

TA-V77

SERVICE MANUAL

US Model
 Canadian Model
 AEP Model
 UK Model
 E Model



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

(US, Canadian model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
 With 8 ohm loads, both channels driven, from 20 – 20,000Hz;
 rated 55 watts per channel minimum RMS power, with no more
 than 0.08% total harmonic distortion from 250 milliwatts to
 rated output.

Amplifier section

Continuous RMS power output

(both channels driven simultaneously)
 At 1 kHz
 80 + 80 watts (10% THD, 6 ohms)
 (AEP, UK, E model)
 55 + 55 watts (0.08% THD, 6 ohms)
 At 40 Hz – 20 kHz, 0.08% THD
 50 + 50 watts (6 ohms)

Power bandwidth (IHF)

10 Hz – 40 kHz

Dynamic headroom

2.1 dB (*78 IHF)

Harmonic distortion

Less than 0.08% at rated output

Intermodulation (IM) distortion

(60 Hz : 7 kHz = 4 : 1) Less than 0.08% at rated output

Frequency response

PHONO : RIAA equalization curve ± 0.5 dB

TUNER	} 10 Hz – 50 kHz $\begin{matrix} +0 \\ -2 \end{matrix}$ dB
CD	
AUX	
TAPE	

MIC : 100 Hz – 10 kHz ± 5 dB

VIDEO : 10 Hz – 50 kHz $\begin{matrix} +0 \\ -2 \end{matrix}$ dB

Residual noise Less than 100 μ V (6 ohms, network A)

Damping factor 25 (6 ohms, 1 kHz)

Inputs

	Sensitivity	Impedance	Maximum input capability (1 kHz)	S/N (weighting network, input level)
PHONO	2.5 mV	50 k Ω	100 mV	73 dB 75 dB* (A, 2.5 mV)
TUNER	150 mV	50 k Ω	—	98 dB
CD				80 dB* (A, 150 mV)
AUX				
TAPE				
VIDEO1,2 (audio)				
MIC	2 mV	50k Ω	—	70 dB 70 dB* (A, 2 mV)

* '78 IHF

— Continued on Page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE \triangle SUR LES DIAGRAMMES SCHEMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

INTEGRATED STEREO AMPLIFIER

SONY®



TA-V77

Outputs
 REC OUT 1,2, VIDEO 1 (audio)
 Voltage 150 mV
 Impedance 4.7 k ohms
 SPEAKER A, B
 Accepts speakers of 6 - 16 ohms.
 HEADPHONES
 Accepts low and high impedance headphones.
 VIDEO 1 (video), MONITOR
 Voltage 1 Vp-p
 Impedance 75 ohms

Graphic equalizer
 Center frequencies : 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz

General System
 Pre-amplifier section : low-noise IC NF type equalizer amp
 Power amplifier section : pure-complementary SEPP OCL power amplifier with all stages direct coupled

Power requirements
 US, Canadian model: 120 V ac, 60 Hz
 AEP model: 220 V ac (or 240 V ac adjustable by authorized Sony personnel), 50/60 Hz
 UK model: 240 V ac (or 220 V ac adjustable by Sony personnel), 50 Hz
 E model: 120, 220, or 240 V ac adjustable, 50/60 Hz

Power consumption
 US model. 100 W
 Canadian model: 160 W
 AEP, E model: 130 W
 UK model. 110 W

AC outlets
 US, Canadian, AEP, E model: 1 unswitched, 100 watts max.
 UK model: 1 switched, 100 watts max.

Dimensions
 Approx. 355 x 130 x 245 mm (w/h/d)
 (14 x 5 1/8 x 9 3/4 inches)
 including projecting parts and controls

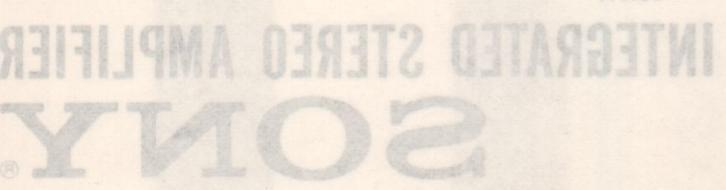
Weight
 Approx. 6.2 kg (13 lb 11 oz) net
 Approx. 6.6 kg (14 lb 9 oz) in shipping carton

0 dB = 0.775 V

FEATURES

- With the TA-V77, an amplifier for the AV (Audio-Video) era, recording/playback of hi-fi video is possible, in addition to the usual audio sources.
- One pair of recording playback jacks for video and one playback jack each on front and rear panels. Monitor jack provided.
 - With the optional Sony ST-V77/V77L system control tuner, remote control operation of the whole audio system and direct function* are possible.
 - 9-band graphic equalizer for fine adjustment of tone quality.
 - Built-in 9-band spectrum analyzer.
 - Wake-up volume feature, with which timer-activated play at a preset volume level is possible.
 - Microphone mixing jack.
 - Easy-to-read volume level indicator.

*With direct function, the amplifier operation mode can be changed automatically by simply pressing the operation key of the required equipment. For example, when you want to switch from an FM program to a record, press the START/STOP key of the turntable system. The operation mode of the amplifier is automatically set to PHONO and record play starts.



SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
 Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

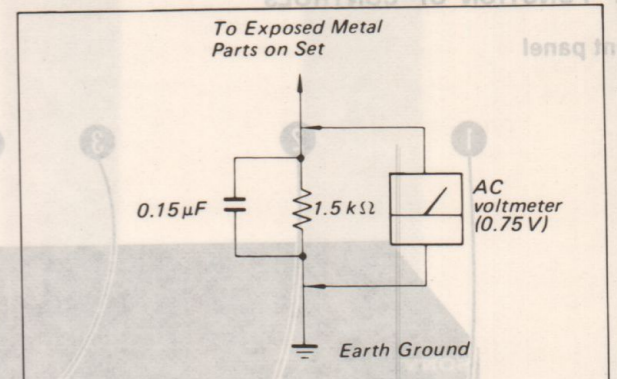
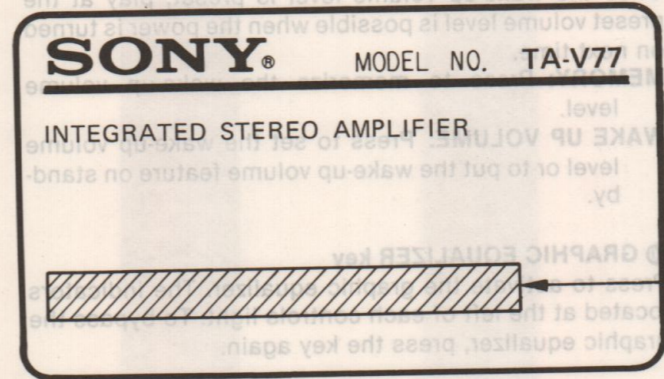


Fig. A. Using an AC voltmeter to check AC leakage.

SERVICING NOTE
 When repairing this set, be sure to remove the connector that connected with remote control terminal.

- MODEL IDENTIFICATION -
 (Specification Label)

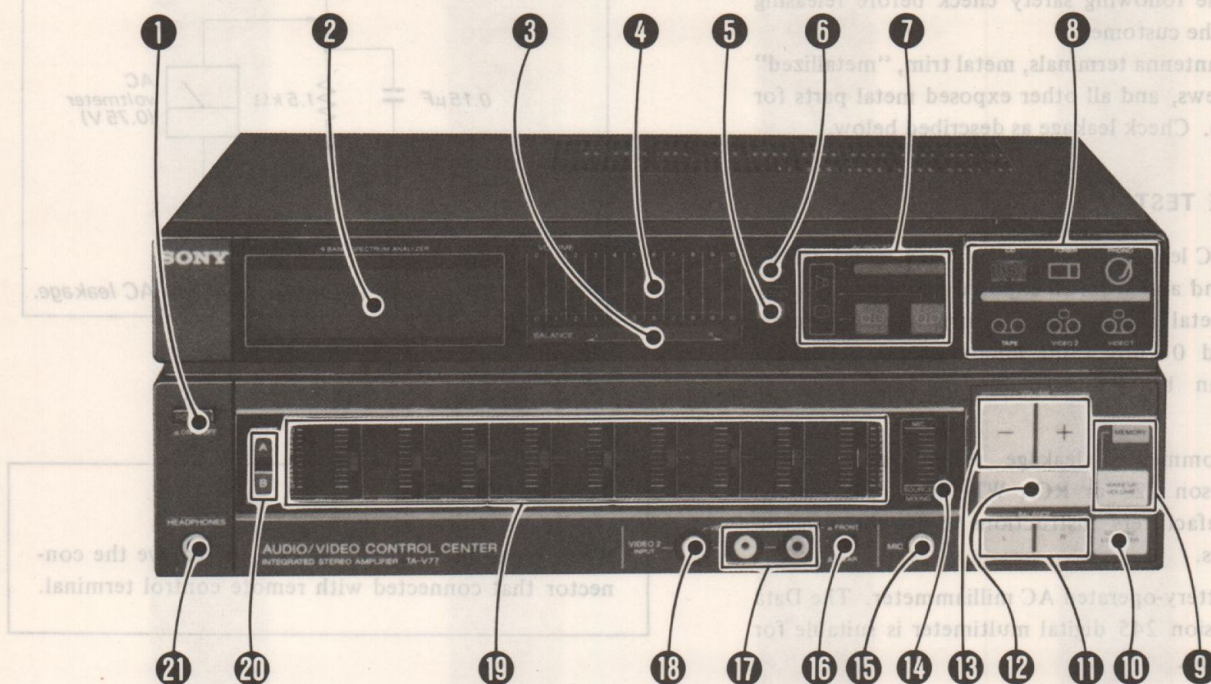


- US model: AC 120V 60Hz 100W
- Canadian model: AC 120V 60Hz 160W
- AEP, G-AEP model: AC 220V ~ 50/60Hz 130W
- UK model: AC 240V ~ 50/60Hz 110W
- E model: AC 120/220/240V ~ 50/60Hz 130W

SECTION 1 OUTLINE

1-1. FUNCTION OF CONTROLS

Front panel



① POWER switch

Press this switch to turn on the power (ON). Press again to turn off the power (OFF). When the power is supplied, the AUDIO SOURCE indicator and either the VIDEO 1 or VIDEO 2 indicator, whichever was selected previously, of the AV INDICATOR light and the TUNER input is automatically selected.

② 9-BAND SPECTRUM ANALYZER

This indicates the right and left input level with the same frequency division of the built-in graphic equalizer.

③ BALANCE indicator

When the L or R side of the BALANCE control keys is kept pressed, the bar moves in the corresponding direction. The movement of the bar is not proportional to the number of times the BALANCE key is pressed.

④ VOLUME indicator

This indicates the output volume level. As the indication moves towards the top right, the volume level increases. When the power is turned on, the volume level set last flickers and goes off once. Then the volume indication gradually increases to the last preset level.

⑤ MUTING indicator

This indicator lights when the MUTING key is pressed.

⑥ WAKE UP VOLUME indicator

This indicator flickers when the MEMORY key is pressed and the wake-up volume is memorized. When the indicator lights, the wake up volume feature stands by.

⑦ AV INDICATOR

This indicates the signal flow of the audio and video sources.

⑧ FUNCTION keys

Press the appropriate key to select the input signal source. The built-in indicator lights.

⑨ WAKE UP VOLUME key and MEMORY key

Once the wake-up volume level is preset, play at the preset volume level is possible when the power is turned on next time.

MEMORY: Press to memorize the wake-up volume level.

WAKE UP VOLUME: Press to set the wake-up volume level or to put the wake-up volume feature on stand-by.

⑩ GRAPHIC EQUALIZER key

Press to activate the graphic equalizer. The indicators located at the left of each controls light. To bypass the graphic equalizer, press the key again.

