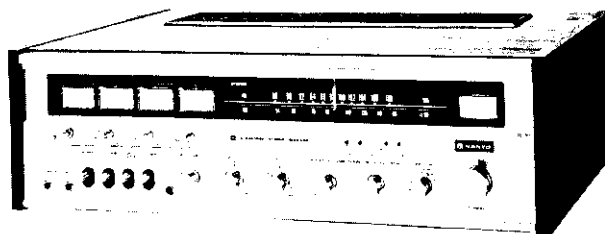




SANYO
4 CHANNEL
STEREO RECEIVER
DCX 3300K
DCX 3300KA
SERVICE MANUAL



SPECIFICATION

GENERAL

IC	STK-023 x 2 LA1201 x 1
FET	2SK41 x 1
Transistor	2SC693 x 18
	2SC537 x 8
	2SC536 x 1
	2SC668 x 2
	2SC929 x 1
Diode	2SC930 x 1
	2SA608 x 2
	1S188 x 29
	DS-430 x 14
	DS-118 x 2
Power Source	SZ-9 x 1
	AC 120V, 200, 230V
	150W
Power Consumption	150W
Dimension	APPROX. Width 530mm (21-1/4")
	Deep 390mm (15-3/4")
	Hight 150mm (6")
Weight	Approx. 10.9Kg (24 lbs)

TUNER SECTION

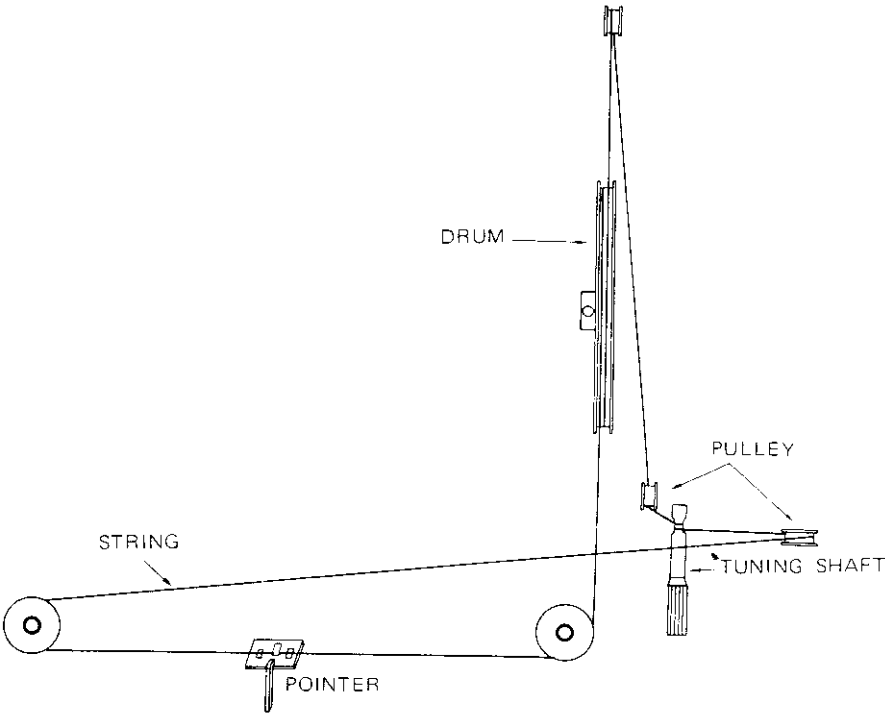
Frequency RAnge	AM 535 – 1,605KHz FM 88 – 108MHz
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Inter. Frequency	AM 455KHz FM 10.7MHz
Sensitivity	AM 300μV/m FM 20μV
FM MPX Separation	30dB (at 1,000Hz)
Signal to Noise	40dB

AUDIO SECTION

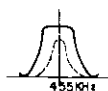
Power Output	20W (THD 10%)
Frequency Responce	80 – 12,000Hz ±3dB
Power Band Width	80 – 12,000Hz ±3dB
Input Terminal	PHONO 5mV 50KΩ
	AUX 120mV 100KΩ
	TAPE PLYBACK 300mV 100KΩ
	MIC -65dB 10KΩ
Output Terminal	SPEAKER 8Ω
	HEAD PHONE 8Ω
Tone Control	BASS ±12dB at 100Hz
	TREBLE ±12dB at 10KHz
Loudness Control	50Hz +12dB
	10KHz +5dB

DIAL CORD STRINGING



ADJUSTMENT

AM ADJUSTMENT

Step	Adjusting circuit	Connections		SG. frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to VC4.	Connect oscilloscope to test point TP2.	455 KHz (400Hz 30% modulation)	Near max. capacity of VC. at position with no unrequired signal.	AM 1st 9-20940 (Yellow) 9-20950 (White) AM 2nd 9-20960 (Black)	
2	RF	Connect standard loop antenna to output terminals of SG.	Connect V.T.V.M. to speaker terminals.	600 KHz (400Hz, 30% modulation)	600 KHz	AM ANT 9-20524 AM OSC 9-20700 (Red)	Max.
3		Place receiver 2 feet from loop antenna.		1400 KHz (400Hz, 30% modulation)	1400 KHz	TC4 TC5	Max.
4	Repeat adjustments.						

PREPARE

1. Variable capacitor completely closed.
2. Set the dial pointer to very left line dial scale.
3. Connect sweep generator, SG, V.T.V.M. and oscilloscope.
4. Selector switch to "AM".
5. Use a screwdriver with plastic grip for all adjustments.

FM ADJUSTMENT

Step	Adjusting circuit	Connections		SG frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to test point TP1 through 0.01μF	Connect oscilloscope to test point TP3.	10.7 MHz (no modulation)	Near max. capacity of VC. at position with no unrequired signal.	FM 1st 9-20890 (Violet) 9-20900 (Orange) FM 2nd 9-20910 (Gray) 9-20920 (Brown) FM 3rd 9-20930 (Pink) 9-20920 (Blue)	
2	Ratio Det.		Connect oscilloscope to test point TP4.			FM DET 9-20850 9-20860	
3	RF	Connect FM SG. to FM ANT. terminals.	Connect V.T.V.M. to speaker terminal.	90 MHz (400Hz, 30% modulation)	90 MHz	FM ANT 9-20910 FM OSC 9-20460 FM Coil 9-20260	Max.
4				106 MHz (400Hz, 30% modulation)	106 MHz	TC1 TC2 TC3	Max.
5	Repeat adjustments.						

PREPARE

1. Variable capacitor completely closed.
2. Set the dial pointer to very left line of dial scale.
3. Connect sweep generator, FM SG, V.T.V.M. and oscilloscope. FM antenna input impedance is 300 ohm.
4. Selector switch to "FM".
5. Use a screwdriver with plastic grip for all adjustments.

FM MPX ADJUSTMENT

Step	Adjusting circuit	Connections		Position of tuning dial	Adjustment	V.T.V.M.
		Input	Output			
1	SCA signal filter (67 KHz)	Add SCA signal to FM stereo SG. to FM ANT. terminals. FM stereo signal OFF.	Connect V.T.V.M. to emitter of TR201.	Near max. capacity of VC. at position with no unrequired signal.	67KHz 9-20140 (Red)	Min.
2	19KHz pilot signal	Connect FM stereo SG. to FM ANT terminals. 19KHz signal ON. SCA signal OFF.	Connect V.T.V.M. to test point TP8.		19KHz 9-20160 (Blue)	Max.
			Connect V.T.V.M. to test points TP7 & TP9.		19KHz 9-20150 (Green)	Max.
3	38 KHz	Connect FM stereo SG to FM ANT terminals. 19KHz signal ON. Main channel, sub channel signal ON. Add 1000Hz signal from L Ch.	Connect V.T.V.M. to test point TP8.		38KHz 9-20170 (Yellow)	Max.
4	FM stereo signal separation	Add 1000Hz signal from L Ch.	Connect V.T.V.M. to R speaker terminal.		Separation control SVR B-10K ohm	Min.
5		Connect FM stereo SG to FM ANT terminals. 19KHz signal ON. Main channel, sub channel signal ON. Add 1000Hz signal from R Ch.	Connect V.T.V.M. to L speaker terminal.		38KHz 9-20170 (Yellow)	Min.
6	Repeat steps 4 ~ 5. Set at position with max. channel separation.					

PREPARE

1. Variable capacitor completely closed.
2. Connect FM stereo SG. and V.T.V.M.
3. Selector switch to "FM AUTO"
4. Use a screwdriver with plastic grip for all adjustments.

10. *Journal of the American Medical Association*, 2000; 284: 2689-2695.



PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
PACKING				CHASSIS MECHANICAL PARTS			
	131 6 1139 36401	Box Corrugate Exp (DCX-3300K)	1	33	131 2 6101 14701	Plate, Shield, SQ P.C.B.	1
	131 6 1139 36403	Box Corrugate Exp (DCX-3300KA)	1			Screw, Pan Hd. Tapping	2
	131 6 3009 16230	Pad, Front (DCX-3300K)	1	34	131 0 3020 01200	Pulley Ass'y	1
	131 6 3009 16240	Pad, Rear (DCX-3300K)	1			Screw, Button Hd. Tapping 3x8	1
	131 6 3009 17450	Pad, Left and Right (DCX-3300KA)	2	35	131 0 3002 10201	Drum Ass'y	1
	131 6 2119 00570	Bag, Polyethylene Exp	1			Screw, Pan Hd. 3x8	2
	131 6 4559 10100	Manufacturing No.	1	36	131 2 4112 10200	Rope 0.5φ	1
	131 6 2719 10300	Bag Fan	1	37	131 2 4111 00200	Spring, Rope	1
	131 6 4119 27001	Explanatory Booklet (DCX-3300K)	1		131 0 3011 12800	Pointer Ass'y (DCX-3300K)	1
	131 6 4119 27003	Explanatory Booklet (DCX-3300KA)	1	38	131 0 3011 13700	Pointer Ass'y (DCX-3300KA)	1
	4 2449 20230	Antenna FM	1	39	131 2 6308 12400	Filter	1
	131 6 4159 14700	Notes, Power Caution	1	40	131 2 1201 21300	Plate, Dial	1
CABINET				41	131 2 1406 11200	Plate, Color	1
	131 0 1101 04201	Cabinet Ass'y	1	25	131 2 6111 11300	Bushing (HEIKO 3P-4), 2 wire Cord only	1
1	131 2 1101 20801	Cabinet	(1)	25	131 2 6111 11200	Bushing (Rubber), 3 Wire Cord only	1
3	131 2 6201 12600	Plate, Heat Sink	1		131 0 3016 10000	Cramp Wire Ass'y, Photex, England Type	1
6	131 2 6101 16700	Plate, Shield	1	42	131 2 6110 17900	Screw, Pan Hd. Tapping 3x8	1
	131 2 3101 12500	Metal Mount (DCX-3300K)	1			Shelter Light, Plate Dial	1
2	131 2 3101 12501	Metal Mount (DCX-3300KA)	1	43	131 2 6110 18000	Screw, Pan Hd. Tapping 3x8	2
		Screw, Truss Hd. Tapping 3x8	3			Screw, Pan Hd. Tapping 3x8	4
4	131 2 1804 10401	Leg, Rubber	4	44	131 0 3003 14400	Shaft, Dial Ass'y	1
		Screw, Truss Hd. Tapping 4x12	4			Screw, Pan Hd. Tapping 3x8	2
		Washer, Plain 4.2φx12φx1t	4	45	131 2 6107 13900	Plate, Fiber, Pilot Holder	1
5	131 2 4203 15200	Washer	4		131 2 6107 14800	Plate, Fiber, Power SW (4-1319-228630)	1
		Screw, Pan Hd. 4x20	7		131 2 6107 11800	Plate, Fiber, Power SW (4-1319-228610)	1
7	131 2 3201 11600	Angle Leinf	2		131 2 6107 14200	Plate, Fiber, Power SW	1
		Screw, Truss Hd. Tapping	8	46	131 2 6110 17600	Shelter Light, Dial	1
		Washer, Plain 4.2φx16φx1.6t	3			Screw, Button Hd. Tapping 3x8	2
8	131 2 1203 22602	Panel Control (DCX-3300K)	1	47	131 2 6110 17700	Shelter Light, Special Control	1
	131 2 1203 22603	Panel Control (DCX-3300KA)	1			Screw, Button Hd. Tapping 3x5	1
		Screw, Flat Hd. Tapping	3	48	131 2 5206 11300	Moldplane, Special Tuning	5
9	131 2 1205 10800	Decoration Plate, Dial	1	49	131 2 6111 11600	Bushing, Function	5
10	131 2 6113 11700	Shelter, Switch Lever	4			Screw, Pan Hd. Tapping 3x8,	8
11	131 2 1504 10900	Plate Sign Lamp 2/4CHL Selector	5			Plate Heat Sink	
		Nut, M8, Mic, Panel	1			Washer, Plain 4.2φx12φx1t	4
12	131 2 1601 22500	Knob, Tuning	1	50	131 2 4203 15300	Power Trans	4
13	131 2 4201 12400	Screw, Tuning Knob 3x8	1	51	131 2 4203 15400	Washer, Nylon, Power Trans	4
15	131 2 1601 22600	Knob, Selector	4			Washer, Nylon, Power Trans	4
16	131 2 1601 22700	Knob, Special Control	4			Nut, Hex Hd.	4
18	131 2 1601 22900	Knob, Bass, Treble	2	52	131 2 6111 11500	Bushing, Stereo Ind.	1
17	131 2 1601 22800	Knob, Bass, Treble	2	53	131 2 6113 11400	Shelter, Lever SW	4
14	131 2 4201 12500	Screw, Bass, Treble 3x5	2	54	131 2 6110 17800	Shelter Light, Tuning	1
19	131 2 1301 13700	Badge	1			Screw, Button Hd. Tapping 3x8	1
				55	131 2 3608 11300	Cramp Wire, Nylon	12
CHASSIS MECHANICAL PARTS					131 0 3016 10401	Cramp Wire Ass'y, ANT Lead	1
						Screw, Pan Hd. Tapping 3x8	1
20	131 2 3301 17000	Chassis	1	CHASSIS ELECTRICAL PARTS			
		Screw, Pan Hd. Tapping	17	59	131 0 4001 35100	Printed Circuit Ass'y RF, IF	1
21	131 2 3617 12100	Metal Mount Trans	1	60	131 0 4001 18007	Printed Circuit Ass'y, MPX	1
		Screw, Pan Hd. Tapping	14	61	131 0 4001 32300	Printed Circuit Ass'y, SQ	1
	131 2 3306 15001	Panel, Rear (DCX-3300K)	1	62	131 0 4001 31801	Printed Circuit Ass'y, Pre. Amp	1
24	131 2 3306 15003	Panel, Rear (DCX-3300KA)	1	63	131 0 4001 32001	Printed Circuit Ass'y, Meter	1
		Screw, Button Hd. Tapping 3x8	6	64	131 0 4001 35000	Printed Circuit Ass'y, Main AMP	2
22	131 2 3101 16400	Metal Mount	1	65	131 0 4001 32101	Printed Circuit Ass'y, Pilot (Dial)	1
		Screw, Pan Hd. Tapping 3x8	2	66	131 0 4001 32200	Printed Circuit Ass'y, Pilot (Meter)	1
23	131 2 3603 12700	Metal Mount, Antenna	1	67	131 0 4001 34900	Printed Circuit Ass'y, Equalizer	1
		Screw, Button Hd. Tapping 3x8	2	68	131 0 4001 34501	Printed Circuit Ass'y, Loudness	1
		Screw, Pan Hd. Tapping 3x8	8	70	131 0 4001 34601	Printed Circuit Ass'y, Power Supply	1
		Nut, Hex. Hd. M3	2		131 0 4001 38800	Printed Circuit Ass'y, Protector (Relay)	1
		Screw, Countersunk 3x8	2		131 0 4001 42500	Printed Circuit Ass'y, Protector (Elect)	1
26	131 2 3305 15000	Panel, Front	1		131 0 4001 38900	Printed Circuit Ass'y, Pre-2	1
		Screw, Button Hd. Tapping 3x8	8	71	4 2229 22990	Variable Resistor 200K ohm-B x 4	1
27	131 2 4120 10500	Slide Rail, Pointer	1			Master Volume	
		Screw, Pan Hd. Tapping 3x8	2		4 2229 23180	Variable Resistor 1K ohm-B x 1 with SW	1
28	131 2 4108 10300	Spindle, Pulley	4			Mic Volume (DCX-3300K)	
29	131 2 4107 10300	Pulley	4	72	4 2229 23181	Variable Resistor 1K ohm-B x 1 with SW	1
30	131 2 4208 15400	Spacer	4			Mic Volume (DCX-3300KA)	
31	131 2 6103 12600	Cover, Shield	1	73	4 2239 20371	Electrolytic Cap. 2200μF/63WV	1
		Screw, Pan Hd. Tapping 3x8	2	74	4 2319 22344	Switch Lever 12P, SP Select,	2
32	131 2 3614 13800	Mount P.C.B. SQ Amp P.C.B.	1			Tape Monitor	
		Screw, Pan Hd. Tapping 3x8	4		4 2319 22300	Switch Rotary 2-4-5, Function (DCX-3300K)	1
					4 2319 22620	Switch Rotary 3-6-5, 2CHL Select (DCX-3300K)	1

NOTES: 1. Part orders must contain Model Number, Part Number and Description.

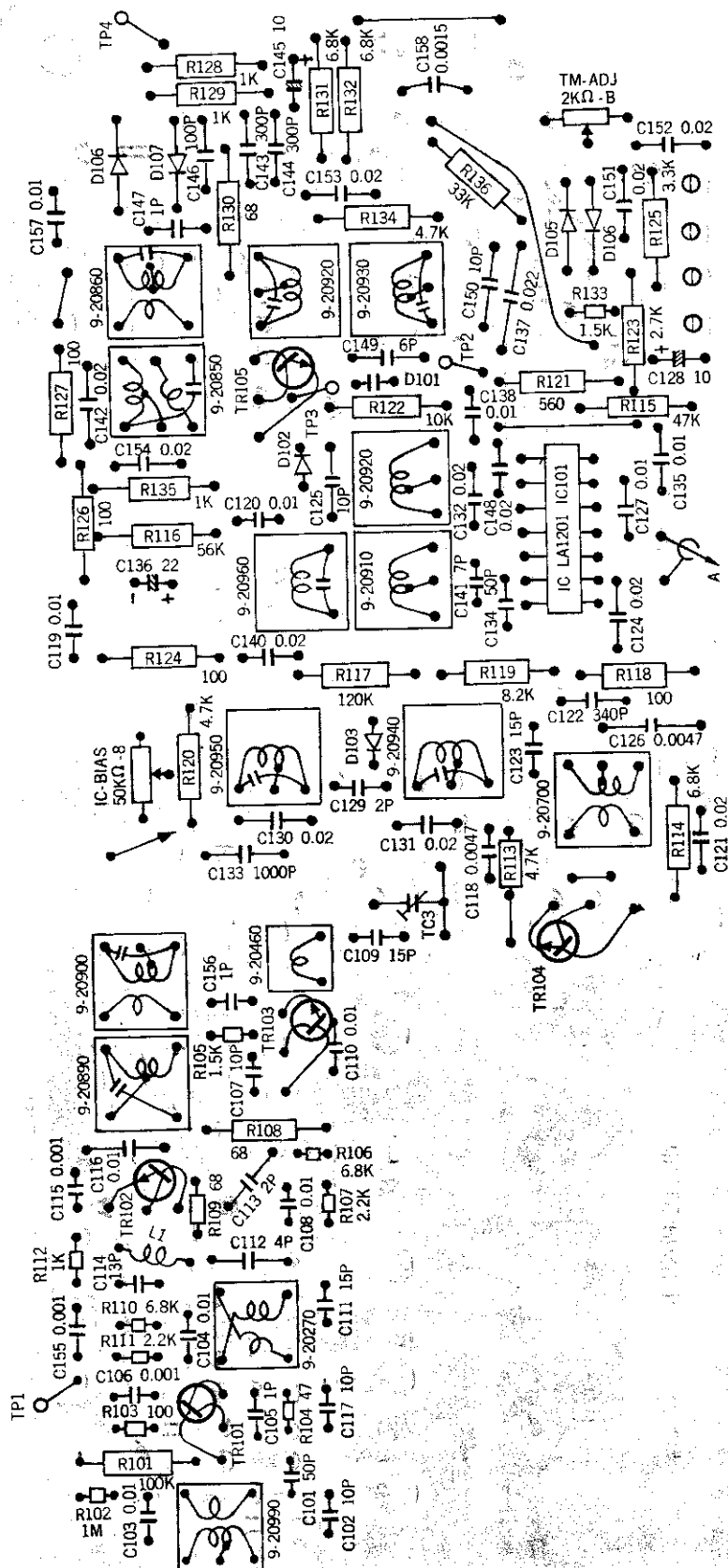
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.

3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
CHASSIS ELECTRICAL PARTS			
75	4 2319 22620	Switch Rotary 3-6-5, 2CHL Select, Function (DCX-3300KA)	2
76	4 2319 22631	Switch Lever 3P, Power SW	1
77	4 2349 20190	Fuse, 2A	1
78	4 2359 20160	Fuse Holder, Tuning Meter Lamp	1
79	4 2359 20190	Socket, DIN	1
80	4 2359 21110	Fuse Holder, AC	1
81	4 2359 21080	Jack, Headphone	2
82	4 2359 21100	Socket, AC Outlet	1
83	4 2359 21230	Socket, Phono 4P, Rec, Tape	2
84	4 2359 21250	Socket, Phono 6P, AUX PHONO	1
85	4 2359 21410	Jack, Mic	1
87	4 2379 20020	Terminal ANT 3P	1
89	4 2519 22761	Power Trans, 120/200/240V	1
90	4 2579 20524	Antenna Coil MW	1
91	4 5119 20291	Meter, VU	4
92	4 5119 20301	Meter, Tuning	1
93	4 6129 20310	Pilot Lamp, 6.3V, 140mA, Pointer	1
94	4 6129 20153	Pilot Lamp, Stereo Ind.	1
95	4 6129 20280	Pilot Lamp, Fuse Type, Tuning Meter	1
	4 2379 20250	Terminal Lug 1-1P	2
	4 2379 20080	Terminal 4P, SP	2
96	4 2359 21220	Power Selector (Socket)	1
97	4 2369 20550	Power Selector (Plug)	1
SELECT FOLLOWING PARTS ACCORDING YOUR LOCAL SUPPLY METHOD AND VOLTAGE			
88	4 2439 20390	Power Cord, UL cord	1
	4 2369 20260	Plug Conversion, Siemens	1
	4 2369 20270	Plug Conversion, Continental	1
	4 2369 20280	Plug Photex, Australia 3P	1
	4 2369 20290	Plug 3P, England 3P	1
RESISTORS			
R803		Carbon 820 ohm $\pm 10\%$ 1/4W	1
R807		Carbon 1K ohm $\pm 10\%$ 1/4W	1
R804		Carbon 1.5K ohm $\pm 10\%$ 1/4W	1
R801,802		Carbon 150K ohm $\pm 10\%$ 1/4W	2
R805,806		Carbon 1.8M ohm $\pm 10\%$ 1/2W	2
R813,814, 815,816 R817		Oxide Metal 0.12 ohm $\pm 10\%$ 1/2W (DCX 3300KA)	4
		Oxide Metal 470 ohm $\pm 10\%$ 1W (DCX 3300KA)	1
CAPACITORS			
C802		P.P. 0.01 μ F $\pm 20\%$ 630WV	1
RF.IF. P.C.B. ASSEMBLY			
L1	131-04001 35100	Printed Circuit Assy	1
	4 2269 21735	Printed circuit board	1
	4 2249 20410	Variable Capacitor	1
	4 2249 20310	Trimmer Capacitor, FM OSC	1
	4 2579 20990	Antenna Coil, FM	1
	4 2589 20460	OSC Coil FM	1
	4 2599 20270	RF Coil FM	1
	4 2569 20890	IFT, FM 1st (Violet)	1
	4 2569 20900	IFT, FM 1st (Yellow, Green)	1
	4 2569 20910	IFT, FM 2nd (Gray)	1
	4 2569 20920	IFT, FM 2nd, 3rd (Brown)	2
	4 2569 20930	IFT, FM 3rd (Green)	1
	4 2569 20850	IFT, FM Detector (Pink)	1
	4 2569 20860	IFT, FM Detector (Blue)	1
	4 2539 20130	RF Filter Choke	1
	4 2589 20700	OSC Coil, AM (Red)	1
	4 2569 20940	IFT, AM 1st (Yellow)	1
	4 2569 20950	IFT, AM 2nd (White)	1
	4 2569 20960	IFT, AM 3rd (Black)	1
	4 2229 21800	Variable Resistor 2K-B, Tuning Meter	1
	4 2229 21810	Variable Resistor 50K-B, IC Bias	1
SEMI-CONDUCTORS			
IC101		IC LA 1201	1
TR102		Transistor 2SC668 D, E	1
TR103		Transistor 2SC668 D	1
TR104		Transistor 2SC929 D, E	1
TR105		Transistor 2SC930 D, E	1
D101,102 103,104 105,106 107 TR101		Diode 1S188FM	7
		Transistor FET 2SK41 F	1

Ref. No. or Part No.	Description	Q'ty
RF. IF. P.C.B. ASSEMBLY		
RESISTORS		
R108,130	Carbon 68 ohm $\pm 10\%$ 1/4W	2
R118,124 126,127	Carbon 100 ohm $\pm 10\%$ 1/4W	4
R121	Carbon 560 ohm $\pm 10\%$ 1/4W	1
R128,129 135	Carbon 1K ohm $\pm 10\%$ 1/4W	3
R123	Carbon 2.7K ohm $\pm 10\%$ 1/4W	1
R125	Carbon 3.3K ohm $\pm 10\%$ 1/4W	1
R120,134	Carbon 4.7K ohm $\pm 10\%$ 1/4W	2
R114,131 132	Carbon 6.8K ohm $\pm 10\%$ 1/4W	3
R119	Carbon 8.2K ohm $\pm 10\%$ 1/4W	1
R122	Carbon 10K ohm $\pm 10\%$ 1/4W	1
R115	Carbon 47K ohm $\pm 10\%$ 1/4W	1
R116	Carbon 56K ohm $\pm 10\%$ 1/4W	1
R101	Carbon 100K ohm $\pm 10\%$ 1/4W	1
R117	Carbon 120K ohm $\pm 10\%$ 1/4W	1
R136	Carbon 33 K ohm $\pm 10\%$ 1/4W	1
R104	Carbon 47 ohm $\pm 10\%$ 1/4W ELR	1
R109	Carbon 68 ohm $\pm 10\%$ 1/4W ELR	1
R103	Carbon 100 ohm $\pm 10\%$ 1/4W ELR	1
R112	Carbon 1K ohm $\pm 10\%$ 1/4W ELR	1
R105,133	Carbon 1.5K ohm $\pm 10\%$ 1/4W ELR	2
R107,111	Carbon 2.2K ohm $\pm 10\%$ 1/4W ELR	2
R113	Carbon 4.7K ohm $\pm 10\%$ 1/4W ELR	1
R106,110	Carbon 6.8K ohm $\pm 10\%$ 1/4W ELR	2
R102	Carbon 1M ohm $\pm 10\%$ 1/4W ELR	1
CAPACITOR		
C147	Ceramic 1pF ± 0.25 pF 50WV NPO	1
C105 C156	Ceramic 1pF ± 0.25 pF 50WV	2
C129	Ceramic 2pF ± 0.25 pF 50WV	1
C112	Ceramic 4pF ± 0.25 pF 50WV	1
C149	Ceramic 6pF ± 0.25 pF 50WV	1
C102,117 125,150	Ceramic 10pF ± 0.25 pF 50WV	4
C107	Ceramic 10pF ± 0.5 pF 50WV	1
C141	Ceramic 7pF ± 0.25 pF 50WV	1
C114	Ceramic 13pF ± 0.25 pF 50WV	1
C109	Ceramic 15pF $\pm 5\%$ 50WV, N470	1
C111	Ceramic 15pF $\pm 5\%$ 50WV,	1
C123	Ceramic 15pF $\pm 5\%$ 50WV, N1500	1
C101,134	Ceramic 50pF $\pm 10\%$ 50WV	2
C146	Ceramic 100pF $\pm 20\%$ 50WV	1
C143,144	Ceramic 300pF $\pm 20\%$ 50WV	2
C122	Styrol 340pF $\pm 5\%$ 50WV	1
C106,115 155	Ceramic 0.001 μ F +80 -20% 50WV	3
C133	Styrol 0.001 μ F $\pm 10\%$ 50WV	1
C118,126	Mylar 0.0047 μ F $\pm 20\%$ 50WV	2
C108,135 138	Mylar 0.01 μ F $\pm 20\%$ 50WV	3
C110	Ceramic 0.01 μ F $\pm 20\%$ 50WV	1
C103,104 119,120		
116,127,157	Ceramic 0.01 μ F +80 -20% 50WV	7
C121,124 130,131 132,140 142,148 151,152 153,154	Ceramic 0.02 μ F +80 -20% 50WV	12
C137	Mylar 0.022 μ F $\pm 20\%$ 50WV	1
C128,145	Electrolytic 10 μ F +150 -10% 16WV	2
C136	Electrolytic 22 μ F +150 -10% 16WV	1
C113	Ceramic 2pF ± 0.25 pF 50WV	1
C158	Mylar 0.0015 μ F $\pm 20\%$ 50WV	1

