

# Service Manual

**CIRCUIT DESCRIPTIONS  
REPAIR & ADJUSTMENTS**



**ORDER NO.  
ARP1161-0**

**AUDIO VIDEO MASTER AMPLIFIER**

# A-X707V (BK)

MODEL A-X707V (BK) COMES IN THREE VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Power requirement	Destination
HE	AC220V, 240V (switchable) *	European continent
HEZ	AC220V, 240V (switchable) *	West Germany
HB	AC220V, 240V (switchable) *	United Kingdom

- This service manual is applicable to the HE and HB types. \*Change the primary wiring of the power transformer.
- As to the HB type, please refer to page 37.
- As to the HEZ type, please refer to the additional service manual (ARP1162).
- As to the circuit and descriptions, please refer to the A-X909 (BK) service manual (ARP-997).
- Ce manuel d'instruction se réfère au mode de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

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# 1. SPECIFICATIONS

## Amplifier Section

DIN continuous power output (both channels driven)	
1 kHz, 1%, 8 $\Omega$ .....	45 W + 45 W (A-X707V)
DIN music power (both channels driven)	
1 kHz, 1%, 8 $\Omega$ .....	78 W + 78 W (A-X707V)
Total harmonic distortion	
1 kHz, 20 W, 8 $\Omega$ .....	0.05% (A-X707V)
Input (sensitivity/impedance)	
PHONO MM .....	2.5 mV/47 k $\Omega$
TUNER, CD, TAPE PLAY, ADP, VCR .....	150 mV/47 k $\Omega$
Overload level	
PHONO MM 1 kHz, 0.1% .....	75 mV
Output (level/impedance)	
TAPE REC .....	150 mV/2.2 k $\Omega$
Frequency Response	
PHONO MM 20 Hz to 20 kHz .....	$\pm 0.5$ dB
TUNER, CD, AUX 20 Hz to 50 kHz .....	+1 dB
	-3
Tone Control	
BASS .....	$\pm 10$ dB 100 Hz
TREBLE .....	$\pm 10$ dB 10 kHz
Loudness contour (volume control set at -40 dB position) ....	
	+7 dB 100 Hz/ +4 dB 10 kHz
Hum and Noise (IHF short circuited, A network)	
PHONO MM .....	72 dB
TUNER, CD, TAPE PLAY, ADP, VCR .....	90 dB
Hum and Noise (DIN, continuous power/50 mW)	
PHONO MM .....	72 dB/64 dB
TUNER, CD, TAPE PLAY, ADP, VCR .....	87 dB/63 dB

## Video Section

Input jacks (sensitivity/impedance)	
VDP, TV, VCR 1, VCR 2 .....	1Vp-p/75 $\Omega$
Output jacks (sensitivity/output level)	
VCR 1, VCR 2, REC .....	1Vp-p/75 $\Omega$
Monitor output .....	1Vp-p/75 $\Omega$

## Power Supply/Miscellaneous

Power requirements	
European model .....	a.c. 220 V $\sim$ , 50/60 Hz
U.K., Australian models .....	a.c. 240 V $\sim$ , 50/60 Hz
Other destination models .....	$\sim$ AC 110 V/120 V/220 V/240 V (switchable), 50/60 Hz
Power consumption	
European model .....	320 W (A-X707V)
U.K., Australian models .....	320 W (A-X707V)
AC outlets	
Switched (x 2) .....	(200 W) } total 330 W
Switched (x 1) .....	(230 W)
Dimensions .....	
	360(W) x 331.5(D) x 100(H) mm
	14-3/16 (W) x 13-1/8 (D) x 3-7/8 (H) in
Weight .....	6.8 kg/15 lb (A-X707V)

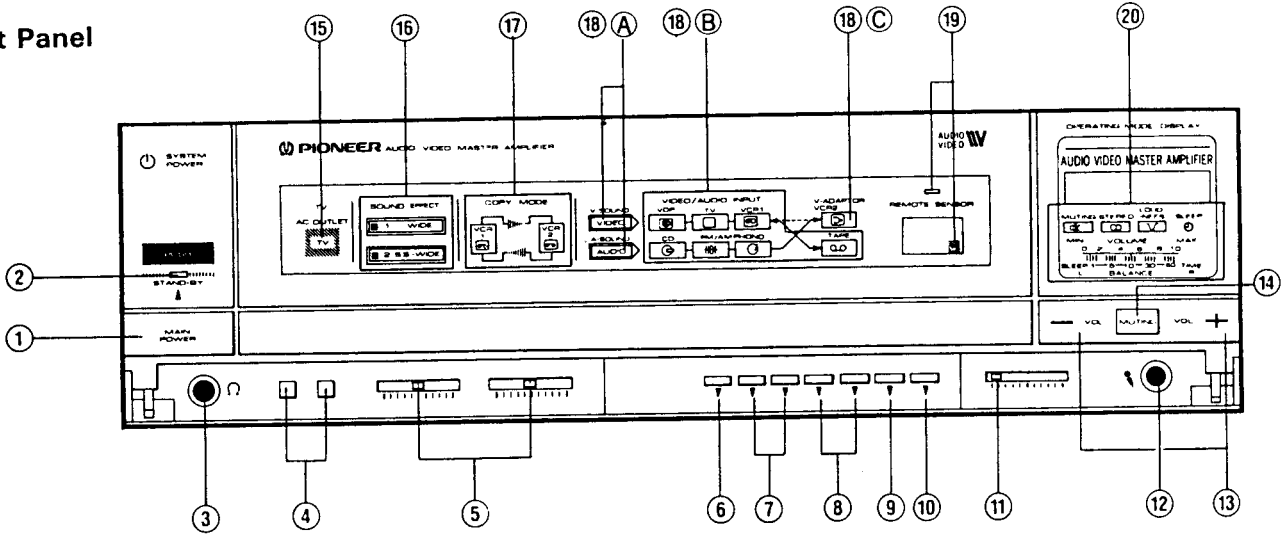
## Accessories

Operating instructions .....	1
Operating instructions for remote control unit .....	1
System component connections .....	1
Remote control unit .....	1
Size "AAA"/R03 dry cell batteries .....	2
Video cord (BNC type) .....	1
Spacer .....	4

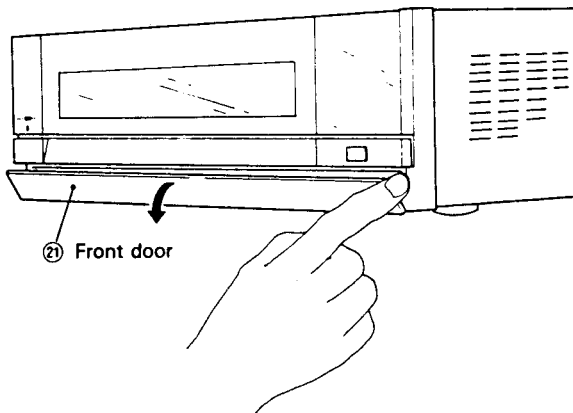
- Specifications and design subject to possible modification without notice due to improvements.

## 2. FRONT AND REAR PANEL FACILITIES

### Front Panel



### Opening the front door



#### ① MAIN POWER switch

Press this switch to turn the unit's power ON/STAND-BY and OFF.

#### ② SYSTEM POWER switch/indicator

- When the MAIN POWER switch is ON, the power to the switched auxiliary power outlets on rear panel is switched ON and STAND-BY with this switch.
- Every time this switch is pressed, the power is repeatedly switched between ON and STAND-BY alternately. When the power is at stand-by, the indicator lights.
- This switch can be set to the ON and STAND-BY positions using the remote control unit. This means that it is possible to switch on and off the components connected to the unit's switched auxiliary outlets from the listening position.
- The power system for this unit has been designed so as to select the transformer's secondary circuitry. As a result, the unit's circuitry will operate even when the SYSTEM POWER switch is at the STAND-BY position, so long as the power cord is connected to a power outlet, and the MAIN POWER switch is in the ON position.

- Turn off the MAIN POWER switch when you do not plan to use the unit for a long period of time.

#### ③ PHONES jack

Plug the headphones into this jack for use.

#### ④ SPEAKERS selector switches

##### SPEAKERS A selector switch

This switch selects the speaker system connected to the terminals of speakers A.

[ON] Depressed position: Sound is output from the speaker system

[OFF] Released position: No sound output is from the speaker system. Use this position when employing headphones.

##### SPEAKERS B selector switch

This switch selects the speaker system connected to the terminals of speakers B.

[ON] Depressed position: Sound is output from the speaker system

[OFF] Released position: No sound output is from the speaker system. Use this position when employing headphones.

**⑤ TONE CONTROLS****BASS control**

This is used to adjust the bass sound.

The control's center position is the standard (flat) setting. When the control is moved right, the bass is enhanced and when moved left, it is attenuated.

**TREBLE control**

This is used to adjust the treble sound.

The control's center position is the standard (flat) setting. When the control is moved right, the treble is enhanced and when moved left, it is attenuated.

**⑥ VCR COPY switch**

This is used when two video cassette recorders (VCRs) are employed to copy material from one video tape to another. Every time the switch is pressed, 1▷2, 2▷1 and OFF are selected in sequence.

1 ▷ 2: The ▷ COPY MODE indicator lights. This is used to copy from the VCR 1 connected to the VCR 1 jacks onto the VCR 2 connected to the VCR 2 jacks.

2 ▷ 1: The ◁ COPY MODE indicator lights. This is used to copy from the VCR 2 connected to the VCR 2 jacks onto the VCR 1 connected to the VCR 1 jacks.

**⑦ INPUT selector switches****VIDEO switch**

Press this when operating video components. Every time it is pressed, the pictures and sound of the components to be operated is selected.

**AUDIO switch**

Press this when operating audio components. Every time it is pressed, the picture remains unchanged and the sound alone of the components is switched.

**⑧ BALANCE switches**

Normally, the BALANCE indication on the operating mode display is kept at its center position (setting is made here by pressing L and R simultaneously). Adjust these switches when the volume tends to be louder at the left or right. If it is too loud at the right, press L; if it is too loud at the left, press R.

**⑨ LOUDNESS switch**

Use this switch when listening to sound at a low volume. The switch is ON when "LOUDNESS" on the operating mode display lights. In this mode, the bass and treble are boosted and the sound takes on an extra "punch" even at low volume levels.

**⑩ MODE switch**

This selects the mode in which the sound is heard.

When "STEREO" on the operating mode display lights, the sound is heard in normal stereo, and every time the switch is pressed, the sound is heard in the L, R and stereo modes in sequence.

L: The left channel sound only is heard (signals connected to the left of the two rear panel jacks).

R: The right channel sound only is heard (signals connected to the right of the two rear panel jacks).

The STEREO mode is automatically set when one of the INPUT selector switches has been set or when the power switch has been set to OFF.

**⑪ MIC MIXING LEVEL control**

This adjusts the volume of the components connected to the rear panel and the volume of the microphone plugged into the MIC jack. The microphone's volume is set to its maximum at the MIC position and the sound from the components is not heard. Conversely, the volume of the components is set to its maximum at the SOURCE position and the microphone sound is not heard.

**NOTE:**

*Always remember to keep the control at the SOURCE position when operating only the components.*

**⑫ MIC jack**

Plug the microphone into the jack for use.

**⑬ VOLUME switches**

Use these to adjust the volume.

[+]: Press to raise the volume.

[-]: Press to lower the volume.

**⑭ MUTING switch**

Use this switch to temporarily turn down the sound completely.

This switch is ON when "MUTING" on the operating mode display lights, and in this mode no sound is heard.

The volume returns to its previous level when the switch is returned to the OFF position.

**⑮ TV AC OUTLET indicator**

This lights when power is supplied to the TV set connected to the rear panel's TV auxiliary outlet. The accessory remote control unit can be used for operation.

**⑯ SOUND EFFECT indicators**

These display the "sound" effect setting. The accessory remote control can be used for operation.

**⑰ COPY MODE indicators**

These display the setting of the VCR COPY switch.

Copying is possible from VCR 1 to VCR 2 when ▷ lights and from VCR 2 to VCR 1 when ◁ lights.

**⑱ VIDEO/AUDIO INPUT indicators**

**(A):** These indicate the INPUT selector switch settings; VIDEO lights for video components and AUDIO for audio components.

**(B):** These indicate the component(s) being operated.

**(C):** This lights when the VIDEO ADAPTOR key on the remote control unit is ON.

**⑲ REMOTE SENSOR/indicator**

This lights when it receives signals from the remote control unit.

## ⑳ OPERATING MODE DISPLAYS

- [MUTING]: This lights when the MUTING switch is set to ON.
- [STEREO]: This lights when the MODE switch is at STEREO.
- [LOUDNESS]: This lights when the LOUDNESS switch is at ON.
- [SLEEP]: This lights when the sleep timer is set by the remote control unit.
- [VOLUME] With SLEEP OFF;
- [BALANCE] The volume is normally indicated by the "VOLUME" display. When the BALANCE switch is pressed, the "BALANCE" display is selected and the volume balance between the left and right channels is indicated. (A return is automatically made after a few seconds to the "VOLUME" display.)
- [SLEEP TIME]: With SLEEP ON:  
SLEEP lights. Normally, the "SLEEP TIME" display shows the 60-minute or 30-minute setting and the remaining time. The display blinks when one minute remains. When the VOLUME or BALANCE switch is pressed, the "VOLUME" or "BALANCE" display is selected, respectively. (A return is automatically made after a few seconds to the "SLEEP TIME" display.)

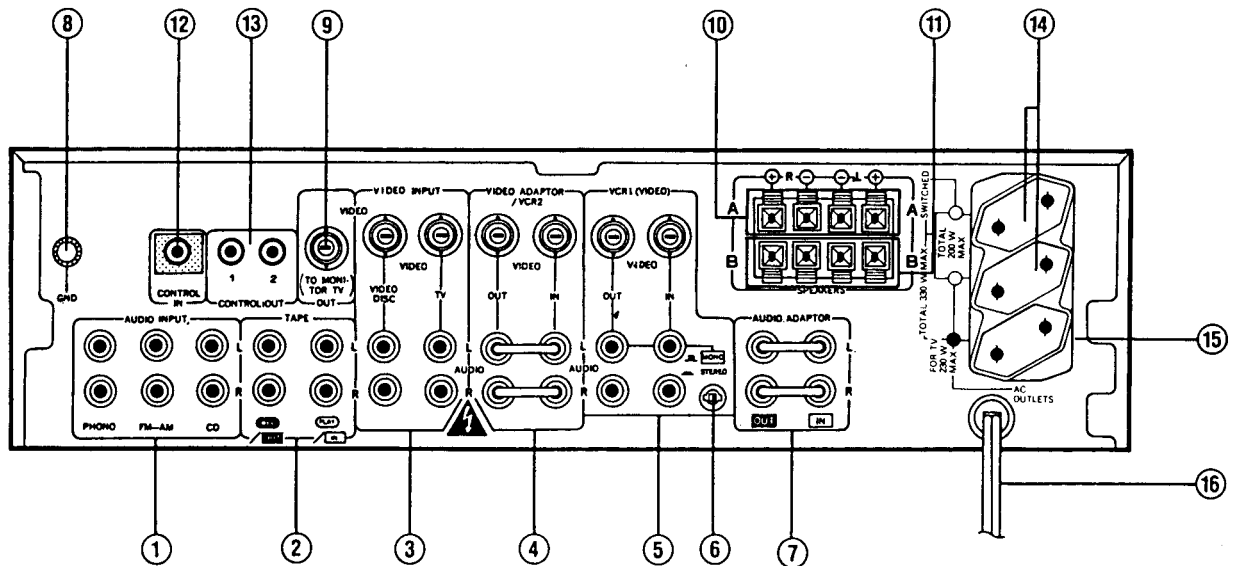
## ㉑ Front door

This unit stores the positions at which the switches below are used in its microcomputer for about one week after the main power has been switched off. This means that when the power is switched back on again, the same positions of the various switches as those set previously are restored.

- INPUT selector switch
  - MUTING switch
  - VCR COPY switch
  - LOUDNESS switch
  - BALANCE switches
  - VOLUME switches (setting is made to where three indicators lights when the volume is so high that 4 or more indicators light)
  - SOUND EFFECT key
  - VIDEO ADAPTOR key
  - TV AC OUTLET key
- Unless the unit is used within the week, the positions stored in the memory are erased and the following positions are set:
- VOLUME switches: Minimum
  - LOUDNESS, MUTING switches: OFF
  - BALANCE switches: Center
  - VCR COPY switch: OFF
  - SOUND EFFECT key: OFF
  - VIDEO ADAPTOR key: OFF
  - TV AC OUTLET key: OFF

The ②, ⑦, ⑬ and ⑭ switches can be operated using the accessory remote control unit. Refer to the Operating Instructions accompanying this unit for details on the control unit itself and how to operate it.

## Rear Panel



### ① AUDIO INPUT jacks

PHONO: For playing a record on the turntable.  
 FM/AM: For operating an FM/AM tuner.  
 CD: For playing a compact disc player.

### ② TAPE jacks

REC/OUT: For recording on a tape deck.  
 PLAY/IN: For playback on a tape deck.

### ③ VIDEO INPUT jacks

#### VDP

VIDEO: For playing a video disc on a video disc player (VDP).

AUDIO: For reproducing sound on a VDP.

#### TV

VIDEO: For reproducing the images of the TV tuner.

AUDIO: For reproducing the sound of the TV tuner.

### ④ VIDEO ADAPTOR/VCR 2 jacks

#### OUTPUT

VIDEO: For the video output to a video adaptor (color corrector or enhancer, etc) or second video cassette recorder (VCR 2).

AUDIO: For the audio output to a video adaptor or second video cassette recorder (VCR 2).

#### INPUT

VIDEO: For the video input from the video adaptor or second video cassette recorder (VCR 2).

AUDIO: For the audio input from the video adaptor or second video cassette recorder (VCR 2).

### ⑤ VCR 1 jacks

#### OUTPUT

VIDEO: For recording the images on the first video cassette recorder (VCR 1).

AUDIO: For recording the sound on the first video cassette recorder (VCR 1).

#### INPUT

VIDEO: For playing back the images from the first video cassette recorder (VCR 1).

AUDIO: For playing back the sound from the first video cassette recorder (VCR 1).

### ⑥ STEREO/MONO selector switch

STEREO: (depressed position): Set the switch here when connecting a stereo video cassette recorder to the VCR 1 audio input jacks.

MONO: (released position): Set here when connecting a monaural type of video cassette recorder (provided with only one audio output plug) to the VCR 1 audio input jacks.

In this case, make sure that the audio plug is connected to "L."

### ⑦ AUDIO ADAPTOR jacks

**OUTPUT:** For output (connected to input jacks of audio adaptor).

**INPUT:** For input (connected to output jacks of audio adaptor).

*For normal use, always keep the connecting bars in place. No sound will be heard once they are removed. Use them when an audio adaptor (such as a graphic equalizer) is employed.*

### ⑧ PHONO GND terminal

Connect the ground wire of the turntable to this terminal.

