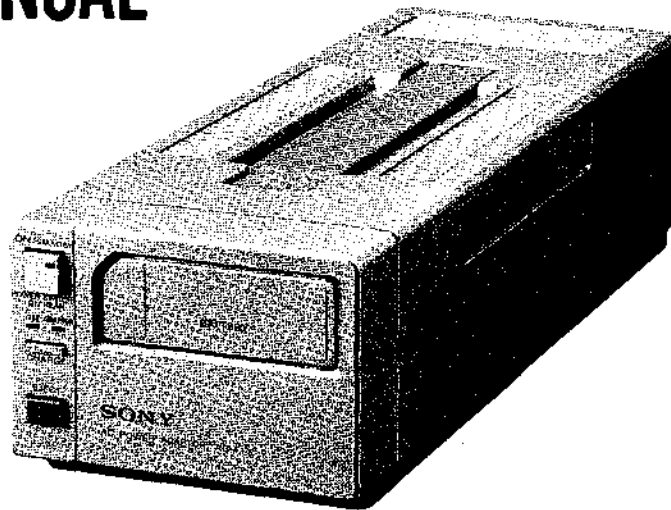


AC-F1E

SERVICE MANUAL

D01



January, 1982

SPECIFICATIONS


Power requirements	110-240 V ac \pm 10%
	50/60 Hz
Power consumption	65 W
Output voltage	14 V dc
Output current	2.0 A
Charging voltage	17 V dc
Charging current	2.3 A
Rechargeable batteries	NP-1 battery pack only
Operating temperatures	0°C to 40°C (32°F to 104°F)
Storage temperatures	-20°C to +65°C (-4°F to +149°F)
Dimensions	Approx. 108×80×305 mm (w/h/d) (4 $\frac{3}{8}$ ×3 $\frac{1}{4}$ ×12 $\frac{1}{8}$ inches) not including projecting parts
Weight	Approx. 1.9 kg (4 lb 3 oz) net



ACC

AC POWER ADAPTOR
SONY®

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS 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. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SECTION 1 OUTLINE

1-1. LOCATION AND FUNCTION OF PARTS AND CONTROLS

1 ON/STANDBY button

Press to turn on the unit after setting the POWER switch to ON. The lamp on the button will light up. Press again so that the unit is in the standby mode, and the lamp will go off.

2 VTR lamp and ADAPTOR lamp

The left VTR lamp lights while the battery pack inserted into the recorder is being charged and the right ADAPTOR lamp lights while the battery pack inserted into the ac power adaptor is being charged.

3 CHARGE button

Press to start charging the battery pack.

4 EJECT button

Press to eject the battery pack.

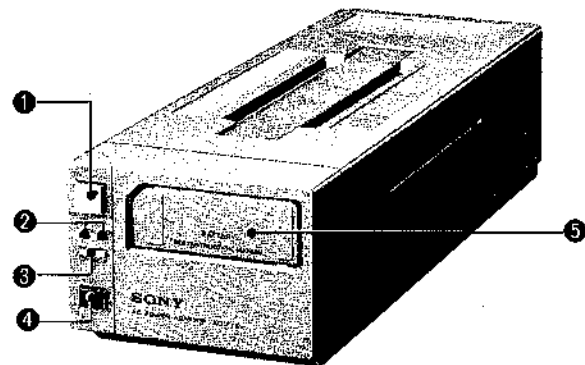
5 BATTERY compartment

6 Mains lead

7 DC OUT cord

8 POWER switch

Set this switch to ON to supply the power to the unit. Set it to OFF to cut the mains power completely.

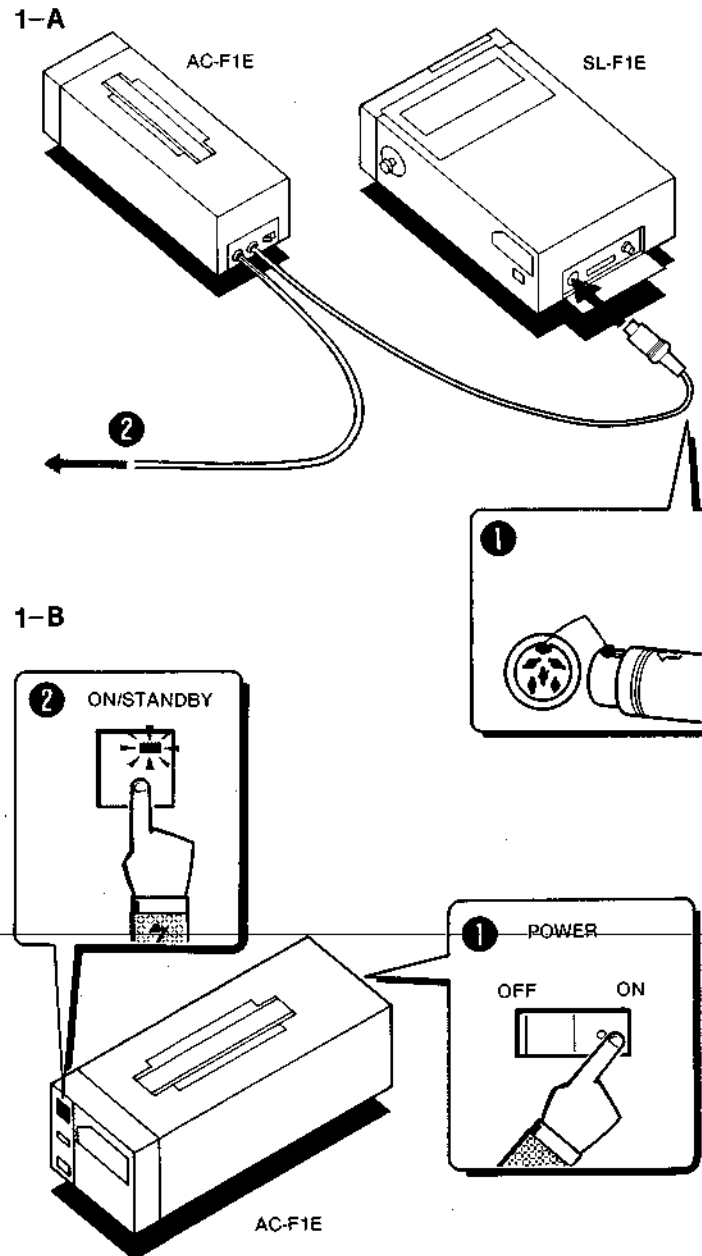


1-2. AC POWER OPERATION OF THE RECORDER

1. Connect the ac power adaptor to the video cassette recorder and plug in the adaptor. (Figure 1-A)

2. Press the ON/STANDBY button on the ac power adaptor after setting the POWER switch to ON. (Figure 1-B) The green lamp will light up and power will be supplied to the recorder. The recorder can be turned on or off with its own ON button.

The recorder cannot be operated when the battery pack is being charged.
Power will not be supplied from the ac power adaptor when a battery pack inside the ac power adaptor is being charged.



