

SERVICE MANUAL

AEP Model
UK Model
E Model



TA-V70 is amplifier section of LBT-V70WR

SPECIFICATIONS

Continuous RMS power output (AEP, G-AEP, UK model)

50 + 50 watts
(6 ohms, at 1 kHz, 0.5% THD)
40 + 40 watts
(6 ohms, 40 Hz - 20 kHz, 0.5% THD)

Music power output (E model)

160 W (6 ohms, 5% THD)

Peak music power output (E model)

320 W (6 ohms)

Inputs

Inputs	Sensitivity	Impedance
PHONO (phono jacks)	2 mV	50 kilohms
CD, VIDEO 1/2 (AUDIO IN) (phono jacks)	150 mV	50 kilohms
MIC (phone jack)	2 mV	20 kilohms

Outputs

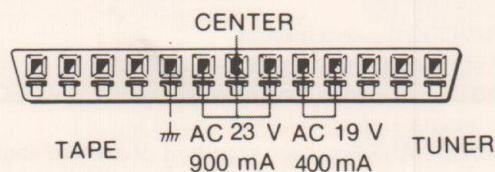
VIDEO (AUDIO OUT) (phono jacks)	Voltage 150 mV, Impedance 4.7 kilohms
HEADPHONES (stereo phone jack)	Accepts headphones of 8 ohms or more
SPEAKER	Accepts speakers of 6 to 16 ohms

Video inputs/outputs

VIDEO 1/2 IN, VIDEO 1 OUT, MONITOR
OUT: 1 V p-p, 75 ohms

SYSTEM CONTROL 1 terminal (13-pin)

SYSTEM CONTROL 2 terminal (13-pin)



SYSTEM CONTROL 3 terminal (6-pin)

Frequency response

PHONO: RIAA curve ± 0.5 dB

CD, VIDEO 1/2 (AUDIO IN):

15 Hz - 50 kHz $+0$ dB -3 dB

MIC: 100 Hz - 10 kHz $+0$ dB -6 dB

Power requirements AEP model : 220 V ac, 50/60 Hz
UK model : 240 V ac, 50/60 Hz
E model : 120, 220 or 240 V ac
adjustable, 50/60 Hz

Power consumption AEP model : 110 watts
UK model : 230 watts
E model : 110 watts

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

Dimensions Approx. 355 × 98 × 290 mm (w/h/d)
(14 × 4 $\frac{1}{8}$ × 9 $\frac{7}{8}$ inches)
incl. projecting parts and controls

Weight Approx. 5.8 kg (11 lb 15 oz) net

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.

INTEGRATED STEREO AMPLIFIER
SONY

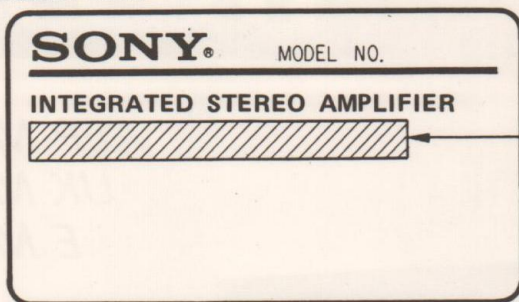


MICROFILM

AUD

MODEL IDENTIFICATION

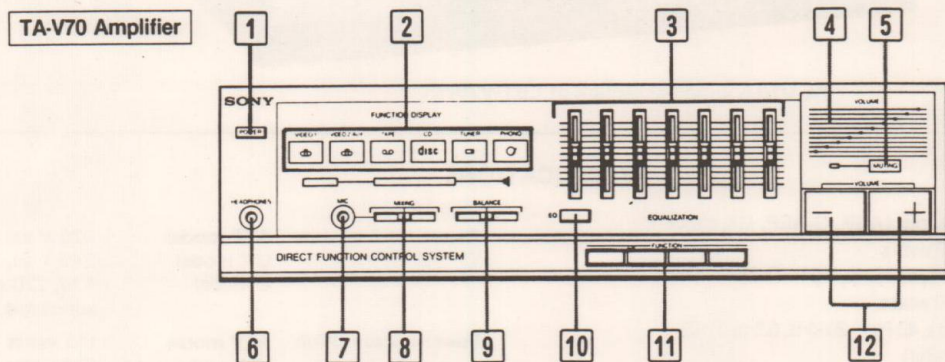
—Specification Label—



AEP, G-AEP model AC : 220V 50/60Hz 110W
 UK model AC : 240V 50/60Hz 230W
 E, EA3 model AC : 120/220/240V 50/60Hz 110W

**SECTION 1
 OUTLINE**

1-1. FUNCTION OF CONTROLS



1 POWER switch

Press the switch (ON) to turn on the power of the stereo system. To turn it off, press the switch again (OFF).

2 FUNCTION indicators

The indicator lights to show the input source in use. When the power is turned on, the TUNER indicator lights.

3 GRAPHIC EQUALIZER controls

To equalize the listening or recording sound, slide each control upwards to increase the level of the frequency band, and downwards to decrease the level.

100 Hz: Use to boost or cut the bass.

250 Hz: Use to adjust the middle and low frequency range.

500 Hz: Use to adjust the middle frequency range.

1 kHz: Use to provide more presence of vocals.

3 kHz: Use to adjust the brightness of sound.

6 kHz: Use to adjust the middle and high frequency range.

14 kHz: This control effects general treble. Slide downwards to reduce high frequency noise, such as tape hiss.

To record or listen to the sound with the original tone quality, set all the controls at their center positions.

4 VOLUME indicator

5 MUTING switch and indicator

Press to reduce the sound level by 20 dB. Press again to restore the same listening level as before.

6 HEADPHONES jack (stereo phone jack)

7 MIC (microphone) jack (phone jack)

Connect a microphone for microphone mixing.

8 MIXING control

Adjusts the balance between the volume of the microphone and the program source. Slide the control towards MIC to increase microphone volume, and towards SOURCE to increase source volume. When not in use for microphone mixing, slide this control fully to SOURCE.

9 BALANCE control

Adjusts the balance of the left and right channel output levels.

10 GRAPHIC EQUALIZER switch

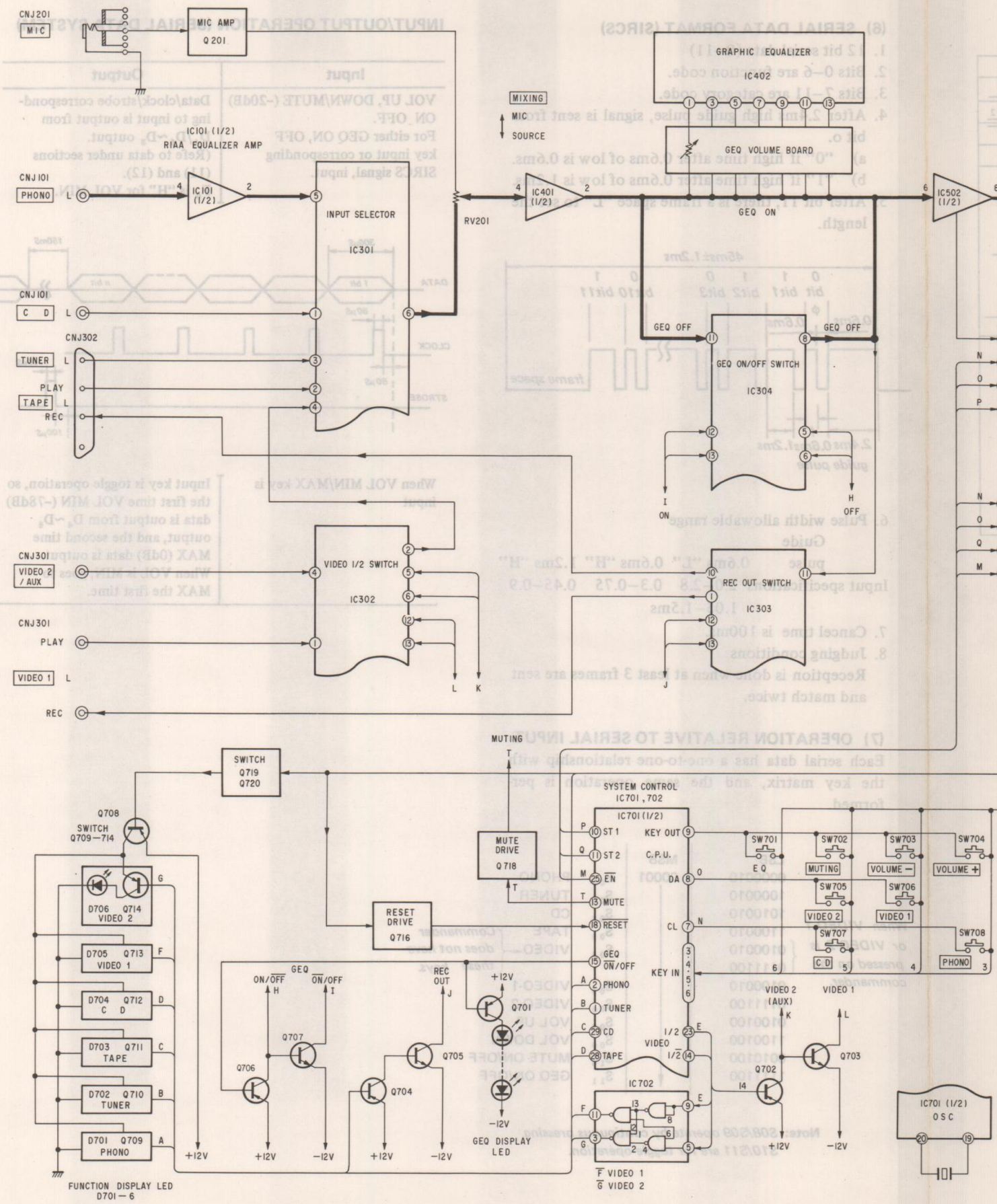
Depress this switch to activate the graphic equalizer controls. Press it again to obtain the original tone quality.

11 FUNCTION select buttons

Press the desired program source button.
VIDEO 1: For video programs connected to VIDEO 1 inputs.
VIDEO 2/AUX: For video programs or another source connected to VIDEO 2 inputs.
CD: For the programs connected to CD inputs.
PHONO: For disc programs connected to PHONO inputs.

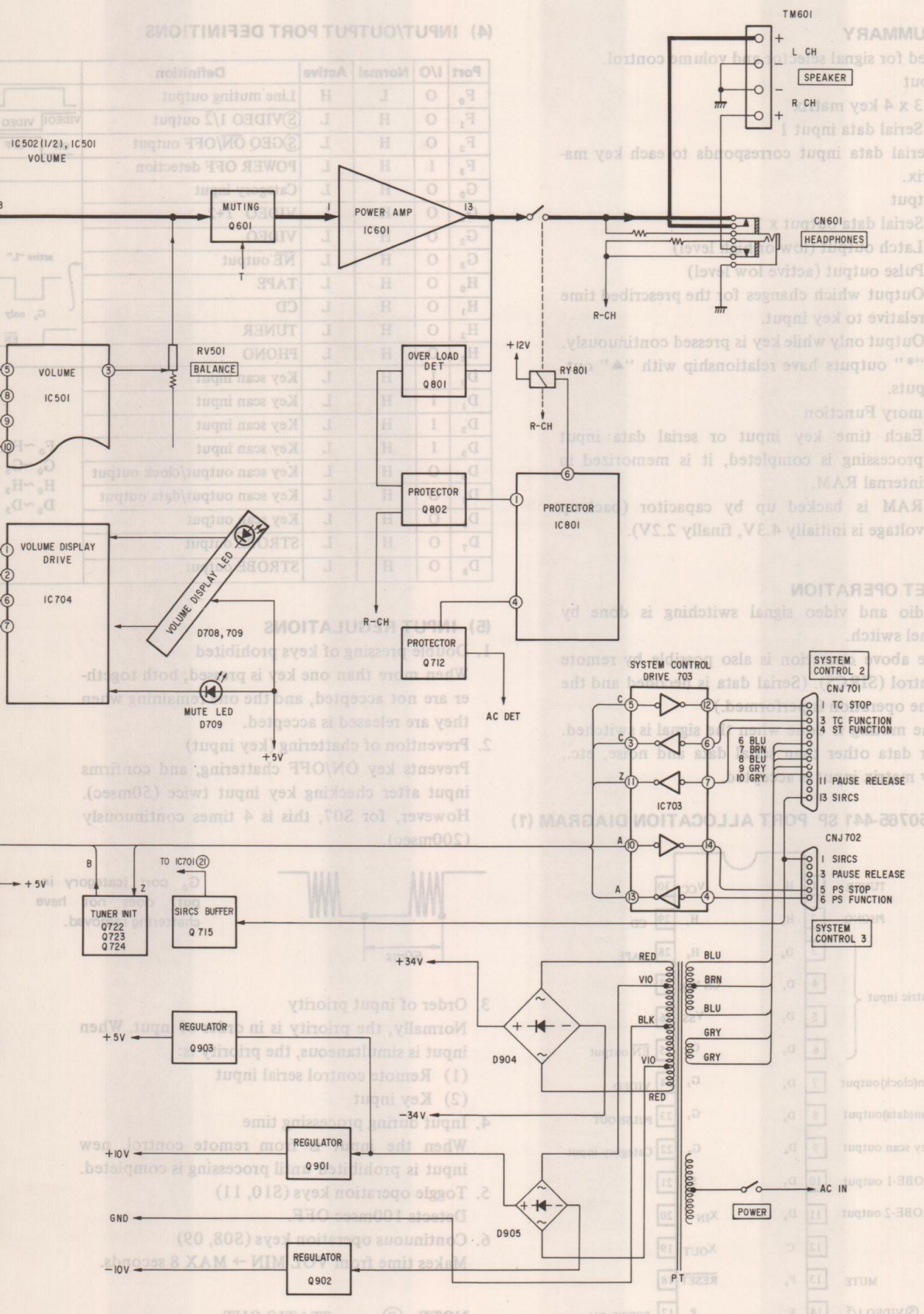
12 VOLUME CONTROL buttons

SECTION 2
BLOCK DIAGRAM



SECTION 3

MICROCOMPUTER SPECIFICATION (M50765-4412P)