### ⑨ VIDEO OUTPUT jack

This is the video output jack for playing images of a video component connected to the VIDEO INPUT jack or VIDEO ADAPTOR/VCR 2 or VCR 1 jack. Connect it to a color monitor or to a TV set which is equipped with a video input jack.

### ⑩ SPEAKERS A terminals

"R" is for the system installed on the right and "L" for the system installed on the left.

### ⑪ SPEAKERS B terminals

"R" is for the system installed on the right and "L" for the system installed on the left.

### ⑫ CONTROL INPUT jack

This jack is used when using the master amplifier's remote control unit in conjunction with the photo-signal receiver on a Pioneer component display.

Connect the jack to the control output jack on the component display (refer to SYSTEM COMPONENT CONNECTIONS on the separate sheets for details).

Make the connection using the control cord provided with the component bearing the "SR" symbol.

### ⑬ CONTROL OUTPUT jacks

These jacks are for controlling the overall system using the master amplifier's remote control unit when it is used with components bearing the "SR" symbol. Connect the jack to the control input jack on the other component (refer to SYSTEM COMPONENT CONNECTIONS on the separate sheets for details).

Make the connection using the control cord provided with the component bearing the "SR" symbol.

### ⑭ SWITCHED AC OUTLETS (MAX. 200 W)

- The power to the components (whose power switches are kept at the "ON" position) connected to these outlets is switched ON and OFF by the ON/STAND-BY setting of the master amplifier's SYSTEM POWER switch.
- Ensure that the combined power consumption of the components connected to these outlets does not exceed 200 watts. Also, do not allow the total combined power consumption of all connected components (including the TV connected to the TV AC OUTLET) to exceed 330 W.

**NOTE:**

*Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.*

*This can cause the amplifier to malfunction.*

### ⑮ TV AC OUTLET (SWITCHED MAX. 230 W)

- When the TV's power plug is connected here, its power is switched ON and OFF by setting the TV/AC OUTLET switch on the remote control unit to ON and OFF (provided that the TV's power switch is kept at the "ON" position).
- Ensure that the power consumption of the TV connected to this outlet does not exceed 230 watts. Also, do not allow the total combined power consumption of all connected components (including the components connected to the SWITCHED AC OUTLETS) to exceed 330 W.

**NOTE:**

*When the master amplifier is connected to an audio timer, connect the TV to a wall AC outlet.*

*Connect the PIONEER component display to a wall AC outlet.*

*Do not connect appliances with high power consumption such as heaters or irons to the AC OUTLETS in order to avoid overheating or fire risk.*

*This can cause the equipment to malfunction.*

### ⑯ Power cord

Connect this to a wall AC outlet or to the electrical outlet of an audio timer.

#### Power consumption of AC outlets

Under no circumstances should an electrical appliance (such as a toaster or hair drier) with a power consumption exceeding the maximum rating marked on the panel be connected to these outlets since malfunctioning or breakdowns may result.

#### Speaker impedance

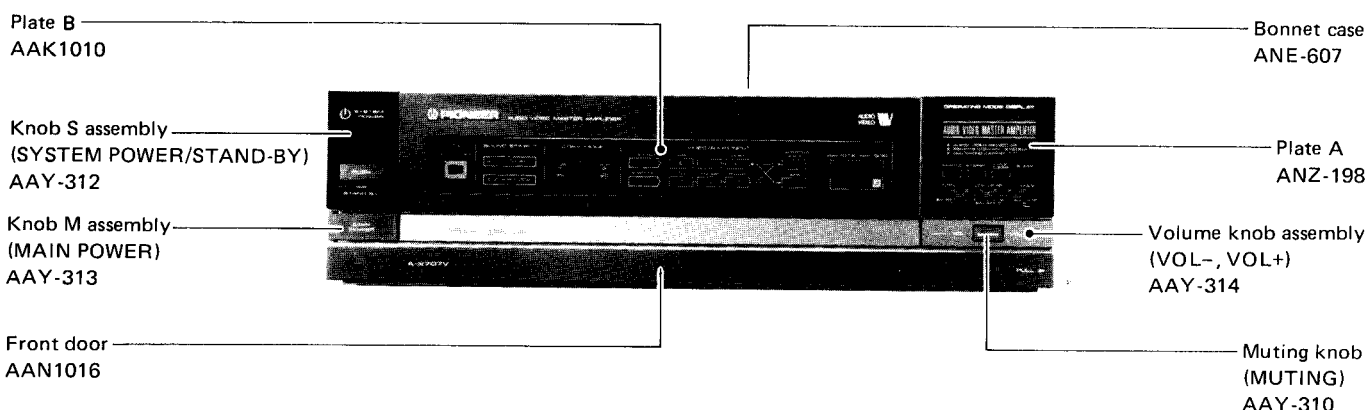
Use speaker systems with an impedance ranging from 6 to 16 ohms for connection to the SPEAKERS A or B terminals.

### 3. PARTS LOCATION

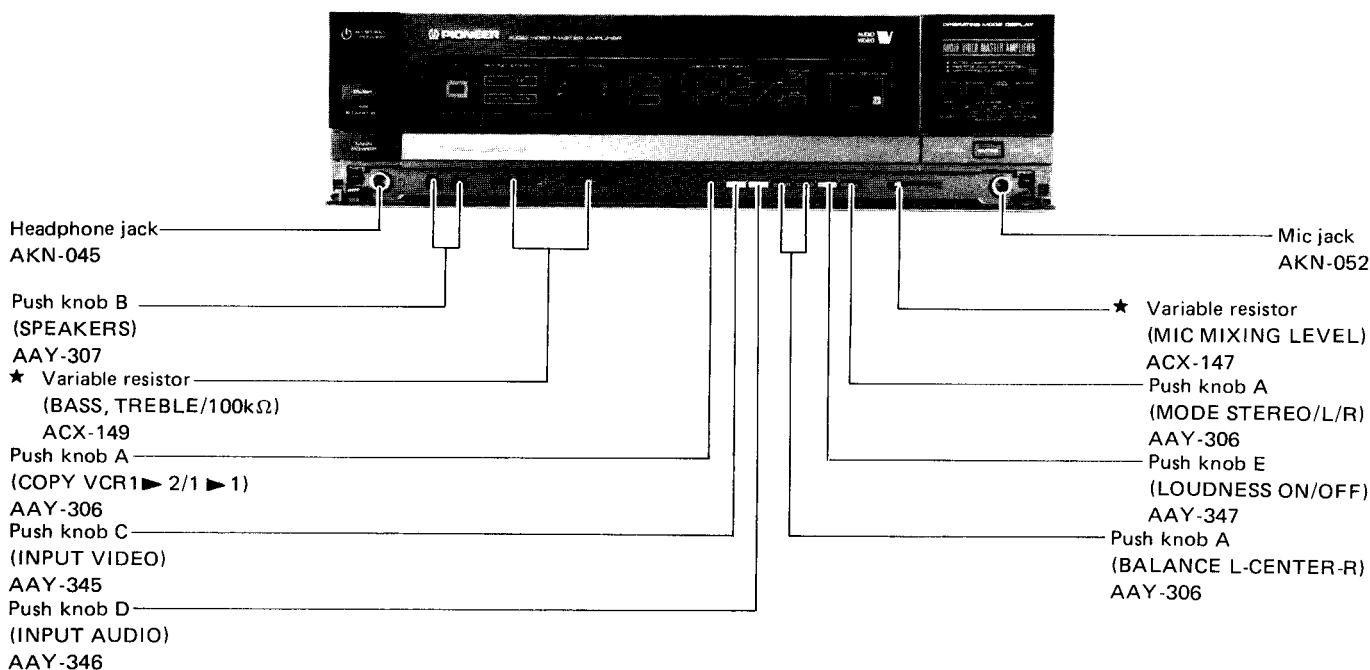
**NOTES:**

- Parts without part number cannot be supplied.
- The  $\triangle$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.  
**★★ GENERALLY MOVES FASTER THAN ★**  
*This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.*
- Parts marked by "  $\odot$  " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

