

SERVICE MANUAL

ADCOM[®] TUNER/PREAMP GTP-500

TABLE OF CONTENTS

Chassis Layout	1
Alignment	2
Schematic Diagram	3
Wiring Diagram	5
Repair Parts List	7

ADCOM TECHNICAL
SERVICE DEPARTMENT
11 Elkins Road
East Brunswick, NJ 08816
Telephone (201) 390-1130

FM, IF, RF Alignment and FM MPX Alignment Model GTP-500

Instruments : FM Signal Generator, (400Hz, 100% Modulated) T.H.D. Analyzer, Oscilloscope, AC VTVM, DC Voltmeter, Tuning Meter
 FM Stereo Generator, AC VTVM, Oscilloscope, Frequency Counter and T.H.D. Analyzer

Terminated : DC Voltmeter...Between TP4 and Earth X-1050 P.C.B.
 Tuning Meter...Between TP1 and TP2 X-1050 P.C.B.

Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	No use.		87.5 MHz	L107	3V reading on DC Voltmeter
2			108 MHz	CT104	23V reading on DC Voltmeter
3	Repeat steps 1 and 2 until no further improvement is noticed.				
4	Antenna terminal	90 MHz	90 MHz	L102,L103 L104	Maximum reading on AC VTVM.
5				L106	Adjusting balance of wave form
6		105 MHz	105 MHz	CT101, CT102 CT103	Maximum reading on AC VTVM.
7	Repeat steps 4, 5 and 6 until no further improvement is noticed. (Muting OFF)				
8	Antenna terminal 1mV input	90 MHz	90 MHz	L151(A)	Adjust center on Tuning Meter connected across TP1 & TP2
9				L151(B)	Minimum reading on T.H.D. Analyzer
10	Repeat steps 8 and 9 until no further improvement is noticed. (Muting OFF)				
11	Antenna terminal 15µV input	90 MHz	90 MHz	VR 151	Muting Level (Muting ON)
12	Antenna terminal 1mV input	90 MHz	90 MHz	VR 152	Signal Indicator Level 5th LED light on
13	Antenna terminal 1mV input (L or R)	98 MHz Pilot...10% 1 KHz...90% Mod.	98 MHz	VR301	Best separation (muting on) (hi blend off) No need to Adjust VCO

