

SERVICE MANUAL

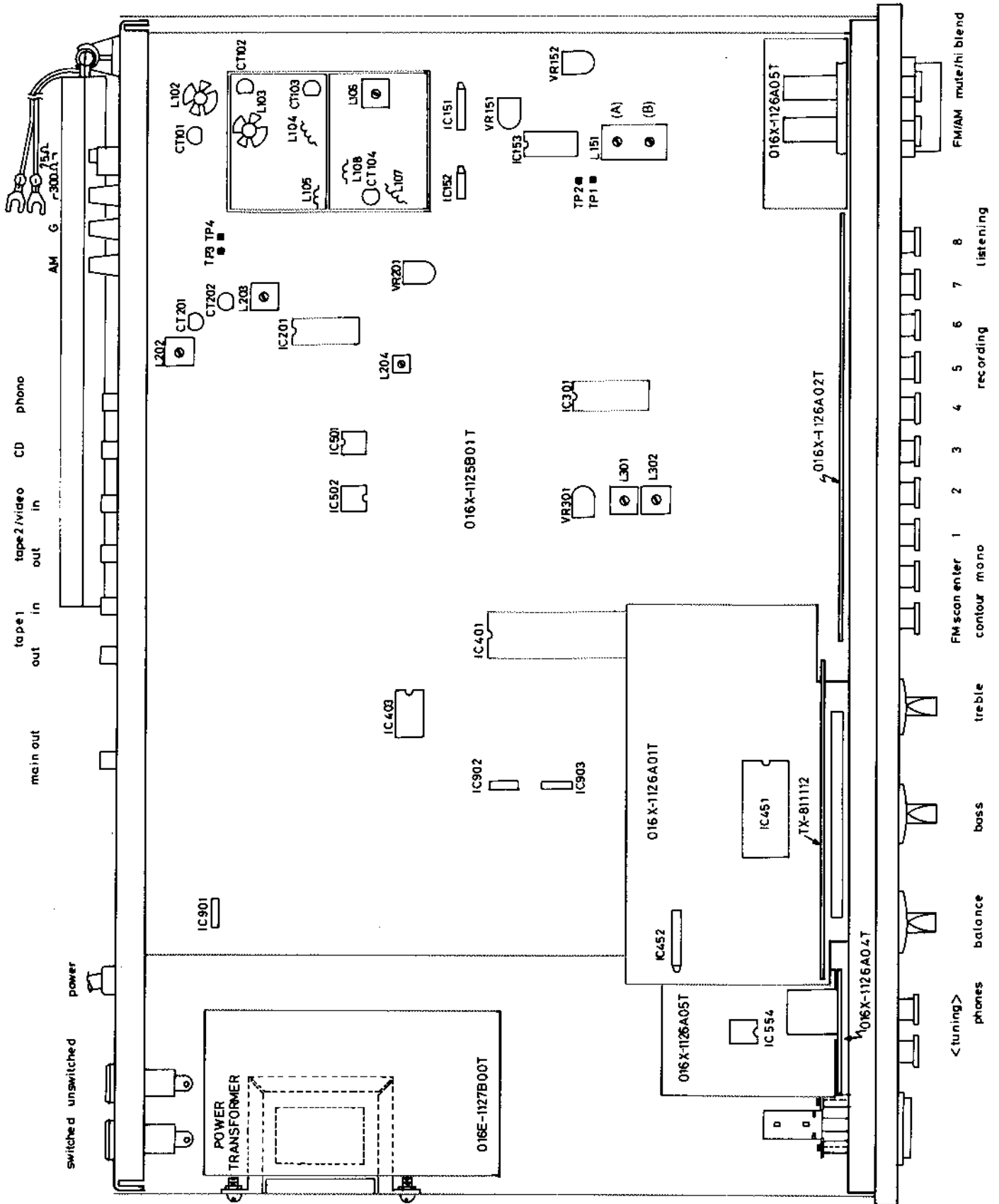
ADCOM[®] TUNER/PREAMP GTP-400

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ADCOM, a division of
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Chassis Layout



FM IF and RF Alignment / FM MPX Alignment

Instruments: FM Stereo Signal Generator, (400Hz, 100% Modulated) THD Analyzer, Oscilloscope, AC Voltmeter, Digital DC Voltmeter.