11 BALANCE control keys

Press to govern the amount of sound coming from each speaker or headphones, for optimum stereo effect.

12 MUTING key

Press to decrease the sound level temporarily. Press again to resume the original sound level. When this key is pressed, the MUTING indicator lights. The VOLUME indicator illumination does not change.

13 VOLUME control keys

Press the + side to increase the volume level. Press the - side to decrease the volume level. When the power is supplied, the volume level gradually increases to the level which was set previously.

14 MIC MIXING control

This adjusts the balance between the volume of the microphone and the program source. Slide the control towards MIC for increased microphone volume. Slide the control towards SOURCE for increased source volume. When microphone mixing is not done, slide this control fully down to SOURCE.

15 MIC jack

For connecting a microphone used for microphone mixing.

16 Video selector switch

This selects the source connected to the VIDEO 2 IN jacks on the rear panel or VIDEO 2 INPUT jacks on the front panel.

▢ FRONT: To select the source connected to the VIDEO 2 INPUT jacks on the front panel.

▢ REAR: To select the source connected to the VIDEO 2 IN jacks on the rear panel.

17 VIDEO 2 AUDIO INPUT jacks

Connect the audio output of a second video recorder, microcomputer, etc. to these jacks. For audio tape dubbing, use these jacks for connection of a playback tape deck.

18 VIDEO 2 VIDEO INPUT jack

Connect the video output of a second video recorder, microcomputer, etc. to this jack.

19 Graphic equalizer controls and indicators

Slide the controls of the frequency band upwards (+10) or downwards (-10) to equalize the sound of the program source selected with the FUNCTION key.

20 SPEAKERS selectors

Depress to select speaker system A, B or both.

21 HEADPHONES jack

Accepts all low or high impedance stereo headphones.

22 Ground terminal (⏏)

To prevent hum, be sure to connect the ground wire of the turntable system to this ground terminal. If hum persists, it may be helpful to connect the ground terminal directly to earth via a ground rod.

23 PHONO input jacks

Accept the output of a turntable system.

24 CD (Compact Disc) input jacks

Accept the output of a compact disc player.

25 TAPE RECORDER REC OUT 1 jacks

Accept the input of a double cassette deck for recording. When using a double cassette deck other than a Sony model, connect the deck to TAPE RECORDER REC OUT 2 jacks.

26 TAPE RECORDER TAPE input jacks

Accept the output of a tape deck for playback.

27 TAPE RECORDER REC OUT 2 jacks

Accept the input of a normal cassette deck or double cassette deck other than a Sony model for recording.

28 TUNER input jacks

Accept the output of a tuner.

29 R REMOTE OUT (remote control output) connector

Connect to the R REMOTE IN connector of other Sony equipment (PS-LX550, PS-FL770 etc.) with the supplied 4-pin remote control cord for whole audio system remote control.

30 R REMOTE IN (remote control input) connector

Use this connector to remotely control the whole audio system with the ST-V77/V77L system control tuner. For details, refer to the operating instructions of the ST-V77/V77L.

31 MONITOR VIDEO OUT jack

Connect to the VIDEO IN jack of a color monitor.

32 VIDEO 1 VIDEO OUT jack

Connect to the VIDEO IN jack of a video recorder for recording.

33 VIDEO 1 VIDEO IN jack

Connect to the VIDEO OUT jack of a video recorder for playback.

34 VIDEO 2 VIDEO IN jack

Connect to the VIDEO OUT jack of the second video recorder, etc.

35 SPEAKERS A and B connectors

For connecting one or two pairs of speaker systems. Either A or B or both can be selected by means of the front panel SPEAKERS selectors.

36 AC OUTLET

This is used to power other audio components whose total power consumption is less than 100 watts.

UNSWITCHED (US, Canadian, AEP, E model): This outlet is not controlled by the POWER switch setting on the front panel.

SWITCHED (UK model): This outlet is controlled by the POWER switch setting on the front panel.

Do not connect any electrical home appliance such as an electric iron, fan, TV or other high-wattage equipment to this ac outlet.

For customers of the E model supplied with plug adaptor: If necessary, use the plug adaptor to connect the amplifier to an ac outlet in the house. However, when making connections between Sony components, the adaptor is not needed.

37 Power cord

Connect to a wall outlet. For whole audio system remote control, connect to the SWITCHED AC OUTLET of the optional Sony ST-V77/V77L system control tuner.

38 VIDEO 2 AUDIO IN jacks

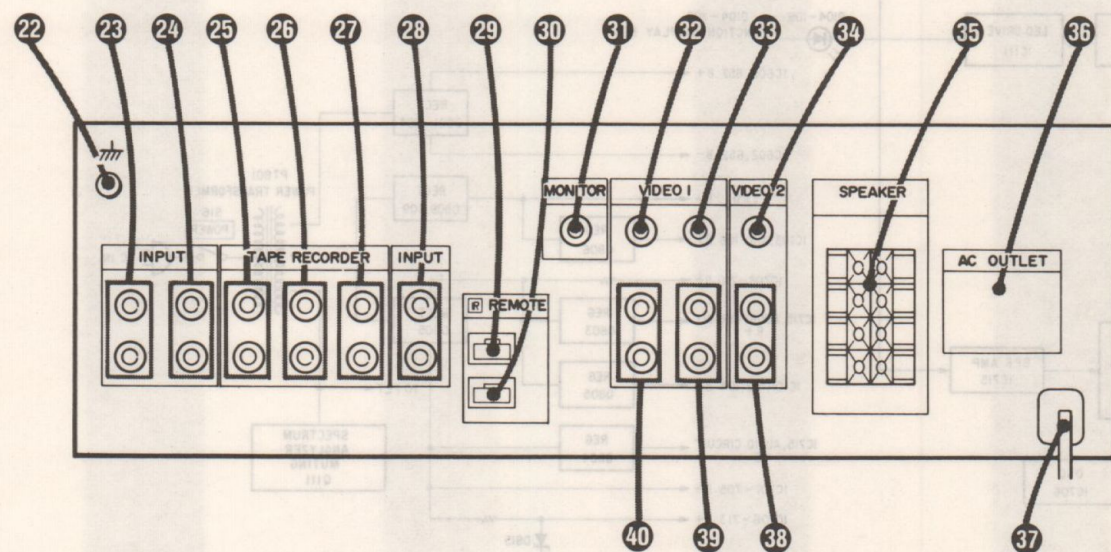
Connect to the AUDIO OUT jacks of the second video recorder, etc.

39 VIDEO 1 AUDIO IN jacks

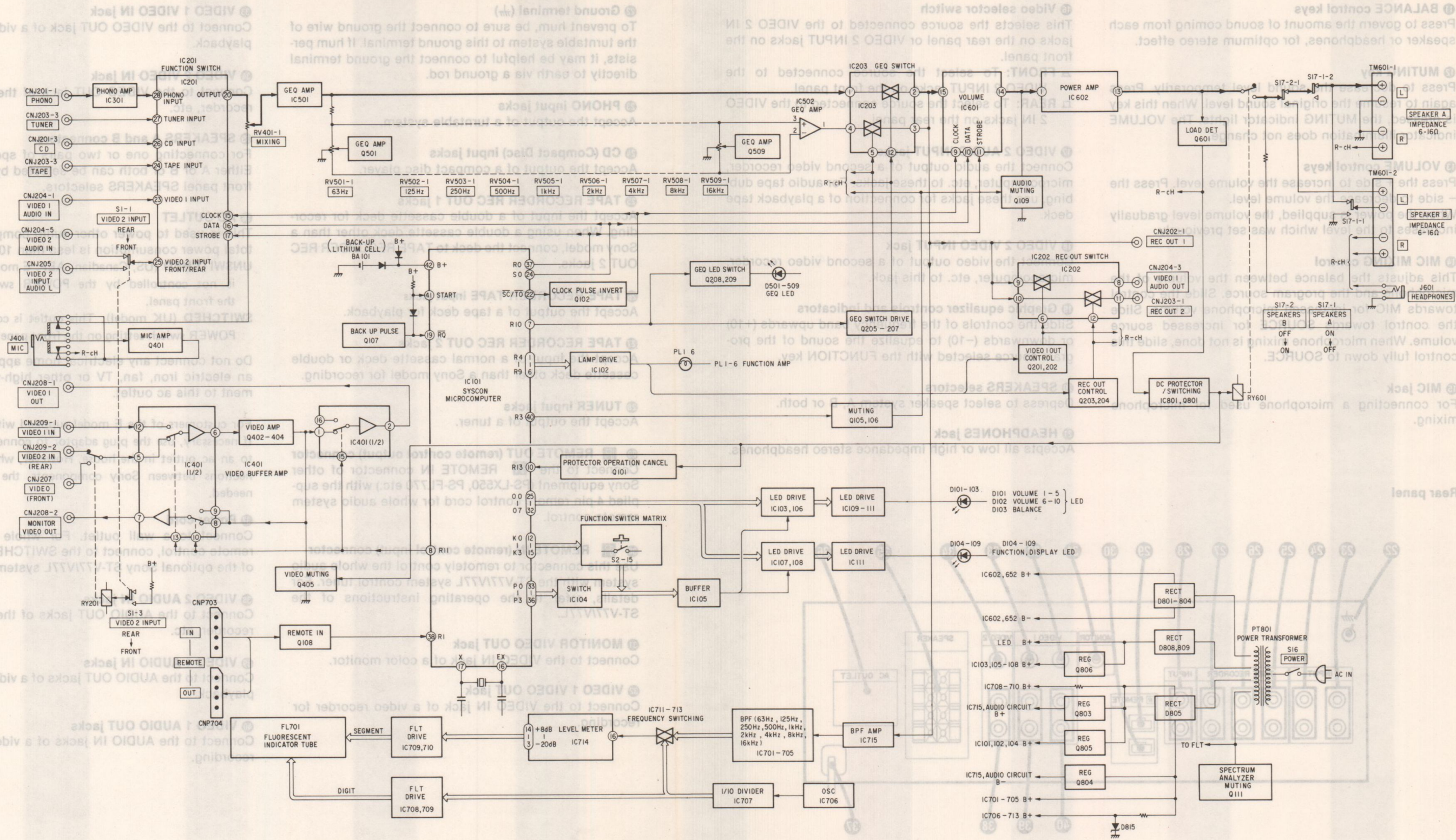
Connect to the AUDIO OUT jacks of a video recorder for playback.

40 VIDEO 1 AUDIO OUT jacks

Connect to the AUDIO IN jacks of a video recorder for recording.