1-3. CHARGING THE BATTERY PACK

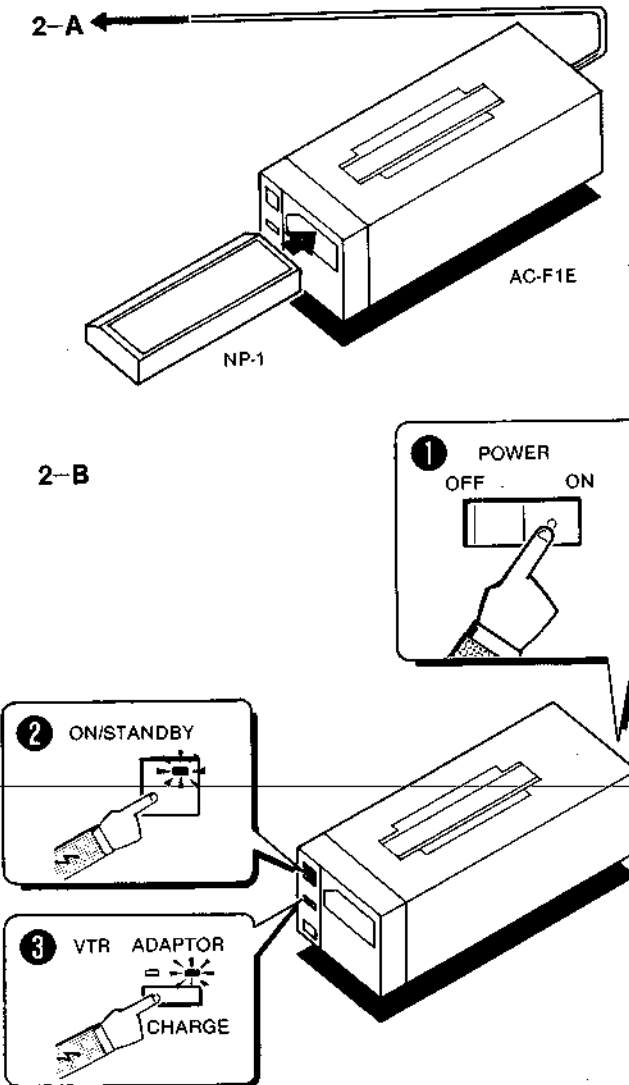
Note on charging temperatures
The battery pack can be charged within the temperature range from 5°C to 40°C (41°F to 104°F). For best results, however, we recommend charging within the temperature range from 10°C to 30°C (50°F to 86°F).
● If the battery pack is charged at a temperature outside the recommended range, or when the battery itself is warm from use, the battery may not be fully charged and the operating time will be shortened.

TO CHARGE THE NP-1 RECHARGEABLE BATTERY PACK USING THE AC POWER ADAPTOR ONLY

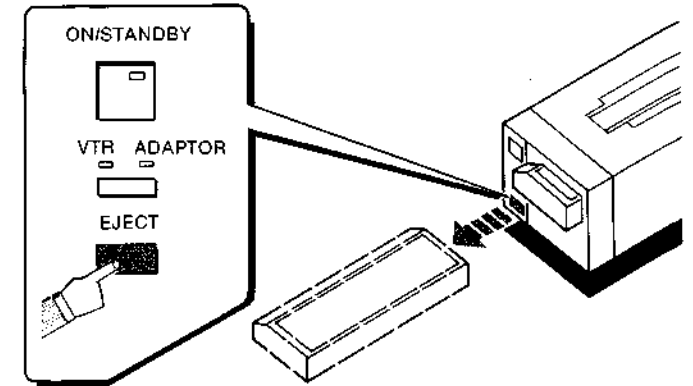
1. Insert the battery pack into the BATTERY compartment until it clicks and plug in the adaptor. (Figure 2-A)

2. Turn on the unit and press the CHARGE button. The right ADAPTOR lamp will light up. (Figure 2-B) The charging time is about 1 hour at normal temperatures.

3. When the battery is fully charged, charging will stop automatically and the lamp goes off. Turn the unit off and press the EJECT button to remove the battery pack. (Figure 2-C)



2-C



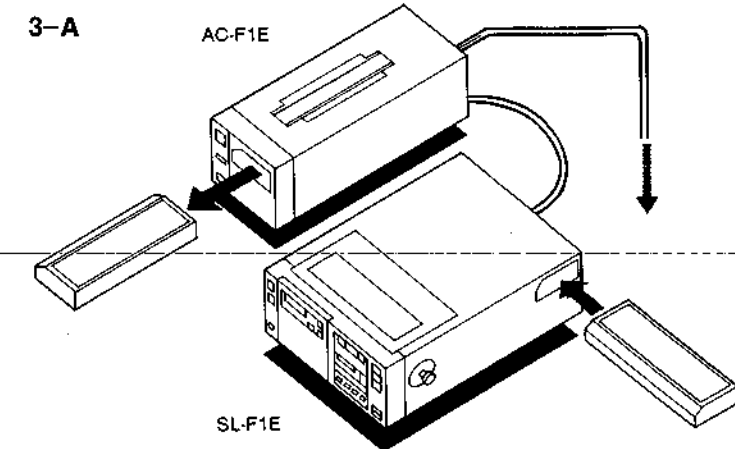
To charge a battery pack inserted into the recorder

It is not possible to charge two battery packs at the same time.
If the CHARGE button is pressed, when battery packs are inserted into both the recorder and the ac power adaptor, only the battery pack inside the ac power adaptor will be charged.

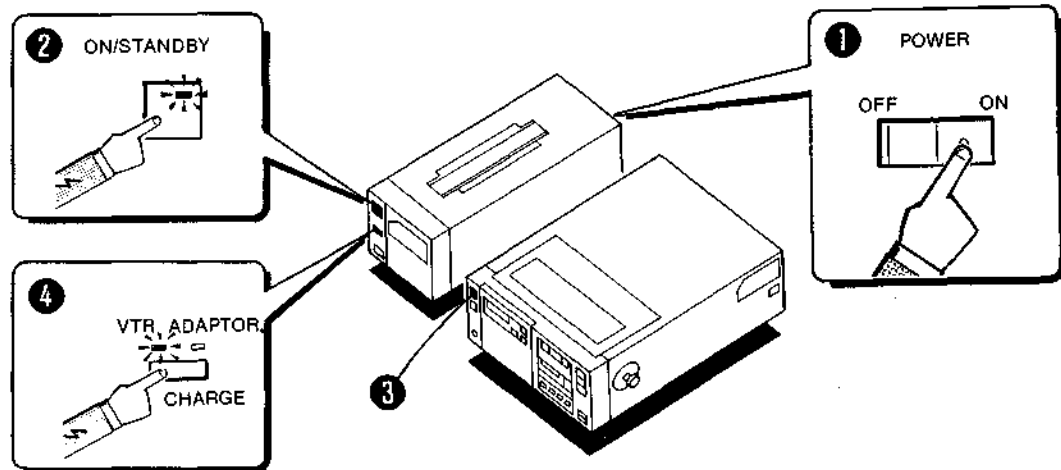
1. Insert the battery pack into the recorder. Remove the battery pack, if present, from the ac power adaptor. (Figure 3-A)

2. Turn the ac power adaptor on, and check that the recorder is turned off. Then press the CHARGE button. (Figure 3-B) The left VTR lamp will light up and charging starts. The charging time is about 1 hour at normal temperatures.