Connections: THD Analyzer, Oscilloscope and AC Voltmeter to audio outputs (Left or Right as necessary).

Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	Not Necessary		87.5MHz	L107	1.7 reading on DC Voltmeter Across TP3 & TP4
2			108MHz	CT104	9V reading on DC Voltmeter Across TP3 & TP4
3	Repeat steps 1 and 2 until no further improvement is observed.				
4	Antenna terminal input below limiting of IF	90MHz	90MHz	L102,L103,L104	Maximum reading on AC Voltmeter
5		105MHz	105MHz	CT101, CT102,CT103	Maximum reading on AC Voltmeter
6		98MHz	98MHz	L106	Maximum Output/Minimum Distortion
7	Repeat steps 4,5 and 6 until no further improvement is observed .(Muting OFF)				
8	Antenna terminal	90MHz	90MHz	L151(A)	0.0V on DC Voltmeter connected across TP1&TP2
9	1mV input			L151(B)	Minimum reading on THD Analyzer
10	Repeat steps 8 and 9 until no further improvement is observed. (Muting OFF)				
11	Antenna terminal 15µV input	90MHz	90MHz	VR 151	Muting Level (Muting ON)
12	Antenna terminal 1mV input	90MHz	90MHz	VR 152	SIGNAL LEVEL INDICATOR 5th LED ON
13	Antenna terminal 1mV input (L or R)	98MHz Pilot...10% 1kHz...90% Mod.	98MHz	VR301	Best separation (muting ON) (hi blend OFF)

AM IF and RF Alignment

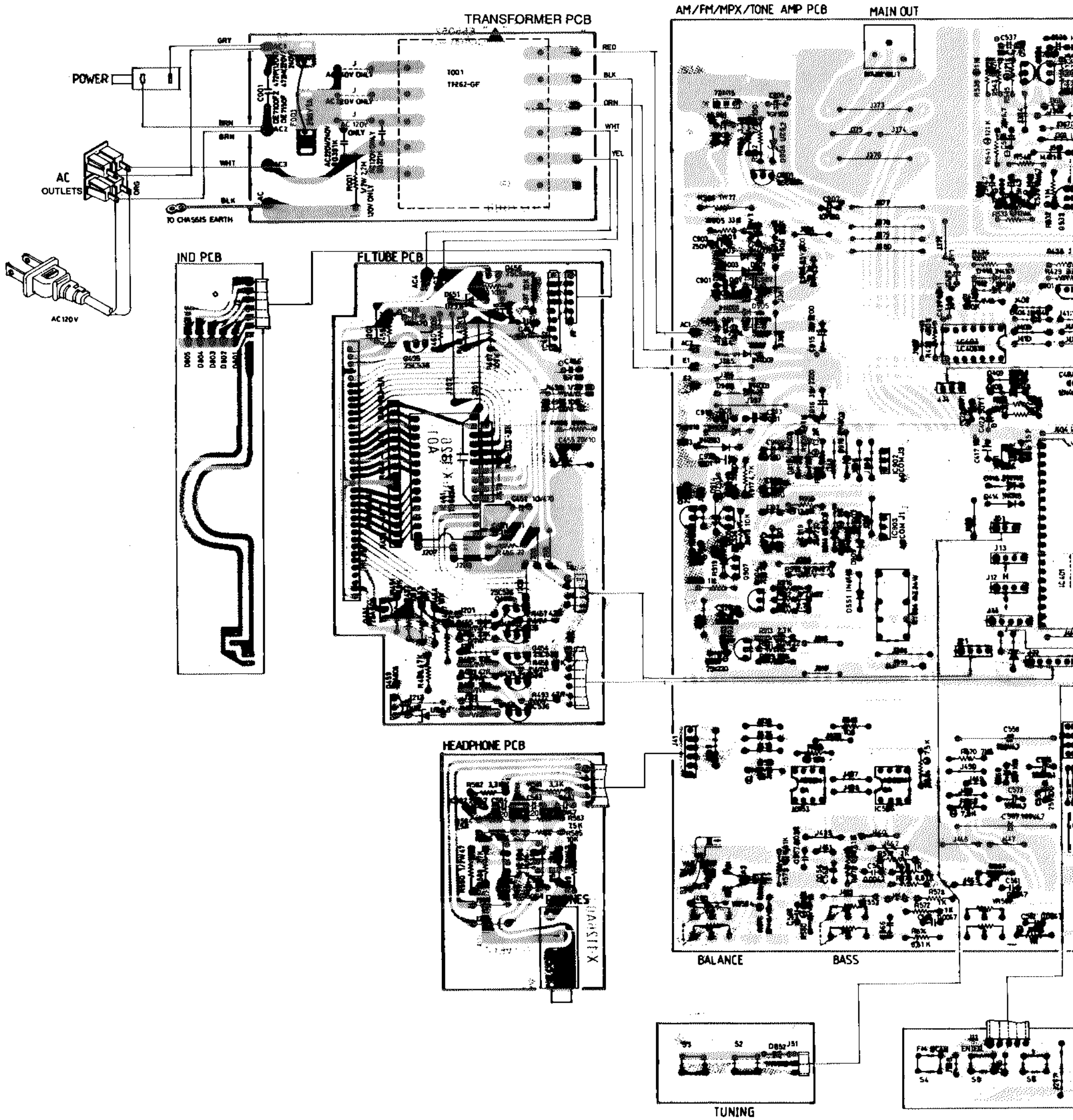
Instruments: AM Signal Generator (400Hz, 30% Modulated), AC Voltmeter, Oscilloscope, DC Voltmeter.

