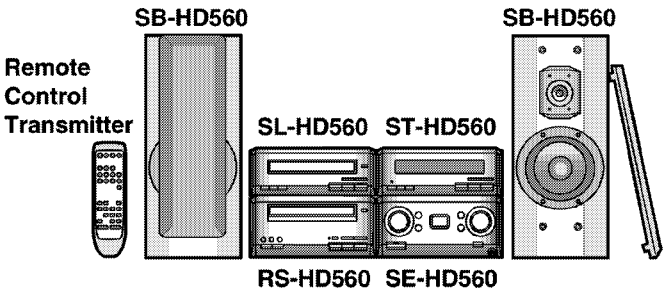
ORDER No.AD0203062C2

Service Manual

Tuner



ST-HD560E

Colour

(N).....Gold Type

System

SC-HD560:

Tuner; ST-HD560, Amplifier; SE-HD560,

CD Player; SL-HD560, Cassette Deck; RS-HD560,

Speakers; SB-HD560 (Made in Spain.)

Specifications

IPre-amplifier section

Input sensitivity/impedance:

EXT IN; 300 mV/15 kΩ

ITuner section

FM frequency range: 87.50 - 108.00 MHz (0.05 MHz steps)

FM antenna terminal(s) 75 Ω (unbalanced)

AM frequency range: 522 - 1629 kHz (9 kHz steps)
520 - 1630 kHz (10 kHz steps)

ITimer section

Clock: Quarts - lock type

Function: Play timer (every day), Rec timer (every day), Sleep timer (120 min, 30min internals)

IGeneral

Dimensions (WxHxD): 210x76.3x251 mm

Mass: 1.1 kg

Notes:

Specifications are subject to change without notice.

Mass and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

CONTENTS

Technics

1 Note

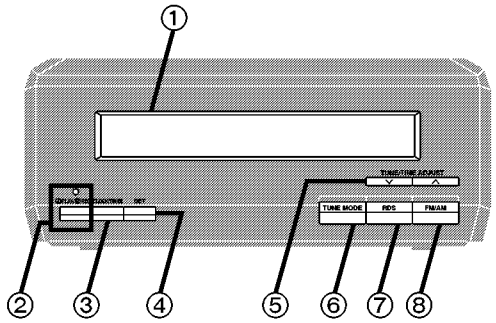
1. **Because of unque interconnecting cables, when a component requires service, send or bring in the entire system.**
2. **Refer to the service manual for Model No. SE-HD560 (Order No. AD0203061C2) for information on Accessories and Packaging.**

2 Before Repair

This equipment (ST-HD560), which is a component of the system, is supplied with power from the Amplifier (SE-HD560). When repairing this equipment or checking operation of the system, be sure to connect to the amplifier with it.

Power supply and operation check in the state of it as a single equipment is impracticable.

3 Location of Controls

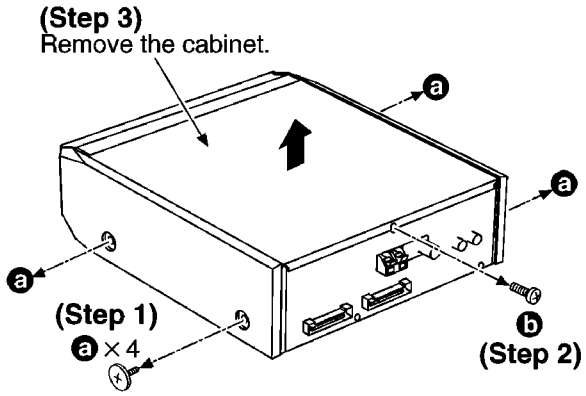


① **Display panel**
The display also shows information for the cassette deck, CD player, and amplifier.
② **Play timer/record timer button and indicator (◴ PLAY/◴ REC)**
③ **Clock/timer button (CLOCK/TIMER)**
④ **Set button (SET)**
⑤ **Tuning/time adjust buttons (TUNE/TIME ADJUST ∨, ∧)**
⑥ **Tuning mode button (TUNE MODE)**
⑦ **RDS button (RDS)**
⑧ **Band select button (FM/AM)**

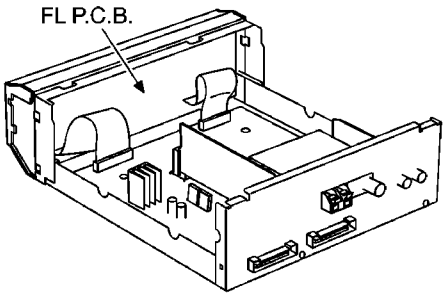
4 Operation Checks and Component Replacement Procedures

- **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
- **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**

4.1. Checking for the FL P.C.B.

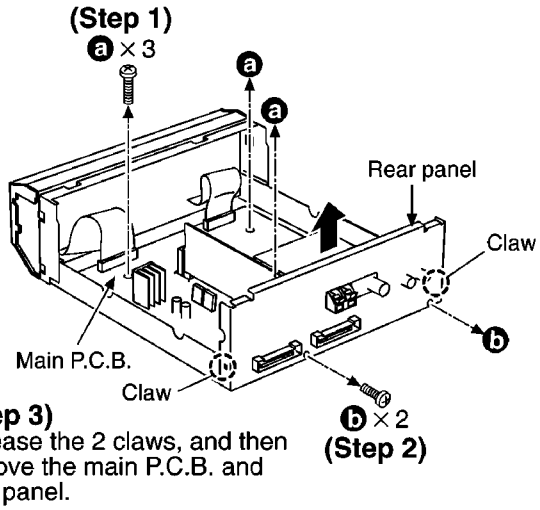


- **Check the FL P.C.B. as shown below.**

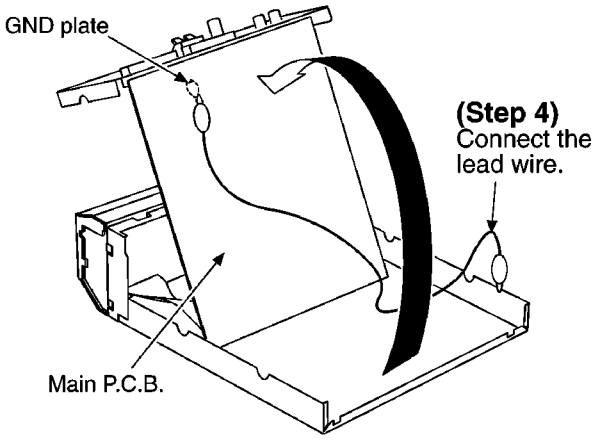


4.2. Checking for the main P.C.B.

- Follow the **(Step 1)** - **(Step 3)** of item 4.1.



- **Check the main P.C.B. as shown below.**



5 To Supply Power Source

This unit is designed to operate on power supplied from system connected.
When a component requires service, use the system connections to supply power source.
For system connections, refer to Fig. 5-1.

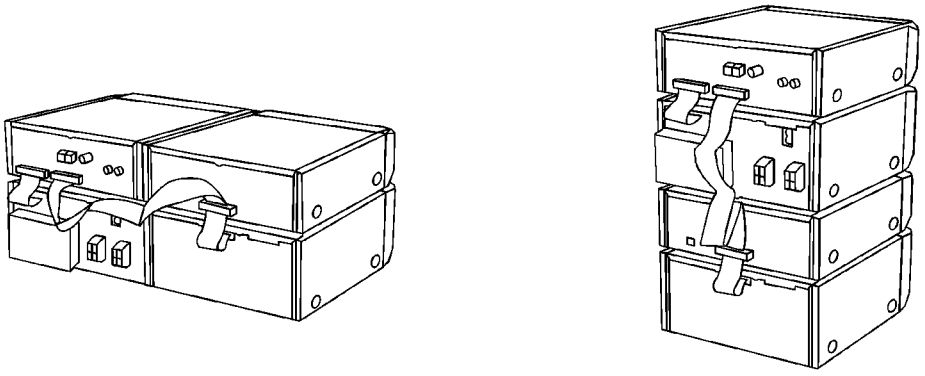


Fig. 5-1.

6 Self-Diagnostic Function

This unit is equipped with a self-diagnostic function which, in the event of a malfunction, automatically displays a code indicating the nature of the malfunction.

Use this self-diagnostic function when servicing the unit.

6.1. To display the malfunction code

U70 CD: Automatically displays on the tuner when
U70 TAPE: a malfunction occurs. Refer to Fig. 6-1.
F61: Automatically displays on the tuner when a malfunction occurs. Refer to Fig. 6-1.

Fig. 6-1.

6.2. To return to the normal display

1. **For U70 CD/U70 TAPE**
   - Press an any operation button on the tuner.
   - To re-display the code, switch the power off (POWER STANDBY button), and then switch power back on again.
2. **For F61**
   - If F61 is displayed, the power will automatically be switched off.
   - F61 will be displayed for 3 seconds, and then the clock will be displayed.
   - To re-display the code, switch the power on. F61 will be re-displayed, and then after 3 seconds the clock will be displayed and the power will automatically switch off.

6.3. Display contents

6.3.1. U70 CD/U70 TAPE (displayed automatically)

- **Problem or condition**

A bus-line communications error has occurred as a result of the flat cables being inserted incorrectly, thus preventing the system from operating.

– If U70 is displayed on the tuner, the CD Player or Cassette deck cannot be operated by remote control.

- **Correction Procedure**

1. To check for correct insertion of the flat cables.
   – Insert each connectors until you hear a click.
   – Insert the flat cables at the back of the unit in the order indicated. Refer to Fig. 6-2.
   Make sure the white side of the cable is on your right side. Refer to Fig. 6-3.

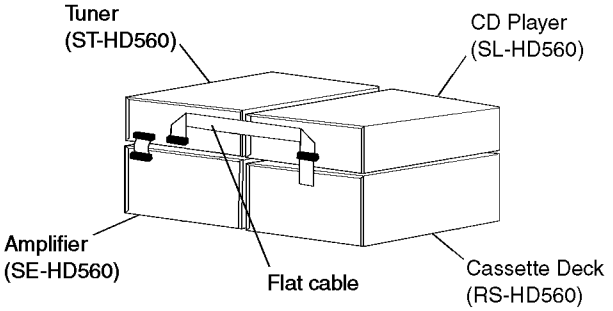


Fig. 6-2.

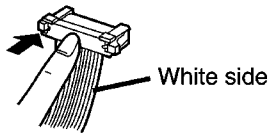


Fig. 6-3.

2. Breakage of the flat cables. (Check and replace.)
3. If the problem is not corrected by items 1 and 2 above, this indicates a faulty IC.
   ST-HD560:
   IC601 (C2BBGF000308)
   SL-HD560:
   IC201 (C2BBFD000340)
   RS-HD560:
   IC701 (C2BBED000031)
   Check these ICs and replace.

6.3.2. F61

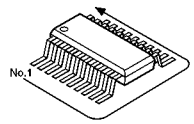
- **Problem or condition**

When the power switch is switched on, it automatically switches back off, making it impossible to switch power on.

- **Correction procedure**

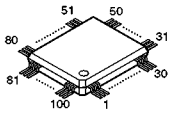
Faulty the Amplifier (SE-HD560) output IC (IC101). (When a DC voltage is applied to speaker terminals.)

7 Type Illustration of ICs, Transistors and Diodes

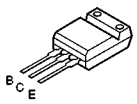


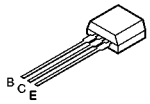
BU4052BCF-E2	16IPN
C1BB00000527	16PIN
C1BB00000528	20PIN
NJM4558MTE1	8PIN

C2BBGF000308



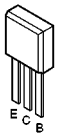
2SB1417PQTA
2SD2137PQTA



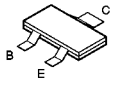


2SD2144STA
DTA114ESTP
DTA114TSTP
DTC114ESTP
DTC143XSTP

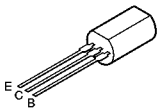
2SA1309ATA
2SC3311ATA



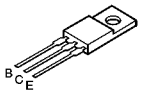
2SD1819ATX
UN5214TX



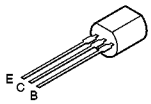
2SC3940AQSTA



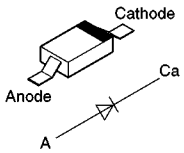
2SD2374PQAU



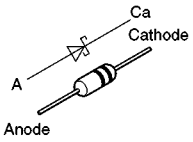
2SB621AQRSTA

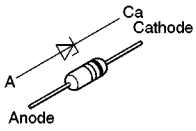


MA111TX
1SS380TE-17



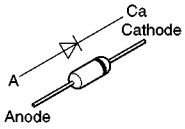
MA719TA



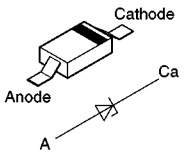


MA4056HTA
MA4062HTA
MA4082LTA
MA4091MTA

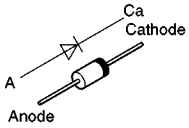
MA165TA
MA29WATA



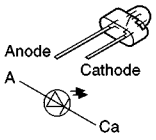
MA8062MTX
MA8051MTX



RL1N4003N02



LNJ201LPQJA



8 Schematic Diagram Notes

- **This schematic diagram may be modified at any time with the development of new technology.**

Notes:

S601: Tuning/time adjust up switch (TUNE/TIME ADJUST Λ)
S602: Tuning/time adjust down switch (TUNE/TIME ADJUST V)
S603: Play timer/record timer switch (◴ PLAY/ ◴ REC)
S604: Clock/timer switch (CLOCK/TIMER)
S605: Set switch (SET)
S606: Tuning mode switch (TUNE MODE)
S607: RDS switch (RDS)
S608: Band select switch (FM/AM)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on theinternalimpedance of the DC circuit tester.

  No mark : FM
  ( ) : AM

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts list.

- **Caution!**

  IC and LSI are sensitive to static electricity.

  Secondary trouble can be prevented by taking care during repair.

  Cover the parts boxes made of plastics with aluminum foil.

  Ground the soldering iron.

  Put a conductive mat on the work table.

  Do not touch the legs of IC or LSI with the fingers directly.

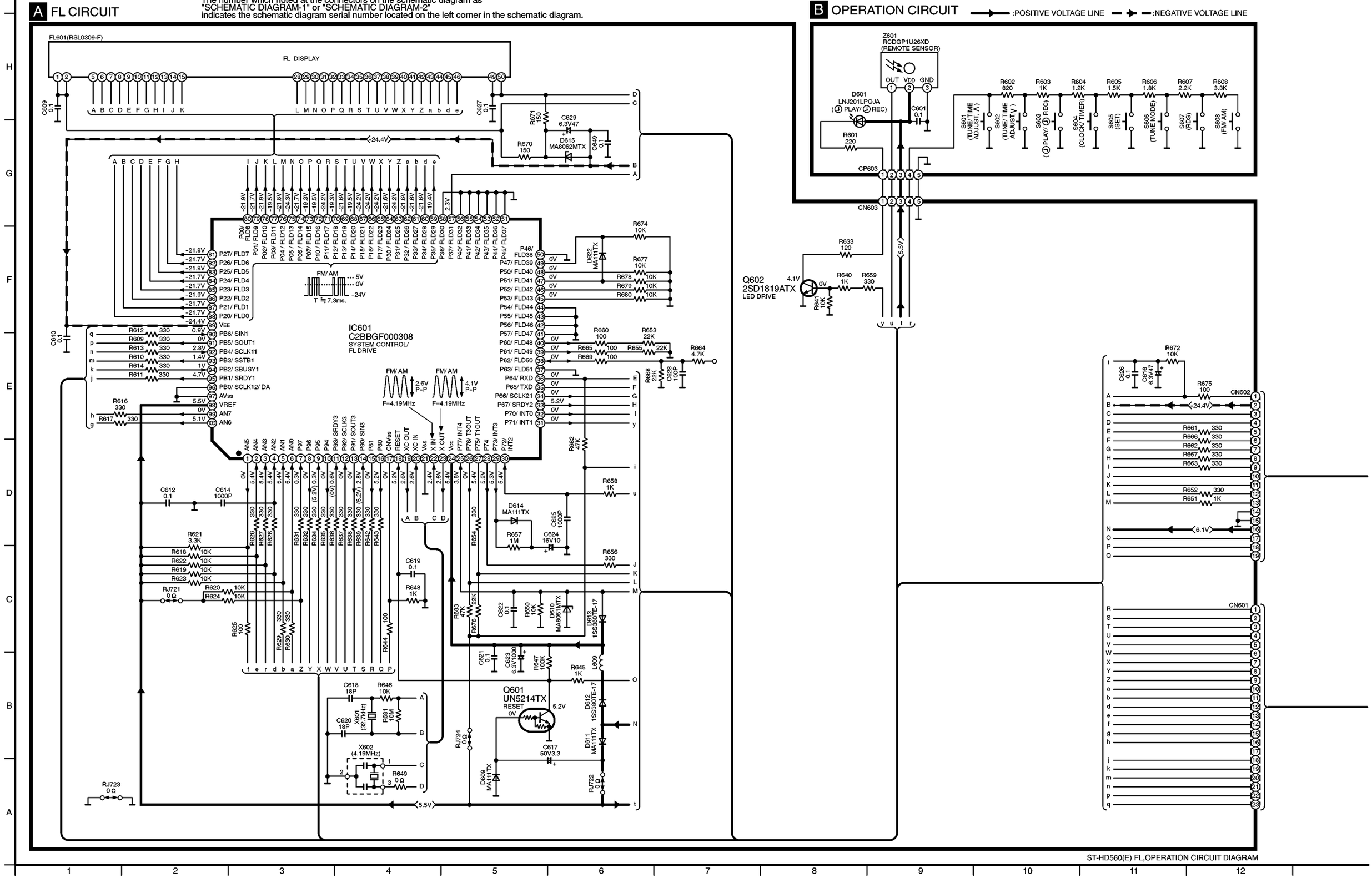
- Voltage and signal line

  : Positive voltage line
  : Negative voltage line
  : FM signal line
  : FM OSC signal line
  : AM signal line
  : AM OSC signal line
  : FM/AM signal line

9 Schematic Diagram

SCHEMATIC DIAGRAM-1

NOTE:
The number which noted at the connectors on the schematic diagram as
"SCHEMATIC DIAGRAM-1" or "SCHEMATIC DIAGRAM-2"
indicates the schematic diagram serial number located on the left corner in the schematic diagram.



SCHEMATIC DIAGRAM-2

C MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :NEGATIVE VOLTAGE LINE :FM/ AM SIGNAL LINE

IC402
C1BB00000528
ELECTRONIC VOLUME

IC403
NJM4558MTE1
BUFFER AMP

IC404
BU4052BCF-E2
SWITCHING(VGCA)

IC405
NJM4558MTE1
BUFFER AMP

IC406
BU4052BCF-E2
SIGNAL SELECTOR

IC251
C1BB00000527
RDS DECODER

Q301
DTC143XSTP
INTERFACE

Q302
2SC3311ATA
INTERFACE

Q303
2SC3311ATA
INTERFACE

Q404
DTA114ESTP
SWITCHING(VGCA)

Q405,406
2SC3311ATA
SWITCHING
(VGCA)

Q251
2SC3311ATA
REGULATOR

Q252
2SC3940AQSTA
REGULATOR

D CONNECTOR CIRCUIT

E EXT IN TERMINAL CIRCUIT

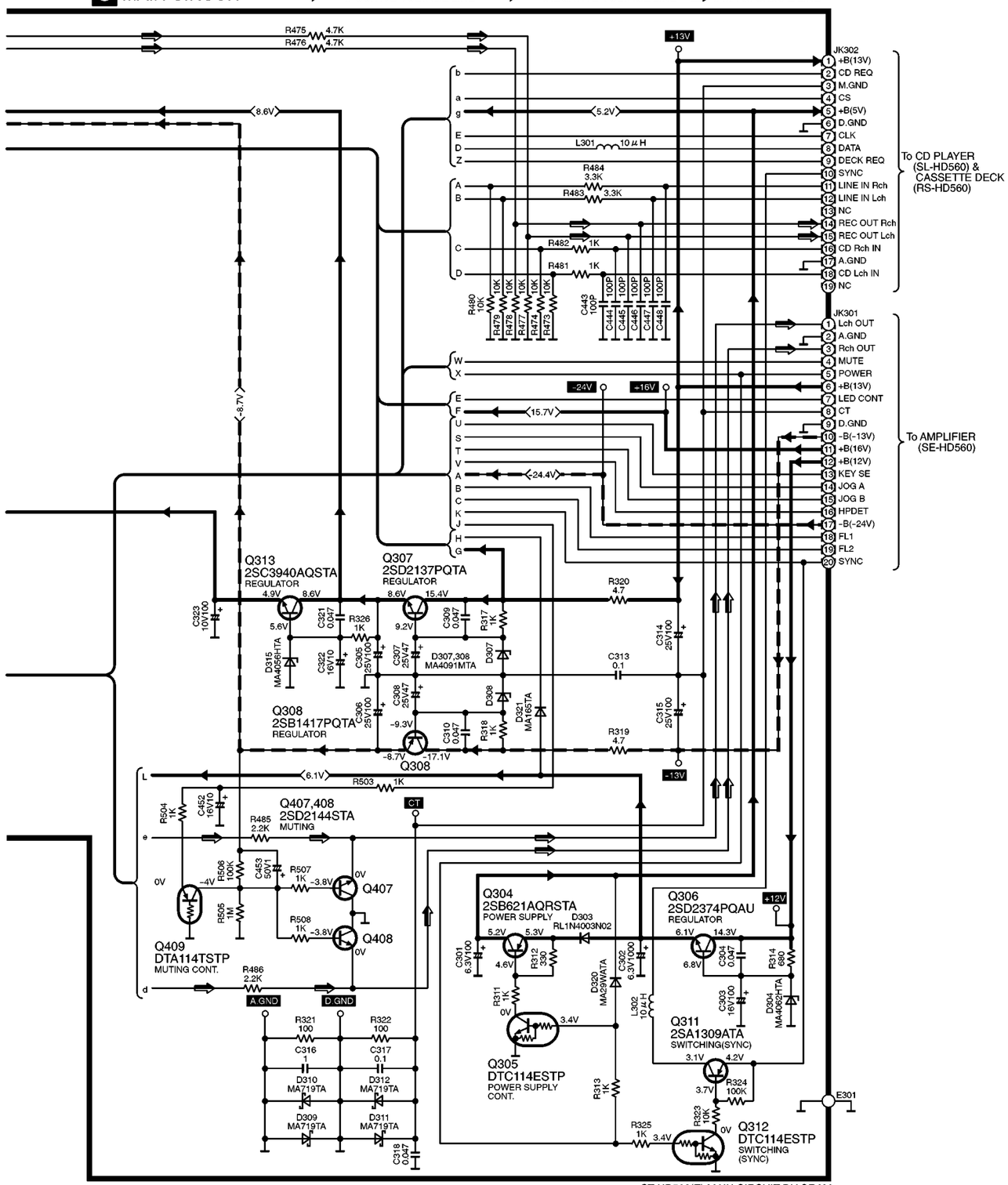
To TUNER UNIT on SCHEMATIC DIAGRAM-4/11,12-A

ST-HD560(E) MAIN,CONNECTOR,EXT IN TERMINAL CIRCUIT DIAGRAM

SCHEMATIC DIAGRAM-3

C MAIN CIRCUIT

:POSITIVE VOLTAGE LINE :NEGATIVE VOLTAGE LINE :FM/ AM SIGNAL LINE



ST-HD560(E) MAIN CIRCUIT DIAGRAM

SCHEMATIC DIAGRAM-4

Z101 TUNER UNIT(RAN0005EM-2)

:POSITIVE VOLTAGE LINE :FM SIGNAL LINE :AM SIGNAL LINE :FM OSC SIGNAL LINE :AM OSC SIGNAL LINE :FM/ AM SIGNAL LINE

2SK360 RF AMP

2SC2059 FM MIXER

2SK360 FM OSC

2SC2413 BUFFER AMP

2SC2413 FM IF AMP

2SC2413 FM IF AMP

DTA114 POWER SUPPLY (FM:ON)

LA1833MN FM/AM IF AMP, DET/AM OSC,MIX/FM MPX

LC72131M PLL FREQUENCY SYNTHESIZER

2SC2712 SWITCHING

FM ANT (75Ω)

AM ANT EXT

LOOP

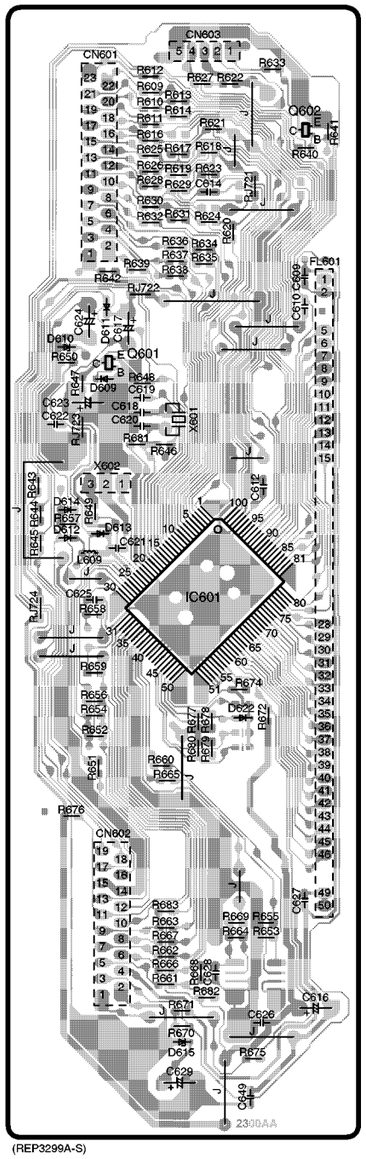
To D CONNECTOR CIRCUIT(CN253) on SCHEMATIC DIAGRAM-2/19,20-A

ST-HD560(E) TUNER CIRCUIT DIAGRAM

10 Printed Circuit Board Diagram

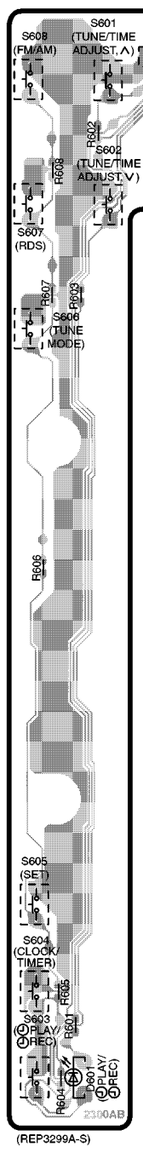
Note: This printed circuit board diagram may be modified at any time with the development of new technology.

A FL P.C.B.



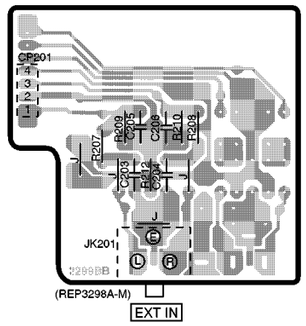
(REP3299A-S)

B OPERATION P.C.B.



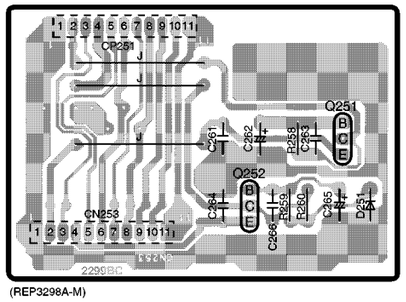
(REP3299A-S)

E EXT IN TERMINAL P.C.B.



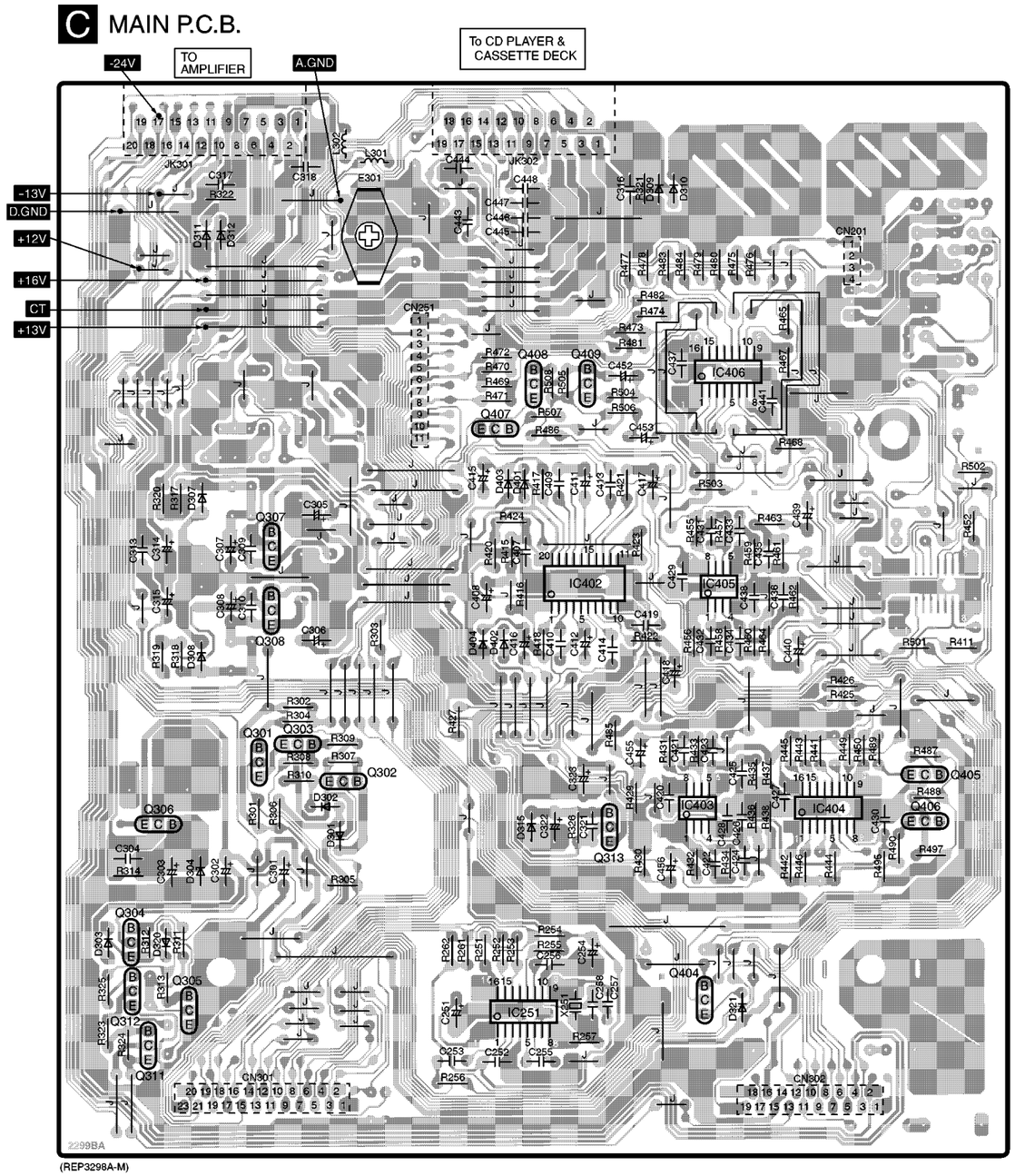
(REP3298A-M)

D CONNECTOR P.C.B.



(REP3298A-M)

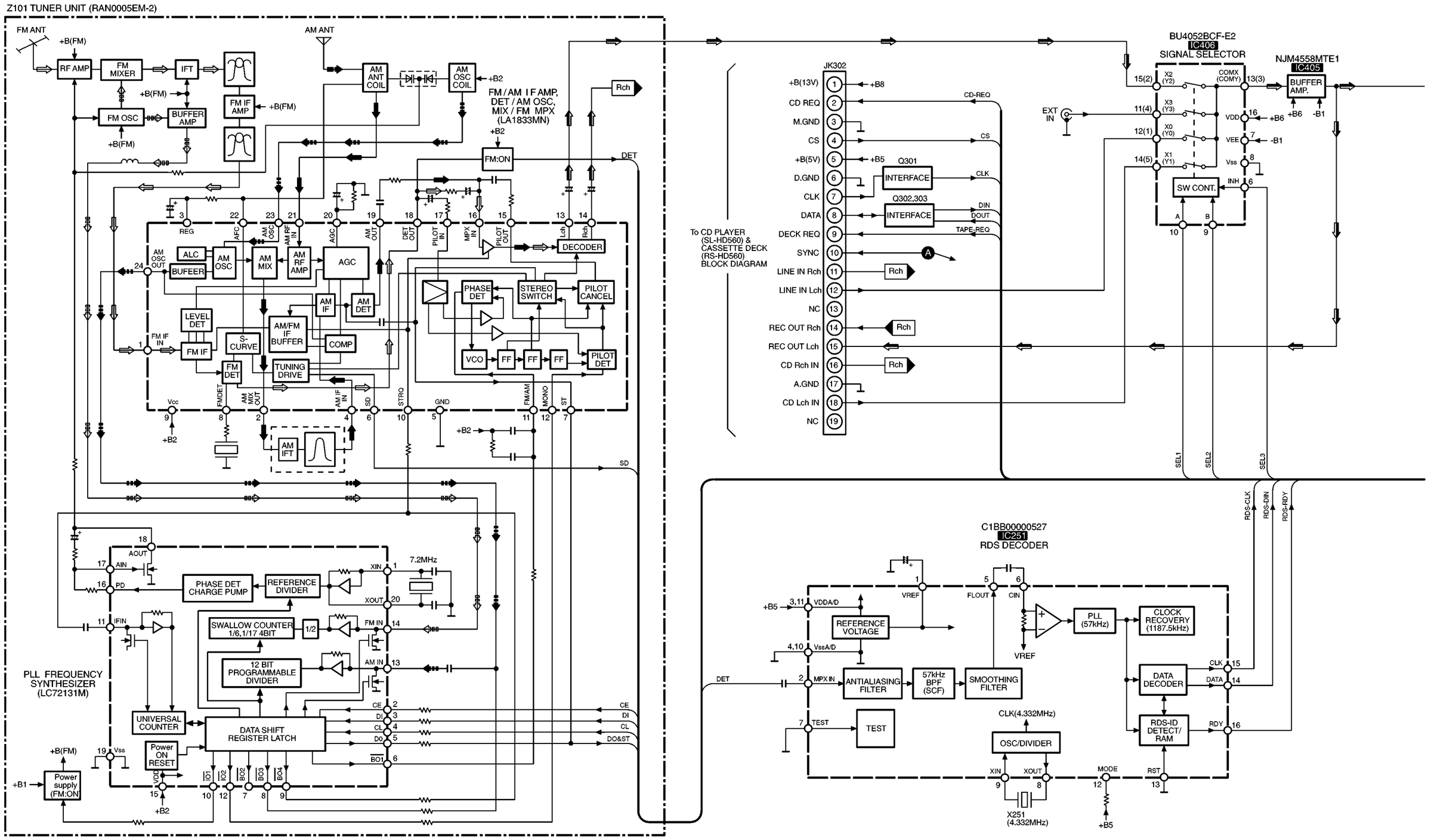
C MAIN P.C.B.