SECTION 3

MICROCOMPUTER SPECIFICATION (M50765-441SP)

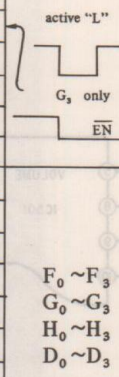
SECTION 2
BLOCK DIAGRAM

(1) SUMMARY

- Used for signal selector and volume control.
- Input
 - ▲ 3 x 4 key matrix
 - ▲ Serial data input 1
 - Serial data input corresponds to each key matrix.
- Output
 - ▲ Serial data output x 2
 - ▲ Latch output (low or high level)
 - ▲ Pulse output (active low level)
 - * Output which changes for the prescribed time relative to key input.
 - * Output only while key is pressed continuously. “*” outputs have relationship with “▲” outputs.
- Memory Function
 - ▲ Each time key input or serial data input processing is completed, it is memorized in internal RAM.
 - ▲ RAM is backed up by capacitor (back-up voltage is initially 4.3V, finally 2.2V).

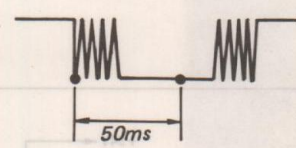
(4) INPUT/OUTPUT PORT DEFINITIONS

Port	I/O	Normal	Active	Definition
F ₀	O	L	H	Line muting output
F ₁	O	H	L	VIDEO 1/2 output
F ₂	O	H	L	GEQ ON/OFF output
F ₃	I	H	L	POWER OFF detection
G ₀	O	H	L	Category input
G ₁	O	H	L	VIDEO 1+2
G ₂	O	H	L	VIDEO
G ₃	O	H	L	NE output
H ₀	O	H	L	TAPE
H ₁	O	H	L	CD
H ₂	O	H	L	TUNER
H ₃	O	H	L	PHONO
D ₀	I	H	L	Key scan input
D ₁	I	H	L	Key scan input
D ₂	I	H	L	Key scan input
D ₃	I	H	L	Key scan input
D ₄	O	H	L	Key scan output/clock output
D ₅	O	H	L	Key scan output/data output
D ₆	O	H	L	Key scan output
D ₇	O	H	L	STROBE output
D ₈	O	H	L	STROBE output



(5) INPUT REGULATIONS

- Double pressing of keys prohibited
When more than one key is pressed, both together are not accepted, and the one remaining when they are released is accepted.
- Prevention of chattering (key input)
Prevents key ON/OFF chattering, and confirms input after checking key input twice (50msec). However, for S07, this is 4 times continuously (200msec).



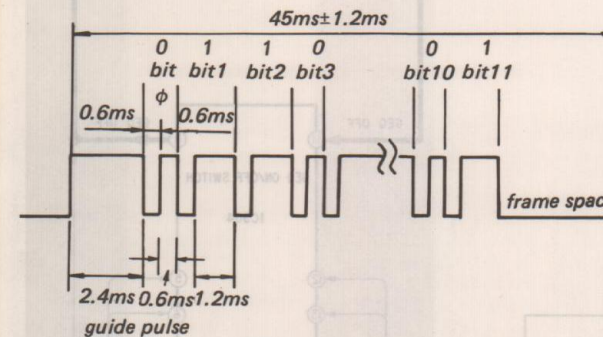
G₀ port (category input) does not have chattering removed.

- Order of input priority
Normally, the priority is in order of input. When input is simultaneous, the priority is:
(1) Remote control serial input
(2) Key input
- Input during processing time
When the input is from remote control, new input is prohibited until processing is completed.
- Toggle operation keys (S10, 11)
Detects 100msec OFF.
- Continuous operation keys (S08, 09)
Makes time from VOL MIN → MAX 8 seconds.

NOTE: (S) STATIC OUT

(6) SERIAL DATA FORMAT (SIRCS)

- 12 bit serial data (0-11)
- Bits 0-6 are function code.
- Bits 7-11 are category code.
- After 2.4ms high guide pulse, signal is sent from bit 0.
 - “0” if high time after 0.6ms of low is 0.6ms.
 - “1” if high time after 0.6ms of low is 1.2ms.
- After bit 11, there is a frame space “L” to set the length.



6. Pulse width allowable range
Guide

pulse 0.6ms “L” 0.6ms “H” 1.2ms “H”
Input specifications 2.0-2.8 0.3-0.75 0.45-0.9 1.05-1.5ms

- Cancel time is 100ms.
- Judging conditions
Reception is done when at least 3 frames are sent and match twice.

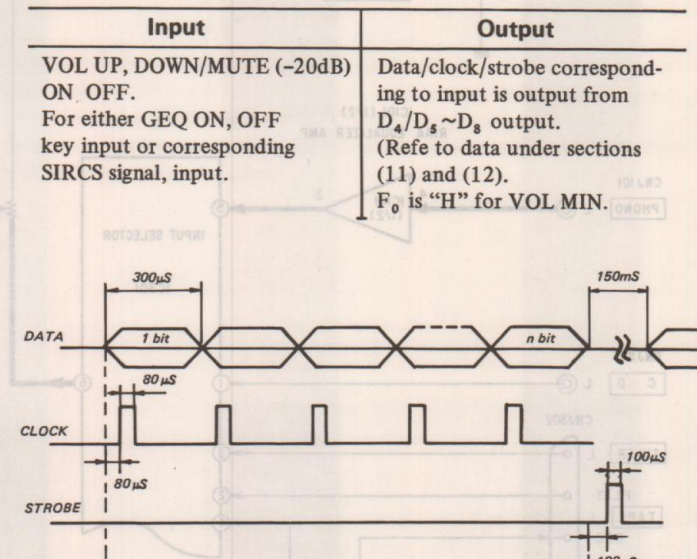
(7) OPERATION RELATIVE TO SERIAL INPUT

Each serial data has a one-to-one relationship with the key matrix, and the same operation is performed.

LSB	MSB	Function
0000010	00001	S _{0,0} PHONO
1000010		S _{0,1} TUNER
1010010		S _{0,2} CD
1100010		S _{0,3} TAPE
0100010		S _{0,4} VIDEO
0111100		
0100010		S _{0,5} VIDEO-1
0111100		S _{0,6} VIDEO-2
0100100		S _{0,8} VOL UP
1100100		S _{0,9} VOL DOWN
0010100		S _{1,0} MUTE ON/OFF
1111100		S _{1,1} GEQ ON/OFF

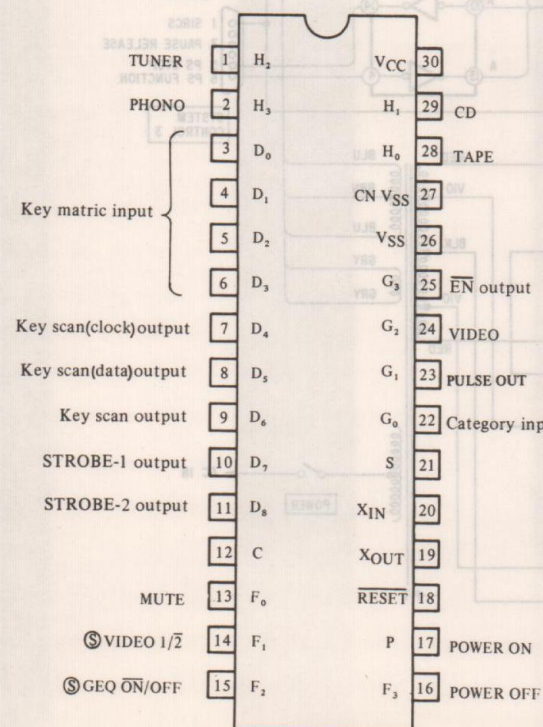
Note: S08/S09 operate by continuous pressing. S10/S11 are for toggle operation.

INPUT/OUTPUT OPERATION (SERIAL DATA SYSTEM)



When VOL MIN/MAX key is input
Input key is toggle operation, so the first time VOL MIN (-78dB) data is output from D₄~D₈ output, and the second time MAX (0dB) data is output. When VOL is MIN, goes to MAX the first time.

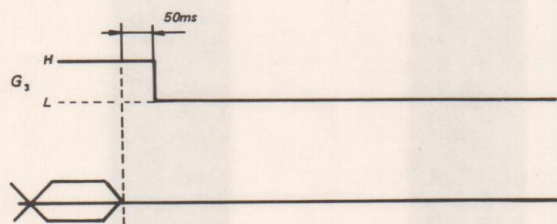
(3) M50765-441 SP PORT ALLOCATION DIAGRAM (1)



(8) INPUT/OUTPUT OPERATION

G₃ port (EN output)

“H” when power is supplied, then “L” 50ms after serial data is sent. Stays low then until power is cut.



G₀ port (category input)

When “H”, PHONO, TUNER, CD, TAPE, VIDEO 1, VIDEO 2 function at same level.

When “L”, PHONO, TUNER, CD, TAPE, VIDEO and both VIDEO 1 and VIDEO 2 are memorized.

G₁ port (VIDEO 1 + 2 output)

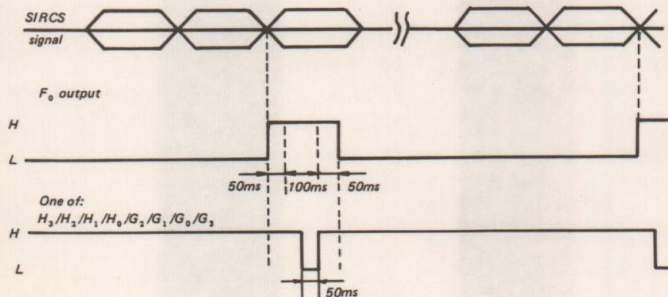
When VIDEO 1 or VIDEO 2 is selected, output is one shot.

G₁/G₂/H₀/H₁/H₂/H₃ ports (VIDEO 1+2/VIDEO/TAPE/CD/TUNER/PHONO) Change output definitions.

When there is input corresponding to the above outputs, output without fail, no matter how many times pressed.

However, F₀ port (MUTE output) only outputs the first time.

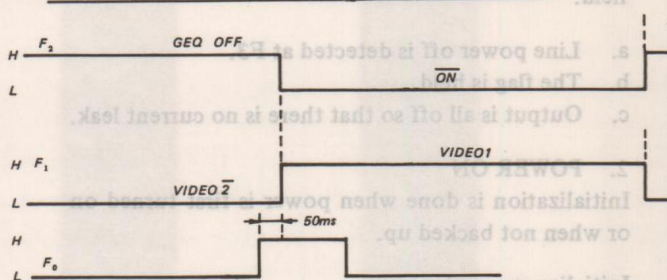
Input	Output
For PHONO/TUNER/CD/TAPE/VIDEO/VIDEO 1/VIDEO 2/GEQ ON, OFF key input or corresponding SIRCS signal input.	Any of H ₃ /H ₂ /H ₁ /H ₀ /G ₂ /G ₁ active “L”. F ₀ output “H”.



When the corresponding code accepts the input, F₀ output is performed. When the same code is input continuously, there is no output.

When the same function is pressed again, F₀ output is not done.

Among the above inputs, F₂ or F₁ active “L”. VIDEO ½ GEQ ON/OFF only perform the output at right at the same time.

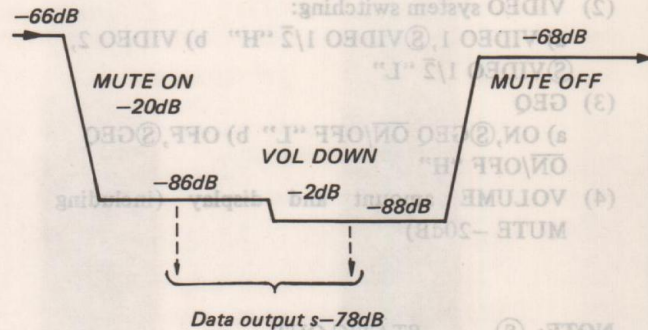


(9) MUTE (-20dB) STATE

When MUTE (-20dB) key or SIRCS code MUTE (-20dB) is accepted, volume is decreased 20dB from the current volume. At this time, data is output to light up the MUTE (-20dB) display. Next MUTE (-20dB) key or SIRCS code MUTE (-20dB) is accepted, 20dB is added to the current volume, and data is output to put out the MUTE (-20dB) display. *VOL display does not change.

