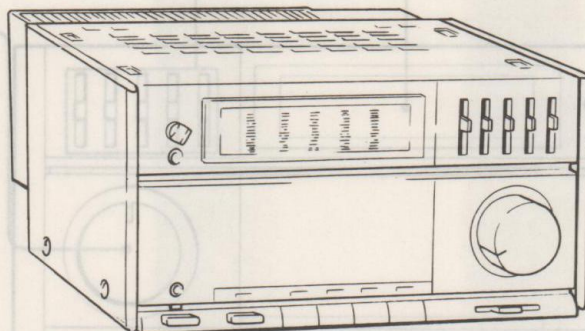


TA-808M

SERVICE MANUAL

AEP Model



- TA-808M is the INTEGRATED STEREO AMPLIFIER in MHC-3000.

SPECIFICATIONS

Continuous RMS power output
45 + 45 W
(6 ohms, at 1 kHz, 5% THD)

Inputs

Input jacks	Jack type	Sensitivity	Impedance
PHONO	Phono	2.5 mV	50 kohms
CD/AUX	Phono	450 mV	50 kohms
MIC	Stereo mini	1 mV	600 ohms

Outputs

HEADPHONES (stereo phone jack)	Accepts headphones of 8 ohms or more
SPEAKER	Accepts speakers of 6 to 16 ohms

General

Power requirements
220 V AC, 50 Hz

Power consumption
110 W

Dimensions
Approx. 245 × 120 × 285 mm (w/h/d)
(9³/₄ × 4³/₄ × 11¹/₄ inches)
incl. projecting parts and controls

Weight
Approx. 4.5 kg (10 lb) net

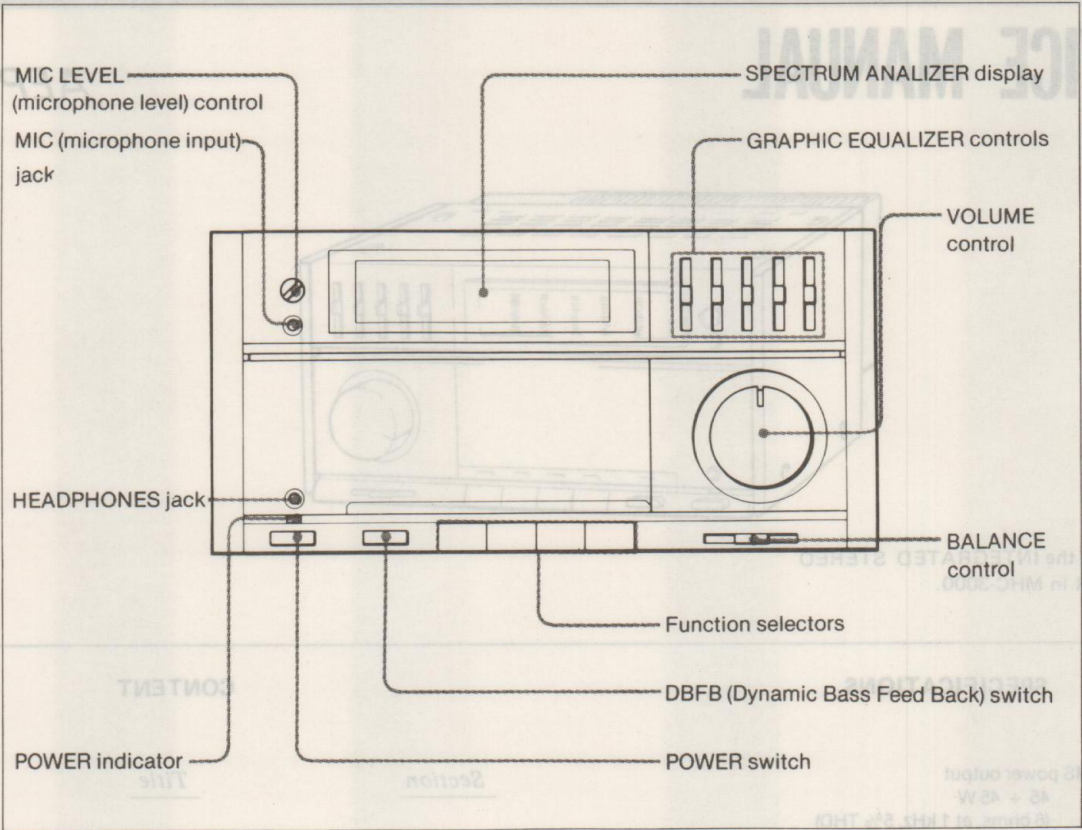
CONTENT

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INTEGRATED STEREO AMPLIFIER
SONY®

LOCATION AND FUNCTION OF CONTROLS



—MODEL IDENTIFICATION—
(Specification Label)

SONY[®]

MODEL NO. TA-808M

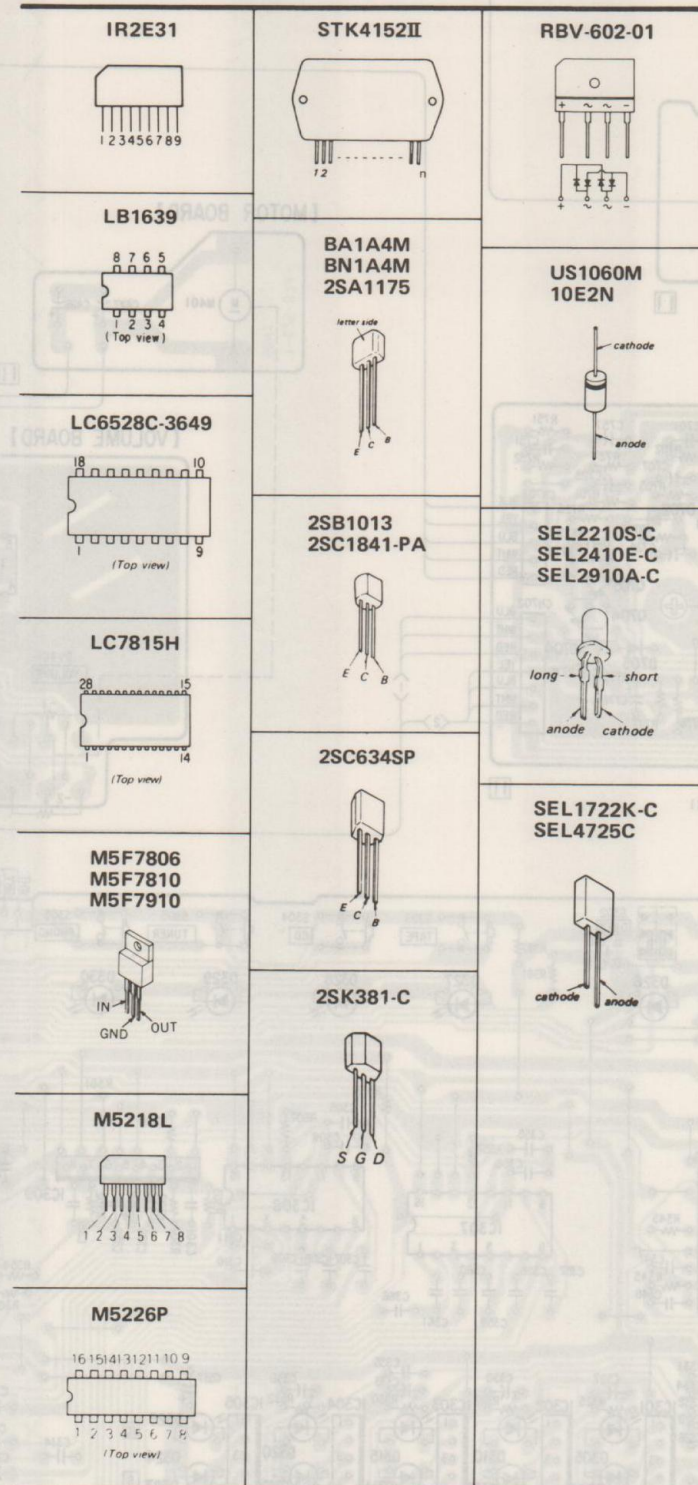
INTEGRATED STEREO AMLIFIER

SAFETY-RELATED COMPONENT WARNING!!

