



CASSETTE RADIO-RECORDER

TPR-101, E, H, V, C

[SERVICE MANUAL]

MAIN SPECIFICATION

Type:	Capstan-drive, dual-track cassette tape recorder with radio built-in.	Output:	Max., 1,200 mW
Transistor:	15 (TPR-101, TPR-101 E & TPR-101 C) 16 (TPR-101 H & TPR-101 V)	Recording system:	AC bias.
Frequency ranges:	FM, 88 ~ 108 M Hz; AM, 525 ~ 1,650 K Hz; MB, 1.6 ~ 4M Hz (TPR-101, TPR-101 E & TPR-101 C) SW, 3.9 ~ 12 M Hz (TPR-101 H); SW, 6 ~ 16 M Hz (TPR-101 V); LW, 150 ~ 350 K Hz (TPR-101 V)	Erasing system:	AC erase.
Power source:	Battery power, DC 6 V Size "D" (UM-1) 1.5 V x 4; AC plug-in, 117 V (TPR-101 & TPR-101 C); AC plug-in, 110 ~ 120 V & 220 ~ 240 V, switchable (TPR-101 H, TPR-101 E & TPR-101 V)	Recording time:	90 min., forth and back (with C-90 cassette).
		Rewinding time:	Within 90 seconds.
		Fast forward time:	Within 160 seconds.
		S/N ratio:	45 dB
		Wow and flutter:	0.45 %
		Frequency response:	200 ~ 6,300 Hz
		Dimensions:	11-13/16" x 9-3/32" x 3-9/16" (285 x 231 x 90 mm)
		Weight:	6 lbs. (2.8 kg).

Ref. No.	Part No.	Description	Quantity by Model					Remarks
				C	E	H	V	
113	7441003	E stop ring, STE-1.5	1	1	1	1	1	
114	7253070	Bind screw, U+2.6-3	1	1	1	1	1	
115	7233094	Countersunk-head screw, O+3-6S	3	3	3	3	3	
116	7253095	Bind screw, U+3-8	4	4	4	4	4	
117	7343095	Bind tapping screw, UT11+3-8	6	6	9	9	11	
118	7343099	Bind tapping screw, UT11+3-15	1	1	1	1	1	
119	7392004	NSP-4	4	4	4	4	4	
120	7374093	Set screw, SS3+5, grooved point	2	2	2	2	2	
121	7441006	E stop ring, STE-2.3	2	2	2	2	2	
122	7253034	Bind screw, U+2-5	2	2	2	2	2	
123	7422306	Spring washer, WS-3	2	2	2	2	2	
124	7263092	Pan-head screw, V+3-4S	3	3	3	3	3	
125	7410316	Washer, W-3-8-0.8	2	2	2	2	2	
126	7081015	Felt washer, WF-3-8-0.5	3	3	3	3	3	
127	7253031	Bind screw, U+2-2S	2	2	2	2	2	

ELECTRICAL PARTS

Ref. No.	Symb. No.	Part No.	Description	Quantity by Model					Remarks
					C	E	H	V	
		2401601	Printed circuit board, Tuner	1	1	1	0	0	
		2401627	Printed circuit board, Tuner	0	0	0	1	0	
		2401629	Printed circuit board, Tuner	0	0	0	0	1	
		2401602	Printed circuit board, Switch	1	1	1	0	0	
		2401628	Printed circuit board, Switch	0	0	0	1	0	
		2401630	Printed circuit board, Switch	0	0	0	0	1	
		24016032	Printed circuit board, TP	1	1	1	1	1	
		2401604	Printed circuit board, OSC	1	1	1	1	1	
	L5, 6	24016052	Antenna coil	1	1	1	0	0	
	L7, 8	2401617	Bar antenna coil	0	0	0	1	0	
		2401631	Bar antenna coil	0	0	0	0	1	
		4171606	SW antenna coil	0	0	0	0	1	
	L10	2401606	OSC coil (TP)	1	1	1	1	0	
	L102	2401606	OSC coil (TP)	0	0	0	0	1	
	L3	12545319	FM choke coil	1	1	1	0	1	
	L5	1254319	FM choke coil	0	0	0	1	0	
	L7	1447305	AM OSC coil	1	1	1	0	0	
	L11	1447305	AM OSC coil	0	0	0	1	0	
	L9	1447305	AM OSC coil	0	0	0	0	1	
	L8	7007028	MB OSC coil	1	1	1	0	0	
	L8	1447306	LW OSC coil	0	0	0	0	1	
	L10	7007030	SW OSC coil	0	0	0	0	1	
	L12	1486621	SW OSC coil	0	0	0	1	0	
	L2	2401635	FM coil	0	0	0	1	0	
	L1, 3	2401636	FM coil	0	0	0	2	0	
	L2	7006017	FM coil	1	1	1	0	1	
	L4	7006017	FM coil	0	0	0	1	0	
	L4	7006016	FM coil	1	1	1	0	1	
	L6	7006016	FM coil	0	0	0	1	0	
	L1	7006010	FM coil (matching)	1	1	1	0	1	
	L9	2401643	Trap coil	1	1	1	1	0	5μH
	L101	2401643	Trap coil	0	0	0	0	1	5μH
		7006019	FM coil	0	0	0	1	0	
		7006021	FM coil	0	0	0	1	0	