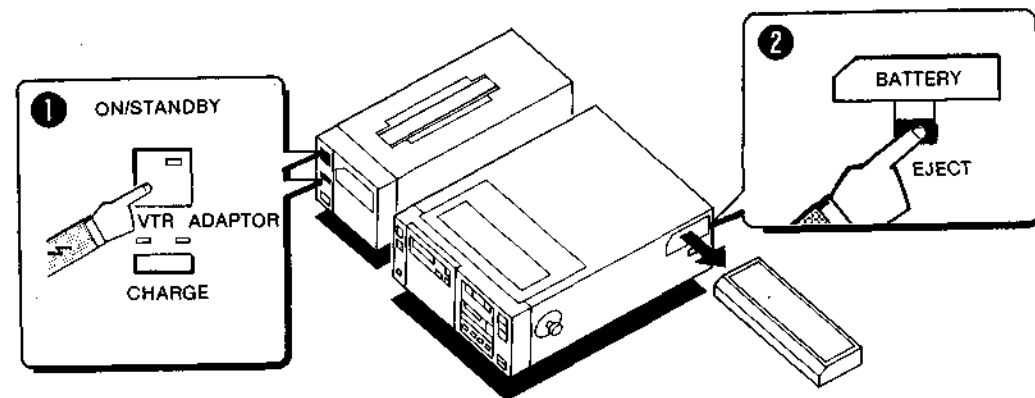
When charging the battery pack inside the recorder, the recorder should be turned off. If the recorder is turned on during charging, charging will stop.



3-B

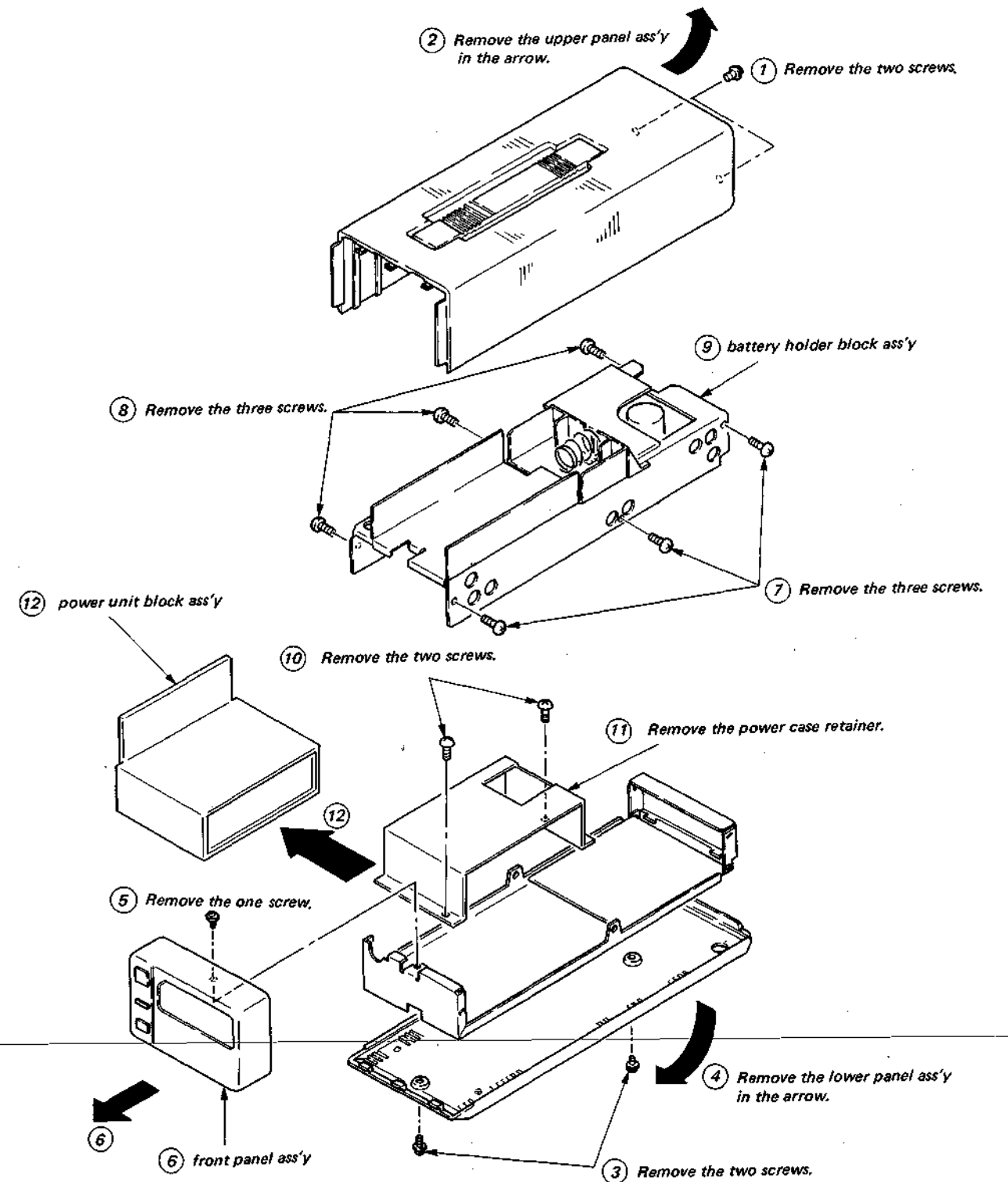


3-C



SECTION 2 DISASSEMBLY

2-1. POWER UNIT BLOCK ASSY REMOVAL



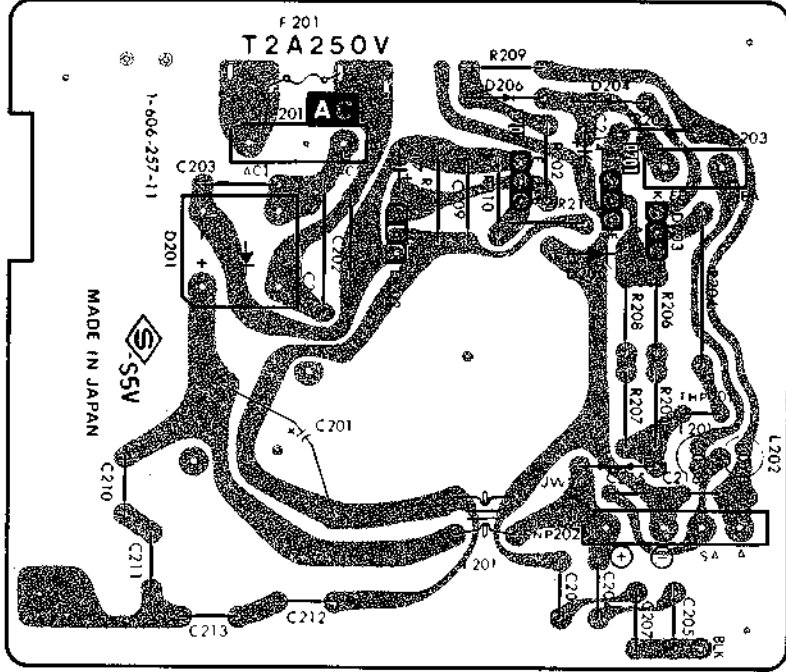
B E C D

**SECTION 3
DIAGRAMS**

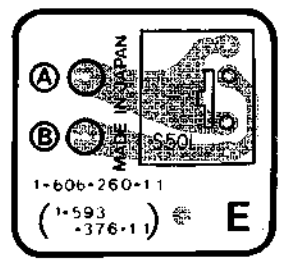
3-1. MOUNTING DIAGRAMS
— Conductor Side —