Rear panel

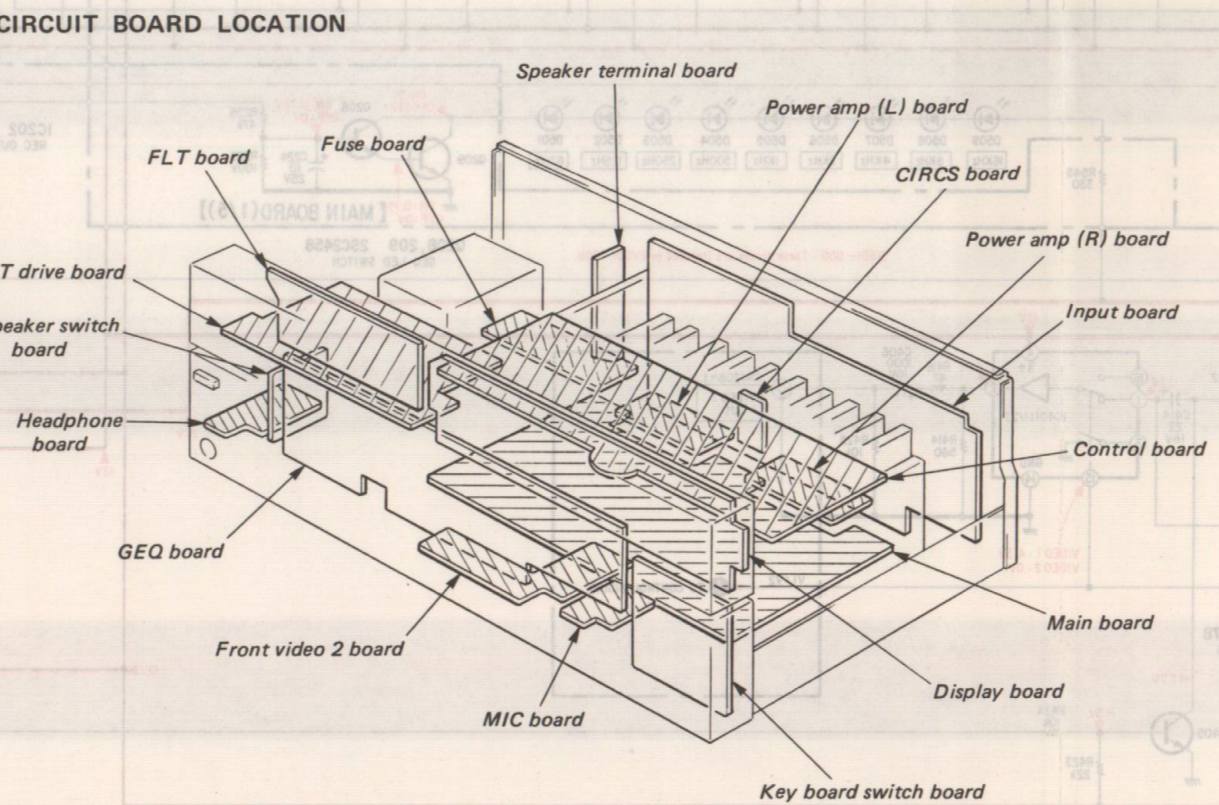
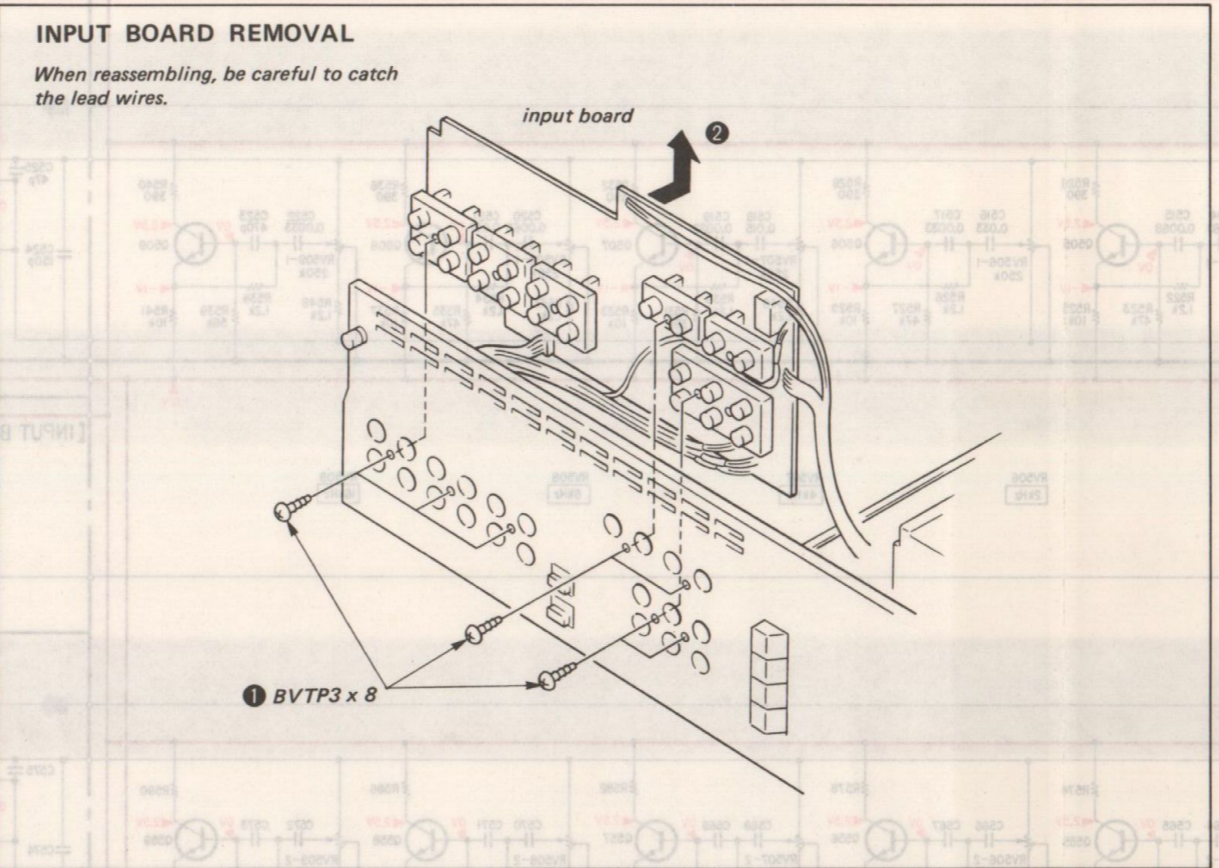
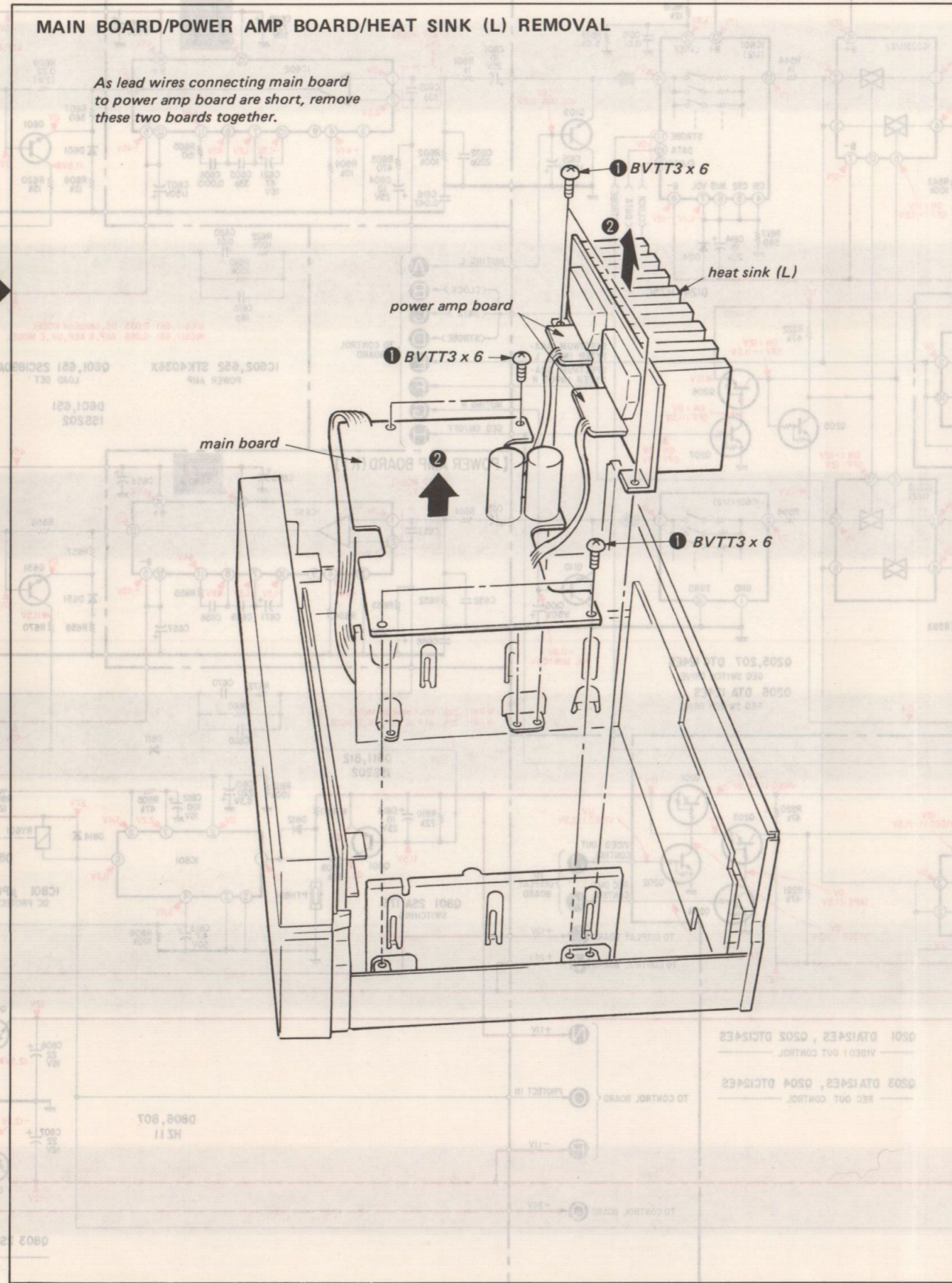
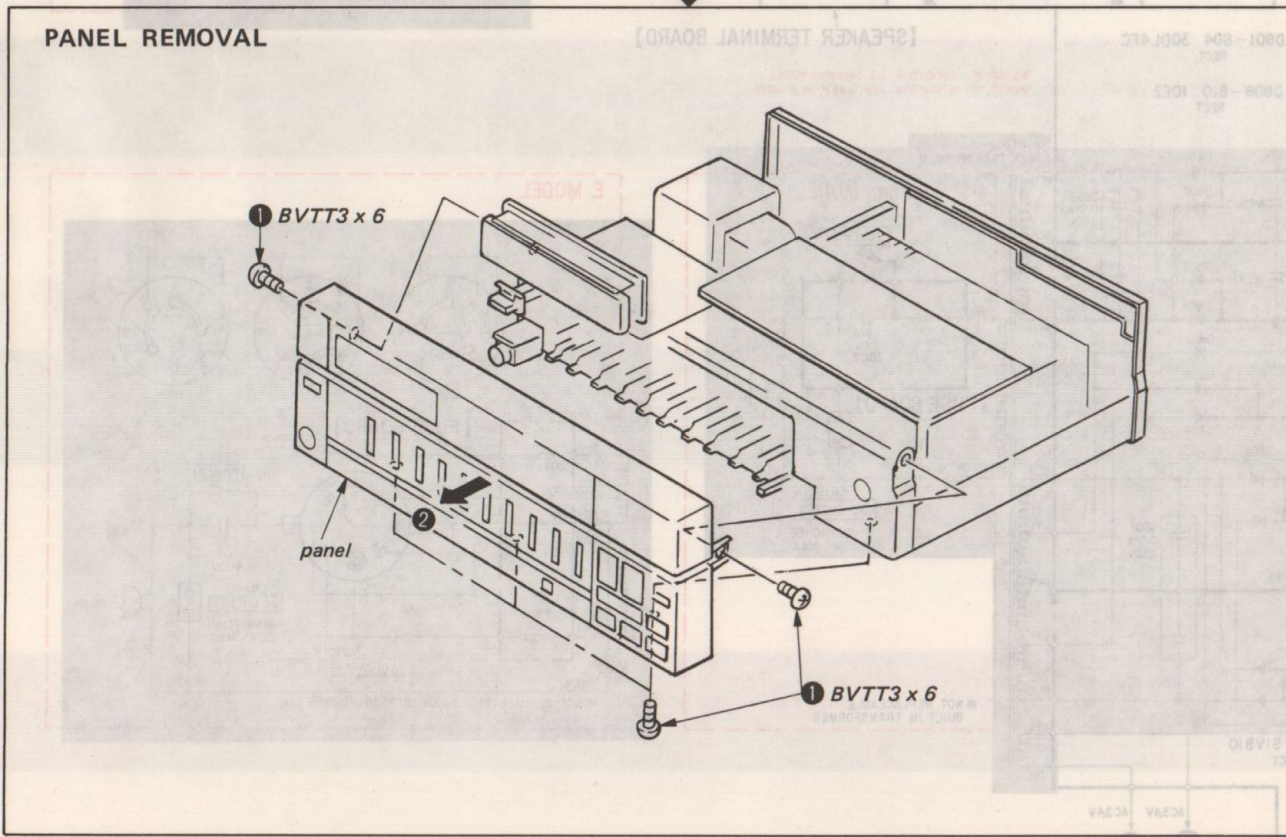
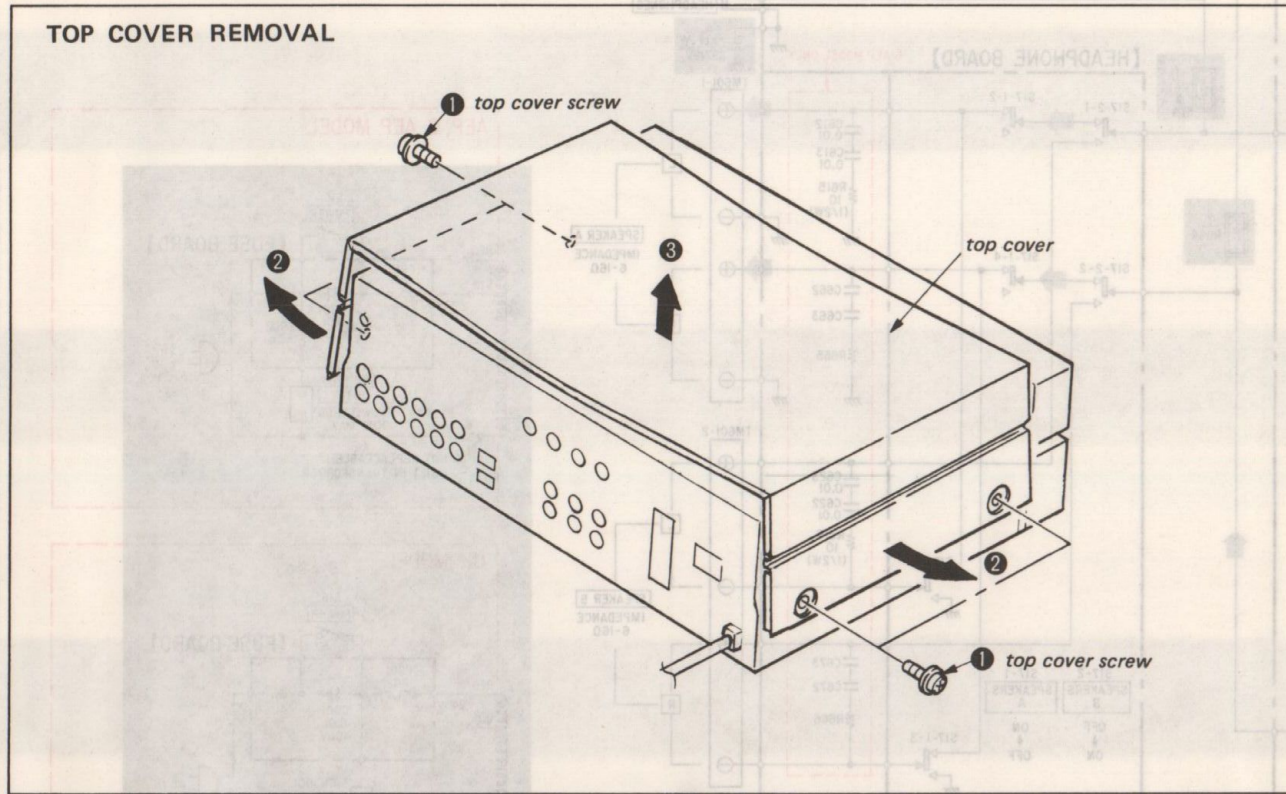
1-2. BLOCK DIAGRAM