If VOL UP/DOWN is done after MUTE ON, MUTE OFF adds 20dB of volume at the final step. Also, for MUTE ON, if below -78dB, the data is all output at -78dB.

*VOL display changes.



Note: VOL MAX for MUTE (-20dB) ON has VOL MAX display and -20dB VOL data.

(10) POWER ON/OFF AND INITIALIZATION

1. POWER OFF

Flags corresponding to key input are allocated and held.

- a. Line power off is detected at F3.
- b. The flag is held.
- c. Output is all off so that there is no current leak.

2. POWER ON

Initialization is done when power is first turned on or when not backed up.

Initialize processing:

The RAM is cleared and S01 operation is done. VOL -70dB processing is done. GEQ/MUTE (-20dB) are off.

When category input is "L", VIDEO 1.

When backed up:

The last status is reproduced according to flag state.

- (1) Audio system switching reproduces one of the following.
 - a) PHONO
 - b) TUNER
 - c) CD
 - d) TAPE
 - e) VIDEO

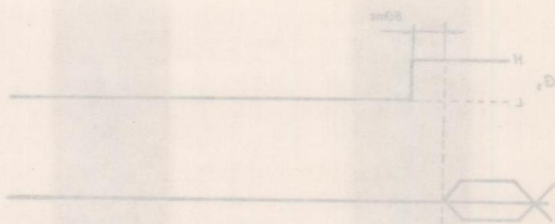
When category input is "L", the switching is done as in (1) and (2) above. When "H", one of PHONO/TUNER/CD/TAPE/VIDEO 1/VIDEO 2 is performed at the same level.
- (2) VIDEO system switching:
 - a) VIDEO 1, \textcircled{S} VIDEO 1/2 "H" b) VIDEO 2, \textcircled{S} VIDEO 1/2 "L"
- (3) GEQ
 - a) ON, \textcircled{S} GEQ $\overline{\text{ON}}$ /OFF "L" b) OFF, \textcircled{S} GEQ $\overline{\text{ON}}$ /OFF "H"
- (4) VOLUME amount and display (including MUTE -20dB)

NOTE: \textcircled{S} STATIC OUT

Note: VOL MAX for MUTE (-20dB) ON has VOL MAX display and -20dB VOL data.

(8) INPUT/OUTPUT OPERATION

G₂ port (EN output) "H" when power is supplied, then "L" 20ms after serial data is sent. Stays low then until power is cut.

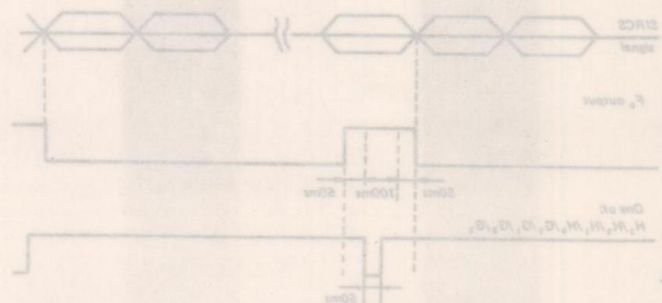


G₁ port (category input) When "H", PHONO, TUNER, CD, TAPE, VIDEO 1, VIDEO 2 function at same level. When "L", PHONO, TUNER, CD, TAPE, VIDEO and both VIDEO 1 and VIDEO 2 are memorized.

G₁ port (VIDEO 1 + 2 output) When VIDEO 1 or VIDEO 2 is selected, output is one shot.

G₁/G₂/H₀/H₁/H₂ ports (VIDEO 1+2/VIDEO) TAPE/CD/TUNER/PHONO) Change output definitions. When there is input corresponding to the above outputs, output without fail, no matter how many times pressed. However, E₀ port (MUTE output) only outputs the first time.

Output	Input
Any of H ₁ /H ₂ /H ₀ /G ₁ /G ₂	For PHONO/TUNER/CD/TAPE/VIDEO/VIDEO 1/VIDEO 2
F ₀ output "H"	GEQ ON, OFF key input or corresponding SIRC'S signal input.



When the corresponding code accepts the input, F₀ output is performed. When the same code is input continuously, there is no output. When the same function is pressed again, F₀ output is not done.

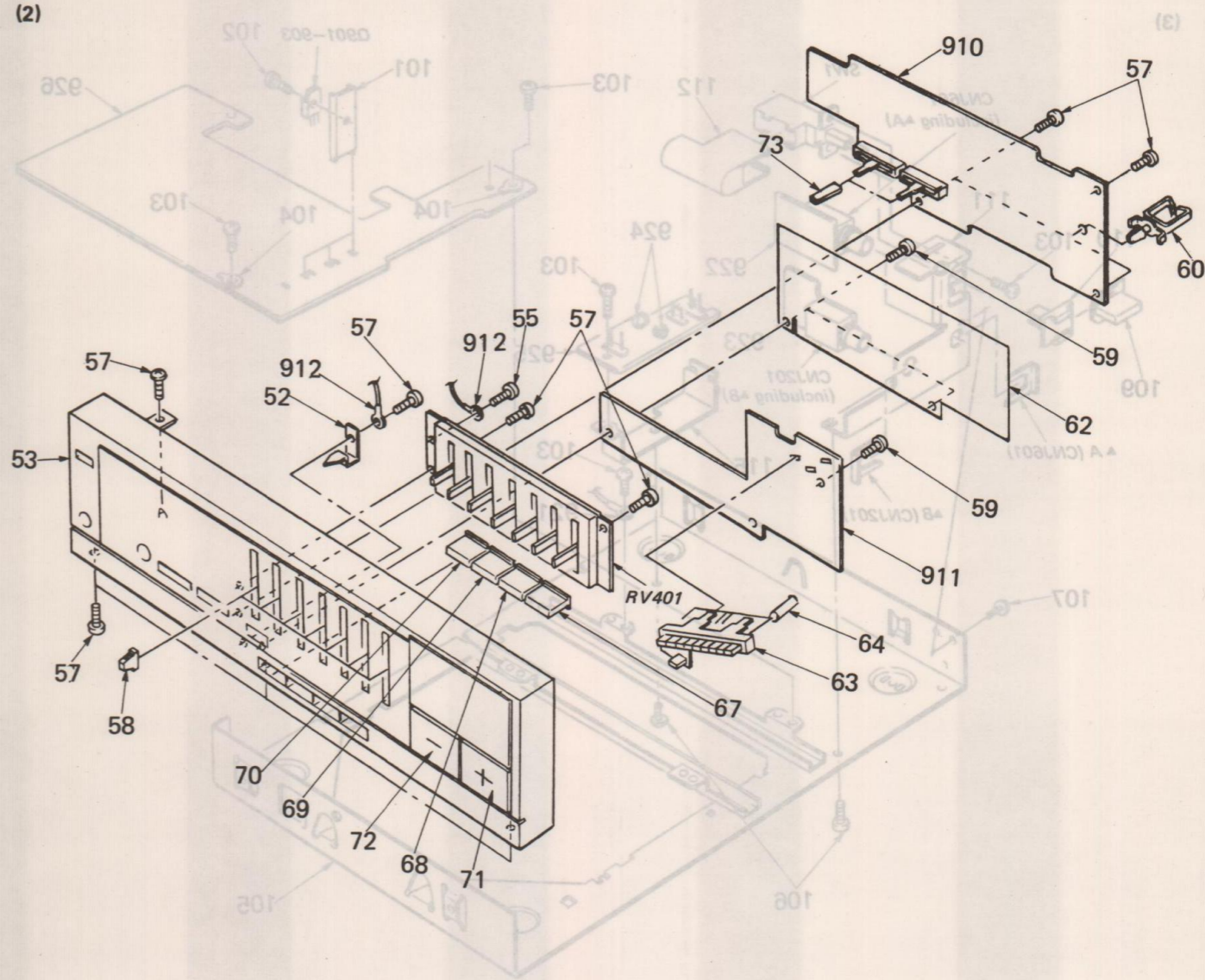
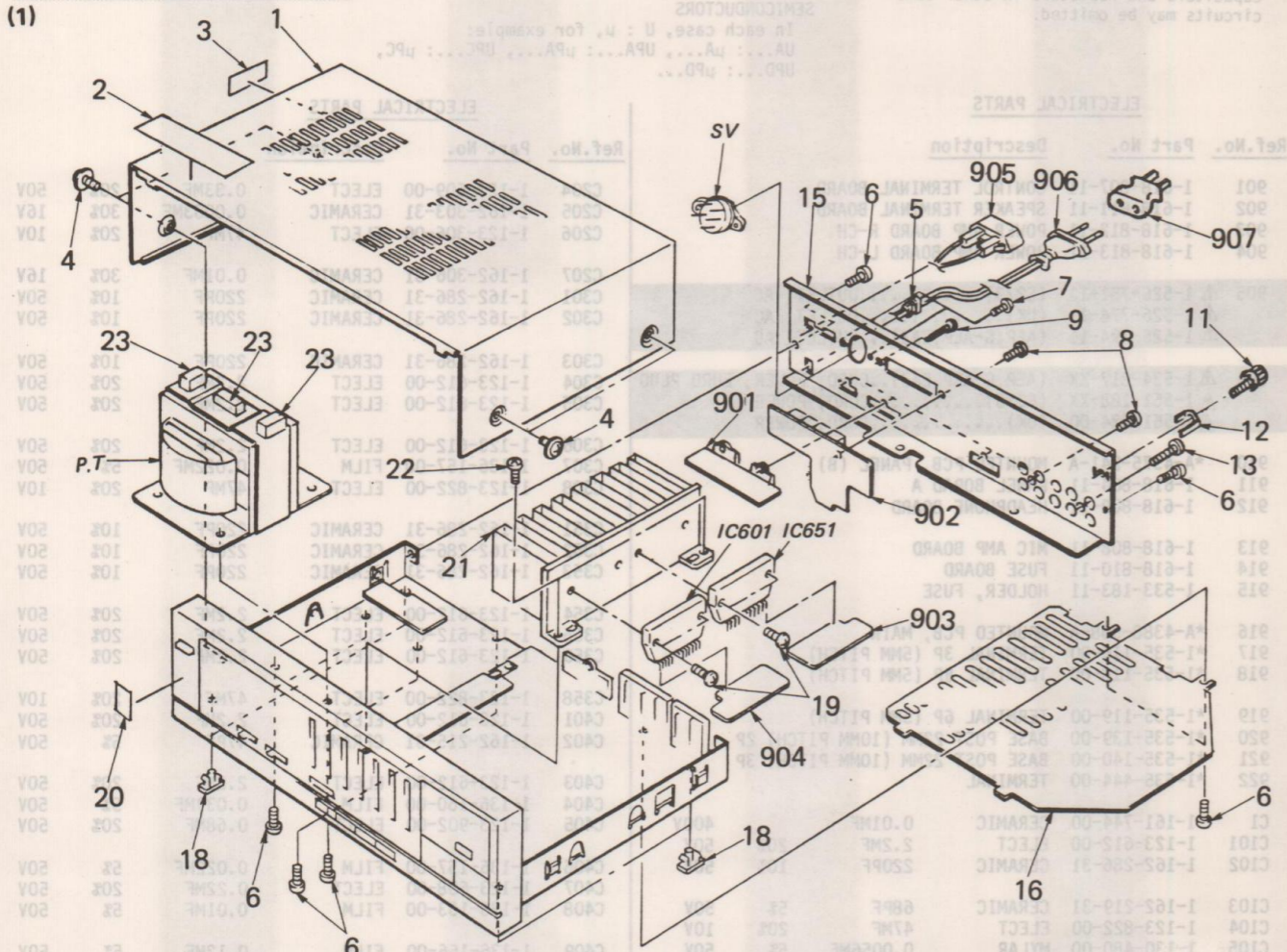
SECTION 4
EXPLODED VIEWS

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 in the remark column.

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

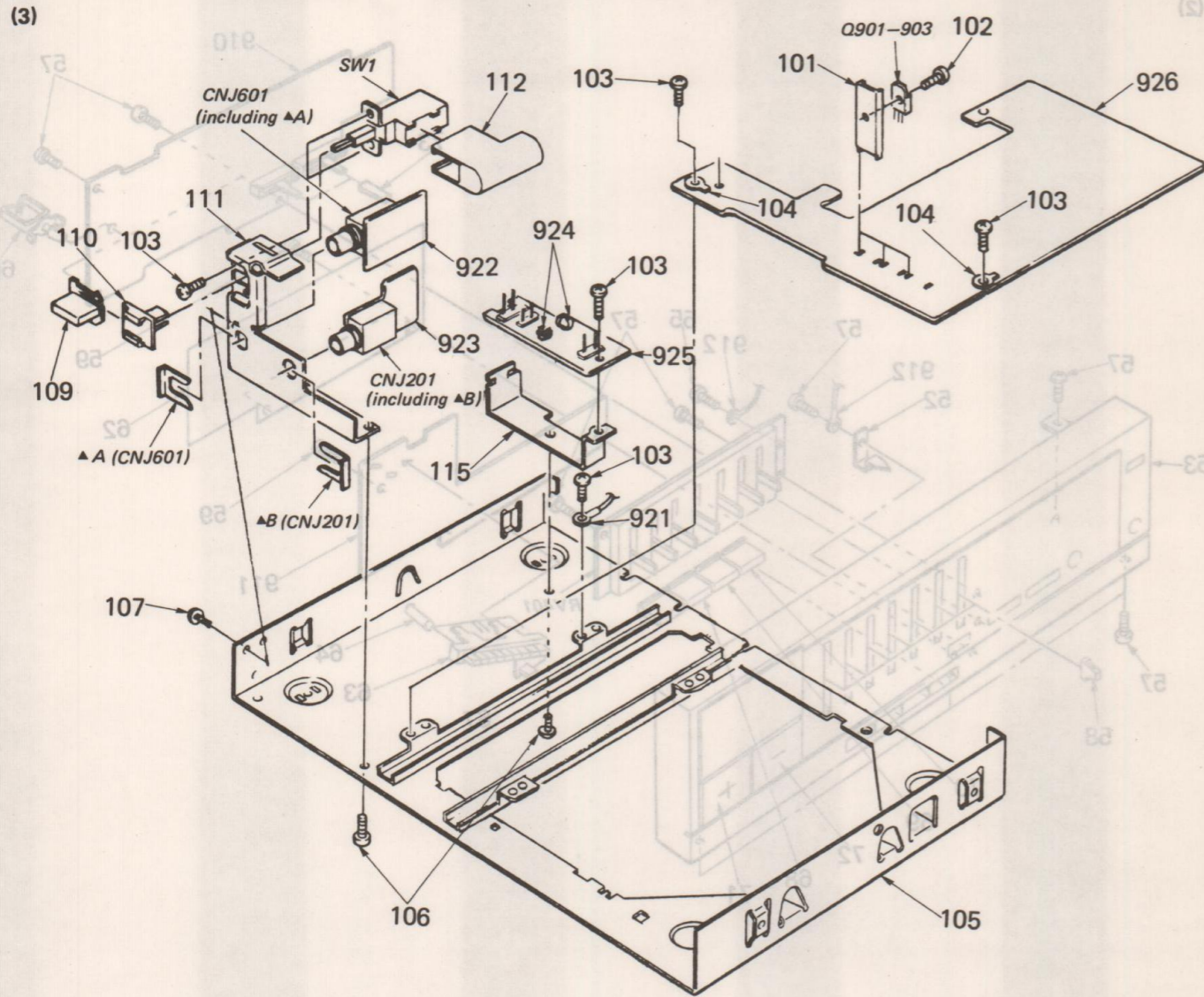


No.	Part No.	Description	Remarks
1	4-914-029-01	CASE	
2	4-861-045-00	LABEL, CAUTION	
3	3-703-079-21	(UK)...LABEL CAUTION	
4	4-886-821-01	SCREW, M3 CASE	
5	3-703-244-00	(AEP,G-AEP,UK,EA3)...BUSHING (2104), CORD	
5	3-703-571-00	(E2/3)...BUSHING CORD	
6	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
7	7-685-871-01	SCREW +BVTT 3X6 (S)	
11	3-706-165-00	SCREW	
12	3-701-993-00	SPACER, TERMINAL	
13	3-703-473-00	SCREW, TERMINAL	
15	4-914-036-11	(AEP)....PLATE, JACK	
	4-914-036-21	(G-AEP)....PLATE, JACK	
	4-914-036-31	(UK)....PLATE, JACK	
	4-914-036-41	(E)....PLATE, JACK	
	4-914-036-51	(EA3)....PLATE, JACK	
16	*4-912-117-21	PLATE, BOTTOM	
18	X-4907-603-1	FOOT ASSY	

No.	Part No.	Description	Remarks
19	7-685-650-71	SCREW +BVTP 3X16 TYPE2 IT-3	
20	3-703-710-41	STICKER, SONY SYMBOL (12)	
21	*4-914-027-11	HEAT SINK (E)	
22	7-685-752-04	SCREW +BVTT 3X8 (S)	
23	9-911-843-XX	CUSHION (A)	
901	1-618-807-11	CONTROL TERMINAL BOARD	
902	1-618-811-11	SPEAKER TERMINAL BOARD	
903	1-618-812-11	POWER AMP BOARD R-CH	
904	1-618-813-11	POWER AMP BOARD L-CH	
905	Δ 1-526-751-11	(UK).....OUTLET, AC	
	Δ 1-526-774-11	(E2/3).....OUTLET, AC	
	Δ 1-526-794-11	(AEP,G-AEP,EA3)...OUTLET, AC	
906	Δ 1-534-817-XX	(AEP,G-AEP,EA3)...CORD, POWER, EURO PLUG	
	Δ 1-551-188-XX	(E2/3).....CORD, POWER	
	Δ 1-551-884-00	(UK).....CORD, POWER	
907	Δ 1-526-565-00	(E3)...AC PLUG ADAPTOR	
PT	Δ 1-448-510-11	(E2/3,EA3).....TRANSFORMER, POWER	
PT	Δ 1-448-511-11	(AEP,G-AEP,UK)...TRANSFORMER, POWER	
SV	Δ 1-526-576-51	(E2/3,EA3).....SELECTOR POWER VOLTAGE	

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
52	*4-881-629-00	PLATE (A), GROUND		68	4-914-020-11	KNOB (S), FUNCTION (CD)	
53	X-4914-010-1	PANEL ASSY, FRONT		69	4-914-020-31	KNOB (S), FUNCTION (VIDEO 2)	
55	7-685-871-01	SCREW +BVTT 3X6 (S)		70	4-914-020-21	KNOB (S), FUNCTION (VIDEO 1)	
57	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S		71	4-914-042-01	KNOB (VOL), T (+)	
58	4-902-815-11	KNOB, EQUALIZER		72	4-914-042-11	KNOB (VOL), T (-)	
60	*3-655-214-00	CLIP, CABLE		73	4-912-128-01	KNOB, SLIDE	
62	*4-914-058-01	SHEET, SHIELD		910	*A-4375-241-A	MOUNTED PCB, PANEL (B)	
63	*4-914-041-01	HOLDER, LED		911	1-618-804-11	PANEL BOARD A	
64	4-905-273-11	CUSHION, LED		912	7-623-508-01	LUG ϕ 3MM	
67	4-914-020-01	KNOB (S), FUNCTION (PHONO)		RV401	1-237-200-11	RES, VAR, SLIDE (BLOCK TYPE) GEQ VOL BLOCK	

SECTION 5
ELECTRICAL PARTS LIST



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

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	*4-870-273-00	HEAT SINK (E)		112	3-575-524-00	COVER, POWER SWITCH	
102	7-685-752-04	SCREW +BVTT 3X8 (S)		921	7-623-508-01	LUG ϕ 3MM	
103	7-685-871-01	SCREW +BVTT 3X6 (S)		115	*4-902-812-01	HOLDER, FUSE PC BOARD	
104	*4-914-059-01	PLATE, GROUND		922	1-618-809-11	HEADPHONE BOARD	
105	*X-4914-004-1	CHASSIS ASSY		923	1-618-808-11	MIC AMP BOARD	
106	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S		924	1-618-810-11	FUSE BOARD	
107	7-682-545-04	SCREW +P 3X4		925	1-533-183-11	HOLDER, FUSE	
109	4-907-611-01	KNOB POWER		926	*A-4388-508-A	MOUNTED PCB, MAIN	
110	4-875-466-00	JOINT KNOB		SW1	▲ 1-554-920-11	SWITCH, PUSH (AC POWER)(1 KEY)	
111	*4-914-016-01	BRACKET, SWITCH		CNJ201	1-507-854-11	JACK LARGE TYPE (MIC)	
				CNJ601	1-507-849-11	JACK LARGE TYPE (HEADPHONES)	

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: μ F, PF: μ F.
- RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

- In each case, U: μ , for example:
- UA...: μ A..., UPA...: μ PA..., UPC...: μ PC,
- UPD...: μ PD...

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	1-618-807-11	CONTROL TERMINAL BOARD
902	1-618-811-11	SPEAKER TERMINAL BOARD
903	1-618-812-11	POWER AMP BOARD R-CH
904	1-618-813-11	POWER AMP BOARD L-CH
905	▲ 1-526-751-11	(E2/3).....OUTLET, AC
	▲ 1-526-774-11	(UK).....OUTLET, AC
	▲ 1-526-794-11	(AEP,G-AEP,EA3)...OUTLET, AC
906	▲ 1-534-817-XX	(AEP,G-AEP,EA3)..CORD, POWER, EURO PLUG
	▲ 1-551-188-XX	(E2/3).....CORD, POWER
	▲ 1-551-884-00	(UK).....CORD, POWER
910	*A-4375-241-A	MOUNTED PCB, PANEL (B)
911	1-618-804-11	PANEL BORAD A
912	1-618-809-11	HEADPHONE BOARD
913	1-618-808-11	MIC AMP BOARD
914	1-618-810-11	FUSE BOARD
915	1-533-183-11	HOLDER, FUSE
916	*A-4388-508-A	MOUNTED PCB, MAIN
917	*1-535-116-00	TERMINAL 3P (5MM PITCH)
918	*1-535-118-00	TERMINAL 5P (5MM PITCH)
919	*1-535-119-00	TERMINAL 6P (5MM PITCH)
920	*1-535-139-00	BASE POST 22MM (10MM PITCH) 2P
921	*1-535-140-00	BASE POST 22MM (10MM PITCH) 3P
922	*1-535-444-00	TERMINAL
C1	1-161-744-00	CERAMIC 0.01MF 400V
C101	1-123-612-00	ELECT 2.2MF 20% 50V
C102	1-162-286-31	CERAMIC 220PF 10% 50V
C103	1-162-219-31	CERAMIC 68PF 5% 50V
C104	1-123-822-00	ELECT 47MF 20% 10V
C105	1-130-480-00	MYLAR 0.0056MF 5% 50V
C106	1-130-473-00	MYLAR 0.0015MF 5% 50V
C107	1-123-610-00	ELECT 0.47MF 20% 50V
C108	1-123-822-00	ELECT 47MF 20% 10V
C109	1-162-282-31	CERAMIC 100PF 10% 50V
C110	1-162-306-31	CERAMIC 0.01MF 30% 16V
C151	1-123-612-00	ELECT 2.2MF 20% 50V
C152	1-162-286-31	CERAMIC 220PF 10% 50V
C153	1-162-219-31	CERAMIC 68PF 5% 50V
C154	1-123-822-00	ELECT 47MF 20% 10V
C155	1-130-480-00	MYLAR 0.0056MF 5% 50V
C156	1-130-473-00	MYLAR 0.0015MF 5% 50V
C157	1-123-610-00	ELECT 0.47MF 20% 50V
C158	1-123-822-00	ELECT 47MF 20% 10V
C159	1-162-282-31	CERAMIC 100PF 10% 50V
C160	1-162-306-31	CERAMIC 0.01MF 30% 16V
C201	1-123-609-00	ELECT 0.33MF 20% 50V
C202	1-162-294-31	CERAMIC 0.001MF 10% 50V
C203	1-123-306-00	ELECT 47MF 20% 10V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C204	1-123-609-00	ELECT 0.33MF 20% 50V
C205	1-162-303-31	CERAMIC 0.0033MF 30% 16V
C206	1-123-306-00	ELECT 47MF 20% 10V
C207	1-162-306-31	CERAMIC 0.01MF 30% 16V
C301	1-162-286-31	CERAMIC 220PF 10% 50V
C302	1-162-286-31	CERAMIC 220PF 10% 50V
C303	1-162-286-31	CERAMIC 220PF 10% 50V
C304	1-123-612-00	ELECT 2.2MF 20% 50V
C305	1-123-612-00	ELECT 2.2MF 20% 50V
C306	1-123-612-00	ELECT 2.2MF 20% 50V
C307	1-136-157-00	FILM 0.022MF 5% 50V
C308	1-123-822-00	ELECT 47MF 20% 10V
C351	1-162-286-31	CERAMIC 220PF 10% 50V
C352	1-162-286-31	CERAMIC 220PF 10% 50V
C353	1-162-286-31	CERAMIC 220PF 10% 50V
C354	1-123-612-00	ELECT 2.2MF 20% 50V
C355	1-123-612-00	ELECT 2.2MF 20% 50V
C356	1-123-612-00	ELECT 2.2MF 20% 50V
C358	1-123-822-00	ELECT 47MF 20% 10V
C401	1-123-612-00	ELECT 2.2MF 20% 50V
C402	1-162-215-31	CERAMIC 47PF 5% 50V
C403	1-123-612-00	ELECT 2.2MF 20% 50V
C404	1-136-160-00	FILM 0.039MF 5% 50V
C405	1-123-902-00	ELECT 0.68MF 20% 50V
C406	1-136-157-00	FILM 0.022MF 5% 50V
C407	1-123-608-00	ELECT 0.22MF 20% 50V
C408	1-136-153-00	FILM 0.01MF 5% 50V
C409	1-136-166-00	FILM 0.12MF 5% 50V
C410	1-130-478-00	MYLAR 0.0039MF 5% 50V
C411	1-136-163-00	FILM 0.068MF 5% 50V
C412	1-130-473-00	MYLAR 0.0015MF 5% 50V
C413	1-136-157-00	FILM 0.022MF 5% 50V
C414	1-162-293-31	CERAMIC 820PF 10% 50V
C415	1-136-153-00	FILM 0.01MF 5% 50V
C416	1-162-288-31	CERAMIC 330PF 10% 50V
C417	1-130-479-00	MYLAR 0.0047MF 5% 50V
C418	1-162-294-31	CERAMIC 0.001MF 10% 50V
C419	1-119-503-11	ELECT 2.2MF 20% 10V
C420	1-124-236-00	ELECT 47MF 20% 10V
C422	1-123-822-00	ELECT 47MF 20% 10V
C451	1-123-612-00	ELECT 2.2MF 20% 50V
C452	1-162-215-31	CERAMIC 47PF 5% 50V
C453	1-123-612-00	ELECT 2.2MF 20% 50V
C454	1-136-160-00	FILM 0.039MF 5% 50V
C455	1-123-902-00	ELECT 0.68MF 20% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C456	1-136-157-00	FILM	0.022MF	5%	50V
C457	1-123-608-00	ELECT	0.22MF	20%	50V
C458	1-136-153-00	FILM	0.01MF	5%	50V
C459	1-136-166-00	FILM	0.12MF	5%	50V
C460	1-130-478-00	MYLAR	0.0039MF	5%	50V
C461	1-136-163-00	FILM	0.068MF	5%	50V
C462	1-130-473-00	MYLAR	0.0015MF	5%	50V
C463	1-136-157-00	FILM	0.022MF	5%	50V
C464	1-162-293-31	CERAMIC	820PF	10%	50V
C465	1-136-153-00	FILM	0.01MF	5%	50V
C466	1-162-288-31	CERAMIC	330PF	10%	50V
C467	1-130-479-00	MYLAR	0.0047MF	5%	50V
C468	1-162-294-31	CERAMIC	0.001MF	10%	50V
C469	1-119-503-11	ELECT	2.2MF	20%	10V
C470	1-124-236-00	ELECT	47MF	20%	10V
C472	1-123-822-00	ELECT	47MF	20%	10V
C501	1-119-503-11	ELECT	2.2MF	20%	10V
C502	1-162-215-31	CERAMIC	47PF	5%	50V
C503	1-123-612-00	ELECT	2.2MF	20%	50V
C504	1-119-503-11	ELECT	2.2MF	20%	10V
C505	1-119-503-11	ELECT	2.2MF	20%	10V
C506	1-123-822-00	ELECT	47MF	20%	10V
C551	1-119-503-11	ELECT	2.2MF	20%	10V
C552	1-162-215-31	CERAMIC	47PF	5%	50V
C553	1-123-612-00	ELECT	2.2MF	20%	50V
C554	1-119-503-11	ELECT	2.2MF	20%	10V
C555	1-119-503-11	ELECT	2.2MF	20%	10V
C556	1-123-822-00	ELECT	47MF	20%	10V
C601	1-123-611-00	ELECT	1MF	20%	50V
C602	1-102-110-00	CERAMIC	220PF	10%	50V
C603	1-123-307-00	ELECT	100MF	20%	10V
C604	1-102-947-00	CERAMIC	10PF	5%	50V
C605	1-102-074-00	CERAMIC	0.001MF	10%	50V
C606	1-102-106-00	CERAMIC	100PF	10%	50V
C607	1-123-611-00	ELECT	1MF	20%	50V
C608	1-130-473-00	MYLAR	0.0015MF	5%	50V
C609	1-124-122-11	ELECT	100MF	20%	50V
C610	1-102-106-00	CERAMIC	100PF	10%	50V
C611	1-123-356-00	ELECT	10MF	20%	50V
C612	1-123-356-00	ELECT	10MF	20%	50V
C613	1-130-491-00	MYLAR	0.047MF	5%	50V
C614	1-136-163-00	FILM	0.068MF	5%	50V
C615	1-136-163-00	FILM	0.068MF	5%	50V
C618	1-123-610-00	ELECT	0.47MF	20%	50V
C619	1-102-110-00	CERAMIC	220PF	10%	50V
C620	1-102-963-00	CERAMIC	33PF	10%	50V
C621	1-161-330-00	CERAMIC	0.01MF	30%	25V
C623	1-162-596-00	(G-AEP)...CERAMIC	0.022MF		25V
C651	1-123-611-00	ELECT	1MF	20%	50V
C652	1-102-110-00	CERAMIC	220PF	10%	50V
C653	1-123-307-00	ELECT	100MF	20%	10V
C654	1-102-947-00	CERAMIC	10PF	5%	50V
C655	1-102-074-00	CERAMIC	0.001MF	10%	50V
C656	1-102-106-00	CERAMIC	100PF	10%	50V
C657	1-123-611-00	ELECT	1MF	20%	50V
C658	1-130-473-00	MYLAR	0.0015MF	5%	50V
C659	1-124-122-11	ELECT	100MF	20%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C660	1-102-106-00	CERAMIC	100PF	10%	50V
C661	1-123-356-00	ELECT	10MF	20%	50V
C662	1-123-356-00	ELECT	10MF	20%	50V
C663	1-130-491-00	MYLAR	0.047MF	5%	50V
C664	1-136-163-00	FILM	0.068MF	5%	50V
C665	1-136-163-00	FILM	0.068MF	5%	50V
C668	1-123-610-00	ELECT	0.47MF	20%	50V
C669	1-102-110-00	CERAMIC	220PF	10%	50V
C670	1-102-963-00	CERAMIC	33PF	10%	50V
C673	1-162-596-00	(G-AEP)...CERAMIC	0.022MF		25V
C701	1-162-284-31	CERAMIC	150PF	10%	50V
C702	1-162-284-31	CERAMIC	150PF	10%	50V
C703	1-123-608-00	ELECT	0.22MF	20%	50V
C704	1-162-291-31	CERAMIC	560PF	10%	50V
C705	1-162-291-31	CERAMIC	560PF	10%	50V
C708	1-123-617-00	ELECT	10MF	20%	16V
C709	1-124-890-51	ELECT	6800MF	20%	6.3V
C711	1-123-617-00	ELECT	10MF	20%	16V
C712	1-123-644-00	ELECT	22MF	20%	10V
C713	1-123-617-00	ELECT	10MF	20%	16V
C714	1-123-617-00	ELECT	10MF	20%	16V
C715	1-162-596-00	CERAMIC	0.022MF		25V
C716	1-162-596-00	CERAMIC	0.022MF		25V
C717	1-162-596-00	CERAMIC	0.022MF		25V
C718	1-162-596-00	CERAMIC	0.022MF		25V
C719	1-162-596-00	CERAMIC	0.022MF		25V
C720	1-162-596-00	CERAMIC	0.022MF		25V
C721	1-162-596-00	CERAMIC	0.022MF		25V
C722	1-162-596-00	CERAMIC	0.022MF		25V
C723	1-162-596-00	CERAMIC	0.022MF		25V
C724	1-162-596-00	CERAMIC	0.022MF		25V
C725	1-162-596-00	CERAMIC	0.022MF		25V
C726	1-162-596-00	CERAMIC	0.022MF		25V
C727	1-162-596-00	CERAMIC	0.022MF		25V
C728	1-162-291-31	CERAMIC	560PF	10%	50V
C729	1-162-596-00	CERAMIC	0.022MF		25V
C730	1-162-596-00	CERAMIC	0.022MF		25V
C731	1-162-596-00	CERAMIC	0.022MF		25V
C732	1-162-596-00	CERAMIC	0.022MF		25V
C733	1-162-596-00	CERAMIC	0.022MF		25V
C801	1-124-444-00	ELECT	220MF	20%	6.3V
C802	1-124-444-00	ELECT	220MF	20%	6.3V
C803	1-123-356-00	ELECT	10MF	20%	50V
C804	1-124-468-11	ELECT	100MF	20%	6.3V
C901	1-124-030-00	ELECT	6800MF	20%	42V
C902	1-124-030-00	ELECT	6800MF	20%	42V
C903	1-102-394-00	CERAMIC	0.01MFX2		250V
C904	1-124-445-00	ELECT	100MF	20%	16V
C905	1-124-445-00	ELECT	100MF	20%	16V
C906	1-123-822-00	ELECT	47MF	20%	10V
C907	1-123-822-00	ELECT	47MF	20%	10V
C908	1-124-480-11	ELECT	470MF	20%	25V
C909	1-124-480-11	ELECT	470MF	20%	25V
C910	1-102-394-00	CERAMIC	0.01MFX2		250V
C911	1-124-443-00	ELECT	100MF	20%	10V
C912	1-123-822-00	ELECT	47MF	20%	10V
C913	1-162-596-00	CERAMIC	0.022MF		25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C914	1-162-596-00	CERAMIC 0.022MF 25V
C915	1-162-596-00	CERAMIC 0.022MF 25V
CN101	*1-562-250-00	SOCKET, CONNECTOR 5P
CN201	*1-562-327-00	SOCKET, CONNECTOR 3P
CN202	*1-562-327-00	SOCKET, CONNECTOR 3P
CN701	*1-562-249-00	SOCKET, CONNECTOR 4P
CN702	*1-562-327-00	SOCKET, CONNECTOR 3P
CN703	*1-562-328-00	SOCKET, CONNECTOR 7P
CN704	*1-562-328-00	SOCKET, CONNECTOR 7P
CN705	*1-562-327-00	SOCKET, CONNECTOR 3P
CN706	*1-562-249-00	SOCKET, CONNECTOR 4P
CN708	*1-562-328-00	SOCKET, CONNECTOR 7P
CN709	*1-562-328-00	SOCKET, CONNECTOR 7P
CN710	*1-562-327-00	SOCKET, CONNECTOR 3P
CN711	*1-562-249-00	SOCKET, CONNECTOR 4P
CN712	*1-562-251-00	SOCKET, CONNECTOR 6P
CN714	*1-562-327-00	SOCKET, CONNECTOR 3P
CNJ101	1-507-788-00	JACK, PIN 4P (PHONO,CD)
CNJ201	1-507-854-00	JACK, LARGE TYPE (MIC)
CNJ301	1-507-911-11	JACK, PIN 6P (VIDEO-1/2)
CNJ302	1-562-068-13	SOCKET, CONNECTOR 13P(SYSTEM CONTROL 1)
CNJ401	*1-563-251-11	SOCKET, CONNECTOR 12P
CNJ451	*1-563-152-11	SOCKET, CONNECTOR 10P
CNJ601	1-507-849-00	JACK, LARGE TYPE (HEADPHONES)
CNJ701	1-562-068-13	SOCKET, CONNECTOR 13P(SYSTEM CONTROL 2)
CNJ702	1-563-102-11	SOCKET, CONNECTOR 6P (SYSTEM CONTROL 3)
D701	8-719-302-16	DIODE SEL1813A-C-TP2
D702	8-719-302-16	DIODE SEL1813A-C-TP2
D703	8-719-302-16	DIODE SEL1813A-C-TP2
D704	8-719-302-16	DIODE SEL1813A-C-TP2
D705	8-719-302-16	DIODE SEL1813A-C-TP2
D706	8-719-302-16	DIODE SEL1813A-C-TP2
D707	8-719-938-09	DIODE SLP269B-50
D708	8-719-938-09	DIODE SLP269B-50
D709	8-719-938-08	DIODE SLP455B-50
D710	8-719-107-94	DIODE 1SS202-1
D712	8-719-107-94	DIODE 1SS202-1
D713	8-719-107-94	DIODE 1SS202-1
D714	8-719-107-94	DIODE 1SS202-1
D715	8-719-107-94	DIODE 1SS202-1
D716	8-719-107-94	DIODE 1SS202-1
D717	8-719-107-94	DIODE 1SS202-1
D718	8-719-107-94	DIODE 1SS202-1
D719	8-719-107-94	DIODE 1SS202-1
D801	8-719-107-94	DIODE 1SS202-1
D802	8-719-107-94	DIODE 1SS202-1
D803	8-719-200-79	DIODE 10E2N
D804	8-719-107-94	DIODE 1SS202-1
D805	8-719-107-94	DIODE 1SS202-1
D851	8-719-107-94	DIODE 1SS202-1
D901	8-719-910-13	DIODE HZ11A3L
D902	8-719-910-13	DIODE HZ11A3L
D903	8-719-910-11	DIODE HZ7A1L
D904	8-719-302-38	DIODE RBV602-01
D905	8-719-511-20	DIODE S1VB20

