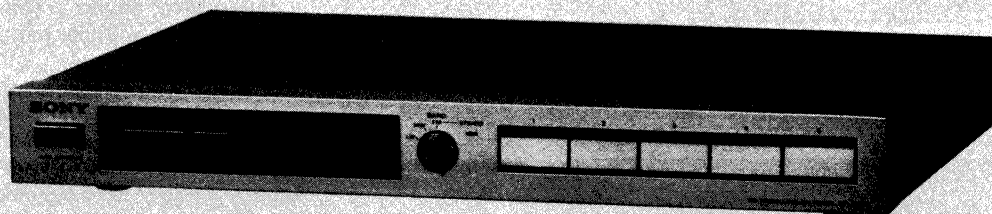


ST-JX35L

*UK Model
AEP Model*



FM STEREO/FM-AM TUNER

SPECIFICATIONS

FM tuner section

Tuning range 87.5 MHz – 108 MHz
Antenna terminals 300 ohms, balanced
75 ohms, unbalanced
West Germany only :
75 ohms, IEC connector
Intermediate frequency 10.7 MHz

Capture ratio 1.0 dB
AM suppression ratio 54 dB
Image response ratio 50 dB
IF response ratio 90 dB
Spurious response ratio 70 dB
RF intermodulation 60 dB (IHF)
Muting threshold approx. 25 dBf, 10 μ V
Output level/impedance at 75 kHz deviation 550 mV, 3.3 k ohms

— Continued on Page 2 —

	at 40 kHz deviation
Sensitivity	at 46 dB quieting 17.3 dBf, 4 μ V (mono) 38.3 dBf, 45 μ V (stereo)
Usable sensitivity	10.3 dBf, 1.8 μ V (IHF) 1.7 μ V (S/N = 26 dB)
Signal-to-noise ratio	76 dB (mono) 71 dB (stereo)
Harmonic distortion at 1 kHz	0.15% (mono) 0.3% (stereo)
IM distortion	0.15% (mono) 0.3% (stereo)
Separation at 1 kHz	45 dB
Frequency response	40 Hz – 12.5 kHz ± 0.5 dB 30 Hz – 15 kHz ± 0.5 dB –2.0
Selectivity	at 300 kHz 70 dB

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND 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.



SONY

SERVICE MANUAL

ST-JX35L

MW/LW tuner section

		MW	LW
Tuning range		522 kHz – 1,602 kHz	153 kHz – 344 kHz
Antenna	ferrite-bar antenna	provided	provided
	external antenna terminal	provided	provided
Intermediate frequency		450 kHz	450 kHz
Usable sensitivity	ferrite-bar antenna	200 μ V/m (at 999 kHz)	500 μ V/m (at 230 kHz)
	external antenna	30 μ V (at 999 kHz)	50 μ V (at 230 kHz)
Signal-to-noise ratio		54 dB	54 dB
Harmonic distortion		0.3%	0.3%
Selectivity		35 dB (9 kHz)	35 dB (9 kHz)

General System

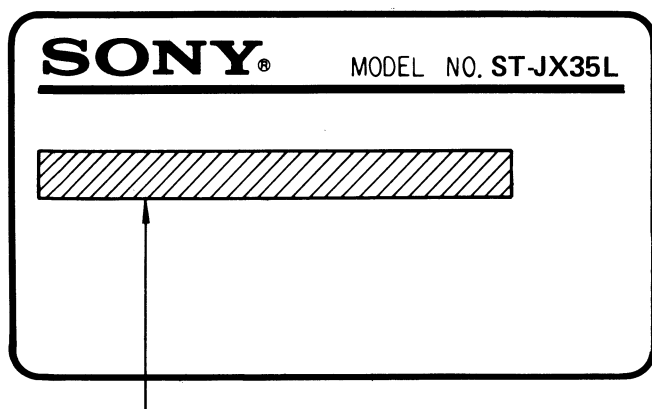
	PLL quartz-locked digital synthesizer system
	FM stereo, FM/AM superheterodyne tuner
Power requirements	AEP model: 220 V ac (or 240 V ac adjustable by authorized Sony personnel), 50/60 Hz
	UK model: 240 V ac (or 220 V ac adjustable by authorized Sony personnel), 50 Hz
	Memory back-up power: 3 V dc, two batteries, IEC designation R6 (size AA)
	Battery life: approx. 1 year with Sony SUM-3(NS) New Super batteries
Power consumption	8 watts
Dimensions	Approx. 430 × 55 × 298 mm (w/h/d)
	(17 × 2 ¹ / ₄ × 11 ³ / ₄ inches)
Weight	including projecting parts and controls
	Approx. 2.9 kg (6 lbs 7 oz) net
	Approx. 3.3 kg (7 lbs 5 oz) in shipping carton

FEATURES

The Sony ST-JX35L FM stereo/FM-AM tuner provides accurate and easy tuning with digital synthesizer system in a remarkably compact cabinet.

- The quartz-locked frequency-synthesizer system allows accurate and stable tuning that is not affected by temperature variations or long period usage.
- Each station preset button allows you to memorize 3 stations: one station for each band, and to select these memorized stations with the touch of a button.

- In the manual tuning mode, quick and accurate station selection is possible with an electronic digital readout on the frequency display window.
- The back-lighted LCD (liquid crystal display) window clearly shows the frequency received, band, tuning, muting, memory-standby and the selected station preset button number.
- The memory back-up batteries retain the memory contents when the power is turned off.
- An FM muting circuit is incorporated to eliminate any interstation noise.

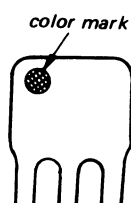


AEP, G-AEP model : 220V 50/60Hz 8W
 For G-AEP model, FM 75 Ω input terminal is coaxial type.
 UK model : 240V 50/60Hz 8W

• IF OFFSET ADJUSTMENT (FM IF)

Diode Installations Depending on the Ceramic Filters (CF201 – 203)

This set employs three ceramic filters (CF201 – 203) which should have the same colour marking to identify their center frequency. Therefore FM IF offset adjustment by diodes (D604 – 605) installation is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



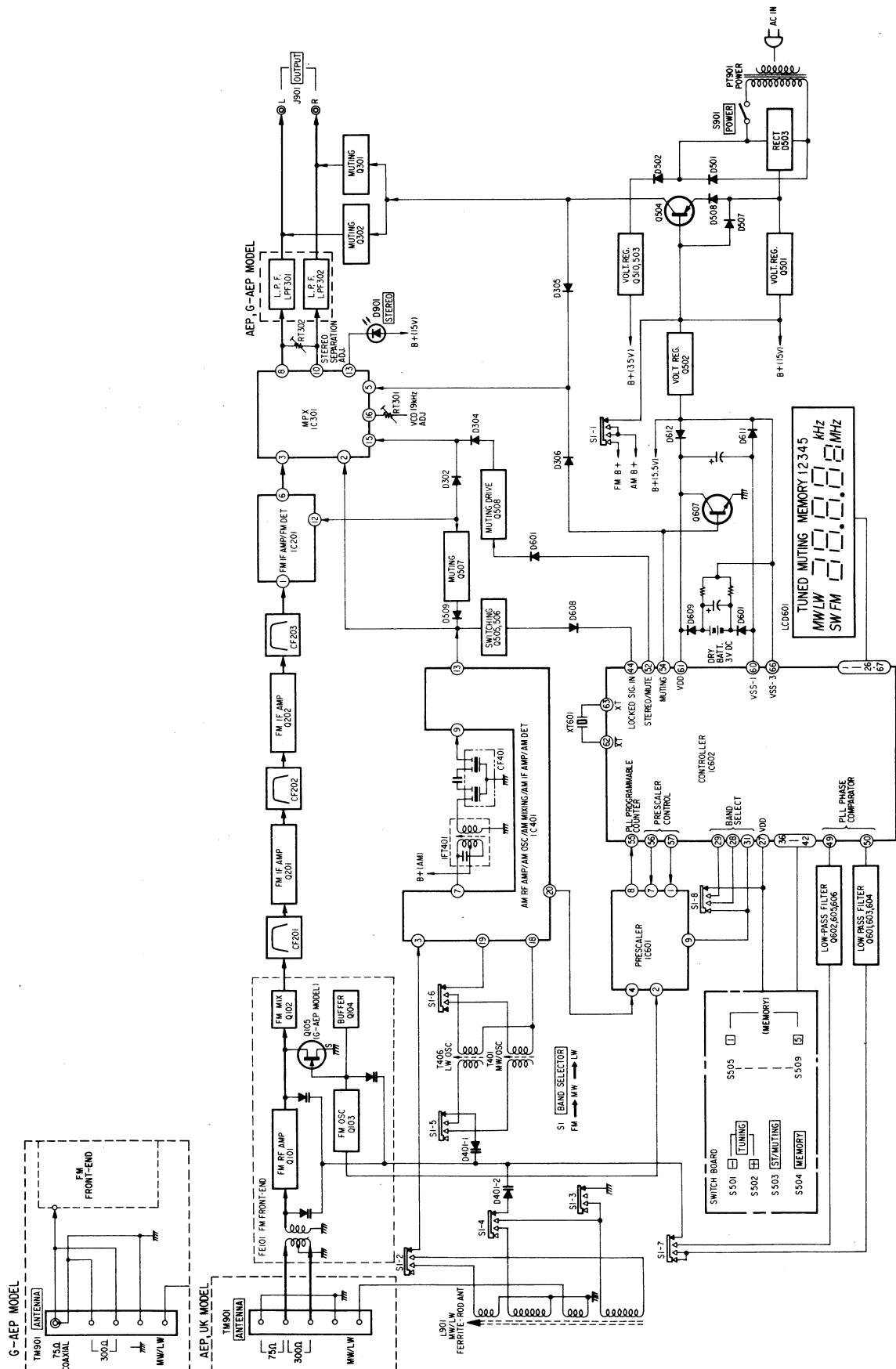
Ceramic filter		Diode installation		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	D604	D605	
White	10.750	X	○	10.750
Red	10.700	X	X	10.700
Black	10.650	○	X	10.650

○: installed
X: not installed

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i.e., of same colour coding should be used for CF201 through CF203.