**Front Panel View (1)**

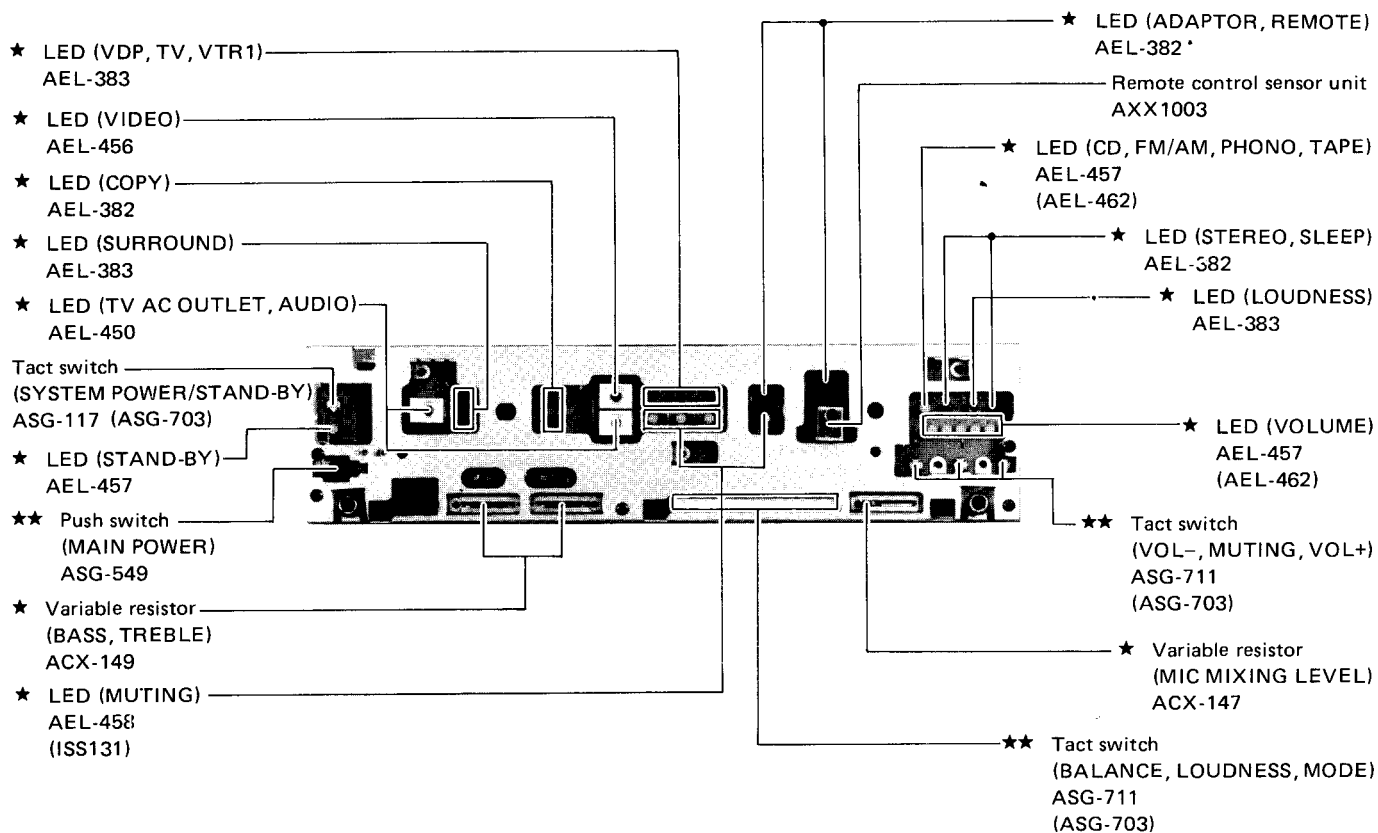


**Front Panel View (2)**

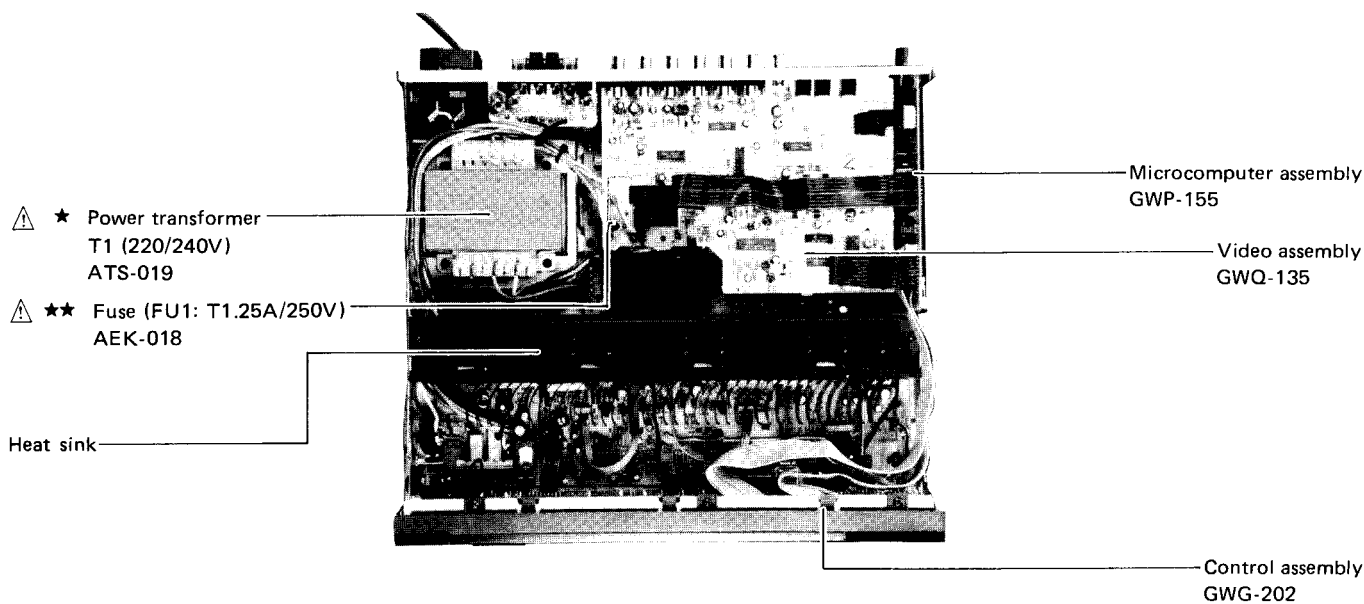




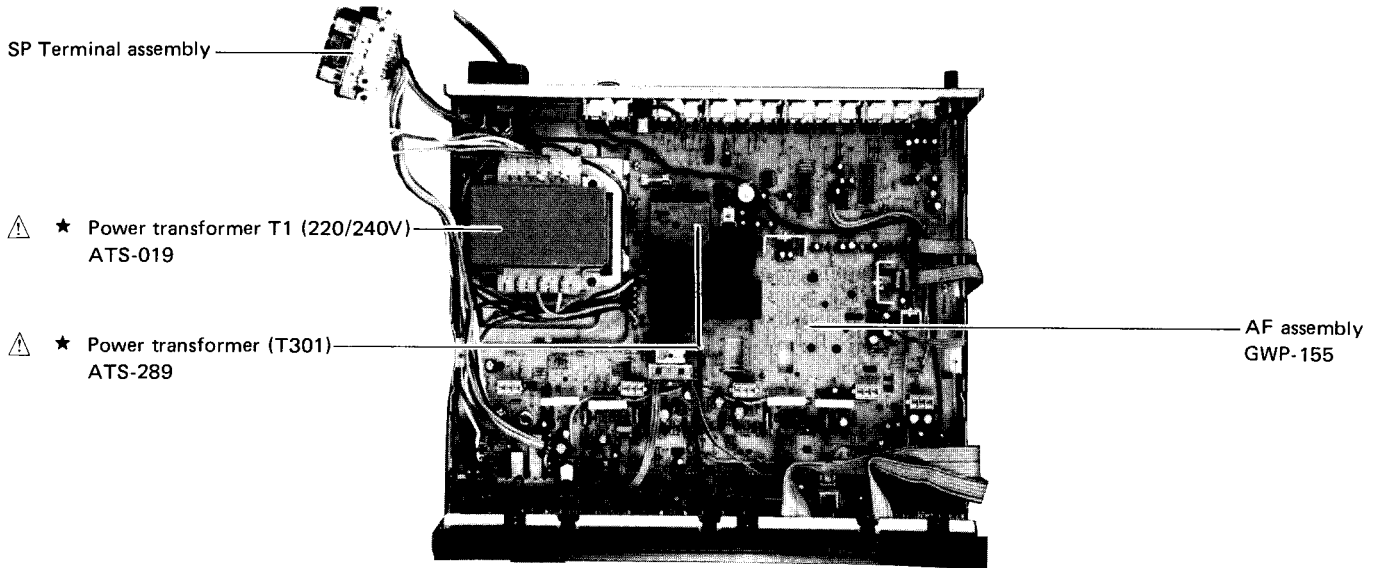
**Front Panel with Panel Removed**



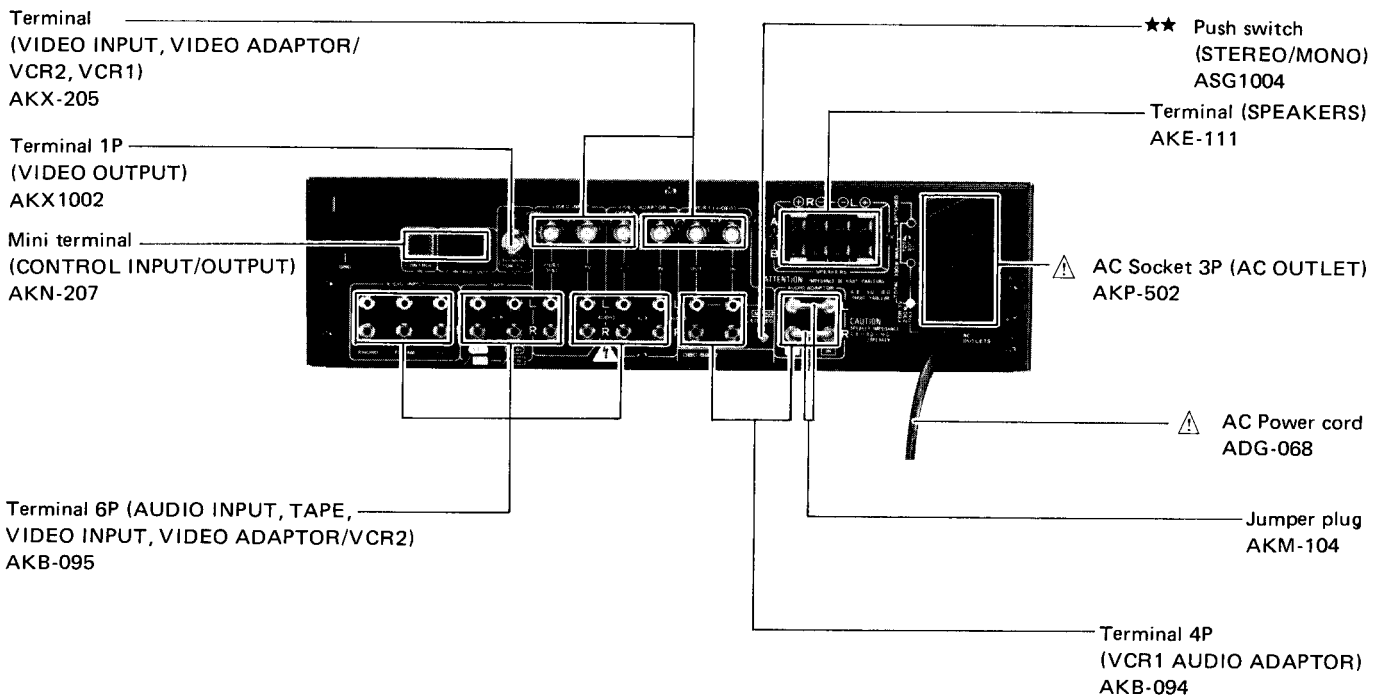
**Top View with Bonnet Case Removed**



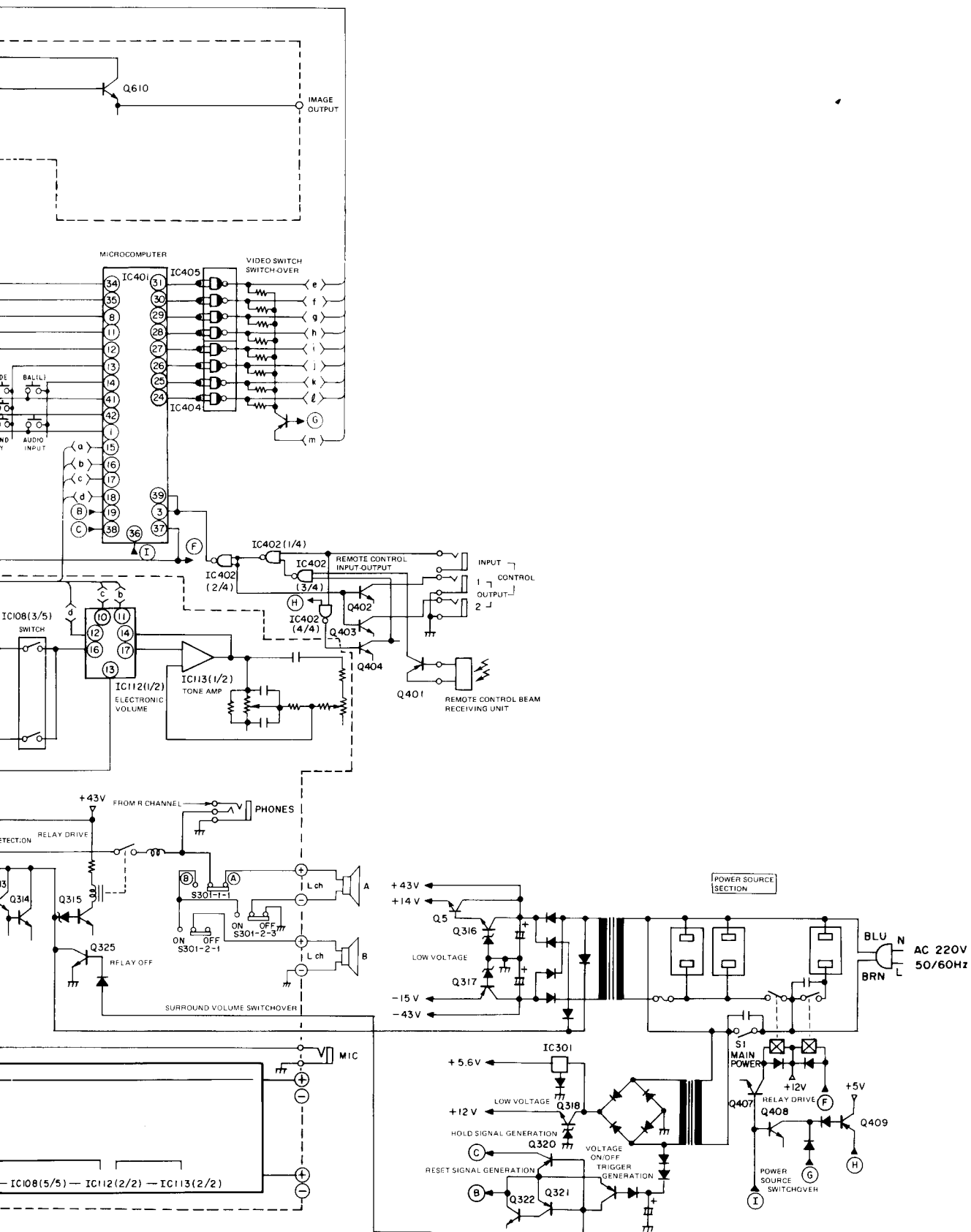
**Top View with Bonnet Case Removed**



**Rear Panel View**







## 5. DISASSEMBLY

### • How to Demount Video Assembly

1. Detach the seven screws marked ❶ from the rear panel's face, detach the two rivets marked ❸ from the board's face and demount the Video Assembly.

### • How to Demount the Microcomputer Assembly

1. After demounting the Video Assembly, detach the two rivets marked ❹ and demount the Microcomputer Assembly.

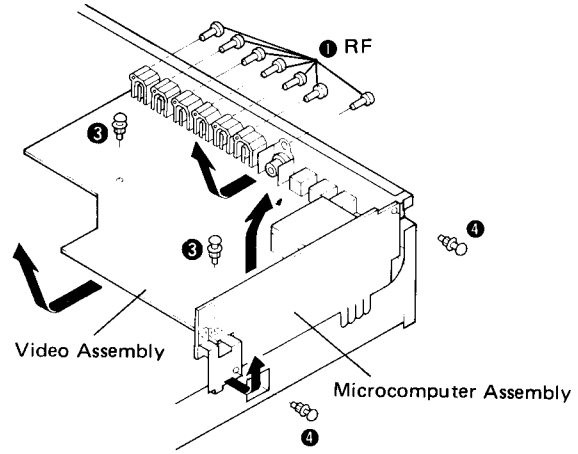


Fig. 5-1 How to demount the Video Assembly

### • How to Demount the Bottom (BASE) Plate

1. Detach the five screws marked ❺ and demount the bottom plate.

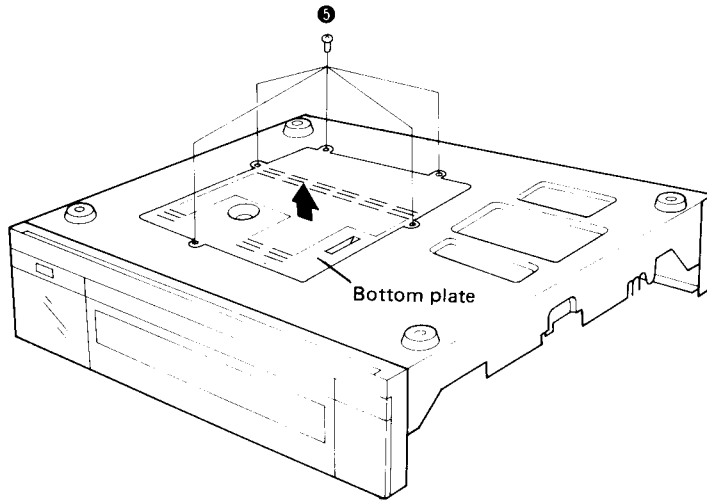


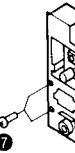
Fig. 5-2 How to demount the bottom plate

- How to...
1. Detach the three screws from the front panel. Detach the receiver from the front panel.



Fig. 5-3

2. Detach the mouse from the front panel.



• **How to Demount the Control Assembly**

1. Detach the three screws marked ⑥ and the three claws from the upper face and demount the front panel assembly.

Detach the rubber securing the remote control receiver and demount the receiver from the front panel.

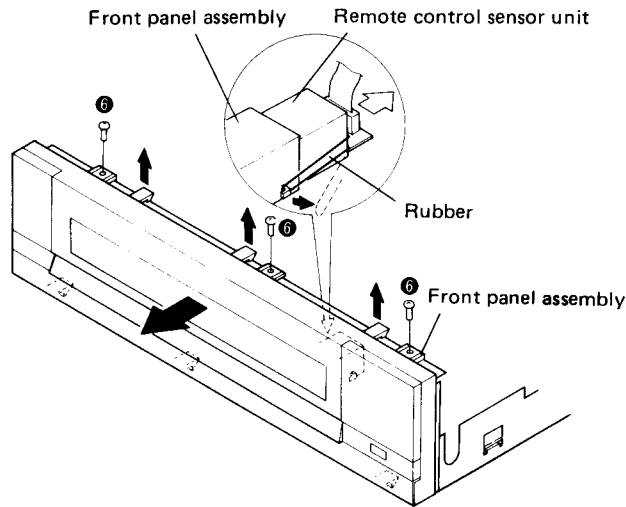


Fig. 5-3 How to demount the front panel assembly

2. Detach the five screws marked ⑦ and demount the front stay.

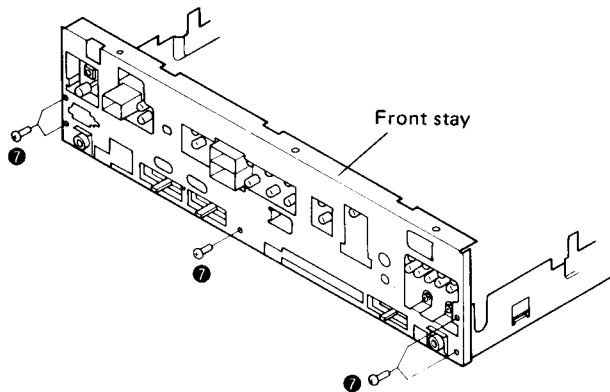


Fig. 5-4 How to demount the front stay

3. Detach the three screws marked ⑧, the five rivets marked ⑨, and demount the Control Assembly.

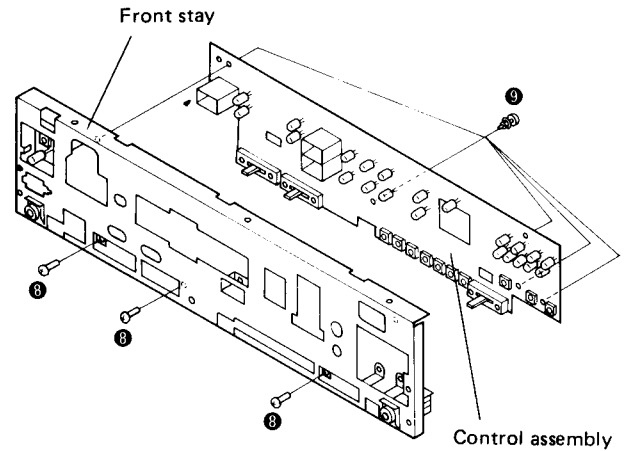


Fig. 5-5 How to demount the control assembly

• **How to Mount the Door**

As Fig. 5-6 shows, mount the door to the front panel in the horizontal position.

**Warning:** Do not attempt to mount the door in the vertical position since this will damage the claws of the hinges.

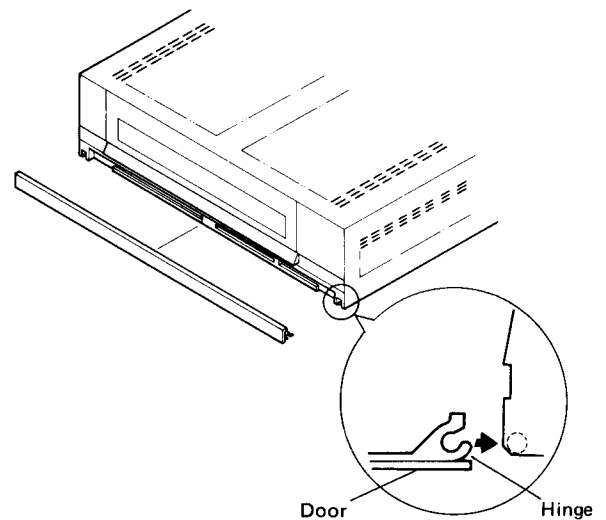


Fig. 5-6 How to mount the door

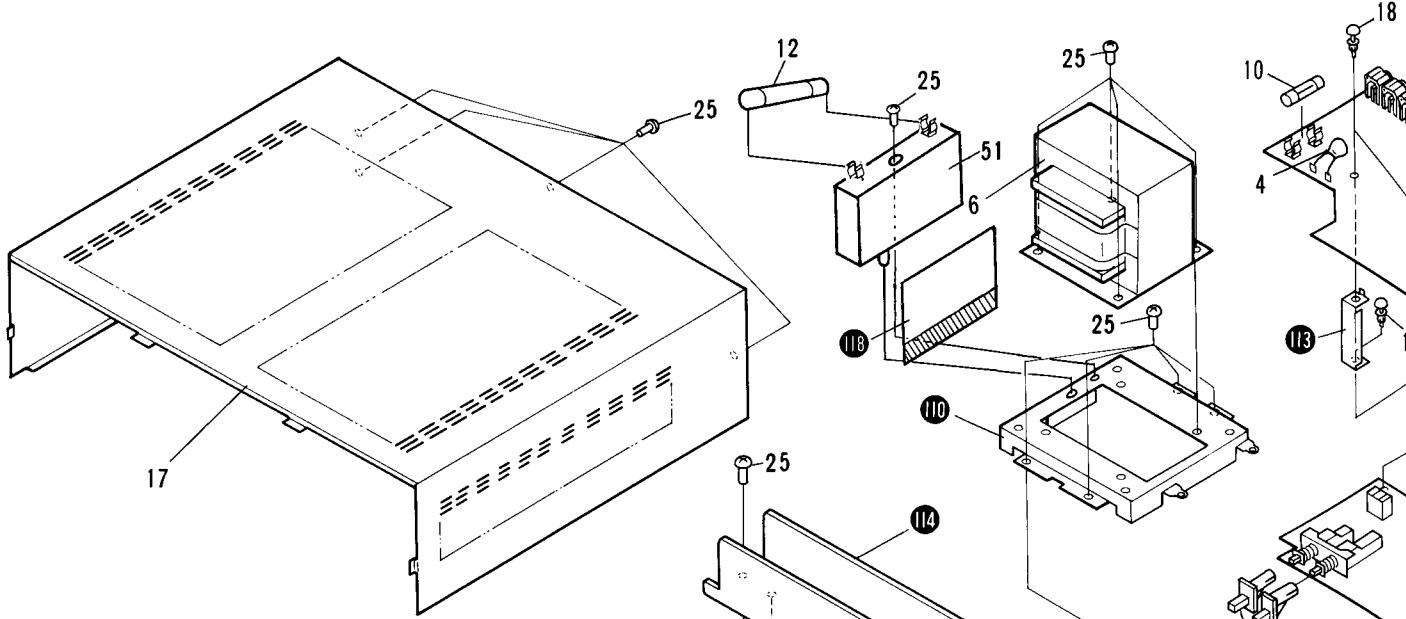
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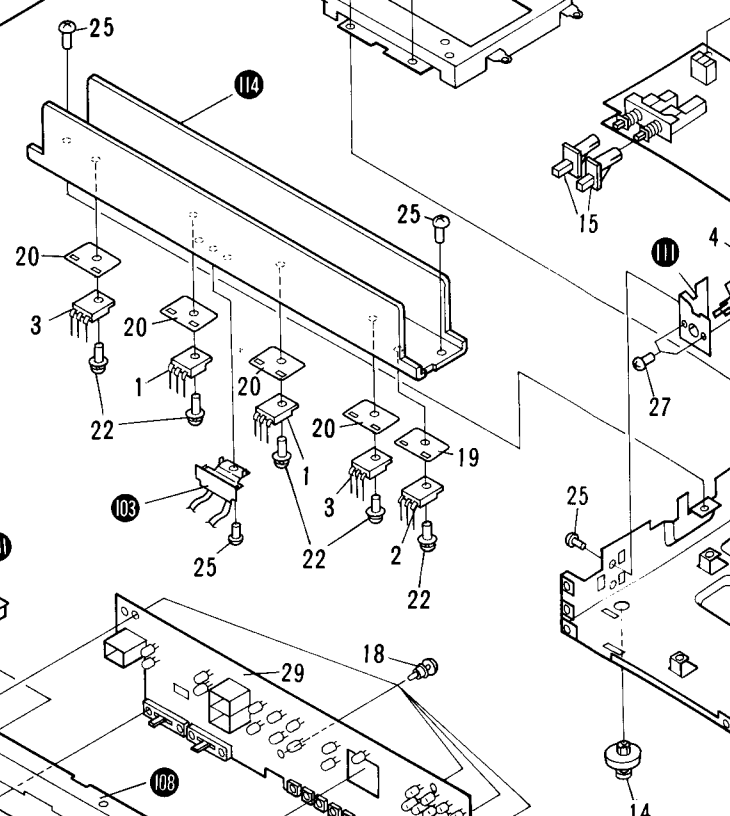
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# 6. EXPLODED VIEWS AND PARTS LIST