ELECTRICAL PARTS

Ref.No.	Part No.	Description
F1	△ 1-532-259-00	FUSE, TIME-LAG
F2	△ 1-532-259-00	FUSE, TIME-LAG
IC101	8-759-923-97	IC BA4561
IC301	8-759-802-52	IC LC7818
IC302	8-759-800-37	IC LC4066BH
IC303	8-759-800-37	IC LC4066BH
IC304	8-759-800-37	IC LC4066BH
IC401	8-759-923-97	IC BA4561
IC402	8-759-802-54	IC LA3605
IC403	8-759-802-54	IC LA3605
IC501	8-759-204-30	IC TC9176P
IC502	8-759-923-97	IC BA4561
IC601	8-749-900-13	(E2/3:Canadian,US)...IC STK4028NKZ
IC601	8-749-900-12	(AEP,G-AEP,UK).....IC STK4034NKZ
IC651	8-749-900-13	(E2/3:Canadian,US)...IC STK4028NKZ
IC651	8-749-900-12	(AEP,G-AEP,UK).....IC STK4034NKZ
IC701	8-759-603-42	IC M50765-441SP
IC702	8-709-140-11	IC UPD4011BC
IC703	8-759-601-03	IC M54566P
IC704	8-759-603-19	IC M54977P
IC801	8-759-101-23	IC UPC1237H
L601	*1-420-872-00	COIL, AIR CORE 1.9UH
L651	*1-420-872-00	COIL, AIR CORE 1.9UH
PS901	△ 1-532-686-00	LINK, IC
PS902	△ 1-532-686-00	LINK, IC
PS903	△ 1-532-686-00	LINK, IC
PT	△ 1-448-510-11	(E2/3,EA3).....TRANSFORMER, POWER
PT	△ 1-448-511-11	(AEP,G-AEP,UK)...TRANSFORMER, POWER
Q201	8-729-606-33	TRANSISTOR 2SC2603F
Q601	8-729-107-99	TRANSISTOR 2SC3622A-K
Q651	8-729-107-99	TRANSISTOR 2SC3622A-K
Q701	8-729-900-63	TRANSISTOR DTA124ES
Q702	8-729-900-63	TRANSISTOR DTA124ES
Q703	8-729-900-36	TRANSISTOR DTA124ES
Q704	8-729-900-63	TRANSISTOR DTA124ES
Q705	8-729-900-36	TRANSISTOR DTA124ES
Q706	8-729-900-63	TRANSISTOR DTA124ES
Q707	8-729-900-36	TRANSISTOR DTC124ES
Q708	8-729-117-54	TRANSISTOR 2SA1175
Q709	8-729-900-63	TRANSISTOR DTA124ES
Q710	8-729-900-63	TRANSISTOR DTA124ES
Q711	8-729-900-63	TRANSISTOR DTA124ES
Q712	8-729-900-63	TRANSISTOR DTA124ES
Q713	8-729-900-63	TRANSISTOR DTA124ES
Q714	8-729-900-63	TRANSISTOR DTA124ES
Q715	8-729-900-80	TRANSISTOR DTC114ES
Q716	8-729-900-36	TRANSISTOR DTC124ES
Q718	8-729-117-54	TRANSISTOR 2SA1175
Q719	8-729-606-33	TRANSISTOR 2SC2603F
Q720	8-729-900-36	TRANSISTOR DTC124ES
Q721	8-729-900-36	TRANSISTOR DTC124ES
Q722	8-729-900-36	TRANSISTOR DTC124ES
Q723	8-729-900-36	TRANSISTOR DTC124ES
Q724	8-729-900-36	TRANSISTOR DTC124ES
Q801	8-729-108-05	TRANSISTOR 2SC1841PA


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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q802	8-729-900-63	TRANSISTOR	DTA124ES		
Q851	8-729-108-05	TRANSISTOR	2SC1841PA		
Q901	8-729-107-25	TRANSISTOR	2SD1585-L		
Q902	8-729-111-67	TRANSISTOR	2SD1094-L		
Q903	8-729-107-25	TRANSISTOR	2SD1585-L		
R101	1-249-441-11	CARBON	100K	5%	1/6W
R102	1-247-831-00	CARBON	1K	5%	1/6W
R103	1-249-441-11	CARBON	100K	5%	1/6W
R104	1-247-829-00	CARBON	820	5%	1/6W
R105	1-247-897-00	CARBON	560K	5%	1/6W
R106	1-249-437-11	CARBON	47K	5%	1/6W
R107	1-247-815-00	CARBON	220	5%	1/6W
R108	1-249-441-11	CARBON	100K	5%	1/6W
R109	1-247-692-11	CARBON	22	5%	1/4W
R110	1-247-829-00	CARBON	820	5%	1/6W
R151	1-249-441-11	CARBON	100K	5%	1/6W
R152	1-247-831-00	CARBON	1K	5%	1/6W
R153	1-249-441-11	CARBON	100K	5%	1/6W
R154	1-247-829-00	CARBON	820	5%	1/6W
R155	1-247-897-00	CARBON	560K	5%	1/6W
R156	1-249-437-11	CARBON	47K	5%	1/6W
R157	1-247-815-00	CARBON	220	5%	1/6W
R158	1-249-441-11	CARBON	100K	5%	1/6W
R159	1-247-692-11	CARBON	22	5%	1/4W
R160	1-247-829-00	CARBON	820	5%	1/6W
R201	1-249-441-11	CARBON	100K	5%	1/6W
R202	1-249-441-11	CARBON	100K	5%	1/6W
R203	1-247-831-00	CARBON	1K	5%	1/6W
R204	1-247-849-00	CARBON	5.6K	5%	1/6W
R205	1-247-859-00	CARBON	15K	5%	1/6W
R206	1-249-441-11	CARBON	100K	5%	1/6W
R207	1-249-421-11	CARBON	2.2K	5%	1/6W
R208	1-247-831-00	CARBON	1K	5%	1/6W
R301	1-247-831-00	CARBON	1K	5%	1/6W
R302	1-247-831-00	CARBON	1K	5%	1/6W
R303	1-247-831-00	CARBON	1K	5%	1/6W
R304	1-247-897-00	CARBON	560K	5%	1/6W
R305	1-247-897-00	CARBON	560K	5%	1/6W
R306	1-247-897-00	CARBON	560K	5%	1/6W
R307	1-247-897-00	CARBON	560K	5%	1/6W
R308	1-247-897-00	CARBON	560K	5%	1/6W
R309	1-247-897-00	CARBON	560K	5%	1/6W
R310	1-247-897-00	CARBON	560K	5%	1/6W
R311	1-247-897-00	CARBON	560K	5%	1/6W
R313	1-247-831-00	CARBON	1K	5%	1/6W
R314	1-247-831-00	CARBON	1K	5%	1/6W
R317	1-247-823-00	CARBON	470	5%	1/6W
R318	1-247-823-00	CARBON	470	5%	1/6W
R319	1-247-903-00	CARBON	1M	5%	1/6W
R320	1-247-903-00	CARBON	1M	5%	1/6W
R321	1-249-433-11	CARBON	22K	5%	1/6W
R322	1-249-433-11	CARBON	22K	5%	1/6W
R323	1-247-901-00	CARBON	820K	5%	1/6W
R324	1-249-429-11	CARBON	10K	5%	1/6W
R325	1-249-429-11	CARBON	10K	5%	1/6W
R351	1-247-831-00	CARBON	1K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R352	1-247-831-00	CARBON	1K	5%	1/6W
R353	1-247-831-00	CARBON	1K	5%	1/6W
R354	1-247-897-00	CARBON	560K	5%	1/6W
R355	1-247-897-00	CARBON	560K	5%	1/6W
R356	1-247-897-00	CARBON	560K	5%	1/6W
R357	1-247-897-00	CARBON	560K	5%	1/6W
R358	1-247-897-00	CARBON	560K	5%	1/6W
R359	1-247-897-00	CARBON	560K	5%	1/6W
R360	1-247-897-00	CARBON	560K	5%	1/6W
R361	1-247-897-00	CARBON	560K	5%	1/6W
R363	1-247-831-00	CARBON	1K	5%	1/6W
R364	1-247-831-00	CARBON	1K	5%	1/6W
R367	1-247-823-00	CARBON	470	5%	1/6W
R368	1-247-823-00	CARBON	470	5%	1/6W
R369	1-247-903-00	CARBON	1M	5%	1/6W
R370	1-247-903-00	CARBON	1M	5%	1/6W
R401	1-247-887-00	CARBON	220K	5%	1/6W
R402	1-247-831-00	CARBON	1K	5%	1/6W
R403	1-247-887-00	CARBON	220K	5%	1/6W
R404	1-249-441-11	CARBON	100K	5%	1/6W
R405	1-249-425-11	CARBON	4.7K	5%	1/6W
R406	1-249-441-11	CARBON	100K	5%	1/6W
R407	1-247-692-11	CARBON	22	5%	1/4W
R451	1-247-887-00	CARBON	220K	5%	1/6W
R452	1-247-831-00	CARBON	1K	5%	1/6W
R453	1-247-887-00	CARBON	220K	5%	1/6W
R454	1-249-441-11	CARBON	100K	5%	1/6W
R455	1-249-425-11	CARBON	4.7K	5%	1/6W
R456	1-249-441-11	CARBON	100K	5%	1/6W
R457	1-247-692-11	CARBON	22	5%	1/4W
R501	1-249-441-11	CARBON	100K	5%	1/6W
R502	1-247-831-00	CARBON	1K	5%	1/6W
R503	1-247-887-00	CARBON	220K	5%	1/6W
R504	1-247-831-00	CARBON	1K	5%	1/6W
R505	1-247-692-11	CARBON	22	5%	1/4W
R551	1-249-441-11	CARBON	100K	5%	1/6W
R552	1-247-831-00	CARBON	1K	5%	1/6W
R553	1-247-887-00	CARBON	220K	5%	1/6W
R554	1-247-831-00	CARBON	1K	5%	1/6W
R555	1-247-692-11	CARBON	22	5%	1/4W
R601	1-247-713-11	CARBON	1K	5%	1/4W
R602	1-247-173-00	CARBON	56K	5%	1/4W
R603	1-247-125-00	CARBON	560	5%	1/4W
R604	1-247-173-00	CARBON	56K	5%	1/4W
R605	1-247-149-00	CARBON	5.6K	5%	1/4W
R606	1-247-713-11	CARBON	1K	5%	1/4W
R607	△ 1-247-700-11	CARBON	100	5%	1/4W F
R608	△ 1-247-192-00	CARBON	10	5%	1/2W F
R609	1-247-192-00	CARBON	10	5%	1/2W
R610	△ 1-247-240-00	CARBON	1K	5%	1/2W F
R612	1-247-713-11	CARBON	1K	5%	1/4W
R613	1-249-469-11	CARBON	100K	5%	1/4W
R614	1-247-713-11	CARBON	1K	5%	1/4W
R651	1-247-713-11	CARBON	1K	5%	1/4W
R652	1-247-173-00	CARBON	56K	5%	1/4W
R653	1-247-125-00	CARBON	560	5%	1/4W
R654	1-247-173-00	CARBON	56K	5%	1/4W