SECTION 1 OUTLINE

1. BLOCK DIAGRAM



SECTION 2 DISASSEMBLY

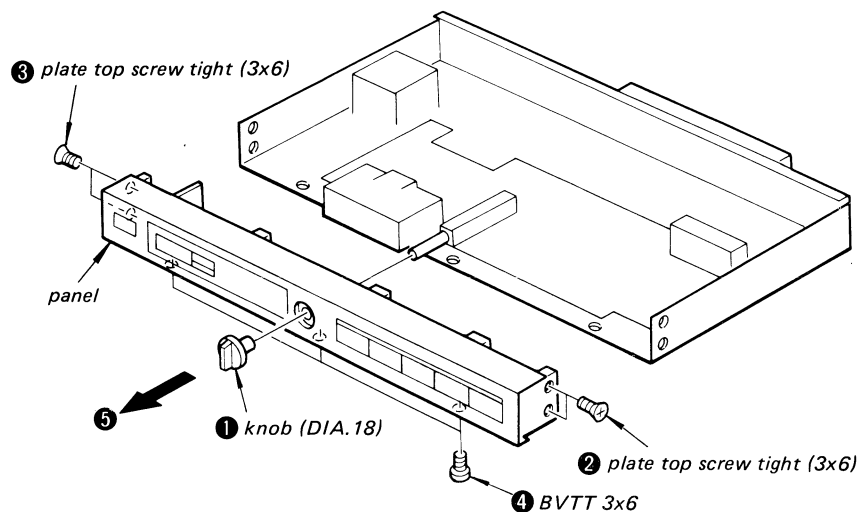
- Follow the disassembly procedure in the numerical order given.

CASE

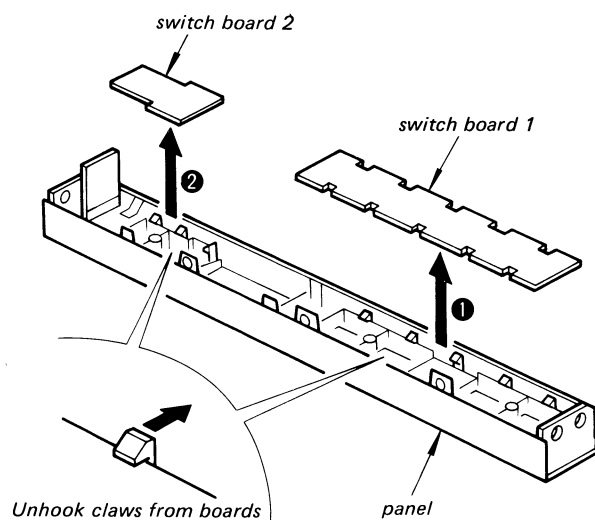
Remove four screws at each side of the case (M4S TIGHT), and the case.



PANEL



SWITCH BOARD 1/SWITCH BOARD 2



SECTION 3 ADJUSTMENTS

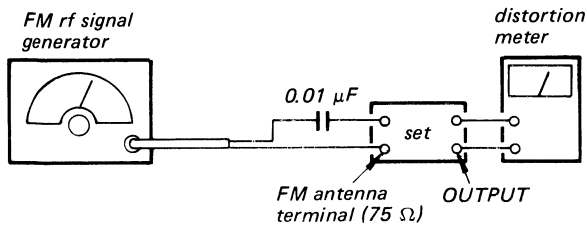
FM SECTION

FM Discriminator Alignment

Setting:

BAND SELECTOR switchFM
STEREO/MUTING switchOFF

Procedure:



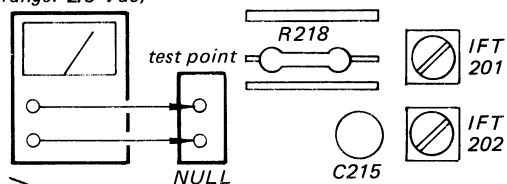
Carrier frequency: 98 MHz
Output level: 1 mV (60 dB)
Modulation: 1 kHz, 40 kHz deviation (100%)

1. Tune the set to 98 MHz.
2. Adjust IFT201 for 0 V reading on the VOM. NULL Adjustment

Note: When the ceramic filter is replaced, these adjustments should be made (See page 3).

3. Adjust IFT201 for a minimum reading on the distortion meter. Distortion Adjustment

VOM
(range: 2.5 Vdc)

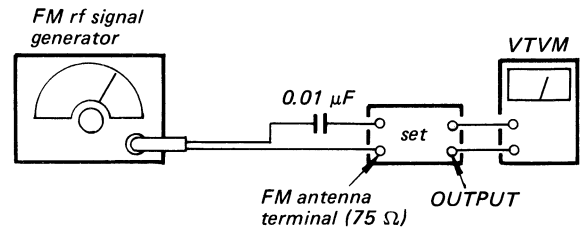


FM Muting Level Adjustment

Setting:

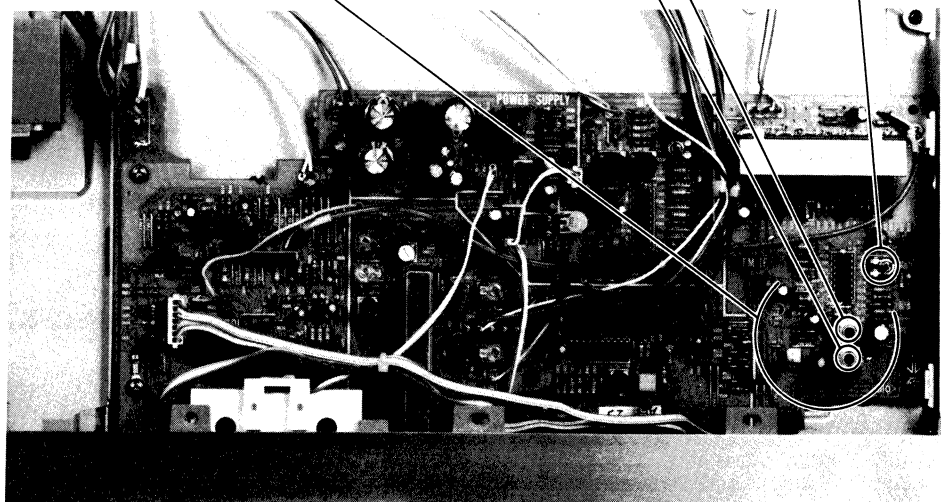
BAND SELECTOR switchFM
STEREO/MUTING switchON

Procedure:



Carrier frequency: 98 MHz
Modulation: 1 kHz, 40 kHz deviation (100%)
Output level: 17.9 μV (25 dB)

1. Tune the set to 98 MHz.
2. Adjust RT201 for a point the VTVM reading just drops to 0 V.

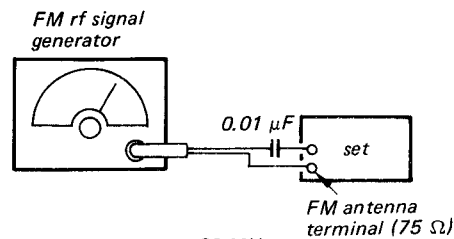


VCO Adjustment

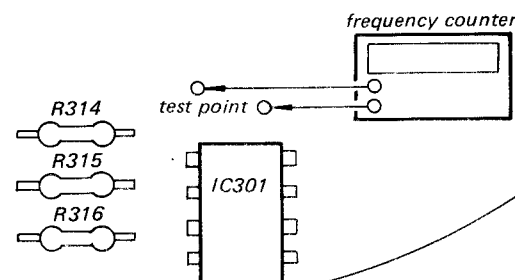
Setting: BAND SELECTOR switch: FM
STEREO/MUTING switch: ON

A) Regular Method

Procedure:



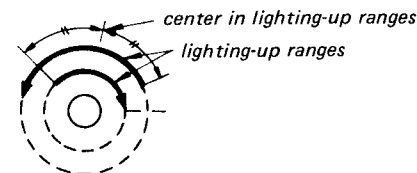
1. Tune the set to 98 MHz.
2. Adjust RT301 for 19 kHz $\pm$ 50 Hz on the counter.



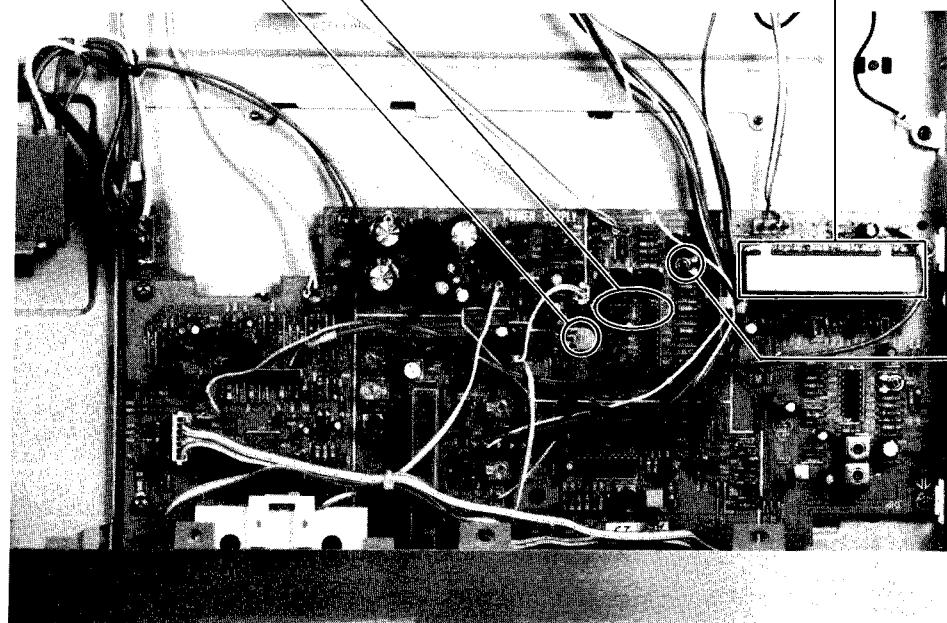
B) Simple Method

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RT301 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RT301 at the center of the lighting-up range of both turns as shown below.