Connections: AC Voltmeter and Oscilloscope to audio output (Left or Right).

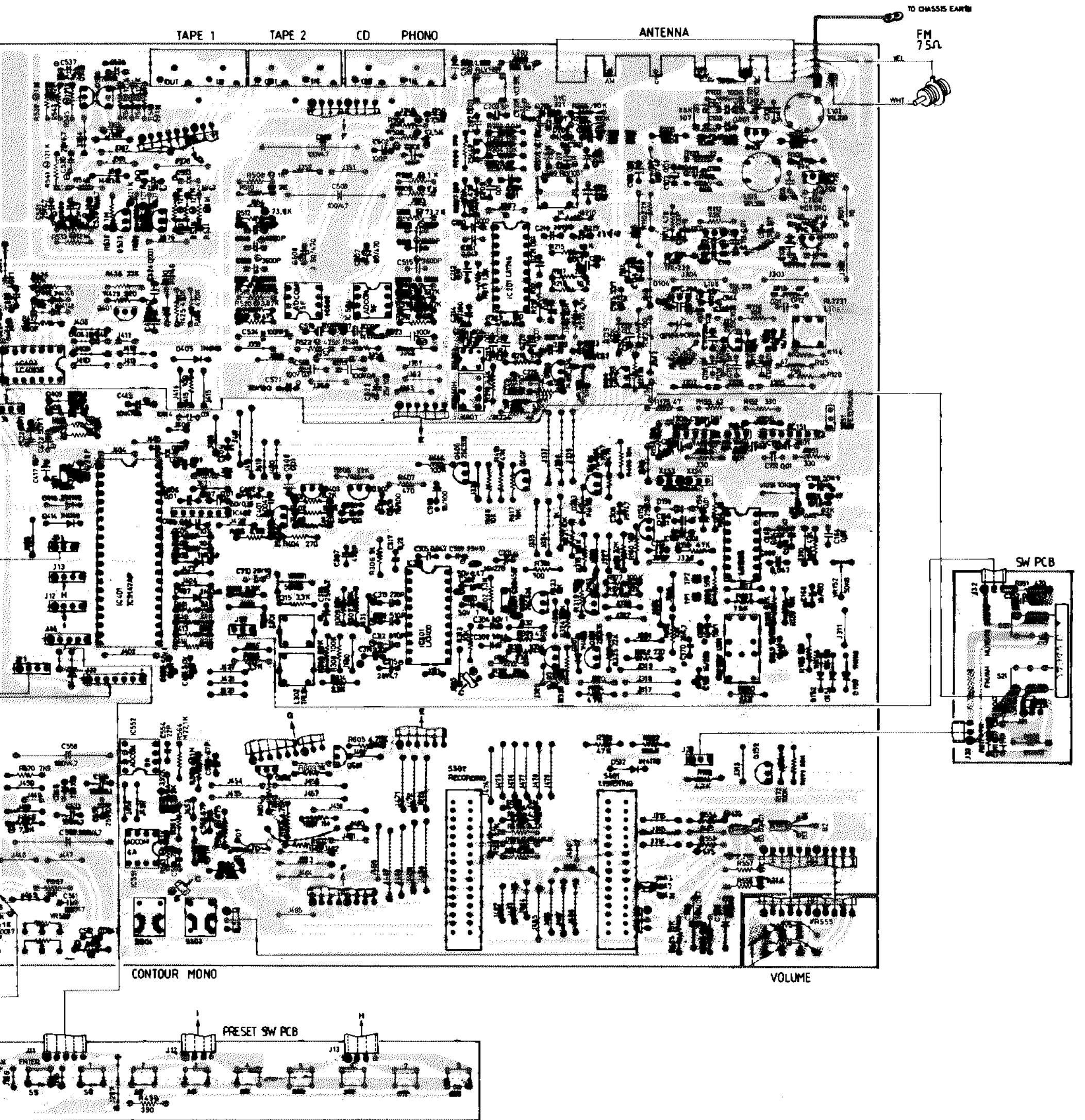
Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	Not Necessary		530kHz (531kHz) Europe	L203	1.3V ± 0.1V on DC Voltmeter Across TP3 & TP4
2			1600kHz (1602kHz) Europe	CT202	9V ± 0.1V on DC Voltmeter Across TP3 & TP4
3	Repeat steps 1 and 2 until no further improvement is observed.				
4	Test Loop Radiate signal into loop antenna 2mV Input	450kHz	530kHz	L204	Maximum reading on AC Voltmeter
5		600kHz	600kHz	L202, L204	
6		1400kHz	1400kHz	CT201	
7	Repeat steps 5 and 6 until no further improvement is noticed.				
8	Test Loop Radiate signal into loop ant. 5mV input	1000kHz	1000kHz	VR201	SIGNAL LEVEL INDICATOR 5th LED ON