Ref. No.	Symb. No.	Part No.	Description	Quantity by Model					Remarks
					C	E	H	V	
	CH3	2401624	Choke coil	1	1	1	1	0	35 μ H
	L105	2401624	Choke coil	0	0	0	0	1	35 μ H
	CH4	2401621	Choke coil	1	1	1	1	0	1.3 μ H
	L104	2401621	Choke coil	0	0	0	0	1	13 μ H
	L103	2401644	Choke coil	0	0	0	0	1	60 μ H
	C174	2401625	Through-type capacitor	0	0	0	0	1	0.002 μ F
	C175	2401620	Through-type capacitor	0	0	0	0	1	0.002 μ F
		2401625	Through-type capacitor	1	1	1	1	0	0.002 μ F
		2401620	Through-type capacitor	1	1	1	1	0	0.002 μ F
	LM	2401607	Level meter	1	1	1	1	1	
	SP	1302307	Speaker	1	1	1	1	1	
		7031076	See-saw switch	1	1	1	1	1	
		2401609	Slide switch	1	1	1	1	1	
		2401615	Push switch	1	1	1	0	0	
		2401619	Push switch	0	0	0	1	0	
		2401632	Push switch	0	0	0	0	1	
		7031111	Slide switch	1	1	1	1	1	
		7031109	Leaf switch R	1	1	1	1	1	
		7031110	Leaf switch S	1	1	1	1	1	
		7031139	Slide switch	0	0	0	1	0	
	IPT	2401618	Input power transformer	1	1	1	1	1	
	OPT	145136	Output power transformer	1	1	1	1	1	
	PT	2401608	Power transformer	1	0	1	1	0	
	PT	2401622	Power transformer	0	1	0	0	0	
	PT	2401633	Power transformer	0	0	0	0	1	
		7021164	Volume	2	2	2	2	2	
		7021147	SVR	1	1	1	1	1	50kB
		7011005	Trimmer	1	1	1	1	1	
	VC (1-4)	1447302	PVC	1	1	1	1	0	2AF
		1447302	PVC	0	0	0	0	1	2AF
	CH2	7005042	Micro inductor	1	1	1	2	0	33 μ H
	IFT6	3122306	AM IFT (1)	1	1	1	1	1	
	IFT7	1322307	AM IFT (2)	1	1	1	1	1	
	IFT8	7008063	AM IFT (3)	1	1	1	1	1	
	IFT1	1436305	FM IFT (1)	1	1	1	1	1	
	IFT2, 3	7008080	FM IFT (2)	2	2	2	2	2	
	IFT4	7008078	FM IFT (ratio P)	1	1	1	1	1	
	IFT5	7008084	FM IFT (ratio S)	1	1	1	1	1	
		7032250	3.5 ϕ Jack	3	3	3	3	0	
		7032002	2.5 ϕ Jack	1	1	1	1	0	
		7032276	DIN socket (5P)	0	0	0	0	1	
		7032268	DIN socket (2P)	0	0	0	0	1	
		7032281	DIN socket (5P)	0	0	0	0	1	
		7032225	AC jack	1	1	1	1	1	
		7038020	Radiation plate	2	2	2	2	0	
		1451319	Radiation plate	0	0	0	0	2	
	EH	7046028	Erasure head	1	1	1	1	1	
	R, PH	2258622	Record/playback head assembly	1	1	1	1	1	
	M	2401610	Motor assembly	1	1	1	1	1	
		7033001	Lug. plate	1	0	1	1	1	
		7033008	Lug. plate	0	1	0	0	0	
		7064027	Fuse holder	0	0	1	1	0	
		7064025	Fuse holder	0	0	0	0	1	
		7035006	Fuse	0	0	1	1	0	
		7035028	Fuse	0	0	0	0	1	
		7053010	AC socket cover	0	0	0	0	1	
	PT	2401608	Power transformer	1	0	1	1	0	

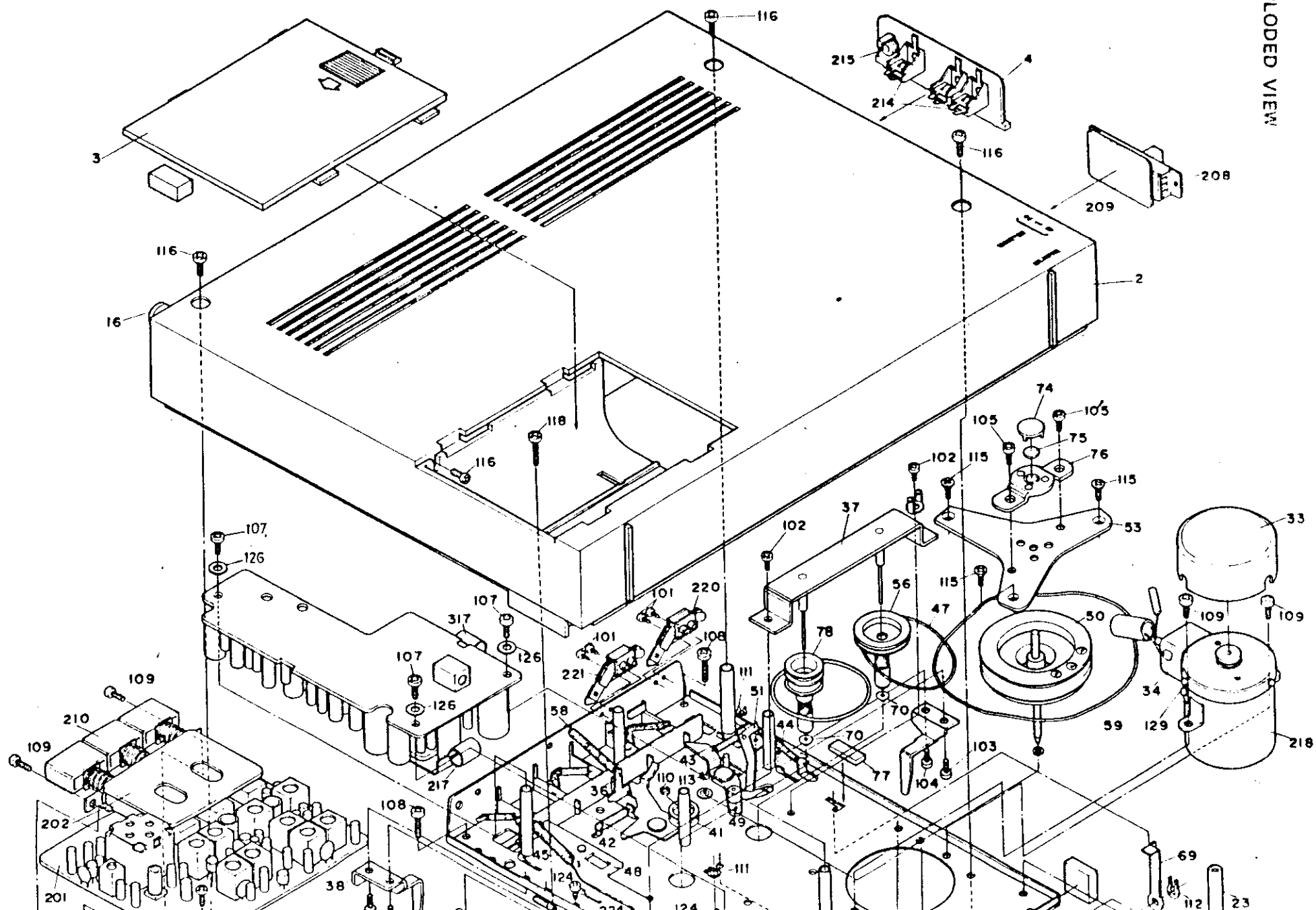
Ref. No.	Symb. No.	Part No.	Description	Quantity by Model					Remarks
					C	E	H	V	
	PT	2401622	Power transformer	0	1	0	0	0	
	PT	2461633	Power transformer	0	0	0	0	1	
	Th	8064261	Thermister	1	1	1	2	0	19D26A
	Th2	8064261	Thermister	0	0	0	0	1	
	Th1	8065271	Thermister	0	0	0	0	1	22D27A
	D9, 10	7027005	Silicon diode	2	2	2	2	0	SD-1Y
	D8, 9	7027005	Silicon diode	0	0	0	0	2	SD-1Y
	D3~8, 11	8051060	Diode	7	7	7	0	0	1N60
	D2~8	8051060	Diode	0	0	0	7	0	1N60
	D2~7	8051060	Diode	0	0	0	0	6	
	Tr1	8033943	Transistor	1	1	1	0	1	2SC 394 (O)
	Tr2	8033944	Transistor	1	1	1	1	1	2SC 394 (Y)
	Tr5, 6	8033803	Transistor	2	2	2	0	0	2SC 380 (O)
	Tr6	8033803	Transistor	0	0	0	1	0	2SC 380 (O)
	Tr3, 4	8033804	Transistor	2	2	2	2	0	2SC 380 (Y)
	Tr7	8024390	Transistor	1	1	1	1	0	2SB439
	Tr8	8020540	Transistor	1	1	1	0	0	2SB54
	Tr8, 16	8020540	Transistor	0	0	0	2	0	2SB54
	Tr10, 11, 14, 15	8020560	Transistor	4	4	4	4	0	2SB56
	Tr12, 13	8023643	Transistor	2	2	2	2	0	2SB364 (3)
	Tr9	8031825	Transistor	1	1	1	1	0	2SC182 (5)
	Tr5	8014711	Transistor	0	0	0	1	1	2SA471 (1)
	Tr1	8036683	Transistor	0	0	0	1	0	2SC668
	Tr3	8033803	Transistor	0	0	0	0	1	2SC380 (O)
	Tr4, 7	8033804	Transistor	0	0	0	0	2	2SC380 (Y)
	Tr8	8024390	Transistor	0	0	0	0	1	2SB439
	Tr6, 9	8020540	Transistor	0	0	0	0	2	2SB54
	Tr11, 12, 15, 16	8020560	Transistor	0	0	0	0	4	2SB56
	Tr13, 14	8023643	Transistor	0	0	0	0	2	2SB364 (3)
	Tr16	8031825	Transistor	0	0	0	0	1	2SC182 (5)
	D1	8052352	Variable Capacitor	1	1	1	1	1	1S352 (M)
		2401626	Circuit board, Monitor switch	1	1	1	1	1	