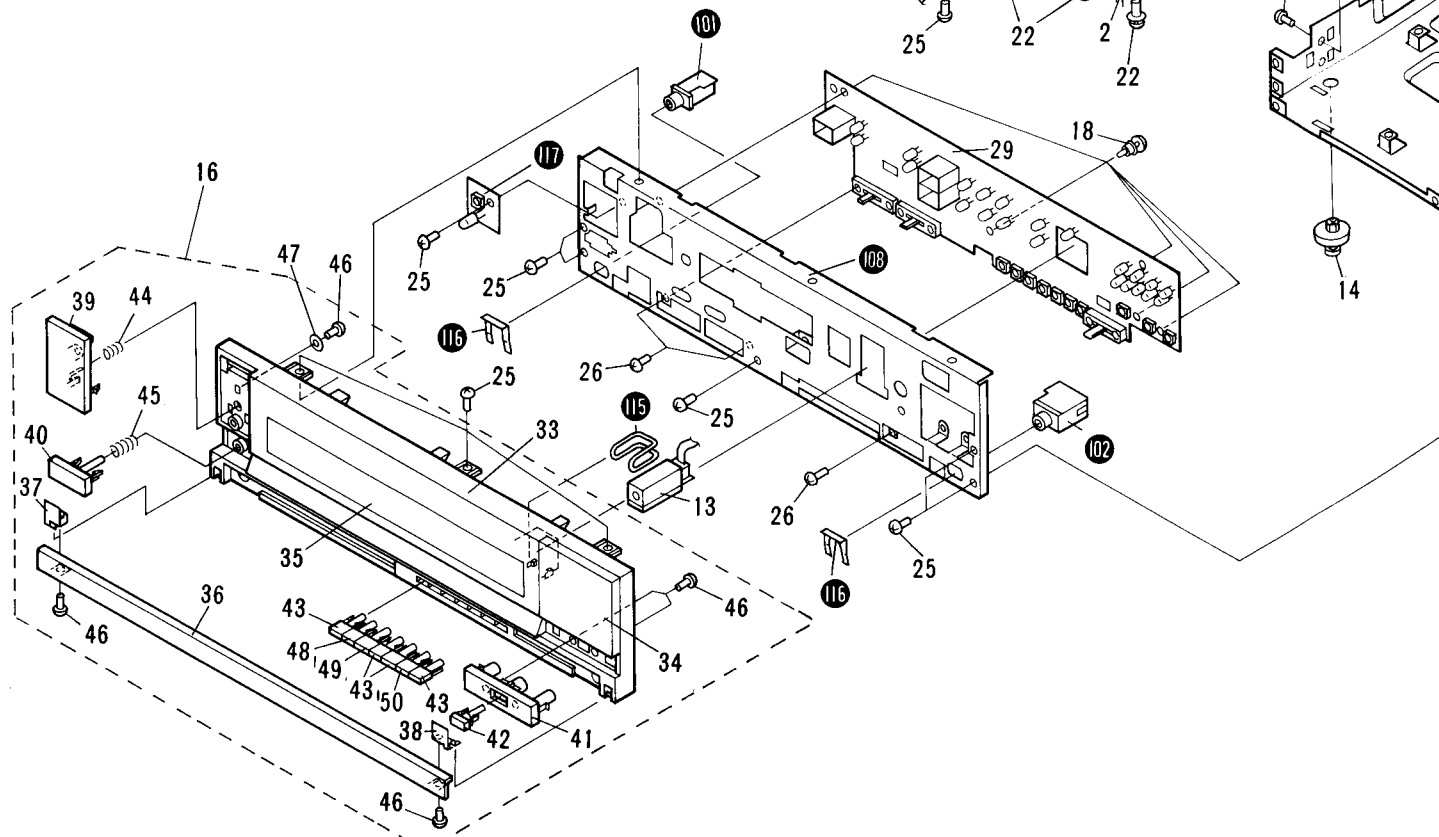
A



B



C

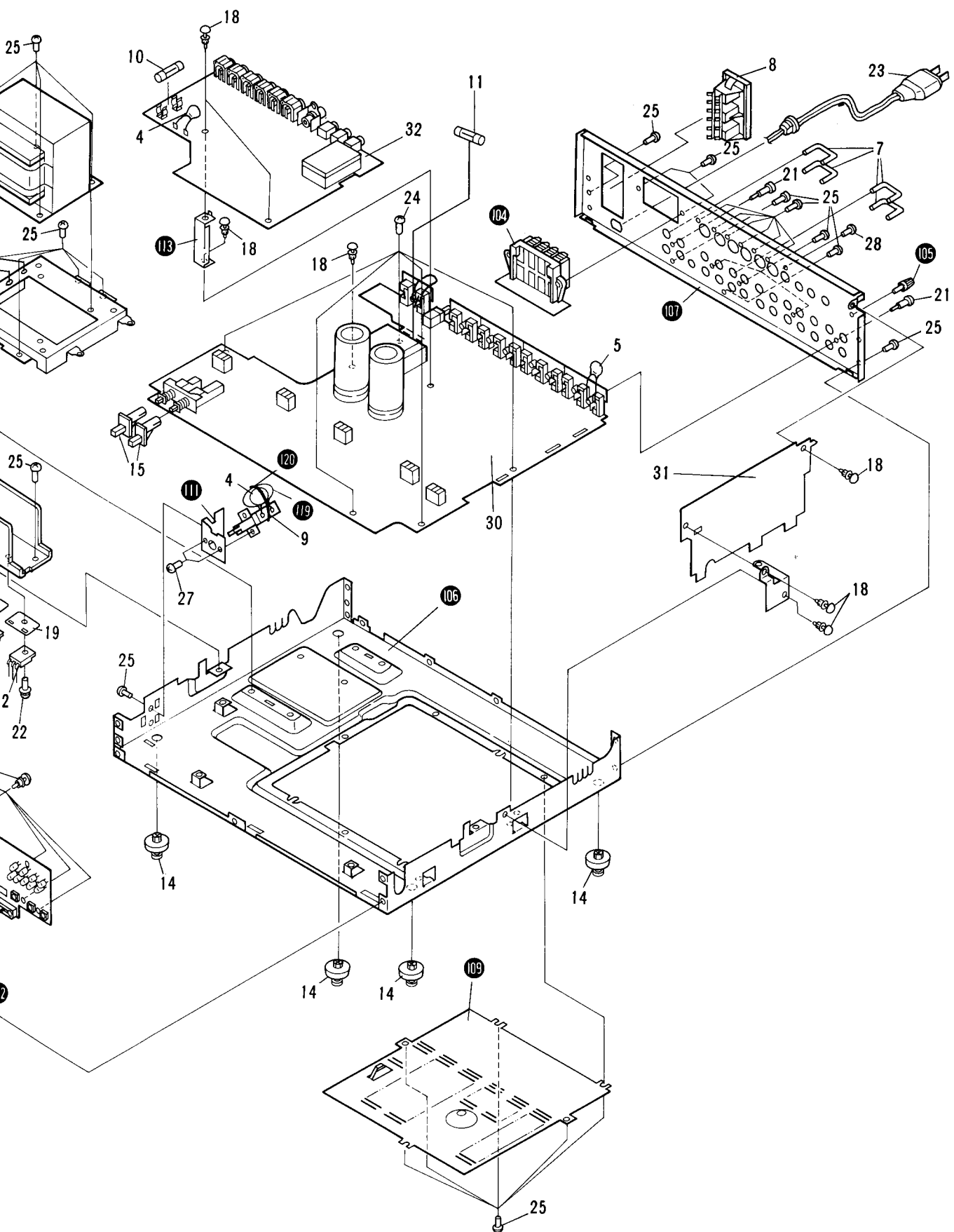


D

1

2

3





**NOTES:**

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- The  $\triangle$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.  
**★★ GENERALLY MOVES FASTER THAN ★**  
 This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by "  $\odot$  " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

**Parts List**

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
★★	1	2SA1389(A)	Transistor (Q3, Q4)		36	AAN1016	Front door
★★	2	2SC2577(A)	Transistor (Q5)		37	ANZ-200	Hinge L
★★	3	2SC3546	Transistor (Q1, Q2)		38	ANZ-201	Hinge R
$\triangle$	4	ACG-502	Power capacitor (C2, C3) (0.01/AC400V)		39	AAZ-312	Knob S assembly (SYSTEM POWER/STAND-BY)
	5	CKDYF473Z50	Ceramic capacitor (C1)		40	AAZ-313	Knob M assembly (MAIN POWER)
$\triangle$	6	ATS-019	Power transformer (T1) (220V/240V)		41	AAZ-314	Volume knob assembly (VOLUME)
	7	AKM-104	Jumper plug		42	AAZ-310	Muting knob (MUTING)
$\triangle$	8	AKP-502	AC socket 3P (AC OUTLET)		43	AAZ-306	Push knob A (COPY, BALANCE, MODE)
$\triangle$ ★★	9	ASG-549	Push switch (S1)(POWER)		44	ABH-159	Coil spring
$\triangle$ ★★	10	AEK-018	Fuse (FU1: T1.25A)		45	ABH-155	Coil spring
$\triangle$ ★★	11	AEK-401	Fuse (FU3: T0.5A)		46	BBZ26P060FZK	Screw
$\triangle$ ★★	12	AEK-403	Fuse (FU2: T2.5A)		47	WA35F100FN080	Washer
	13	AXX1003	Remote control sensor unit		48	AAZ-345	Push knob C (INPUT, VIDEO)
	14	AEP-320	Reg assembly		49	AAZ-346	Push knob D (INPUT, AUDIO)
	15	AAZ-307	Push knob (B)(SPEAKERS)		50	AAZ-347	Push knob E (LOUDNESS)
	16	AMB1069	Front panel assembly	$\triangle$	51	AKR-038	Fuse holder
	17	ANE-607	Bonnet case		101		Headphone assembly
	18	AEC-525	Nylon rivet		102		Mic jack assembly
	19	AEC-818	Mica sheet		103		Transistor assembly
	20	AEP-322	Mica sheet		104		SP Terminal assembly
	21	ABA-115	Screw		105		Terminal (GND)
	22	ABA-258	Screw		106		Chassis
$\triangle$	23	ADG-068	AC power cord		107		Rear panel
	24	BBZ30P080FMC	Screw		108		Panel stay
	25	BBZ30P080FZK	Screw		109		Bottom plate
	26	PMZ20P030FZK	Screw		110		Transformer holder
	27	VMZ30P060FMC	Screw		111		SW holder
	28	VMZ30P060FZK	Screw		112		P.C.B. holder(A)
	29	GWG-202	Control assembly		113		P.C.B. holder(B)
	30	GWK-276	AF assembly		114		Heat sink
	31	GWP-155	Microcomputer assembly		115		Rubber ring
	32	GWQ-135	Video assembly		116		Mount plate
	33	AAP-136	Aluminium panel		117		Switch assembly
	34	ANZ-198	Plate A		118		Barrier
	35	AAK1010	Plate B		119	AEC-294	Capacitor cover
					120	AEC-093	Binder

Parts L

Mark M

# 7. PACKING

importance of the parts of identical indicated with the use it depends on every time may be

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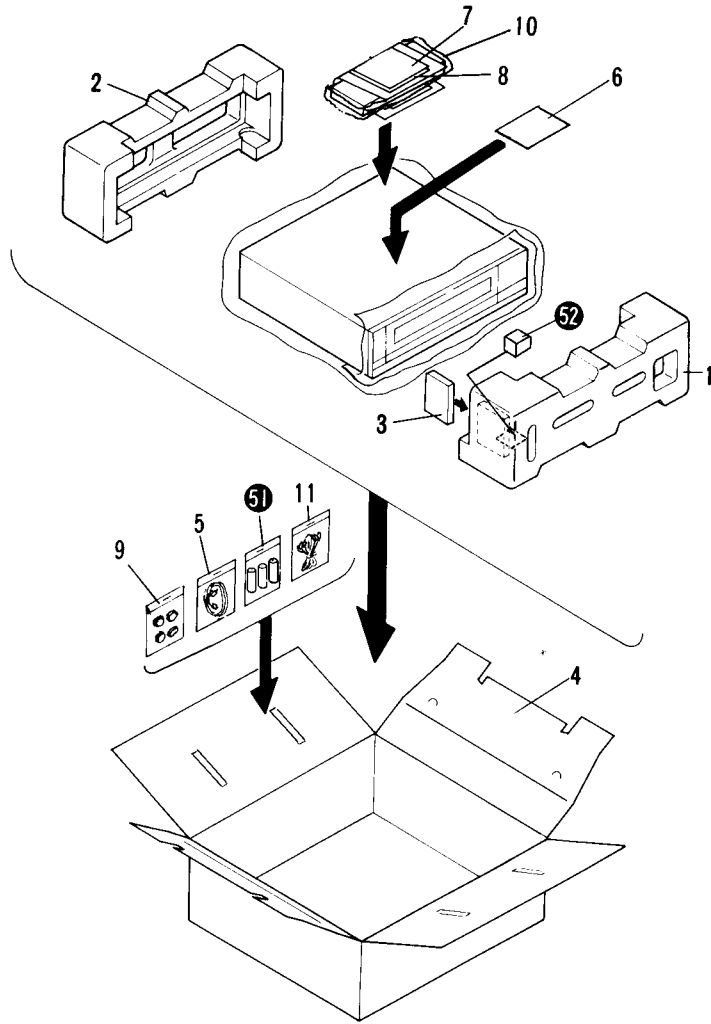
assembly (SYSTEM /STAND-BY)  
assembly  
(POWER)

knob assembly  
(ME)  
knob (MUTING)  
knob A  
(BALANCE, MODE)  
ng  
ng

knob C  
(VIDEO)  
knob D (INPUT, AUDIO)  
knob E (LOUDNESS)  
holder

one assembly  
assembly  
or assembly  
inal assembly  
(GND)

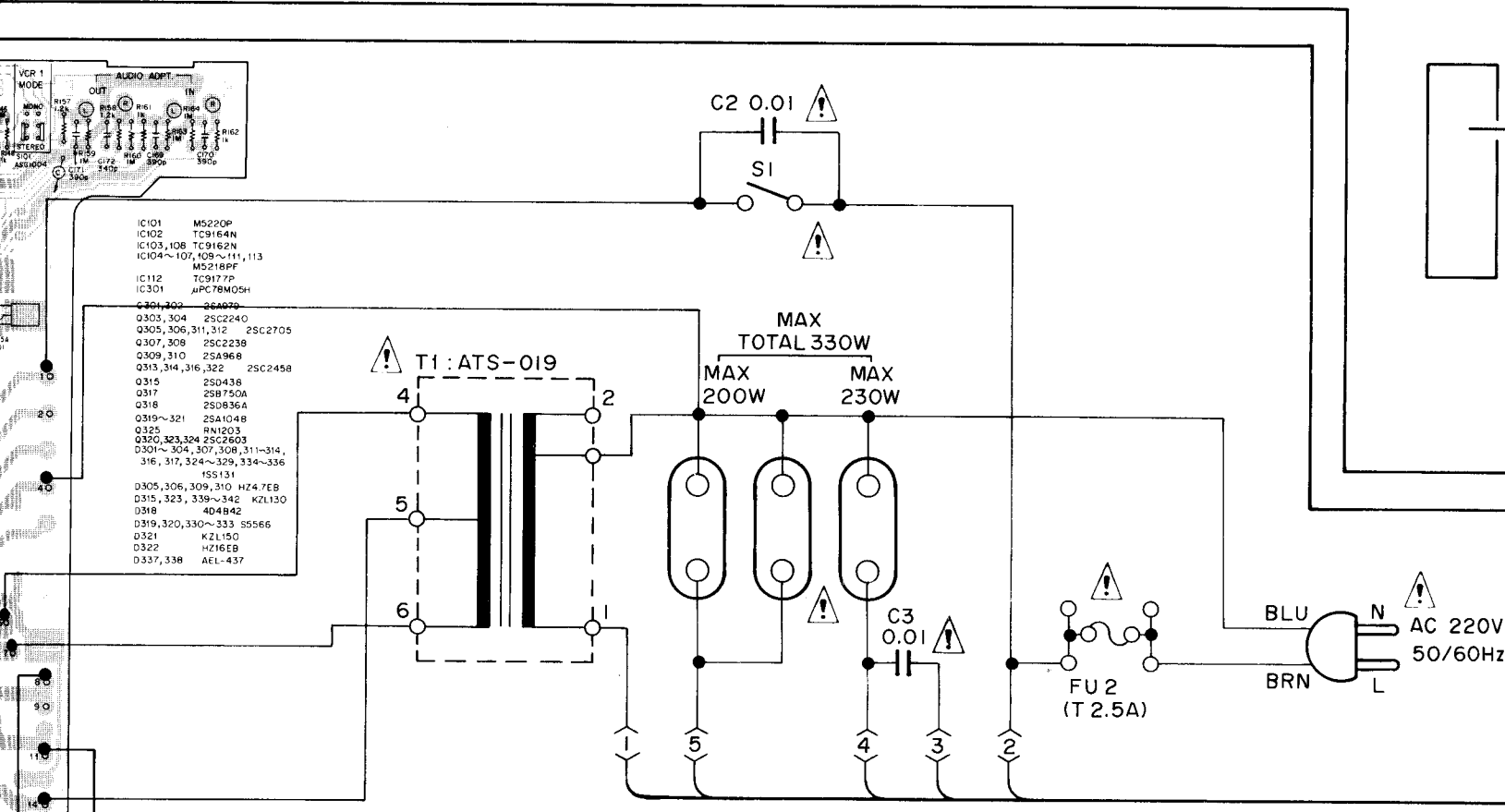
nel  
ay  
plate  
rmer holder  
er  
holder(A)  
holder(B)  
k  
ring  
plate  
assembly  
or cover



## Parts List

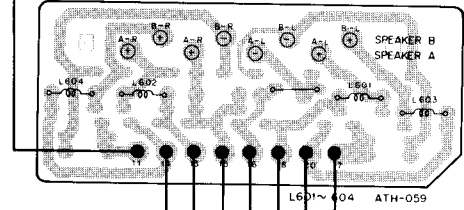
Mark	No.	Part No.	Description
	1	AHA-409	Front pad
	2	AHA-410	Rear pad
	3	AHB-157	Sub pad
	4	AHD1089	Packing case
	5	AKM-104	Connection cord with plug
	6	ARE1013	Operating instructions (English/German/French/Italian)
	7	ARE1014	REMOTE CONTROL of Operating instructions (English/German/French/Italian)
	8	ARE1007	Note sheet
		ARE1023	Note sheet
	9	AEA1001	Spacer assembly
	10	AXD1003	Remote control unit
	11	ADF1001	Connection cable (RF)
	51		Battery assembly



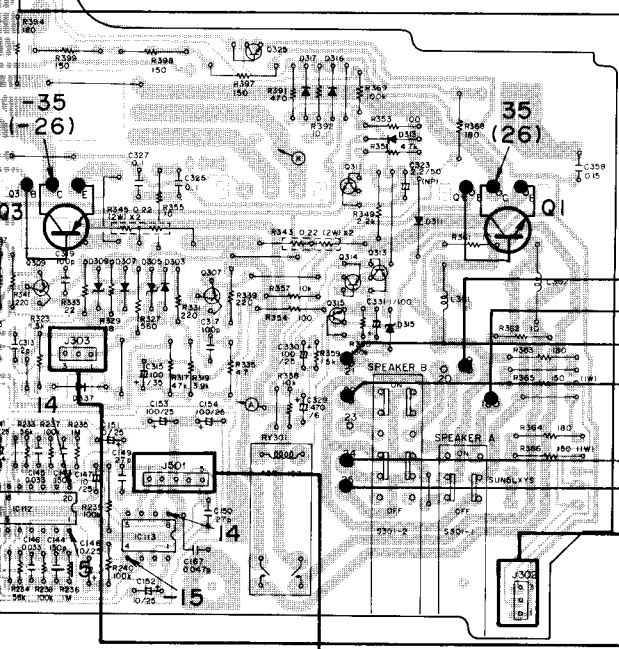
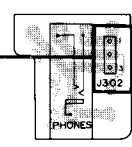