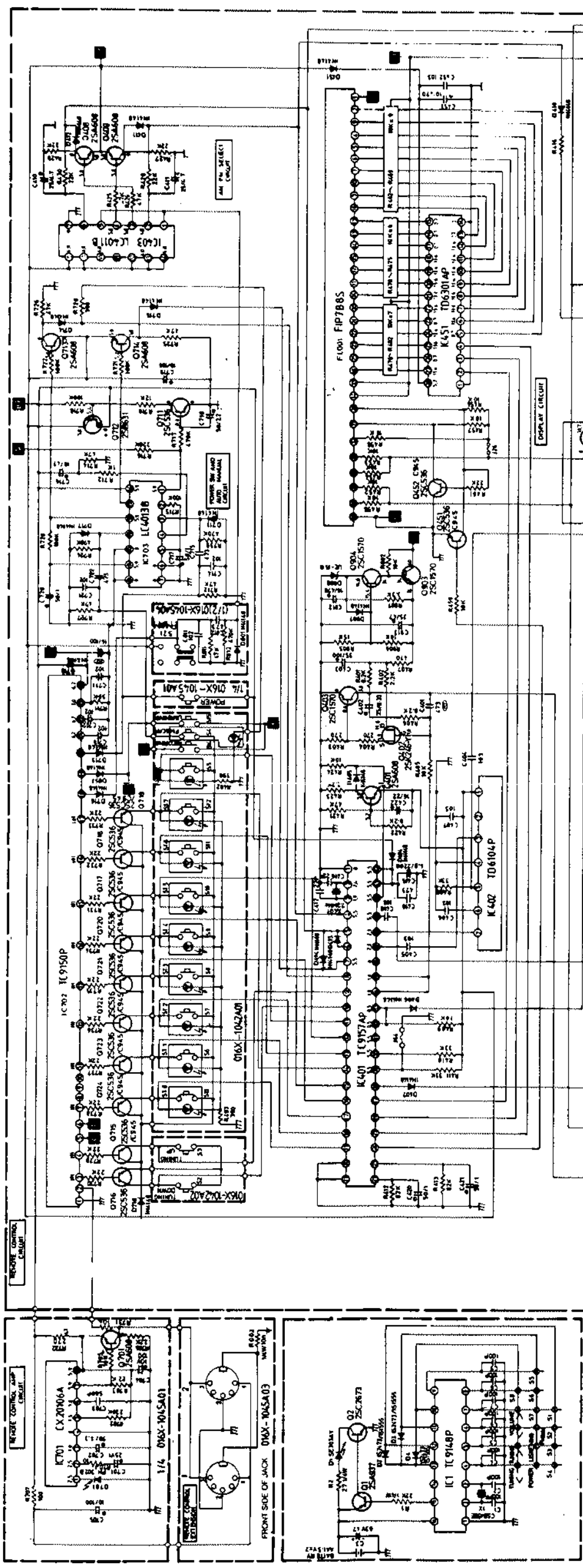
AM, IF and RF Alignment Model GTP-500

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

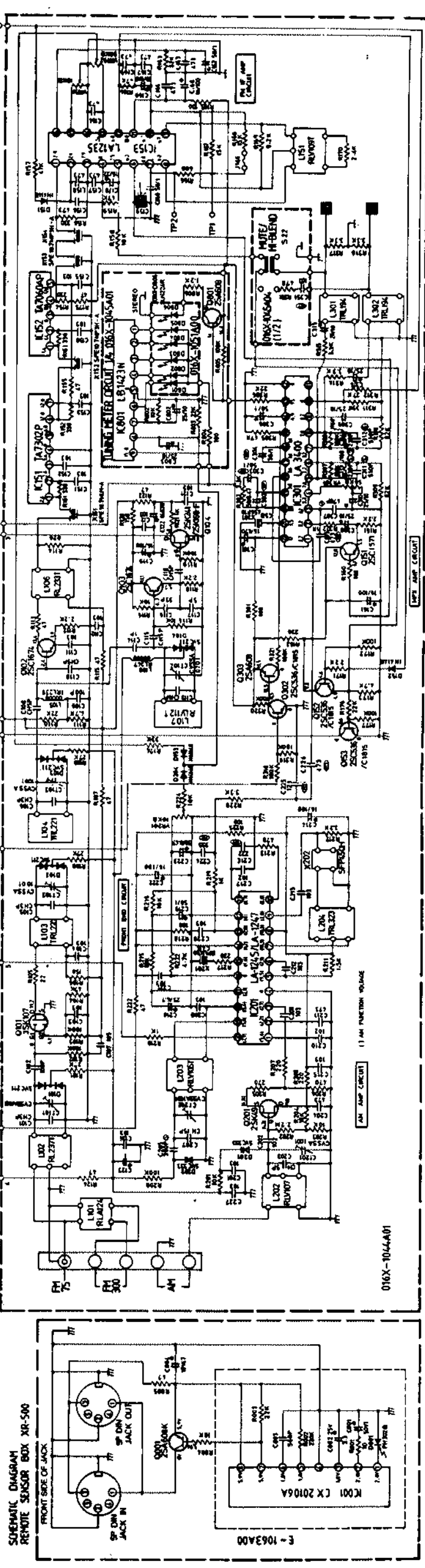
Terminated : DC Voltmeter...Between TP4 and Earth X-1050 P.C.B.

Step	Generator		Tuning Dial Setting	Adjust	Adjust for
	Coupling	Frequency			
1	No use.		530 KHz (531 KHz) Europe	L203	About 3.0V ± 0.1V on DC Volt meter
2			1600 KHz (1602 KHz)Europe	CT202	About 25V ± 0.2V on DC Volt meter
3	Repeat steps 1 and 2 until no further improvement is noticed.				
4	Test Loop Radiate signal into loop antenna	450 KHz	530 KHz	L204	Maximum reading on AC VTVM.
5		600 KHz	600 KHz	L202,L204	
6		1400 KHz	1400 KHz	CT201	
7	Repeat steps 5 and 6 until no further improvement is noticed.				
8	Test Loop Radiate signal into loop ANT. 5mV input	1000 KHz	1000 KHz	VR201	Signal Indicator Level 5th LED light on

