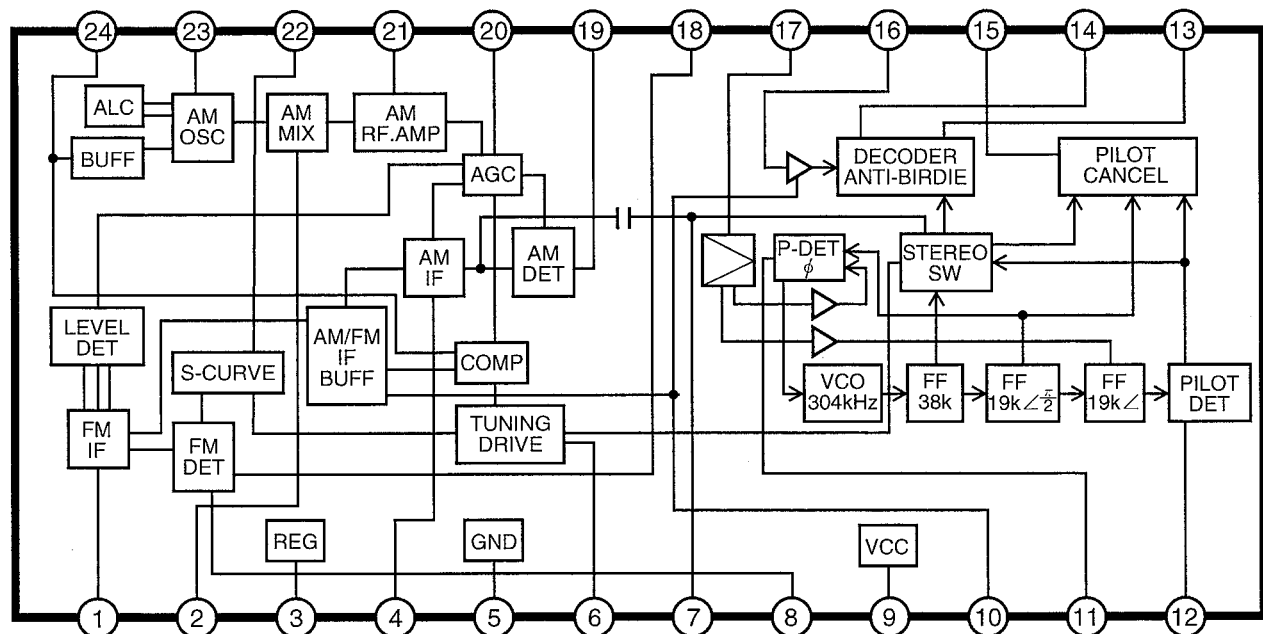


IC131 LB1641L (Motor Driver)



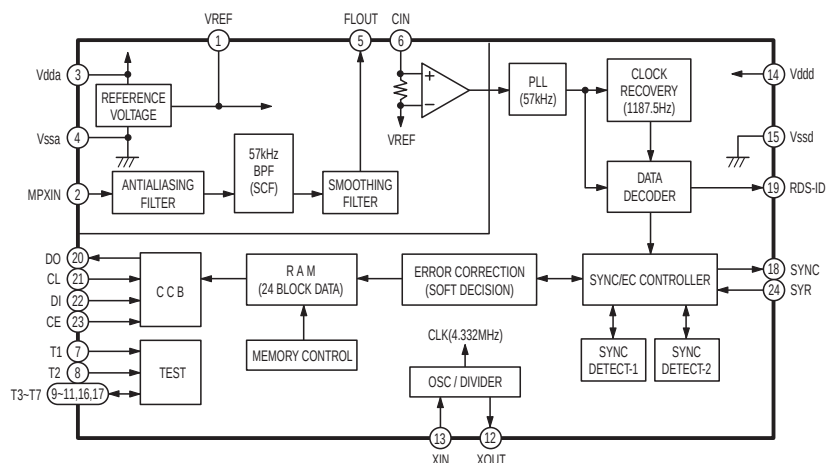
Input		Output		Action
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	Normal(Reverse)Rotary
0	1	0	1	Reverse(Normal)Rotary
1	1	0	0	Brake

IC231 LA1844ML
(Electronic Tuning-Supported Home Audio Tuner IC)



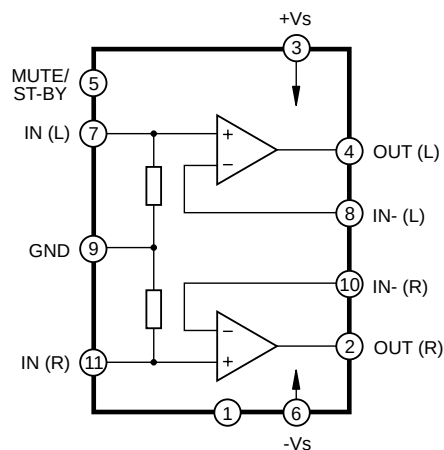
IC BLOCK DIAGRAM & DESCRIPTION

IC241 LC72121M (PLL Synthesizer)

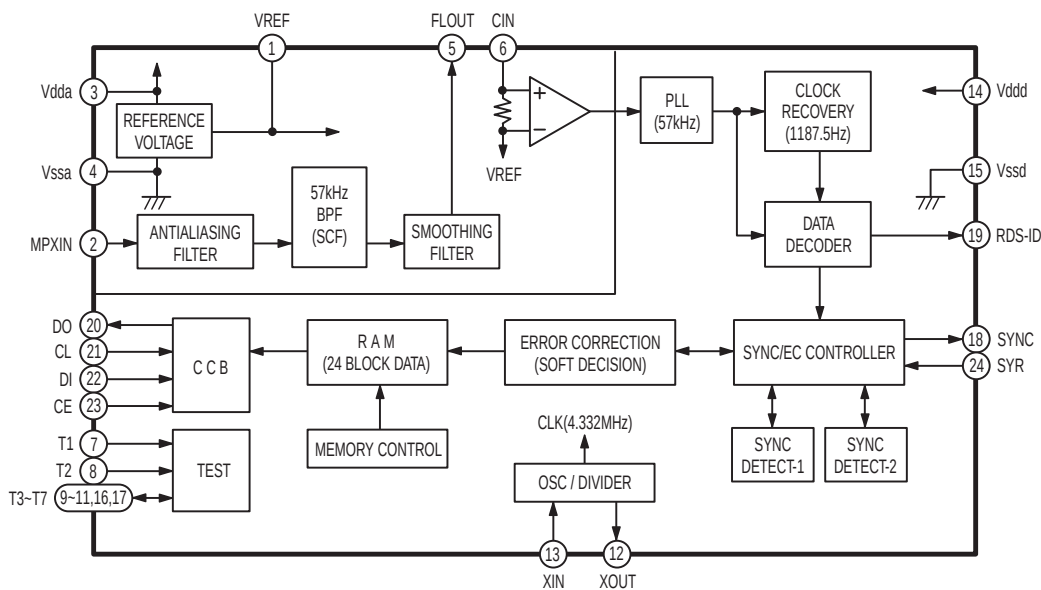


IC487 TDA7265

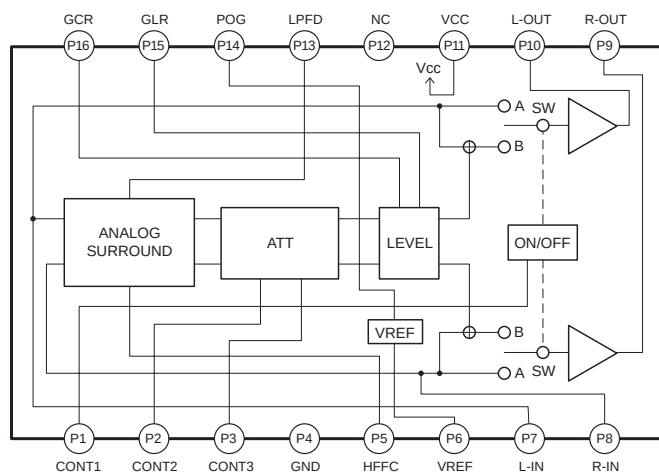
(25 + 25W Stereo Amplifier with Mute & ST-by)



IC251 LC72722 (RDS Signal Processor)



IC415 LA2615 (Surround Signal Processor)



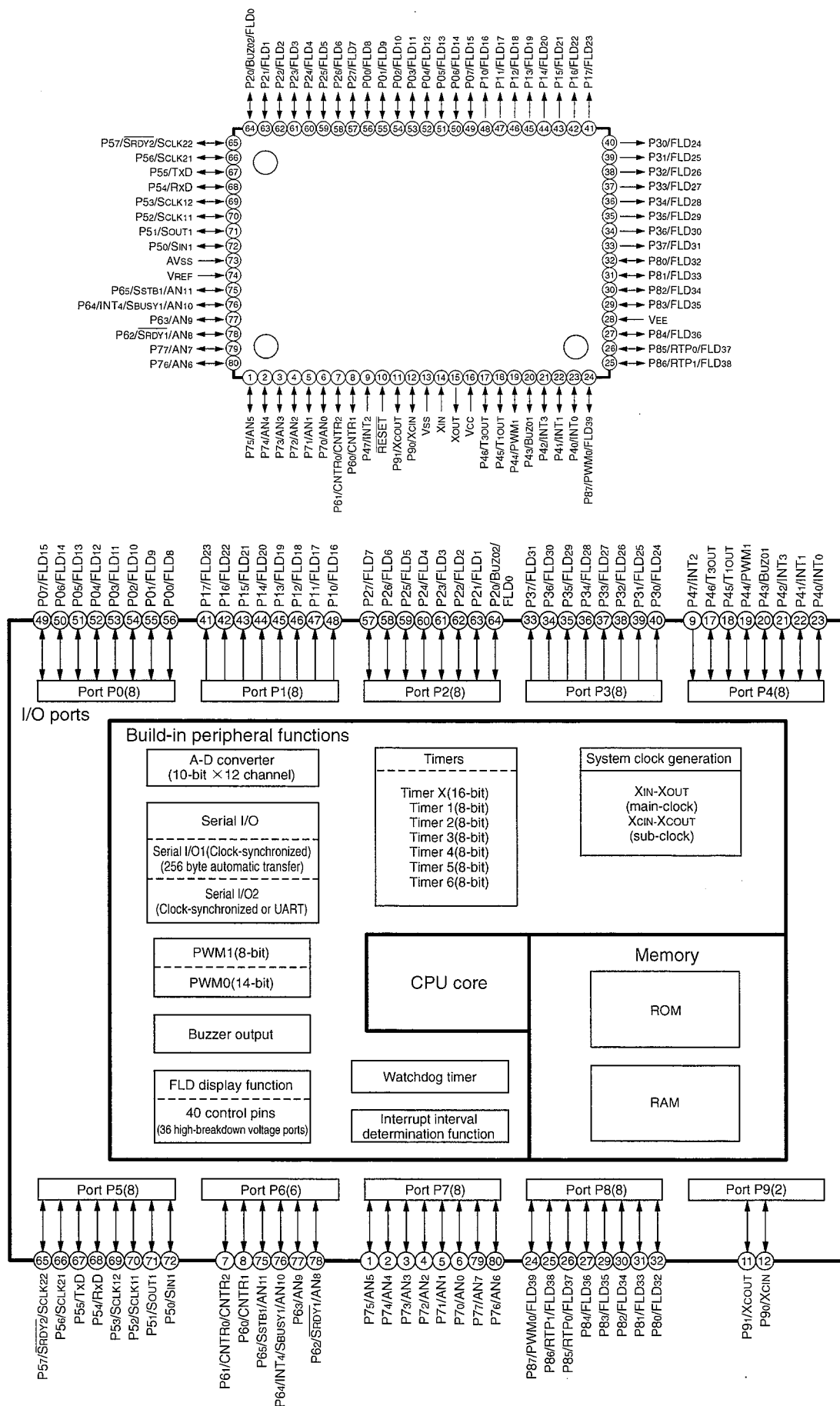
IC451 LC75342M

(2-ch Stereo Audio Power Amplifier)



IC BLOCK DIAGRAM & DESCRIPTION

IC601 M38B57MCH-B25FP (8-bit Cmos Microcomputer)



IC BLOCK DIAGRAM & DESCRIPTION

IC601 M38B57MCH-B252FP (8-bit Cmos Microcomputer)

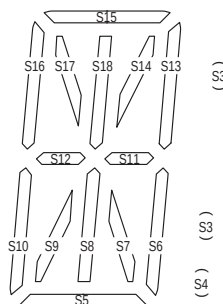
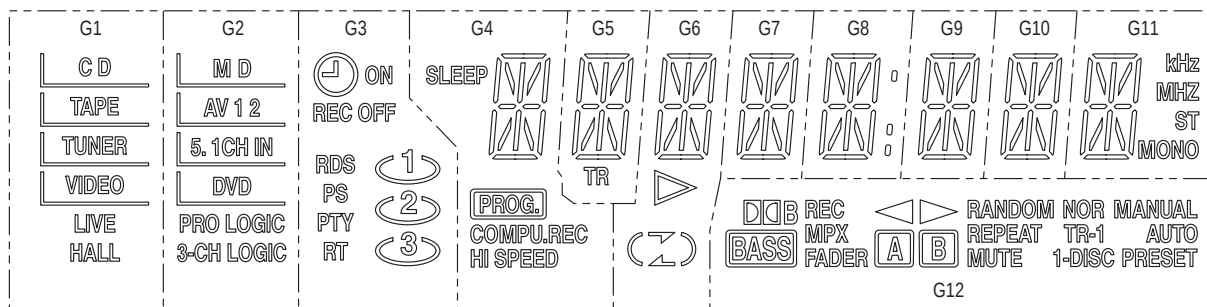
Pin	Pin Name	I/O	Description
1	KEY1	AD	KEY INPUT
2	ILLM_LED	O	LED LIGHTING CONTROL OUTPUT
3	AD_SW	I	TRAY OPEN/CLOSE SW / CD LIMIT SW INPUT
4	RWC	O	CD DSP RWC(COMMAND LATCH)OUTPUT
5	DSP_RES	O	CD DSP RESET OUTPUT
6	TRY_OPEN	O	TRAY OPEN/CLOSE MOTOR OUTPUT
7	TRY_CLOS	O	TRAY OPEN/CLOSE MOTOR OUTPUT
8	VD_GND	O	GND CONTROL OUTPUT FOR MICON POWER CHECK
9	V_CHK	I	POWER FAILURE DETECT(POWER FAILURE=L) /MICON POWER CHK(DOWN=L)
10	RESET		SYSTEM RESET TERMINAL
11	Xcout		SUB CLOCK OSCILLATION TERMINAL
12	Xcin		SUB CLOCK OSCILLATION TERMINAL
13	Vss		GROUND POTEINTIAL TERMINAL
14	Xin		MAIN CLOCK OSCILLATION CERAMIC TERMINAL
15	Xout		MAIN CLOCK OSCILLATION CERAMIC TERMINAL
16	Vcc		PLUS POWER TERMINAL
17	SHIFT	O	CLOCK SHIFT CONTROL OUTPUTbc-A=Low)
18	PULL_UP	O	PULL UP CONTROL OUTPUT(ON=L)
19	SQOUT	I	
20	DRF	I	
21	C2F	I	
22	IR	I	REMOTE CONTROL INPUT
23	WRQ(int)	I	CD DSP WRQ(SubQ REQUEST SIGNAL)INPUT
24	TU_DO	I	TU PLL DO INPUT
25	CLK	O	TU PLL / RDS / CD DSP CLK OUTPUT
26	DATA	O	TU PLL / RDS / CD DSP DATA OUTPUT
27	TU_CE	O	TU PLL / RDS CE OUTPUT
28	Vee		FL M MINUSPOWER TERMINAL
29	G12	O	FL DEG1T OUTPUT(Pull Down R)
30	G11	O	⚡ (Pull Down R)
31	G10	O	⚡ (Pull Down R)
32	G09	O	⚡ (Pull Down R)
33	G08	O	⚡
34	G07	O	⚡
35	G06	O	⚡
36	G05	O	⚡
37	G04	O	⚡
38	G03	O	⚡
39	G02	O	⚡
40	G01	O	⚡
41	S01	O	FL SEGMENT OUTPUT
42	S02	O	⚡

Pin	Pin Name	I/O	Description
43	S03	O	⚡
44	S04	O	⚡
45	S05	O	⚡
46	S06	O	⚡
47	S07	O	⚡
48	S08	O	⚡
49	S09	O	⚡
50	S10	O	⚡ SEL_DIM
51	S11	O	⚡ SEL_DPS
52	S12	O	⚡ SEL_RDSE
53	S13	O	⚡ SEL_RDS
54	S14	O	⚡ SEL_SUR
55	S15	O	⚡ SEL_LINE2
56	S16	O	⚡ SEL_LINE
57	S17	O	⚡ (Pull Down R) SEL_ECO
58	S18	O	⚡ (Pull Down R) SEL_12/24
59	SEL_IN	I	OPTION SELECT IN
60	TU_RDSIN	I	RDS DATA INPUT
61	MULJOG_A	I	MULTI JOG A
62	MULJOG_B	I	MULTI JOG B
63	VOLJOG_A	I	VOLUME JOG A
64	VOLJOG_B	I	VOLUME JOG B
65	CE	I/O	SERIAL CHIP ENABLE INPUT/OUTPUT
66	CLOCK	O	SERIAL CLOCK OUTPUT
67	DATA_O	Out	SERIAL DATA OUTPUT
68	DATA_I	In	SERIAL DATA INPUT
69	EXPOWER	O	POWER SUPPLY CONTROL
70	MUTE	O	MUTE CONTROL OUTPUT(ON=Hi)
71	2P_CON	O	SUB POWER CONTROL OUTPUT (POWER ON=Hi)
72	1P_CON	O	MAIN POWER CONTROL OUTPUT (POWER ON=Hi)
73	Avss		A/D GROUND POTENTIAL TERMINAL
74	VREF		A/D STANDARD POTENTIAL TERMINAL
75	VOL_DATA	O	LC75342 DATA OUTPUT
76	VOL_CLK	O	LC75342 CLOCK OUTPUT
77	VOL_CE	O	LC75342 CE OUTPUT
78	SUR_P1	O	LA2615 P1 OUTPUT
79	SUR_P3	O	LA2615 P3 OUTPUT
80	KEY2	A/D	KEY INPUT

FL DISPLAY DESCRIPTION

TYPE : CM1841M

ANODE & GRID ASSIGNMENT



ANODE & GRID ASSIGNMENT

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
S1	CD	MD	ON	SLEEP							MONO	PRESET
S2	(CD)	(MD)		HI SPEED							ST	1-DISC
S3	TAPE	(AV1) 2	REC	COMPU.REC				S3			MHz	MUTE
S4				PROG	TR			S4			KHz	FADER
S5				S5	S5	S5	S5	S5	S5	S5	S5	DDB
S6			(3)	S6	S6	S6	S6	S6	S6	S6	S6	REC
S7			RT	S7	S7	S7	S7	S7	S7	S7	S7	(BASS)
S8			3	S8	S8	S8	S8	S8	S8	S8	S8	MPX
S9			PTY	S9	S9	S9	S9	S9	S9	S9	S9	NOR
S10		3-CH LOGIC	(2)	S10	S10	S10	S10	S10	S10	S10	S10	RANDOM
S11		PRO LOGIC	PS	S11	S11	S11	S11	S11	S11	S11	S11	
S12	HALL	(DVD)	2	S12	S12	S12	S12	S12	S12	S12	S12	
S13	LIVE	DVD	RDS	S13	S13	S13	S13	S13	S13	S13	S13	MANUAL
S14	(VIDEO)	(5.1CH IN)	(1)	S14	S14	S14	S14	S14	S14	S14	S14	(A)
S15	(TAPE)	(AV) 1 (2)	OFF	S15	S15	S15	S15	S15	S15	S15	S15	AUTO
S16	TUNER	AV (12)		S16	S16	S16	S16	S16	S16	S16	S16	TR-1
S17	(TUNER)	(AV12)	1	S17	S17	S17	S17	S17	S17	S17	S17	REPEAT
S18	VIDEO	5.1CH IN		S18	S18	S18	S18	S18	S18	S18	S18	(B)