RESISTORS (1/4W, $\pm 10\%$) TPR-101, C, E & H

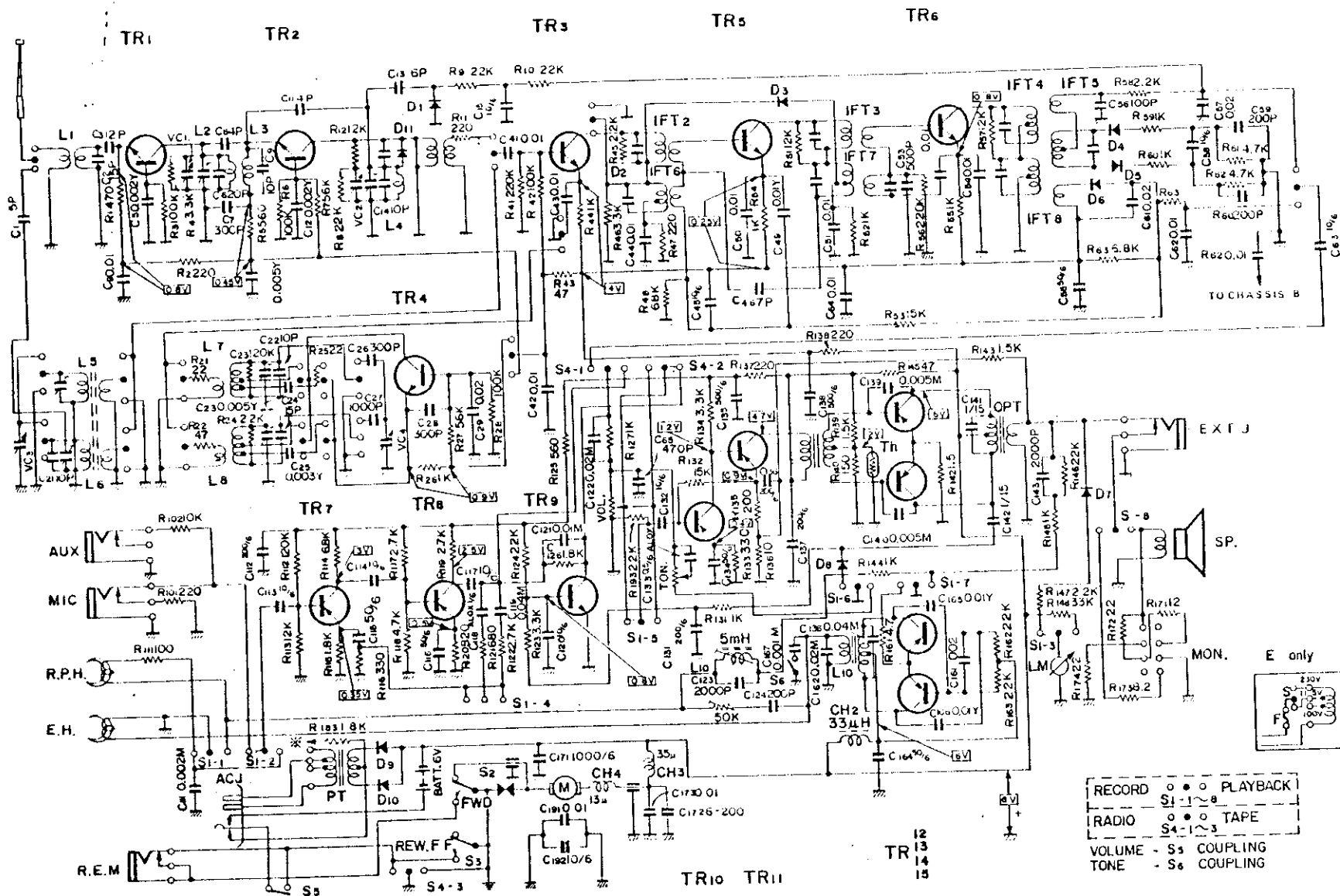
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	8120159	1.5		8120182	1.8k
	8120479	4.7		8120222	2.2k
	8120829	8.2		8120272	2.7k
	8120100	10		8120332	3.3k
	8120120	12		8120472	4.7k
	8120220	22		8120562	5.6k
	8120470	47		8120682	6.8k
	8120101	100		8120103	10k
	8120151	150		8120123	12k
	8120331	220		8120153	15k
	8120471	470		8120223	22k
	8120561	560		8120273	27k
	8120681	680		8120333	33k
	8120821	820		8120563	56k
	8120102	1k		8120683	68k
	8120152	1.5k		8120104	100k

