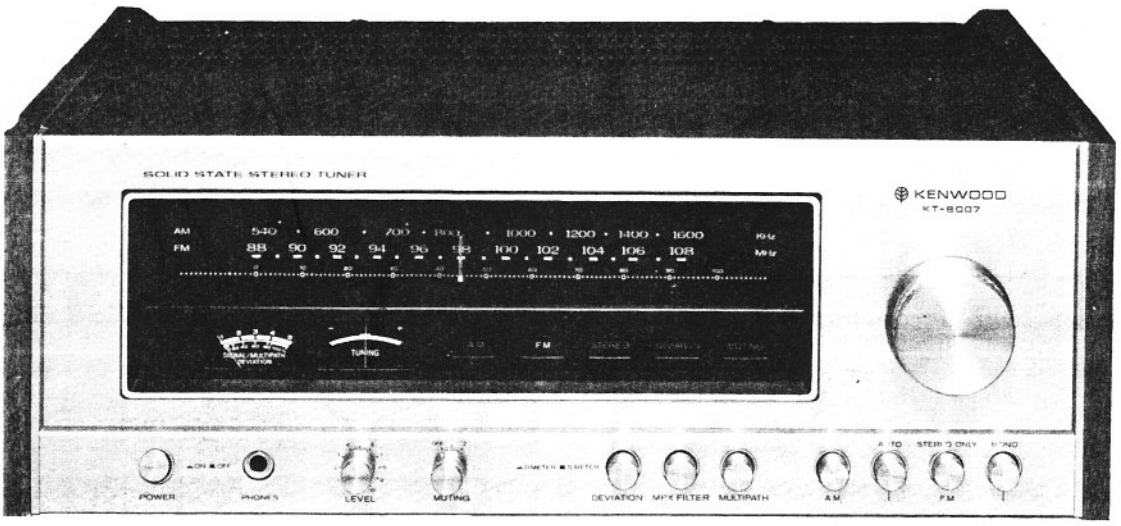
KENWOOD

HI/FI STEREO COMPONENTS

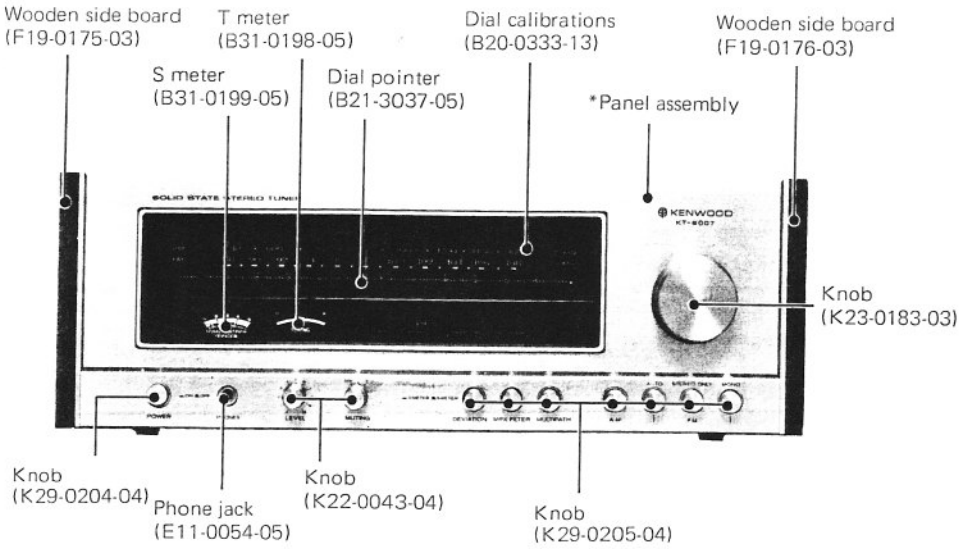
SERVICE MANUAL

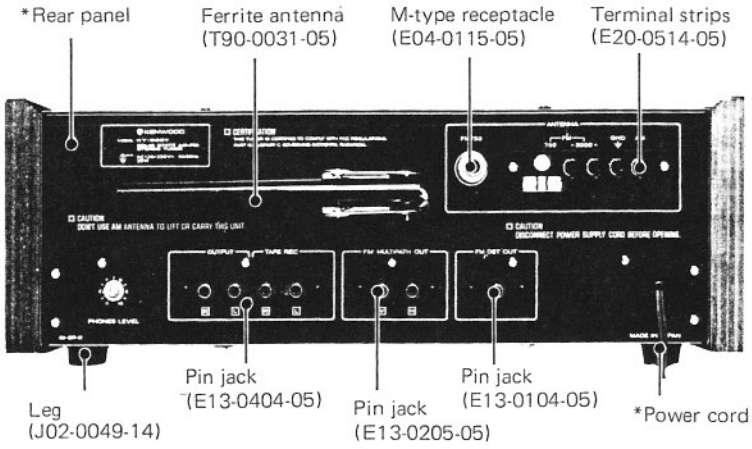
KT-8007



SOLID STATE STEREO TUNER

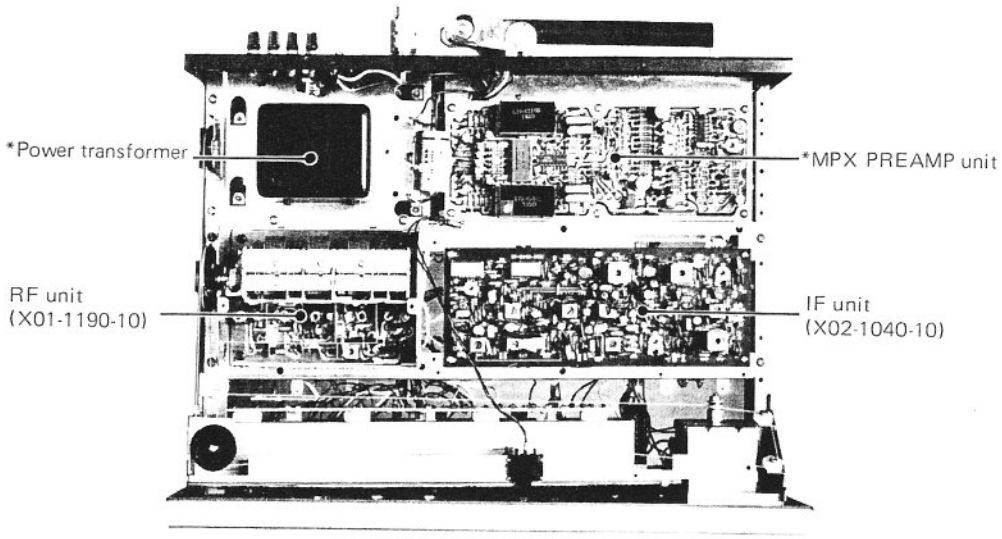
EXTERNAL VIEW

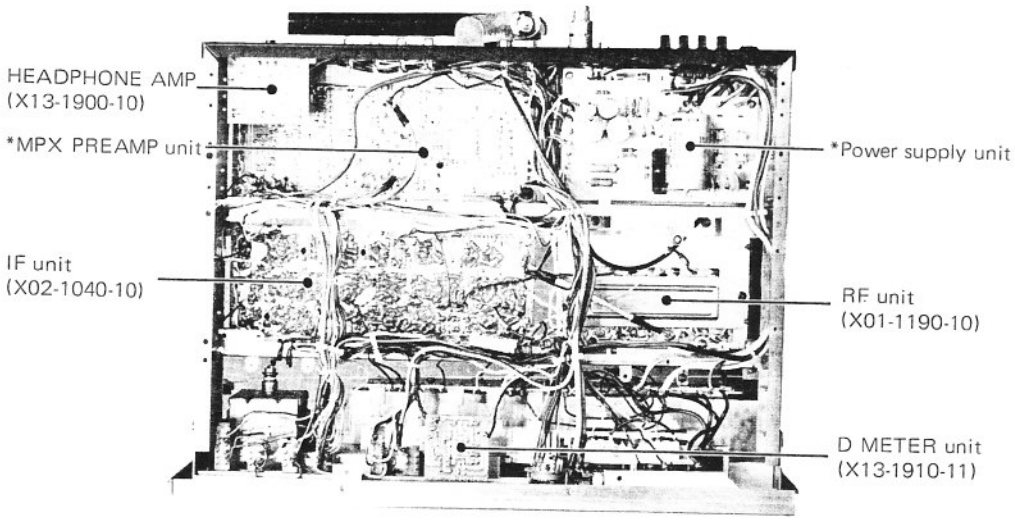




* Refer to
MODIFICATION PARTS LIST

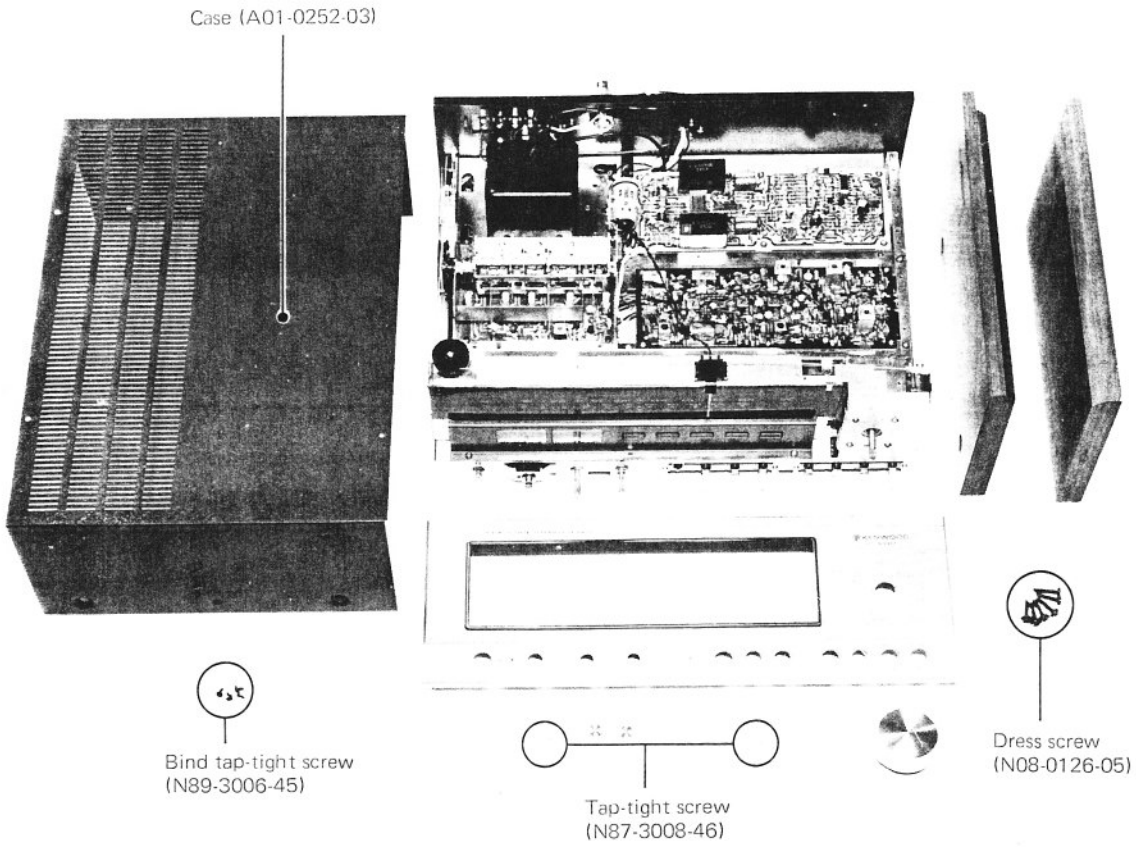
TOP & BOTTOM VIEW



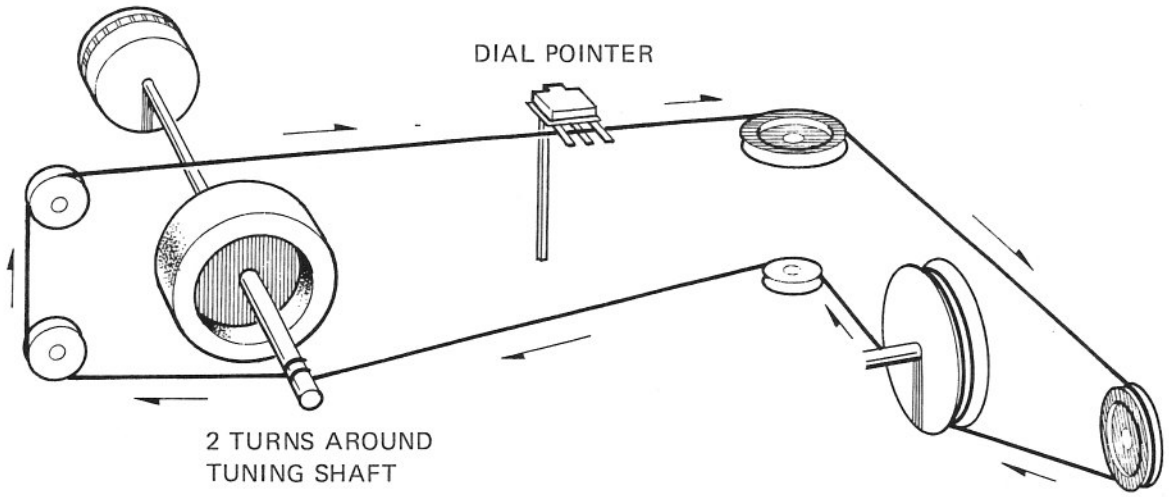


* Refer to
MODIFICATION PARTS LIST

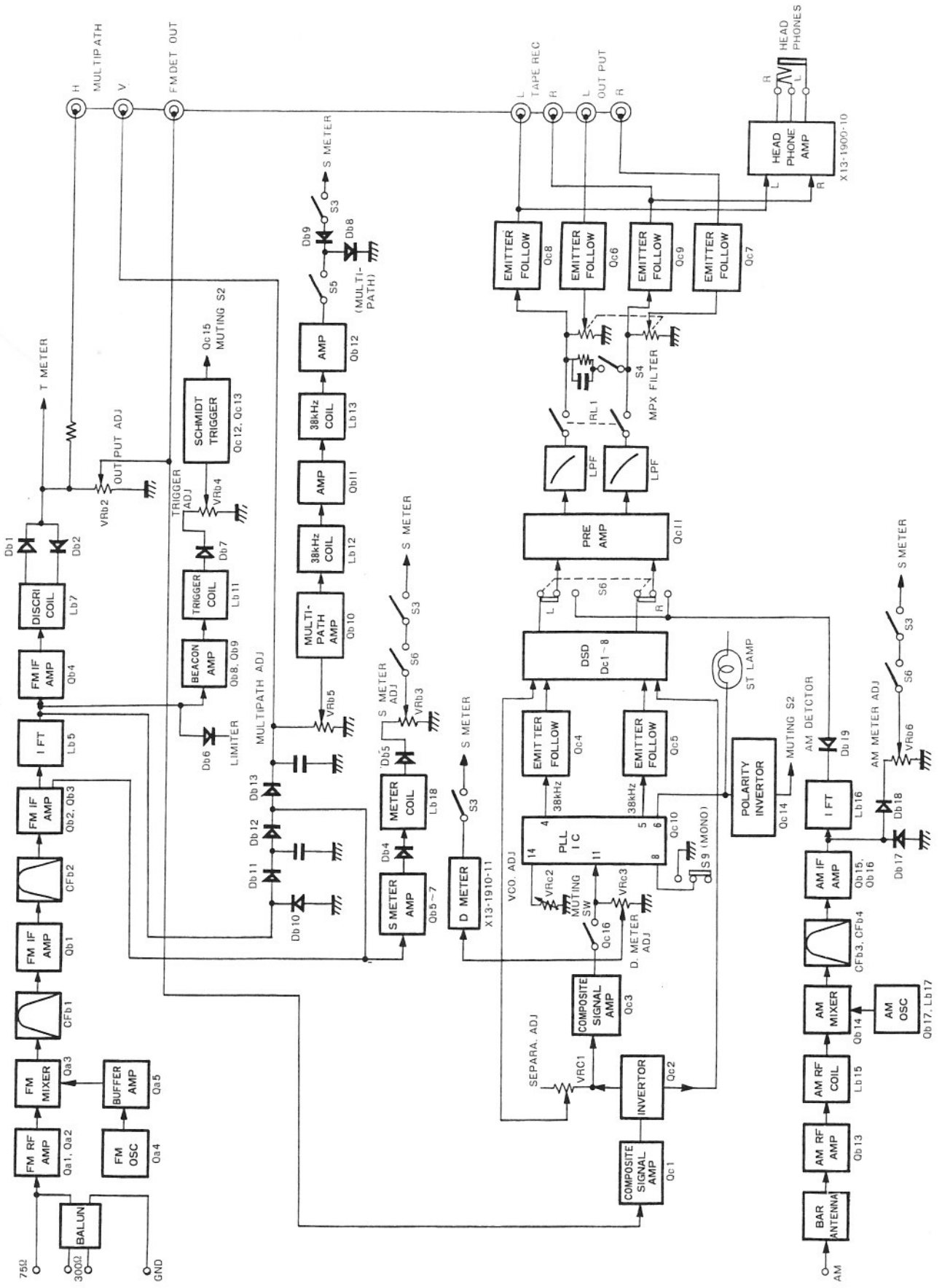
DISASSEMBLY/CORD STRINGING



▼ CORD STRINGING



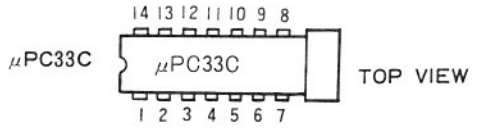
BLOCK DIAGRAM

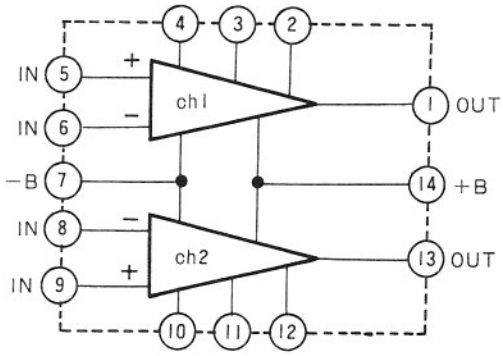


CIRCUIT DESCRIPTION/PACKING

MPX PREAMP (X04-1070-10)

High stability, means that accurate switching signal can be made for a long time and good separation are the necessary conditions required in the design of MPX circuit. In the previous design, 38 kHz sub-carrier signal was generated by doubling 19 kHz pilot signal and it was impossible to obtain high stability in the case of using LC tuning circuit. In this circuit PLL IC is used to construct 38 kHz sub-carrier and DSD (Double Switching Demodulator) circuit to demodulate stereo signals. Now, application of PLL IC and DSD circuit attain high stability and good separation.
Preamp section consists of DC amp circuit using IC, low pass filter, an audio muting circuit using relay and an emitter follower circuitry.