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

SECTION 1 DIAGRAMS

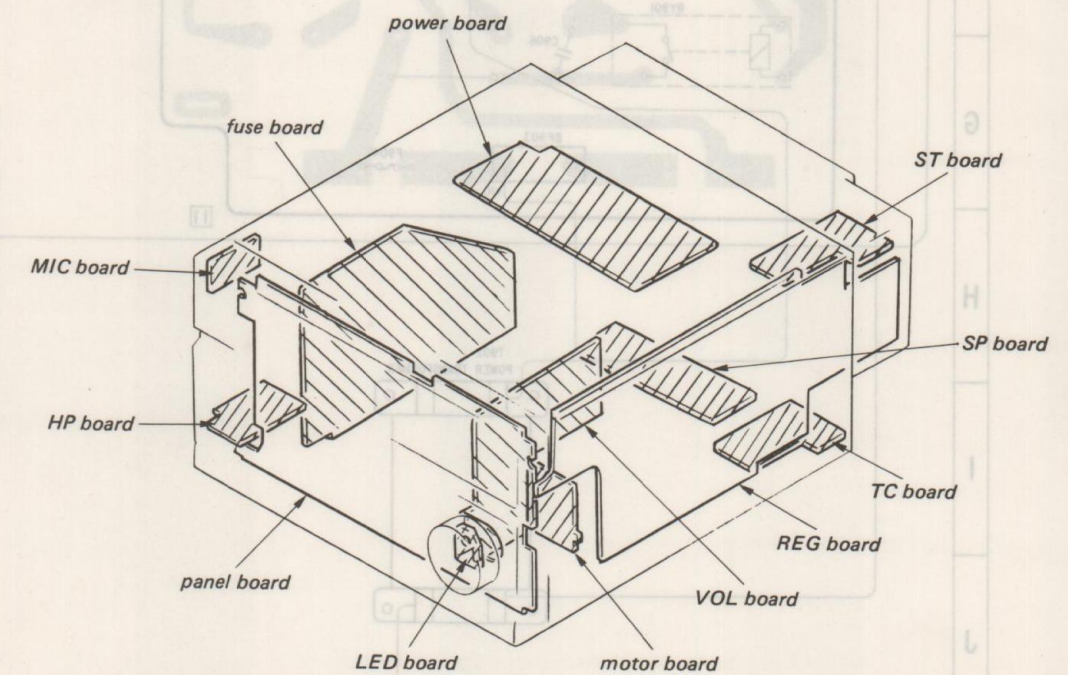
1-1. SEMICONDUCTOR LEAD LAYOUTS



• SEMICONDUCTOR LOCATIONS

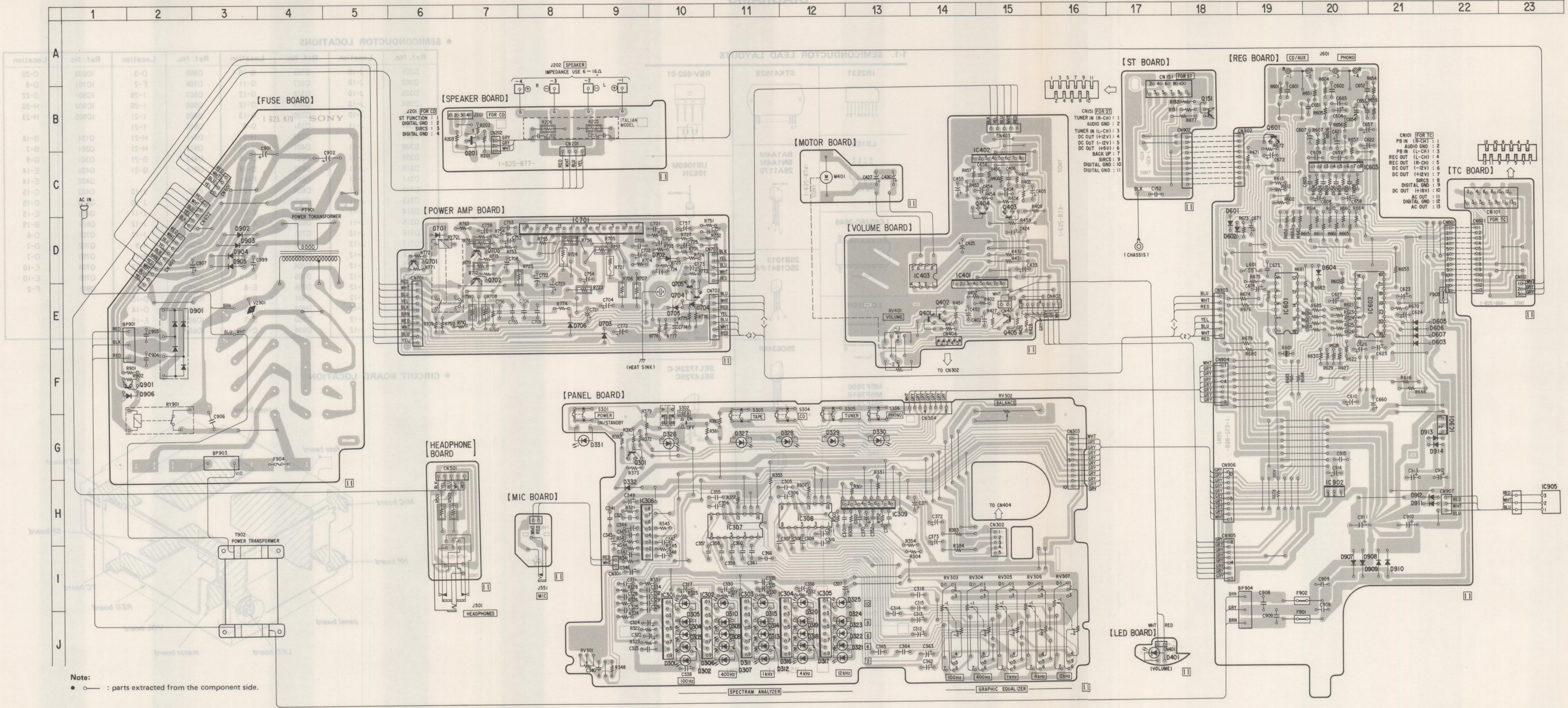
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	J-10	D326	G-10	D905	D-3	IC603	C-20
D302	J-10	D327	G-11	D906	F-2	IC701	D-8
D303	J-10	D328	G-12	D907	I-20	IC901	G-22
D304	J-10	D329	G-12	D908	I-20	IC902	H-20
D305	J-10	D330	G-13	D909	I-21	IC905	H-23
D306	J-11	D331	G-8	D910	I-21		
D307	J-11	D332	H-9	D911	H-21	Q151	B-18
D308	J-11	D401	J-17	D912	H-21	Q201	B-7
D309	J-11	D601	D-18	D913	G-21	Q301	G-9
D310	J-11	D602	D-18	D914	G-21	Q401	E-14
D311	J-11	D603	F-21			Q402	E-14
D312	J-11	D604	D-20	IC301	J-10	Q403	C-15
D313	J-11	D605	E-21	IC302	J-10	Q404	C-15
D314	J-11	D606	E-21	IC303	J-11	Q405	E-15
D315	J-11	D607	E-21	IC304	J-12	Q601	B-19
D316	J-12	D701	D-6	IC305	J-12	Q701	D-6
D317	J-12	D702	D-10	IC306	H-9	Q702	D-7
D318	J-12	D703	E-9	IC307	H-11	Q703	D-7
D319	J-12	D704	E-10	IC308	H-12	Q704	E-10
D320	J-12	D705	E-10	IC309	H-13	Q705	E-10
D321	J-12	D706	E-8	IC401	E-15	Q901	F-2
D322	J-12	D901	E-2	IC402	C-15		
D323	J-12	D902	D-3	IC403	D-14		
D324	J-12	D903	D-3	IC601	E-19		
D325	J-12	D904	D-3	IC602	E-21		

• CIRCUIT BOARD LOCATION



1-2. PRINTED WIRING BOARDS

- See page 4 for semiconductor lead layouts.
- See page 5 for semiconductor locations.