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	8120124	120k	CAPACITORS		
	8120154	150k		8213040	4p (Ceramic)
	8120224	220k		8213050	5p (Ceramic)
	8120474	470k		8213060	6p (Ceramic)
	8134220	22		8213070	7p (Ceramic)
	8134330	33		8213100	10p (Ceramic)
	8134470	47		8213120	12p (Ceramic)
	8134101	100		8212150	15p (Ceramic)
	8134221	220		8212200	20p (Ceramic)
	8134561	560		8212220	24p (Ceramic)
	8134102	1k		8212410	100p (Ceramic)
	8134332	3.3k		8212470	200p (Ceramic)
	8134822	8.2k		8212510	300p (Ceramic)
	8134123	12k		8212550	470p (Ceramic)
	8134223	22k		8212650	0.002 (Ceramic)
	8134333	33k		8205810	0.01 (Ceramic)
	8134683	68k		8205830	0.022 (Ceramic)
TPR-101 V				8214650	0.002Y (Ceramic)
	8132159	1.5		8214690	0.003Y (Ceramic)
	8132479	4.7		8214720	0.005Y (Ceramic)
	8132829	8.2		8214810	0.01Y (Ceramic)
	8132100	10		8212120	12p (Ceramic)
	8132120	12		8212220	22p (Ceramic)
	8132220	22		8212230	27p (Ceramic)
	8132470	47		8212260	36p (Ceramic)
	8132101	100		8212610	0.001 (Ceramic)
	8132151	150		8214610	0.001Y (Ceramic)
	8132221	220		8727610	0.001 (Mylar)
	8132331	330		8727650	0.002 (Mylar)
	8132471	470		8727720	0.005 (Mylar)
	8132561	560		8727810	0.01 (Mylar)
	8132681	680		8727830	0.02 (Mylar)
	8132102	1k		8727870	0.04 (Mylar)
	8132152	1.5k		8727910	0.1 (Mylar)
	8132182	1.8k		7015095	0.5/6 (AlOX)
	8132222	2.2k		7015097	1/6 (AlOX)
	8132272	2.7k		8617510	300p (Styrol)
	8132332	3.3k		8517610	1000p (Styrol)
	8132472	4.7k		8517650	2000p (Styrol)
	8132822	8.2k		8519320	62p (Styrol)
	8132682	6.8k		8517450	150p (Styrol)
	8132103	10k		8335100	1/16 (Chemical)
	8132123	12k		8332110	10/6.3 (Chemical)
	8132153	15k		8332310	33/6.3 (Chemical)
	8132223	22k		8332510	47/6.3 (Chemical)
	8132273	27k		8332220	220/6.3 (Chemical)
	8132333	33k		8332520	470/6.3 (Chemical)
	8132563	56k		8332130	1000/6.3 (Chemical)
	8132683	68k		8432110	10/6.3 (Chemical)
	8132104	100k		7917510	300p (Mica)
	8132124	120k		7917650	2000p (Mica)
	8132224	220k			
	8132274	270k			
	8132821	820			
	8132270	27			
	8134332	3.3k			