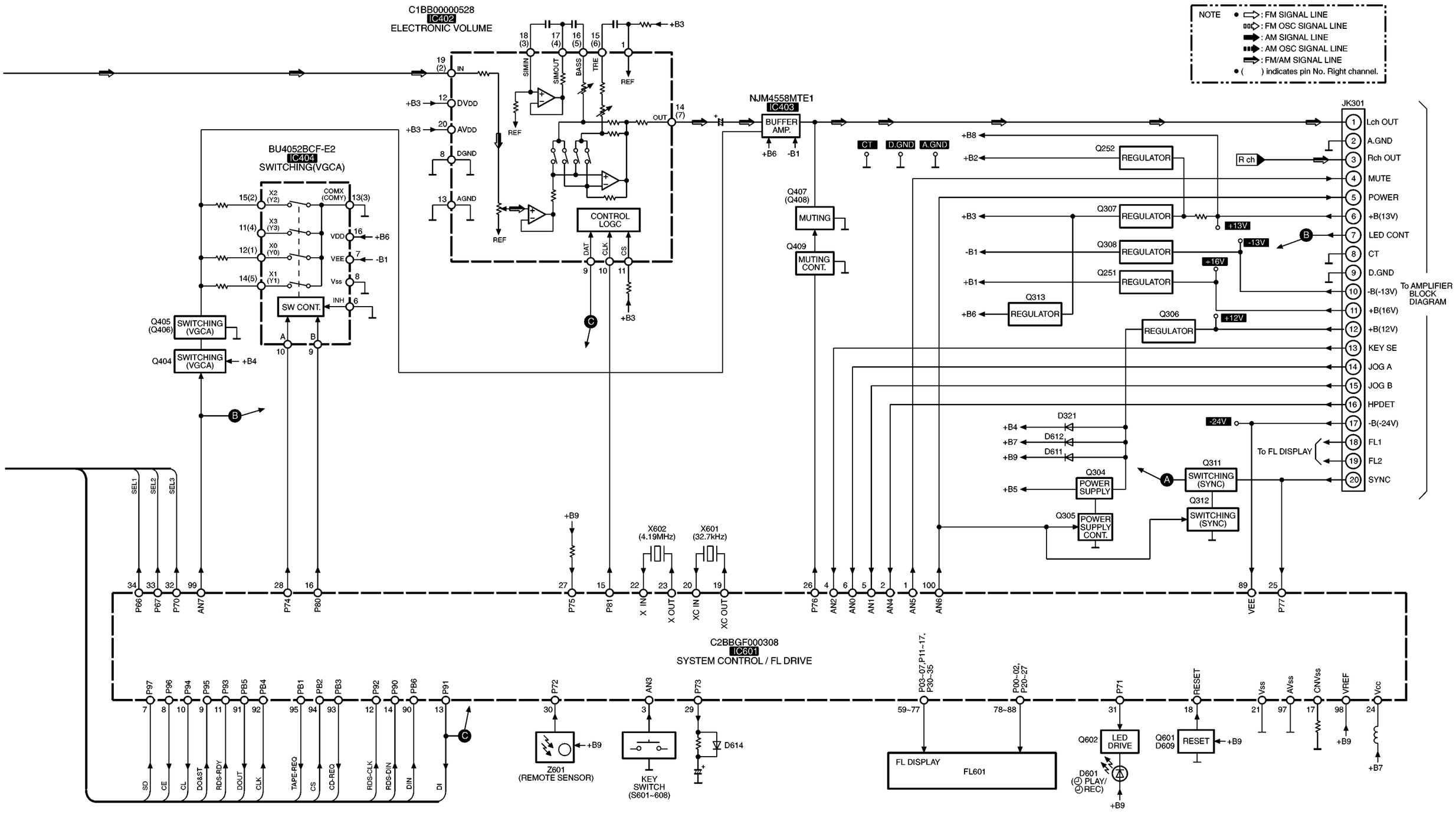
(REP3298A-M)

ST-HD560(E) FL, OPERATION, EXT IN TERMINAL, CONNECTOR, MAIN P.C.B.

11 Block Diagram

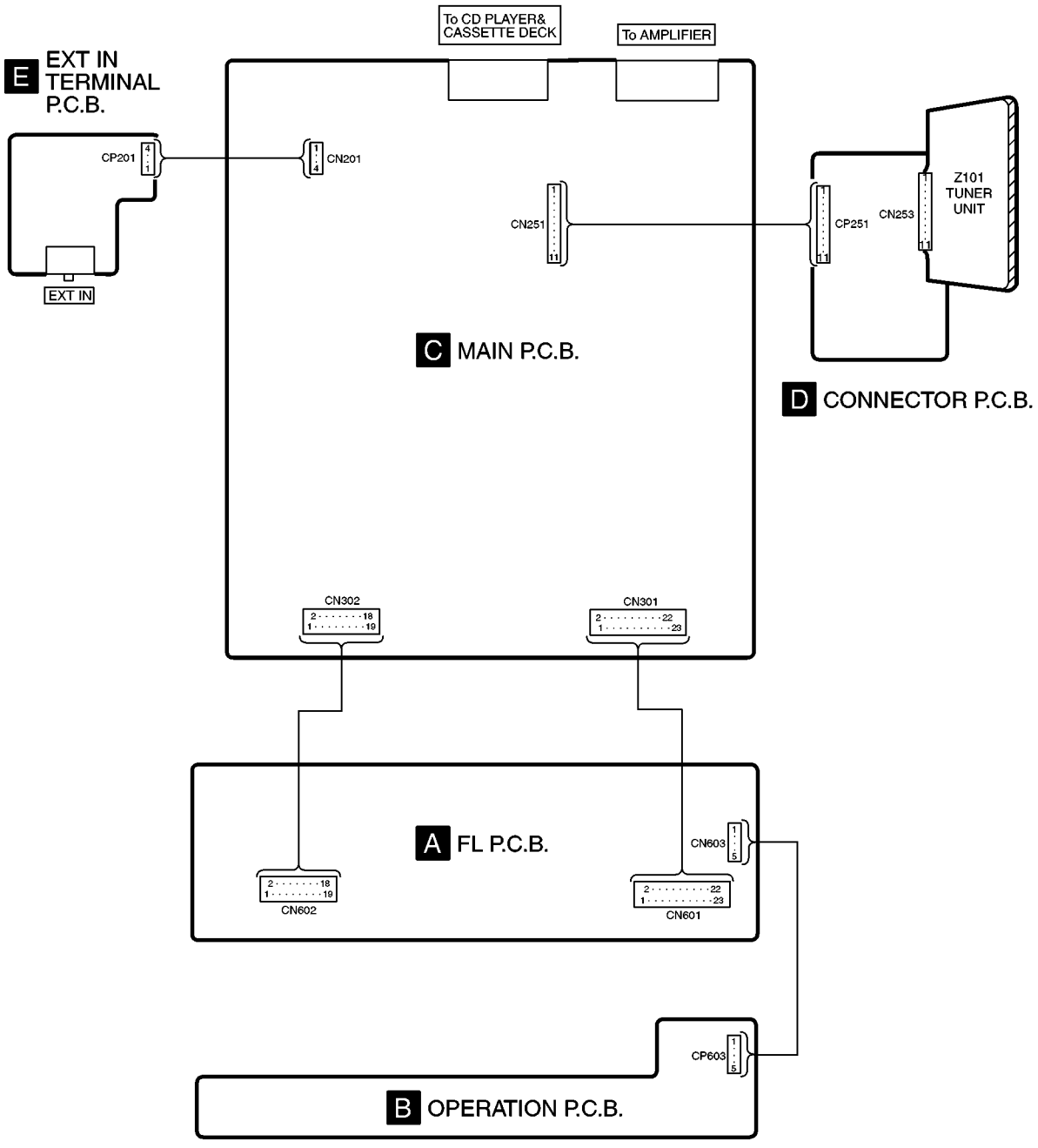


ST-HD560(E) BLOCK DIAGRAM



ST-HD560(E) BLOCK DIAGRAM

12 Wiring Connection Diagram



13 Terminal Function of ICs

13.1. IC601 (C2BBGF000308): System Control/FL Drive

Pin No.	Terminal Name	I/O	Function
1	AN5	O	Muting signal output
2	AN4	I	Headphone connection detect signal input
3	AN3	I	Key switch signal input
4	AN2	I	Key switch signal input from Amplifier
5	AN1	I	Selector switch signal input from Amplifier
6	AN0	I	Volume switch signal input from Amplifier
7	P97	I	Tuner signal detection input from Z101
8	P96	O	Chip enable signal output for Z101
9	P95	I	Data signal input from Z101
10	P94	O	Clock signal output for Z101
11	P93/ SRDY3	I	RDS ready signal input from IC251
12	P92/ SCLK3	I	RDS clock signal input from IC251
13	P91/ SOUT3	O	Control data signal output for IC402
14	P90/ SIN3	I	RDS data signal input from IC251
15	P81	O	Clock signal output for serial data transfer
16	P80	O	VGCA switch control signal output
17	CNV_{SS}	-	GND terminal
18	RESET	I	Reset signal input
19	XC OUT	O	Oscillator connected terminal (F=32.7 kHz)
20	XC IN	I	
21	V_{SS}	-	GND terminal
22	X IN	I	Oscillator connected terminal (F=4.19 MHz)
23	X OUT	O	
24	V_{CC}	I	Power supply terminal
25	P77/ INT4	I	Power failure detect signal input
26	P76/ T3OUT	O	Muting signal output
27	P75/ T1OUT	-	Not used, connected to VREF
28	P74	O	VGCA switch control signal output
29	P73/ INT3	O	CR timer terminal for clock backup
30	P72/ INT2	I	Remote control signal input
31	P71/ INT1	O	LED drive signal output
32	P70/ INT0	O	Select signal output for IC406
33	P67/ SRDY2	O	Select signal output for IC406
34	P66/ SCLK21	O	Select signal output for IC406
35	P65/ TXD	-	Not used, connected to GND
36	P64/ RXD	-	Not used, connected to VREF
37	P63/ FLD51	-	GND terminal
38	P62/ FLD50	I/O	Data signal input/output
39	P61/ FLD49	O	Chip select signal output
40	P60/ FLD48	O	Clock signal output
41 | 44	P57/ FLD47 | P54/ FLD44	-	Not used, connected to GND
45 | 56	P53/ FLD43 | P40/ FLD32	-	Not used, connected to GND
57	P37/ FLD31	-	Not used, connected to VREF
58	P36/ FLD30	-	Not used, connected to GND
59 | 77	P35/ FLD29 | P03/ FLD11	O	FL segment control signal output
78 | 88	P02/ FLD10 | P20/ FLD0	O	FL grid control signal output
89	V_{EE}	I	Power supply terminal (Negative)
90	PB6/ SIN1	I	Communication data signal input
91	PB5/ SOUT1	O	Communication data signal output
92	PB4/ SCLK11	I	Communication clock signal input
93	PB3/ SSTB1	O	Communication request signal output for CD
94	PB2/ SBUSY1	I	Communication chip select signal input
95	PB1/ SRDY1	O	Communication request signal output for Deck
96	PB0/ SCLK12/ DA	-	Not used, connected to GND
97	AV_{SS}	-	GND terminal
98	VREF	I	Reference voltage input
99	AN7	O	LED (VGCA) control signal output
100	AN6	O	Power supply control signal output

14 Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

- The marking [RTL] indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- All parts are supplied by MESA.