SECTION 2
DISASSEMBLY

MEMO

Note: Follow the disassembly procedure in the numerical order given.

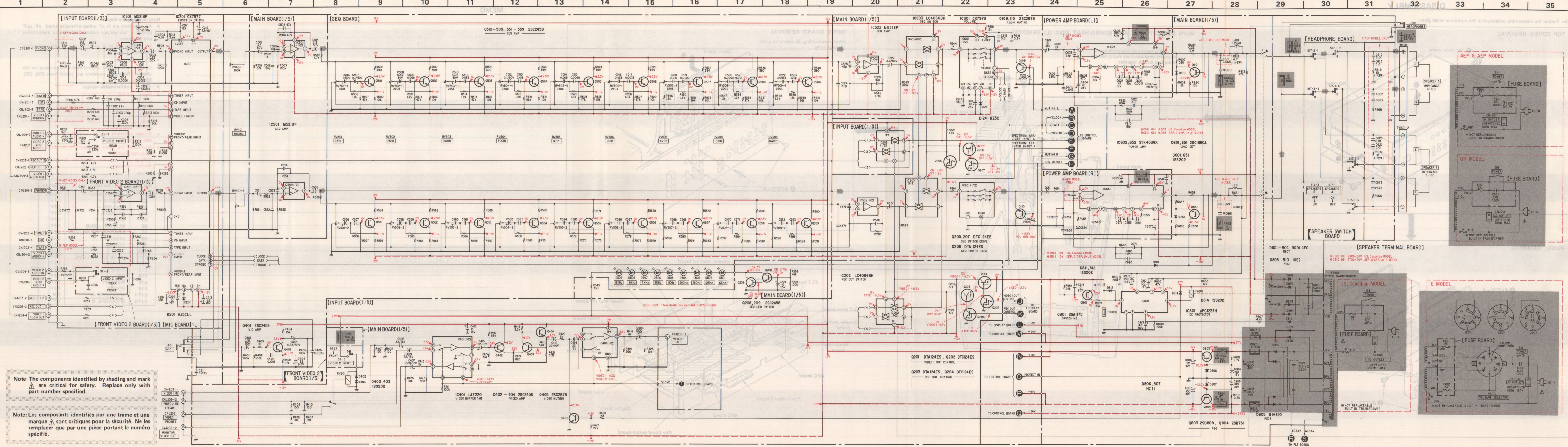


- Note on schematic diagram:**
- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - ☞ : signal path.
 - Components for right channel have same values as for left channel. Reference numbers are coded from 250, 350, 550, 650.
 - : nonflammable resistor.
 - : B+ bus.
 - : B- bus.
 - Voltagages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no-signal conditions with a VOM (50k Ω /V).
 - Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken to ground in no signal mode by using oscilloscope.
 - Voltage variations may be noted due to normal production tolerances.
 - Switch

Ref. No.	Switch	Position
S1	VIDEO 2 INPUT	REAR
S2	VOLUME +	OFF
S3	VOLUME -	OFF
S4	BALANCE L	OFF
S5	BALANCE R	OFF
S6	MUTING -20dB	OFF
S7	GRAPHIC EQUALIZER	OFF
S8	VIDEO 1	OFF
S9	VIDEO 2	OFF
S10	TAPE	OFF
S11	WAKE UP VOLUME	OFF
S12	PHONO	OFF
S13	TUNER	OFF
S14	CD	OFF
S15	MEMORY	OFF
S16	POWER	OFF
S17.1	SPEAKERS A	ON
S17.2	SPEAKERS B	OFF

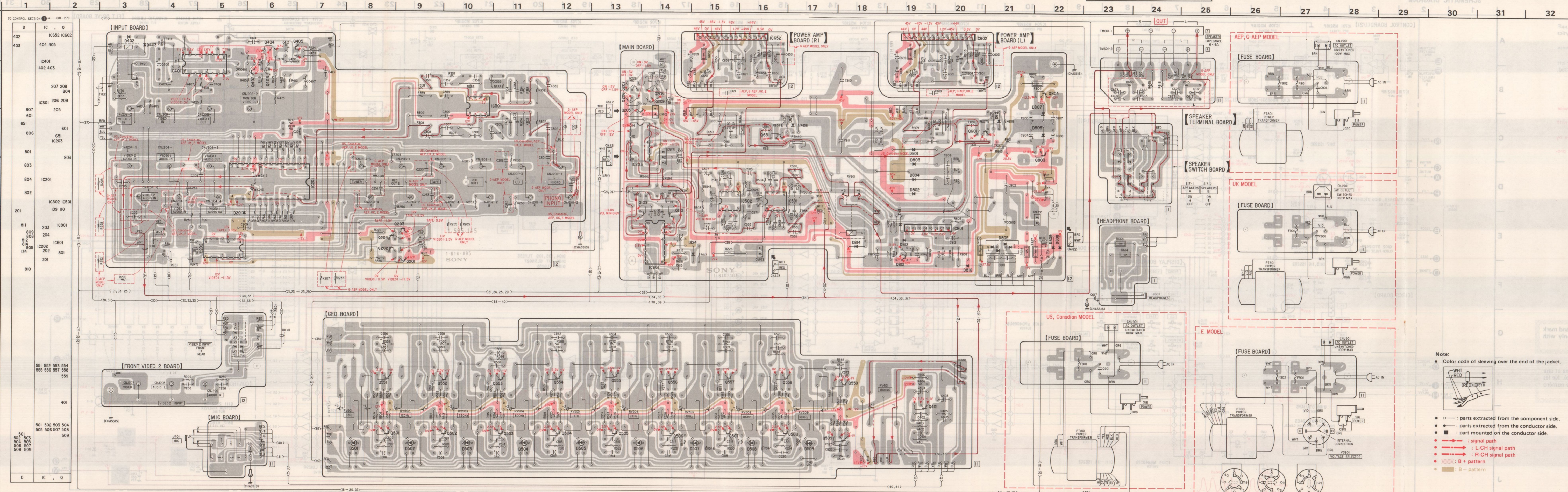
Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une lettre Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



• Semiconductor Lead Layouts

A	CX7977 [Top view]	2SA1048-GR DTA124ES DTC124ES [Top view]
B	CX7978 LA7220 16181413121110 8 UNSWITCHED 100W MAX [Top view]	2SC2785 letter side [Top view]
C	LC4066BH 1413121110 8 [Top view]	10E2 cathode [Top view]
D	M-5218 [Top view]	30DL4 anode [Top view]
E	STK4036X mark 12 n	1SS202-1 cathode [Top view]
F	μPC1237H [Top view]	1SS202-1 anode [Top view]
G	2SB731 2SD809-K letter side	HZ11C3L RDS.1E cathode [Top view]
H	2SC1890A 2SC2878-B [Top view]	S1VB20 [Top view]
I		
J		

Note:
 • Color code of sleeving over the end of the jacket.
 [Diagram showing WHT, RED, and RED(NGRY) sleeves]

• —○— : parts extracted from the component side.
 • —●— : parts extracted from the conductor side.
 ■ : part mounted on the conductor side.