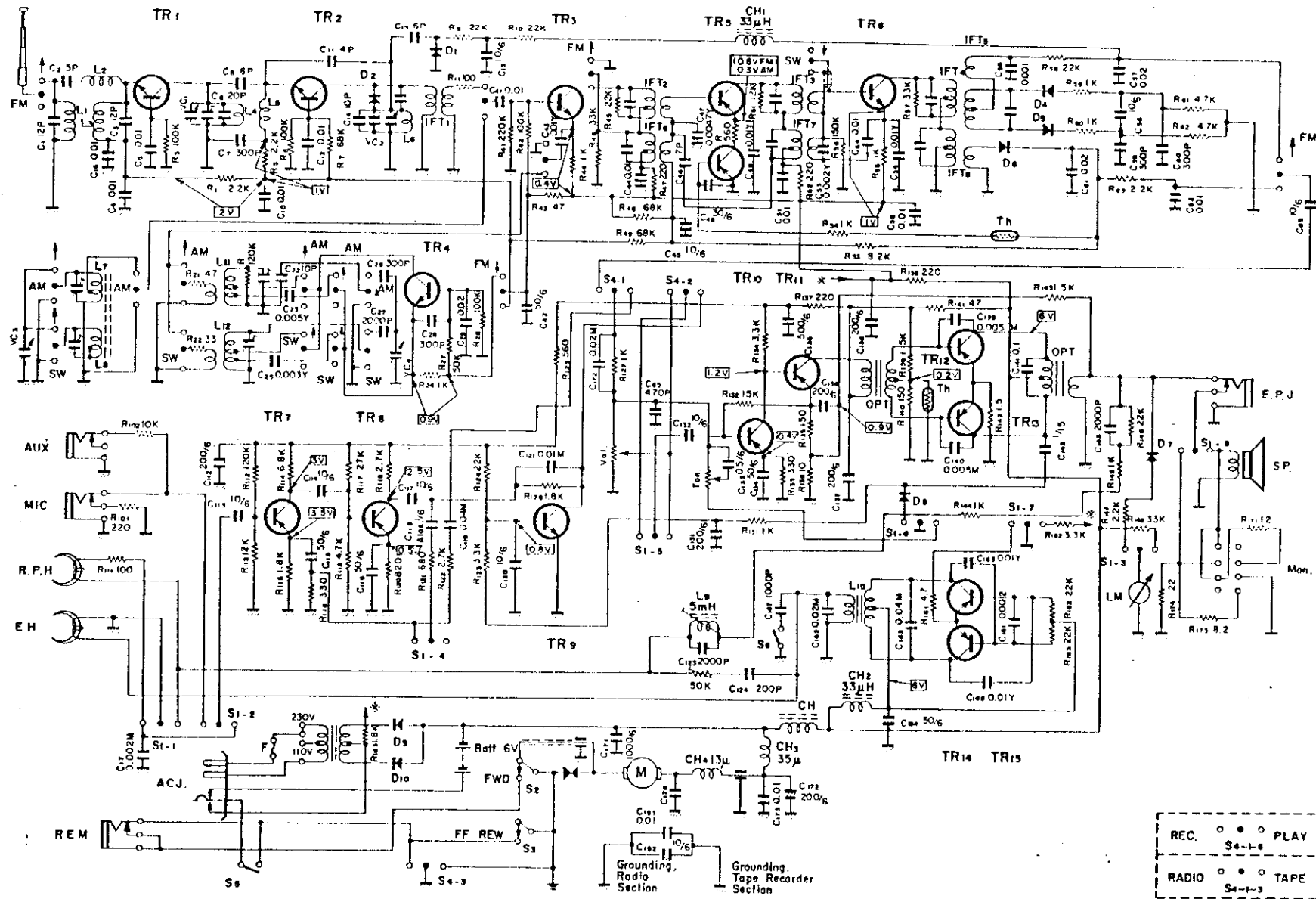
EXPLODED VIEW



SCHEMATIC DIAGRAM, TPR-101, TPR-101C & TPR-101E

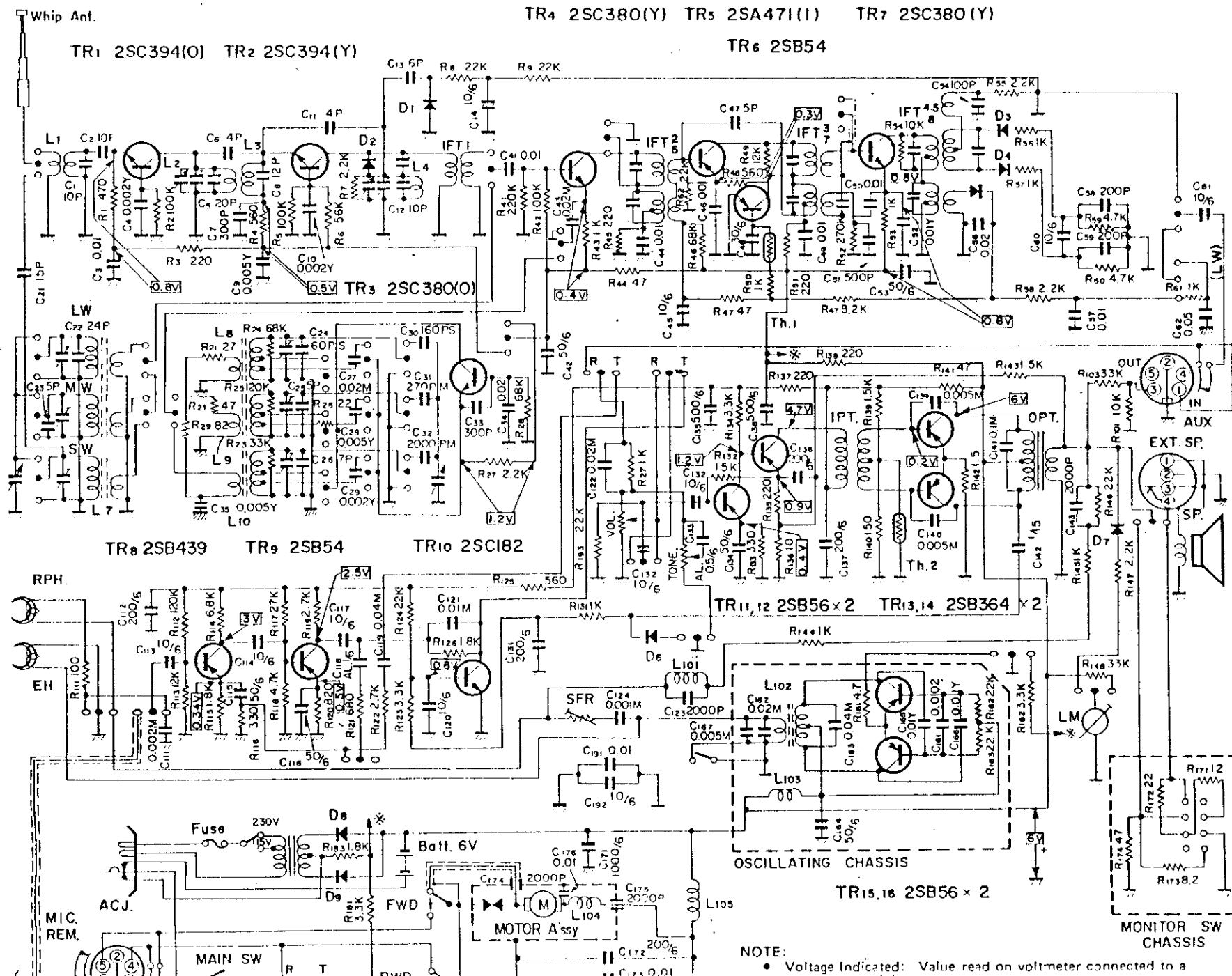


SCHEMATIC DIAGRAM, TPR-101H



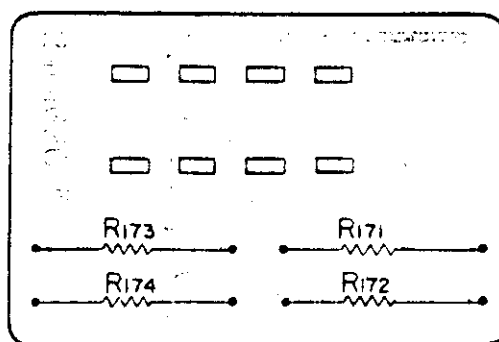
NOTE:

- Voltage Indicated: Value read on voltmeter connected to a grounding (+) and the arrow-marked point.
- Subject to change without prior notice.