The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement.

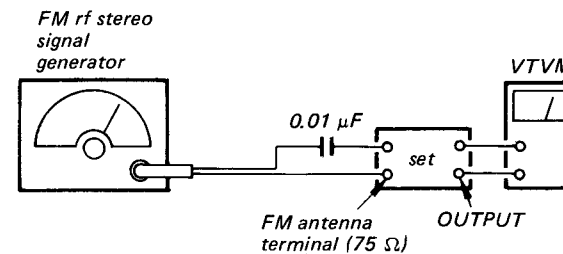


FM Stereo Separation Adjustment

Setting:

BAND SELECTOR switchFM
STEREO/MUTING switchON (STEREO)

Procedure:



Audio (1 kHz): 16.25 kHz deviation
Pilot (19 kHz): 7.5 kHz deviation
Sub-channel (38 kHz) 16.25 kHz deviation

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ [Ⓐ] Adjust RT302 for minimum reading
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ [Ⓒ] Adjust RT302 for minimum reading

L-CH Stereo separation: Ⓐ - Ⓑ[Ⓐ]
R-CH Stereo separation: Ⓒ - Ⓓ[Ⓒ]

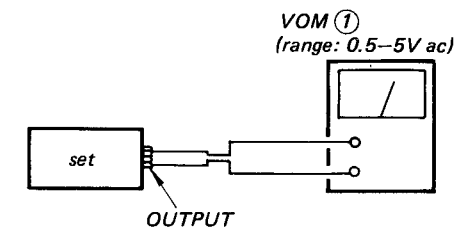
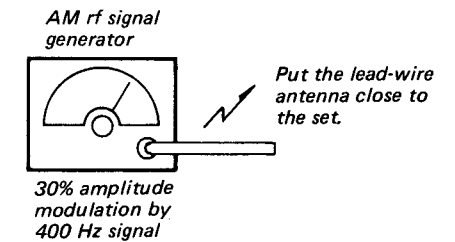
The separations of both channels should be equal.

RT302

MW/LW SECTION

Setting:

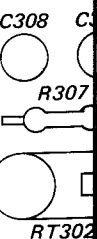
BAND SELECTOR switch: MW/LW



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

MW FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM ②	frequency indication	adjustment part
22 $\pm$ 0.2 V	1,602 kHz	CT401
1.6 $\pm$ 0.1 V	522 kHz	T401

LW FREQUENCY COVERAGE	
reading on VOM ②	18.5 $\pm$ 0.5
frequency indication	344 kHz
adjustment part	CT401

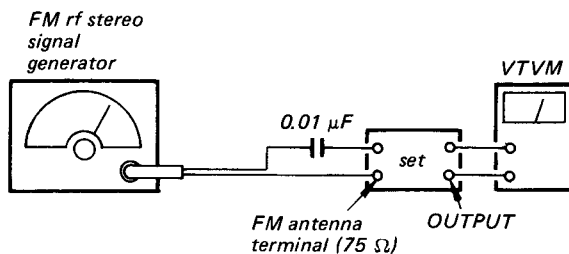


FM Stereo Separation Adjustment

Setting:

BAND SELECTOR switchFM
STEREO/MUTING switchON (STEREO)

Procedure:



Carrier frequency: 98 MHz
Output level: 1mV (60 dB)
Modulation: Stereo

Audio (1 kHz): 16.25 kHz deviation
Pilot (19 kHz): 7.5 kHz deviation
Sub-channel (38 kHz) 16.25 kHz deviation

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ [Ⓐ] Adjust RT302 for minimum reading
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ [Ⓒ] Adjust RT302 for minimum reading

L-CH Stereo separation: Ⓐ - Ⓑ[Ⓐ]
R-CH Stereo separation: Ⓒ - Ⓓ[Ⓒ]

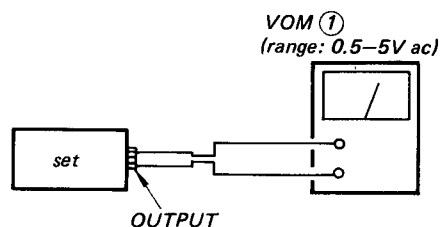
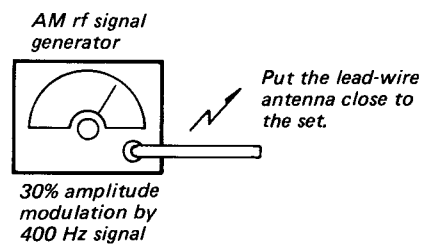
The separations of both channels should be equal.

RT302

MW/LW SECTION

Setting:

BAND SELECTOR switch: MW/LW



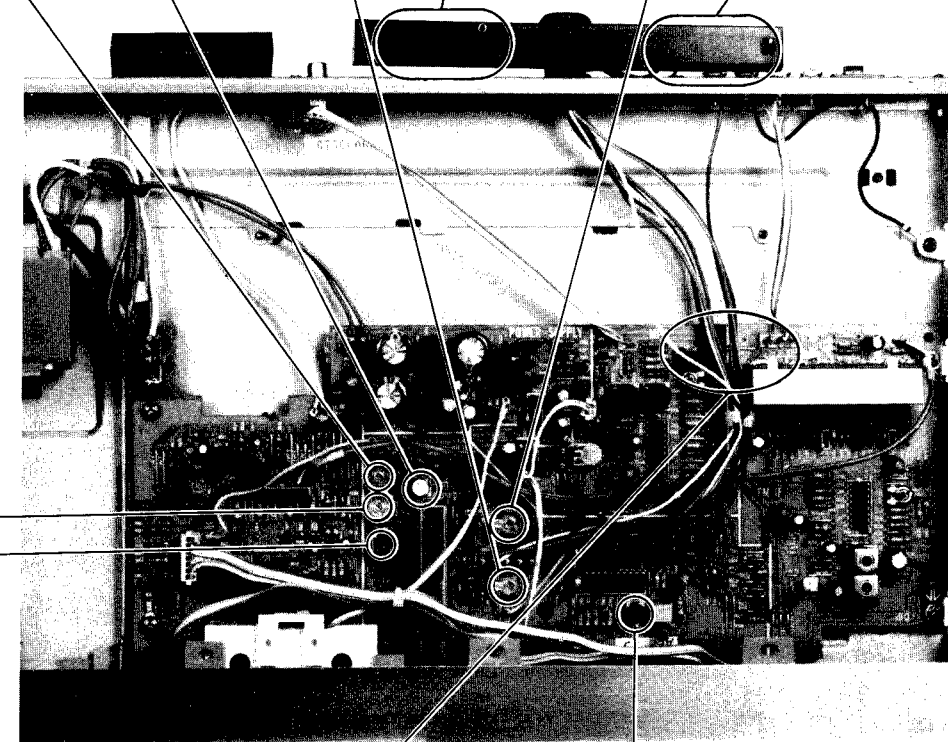
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

MW FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM ②	frequency indication	adjustment part
22 ± 0.2 V	1,602 kHz	CT401
1.6 ± 0.1 V	522 kHz	T401

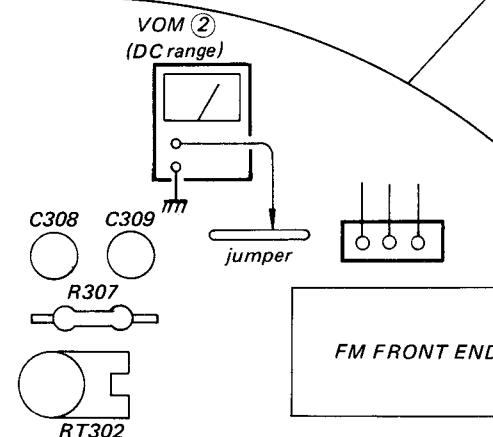
LW FREQUENCY COVERAGE ADJUSTMENT		
reading on VOM ②		
18.5 ± 0.2 V	2.2 ± 0.1 V	
frequency indication	344 kHz	153 kHz
adjustment part	CT407	T406

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ①	
1,404 kHz	603 kHz
CT404	L901

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VOM ①	
310 kHz	170 kHz
CT408	L901