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

SONY INTEGRATED STEREO AMPLIFIER TA-V70

SCHEMATIC DIAGRAM

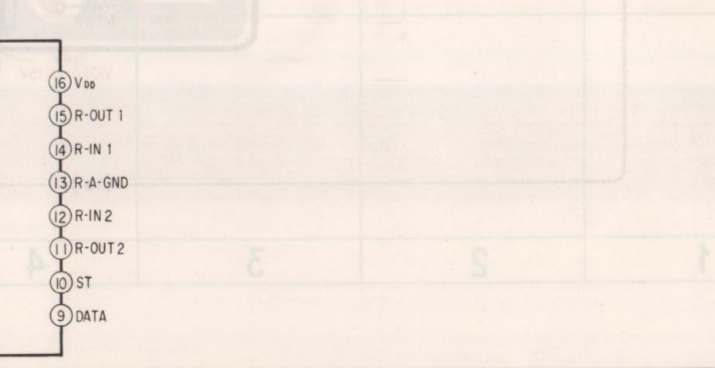
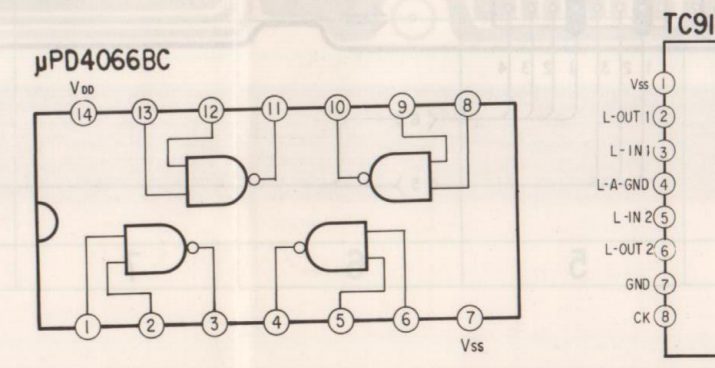
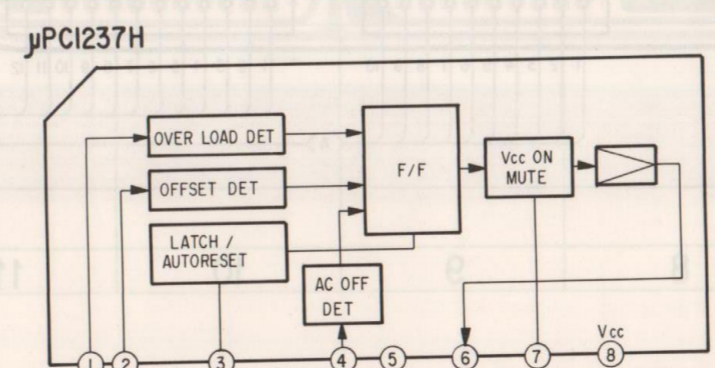
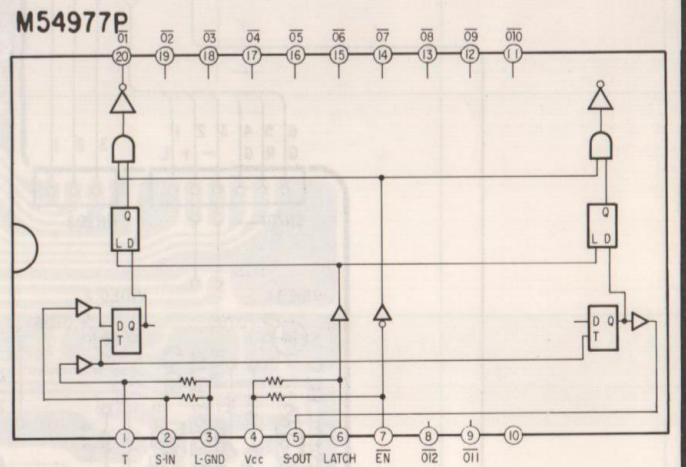
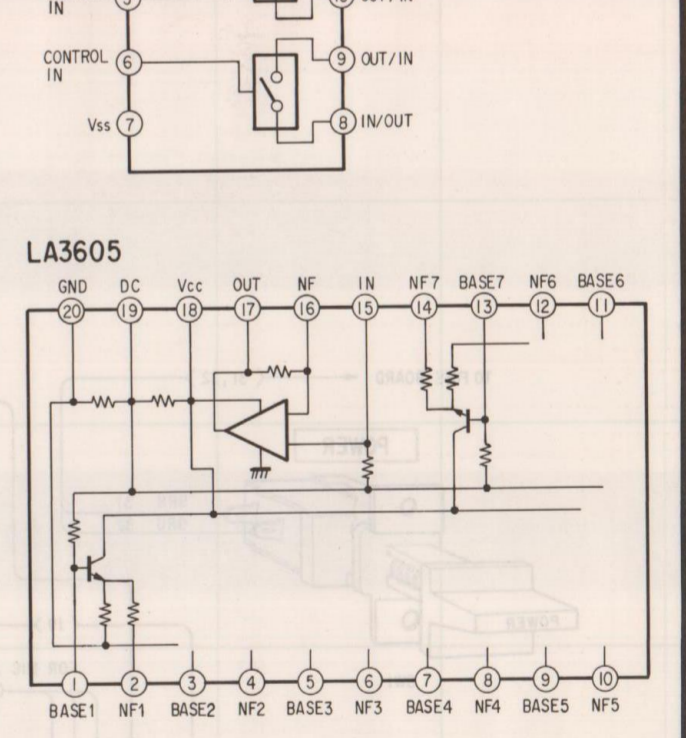
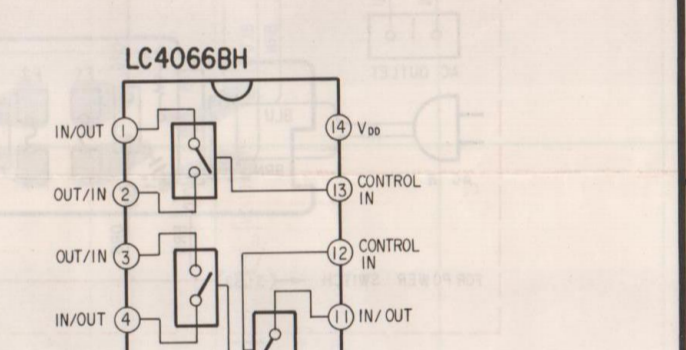
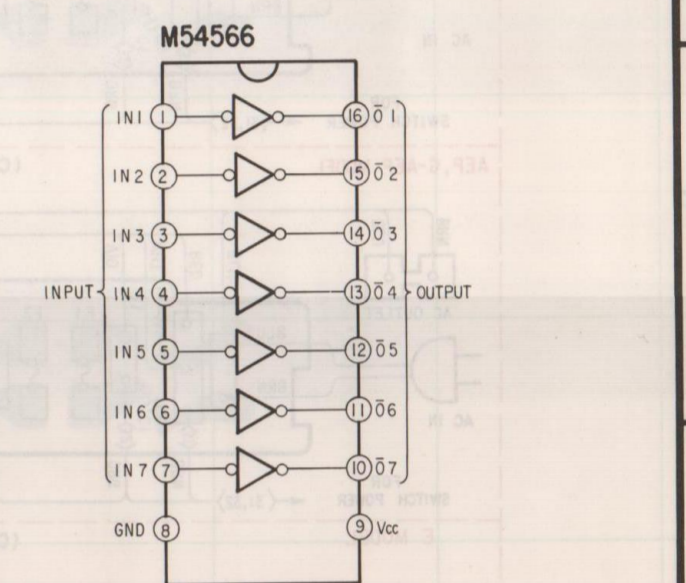
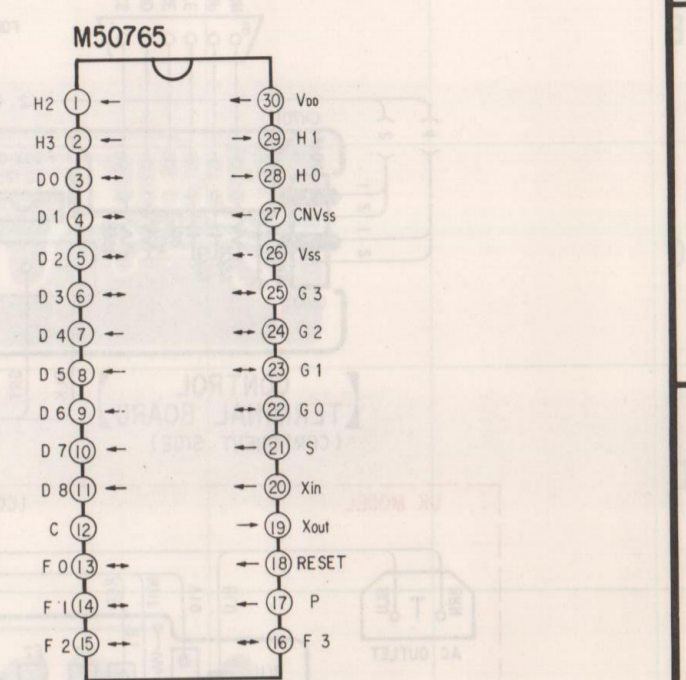
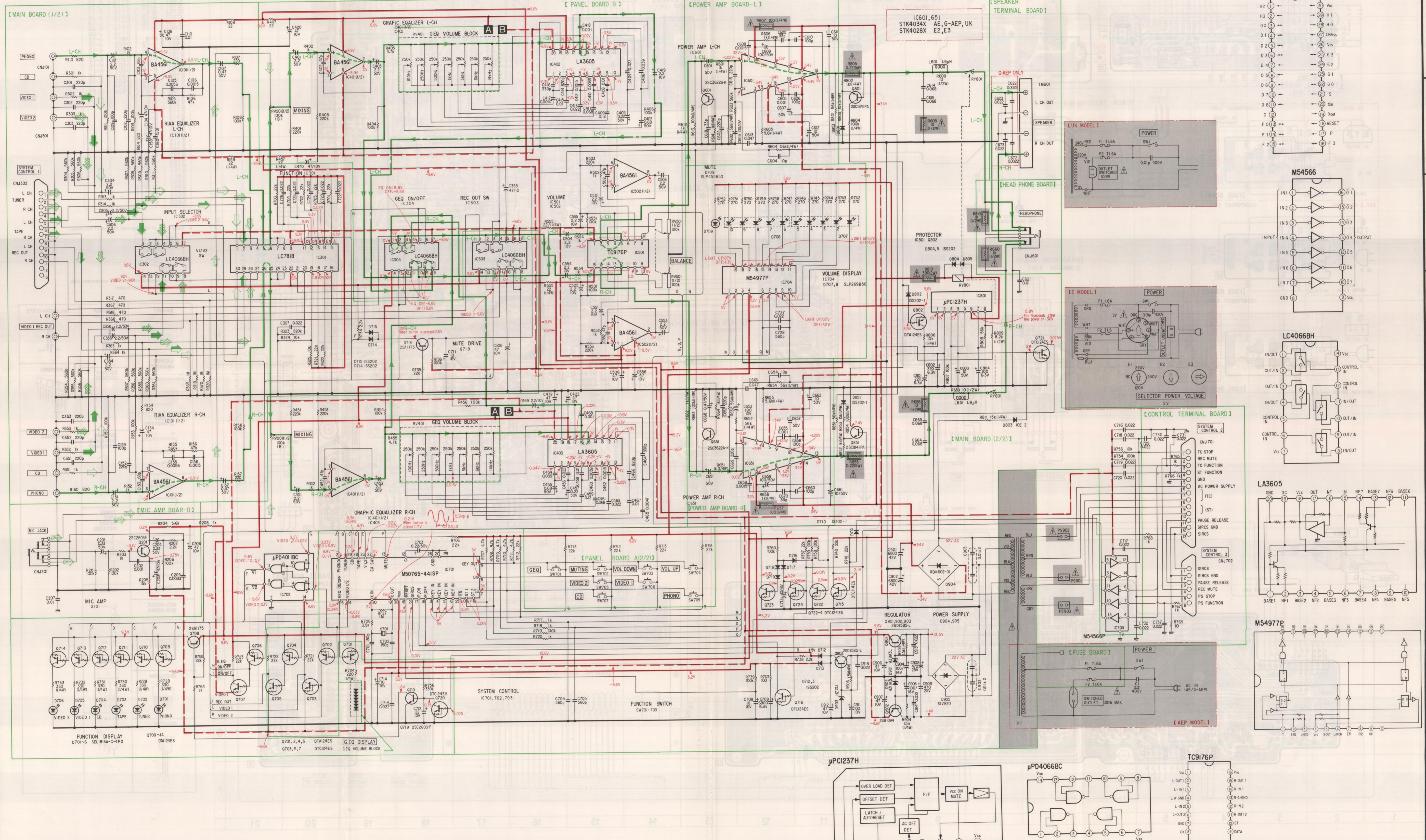
UK Model
E Model

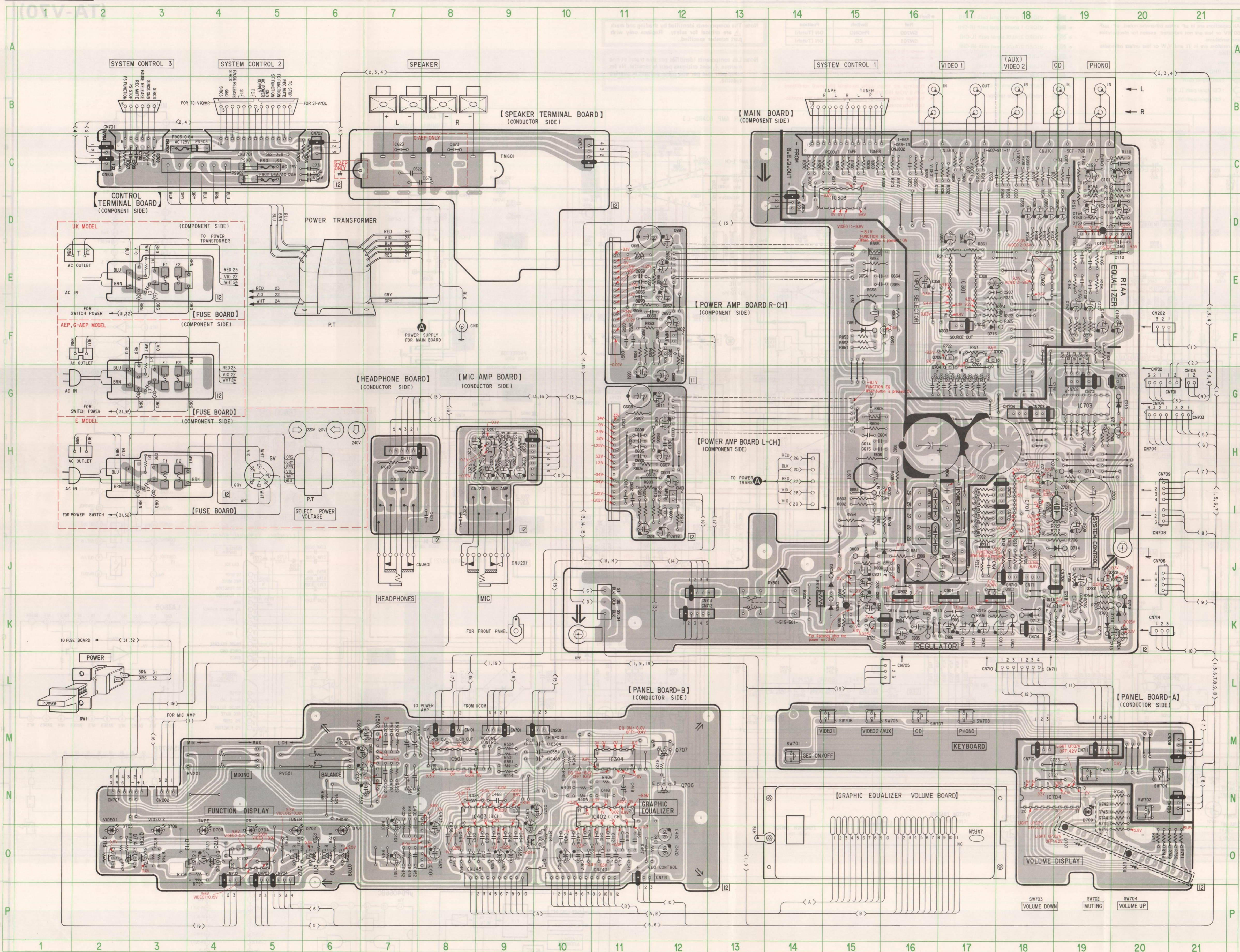
- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{2}\text{W}$ or less unless otherwise specified.
 - signal path.
 - PHONO signal path
 - MIC signal path
 - CD signal path (L-CH)
 - CD signal path (R-CH)
 - VIDEO 1 sound signal path (L-CH)
 - VIDEO 1 sound signal path (R-CH)
 - VIDEO 2/AUX signal path (L-CH)
 - VIDEO 2/AUX signal path (R-CH)
 - TUNER signal path (L-CH)
 - TUNER signal path (R-CH)
 - TAPE signal path (L-CH)
 - TAPE signal path (R-CH)
 - non-flammable resistor.

- Switch**
- | Ref | Switch | Position |
|-------|--------|------------|
| SW709 | PHONO | ON (Tutch) |
| SW701 | EQ | ON (Tutch) |
- B+ bus.
 - B- bus.
 - adjustment for repair.
 - Voltagess are dc with respect to ground unless otherwise noted.
 - Readings are taken under no-signal (detuned) conditions with a VOM (50 $\text{k}\Omega/\text{V}$).
 - Voltage variations may be noted due to normal production tolerances.

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 marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.





SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
IC101	D-19	D701	O-6
IC301	D-17	D702	O-5
IC302	D-18	D703	O-4
IC303	D-15	D704	O-5
IC304	M-1	D705	O-2
IC401	O-8	D706	O-3
IC402	N-11	D707	O-19
IC403	N-9	D708	O-20
IC501	M-9	D709	N-19
IC502	M-7	D710	K-20
IC601	H-11	D711	K-18
IC602	F-11	D712	K-18
IC603	F-18	D713	J-19
IC701	O-5	D714	F-17
IC702	O-5	D715	F-17
IC703	F-19	D716	K-20
IC704	N-18	D717	K-19
IC801	K-15	D718	K-18
		D719	J-20
		D801	J-15
Q201	H-9	D802	J-16
Q601	I-12	D803	J-15
Q651	F-12	D804	J-15
Q701	O-9	D805	J-15
Q702	F-17	D806	F-15
Q703	F-17	D807	F-15
Q704	F-17	D808	F-15
Q705	N-12	D809	K-18
Q706	M-12	D810	K-18
Q707	M-12	D811	J-17
Q708	M-12	D812	J-17
Q709	O-6	D813	J-17
Q710	O-6	D814	J-17
Q711	O-5	D815	J-17
Q712	O-5	D816	J-17
Q713	O-5	D817	J-17
Q714	H-20	D818	K-18
Q715	H-20	D819	K-18
Q716	K-4	D820	K-18
Q717	K-4	D821	K-18
Q718	O-4	D822	K-18
Q719	O-4	D823	K-18
Q720	C-4	D824	K-18
Q721	K-20	D825	K-18
Q722	J-19	D826	K-18
Q723	J-19	D827	K-18
Q724	K-20	D828	K-18
Q801	J-15	D829	K-18
Q802	J-16	D830	K-18
Q803	F-15	D831	K-18
Q804	F-15	D832	K-18
Q805	F-15	D833	K-18
Q806	K-16	D834	K-18
Q807	K-16	D835	K-18
Q808	K-16	D836	K-18
Q809	K-16	D837	K-18
Q810	K-16	D838	K-18
Q811	K-16	D839	K-18
Q812	K-16	D840	K-18

Note:
 • Color code of sleeving over the end of the jacket.

 • ○ : parts extracted from the component side.
 • ▲ : nonflammable resistor.

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R655	1-247-149-00	CARBON	5.6K	5%	1/4W	
R656	1-247-713-11	CARBON	1K	5%	1/4W	
R657	△1-247-700-11	CARBON	100	5%	1/4W	F
R658	△1-247-192-00	CARBON	10	5%	1/2W	F
R659	1-247-192-00	CARBON	10	5%	1/2W	
R660	△1-247-240-00	CARBON	1K	5%	1/2W	F
R662	1-247-713-11	CARBON	1K	5%	1/4W	
R663	1-249-469-11	CARBON	100K	5%	1/4W	
R664	1-247-713-11	CARBON	1K	5%	1/4W	
R701	1-249-433-11	CARBON	22K	5%	1/6W	
R702	1-249-433-11	CARBON	22K	5%	1/6W	
R703	1-249-433-11	CARBON	22K	5%	1/6W	
R704	1-249-433-11	CARBON	22K	5%	1/6W	
R705	1-249-433-11	CARBON	22K	5%	1/6W	
R706	1-249-433-11	CARBON	22K	5%	1/6W	
R707	1-249-425-11	CARBON	4.7K	5%	1/6W	
R708	1-249-425-11	CARBON	4.7K	5%	1/6W	
R709	1-249-425-11	CARBON	4.7K	5%	1/6W	
R710	1-249-425-11	CARBON	4.7K	5%	1/6W	
R711	1-249-425-11	CARBON	4.7K	5%	1/6W	
R712	1-249-433-11	CARBON	22K	5%	1/6W	
R713	1-249-433-11	CARBON	22K	5%	1/6W	
R714	1-249-433-11	CARBON	22K	5%	1/6W	
R715	1-249-433-11	CARBON	22K	5%	1/6W	
R716	1-249-433-11	CARBON	22K	5%	1/6W	
R717	1-247-831-00	CARBON	1K	5%	1/6W	
R718	1-247-831-00	CARBON	1K	5%	1/6W	
R719	1-249-441-11	CARBON	100K	5%	1/6W	
R720	1-247-831-00	CARBON	1K	5%	1/6W	
R721	1-249-433-11	CARBON	22K	5%	1/6W	
R722	1-249-433-11	CARBON	22K	5%	1/6W	
R723	1-249-433-11	CARBON	22K	5%	1/6W	
R724	1-247-704-11	CARBON	220	5%	1/4W	
R726	1-247-845-00	CARBON	3.9K	5%	1/6W	
R727	1-247-903-00	CARBON	1M	5%	1/6W	
R728	1-247-706-11	CARBON	330	5%	1/4W	
R729	1-247-706-11	CARBON	330	5%	1/4W	
R730	1-247-706-11	CARBON	330	5%	1/4W	
R731	1-247-706-11	CARBON	330	5%	1/4W	
R732	1-247-706-11	CARBON	330	5%	1/4W	
R733	1-247-706-11	CARBON	330	5%	1/4W	
R734	1-249-421-11	CARBON	2.2K	5%	1/6W	
R735	1-249-433-11	CARBON	22K	5%	1/6W	
R736	1-249-441-11	CARBON	100K	5%	1/6W	
R738	1-249-421-11	CARBON	2.2K	5%	1/6W	
R739	1-249-441-11	CARBON	100K	5%	1/6W	
R740	1-249-433-11	CARBON	22K	5%	1/6W	
R741	1-249-433-11	CARBON	22K	5%	1/6W	
R742	1-247-817-00	CARBON	270	5%	1/6W	
R743	1-247-817-00	CARBON	270	5%	1/6W	
R744	1-247-817-00	CARBON	270	5%	1/6W	
R745	1-247-817-00	CARBON	270	5%	1/6W	
R746	1-247-817-00	CARBON	270	5%	1/6W	
R747	1-247-817-00	CARBON	270	5%	1/6W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R748	1-247-817-00	CARBON	270	5%	1/6W	
R749	1-247-817-00	CARBON	270	5%	1/6W	
R750	1-247-817-00	CARBON	270	5%	1/6W	
R751	1-247-817-00	CARBON	270	5%	1/6W	
R752	1-247-817-00	CARBON	270	5%	1/6W	
R755	1-249-433-11	CARBON	22K	5%	1/6W	
R756	1-247-891-00	CARBON	330K	5%	1/6W	
R757	1-249-433-11	CARBON	22K	5%	1/6W	
R758	1-249-441-11	CARBON	100K	5%	1/6W	
R759	1-249-441-11	CARBON	100K	5%	1/6W	
R760	1-249-441-11	CARBON	100K	5%	1/6W	
R763	1-249-405-11	CARBON	100	5%	1/6W	
R764	1-247-831-00	CARBON	1K	5%	1/6W	
R765	1-247-831-00	CARBON	1K	5%	1/6W	
R766	1-247-831-00	CARBON	1K	5%	1/6W	
R767	1-247-831-00	CARBON	1K	5%	1/6W	
R768	1-247-831-00	CARBON	1K	5%	1/6W	
R769	1-247-783-00	CARBON	10	5%	1/6W	
R801	1-247-173-00	CARBON	56K	5%	1/4W	
R802	1-247-713-11	CARBON	1K	5%	1/4W	
R803	1-249-460-11	CARBON	15K	5%	1/4W	
R804	1-249-469-11	CARBON	100K	5%	1/4W	
R805	△1-217-156-00	RES, METAL PLATE	0.22	5W		
R806	1-247-725-11	CARBON	10K	5%	1/4W	
R807	1-249-441-11	CARBON	100K	5%	1/6W	
R808	1-247-873-00	CARBON	56K	5%	1/6W	
R809	1-244-895-00	CARBON	8.2K	5%	1/2W	
R810	△1-206-654-11	METAL OXIDE	390	5%	2W	F
R811	1-249-460-11	CARBON	15K	5%	1/4W	
R851	1-247-173-00	CARBON	56K	5%	1/4W	
R852	1-247-713-11	CARBON	1K	5%	1/4W	
R853	1-249-460-11	CARBON	15K	5%	1/4W	
R854	1-249-469-11	CARBON	100K	5%	1/4W	
R855	△1-217-156-00	RES, METAL PLATE	0.22	5W		
R904	1-247-135-00	CARBON	1.5K	5%	1/4W	
R906	1-247-135-00	CARBON	1.5K	5%	1/4W	
RV201	1-230-732-11	RES, VAR, SLIDE	100K/100K	(MIXING)		
RV401	1-237-200-11	RES, VAR, SLIDE	(BLOCK TYPE)	GEQ VOL BLOCK		
RV501	1-237-201-11	RES, VAR, SLIDE	100K/100K	(BALANCE)		
RY801	1-515-501-00	RELAY				
SW1	△1-554-920-11	SWITCH, PUSH	(AC POWER)	(1 KEY)		
SW701	1-554-303-21	SWITCH, KEY BOARD	(E.Q)			
SW702	1-554-303-21	SWITCH, KEY BOARD	(MUTING)			
SW703	1-554-303-21	SWITCH, KEY BOARD	(VOLUME -)			
SW704	1-554-303-21	SWITCH, KEY BOARD	(VOLUME +)			
SW705	1-554-303-21	SWITCH, KEY BOARD	(VIDEO-2)			
SW706	1-554-303-21	SWITCH, KEY BOARD	(VIDEO-1)			
SW707	1-554-303-21	SWITCH, KEY BOARD	(C D)			
SW708	1-554-303-21	SWITCH, KEY BOARD	(PHONO)			
TM601	1-536-705-21	TERMINAL BOARD	(SP)			
X701	1-527-532-00	OSCILLATOR, CERAMIC				

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

Sony Corporation