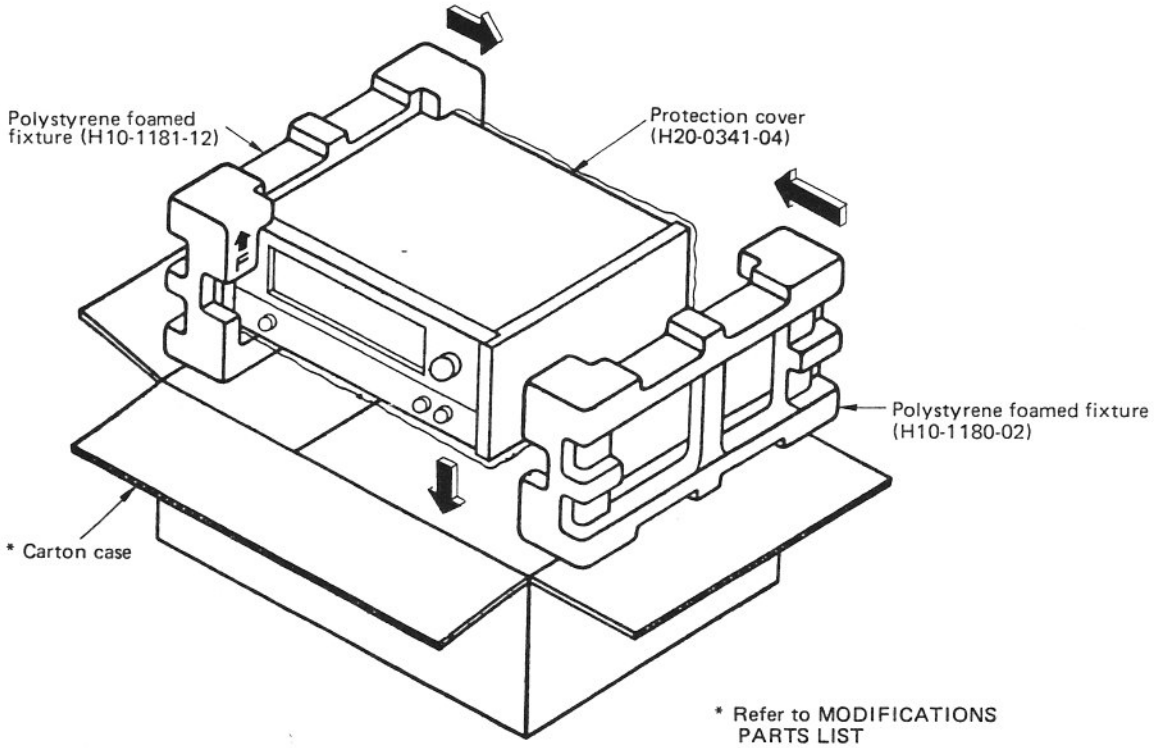


▲ μPC 33C

D METER (X13-1910-11)

The Deviation Meter indicates the frequency deviation of an FM broadcast and degree of modulation in terms of ±75 kHz deviation at 100% modulation.
A signal from a composite amplifier stage (Qc1 ~ 3, Qc16) is fed to ICq1. Incoming signal level, FM multipath interference and FM carrier deviation can all be indicated accurately with a very versatile meter located on the front panel.

▼ PACKING



* Refer to MODIFICATIONS PARTS LIST

ADJUSTMENTS

* Tuning dial is set to the proper point corresponding to no radio stations.
* The sweep and the r.f. generator are set to the lowest response possible on oscilloscope.
* When connecting the r.f. generator to the antenna terminal, use the dummy antenna . . . refer to Fig. 1.
* Use the insulated screwdriver adjusting the i.f.t.
* FM MUTING is OFF position unless it is required.
* Test point shown in the schematic diagram and PC board.
* INPUT means antenna input level.

No.	ALIGN	TEST EQUIPMENTS		TUNER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
FM SECTION							
1	IFT	SWEEP to TP1 via. 5pF cap.	10.7 MHz	Non-station	SCOPE to TP2 via 100kΩ resist.	La7, Lb5	Maximum deflection (Fig. 2)
2	IFT	Same	Same	Same	SCOPE to T3	Lb11	Same
3	DISCRIMI-NATOR	Same	Same		VTVM & SCOPE to REC jack	Lb7	S-response and its symmetry on each side of 10.7 MHz center frequency (Fig. 3)
4	TRACKING	RF-SG to ANT via. dummy ant.	90 MHz 75 kHz (Dev.) 400 Hz (Mod.)	90 MHz	Same	La1, La3, La4 La6, La8	Maximu deflection
5	TRACKING	Same	105 MHz 75 kHz (Dev.) 400 Hz (Mod.)	105 MHz	Same	CTa1 ~ 5	Same
6	BEACON	Same	95 MHz 75 kHz (Dev.) 400 Hz (Mod.) 60 dB (Input)	95 MHz	DC Volt Meter to TP4	VRb4	Set VRb4 to its center. Check the output (DC) at TP4 and assume its value for 0 dB
7	IF GAIN	Same	95 MHz 75 kHz (Dev.) 400 Hz (Mod.) 22 ~ 23dB(Input)	Same	Same	VRb1	Adjust VRb1 so that the output is at −3 dB in respect to 0 dB
8	MUTING	Same	Same	95 MHz MUTING 1 position	Same	VRb4	Adjust VRb4 so that muting operation is on.
9	AF OUTPUT	Same	95 MHz 75 kHz (Dev.) 400 Hz (Mod.) 60 dB (Input)	95 MHz	VTVM & SCOPE to REC jack	VRb2	Output is 1.5V.
10	S METER	Same	Same	Same	S meter	Lb18	Maximum deflection
11	S METER	Same	Same	Same	S meter	VRb3	Confirm the meter deflection at 4.5
12a	VCO	—	—	Non-station	Frequency-counter to TP5	VRc2	Counter indicates 19 kHz.
12b	VCO	RF-SG to ANT via. dummy ant. MPX-SG to RE-SG ext. Mod.	95 MHz 60 dB (Input) PILOT SIG. ON-OFF	95 MHz	SCOPE to TP5	Same	Phase not drift.
13	DEVIATION METER	Same	95 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) 60 dB (Input) L + R (SELECTOR)	95 MHz Deviation meter SW	Deviation meter	VRc3	Meter indicates 100%

ADJUSTMENTS

No.	ALIGN	TEST EQUIPMENTS		TUNER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
14	SEPARATION	Same	95 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) 60 dB (Input) L or R (SELECTOR)	95 MHz	VTVM & SCOPE to REC jack	VRc1	Minimum deflection
15	MULTIPATH	AG to TP6	38 kHz (1mV)	Non-station	VTVM & SCOPE to TP7	Lb12, Lb13	Maximum deflection
16	MULTIPATH	–	–	Non-station	–	VRb5	Set VRb5 to its center
AM SECTION							
1	IFT	RF-SG to ANT	1,000 kHz (400 Hz, 30% Mod.)	1,000 kHz	VTVM & SCOPE to REC jack	Lb16	Maximum deflection
2	TRACKING	RF-SG to ANT	600 kHz (400 Hz, 30% Mod.)	600 kHz	Same	Lb15, Lb17 Ferrite ANT	Same
3	TRACKING	Same	1,400 kHz (400 Hz, 30% Mod.)	1,400 kHz	Same	CTa6 ~ 8	Same
4	S METER	Same	1,000 kHz (400 Hz, 30% Mod.)	1,000 kHz	S meter	VRb6	Confirm the meter deflection at 4.5

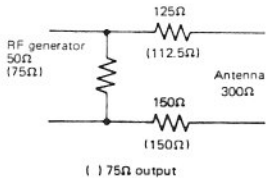


Fig. 1 Dummy antenna

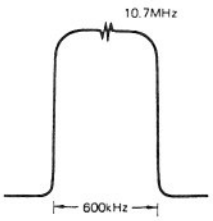


Fig. 2 IF waveform

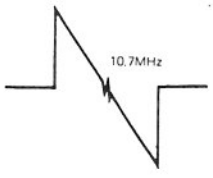


Fig. 3 DISCRI warveform

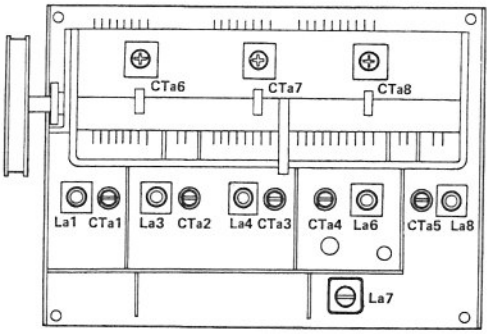


Fig. 4 RF unit

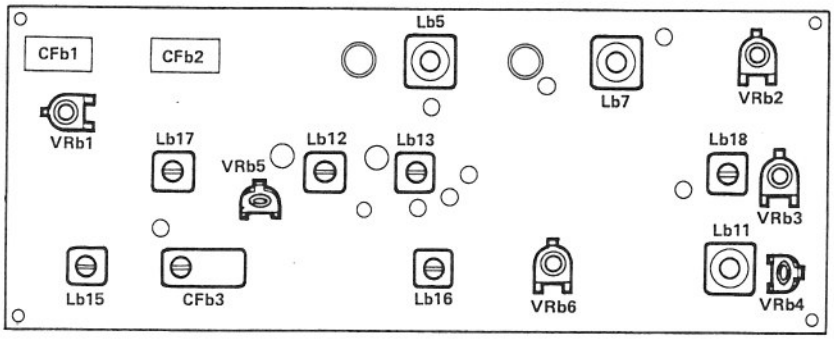


Fig. 5 IF unit

Ref. No.	U.S.A. (K)	Canada (P)	Europe (W)	Scandinavia (L)	England (T)	Other area (M)	Description
R2	RC05GF2H225K	RC05GF2H225K	–	–	–	–	Carbon resistor 2.2MΩ ±10% 1/2W
–	A20-0852-02	A20-0852-02	A20-0852-02	A20-0852-02	A20-0858-02	A20-0852-02	Panel assembly
–	A20-0853-02	A20-0853-02	A20-0853-02	A20-0853-02	A20-0859-02	A20-0853-02	Panel
–	A23-0527-02	A23-0527-02	A23-0529-02	A23-0530-02	A23-0529-02	A23-0528-02	Rear panel
–	B40-1079-04	B40-1078-04	–	–	B40-1080-04	–	Model name plate
–	–	–	B42-0024-04	–	–	–	SEV sticker
–	B42-0359-04	–	–	–	–	–	Caution sticker (side board) x 2
–	B42-0439-04	B42-0439-04	–	–	–	–	Caution sticker (Fuse)
–	–	–	B42-0473-14	B42-0473-14	–	B42-0473-14	Serial number seal
–	B46-0002-00	B46-0021-00	–	–	–	–	Warranty card
–	B50-1249-00	B50-1249-00	B50-1249-00	B50-1249-00	B50-1251-00	B50-1249-00	Instruction manual
–	–	–	B58-0156-00	–	B58-0003-00	B58-0003-00	Power supply caution card
–	–	–	B58-0157-00	–	B58-0101-00	B58-0101-00	Power voltage selector caution card
–	B58-0043-00	B58-0043-00	–	–	–	–	Carton case caution card
–	–	–	D32-0021-04	–	D32-0021-04	D32-0021-04	Switch stopper
–	E29-0047-04	–	–	–	–	–	Ferrite antenna lead holder
–	E30-0181-05	E30-0181-05	E30-0176-05	E30-0292-05	–	E30-0034-05	Power cord
–	H01-1215-04	H01-1216-04	H01-1216-04	H01-1216-04	H01-1217-04	H01-1216-04	Carton case (inside)
–	–	H03-0360-04	H03-0360-04	H03-0360-04	H03-0361-04	H03-0360-04	Carton case (outside)
–	J41-0034-05	J41-0034-05	J41-0017-05	J41-0017-05	J41-0024-15	J41-0034-05	Power cord bushing
–	L04-0072-05	L04-0072-05	L09-0143-05	L09-0142-05	L03-0107-05	L03-0107-05	Power transformer
–	R90-0097-05	–	–	–	R90-0097-05	R90-0097-05	Spark killer
–	–	–	S31-2001-05	–	S31-2001-05	S31-2001-05	Slide switch
S1	S59-2022-15	S59-2022-15	S59-2023-15	S59-2023-15	S59-2024-15	S59-2024-15	Pushbutton switch (POWER)
–	X00-1560-10	X00-1560-10	X00-1560-61	X00-1560-61	X00-1560-01	X00-1560-01	POWER SUPPLY unit
–	X04-1070-10	X04-1070-10	X04-1070-01	X04-1070-01	X04-1070-01	X04-1070-10	MPX PREAMP unit

PARTS LIST

TOTAL

Ref. No.	Parts No.	Description	Remarks
		CAPACITOR	
C1	CE02W1C471	Electrolytic 470μF 16WV	
C2	CE02W0J221	Electrolytic 220μF 6.3WV	
C3	CE02W1C222	Electrolytic 2200μF 6.3WV	
C4	CK45D1H561M	Ceramic 560pF ±20%	
		RESISTOR	
R1	RC05GF2H270K	Carbon 27Ω ±10% 1/2W	
R3	RN14AB3A271J	Metal film 270Ω ±5% 1W	
		SEMICONDUCTOR	
D1		1N60	
		POTENTIOMETER	
VR1	R06-4017-05	50kΩ (B) x 2	
		SWITCH	
S2	S29-1071-05	Rotary (MUTING)	
S6 ~ 9	S42-4005-05	Pushbutton (AM, FM)	
		MISCELLANEOUS	
—	A01-0252-03	Case	
—	A13-0094-03	Frame (A) x 2	
—	A13-0095-22	Frame (B)	
—	A13-0096-12	Frame (C)	
—	A13-0098-03	Frame (E)	
—	A22-0165-01	Sub-panel	
—	A33-0030-04	Reflector	
—	A40-0136-03	Bottom plate	
—	A48-0022-04	Panel side plate (LEFT)	
—	A48-0023-04	Panel side plate (RIGHT)	
—	A70-0083-05	Lamp assembly	
—	B03-0072-03	Dress board	
—	B07-0124-14	Ring	
—	B07-0136-04	Ring	
—	B07-0138-04	Ring	
—	B07-0139-05	Escutcheon	
—	B10-0166-04	Front glass	
—	B19-0168-03	Color board	
—	B19-0170-04	Filter	
—	B20-0333-13	Dial calibrations	
—	B21-3037-15	Dial pointer	
—	B23-3013-14	Indicator board	
—	B30-0075-05	Pilot lamp (8V 300 mA) x 4	
—	B30-0077-05	Pilot lamp (8V 50 mA) x 5	
—	B31-0198-05	T meter	
—	B31-0199-05	S meter	
—	B42-0009-04	Passed sticker	
—	B52-0174-00	Schematic diagram	
—	D01-0021-05	Flywheel	
—	D15-0067-34	Pulley	
—	D15-0073-14	Pulley (middle) x 2	
—	D15-0075-04	Pulley (small) x 3	
—	D20-0106-03	Dial shaft assembly	
—	E04-0115-05	M-type receptacle	
—	E05-0117-05	TM plug	
—	E11-0054-05	Phone jack (PHONES)	
—	E13-0104-05	Pin jack (1P)	
—	E13-0205-05	Pin jack (2P)	
—	E13-0404-05	Pin jack (4P)	
—	E20-0514-05	Terminal strips	
—	E30-0050-05	Audio cable x 2	
—	F07-0353-03	Dial cover	
—	F07-0355-03	IF unit cover	
—	F07-0356-03	MPX PREAMP unit cover	
—	F19-0175-03	Wooden side board (L)	
—	F19-0176-03	Wooden side board (R)	
—	G01-0044-14	Dial spring	
—	H25-0048-03	Polyethylene bag	
—	H25-0078-00	Instruction bag	
—	H25-0148-04	Warranty bag	
—	J02-0049-14	Leg x 4	
—	J19-0258-04	Lead wire holder	
—	J19-0428-13	Front glass holder (A)	
—	J19-0429-13	Front glass holder (B)	
—	J21-0480-13	Antenna holder	
—	J21-1292-04	Transformer holder	
—	J21-1293-04	Pulley holder	
—	J25-1133-03	PC board (lamp assembly)	
—	K22-0043-04	Knob (LEVEL, MUTING) x 2	
—	K23-0183-03	Knob (TUNING)	
—	K29-0204-04	Knob (POWER)	
—	K29-0205-04	Knob (SELECTOR) x 7	
—	L19-0009-05	Balun transformer	
L1, 2	L33-0025-05	Choke coil (1μH)	
—	T90-0002-05	FM indoor antenna	
—	T90-0031-05	Ferrite antenna	
—	X01-1190-10	RF unit	
—	X02-1040-10	IF unit	
—	X13-1900-10	HEADPHONE AMP unit	
—	X13-1910-11	D METER unit	

POWER SUPPLY (X00-1560-10, 01, 61)

Ref. No.	Parts No.	Description	Remarks
		CAPACITOR	
Ck1, 2	CK45E2H103P	Ceramic 0.01μF +100%, −0%	
Ck3	CE02W1E332	Electrolytic 3300μF 25WV	
Ck4	CE04W1E471	Electrolytic 470μF 25WV	
Ck5	CE04W1C471	Electrolytic 470μF 16WV	
Ck6	CE04W1E010	Electrolytic 1μF 25WV	
Ck7	CE04W1E471	Electrolytic 470μF 25WV	
Ck8	CE04W1E221	Electrolytic 220μF 25WV	
Ck9	CE04W1C101	Electrolytic 100μF 16WV	
		RESISTOR	
Rk1	PD14BY2E271J-B	Carbon 270Ω ±5% 1/4W	
Rk2	PD14BY2E101J	Carbon 100Ω ±5% 1/4W	
Rk3	PD14BY2E181J-B	Carbon 180Ω ±5% 1/4W	
Rk4	PD14BY2E680J	Carbon 68Ω ±5% 1/4W	

PARTS LIST

Ref. No.	Parts No.	Description	Re-marks
Rk5	PD14BY2E682J	Carbon 6.8kΩ ±5% 1/4W	
Rk6	RN14AB3D330K-B	Metal film 33Ω ±10% 2W	
Rk7	RN14AB3D121K-B	Metal film 120Ω ±10% 2W	
Rk8	PD14BY2E564J	Carbon 560Ω ±5% 1/4W	
	SEMICONDUCTOR		
Qk1		2SC1419 (B), (C)	
Dk1~5		V03C	
Dk6		1S1555	
Dk7, 8		YZ-140	
	MISCELLANEOUS		
–	F01-0197-04	Heat sink	
Fk1	F05-2021-05	Fuse (2A)	–10
	F05-2023-05	Fuse (2A)	–01
	F05-2029-05	Fuse (2A)	–61
Fk2, 3	F05-5011-05	Fuse (0.5A)	–10
	F05-5013-05	Fuse (0.5A)	–01
	F05-5015-05	Fuse (0.5A)	–61
–	J13-0039-05	Fuse holder x 6	–61
–	J13-0041-05	Fuse holder x 6	–10,–01

RF (X01-1190-10)

Ref. No.	Parts No.	Description	Re-marks
	CAPACITOR		
Ca1	CC45SH1H150J	Ceramic 15pF ±5%	
Ca2, 3	CK45F1H103Z	Ceramic 0.01μF +80%, –20%	
Ca4	CC45SL1H100J	Ceramic 10pF ±5%	
Ca5	CC45SH1H150J	Ceramic 15pF ±5%	
Ca6	CC45SH1H180J	Ceramic 18pF ±5%	
Ca7~9	CK45F1H103Z	Ceramic 0.01μF +80%, –20%	
Ca10	CC45SL1H100J	Ceramic 10pF ±5%	
Ca11	CC45SH1H150J	Ceramic 15pF ±5%	
Ca12	CC45PG1H220J	Ceramic 22pF ±5%	
Ca13	CC45TH1H100J	Ceramic 10pF ±5%	
Ca14	CC45TH1H390J	Ceramic 39pF ±5%	
Ca15,16	CC45RG1H100J	Ceramic 10pF ±5%	
Ca17	CK45F1H103Z	Ceramic 0.01μF +80%, –20%	
Ca18	CC45SH1H220J	Ceramic 22pF ±5%	
Ca19	CC45SL1H221K	Ceramic 220pF ±10%	
Ca20	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Ca21	CQ93M1H103K	Mylar 0.01μF ±10%	
	RESISTOR		
Ra1	PD14BY2B681J	Carbon 680Ω ±5% 1/8W	
Ra2	PD14BY2B103J	Carbon 10kΩ ±5% 1/8W	
Ra3	PD14BY2B102J	Carbon 1kΩ ±5% 1/8W	
Ra4, 5	PD14BY2B103J	Carbon 10kΩ ±5% 1/8W	
Ra6	PD14BY2B102J	Carbon 1kΩ ±5% 1/8W	
Ra7	PD14BY2B221J	Carbon 220Ω ±5% 1/8W	
Ra9	PD14BY2B104J	Carbon 100kΩ ±5% 1/8W	
Ra10	PD14BY2B221J	Carbon 220Ω ±5% 1/8W	
Ra11	PD14BY2B103J	Carbon 10kΩ ±5% 1/8W	
Ra12	PD14BY2B123J	Carbon 12kΩ ±5% 1/8W	
Ra13	PD14BY2B221J	Carbon 220Ω ±5% 1/8W	
Ra14	PD14BY2B102J	Carbon 1kΩ ±5% 1/8W	
Ra15	PD14BY2B101J	Carbon 100Ω ±5% 1/8W	
Ra16	PD14BY2B331J	Carbon 330Ω ±5% 1/8W	
Ra17	PD14BY2B104J	Carbon 100kΩ ±5% 1/8W	
	SEMICONDUCTOR		
Qa1		3SK45 (B), (C)	
Qa2, 3		3SK41 (L), (M) or 3SK45 (B),(C)	
Qa4		2SC785 (R)	
Qa5		2SK19 (GR), (BL)	
THa1		SDT-65	
	COIL/IFT		
La1	L34-0301-04	FM ANT coil	
La2	L33-0025-05	Choke coil	
La3	L34-0418-05	RF 1 coil	
La4	L34-0419-05	RF 2 coil	
La5	L33-0025-05	Choke coil	
La6	L34-0420-05	RF 3 coil	
La7	L30-0253-05	FM IFT	
La8	L34-0424-05	OSC coil	
La9	L33-0026-05	Choke coil	
La10	L40-1092-03	Choke coil	
	MISCELLANEOUS		
–	A10-0344-23	Front end chassis	
–	A40-0104-04	Front end bottom plate	
–	C01-0174-05	Variable capacitor	
CTa1~4	C05-0010-15	Ceramic trimmer (10P)	
CTa5	C05-0009-15	Ceramic trimmer (6P)	
–	E29-0041-04	Lead plate	
–	F07-0285-23	Front end cover	
–	F10-0354-04	Front end shielded plate	

IF (X02-1040-10)

Ref. No.	Parts No.	Description	Re-marks
	CAPACITOR		
Cb1~10	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb11	CC45SL1H220K	Ceramic 22pF ±10%	
Cb12	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb13,14	CQ93M1H223K	Mylar 0.022μF±10%	
Cb15	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb16	CK45F1H473Z	Ceramic 0.047μF+80%,–20%	
Cb17~19	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb20	CQ93M1H223K	Mylar 0.022μF±10%	
Cb21	CC45SL1H101K	Ceramic 100pF ±10%	
Cb22,23	CC45SL1H221K	Ceramic 220pF ±10%	
Cb24	CE04W1E100	Electrolytic 10μF 25WV	
Cb25~29	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb30	CC45SL1H221K	Ceramic 220pF ±10%	
Cb31~33	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb34	CQ93M1H223K	Mylar 0.022μF±10%	
Cb35~38	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb39	CC45SL1H470K	Ceramic 47pF ±10%	
Cb40	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	
Cb41	CC45SL1H220K	Ceramic 22pF ±10%	
Cb42	CK45F1H103Z	Ceramic 0.01μF +80%,–20%	

PARTS LIST

Ref. No.	Parts No.	Description	Remarks
Cb43	CS04E1ER22M	Tantalum 0.22μF 25WV	
Cb44	CK45F1H223Z	Ceramic 0.022μF +80%,−20%	
Cb45	CC45SL1H100D	Ceramic 10pF ±0.5pF	
Cb46	CK45F1H223Z	Ceramic 0.022μF +80%,−20%	
Cb47,48	CC45SL1H470K	Ceramic 47pF ±10%	
Cb50	CE04W1H010	Electrolytic 1μF 50WV	
Cb51	CQ93M1H562K	Mylar 0.0056μF ±10%	
Cb52	CQ09S1H472J	Polystyrene 4700pF ±5%	
Cb53,54	CE04W1H010	Electrolytic 1μF 50WV	
Cb55	CQ09S1H472J	Polystyrene 4700pF ±5%	
Cb56~58	CE04W1H010	Electrolytic 1μF 50WV	
Cb59	CQ93M1H223K	Mylar 0.022μF ±10%	
Cb60	CK45F1H473Z	Ceramic 0.047μF +80%,−20%	
Cb61	CQ93M1H223K	Mylar 0.022μF ±10%	
Cb62,63	CK45F1H473Z	Ceramic 0.047μF +80%,−20%	
Cb64	CE04W1E100	Electrolytic 10μF 25WV	
Cb65	CK45F1H223Z	Ceramic 0.022μF +80%,−20%	
Cb66	CQ93M1H223K	Mylar 0.022μF ±10%	
Cb67	CC45SL1H680K	Ceramic 68pF ±10%	
Cb68	CE04W1H010	Electrolytic 1μF 50WV	
Cb69	CK45F1H223Z	Ceramic 0.022μF +80%,−20%	
Cb70	CE04W1E100	Electrolytic 10μF 25WV	
Cb71,72	CK45F1H223Z	Ceramic 0.022μF +80%,−20%	
Cb73	CQ93M1H223K	Mylar 0.022μF ±10%	
Cb74	CC45SL1H331K	Ceramic 330pF ±10%	
Cb75	CM93D1H102J(Z)	Mica 1000pF ±5%	
Cb76	CK45F1H223Z	Ceramic 0.022μF +80%,−20%	
Cb77	CQ93M1H472K	Mylar 4700pF ±10%	
Cb78	CQ93M1H103K	Mylar 0.01μF ±10%	
Cb79	CQ93M1H223K	Mylar 0.022μF ±10%	
Cb80	CS04E1ER47M	Tantalum 0.47μF 25WV	
Cb81	CE04W1E100	Electrolytic 10μF 25WV	
Cb82	CQ93M1H223K	Mylar 0.022μF ±10%	
Cb83	CC45SL1H180K	Ceramic 18pF ±10%	
Cb84	CQ09S1H391J	Polystyrene 390pF ±5%	
Cb85	CQ93M1H223K	Mylar 0.022μF ±10%	
Cb86	CK45F1H223Z	Ceramic 0.022μF +80%,−20%	
Cb87	CE04W1E100	Electrolytic 10μF 25WV	

RESISTOR

Rb1	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb3	PD14BY2B153J	Carbon	15kΩ	±5%	1/8W	
Rb4	PD14BY2B471J	Carbon	470Ω	±5%	1/8W	
Rb5	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb6	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb8	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb9	PD14BY2B562J	Carbon	5.6kΩ	±5%	1/8W	
Rb10	PD14BY2B153J	Carbon	15kΩ	±5%	1/8W	
Rb11	PD14BY2B471J	Carbon	470Ω	±5%	1/8W	
Rb12	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb13	PD14BY2B820J	Carbon	82Ω	±5%	1/8W	
Rb14	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb16	PD14CY2E681J	Carbon	680Ω	±5%	1/4W	
Rb17	PD14BY2B221J	Carbon	220Ω	±5%	1/8W	
Rb18	PD14BY2B822J	Carbon	8.2kΩ	±5%	1/8W	
Rb19	PD14BY2B101J	Carbon	100Ω	±5%	1/8W	
Rb20	PD14CY2E102J	Carbon	1kΩ	±5%	1/4W	
Rb21	PD14BY2B221J	Carbon	220Ω	±5%	1/8W	
Rb22	PD14BY2B682J	Carbon	6.8kΩ	±5%	1/8W	
Rb23,24	PD14BY2B222J	Carbon	2.2kΩ	±5%	1/8W	
Rb25	PD14BY2B471J	Carbon	470Ω	±5%	1/8W	
Rb26	PD14BY2B104J	Carbon	100kΩ	±5%	1/8W	
Rb27,28	PD14BY2B682J	Carbon	6.8kΩ	±5%	1/8W	
Rb29	PD14BY2B222J	Carbon	2.2kΩ	±5%	1/8W	
Rb30	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb31	PD14BY2B562J	Carbon	5.6kΩ	±5%	1/8W	
Rb32	PD14BY2B103J	Carbon	10kΩ	±5%	1/8W	
Rb33	PD14CY2E394J	Carbon	390kΩ	±5%	1/4W	
Rb34	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb35	PD14BY2B562J	Carbon	5.6kΩ	±5%	1/8W	
Rb36	PD14BY2B223J	Carbon	22kΩ	±5%	1/8W	
Rb37	PD14BY2B681J	Carbon	680Ω	±5%	1/8W	
Rb38	PD14BY2B682J	Carbon	6.8kΩ	±5%	1/8W	
Rb39	PD14BY2B221J	Carbon	220Ω	±5%	1/8W	
Rb40	PD14BY2B472J	Carbon	4.7kΩ	±5%	1/8W	
Rb41	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb42	PD14BY2B103J	Carbon	10kΩ	±5%	1/8W	
Rb43	PD14BY2B390J	Carbon	39Ω	±5%	1/8W	
Rb44	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb45	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb46	PD14BY2B152J	Carbon	1.5kΩ	±5%	1/8W	
Rb47	PD14BY2B332J	Carbon	3.3kΩ	±5%	1/8W	
Rb48~50	PD14BY2B103J	Carbon	10kΩ	±5%	1/8W	
Rb51	PD14BY2B393J	Carbon	39kΩ	±5%	1/8W	
Rb52	PD14BY2B224J	Carbon	220kΩ	±5%	1/8W	
Rb53	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb54	PD14BY2B393J	Carbon	39kΩ	±5%	1/8W	
Rb55	PD14BY2B224J	Carbon	220kΩ	±5%	1/8W	
Rb56	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb57	PD14BY2B393J	Carbon	39kΩ	±5%	1/8W	
Rb58	PD14BY2B224J	Carbon	220kΩ	±5%	1/8W	
Rb59	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb60	PD14BY2B392J	Carbon	3.9kΩ	±5%	1/8W	
Rb61	PD14BY2B224J	Carbon	220kΩ	±5%	1/8W	
Rb62	PD14BY2B103J	Carbon	10kΩ	±5%	1/8W	
Rb63	PD14BY2B472J	Carbon	4.7kΩ	±5%	1/8W	
Rb64	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb65	PD14BY2B473J	Carbon	47kΩ	±5%	1/8W	
Rb66	PD14BY2B562J	Carbon	5.6kΩ	±5%	1/8W	
Rb67	PD14BY2B563J	Carbon	56kΩ	±5%	1/8W	
Rb68	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb69	PD14BY2B100J	Carbon	10Ω	±5%	1/8W	
Rb70,71	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb72	PD14BY2B823J	Carbon	82kΩ	±5%	1/8W	
Rb73,74	PD14BY2B332J	Carbon	3.3kΩ	±5%	1/8W	
Rb75	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb76	PD14BY2B101J	Carbon	100Ω	±5%	1/8W	
Rb77	PD14BY2B562J	Carbon	5.6kΩ	±5%	1/8W	
Rb78	PD14BY2B273J	Carbon	27kΩ	±5%	1/8W	
Rb79	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb80	PD14BY2B822J	Carbon	8.2kΩ	±5%	1/8W	
Rb81	PD14BY2B333J	Carbon	33kΩ	±5%	1/8W	
Rb82	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb83	PD14BY2B101J	Carbon	100Ω	±5%	1/8W	
Rb84	PD14BY2B822J	Carbon	8.2kΩ	±5%	1/8W	
Rb85	PD14BY2B101J	Carbon	100Ω	±5%	1/8W	
Rb86	PD14BY2B562J	Carbon	5.6kΩ	±5%	1/8W	
Rb87	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb88	PD14BY2B562J	Carbon	5.6kΩ	±5%	1/8W	
Rb89	PD14BY2B153J	Carbon	15kΩ	±5%	1/8W	
Rb90	PD14BY2B563J	Carbon	56kΩ	±5%	1/8W	
Rb91	PD14BY2B221J	Carbon	220Ω	±5%	1/8W	
Rb92	PD14BY2B331J	Carbon	330Ω	±5%	1/8W	
Rb93	PD14BY2B102J	Carbon	1kΩ	±5%	1/8W	
Rb94	PD14BY2B333J	Carbon	33kΩ	±5%	1/8W	

PARTS LIST

Ref. No.	Parts No.	Description	Remarks
SEMICONDUCTOR			
Qb1,2		2SC381 (O)	
Qb3, 4		NJM703W	
Qb5, 6		2SC381 (R)	
Qb7~9		2SC381 (O)	
Qb10~12		2SC828A (R)	
Qb13~15		2SC941 (O)	
Qb16		2SC381 (O)	
Qb17		2SC941 (O)	
Db1~5		1N60	
Db6		M8513A-O	
Db7~13		1N60	
Db14~16		M8513A-O	
Db17~20		1N60	
THb1		5T32	
COIL/FILTER/IFT			
Lb1, 2	L40-1092-03	Ferri inductor (1R0M)	
Lb3	L40-1011-03	Ferri inductor (101K)	
Lb4	L40-1092-03	Ferri inductor (1R0M)	
Lb5	L30-0205-05	FM IFT	
Lb6	L40-1011-43	Ferri inductor (101K)	
Lb7	L30-0207-15	Discriminator coil	
Lb8	L40-1011-43	Ferri inductor (101K)	
Lb9	L40-3311-03	Ferri inductor (331K)	
Lb11	L30-0206-15	Trigger coil	
Lb12,13	L31-0285-05	38kHz coil	
Lb14	L40-1025-03	Ferri inductor (102J)	
Lb15	L31-0111-05	AM RF coil	
Lb16	L30-0052-05	AM IFT	
Lb17	L30-0082-05	AM OSC coil	
Lb18	L30-0256-05	Meter coil	
CFb1,2	L72-0020-05	Ceramic filter (FM)	
CFb3	L72-0021-05	Ceramic filter (AM)	
CFb4	L72-0022-05	Ceramic filter (AM)	
POTENTIOMETER			
VRb1	R12-2016-05	PC trimmer 5kΩ	
VRb2	R12-3028-05	PC trimmer 20kΩ	
VRb3	R12-2016-05	PC trimmer 5kΩ	
VRb4	R12-5014-05	PC trimmer 100kΩ	
VRb5	R12-5013-05	PC trimmer 100kΩ	
VRb6	R12-2016-05	PC trimmer 5kΩ	

MPX PREAMP (X04-1070-10,01)

Ref. No.	Parts No.	Description	Remarks
CAPACITOR			
Cc1	CE04W1E100	Electrolytic 10μF 25WV	
Cc2	CE04W1H010	Electrolytic 1μF 50WV	
Cc3	CQ93M1H473M	Mylar 0.047μF ±20%	
Cc4	CQ93M1H103M	Mylar 0.01μF ±20%	
Cc5	CQ08S1H471J	Polystyrene 470pF ±5%	
Cc6	CC45SL1H331K	Ceramic 330pF ±10%	
Cc7	CS15E1VR47M	Tantalum 0.47μF 35WV	
Cc8	CS15E1VR33M	Tantalum 0.33μF 35WV	
Cc9	CS15E1VR10M	Tantalum 0.1μF 35WV	
Cc10	CE04W1C221	Electrolytic 220μF 16WV	
Cc11	CE04W1E4R7-BR	Electrolytic 4.7μF 25WV	
Cc12	CE04W1C470-BR	Electrolytic 47μF 16WV	
Cc13~16	CE04W1E100-BR	Electrolytic 10μF 25WV	
Cc17,18	CE04W1H010-BR	Electrolytic 1μF 50WV	
Cc19,20	CQ93M1H822J	Mylar 0.0082μF ±5%	−10
	CQ93M1H562J	Mylar 0.0056μF ±5%	−01
Cc21~24	CQ93M1H224K	Mylar 0.22μF ±10%	
Cc25,26	CC45SL1H101K	Ceramic 100pF ±10%	
Cc27,28	CC45SL1H221K	Ceramic 220pF ±10%	
Cc29,30	CS15E1V1R5M	Tantalum 1.5μF 35WV	
Cc31~38	CE04W1H010	Electrolytic 1μF 50WV	
Cc39	CQ93M1H332M	Mylar 0.0033μF ±20%	
Cc40	CE04W1E100	Electrolytic 10μF 25WV	
RESISTOR			
Rc1	PD14BY2E823J	Carbon 82kΩ ±5% 1/4W	
Rc2	PD14BY2E274J	Carbon 270kΩ ±5% 1/4W	
Rc3	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W	
Rc4	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W	
Rc5	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W	
Rc6	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W	
Rc7	PD14BY2E474J	Carbon 470kΩ ±5% 1/4W	
Rc8	PD14BY2E471J	Carbon 470Ω ±5% 1/4W	
Rc9	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W	
Rc10	PD14BY2E824J	Carbon 820kΩ ±5% 1/4W	
Rc12	PD14BY2E273J	Carbon 27kΩ ±5% 1/4W	
Rc13	PD14BY2E163J	Carbon 16kΩ ±5% 1/4W	Qc10: HA-1156
	PD14BY2E183J	Carbon 18kΩ ±5% 1/4W	Qc10: SN-76115 N
Rc14	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W	
Rc15,16	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W	
Rc17,18	PD14BY2E822J	Carbon 8.2kΩ ±5% 1/4W	
Rc19,20	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W	
Rc22,23	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W	
Rc24~27	PD14BY2E153J	Carbon 15kΩ ±5% 1/4W	
Rc28,29	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W	
Rc30~37	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W	
Rc38,39	PD14BY2E184J	Carbon 180kΩ ±5% 1/4W	
Rc40,41	PD14BY2E224J	Carbon 220kΩ ±5% 1/4W	
Rc42,43	PD14BY2E184J	Carbon 180kΩ ±5% 1/4W	
Rc44,45	PD14BY2E682J	Carbon 6.8kΩ ±5% 1/4W	
Rc46,47	PD14BY2E184J	Carbon 180kΩ ±5% 1/4W	
Rc48,49	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W	
Rc50,51	PD14BY2E563J	Carbon 56kΩ ±5% 1/4W	
Rc52,53	PD14BY2E153J	Carbon 15kΩ ±5% 1/4W	
Rc54,55	PD14BY2E224J	Carbon 220kΩ ±5% 1/4W	
Rc56,57	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W	
Rc58,59	PD14BY2E302J	Carbon 3kΩ ±5% 1/4W	
Rc60,61	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W	
Rc62,63	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W	
Rc64~67	PD14BY2E224J	Carbon 220kΩ ±5% 1/4W	
Rc68~71	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W	
Rc72~75	PD14BY2E184J	Carbon 180kΩ ±5% 1/4W	
Rc76	PD14BY2E273J	Carbon 27kΩ ±5% 1/4W	
Rc77	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W	
Rc78	PD14BY2E471J	Carbon 470Ω ±5% 1/4W	
Rc79	PD14BY2E823J	Carbon 82kΩ ±5% 1/4W	
Rc80	PD14BY2E273J	Carbon 27kΩ ±5% 1/4W	
Rc81,82	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W	
Rc83	PD14BY2E471J	Carbon 470Ω ±5% 1/4W	
Rc84	PD14BY2E823J	Carbon 82kΩ ±5% 1/4W	
Rc85	PD14BY2E273J	Carbon 27kΩ ±5% 1/4W	

PARTS LIST

Ref. No.	Parts No.	Description	Remarks
Rc86	PD14BY2E823J	Carbon 82kΩ ±5% 1/4W	
Rc87	PD14BY2E684J	Carbon 680kΩ ±5% 1/4W	
		SEMICONDUCTOR	
Qc1		2SA733 (Q)	
Qc2~9		2SC1345 (C), (D)	
Qc10		HA1156 or SN76115N	
Qc11		μPC 33C	
Qc12~15		2SC945 (Q), (R)	
Qc16		2SC1345 (C), (D)	
Dc1~8		1N60	
Dc9~11		1S2076	
		COIL/FILTER	
Lc1,2	L79-0011-05	Low pass filter	
Lc3	L40-1021-45	Choke coil	
		POTENTIOMETER	
VRc1	R12-0058-05	PC trimmer 470Ω	
VRc2	R12-2020-05	PC trimmer 6.8kΩ	
VRc3	R12-4019-05	PC trimmer 50kΩ	
		MISCELLANEOUS	
RL1	S51-2024-05	Reed relay	

HEADPHONE AMP (X13-1900-10)

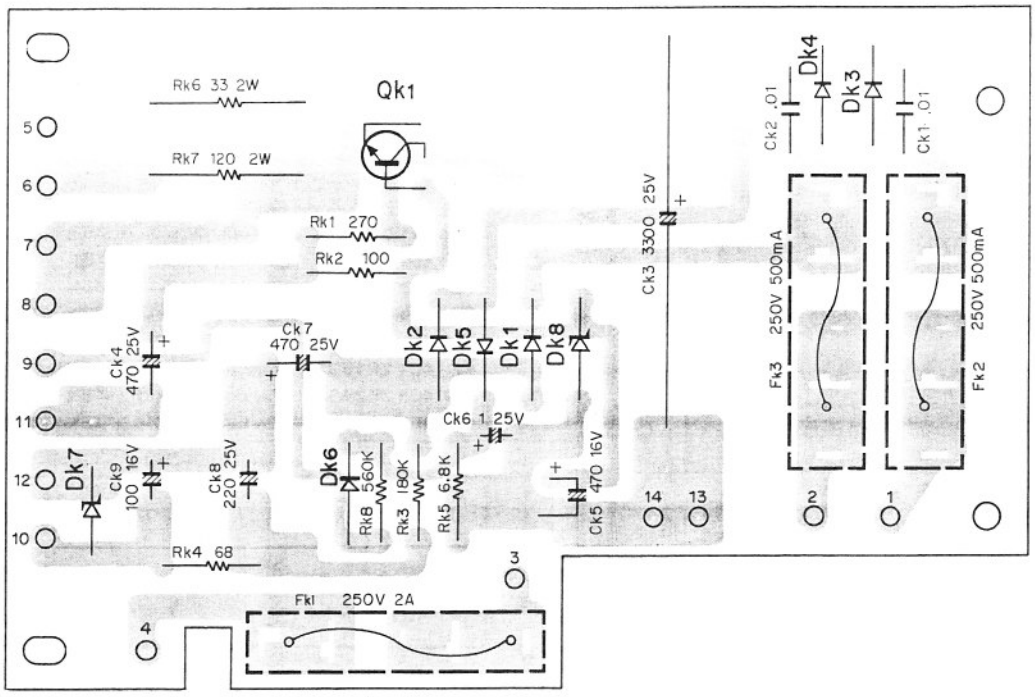
Ref. No.	Parts No.	Description	Remarks
		CAPACITOR	
Ch1,2	CE04W1H010	Electrolytic 1μF 50WV	
Ch3,4	CC45SL1H100D	Ceramic 10pF ±0.5pF	
Ch5,6	CE04W1C221	Electrolytic 220μF 16WV	
Ch7	CE04W1C471	Electrolytic 470μF 16WV	
		RESISTOR	
Rh1,2	PD14CY2E222J	Carbon 2.2kΩ ±5% 1/4W	
Rh3,4	PD14CY2E683J	Carbon 68kΩ ±5% 1/4W	
Rh5,6	PD14CY2E334J	Carbon 330kΩ ±5% 1/4W	
Rh7,8	PD14CY2E100J	Carbon 10Ω ±5% 1/4W	
Rh9,10	RN14AB3D101K-B	Metal film 100Ω ±10% 2W	
		SEMICONDUCTOR	
Qh1,2		2SC1345 (D), (E)	
Qh3,4		2SC1384 (R)	
		POTENTIOMETER	
VRh1	R06-4020-05	Volume 50kΩ (B) x 2	

D METER (X13-1910-11)

Ref. No.	Parts No.	Description	Remarks
		CAPACITOR	
Cq1	CQ93M1H154M	Mylar 0.15μF ±20%	
		RESISTOR	
Rq1	PD14BY2E273J	Carbon 27kΩ ±5% 1/4W	
Rq2	PD14BY2E334J	Carbon 330kΩ ±5% 1/4W	
Rq3	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W	
Rq4	PD14CY2E105J	Carbon 1MΩ ±5% 1/4W	
Rq5	PD14BY2E223J	Carbon 22kΩ ±5% 1/4W	
Rq6	PD14CY2E163J	Carbon 16kΩ ±5% 1/4W	
Rq7	PD14CY2E304J	Carbon 300kΩ ±5% 1/4W	
Rq8	PD14CY2E152J	Carbon 1.5kΩ ±5% 1/4W	
Rq9	PD14CY2E243J	Carbon 24kΩ ±5% 1/4W	
Rq10	PD14CY2E681J	Carbon 680Ω ±5% 1/4W	
		SEMICONDUCTOR	
1Cq1		RC4558T	
Dq1		1S2076	
		SWITCH	
S2~5	S40-3009-05	Pushbutton (DEV, MPX, MUL)	

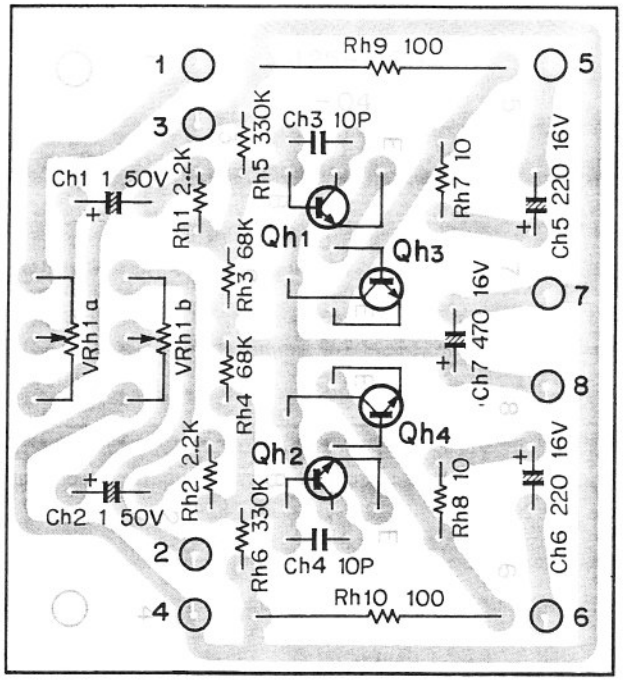
PC BOARD

▼ POWER SUPPLY (X00-1560-10)



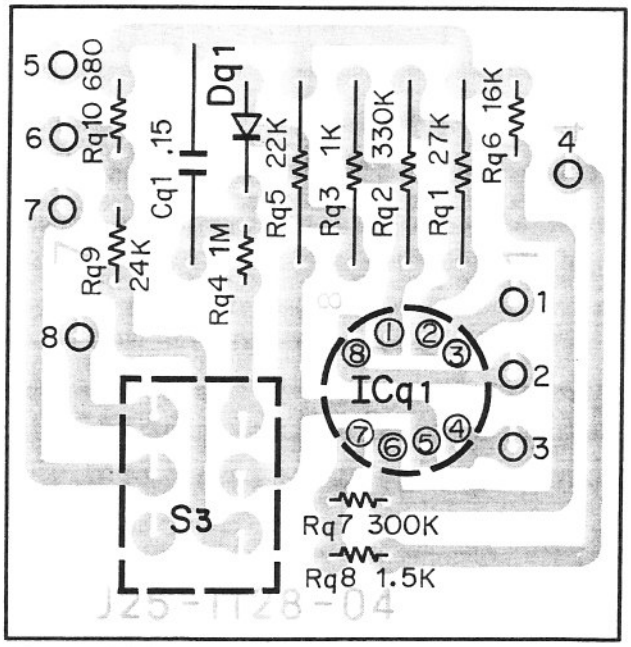
Qk1: 2SC1419(B) or (C) Dk1 ~ 5: V03C, Dk6: 1S1555 Dk7,8: YZ-140

▼ HEADPHONE AMP (X13-1900-10)