SCHEMATIC DIAGRAM MODEL NO GTP-500 1/2

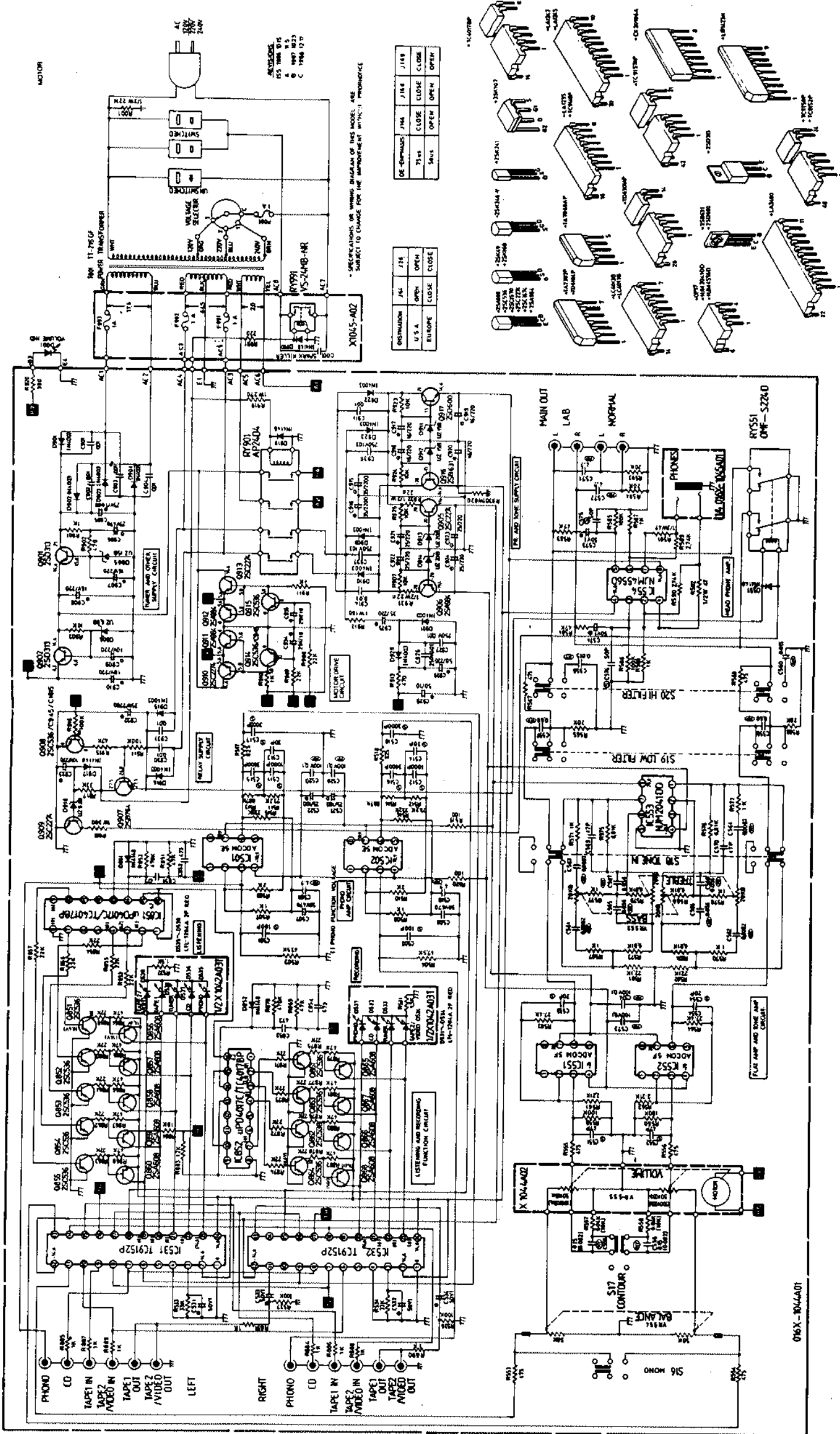


SCHEMATIC DIAGRAM
REMOTE CONTROL TRANSMITTER RC-500

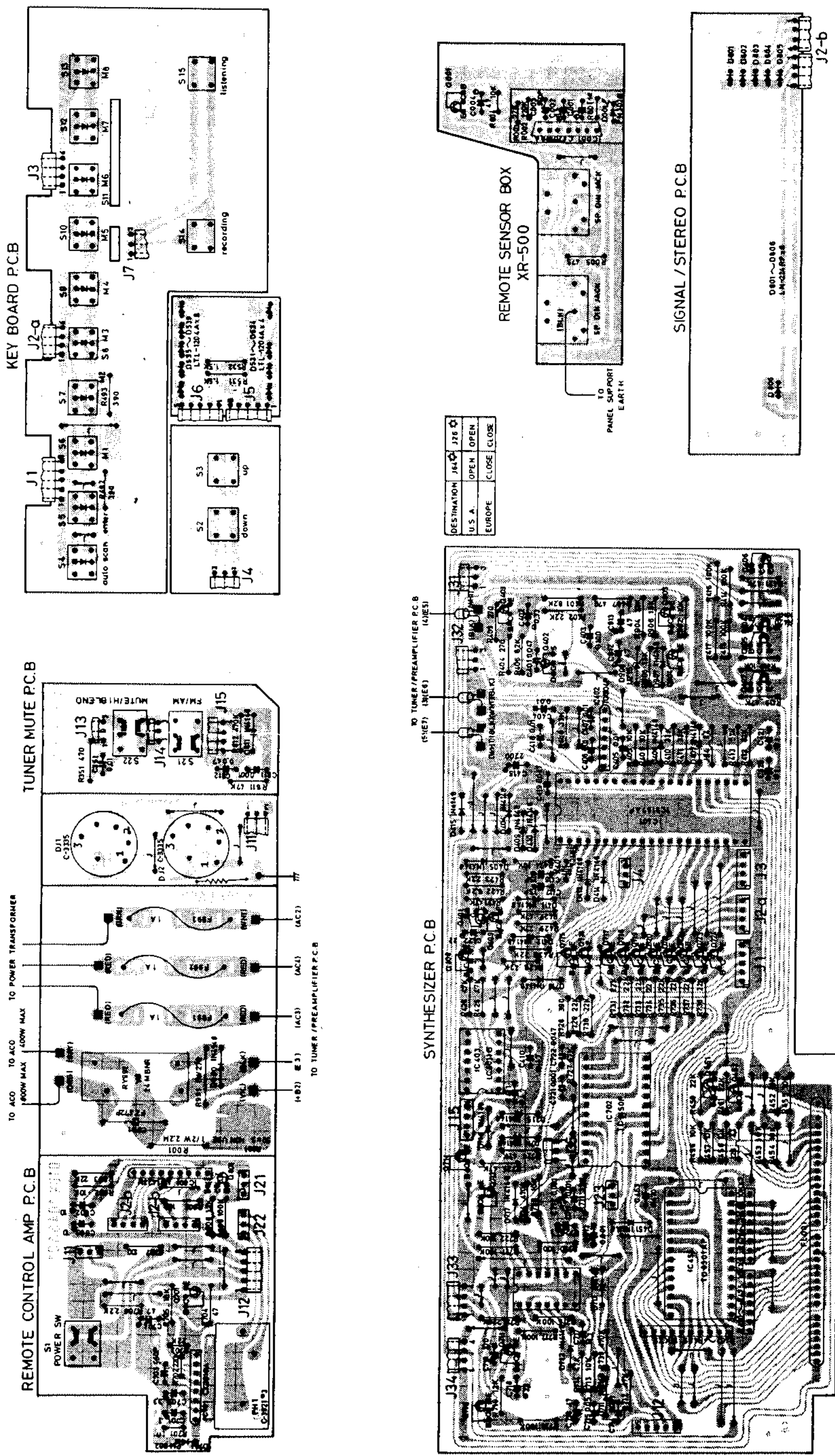


SCHEMATIC DIAGRAM
REMOTE CONTROL SENSOR BOX XR-500

SCHEMATIC DIAGRAM MODEL NO GTP-500 2/2



Wiring Diagram Model GTP-500



DESTINATION	J64	J28
U.S.A.	OPEN	OPEN
EUROPE	CLOSE	CLOSE

Repair Parts List Model GTP-500

Schematic Location	Part #	Description
D101-D104	DD50000055	Diode SVC-211
D151-D153	DD10000100	Diode 1N4148
D201-D202	DD50000092	Diode SVC-333 (B2)
D204	DD10000100	Diode 1N4148
D404-D414	DD10000100	Diode 1N4148
D451	DD10000100	Diode 1N4148
D531-D539	DD40000769	L.E.D. LTL-1204A 2F RED
D701	DD70000036	Photo Diode PH302B
D711-D718	DD10000100	Diode 1N4148
D801-D806	DD40000095	L.E.D. 034 SEL1124R/LN224R
D851-D853	DD10000100	Diode 1N4148
D901-D904	DD10000068	Diode 1N4003