• — : signal path
 • — : L-CH signal path
 • — : R-CH signal path
 • — : B+ pattern
 • — : B- pattern

3-3. CONTROL SECTION SCHEMATIC DIAGRAM

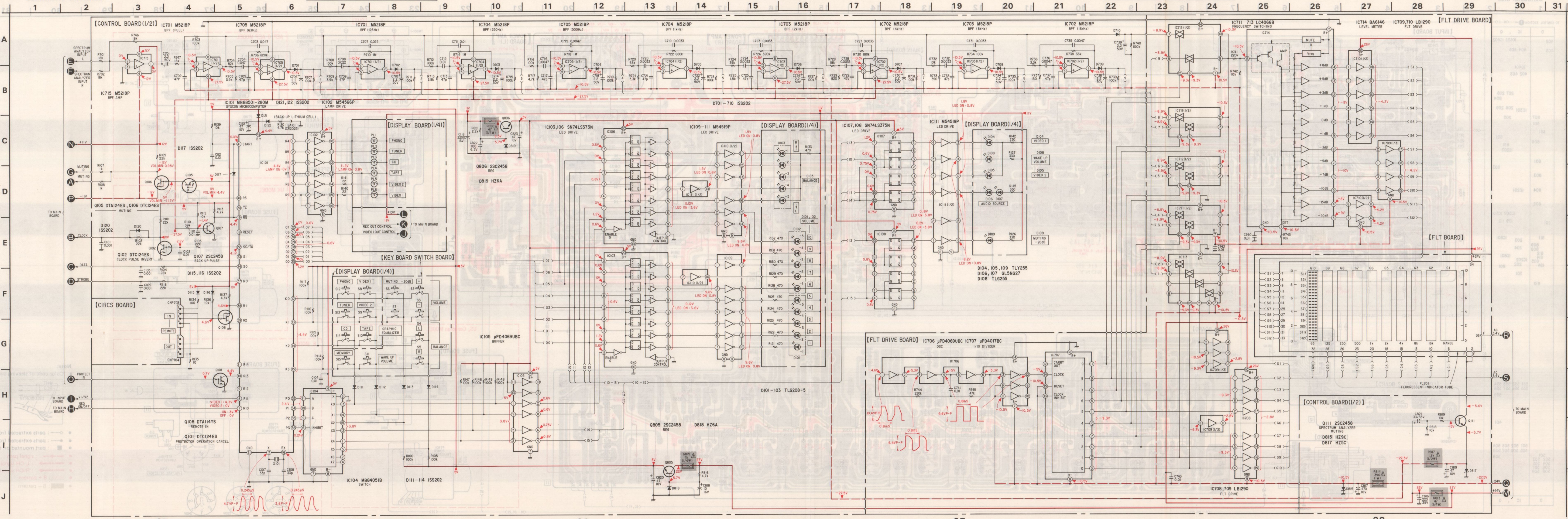
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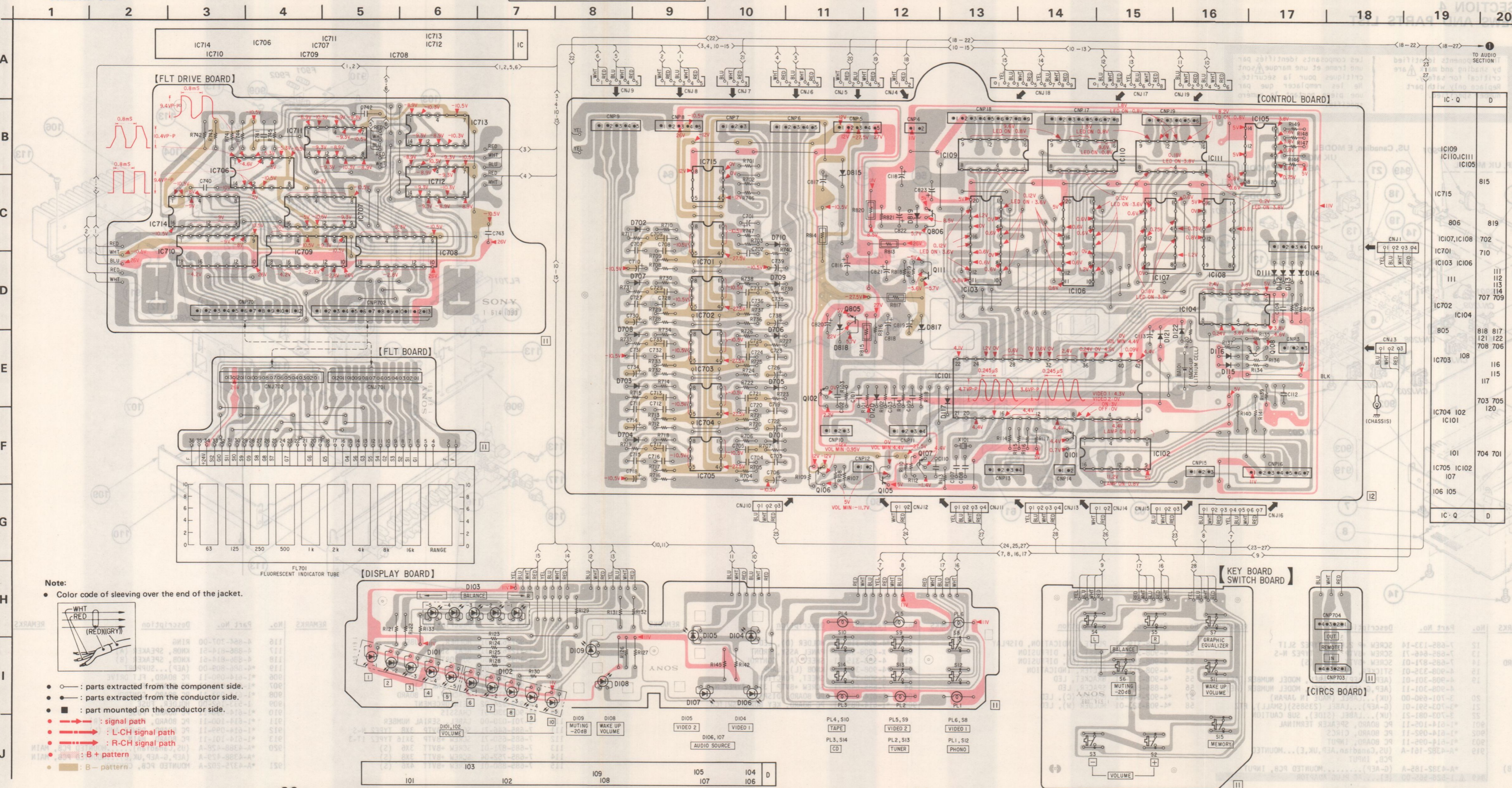
• Switch

Ref. No.	Switch	Position
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S3	VOLUME -	OFF
S4	BALANCE L	OFF
S5	BALANCE R	OFF
S6	MUTING -20dB	OFF
S7	GRAPHIC EQUALIZER	OFF
S8	VIDEO 1	OFF
S9	VIDEO 2	OFF
S10	TAPE	OFF
S11	WAKE UP VOLUME	OFF
S12	PHONO	OFF
S13	TUNER	OFF
S14	CD	OFF
S15	MEMORY	OFF
S16	POWER	OFF
S17-1	SPEAKERS A	ON
S17-2	SPEAKERS B	OFF

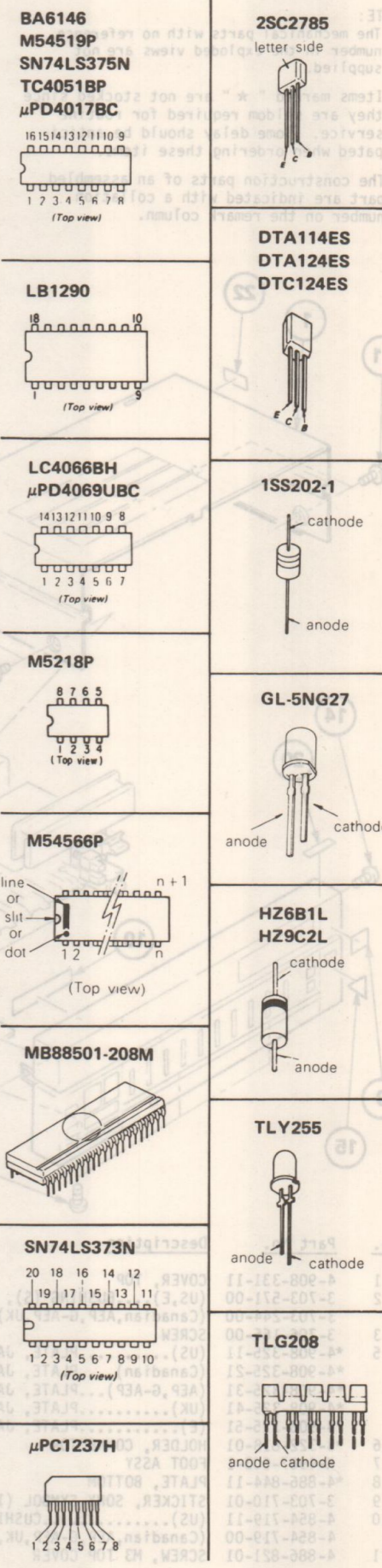
Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

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• Semiconductor Lead Layouts