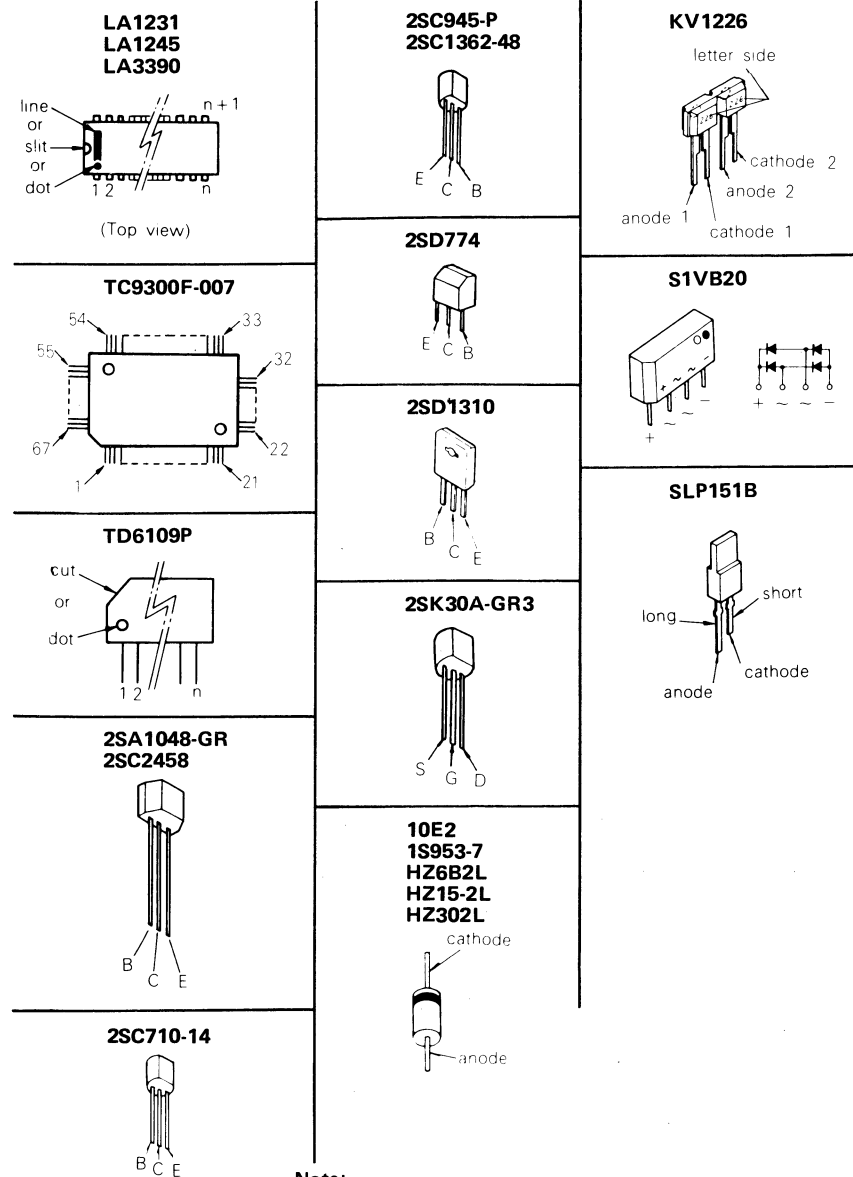


IFT401
450 kHz
Adjust for a maximum reading on VOM ①
AM IF ALIGNMENT



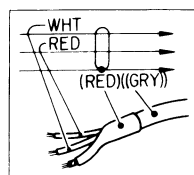
SECTION 4
DIAGRAMS4-1. MOUNTING DIAGRAM
— Conductor Side —

Semiconductor lead layouts

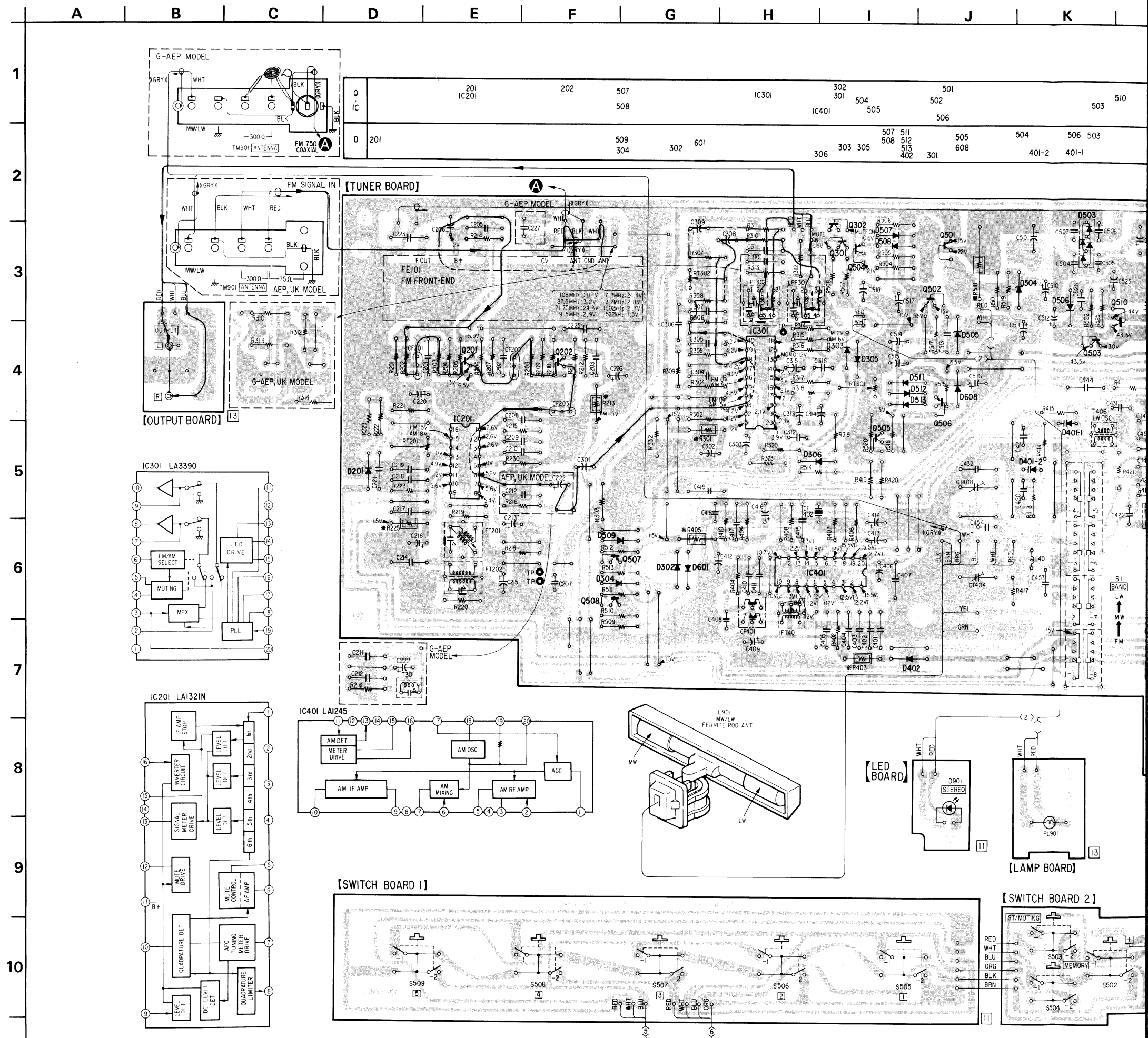


Note:

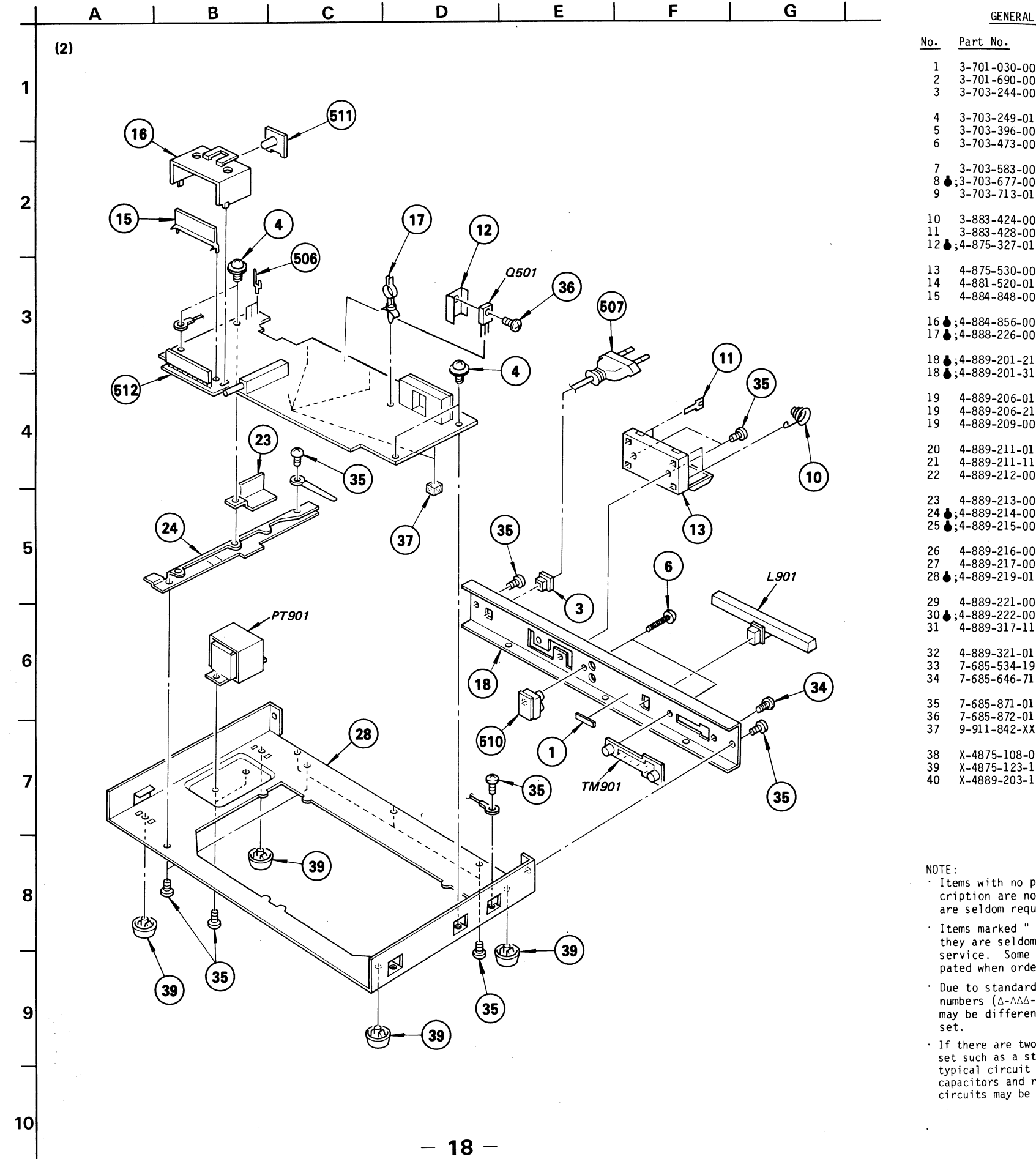
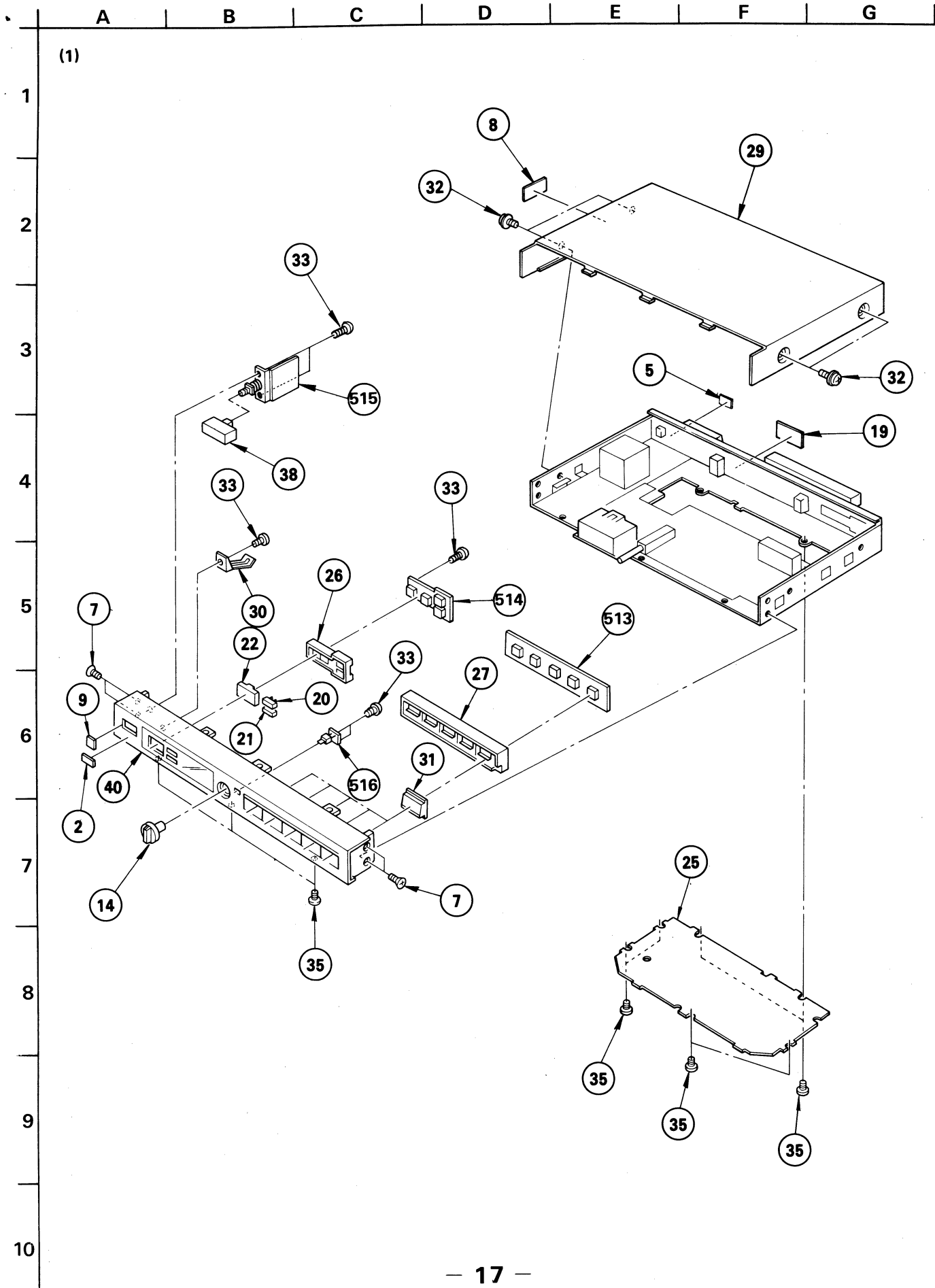
- Color code of sleeving over the end of the jacket.