IC101	M5220P
IC102	TC9164N
IC103, 108	TC9162N
IC104~107, 109~111, 113	M5218PF
C112	TC9177P
IC301	µPC78M05H
C304, 309	68000
Q303, 304	2SC2240
Q305, 306, 311, 312	2SC2705
Q307, 308	2SC2238
Q309, 310	2SA968
Q313, 314, 316, 322	2SC2458
Q315	2SD438
Q317	2SB750A
Q316	2SD836A
Q319~321	2SA1048
Q325	HN1203
Q320, 323, 324	2SC2603
D301~304, 307, 308, 311~314, 316, 317, 324~329, 334~336	1SS131
D305, 306, 309, 310	H24.7EB
D315, 323, 339~342	KZL130
D318	4D4B42
D319, 320, 330~333	5S566
D321	KZL150
D322	HZ16EB
D337, 338	AEL-437

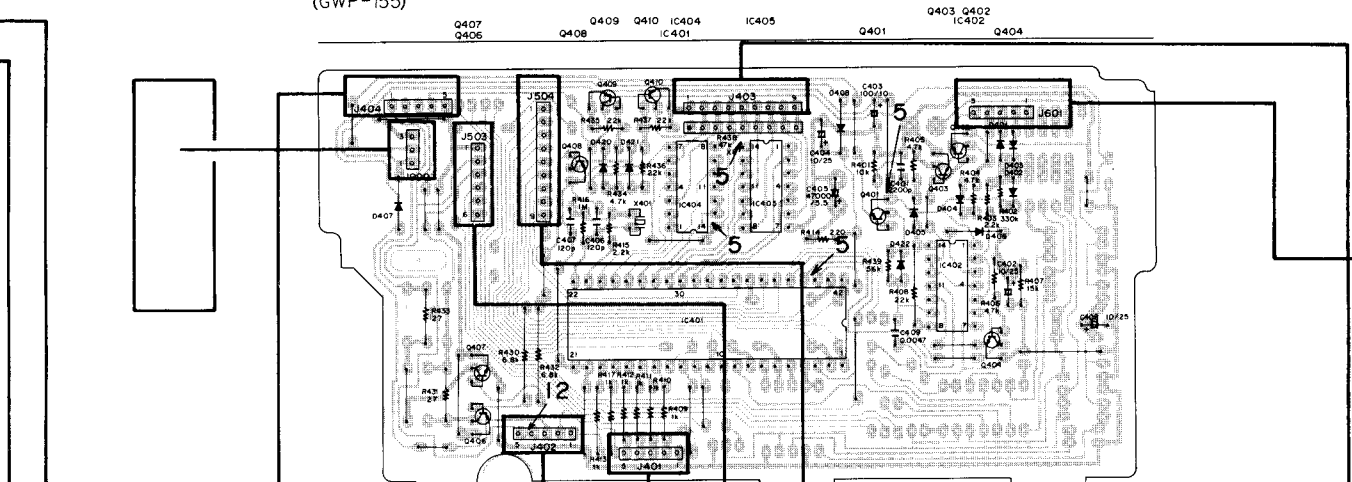
SP TERMINAL ASSEMBLY



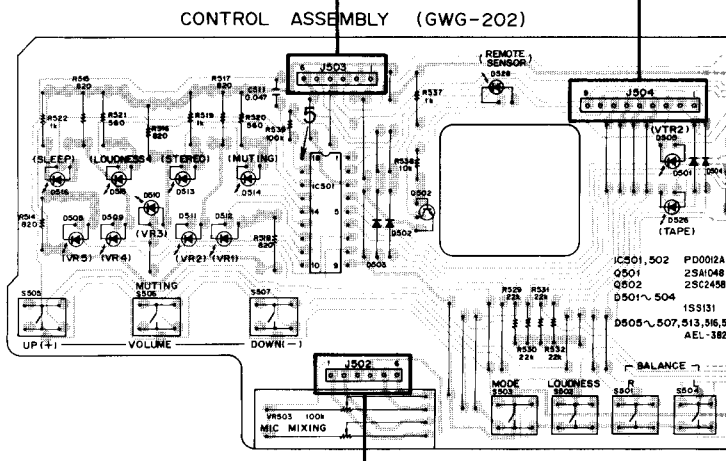
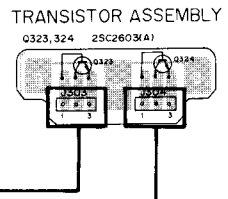
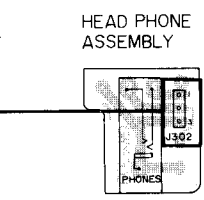
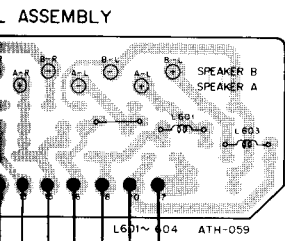
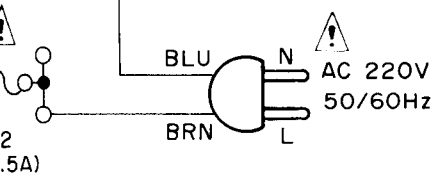
HEAD PHONE ASSEMBLY



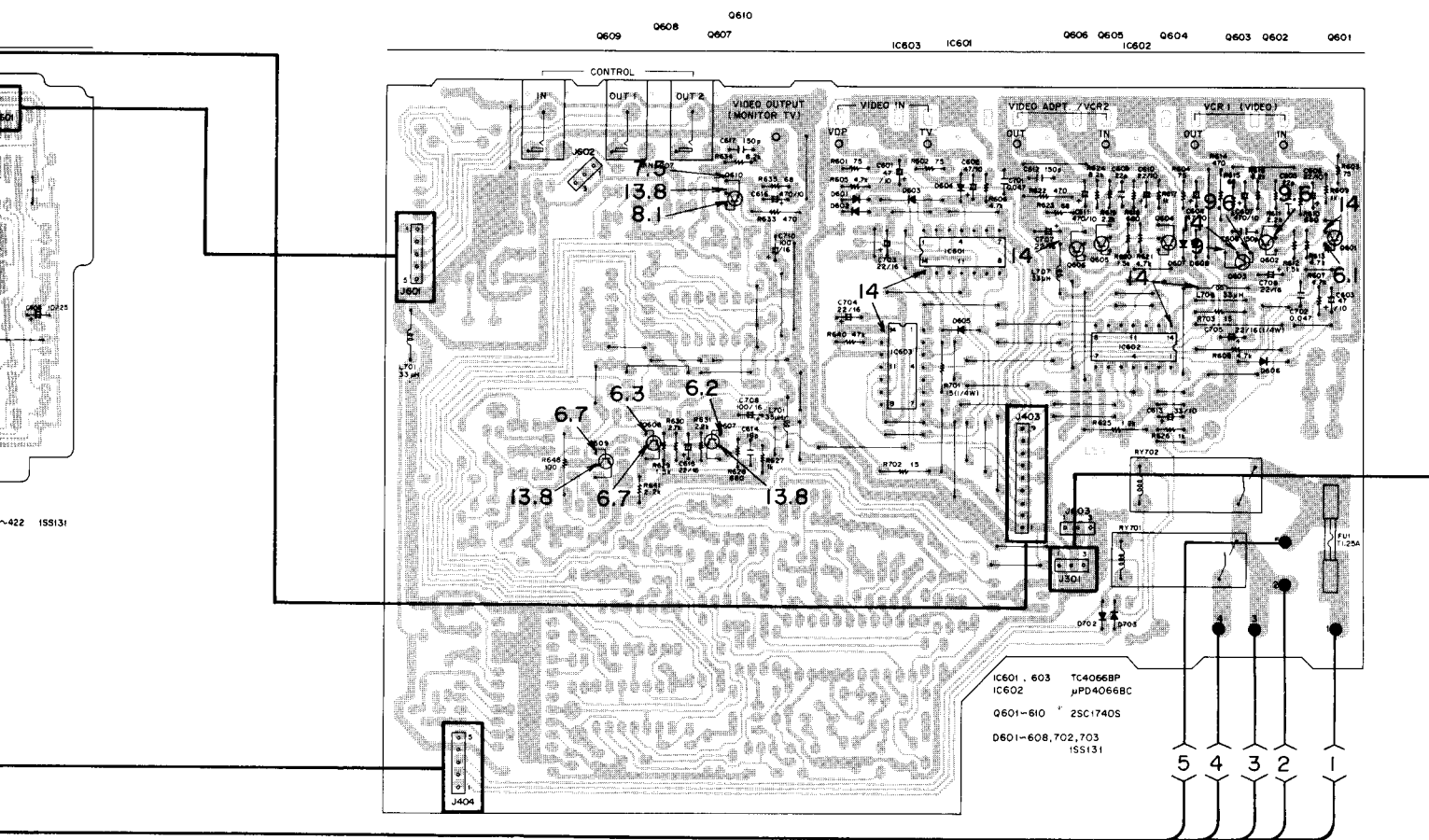
MICRO COMPUTER ASSEMBLY (GWP-155)



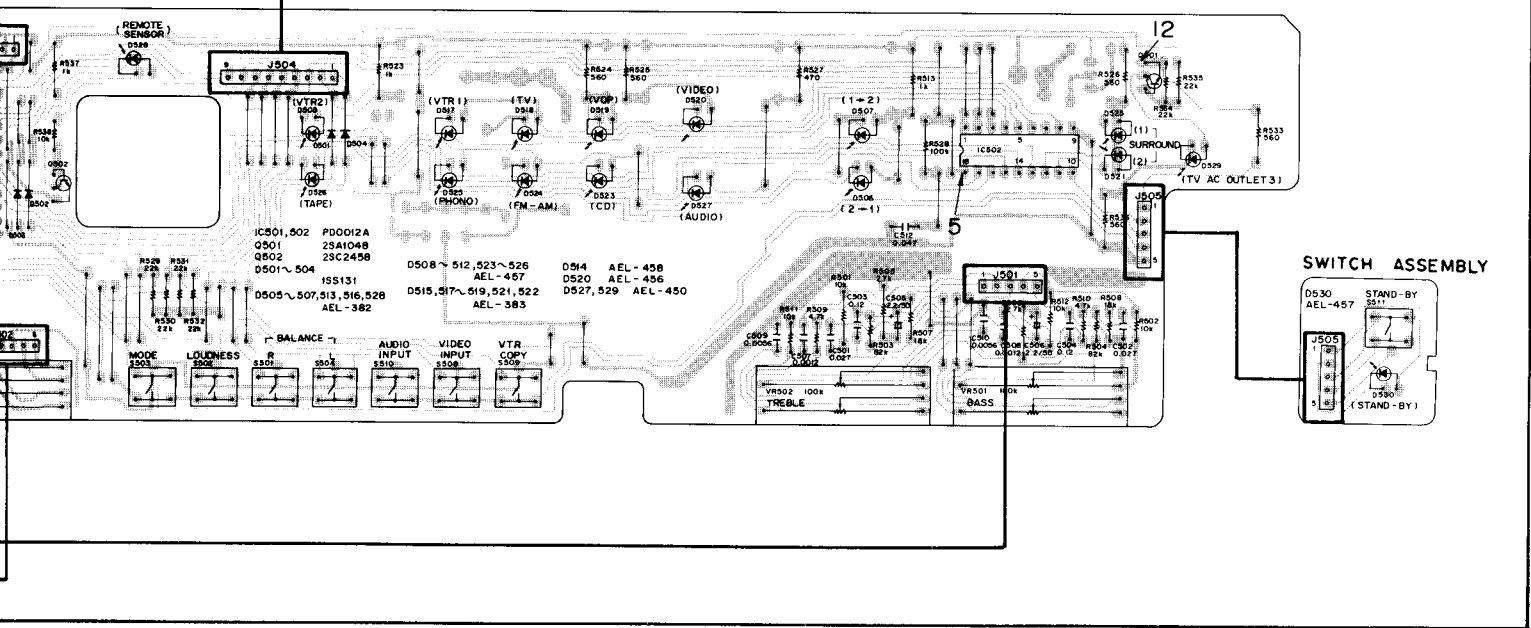
IC401	PDI007	Q402,403,408	Q409	25B560	
IC402	TC411BP	Q410	Q410	25A1048	
IC404,405	HD41526P	Q401~406,408,420~422	ISS131		
Q401	RN203	Q404,407	25D438	D407	55566



VIDEO ASSEMBLY (GWQ-135)



VIDEO ASSEMBLY (GWG-202)

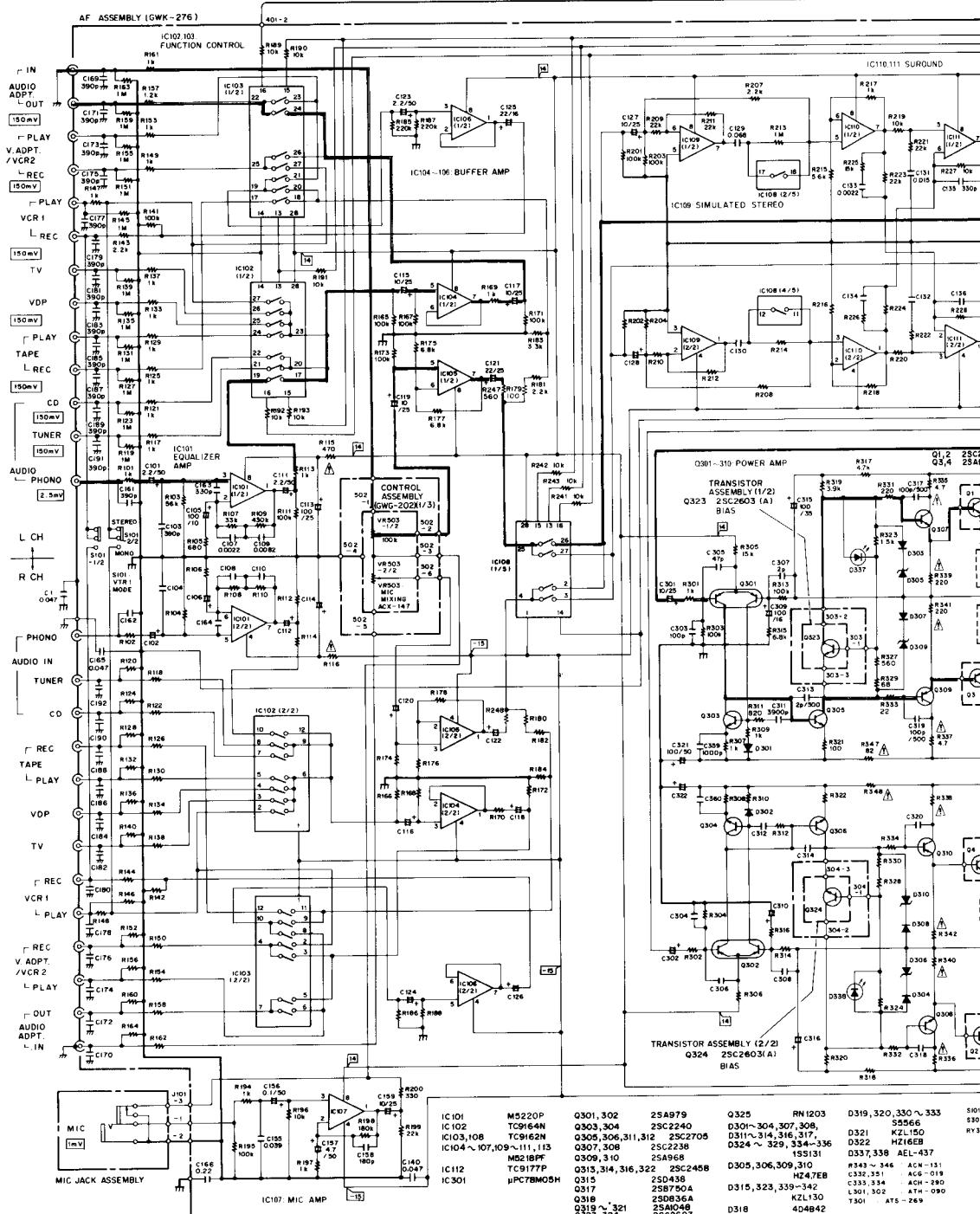


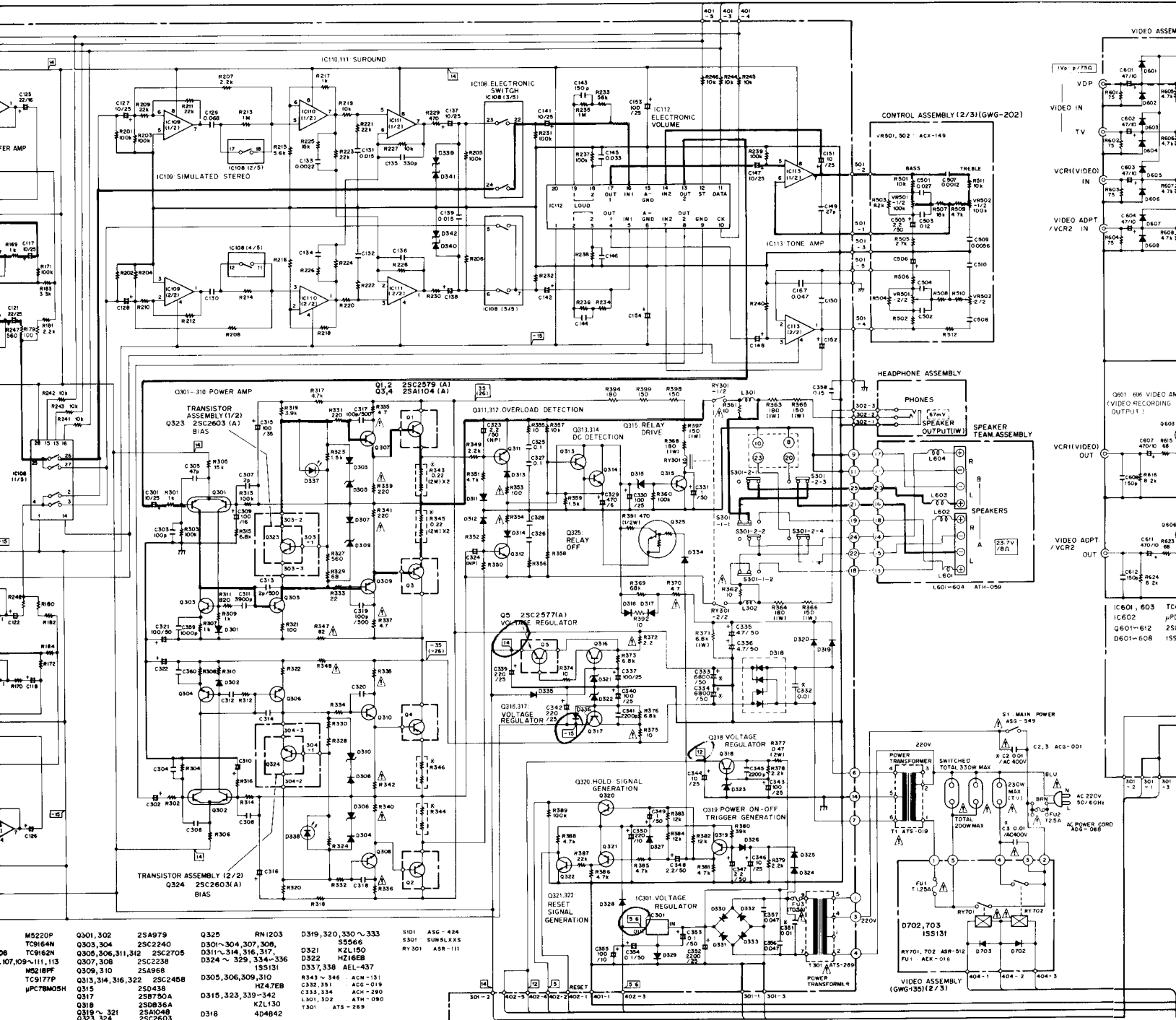
# 9. SCHEMATIC DIAGRAM

A

B

C





M5220P	Q301, 302	2SA979	Q325	RN1203	D319, 320, 330 ~ 333	S101	ASG - 424
TC9164N	Q303, 304	2SC2240	D301 ~ 304, 307, 308,	S5066	S301	SUNSLKX8	
TC9162N	Q305, 306, 311, 312	2SC2705	D311 ~ 314, 316, 317,	D322	H216EB		
UPC78M05H	Q307, 308	2SC2238	D324 ~ 329, 334 ~ 336	D337, 338	AEL-437		
TC9177P	Q309, 310	2SA968	IS5131	R343 ~ 346	ACM-151		
	Q313, 314, 316, 322	2SC2458	D305, 306, 309, 310	R347 ~ 348	ACM-019		
	Q315	2SD438	R349 ~ 346	C332, 331	ACM-019		
	Q317	2S8750A	D315, 323, 335 ~ 342	C333, 334	ACM-090		
	Q318	2S0836A	KZL150	L301, 302	ATH-280		
	Q319 ~ 321	2SA1048	D318	4D4842	T301	ATS-289	
	Q323, 324	2SC2603					