Qh1,2: 2SC1345(D) or (E), Qh3,4: 2SC1384R,

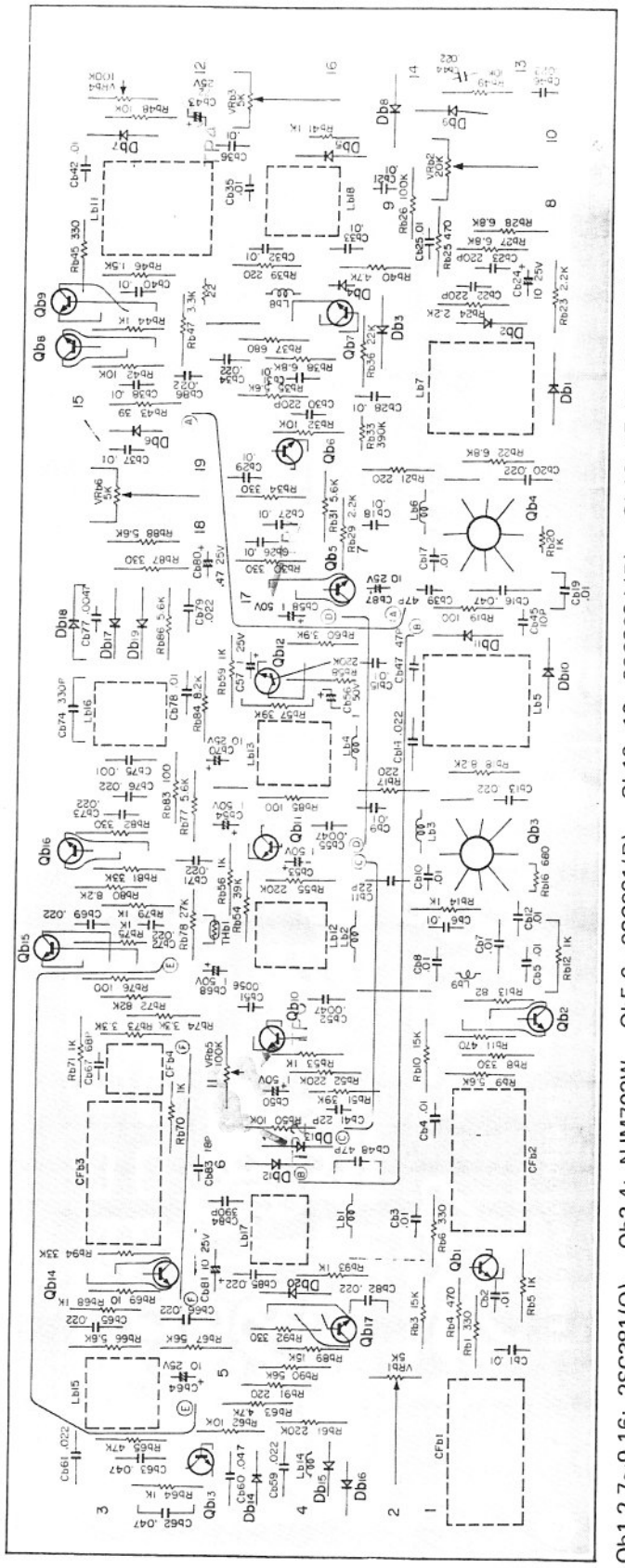
▼ D METER (X13-1910-11)



ICq1: RC4558T, Dq1: 1S2076

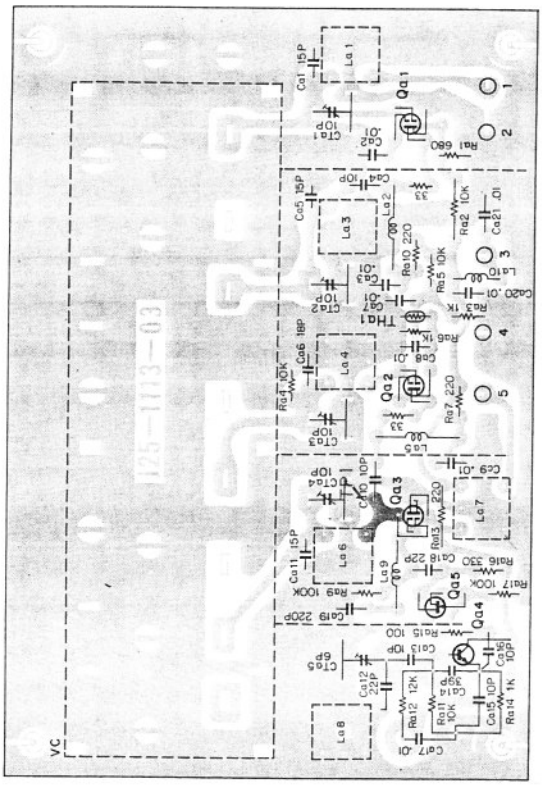
PC BOARD

◄ IF (X02-1040-10)

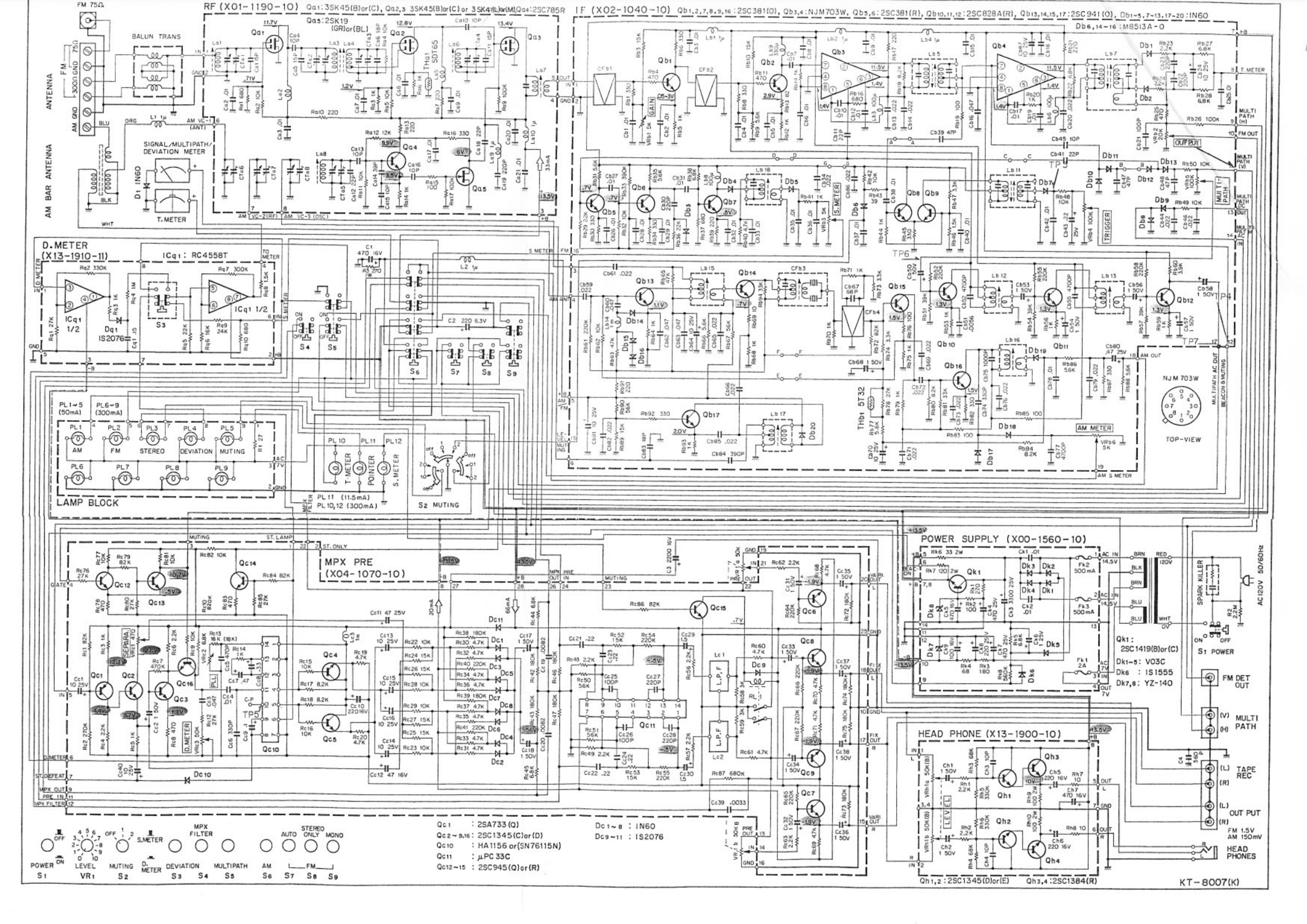


Qb1,2,7~9,16: 2SC381(O), Qb3,4: NJM703W, Qb5,6: 2SC381(R), Qb10~12: 2SC828A(R), Qb13~15,17: 2SC941(O),
Db1~5,7~13,17~20: 1N60, Db6,14~16: M8513A-0, THb1: 5T32

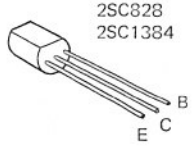
▼ RF (X01-1190-10)



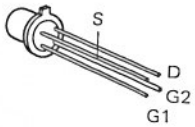
Qa1: 3SK45(B) or (C), Qa2,3: 3SK45(B) or (C) or 3SK41(L) or (M),
Qa4: 2SC785R, Qa5: 2SK19(GR) or (BL), THa1: SDT-65,


RF (X01-1190-10)
IF (X02-1040-10)
D.METER (X13-1910-11)
MPX PRE (X04-1070-10)
POWER SUPPLY (X00-1560-10)
HEAD PHONE (X13-1900-10)
LAMP BLOCK
NJM 703W
TOP-VIEW
SIGNAL/MULTIPATH/ DEVIATION METER
T.METER
S1 POWER
S2 MUTING
FM DET OUT
MULTI PATH
TAPE REC
OUT PUT
HEAD PHONES
KT-8007(K)

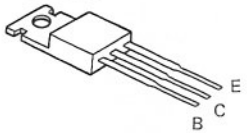
2SA733
2SC945
2SC828
2SC1384



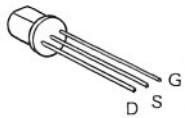
3SK41
3SK45



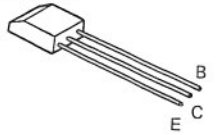
2SC1419



2SK19



2SC535
2SC458
2SC1345



2SC785R
2SC381
2SC941

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- 3-6-17 AOBADAI, MEGURO-KU, TOKYO, JAPAN.