PCB/Component Layout Model GTP-400

NOTE: ADCOM RESERVES THE RIGHT TO UPGRADE PRODUCT WITHOUT

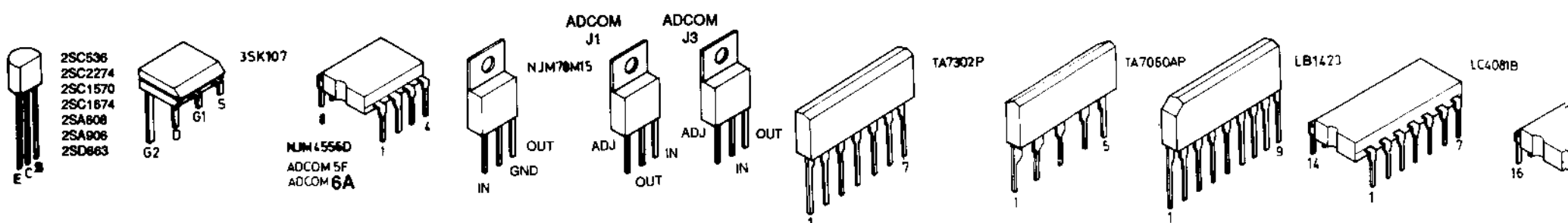
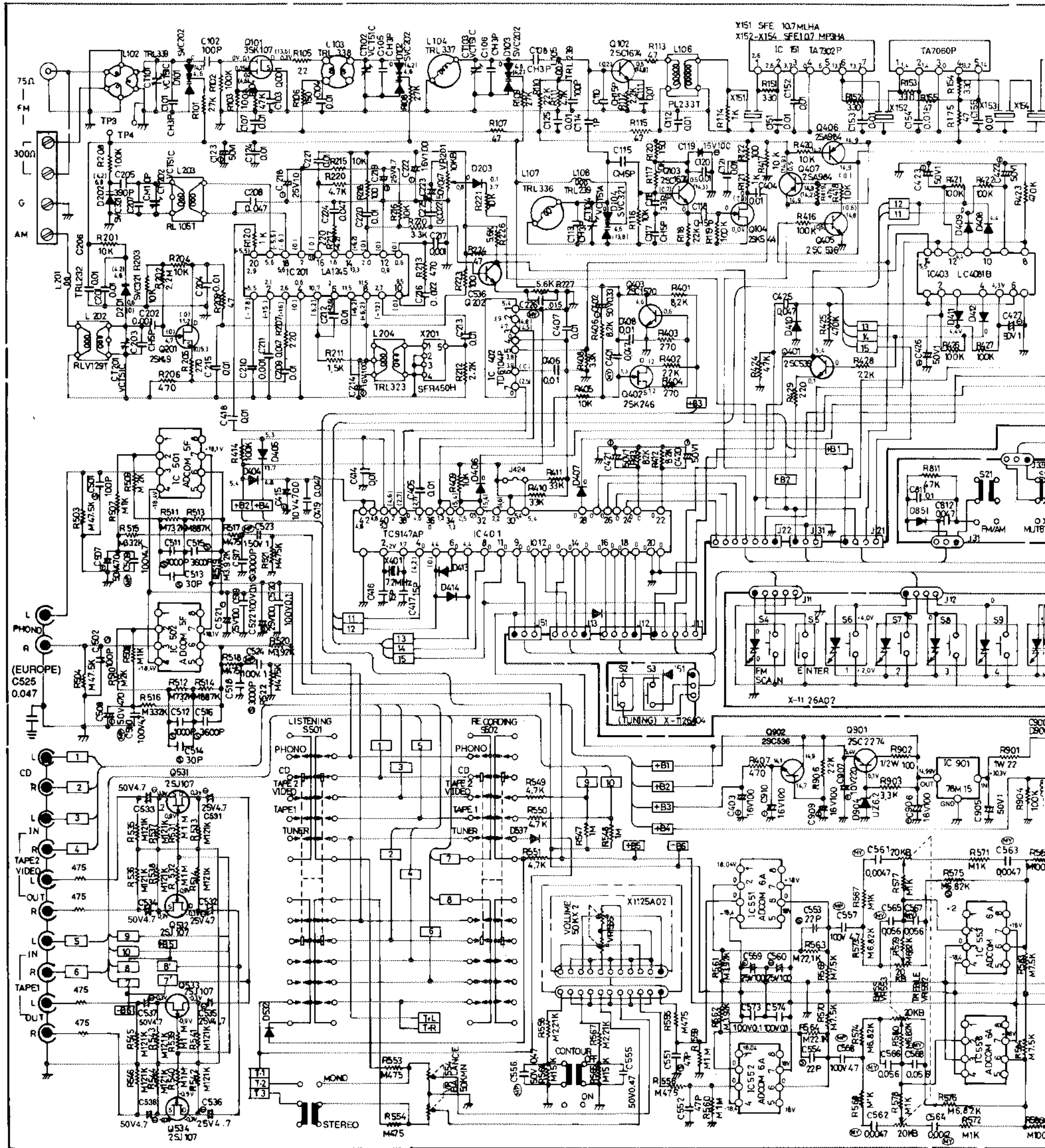


RESERVES THE RIGHT TO MODIFY CIRCUITRY AND/OR CHANGE COMPONENTS TO THE PRODUCT WITHOUT PRIOR NOTICE OR INCURRING ANY LIABILITY.