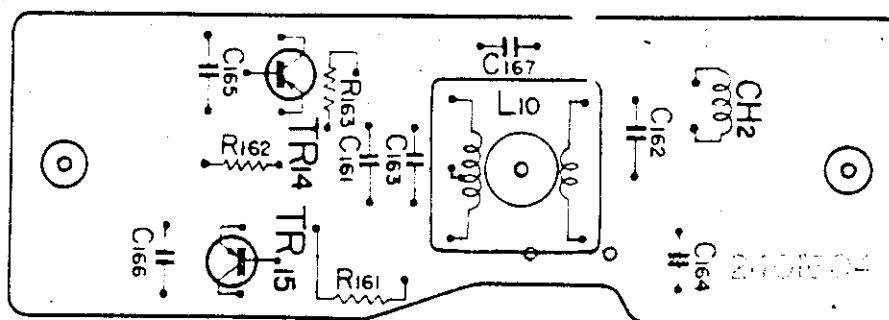


SCHEMATIC DIAGRAM, TPR-101V

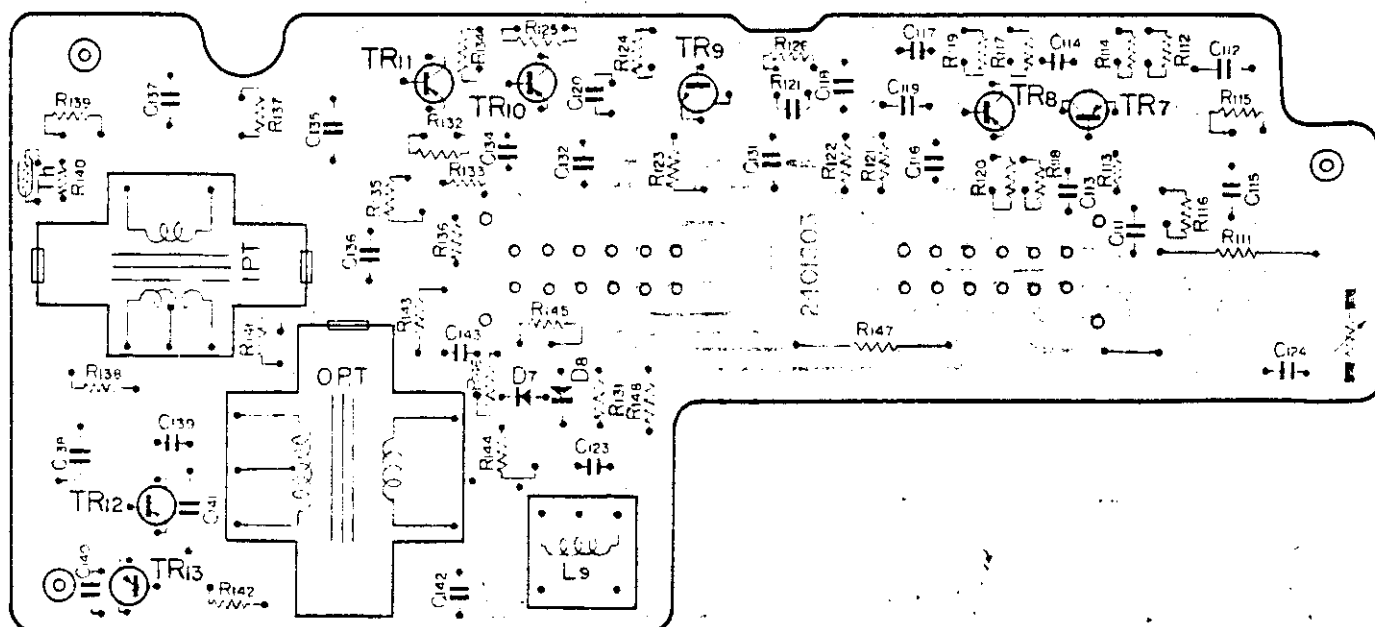
MONITOR CIRCUIT BOARD



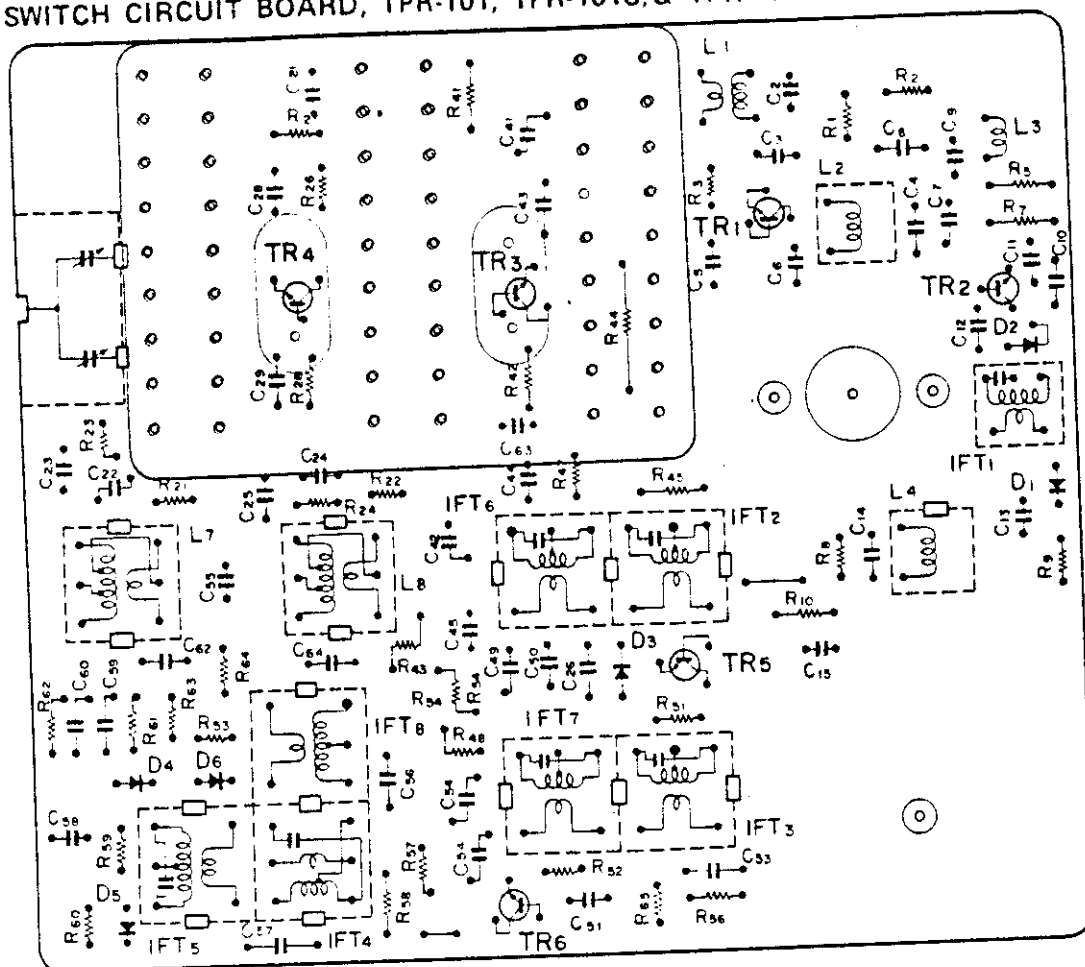
OSC CIRCUIT BOARD



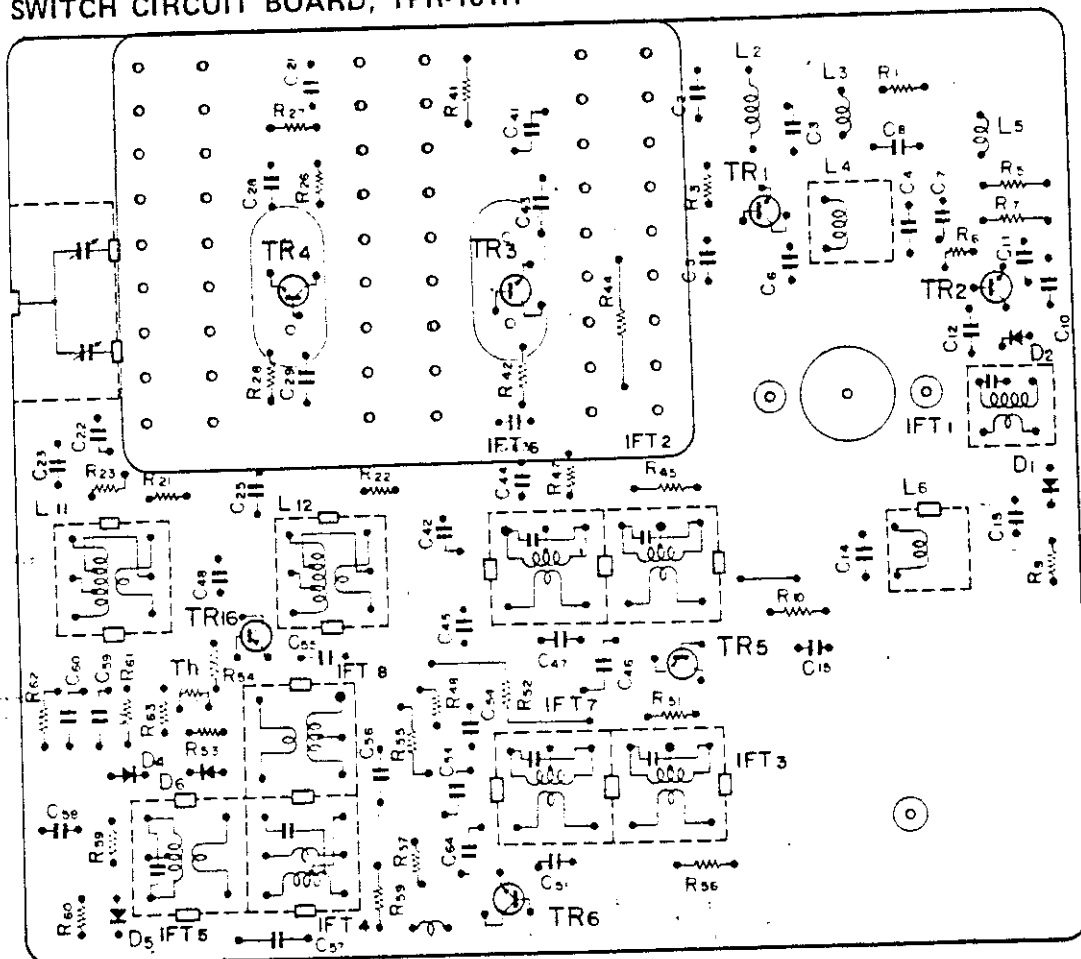
AUDIO CIRCUIT BOARD