- : parts extracted from the component side.
- : indicates side identified with part number.
- *: nonflamable resistors except for AEP, G-AEP model (R213, 225, 301, 403 and R405).
- : B+ pattern
- : signal path
- : L-CH signal path
- : R-CH signal path



SECTION 5
EXPLODED VIEWS AND PARTS LIST



GENERAL SECTION

No.	Part No.	Description
1	3-701-030-00	LABEL, SERIAL NUMBER
2	3-701-690-00	(UK).....LABEL (MADE IN JAPAN)
3	3-703-244-00	BUSHING, CORD
4	3-703-249-01	SCREW, S TIGHT, +PTWH 3X6
5	3-703-396-00	(UK).....LABEL, CAUTION
6	3-703-473-00	SCREW, TERMINAL, +BV TYPE2
7	3-703-583-00	TIGHT (3X6), PLATE TAP
8	3-703-677-00	(UK).....LABEL, CAUTION, MAIN, NEW UL
9	3-703-713-01	STICKER, SONY SYMBOL (12)
10	3-883-424-00	SPRING
11	3-883-428-00	PLATE, TERMINAL (POSITIVE)
12	4-875-327-01	HEAT SINK
13	4-875-530-00	CASE, BATTERY
14	4-881-520-01	KNOB (DIA. 18)
15	4-884-848-00	ILLUMINATOR (ST)
16	4-884-856-00	HOUSE, LAMP
17	4-888-226-00	CLIP, STAND-OFF
18	4-889-201-21	(AEP,UK)....PLATE, JACK
18	4-889-201-31	(G-AEP)....PLATE, JACK
19	4-889-206-01	(G-AEP)....LABEL, MODEL NUMBER (AEP)
19	4-889-206-21	(AEP).....LABEL, MODEL NUMBER (AEP)
19	4-889-209-00	(UK).....LABEL, MODEL NUMBER (UK)
20	4-889-211-01	KNOB (18X4), SQUARE
21	4-889-211-11	KNOB (18X4), SQUARE
22	4-889-212-00	KNOB (32X12), SQUARE
23	4-889-213-00	INSULATOR
24	4-889-214-00	FRAME
25	4-889-215-00	PLATE, BOTTOM
26	4-889-216-00	HINGE (B)
27	4-889-217-00	HINGE (A)
28	4-889-219-01	CHASSIS
29	4-889-221-00	CASE
30	4-889-222-00	PLATE, GROUND
31	4-889-317-11	KNOB (16XL), SQUARE
32	4-889-321-01	SCREW, M4S TIGHT
33	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
34	7-685-646-71	SCREW +BVT 3X8 TYPE2 IT-3
35	7-685-871-01	SCREW +BVT 3X6 (S)
36	7-685-872-01	SCREW +BVT 3X8 (S)
37	9-911-842-XX	RETAINER, PC BOARD
38	X-4875-108-0	KNOB ASSY, POWER
39	X-4875-123-1	FOOT ASSY, MF
40	X-4889-203-1	PANEL ASSY

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- 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 numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

MMH: mH, UH: μH

SEMICONDUCTORS

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

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
81	1-501-161-00	ANTENNA, FEEDER
82	1-528-027-11	BATTERY, NEW SUPER (SUM-3)(NS)
83	1-551-734-11	CORD, CONNECTION
84	3-701-630-00	BAG, POLYETHYLENE
85	3-773-513-11	(AEP,UK)....MANUAL, INSTRUCTION
86	3-773-513-41	(AEP,G-AEP)....MANUAL, INSTRUCTION
87	4-879-798-00	SHEET, PROTECTION
88	4-881-536-00	CUSHION (UPPER)
89	4-881-537-00	CUSHION (LOWER)
90	4-889-225-00	INDIVIDUAL CARTON

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-508-808-00	14MM BASE POST
502	1-508-829-12	H TYPE BASE POST
503	1-535-115-00	TERMINAL
504	1-535-116-00	TERMINAL
505	1-535-118-00	TERMINAL
506	1-535-416-00	TERMINAL
507	1-551-427-11	(AEP,G-AEP)....CORD, POWER, EULO PLUG
507	1-556-562-00	(UK).....CORD, POWER
508	1-560-060-00	PIN, CONNECTOR 2P
509	1-560-338-00	PIN, CONNECTOR 7P
510	1-609-848-00	PC BOARD, OUTPUT
511	1-609-849-00	PC BOARD, LAMP
512	1-609-852-00	PC BOARD, TUNER
512	A-4351-347-A	(AEP).....MOUNTED PCB, TUNER
512	A-4351-348-A	(G-AEP)....MOUNTED PCB, TUNER
512	A-4351-355-A	(UK).....MOUNTED PCB, TUNER
513	1-610-699-00	PC BOARD, SW-1
514	1-610-700-00	PC BOARD, SW-2
515	1-610-701-00	PC BOARD, POWER SW
516	1-610-746-00	PC BOARD, LED
C201	1-161-263-00	CERAMIC 22PF 5% 50V
C202	1-161-494-00	CERAMIC 0.022MF 30% 25V
C203	1-161-494-00	CERAMIC 0.022MF 30% 25V
C205	1-161-494-00	CERAMIC 0.022MF 30% 25V
C206	1-123-320-00	ELECT 100MF 20% 16V
C207	1-101-005-00	CERAMIC 0.022MF 50V
C208	1-161-494-00	CERAMIC 0.022MF 30% 25V
C209	1-161-494-00	CERAMIC 0.022MF 30% 25V
C210	1-161-494-00	CERAMIC 0.022MF 30% 25V
C211	1-161-315-00	(G-AEP)....CERAMIC 220PF 10% 50V
C212	1-161-265-00	(AEP,UK)....CERAMIC 33PF 5% 50V
C212	1-161-321-00	(G-AEP)....CERAMIC 680PF 10% 50V
C213	1-123-380-00	ELECT 1MF 20% 50V
C214	1-161-494-00	CERAMIC 0.022MF 30% 25V
C215	1-123-380-00	ELECT 1MF 20% 50V
C216	1-123-320-00	ELECT 100MF 20% 16V
C217	1-161-494-00	CERAMIC 0.022MF 30% 25V
C218	1-161-494-00	CERAMIC 0.022MF 30% 25V
C219	1-161-494-00	CERAMIC 0.022MF 30% 25V
C220	1-123-380-00	ELECT 1MF 20% 50V
C221	1-161-494-00	CERAMIC 0.022MF 30% 25V
C222	1-123-356-00	ELECT 10MF 20% 16V
C223	1-161-323-00	CERAMIC 0.001MF 10% 50V
C225	1-161-494-00	CERAMIC 0.022MF 30% 25V