1

1



SECTION 2 EXPLODED VIEWS

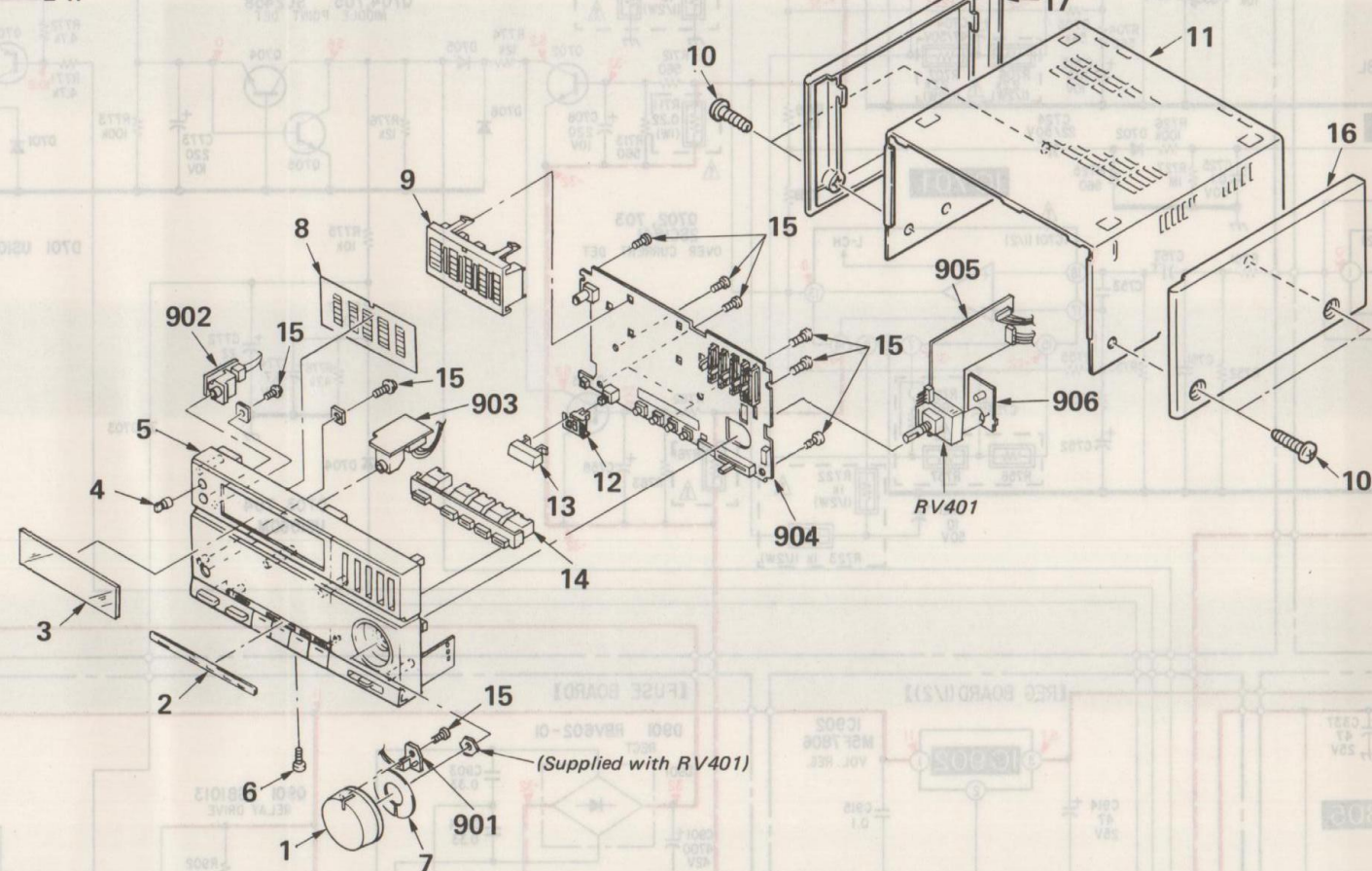
NOTE:

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

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

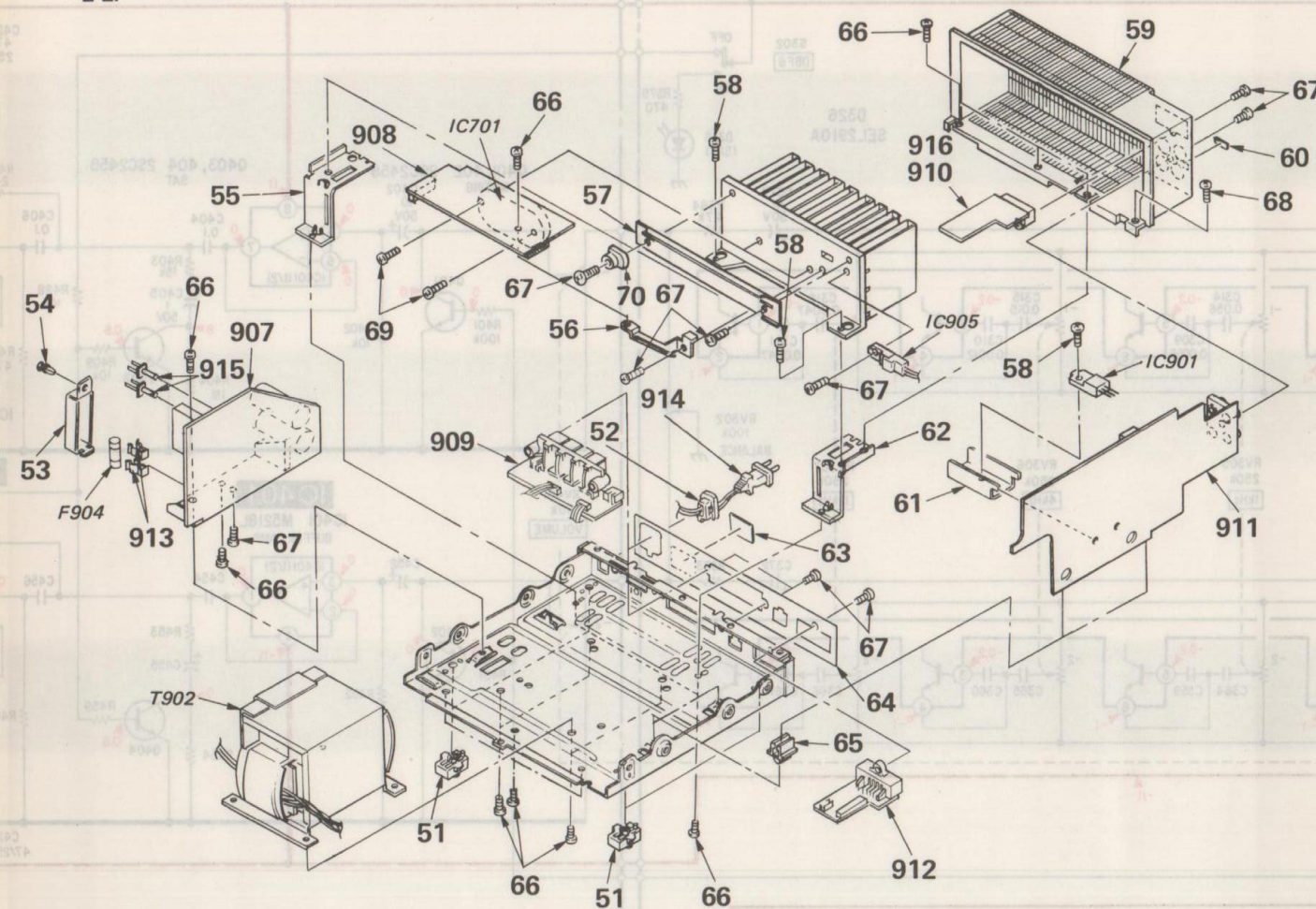
2-1.