SWITCH CIRCUIT BOARD, TPR-101, TPR-101C, & TPR-101E

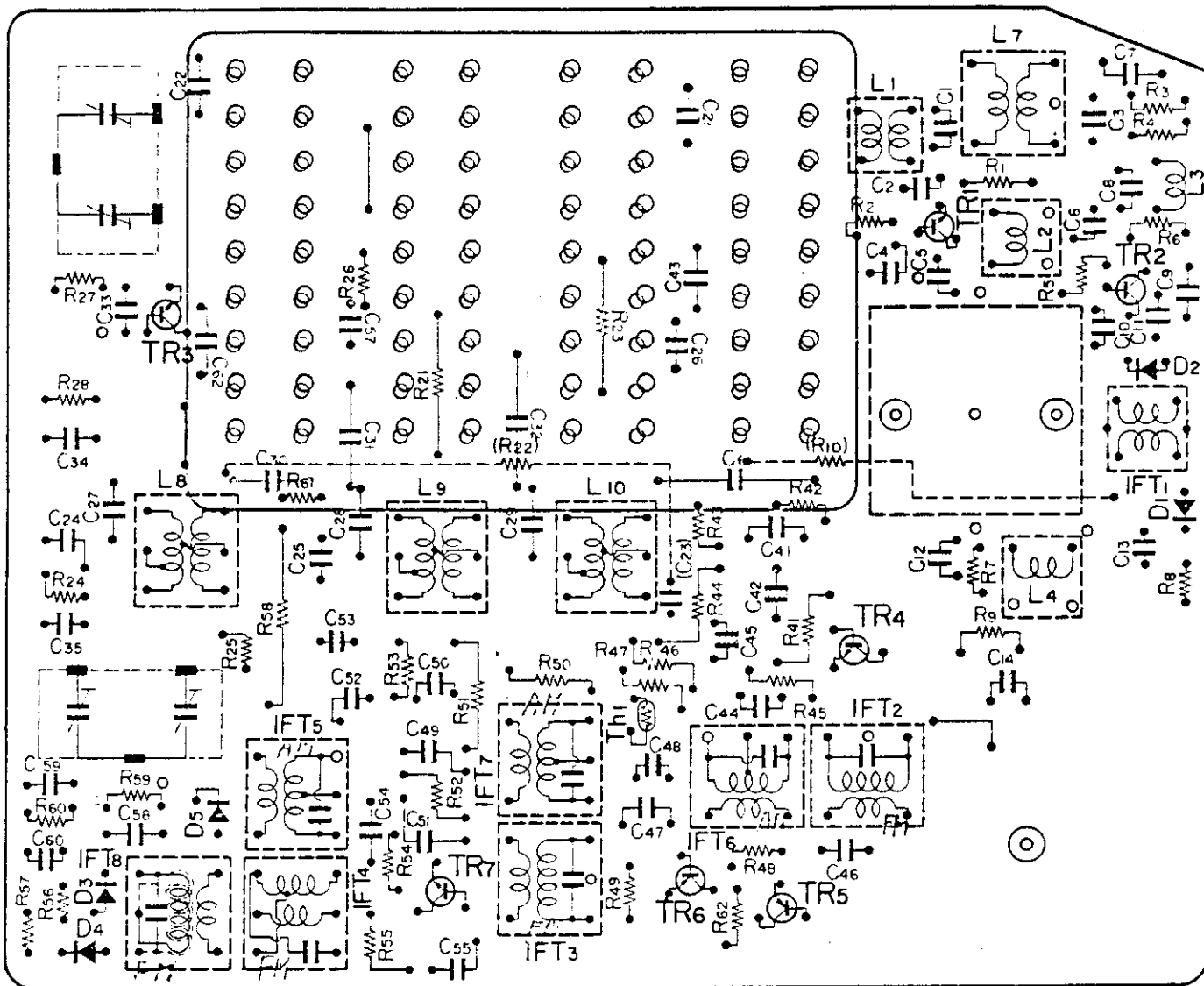


SWITCH CIRCUIT BOARD, TPR-101H



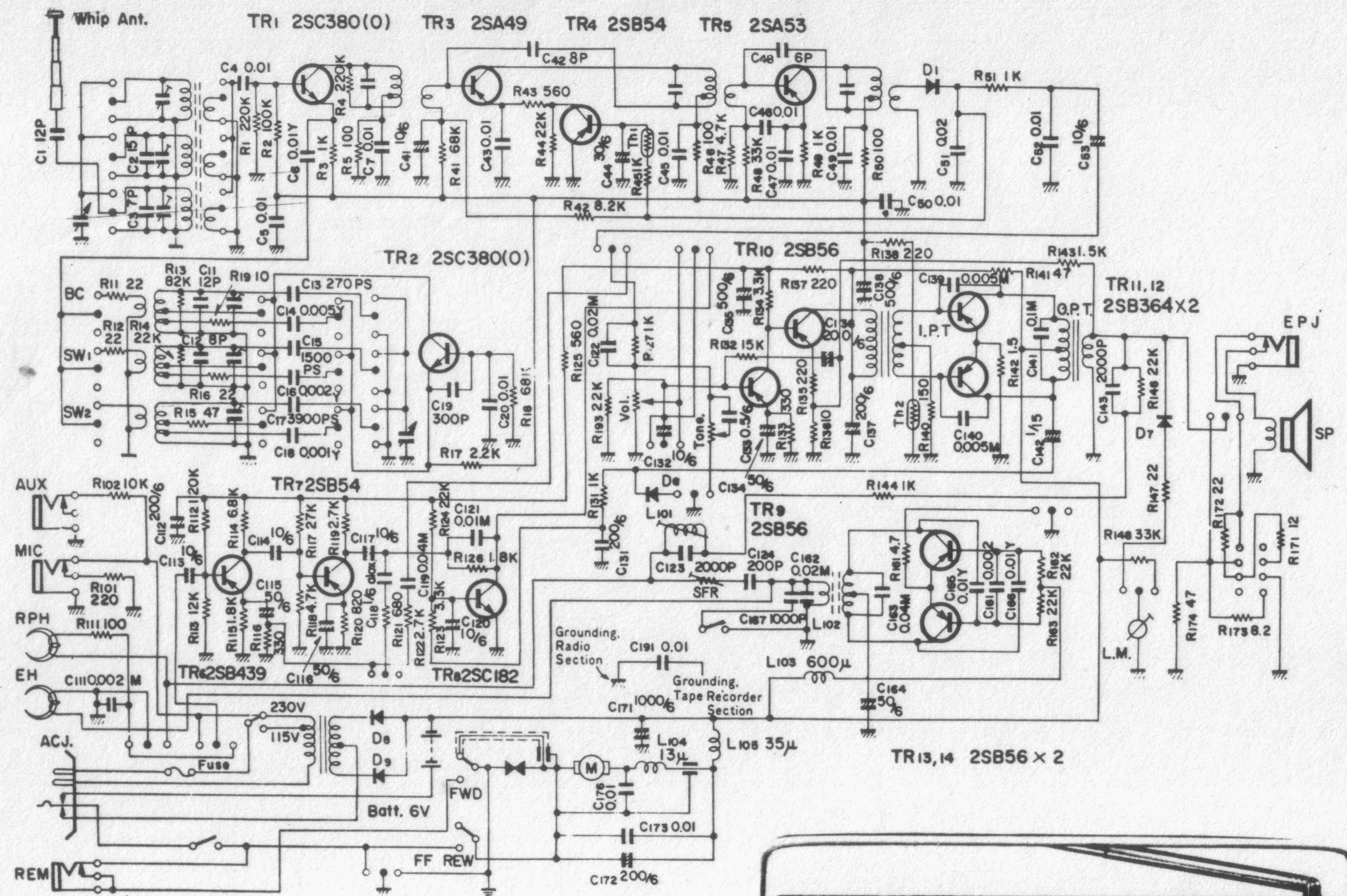
NOTE:
Blue color represents
smaller chassis.
Black color represents
larger chassis.