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- 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.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C226	1-123-320-00	ELECT 100MF 20% 16V
C227	1-101-005-00	(G-AEP)....CERAMIC 0.022MF 50V
C301	1-123-356-00	ELECT 10MF 20% 16V
C302	1-123-320-00	ELECT 100MF 20% 16V
C303	1-123-328-00	ELECT 4.7MF 20% 25V
C304	1-161-320-00	CERAMIC 560PF 10% 50V
C305	1-161-320-00	CERAMIC 560PF 10% 50V
C306	1-161-330-00	CERAMIC 0.01MF 30% 25V
C307	1-161-330-00	CERAMIC 0.01MF 30% 25V
C308	1-123-328-00	ELECT 4.7MF 20% 25V
C309	1-123-328-00	ELECT 4.7MF 20% 25V
C310	1-161-326-00	(AEP,G-AEP)....CERAMIC 0.0022MF 30% 50V
C311	1-161-326-00	(AEP,G-AEP)....CERAMIC 0.0022MF 30% 50V
C312	1-101-006-00	CERAMIC 0.047MF 50V
C313	1-123-353-00	ELECT 2.2MF 20% 50V
C314	1-123-354-00	ELECT 3.3MF 20% 50V
C315	1-123-380-00	ELECT 1MF 20% 50V
C316	1-104-077-00	POLYSTYRENE 0.001MF 5% 50V
C401	1-161-494-00	CERAMIC 0.022MF 30% 25V
C402	1-161-494-00	CERAMIC 0.022MF 30% 25V
C403	1-161-494-00	CERAMIC 0.022MF 30% 25V
C404	1-161-494-00	CERAMIC 0.022MF 30% 25V
C405	1-161-494-00	CERAMIC 0.022MF 30% 25V
C406	1-123-328-00	ELECT 4.7MF 20% 25V
C407	1-161-494-00	CERAMIC 0.022MF 30% 25V
C408	1-161-267-00	CERAMIC 47PF 5% 50V
C409	1-123-356-00	ELECT 10MF 20% 16V
C410	1-161-494-00	CERAMIC 0.022MF 30% 25V
C411	1-161-323-00	CERAMIC 0.001MF 10% 50V
C412	1-123-319-00	ELECT 47MF 20% 16V
C413	1-123-328-00	ELECT 4.7MF 20% 25V
C414	1-123-354-00	ELECT 3.3MF 20% 50V
C415	1-161-494-00	CERAMIC 0.022MF 30% 25V
C416	1-123-351-00	ELECT 0.47MF 20% 50V
C417	1-161-494-00	CERAMIC 0.022MF 30% 25V
C418	1-101-005-00	CERAMIC 0.022MF 50V
C419	1-161-329-00	CERAMIC 0.0068MF 30% 25V
C420	1-101-005-00	CERAMIC 0.022MF 50V
C421	1-101-005-00	CERAMIC 0.022MF 50V
C422	1-103-716-00	POLYSTYRENE 430PF 5% 50V
C425	1-161-301-00	CERAMIC 10PF 5% 50V
C431	1-103-706-00	POLYSTYRENE 160PF 5% 50V
C444	1-161-330-00	CERAMIC 0.01MF 30% 25V
C453	1-161-053-00	CERAMIC 0.0015MF 30% 50V
C454	1-102-120-00	CERAMIC 0.0018MF 10% 50V
C455	1-161-267-00	CERAMIC 47PF 5% 50V