A B C D

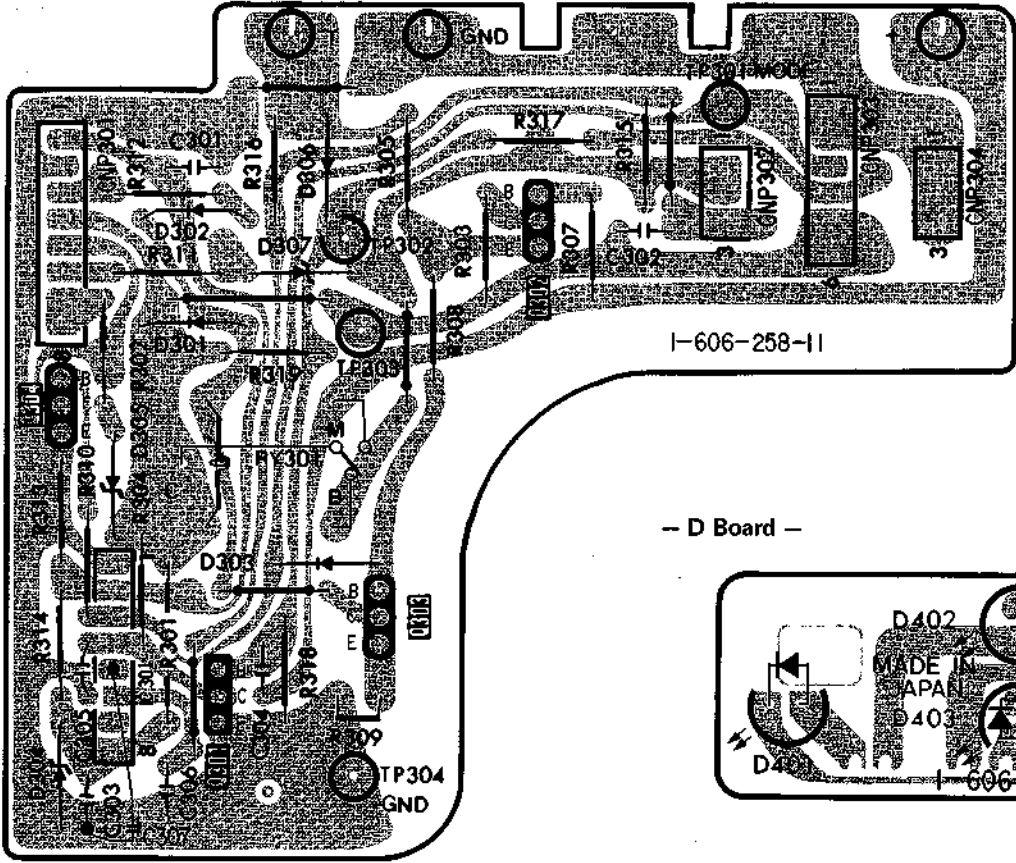
— B Board —



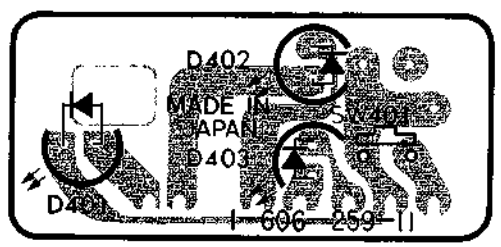
— E Board —



— C Board —




— D Board —






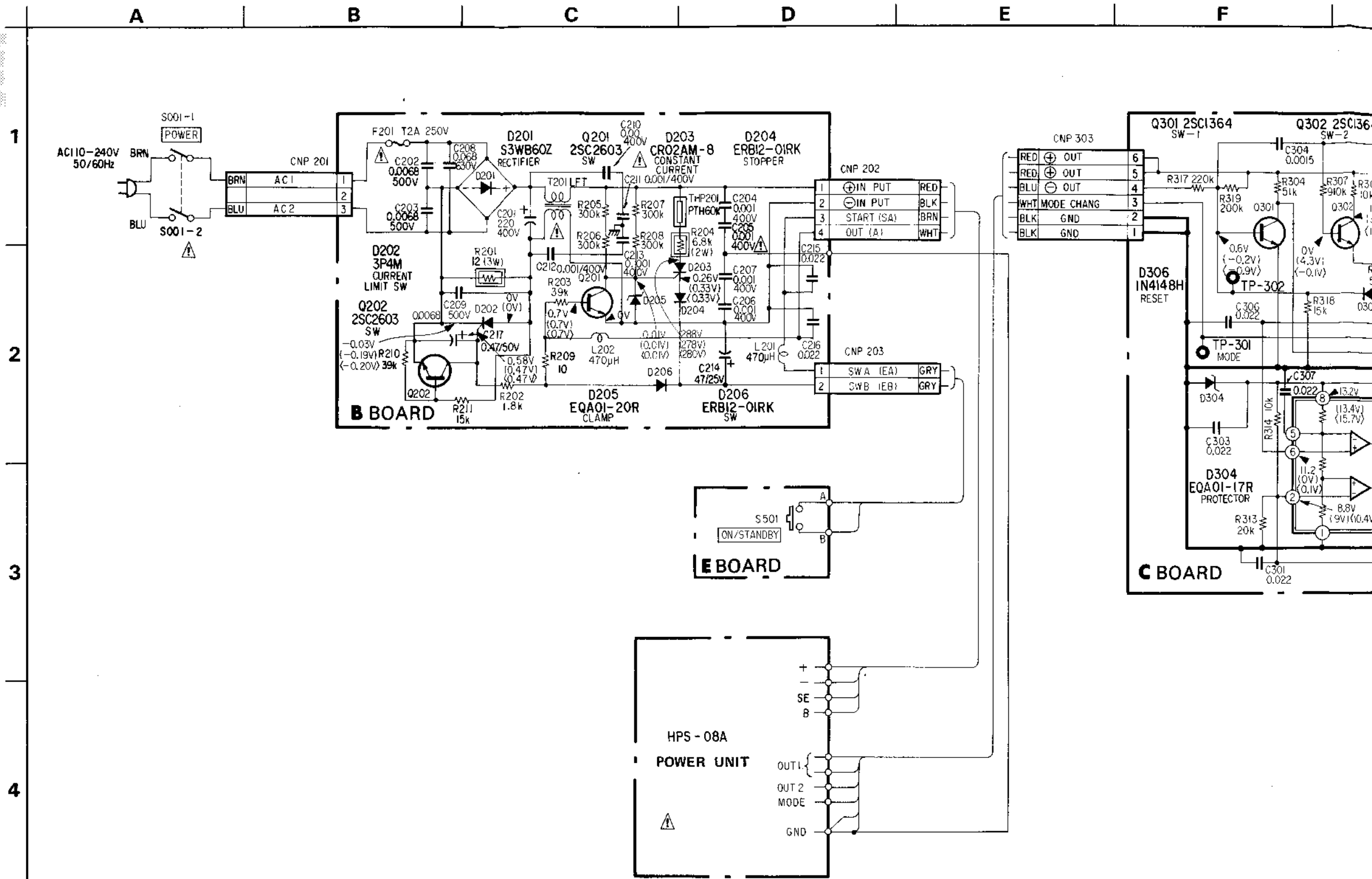
1
2
3
4
5

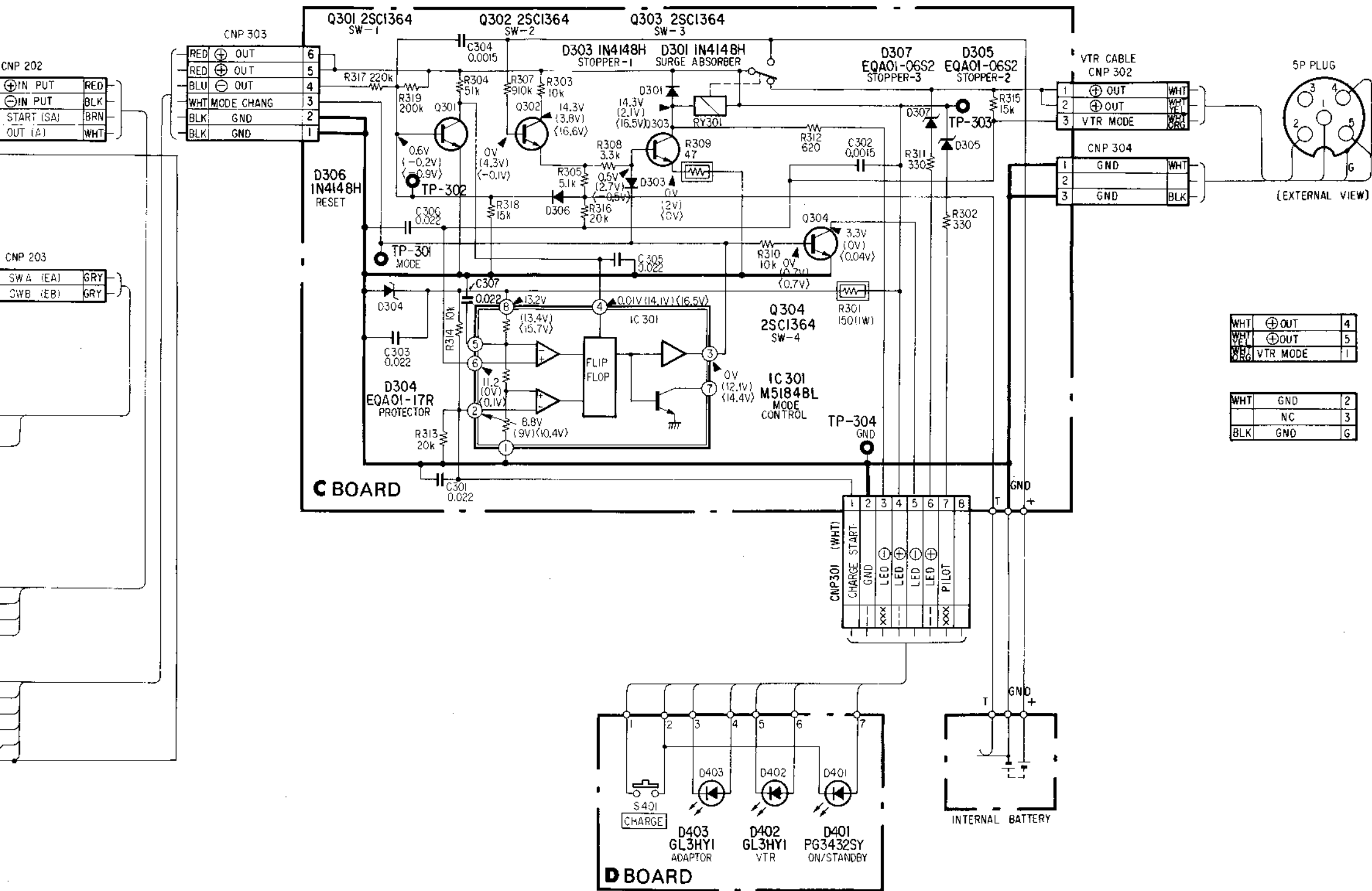
3-2. SCHEMATIC DIAGRAM

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

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. k Ω : 1000 Ω ; M Ω : 1000k Ω
-  : nonflammable resistor.
-  : internal component.
-  : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 1M-ohm-per-volt DMT.
- Voltage measured in non-charging mode.
- (V): Value measured when AC adapter battery is being charged.
- B+ : B+ bus.
- < V > : Value measured when VTR battery is being charged.