PIN ASSIGNMENT

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Assignment	F1	F1	NP	NL	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3

Pin No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Assignment	S2	S1	NL	NL	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	NL	NP	F2	F2

F1,F2:Filament

G1~G12:Grid

S1~S18:Anode

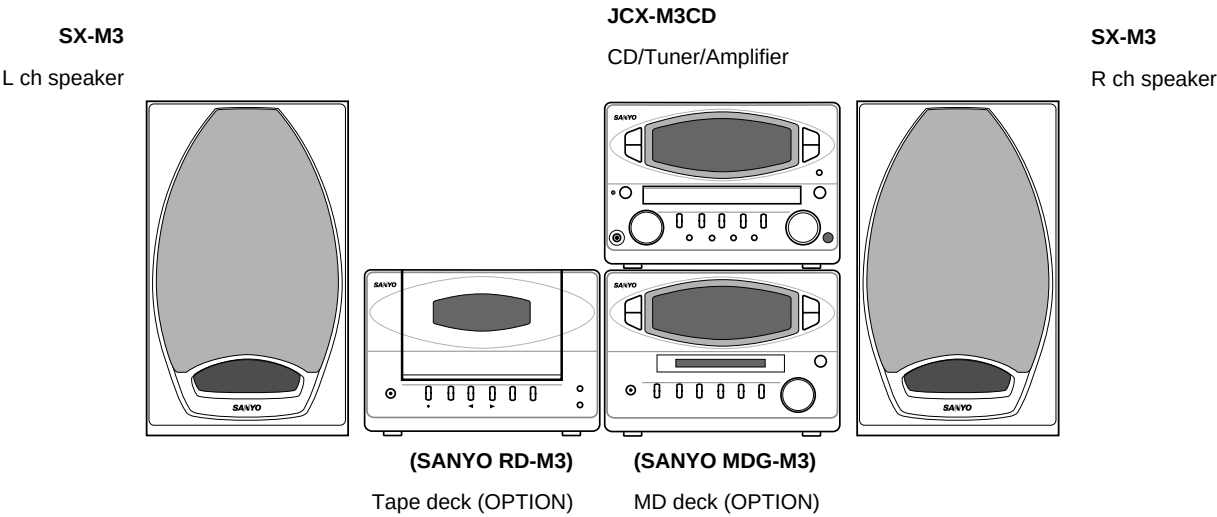
NP:No Pin

NL:No Lead

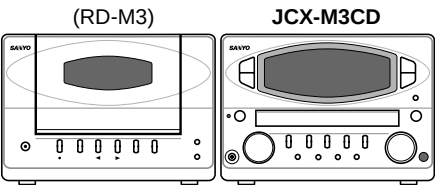
SYSTEM VARIETIES

There are several system varieties with optional equipment as below.

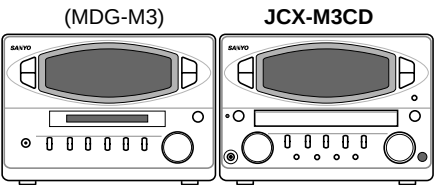
Example 1



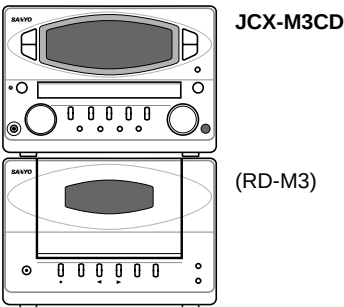
Example 2



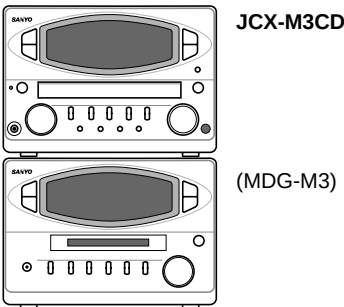
Example 3



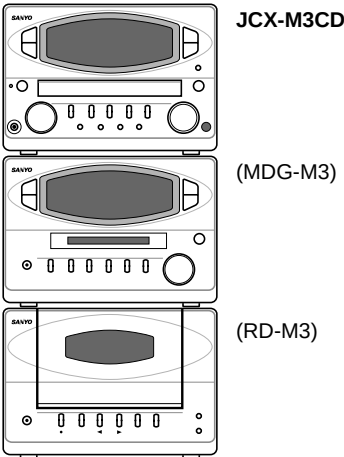
Example 4



Example 5

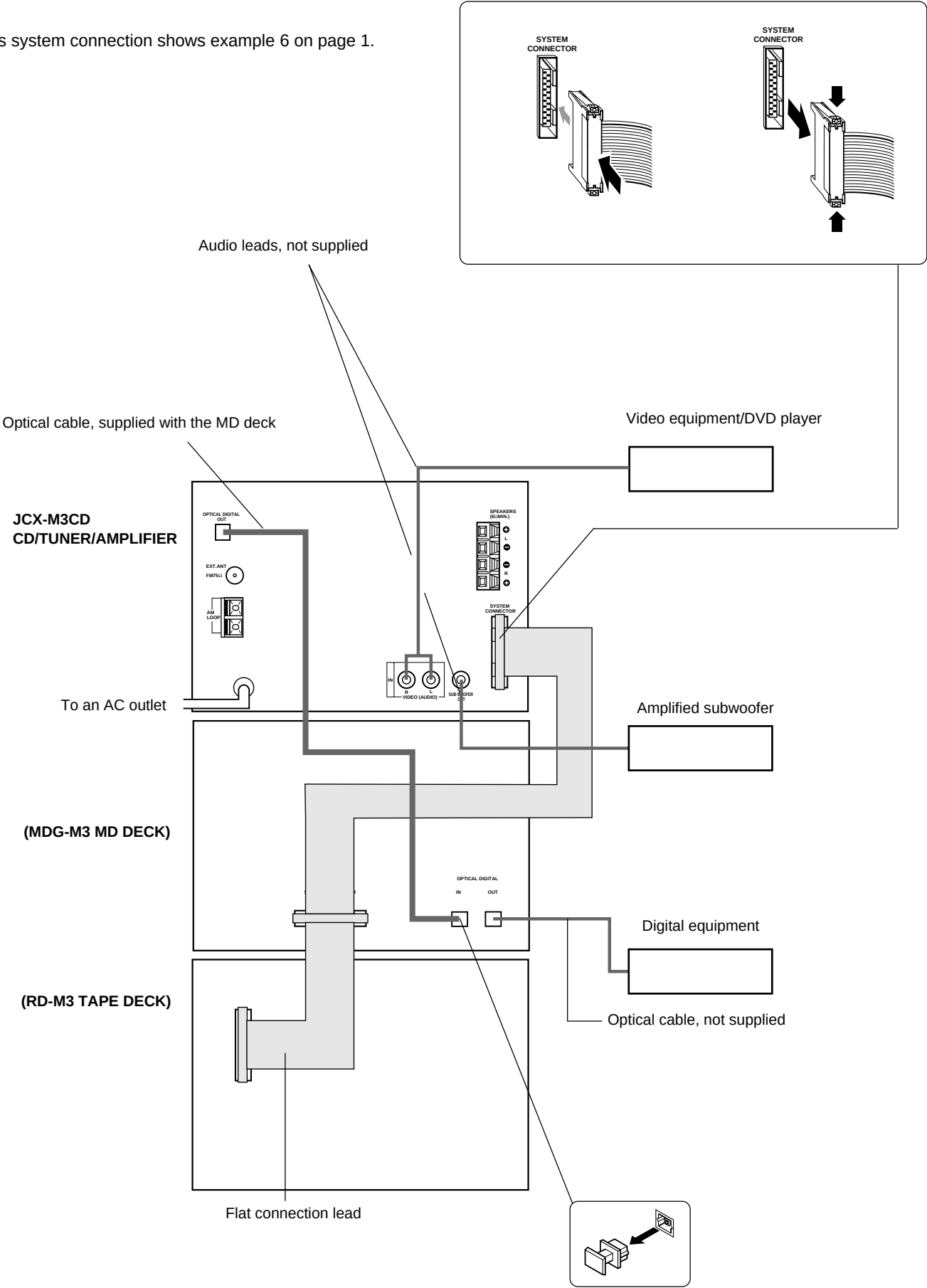


Example 6



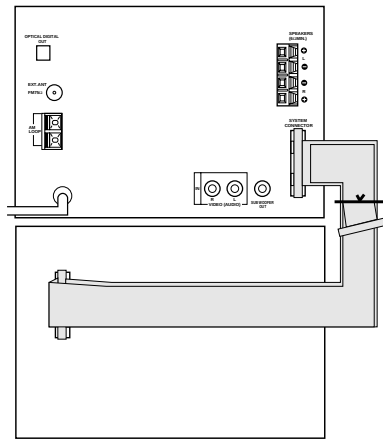
SYSTEM CONNECTIONS

This system connection shows example 6 on page 1.



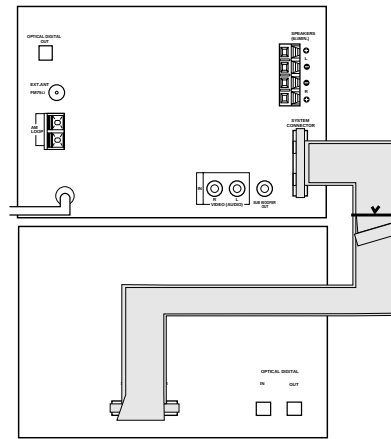
SYSTEM CONNECTIONS

JCX-M3CD CD/TUNER/AMPLIFIER

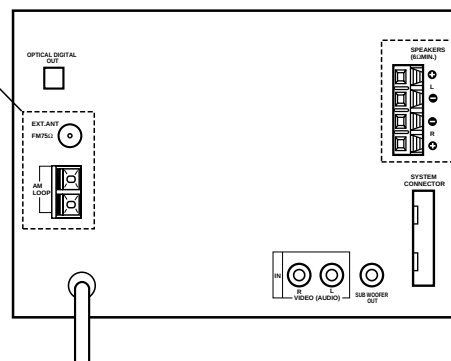
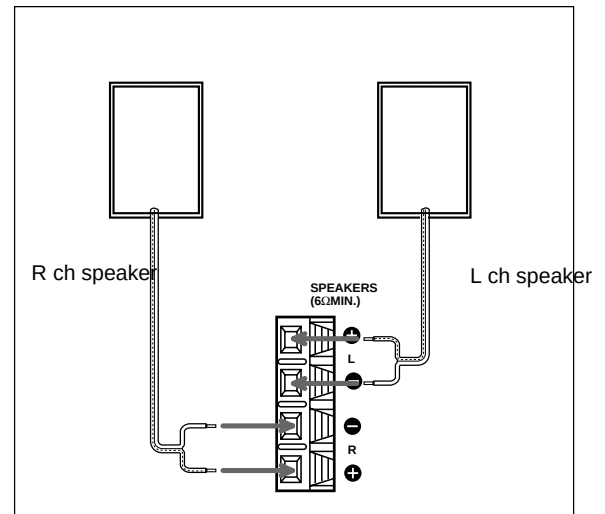
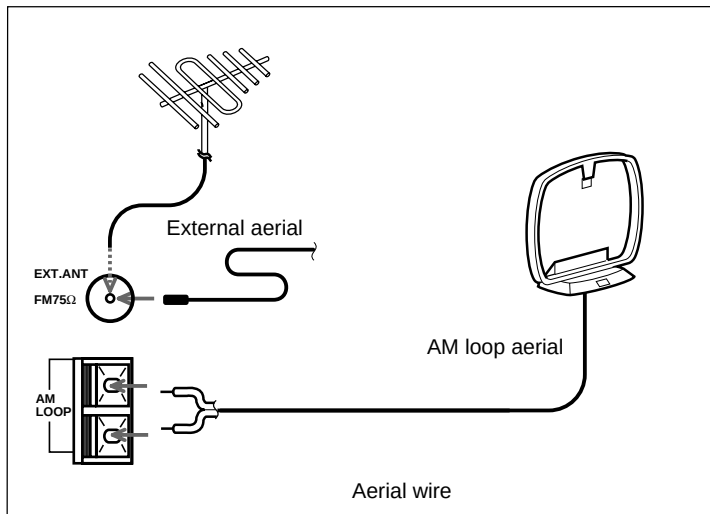
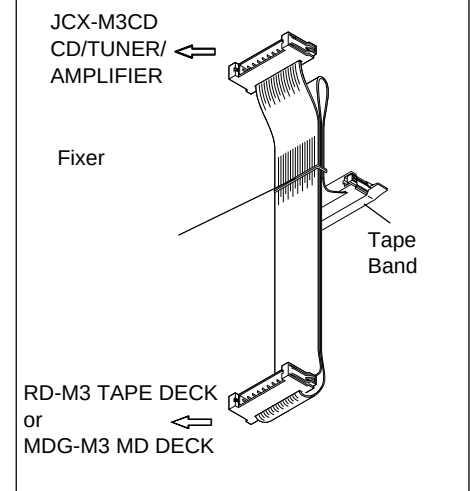


(RD-M3 TAPE DECK)

JCX-M3CD CD/TUNER/AMPLIFIER



(MDG-M3 MD DECK)

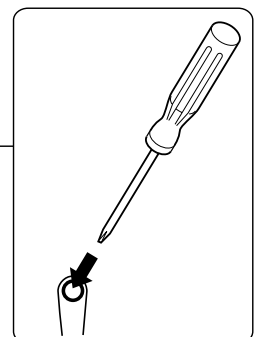
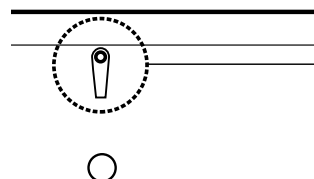


JCX-M3CD
CD/TUNER/AMPLIFIER

WHAT TO DO IF

If the operation of the system or display is not normal.

1. Disconnect the mains lead.
2. Press the **RESET** button (bottom of the CD/Tuner/Amplifier) for at least 30 seconds.
3. Connect the mains lead.
4. Resume the operation.

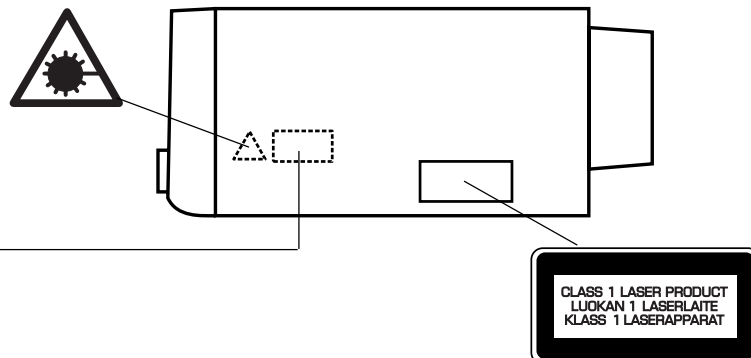


LASER BAEM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

(CD/TUNER/AMPLIFIER)

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING – OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.



SERVICE MODE

Preparation

Press the unit's BASS and STOP keys at the same time. (This initiates service mode entry status.)

Next, press another key on the unit to switch to the corresponding service mode.

The unit enters a service mode only if another key is pressed within one second.

KEY	SERVICE MODE
JOG_MODE	Key Connection Checking
TIMER	FLD Checking
FWD	CD Laser Output Measurement

1. Key connection check

1. To enter this mode, press JOG_MODE key in the service mode entry state.
2. In this mode, the key code (two-digit) of a key now being pressed is displayed on the seven-segment minute indicator, and the number of unit keys (two-digit) that have been pressed after this mode was entered on the seven-segment second indicator.
3. The unit keys that have once been pressed are not counted.
4. Press POWER key of the remote controller to exit this mode.

2. FLD check

1. To enter this mode, press TIMER key in the service mode entry state.
2. In this mode, all FL and LEDs are lit.
3. In this mode, press POWER key of the remote controller to enter the key connection checking mode.
4. Press the POWER key of the unit to exit this mode.

3. Measurement of CD laser output

1. To enter this mode, press FWD key in the service mode entry state in the CD function.
2. In this mode, every push of FWD key repeats turning on and off the laser (only at STOP). (While laser is on, "FM" is displayed.)
3. The mode is deselected when power is turned off or CD is played back.

CD PICK-UP MAINTENANCE

Pick-up (Optical lens) Cleaning

Clean the lens with the specified cleaning disc or moisten a cotton swab with isopropyl alcohol and cleaning paper.

Specified cleaning disc : LC-1 (Part code : 645 026 1961 manufactured by SANYO.)

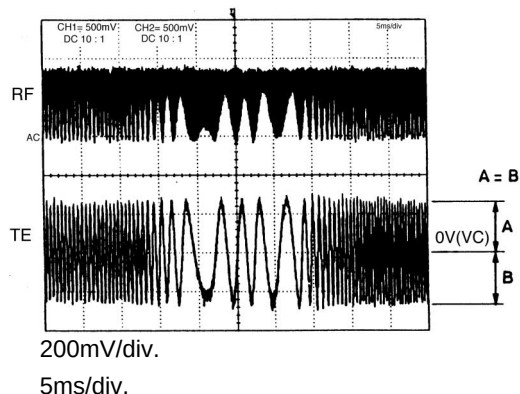
Regarding procedure of cleaning with moisten cotton swab, please refer to the attached as follows.

1. Cotton swab wrapped with Cleaning paper.
2. Add the isopropyl alcohol.
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

CD ADJUSTMENTS

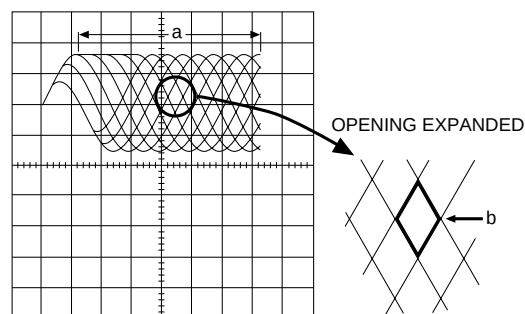
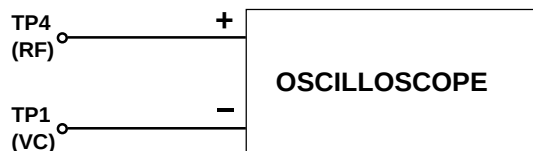
1. Confirm the tracking balance

1. Connect an Oscilloscope to TP2 (TE) and TP1 (VC).
2. Turn on the POWER switch.
3. Set the test disc. (DISC 1)
4. Press "STOP" button and "FM MODE" button simultaneously.
Within 1 second after pressing the "PLAY/PAUSE" button.
(SERVICE MODE : Tracking balance adjustment mode)
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V (VC).



2. Checking the "eye" pattern

1. Switch "ON" the POWER.
2. Connect an oscilloscope to TP4 (RF) and TP1 (VC).
3. Load the test disc.
4. Press the PLAY button.
5. Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
6. Press the STOP button.
7. Turn off the POWER switch.

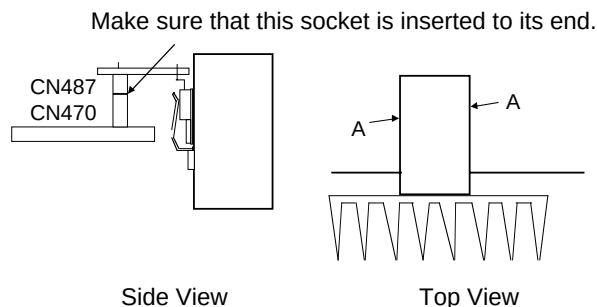


HOW TO ASSEMBLE/REMOVE POWER IC P.W.B

When assembling or removing power IC P.W.B, any stress should not be added on IC terminals.