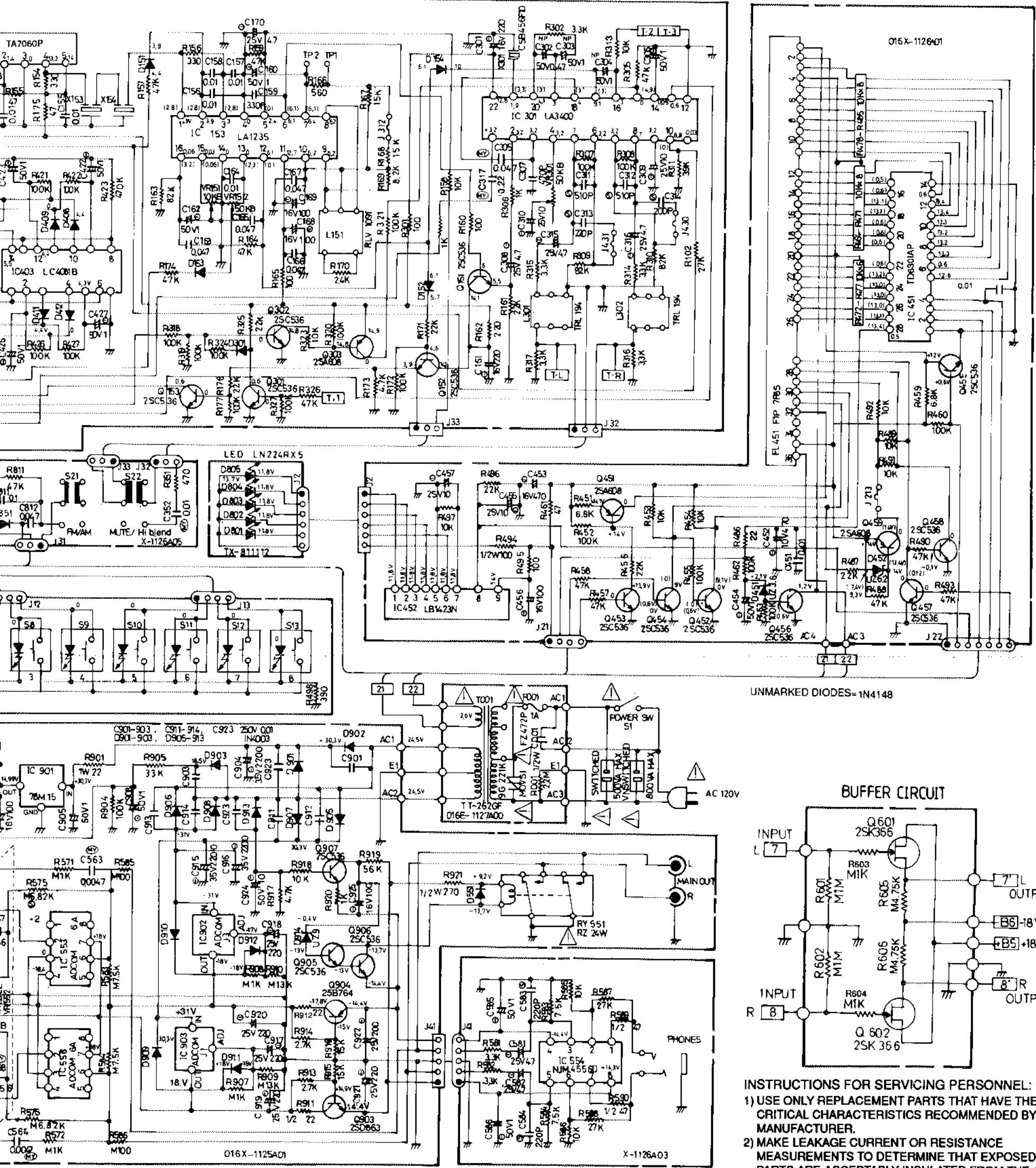


Schematic Diagram Model GTP-400

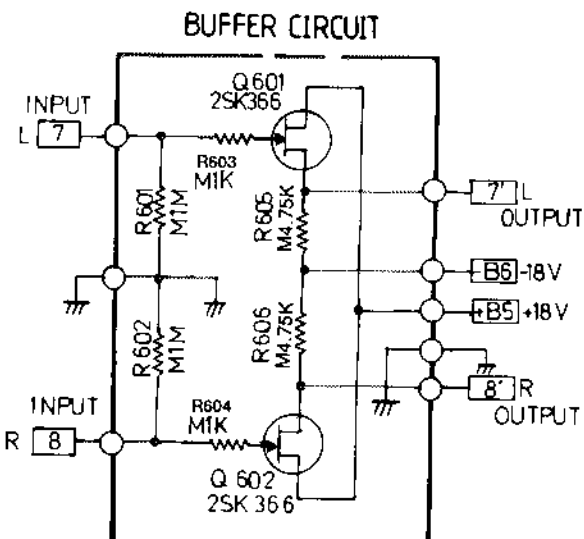
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CIRCUITRY AND/OR CHANGE COMPONENTS TO UPGRADE
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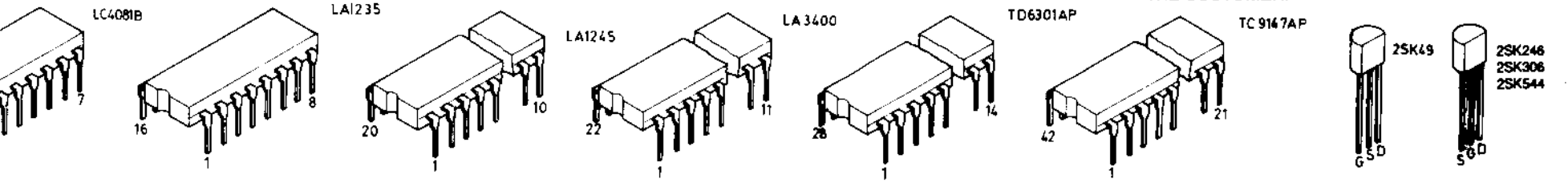