WHT	⊕ OUT	4
WHT	⊕ OUT	5
WHT	VTR MODE	1

WHT	GND	2
	NC	3
BLK	GND	6

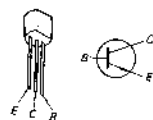
SECTION 4 EXPLODED VIEWS

3-3. SEMICONDUCTORS

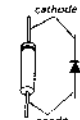
M51848L



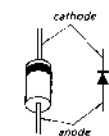
2SC945
2SC1815
2SC2603
JC501



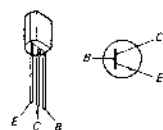
1N4148H
1S1555
1S2076
1S2473



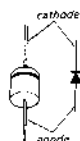
ERB12-01RK
ERB12-04RK



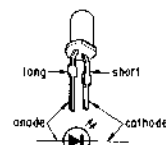
2SC1363
2SC1364



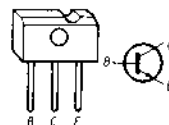
1SS133



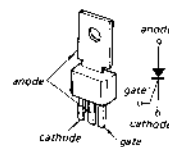
GL3HY1
GL3HY5



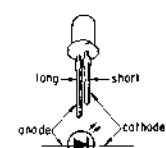
2SC2021



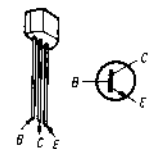
3P4M



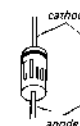
PG3432SY



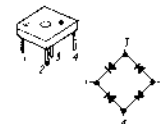
2SC2458



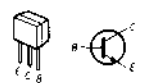
EQA01-06S2
EQA01-17R
EQA01-20R
EQB01-20



S3WB60Z
S3WB60ZS



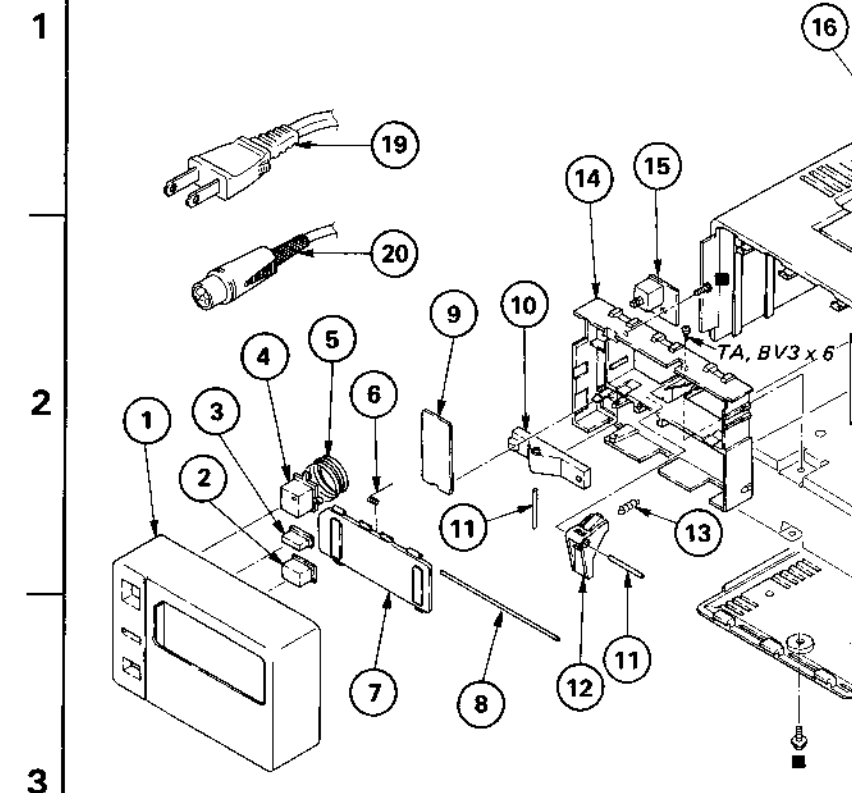
2SC2785



A B

(1) CABINET

■ : TA, BV3 x 8



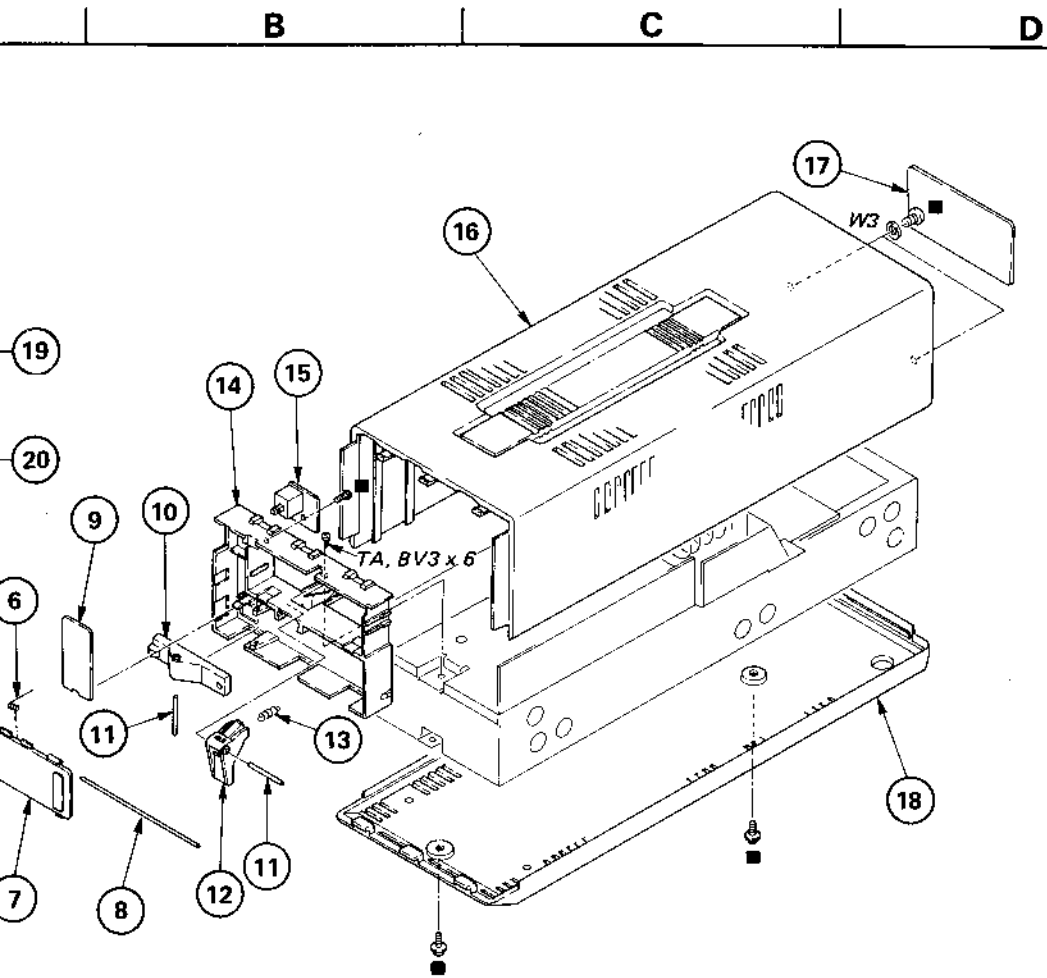
No.	Part No	Description	Remark	No.	Part No
1	X-2360-501-0	PANEL ASSY, FRONT		11	◆:2-291-
2	2-291-503-00	BUTTON (C)		12	◆:2-291-
3	2-291-502-00	BUTTON (B)		13	2-291-
4	X-2291-502-0	BUTTON (A) ASSY		14	◆:2-291-
5	2-291-509-00	SPRING, COMPRESSION		15	◆:1-606-
6	3-669-592-00	SPRING (A), TORSION		16	X-2291-
7	3-669-517-41	LID, BATTERY CASE		17	◆:2-360-
8	◆:3-669-521-00	SHAFT (B)		18	X-2360-
9	◆:1-606-259-00	D BOARD		19	◆:1-534-
10	◆:2-291-523-00	LEVER (A)		20	1-556-

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- As to the part numbered with E the electrical parts list.
- Items marked "◆" are not stocked they are seldom required for service. Some delay should be when ordering these items.

SECTION 4 EXPLODED VIEWS



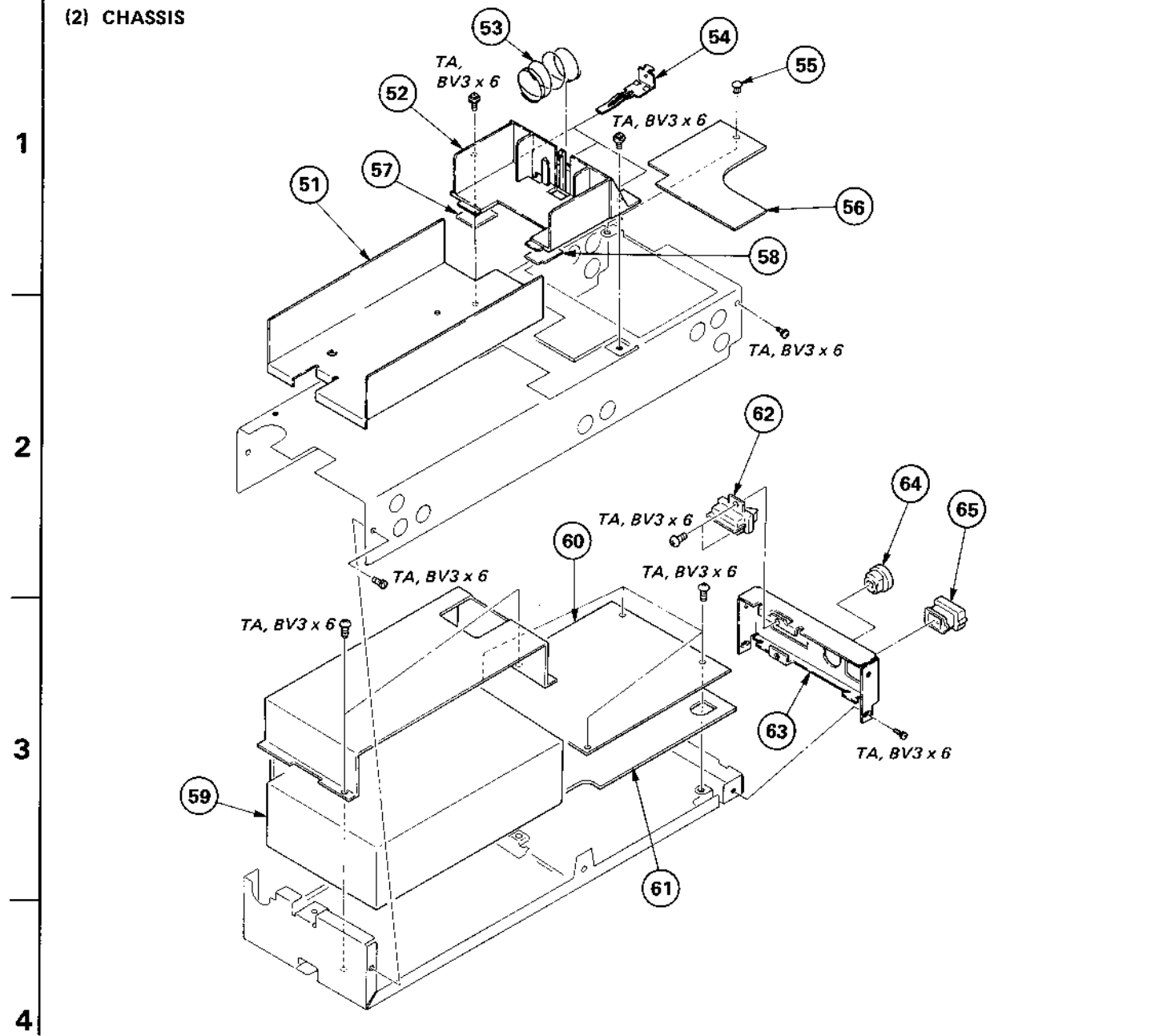
Remark	No.	Part No	Description	Remark
	11	▲:2-291-505-00	SHAFT (A)	
	12	▲:2-291-507-00	LEVER (A), LOCK	
	13	2-291-510-00	SPRING, TENSION	
	14	▲:2-291-527-00	PANEL, SUB	
	15	▲:1-606-260-00	E BOARD	
	16	X-2291-504-0	PANEL ASSY, UPPER	
	17	▲:2-360-522-00	LABEL, MODEL NUMBER	
	18	X-2360-502-0	PANEL ASSY, LOWER	
	19	▲:1-534-817-XX	CORD, POWER	
	20	1-556-156-00	CORD (WITH PLUG) 5P	