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

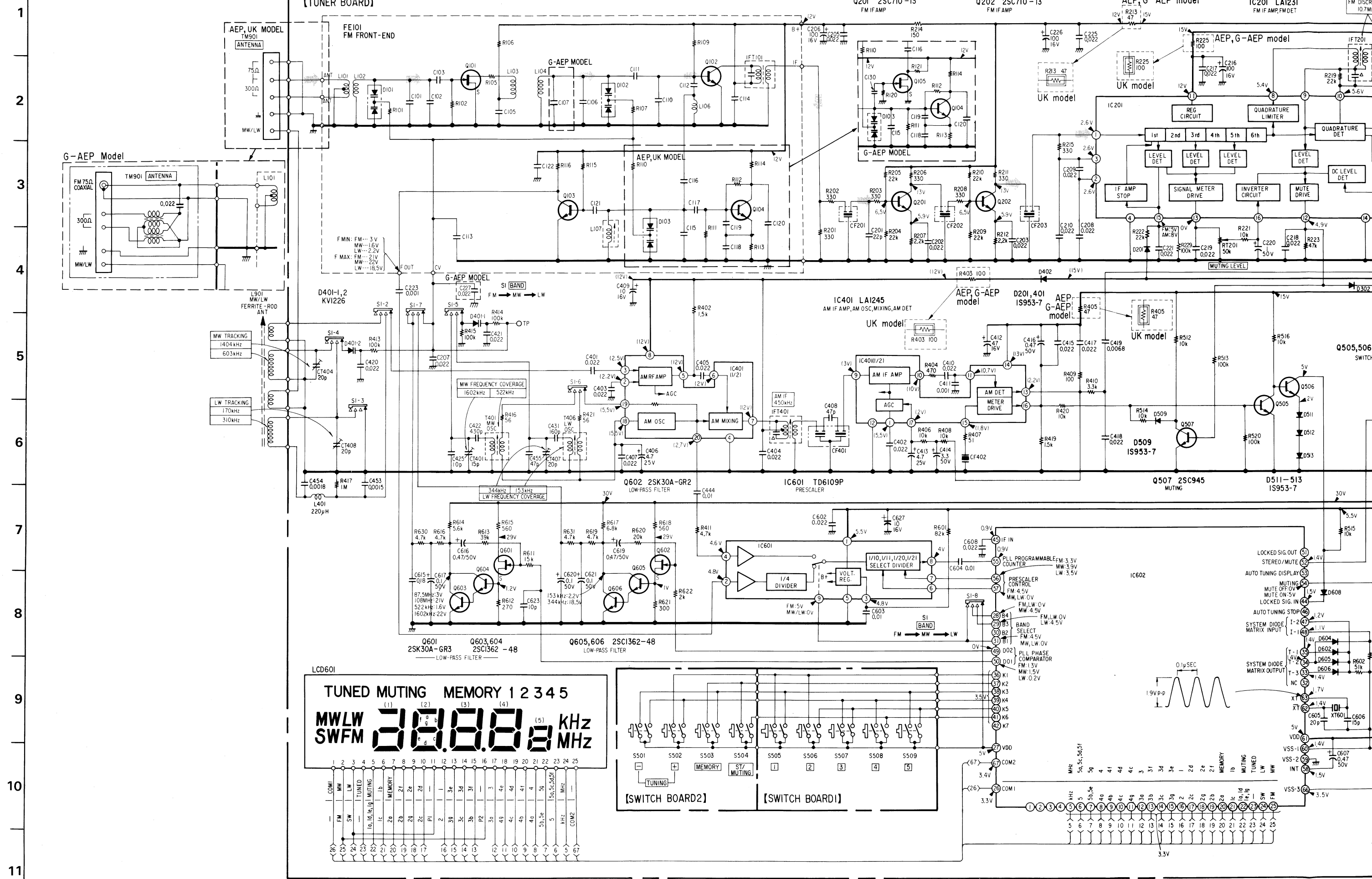
MMH: mH, UH: μH

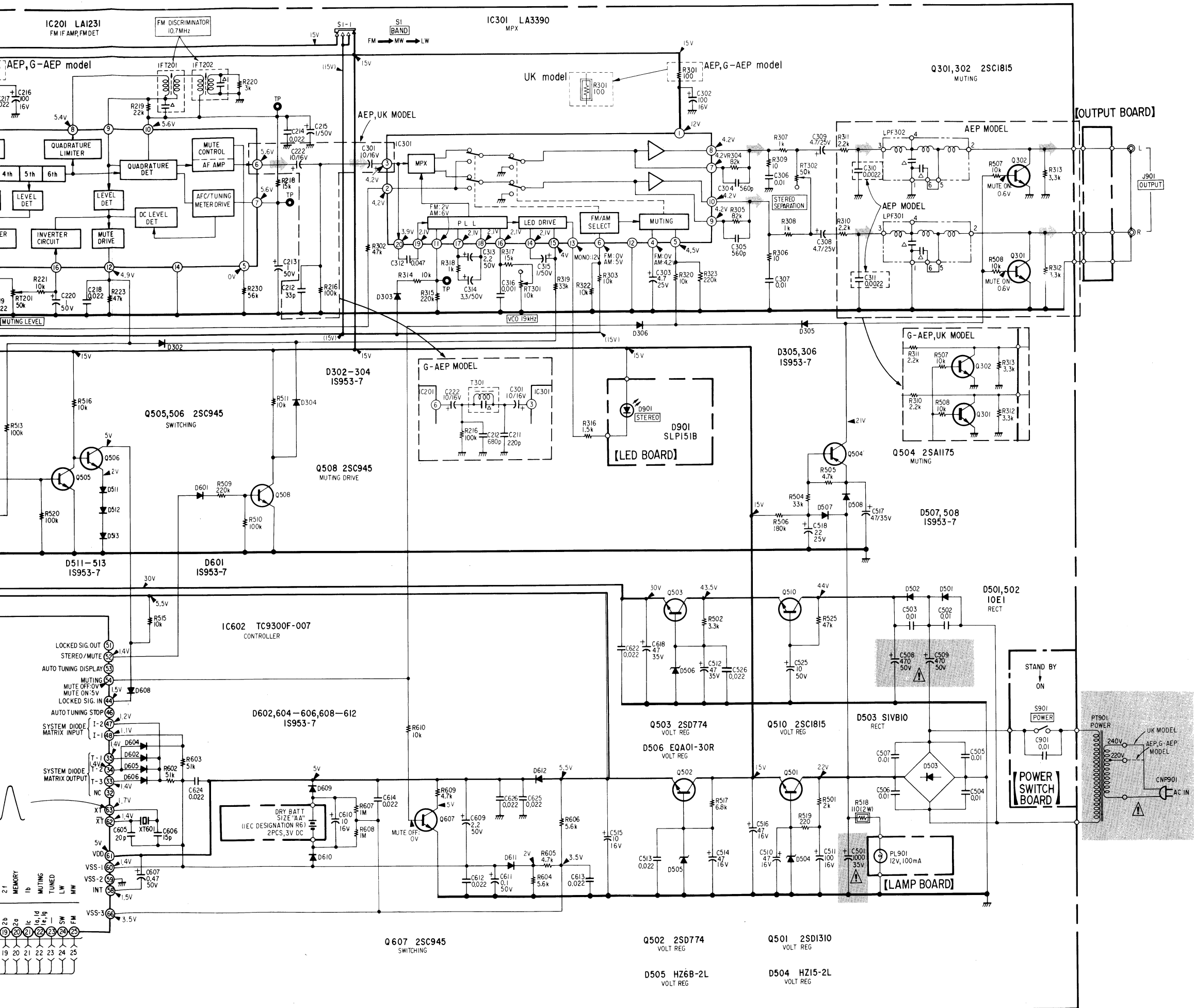
SEMICONDUCTORS

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

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

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---





- Note:**
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega$: 1000 Ω , $\text{M}\Omega$: 1000 $\text{k}\Omega$
 - : nonflammable resistor.
 - Δ : internal component.
 - : panel designation.
 - : adjustment for repair.
 - : B+ bus.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no-signal (detuned) conditions with a VOM.
no mark: FM
() : AM
 - Voltage variations may be noted due to normal production tolerances.
 - Switch

Ref. No.	Switch	Position
S1	BAND	FM
S501	TUNING -	OFF
S502	TUNING +	OFF
S503	ST/MUTING	OFF
S504	MEMORY	OFF
S505-9	1-5	OFF
S901	POWER	STAND BY

• : signal path

Note: Voltages are measured with a VOM (50k Ω /V).

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C501	A. 1-123-349-00	ELECT	1000MF	20%	35V
C502	1-101-004-00	CERAMIC	0.01MF		50V
C503	1-101-004-00	CERAMIC	0.01MF		50V
C504	1-101-004-00	CERAMIC	0.01MF		50V
C505	1-101-004-00	CERAMIC	0.01MF		50V
C506	1-101-004-00	CERAMIC	0.01MF		50V
C507	1-101-004-00	CERAMIC	0.01MF		50V
C508	A. 1-123-363-00	ELECT	470MF	20%	50V
C509	A. 1-123-363-00	ELECT	470MF	20%	50V
C510	1-123-319-00	ELECT	47MF	20%	16V
C511	1-123-320-00	ELECT	100MF	20%	16V
C512	1-123-359-00	ELECT	47MF	20%	35V
C513	1-161-494-00	CERAMIC	0.022MF	30%	25V
C514	1-123-319-00	ELECT	47MF	20%	16V
C515	1-123-356-00	ELECT	10MF	20%	16V
C516	1-123-319-00	ELECT	47MF	20%	16V
C517	1-123-359-00	ELECT	47MF	20%	35V
C518	1-123-330-00	ELECT	22MF	20%	25V
C525	1-123-356-00	ELECT	10MF	20%	50V
C526	1-101-005-00	CERAMIC	0.022MF		50V
C602	1-161-494-00	CERAMIC	0.022MF	30%	25V
C603	1-161-330-00	CERAMIC	0.01MF	30%	25V
C604	1-161-330-00	CERAMIC	0.01MF	30%	25V
C605	1-101-974-00	CERAMIC	20PF	5%	50V
C606	1-102-851-00	CERAMIC	15PF	5%	50V
C607	1-123-351-00	ELECT	0.47MF	20%	50V
C608	1-101-005-00	CERAMIC	0.022MF		50V
C609	1-123-353-00	ELECT	2.2MF	20%	50V
C610	1-123-356-00	ELECT	10MF	20%	16V
C611	1-123-607-00	ELECT	0.1MF	20%	50V
C612	1-161-494-00	CERAMIC	0.022MF	30%	25V
C613	1-161-494-00	CERAMIC	0.022MF	30%	25V
C614	1-161-494-00	CERAMIC	0.022MF	30%	25V
C615	1-130-635-00	FILM	0.18MF	5%	50V
C616	1-123-351-00	ELECT	0.47MF	20%	50V
C617	1-123-607-00	ELECT	0.1MF	20%	50V
C618	1-123-359-00	ELECT	47MF	20%	35V
C619	1-123-351-00	ELECT	0.47MF	20%	50V
C620	1-123-607-00	ELECT	0.1MF	20%	50V
C621	1-123-607-00	ELECT	0.1MF	20%	50V
C622	1-101-005-00	CERAMIC	0.022MF		50V
C623	1-161-259-00	CERAMIC	10PF	5%	50V
C624	1-161-494-00	CERAMIC	0.022MF	30%	25V
C625	1-161-494-00	CERAMIC	0.022MF	30%	25V
C626	1-161-494-00	CERAMIC	0.022MF	30%	25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C627	1-123-356-00	ELECT	10MF	20%	16V
C901	1-101-004-00	CERAMIC	0.01MF		50V
CF201	1-527-968-71	FILTER, CERAMIC			
CF202	1-527-968-71	FILTER, CERAMIC			
CF203	1-527-968-71	FILTER, CERAMIC			
CF401	1-527-937-00	FILTER, CERAMIC			
CF402	1-527-981-00	FILTER, CERAMIC			
CT401	1-141-180-00	CAP, TRIMMER 15P			
CT404	1-141-171-00	CAP, TRIMMER 20P			
CT407	1-141-171-00	CAP, TRIMMER 20P			
CT408	1-141-171-00	CAP, TRIMMER 20P			
D201	8-719-107-57	DIODE 1S953-7			
D302	8-719-107-57	DIODE 1S953-7			
D303	8-719-103-57	DIODE 1S953-7			
D304	8-719-107-57	DIODE 1S953-7			
D305	8-719-107-57	DIODE 1S953-7			
D306	8-719-107-57	DIODE 1S953-7			
D401	8-719-912-27	DIODE KV1226			
D402	8-719-107-57	DIODE 1S953-7			
D501	8-719-200-02	DIODE 10E2			
D502	8-719-200-02	DIODE 10E2			
D503	8-719-511-20	DIODE 1SVB20			
D504	8-719-910-52	DIODE HZ15-2L			
D505	8-719-910-65	DIODE HZ6B2L			
D506	8-719-913-02	DIODE HZ30-2L			
D507	8-719-107-57	DIODE 1S953-7			
D508	8-719-107-57	DIODE 1S953-7			
D509	8-719-107-57	DIODE 1S953-7			
D511	8-719-107-57	DIODE 1S953-7			
D512	8-719-107-57	DIODE 1S953-7			
D513	8-719-107-57	DIODE 1S953-7			
D601	8-719-107-57	DIODE 1S953-7			
D602	8-719-107-57	DIODE 1S953-7			
D604	8-719-107-57	DIODE 1S953-7			
D605	8-719-107-57	DIODE 1S953-7			
D606	8-719-107-57	DIODE 1S953-7			
D608	8-719-107-57	DIODE 1S953-7			
D609	8-719-107-57	DIODE 1S953-7			
D610	8-719-107-57	DIODE 1S953-7			
D611	8-719-107-57	DIODE 1S953-7			
D612	8-719-107-57	DIODE 1S953-7			
D901	8-719-901-52	DIODE SLP151B			
FE101	A-4344-029-A	(AEP,UK)...FRONT END, FM			
FE101	A-4344-031-A	(G-AEP)....FRONT END, FM			

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "A" 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 numbers (Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -XX or Δ - $\Delta\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.