SWITCH CIRCUIT BOARD, TPR-101V



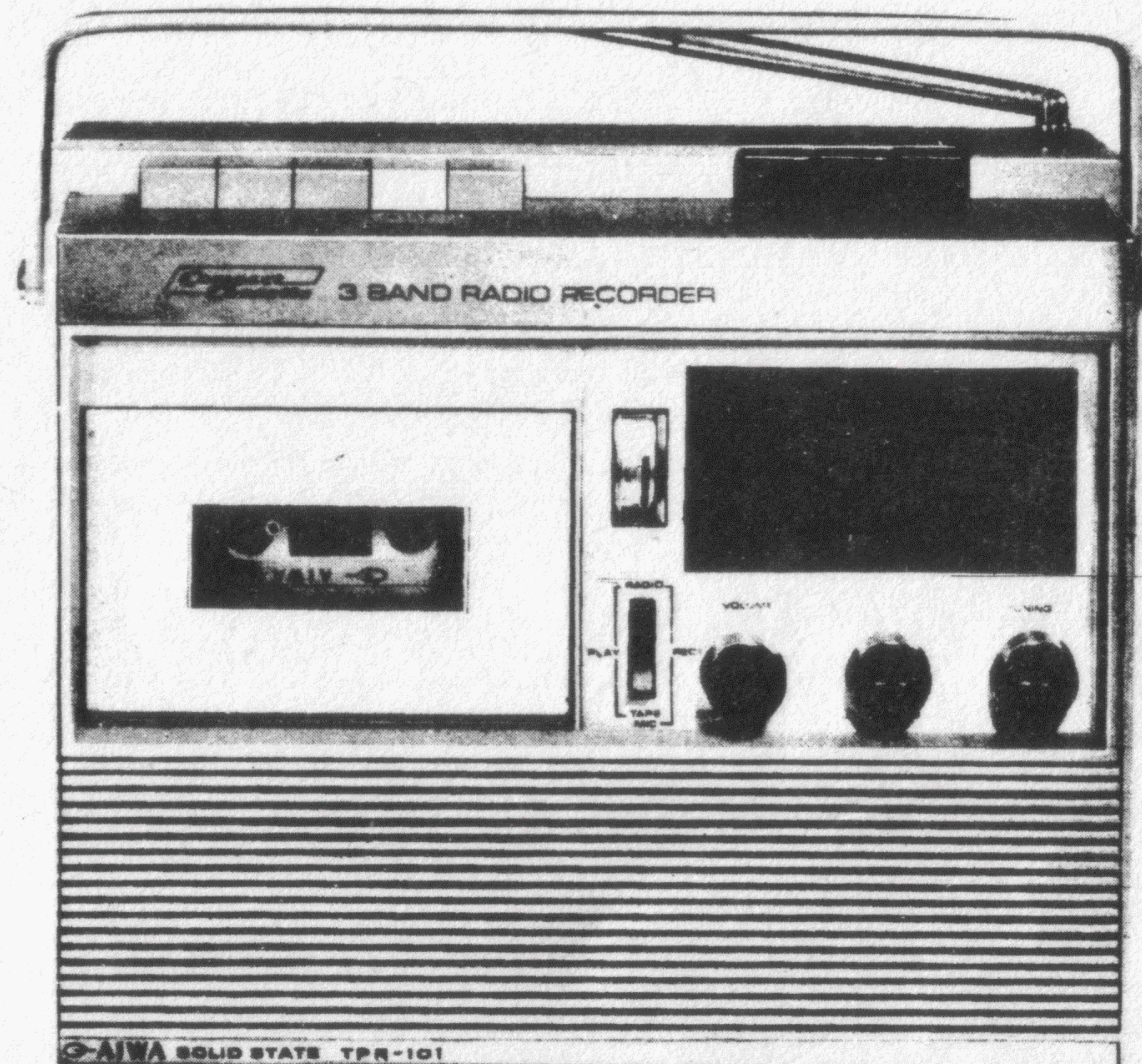
NOTE:
 Blue color represents
 smaller chassis.
 Black color represents
 larger chassis.

SCHEMATIC DIAGRAM TPR-101SSH



AIWA®

TPR-101SSH



SCHEMATIC DIAGRAM TPR-101 SLH