on
Y, FRONT
ASSY
MPRESSION
, TORSION
ERY CASE

As to the part numbered with E-, refer to the electrical parts list.
Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

(2) CHASSIS



No.	Part No	Description	Remark	No.	Part No	Description	Remark
51	▲:2-291-513-00	GUIDE, BATTERY		59	▲A-6704-072-A	POWER UNIT BLOCK ASSY (HPS-08A)	
52	▲:2-291-529-00	HOLDER, BATTERY		60	▲:1-606-257-00	B BOARD	
53	3-669-594-00	SPRING, COMPRESSION		61	▲:2-360-502-00	INSULATOR (A)	
54	3-669-526-00	TERMINAL		62	▲:1-554-021-00	SWITCH, SEESAW (AC POWER)	
55	4-812-134-11	RIVET NYLON, 3.5		63	2-360-512-00	PANEL, REAR	
56	▲:1-606-258-00	C BOARD		64	2-234-904-00	BUSH, CORD	
57	▲:2-360-503-00	INSULATOR (B)		65	▲:3-703-244-00	BUSHING, CORD	
58	▲:2-360-504-00	INSULATOR (C)					

NOTE:

Items with no part number and no description are not stocked because they are seldom required for routine service.
The construction parts of an assembled part are indicated with a collation number in the remark column.

As to the part numbered with E-, refer to the electrical parts list.
Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

SECTION 5 ELECTRICAL PARTS LIST



Ref.No	Part No	Description	Remark	Ref.No	Part No	Description	Remark
*:1-606-258-00 C BOARD *****				R318 1-246-501-00 CARBON 15K 5% 1/4W R319 1-246-528-00 CARBON 200K 5% 1/4W			
<u>CAPACITOR</u>				<u>RELAY</u>			
C301	1-101-005-00	CERAMIC 0.022MF	50V	RY301	1-515-459-00	RELAY	
C302	1-102-119-00	CERAMIC 0.0015MF	10% 50V	<u>POST PIN</u>			
C303	1-101-005-00	CERAMIC 0.022MF	50V	TP301	1-536-354-00	POST PIN	
C304	1-102-119-00	CERAMIC 0.0015MF	10% 50V	TP302	1-536-354-00	POST PIN	
C305	1-101-005-00	CERAMIC 0.022MF	50V	TP303	1-536-354-00	POST PIN	
C306	1-101-005-00	CERAMIC 0.022MF	50V	TP304	1-536-354-00	POST PIN	
C307	1-101-005-00	CERAMIC 0.022MF	50V	*****			
<u>PLUG</u>				*:1-606-257-00 B BOARD *****			
CNP301	1-508-846-00	PIN, CONNECTOR 8P		*:1-533-087-00 HOLDER, FUSE			
CNP302	1-508-742-00	PIN, CONNECTOR 3P		<u>CAPACITOR</u>			
CNP303	1-508-845-00	PIN, CONNECTOR 6P		C201	1-125-285-00	ELECT(BLOCK) 220MF	20% 400V
CNP304	1-508-742-00	PIN, CONNECTOR 3P		C202	1-102-267-00	CERAMIC 0.0008MF	500V
<u>DIODE</u>				D301	=>8-719-901-33	DIODE ISS133	
D303	=>8-719-901-33	DIODE ISS133		C203	1-102-267-00	CERAMIC 0.0008MF	500V
D304	8-719-936-17	DIODE EQA01-17R		C204	1-161-741-00	CERAMIC 0.0008MF	10% 400V
D305	=>8-719-931-06	DIODE EQB01-06		C205	1-161-741-00	CERAMIC 0.001MF	10% 400V
D306	=>8-719-901-33	DIODE ISS133		C206	1-161-741-00	CERAMIC 0.001MF	10% 400V
D307	=>8-719-931-06	DIODE EQB01-06		C207	1-161-741-00	CERAMIC 0.001MF	10% 400V
<u>IC</u>				C208	1-130-819-00	FILM 0.0008MF	10% 630V
IC301	8-759-618-48	IC M51848L		C209	1-102-267-00	CERAMIC 0.0068MF	500V
<u>TRANSISTOR</u>				C210	1-161-741-00	CERAMIC 0.001MF	10% 400V
Q301	=>8-729-178-54	TRANSISTOR 2SC2785		C211	1-161-741-00	CERAMIC 0.001MF	10% 400V
Q302	=>8-729-178-54	TRANSISTOR 2SC2785		C212	1-161-741-00	CERAMIC 0.001MF	10% 400V
Q303	=>8-729-178-54	TRANSISTOR 2SC2785		C213	1-161-741-00	CERAMIC 0.001MF	10% 400V
Q304	=>8-729-178-54	TRANSISTOR 2SC2785		C214	1-123-332-00	ELECT 47MF	20% 25V
<u>RESISTOR</u>				C215	1-101-005-00	CERAMIC 0.022MF	50V
R301	1-213-133-00	METAL 150 5%	1W F	C216	1-101-005-00	CERAMIC 0.022MF	50V
R302	1-246-461-00	CARBON 330 5%	1/4W	C217	1-123-379-00	ELECT 0.47MF	20% 50V
R303	1-246-497-00	CARBON 10K 5%	1/4W	<u>PLUG</u>			
R304	1-246-514-00	CARBON 51K 5%	1/4W	CNP201	1-508-765-00	3P PLUG (M)	
R305	1-246-490-00	CARBON 5.1K 5%	1/4W	CNP202	1-508-766-00	4P PLUG (M)	
R307	1-246-544-00	CARBON 910K 5%	1/4W	CNP203	1-508-786-00	2P PLUG (M)	
R308	1-246-485-00	CARBON 3.3K 5%	1/4W	<u>DIODE</u>			
R309	1-202-858-00	COMPOSITION 47	1/4W F	D201	8-719-503-06	DIODE 5WB50Z	
R310	1-246-497-00	CARBON 10K 5%	1/4W	D202	8-719-193-04	DIODE 3P4M	
R311	1-246-461-00	CARBON 330 5%	1/4W	D203	8-719-000-28	THYRISTOR CR02AM-8	
R312	1-246-468-00	CARBON 620 5%	1/4W	D204	=>8-719-920-04	DIODE ERB12-04RK	
R313	1-246-504-00	CARBON 20K 5%	1/4W	D205	=>8-719-931-20	DIODE EQB01-20	
R314	1-246-497-00	CARBON 10K 5%	1/4W	D206	=>8-719-920-04	DIODE ERB12-04RK	
R315	1-246-501-00	CARBON 15K 5%	1/4W	<u>FUSE</u>			
R316	1-246-504-00	CARBON 20K 5%	1/4W	F201	1-532-203-00	FUSE TIME-LAG 12A 250V	
R317	1-246-529-00	CARBON 220K 5%	1/4W				