No.	Part No.	Description	Remarks
1	4-922-790-01	KNOB (VOLUME)	
2	4-920-880-01	PLATE (F), INDICATION	
3	4-922-758-01	PLATE (S.A), ORNAMENTAL	
4	4-920-877-02	KNOB (VOL)(MIC LEVEL)	
5	X-4919-671-1	PANEL ASSY	
6	7-685-870-01	SCREW +BVTT 3X5 (S)	
7	4-925-554-01	SPACER	
8	4-922-757-01	PLATE (S.A), INDICATION	
9	*4-920-881-01	HOUSE (S.A), LIGHTING	
10	4-886-821-51	SCREW, CASE, (M3X14)	
11	4-920-118-01	CASE	
12	*4-920-879-01	JOINT (D)	

No.	Part No.	Description	Remarks
13	4-914-388-31	BUTTON (DBFB)	
14	*4-920-882-01	HOUSE (F), LIGHTING	
15	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
16	4-925-524-01	PLATE (B-R), SIDE	
17	4-925-525-01	PLATE (B-L), SIDE	
901	*1-625-875-11	PC BOARD, LED	
902	*1-625-872-11	PC BOARD, MIC	
903	*1-625-878-11	PC BOARD, HP	
904	*A-4375-352-A	MOUNTED PCB, PANEL	
905	*1-625-873-11	PC BOARD, VOL	
906	*1-625-874-11	PC BOARD, MOTOR	
RV401	1-238-061-11	RES, VAR CARBON 50K/50K (VOLUME)	

2-2.



No.	Part No.	Description	Remarks
51	X-4902-937-1	FOOT ASSY, RUBBER	
52	*3-703-244-00	BUSHING (2104), CORD	
53	*4-922-787-01	COVER (INSULATING)	
54	3-531-576-01	RIVET	
55	*4-914-393-01	BRACKET (LEFT), HEAT SINK	
56	*4-910-064-01	BRACKET (H), PC BOARD	
57	4-920-112-01	PLATE, BLOCK	
58	7-682-548-04	SCREW +BVTT 3X8 (S)	
59	*4-920-116-11	PLATE, JACK	
60	*4-920-876-01	LABEL (PHONO)	
61	*4-880-403-11	HEAT SINK	
62	*4-914-394-01	BRACKET (RIGHT), HEAT SINK	

No.	Part No.	Description	Remarks
63	*4-922-727-01	(AE1).....LABEL, MODEL NUMBER	
64	*4-922-727-11	(AE2).....LABEL, MODEL NUMBER	
65	*4-922-729-01	(Italian).....LABEL, MODEL NUMBER	
66	*4-920-885-01	COVER, REAR	
67	*3-642-310-00	HOLDER, CIRCUIT BOARD	
68	7-682-147-01	SCREW +BVTT 3X6 (S)	
69	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	

No.	Part No.	Description	Remarks
68	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
69	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
70	*4-925-538-01	BUSHING	
907	*1-625-879-11	PC BOARD, FUSE	
908	*A-4388-707-A	(Italian).....MOUNTED PCB, POWER	
909	*A-4388-730-A	(AEP).....MOUNTED PCB, POWER	
910	*1-625-877-11	PC BOARD, SP	
911	*A-4394-447-A	(AEP).....MOUNTED PCB, REG	
912	*A-4394-462-A	(Italian).....MOUNTED PCB, REG	
913	*1-625-869-11	PC BOARD, TC	
914	*1-533-183-11	HOLDER, FUSE	
915	*1-535-476-11	CORD, POWER	
916	*1-625-870-11	PC BOARD, ST	

No.	Part No.	Description	Remarks
912	*1-625-869-11	PC BOARD, TC	
913	*1-533-183-11	HOLDER, FUSE	
914	*1-535-476-11	CORD, POWER	
915	*1-535-476-11	CORD, POWER	
916	*1-625-870-11	PC BOARD, ST	
F904	*1-532-285-00	FUSE, TIME-LAG	
IC701	Δ.8-749-941-52	IC STK4152II	
IC901	8-759-604-50	IC MSF7910	
IC905	8-759-604-32	IC MSF7810	
T902	*1-449-193-11	TRANSFORMER, POWER	

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

SECTION 3 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

Ref.No.	Part No.	Description
901	*1-625-875-11	PC BOARD, LED
902	*1-625-872-11	PC BOARD, MIC
903	*1-625-878-11	PC BOARD, HP
904	*A-4375-352-A	MOUNTED PCB, PANEL
905	*1-625-873-11	PC BOARD, VOL
906	*1-625-874-11	PC BOARD, MOTOR
907	*1-625-879-11	PC BOARD, FUSE
908	*A-4388-707-A	(Italian).....MOUNTED PCB, POWER
909	*A-4388-730-A	(AEP).....MOUNTED PCB, POWER
910	*1-625-877-11	PC BOARD, SP
911	*A-4394-447-A	(AEP).....MOUNTED PCB, REG
912	*A-4394-462-A	(Italian).....MOUNTED PCB, REG
913	*1-625-869-11	PC BOARD, TC
914	*1-533-183-11	HOLDER, FUSE
915	*1-535-476-11	CORD, POWER
916	*1-625-870-11	PC BOARD, ST

BP901	*1-535-116-00	TERMINAL
BP903	1-535-139-00	BASE POST 22mm 2P
BP904	*1-508-830-12	H TYPE BASE POST

C152	1-101-005-00	CERAMIC 0.022MF
C201	1-136-165-91	(Italian)....FILM 0.1MF 5%
C202	1-136-165-91	(Italian)....FILM 0.1MF 5%