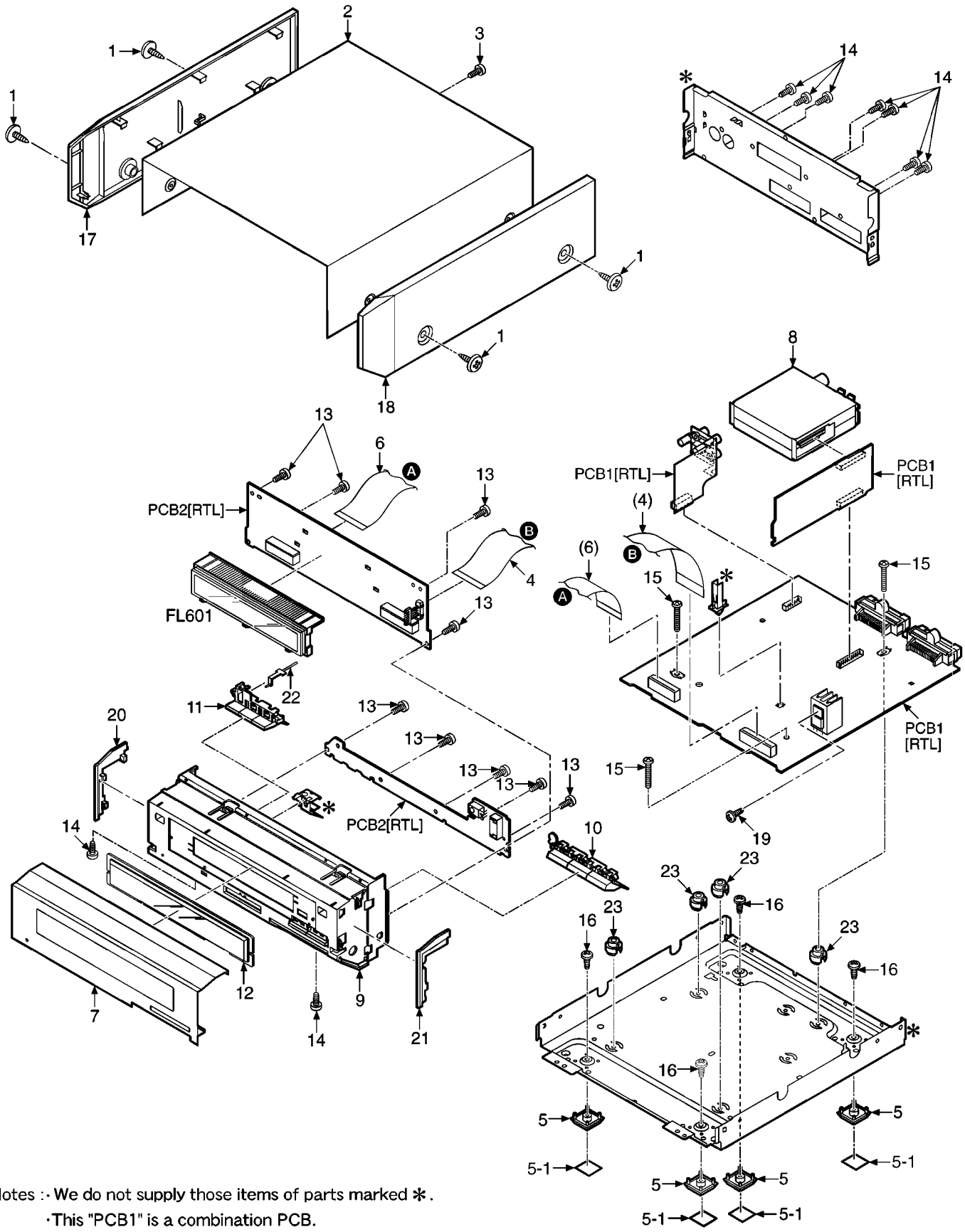
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RHD30082-K1	SCREW	4	
2	RKM0413A-N	CABINET	1	
3	XTB3+8JFZ	SCREW	1	
4	REZ1379	FFC(23P)	1	
5	RKA0114-K	FOOT	4	
5-1	RKA0083-K	CUSHION	4	
6	REZ1359	FFC(19P)	1	
7	RGG0189G-S	FRONT PANEL	1	
8	RAN0005EM-2	TUNER PACK(Z101)	1	
9	RGP0841-S	SUB PANEL	1	
10	RGU1935-S	BUTTON,BAND	1	
11	RGU1939-S	BUTTON,TIMER	1	
12	RKW0629-R	FL WINDOW	1	
13	XTBS26+8J	SCREW	9	
14	XTBS3+8JFZ1	SCREW	9	
15	XTB3+12JFZ	SCREW	3	
16	XTB3+5JFZ	SCREW	4	
17	RGK1326-M	SIDE PANEL(L)	1	
18	RGK1327-M	SIDE PANEL(R)	1	
19	XYN3+F8	SCREW	1	
20	RGK1330-S	SIDE ORNAMENT(L)	1	
21	RGK1331-S	SIDE ORNAMENT(R)	1	
22	RGL0529-Q	INDICATOR,TIMER	1	
23	SHE170-2	P.C.B. SUPPORT	4	
C203-06	ECBA1H101KB5	50V 100P	4	
C251	ECA1CAK100XB	16V 10U	1	
C252	ECBT1H104ZF5	50V 0.1U	1	F1E1H104A001
C253	ECBT1H331KB3	50V 330P	1	
C254	ECA0JAK101XB	6.3V 100U	1	
C255	ECBT1H561KB3	50V 560P	1	
C256	ECBT1H104ZF5	50V 0.1U	1	F1E1H104A001
C257,58	ECBT1H470J3	50V 47P	2	
C261	ECBT1H473KB5	50V 0.047U	1	F1D1H473A012
C262	ECA1EAM101XB	25V 100U	1	
C263,64	ECBT1H473KB5	50V 0.047U	2	F1D1H473A012
C265	ECA1CAK101XB	16V 100U	1	
C266	ECBT1H473KB5	50V 0.047U	1	F1D1H473A012
C301	ECA0JAK101XB	6.3V 100U	1	
C302	ECA0JAM102XB	6.3V 1000U	1	
C303	ECA1CAK101XB	16V 100U	1	
C304	ECBT1H473KB5	50V 0.047U	1	F1D1H473A012
C305,06	ECA1EPX101B	25V 100U	2	
C307,08	ECA1EPX470B	25V 47U	2	
C309,10	ECBT1H473KB5	50V 0.047U	2	F1D1H473A012
C313	ECBT1H104ZF5	50V 0.1U	1	F1E1H104A001
C314,15	ECA1EAM101XB	25V 100U	2	
C316	ECBT1C105ZF5	16V 1U	1	F1E1C1050001
C317	ECBT1H104ZF5	50V 0.1U	1	F1E1H104A001
C318	ECBT1H473KB5	50V 0.047U	1	F1D1H473A012
C321	ECBT1H473KB5	50V 0.047U	1	F1D1H473A012
C322	ECA1CAK100XB	16V 10U	1	
C323	ECA1APX101B	10V 100U	1	
C407	ECBT1H104ZF5	50V 0.1U	1	F1E1H104A001
C408	ECA0JAK101XB	6.3V 100U	1	
C409,10	ECQB1H223JF3	50V 0.022U	2	
C411,12	ECA1HAKR47XB	50V 0.47U	2	
C413,14	ECBT1C332KR5	16V 3300P	2	ECBT1C332KR3
C415-18	ECA1HAKR22XB	50V 0.22U	4	
C419,20	ECBT1H104ZF5	50V 0.1U	2	F1E1H104A001
C421,22	ECBT1H330J5	50V 33P	2	F1D1H330A006
C423-26	ECBA1H101KB5	50V 100P	4	
C427-30	ECBT1H104ZF5	50V 0.1U	4	F1E1H104A001
C431-34	ECBA1H101KB5	50V 100P	4	
C435,36	ECBT1H331KB3	50V 330P	2	
C437,38	ECBT1H104ZF5	50V 0.1U	2	F1E1H104A001
C439,40	ECA1HAK0R1XB	50V 0.1U	2	
C441	ECBT1H104ZF5	50V 0.1U	1	F1E1H104A001
C443-48	ECBA1H101KB5	50V 100P	6	
C452	ECA1CAK100XB	16V 10U	1	
C453	ECA1HAK010XI	50V 1U	1	
C455,56	ECA1CAK100XB	16V 10U	2	
C601	ECJ2VF1H104Z	50V 0.1U	1	
C609,10	ECJ2VF1H104Z	50V 0.1U	2	
C612	ECJ2VF1H104Z	50V 0.1U	1	
C614	ECUV1H102KBN	50V 1000P	1	ECJ2VB1H102K
C616	RCE0JKA470BG	6.3V 47U	1	F2A0J470A014
C617	RCE1HKA3R3BG	50V 3.3U	1	F2A1H3R3A015
C618	ECUV1H180JCN	50V 18P	1	ECJ2VC1H180J
C619	ECJ2VF1H104Z	50V 0.1U	1	
C620	ECUV1H180JCN	50V 18P	1	ECJ2VC1H180J
C621,22	ECJ2VF1H104Z	50V 0.1U	2	
C623	F2A0J102A130	6.3V 1000U	1	
C624	ECA1CAK100XB	16V 10U	1	
C625	ECUV1H102KBN	50V 1000P	1	ECJ2VB1H102K
C626,27	ECJ2VF1H104Z	50V 0.1U	2	
C628	ECJ2VC1H101J	50V 100P	1	
C629	RCE0JKA470BG	6.3V 47U	1	F2A0J470A014
C649	ECJ2VF1H104Z	50V 0.1U	1	
CN201	RJT100W04	CONNECTOR(4P)	1	
CN251	RJT100W11	CONNECTOR(11P)	1	K1KA11A00093
CN253	RJT100W11	CONNECTOR(11P)	1	K1KA11A00093
CN301	RJS1A6823	CONNECTOR(23P)	1	K1MN23A00009
CN302	RJS1A6819	CONNECTOR(19P)	1	K1MN19A00013
CN601	RJS1A6223-1	CONNECTOR(23P)	1	K1MN23C00001
CN602	RJS1A6219-1	CONNECTOR(19P)	1	K1MN19C00001
CN603	RJT066H05A	CONNECTOR(5P)	1	K1KA05B00073
CP201	RJU100W04	CONNECTOR(4P)	1	
CP251	RJU100W11	CONNECTOR(11P)	1	K1KB11A00020
CP603	RJU066H05	CONNECTOR(5P)	1	K1KB05C00003
D251	MA4082LTA	DIODE	1	MAZ40820LF
D301,02	MA165	DIODE	2	MA2C165
D303	RL1N4003N02	DIODE	1	B0AAMM000009
D304	MA4062H	DIODE	1	MAZ40620H
D307,08	MA4091MTA	DIODE	2	MAZ40910MF
D309-12	MA719TA	DIODE	4	MA2C71900A
D315	MA4056H	DIODE	1	MAZ40560H
D320	MA29W-A	DIODE	1	MA2C029WA
D321	MA165	DIODE	1	MA2C165
D401-04	MA165	DIODE	4	MA2C165
D601	LNJ201LPQJA	LED	1	
D609	MA2J11100L	DIODE	1	
D610	MA8051M	DIODE	1	MAZ80510M
D611	MA2J11100L	DIODE	1	
D612,13	1SS380TE-17	DIODE	2	
D614	MA2J11100L	DIODE	1	
D615	MA8062M	DIODE	1	MAZ80620ML
D622	MA2J11100L	DIODE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
FL601	RSL0309-F	FL	1	
IC251	C1BB00000527	IC	1	
IC402	C1BB00000528	IC	1	
IC403	NJM4558MTE1	IC	1	C0ABBB000109
IC404	BU4052BCF-E2	IC	1	C0JBAR000002
IC405	NJM4558MTE1	IC	1	C0ABBB000109
IC406	BU4052BCF-E2	IC	1	C0JBAR000002
IC601	C2BBGF000308	IC	1	
JK201	SJF3069-8N	JACK,EXT IN/OUT	1	K2HA102B0039
JK301	RJT065K20	SYSTEM CONNECTOR(20P)	1	K1FA220B0006
JK302	RJT065K19	SYSTEM CONNECTOR(19P)	1	K1FA219B0001
L301,02	RLQA100JT-Y	COIL	2	G0C100JA0023
L609	RLBN300AV-W	COIL	1	J0JHC0000027
PCB1	REP3298A-M	MAIN P.C.B. ASS'Y	1	[RTL]
PCB2	REP3299A-S	PANEL P.C.B. ASS'Y	1	[RTL]
Q251	2SC3311ATA	TRANSISTOR	1	2SC3311A0A
Q252	2SC3940AQSTA	TRANSISTOR	1	2SC3940ARA
Q301	DTC143XSTP	TRANSISTOR	1	B1GACFGH0002
Q302,03	2SC3311ATA	TRANSISTOR	2	2SC3311A0A
Q304	2SB621A-R	TRANSISTOR	1	2SB0621AH
Q305	DTC114ESTP	TRANSISTOR	1	B1GACFJJ0007
Q306	2SD2374PQAU	TRANSISTOR	1	2SD23740J1AU
Q307	2SD2137PQTA	TRANSISTOR	1	2SD21370PA
Q308	2SB1417PQTA	TRANSISTOR	1	2SB14170JA
Q311	2SA1309ATA	TRANSISTOR	1	2SA1309AWA
Q312	DTC114ESTP	TRANSISTOR	1	B1GACFJJ0007
Q313	2SC3940AQSTA	TRANSISTOR	1	2SC3940ARA
Q404	DTA114ESTP	TRANSISTOR	1	B1GCCFJJ0008
Q405,06	2SC3311ATA	TRANSISTOR	2	2SC3311A0A
Q407,08	2SD2144S	TRANSISTOR	2	B1AAGC000006
Q409	DTA114ESTP	TRANSISTOR	1	B1GCCFJA0002
Q601	UN5214TX	TRANSISTOR	1	UNR521400L
Q602	2SD1819A0L	TRANSISTOR	1	
R207,08	ERDS2FJ103	1/4W 10K	2	
R209,10	ERDS2FJ472	1/4W 4.7K	2	
R212	ERDS2FJ100	1/4W 10	1	
R251-53	ERDS2FJ101	1/4W 100	3	
R254,55	ERDS2FJ103	1/4W 10K	2	
R256,57	ERDS2FJ101	1/4W 100	2	
R258	ERDS2FJ102	1/4W 1K	1	
R259	ERDS2FJ221	1/4W 220	1	
R260	ERDS2FJ102	1/4W 1K	1	
R261,62	ERDS2FJ103	1/4W 10K	2	
R301-03	ERDS2FJ103	1/4W 10K	3	
R304	ERDS2FJ331	1/4W 330	1	
R305	ERDS2FJ103	1/4W 10K	1	
R306	ERDS2FJ223	1/4W 22K	1	
R307	ERDS2FJ103	1/4W 10K	1	
R308,09	ERDS2FJ472	1/4W 4.7K	2	
R310	ERDS2FJ473	1/4W 47K	1	
R311	ERDS2FJ102	1/4W 1K	1	
R312	ERDS2FJ331	1/4W 330	1	
R313	ERDS2FJ102	1/4W 1K	1	
R314	ERDS2FJ681	1/4W 680	1	
R317,18	ERDS2FJ102	1/4W 1K	2	
R319,20	ERD2FCJ4R7	1/4W 4.7	2	
R321,22	ERDS2FJ101	1/4W 100	2	
R323	ERDS2FJ103	1/4W 10K	1	
R324	ERDS2FJ104	1/4W 100K	1	
R325,26	ERDS2FJ102	1/4W 1K	2	
R411	ERDS2FJ101	1/4W 100	1	
R415,16	ERDS2FJ472	1/4W 4.7K	2	
R417,18	ERDS2FJ101	1/4W 100	2	
R420	ERDS2FJ152	1/4W 1.5K	1	
R421,22	ERDS2FJ101	1/4W 100	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R423	ERDS2FJ103	1/4W 10K	1	
R424	ERDS2FJ102	1/4W 1K	1	
R425-27	ERDS2FJ101	1/4W 100	3	
R429,30	ERDS2FJ104	1/4W 100K	2	
R431,32	ERDS2FJ101	1/4W 100	2	
R433,34	ERDS2FJ103	1/4W 10K	2	
R435,36	ERDS2FJ473	1/4W 47K	2	
R437,38	ERDS2TJ183	1/4W 18K	2	
R441,42	ERDS2FJ103	1/4W 10K	2	
R443,44	ERDS2TJ272T	1/4W 2.7K	2	
R445,46	ERDS2FJ122	1/4W 1.2K	2	
R449,50	ERDS2FJ101	1/4W 100	2	
R452	ERDS2FJ103	1/4W 10K	1	
R455,56	ERDS2FJ101	1/4W 100	2	
R457,58	ERDS2FJ103	1/4W 10K	2	
R459,60	ERDS2FJ472	1/4W 4.7K	2	
R461,62	ERDS2FJ104	1/4W 100K	2	
R463-65	ERDS2FJ101	1/4W 100	3	
R467,68	ERDS2FJ101	1/4W 100	2	
R469,70	ERDS2FJ223	1/4W 22K	2	
R471,72	ERDS2FJ101	1/4W 100	2	
R473,74	ERDS2FJ103	1/4W 10K	2	
R475,76	ERDS2FJ472	1/4W 4.7K	2	
R477-80	ERDS2FJ103	1/4W 10K	4	
R481,82	ERDS2FJ102	1/4W 1K	2	
R483,84	ERDS2FJ332	1/4W 3.3K	2	
R485,86	ERDS2FJ222	1/4W 2.2K	2	
R487,88	ERDS2FJ472	1/4W 4.7K	2	
R489,90	ERDS2FJ122	1/4W 1.2K	2	
R495	ERDS2TJ105T	1/4W 1M	1	
R497	ERDS2TJ105T	1/4W 1M	1	
R501,02	ERDS2T0T	1/4W 0	2	
R503,04	ERDS2FJ102	1/4W 1K	2	
R505	ERDS2TJ105T	1/4W 1M	1	
R506	ERDS2FJ104	1/4W 100K	1	
R507,08	ERDS2FJ102	1/4W 1K	2	
R601	ERJ6GEYJ221V	1/10W 220	1	
R602	ERJ6GEYJ821V	1/10W 820	1	
R603	ERJ6GEYJ102V	1/10W 1K	1	
R604	ERJ6GEYJ122V	1/10W 1.2K	1	
R605	ERJ6GEYJ152V	1/10W 1.5K	1	D0GD152JA003
R606	ERJ6GEYJ182V	1/10W 1.8K	1	
R607	ERJ6GEYJ222V	1/10W 2.2K	1	
R608	ERJ6GEYJ332V	1/10W 3.3K	1	
R609-14	ERJ6GEYJ331V	1/10W 330	6	
R616,17	ERJ6GEYJ331V	1/10W 330	2	
R618-20	ERJ6GEYJ103V	1/10W 10K	3	
R621	ERJ6GEYJ332V	1/10W 3.3K	1	
R622-24	ERJ6GEYJ103V	1/10W 10K	3	
R625	ERJ6GEYJ101V	1/10W 100	1	
R626-32	ERJ6GEYJ331V	1/10W 330	7	
R633	ERJ6GEYJ121V	1/10W 120	1	D0GD121JA003
R634-39	ERJ6GEYJ331V	1/10W 330	6	
R640	ERJ6GEYJ102V	1/10W 1K	1	
R641	ERJ6GEYJ103V	1/10W 10K	1	
R642,43	ERJ6GEYJ331V	1/10W 330	2	
R644	ERJ6GEYJ101V	1/10W 100	1	
R645	ERJ6GEYJ102V	1/10W 1K	1	
R646	ERJ6GEYJ103V	1/10W 10K	1	
R647	ERJ6GEYJ104V	1/10W 100K	1	
R648	ERJ6GEYJ102V	1/10W 1K	1	
R649	ERJ6GEY0R00V	1/10W 0	1	
R650	ERJ6GEYJ103V	1/10W 10K	1	
R651	ERJ6GEYJ102V	1/10W 1K	1	
R652	ERJ6GEYJ331V	1/10W 330	1	
R653	ERJ6GEYJ223V	1/10W 22K	1	D0GD223JA003
R654	ERJ6GEYJ331V	1/10W 330	1	
R655	ERJ6GEYJ223V	1/10W 22K	1	D0GD223JA003
R656	ERJ6GEYJ331V	1/10W 330	1	
R657	ERJ6GEYG105	1/10W 1M	1	
R658	ERJ6GEYJ102V	1/10W 1K	1	
R659	ERJ6GEYJ331V	1/10W 330	1	
R660	ERJ6GEYJ101V	1/10W 100	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R661-63	ERJ6GEYJ331V	1/10W 330	3	
R664	ERJ6GEYJ472V	1/10W 4.7K	1	D0GD472JA012
R665	ERJ6GEYJ101V	1/10W 100	1	
R666,67	ERJ6GEYJ331V	1/10W 330	2	
R668	ERJ6GEYJ223V	1/10W 22K	1	D0GD223JA003
R669	ERJ6GEYJ101V	1/10W 100	1	
R670,71	ERJ6GEYJ151V	1/10W 150	2	
R672	ERJ6GEYJ103V	1/10W 10K	1	
R674	ERJ6GEYJ103V	1/10W 10K	1	
R675	ERJ6GEYJ101V	1/10W 100	1	
R676	ERJ6GEYJ223V	1/10W 22K	1	D0GD223JA003
R677-80	ERJ6GEYJ103V	1/10W 10K	4	
R681	ERJ6GEYJ106V	1/10W 1M	1	
R682,83	ERJ6GEYF473	1/10W 47K	2	
RJ721-24	ERJ8GEY0R00V	CHIP JUMPER	4	D0YFR0000002
S601-08	EVQ11G05R	SW,PUSH	8	
X251	RSXC4M33S02T	OSCILLATOR	1	H0H433400001
X601	RSXD32K7S05	OSCILLATOR	1	H0A327200029
X602	H2B419400005	OSCILLATOR	1	
Z601	RCDGP1U26XD	REMOTE SENSOR	1	B3RAD0000010

15 Cabinet Parts Location



Notes :· We do not supply those items of parts marked ✻.

·This "PCB1" is a combination PCB.

·This "PCB2" is a combination PCB.