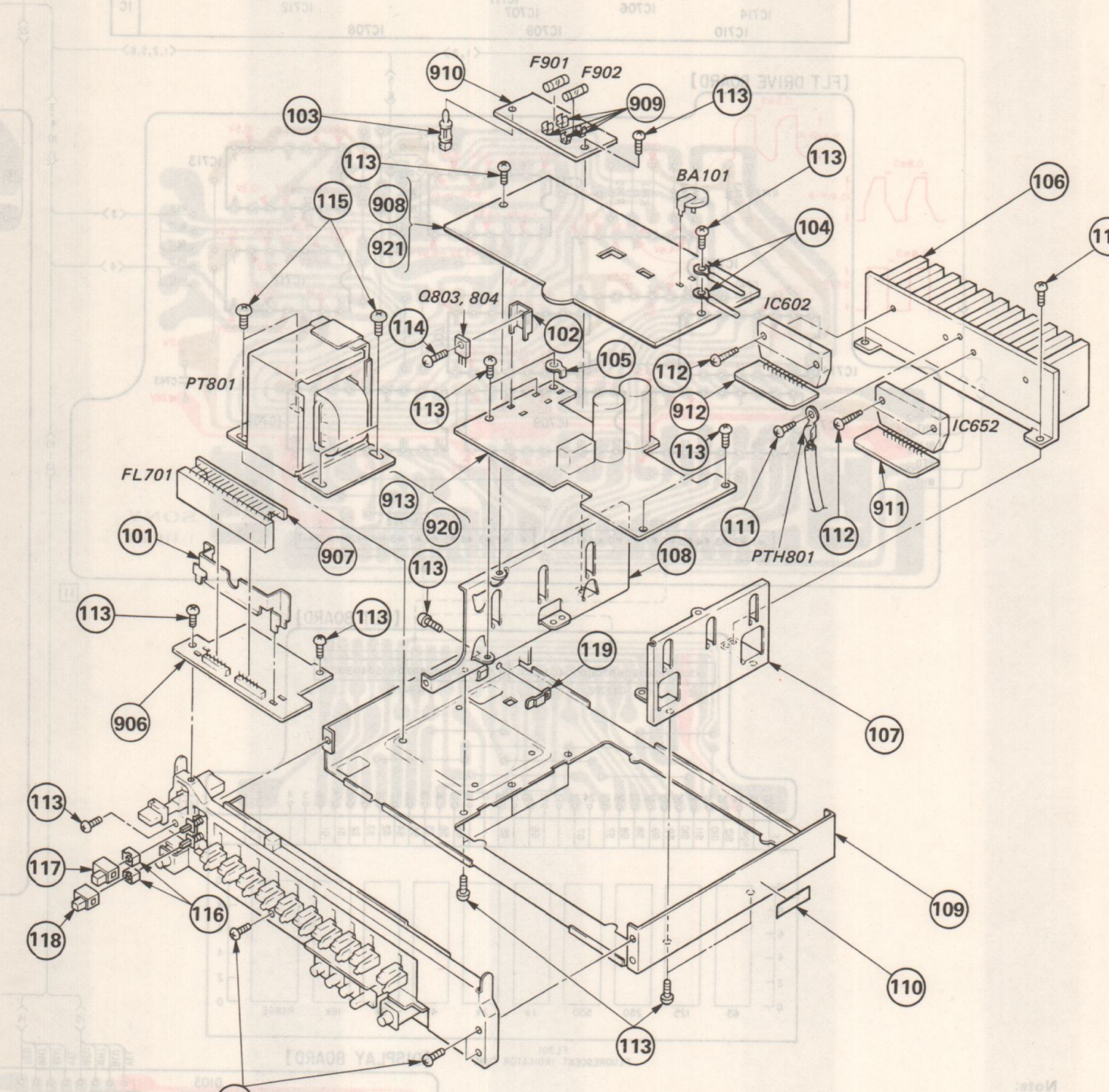
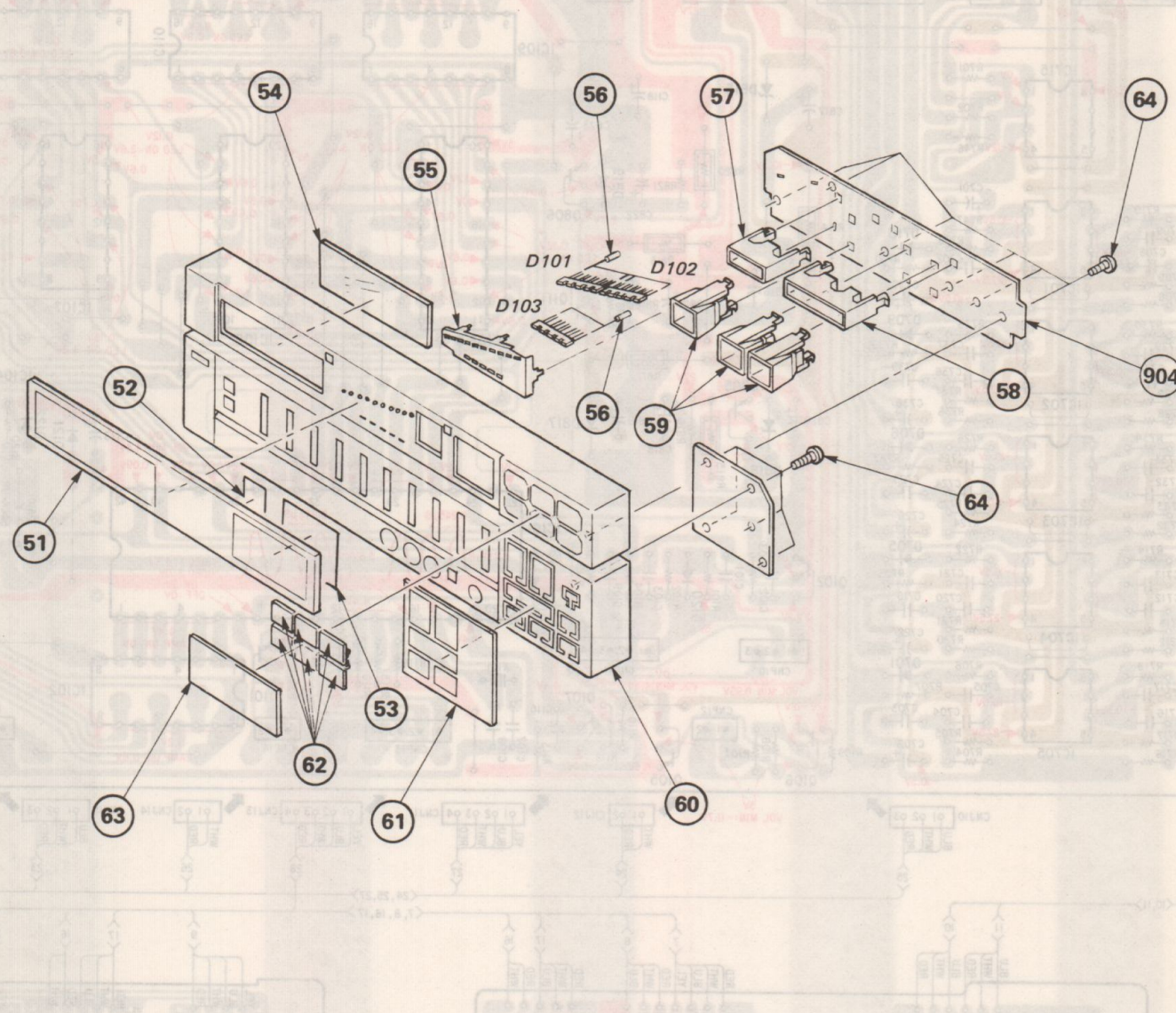
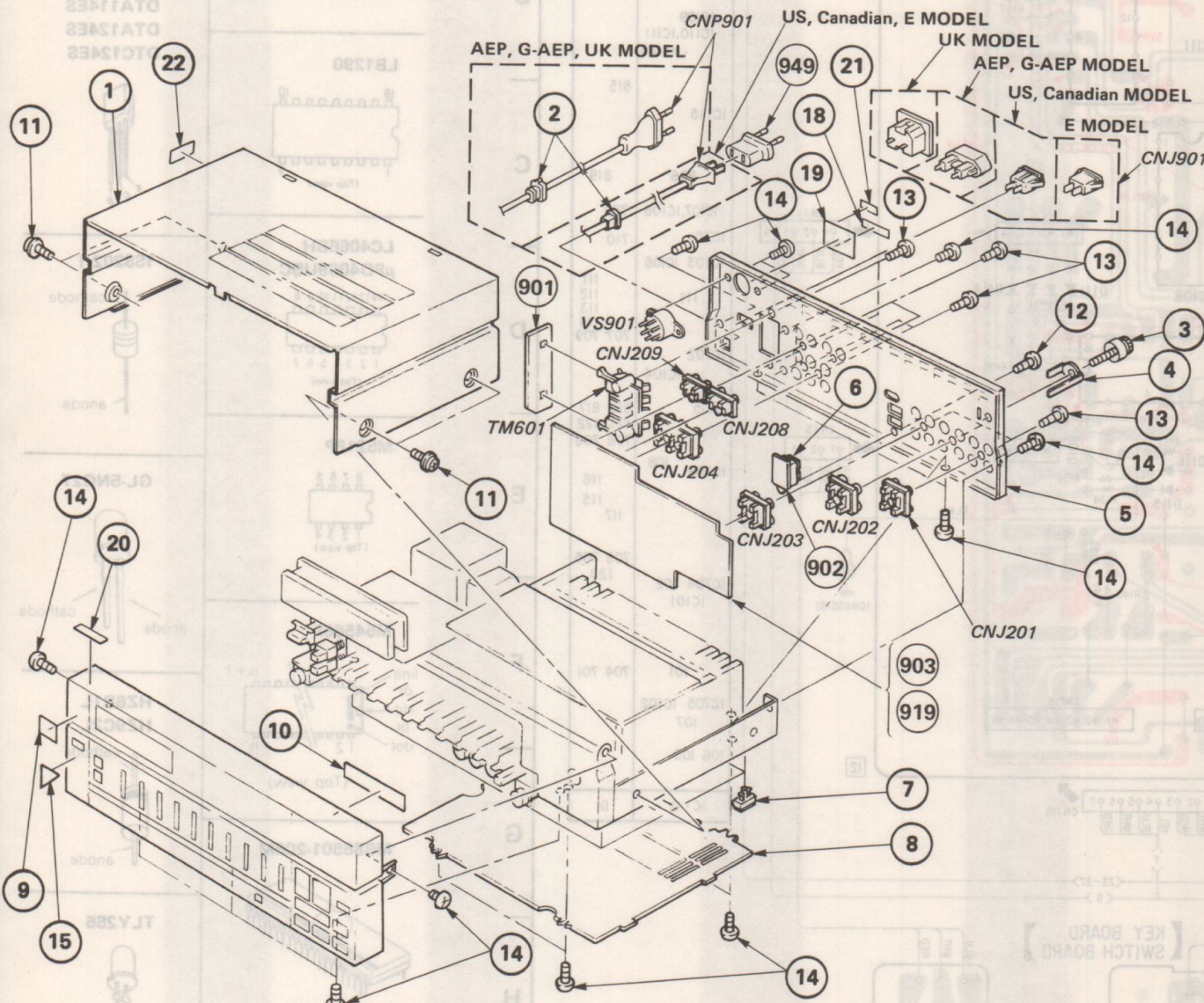


SECTION 4
EXPLODED VIEWS AND PARTS LIST

NOTE:
 • The mechanical parts with no reference number in the exploded views are not supplied.
 • Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
 • The construction parts of an assembled part are indicated with a collation number on the remark column.

The components identified by shading and mark are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



No.	Part No.	Description	REMARKS
1	4-908-331-11	COVER, TOP	
2	3-703-571-00	(US,E)...BUSHING (S), CORD	
	3-703-244-00	(Canadian,AEP,G-AEP,UK)...BUSHING, CORD	
3	3-706-165-00	SCREW	
5	*4-908-325-11	(US)...PLATE, JACK	
	*4-908-325-21	(Canadian)...PLATE, JACK	
	*4-908-325-31	(AEP,G-AEP)...PLATE, JACK	
	*4-908-325-41	(UK)...PLATE, JACK	
	*4-908-325-51	(E)...PLATE, JACK	
6	*3-322-818-01	HOLDER, CONNECTOR	
7	X-4907-603-1	FOOT ASSY	
8	*4-886-844-11	PLATE, BOTTOM	
9	3-703-710-01	STICKER, SONY SYMBOL (12)	
10	4-854-719-11	(US)...CUSHION (B)	
	4-854-719-00	(Canadian,AEP,G-AEP,UK,E)...CUSHION (B)	
11	4-886-821-01	SCREW, M3 TOP COVER	

No.	Part No.	Description	REMARKS
12	7-685-133-14	SCREW +P 2.6X6 TYPE2 SLIT	
13	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
14	7-685-871-01	SCREW +BVTT 3X6 (S)	
15	4-908-335-01	STICKER, AV	
19	4-908-301-01	(AEP,G-AEP)...LABEL, MODEL NUMBER (AE)	
	4-908-301-11	(AEP,G-AEP)...LABEL, MODEL NUMBER (AE)	
20	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)	
21	*3-703-591-01	(G-AEP)...LABEL (23585S)(SMALL), FTZ	
22	3-703-081-21	(UK)...LABEL (SIDE), SUB CAUTION	
901	*1-614-105-11	PC BOARD, SPEAKER TERMINAL	
902	*1-614-092-11	PC BOARD, CIRCS	
903	*1-614-095-11	PC BOARD, INPUT	
919	*A-4382-161-A	(US,Canadian,AEP,UK,E)...MOUNTED PCB, INPUT	
	*A-4382-185-A	(G-AEP)...MOUNTED PCB, INPUT	
949	*1-526-565-00	(E)...AC PLUG ADAPTOR	

No.	Part No.	Description	REMARKS
51	4-908-319-01	PLATE, INDICATION, DISPLAY	
52	4-908-309-01	SHEET (B), DIFFUSION	
53	4-908-309-01	SHEET (A), DIFFUSION	
54	4-908-311-01	FILTER, INDICATION	
55	*4-908-317-01	BRACKET, LED	
56	4-886-864-11	SPACER, LED	
57	*4-902-848-01	HOLDER (C), LED	
58	*4-908-323-01	HOLDER (W), LED	

No.	Part No.	Description	REMARKS
59	*4-908-318-01	HOLDER (D), LED	
60	X-4908-304-1	PANEL ASSY, FRONT	
61	4-908-315-01	SHEET (A), CONTROL	
62	*4-908-314-01	KNOB (L), LAMP	
63	4-908-313-01	SHEET, FUNCTION	
64	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
904	*1-614-094-11	PC BOARD, DISPLAY	
905	*1-614-089-11	PC BOARD, KEY BOARD SWITCH	