At assembling : After connecting CN478 to CN470, fix heatsink on the frame of power transformer with two screws.

At removing : Remove two screw fixing heatsink and hold "A" places as shown, then remove or connect socket.

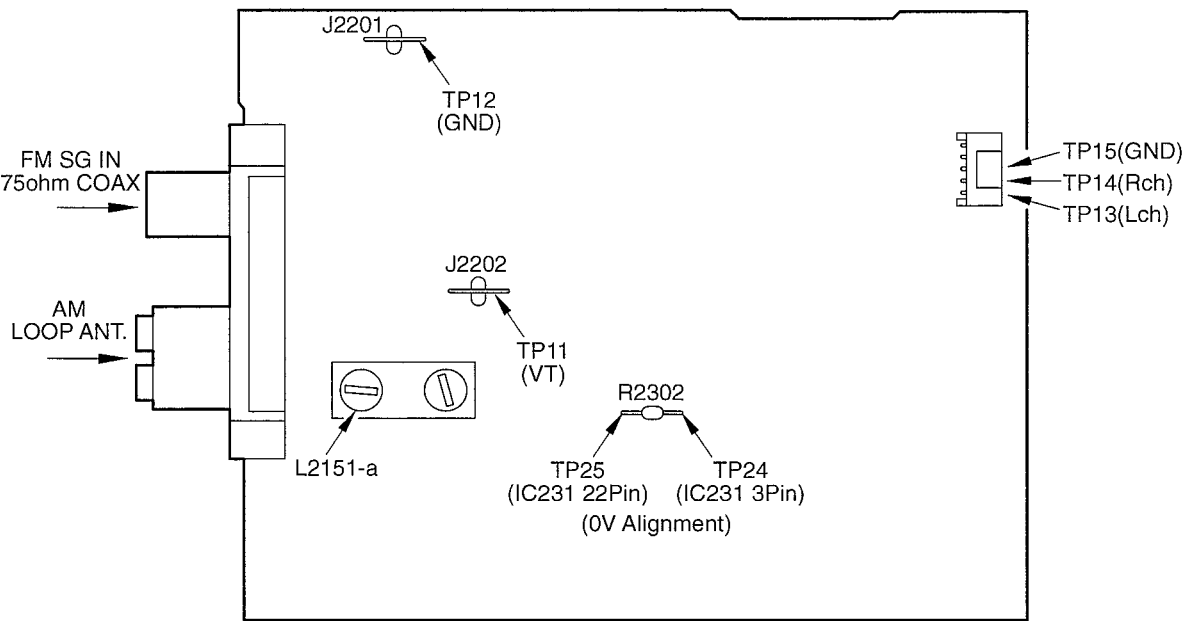


Side View

Top View

TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- MODE : ST (Stereo)
- Speaker impedance : 6 ohm
- TUNING
 - FM : 87.5 - 108.0MHz (50kHz step)
 - AM : 522 - 1611KHz (9kHz step)



RF Level : dBμV EMF open, Output Level : about 200mV at TP13,14 & 15
Antenna : 75 unbalanced , Modulation : 1 kHz
Deviation : ±22.5kHz(MONO) ±22.5kHz(STEREO) ±6.75kHz(PILOT)

1. FM

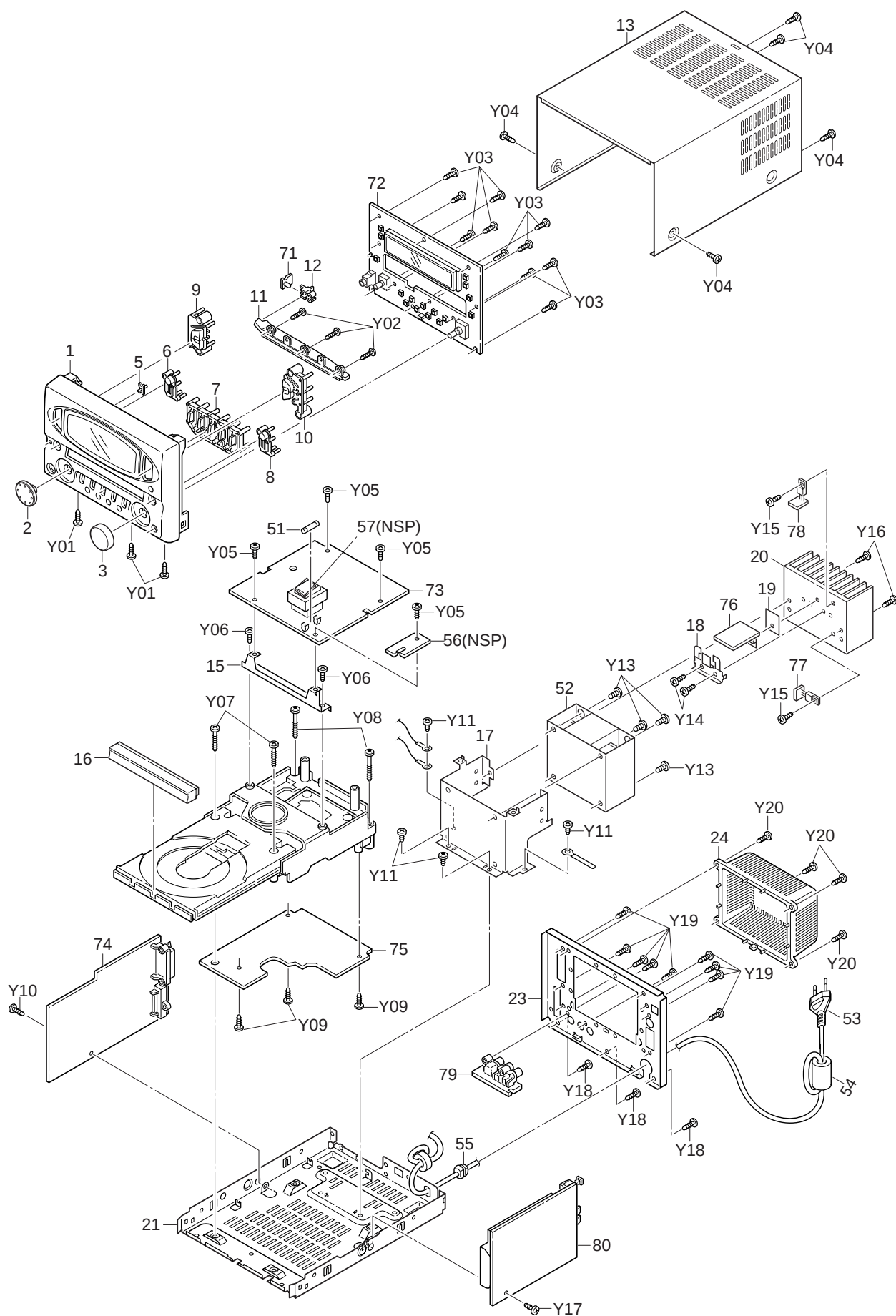
Step	Adjusting Circuit	Connection		SG Frequency	Adjustment parts	Confirmation & Adjustment	Remarks
		Input	Output				
1	IF(0V) alignment	FM Antenna SG=66dB μV	IC231 3,22 Pin (TP24,25)	98.0 MHz	XF233	Align voltage between pin 3 and pin 22 of IC231 so as to be 0.0±0.05V.	
2	Cover voltage	---	TP11(H), TP12(E)	87.5 MHz	---	Make sure voltage is more than 0.8V.(avg.=2.0V)	
		---		108.0 MHz	---	Make sure voltage is less than 9.0V.(avg.=7.5V)	
3	Tracking	FM Antenna	TP13(L) , TP14(R), TP15(E)	90.0 MHz	---	Make sure S/N=30 sens. is within 26dB μV.	
				106.0MHz	---	Make sure S/N=30 sens. is within 24dB μV.	

SG Modulation : 1kHz, 30%
Antenna, IRE Loop, Distance: 60 cm
RF Level : dBμV EMF open
Output Level : about 200mV at TP13,TP14,TP15

2. AM

Step	Adjusting Circuit	Connection		SG Frequency	Adjustment parts	Confirmation & Adjustment	Remarks
		Input	Output				
1	Cover voltage	---	TP11(H), TP12(E)	522 kHz	---	Make sure voltage is more than 0.8V.(avg.=1.1V)	
		---		1611kHz	---	Make sure voltage is less than 9.0V.(avg.=5.5V)	
2	Tracking	Loop Antenna	TP13(L) , TP14(R), TP15(E)	603 kHz	L2151-a	Make sure S/N=20 sens. is within 85dB μV/m.	Adjust L2151-a so as to be Output MAX at 603kHz.
				1404 kHz		Make sure S/N=30 sens. is within 82dB μV/m.	

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL Δ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY Δ , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μ F type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 310 7293	CARTON CASE, INNER SLEEVE
	614 309 5217	CUSHION, FRONT
	614 309 5224	CUSHION, BACK
	614 310 7118	INSTRUCTION MANUAL
	614 313 3513	INSTRUCTION MANUAL (GREEK)
	645 041 1533	POLY SHEET-0750X0500*NC, SET
	645 040 9943	BATTERY COVER, SERVICE PARTS
	645 005 1227	ASSY, ANTENNA, LOOP
	614 229 4635	ANTENNA, FM
or	614 308 5515	ANTENNA, FM
	645 040 1923	REMOCON, RB-M3RD
	645 040 1787	ASSY, CABLE, SYSTEM 19P
	614 311 5090	ASSY, BOX, SPEAKER
	614 311 5106	ASSY, GRILLE

REF.NO.	PART NO.	DESCRIPTION
Y05	411 021 3503	SCR S-TPG BIN 3X10, SUB TRANS PWB
Y06	411 021 3503	SCR S-TPG BIN 3X10, HOLDER PWB
Y07	411 098 4403	SCR S-TPG BIN 3X25, CD MECHA FIX FRONT
Y08	411 122 3709	SCR S-TPG BIN 3X35, CD MECHA FIX BACK
Y09	411 021 3503	SCR S-TPG BIN 3X10, CD MECHA-CD PWB
Y10	411 021 3503	SCR S-TPG BIN 3X10, MAIN PWB
Y11	411 021 5705	SCR S-TPG BIN 3X6, HOLDER TRANS-BOTTOM
Y13	411 001 4209	SCR S-TPG BIN 4X8, TRANS
Y14	411 021 3503	SCR S-TPG BIN 3X10, POWER-IC
Y15	411 021 3503	SCR S-TPG BIN 3X10, +MB, +12V REG
Y16	411 021 3503	SCR S-TPG BIN 3X10, HEAT SINK
Y17	411 021 3503	SCR S-TPG BIN 3X10, TUNER PWB
Y18	411 021 3701	SCR S-TPG BIN 3X10, BOTTOM-REAR
Y19	411 021 3701	SCR S-TPG BIN 3X10, REAR-ELECT PARTS
Y20	411 021 3701	SCR S-TPG BIN 3X10, COVER FIX

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 309 4586	ASSY, CABINET, FRONT
2	614 310 5336	KNOB, VOLUME, MULTI JOG
3	614 309 5095	KNOB, ROTARY, VOLUME
5	614 309 4715	BUTTON, POWER
6	614 302 0530	DEC, WINDOW LED, POWER
7	614 309 4739	BUTTON, PLAY
8	614 309 4722	BUTTON, OPEN/CLOSE
9	614 309 4678	BUTTON, LEFT, BAND/TUNE MODE
10	614 309 4692	BUTTON, RIGHT, INPUT/SUPER BASS
11	614 309 4975	DEC, WINDOW, LED, LIGHTING
12	614 309 5088	HOLDER, LED, LIGHTING
13	614 309 4531	ASSY, CABINET, AFTER BENDING
15	614 309 5071	HOLDER, PWB, SUB TRANS PWB
16	614 309 4982	DEC, ESCUTCHEON, CD TRAY
17	614 309 5064	HOLDER, TRANS/HEAT SINK/S-T-PWB
18	614 312 0223	MOUNTING, POWER IC
19	614 310 8887	SPACER, RUBBER, POWER IC
20	614 310 7668	HEAT SINK, POWER IC, REGULATOR
21	614 309 4616	ASSY, CABINET, BOTTOM
23	614 309 5149	PANEL, REAR
24	614 310 7194	ASSY, COVER
	614 129 1901	FIXER, AC CORD
	614 284 1884	FIXER, AC CORD
	614 129 9136	LUG, FOR CD-TU WIRE

ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	Δ 423 016 9803	FUSE 250V 0.63A FU499
52	Δ 645 040 0902	TRANS, POWER
53	Δ 645 016 9939	CORD, POWER-1.74MK
or	Δ 614 255 2513	POWER CORD
54	645 037 3060	CORE, CLAMP, LINE-NOISE
55	645 013 6498	CORE, FERRITE, AC-EMC
56	Δ 614 310 8900	PWB, DRESSING, DRESSING (N.S.P)
57	Δ 614 312 7031	PWB, INSULATOR, INSULATOR (N.S.P)
CN135	614 309 4159	ASSY, WIRE, CD-TUNER (OPT OUT)
CN191	645 041 1786	FLEXIBLE FLAT CABLE, PICK UP
CN691	645 040 1770	FLEXIBLE FLAT CABLE, FRONT-PRE

LED P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 309 4272	ASSY, PWB, ILLUMINATION (Only Initial)
CN651	614 035 4911	SOCKET, DIP 2P, LED
or	645 012 7786	SOCKET, DIP 2P, LED
D6501	407 212 8907	LED HLMP-BB01-J0B00

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 021 3503	SCR S-TPG BIN 3X10, FRONT-BOTTOM FIX
Y02	411 021 1202	SCR S-TPG BIN 2X8, DEC WINDOW LED
Y03	411 021 3503	SCR S-TPG BIN 3X10, FRONT PWB FIX
Y04	411 021 3701	SCR S-TPG BIN 3X10, CABINET

PARTS LIST

FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
72	614 309 0625	ASSY,PWB,FRONT (Only Initial)	or	405 011 8609	TR 2SC1740S-S
BR601	614 305 2241	HOLDER,FL,FL_MOUNT	or	405 020 7402	TR 2SC945A-P
C6093	403 304 4802	DL-ELECT 0.047F Z 5.5V	or	405 020 7204	TR 2SC945A-K
or	403 262 8607	DL-ELECT 0.047F Z 5.5V	Q6006	405 143 8706	TR KTC3199-GR
CN479	645 012 0008	JACK,PHONE D3.6,HEADPHONE	or	405 017 9600	TR 2SC3330-T
CN488	614 273 3905	CORD,1P CONNECTOR, FRONT-CHASSIS	or	405 017 9709	TR 2SC3330-U
CN489	614 020 1246	SOCKET,5P	or	405 019 3705	TR 2SC536-G-AUD-SPA
CN499	614 309 6184	ASSY,WIRE,HEADPHONE	or	405 011 8500	TR 2SC1740S-R
CN601	645 012 5553	SOCKET,FPC 22P,FRONT-AMP	or	405 011 8609	TR 2SC1740S-S
CN602	614 035 4959	SOCKET,DIP 6P,FRONT-TU	or	405 020 7402	TR 2SC945A-P
or	645 012 7823	SOCKET,DIP 6P,FRONT-TU	or	405 020 7204	TR 2SC945A-K
CN603	614 035 5017	SOCKET,DIP 12P,FRONT-CD	Q6007	405 141 3505	TR KTA1266-Y
or	645 012 7885	SOCKET,DIP 12P,FRONT-CD	or	405 141 3406	TR KTA1266-GR
CN604	614 035 4911	SOCKET,DIP 2P,LED	or	405 004 4502	TR 2SA608-F-NP
or	645 012 7786	SOCKET,DIP 2P,LED	or	405 004 5004	TR 2SA608-G-NP
CN612	614 297 8856	CORD,6P CONNECTOR,FRONT-TU	or	405 006 3909	TR 2SA952-K
or	614 309 4135	ASSY,WIRE,FRONT-TU	or	405 006 4005	TR 2SA952-L
CN613	614 309 4111	ASSY,WIRE,FRONT-CD	Q6008	405 000 6104	TR DTC144ES
D6001	407 012 4406	DIODE 1SS133	or	405 146 1209	TR KRC104M
D6002	407 099 4603	ZENER DIODE MTZJ3.9B	Q6009	405 000 6104	TR DTC144ES
D6004	408 032 5404	LED SLP-9118C-51H-S-T1	or	405 146 1209	TR KRC104M
D6011	407 012 4406	DIODE 1SS133	Q6010	405 000 2205	TR DTA144ES
D6091	407 012 4406	DIODE 1SS133	or	405 146 1308	TR KRA104M
DS601	407 217 1101	PHOTO DIODE SPS-442-1G,IR	Q6011	405 000 6104	TR DTC144ES
FL601	645 040 1794	FLOURESCENT TUBE,FL	or	405 146 1209	TR KRC104M
IC601	410 384 0808	IC M38B57MCH-B252FP, MICRO-CONTROLLER	R4790	401 009 5605	CARBON 330 JA 1/2W
L4790	645 001 4550	INDUCTOR,10U K	R4890	401 009 5605	CARBON 330 JA 1/2W
L4791	645 001 4550	INDUCTOR,10U K	S6001	645 026 4771	SWITCH,ROTARY(ENCODER), VOLUME
L4891	645 001 4550	INDUCTOR,10U K	S6002	645 040 1763	SWITCH,ROTARY(ENCODER), MULTIJOG
L6091	645 001 4550	INDUCTOR,10U K	S6091	614 215 9828	SWITCH,TACT,RESETSW
or	645 031 7835	INDUCTOR,10U K	S6101	614 240 1002	SWITCH,TACT
Q6001	405 143 8706	TR KTC3199-GR	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 017 9600	TR 2SC3330-T	or	614 220 5471	SWITCH,TACT
or	405 017 9709	TR 2SC3330-U	S6102	614 240 1002	SWITCH,TACT
or	405 019 3705	TR 2SC536-G-AUD-SPA	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 011 8500	TR 2SC1740S-R	or	614 220 5471	SWITCH,TACT
or	405 011 8609	TR 2SC1740S-S	S6103	614 240 1002	SWITCH,TACT
or	405 020 7402	TR 2SC945A-P	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 020 7204	TR 2SC945A-K	or	614 220 5471	SWITCH,TACT
Q6002	405 143 6504	TR KTA1267-GR	S6104	614 240 1002	SWITCH,TACT
or	405 004 4601	TR 2SA608-F-SPA	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 004 5103	TR 2SA608-G-SPA	or	614 220 5471	SWITCH,TACT
or	405 006 1806	TR 2SA933S-R	S6105	614 240 1002	SWITCH,TACT
or	405 006 1905	TR 2SA933S-S	or	645 006 5958	SWITCH,PUSH 1P-1T
Q6003	405 141 3505	TR KTA1266-Y	or	614 220 5471	SWITCH,TACT
or	405 141 3406	TR KTA1266-GR	S6106	614 240 1002	SWITCH,TACT
or	405 004 4502	TR 2SA608-F-NP	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 004 5004	TR 2SA608-G-NP	or	614 220 5471	SWITCH,TACT
or	405 006 3909	TR 2SA952-K	S6107	614 240 1002	SWITCH,TACT
or	405 006 4005	TR 2SA952-L	or	645 006 5958	SWITCH,PUSH 1P-1T
Q6004	405 143 8706	TR KTC3199-GR	or	614 220 5471	SWITCH,TACT
or	405 017 9600	TR 2SC3330-T	S6108	614 240 1002	SWITCH,TACT
or	405 017 9709	TR 2SC3330-U	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 019 3705	TR 2SC536-G-AUD-SPA	or	614 220 5471	SWITCH,TACT
or	405 011 8500	TR 2SC1740S-R	S6109	614 240 1002	SWITCH,TACT
or	405 011 8609	TR 2SC1740S-S	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 020 7402	TR 2SC945A-P	or	614 220 5471	SWITCH,TACT
or	405 020 7204	TR 2SC945A-K	S6110	614 240 1002	SWITCH,TACT
Q6005	405 143 8706	TR KTC3199-GR	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 017 9600	TR 2SC3330-T	or	614 220 5471	SWITCH,TACT
or	405 017 9709	TR 2SC3330-U	S6111	614 240 1002	SWITCH,TACT
or	405 019 3705	TR 2SC536-G-AUD-SPA	or	645 006 5958	SWITCH,PUSH 1P-1T
or	405 011 8500	TR 2SC1740S-R	or	614 220 5471	SWITCH,TACT
			S6114	614 240 1002	SWITCH,TACT

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6115	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6116	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6117	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6118	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
TA601	614 112 1383	DOUBLE FACE,FL_MOUNT
X6001	645 032 1627	OSC,CRYSTAL 32.768KHZ,XTAL
X6002	614 215 5561	RESONATOR,CERAM
or	645 013 7532	OSC,CERAMIC 4.19MHZ

PRE AMPLIFIER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 309 3091	ASSY,PWB, PRE AMP (Only Initial)
C4508	403 058 5209	POLYESTER 0.15U K 50V
C4509	403 058 5209	POLYESTER 0.15U K 50V
C4590	403 057 1202	POLYESTER 0.01U M 50V
C4591	403 057 1202	POLYESTER 0.01U M 50V
C4592	403 057 1202	POLYESTER 0.01U M 50V
C4593	403 057 1202	POLYESTER 0.01U M 50V
C4608	403 058 5209	POLYESTER 0.15U K 50V
C4609	403 058 5209	POLYESTER 0.15U K 50V
CN400	645 012 5553	SOCKET,FPC 22P
CN421	614 035 4942	SOCKET,DIP 5P
CN422	645 005 9292	PLUG,5P
CN423	645 026 1916	CORD,TERMINAL
CN426	645 026 8960	PLUG,12P
CN438	614 239 5455	SOCKET, SYSTEM-CONNECTOR
CN455	645 008 5314	TERMINAL,SPEAKER-OUT
CN456	645 005 8110	PLUG,4P
CN457	645 005 8554	SOCKET,6P
CN458	645 006 1820	PLUG,5P
CN459	645 005 9292	PLUG,5P
CN482	614 309 6177	ASSY,WIRE,TUNER-PREAMP
D4370	△ 407 148 6701	DIODE 1A3-I
IC415	409 467 0101	IC LA2615
IC451	409 474 6103	IC LC75342M
LG401	645 023 8987	FIXER
LG402	645 023 8987	FIXER
LG403	645 023 8987	FIXER
LG404	645 023 8987	FIXER
LG405	645 023 8987	FIXER
LG406	614 129 9082	LUG
PR457	△ 645 014 2475	PROTECTOR,0.75A 125V
PR459	△ 645 014 2574	PROTECTOR,3A 125V
	645 029 0015	FUSE HOLDER,F502

AMPLIFIER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 309 3107	ASSY,PWB, POWER-AMP (Only Initial)
C4705	403 059 8209	POLYESTER 0.22U K 50V
C4706	403 059 8209	POLYESTER 0.22U K 50V

REF.NO.	PART NO.	DESCRIPTION
C4805	403 059 8209	POLYESTER 0.22U K 50V
C4806	403 059 8209	POLYESTER 0.22U K 50V
C4909	403 329 6102	ELECT 1000U M 35V
C4910	403 329 6201	ELECT 2200U M 35V
or	403 325 0203	ELECT 2200U M 35V
C4911	403 329 6102	ELECT 1000U M 35V
C4974	△ 403 349 3303	CERAMIC 0.01U M 250V
or	△ 404 000 1607	CERAMIC 0.01U F 400V
C4975	403 200 6900	ELECT 1000U M 16V
or	403 313 4602	ELECT 1000U M 16V
CN440	△ 645 005 9315	PLUG,2P
CN470	645 005 8493	SOCKET,10P
CN491	645 006 1806	PLUG,3P
CN492	645 026 8977	SOCKET,12P
CN493	645 006 2018	PLUG,6P
CN494	645 005 7373	PLUG,3P
CN495	614 221 8273	TERMINAL
CN496	645 005 7373	PLUG,3P
D4400	407 012 4406	DIODE 1SS133
D4401	407 099 5402	ZENER DIODE MTZJ6.2B
D4470	407 099 4603	ZENER DIODE MTZJ3.9B
D4471	407 012 4406	DIODE 1SS133
D4475	△ 407 148 6701	DIODE 1A3-I
D4901	△ 407 196 5800	DIODE 1N5402BD82
D4902	△ 407 196 5800	DIODE 1N5402BD82
D4903	△ 407 196 5800	DIODE 1N5402BD82
D4904	△ 407 196 5800	DIODE 1N5402BD82
D4905	407 099 6805	ZENER DIODE MTZJ13B
D4906	407 099 6805	ZENER DIODE MTZJ13B
D4907	△ 407 148 6701	DIODE 1A3-I
D4930	407 099 5402	ZENER DIODE MTZJ6.2B
D4950	407 012 4406	DIODE 1SS133
D4951	407 012 4406	DIODE 1SS133
D4952	407 099 9905	ZENER DIODE MTZJ33B
D4953	407 099 5204	ZENER DIODE MTZJ5.1B
D4954	407 012 4406	DIODE 1SS133
D4955	407 012 4406	DIODE 1SS133
D4970	△ 407 148 6701	DIODE 1A3-I
D4971	△ 407 148 6701	DIODE 1A3-I
D4972	△ 407 148 6701	DIODE 1A3-I
D4973	△ 407 148 6701	DIODE 1A3-I
FCL41	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
FCL42	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
HS491	614 215 9347	HEAT SINK,Q4930
L4970	△ 645 017 8061	INDUCTOR,181M
or	△ 645 038 6053	INDUCTOR,181U
LG441	645 023 8987	FIXER
LG442	645 023 8987	FIXER
PR491	△ 645 025 5137	PROTECTOR,7A 125V
PR492	△ 645 025 5137	PROTECTOR,7A 125V
PR493	△ 645 014 2468	PROTECTOR,0.63A 125V
PR495	△ 645 014 2451	PROTECTOR,0.25A 125V
PT497	△ 645 041 0277	TRANS,POWER
Q4400	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4401	△ 405 141 1402	TR KTD863-GR
or	△ 405 023 5009	TR 2SD400-E-MP
or	△ 405 023 5306	TR 2SD400-F-MP
Q4470	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
Q4471	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4770	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4771	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4773	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4902	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4904	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4905	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4906	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4907	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4930	△ 405 138 6403	TR KTD2058Y
Q4950	△ 405 141 3604	TR KTA1273-Y
or	△ 405 009 5207	TR 2SB927-S
or	△ 405 009 5306	TR 2SB927-T
R4707	△ 402 078 5107	FUSIBLE RES 4.7 JA 1/4W
or	△ 402 081 2605	FUSIBLE RES 4.7 J- 1/4W
R4807	△ 402 078 5107	FUSIBLE RES 4.7 JA 1/4W
or	△ 402 081 2605	FUSIBLE RES 4.7 J- 1/4W
R4900	△ 402 081 2506	FUSIBLE RES 1 J- 1/2W
R4901	△ 402 081 2506	FUSIBLE RES 1 J- 1/2W
R4904	△ 402 083 3501	RESISTOR 1.5K J- 1W
R4907	△ 402 083 3303	FUSIBLE RES 33 J- 1/2W
RY440	645 035 6575	RELAY
or	645 030 5597	RELAY
SA001	411 021 6405	SCR S-TPG BIN 3X8, FOR Q4930
WR440	614 017 8203	TERMINAL BOARD
WR441	614 017 8203	TERMINAL BOARD

CD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 309 3541	ASSY,PWB,CD (Only Initial)
CN111	645 039 1972	SOCKET,FPC 15P
CN113	614 035 4959	SOCKET,DIP 6P
CN114	614 035 4942	SOCKET,DIP 5P
CN122	645 006 0991	PLUG,12P
CN123	614 035 4942	SOCKET,DIP 5P
CN126	614 309 4142	ASSY,WIRE,CD-AMP

REF.NO.	PART NO.	DESCRIPTION
CN127	614 309 4135	ASSY,WIRE,BASE-MECHA
CN128	614 309 4142	ASSY,WIRE,LOADING-MECHA
CN131	645 005 8226	PLUG,3P
D1371	407 099 5105	ZENER DIODE MTZJ4.7B
D1480	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
D1601	△ 407 148 6701	DIODE 1A3-I
D1602	△ 407 148 6701	DIODE 1A3-I
D1603	△ 407 148 6701	DIODE 1A3-I
D1604	△ 407 148 6701	DIODE 1A3-I
D1981	407 099 5204	ZENER DIODE MTZJ5.1B
IC101	409 396 8100	IC LA9241ML
IC102	409 435 2106	IC LC78622NE
IC103	△ 409 372 9602	IC LA6541
IC132	△ 409 408 1303	IC LB1641L
L1451	645 001 4550	INDUCTOR,10U K
PR101	△ 645 014 2482	PROTECTOR,0.315A 125V
PR132	△ 645 014 2499	PROTECTOR,0.4A 125V
Q1301	405 008 7202	TR 2SB810-E
or	405 008 7301	TR 2SB810-F
or	405 008 6809	TR 2SB808-F-SPA
Q1401	△ 405 141 3604	TR KTA1273-Y
or	△ 405 009 5207	TR 2SB927-S
or	△ 405 001 9302	TR 2SA1020-Y
Q1771	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
Q1773	405 000 0508	TR DTA114ES
or	405 110 5400	TR KRA102M-A
Q1781	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 015 6403	TR 2SC2785-F
or	405 015 6205	TR 2SC2785-E
or	405 143 8706	TR KTC3199-GR
Q1783	405 000 0508	TR DTA114ES
or	405 110 5400	TR KRA102M-A
R1371	△ 402 083 3600	RESISTOR 15 J- 2W
SH101	614 313 2424	SHIELD, FOR RF_JITTER
X1451	645 020 9024	OSC,CRYSTAL 16.9344MHZ

POWER IC P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 309 3138	ASSY,PWB,POWER IC (Only Initial)
CN487	645 006 1868	PLUG,10P
IC487	△ 409 441 6402	IC TDA7265

REGULATOR P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
77	614 309 3145	ASSY,PWB, VOL REG (Only Initial)
CN419	614 035 4928	SOCKET,DIP 3P
or	614 237 9769	SOCKET
CN420	614 309 9482	ASSY,WIRE
Q4190	△ 405 138 6403	TR KTD2058Y

PARTS LIST

REGULATOR 2 P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
78	614 311 4901	ASSY,PWB,VOL REG2 (Only Initial)	Q2310	405 143 8706	TR KTC3199-GR
CN417	614 035 4928	SOCKET,DIP 3P	or	405 017 9600	TR 2SC3330-T
or	614 237 9769	SOCKET	or	405 017 9709	TR 2SC3330-U
CN427	614 309 9482	ASSY,WIRE	or	405 019 3705	TR 2SC536-G-AUD-SPA
Q4170	△ 405 138 6403	TR KTD2058Y	or	405 011 8500	TR 2SC1740S-R
			or	405 011 8609	TR 2SC1740S-S
			or	405 020 7402	TR 2SC945A-P
			or	405 020 7204	TR 2SC945A-K
			Q2451	405 151 5209	TR KRA107M
			or	405 000 0904	TR DTA114YS
			or	405 078 2404	TR BN1A4P
			or	405 036 3702	TR 2SA1564

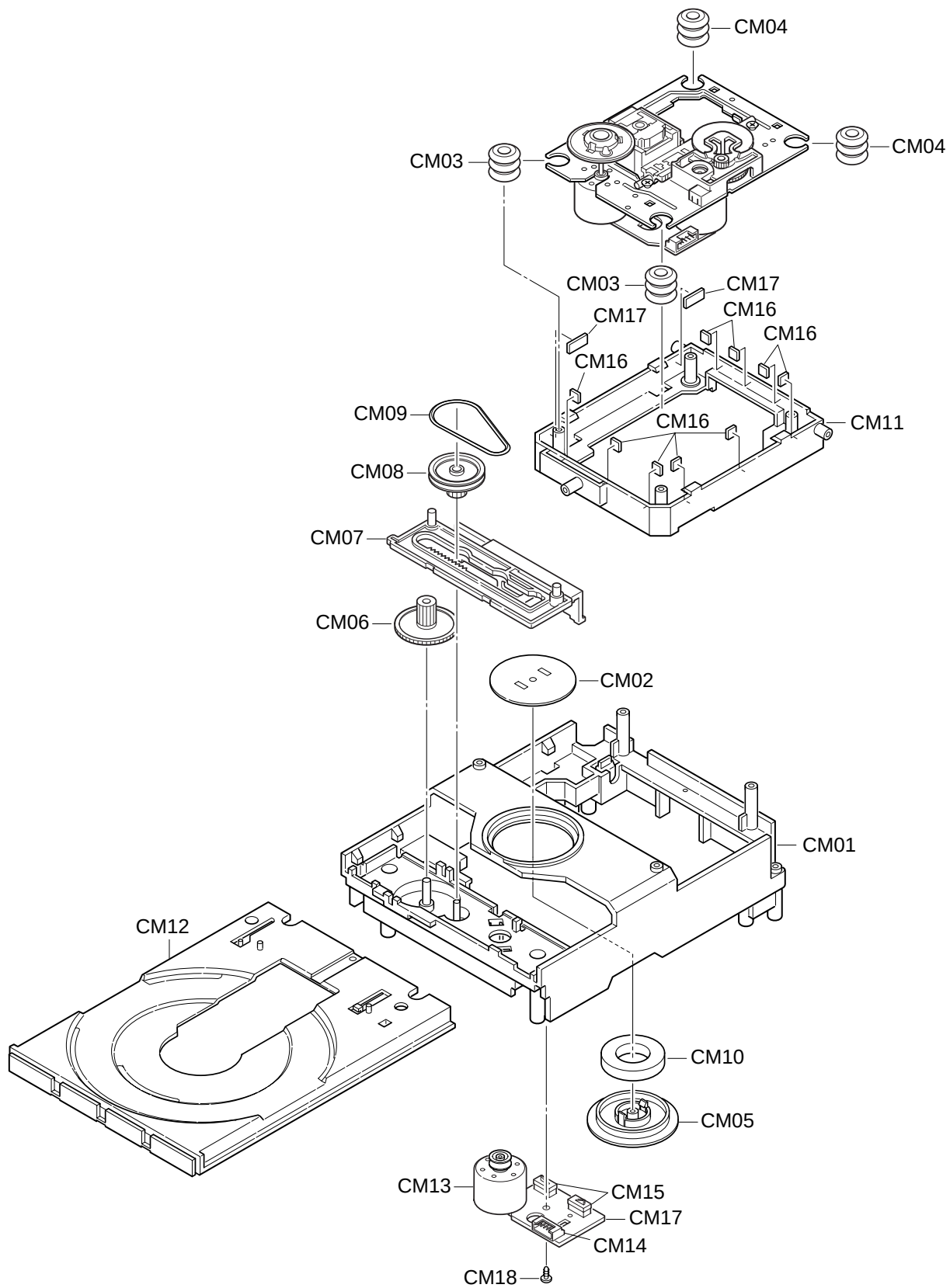
AUDIO TERMINAL P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
79	614 309 3121	ASSY,PWB,VIDEO IN(Only Initial)	Q2502	405 151 5209	TR KRA107M
CN452	645 040 5105	JACK,RCA-2,VIDEODVDIN	or	405 000 0904	TR DTA114YS
CN453	645 033 3057	JACK,RCA,WOOFEROUT	or	405 078 2404	TR BN1A4P
CN462	614 310 0157	ASSY,WIRE	or	405 036 3702	TR 2SA1564
LG462	614 129 9082	LUG	Q2701	405 143 8706	TR KTC3199-GR
			or	405 017 9600	TR 2SC3330-T
			or	405 017 9709	TR 2SC3330-U
			or	405 019 3705	TR 2SC536-G-AUD-SPA
			or	405 011 8500	TR 2SC1740S-R
			or	405 011 8609	TR 2SC1740S-S
			or	405 020 7402	TR 2SC945A-P
			or	405 020 7204	TR 2SC945A-K

TUNER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
80	614 309 3114	ASSY,PWB,TUNER (Only Initial)	or	405 020 7402	TR 2SC945A-P
C2457	403 259 0508	NP-ELECT 1U M 50V	Q2801	405 143 8706	TR KTC3199-GR
CN168	645 005 8226	PLUG,3P	or	405 017 9600	TR 2SC3330-T
or	645 009 6433	PLUG,3P	or	405 017 9709	TR 2SC3330-U
CN169	614 240 5703	OPTO CONNECTOR	or	405 019 3705	TR 2SC536-G-AUD-SPA
CN201	614 255 5750	TERMINAL	or	405 011 8500	TR 2SC1740S-R
or	645 032 6394	TERMINAL	or	405 011 8609	TR 2SC1740S-S
CN241	645 006 0922	PLUG,5P	or	405 020 7402	TR 2SC945A-P
or	645 009 6457	PLUG,5P	or	405 020 7204	TR 2SC945A-K
CN242	645 006 0939	PLUG,6P	R2301	△ 401 017 0708	CARBON 270 JA 1/4W
or	645 009 6464	PLUG,6P	R2311	△ 401 017 0708	CARBON 270 JA 1/4W
D2151	407 012 4406	DIODE 1SS133	SH202	614 310 3400	SHIELD
D2301	407 063 9108	ZENER DIODE MTZJ6.8B	U2101	645 033 5327	TUNER,FM
D2451	407 012 4406	DIODE 1SS133	X2451	645 023 4965	OSC,CRYSTAL 7.2MHZ
D2452	407 153 7502	ZENER DIODE GZS3.0B	X2501	645 035 8326	OSC,CRYSTAL 4.332MHZ
D2453	407 012 4406	DIODE 1SS133	XF221	614 240 2917	FILTER,CERAM
D2454	407 012 4406	DIODE 1SS133	or	645 010 0079	CERAMIC FILTER 10.70MHZ
D2466	407 012 4406	DIODE 1SS133	or	614 254 3214	FILTER
D2467	407 012 4406	DIODE 1SS133	XF222	614 240 2917	FILTER,CERAM
IC231	409 474 3201	IC LA1844ML	or	645 010 0079	CERAMIC FILTER 10.70MHZ
IC241	409 439 4502	IC LC72121M-D	or	614 254 3214	FILTER
IC251	409 447 3900	IC LC72722	XF231	614 246 0849	FILTER
L2151	645 023 0127	TUNER	XF233	645 039 9923	TRANS,IF 10.7MHZ
L2451	645 001 4581	INDUCTOR,100U K			
or	645 031 7842	INDUCTOR,100U K			
L2501	645 001 4581	INDUCTOR,100U K			
or	645 031 7842	INDUCTOR,100U K			
L2502	645 001 4581	INDUCTOR,100U K			
or	645 031 7842	INDUCTOR,100U K			
LG201	645 023 8987	FIXER			
Q2140	405 143 8706	TR KTC3199-GR			
or	405 017 9600	TR 2SC3330-T			
or	405 017 9709	TR 2SC3330-U			
or	405 019 3705	TR 2SC536-G-AUD-SPA			
or	405 011 8500	TR 2SC1740S-R			
or	405 011 8609	TR 2SC1740S-S			
or	405 020 7402	TR 2SC945A-P			
or	405 020 7204	TR 2SC945A-K			
Q2201	405 151 4202	TR KTC3193-O			
or	405 151 4103	TR KTC3193-Y			
or	405 016 0806	TR 2SC2839-E			

EXPLODED VIEW (CD MECHANISM)

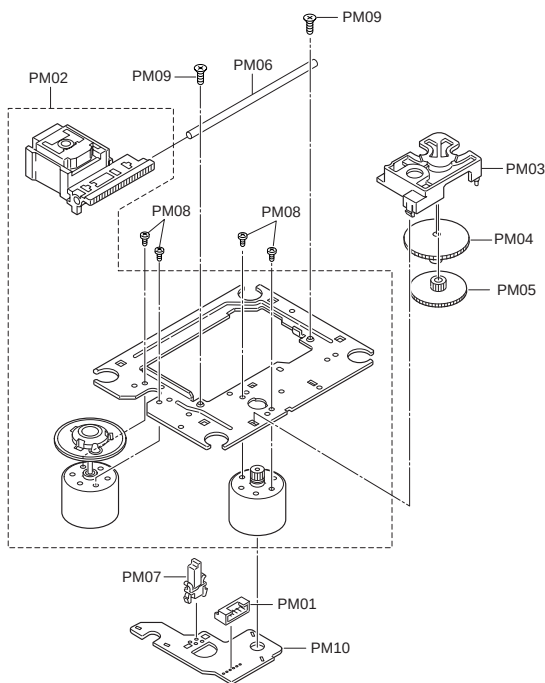


PARTS LIST

CD MECHANISM (CD11FT-SASH... Only Initial)

REF.NO.	PART NO.	DESCRIPTION
CM01	620 231 4594	CHASSIS,FRAME
CM02	620 231 4648	PLATE,MAGNET
CM03	620 229 0393	CUSHION,RUBBER
CM04	620 229 0409	CUSHION,RUBBER
CM05	620 231 4631	HOLDER,MAGNET
CM06	620 231 4686	GEAR,DRIVE
CM07	620 231 4693	GEAR,SLIDE
CM08	620 231 4662	PULLEY,GEAR
CM09	620 231 4655	BELT,SQUARE
CM10	620 231 7274	MAGNET
CM11	620 231 4624	LIFTER,MECHA
CM12	620 231 4617	TABLE,LOADING
CM13	620 232 5507	ASSY,MOTOR,LOADING
CM14	620 022 0460	PLUG 5P
CM15	620 232 2124	SWITCH,PUSH2-1
CM16	620 232 8386	CUSHION
CM17	620 232 6603	PWB,MOTOR
CM18	411 021 6405	SCR S-TPG BIN 3X8

EXPLODED VIEW (CD MECHANISM)

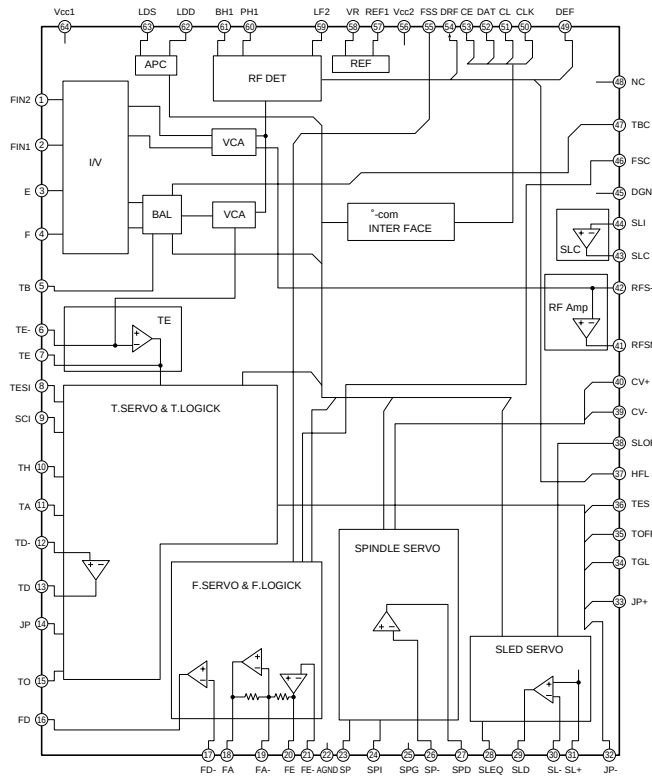


CD BASE MECHANISM(CDDA11-SASH...Only Initial)

REF.NO.	PART NO.	DESCRIPTION
PM01	620 021 8436	PLUG 6P
PM02	620 233 0853	ASSY MOTOR,BASE CHASSIS ASSY
PM03	620 236 3776	COVER,GEAR
PM04	620 230 8753	GEAR MIDDLE,RELAY GEAR
PM05	620 230 8760	GEAR DRIVE
PM06	620 231 0596	SHAFT SLIDE,PICK RAIL
PM07	620 233 0860	SWITCH LEAG,LIMIT SWITCH
PM08	411 104 8401	SCR PAN PCS 2X3
PM09	411 027 5402	SCR S-TPG FLT 2.6X6
PM10	620 236 0836	PWB,MOTOR

IC BLOCK DIAGRAM & DESCRIPTION

IC101 LA9241ML (Servo Signal Processor)

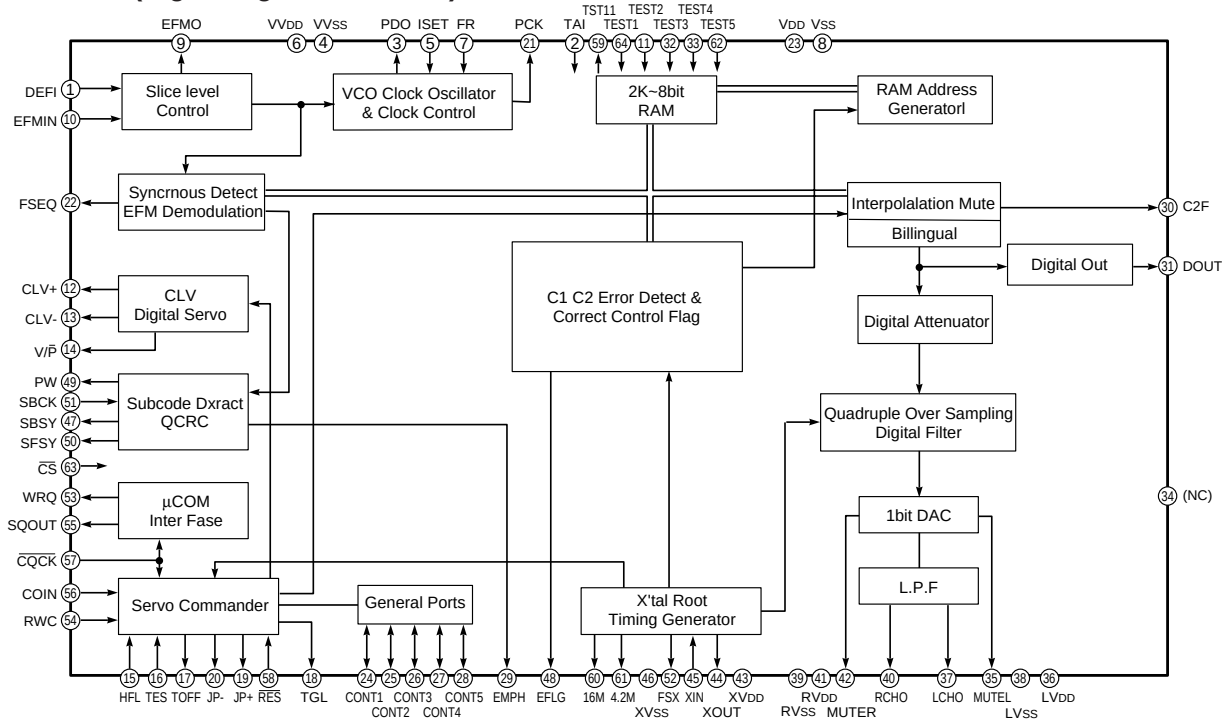


No.	Pin Name	I/O	Function
1	FIN2	I	Connection Pin for Photo Diode of Pickup.
2	FIN1	I	FIN2 + FIN1 = RF, FIN2 - FIN1 = FE
3	E	I	Connection Pin for Photo Diode of Pickup.
4	F	I	E - F = TE
5	TB	I	Input Pin for DC ingredient of TE Signal.
6	TE-	I	Connection Pin for Gain Setting Resistor of TE Signal to TE Signal Pin.
7	TE	O	Output Pin for Tracking Error Signal.
8	TESI	I	Input Pin for Track Error Sense Comparator. TE Signal through Band Pass, and Inputted.
9	SCI	I	Input Pin for Shock Detection.
10	TH	I	Connection Pin for Time Constant Setting of Tracking Gain.
11	TA	O	Output Pin for TA Amplifier.
12	TD-	I	Connection Pin for Constant Tracking Phase Compensation, Consist of between TD and VR.
13	TD	I	Connection Pin for Constant of Tracking Phase Compensation.
14	JP	I	Connection Pin for Amplitude Setting of Tracking Jump (Kick Pulse) Signal.
15	TO	O	Output Pin for Tracking Control Signal.
16	FD	O	Output Pin for Focusing Control Signal.
17	FD-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD and FA.
18	FA+	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD- and FA-.
19	FA-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FA and FE.
20	FE	O	Output Pin for Focusing Error Signal.
21	FE-	I	Connection Pin for Gain Setting Resistor of FE Signal to FE Signal Pin.
22	AGND	-	Ground for Analog Signal.

No.	Pin Name	I/O	Function
23	SP	O	Output Pin for Single End of Input Signal of the CV+, CV- Pin.
24	SPI	I	Input Pin for Spindle Amplifier.
25	SPG	I	Connection Pin for Gain Setting Resistor, when Spindle 12 cm Mode.
26	SP-	I	Connection Pin for Constant of Spindle Phase Compensation with SPD Pin.
27	SPD	O	Output Pin for Spindle Control Signal.
28	SLEQ	I	Connection Pin for Constant of Sled Phase Compensation.
29	SLD	O	Output Pin for Sled Control Signal.
30	SL-	I	Input Pin for Sled Signal from Micro Processor.
31	SL+	I	
32	JP-	I	Input Pin for Tracking Jump Signal from Digital Signal Processor.
33	JP+	I	
34	TGL	I	Input Pin for Tracking Gain Control Signal from Digital Signal Processor. TGL = H : Gain Low
35	TOFF	I	Input Pin for Tracking Off Control Signal from Digital Signal Processor. TOFF = H : OFF
36	TES	O	Output Pin for Track Error Sense Signal to Digital Signal Processor.
37	HFL	I	High Frequency Level Signal Use Detection Main-Beam Position is on the pit or mirror.
38	SLOF	I	Input Pin for Sled Servo Off Control.
39	CV-	I	Input Pin for Constant Linear Velocity Error Signal from Digital Signal Processor.
40	CV+	I	
41	RFSM	O	Output Pin for RF Signal.
42	RFS-	I	Connection Pin for Gain Setting of RF and Constant Setting of 3T Compensation of the EFM Signal with RFSM Pin.
43	SLC	O	Slice Level Control Signal is Output Pin. It Control Level of Data-Slice by Digital Signal Processor of the RF Waveform.
44	SLI	I	Input Pin for Level Control of Data-Slice by Digital Signal Processor.
45	DGND	-	Ground for Digital Signal.
46	FSC	O	Output Pin for Focus Search Smooth Condenser
47	TBC	O	Connection Pin for Variable Range Setting of EF Balance.
48	NC	-	No Connect
49	DEF	O	Output Pin for Defect Detection of Disc.
50	CLK	I	Input Pin for Reference Clock Pulse. (4.23 MHz of Digital Signal Processor)
51	CL	I	Input Pin of Clock Pulse for Command from Micro Processor.
52	DAT	I	Input Pin of Data for Command from Micro Processor.
53	CE	I	Input Pin of Chip Enable for Command from Micro Processor.
54	DRF	O	Output Pin for Detect of RF Level.
55	FSS	I	Select Pin for Focus Search Mode
56	VCC2	-	VCC for Servo and Digital Root.
57	REFI	I	Bus Control Connection Pin for Reference Voltage.
58	VR	O	Output Pin for Reference Voltage.
59	LF2	I	Connection Pin for Time Constant Setting of Detect Detection of the Disc.
60	PH1	I	Capacitor Connection Pin for Peak-hold of RF Signal.
61	BH1	I	Capacitor Connection Pin for Bottom-hold of RF Signal.
62	LDD	O	Output Pin of APC (Automatic Power Control) Circuit.
63	LDS	I	Input Pin of APC (Automatic Power Control) Circuit.
64	VCC1	I	VCC for RF Root.

IC BLOCK DIAGRAM & DESCRIPTION

IC102 LC78622NE (Digital Signal Processor)

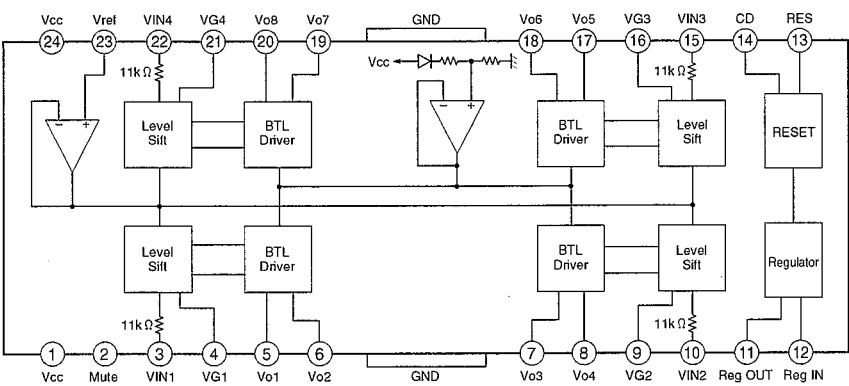


No.	Pin Name	I/O	Function
1	DEFI	I	Input terminal for detect signal of defect
2	TAI	I	Input terminal for test.
3	PDO	O	The phase comparison output terminal for external VCO control.
4	VVSS	-	Ground terminal for built-in VCO
5	ISET	I	Resistance connection terminal for electric current adjustment of PDO output.
6	VVDD	-	Built-in VCO power supply terminal.
7	FR	I	VCO frequency range adjustment.
8	VSS	-	Ground for Digital
9	EFMO	O	EFM signal output terminal for slice level control.
10	EFMIN	I	EFM signal input terminal for slice level control.
11	TEST2	I	TEST pin. Normal time is non connection.
12	CLV+	O	Output terminal for Disc motor control.
13	CLV-	O	Output terminal for Disc motor control.
14	V/P	O	Change of rough servo / phase control Rough servo : "H", Phase control : "L"
15	HFL	I	Input terminal of track search signal.
16	TES	I	Input terminal of tracking error signal.
17	TOFF	O	Output terminal of tracking off.
18	TGL	O	Output terminal for change of tracking gain.
19	JP+	O	Output terminal for tracking jump control.
20	JP-	O	Output terminal for tracking jump control.
21	PCK	O	Clock monitor output terminal for EFM data playback. (4.3218 MHz)
22	FSEQ	O	Output terminal for detect of SYNC signal.
23	DVDD	-	+5V
24	CONT1	I/O	This output can control at serial control from micro processor.
25	CONT2	I/O	
26	CONT3	I/O	
27	CONT4	I/O	
28	CONT5	I/O	
29	EMPH	O	Output terminal of de-emphasis monitor . "H" : de-emphasis
30	C2F	O	Output terminal of C2 flag
31	DOUT	O	Output terminal of digital out
32	TEST3	I	Test pin.

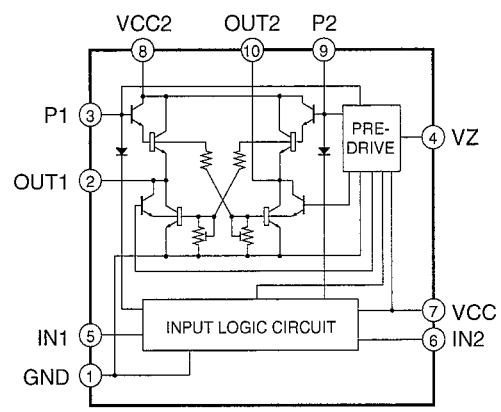
No.	Pin Name	I/O	Function
33	TEST4	I	Test pin.
34	NC	-	Non connection.
35	MUTEL	O	Mute output terminal for L-ch
36	LVDD	-	Power supply for L-ch
37	LCHO	O	Output terminal for L-ch
38	LVSS	-	GND for L-ch
39	RVSS	-	GND for R-ch
40	RCHO	O	Output terminal for R-ch
41	RVDD	-	Power supply for R-ch
42	MUTER	O	Mute output terminal for R-ch
43	XVDD	-	Power supply of crystal oscillation
44	XOUT	O	Connection terminal of crystal oscillation (16.9344MHz)
45	XIN	I	Connection terminal of crystal oscillation (16.9344MHz)
46	XVSS	-	GND of crystal oscillation
47	SBSY	O	Output terminal for synchronizing signal of sub-cord block
48	EFLG	O	Output terminal for correction monitor of C1, C2, Single and Double
49	PW	O	Output terminal for sub-cord of P, Q, R, S, T, U and W
50	SFSY	O	Output terminal for synchronizing signal of sub-cord frame
51	SBCK	I	Input terminal for readout clock of sub-cord
52	FSX	O	Output terminal of Synchronizing signal (7.35kHz)
53	WRQ	O	Output terminal for standby of sub-cord Q output
54	RWC	I	Input terminal of read / write control
55	SQOUT	O	Output terminal of sub-cord Q
56	COIN	I	Input terminal of command from micro processor
57	CQCK	I	Clock input for reading sub-cord from SQOUT
58	RES	I	Reset (turn on : L)
59	TST11	O	Test pin
60	16M	O	16.9344MHz
61	4.2M	O	4.2336MHz
62	TEST5	I	Test pin
63	CS	I	Chip select terminal
64	TEST1	I	Test pin

IC BLOCK DIAGRAM & DESCRIPTION

IC103 LA6541 (Pick-up Actuator & CD Mechanism Motor)

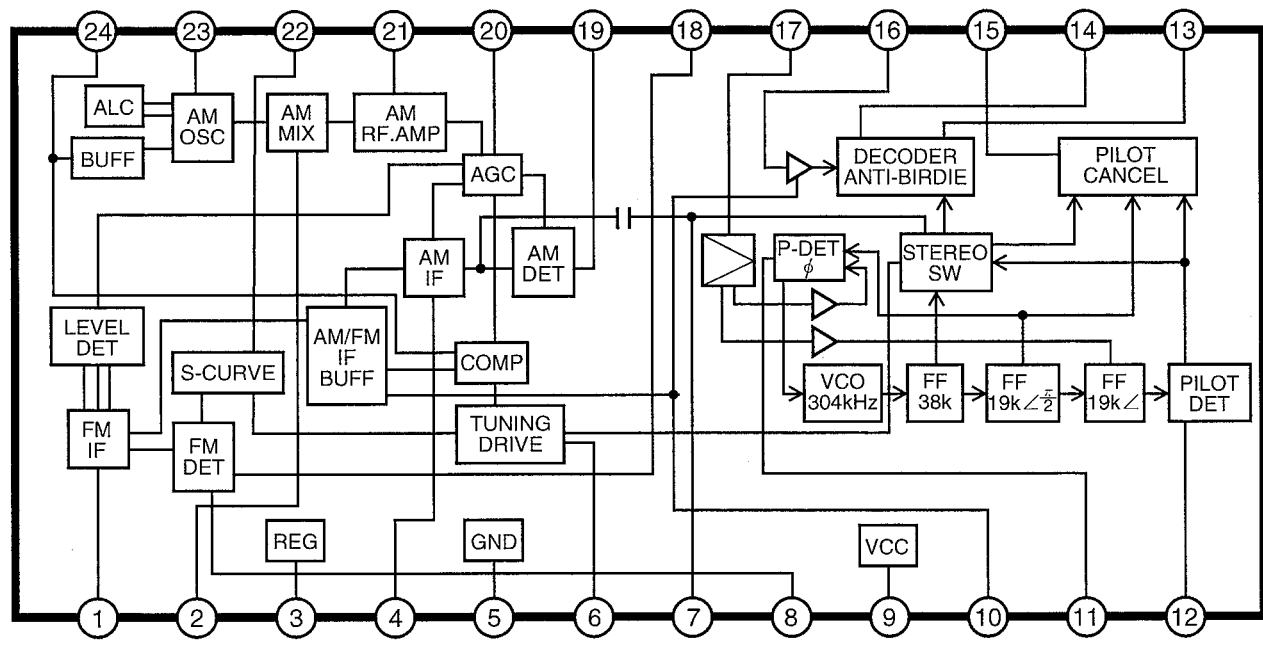


IC131 LB1641L (Motor Driver)



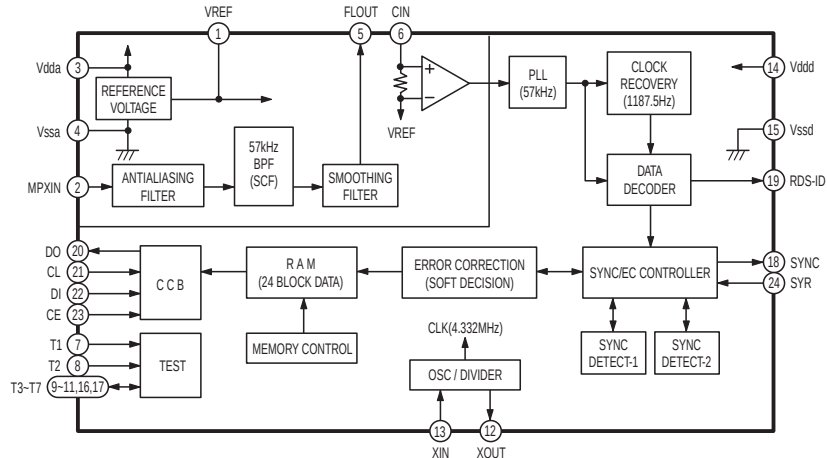
Input		Output		Action
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	Normal(Reverse)Rotary
0	1	0	1	Reverse(Normal)Rotary
1	1	0	0	Brake

IC231 LA1844ML
(Electronic Tuning-Supported Home Audio Tuner IC)



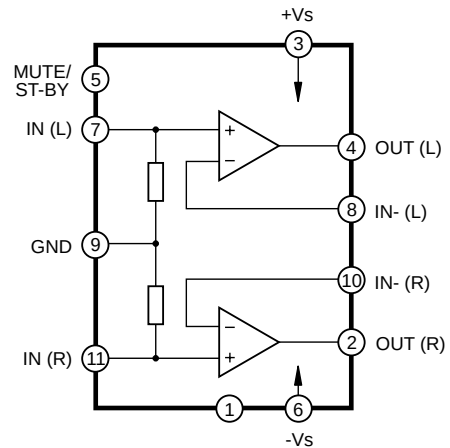
IC BLOCK DIAGRAM & DESCRIPTION

IC241 LC72121M (PLL Synthesizer)

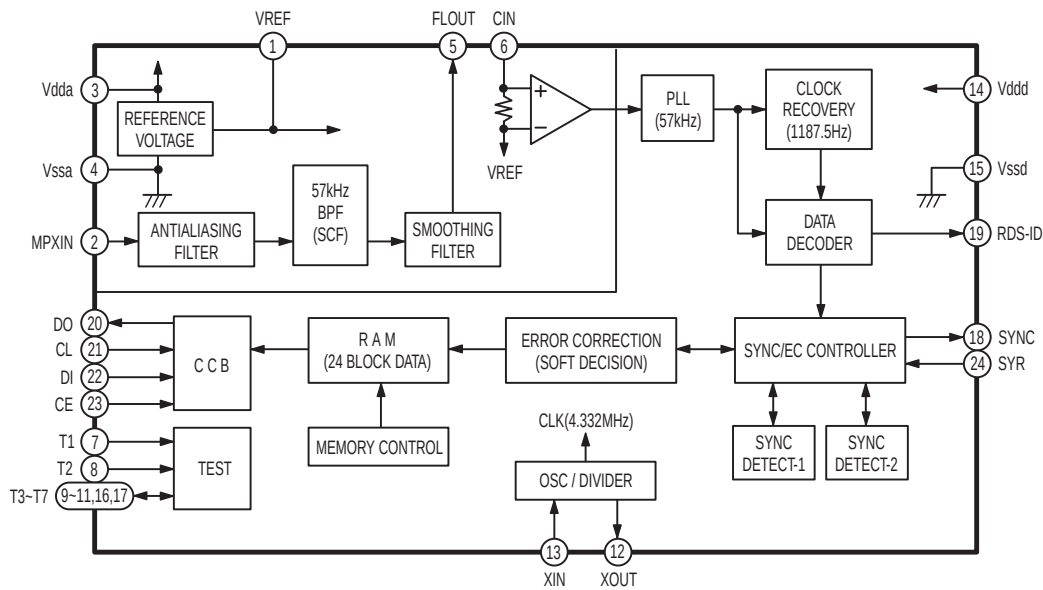


IC487 TDA7265

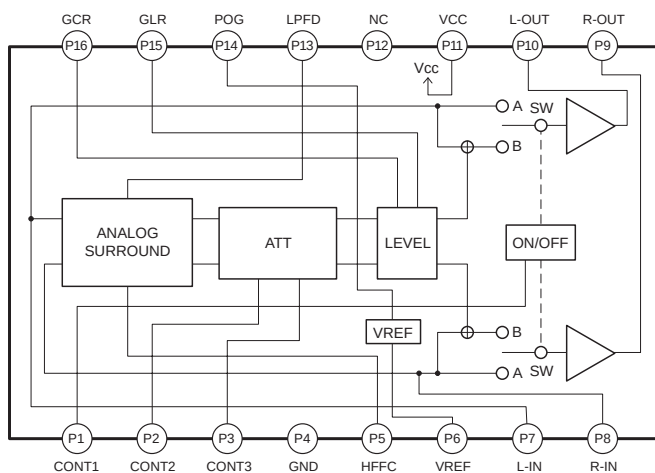
(25 + 25W Stereo Amplifier with Mute & ST-by)



IC251 LC72722 (RDS Signal Processor)



IC415 LA2615 (Surround Signal Processor)



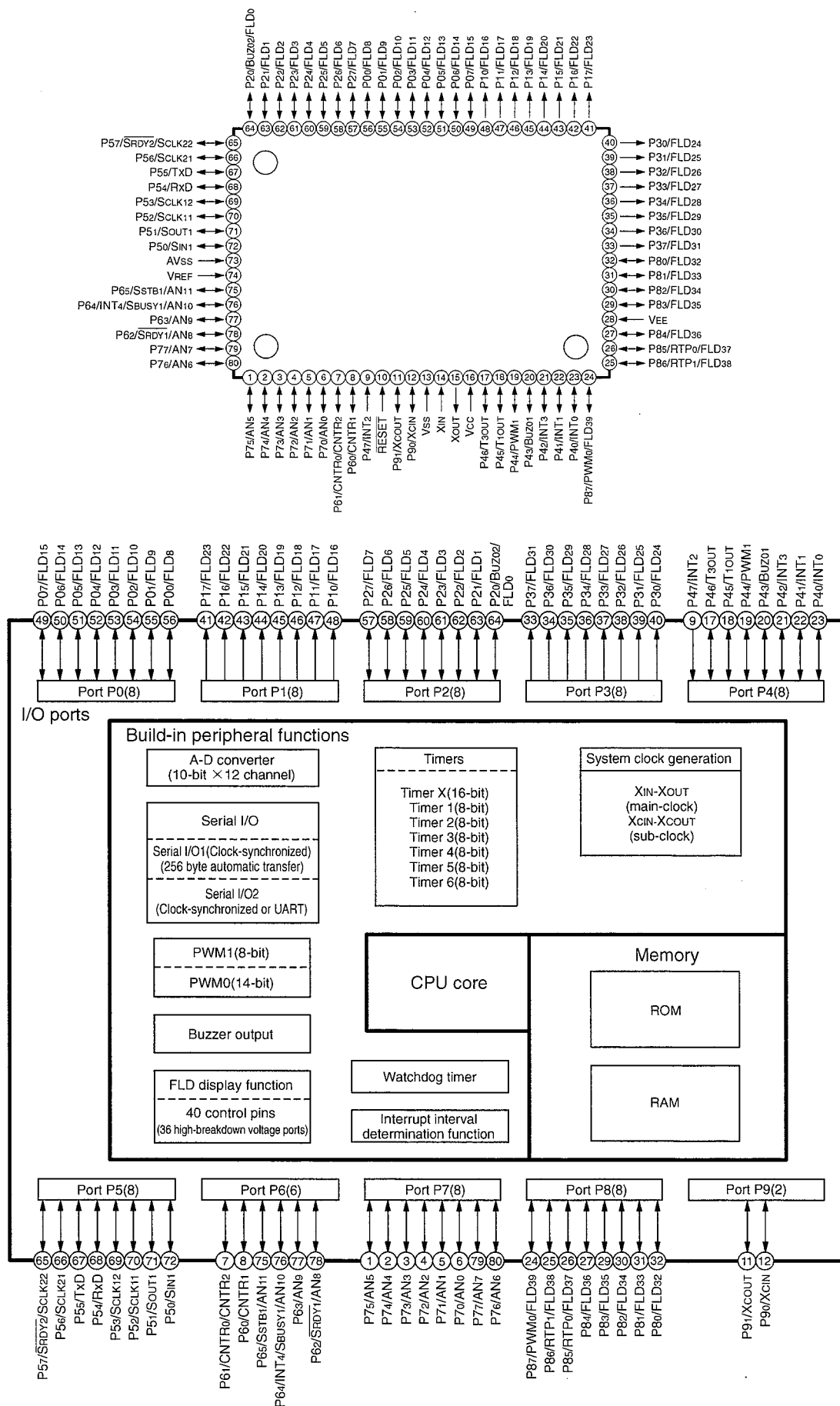
IC451 LC75342M

(2-ch Stereo Audio Power Amplifier)



IC BLOCK DIAGRAM & DESCRIPTION

IC601 M38B57MCH-B25FP (8-bit Cmos Microcomputer)



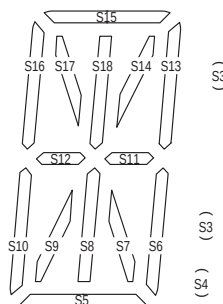
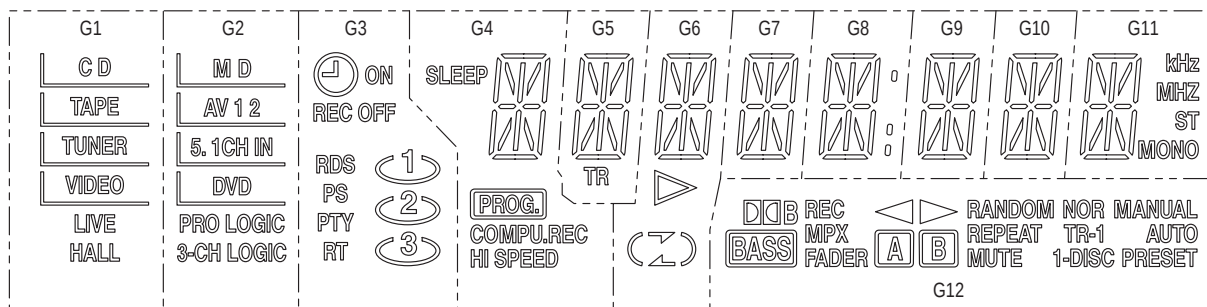
IC BLOCK DIAGRAM & DESCRIPTION

IC601 M38B57MCH-B252FP (8-bit Cmos Microcomputer)

Pin	Pin Name	I/O	Description
1	KEY1	AD	KEY INPUT
2	ILLM_LED	O	LED LIGHTING CONTROL OUTPUT
3	AD_SW	I	TRAY OPEN/CLOSE SW / CD LIMIT SW INPUT
4	RWC	O	CD DSP RWC(COMMAND LATCH)OUTPUT
5	DSP_RES	O	CD DSP RESET OUTPUT
6	TRY_OPEN	O	TRAY OPEN/CLOSE MOTOR OUTPUT
7	TRY_CLOS	O	TRAY OPEN/CLOSE MOTOR OUTPUT
8	VD_GND	O	GND CONTROL OUTPUT FOR MICON POWER CHECK
9	V_CHK	I	POWER FAILURE DETECT(POWER FAILURE=L) /MICON POWER CHK(DOWN=L)
10	RESET		SYSTEM RESET TERMINAL
11	Xcout		SUB CLOCK OSCILLATION TERMINAL
12	Xcin		SUB CLOCK OSCILLATION TERMINAL
13	Vss		GROUND POTEINTIAL TERMINAL
14	Xin		MAIN CLOCK OSCILLATION CERAMIC TERMINAL
15	Xout		MAIN CLOCK OSCILLATION CERAMIC TERMINAL
16	Vcc		PLUS POWER TERMINAL
17	SHIFT	O	CLOCK SHIFT CONTROL OUTPUTbc-A=Low)
18	PULL_UP	O	PULL UP CONTROL OUTPUT(ON=L)
19	SQOUT	I	
20	DRF	I	
21	C2F	I	
22	IR	I	REMOTE CONTROL INPUT
23	WRQ(int)	I	CD DSP WRQ(SubQ REQUEST SIGNAL)INPUT
24	TU_DO	I	TU PLL DO INPUT
25	CLK	O	TU PLL / RDS / CD DSP CLK OUTPUT
26	DATA	O	TU PLL / RDS / CD DSP DATA OUTPUT
27	TU_CE	O	TU PLL / RDS CE OUTPUT
28	Vee		FL M MINUSPOWER TERMINAL
29	G12	O	FL DEG1T OUTPUT(Pull Down R)
30	G11	O	⚡ (Pull Down R)
31	G10	O	⚡ (Pull Down R)
32	G09	O	⚡ (Pull Down R)
33	G08	O	⚡
34	G07	O	⚡
35	G06	O	⚡
36	G05	O	⚡
37	G04	O	⚡
38	G03	O	⚡
39	G02	O	⚡
40	G01	O	⚡
41	S01	O	FL SEGMENT OUTPUT
42	S02	O	⚡

Pin	Pin Name	I/O	Description
43	S03	O	⚡
44	S04	O	⚡
45	S05	O	⚡
46	S06	O	⚡
47	S07	O	⚡
48	S08	O	⚡
49	S09	O	⚡
50	S10	O	⚡ SEL_DIM
51	S11	O	⚡ SEL_DPS
52	S12	O	⚡ SEL_RDSE
53	S13	O	⚡ SEL_RDS
54	S14	O	⚡ SEL_SUR
55	S15	O	⚡ SEL_LINE2
56	S16	O	⚡ SEL_LINE
57	S17	O	⚡ (Pull Down R) SEL_ECO
58	S18	O	⚡ (Pull Down R) SEL_12/24
59	SEL_IN	I	OPTION SELECT IN
60	TU_RDSIN	I	RDS DATA INPUT
61	MULJOG_A	I	MULTI JOG A
62	MULJOG_B	I	MULTI JOG B
63	VOLJOG_A	I	VOLUME JOG A
64	VOLJOG_B	I	VOLUME JOG B
65	CE	I/O	SERIAL CHIP ENABLE INPUT/OUTPUT
66	CLOCK	O	SERIAL CLOCK OUTPUT
67	DATA_O	Out	SERIAL DATA OUTPUT
68	DATA_I	In	SERIAL DATA INPUT
69	EXPOWER	O	POWER SUPPLY CONTROL
70	MUTE	O	MUTE CONTROL OUTPUT(ON=Hi)
71	2P_CON	O	SUB POWER CONTROL OUTPUT (POWER ON=Hi)
72	1P_CON	O	MAIN POWER CONTROL OUTPUT (POWER ON=Hi)
73	Avss		A/D GROUND POTENTIAL TERMINAL
74	VREF		A/D STANDARD POTENTIAL TERMINAL
75	VOL_DATA	O	LC75342 DATA OUTPUT
76	VOL_CLK	O	LC75342 CLOCK OUTPUT
77	VOL_CE	O	LC75342 CE OUTPUT
78	SUR_P1	O	LA2615 P1 OUTPUT
79	SUR_P3	O	LA2615 P3 OUTPUT
80	KEY2	A/D	KEY INPUT

ANODE & GRID ASSIGNMENT



G4~G11

ANODE & GRID ASSIGNMENT

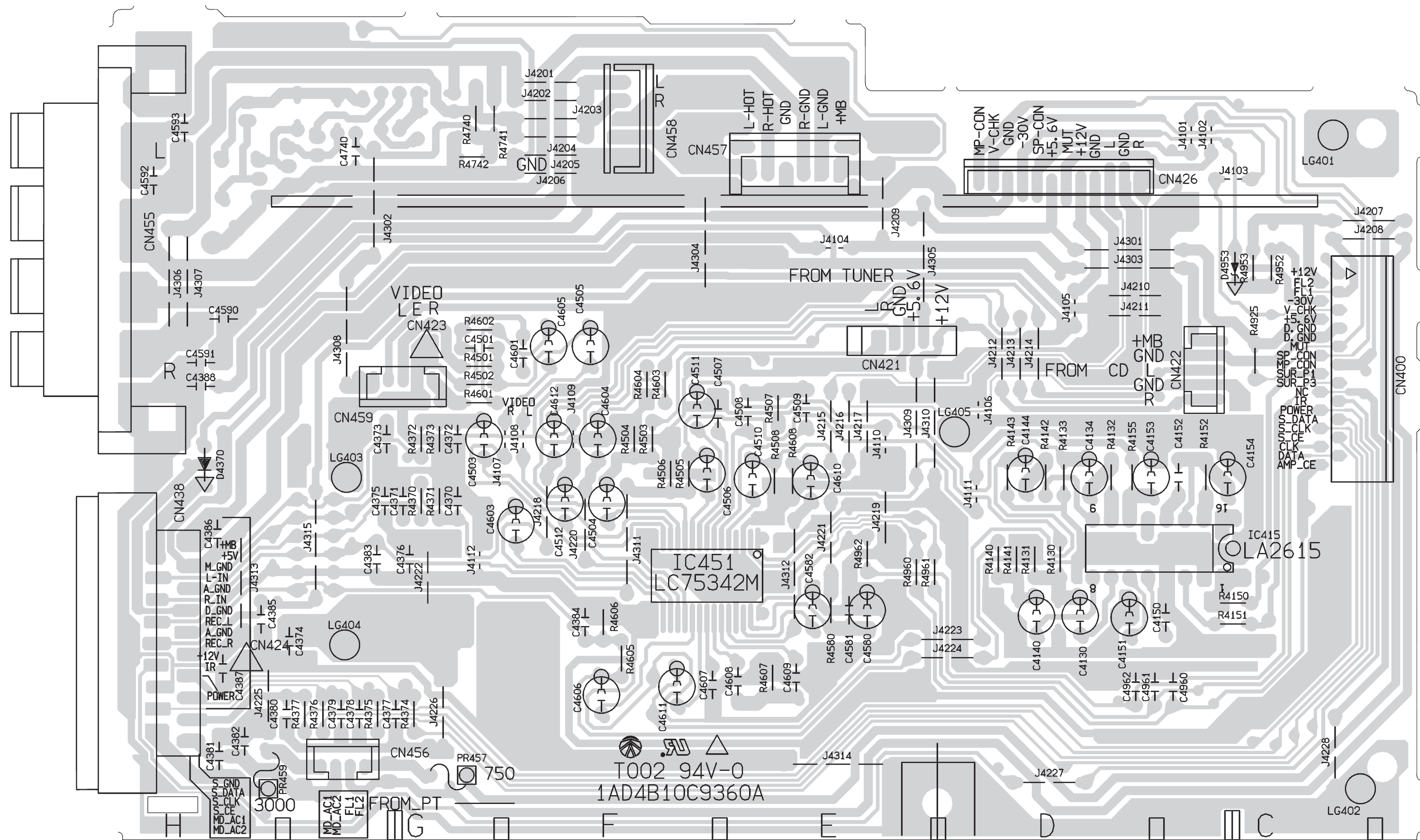
[illegible]