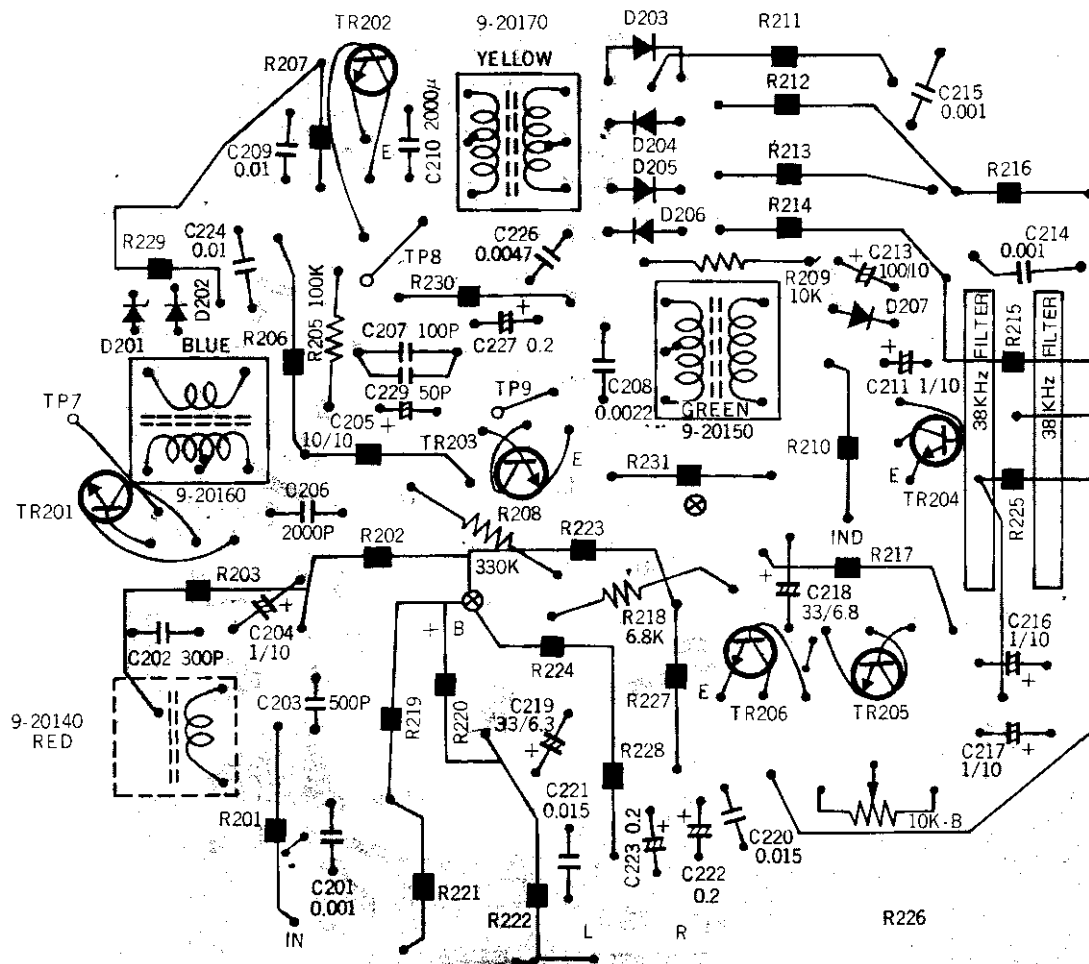


PARTS LIST

Ref. No. or Part No.	Description	Q'ty
MPX P.C.B. ASSEMBLY		
131 0 4001 18007	Printed circuit assy	1
4 2269 21801	Printed circuit board	1
4 2659 20140	Multiplex coil SCA (red)	1
4 2659 20150	Multiplex coil, 19K Hz (green)	1
4 2659 20160	Multiplex coil, 19K Hz (blue)	1
4 2659 20170	Multiplex coil, 38K Hz (yellow)	1
4 2229 21270	VR B-10K ohm, Separation control	1
4 2279 20140	Rescap, 38K Hz Trap	2
111 2 6220 11100	Wire Wrap terminal	2
TR201,202	Transistor 2SC537	4
205,206,	Transistor 2SC537 E	2
TR204,203		
D201,202,203,204	Diode 1S188 FM1	6
205,206	Diode DS-430	1
D207		
RESISTORS		
R218	Carbon P-type 6.8K ohm $\pm 10\%$ 1/4W	1
R209	Carbon P-type 10K ohm $\pm 10\%$ 1/4W	1
R205	Carbon P-type 100K ohm $\pm 10\%$ 1/4W	1
R208	Carbon P-type 330K ohm $\pm 10\%$ 1/4W	1

Ref. No. or Part No.	Description	Q'ty
MPX P.C.B. ASSEMBLY		
CAPACITORS		
C202	Styrol 300PF $\pm 10\%$ 35WV	1
C203	Styrol 500PF $\pm 10\%$ 35WV	1
C206,210	Styrol 2000PF $\pm 10\%$ 35WV	2
C214,215,201	Mylar 0.001 μ F $\pm 20\%$ 50WV	3
C209,224,	Mylar 0.01 μ F $\pm 20\%$ 50WV	2
C220,221	Mylar 0.015 μ F $\pm 20\%$ 50WV	2
C208	Mylar 0.0022 μ F $\pm 20\%$ 50WV	1
C207	Ceramic 100pF, $\pm 10\%$ 50WV	1
C204,216,217,211	Electrolytic 1 μ F + 150 $\sim -0\%$ 10WV	4
C205	Electrolytic 10 μ F + 150 $\sim -0\%$ 10WV	1
C218,219	Electrolytic 33 μ F + 150 $\sim -0\%$ 6.3WV	2
C213	Electrolytic 100 μ F + 150 $\sim -0\%$ 10WV	1
C222,223,227	Aliscon 0.2 μ F +40 $\sim -20\%$ 10WV	3
C226	Mylar 0.0047 μ F $\pm 20\%$ 50WV	1

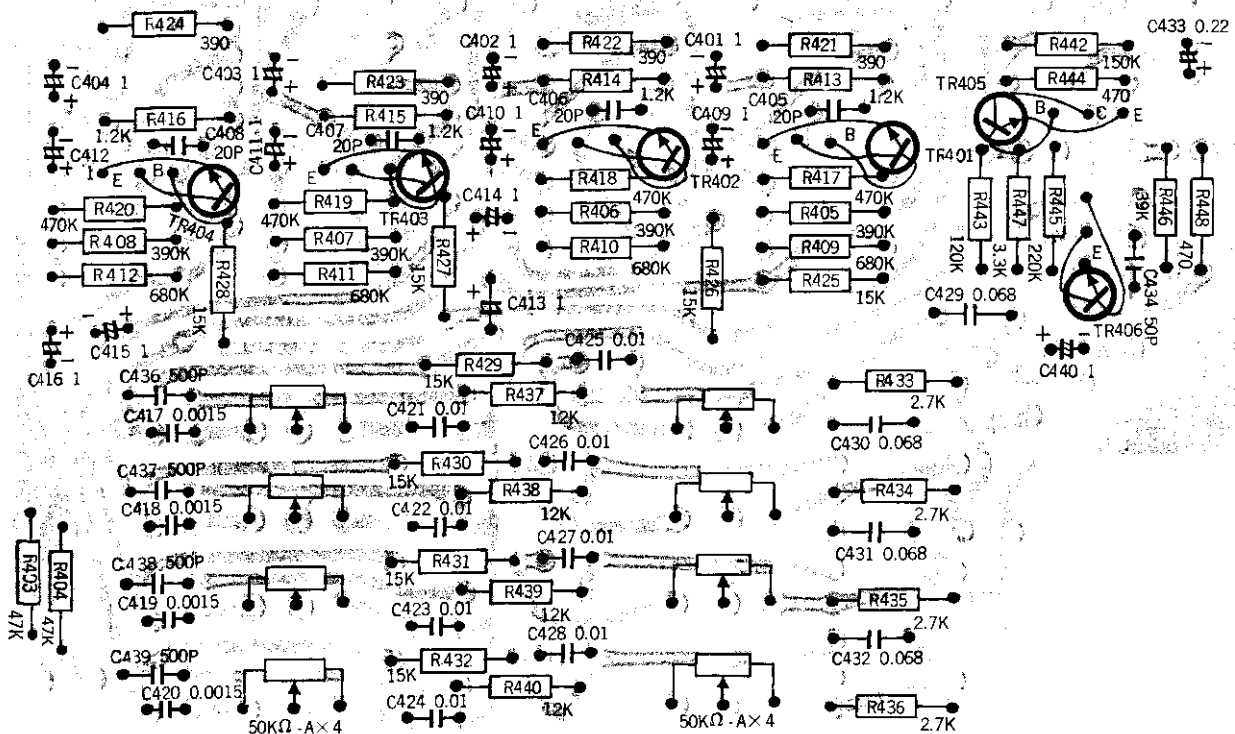
MPX. P.C.B. ASSEMBLY



PARTS LIST

Ref. No.	or Part No.	Description	Q'ty	Ref. No.	or Part No.	Description	Q'ty
PRE AMP. P.C.B. ASSEMBLY				PRE AMP. P.C.B. ASSEMBLY			
	131 0 4001 31801	Printed Circuit Assy	1	R445		Carbon 220K ohm $\pm 10\%$ 1/4W	1
	4 2269 23830	Printed Circuit Board	1	R405,406		Carbon 390K ohm $\pm 10\%$ 1/4W	4
	4 2229 23000	V.R. 50K-Ax4, BASS, TREBLE	2	407,408		Carbon 470K ohm $\pm 10\%$ 1/4W	4
	111 2 6220 11100	Wire Wrap Terminal	14	R417,418		Carbon 680K ohm $\pm 10\%$ 1/4W	4
		SEMI-CONDUCTORS		R409,410			
TR401,402		Transistor 2SC693 F,G	5	411,412			
403,404						CAPACITORS	
406				C405,406		Ceramic 20pF $\pm 10\%$ 50WV	4
TR405		Transistor 2SC693 F α , Fu, G α , Gu	1	407,408		Ceramic 50pF $\pm 10\%$ 50W	1
		RESISTORS		C434		Ceramic 500pF $\pm 10\%$ 50WV	4
R421,422		Carbon 390 ohm $\pm 10\%$ 1/4W	4	C417,418		Mylar 0.0015 μ F $\pm 20\%$ 50WV	4
423,424				419,420		Mylar 0.01 μ F $\pm 20\%$ 50WV	8
R444,448		Carbon 470 ohm $\pm 10\%$ 1/4W	2	C421,422			
R413,414		Carbon 1.2K ohm $\pm 10\%$ 1/4W	4	423,424			
415,416				425,426			
R433,434		Carbon 2.7K ohm $\pm 10\%$ 1/4W	4	427,428			
435,436				C429,430		Mylar 0.068 μ F $\pm 20\%$ 50WV	4
R447		Carbon 3.3K ohm $\pm 10\%$ 1/4W	1	431,432			
R437,438		Carbon 12K ohm $\pm 10\%$ 1/4W	4	C433		Al.Si. 0.22 μ F $\pm 150-10\%$ 10WV	1
439,440				440		Al.Si. 1 μ F $\pm 150-10\%$ 25WV	9
R425,426		Carbon 15K ohm $\pm 10\%$ 1/4W	8	C409,410		Electrolytic 1 μ F $\pm 150-10\%$ 10WV	4
427,428				411,412			
429,430							
431,432							
R446		Carbon 39K ohm $\pm 10\%$ 1/4W	1				
R403,404		Carbon 47K ohm $\pm 10\%$ 1/4W	2				
R443		Carbon 120K ohm $\pm 10\%$ 1/4W	1				
R442		Carbon 150K ohm $\pm 10\%$ 1/4W	1				

PRE AMP. P.C.B. ASSEMBLY.



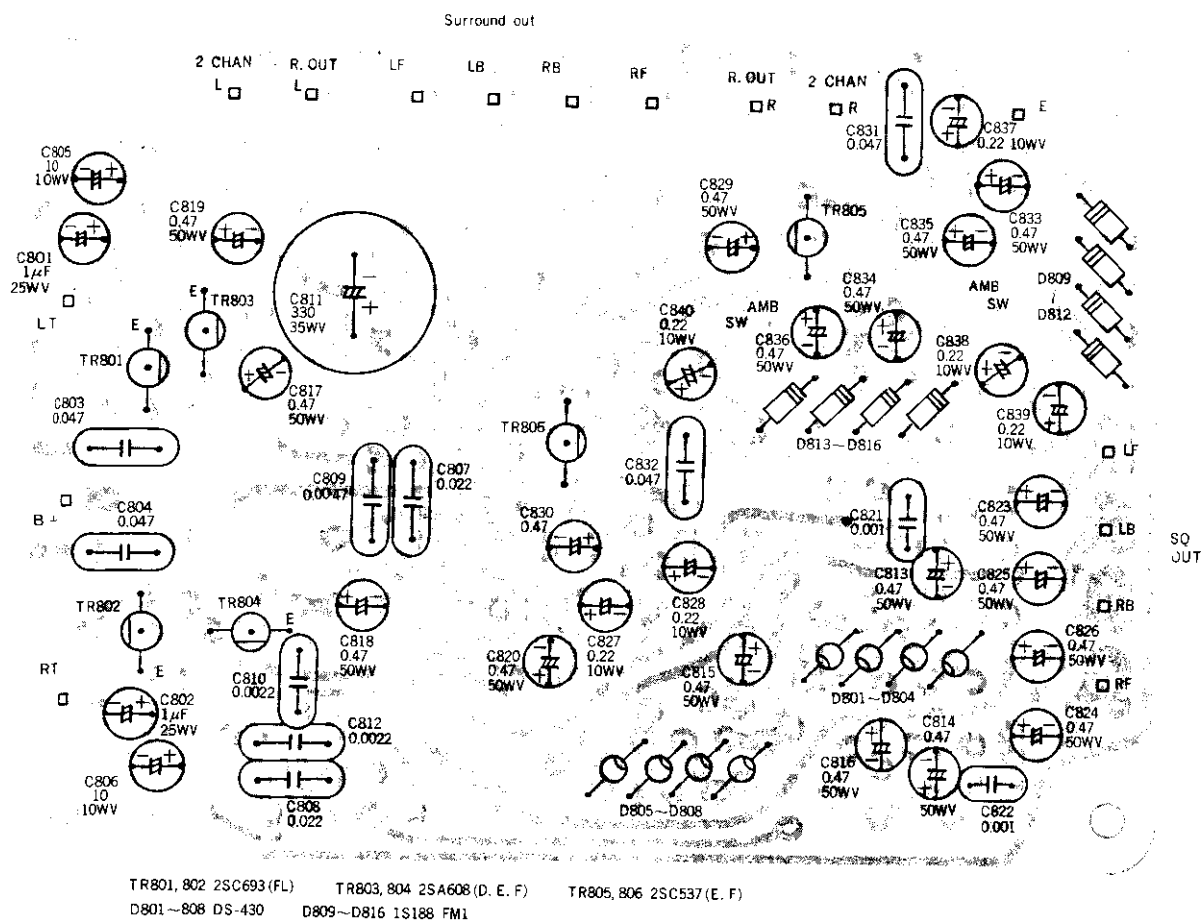
PARTS LIST

Part orders must contain Part No. and Description.

Ref. No. or Part No.	Description	Q'ty
MATRIX P.B.C. ASSEMBLY		
131 0 4001 32300	Printed Circuit Assy	1
4 2269 24010	Printed Circuit Board	1
111 2 6220 11100	Wire Wrap Terminal	18
SEMI-CONDUCTORS		
TR801,802	Transistor 2SC693 FL, GL	2
TR803,804	Transistor 2SA608 D,E,F	2
TR805,806	Transistor 2SC537 E, F	2
D801,802	Diode DS-430	8
803,804		
805,806		
807,808		
D809,810	Diode 1S188	8
811,812		
813,814		
815,816		
CAPACITORS		
C805,806	Electrolytic 10 μ F +150 -10% 10WV	2
C811	Electrolytic 330 μ F +150-10% 35WV	1

Ref. No. or Part No.	Description	Q'ty
MATRIX P.C.B. ASSEMBLY		
C827,828	AL.SI. 0.22 μ F $\pm$ 20% 10WV	6
837,838		
839,840		
C813,814		
815,816		
817,818		
819,820	AL.SI. 0.47 μ F +150-10% 50WV	18
823,824		
825,826		
829,830		
833,834		
835,836	Mylar 0.001 μ F $\pm$ 20% 50WV	2
C821,822		
C810,812		
C809		
C807,808		
C803,804	Mylar 0.0022 μ F $\pm$ 20% 50WV	2
831,832	Mylar 0.0047 μ F $\pm$ 20% 50WV	1
C801,802	Mylar 0.022 μ F $\pm$ 20% 50WV	2
	Mylar 0.047 μ F $\pm$ 20% 50WV	4
	Electrolytic 1 μ F $\pm$ 20% 25WV	2

MATRIX P.C.B. ASSEMBLY

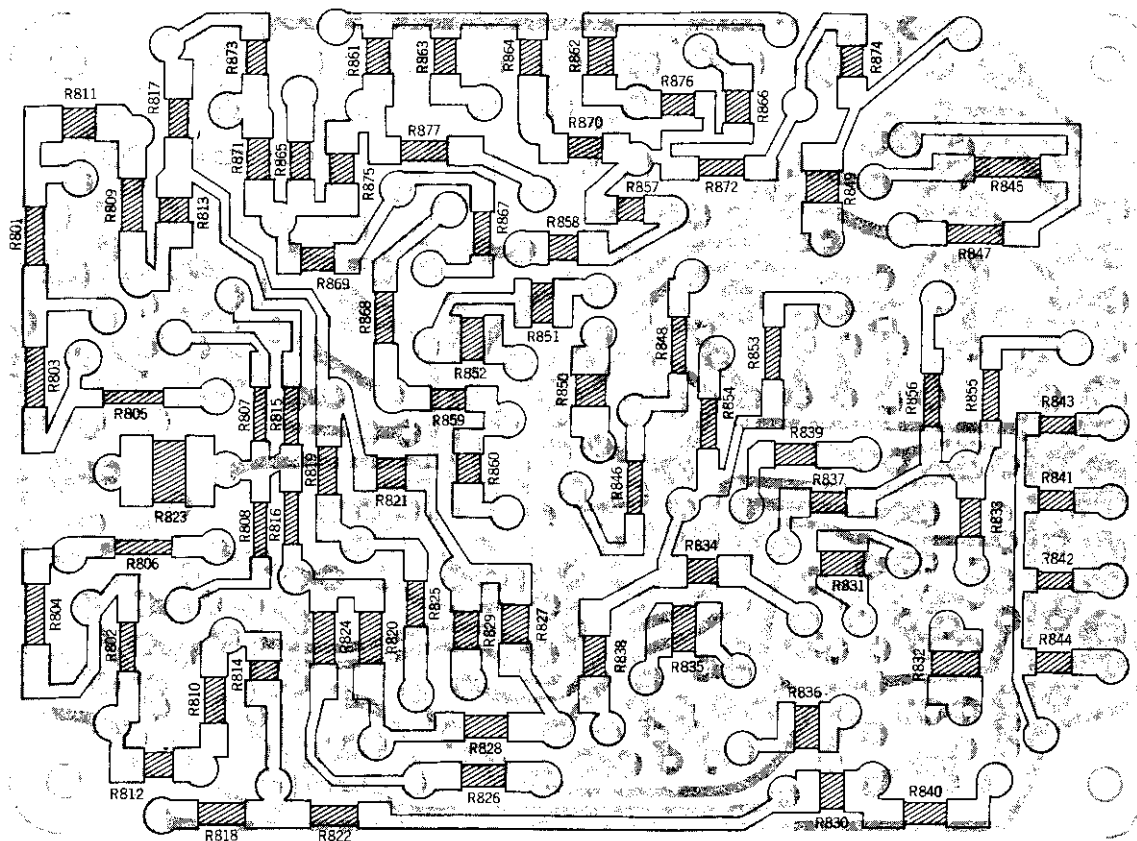


MATRIX P.C.B. ASSEMBLY

MATRIX P.C.B. PRINTED RESISTORS VALUE

R801	330K	±20%	1/32W	R821	10K	±10%	1/32W	R840	22K	±15%	1/32W	R859	100K	±10%	1/32W
R802	330K	±20%	1/32W	R822	22K	±10%	1/32W	R841	120K	±15%	1/32W	R860	100K	±10%	1/32W
R803	330K	±20%	1/32W	R823	220K	±20%	1/16W	R842	120K	±15%	1/32W	R861	120K	±15%	1/32W
R804	330K	±20%	1/32W	R824	22K	±10%	1/32W	R843	120K	±15%	1/32W	R862	120K	±15%	1/32W
R805	330K	±20%	1/32W	R825	120K	±10%	1/32W	R844	120K	±15%	1/32W	R863	120K	±15%	1/32W
R806	330K	±20%	1/32W	R826	100K	±10%	1/32W	R845	330K	±20%	1/32W	R864	120K	±15%	1/32W
R807	220K	±20%	1/32W	R827	100K	±10%	1/32W	R846	330K	±20%	1/32W	R865	18K	±15%	1/32W
R808	220K	±20%	1/32W	R828	120K	±10%	1/32W	R847	220K	±20%	1/32W	R866	18K	±15%	1/32W
R809	2.2K	±10%	1/32W	R829	56K	±15%	1/32W	R848	220K	±20%	1/32W	R867	180K	±10%	1/32W
R810	2.2K	±10%	1/32W	R830	56K	±10%	1/32W	R849	470	±10%	1/32W	R868	180K	±10%	1/32W
R811	10K	±20%	1/32W	R831	4.7K	±20%	1/32W	R850	470	±10%	1/32W	R869	82K	±10%	1/32W
R812	10K	±20%	1/32W	R832	4.7K	±20%	1/32W	R851	4.7K	±10%	1/32W	R870	82K	±10%	1/32W
R813	6.8K	±10%	1/32W	R833	100K	±20%	1/32W	R852	4.7K	±10%	1/32W	R871	120K	±15%	1/32W
R814	6.8K	±10%	1/32W	R834	100K	±20%	1/32W	R853	27K	±10%	1/32W	R872	120K	±15%	1/32W
R815	1.8K	±10%	1/32W	R835	4.7K	±20%	1/32W	R854	27K	±10%	1/32W	R873	120K	±15%	1/32W
R816	1.8K	±10%	1/32W	R836	4.7K	±20%	1/32W	R855	27K	±10%	1/32W	R874	120K	±15%	1/32W
R817	2.2K	±10%	1/32W	R837	100K	±20%	1/32W	R856	27K	±10%	1/32W	R875	68K	±10%	1/32W
R818	2.2K	±10%	1/32W	R838	100K	±20%	1/32W	R857	100K	±10%	1/32W	R876	68K	±10%	1/32W
R819	22K	±10%	1/32W	R839	22K	±15%	1/32W	R858	100K	±10%	1/32W	R877	47K	±10%	1/32W
R820	22K	±10%	1/32W												

PRINTED RESISTERS LAYOUT



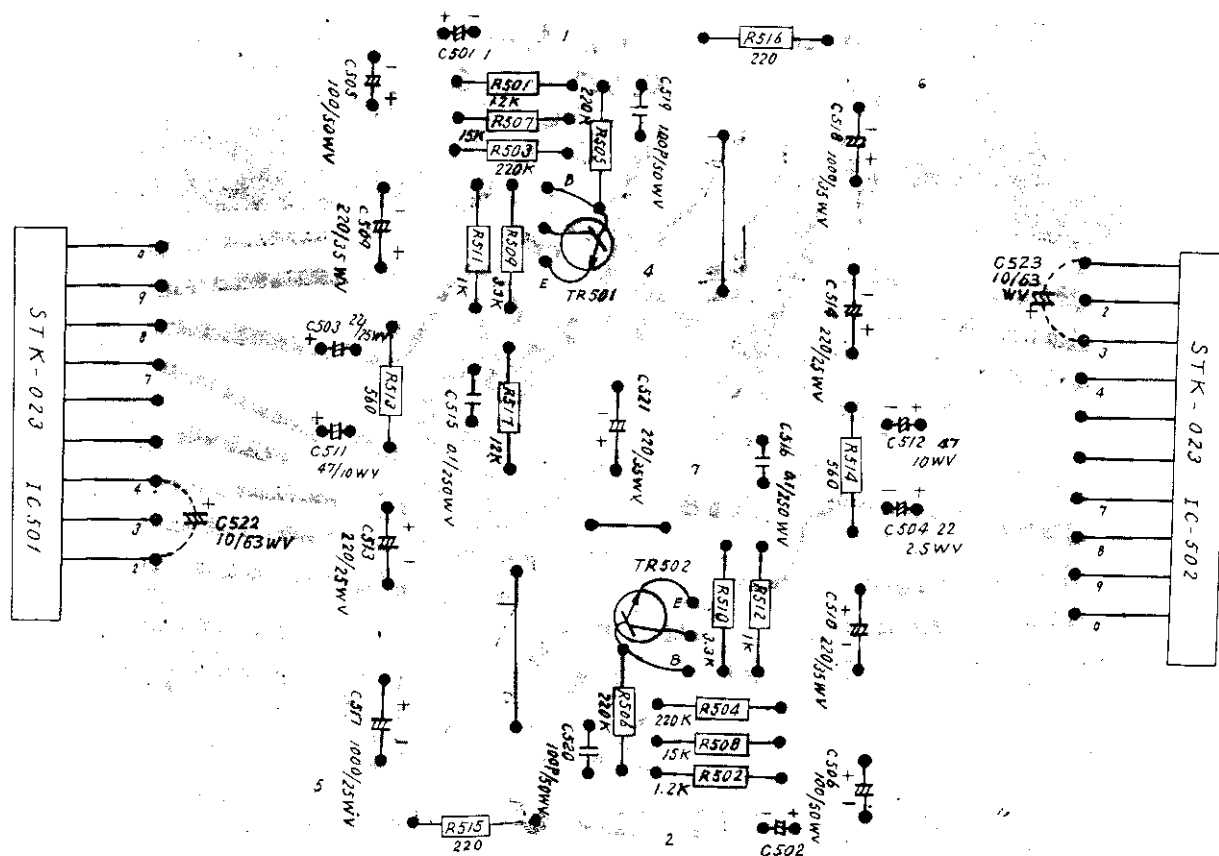
PARTS LIST

Part orders must contain Part No. and Description.

Ref. No. or Part No.	Description	Q'ty
MAIN AMP. P.C.B. ASSEMBLY		
131 0 4001 35000	Printed circuit Assy	1
4 2269 24190	Printed Circuit Board	1
111 2 6220 11100	Wire Wrap Terminal	9
131 2 6201 18500	Plate Heat Sink, Power Transistor	2
4 2359 20930	Fuse Holder	4
4 2349 20030	Fuse 2A	2
	Pan Hd. Tapping Screw 3 x 14	4
	Pan Hd. Screw 3 x 8	4
	Hexagon Nut M3	4
SEMI-CONDUCTORS		
IC501,502	STK-023 G	2
TR501,502	2SC693 FL, GL	2
RESISTORS		
R515,516	Carbon 220 $\pm 10\%$ 1/4W	2
R513,514	Carbon 560 $\pm 10\%$ 1/4W	2
R511,512	Carbon 1K $\pm 10\%$ 1/4W	2
R501,502	Carbon 1.2K $\pm 10\%$ 1/4W	2
R509,510	Carbon 3.3K $\pm 10\%$ 1/4W	2
R507,508	Carbon 15K $\pm 10\%$ 1/4W	2
R503,504	Carbon 220K $\pm 10\%$ 1/4W	4
505,506	Carbon 12K Ω $\pm 10\%$ 1/4W	1
R517		

Ref. No. or Part No.	Description	Q'ty
MAIN AMP. P.C.B. ASSEMBLY		
CAPACITORS		
C503,504	Electrolytic 22 μ F +150 -10% 25WV	2
C511,512	Electrolytic 47 μ F +150 -10% 10WV	2
C505,506	Electrolytic 100 μ F +150 -10% 50WV	2
C513,514	Electrolytic 220 μ F +150 -10% 25WV	2
C509,510	Electrolytic 220 μ F +150 -10% 35WV	3
521		
C517,518	Electrolytic 1000 μ F +150 -10% 35WV	2
C519,520	Ceramic 100pF $\pm 10\%$ 50WV	2
C515,516	Ceramic 0.1 μ F +100 -0% 250WV	2
C501,502	Al.Si. 1 μ F $\pm 20\%$ 25WV	2
C522,523	Electrolytic 10 μ F +150 -10% 63WV	2

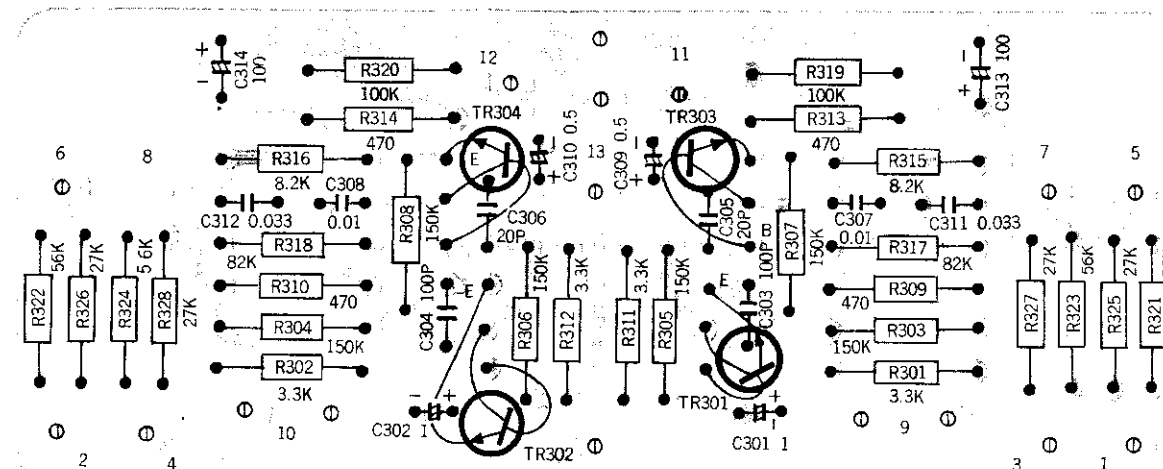
MAIN AMP. P.C.B. ASSEMBLY



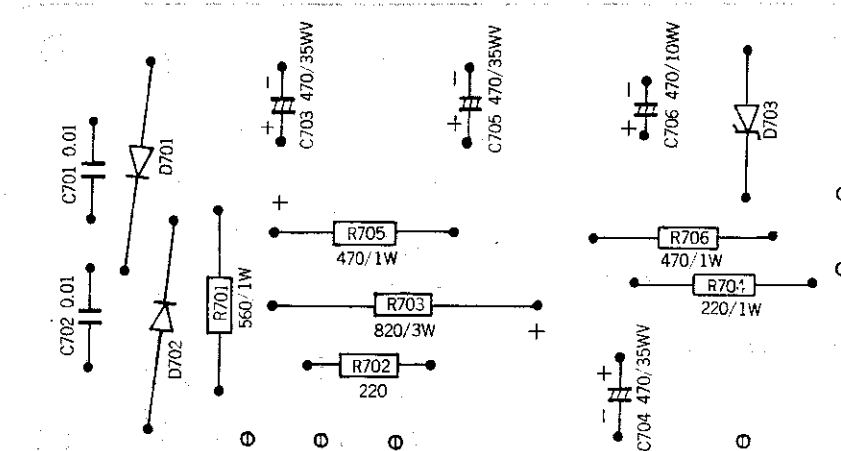
PARTS LIST

Part orders must contain Part No. and Description.

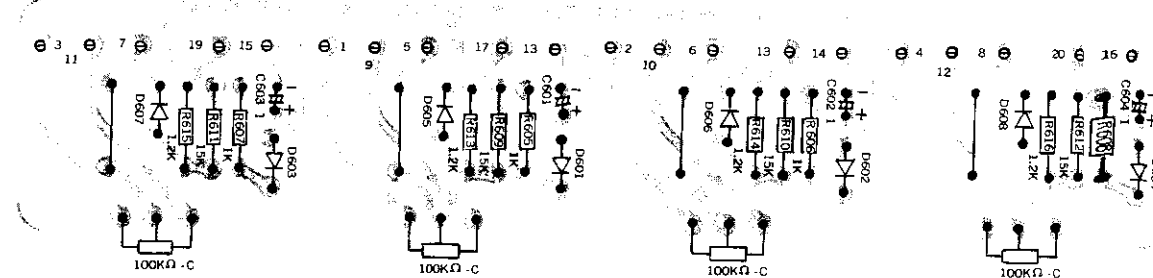
Ref. No. or Part No.	Description	Q'ty	Ref. No. or Part No.	Description	Q'ty
EQUALIZER AMP. P.C.B. ASSEMBLY					
131 0 4001 34900	Printed Circuit Assy	1	METER P.C.B. ASSEMBLY		
111 2 6220 11100	Wire wrap Terminal	18	RESISTORS		
4 2269 24200	Printed Circuit Board	1	R605,606	Carbon 1K ohm $\pm 10\%$ 1/4W	4
TR301,302	SEMI-CONDUCTOR		607,608		
TR303,304	Transistor 2SC693 FL, GL	2	R613,614	Carbon 1.2 K ohm $\pm 10\%$ 1/4W	4
	Transistor 2SC693 F, G	2	615,616	Carbon 15K ohm $\pm 10\%$ 1/4W	4
	RESISTORS		R609,610		
R309,310	Carbon 470 ohm $\pm 10\%$ 1/4W	4	611,612		
313,314			CAPACITORS		
R301,302	Carbon 3.3K ohm $\pm 10\%$ 1/4W	4	C601,602	Electrolytic 1 μ F +150 -10% 50W	4
311,312			PILOT (METER) P.C.B. ASSEMBLY		
R315,316	Carbon 8.2K ohm $\pm 10\%$ 1/4W	2	131 0 4001 32200	Printed Circuit Assy	1
R317,318	Carbon 82K ohm $\pm 10\%$ 1/4W	2	4 2269 23990	Printed Circuit Board	1
R319,320	Carbon 100K ohm $\pm 10\%$ 1/4W	2	4 2359 20930	Fuse Holder	8
R303,304	Carbon 150K ohm $\pm 10\%$ 1/4W	6	4 6129 20280	Pilot Lamp	4
305,306			PILOT (DIAL) P.C.B. ASSEMBLY		
307,308			131 0 4001 32101	Printed Circuit Assy	1
R325,326	Carbon 27K ohm $\pm 10\%$ 1/4W	4	4 2269 23870	Printed Circuit Board	1
327,328			4 2359 20930	Fuse Holder	8
R321,323	Carbon 56K ohm $\pm 10\%$ 1/4W	4	4 6129 20280	Pilot Lamp	4
324,322			111 2 6220 11100	Wire Wrap Terminal	10
	CAPACITORS		4 6129 20300	Pilot Lamp (N)	2
C305,306	Ceramic 20pF $\pm 10\%$ 50WV	2	4 6129 20301	Pilot Lamp (O)	1
C303,304	Ceramic 100pF $\pm 10\%$ 50WV	2	4 6129 20302	Pilot Lamp (Y)	2
C307,308	Mylar 0.01 μ F $\pm 20\%$ 50WV	2	R801	Carbon 10 ohm $\pm 10\%$ 1/4W	1
C311,312	Mylar 0.033 μ F $\pm 20\%$ 50WV	2	LOUDNESS P.C.B. ASSEMBLY		
C309,310	Al. Si. 0.5 μ F $\pm 20\%$ 25WV	2	131 0 4001 34501	Printed Circuit Assy	1
C301,302	Al. Si. 1 μ F $\pm 20\%$ 25WV	2	4 2269 24430	Printed Circuit Board	1
C313,314	Electrolytic 100 μ F +150-10% 10WV	2	4 2319 22333	Switch Lever 6P, LOUDNESS	1
POWER SUPPLY P.C.B. ASSEMBLY			111 2 6220 11100	Wire Wrap Terminal	5
131 0 4001 34601	Printed Circuit Assy	1	R901,902	Carbon 39K ohm $\pm 10\%$ 1/4W	2
4 2269 24110	Printed Circuit Board	6	C903,904	Ceramic 390pF $\pm 10\%$ 50WV	2
111 2 0229 11100	Wire Wrap Terminal	1	C901,902	Mylar 0.01 μ F $\pm 20\%$ 50WV	2
D701,702	SEMI-CONDUCTORS		PRE-2 P.C.B. ASSEMBLY PARTS (DCX 3300KA)		
D703	Diode DS-118	2	131 0 4001 38900	Printed Circuit Assembly	1
	Zener Diode SZ-9	1	4 2269 24810	Printed Circuit Assembly	1
	CAPACITORS		SEMICONDUCTORS		
C703,704	Electrolytic 470 μ F +150-10% 35WV	3	TR1101,TR1102	Transistor 2SC693	4
705			TR1103,TR1104		
C706	Electrolytic 470 μ F +150-10% 10WV	1	RESISTORS		
C701,702	Ceramic 0.01 μ F +80-20% 250W 250WV	2	R1101,R1102,	Carbon 150 K $\pm 10\%$ 1/4W	8
	RESISTOR		R1103,R1104,		
R702	Carbon 220 ohm 10% 1/4W	1	R1105,R1106,	Carbon 10 K $\pm 10\%$ 1/4W	4
R704	Metal Film 220 ohm $\pm 10\%$ 1W	1	R1107,R1108,	Carbon 330 K $\pm 10\%$ 1/4W	4
R705,706	Metal Film 470 ohm $\pm 10\%$ 1W	2	R1109,R1110,		
R701	Metal Film 560 ohm $\pm 10\%$ 1W	1	R1111,R1112,	CAPACITORS	
R703	Metal Film 820 ohm $\pm 10\%$ 3W	1	R1113,R1114,	Aluminium +150 -10% 25WV	8
			R1115,R1116	1 μ F - 10	
METER P.C.B. ASSEMBLY			C1101,C1102,	Ceramic 30pF $\pm 10\%$ 50WV	4
131 0 4001 32001	Printed Circuit Assy	1	C1103,C1104,	Electrolytic 100 μ F 25WV	1
4 2269 23850	Printed Circuit Board	1	C1105,C1106,		
4 2229 22711	V.R. 100K-Cxl, Spatial Control	4	C1107,C1108,		
2 6220 11100	Wire Wrap Terminal	20	C1109,C1110,		
	SEMI-CONDUCTORS		C1111,C1112		
D601,602	1S188	4	C1113		
603,604					
D605,606	DS430	4			
607,608					



EQUALIZER AMP. P.C.B. ASSEMBLY

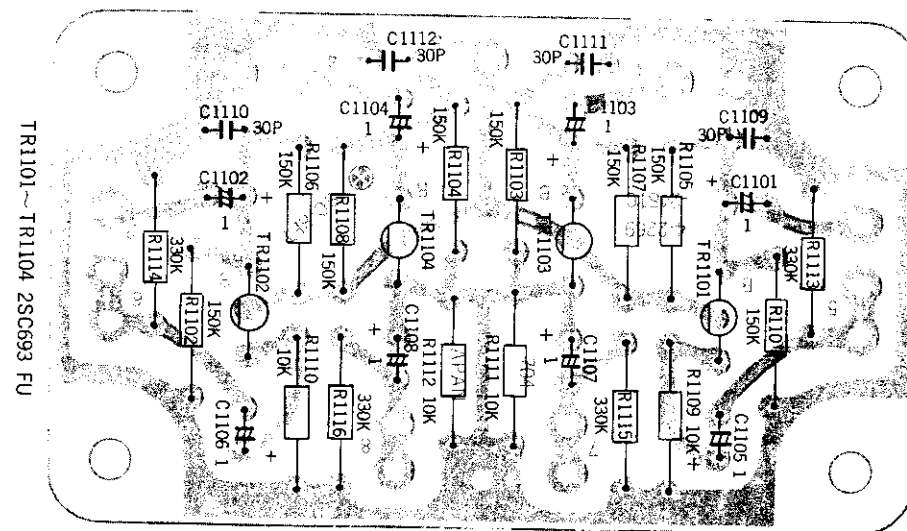
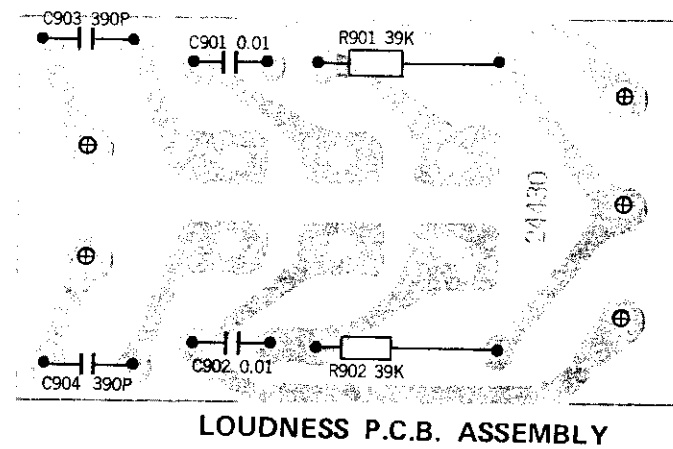
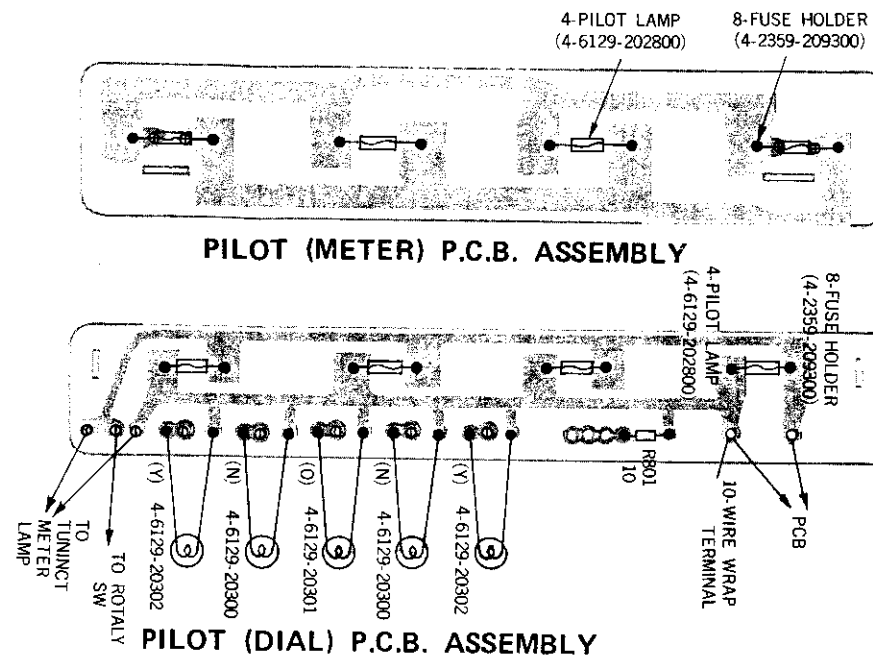


POWER SUPPLY P.C.B. ASSEMBLY



METER P.C.B. ASSEMBLY

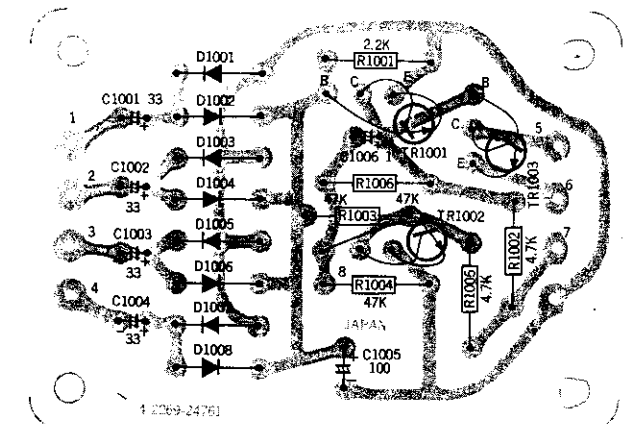
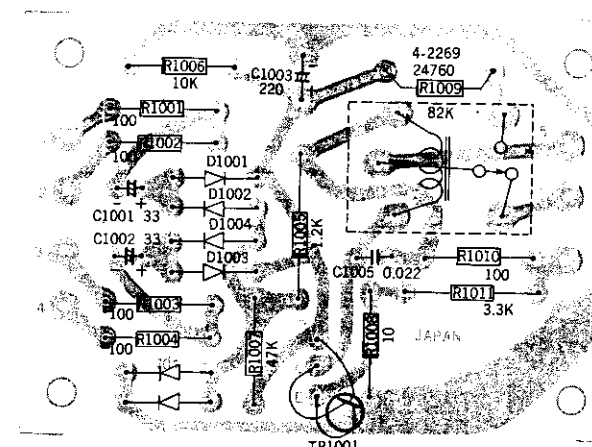
PARTS LIST



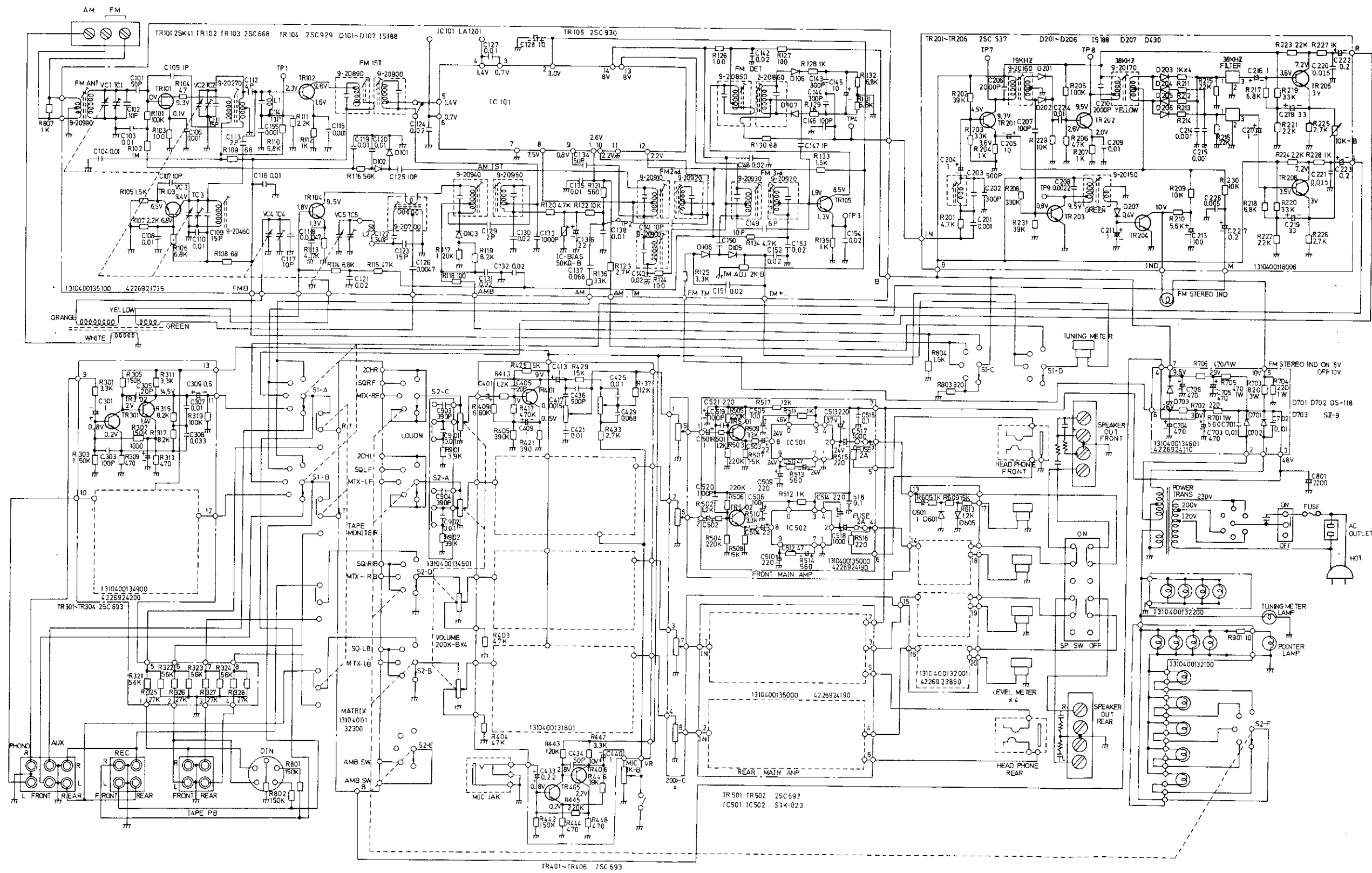
Ref. No. or Part No.	Description	Q'ty
PROTECTOR P.C.B. ASSEMBLY (RELAY)		
131 0 4001 38800	Printed Circuit Assembly	1
4 2269 24760	Printed Circuit Board	1
4 2329 20050	Relay DC24V, 19mA 1260Ω	1
SEMI CONDUCTOR		
TR1001	Transistor 2SC536	1
D1005, D1006	Diode DS430	2
D1001, D1002, D1003, D1004	Diode 1S188	4
RESISTORS		
R1008	Carbon 10Ω ±10% 1/4W	1
R1001, R1002, R1003, R1004	Carbon 100Ω ±10% 1/4W	5
R1010	Carbon 10KΩ ±10% 1/4W	1
R1006	Carbon 47KΩ ±10% 1/4W	1
R1007	Carbon 82KΩ ±10% 1/4W	1
R1009	Metal Film 1.2KΩ ±10% 1/4W	1
R1005	Carbon 3.3KΩ ±10% 1/2W	1
R1011		
CAPACITORS		
C1001, C1002	Electrolytic 33μF +150% -10% 10WV	2
C1003	Electrolytic 220μF +150% -10% 10WV	1
C1005	Mylar 0.022μF ±20% 50WV	1

Ref. No. or Part No.	Description	Q'ty
PROTECTOR P.C.B. ASSY (ELECTRONIC)		
131 0 4001 42500	Protector PCB Assembly	1
4 2269 24761	Printed Circuit Board	(1)
SEMI-CONDUCTORS		
TR1001, 1002	Transistor 2SC536F	2
TR1003	Transistor 2SC536G	1
D1001-1008	Diode 1S188	8
RESISTORS		
R1003, 1004, 1006	Carbon 47K ohm 10% 1/4W	3
R1001	Carbon 2.2K ohm 10% 1/4W	1
R1002, 1005	Carbon 4.7K ohm 10% 1/4W	2
CAPACITORS		
C1001-1004	Electrolytic 33μF 10V	4
C1005	Electrolytic 100μF 16V	1
C1006	Electrolytic 1 μF 25V	1

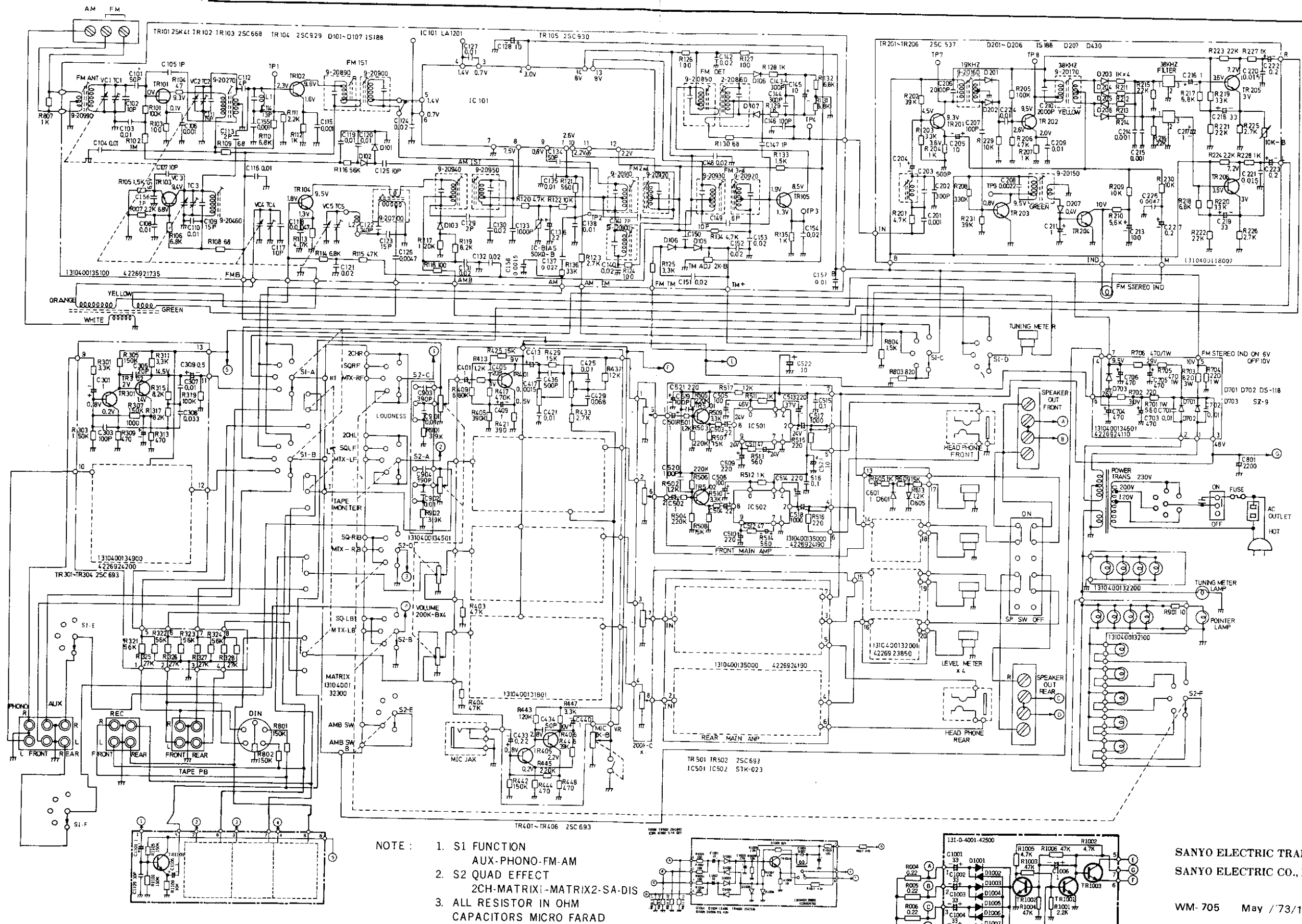
PROTECTOR (RELAY) P.C.B. ASSEMBLY _____ PROTECTOR (ELECTRIC) P.C.B. ASSEMBLY _____



SCHEMATIC DIAGRAM (DCX 3300K)



SCHEMATIC DIAGRAM (DCX 3300KA)



SANYO ELECTRIC TRADING CO., LTD.
SANYO ELECTRIC CO., LTD. (S.A.) K.A. JAPAN.

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