C301	1-162-282-31	CERAMIC 100PF 10%
C302	1-162-282-31	CERAMIC 100PF 10%
C305	1-162-282-31	CERAMIC 100PF 10%

C306	1-162-215-31	CERAMIC 47PF 5%
C307	1-136-163-00	FILM 0.068MF 5%
C308	1-136-156-00	FILM 0.018MF 5%

C309	1-130-480-00	MYLAR 0.0056MF 5%
C310	1-130-472-00	MYLAR 0.0012MF 5%
C311	1-130-467-00	MYLAR 470PF 5%

C312	1-124-902-00	ELECT 0.47MF 20%
C313	1-124-463-00	ELECT 0.1MF 20%
C314	1-136-162-00	FILM 0.056MF 5%

C315	1-136-155-00	FILM 0.015MF 5%
C316	1-130-479-00	MYLAR 0.0047MF 5%
C321	1-162-215-31	CERAMIC 47PF 5%

C322	1-124-463-00	ELECT 0.1MF 20%
C323	1-161-494-00	CERAMIC 0.022MF 25V
C324	1-124-927-11	ELECT 4.7MF 20%

C325	1-161-494-00	CERAMIC 0.022MF 25V
C326	1-161-377-00	CERAMIC 0.0047MF 30%
C327	1-124-927-11	ELECT 4.7MF 20%

CAPACITORS:
MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

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

Ref.No.	Part No.	Description
C328	1-161-379-00	CERAMIC 0.01MF 30%
C329	1-161-375-00	CERAMIC 0.0022MF 30%
C330	1-124-927-11	ELECT 4.7MF 20%
C331	1-161-375-00	CERAMIC 0.0022MF 30%
C332	1-162-290-31	CERAMIC 470PF 10%
C333	1-124-927-11	ELECT 4.7MF 20%
C334	1-162-294-31	CERAMIC 0.001MF 10%
C335	1-162-286-31	CERAMIC 220PF 10%
C336	1-124-927-11	ELECT 4.7MF 20%
C337	1-124-477-11	ELECT 47MF 20%
C338	1-124-477-11	ELECT 47MF 20%
C340	1-161-379-00	CERAMIC 0.01MF 30%
C341	1-161-379-00	CERAMIC 0.01MF 30%
C342	1-162-294-31	CERAMIC 0.001MF 10%
C343	1-124-463-00	ELECT 0.1MF 20%
C344	1-124-477-11	ELECT 47MF 20%
C345	1-162-294-31	CERAMIC 0.001MF 10%
C346	1-124-902-00	ELECT 0.47MF 20%

C347	1-162-288-31	CERAMIC 330PF 10%
C348	1-161-379-00	CERAMIC 0.01MF 30%
C349	1-124-477-11	ELECT 47MF 20%
C351	1-162-282-31	CERAMIC 100PF 10%
C352	1-162-282-31	CERAMIC 100PF 10%
C355	1-162-282-31	CERAMIC 100PF 10%

C356	1-162-215-31	CERAMIC 47PF 5%
C357	1-136-163-00	FILM 0.068MF 5%
C358	1-136-156-00	FILM 0.018MF 5%

C359	1-130-480-00	MYLAR 0.0056MF 5%
C360	1-130-472-00	MYLAR 0.0012MF 5%
C361	1-130-467-00	MYLAR 470PF 5%

C362	1-124-902-00	ELECT 0.47MF 20%
C363	1-124-463-00	ELECT 0.1MF 20%
C364	1-136-162-00	FILM 0.056MF 5%

C365	1-136-155-00	FILM 0.015MF 5%
C366	1-130-479-00	MYLAR 0.0047MF 5%
C370	1-124-477-11	ELECT 47MF 20%

C371	1-124-477-11	ELECT 47MF 20%
C372	1-123-875-11	ELECT 10MF 20%
C373	1-123-875-11	ELECT 10MF 20%

C402	1-123-875-11	ELECT 10MF 20%
C404	1-136-165-00	FILM 0.1MF 5%
C405	1-124-499-11	ELECT 1MF 20%

C406	1-136-165-00	FILM 0.1MF 5%
C423	1-124-477-11	ELECT 47MF 20%
C424	1-124-477-11	ELECT 47MF 20%

Ref.No.	Part No.	Description
C425	1-124-443-00	ELECT 100MF 20%
C426	1-124-443-00	ELECT 100MF 20%
C427	1-124-443-00	ELECT 100MF 20%

C452	1-123-875-11	ELECT 10MF 20%
C454	1-136-165-00	FILM 0.1MF 5%
C455	1-124-499-11	ELECT 1MF 20%

C456	1-136-165-00	FILM 0.1MF 5%
C601	1-162-282-31	CERAMIC 100PF 10%
C602	1-162-282-31	CERAMIC 100PF 10%

C603	1-162-288-31	CERAMIC 330PF 10%
C604	1-123-875-11	ELECT 10MF 20%
C605	1-130-473-00	(AEP).....MYLAR 0.0015MF 5%
C605	1-130-485-00	(Italian)....MYLAR 0.015MF 5%

C606	1-130-480-00	MYLAR 0.0056MF 5%
C607	1-124-925-11	ELECT 2.2MF 20%
C608	1-123-875-11	ELECT 10MF 20%

C609	1-162-286-31	CERAMIC 220PF 10%
C610	1-124-499-11	ELECT 1MF 20%
C621	1-124-477-11	ELECT 47MF 20%

C622	1-124-477-11	ELECT 47MF 20%
C623	1-124-477-11	ELECT 47MF 20%
C624	1-124-925-11	ELECT 2.2MF 20%

C625	1-124-477-11	ELECT 47MF 20%
C626	1-124-499-11	ELECT 1MF 20%
C627	1-124-902-00	ELECT 0.47MF 20%

C651	1-162-282-31	CERAMIC 100PF 10%
C652	1-162-282-31	CERAMIC 100PF 10%
C653	1-162-288-31	CERAMIC 330PF 10%
C654	1-123-875-11	ELECT 10MF 20%

C655	1-130-473-00	(AEP).....MYLAR 0.0015MF 5%
C655	1-130-485-00	(Italian)....MYLAR 0.015MF 5%
C656	1-130-480-00	MYLAR 0.0056MF 5%
C657	1-124-925-11	ELECT 2.2MF 20%
C658	1-123-875-11	ELECT 10MF 20%

C659	1-162-286-31	CERAMIC 220PF 10%
C660	1-124-499-11	ELECT 1MF 20%
C671	1-124-499-11	ELECT 1MF 20%

C672	1-123-875-11	ELECT 10MF 20%
C673	1-161-379-00	CERAMIC 0.01MF 30%
C674	1-123-875-11	ELECT 10MF 20%

C659	1-162-286-31	CERAMIC	220PF	10%	50V
C660	1-124-499-11	ELECT	1MF	20%	50V
C671	1-124-499-11	ELECT	1MF	20%	50V

Ref.No.	Part No.	Description
D322	8-719-310-63	DIODE SEL4725C
D323	8-719-310-63	DIODE SEL4725C
D324	8-719-310-63	DIODE SEL4725C
D325	8-719-310-63	DIODE SEL4725C
D326	8-719-310-60	DIODE SEL2910A-C
D327	8-719-310-81	DIODE SEL1722K-C
D328	8-719-310-81	DIODE SEL1722K-C
D329	8-719-310-81	DIODE SEL1722K-C
D330	8-719-310-81	DIODE SEL1722K-C
D331	8-719-301-38	DIODE SEL2210S-C
D332	8-719-000-26	DIODE US1060M
D401	8-719-301-43	DIODE SEL2410E-C
D601	8-719-000-26	DIODE US1060M
D602	8-719-000-26	DIODE US1060M
D603	8-719-000-26	DIODE US1060M
D604	8-719-000-26	DIODE US1060M
D605	8-719-000-26	DIODE US1060M
D606	8-719-000-26	DIODE US1060M
D607	8-719-000-26	DIODE US1060M
D701	8-719-000-26	DIODE US1060M
D702	8-719-000-26	DIODE US1060M
D703	8-719-000-26	DIODE US1060M
D704	8-719-000-26	DIODE US1060M
D705	8-719-000-26	DIODE US1060M
D706	8-719-000-26	DIODE US1060M
D901	8-719-302-38	DIODE RBV-602-01
D902	8-719-200-77	DIODE 10E2N
D903	8-719-200-77	DIODE 10E2N
D904	8-719-200-77	DIODE 10E2N
D905	8-719-200-77	DIODE 10E2N
D906	8-719-000-26	DIODE US1060M
D907	8-719-200-77	DIODE 10E2N
D908	8-719-200-77	DIODE 10E2N
D909	8-719-200-77	DIODE 10E2N
D910	8-719-200-77	DIODE 10E2N
D911	8-719-000-26	DIODE US1060M
D912	8-719-000-26	DIODE US1060M
D913	8-719-000-26	DIODE US1060M
D914	8-719-000-26	DIODE US1060M
F901	1-532-846-21	LINK, IC
F902	1-532-846-21	LINK, IC
F903	1-532-841-21	LINK, IC
F904	1-532-285-00	FUSE, TIME-LAG
IC301	8-759-913-80	IC IR2E31
IC302	8-759-913-80	IC IR2E31
IC303	8-759-913-80	IC IR2E31
IC304	8-759-913-80	IC IR2E31
IC305	8-759-913-80	IC IR2E31
IC306	8-759-600-02	IC M5218L
IC307	8-759-602-04	IC M5226P
IC308	8-759-602-04	IC M5226P
IC309	8-759-600-02	IC M5218L
IC401	8-759-600-02	IC M5218L
IC402	8-759-600-02	IC M5218L
IC403	8-759-820-62	IC LB1639
IC601	8-759-820-50	IC LC6528C-3649
IC602	8-759-800-33	IC LC7815H
IC603	8-759-600-02	IC M5218L