UNMARKED DIODES=1N4148



INSTRUCTIONS FOR SERVICING PERSONNEL:

- 1) USE ONLY REPLACEMENT PARTS THAT HAVE THE CRITICAL CHARACTERISTICS RECOMMENDED BY MANUFACTURER.
- 2) MAKE LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE AC SUPPLY CIRCUIT BEFORE RETURNING THE UNIT TO THE CUSTOMER.



Repair Parts List Model GTP-400

Schematic Location	Part Number	Description
Q101	TR50000140	Transistor 3SK107-F
Q102, 103	TR30000133	Transistor 2SC1674 (K,L)
Q104	TR50000103	Transistor 2SK544(F)
Q151-153	TR30000327	Transistor 2SC536 (G)
Q201	TR50000097	Transistor 2SK49 (F,H)
Q202	TR30000327	Transistor 2SC536 (G)
Q401	TR30000327	Transistor 2SC536 (G)
Q402	TR50000127	Transistor 2SK246-Y
Q403	TR30000108	Transistor 2SC1570
Q405	TR30000327	Transistor 2SC536 (G)
Q406,407	TR10000140	Transistor 2SA984K (E,F)
Q451	TR10000126	Transistor 2SA608K (F,G)
Q452-458	TR30000327	Transistor 2SC536 (G)
Q459	TR10000126	Transistor 2SA608K (F,G)
Q531-534	TR50000164	Transistor 2SJ107-GR
Q601,602	TR50000176	Transistor 2SK366
Q901	TR30000121	Transistor 2SC2274 (E,F)
Q902	TR30000327	Transistor 2SC536 (G)
Q903	TR30000080	Transistor 2SD863 (E,F)
Q904	TR10000059	Transistor 2SB764 (E,F)
Q905-907	TR30000327	Transistor 2SC536 (G)
D101	DD50000020	Diode SVC202AF
D151-154	DD80000021	Diode 1N4148
D201,202	DD50000031	Diode SVC321B
D203	DD80000021	Diode 1N4148
D404-414	DD80000021	Diode 1N4148
D451	DD20000107	Diode UZ3.6
D452	DD20000081	Diode UZ6.2B
D532,537	DD80000021	Diode 1N4148
D551	DD80000021	Diode 1N4148
D801-805	DD40000095	LED LN224R
D851	DD80000021	Diode 1N4148
D901-903	DD10000068	Diode 1N4003
D904	DD20000181	Diode UZ6.2B
D905-913	DD10000068	Diode 1N4003
D914	DD20000132	Diode UZ9.1B
IC151	IC00001516	TA7302P
IC152	IC00001449	TA7060AP
IC153	IC00001103	LA1235
IC201	IC00001322	LA1245
IC301	IC00001450	LA3400
IC401	IC00000950	TC9147AP/BP
IC402	IC00000482	TD6104P

Repair Parts List Model GTP-400 (cont'd)