No.	Part No.	Description	REMARKS
101	*4-907-637-01	HOLDER, FL TUBE	
102	*3-312-615-31	HEAT SINK	
103	*4-309-357-00	SUPPORT, PC	
104	*3-701-822-00	HOLDER, WIRE	
105	4-870-539-00	PLATE, GROUND	
106	*4-908-332-01	HEAT SINK (L)	
107	*4-908-316-01	BRACKET, PC BOARD	
108	*4-908-324-02	REINFORCEMENT	
109	*4-908-330-01	CHASSIS	
110	*3-701-030-00	LABEL, SERIAL NUMBER	
111	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
112	7-685-650-71	SCREW +BVTP 3X16 TYPE2 IT-3	
113	7-685-871-01	SCREW +BVTT 3X6 (S)	
114	7-685-752-04	SCREW +BVTT 3X8 (S)	
115	7-685-880-01	SCREW +BVTT 4X6 (S)	

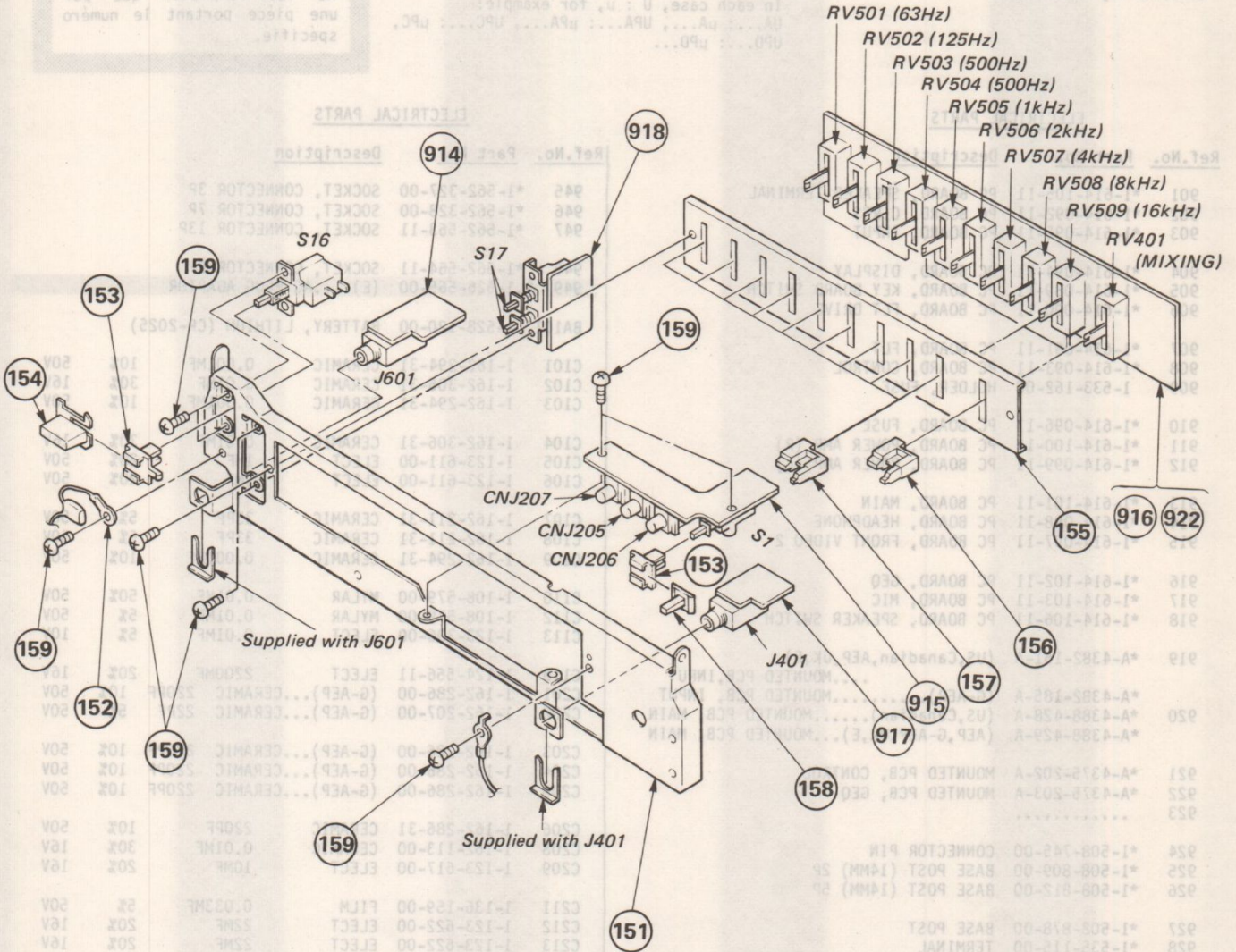
No.	Part No.	Description	REMARKS
116	4-864-307-00	RING	
117	4-886-814-51	KNOB, SPEAKER (A)	
118	4-886-814-61	KNOB, SPEAKER (B)	
119	*4-886-809-00	(AEP)...SUPPORT	
906	*1-614-090-11	PC BOARD, FLT DRIVE	
907	*1-614-091-11	PC BOARD, FLT	
908	*1-614-093-11	PC BOARD, CONTROL	
909	1-533-162-00	HOLDER, FUSE	
910	*1-614-096-11	PC BOARD, FUSE	
911	*1-614-100-11	PC BOARD, POWER AMP (R)	
912	*1-614-099-11	PC BOARD, POWER AMP (L)	
913	*1-614-101-11	PC BOARD, MAIN	
920	*A-4388-428-A	(US,Canadian)...MOUNTED PCB, MAIN	
	*A-4388-429-A	(AEP,G-AEP,UK,E)...MOUNTED PCB, MAIN	
921	*A-4375-202-A	MOUNTED PCB, CONTROL	

SECTION 2
ELECTRICAL PARTS LIST

The components identified by shading and mark are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:
Items marked * are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
If there are two or more circuitry sets such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.



No.	Part No.	Description	REMARKS
151	*4-908-327-01	PANEL, SUB	
152	*4-838-926-00	PLATE (A), LUG TERMINAL	
153	4-875-466-00	JOINT (F2), KNOB	
154	4-907-611-01	KNOB, POWER	
155	*4-908-322-01	RETAINER, CONTROL	
156	4-908-321-14	KNOB, SLIDE	
157	X-4908-302-4	KNOB ASSY, SLIDE	
158	4-888-025-11	KNOB (D), PUSH	

No.	Part No.	Description	REMARKS
159	7-685-871-01	SCREW +BVTT 3X6 (S)	
908	1-614-106-00	PC BOARD, SPEAKER SWITCH	
914	*1-614-098-11	PC BOARD, HEADPHONE	
915	*1-614-097-11	PC BOARD, FRONT VIDEO 2	
916	*1-614-102-11	PC BOARD, GEQ	
917	*1-614-103-11	PC BOARD, MIC	
918	*1-614-106-11	PC BOARD, SPEAKER SWITCH	
922	*A-4375-203-A	MOUNTED PCB, GEQ	

SECTION 5 ELECTRICAL PARTS LIST

NOTE:

Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:µF, PF:µµF.

RESISTORS

All resistors are in ohms. F: nonflammable

COILS

MMH: mH, UH: µH

SEMICONDUCTORS

In each case, U: µ, for example: UA...: µA..., UPA...: µPA..., UPC...: µPC, UPD...: µPD...

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Table with columns: Ref.No., Part No., Description. Lists electrical parts for the left side of the device, including PC boards, capacitors, resistors, and connectors.

Table with columns: Ref.No., Part No., Description. Lists electrical parts for the right side of the device, including sockets, capacitors, resistors, and connectors.

Table with columns: Ref.No., Part No., Description. Lists electrical parts for the bottom section of the device, including capacitors, resistors, and connectors.

Table with columns: Ref.No., Part No., Description. Lists electrical parts for the bottom section of the device, including capacitors, resistors, and connectors.

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Value	Unit	Volts
C733	1-162-215-31	CERAMIC	47PF	5%	50V
C734	1-123-381-00	ELECT	2.2MF	20%	50V
C735	1-106-188-00	MYLAR	0.0047MF	5%	50V
C736	1-106-188-00	MYLAR	0.0047MF	5%	50V
C737	1-162-215-31	CERAMIC	47PF	5%	50V
C738	1-123-381-00	ELECT	2.2MF	20%	50V
C739	1-123-381-00	ELECT	2.2MF	20%	50V
C740	1-162-306-31	CERAMIC	0.01MF	30%	16V
C741	1-162-306-31	CERAMIC	0.01MF	30%	16V
C742	1-162-306-31	CERAMIC	0.01MF	30%	16V
C743	1-162-306-31	CERAMIC	0.01MF	30%	16V
C801	1-102-394-00	CERAMIC	0.01X2		250V
C802	1-124-618-11	ELECT	2200MF	20%	35V
C803	1-124-618-11	ELECT	2200MF	20%	35V
C804	1-124-445-00	ELECT	100MF	20%	16V
C805	1-124-445-00	ELECT	100MF	20%	16V
C806	1-123-330-00	ELECT	22MF	20%	16V
C807	1-123-330-00	ELECT	22MF	20%	16V
C809	1-102-394-00	CERAMIC	0.01X2		250V
C810	1-124-588-00	(AEP,G-AEP,UK,E)...ELECT	4700MF	20%	50V
C810	1-124-639-00	(US,Canadian)...ELECT	6800MF	20%	50V
C811	1-124-588-00	(AEP,G-AEP,UK,E)...ELECT	4700MF	20%	50V
C811	1-124-639-00	(US,Canadian)...ELECT	6800MF	20%	50V
C812	1-124-445-00	ELECT	100MF	20%	16V
C813	1-123-369-00	ELECT	4.7MF	20%	50V
C814	1-123-329-00	ELECT	10MF	20%	250V
C815	1-123-308-00	ELECT	220MF	20%	6.3V
C816	1-123-346-00	ELECT	220MF	20%	35V
C817	1-124-472-11	ELECT	470MF	20%	10V
C818	1-123-356-00	ELECT	10MF	20%	16V
C819	1-123-306-00	ELECT	47MF	20%	10V
C820	1-123-306-00	ELECT	47MF	20%	10V
C821	1-123-502-00	ELECT	33MF	20%	35V
C822	1-123-307-00	ELECT	100MF	20%	6.3V
C823	1-123-306-00	ELECT	47MF	20%	10V
C901	1-161-744-00	CERAMIC	0.01MF		400V
CNJ201	1-507-910-11	JACK, PIN 4P			
CNJ202	1-507-909-11	JACK, PIN 4P			
CNJ203	1-507-910-11	JACK, PIN 4P			
CNJ204	1-507-887-00	JACK, PIN 6P			
CNJ205	1-507-588-91	JACK, PIN (1P)			
CNJ206	1-507-588-81	JACK, PIN (1P)			
CNJ207	1-507-588-32	JACK, PIN 1P			
CNJ208	1-507-888-00	JACK, PIN 2P			
CNJ209	1-507-888-00	JACK, PIN 2P			