Ref.No.	Part No.	Description
IC701	8-749-941-52	IC STK4152II
IC901	8-759-604-50	IC M5F7910
IC902	8-759-604-84	IC M5F7806
IC905	8-759-604-32	IC M5F7810
J201	1-564-980-11	PIN, CONNECTOR 4P
J202	1-536-705-00	TERMINAL BOARD (SP)
J501	1-562-837-11	JACK (HEADPHONES)
J551	1-562-981-21	JACK (MIC)
J601	1-507-908-11	JACK, PIN 4P
L601	1-410-564-21	INDUCTOR 100UH
PT901	1-449-194-11	TRANSFORMER, POWER
Q151	8-729-115-15	TRANSISTOR BN1A4M
Q201	8-729-600-94	TRANSISTOR 2SK381-C
Q301	8-729-117-54	TRANSISTOR 2SA1175
Q401	8-729-600-27	TRANSISTOR 2SC634SP
Q402	8-729-600-27	TRANSISTOR 2SC634SP
Q403	8-729-600-27	TRANSISTOR 2SC634SP
Q404	8-729-600-27	TRANSISTOR 2SC634SP
Q405	8-729-115-79	TRANSISTOR BA1A4M
Q601	8-729-600-27	TRANSISTOR 2SC634SP
Q701	8-729-801-83	TRANSISTOR 2SB1013
Q702	8-729-108-05	TRANSISTOR 2SC1841-PA
Q703	8-729-108-05	TRANSISTOR 2SC1841-PA
Q704	8-729-600-27	TRANSISTOR 2SC634SP
Q705	8-729-600-27	TRANSISTOR 2SC634SP
Q901	8-729-801-83	TRANSISTOR 2SB1013
R151	1-249-425-11	CARBON 4.7K 5% 1/4W
R152	1-249-429-11	CARBON 10K 5% 1/4W
R201	1-249-429-11	CARBON 10K 5% 1/4W
R202	1-249-433-11	CARBON 22K 5% 1/4W
R203	1-249-417-11	CARBON 1K 5% 1/4W
R205	1-247-727-81	(Italian)...CARBON 10 5% 1/2W F
R206	1-247-727-81	(Italian)...CARBON 10 5% 1/2W F
R301	1-249-427-11	CARBON 6.8K 5% 1/4W
R302	1-249-435-11	CARBON 33K 5% 1/4W
R303	1-249-425-11	CARBON 4.7K 5% 1/4W
R304	1-249-426-11	CARBON 5.6K 5% 1/4W
R307	1-249-438-11	CARBON 56K 5% 1/4W
R321	1-249-430-11	CARBON 12K 5% 1/4W
R322	1-249-430-11	CARBON 12K 5% 1/4W
R323	1-249-441-11	CARBON 100K 5% 1/4W
R324	1-249-431-11	CARBON 15K 5% 1/4W
R325	1-247-881-00	CARBON 120K 5% 1/4W
R326	1-249-430-11	CARBON 12K 5% 1/4W
R327	1-249-441-11	CARBON 100K 5% 1/4W
R328	1-249-431-11	CARBON 15K 5% 1/4W
R330	1-247-881-00	CARBON 120K 5% 1/4W
R331	1-249-429-11	CARBON 10K 5% 1/4W
R332	1-249-441-11	CARBON 100K 5% 1/4W
R341	1-249-429-11	CARBON 10K 5% 1/4W
R342	1-249-418-11	CARBON 1.2K 5% 1/4W
R343	1-249-429-11	CARBON 10K 5% 1/4W
R344	1-249-399-11	CARBON 33 5% 1/4W
R345	1-249-423-11	CARBON 3.3K 5% 1/4W
R348	1-249-429-11	CARBON 10K 5% 1/4W
R351	1-249-427-11	CARBON 6.8K 5% 1/4W

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				
R352	1-249-435-11	CARBON	33K	5%	1/4W	
R353	1-249-425-11	CARBON	4.7K	5%	1/4W	
R354	1-249-426-11	CARBON	5.6K	5%	1/4W	
R357	1-249-438-11	CARBON	56K	5%	1/4W	
R372	1-249-428-11	CARBON	8.2K	5%	1/4W	
R373	1-249-426-11	CARBON	5.6K	5%	1/4W	
R379	1-249-413-11	CARBON	470	5%	1/4W	
R380	1-249-414-11	CARBON	560	5%	1/4W	
R381	1-249-413-11	CARBON	470	5%	1/4W	
R383	1-249-425-11	CARBON	4.7K	5%	1/4W	
R384	1-249-425-11	CARBON	4.7K	5%	1/4W	
R390	1-249-429-11	CARBON	10K	5%	1/4W	
R392	1-249-412-11	CARBON	390	5%	1/4W	
R401	1-249-441-11	CARBON	100K	5%	1/4W	
R402	1-249-429-11	CARBON	10K	5%	1/4W	
R403	1-249-431-11	CARBON	15K	5%	1/4W	
R404	1-247-903-00	CARBON	1M	5%	1/4W	
R406	1-247-895-00	CARBON	470K	5%	1/4W	
R407	1-249-421-11	CARBON	2.2K	5%	1/4W	
R409	1-249-429-11	CARBON	10K	5%	1/4W	
R426	1-249-417-11	CARBON	1K	5%	1/4W	
R427	1-249-415-11	CARBON	680	5%	1/4W	
R428	1-249-429-11	CARBON	10K	5%	1/4W	
R431	1-249-405-11	CARBON	100	5%	1/4W	
R432	1-249-405-11	CARBON	100	5%	1/4W	
R451	1-249-441-11	CARBON	100K	5%	1/4W	
R452	1-249-429-11	CARBON	10K	5%	1/4W	
R453	1-249-431-11	CARBON	15K	5%	1/4W	
R454	1-247-903-00	CARBON	1M	5%	1/4W	
R456	1-247-895-00	CARBON	470K	5%	1/4W	
R457	1-249-421-11	CARBON	2.2K	5%	1/4W	
R459	1-249-429-11	CARBON	10K	5%	1/4W	
R501	△.1-247-750-81	CARBON	680	5%	1/2W F	
R502	△.1-247-750-81	CARBON	680	5%	1/2W F	
R601	1-249-418-11	CARBON	1.2K	5%	1/4W	
R602	1-247-891-00	CARBON	330K	5%	1/4W	
R603	1-249-432-11	CARBON	18K	5%	1/4W	
R604	1-249-418-11	CARBON	1.2K	5%	1/4W	
R605	1-249-418-11	CARBON	1.2K	5%	1/4W	
R606	1-249-438-11	CARBON	56K	5%	1/4W	
R607	1-249-418-11	CARBON	1.2K	5%	1/4W	
R608	1-249-437-11	CARBON	47K	5%	1/4W	
R609	1-215-487-00	CARBON	560K	5%	1/4W	
R610	1-247-891-00	CARBON	330K	5%	1/4W	
R611	1-249-423-11	CARBON	3.3K	5%	1/4W	
R612	1-247-891-00	CARBON	330K	5%	1/4W	
R613	1-249-417-11	CARBON	1K	5%	1/4W	
R614	1-247-891-00	CARBON	330K	5%	1/4W	
R615	1-249-429-11	CARBON	10K	5%	1/4W	
R616	1-249-425-11	CARBON	4.7K	5%	1/4W	
R621	1-249-421-11	CARBON	2.2K	5%	1/4W	
R622	1-247-887-00	CARBON	220K	5%	1/4W	
R623	1-249-429-11	CARBON	10K	5%	1/4W	
R624	1-249-429-11	CARBON	10K	5%	1/4W	