NOTE:

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

* =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

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

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
 * MF : μF, PF : μμF

RESISTORS
 * All resistors are in ohms
 * F : nonflammable

COILS
 * MMH : mH, UH : μH

B E D

Ref.No	Part No	Description	Remark
<u>COIL</u>			
L201	1-407-177-XX	MICRO INDUCTOR 470UH	
L202	1-407-177-XX	MICRO INDUCTOR 470UH	
<u>TRANSISTOR</u>			
Q201	=>8-729-178-54	TRANSISTOR 2SC2785	
Q202	=>8-729-178-54	TRANSISTOR 2SC2785	
<u>RESISTOR</u>			
R201	1-217-262-00	WIREWOUND	12 10% 3W F
R202	1-246-479-00	CARBON	1.8K 5% 1/4W
R203	1-246-511-00	CARBON	39K 5% 1/4W
R204	1-206-684-00	METAL	6.8K 5% 2W F
R205	1-246-532-00	CARBON	300K 5% 1/4W
R206	1-246-532-00	CARBON	300K 5% 1/4W
R207	1-246-532-00	CARBON	300K 5% 1/4W
R208	1-246-532-00	CARBON	300K 5% 1/4W
R209	1-246-425-00	CARBON	10 5% 1/4W
R210	1-246-511-00	CARBON	39K 5% 1/4W
R211	1-246-501-00	CARBON	15K 5% 1/4W
<u>TRANSFORMER</u>			
T201	A 1-421-526-00	COIL, CHOKE (FILTER, LINE)	
<u>THERMISTOR</u>			
THP201	1-806-371-00	POSISTOR PTH60K01BF30IM300	

	♣: 1-606-260-00	E BOARD	*****
<u>SWITCH</u>			
S501	1-553-926-00	SWITCH, PUSH	

	♣: 1-606-259-00	D BOARD	*****
<u>DIODE</u>			
D401	8-719-914-33	DIODE PG3432SY	
D402	8-719-930-51	DIODE GL-3HY1	
D403	8-719-930-51	DIODE GL-3HY1	
<u>SWITCH</u>			
S401	1-553-766-00	SWITCH, KEY BOARD	

NOTE:

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

• =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

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

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μ F, PF : μ μ F

RESISTORS
• All resistors are in ohms
• F : nonflammable

COILS
• MMH : mH, UH : μ H

Ref.No	Part No	Description	Remark
<u>MISCELLANEOUS</u> *****			
	A 1-534-817-XX	CORD, POWER	
S001	A 1-554-021-00	SWITCH, SEESAW (AC POWER)	

ACCESSORIES AND PACKING MATERIALS

Part.No	Description	Remark
2-291-535-00	BAG, PROTECTION	
2-291-536-00	CUSHION	
2-360-517-00	INDIVIDUAL CARTON	
3-701-623-00	BAG, POLYETHYLENE	
3-701-629-00	BAG, POLYETHYLENE	
3-783-891-41	MANUAL, INSTRUCTION	

STANDARD PARTS LIST

ELECTROLYTIC CAPACITORS

CAP. (μF)	RATING → : Use the high voltage rated one.						
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.	63 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47						→	→
1.0						→	→
2.2						→	→
3.3						→	→
4.7						→	→
10			→	→	→	1-123-356-00	1-123-370-00
22			→	1-123-330-00	→	1-123-357-00	1-123-371-00
33	→		1-123-318-00	→	1-123-343-00	→	1-123-372-00
47	→	1-123-306-00	→	1-123-332-00	→	1-123-359-00	1-123-373-00
100	→	1-123-307-00	→	1-123-333-00	1-123-345-00	1-123-360-00	1-123-374-00
220	→	1-123-308-00	1-123-321-00	1-123-334-00	1-123-346-00	1-123-361-00	1-123-375-00
330	→	1-123-309-00	1-123-322-00	1-123-335-00	1-123-347-00	1-123-362-00	1-123-376-00
470	1-123-298-00	1-123-310-00	1-123-323-00	1-123-336-00	1-123-348-00	1-123-363-00	1-123-377-00
1000	1-123-299-00	1-123-311-00	1-123-324-00	1-123-337-00	1-123-349-00	1-123-364-00	1-123-378-00
2200	1-123-300-00	→	1-123-325-00	1-123-338-00	1-123-350-00		
3300	1-123-301-00	1-123-313-00	1-123-326-00	1-123-339-00			
4700	1-123-302-00	1-123-314-00	1-123-327-00				
6800	1-123-303-00	1-123-315-00					
10000	1-123-304-00						

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	1-123-379-00			
1.0	1-123-380-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-381-00	1-123-026-00	1-123-027-00	1-123-028-00
3.3	1-123-382-00	1-121-707-00	1-123-004-00	1-123-006-00
4.7	1-123-383-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-123-384-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-123-385-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-123-386-00	1-121-757-00		
47	1-123-387-00	1-121-919-00		
100	1-123-388-00			
220	1-123-389-00			
330	1-123-390-00			
470	1-123-391-00			

CERAMIC CAPACITORS

CAP. (pF)	RATING						
	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

MYLAR CAPACITORS

0.001μF = 1,000pF

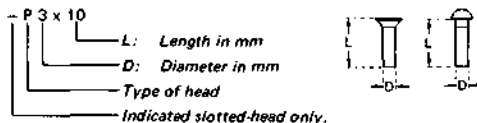
CAP. (μF)	RATING										
	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.
	PART No.	PART No.	PART No.		PART No.	PART No.	PART No.		PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00		
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00		
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00		
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00		
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				

1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.		
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

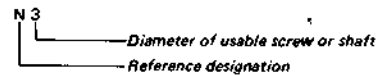
Screw:



Indicated slotted-head only.

Unless otherwise indicated, it means cross-recessed head (Phillips type).

Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation

TV and Consumer Video Group

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