2SA1048  
2SC1740S  
2SC2458

2SA1115  
2SC2603  
RN1203

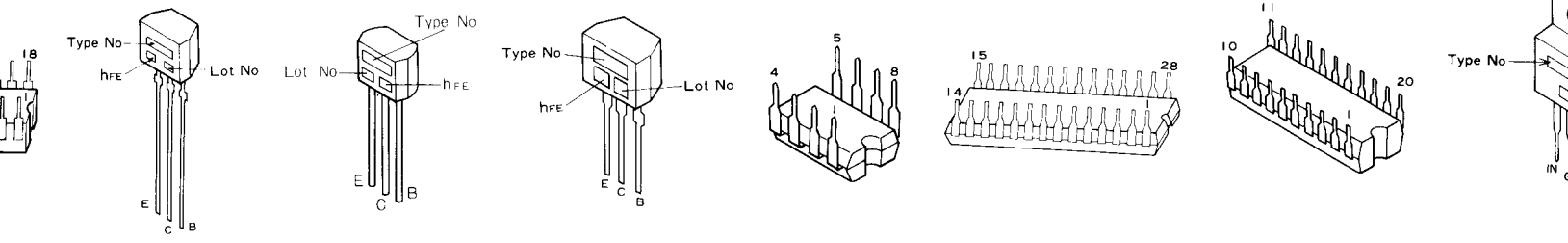
2SA933S  
2SC1740S

M5220P  
M5218PF

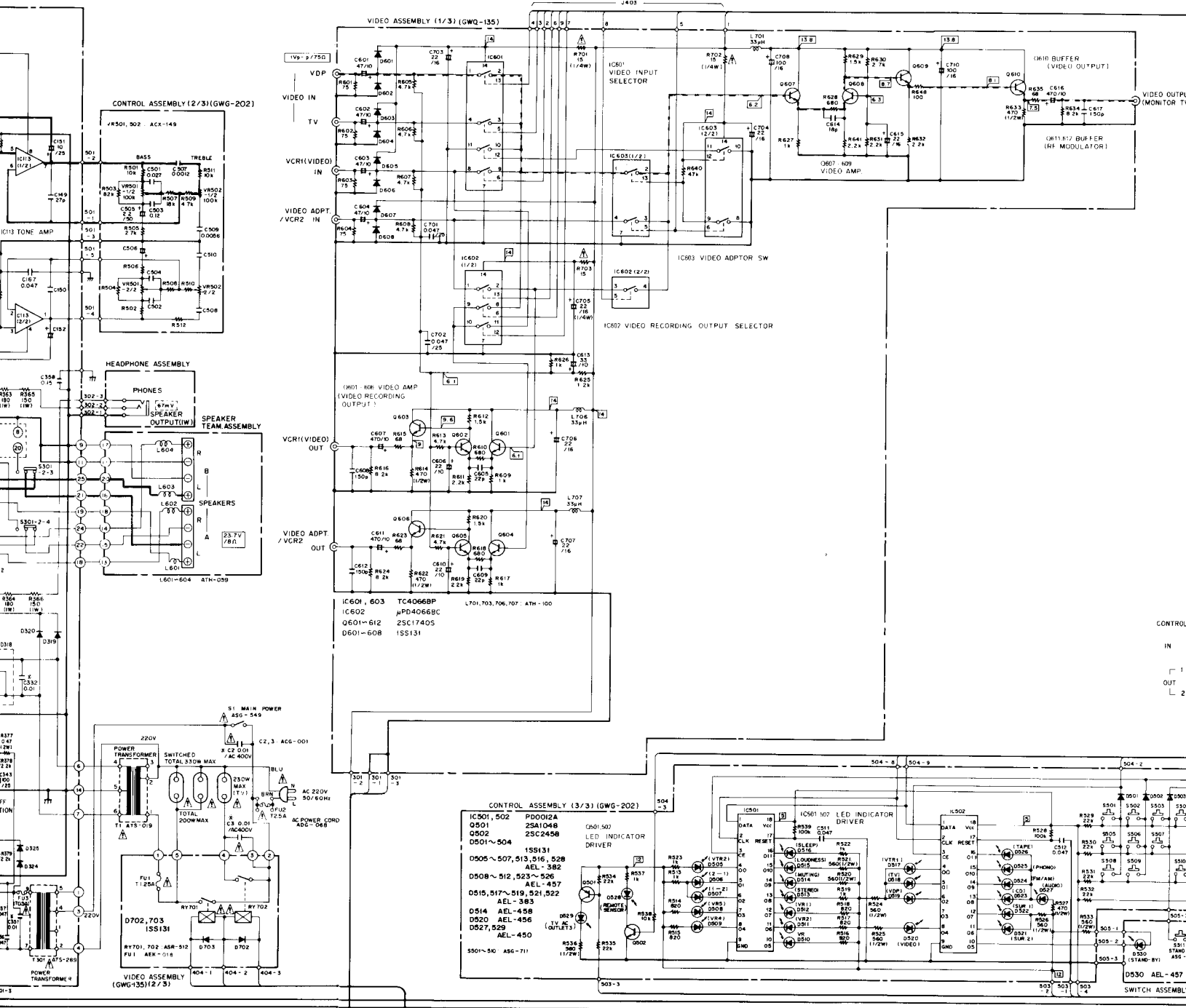
TC9162N  
TC9164N

TC9177P

UPC78M05H







TC9177P

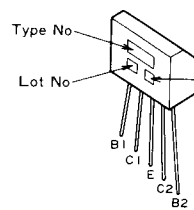
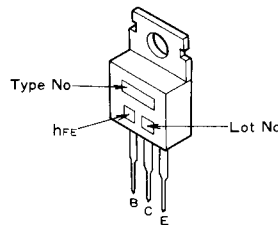
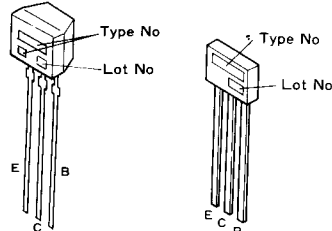
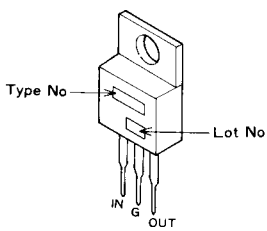
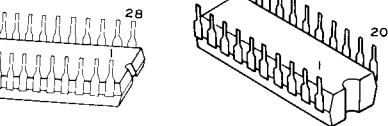
UPC78M05H

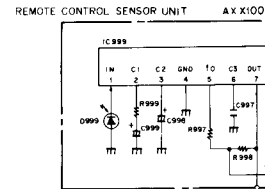
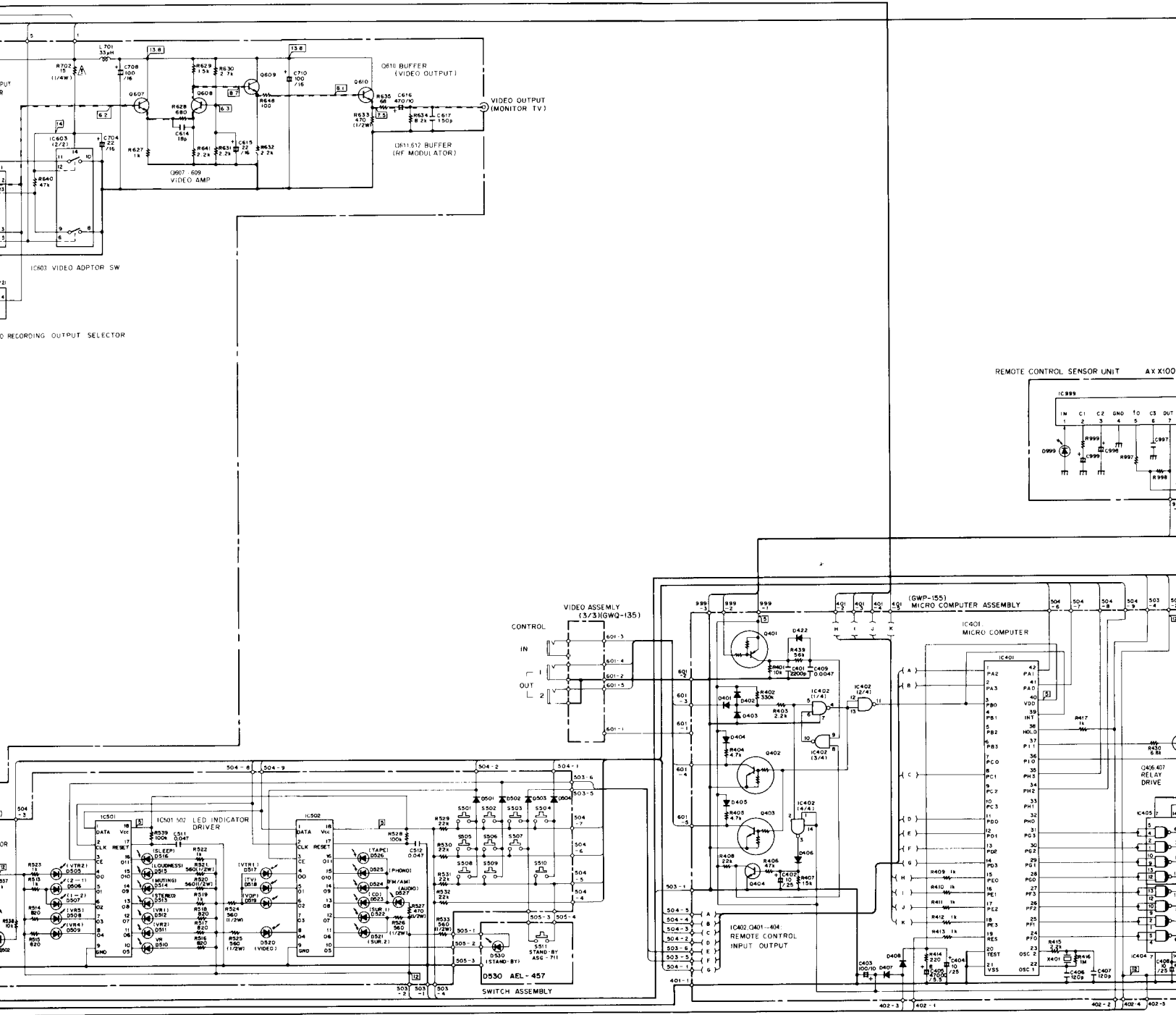
DTC124ES

2SC3400  
2SA1346  
RN2203

2SA968  
2SB750A  
2SC2238  
2SD836A

2SA979



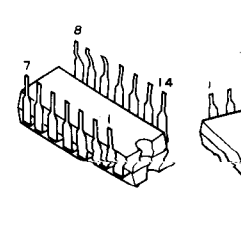
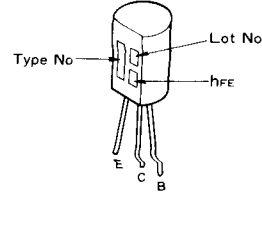
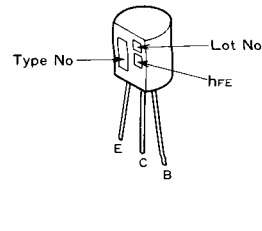
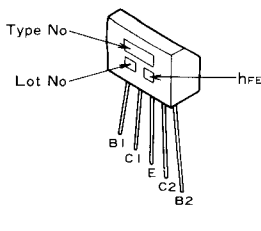
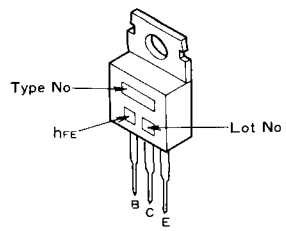
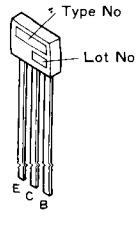


- 2SC3400
- 2SA1346
- RN2203
- 2SA968
- 2SB750A
- 2SC2238
- 2SD836A





- 2SA979
- 2SC2240
- 2SC2705

- 2SC1845
- 2SB560

- TC4066BP
- UPD4066BC
- HD74LS26P
- TC4011BP

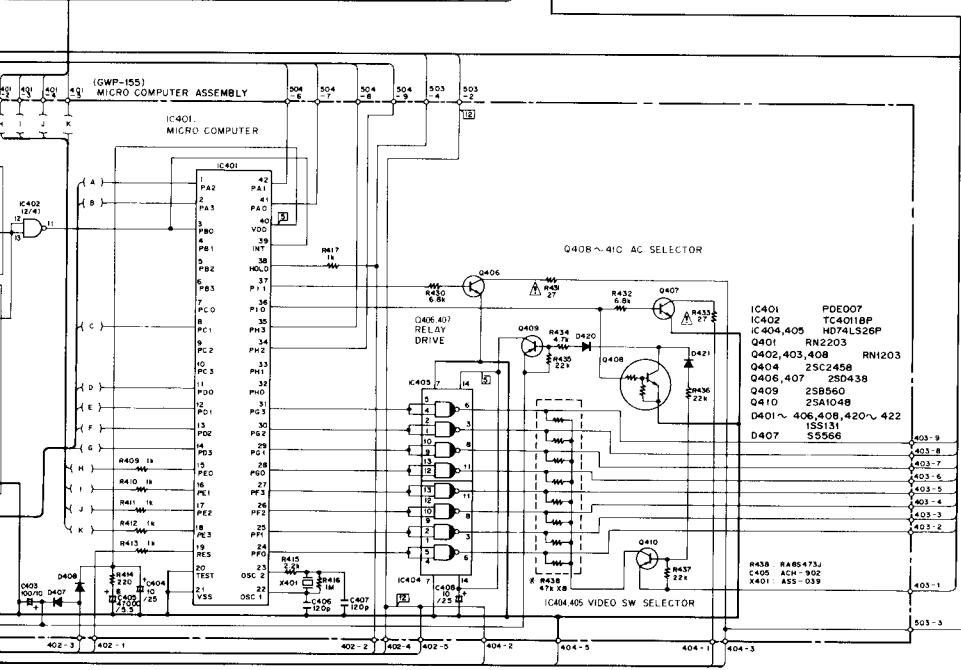
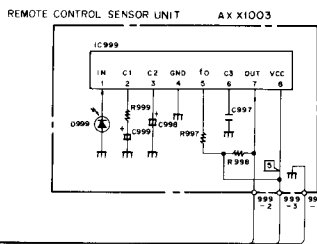


**NOTE:**  
 The indicated semiconductors are representative ones only.  
 Other alternative semiconductors may be used and are listed in the parts list.