Ref.No.	Part No.	Description				
R625	1-249-429-11	CARBON	10K	5%	1/4W	
R626	1-249-429-11	CARBON	10K	5%	1/4W	
R627	1-249-433-11	CARBON	22K	5%	1/4W	
R628	1-249-433-11	CARBON	22K	5%	1/4W	
R629	1-249-433-11	CARBON	22K	5%	1/4W	
R630	1-249-433-11	CARBON	22K	5%	1/4W	
R651	1-249-418-11	CARBON	1.2K	5%	1/4W	
R652	1-247-891-00	CARBON	330K	5%	1/4W	
R653	1-249-432-11	CARBON	18K	5%	1/4W	
R654	1-249-418-11	CARBON	1.2K	5%	1/4W	
R655	1-249-418-11	CARBON	1.2K	5%	1/4W	
R656	1-249-438-11	CARBON	56K	5%	1/4W	
R657	1-249-418-11	CARBON	1.2K	5%	1/4W	
R658	1-249-437-11	CARBON	47K	5%	1/4W	
R659	1-215-487-00	CARBON	560K	5%	1/4W	
R660	1-247-891-00	CARBON	330K	5%	1/4W	
R661	1-249-423-11	CARBON	3.3K	5%	1/4W	
R662	1-247-891-00	CARBON	330K	5%	1/4W	
R663	1-249-417-11	CARBON	1K	5%	1/4W	
R664	1-247-891-00	CARBON	330K	5%	1/4W	
R665	1-249-429-11	CARBON	10K	5%	1/4W	
R666	1-249-425-11	CARBON	4.7K	5%	1/4W	
R670	1-249-428-11	CARBON	8.2K	5%	1/4W	
R671	1-249-426-11	CARBON	5.6K	5%	1/4W	
R672	1-249-419-11	CARBON	1.5K	5%	1/4W	
R673	1-249-429-11	CARBON	10K	5%	1/4W	
R674	1-249-417-11	CARBON	1K	5%	1/4W	
R675	1-249-441-11	CARBON	100K	5%	1/4W	
R676	1-249-417-11	CARBON	1K	5%	1/4W	
R677	1-249-417-11	CARBON	1K	5%	1/4W	
R678	1-249-418-11	CARBON	1.2K	5%	1/4W	
R679	1-249-417-11	CARBON	1K	5%	1/4W	
R680	1-249-417-11	CARBON	1K	5%	1/4W	
R681	1-249-425-11	CARBON	4.7K	5%	1/4W	
R682	1-249-425-11	CARBON	4.7K	5%	1/4W	
R683	1-249-406-11	CARBON	120	5%	1/4W	
R684	1-249-406-11	CARBON	120	5%	1/4W	
R685	1-249-423-11	CARBON	3.3K	5%	1/4W	
R686	1-249-423-11	CARBON	3.3K	5%	1/4W	
R687	1-249-423-11	CARBON	3.3K	5%	1/4W	
R688	1-249-423-11	CARBON	3.3K	5%	1/4W	
R701	1-249-425-11	CARBON	4.7K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R703	1-249-438-11	CARBON	56K	5%	1/4W	
R704	1-249-414-11	CARBON	560	5%	1/4W	
R705	1-249-438-11	CARBON	56K	5%	1/4W	
R706	△.1-247-756-11	CARBON	2.2K	5%	1/2W F	
R707	△.1-247-756-11	CARBON	2.2K	5%	1/2W F	
R708	△.1-247-727-81	CARBON	10	5%	1/2W F	
R709	1-249-429-11	CARBON	10K	5%	1/4W	
R710	1-247-881-00	CARBON	120K	5%	1/4W	
R711	△.1-217-151-00	RES, METAL PLATE 0.22				F
R712	1-249-414-11	CARBON	560	5%	1/4W	
R713	1-249-414-11	CARBON	560	5%	1/4W	

Ref.No.	Part No.	Description				
R721	△.1-212-881-11	FUSIBLE	100	5%	1/4W F	
R722	△.1-247-752-11	CARBON	1K	5%	1/2W F	
R723	△.1-247-752-11	CARBON	1K	5%	1/2W F	
R724	△.1-212-881-11	FUSIBLE	100	5%	1/4W F	
R725	1-249-414-11	CARBON	560	5%	1/4W	
R726	1-249-441-11	CARBON	100K	5%	1/4W	
R727	1-247-903-00	CARBON	1M	5%	1/4W	
R751	1-249-425-11	CARBON	4.7K	5%	1/4W	
R752	1-249-429-11	CARBON	10K	5%	1/4W	
R753	1-249-438-11	CARBON	56K	5%	1/4W	
R754	1-249-414-11	CARBON	560	5%	1/4W	
R755	1-249-438-11	CARBON	56K	5%	1/4W	
R756	△.1-247-756-11	CARBON	2.2K	5%	1/2W F	
R757	△.1-247-756-11	CARBON	2.2K	5%	1/2W F	
R758	△.1-247-727-81	CARBON	10	5%	1/2W F	
R759	1-249-429-11	CARBON	10K	5%	1/4W	
R760	1-247-881-00	CARBON	120K	5%	1/4W	
R761	△.1-217-151-00	RES, METAL PLATE 0.22				F
R762	1-249-414-11	CARBON	560	5%	1/4W	
R763	1-249-414-11	CARBON	560	5%	1/4W	
R771	1-249-425-11	CARBON	4.7K	5%	1/4W	
R772	1-249-425-11	CARBON	4.7K	5%	1/4W	
R773	1-249-441-11	CARBON	100K	5%	1/4W	
R774	1-249-430-11	CARBON	12K	5%	1/4W	
R775	1-249-429-11	CARBON	10K	5%	1/4W	
R776	1-249-430-11	CARBON	12K	5%	1/4W	
R777	1-249-429-11	CARBON	10K	5%	1/4W	
R778	1-249-425-11	CARBON	4.7K	5%	1/4W	
R901	1-249-425-11	CARBON	4.7K	5%	1/4W	
R902	1-249-425-11	CARBON	4.7K	5%	1/4W	
RV301	1-238-069-11	RES, VAR, CARBON 50K (MIC LEVEL)				
RV302	1-238-064-11	RES, VAR, SLIDE 100K (BALANCE)				
RV303	1-238-065-11	RES, VAR, SLIDE 250K/250K (100Hz)				
RV304	1-238-065-11	RES, VAR, SLIDE 250K/250K (400Hz)				
RV305	1-238-065-11	RES, VAR, SLIDE 250K/250K (1kHz)				
RV306	1-238-065-11	RES, VAR, SLIDE 250K/250K (4kHz)				
RV307	1-238-065-11	RES, VAR, SLIDE 250K/250K (12kHz)				
RV401	1-238-061-11	RES, VAR CARBON 50K/50K (VOLUME)				
RY701	1-515-616-11	RELAY				
RY901	1-515-516-00	RELAY				