Schematic Location	Part Number	Description
IC403	IC00001188	LC4081B
IC451	IC00000573	LB1423
IC452	IC00000883	LB1423
IC501, 502	IC00001670	ADCOM 5F
IC551-553	IC00002144	ADCOM 6A
IC554	IC00001474	NJM4556D
IC556	IC00002144	ADCOM 6A
IC901	IC00001267	NJM78M15
IC902	IC00002168	ADCOM J3
IC903	IC00002156	ADCOM J1
L102	LC23390009	FM ANT Coil TRL-339
L103	LC23380004	FM RF Coil TRL-338
L104	LC23370000	FM RF Coil TRL-337
L105, L108	LM00000073	Micro Inductor TRL-239
L106	LC02330000	FM IF Coil RL-233T
L107	LC23360005	FM OSC Coil TRL-336
L151	LC31090007	Detector Coil RLV109T
L201	LM00000220	Micro Inductor TRL-232
L202	LC31290008	AM ANT Coil RLV129T
L203	LC31050009	AM IF Coil TRL-323
L301, 302	LC21940006	FM MPX Filter TRL-194
VR151, 201	RV20000193	Trim Resistor, 08-301 10KB
VR152, 301	RV20000235	Trim Resistor, 08-301 50KB
VR552	RV10000433	Variable Resistor 4TR-1742 20KB Treble
VR553	RV10000433	Variable Resistor 4TR-1742 20KB Bass
VR554	RV10001024	Variable Resistor 4TR-2246 50KMN Balance
VR555	RV10001322	Variable Resistor 4TR-2659A 50KBx2 Volume
X151	LF00000270	Ceramic Filter SFE10.7MLH-A
X152-154	LF00000269	Ceramic Filter SFE10.7MP3H-A
X201	LF00000245	Ceramic Filter SFR450H
X301	LF00000257	Ceramic Filter CSB456F10
X401	DD60000040	Crystal Oscillator HC18U7.2MHz
RY551	LY00000174	Relay RZ-24W
S1	△ SH40000167	C-4176A02 TV-8 Power SW
S2,S3,S5	SH60000203	Key Board SW C-4177A03
S4-S13	SH60000185	Key Board SW With LED C-4177A-01
S501	SH30000444	Function SW 4TR-2569 Listening
S502	SH30000444	Function SW 4TR-2569 Recording
S21,S22	SH12000296	2 Key Push SW 4TR-222788 FM/AM Mute/Hi Blend
T001	△ PT26207103	Power Transformer TT-262GF
	AA80001217	Front Panel GTP-4002TTZ-#1
	KB10001217	Knob 4TR-221#1 23F

Repair Parts List Model GTP-400 (cont'd)

Schematic Location	Part Number	Description
	KB10001229	Knob/LED 4TR-2210A#2 34F
	KB20001342	Push Button 4TR-2212#1 19x19
	KB20001354	Push Button 4TR-2213#1 9F
	KB20001366	Knob Button 4TR-2214#1 9Fx2F
	BU00000645	Button Ring 4TR-2215#1 19x19
	SR00001023	Panel Cap Spacer 4TR-2611# 70x13x0.4T
	AA80001229	Front Panel GTP-400W 2TTZ-1#2
	BU00000670	Button Ring 4TR-2215#2 19x19
	KB10001242	Knob/LED 4TR-2210A#4 34F W
	KB10001254	Knob 4TR-2211#2 23F W
	KB20001410	Push Button 4TR-2212#2 19x19
	KB20001421	Push Button 4TR-2213#2 9F W
	KB20001433	Push Button 4TR-2214#2 9Fx2 W
	AW00000459	Panel Window 4TR-2220#2 TFP-519
	OM00001943	Button Connector 4TR-2216 13.5x13
	OM00001955	Button Connector 4TR-2217#2
	OM10000383	Button Connector 4TR-2217#2
	SN00000179	Button Spring 4TR-1988#2 10F
	AB00000146	Bottom Plate 3TUL-6
	AF80000391	Front Chassis 2TTZ-2 GTP-400/W
	AR80001203	Printed Rear Chassis GTP-400/W
	ASO1001791	Side Chassis 3TUL-4B
	OM10000700	FL Ornamental Plate 4TTZ-4 GTP-400/W
	LB07068000	AM Loop ANT. With Holder TRL-345
	△ SA00001450	AC Outlet Socket S-16519 (C,U,H)
	SA00001530	Coaxial Connector W/NUT 4TR-2290 (C,U,H)
	SA00001760	Coaxial Connector W/NUT 4TR-2439
	△ CD00000220	AC Cord SPT-2 AWG#16 4TR-670#5 (C,U,H)
	△ CD00000048	AC Power Cord 4TR-1037
	AU00000610	Upper Cover 3TR-2221B#1
	MN10002392	Owner's Manual GTP-400
F001	△ FU12000070	Fuse 250V 1A UL/CSA
C001	△ CK00000060	Spark Killer 7100DE F2472P
MOV	△ DD30000104	MOV TNR9G221K