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Value	Unit	Volts
△CNJ901	1-526-751-00	(UK).....OUTLET, AC			
△CNJ901	1-526-774-11	(E).....OUTLET, AC			
△CNJ901	1-526-794-11	(AEP,G-AEP).....OUTLET, AC			
△CNJ901	1-526-882-00	(US,Canadian)...OUTLET, AC			
△CNP901	1-551-188-XX	(E).....CORD, POWER			
△CNP901	1-551-427-11	(AEP,G-AEP)...CORD, POWER, EURO PLUG			
△CNP901	1-556-560-00	(UK).....CORD, POWER			
△CNP901	1-556-905-00	(Canadian)...CORD, POWER			
△CNP901	1-557-579-11	(US).....CORD, POWER			
D101	8-719-822-08	DIODE TLG208			
D102	8-719-822-08	DIODE TLG208			
D103	8-719-822-08	DIODE TLG208			
D104	8-719-800-89	DIODE TLY255			
D105	8-719-800-89	DIODE TLY255			
D106	8-719-919-14	DIODE GL5NG-27			
D107	8-719-919-14	DIODE GL5NG-27			
D108	8-719-800-86	DIODE TLG255			
D109	8-719-800-89	DIODE TLY255			
D111	8-719-107-94	DIODE 1SS202-1			
D112	8-719-107-94	DIODE 1SS202-1			
D113	8-719-107-94	DIODE 1SS202-1			
D114	8-719-107-94	DIODE 1SS202-1			
D115	8-719-107-94	DIODE 1SS202-1			
D116	8-719-107-94	DIODE 1SS202-1			
D117	8-719-107-94	DIODE 1SS202-1			
D120	8-719-107-94	DIODE 1SS202-1			
D121	8-719-107-94	DIODE 1SS202-1			
D122	8-719-107-94	DIODE 1SS202-1			
D124	8-719-101-50	DIODE RD5.1E			
D201	8-719-101-50	DIODE RD5.1E			
D402	8-719-107-94	DIODE 1SS202-1			
D403	8-719-107-94	DIODE 1SS202-1			
D601	8-719-107-94	DIODE 1SS202-1			
D651	8-719-107-94	DIODE 1SS202-1			
D701	8-719-107-94	DIODE 1SS202-1			
D702	8-719-107-94	DIODE 1SS202-1			
D703	8-719-107-94	DIODE 1SS202-1			
D704	8-719-107-94	DIODE 1SS202-1			
D705	8-719-107-94	DIODE 1SS202-1			
D706	8-719-107-94	DIODE 1SS202-1			
D707	8-719-107-94	DIODE 1SS202-1			
D708	8-719-107-94	DIODE 1SS202-1			
D709	8-719-107-94	DIODE 1SS202-1			
D710	8-719-107-94	DIODE 1SS202-1			
D801	△8-719-230-24	DIODE 30DL4			
D802	△8-719-230-24	DIODE 30DL4			

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

ELECTRICAL PARTS

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Table of electrical parts including Ref.No., Part No., and Description for components like diodes (D803-D818), fuses (F901-F902), and indicator tubes (FL701).

Table of electrical parts including Ref.No., Part No., and Description for components like ICs (IC705-IC710, IC708-IC710, IC711-IC713, IC714-IC715, IC801), lamps (PL1-PL3, PL4-PL6), transformers (PT801A), and thermistors (PTH801).

Table of electrical parts including Ref.No., Part No., and Description for various transistors (Q402-Q509, Q601-Q610, Q803-Q806, R101-R113, R114-R116, R117-R120).

Table of electrical parts including Ref.No., Part No., and Description for carbon components (R121-R123, R124-R126, R127-R129, R130-R132, R133-R135, R136-R139, R140-R142, R145-R147, R148-R149, R201, R202-R204, R205-R207, R208-R210, R211-R213, R214-R216, R217-R219).

The components identified by shading and mark are critical for safety. Replace only with part number specified.

The components identified by shading and mark are critical for safety. Replace only with part number specified. Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

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ELECTRICAL PARTS

Table with columns: Ref.No., Part No., Description, Quantity, and Unit. Includes parts like R220, R221, R222, R223, R225, R226, R252, R255, R257, R258, R301, R302, R303, R304, R305, R306, R307, R308, R309, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R453.

Table with columns: Ref.No., Part No., Description, Quantity, and Unit. Includes parts like R475, R476, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543.

Table with columns: Ref.No., Part No., Description, Quantity, and Unit. Includes parts like R544, R545, R546, R547, R548, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R622, R651, R652, R653, R656, R663, R664, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713.

Table with columns: Ref.No., Part No., Description, Quantity, and Unit. Includes parts like R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R811.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R812	1-247-879-00	CARBON 100K 5% 1/6W
R813	△.1-247-099-00	CARBON 47 5% 1/4W F
R814	△.1-213-138-00	METAL OXIDE 390 5% 1W F
R815	△.1-247-131-00	CARBON 1K 5% 1/4W F
R816	1-247-847-00	CARBON 4.7K 5% 1/6W
R817	△.1-247-242-00	CARBON 1.2K 5% 1/2W F
R818	1-247-855-00	CARBON 10K 5% 1/6W
R819	1-247-855-00	CARBON 10K 5% 1/6W
R820	△.1-247-099-00	CARBON 47 5% 1/4W F
R821	1-247-839-00	CARBON 2.2K 5% 1/6W
R825	△.1-247-071-00	CARBON 1 5% 1/4W F
R826	△.1-247-071-00	CARBON 1 5% 1/4W F
R827	△.1-247-071-00	CARBON 1 5% 1/4W F
RV401	1-230-603-11	RES, VAR, SLIDE 100K/100K (MIXING)
RV501	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (63Hz)
RV502	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (125Hz)
RV503	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (250Hz)
RV504	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (500Hz)
RV505	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (1kHz)
RV506	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (2kHz)
RV507	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (4kHz)
RV508	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (8kHz)
RV509	1-230-345-31	RES, VAR, SLIDE (LED) 250KX2 (16kHz)
RY201	1-515-495-00	RELAY
RY601	1-515-501-00	RELAY
S1	1-553-851-00	SWITCH, PUSH (1 KEY)(VIDEO 2 INPUT)
S2	1-554-303-00	SWITCH, KEY BOARD (VOLUME +)
S3	1-554-303-00	SWITCH, KEY BOARD (VOLUME -)
S4	1-554-303-00	SWITCH, KEY BOARD (BALANCE L)
S5	1-554-303-00	SWITCH, KEY BOARD (BALANCE R)
S6	1-554-303-00	SWITCH, KEY BOARD (MUTING -20dB)
S7	1-554-303-00	SWITCH, KEY BOARD (GRAPHIC EQUALIZER)
S8	1-554-303-00	SWITCH, KEY BOARD (VIDEO 1)
S9	1-554-303-00	SWITCH, KEY BOARD (VIDEO 2)
S10	1-554-303-00	SWITCH, KEY BOARD (TAPE)
S11	1-554-303-00	SWITCH, KEY BOARD (WAKE UP VOLUME)
S12	1-554-303-00	SWITCH, KEY BOARD (PHONE)
S13	1-554-303-00	SWITCH, KEY BOARD (TUNER)
S14	1-554-303-00	SWITCH, KEY BOARD (CD)
S15	1-554-303-00	SWITCH, KEY BOARD (MEMORY)
S16	△.1-553-318-00	SWITCH, PUSH (AC POWER)(1 KEY)
S17	1-553-761-00	SWITCH, PUSH (2 KEY)(SPEAKER A,B)
TM601	1-536-706-00	TERMINAL BOARD (SP)
VS901	△.1-526-576-51	(E)...SELECTOR, POWER VOLTAGE
X101	1-527-822-00	OSCILLATOR, CERAMIC

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-556-372-41	CORD, CONNECTION (4 CORE)
3-701-630-00	BAG, POLYETHYLENE
3-703-390-01	(US)...INSTRUCTION
3-760-087-11	(AEP,G-AEP,UK,E)...MANUAL, INSTRUCTION
3-760-087-21	(US,Canadian).....MANUAL, INSTRUCTION
3-760-087-31	(Canadian).....MANUAL, INSTRUCTION
3-760-087-41	(AEP,G-AEP).....MANUAL, INSTRUCTION
4-859-064-00	SHEET, PROTECTION
4-908-305-01	CUSHION (LEFT), LOWER
4-908-306-01	CUSHION (RIGHT), LOWER
4-908-307-01	CUSHION (LEFT), UPPER
4-908-308-01	CUSHION (RIGHT), UPPER
4-908-336-01	(US,Canadian,AEP,G-AEP,UK) ...INDIVIDUAL CARTON
4-908-336-11	(E).....INDIVIDUAL CARTON

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-550-312-41	CORD, CONNECTION (4 CORE)
3-701-830-00	BAG, POLYETHYLENE
3-703-390-01	(US).....INSTRUCTION
3-750-087-11	(AEP, G-AEP, UK, E).....MANUAL, INSTRUCTION
3-750-087-21	(US, Canadian).....MANUAL, INSTRUCTION
3-750-087-31	(Canadian).....MANUAL, INSTRUCTION
3-750-087-41	(AEP, G-AEP).....MANUAL, INSTRUCTION
4-903-084-00	SHEET, PROTECTION
4-908-308-01	CUSHION (LEFT), LOWER
4-908-308-01	CUSHION (RIGHT), LOWER
4-908-307-01	CUSHION (LEFT), UPPER
4-908-308-01	CUSHION (RIGHT), UPPER
4-908-338-01	(US, Canadian, AEP, G-AEP, UK).....INDIVIDUAL CARTON
4-908-338-11	(E).....INDIVIDUAL CARTON

ELECTRICAL PARTS

Ref. No.	Part No.	Description
R812	1-247-819-00	CARBON
R813	1-247-820-00	CARBON
R814	1-247-821-00	METAL OXIDE
R815	1-247-822-00	CARBON
R816	1-247-823-00	CARBON
R817	1-247-824-00	CARBON
R818	1-247-825-00	CARBON
R819	1-247-826-00	CARBON
R820	1-247-827-00	CARBON
R821	1-247-828-00	CARBON
R822	1-247-829-00	CARBON
R823	1-247-830-00	CARBON
R824	1-247-831-00	CARBON
R825	1-247-832-00	CARBON
RV401	1-230-603-11	RES, VAR, SLIDE (MIXING)
RV401	1-230-348-31	RES, VAR, SLIDE (LED) 250KX (25K)
RV402	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (125K)
RV403	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (250K)
RV404	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (500K)
RV405	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (1K)
RV406	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (2K)
RV407	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (4K)
RV408	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (8K)
RV409	1-230-348-31	RES, VAR, SLIDE (LED) 500KX (16K)
RY501	1-812-882-00	RELAY
RY601	1-812-501-00	RELAY
Z1	1-253-851-00	SWITCH, PUSH (I KEY) (VIDEO 2 INPUT)
Z2	1-254-303-00	SWITCH, KEY BOARD (VOLUME -)
Z3	1-254-303-00	SWITCH, KEY BOARD (VOLUME +)
Z4	1-254-303-00	SWITCH, KEY BOARD (BALANCE L)
Z5	1-254-303-00	SWITCH, KEY BOARD (BALANCE R)
Z6	1-254-303-00	SWITCH, KEY BOARD (MUTING -50dB)
Z7	1-254-303-00	SWITCH, KEY BOARD (GRAPHIC EQUALIZER)
Z8	1-254-303-00	SWITCH, KEY BOARD (VIDEO 1)
Z9	1-254-303-00	SWITCH, KEY BOARD (VIDEO 2)
Z10	1-254-303-00	SWITCH, KEY BOARD (TAPE)
Z11	1-254-303-00	SWITCH, KEY BOARD (WAKE UP VOLUME)
Z12	1-254-303-00	SWITCH, KEY BOARD (PHONE)
Z13	1-254-303-00	SWITCH, KEY BOARD (TUNER)
Z14	1-254-303-00	SWITCH, KEY BOARD (CD)
Z15	1-254-303-00	SWITCH, KEY BOARD (MEMORY)
Z16	1-253-218-00	SWITCH, PUSH (AC POWER) (KEY)
Z17	1-253-781-00	SWITCH, PUSH (2 KEY) (SPEAKER A, B)
TM601	1-238-708-00	TERMINAL BOARD (2P)
V9001	1-858-878-81	(E).....SELECTOR, POWER VOLTAGE
X101	1-857-852-00	OSCILLATOR, CERAMIC

The components identified by shading and mark are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.