- RESISTORS:**  
 Indicated in Ω, kΩ, %W, %W: 5% tolerance unless otherwise noted; k, kΩ, M, MΩ, (F) ±1%, (G) ±2%, (K) ±10%, (M) ±20% tolerance
  - CAPACITORS:**  
 Indicated in capacity (μF) (voltage (V)) unless otherwise noted; p, pF. Indication without voltage is 50V except electrolytic capacitor.
  - VOLTAGE, CURRENT:**  
 Signal voltage of ( 70W + 70W, 8Ω ) output ( 1K Hz )  
 DC voltage (V) at no input signal
  - OTHERS:**  
 Signal route  
 Adjusting point  
 The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.  
 \* marked capacitors and resistors have parts numbers.
- This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

- SWITCH**  
**AF ASSEMBLY**  
 S101 VTR 1 MODE STEREO - MONO  
 S301-1 ALL SPEAKERS ON - OFF  
 S301-2 REAR SPEAKERS ON - OFF

- CONTROL ASSEMBLY**  
 S501 BALANCE R  
 S502 LOUDNESS  
 S503 MODE  
 S504 BALANCE L  
 S505 VOLUME UP (+)  
 S506 MUTING  
 S507 VOLUME DOWN (-)  
 S508 VIDEO INPUT  
 S509 VTR COPY  
 S510 AUDIO INPUT
- SWITCH ASSEMBLY**  
 S511 STAND-BY
- OTHERS**  
 S1 MAIN POWER ON-OFF



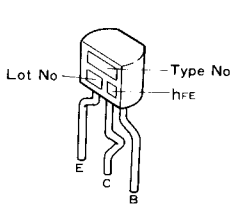
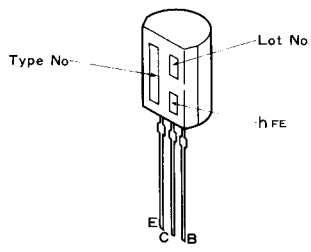
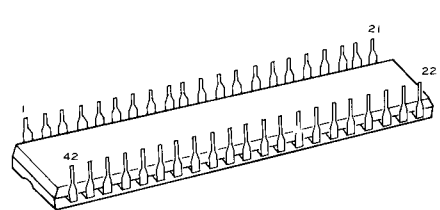
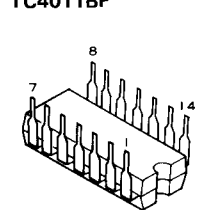
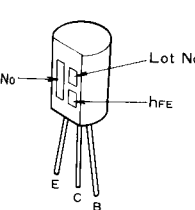
845  
60

TC4066BP  
 UPD4066BC  
 HD74LS26P  
 TC4011BP

PDE007

2SD438

2SC2603(A)



# 10. ELECTRICAL PARTS LIST

**NOTES:**

- When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
 

560Ω	56 × 10 <sup>1</sup>	561	RD½PS	5	6	1	J
47kΩ	47 × 10 <sup>3</sup>	473	RD½PS	4	7	3	J
0.5Ω	0R5		RN2H	0	R	5	K
1Ω	010		RS1P	0	1	0	K
- Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
 

5.62kΩ	562 × 10 <sup>1</sup>	5621	RN¼SR	5	6	2	1	F
--------	-----------------------	------	-------	---	---	---	---	---
- The **⚠** mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.  
**★★ GENERALLY MOVES FASTER THAN ★**  
 This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

**Miscellaneous Parts**

**P.C. BOARD ASSEMBLIES**

Mark	Symbol & Description	Part No.
	Control assembly	GWG-202
	AF Assembly	GWK-276
	Microcomputer assembly	GWP-155
	Video assembly	GWQ-135
	Headphone assembly	Non supply
	Mic jack assembly	Non supply
	Transistor assembly	Non supply
	SP terminal assembly	Non supply
	Switch assembly	Non supply

**SEMICONDUCTORS**

Mark	Symbol & Description	Part No.
★★	Q3, Q4	2SA1389(A)
★★	Q5	2SC2577(A)
★★	Q1, Q2	2SC3546(A)

**SWITCH**

Mark	Symbol & Description	Part No.
⚠★★	S1 Push switch (MAIN POWER)	ASG-549

**TRANSFORMER**

Mark	Symbol & Description	Part No.
⚠★	T1 Power transformer (AC220V/240V)	ATS-019

**CAPACITORS**

Mark	Symbol & Description	Part No.
⚠	C2, C3 Power capacitor (0.01/400V)	ACG-502
	C1 Ceramic capacitor	CKDYF473Z50

**FUSES**

Mark	Symbol & Description	Part No.
⚠★★	FU1 Fuse (T1.25A)	AEK-018
⚠★★	FU3 Fuse (T0.5A)	AEK-401
⚠★★	FU2 Fuse (T2.5A)	AEK-403

**OTHERS**

Mark	Symbol & Description	Part No.
	Pin jack plug	AKM-104
⚠	AC socket 3P (AC OUTLETS)	AKP-502
⚠	Fuse holder	AKR-038
	Remote control sensor unit	AXX1003
	Remote control unit	AXD1003
⚠	AC Power cord	ADG-068

**Control Assembly (GWG-202)**

**SEMICONDUCTORS**

Mark	Symbol & Description	Part No.
★★	IC501, IC502 Output expander IC	PD0012A
★★	Q501	2SA1048 (2SA1115) (2SA933S)
★★	Q502	2SC2458 (2SC1740S) (2SC2603)
★	D505—D507, D513, D516, D528	AEL-382
★	D515, D517—D519, D521, D522	AEL-383
★	D527, D529	AEL-450
★	D520	AEL-456
★	D508—D512, D523—D526	AEL-457 (AEL-462)
★	D514	AEL-458
★	D501—D504	ISS131

**SWITCHES**

Mark	Symbol & Description
★★	S501—S505

**CAPACITORS**

Mark	Symbol & Description
	C505, C506
	C511, C512
	C507, C508
	C503, C504
	C501, C502
	C509, C510

**RESISTORS**

Note: When ordering resistors, first convert resistance values into code form before.

Mark	Symbol & Description
★	VR503
★	VR501, VR502
	R520, R521
	R536
	R513—R515
	Other resistors

**AF Assembly**

**SEMICONDUCTORS**

Mark	Symbol & Description
★★	IC104—IC109
★★	IC101
★★	IC103, IC104
★★	IC102
★★	IC112
★★	IC301
★★	Q325
★★	Q319—Q324
★★	Q309, Q310
★★	Q301, Q302
★★	Q317
★★	Q307, Q308
★★	Q303, Q304
★★	Q313, Q314

## SWITCHES

Mark	Symbol & Description	Part No.
★★	S501-S510 (BALANCE, INPUT, MODE, LOUDNESS, MUTING, VOLUME, VCR COPY)	ASG-711 (ASG-703)

## CAPACITORS

Mark	Symbol & Description	Part No.
	C505, C506	CEYA2R2M50
	C511, C512	CKDYX473M25
	C507, C508	CQMA122K50
	C503, C504	CQMA124K50
	C501, C502	CQMA273K50
	C509, C510	CQMA562K50

## RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
★	VR503 Variable resistor (MIC MIXING 100kΩ)	ACX-147
★	VR501, VR502 Variable resistor (BASS, TREBLE 100kΩ)	ACX-149
	R520, R521, R524-R527, R533, R536	RD1/2PM□□□J
	R513-R519, R522, R523, R537	RD1/4PM□□□J
	Other resistors	RD1/8PM□□□J

## AF Assembly (GWK-276)

### SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC104-IC107, IC110, IC111, IC113, IC109 OP-AMP IC	M5218PF
★★	IC101 OP-AMP IC	M5220P
★★	IC103, IC108 E-SW IC	TC9162N
★★	IC102 E-SW IC	TC9164N
★★	IC112 E-VR IC	TC9177P
★★	IC301 Regurator IC	UPC78M05H
★★	Q325	RN1203 (DTC124ES) (2SC3400)
★★	Q319-Q321	2SA1048 (2SA1115) (2SA933S)
★★	Q309, Q310	2SA968
★★	Q301, Q302	2SA979
★★	Q317	2SB750A
★★	Q307, Q308	2SC2238 (2SC2238)
★★	Q303, Q304	2SC2240 (2SC1845)
★★	Q313, Q314, Q316, Q322	2SC2458 (2SC1740S) (2SC2603)

Mark	Symbol & Description	Part No.
★★	Q305, Q306, Q311, Q312	2SC2705
★★	Q315	2SD438
★★	Q318	2SD836A
★	D337, D338	AEL-437
★	D322	HZ16EB (RD16EB)
★	D305, D306, D309, D310	HZ4.7EB (RD4.7EB)
★	D315, D323, D339-D342	KZL130
★	D318	4D4B42 (RB402)
★	D321	KZL150
★	D319, D320, D330-D333	S5566 (11EZ)
★	D301-D304, D307, D308, D311-D314, D316, D317, D324-D329, D334-D336	ISS131

## SWITCHES, RELAY

Mark	Symbol & Description	Part No.
★★	S101 Push switch (STEREO/MONO)	ASG1004
★★	S301 Push switch (SPEAKERS A/B)	SUN5LXYS
★★	RY301 Relay (Protection)	ASR-107 (ASR-109)

## COILS, TRANSFORMER

Mark	Symbol & Description	Part No.
	L301, L302 Inductor	ATH-090
⚠ ★	T301 Power transformer	ATS-289

## CAPACITORS

Mark	Symbol & Description	Part No.
	C332, C351 (0.01/AC150V)	ACG-019
	C333, C334 (6800/50V)	ACH-290
	C307, C308	CCCSL020C50 (CCDSL020C50)
	C313, C314	CCCSL020C500 (CCDSL020C500)
	C303, C304	CCCSL101J50 (CCDSL101J50)
	C318, C319, C317, C320	CCCSL101K500 (CCDSL101K500)
	C143, C144	CCCSL151J50 (CCDSL151J50)
	C158	CCCSL181J50 (CCDSL181J50)
	C149, C150	CCCSL270J50 (CCDSL270J50)
	C305, C306	CCCSL470J50 (CCDSL470J50)

## RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description
	R343-R344
	R301, R302
	R316, R317
	R391
	R372

Mark	Symbol & Description	Part No.
	C156	CEANL0R1M50
	C323, C324	CEANP2R2M50
	C353, C354	CEAS0R1M50
	C331, C349	CEAS010M50
	C127, C128, C137, C138, C159, C344, C346	CEAS100M25
	C105, C106, C355	CEAS101M10
	C113, C114, C153, C154, C330, C343	CEAS101M25
	C315, C316	CEAS101M35
	C321, C322	CEAS101M50
	C123, C124, C347, C348	CEAS2R2M50
	C125, C126	CEAS220M16
	C350	CEAS221M10
	C339, C342	CEAS221M25
	C352	CEAS222M25
	C157	CEAS4R7M50
	C329	CEAS471M6
	C335, C336	CEHAQ4R7M50
	C115-C120, C141, C142, C147, C148, C151, C152, C301, C302	CEYA100M25
	C309, C310	CEYA101M16
	C337, C340	CEYA101M25
	C101, C102, C111, C112	CEYA2R2M50
	C121, C122	CEYA220M25
	C345	CKCYB222K50
	C135, C136	(CKDYB222K50)
	C103, C104, C161, C162, C169-C192	CKCYB331K50
		(CKDYB331K50)
		CKCYB391K50
		(CKDYB391K50)
	C165, C356, C357	CKCYF473Z50
		(CKDYF473Z50)
	C163, C164	CKDYB331K50
	C359, C360	CQMA102K50
	C325-C328	CQMA104K50
	C131, C132, C139	CQMA153K50
	C358	CQMA154K50
	C107, C108	CQMA222J50
	C133, C134, C341	CQMA222K50
	C166	CQMA224K50
	C130	CQMA332K50
	C145, C146	CQMA333K50
	C311, C312	CQMA392K50
	C155	CQMA393K50
	C140, C167	CQMA473K50
	C129	CQMA683K50
	C109, C110	CQMA822J50

### RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R343-R346 (0.22Ω, 2WX2)	ACN-131
	R301, R302, R305, R306, R313-R316, R373, R376	RDR1/4PM□□□J
	R391	RD1/2PM471J
	R372	RD1/4PMFL2R2J

Mark	Symbol & Description	Part No.
	R115, R116, R307-R310, R317-R322, R329-R334, R368, R378, R379, R394, R397-R399, R355, R356, R374	RD1/4PM□□□J
⚠	R335-R342, R347, R348, R353, R354, R361, R362, R370, R375	RFA1/4PS□□□J
	R392	RFA1/4PS100J
	R323, R324, R327, R328	RN1/4PQ□□□J
	R363-R366, R371	RS1PMF□□□J
	R377	RS2LMFR47J
	Other resistors	RD1/8PM□□□J

### OTHERS

Mark	Symbol & Description	Part No.
	Terminal 4P (VCR1, AUDIO ADAPTOR)	AKB-094
	Terminal 6P (AUDIO INPUT, TAPE, VIDEO INPUT, VIDEO ADAPTOR/VCR2)	AKB-095
	Transistor socket	AKH-017

### Video Assembly (GWQ-135)

#### SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC601, IC603	TC4066BP
★★	IC602	UPD4066BC
★★	Q601-Q610	2SC1740S (2SC2458)
★	D601-D608, D702, D703	1SS131

#### RELAIRES

Mark	Symbol & Description	Part No.
⚠ ★★	RY701, RY702 Power relay	ASR-512

#### COILS

Mark	Symbol & Description	Part No.
	L701, L706, L707 Inductor	ATH1000

#### CAPACITORS

Mark	Symbol & Description	Part No.
	C614	CCCCH180J50 (CCDCH180J50)
	C605, C609	CCCCH220J50 (CCDCH220J50)
	C608, C612, C617	CCCSL151J50 (CCDSL151J50)
	C706-C708, C710	CEAS101M16
	C606, C610, C615, C703-C705	CEAS220M16
	C613	CEAS330M10
	C601-C604	CEAS470M10
	C607, C611, C616	CEAS471M10
	C701, C702	CKCYX473M25 (CKDYX473M25)

### RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol
	R614
⚠	R701
	Other

### OTHERS

Mark	Symbol
	Mini t
	BNC
	BNC

### Microcomputer

### SEMICONDUCTORS

Mark	Symbol
★★	IC404
★★	IC401

★★	IC402
----	-------

★★	Q402
----	------

★★	Q401
----	------

★★	Q410
----	------

★★	Q409
----	------

★★	Q404
----	------

★★	Q406
----	------

★	D401
---	------

★	D402
---	------

### CAPACITORS

Mark	Symbol
	C405
	C406
	C407
	C408
	C409
	C401

	C402
--	------

## RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
△	R614, R622, R633 R701-R703 Other resistors	RD1/2PM471J RFA1/4PS150J RD1/8PM□□□J

## OTHERS

Mark	Symbol & Description	Part No.
	Mini terminal (CONTROL INPUT/ OUTPUT)	AKN-207
	BNC socket	AKX-205
	BNC socket	AKX1002

## Microcomputer Assembly (GWP-155)

### SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC404, IC405	HD74LS26P
★★	IC401 MIDI VS AMP CONTROL	PDE007 (DTA124ES) (2SA1346)
★★	IC402	TC4011BP
★★	Q402, Q403, Q408	RN1203 (DTC124ES) (2SC3400)
★★	Q401	RN2203 (DTA124ES) (2SA1346)
★★	Q410	2SA1048 (2SA1115) (2SA933S)
★★	Q409	2SB560
★★	Q404	2SC2458 (2SC1740S) (2SC2603)
★★	Q406, Q407	2SD438
★	D407	S5566 (11E2)
★	D401-D406, D408, C420-D422	1SS131

### CAPACITORS

Mark	Symbol & Description	Part No.
	C405 Capacitor (4700/55V) C406, C407	ACH-902 CCCCH121J50 (CCDCH121J50)
	C402, C404, C408 C403 C401	CEAS100M25 CEAS101M10 CKCYB222K50 (CKDYB222K50)
	C409	CKCYB472K50 (CKDYB472K50)

## RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
△	R438 R431, R433 Other resistor	RA8S473J RFA1/4PS270J RD1/8PM□□□J

## OTHERS

Mark	Symbol & Description	Part No.
★	X401 Ceramic resonator	ASS-039

## Headphone Assembly

### OTHERS

Mark	Symbol & Description	Part No.
	Jack (PHONES)	AKN-045

## Mic Jack Assembly

### OTHERS

Mark	Symbol & Description	Part No.
	Jack (MIC)	AKN-052

## Transistor Assembly

### SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	Q323, Q324	2SC2603

## SP Terminal Assembly

### COILS

Mark	Symbol & Description	Part No.
	L601-L604 Choke coil	ATH-059

### OTHERS

Mark	Symbol & Description	Part No.
	Terminal 8P (SPEAKERS)	AKE-111

## Switch Assembly

### SEMICONDUCTOR

Mark	Symbol & Description	Part No.
★	D530	AEL-457

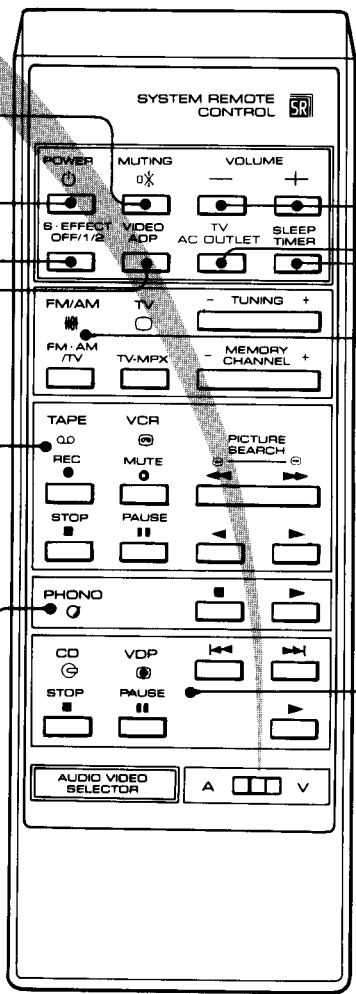
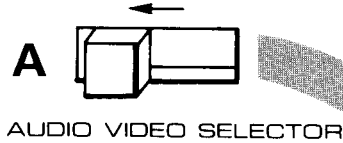
### SWITCH

Mark	Symbol & Description	Part No.
★★	S511 Tact switch (STAND-BY)	ASG-711

# 11. REMOTE CONTROL SECTION / FRONT PANEL FACILITIES

Let's LISTEN TO THE SOUND of the audio components

First, set the switch below to 'A'



**MUTING key**  
Pressing this key mutes the sound. Pressing it again restores the original sound volume.

**POWER key for AV master amplifier**  
Press to switch its power to ON or OFF.

**S·EFFECT OFF/1/2 Key**  
Selects the SOUND mode of the AV master amplifier

OFF → 1 → 2

**VIDEO ADAPTOR key**  
Switches the VIDEO ADAPTOR switch of the AV master amplifier (ex. A-X909V) to ON or OFF.

**VOLUME adjustment keys for AV master amplifier**  
- : Lower + : Higher

**TV/AC OUTLET key**  
Switches the AC OUTLET for the TV of the AV master amplifier to ON or OFF.

**SLEEP key**  
Switches the sleep time setting of the AV master amplifier.

60 → 30 → OFF

FM/AM Tuner Operation Keys	FM/AM
<p><b>FM·AM key</b> : The functions of the /TV amplifier become function of the FM/AM tuner and FM/AM broadcast can be received.</p> <p><b>- MEMORY CHANNEL + key</b> : Channel select key for choosing the broadcast station to be preset to the tuner</p> <p><b>- TUNING + key</b> : Frequency UP/DOWN</p>	

Cassette Tape Deck Operation Keys	TAPE
<p><b>REC key</b> : Recording key</p> <p><b>MUTE key</b> : Mutes the recording</p> <p><b>◀▶ keys</b> : Fast forward, Re-wind keys</p> <p><b>STOP key</b> : Stops tape motion</p> <p><b>PAUSE key</b> : Temporarily stop tape motion (During recording only)</p> <p><b>◀▶ keys</b> : The functions of the amplifier become function of cassette deck and tape playing is started.</p> <p>▶ Forward PLAY key ◀ Reverse PLAY key</p>	

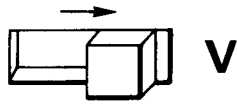
Turntable Operation Keys	PHONO
<p><b>▶ key</b> : The functions of the amplifier become function of the turntable and record playing is started.</p> <p><b>■ key</b> : Stops playing of the turntable</p>	

Compact Disc Operation Keys	CD
<p><b>▶ key</b> : The functions of the amplifier become function of compact disc player and disc playing is started.</p> <p><b>◀▶ keys</b> : Track search keys</p> <p><b>PAUSE key</b> : Temporarily stops playing of the disc</p> <p><b>STOP key</b> : Stops playing of the disc</p>	



Let's **LOOK AT THE IMAGES** of the video components.

First, set the switch below to 'V'.



AUDIO VIDEO SELECTOR

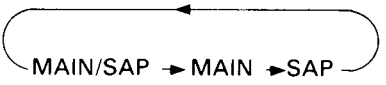
This can turn the power switches of TV sets with the Pioneer mark ON and OFF.