- F : nonflammable

COILS

MMH : mH, UH : μ H

SEMICONDUCTORS

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

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description
IC201	8-759-812-31	IC LA1231
IC301	8-759-833-90	IC LA3390
IC401	8-759-812-45	IC LA1245
IC601	8-759-201-03	IC TD6109P
IC602	8-759-201-31	IC TC9300F-007
IFT201	1-404-400-00	TRANSFORMER, DISCRIMINATOR
IFT202	1-404-401-00	TRANSFORMER, DISCRIMINATOR
IFT401	1-404-413-00	TRANSFORMER, IF
J901	1-507-731-00	JACK, PIN 2P
L401	1-407-173-XX	MICRO INDUCTOR 220UH
L901	1-402-011-41	ANTENNA, FERRITE-ROD (LW/MW)
LCD601	1-806-643-00	DISPLAY PANEL, LIQUID CRYSTAL
LPF301	1-235-164-00	(AEP,G-AEP)...FILTER, LOW PASS
LPF302	1-235-164-00	(AEP,G-AEP)...FILTER, LOW PASS
PL901	1-518-511-00	LAMP, PILOT
PT901A	1-447-560-12	TRANSFORMER, POWER
Q201	8-729-671-14	TRANSISTOR 2SC710-14
Q202	8-729-671-14	TRANSISTOR 2SC710-14
Q301	8-729-245-83	TRANSISTOR 2SC2458
Q302	8-729-245-83	TRANSISTOR 2SC2458
Q501	8-729-103-33	TRANSISTOR 2SD1310
Q502	8-729-177-43	TRANSISTOR 2SD774
Q503	8-729-177-43	TRANSISTOR 2SD774
Q504	8-729-204-83	TRANSISTOR 2SA1048-GR
Q505	8-729-245-83	TRANSISTOR 2SC2458
Q506	8-729-245-83	TRANSISTOR 2SC2458
Q507	8-729-245-83	TRANSISTOR 2SC2458
Q508	8-729-245-83	TRANSISTOR 2SC2458
Q510	8-729-194-57	TRANSISTOR 2SC945-P
Q601	8-729-203-05	TRANSISTOR 2SK30A-GR3
Q602	8-729-203-05	TRANSISTOR 2SK30A-GR3
Q603	8-729-664-48	TRANSISTOR 2SC1362-48
Q604	8-729-664-48	TRANSISTOR 2SC1362-48
Q605	8-729-664-48	TRANSISTOR 2SC1362-48
Q606	8-729-664-48	TRANSISTOR 2SC1362-48
Q607	8-729-245-83	TRANSISTOR 2SC2458
R201	1-246-461-00	CARBON 330 5% 1/4W
R202	1-246-461-00	CARBON 330 5% 1/4W
R203	1-246-461-00	CARBON 330 5% 1/4W
R204	1-246-505-00	CARBON 22K 5% 1/4W
R205	1-246-505-00	CARBON 22K 5% 1/4W
R206	1-246-461-00	CARBON 330 5% 1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R207	1-246-481-00	CARBON	2.2K	5%	1/4W	
R208	1-246-461-00	CARBON	330	5%	1/4W	
R209	1-246-505-00	CARBON	22K	5%	1/4W	
R210	1-246-505-00	CARBON	22K	5%	1/4W	
R211	1-246-461-00	CARBON	330	5%	1/4W	
R212	1-246-481-00	CARBON	2.2K	5%	1/4W	
R213	1-246-441-00	(AEP,G-AEP)...CARBON	47	5%	1/4W	
R213	1-247-099-00	(UK)....CARBON	47	5%	1/4W	F
R214	1-246-453-00	CARBON	150	5%	1/4W	
R215	1-246-461-00	CARBON	330	5%	1/4W	
R216	1-246-521-00	CARBON	100K	5%	1/4W	
R218	1-246-501-00	CARBON	15K	5%	1/4W	
R219	1-246-505-00	CARBON	22K	5%	1/4W	
R220	1-246-484-00	CARBON	3K	5%	1/4W	
R221	1-246-497-00	CARBON	10K	5%	1/4W	
R222	1-246-505-00	CARBON	22K	5%	1/4W	
R223	1-246-513-00	CARBON	47K	5%	1/4W	
R225	1-246-449-00	(AEP,G-AEP)...CARBON	100	5%	1/4W	
R225	1-247-107-00	(UK)....CARBON	100	5%	1/4W	F
R229	1-246-521-00	CARBON	100K	5%	1/4W	
R230	1-246-515-00	CARBON	56K	5%	1/4W	
R301	1-246-449-00	(AEP,G-AEP)...CARBON	100	5%	1/4W	
R301	1-247-107-00	(UK)....CARBON	100	5%	1/4W	F
R302	1-246-513-00	CARBON	47K	5%	1/4W	
R303	1-246-497-00	CARBON	10K	5%	1/4W	
R304	1-246-519-00	CARBON	82K	5%	1/4W	
R305	1-246-519-00	CARBON	82K	5%	1/4W	
R306	1-246-425-00	CARBON	10	5%	1/4W	
R307	1-246-473-00	CARBON	1K	5%	1/4W	
R308	1-246-473-00	CARBON	1K	5%	1/4W	
R309	1-246-425-00	CARBON	10	5%	1/4W	
R310	1-246-481-00	CARBON	2.2K	5%	1/4W	
R311	1-246-481-00	CARBON	2.2K	5%	1/4W	
R312	1-246-485-00	CARBON	3.3K	5%	1/4W	
R313	1-246-485-00	CARBON	3.3K	5%	1/4W	
R314	1-246-497-00	CARBON	10K	5%	1/4W	
R315	1-246-529-00	CARBON	220K	5%	1/4W	
R316	1-246-477-00	CARBON	1.5K	5%	1/4W	
R317	1-246-501-00	CARBON	15K	5%	1/4W	
R318	1-246-473-00	CARBON	1K	5%	1/4W	
R319	1-246-509-00	CARBON	33K	5%	1/4W	
R320	1-246-497-00	CARBON	10K	5%	1/4W	
R322	1-246-497-00	CARBON	10K	5%	1/4W	
R323	1-246-529-00	CARBON	220K	5%	1/4W	
R402	1-246-477-00	CARBON	1.5K	5%	1/4W	

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

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μH

SEMICONDUCTORS

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

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R403	1-246-449-00	(AEP,G-AEP)...CARBON	100	5%	1/4W	
R403	1-247-107-00	(UK).....CARBON	100	5%	1/4W	F
R404	1-246-465-00	CARBON	470	5%	1/4W	
R405	1-246-441-00	(AEP,G-AEP)...CARBON	47	5%	1/4W	
R405	1-247-099-00	(UK).....CARBON	47	5%	1/4W	F
R406	1-246-497-00	CARBON	10K	5%	1/4W	
R407	1-246-442-00	CARBON	51	5%	1/4W	
R408	1-246-497-00	CARBON	10K	5%	1/4W	
R409	1-246-449-00	CARBON	100	5%	1/4W	
R410	1-246-485-00	CARBON	3.3K	5%	1/4W	
R411	1-246-489-00	CARBON	4.7K	5%	1/4W	
R413	1-246-521-00	CARBON	100K	5%	1/4W	
R414	1-246-521-00	CARBON	100K	5%	1/4W	
R415	1-246-521-00	CARBON	100K	5%	1/4W	
R416	1-246-443-00	CARBON	56	5%	1/4W	
R417	1-246-545-00	CARBON	1M	5%	1/4W	
R419	1-246-477-00	CARBON	1.5K	5%	1/4W	
R420	1-246-497-00	CARBON	10K	5%	1/4W	
R421	1-246-443-00	CARBON	56	5%	1/4W	
R501	1-246-480-00	CARBON	2K	5%	1/4W	
R502	1-246-485-00	CARBON	3.3K	5%	1/4W	
R504	1-246-509-00	CARBON	33K	5%	1/4W	
R505	1-246-489-00	CARBON	4.7K	5%	1/4W	
R506	1-246-527-00	CARBON	180K	5%	1/4W	
R507	1-246-497-00	CARBON	10K	5%	1/4W	
R508	1-246-497-00	CARBON	10K	5%	1/4W	
R509	1-246-529-00	CARBON	220K	5%	1/4W	
R510	1-246-521-00	CARBON	100K	5%	1/4W	
R511	1-246-497-00	CARBON	10K	5%	1/4W	
R512	1-246-497-00	CARBON	10K	5%	1/4W	
R513	1-246-521-00	CARBON	100K	5%	1/4W	
R514	1-246-497-00	CARBON	10K	5%	1/4W	
R515	1-246-497-00	CARBON	10K	5%	1/4W	
R516	1-246-497-00	CARBON	10K	5%	1/4W	
R517	1-246-493-00	CARBON	6.8K	5%	1/4W	
R518	1-206-641-00	METAL OXIDE	110	5%	2W	F
R519	1-246-457-00	CARBON	220	5%	1/4W	
R520	1-246-521-00	CARBON	100K	5%	1/4W	
R525	1-246-513-00	CARBON	47K	5%	1/4W	
R601	1-246-519-00	CARBON	82K	5%	1/4W	
R602	1-246-514-00	CARBON	51K	5%	1/4W	
R603	1-246-514-00	CARBON	51K	5%	1/4W	
R604	1-246-491-00	CARBON	5.6K	5%	1/4W	
R605	1-246-489-00	CARBON	4.7K	5%	1/4W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R606	1-246-491-00	CARBON	5.6K	5%	1/4W	
R607	1-246-545-00	CARBON	1M	5%	1/4W	
R608	1-246-545-00	CARBON	1M	5%	1/4W	
R609	1-246-489-00	CARBON	4.7K	5%	1/4W	
R610	1-246-497-00	CARBON	10K	5%	1/4W	
R611	1-246-501-00	CARBON	15K	5%	1/4W	
R612	1-246-459-00	CARBON	270	5%	1/4W	
R613	1-246-511-00	CARBON	39K	5%	1/4W	
R614	1-246-491-00	CARBON	5.6K	5%	1/4W	
R615	1-246-467-00	CARBON	560	5%	1/4W	
R616	1-246-489-00	CARBON	4.7K	5%	1/4W	
R617	1-246-493-00	CARBON	6.8K	5%	1/4W	
R618	1-246-467-00	CARBON	560	5%	1/4W	
R619	1-246-489-00	CARBON	4.7K	5%	1/4W	
R620	1-246-504-00	CARBON	20K	5%	1/4W	
R621	1-246-460-00	CARBON	300	5%	1/4W	
R622	1-246-480-00	CARBON	2K	5%	1/4W	
R630	1-246-489-00	CARBON	4.7K	5%	1/4W	
R631	1-246-489-00	CARBON	4.7K	5%	1/4W	
RT201	1-226-238-00	RES, ADJ, CARBON 50K				
RT301	1-228-505-00	RES, ADJ, METAL GLAZE 10K				
RT302	1-226-238-00	RES, ADJ, CARBON 50K				
S1	1-554-266-00	SWITCH, ROTARY SLIDE (BAND SELECTOR)				
S501	1-552-174-00	SWITCH, PUSH (TUNING -)				
S502	1-552-174-00	SWITCH, PUSH (TUNING +)				
S503	1-552-174-00	SWITCH, PUSH (STEREO/MUTING)				
S504	1-552-174-00	SWITCH, PUSH (MEMORY)				
S505	1-552-174-00	SWITCH, PUSH (1)				
S506	1-552-174-00	SWITCH, PUSH (2)				
S507	1-552-174-00	SWITCH, PUSH (3)				
S508	1-552-174-00	SWITCH, PUSH (4)				
S509	1-552-174-00	SWITCH, PUSH (5)				
S901	1-554-539-00	SWITCH, PUSH (POWER SWITCH)				
T301	1-235-126-00	(G-AEP)...ENCAPSULATED COMPONENT				
T401	1-406-072-00	COIL, MW OSC				
T406	1-406-069-00	COIL, OSC				
TM901	1-536-663-00	(AEP,UK)....TERMINAL BOARD (ANTENNA)				
TM901	1-536-666-21	(G-AEP)....TERMINAL BOARD (ANTENNA)				
XT601	1-527-995-00	VIBRATOR, CRYSTAL				

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- 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 numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

All resistors are in ohms.

F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD....