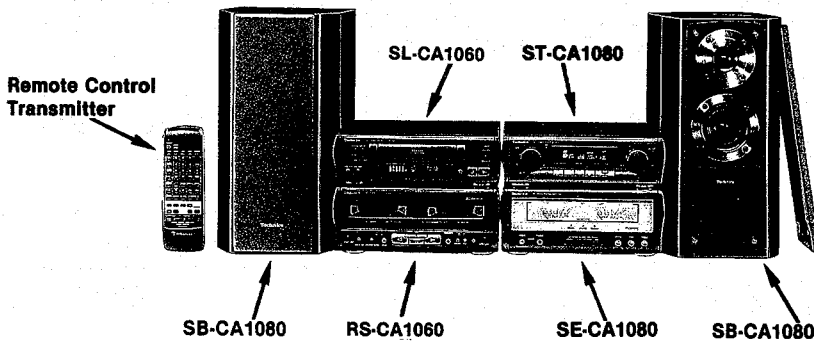


# Service Manual

Stereo Tuner

Tuner

## ST-CA1080



Colour

(K) ... Black Type

Areas

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)
(EG)	Germany and Italy.	

System: SC-CA1080

Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

## ■ SPECIFICATIONS

### ■ Pre-amplifier section

Input sensitivity/impedance	
PHONO	2.5 mV/47 kΩ
DCC, (VDP, VCR1, VCR2)	250 mV/15 kΩ
Output level	
VCR1/DCC RECOUT	150 mV/1.5 kΩ
Frequency response	
PHONO	30 Hz–15 kHz/+1.5 to –2.0 dB
DCC, (VDP, VCR1, VCR2)	20 Hz–40 kHz

### ■ Dolby Pro-Logic section

Mode	NORMAL, WIDE, PHANTOM
Delay time	15, 20, 25, 30 ms

### ■ FM tuner section

Frequency range	87.50–108.00 MHz (0.05 MHz steps)
Sensitivity	1.8 μV (IHF usable)
S/N 26 dB	1.5 μV
S/N	
MONO	70 dB (75 dB, IHF)
Stereo separation 1 kHz	35 dB
Antenna terminal(s)	75 Ω (unbalance)

### ■ AM tuner section

Frequency range	
MW	522–1611 kHz (9 kHz steps)
LW	530–1620 kHz (10 kHz steps)
Sensitivity (S/N 20 dB)	144–288 kHz (9 kHz steps)
MW	500 μV/m
LW	50 μV

### ■ Timer section

Clock	Quartz-lock type
Function	24-hour programmable; Play timer (1 time), Rec timer (1 time), Sleep (120 min., 1 min. intervals)
Setting	1 minute–23 hours 59 minutes (1 min. intervals)

### ■ General

Dimensions (W × H × D)	280 × 89 × 287 mm
Weight	1.75 kg

### Notes:

1. Weight and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

System	Tuner	Compact disc player	Amplifier	Cassette deck	Speaker
SC-CA1080	ST-CA1080	SL-CA1060	SE-CA1080	RS-CA1060	*SB-CA1080

\*Made in PAES

# Technics®

ORDER NO. AD9406153C2

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**Note:** Refer to the replacement Accessories and Packaging of Service manual for Model No. SE-CA1080 (E, EB, EG), Order No. AD9406158C2.

## INSTALLATION

### Stacking the components

Install the various components as shown in the illustration.

System	SC-CA1080
Ⓐ Stereo tuner	ST-CA1080
Ⓑ Power amplifier	SE-CA1080
Ⓒ Compact disc player	SL-CA1060
Ⓓ Cassette deck	RS-CA1060
Ⓔ Speakers	SB-CA1080
	SB-CA1060
	SB-S1080

### Horizontal stacking **A**

### Vertical stacking **B**

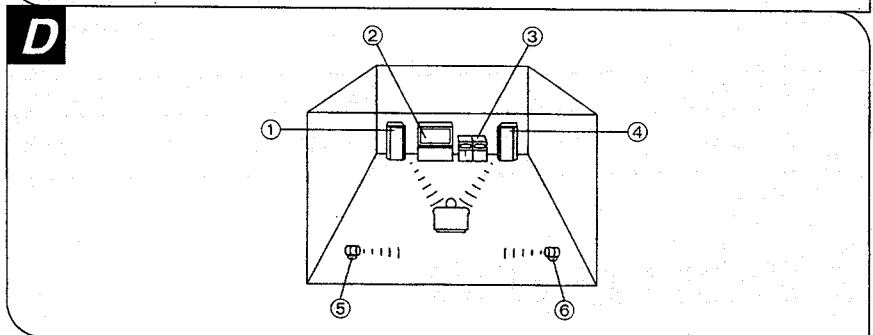
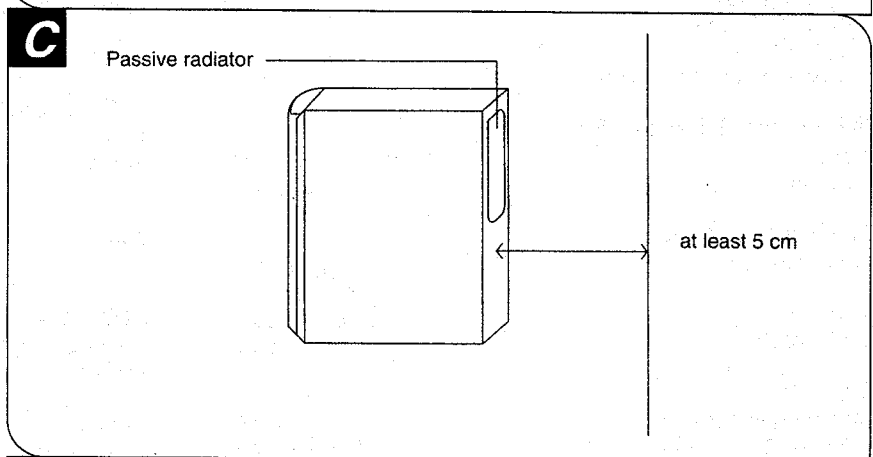
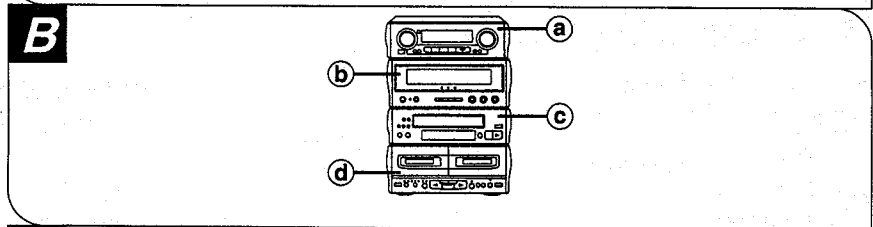
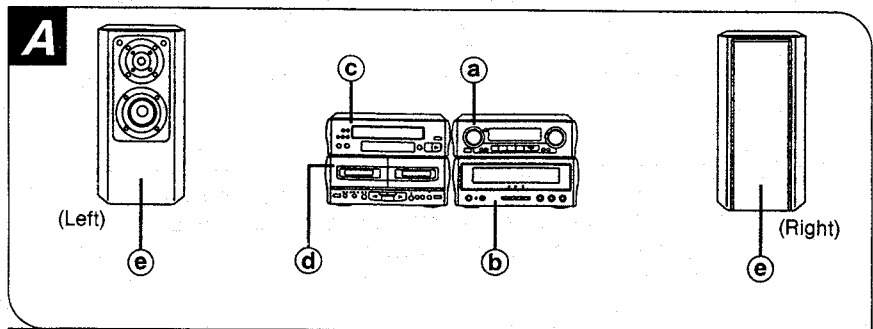
### Main unit speaker installation **C**

Install the main unit speaker-at least 5 cm away from the wall so that the augmented bass sound can be passed through the passive radiator.

### System layout example **D**

To produce a better stereo sound, install both speakers away from the system.

- ① Left speaker
- ② Television set (not included)
- ③ This system
- ④ Right speaker
- ⑤ Surround speaker (left)
- ⑥ Surround speaker (right)



## CONNECTIONS

Connect the AC power supply cord after you have connected all other cables.

### 1 Connect the flat cables.

Hold the connector with the recessed part up and press in at the center until you hear a click.

1. Connect the shorter flat cable to the terminal of the stereo tuner and power amplifier.

2. Connect the longer flat cable to the terminal of the stereo tuner, compact disc player, and cassette deck.

Route the cable horizontally (underneath the heat outlet grille) so that the side with the white-color lead is positioned at the front.

Be sure to connect the blue-colored connector to B1 (tuner/pre-amplifier).

After connection, hold and press the cable as flat to the back of the unit as possible (To minimize noise pickup while listening an AM broadcast).

**Do not try connecting or disconnecting the flat cables while the power is switched to ON.**

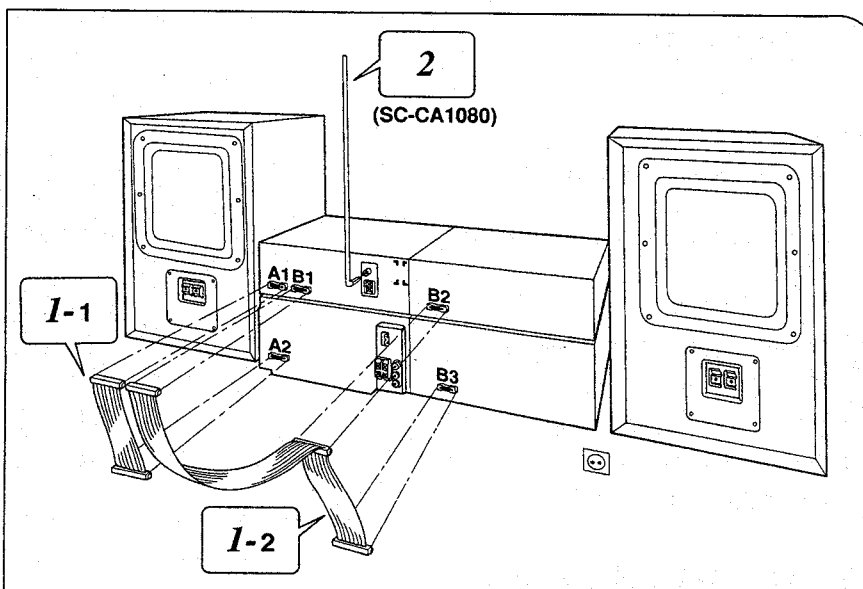
### 2 Connect the FM indoor antenna.

Install the antenna on a wall at a height and in a direction which result in the best reception.

The tip of the internal antenna wire should not come into contact with any metal objects.

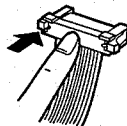
When you cannot get a good reception with this FM indoor antenna, we recommend you install an FM outdoor antenna (not included).

(To be continued)

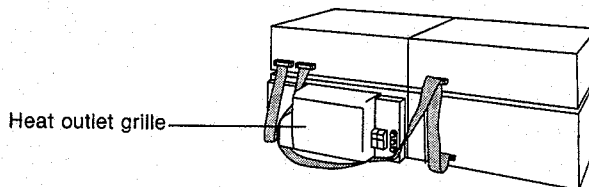
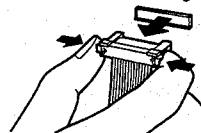


### 1

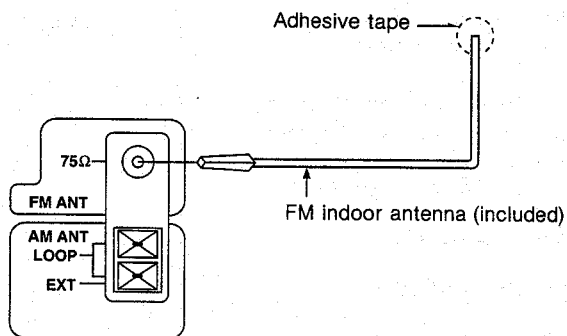
Connecting



Disconnecting



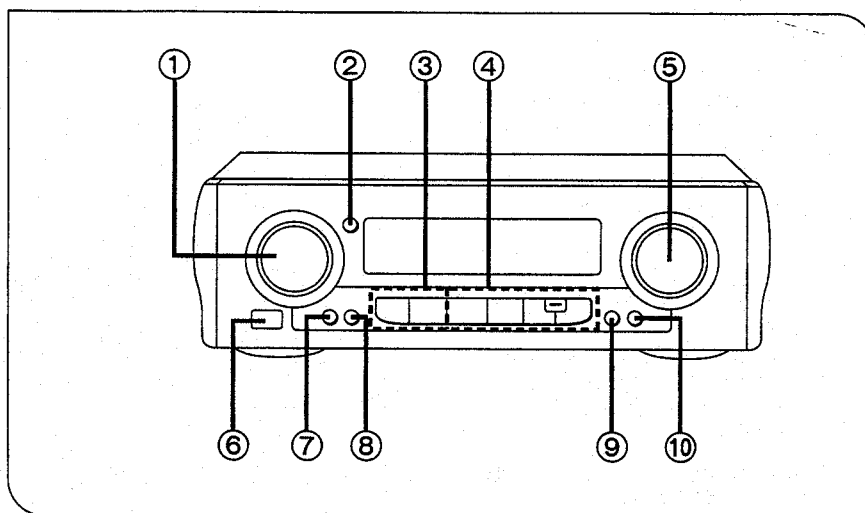
### 2



## LOCATION OF CONTROLS

### Stereo tuner section

- ① JOG control
- ② Set button
- ③ External source input select button
- ④ Internal source input select button
- ⑤ Volume control
- ⑥ Remote control signal sensor
- ⑦ Clock/timer button
- ⑧ Tuning mode select button
- ⑨ Record timer button
- ⑩ Play timer button



## SETTING THE TIME

This is a 24-hours display clock.

These instructions explain how to set the timer for 16:25 (4:25 p.m.) on Wednesday.

- 1** Switch on the power on the power amplifier.
- 2**
  - ① Press **CLOCK/TIMER** to select "CLOCK".
  - The "CLOCK" display will soon disappear, but you can proceed to the next step within 22 seconds.
  - ② Press **SET**.
- 3**
  - ① Turn **JOG** to select the day.
  - ② Press **SET**.
- 4**
  - ① Turn **JOG** to select the hour.
  - ② Press **SET**.
- 5**
  - ① Turn **JOG** to select the minutes.
  - ② Press **SET** to finish setting the time.

The display will return to the previous display after about 2 seconds.

**When "0:00:" flashes on the display:**  
It appears when you connect the power supply cord for the first time or if there has been a power failure.  
If this happens, reset the time.

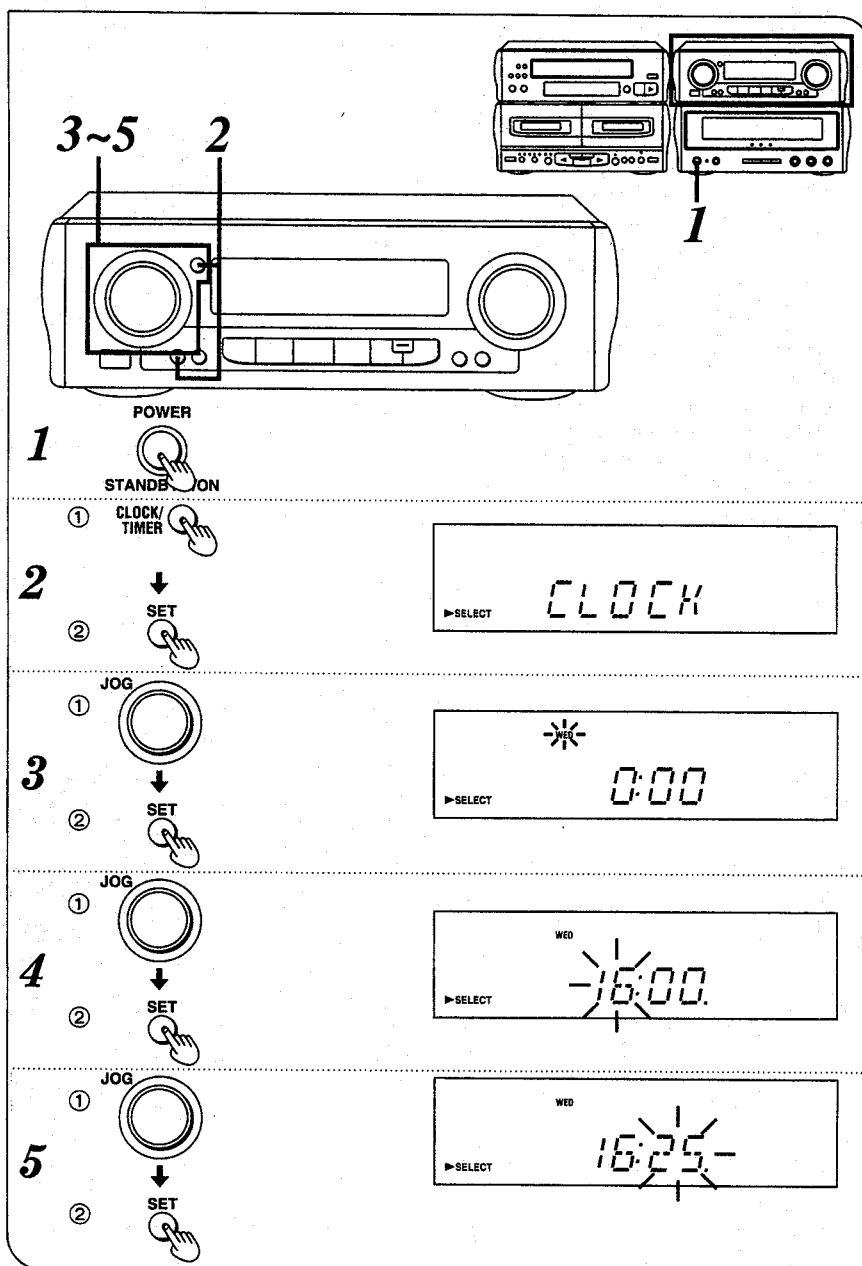
**If the minutes setting has gone wrong:**

1. Press **CLOCK/TIMER**.
2. Press **SET** 3 times.
3. Turn **JOG** to set the minute, and then press **SET**.

**To display the clock again:**

Press **CLOCK/TIMER**.

To return to the previous display, press **CLOCK/TIMER** four times. (or when 22 seconds have passed, the previous display will be returned automatically.)



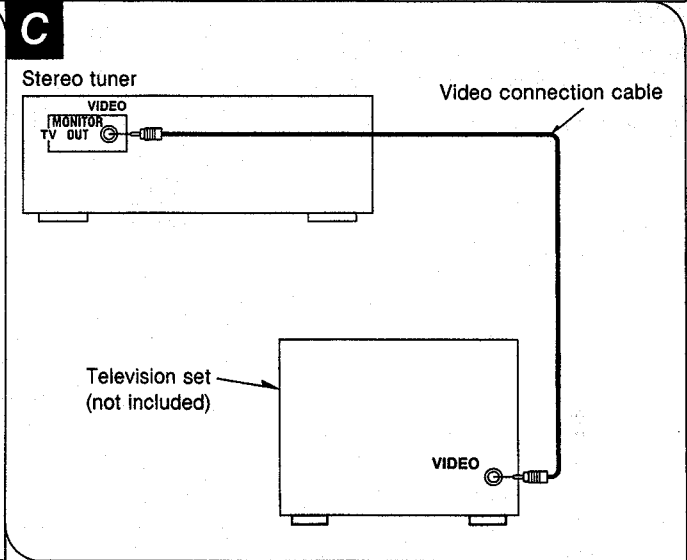
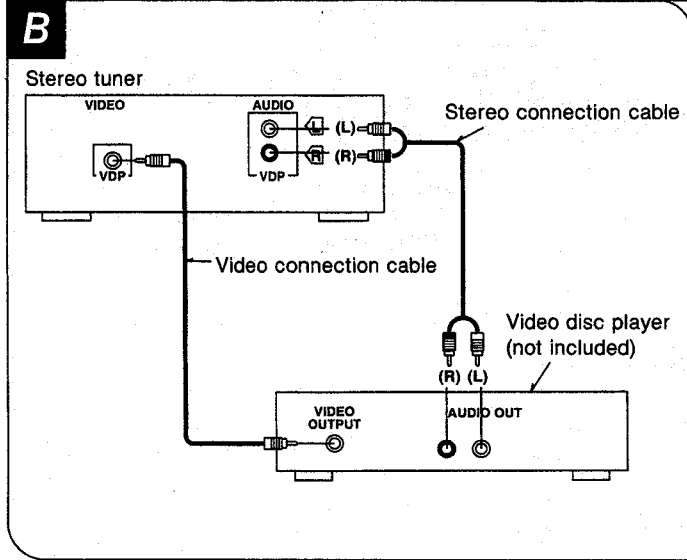
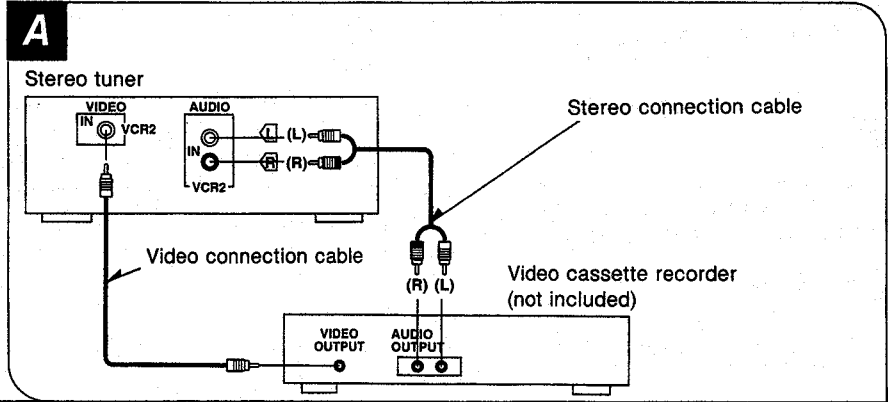
**Video cassette recorder 2 A**

VCR 2 is for playback only.

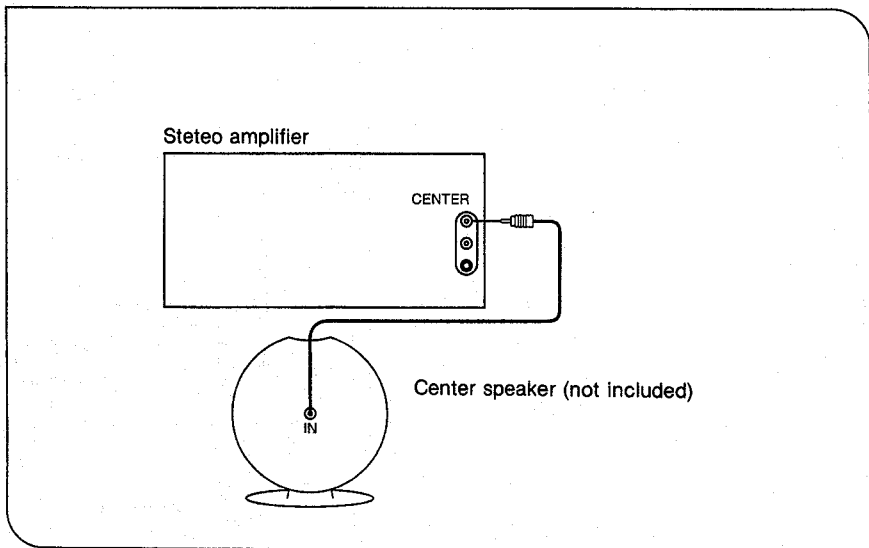
**Video disc player B**

**Television set C**

(To be continued)



**Center speaker**



**External unit connection**

**DCC (digital compact cassette deck)**

**A**

You can make a digital recording on the DCC deck with the optical fiber cable (not included) as shown in the illustration.

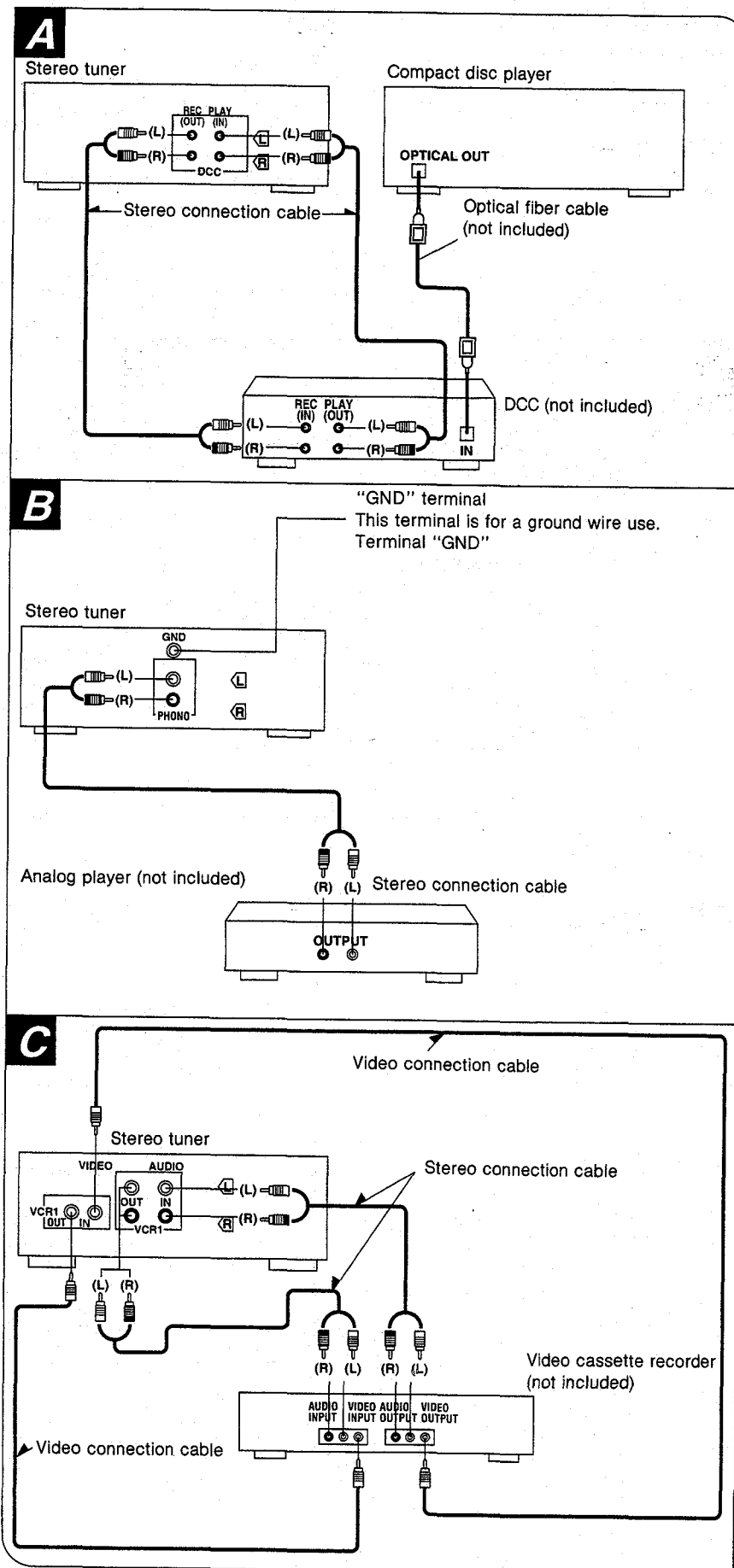
**Analog player**

**Video cassette recorder 1**

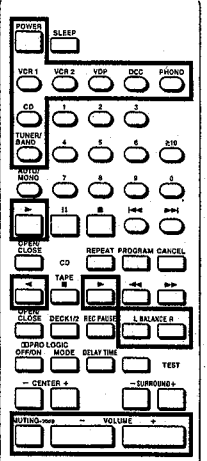












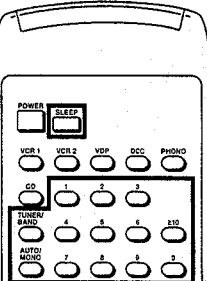

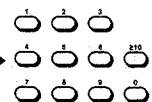


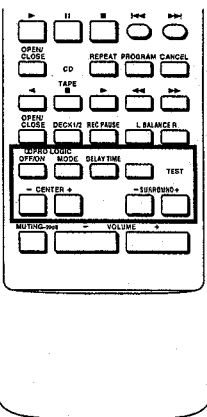






**Note**

- Stereo connection cable, video connection cable, optical fiber cable—not included

(To be continued)



## ■ QUICK REFERENCE OF REMOTE CONTROL OPERATIONS

<i>Common operation</i>		
	Switching the system on and power standby mode	POWER 
	Starting play directly from the power standby condition	 TUNER/BAND 
	Selecting the input source	VCR 1  VCR 2  VDP  DCC  PHONO  CD 
	Adjusting the volume	- VOLUME + 
	Adjusting the volume balance	L BALANCE R 
Muting the volume temporarily	MUTING-20dB 	
<i>Tuner/timer operation</i>		
	Listening to radio broadcasts	TUNER/BAND  
	Switching between FM stereo mode and monaural	AUTO/MONO 
	Operating/releasing the sleep timer	SLEEP 
<i>Dolby Pro-Logic Surround operation</i>		
	Switching Dolby Pro-Logic Surround mode on or off	OFF/ON 
	Switching between Dolby Pro-Logic Surround modes	MODE 
	Adjusting the delay timme	DELAY TIME 
	Activating the test signal sound	 TEST
	Adjusting the center speaker level	- CENTER + 
	Adjusting the surround speaker level	- SURROUND + 

## ■ CONCERNING THE REMOTE CONTROL

### Battery installation **A**

#### Use of batteries

- Do not mix old and new batteries, or batteries of different types (carbon and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or carbon batteries.

#### Battery life

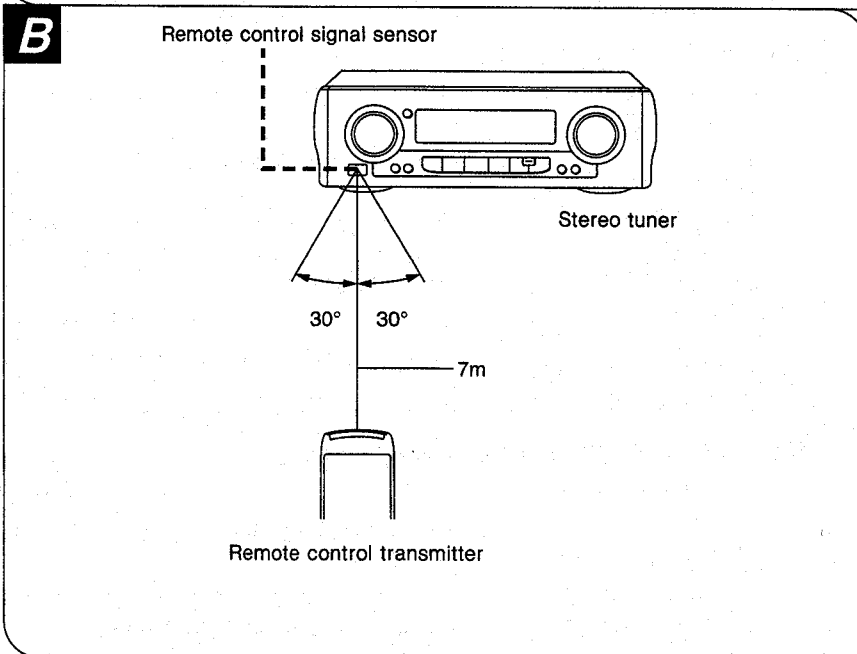
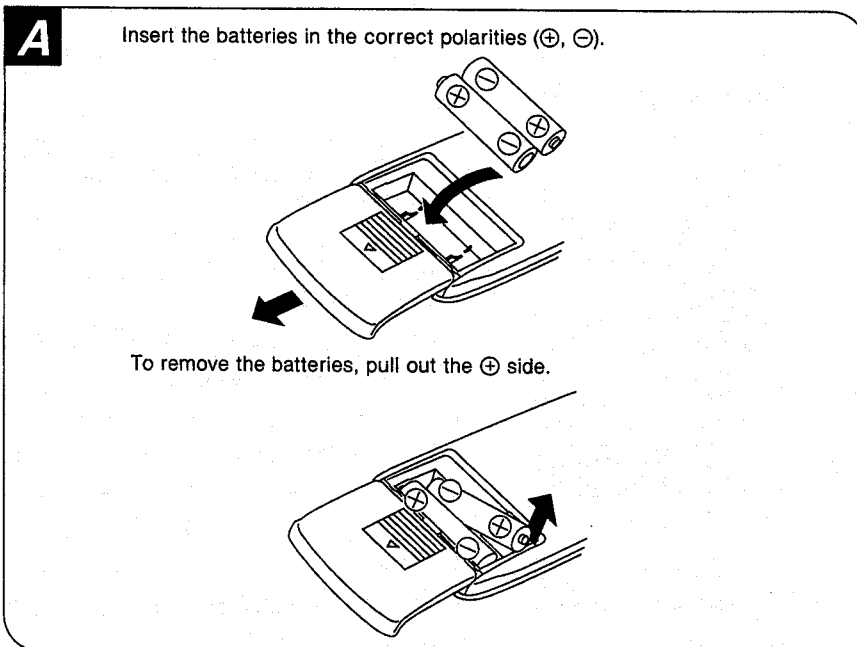
The battery life is about one year.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when the transmitter is held close to the front panel.

### Correct method of use **B**

#### Operation notes

- Aim the remote control's transmission window toward the unit's sensor. Avoid any obstacles.
- Be sure the transmission window and the unit's sensor are free from dust. Excessive dust might affect its performance.
- The operation may not be correct if direct sunlight or other strong light source strikes the receiving sensor of this unit. If there is a problem, place the unit away from the light source.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.
- Never place heavy items.
- Do not disassemble or reconstruct.
- Do not spill water or other liquids.

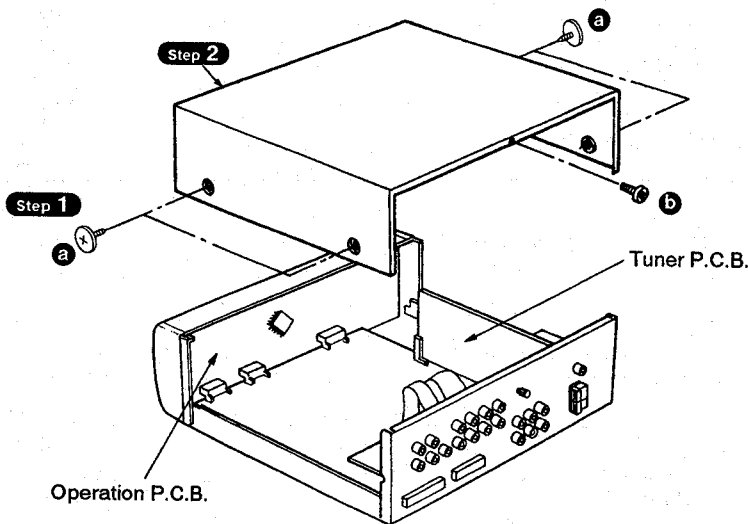




## OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES

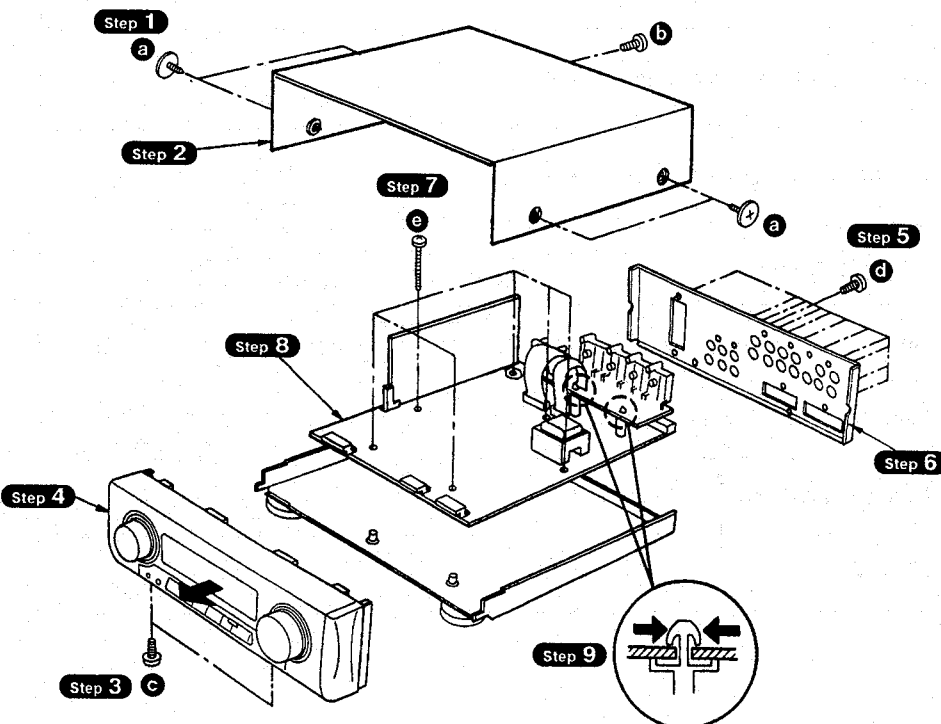
- NOTE**
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
  2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
  3. Illustrated screws are equivalent to actual size.

### 1. Checking for the tuner P.C.B. and operation P.C.B.



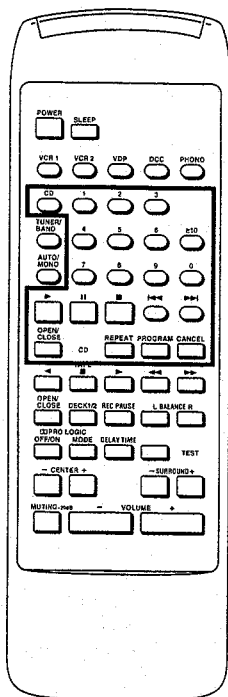
- a (Black)  
[RHD30007]
- b (Black)  
[XTB3+8JFZ]

### 2. Checking for the IN/OUT terminal P.C.B. and main P.C.B.



- a (Black)  
[RHD30007]
- b (Black)  
[XTB3+8JFZ]
- c (Black)  
[XTBS3+8JFZ1]
- d (Black)
- e (Black)  
[XTB3+16JFZ]

**Compact disc section**



Opening or closing the disc tray



Starting play



Temporarily stopping play



Stopping play



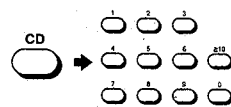
Skipping tracks



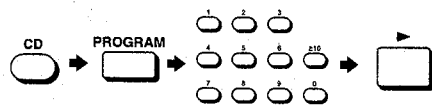
Repeating play



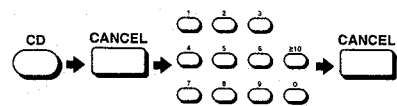
Starting play from a particular track



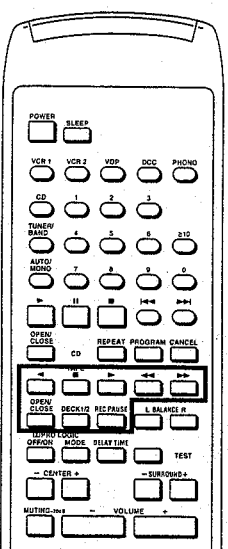
Playing the particular track you programmed



Cancelling the particular track you programmed



**Tape section**



Switching between deck 1 and deck 2



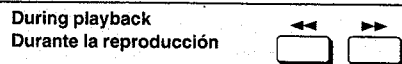
Opening or closing the cassette holder



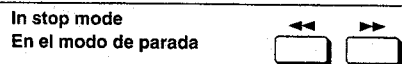
Starting playback



Finding the beginning of a track



Fast forwarding or rewinding the tape

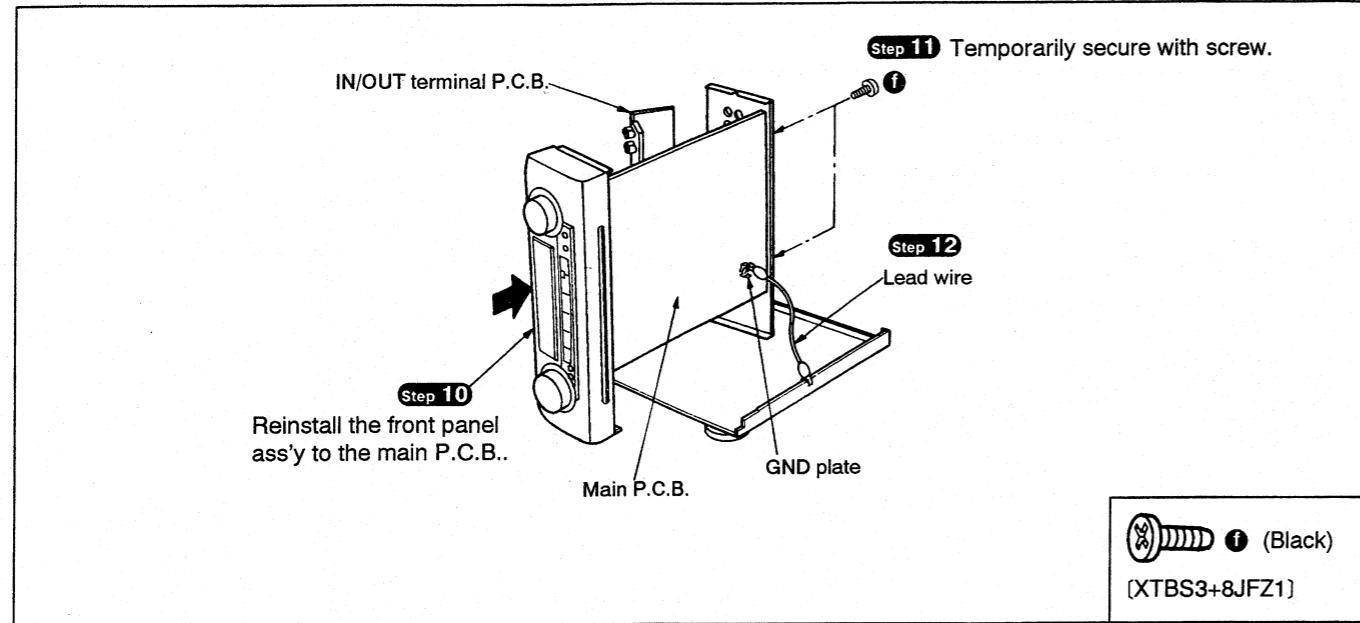


Stopping playback



Recording





**POWER SUPPLY WITH TUNER ST-CA1080**

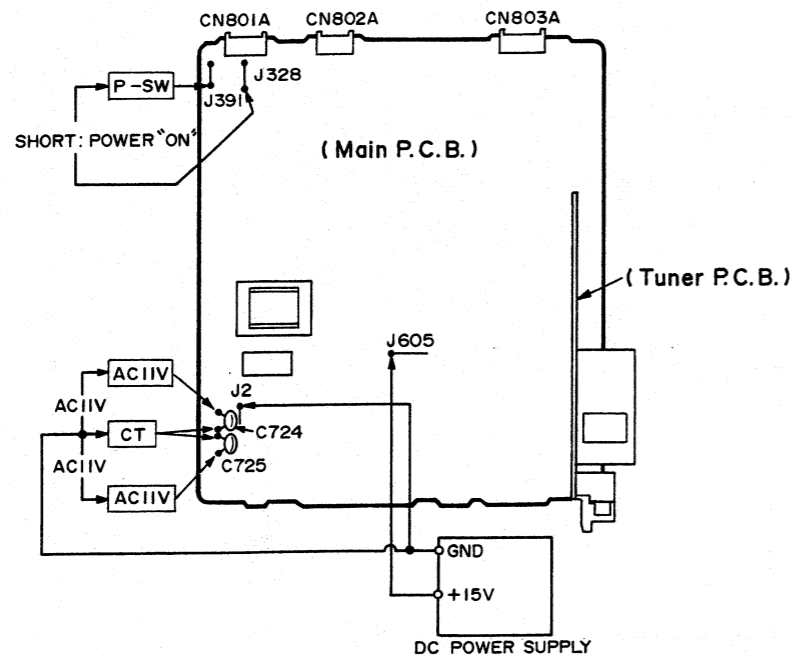
**Power Supply to Main PCB**

1. Apply 11 V AC power between C724 and C725 using the service tool for AC power supply as shown below.  
(The unit comes to STAND BY Mode.)
2. Short the point [P-SW] (J391) to J328 as shown below.  
FL display tube lights and the unit comes to power ON mode.

**Power Supply to Tuner PCB**

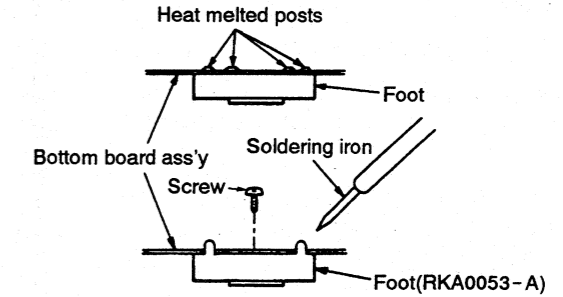
1. Apply 15 V DC power to [J2] and [J605] using the service tool for DC power supply as shown below.

**Note:** When applying DC power, connect between GND and [CT] using the tool.



**REPLACEMENT OF THE FOOT**

1. Remove the 4 heat melted posts on the Bottom board ass'y with a pair of nippers or similar tool.
2. To replace the foot (RKA0011-3) on the Bottom board ass'y melt the 4 posts with a soldering iron or install it with a screw (XTB3+6J).



**TERMINAL FUNCTION OF IC**

• IC801 (M38173M6276F): System control/FL drive

Pin No.	Terminal Name	I/O	Function
1	CR TIMER	O	Condensor/resistance oscillation terminal for an electronic failure detection
2	KEY2	I	Operation (MULTI CONTROL) key signal input
3	KEY1	I	Operation key signal input
4	/SD	I	SD signal input for tuner
5	/STEREO	I	STEREO signal input for tuner
6	STB-LATCH	O	Latch signal output
7	CE1	O	Chip enable signal output
8	CLK1	O	Clock signal output
9	DATA	O	Data signal output
10	DATA IN	I	Data signal input
11	A. MUTE	O	Audio muting signal output (Volume of -10dB and less: "H")
12	MUTE	O	Main muting signal output (Normally "L")
13	CLK2	O	Serial clock output
14	CLK3	O	Serial data output
15	B.DATA IN	I	Data input from bus
16	B.CLK IN	I	Clock input from bus
17	B.DATA OUT	O	Data output to bus (Normally "H")
18	B. CLK OUT	O	Clock output to bus (Normally "L")
19	CHECK & SURR	O	POWER ON mode: Output for SUR ON/OFF (During POWER ON: "H") POWER OFF mode: Demultiplier output for clock control
20	POWER & IJO	I/O	Power control output (During POWER ON: "H") Heat detection input (Unusual situation: "H")
21	/TUNER	O	Audio muting 2 signal output (Volume of -70dB and less: "H")
22	TUNER	O	Selector TUNER output (Output in level: "H")
23	VR. JOG B	I	Rotary encoder input for main volume
24	VR. JOG A	I	Rotary encoder input for tuning volume
25	RC	I	Input for remote control
26	AC IN	I	AC power source input terminal for an electricity failure/clock

Pin No.	Terminal Name	I/O	Function
27	/RESET	I	Reset input terminal
28	10V	I	Power source for pull up (+10V)
29	NC	-	Not connection
30	XIN	I	Connected to a ceramic oscillator for system clock X801 (4.194304MHz)
31	XOUT	O	Connected to GND
32	V <sub>SS</sub>	-	Connected to GND
33	MIC DET	I	Input for MIC detection (Connection: "L")
34	CS2	I	Input for chip selection
35	CS1	I	Input for chip selection
36	TU. JOG B	O	Rotary encoder input for tuning volume
37	TU. JOG A	O	Rotary encoder input for tuning volume
38	S. MUTE	O	Not used, open
39	C. MUTE	O	Not used, open
40	SURR	O	Not used, open
41 } 50 }	1G } 2G }	O	Grid output for FL display
51 } 67 }	P17 } P1 }	O	Segment signal of FL display
68	CLK4	O	Serial data output
69 } 72 }	V.BASS CONT4 } CONT3 } CONT1 }	-	Not used, connected to power supply
73	V <sub>DD</sub> BACK-UP	I	+5V impression
74	VP	-	-VP impression for FL display
75	D. GND	-	Connected to GND
76	VREF	-	Standard voltage for A/D converter (Connected to V <sub>CC</sub> )
77	TU. MUTE	O	Muting control terminal
78 } 79 }	CE3 } CE2 }	O	Chip enable terminal
80	NC	-	Not connection

# SCHEMATIC DIAGRAM

(Parts list of pages 33~37.)

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

### Notes 1:

- **S801** : Play timer (PLAY) switch.
- **S802** : Record timer (REC) switch.
- **S803** : LW/MW (LW/MW) switch.
- **S804** : FM (FM) switch.
- **S805~807** : Internal source input select switches. [S805: CD, S806: TAPE, S807: DCC/PHONO]
- **S808** : External source input select (VCR 1/VCR 2/VDP) switch.
- **S809** : Tuning mode select (TUNING MODE) switch.
- **S810, 811** : Clock/Timer (CLOCK/TIMER) switches. [S810: MODE, S811: SET]

### Signal line

- : REC out signal (Lch)
- : AM (LW/MW) OSC signal
- : AM (LW/MW) signal
- : Positive voltage lines
- : Negative voltage lines
- : FM OSC signal
- : FM signal
- : AF signal (Lch)
- : Surround speaker drive signal
- : Center speaker drive signal

### Important safety notice

Components identified by  $\Delta$  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 as occasion calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

All voltage values shown in circuitry are DC voltage in FM signal (Stereo mono) reception mode.

\* Figures in ( ) Stand for DC-voltage in MW signal reception mode.

\* Figures in < > Stand for DC-voltage in LW signal reception mode.

\* Figures in  $\square$  Stand for DC-voltage in muting mode.

### Caution!

IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.

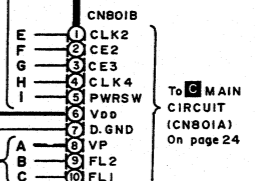
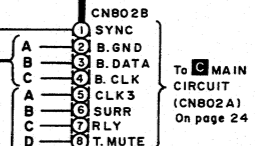
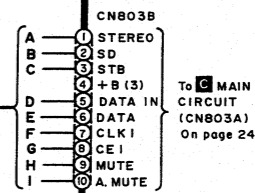
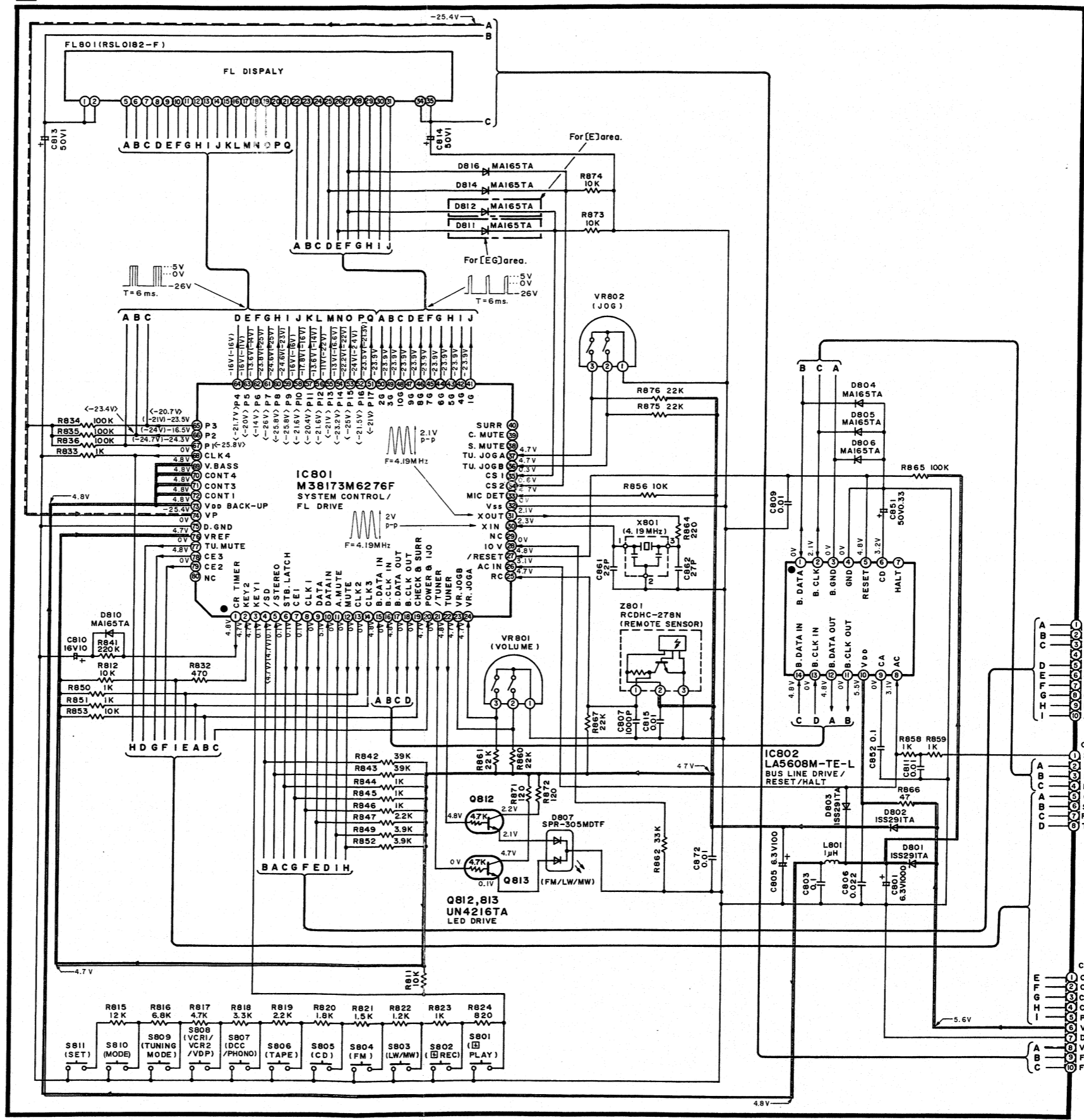
• Cover the parts boxes made of plastics with aluminum foil.

• Ground the soldering iron.

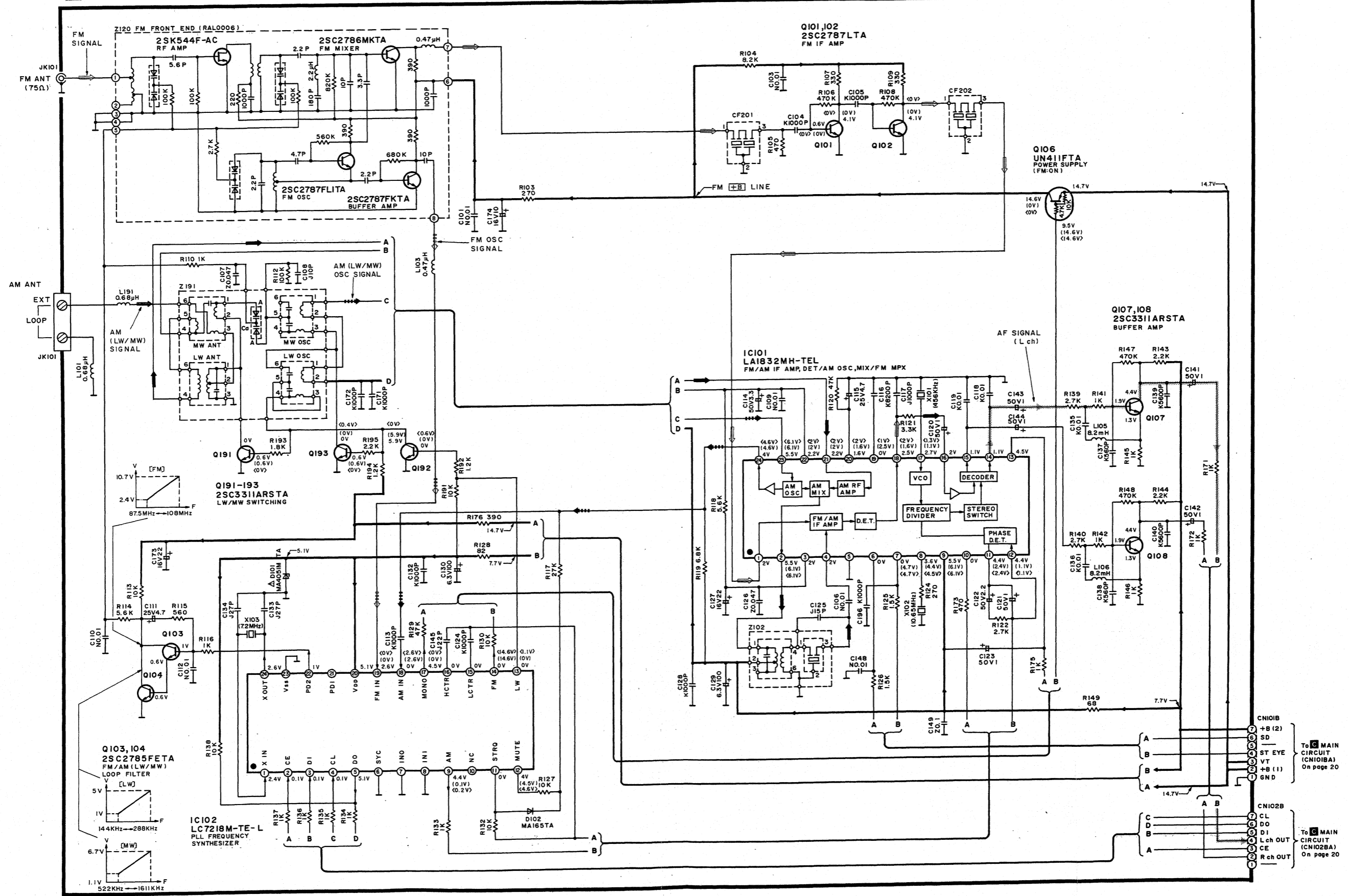
• Put a conductive mat on the work table.

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

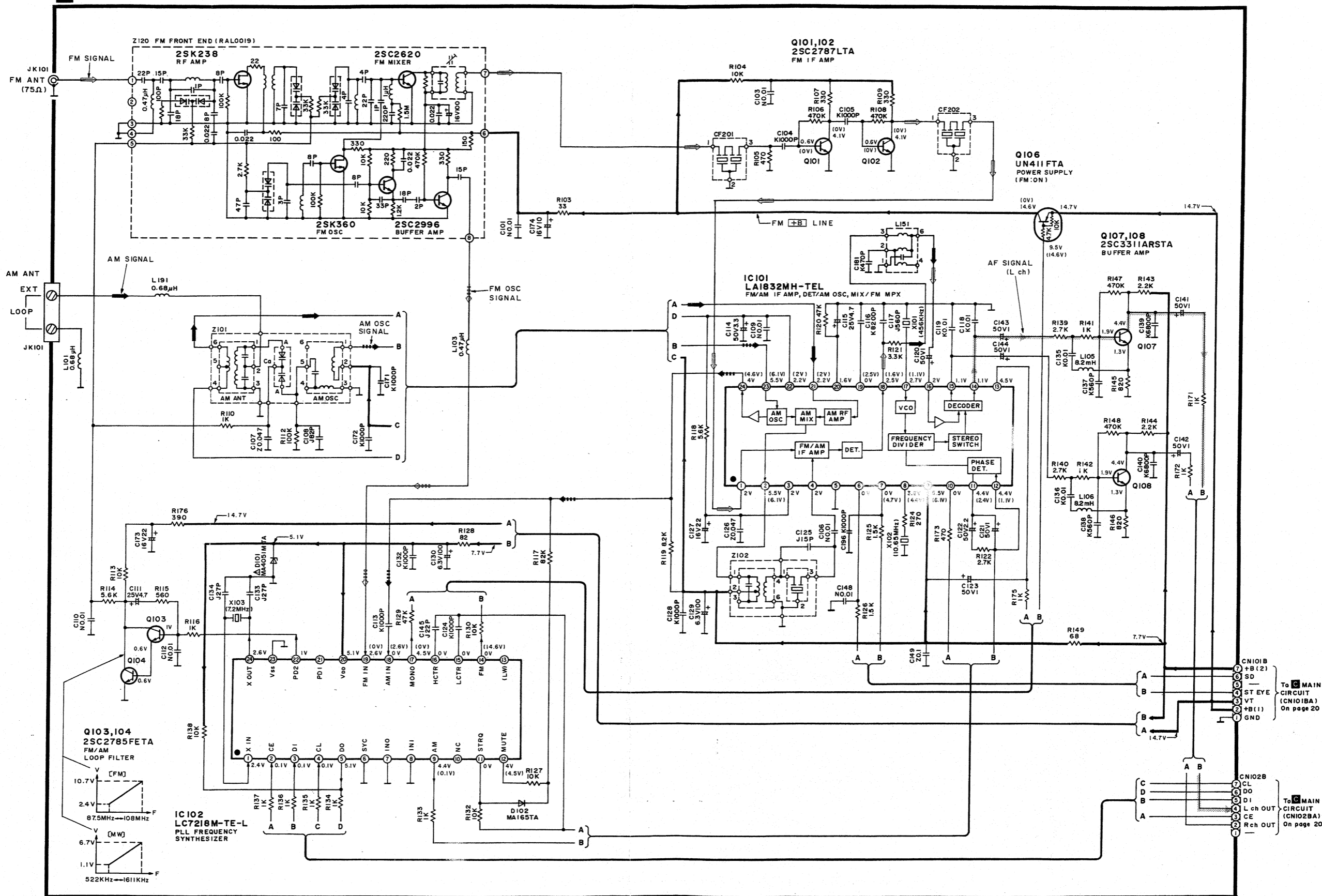
## B OPERATION CIRCUIT



**A** TUNER CIRCUIT For [E] area.



**A** TUNER CIRCUIT For [EG] area.



B  
2) To MAIN CIRCUIT (CN1018A) On page 20

1) To MAIN CIRCUIT (CN1028A) On page 20

2B  
To MAIN CIRCUIT (CN1018A) On page 20

OUT  
To MAIN CIRCUIT (CN1028A) On page 20

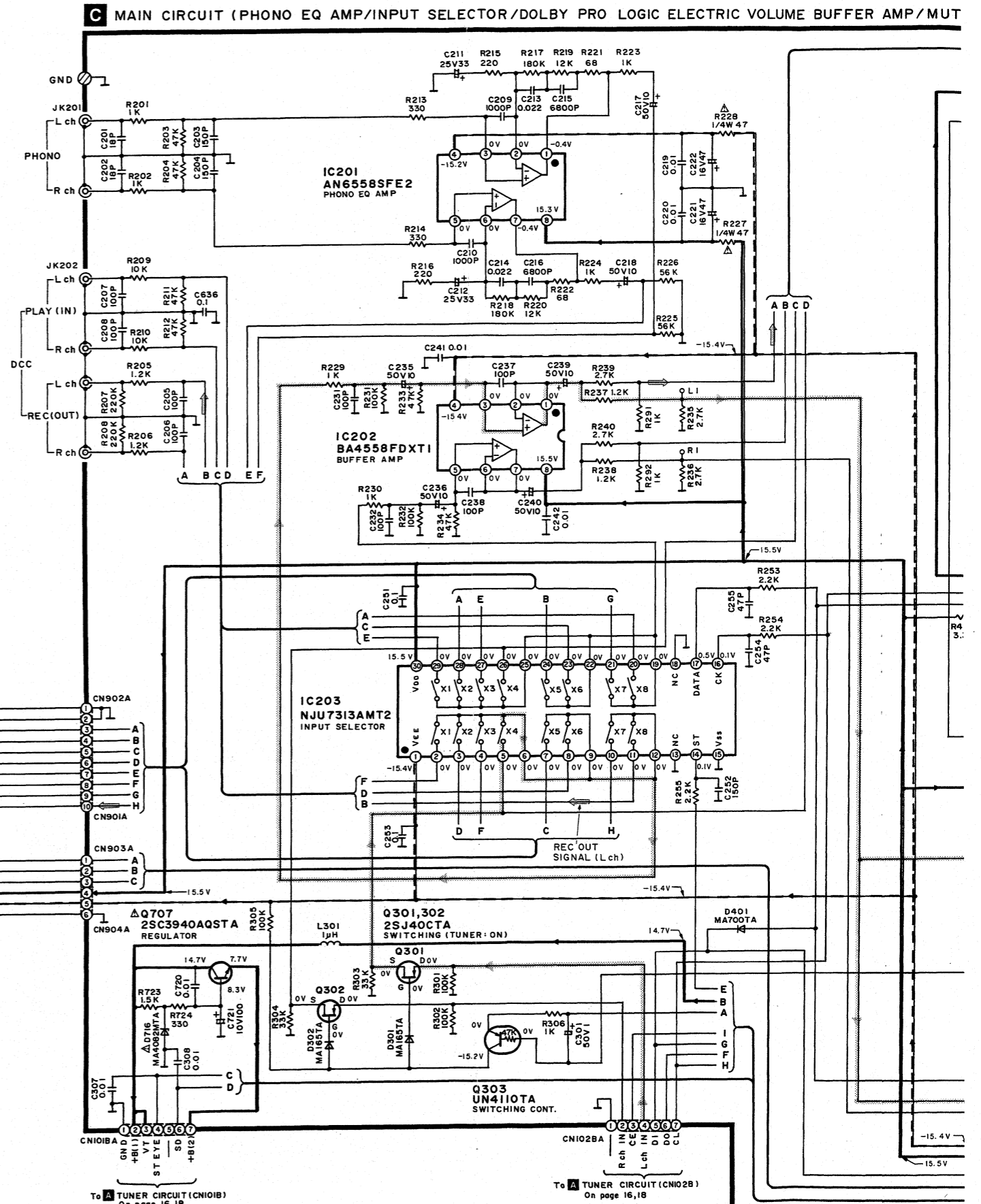
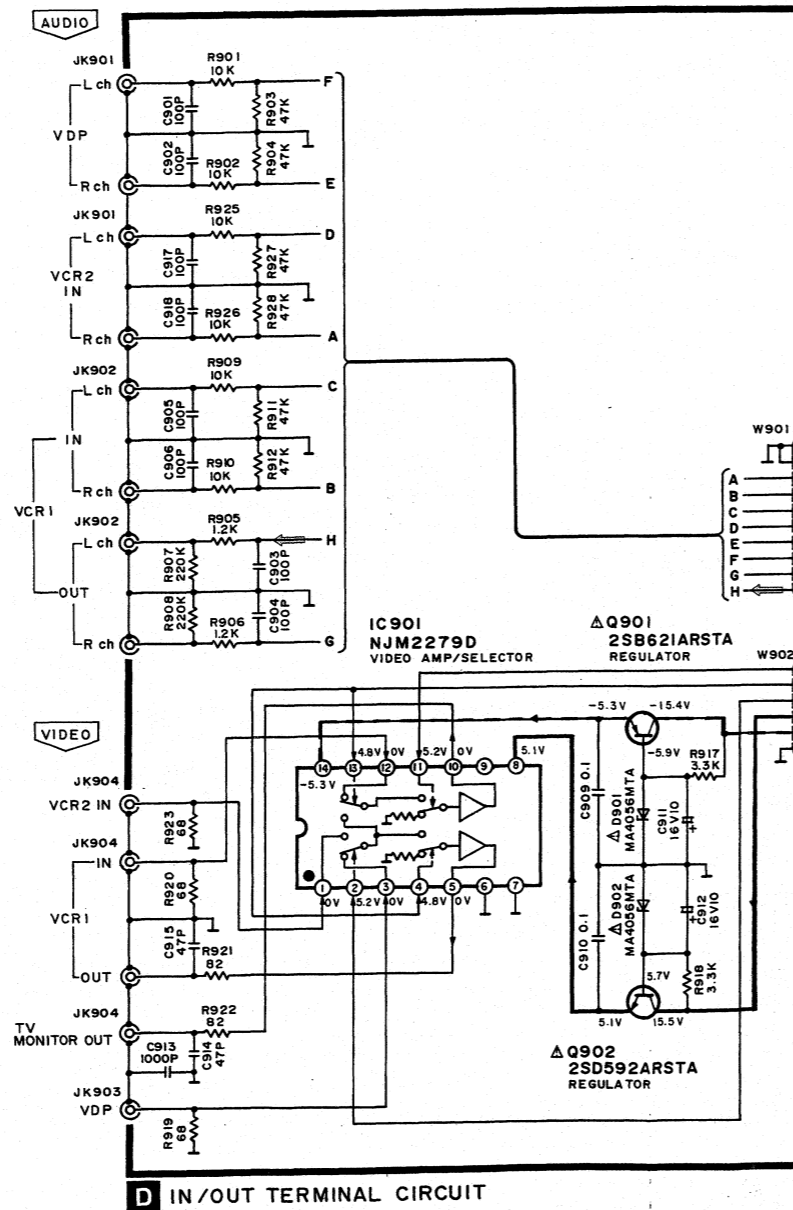
CN1018  
+B (2)  
SD  
ST EYE  
VT  
+B (1)  
GND

CN1028  
CL  
DO  
DI  
L ch OUT  
CE  
Rch OUT

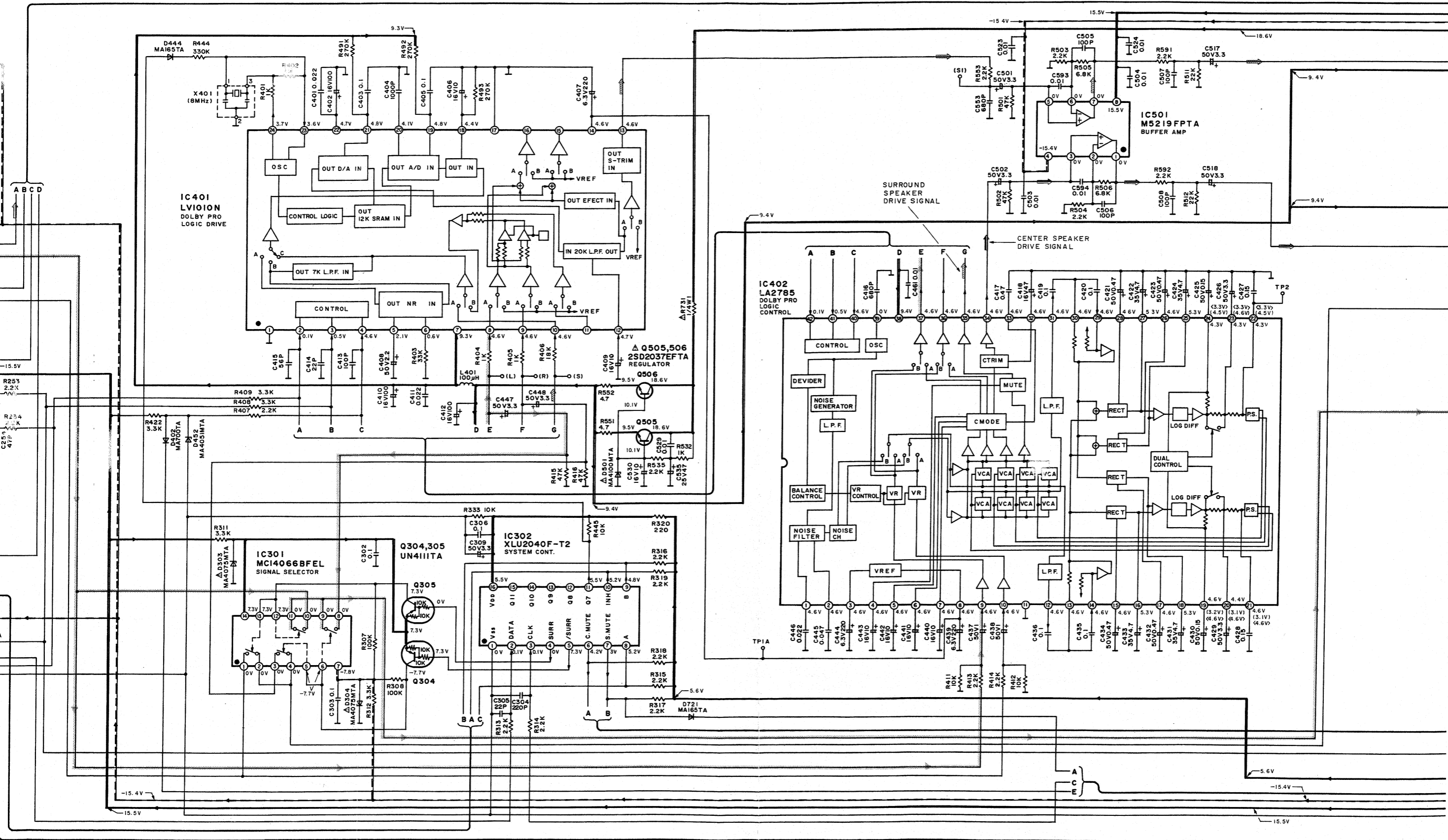


Notes 2:

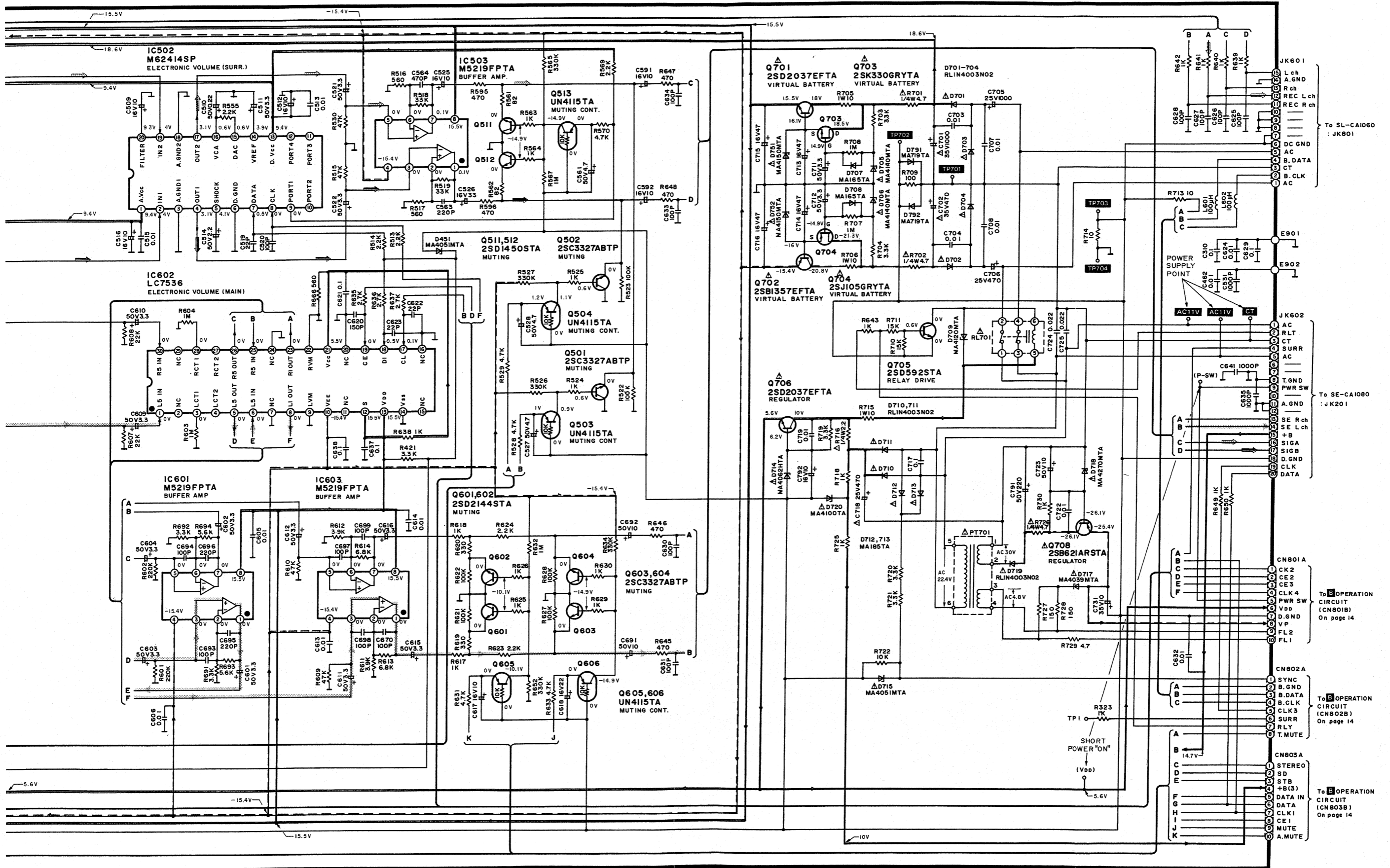
- Signal line
  - ▬▬▬▬▬▬ : REC out signal (Lch)
  - ▬▬▬▬▬▬▬▬ : AM (LW/MW) OSC signal
  - ▬▬▬▬▬▬▬▬ : AM (LW/MW) signal
  - ▬▬▬▬▬▬▬▬ : Positive voltage lines
  - ▬▬▬▬▬▬▬▬ : Negative voltage lines
  - ▬▬▬▬▬▬▬▬ : FM OSC signal
  - ▬▬▬▬▬▬▬▬ : FM signal
  - ▬▬▬▬▬▬▬▬ : AF signal (Lch)
  - ▬▬▬▬▬▬▬▬ : Surround speaker drive signal
  - ▬▬▬▬▬▬▬▬ : Center speaker drive signal
- Important safety notice
  - Components identified by  $\Delta$  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 as occasion calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
  - All voltage values shown in circuitry are DC voltage in FM signal (Stereo mono) reception mode.
  - \* Figures in ( ) Stand for DC-voltage in MW signal reception mode.
  - \* Figures in < > Stand for DC-voltage in LW signal reception mode.
  - \* Figures in  $\square$  Stand for DC-voltage in muting mode.
- 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.



VOLUME BUFFER AMP/MUTING REGULATOR

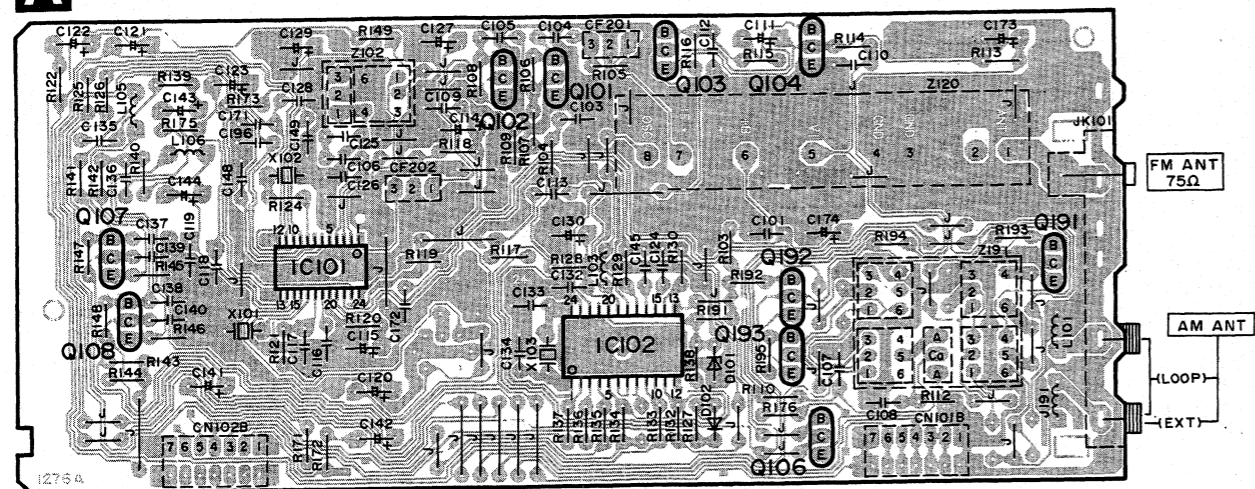




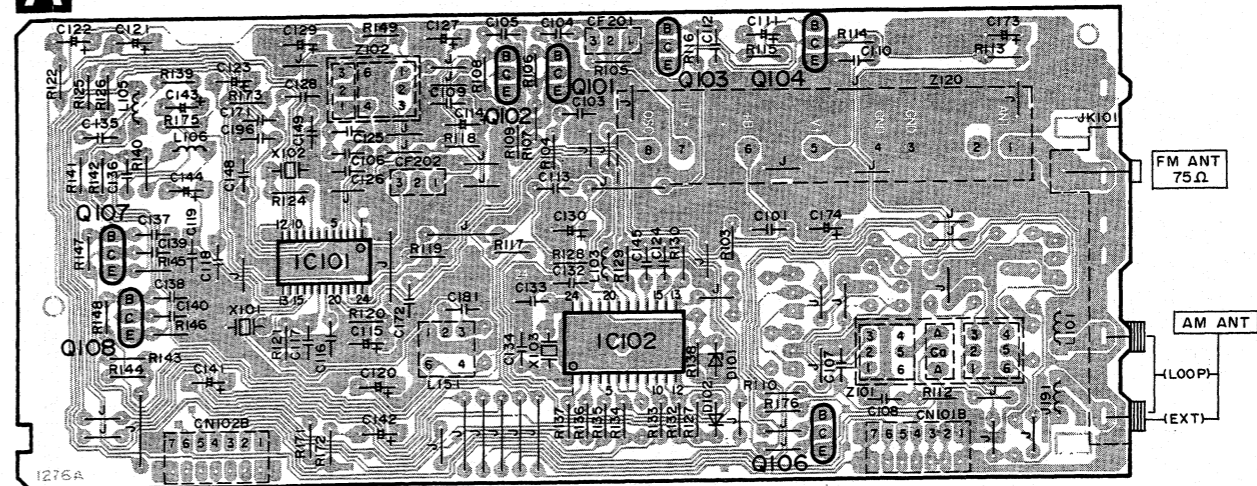


PRINTED CIRCUIT BOARDS

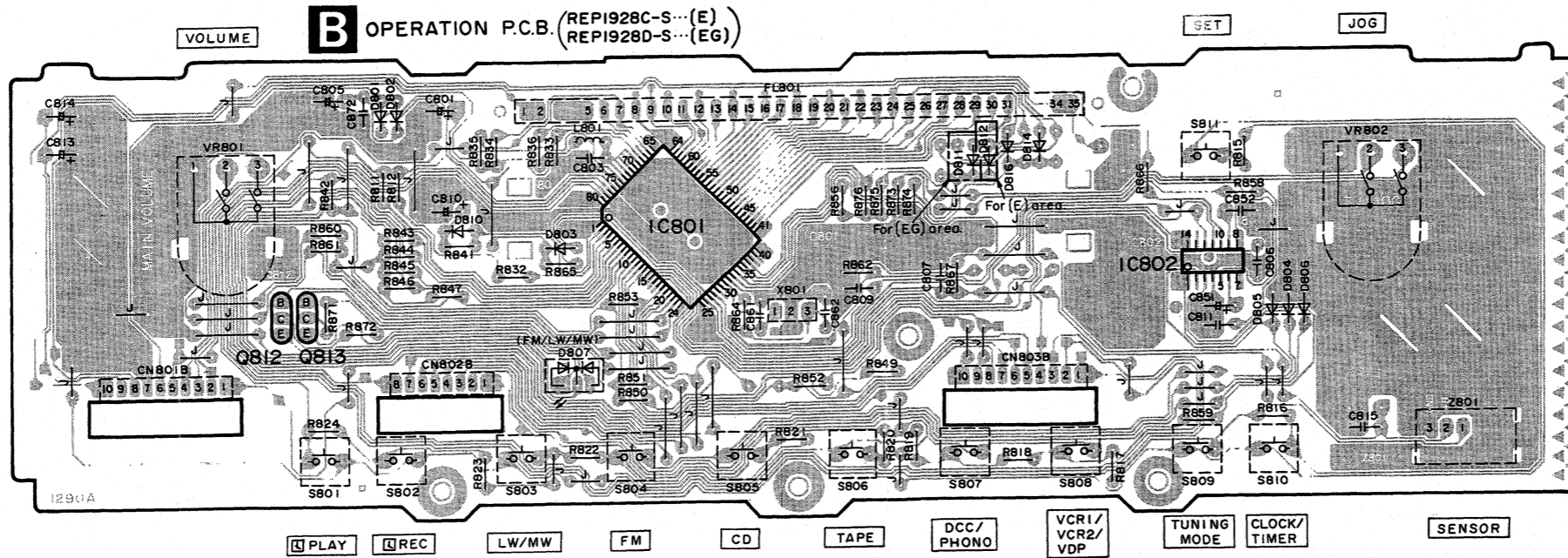
**A** TUNER P.C.B. For (E) area. (REPI930A-T)



**A** TUNER P.C.B. For (EG) area. (REPI930B-T)

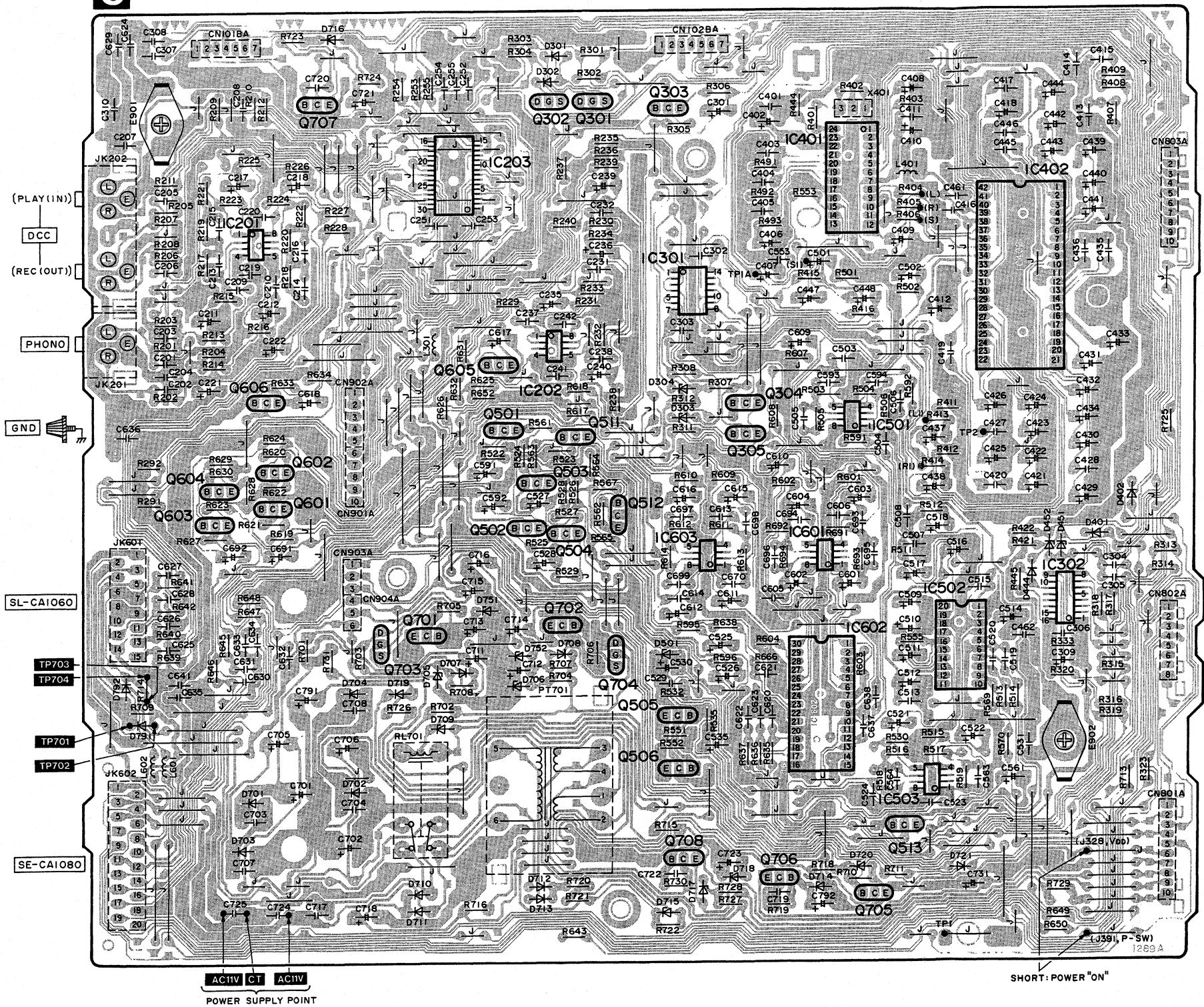


**B** OPERATION P.C.B. (REPI928C-S... (E)  
REPI928D-S... (EG))

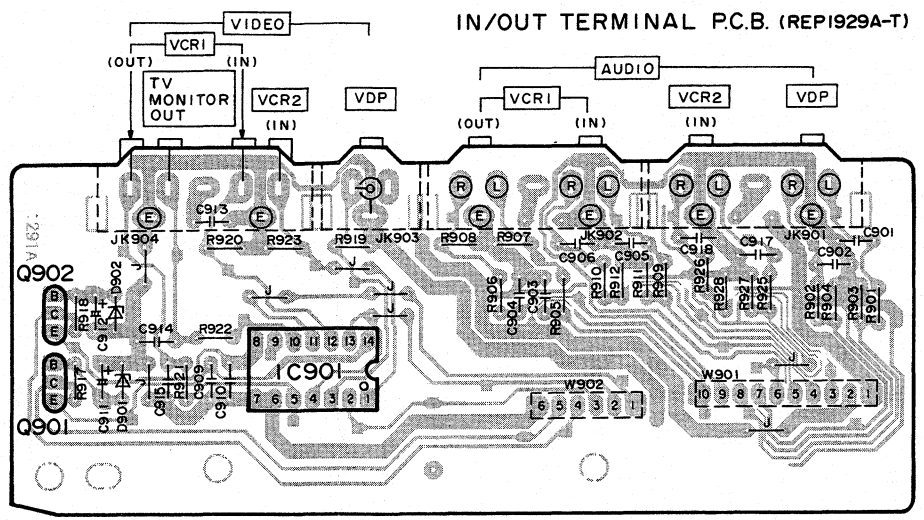




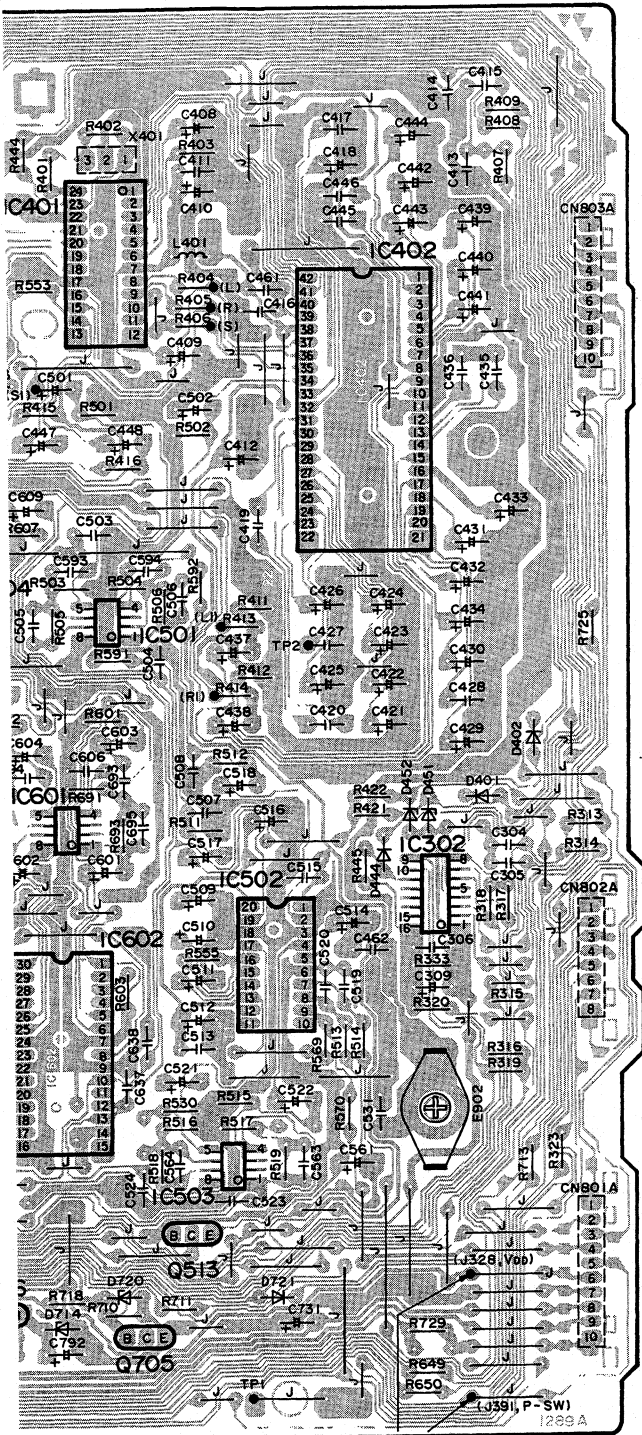
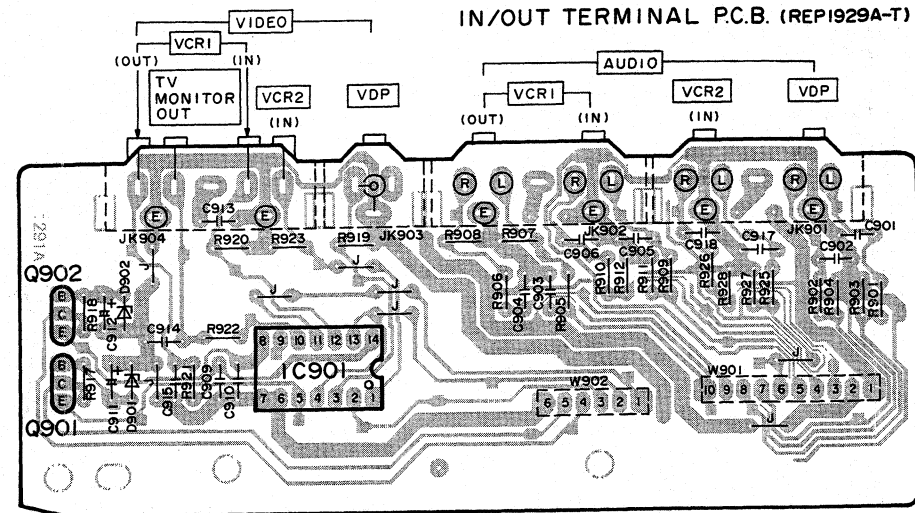
**C** MAIN P.C.B. (REPI926B-M)



**D** IN/OUT TERMINAL P.C.B. (REPI929A-T)



**D** IN/OUT TERMINAL P.C.B. (REP1929A-T)

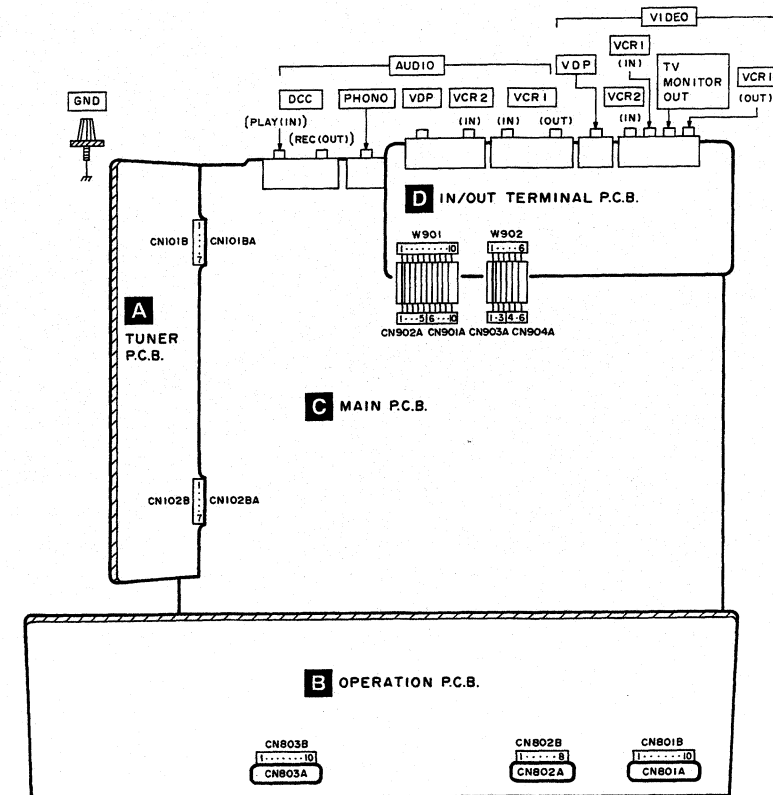


SHORT: POWER "ON"

**TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES**

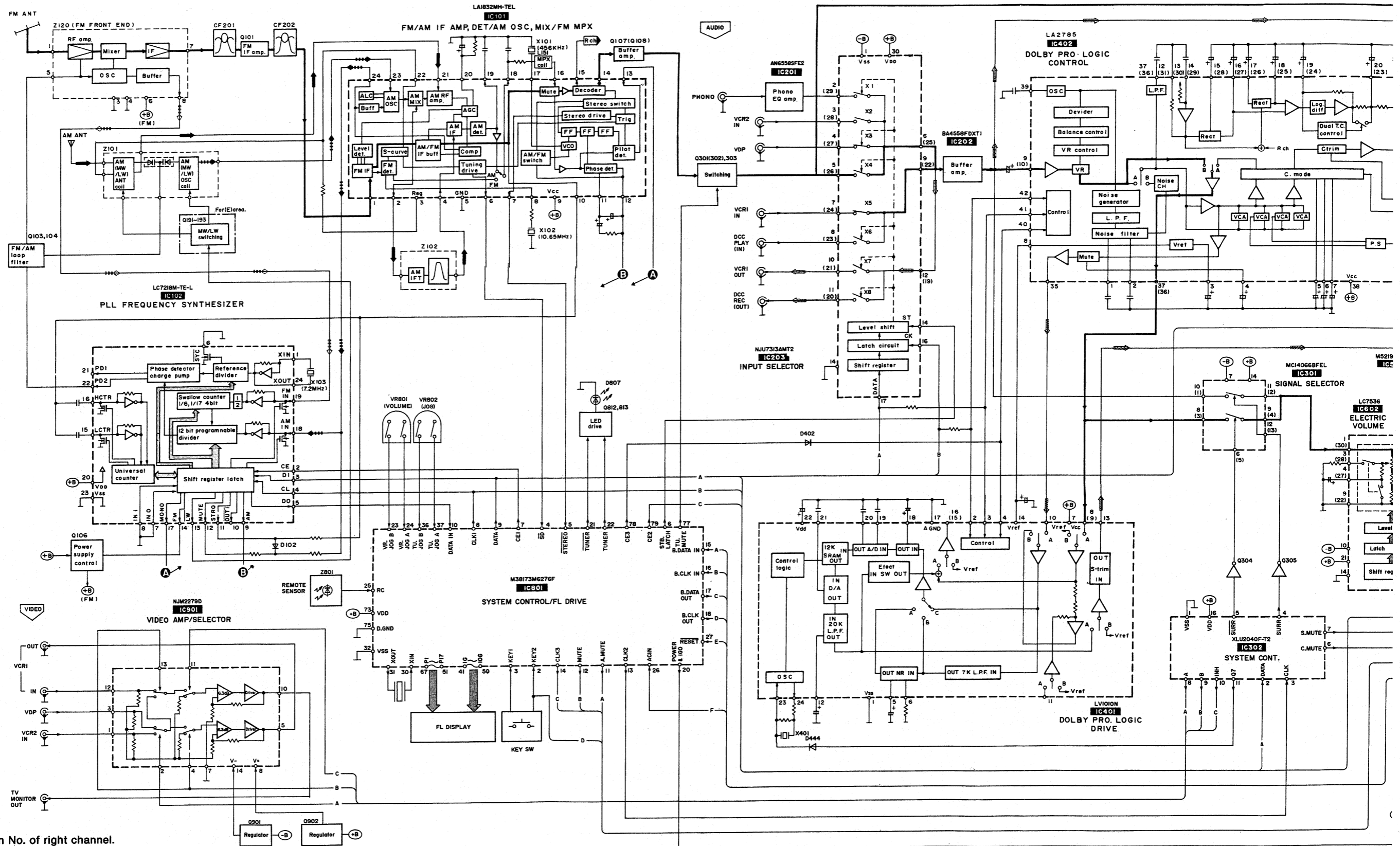
<p>BA4558FDXT1</p>	<table border="1"> <tr> <td>M5219FPTA</td> <td>8 Pin</td> <td>LA1832MH-TEL</td> <td>24 Pin</td> </tr> <tr> <td>AN6558SFE2</td> <td>8 Pin</td> <td>LC7218M-TE-L</td> <td>24 Pin</td> </tr> <tr> <td>MC14066BFEL</td> <td>14 Pin</td> <td>NJU7313AMT2</td> <td>30 Pin</td> </tr> <tr> <td>LA5608M-TE-L</td> <td>14 Pin</td> <td></td> <td></td> </tr> <tr> <td>XLU2040F-T2</td> <td>16 Pin</td> <td></td> <td></td> </tr> </table>	M5219FPTA	8 Pin	LA1832MH-TEL	24 Pin	AN6558SFE2	8 Pin	LC7218M-TE-L	24 Pin	MC14066BFEL	14 Pin	NJU7313AMT2	30 Pin	LA5608M-TE-L	14 Pin			XLU2040F-T2	16 Pin			<p>M38173M6276F</p>	<p>LV1010N</p>
M5219FPTA	8 Pin	LA1832MH-TEL	24 Pin																				
AN6558SFE2	8 Pin	LC7218M-TE-L	24 Pin																				
MC14066BFEL	14 Pin	NJU7313AMT2	30 Pin																				
LA5608M-TE-L	14 Pin																						
XLU2040F-T2	16 Pin																						
<table border="1"> <tr> <td>M62414SP</td> <td>20 Pin</td> </tr> <tr> <td>LA2785</td> <td>42 Pin</td> </tr> </table>	M62414SP	20 Pin	LA2785	42 Pin	<table border="1"> <tr> <td>NJM2279D</td> <td>14 Pin</td> </tr> <tr> <td>LC7536</td> <td>30 Pin</td> </tr> </table>	NJM2279D	14 Pin	LC7536	30 Pin	<p>UN411FTA UN4110TA UN4111TA UN4115TA UN4216TA 2SC2785FETA 2SC2787LTA 2SC3311ARSTA 2SD1450STA</p>	<p>2SB621ARSTA 2SD592STA 2SD592ARSTA</p>												
M62414SP	20 Pin																						
LA2785	42 Pin																						
NJM2279D	14 Pin																						
LC7536	30 Pin																						
<p>2SC3940AQSTA</p>	<p>2SD2144STA</p>	<p>2SB1357EFTA 2SD2037EFTA</p>	<p>2SJ40CTA 2SJ105GRYTA 2SK330GRYT</p>																				
<p>1SS291TA MA185TA MA700TA MA719TA</p>	<p>MA4039MTA MA4051MTA MA4056MTA MA4062HTA MA4075MTA MA4082MTA</p>	<p>MA165TA</p>	<p>RL1N4003N02</p>																				
<p>SPR-305MDTF</p>	<p>MA4100MTA MA4120MTA MA4140MTA MA4150MTA MA4270MTA</p>	<p>SPR-305MDTF</p>	<p>SPR-305MDTF</p>																				

**WIRING CONNECTION DIAGRAM**



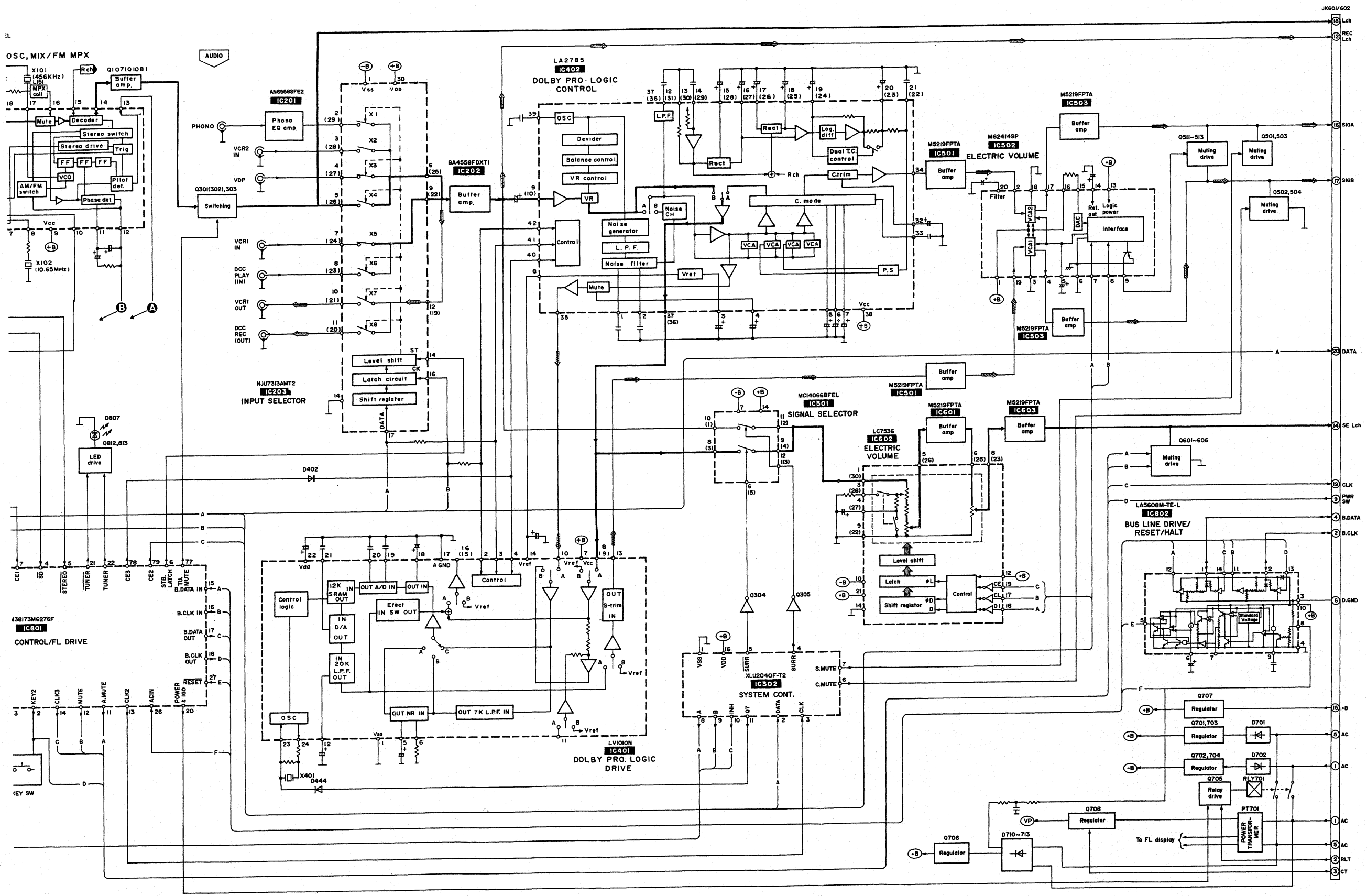


**BLOCK DIAGRAM**



**Notes:**  
 1) ( ) indicates Pin No. of right channel.  
 2)

- : AF SIGNAL
- : FM SIGNAL
- : AM (LW/MW) SIGNAL
- : FM OSC SIGNAL
- : AM (LW/MW) SIGNAL
- : REC OUT SIGNAL
- : SURROUND SPEAKER DRIVE SIGNAL
- : CENTER SPEAKER DRIVE SIGNAL



Ref.No.	Part No.	Part Name & Description	Remarks	Ref.No.	Part No.	Part Name & Description	Remarks
L101	ELESNR68MA	COIL		S807	EVQ21405R	DCC/PHONO	
L103	ELEXTR47MA9	COIL		S808	EVQ21405R	VCR1/VCR2/VDP	
L105, 106	ELELN822KL	COIL		S809	EVQ21405R	TUNING MODE	
L151	SLMB10-1M	COIL	(EG)	S810	EVQ21405R	CLOCK/TIMER MODE	
L191	ELESNR68MA	COIL		S811	EVQ21405R	CLOCK/TIMER SET	
L301	ELEXT1R0KA9	COIL				RELAY (S)	
LA01	ELEPK101KA	COIL					
L601, 602	ELEXT101KA9	COIL					
L801	ELEXT1R0KA9	COIL		RL701	RSY0017M-0	RELAY	△
		TRANSFORMER (S)				CONNECTOR (S) AND SOCKET (S)	
PT701	RTP114G004	POWER TRANSFORMER	△	CN101A	RJT057W007-1	CONNECTOR (7P)	
		COMPONENT COMBINATION (S)		CN101B	RJU057W007	SOCKET (7P)	
				CN102A	RJT057W007-1	CONNECTOR (7P)	
Z101	RLA2Z002M-T	COMPONENT COMBINATION	(EG)	CN102B	RJU057W007	SOCKET (7P)	
Z102	RLI2Z006M-T	COMPONENT COMBINATION		CN801A	RJU003K010M1	SOCKET (10P)	
Z191	RLA6Z005M-T	COMPONENT COMBINATION	(E)	CN801B	RJT003K010-1	CONNECTOR (10P)	
Z801	RCDHC-278N	REMOTE SENSOR		CN802A	RJU003K008M1	SOCKET (8P)	
		FILTER (S)		CN802B	RJT003K008-1	CONNECTOR (8P)	
				CN803A	RJU003K010M1	SOCKET (10P)	
CF201, 202	RLFFETWND01M	CERAMIC FILTER	(E)	CN803B	RJT003K010-1	CONNECTOR (10P)	
CF201	RLFFETNGD01L	CERAMIC FILTER	(EG)	CN901A	RJS1A6605	CONNECTOR (5P)	
CF202	RLFFETMGD01L	CERAMIC FILTER	(EG)	CN902A	RJS1A6605	CONNECTOR (5P)	
		OSCILLATOR (S)		CN903A	RJS1A6603	CONNECTOR (3P)	
				CN904A	RJS1A6603	CONNECTOR (3P)	
						JACK (S)	
X101	RSXZ456MM07M	OSCILLATOR (456KHz)		JK101	RJH5210	ANTENNA TERMINAL	
X102	RLFDGTD01I	OSCILLATOR (10.65MHz)		JK201	SJF3068-7N	PHONO	
X103	RSXC7M20S04T	OSCILLATOR (7.20MHz)		JK202	SJF3069-5N	DCC	
X401	EFOEC8004T4	OSCILLATOR (8MHz)		JK601	RJT065K15	CONNECTOR (15P)	
X801	RSXA4M19S03	OSCILLATOR (4.19MHz)		JK602	RJT065K20	CONNECTOR (20P)	
		DISPLAY TUBE (S)		JK901	SJF3069-5N	VDP/VCR2 P. B. (AUDIO)	
				JK902	SJF3069-5N	VCR1 P. B. /REC OUT (AUDIO)	
FL801	RSL0182-F	FL DISPLAY		JK903	SJF3068-8N	VDP (VIDEO)	
		FM FRONT END PACK ASS'Y (S)		JK904	SJF3069-3N	VCR1 IN/OUT, VCR2 (VIDEO)	
						EARTH TERMINAL (S)	
Z120	RAL0006	FM FRONT END	(E)	E901, 902	SNE1004-2	GND PLATE	
Z120	RAL0019	FM FRONT END	(EG)			FLAT CABLE (S)	
		SWITCH (ES)					
S801	EVQ21405R	TIMER PLAY		W901	RWJ1810100KX	FLAT CABLE (10P)	
S802	EVQ21405R	TIMER REC		W902	RWJ1806100KX	FLAT CABLE (6P)	
S803	EVQ21405R	LW/MW					
S804	EVQ21405R	FM					
S805	EVQ21405R	CD					
S806	EVQ21405R	TAPE					

# REPLACEMENT PARTS LIST

**Notes:** \*Important safety notice:

 Components identified by  $\Delta$  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 parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		Q708	2SB621A-R	TRANSISTOR	$\Delta$
				Q812, 813	UN4216-S	TRANSISTOR	
IC101	LA1832MH-TEL	FM/AM IF AMP./AM OSC		Q901	2SB621A-R	TRANSISTOR	$\Delta$
IC102	LC7218M-TE-L	PLL FREQ SYNTHESIZER		Q902	2SD592ARSTA	TRANSISTOR	$\Delta$
IC201	AN6558SFE2	PHONO EQ AMP				DIODE(S)	
IC202	BA4558FDXT1	BUFFER AMP					
IC203	NJU7313AMT2	INPUT SELECTOR		D101	MA4051MTA	DIODE	$\Delta$
IC301	MC14066BFEL	SIGNAL SELECTOR		D102	MA165	DIODE	
IC302	XLU2040F-T1	SYSTEM CONT.		D301, 302	MA165	DIODE	
IC401	LV1010N	DOLBY PRO-LOGIC DRIVE		D303, 304	MA4075MTA	DIODE	$\Delta$
IC402	LA2785	DOLBY PRO-LOGIC CONTROL		D401, 402	MA700TA	DIODE	
IC501	M5219FPTA	BUFFER AMP		D444	MA165	DIODE	
IC502	M62414SP	ELECTRONIC VOLUME		D451, 452	MA4051MTA	DIODE	
IC503	M5219FPTA	BUFFER AMP		D501	MA4100MTA	DIODE	$\Delta$
IC601	M5219FPTA	BUFFER AMP		D701-704	RL1N4003N02	DIODE	$\Delta$
IC602	LC7536	ELECTRONIC VOLUME		D705, 706	MA4140M	DIODE	$\Delta$
IC603	M5219FPTA	BUFFER AMP		D707, 708	MA165	DIODE	
IC801	M38173M6276F	SYSTEM CONT./FL DRIVE		D709	MA4120	DIODE	
IC802	LA5608M-TE-L	BUS LINE/HALT/RESET		D710, 711	RL1N4003N02	DIODE	$\Delta$
IC901	NJM2279D	VIDEO SELECTOR		D712, 713	MA185TA	DIODE	$\Delta$
		TRANSISTOR(S)		D714	MA4062-H	DIODE	$\Delta$
				D715	MA4051MTA	DIODE	$\Delta$
Q101, 102	2SC2787L	TRANSISTOR		D716	MA4082MTA	DIODE	$\Delta$
Q103, 104	2SC2785FE	TRANSISTOR		D717	MA4039MTA	DIODE	$\Delta$
Q106	UN411FTA	TRANSISTOR		D718	MA4270	DIODE	$\Delta$
Q107, 108	2SC3311ARSTA	TRANSISTOR		D719	RL1N4003N02	DIODE	$\Delta$
Q191-193	2SC3311ARSTA	TRANSISTOR	(E)	D720	MA4100MTA	DIODE	$\Delta$
Q301, 302	2SJ40CTA	TRANSISTOR		D721	MA165	DIODE	
Q303	UN4110TA	TRANSISTOR		D751, 752	MA4150M	DIODE	$\Delta$
Q304, 305	UN4111	TRANSISTOR		D791, 792	MA719TA	DIODE	
Q501, 502	2SC3327-A	TRANSISTOR		D801-803	1SS291TA	DIODE	
Q503, 504	UN4115	TRANSISTOR		D804-806	MA165	DIODE	
Q505, 506	2SD2037EFTA	TRANSISTOR	$\Delta$	D807	SPR-305MDTF	L. E. D.	
Q511, 512	2SD1450RTA	TRANSISTOR		D810	MA165	DIODE	
Q513	UN4115	TRANSISTOR		D811	MA165	DIODE	(EG)
Q601, 602	2SD2144S	TRANSISTOR		D812	MA165	DIODE	(E)
Q603, 604	2SC3327-A	TRANSISTOR		D814	MA165	DIODE	
Q605, 606	UN4115	TRANSISTOR		D816	MA165	DIODE	
Q701	2SD2037EFTA	TRANSISTOR	$\Delta$	D901, 902	MA4056MTA	DIODE	$\Delta$
Q702	2SB1357EFTA	TRANSISTOR	$\Delta$			VARIABLE RESISTOR(S)	
Q703	2SK330GRYTA	TRANSISTOR	$\Delta$	VR801, 802	EVQW2BF2024B	VOLUME/JOG CONTROL	
Q704	2SJ105GRYTA	TRANSISTOR	$\Delta$			COIL(S)	
Q705	2SD592NCR	TRANSISTOR					
Q706	2SD2037EFTA	TRANSISTOR	$\Delta$				
Q707	2SC3940AQSTA	TRANSISTOR	$\Delta$				



Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R693, 694	ERDS2TJ562	1/4W 5.6K	R873, 874	ERDS2TJ103	1/4W 10K	C149	ECBT1H104ZF5	50V 0.1U
R701, 702	ERD2FCVJ4R7T	1/4W 4.7 $\Delta$	R875, 876	ERDS2TJ223	1/4W 22K	C171, 172	ECBT1H102KB5	50V 1000P
R703, 704	ERDS2TJ332	1/4W 3.3K	R901, 902	ERDS2TJ103	1/4W 10K	C173	ECEA1CKA220B	16V 22U
R705, 706	ERG1SJ100E	1W 10	R903, 904	ERDS2TJ473	1/4W 47K	C174	ECEA1CKA100B	16V 10U
R707, 708	ERDS2TJ105T	1/4W 1M	R905, 906	ERDS2TJ122	1/4W 1.2K	C181	ECBT1H471KB5	50V 470P (EG)
R709	ERDS2TJ101	1/4W 100	R907, 908	ERDS2TJ224T	1/4W 220K	C196	ECBT1H102KB5	50V 1000P
R710, 711	ERDS2TJ153	1/4W 15K	R909, 910	ERDS2TJ103	1/4W 10K	C201, 202	ECBT1H180J5	50V 18P
R713, 714	ERDS2TJ100	1/4W 10	R911, 912	ERDS2TJ473	1/4W 47K	C203, 204	ECBT1H151KB5	50V 150P
R715	ERG1SJ100E	1W 10	R917, 918	ERDS2TJ332	1/4W 3.3K	C205-208	ECBT1H101KB5	50V 100P
R716	ERD25FJ2R2	1/4W 2.2 $\Delta$	R919, 920	ERDS2TJ680T	1/4W 68	C209, 210	ECBT1H102KB5	50V 1000P
R718	ERDS2TJ102	1/4W 1K	R921, 922	ERDS2TJ820	1/4W 82	C211, 212	ECA1EAP330B	25V 33U
R719-721	ERDS2TJ332	1/4W 3.3K	R923	ERDS2TJ680T	1/4W 68	C213, 214	ECQB1H223JF3	50V 0.022U
R722	ERDS2TJ103	1/4W 10K	R925, 926	ERDS2TJ103	1/4W 10K	C215, 216	ECBT1C682KR5	16V 6800P
R723	ERDS2TJ152	1/4W 1.5K	R927, 928	ERDS2TJ473	1/4W 47K	C217, 218	ECA1HAP100B	50V 10U
R724	ERDS2TJ331	1/4W 330				C219, 220	ECBT1E103ZF	25V 0.01U
R725	ERDS2TJ102	1/4W 1K			CAPACITORS	C221, 222	ECEA1CKA470B	16V 47U
R726	ERD2FCVJ4R7T	1/4W 4.7 $\Delta$				C231, 232	ECBT1H101KB5	50V 100P
R727, 728	ERDS2TJ151	1/4W 150	C101	ECBT1C103NS5	16V 0.01U	C235, 236	ECA1HAP100B	50V 10U
R729	ERDS2TJ4R7T	1/4W 4.7	C103	ECBT1C103NS5	16V 0.01U	C237, 238	ECBT1H101KB5	50V 100P
R730	ERDS2TJ102	1/4W 1K	C104, 105	ECBT1H102KB5	50V 1000P	C239, 240	ECA1HAP100B	50V 10U
R731	ERD25FVJ1R0T	1/4W 1.0 $\Delta$	C106	ECBT1C103NS5	16V 0.01U	C241, 242	ECBT1E103ZF	25V 0.01U
R811, 812	ERDS2TJ103	1/4W 10K	C107	ECBT1H473ZF5	50V 0.047U	C251	ECBT1H104ZF5	50V 0.1U
R815	ERDS2TJ123	1/4W 12K	C108	ECBT1H100JC5	50V 10P (E)	C252	ECBT1H151KB5	50V 150P
R816	ERDS2TJ682T	1/4W 6.8K	C108	ECBT1H8R2JC5	50V 8.2P (EG)	C253	ECBT1H104ZF5	50V 0.1U
R817	ERDS2TJ472	1/4W 4.7K	C109, 110	ECBT1C103NS5	16V 0.01U	C254, 255	ECBT1H470J5	50V 47P
R818	ERDS2TJ332	1/4W 3.3K	C111	ECEA1EKA4R7B	25V 4.7U	C301	ECEA1HKA010B	50V 1U
R819	ERDS2TJ222	1/4W 2.2K	C112	ECBT1C103NS5	16V 0.01U	C302, 303	ECBT1H104ZF5	50V 0.1U
R820	ERDS2TJ182	1/4W 1.8K	C113	ECBT1H102KB5	50V 1000P	C304	ECBT1H221KB5	50V 220P
R821	ERDS2TJ152	1/4W 1.5K	C114	ECEA1HKA3R3B	50V 3.3U	C305	ECBT1H220J5	50V 22P
R822	ERDS2TJ122	1/4W 1.2K	C115	ECEA1EKA4R7B	25V 4.7U	C306	ECBT1H104ZF5	50V 0.1U
R823	ERDS2TJ102	1/4W 1K	C116	ECBT1C822KS5	16V 8200P	C307, 308	ECBT1C103NS5	16V 0.01U
R824	ERDS2TJ821	1/4W 820	C117	ECQB1H102JF3	50V 1000P (E)	C309	ECEA1HKA3R3B	50V 3.3U
R832	ERDS2TJ471	1/4W 470	C117	ECQB1H561JF3	50V 560P (EG)	C310	ECQV1H104JM3	50V 0.1U
R833	ERDS2TJ102	1/4W 1K	C118, 119	ECFR1C103KR	16V 0.01U	C401	ECBT1E223ZF	25V 0.022U
R834-836	ERDS2TJ104	1/4W 100K	C120, 121	ECEA1HKA010B	50V 1U	C402	ECEA1CKA101B	16V 100U
R841	ERDS2TJ224T	1/4W 220K	C122	ECEA1HKA2R2B	50V 2.2U	C403	ECQV1H104JM3	50V 0.1U
R842, 843	ERDS2TJ393	1/4W 39K	C123	ECEA1HKA010B	50V 1U	C404	ECFR1H102KB	50V 1000P
R844-846	ERDS2TJ102	1/4W 1K	C124	ECBT1H102KB5	50V 1000P	C405	ECQV1H104JM3	50V 0.1U
R847	ERDS2TJ222	1/4W 2.2K	C125	ECBT1H150JC5	50V 15P	C406	ECEA1CKA100B	16V 10U
R849	ERDS2TJ392T	1/4W 3.9K	C126	ECBT1H473ZF5	50V 0.047U	C407	RCEQJKA221BV	6.3V 220U
R850, 851	ERDS2TJ102	1/4W 1K	C127	ECEA1CKA220B	16V 22U	C408	ECEA1HKA2R2B	50V 2.2U
R852	ERDS2TJ392T	1/4W 3.9K	C128	ECBT1H102KB5	50V 1000P	C409	ECEA1CKA100B	16V 10U
R853	ERDS2TJ103	1/4W 10K	C129, 130	ECEA0JKA101B	6.3V 100U	C410	ECEA1CKA101B	16V 100U
R856	ERDS2TJ103	1/4W 10K	C132	ECBT1H102KB5	50V 1000P	C411	ECBT1E223ZF	25V 0.022U
R858, 859	ERDS2TJ102	1/4W 1K	C133, 134	ECBT1H270JU5	50V 27P	C412	ECEA1CKA101B	16V 100U
R860, 861	ERDS2TJ223	1/4W 22K	C135, 136	ECBT1C103KS5	16V 0.01U	C413	ECBT1H101KB5	50V 100P
R862	ERDS2TJ333	1/4W 33K	C137, 138	ECBT1H561KB5	50V 560P	C414	ECBT1H220J5	50V 22P
R864	ERDS2TJ221	1/4W 220	C139, 140	ECBT1C562KR5	16V 5600P (E)	C415	ECBT1H560J5	50V 56P
R865	ERDS2TJ104	1/4W 100K	C139, 140	ECBT1C682KR5	16V 6800P (EG)	C416	ECBA1H681KB5	50V 680P
R866	ERDS2TJ470	1/4W 47	C141-144	ECEA1HKA010B	50V 1U	C417	ECQV1H474JM3	50V 0.47U
R867	ERDS2TJ223	1/4W 22K	C145	ECBT1H220JC5	50V 22P	C418	ECEA1CKA470B	16V 47U
R871, 872	ERDS2EJ121	1/4W 120	C148	ECBT1C103NS5	16V 0.01U	C419, 420	ECQV1H104JM3	50V 0.1U

## RESISTORS AND CAPACITORS

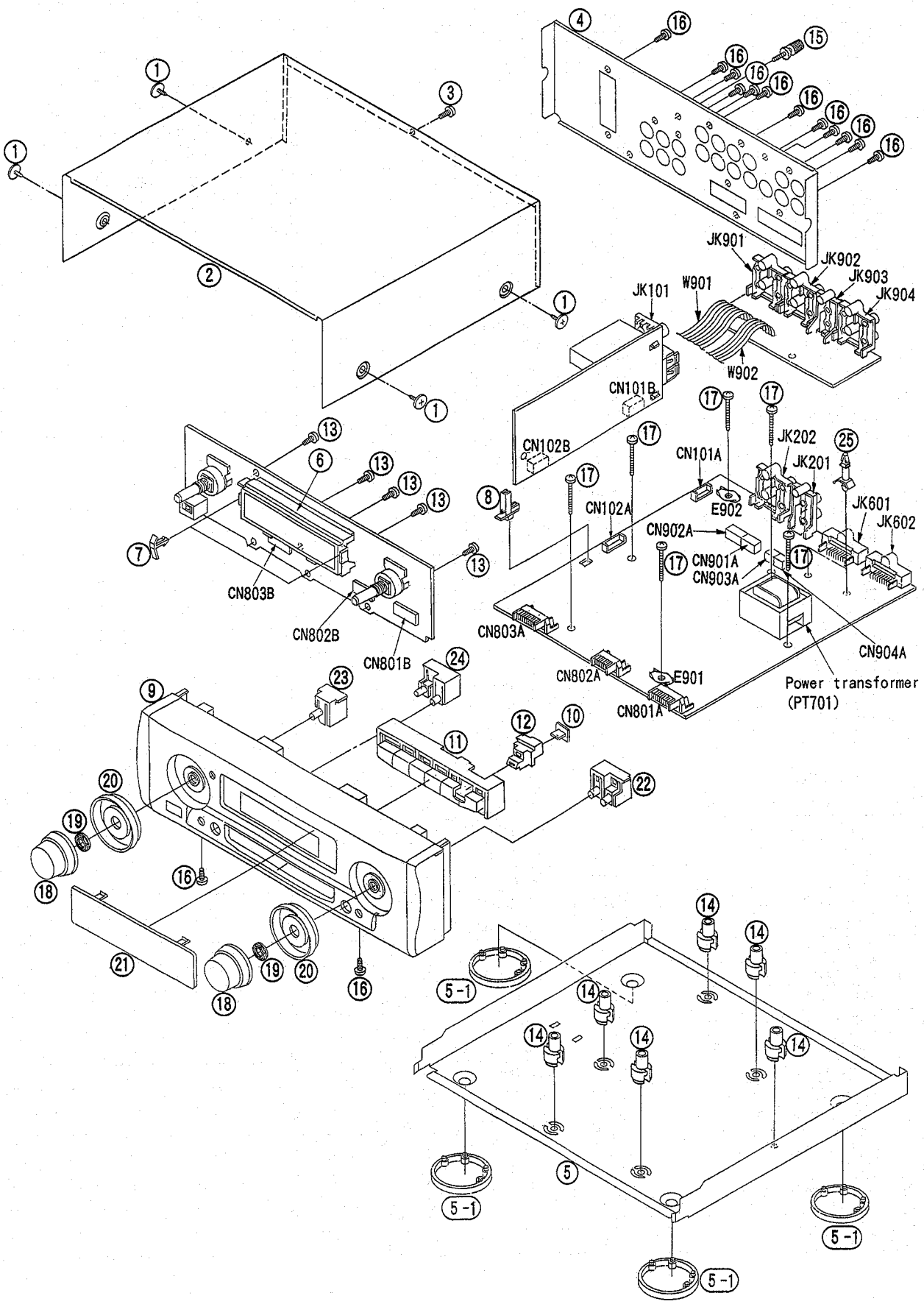
Notes : \* Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)  
\* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R194	ERDS2TJ122	1/4W 1.2K (E)	R503, 504	ERDS2TJ222	1/4W 2.2K
			R195	ERDS2TJ222	1/4W 2.2K (E)	R505, 506	ERDS2TJ682T	1/4W 6.8K
			R201, 202	ERDS2TJ102	1/4W 1K	R511, 512	ERDS2TJ223	1/4W 22K
R103	ERDS2TJ271	1/4W 270 (E)	R203, 204	ERDS2TJ473	1/4W 47K	R513, 514	ERDS2TJ222	1/4W 2.2K
R103	ERDS2TJ330	1/4W 33 (EG)	R205, 206	ERDS2TJ122	1/4W 1.2K	R515	ERDS2TJ473	1/4W 47K
R104	ERDS2TJ822	1/4W 8.2K (E)	R207, 208	ERDS2TJ224T	1/4W 220K	R516, 517	ERDS2TJ561	1/4W 560
R104	ERDS2TJ103	1/4W 10K (EG)	R209, 210	ERDS2TJ103	1/4W 10K	R518, 519	ERDS2TJ333	1/4W 33K
R105	ERDS2TJ471	1/4W 470	R211, 212	ERDS2TJ473	1/4W 47K	R522, 523	ERDS2TJ104	1/4W 100K
R106	ERDS2TJ474	1/4W 470K	R213, 214	ERDS2TJ331	1/4W 330	R524, 525	ERDS2TJ102	1/4W 1K
R107	ERDS2TJ331	1/4W 330	R215, 216	ERDS2TJ221	1/4W 220	R526, 527	ERDS2TJ334	1/4W 330K
R108	ERDS2TJ474	1/4W 470K	R217, 218	ERDS2TJ184T	1/4W 180K	R528, 529	ERDS2TJ472	1/4W 4.7K
R109	ERDS2TJ331	1/4W 330	R219, 220	ERDS2TJ123	1/4W 12K	R530	ERDS2TJ473	1/4W 47K
R110	ERDS2TJ102	1/4W 1K	R221, 222	ERDS2TJ680T	1/4W 68	R532	ERDS2TJ102	1/4W 1K
R112	ERDS2TJ104	1/4W 100K	R223, 224	ERDS2TJ102	1/4W 1K	R535	ERDS2TJ222	1/4W 2.2K
R113	ERDS2TJ103	1/4W 10K	R225, 226	ERDS2TJ563	1/4W 56K	R551, 552	ERDS2TJ4R7T	1/4W 4.7
R114	ERDS2TJ562	1/4W 5.6K	R227, 228	ERD25FJ470	1/4W 47 $\Delta$	R553	ERDS2TJ222	1/4W 2.2K
R115	ERDS2TJ561	1/4W 560	R229, 230	ERDS2TJ102	1/4W 1K	R555	ERDS2TJ222	1/4W 2.2K
R116	ERDS2TJ102	1/4W 1K	R231, 232	ERDS2TJ104	1/4W 100K	R561, 562	ERDS2TJ820	1/4W 82
R117	ERDS2TJ273	1/4W 27K (E)	R233, 234	ERDS2TJ473	1/4W 47K	R563, 564	ERDS2TJ102	1/4W 1K
R117	ERDS2TJ823	1/4W 82K (EG)	R235, 236	ERDS2TJ272T	1/4W 2.7K	R565	ERDS2TJ334	1/4W 330K
R118	ERDS2TJ562	1/4W 5.6K	R237, 238	ERDS2TJ122	1/4W 1.2K	R567	ERDS2TJ105T	1/4W 1M
R119	ERDS2TJ682T	1/4W 6.8K (E)	R239, 240	ERDS2TJ272T	1/4W 2.7K	R569	ERDS2TJ222	1/4W 2.2K
R119	ERDS2TJ822	1/4W 8.2K (EG)	R253-255	ERDS2TJ222	1/4W 2.2K	R570	ERDS2TJ472	1/4W 4.7K
R120	ERDS2TJ473	1/4W 47K	R291, 292	ERDS2TJ102	1/4W 1K	R591, 592	ERDS2TJ222	1/4W 2.2K
R121	ERDS2TJ332	1/4W 3.3K	R301, 302	ERDS2TJ104	1/4W 100K	R595, 596	ERDS2TJ471	1/4W 470
R122	ERDS2TJ272T	1/4W 2.7K	R303, 304	ERDS2TJ333	1/4W 33K	R601, 602	ERDS2TJ224T	1/4W 220K
R124	ERDS2TJ271	1/4W 270	R305	ERDS2TJ104	1/4W 100K	R603, 604	ERDS2TJ105T	1/4W 1M
R125, 126	ERDS2TJ152	1/4W 1.5K	R306	ERDS2TJ102	1/4W 1K	R607, 608	ERDS2TJ223	1/4W 22K
R127	ERDS2TJ103	1/4W 10K	R307, 308	ERDS2TJ104	1/4W 100K	R609, 610	ERDS2TJ473	1/4W 47K
R128	ERDS2TJ820	1/4W 82	R311, 312	ERDS2TJ332	1/4W 3.3K	R611, 612	ERDS2TJ392T	1/4W 3.9K
R129	ERDS2TJ473	1/4W 47K	R313-319	ERDS2TJ222	1/4W 2.2K	R613, 614	ERDS2TJ682T	1/4W 6.8K
R130	ERDS2TJ103	1/4W 10K	R320	ERDS2TJ221	1/4W 220	R617, 618	ERDS2TJ102	1/4W 1K
R132	ERDS2TJ103	1/4W 10K	R323	ERDS2TJ102	1/4W 1K	R619, 620	ERDS2TJ331	1/4W 330
R133-137	ERDS2TJ102	1/4W 1K	R333	ERDS2TJ103	1/4W 10K	R621, 622	ERDS2TJ104	1/4W 100K
R138	ERDS2TJ103	1/4W 10K	R401	ERDS2TJ102	1/4W 1K	R623, 624	ERDS2TJ222	1/4W 2.2K
R139, 140	ERDS2TJ272T	1/4W 2.7K	R402	ERDS2TJ105T	1/4W 1M	R625, 626	ERDS2TJ102	1/4W 1K
R141, 142	ERDS2TJ102	1/4W 1K	R403	ERDS2TJ333	1/4W 33K	R627, 628	ERDS2TJ104	1/4W 100K
R143, 144	ERDS2TJ222	1/4W 2.2K	R404, 405	ERDS2TJ102	1/4W 1K	R629, 630	ERDS2TJ102	1/4W 1K
R145, 146	ERDS2TJ102	1/4W 1K (E)	R406	ERDS2TJ183T	1/4W 18K	R631	ERDS2TJ472	1/4W 4.7K
R145, 146	ERDS2TJ821	1/4W 820 (EG)	R407	ERDS2TJ222	1/4W 2.2K	R632	ERDS2TJ105T	1/4W 1M
R147, 148	ERDS2TJ474	1/4W 470K	R408, 409	ERDS2TJ332	1/4W 3.3K	R633	ERDS2TJ472	1/4W 4.7K
R149	ERDS2TJ680T	1/4W 68	R411, 412	ERDS2TJ103	1/4W 10K	R634	ERDS2TJ334	1/4W 330K
R171, 172	ERDS2TJ102	1/4W 1K	R413, 414	ERDS2TJ222	1/4W 2.2K	R635-637	ERDS2TJ272T	1/4W 2.7K
R173	ERDS2TJ471	1/4W 470	R415, 416	ERDS2TJ473	1/4W 47K	R638-643	ERDS2TJ102	1/4W 1K
R175	ERDS2TJ102	1/4W 1K	R421, 422	ERDS2TJ332	1/4W 3.3K	R645-648	ERDS2TJ471	1/4W 470
R176	ERDS2TJ391	1/4W 390	R444	ERDS2TJ334	1/4W 330K	R649, 650	ERDS2TJ102	1/4W 1K
R191	ERDS2TJ103	1/4W 10K (E)	R445	ERDS2TJ103	1/4W 10K	R652	ERDS2TJ334	1/4W 330K
R192	ERDS2TJ122	1/4W 1.2K (E)	R491-493	ERDS2TJ274	1/4W 270K	R666	ERDS2TJ561	1/4W 560
R193	ERDS2TJ182	1/4W 1.8K (E)	R501, 502	ERDS2TJ473	1/4W 47K	R691, 692	ERDS2TJ332	1/4W 3.3K

1 2 3 4 5

**■ CABINET PARTS LOCATION**

A  
B  
C  
D  
E  
F  
G



Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C421	ECEA1HKAR47B	50V 0.47U	C605, 606	ECBT1E103ZF	25V 0.01U	C852	ECQV1H104JM3	50V 0.1U
C422	ECEA1VKA4R7B	35V 4.7U	C609-612	ECA1HAP3R3B	50V 3.3U	C861	ECBT1H220GC5	50V 22P
C423	ECEA1HKAR47B	50V 0.47U	C613, 614	ECBT1E103ZF	25V 0.01U	C862	ECBT1H270JU5	50V 27P
C424	ECEA1VKA4R7B	35V 4.7U	C615, 616	ECA1HAP3R3B	50V 3.3U	C872	ECBT1E103ZF	25V 0.01U
C425	ECEA1HKAR15B	50V 0.15U	C617	ECEA1CKA100B	16V 10U	C901-906	ECBT1H101KB5	50V 100P
C426	ECEA1HKA3R3B	50V 3.3U	C618	ECEA1CKA220B	16V 22U	C909, 910	ECBT1H104ZF5	50V 0.1U
C427, 428	ECQV1H154JM3	50V 0.15U	C620	ECBT1H151KB5	50V 150P	C911, 912	ECEA1CKA100B	16V 10U
C429	ECEA1HKA3R3B	50V 3.3U	C621	ECBT1H104ZF5	50V 0.1U	C913	ECBT1H102KB5	50V 1000P
C430	ECEA1HKAR15B	50V 0.15U	C622, 623	ECBT1H220J5	50V 22P	C914, 915	ECBT1H470J5	50V 47P
C431	ECEA1VKA4R7B	35V 4.7U	C624	ECBT1E103ZF	25V 0.01U	C917, 918	ECBT1H101KB5	50V 100P
C432	ECEA1HKAR47B	50V 0.47U	C625-628	ECBT1H101KB5	50V 100P			
C433	ECEA1VKA4R7B	35V 4.7U	C629	ECBT1H104ZF5	50V 0.1U			
C434	ECEA1HKAR47B	50V 0.47U	C630, 631	ECBT1H101KB5	50V 100P			
C435, 436	ECQV1H104JM3	50V 0.1U	C632	ECBT1E103ZF	25V 0.01U			
C437, 438	ECEA1HKA010B	50V 1U	C633, 634	ECBT1H101KB5	50V 100P			
C439	RCE0JKA221BV	6.3V 220U	C635	ECBT1H102KB5	50V 1000P			
C440-443	ECEA1CKA100B	16V 10U	C636-638	ECBT1H104ZF5	50V 0.1U			
C444	RCE0JKA221BV	6.3V 220U	C641	ECBT1H102KB5	50V 1000P			
C445	ECFR1E473KR	25V 0.047U	C670	ECBT1H101KB5	50V 100P			
C446	ECFR1C223MR	16V 0.022U	C691, 692	ECA1HAP100B	50V 10U			
C447, 448	ECEA1HKA3R3B	50V 3.3U	C693, 694	ECBT1H101KB5	50V 100P			
C461, 462	ECBT1E103ZF	25V 0.01U	C695, 696	ECBT1H221KB5	50V 220P			
C501, 502	ECA1HPXS3R3B	50V 3.3U	C697-699	ECBT1H101KB5	50V 100P			
C503, 504	ECBT1E103ZF	25V 0.01U	C701	ECA1VM102B	35V 1000U $\Delta$			
C505-508	ECBT1H101KB5	50V 100P	C702	ECA1VM471B	35V 470U $\Delta$			
C509	ECEA1CKA100B	16V 10U	C703, 704	ECKR1H103ZF5	50V 0.01U			
C510	ECEA1HKAR22B	50V 0.22U	C705	ECA1EM102B	25V 1000U			
C511	ECEA1HKA3R3B	50V 3.3U	C706	ECA1EM471B	25V 470U			
C512	ECEA1CKA100B	16V 10U	C707, 708	ECKR1H103ZF5	50V 0.01U			
C513	ECBT1E103ZF	25V 0.01U	C711, 712	ECA1HAP3R3B	50V 3.3U			
C514	ECEA1HKA2R2B	50V 2.2U	C713-716	ECA1CAP470B	16V 47U			
C515	ECBT1E103ZF	25V 0.01U	C717	ECBT1H104ZF5	50V 0.1U			
C516	ECEA1CKA100B	16V 10U	C718	RCE1EM471BV	25V 470U $\Delta$			
C517, 518	ECA1HPXS3R3B	50V 3.3U	C719, 720	ECBT1E103ZF	25V 0.01U			
C519	ECBT1H220J5	50V 22P	C721	ECEA1AKA101B	10V 100U			
C520	ECBT1H101KB5	50V 100P	C722	ECBT1E103ZF	25V 0.01U			
C521, 522	ECEA1HKA3R3B	50V 3.3U	C723	ECEA1HKA100B	50V 10U			
C523, 524	ECBT1E103ZF	25V 0.01U	C724, 725	ECKT1H223ZF	50V 0.022U			
C525	ECEA1CKA100B	16V 10U	C731	ECEA1VKA100B	35V 10U			
C526	ECEA1CKA330B	16V 33U	C791	RCE1HM221BV	50V 220U			
C527, 528	ECEA1HKA4R7B	50V 4.7U	C792	ECEA1CKA100B	16V 10U			
C529	ECBT1E103ZF	25V 0.01U	C801	ECEA0JU102	6.3V 1000U			
C530	ECEA1CKA100B	16V 10U	C803	ECBT1H104ZF5	50V 0.1U			
C531	ECBT1H102KB5	50V 1000P	C805	ECEA0JKA101B	6.3V 100U			
C535	ECEA1EKA470B	25V 47U	C806	ECBT1E223ZF	25V 0.022U			
C553	ECBA1H681KB5	50V 680P	C807	ECBT1H102KB5	50V 1000P			
C561	ECEA1HKA4R7B	50V 4.7U	C809	ECBT1E103ZF	25V 0.01U			
C563	ECBT1H221KB5	50V 220P	C810	ECEA1CKA100B	16V 10U			
C564	ECBT1H471KB5	50V 470P	C811	ECBT1E103ZF	25V 0.01U			
C591, 592	ECA1CPXS100B	16V 10U	C813, 814	ECEA1HKA010B	50V 1U			
C593, 594	ECBT1E103ZF	25V 0.01U	C815	ECBT1E103ZF	25V 0.01U			
C601-604	ECA1HAP3R3B	50V 3.3U	C851	ECEA1HKAR33B	50V 0.33U			

## REPLACEMENT PARTS LIST

**Notes:** \*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.) Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		11	RFKNT1080EGA	INPUT SELECT BUTTON ASS'Y	(EG)
				12	RFKNT1080EB	PANEL LIGHT BUTTON ASS'Y	(E)
				12	RFKNT1080EGB	PANEL LIGHT BUTTON ASS'Y	(EG)
1	RHD30007	SCREW		13	XTBS26+8J	SCREW	
2	RKMO203A-2K	CABINET		14	SHE185-2	P. C. B. SPACER	
3	XTB3+8JFZ	SCREW		15	SNE2123	SCREW	
4	RGR0194B-A2	REAR PANEL	(E)	16	XTBS3+8JFZ1	SCREW	
4	RGR0194B-B	REAR PANEL	(EG)	17	XTB3+16JFZ	SCREW	
5	RFKJSCH404EK	BOTTOM BOARD ASS'Y		18	RGW0206-K	VOLUME KNOB	
5-1	RKA0011-3	FOOT		19	RHN90001	NUT	
6	RMNO194	FL HOLDER		20	RGK0644-S	VOLUME ORNAMENT	
7	RMNO195	FL SPACER		21	RKWO342-V	FL PANEL	
8	RMNO203	P. C. B. HOLDER		22	RFKNT1060EC	REC/PLAY TIMER BUTTON ASS'Y	
9	RFKGTCA1080E	FRONT PANEL ASS'Y		23	RFKNT1060ED	SET BUTTON ASS'Y	
10	RGLO237-Q	PANEL LIGHT		24	RFKNT1060EE	CLOCK/TUN. MODE BUTTON ASS'Y	
11	RFKNT1080EA	INPUT SELECT BUTTON ASS'Y	(E)	25	RMRO439	LOCKING SUPPORT	

## ■ About the Self-Diagnostic Mode

This system 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 system.

### Display method

#### To display the malfunction code

U-70 ..... Automatically displays on the tuner/sound processor and the CD player when a malfunction occurs.

F-61 ..... Automatically displays on the tuner/sound processor when a malfunction occurs.

#### To return to the normal display

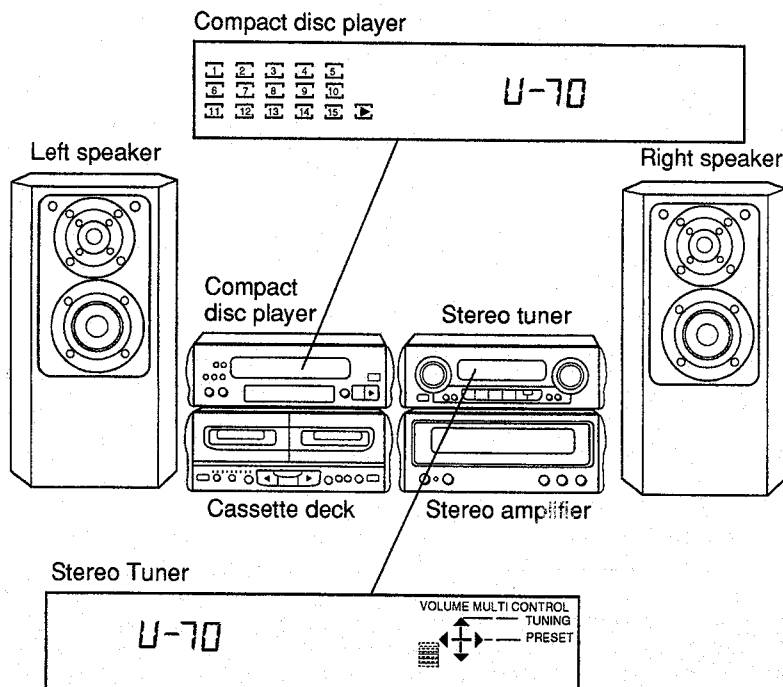
##### 1. For U-70:

- Press and operation button (any button other than the OPEN/CLOSE button) on the unit (tuner/sound processor or CD player) which displayed "U-70".
- To re-display the code, switch the power off (POWER STANDBY button), and then switch power back on again.

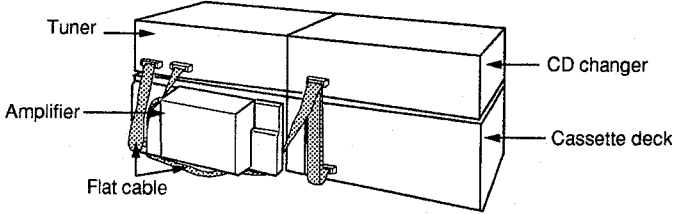
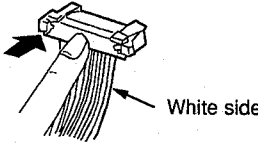
##### 2. For F-61:

- If "F-61" displayed, the power will automatically be switched off and the standby indicator will light up.
- "F-61" will be displayed for 3 seconds, and then the clock will be displayed.
- To re-display the code, switch the power on. "F-61" will be re-displayed, and then after 3 seconds the clock will be displayed and the power will automatically switch off.

### Display location



## Display contents

Display code	Problem or condition	Correction procedure
<p><b>U-70</b> (displayed automatically)</p>	<p>A bus-line communications error has occurred as a result of the flat cables being inserted incorrectly, thus preventing the system from operating.</p> <ol style="list-style-type: none"> <li>1. If "U-70" is displayed on the tuner/sound processor, the tape deck cannot be operated by remote control.</li> <li>2. If "U-70" is displayed on the CD player, the CD player cannot be operated by remote control.</li> </ol>	<div style="text-align: center;">  </div> <ol style="list-style-type: none"> <li>1. To check for correct insertion of the flat cables       <ol style="list-style-type: none"> <li>① Match each connector with the color (black/white) of the connection port and insert until you hear a click.</li> <li>② Insert the flat cables at the back of the unit in the order indicated. Make sure the white side of the cable is on the right.</li> </ol> </li> <li>2. Failure of flat cable (Check and replace as necessary.)</li> <li>3. If the problem is not corrected by items (1.) and (2.) above, this indicates a faulty IC.</li> </ol> <p><b>Compact disc player:</b>            IC601 (M38112M4102F)            IC602 (LA5608M-TE-L)            Check these IC's and replace as necessary.</p> <div style="text-align: center;">  </div>
<p><b>F-61</b></p>	<p>When the power switch is switched on, it automatically switches back off, marking it impossible to switch power on.</p>	<ol style="list-style-type: none"> <li>1. Faulty amplifier output IC (IC501).</li> <li>2. Fan motor is burnt out, locked, or stopped.</li> <li>3. Speaker cable shorts.</li> </ol> <p>Replace the output IC, fan motor or speaker cable as necessary.</p>