This can perform the same operation as when the above switch is set to the "A" position.

### TV Tuner Operation Keys (SD-25, 25A + SD-X5, X7)

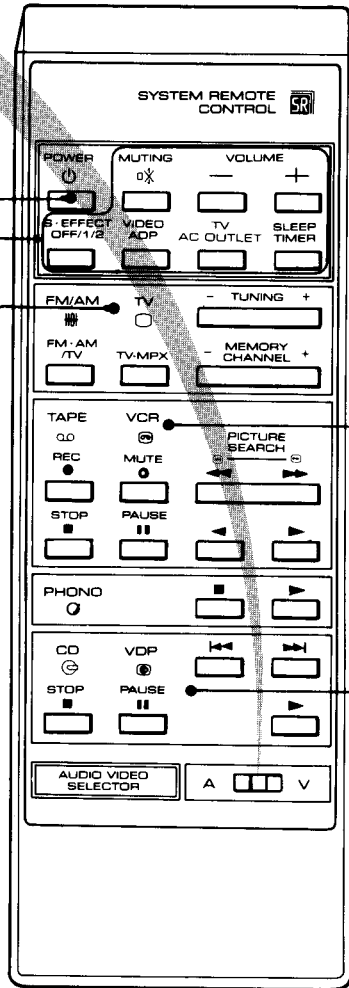
**FM · AM /TV key** : The functions of the amplifier become function of the TV tuner and TV broadcast can be received.

**TV MPX key** : MULTIPLEX mode select key



**MEMORY CHANNEL key** : Channel select key for the next TV channels.

**TUNING + key** : No more



### VCR Operation Keys

VCR

**REC key** : Recording Key

**MUTE key** : No more

**PICTURE SEARCH key** : In PLAY mode; Picture search  
In STOP mode; Fast forward or rewinds the tape

**STOP key** : Stops playing of the Video Cassette Recorder

**PAUSE key** : Temporarily stops tape motion during recording or playback

**▶ key** : The functions of the amplifier become function of Video Cassette Recorder and video tape playing is started. (VCR can only perform forward playback ▶ )

### VDP Operation Keys

VDP

**▶ key** : The functions of the amplifier become function of Laser-Vision player and disc playing is started.

**◀▶ keys** : Scan Forward/Reverse keys

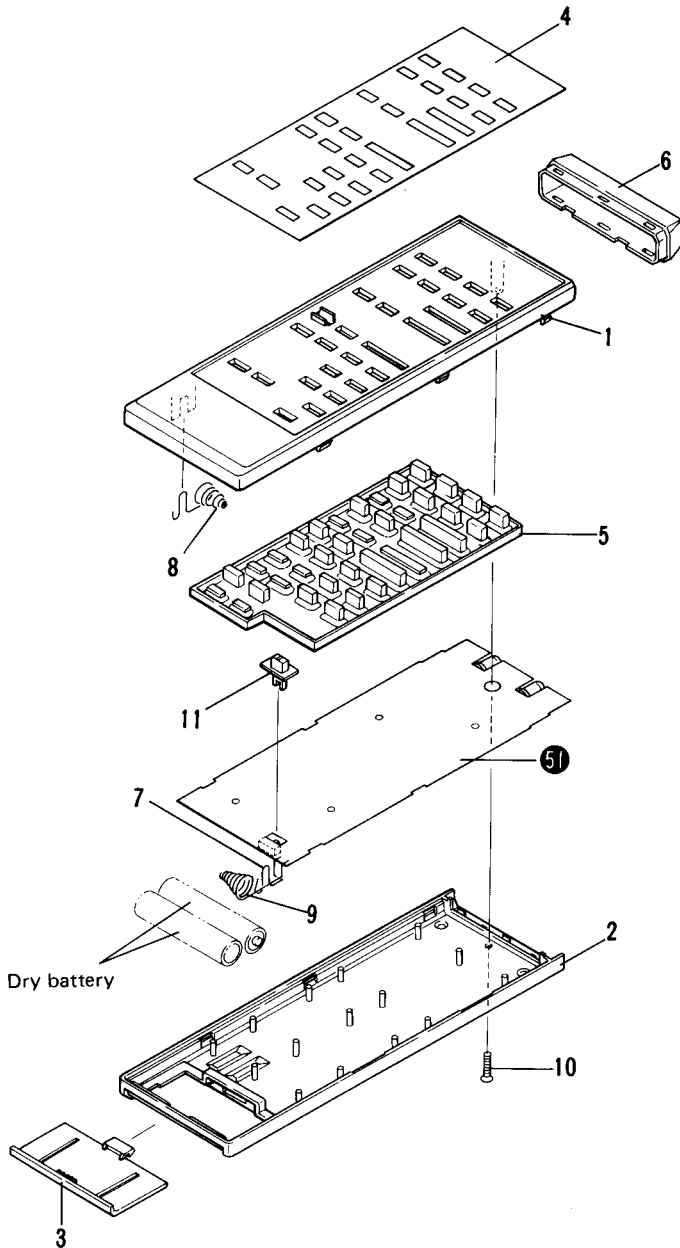
**◀ key** : Reverses the portions of the disc to a previous image

**▶ key** : Fast forwards the portions of the disc to a forthcoming image  
Chapter skipping cannot be performed

**PAUSE key** : Temporarily stops playing of the LaserVision disc

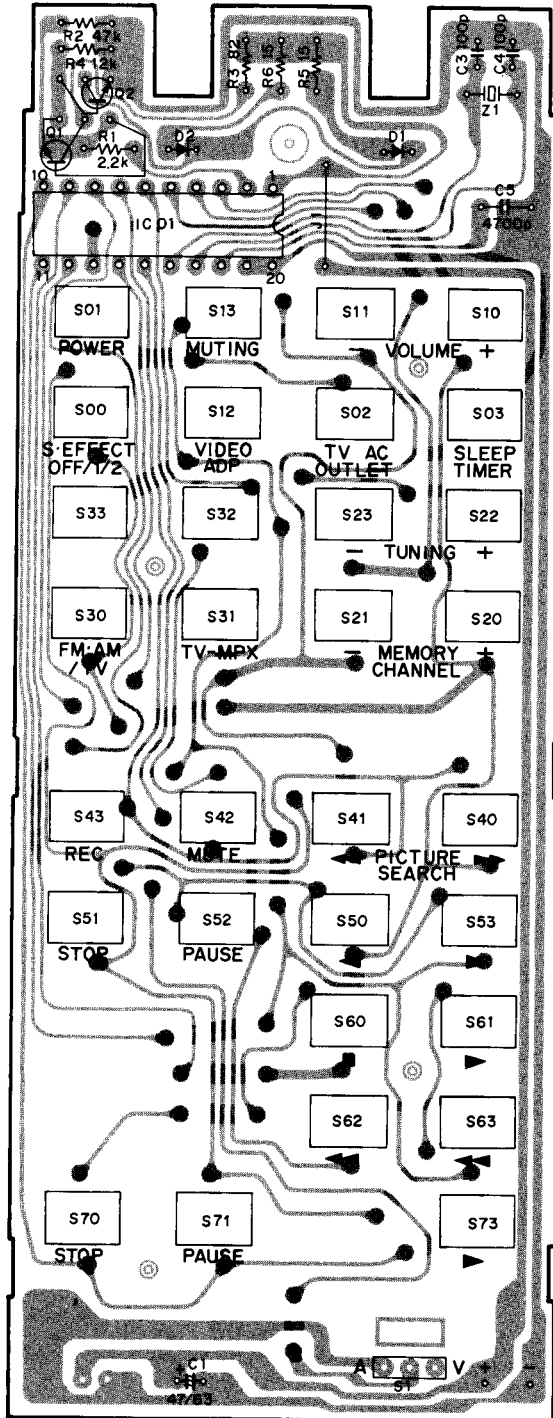
**STOP key** : Stops playing of the Laser-Vision disc.

# 12. REMOTE CONTROL SECTION/ EXPLODED VIEW AND PARTS LIST



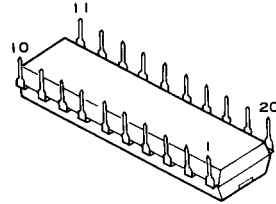
Mark	No.	Part No.	Description
	1	AZN1049	Bonnet case assembly
	2	AZN1050	Under case (Bottom case)
	3	AZN1051	Battery lid
	4	AZA1019	Aluminium plate
	5	AZA1020	Rubber switch
	6	AZN1052	Filter
	7	AZK1021	Battery terminal
	8	AZK1022	Battery spring (A)
	9	AZK1023	Battery spring (B)
	10	CRZ20P080FZK	Screw
	11	AZA1023	Slide knob
	51		P.C. Board Assembly

# 13. REMOTE CONTROL SECTION / P.C. BOARD PATTERNS

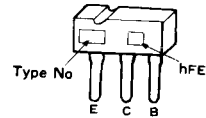


## External Appearance of Transistors and ICs

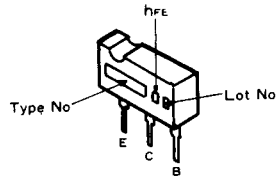
PD5035



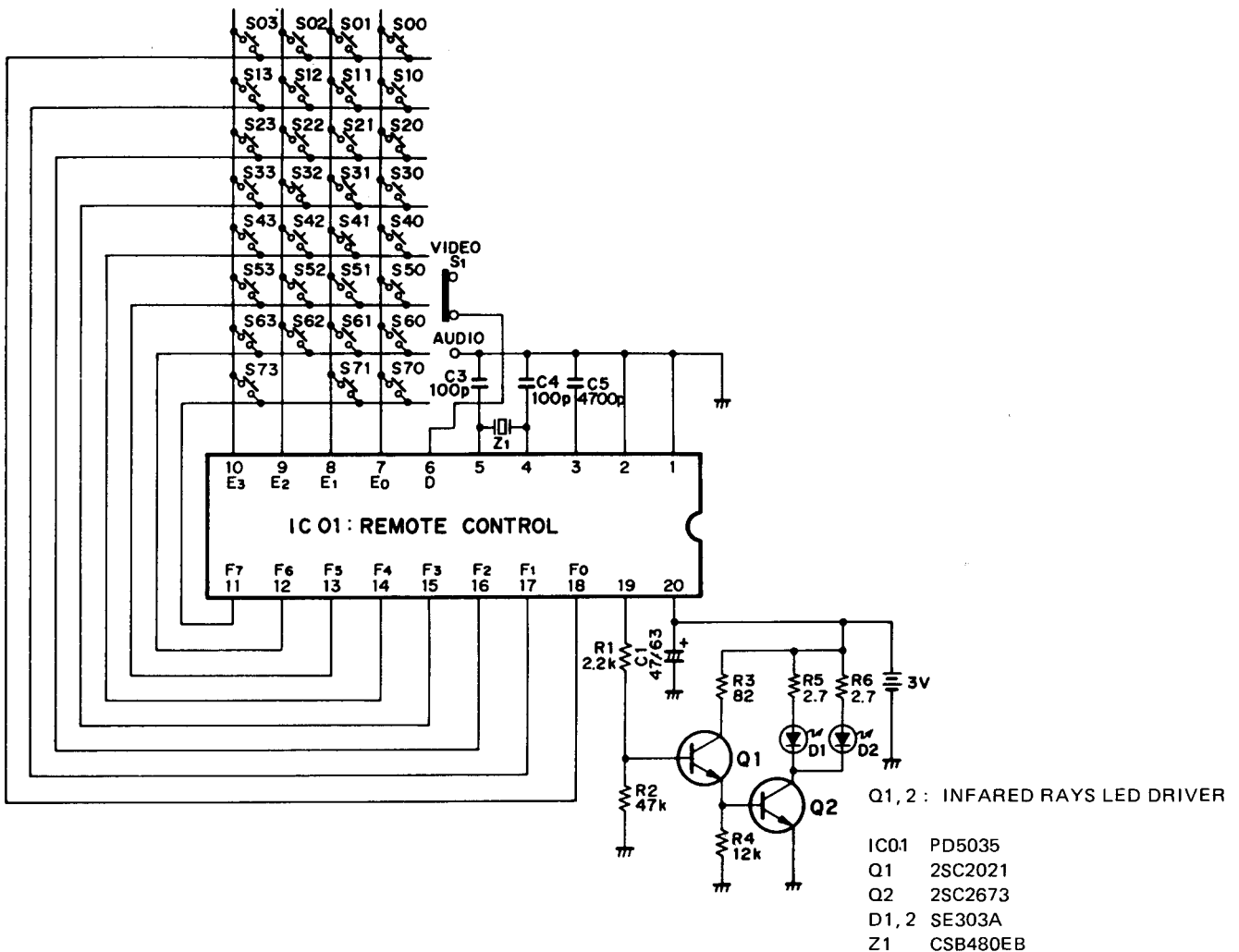
2SC2021



2SC2673



# 14. REMOTE CONTROL SECTION / SCHEMATIC DIAGRAM



**1. RESISTORS**

Indicated in  $\Omega$ , 1/BW & 1/4W,  $\pm 5\%$  tolerance unless otherwise noted k; k $\Omega$ , M; M $\Omega$ , (F);  $\pm 1\%$ , (G);  $\pm 2\%$ , (K);  $\pm 10\%$ , (M);  $\pm 20\%$  tolerance.

**2. CAPACITORS:**

Indicated in capacity ( $\mu$ F)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.

**3. OTHERS :**

- Signal route.
- Adjusting point.

The mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

\* marked capacitors and resistors have parts numbers. The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

**SWITCHES:**

S1 - AUDIO/VIDEO SELECTOR AUDIO-VIDEO

S1 - VIDEO SIDE

S00	S-EFFECT OFF/1/2	(AMP)
S01	POWER ON/OFF	(TV)
S02	TV/AC OUTLET	(AMP)
S03	SLEEP TIMER	(AMP)
S10	VOL +	(AMP)
S11	VOL -	(AMP)
S12	VIDEO ADP.	(AMP)
S13	MUTING	(AMP)
S20	MEMORY CHANNEL +	(TV)

S21	MEMORY CHANNEL -	(TV)
S22	TUNING +	(TV)
S23	TUNING -	(TV)
S30	TV	(AMP)
S31	TV-MPX	(TV)
S32	VOL +	(TV)*
S33	VOL -	(TV)*
S40	PICTURE SEARCH	(VCR)
S41	PICTURE SEARCH	(VCR)
S42	MUTE O	(VCR)
S43	REC	(VCR)
S50		
S51	STOP	(VCR)
S52	PAUSE	(VCR)
S53		(VCR)
S60		
S61		
S62		(VDP)
S63		(VDP)
S70		(VDP)
S71		(VDP)
S72		
S73		(VDP)

S1 -	<u>AUDIO SIDE</u>	
S00	S-EFFECT OFF/1/2	(AMP)
S01	POWER ON/OFF	(AMP)
S02	TV/AC OUTLET	(AMP)
S03	SLEEP TIMER	(AMP)

S10	VOL +	(AMP)
S11	VOL -	(AMP)
S12	VIDEO ADP.	(AMP)
S13	MUTING	(AMP)
S20	MEMORY CHANNEL +	(TUNER)
S21	MEMORY CHANNEL -	(TUNER)
S22	TUNING +	(TUNER)
S23	TUNING -	(TUNER)
S30	FM-AM	(AMP)
S31		
S32	VOL +	(TV)*
S33	VOL -	(TV)*
S40		(DECK)
S41		(DECK)
S42	MUTE	(DECK)
S43	REC	(DECK)
S50		(DECK)
S51	STOP	(DECK)
S52	PAUSE	(DECK)
S53		(DECK)
S60		(PHONO)
S61		(PHONO)
S62		(CD)
S63		(CD)
S70	STOP	(CD)
S71	PAUSE	(CD)
S72		
S73		(CD)

\*: Though the asterisk-marked switches S32, S33 are illustrated in the circuit and pattern diagrams, they can not be pushed on the actual remote control unit.

# 15. REMOTE CONTROL SECTION/ELECTRICAL PARTS LIST

**NOTES:**

- When ordering resistors, first convert resistance values into code form as shown in the following examples.  
*Ex. 1* When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).  

560Ω	56 × 10 <sup>1</sup>	561	RD¼PS	5	6	1	J
47kΩ	47 × 10 <sup>3</sup>	473	RD¼PS	4	7	3	J
0.5Ω	0R5		RN2H	0	R	5	K
1Ω	010		RS1P	0	1	0	K

  
*Ex. 2* When there are 3 effective digits (such as in high precision metal film resistors).  

5.62kΩ	562 × 10 <sup>1</sup>	5621	RN¼SR	5	6	2	1	F
--------	-----------------------	------	-------	---	---	---	---	---
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.  
**★★ GENERALLY MOVES FASTER THAN ★**  
 This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by “ $\odot$ ” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

**P.C. Board Assembly**

**SEMICONDUCTOR**

Mark	Symbol & Description	Part No.
★★	IC01	PD5035
★★	Q1	2SC2021
★★	Q2	2SC2673
★	D1, D2 LED (RED)	SE303A

**OTHERS**

Mark	Symbol & Description	Part No.
Z1	Ceramic resonator	CSB480EB

**SWITCH**

Mark	Symbol & Description	Part No.
★★	SW1 Slide switch (VIDEO/AUDIO)	AZS1011

**CAPACITORS**

Mark	Symbol & Description	Part No.
	C1	CEAJ470M6
	C3, C4	CCDCH101J50
	C5	CKDYF472Z50

**RESISTORS**

*Note:* When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R1-R6	RD1/8PM□□□J

# 16. FOR HB TYPE

**NOTES:**

- Parts without part number cannot be supplied.
- The  $\triangle$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks  $\star\star$  and  $\star$ .  
 $\star\star$  **GENERALLY MOVES FASTER THAN  $\star$**   
 This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by "  $\odot$  " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

The HB type is the same as the HE type with the exception of the following sections.

**CONTRAST OF MISCELLANEOUS PARTS**

Mark	Symbol & Description	Part No.		Remarks
		HE type	HB type	
$\triangle$	AC power cord	ADG-068	ADG-063	
$\triangle$ $\star\star$	FU1 Fuse (T1.25A)	AEK-018	AEK-509	
$\triangle$ $\star\star$	FU2 Fuse (T2.5A)	AEK-403	AEK-512	
$\triangle$ $\star\star$	FU3 Fuse (T0.5A)	AEK-401	AEK-505	
$\triangle$	AC socket 3P (AC OUTLETS)	AKP-502	AKP-505	
	Operating instructions (English/German/French/Italian)	ARE1013	.....	
	(English)	.....	ARB1029	
	REMOTE CONTROL of Operating instructions (English/German/French/Italian)	ARE1014	.....	
	(English)	.....	ARB1006	

**SCHEMATIC DIAGRAM**