Ref.No.	Part No.	Description
S301	1-554-303-21	SWITCH, KEY BOARD (POWER)
S302	1-554-419-00	SWITCH, PUSH (1 KEY)(DBFB)
S303	1-571-436-11	SWITCH, KEYBOARD (TAPE)
S304	1-571-436-11	SWITCH, KEYBOARD (CD)
S305	1-571-436-11	SWITCH, KEYBOARD (TUNER)
S306	1-571-436-11	SWITCH, KEYBOARD (PHONO)
T902	△.1-449-193-11	TRANSFORMER, POWER
VZ901	△.1-807-180-31	VARISTOR SNR-14A471U
X601	1-567-819-11	VIBRATOR, CERAMIC

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Ref. No.	Part No.	Description
2301	1-524-303-51	SWITCH, KEY BOARD (POWER)
2302	1-524-419-00	SWITCH, PUSH (1 KEY) (08F8)
2303	1-521-438-11	SWITCH, KEYBOARD (TAP)
2304	1-521-438-11	SWITCH, KEYBOARD (CD)
2305	1-521-438-11	SWITCH, KEYBOARD (TUNER)
2306	1-521-438-11	SWITCH, KEYBOARD (PHONE)
2903	1-442-193-11	TRANSFORMER, POWER
Y1901	1-807-180-31	VARIABLE SH-14A110
X601	1-557-819-11	VIBRATOR, CERAMIC

Note: The component identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description
R751	1-515-881-11	FUSIBLE
R752	1-543-752-11	CARBON
R753	1-543-752-11	CARBON
R754	1-515-881-11	FUSIBLE
R755	1-543-414-11	CARBON
R756	1-543-441-11	CARBON
R757	1-543-803-00	CARBON
R758	1-543-432-11	CARBON
R759	1-543-432-11	CARBON
R760	1-543-432-11	CARBON
R761	1-543-432-11	CARBON
R762	1-543-432-11	CARBON
R763	1-543-432-11	CARBON
R764	1-543-432-11	CARBON
R765	1-543-432-11	CARBON
R766	1-543-432-11	CARBON
R767	1-543-432-11	CARBON
R768	1-543-432-11	CARBON
R769	1-543-432-11	CARBON
R770	1-543-432-11	CARBON
R771	1-543-432-11	CARBON
R772	1-543-432-11	CARBON
R773	1-543-432-11	CARBON
R774	1-543-432-11	CARBON
R775	1-543-432-11	CARBON
R776	1-543-432-11	CARBON
R777	1-543-432-11	CARBON
R778	1-543-432-11	CARBON
R801	1-543-432-11	CARBON
R802	1-543-432-11	CARBON
R803	1-543-432-11	CARBON
R804	1-543-432-11	CARBON
R805	1-543-432-11	CARBON
R806	1-543-432-11	CARBON
R807	1-543-432-11	CARBON
R808	1-543-432-11	CARBON
R809	1-543-432-11	CARBON
R810	1-543-432-11	CARBON
R811	1-543-432-11	CARBON
R812	1-543-432-11	CARBON
R813	1-543-432-11	CARBON
R814	1-543-432-11	CARBON
R815	1-543-432-11	CARBON
R816	1-543-432-11	CARBON
R817	1-543-432-11	CARBON
R818	1-543-432-11	CARBON
R819	1-543-432-11	CARBON
R820	1-543-432-11	CARBON
R821	1-543-432-11	CARBON
R822	1-543-432-11	CARBON
R823	1-543-432-11	CARBON
R824	1-543-432-11	CARBON
R825	1-543-432-11	CARBON
R826	1-543-432-11	CARBON
R827	1-543-432-11	CARBON
R828	1-543-432-11	CARBON
R829	1-543-432-11	CARBON
R830	1-543-432-11	CARBON
R831	1-543-432-11	CARBON
R832	1-543-432-11	CARBON
R833	1-543-432-11	CARBON
R834	1-543-432-11	CARBON
R835	1-543-432-11	CARBON
R836	1-543-432-11	CARBON
R837	1-543-432-11	CARBON
R838	1-543-432-11	CARBON
R839	1-543-432-11	CARBON
R840	1-543-432-11	CARBON
R841	1-543-432-11	CARBON
R842	1-543-432-11	CARBON
R843	1-543-432-11	CARBON
R844	1-543-432-11	CARBON
R845	1-543-432-11	CARBON
R846	1-543-432-11	CARBON
R847	1-543-432-11	CARBON
R848	1-543-432-11	CARBON
R849	1-543-432-11	CARBON
R850	1-543-432-11	CARBON
R851	1-543-432-11	CARBON
R852	1-543-432-11	CARBON
R853	1-543-432-11	CARBON
R854	1-543-432-11	CARBON
R855	1-543-432-11	CARBON
R856	1-543-432-11	CARBON
R857	1-543-432-11	CARBON
R858	1-543-432-11	CARBON
R859	1-543-432-11	CARBON
R860	1-543-432-11	CARBON
R861	1-543-432-11	CARBON
R862	1-543-432-11	CARBON
R863	1-543-432-11	CARBON
R864	1-543-432-11	CARBON
R865	1-543-432-11	CARBON
R866	1-543-432-11	CARBON
R867	1-543-432-11	CARBON
R868	1-543-432-11	CARBON
R869	1-543-432-11	CARBON
R870	1-543-432-11	CARBON
R871	1-543-432-11	CARBON
R872	1-543-432-11	CARBON
R873	1-543-432-11	CARBON
R874	1-543-432-11	CARBON
R875	1-543-432-11	CARBON
R876	1-543-432-11	CARBON
R877	1-543-432-11	CARBON
R878	1-543-432-11	CARBON
R879	1-543-432-11	CARBON
R880	1-543-432-11	CARBON
R881	1-543-432-11	CARBON
R882	1-543-432-11	CARBON
R883	1-543-432-11	CARBON
R884	1-543-432-11	CARBON
R885	1-543-432-11	CARBON
R886	1-543-432-11	CARBON
R887	1-543-432-11	CARBON
R888	1-543-432-11	CARBON
R889	1-543-432-11	CARBON
R890	1-543-432-11	CARBON
R891	1-543-432-11	CARBON
R892	1-543-432-11	CARBON
R893	1-543-432-11	CARBON
R894	1-543-432-11	CARBON
R895	1-543-432-11	CARBON
R896	1-543-432-11	CARBON
R897	1-543-432-11	CARBON
R898	1-543-432-11	CARBON
R899	1-543-432-11	CARBON
R900	1-543-432-11	CARBON
R901	1-543-432-11	CARBON
R902	1-543-432-11	CARBON
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R904	1-543-432-11	CARBON
R905	1-543-432-11	CARBON
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R912	1-543-432-11	CARBON
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R914	1-543-432-11	CARBON
R915	1-543-432-11	CARBON
R916	1-543-432-11	CARBON
R917	1-543-432-11	CARBON
R918	1-543-432-11	CARBON
R919	1-543-432-11	CARBON
R920	1-543-432-11	CARBON
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R931	1-543-432-11	CARBON
R932	1-543-432-11	CARBON
R933	1-543-432-11	CARBON
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R998	1-543-432-11	CARBON
R999	1-543-432-11	CARBON
R1000	1-543-432-11	CARBON