PIN ASSIGNMENT

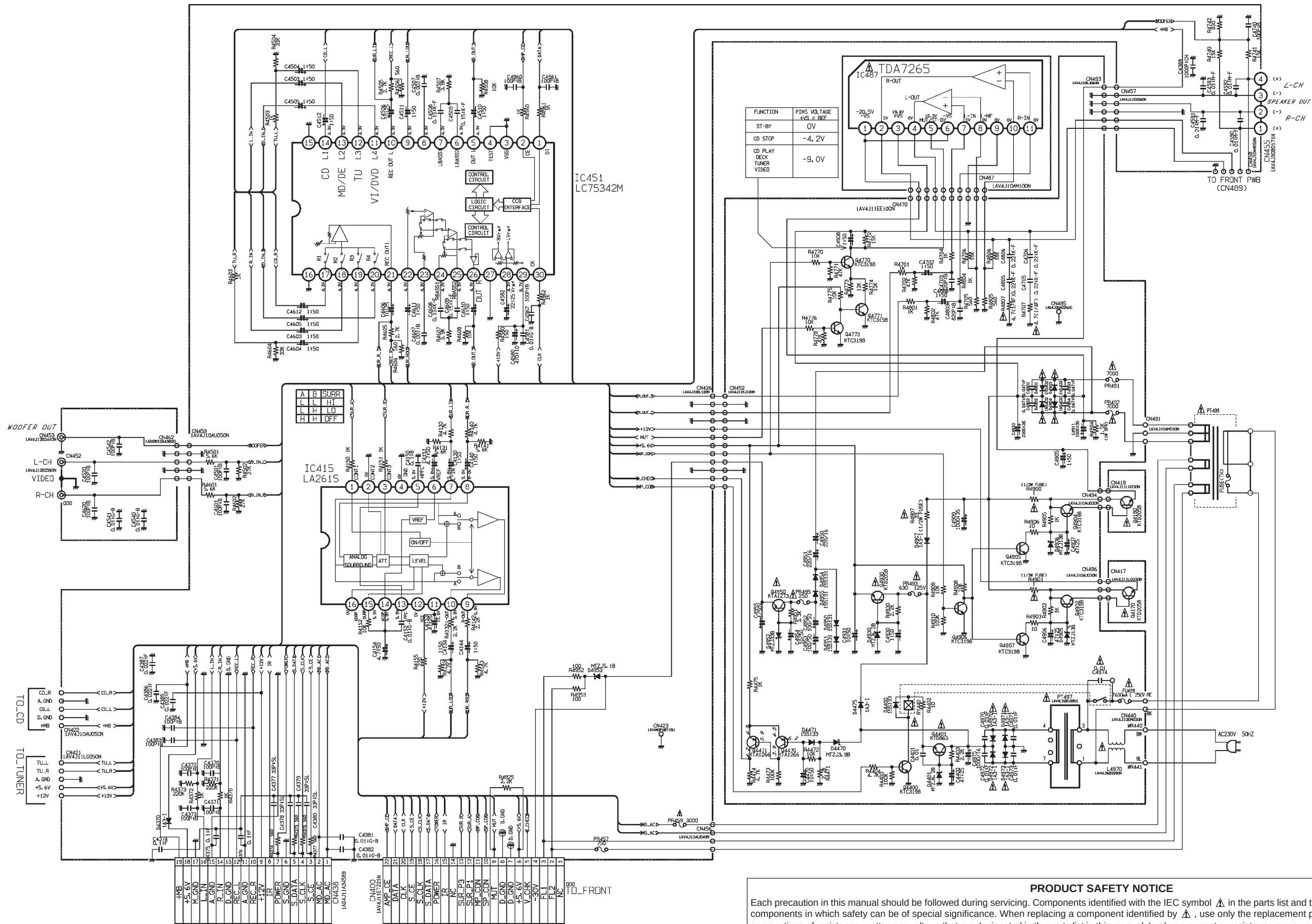
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Assignment	F1	F1	NP	NL	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3

Pin No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Assignment	S2	S1	NL	NL	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	NL	NP	F2	F2

NL:No Lead



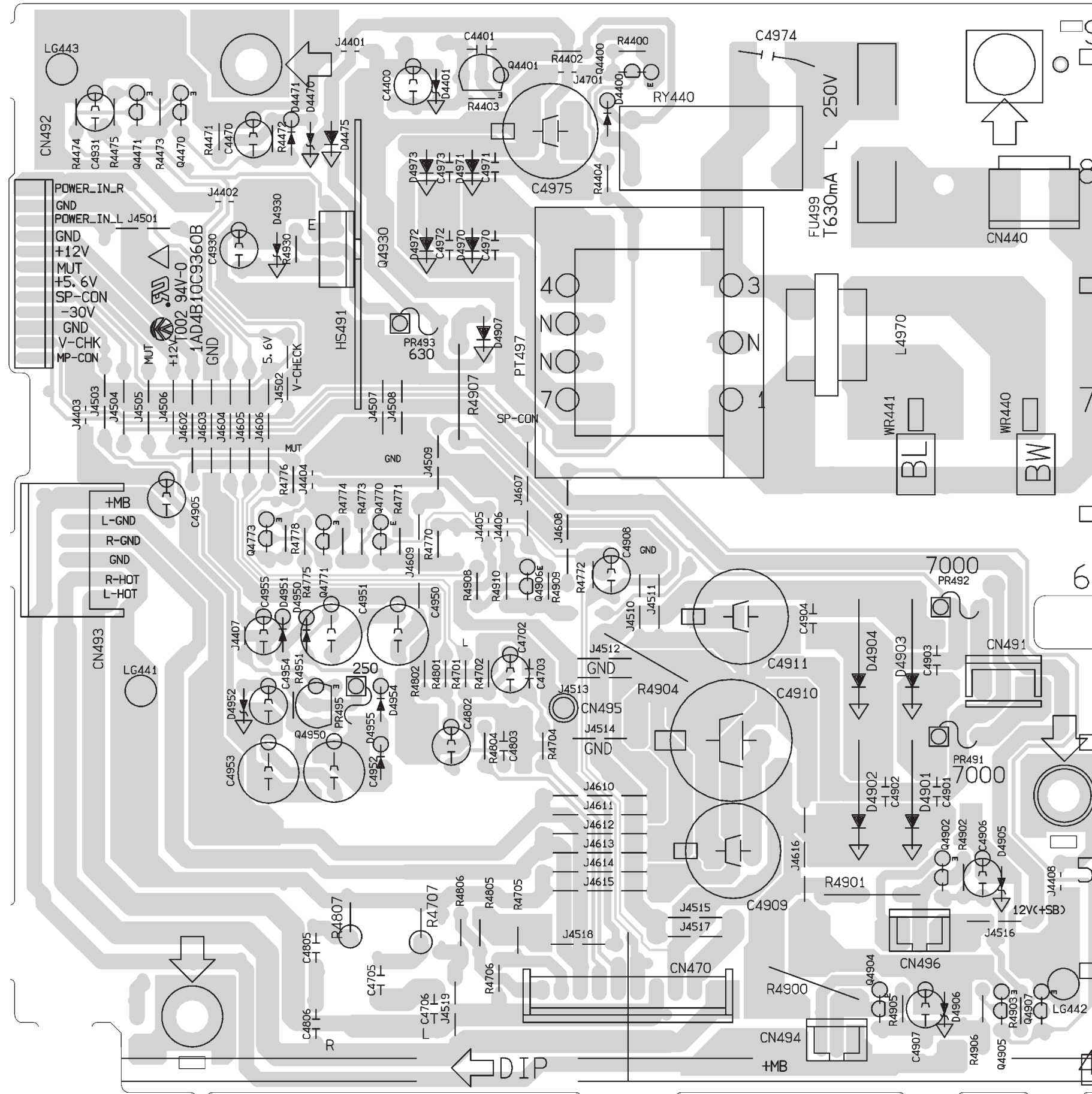
SCHEMATIC DIAGRAM (AMPLIFIER)



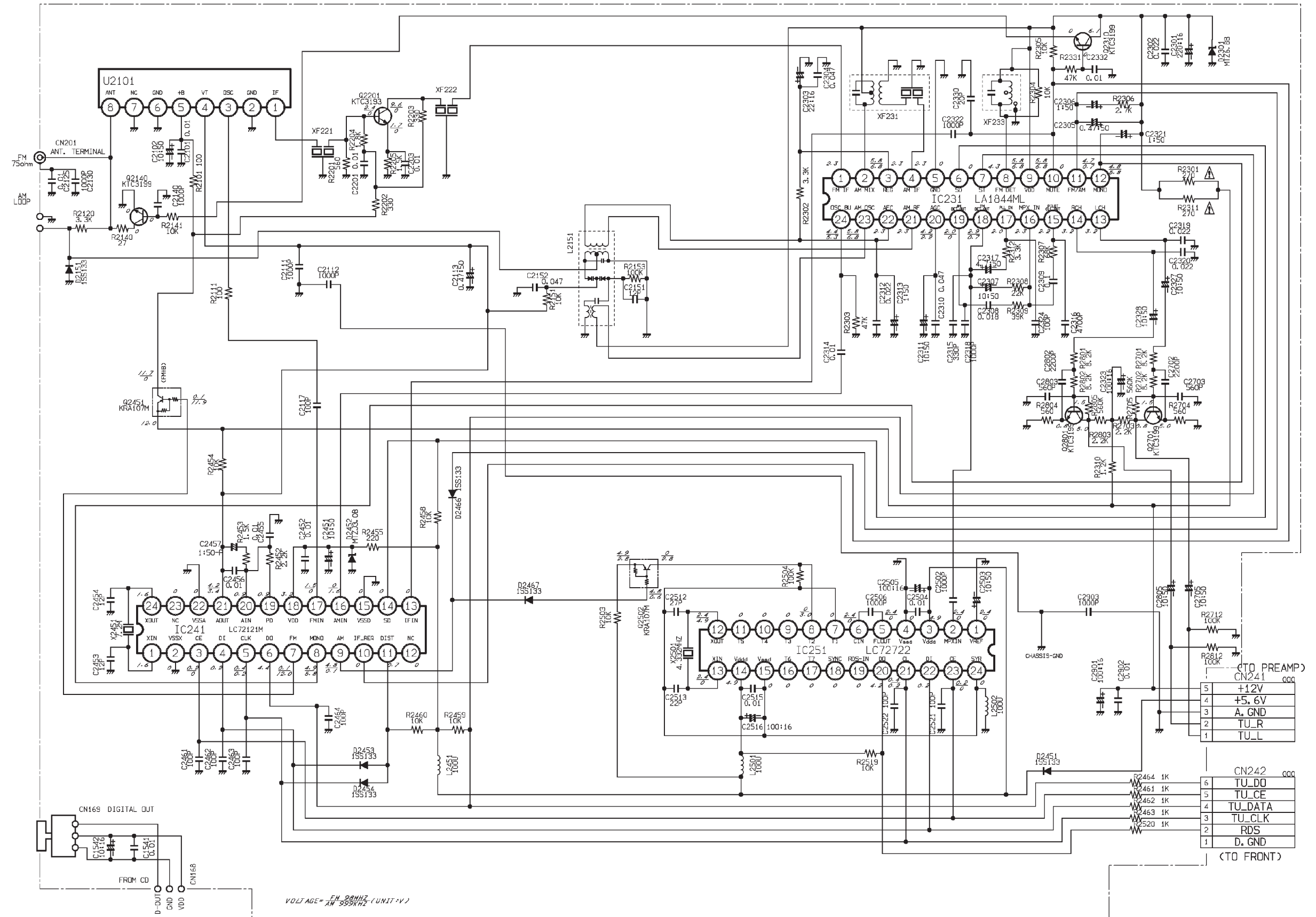
This is a basic schematic diagram.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

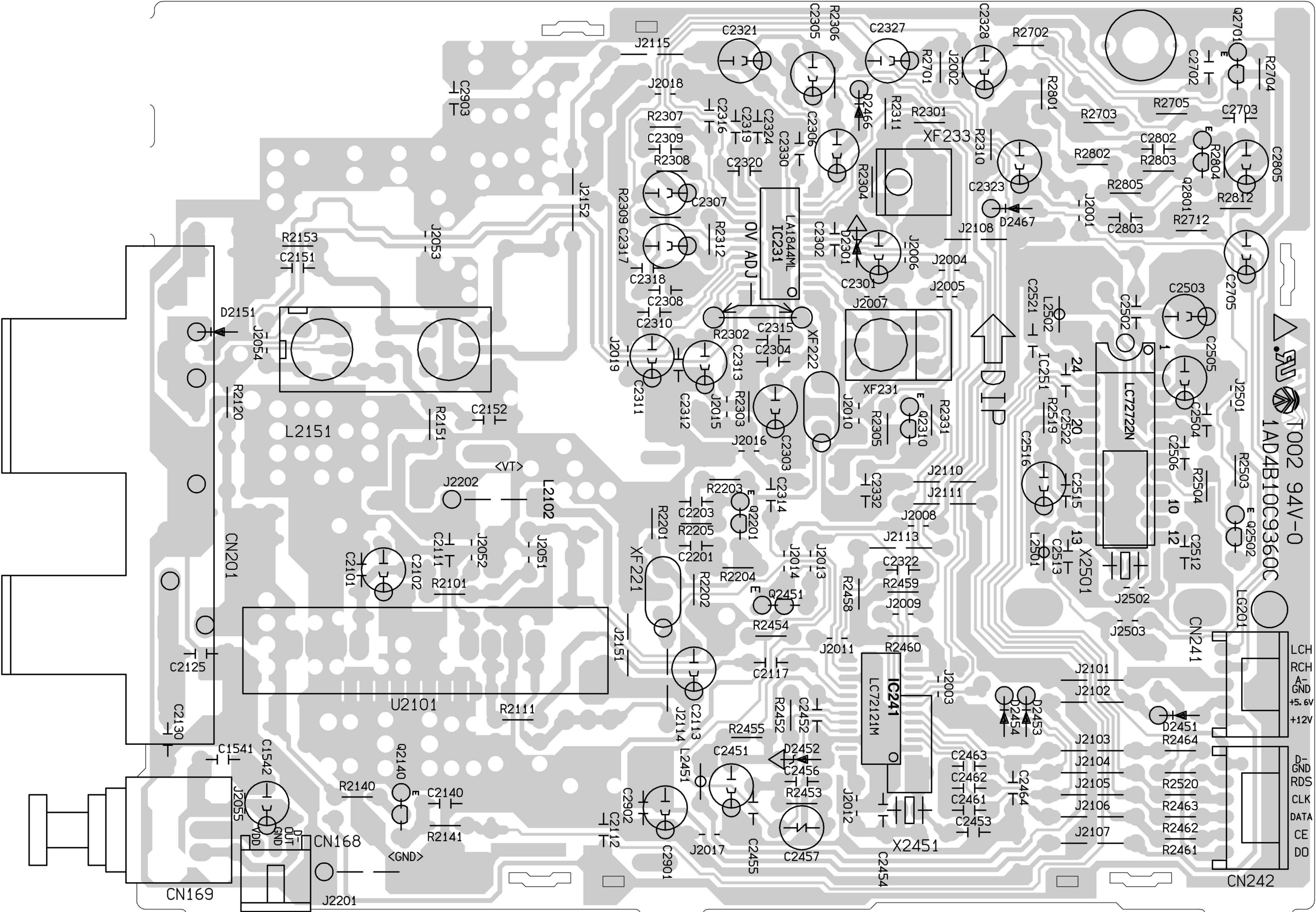


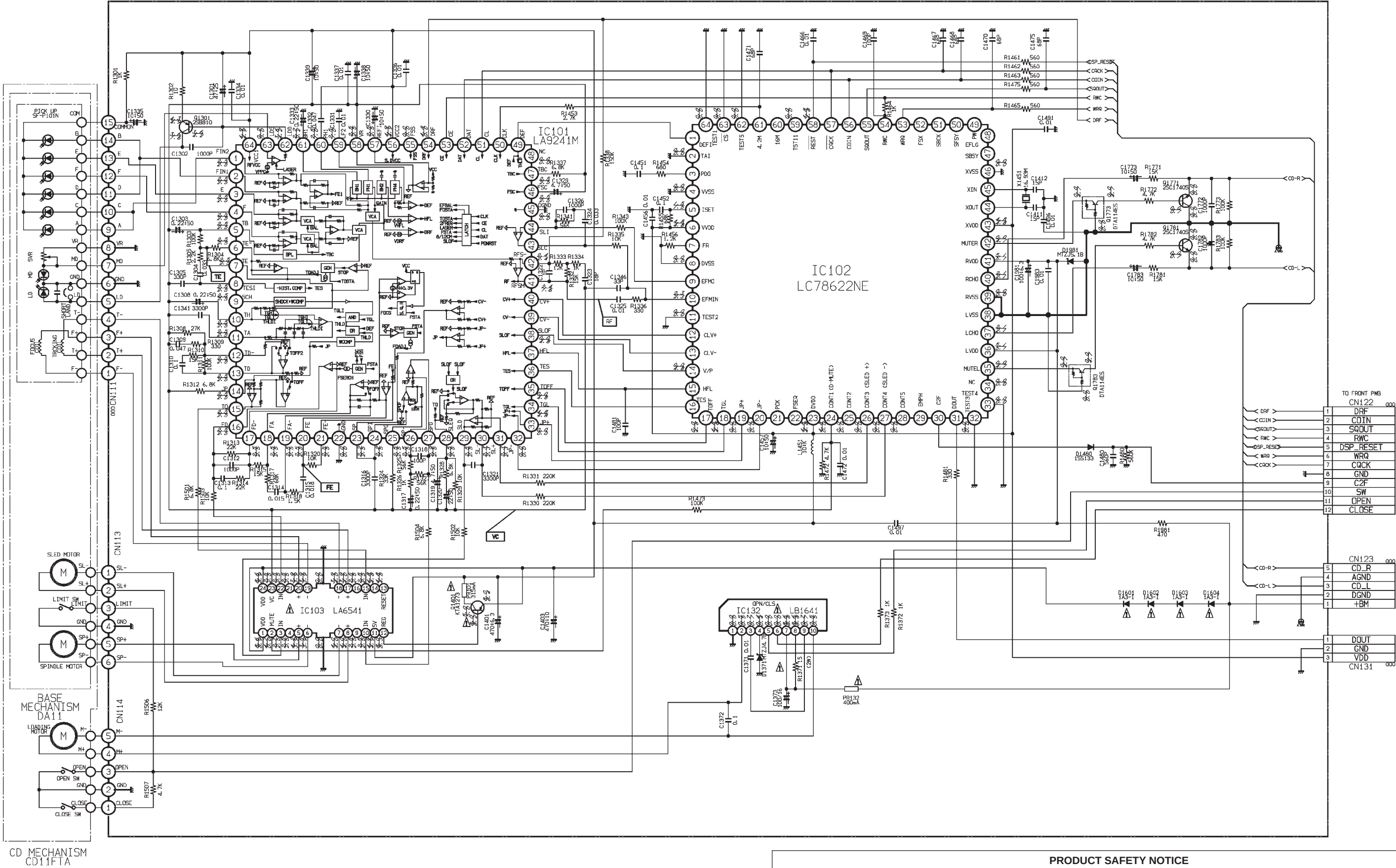
SCHEMATIC DIAGRAM (TUNER)



PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

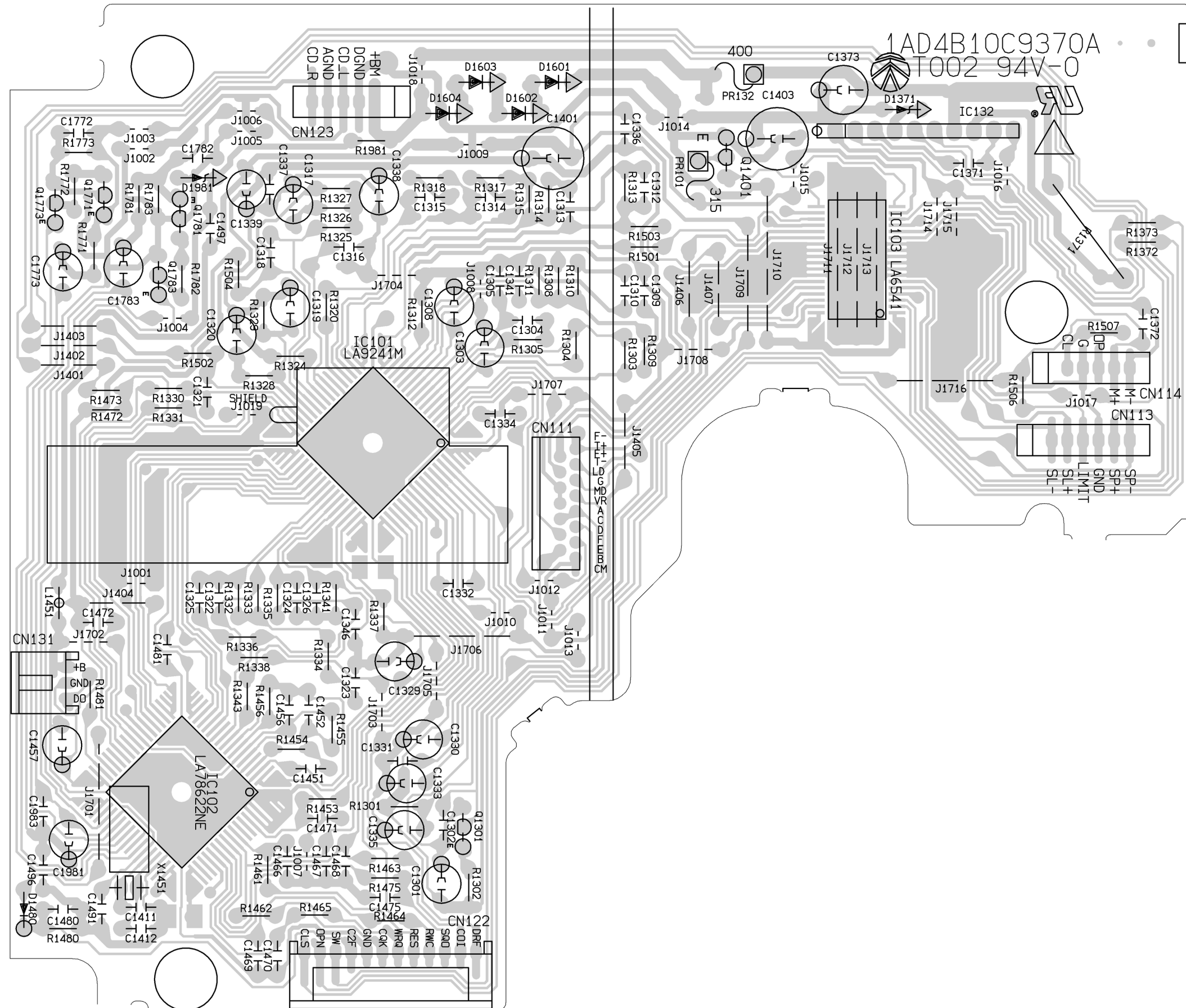


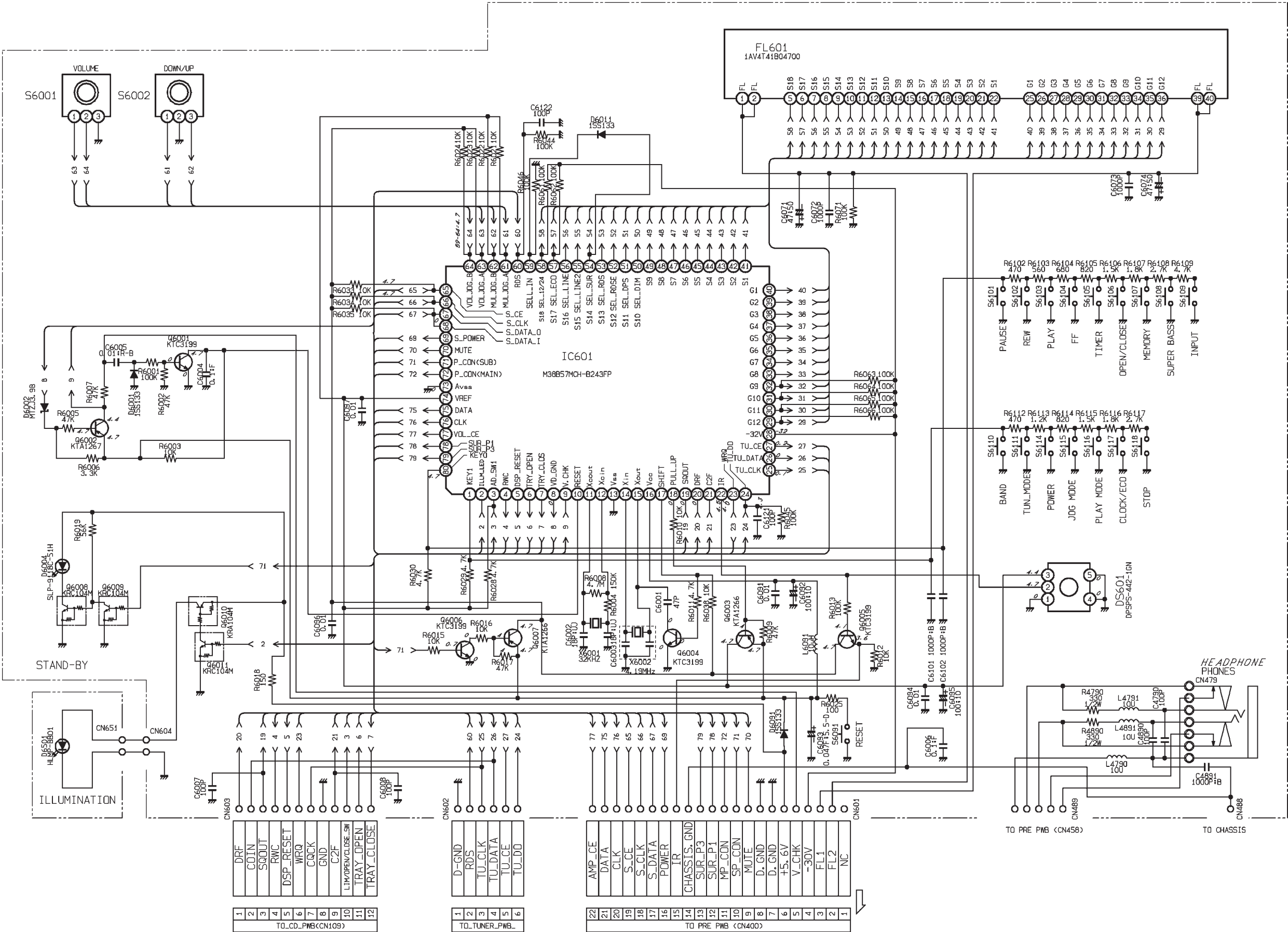


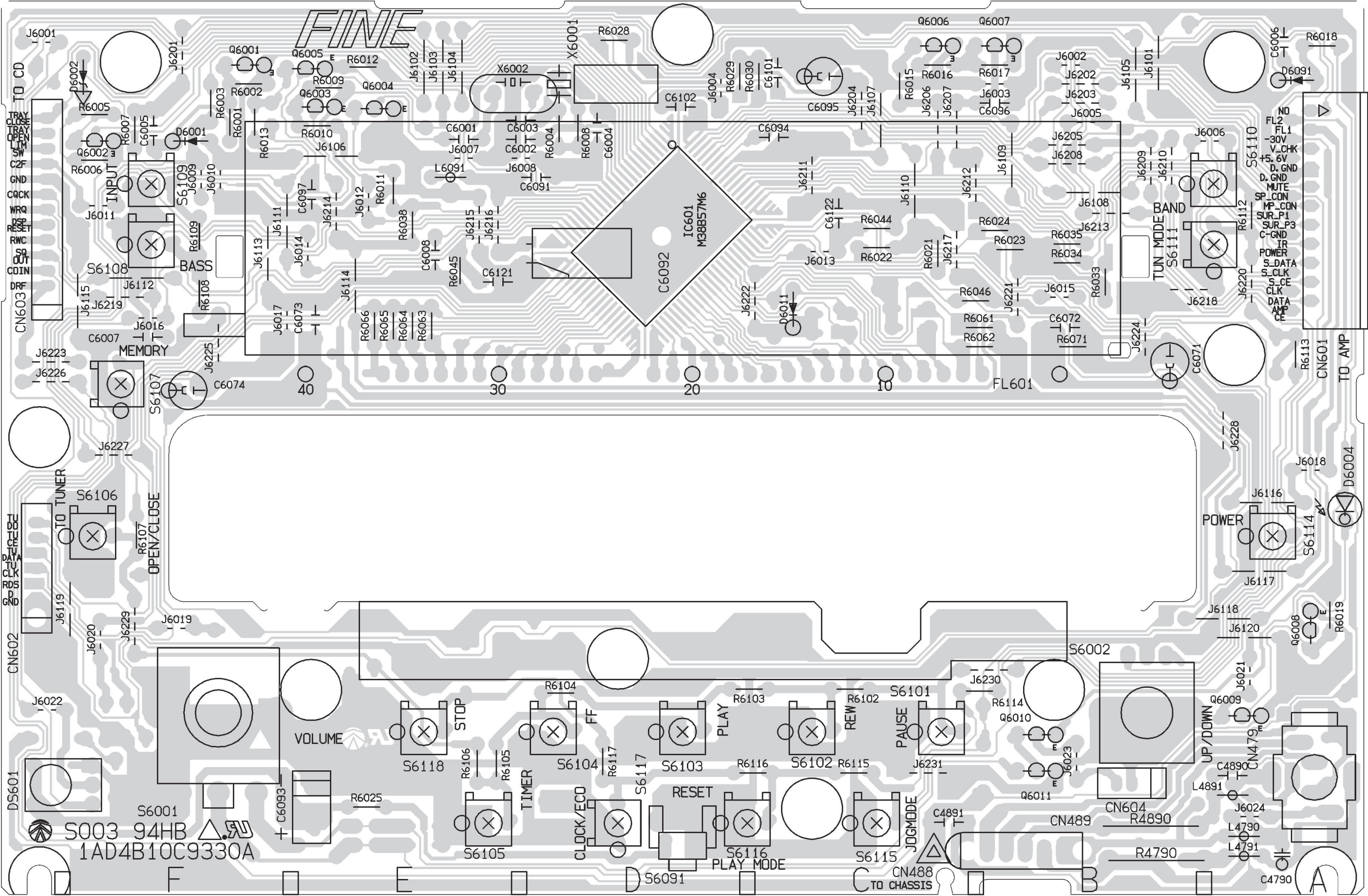
This is a basic schematic diagram.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

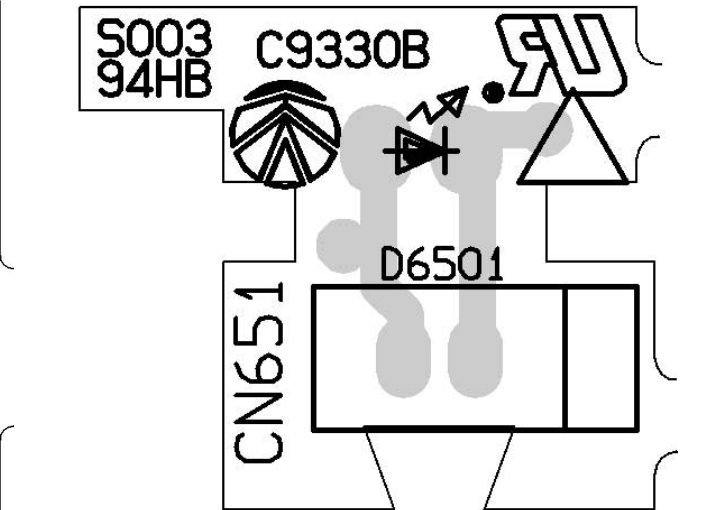
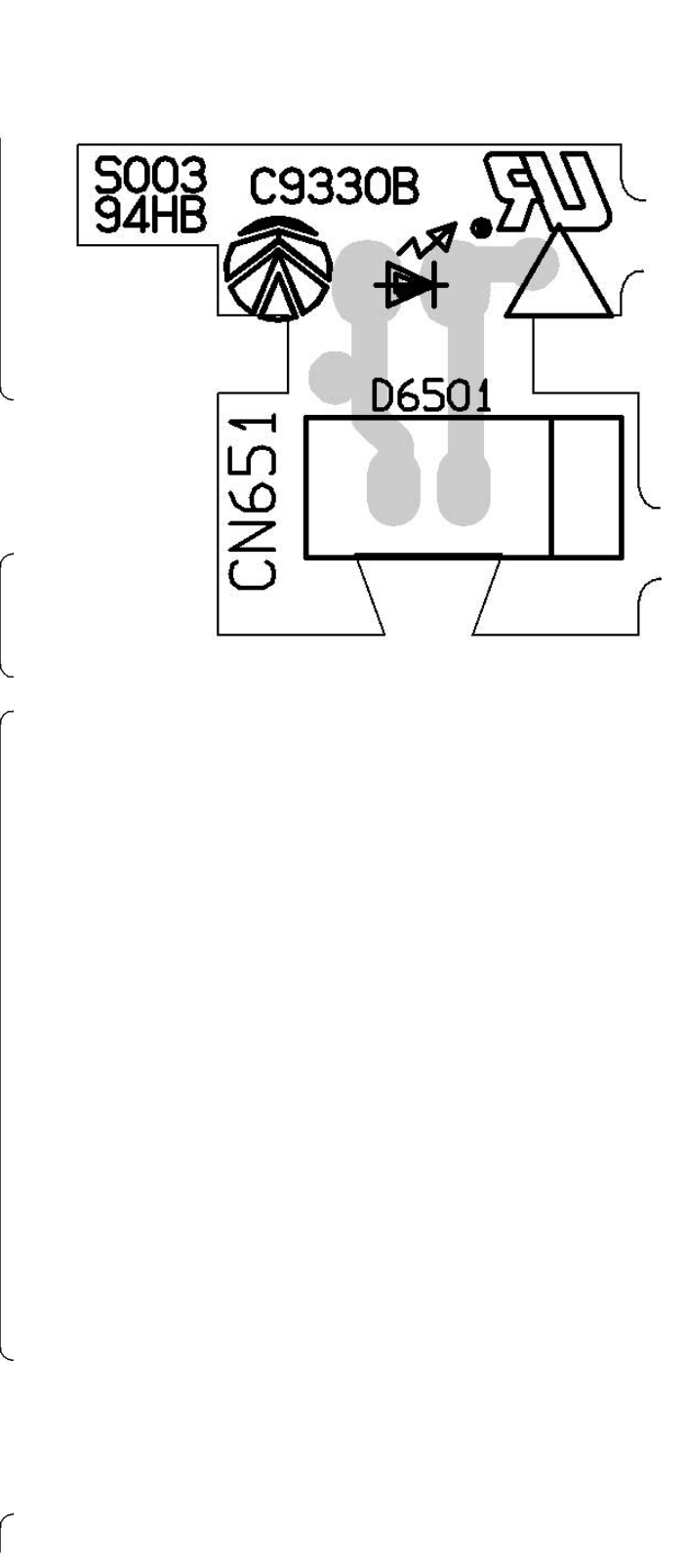






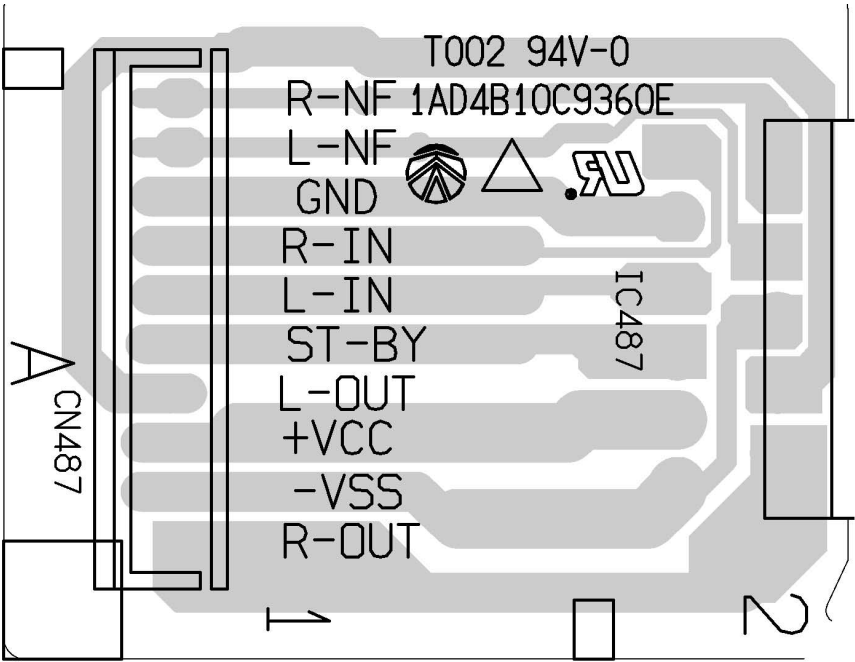
LED, P.W.B

LED, P.W.B

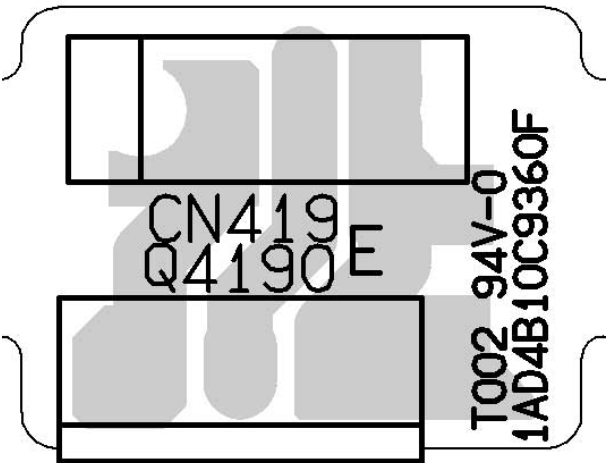


WIRING DIAGRAM (POWER IC, REGULATOR & REGULATOR 2) _____

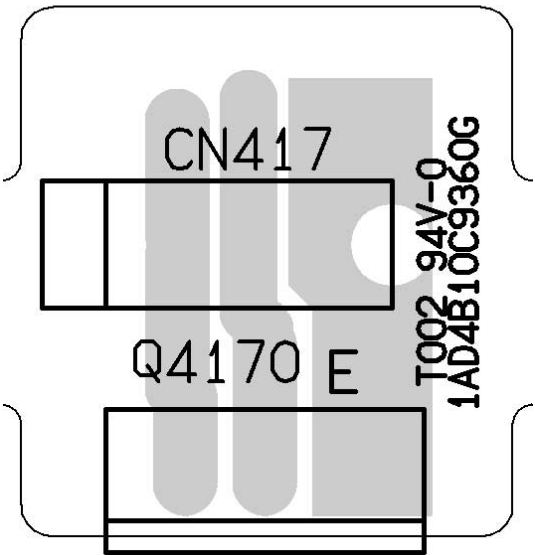
POWER IC, P.W.B



REGULATOR, P.W.B



REGULATOR 2, P.W.B



WIRING CONNECTION