D905	DD20000193	Diode UZ-15B (M,H.)
D906	DD20000065	Diode UZ-6.8B (M,H.)
D907-D910	DD10000068	Diode 1N4003
D911-D912	DD20000193	Diode UZ-15B (M,H.)
D913-D914	DD20000028	Diode UZ-20B (M,H.)
D915-D916	DD10000068	Diode 1N4003
D917	DD10000100	Diode 1N4148
D918	DD20000200	Diode UZ-5.1B
D919	DD10000100	Diode 1N4148
D921-D922	DD10000068	Diode 1N4003
D990	DD10000100	Diode 1N4148
D001	DD40000769	L.E.D. LTL-1204A 2F RED
X401	DD60000040	Crystal Oscillator 023 HC18U7.2MHz
FL001	DD40000125	FL Tube 035 FIP7B8S
IC151	IC00001516	Integrated Circuit 031 TA7302P
IC152	IC00001449	Integrated Circuit 031 TA7060AP/BA401
IC153	IC00001103	Integrated Circuit LA1235
IC201	IC00001322	Integrated Circuit LA1245
IC301	IC00001450	Integrated Circuit LA3400
IC401	IC00001346	Integrated Circuit TC9157AP
IC402	IC00000482	Integrated Circuit TD6104P
IC403	IC00001462	Integrated Circuit LC4011
IC451	IC00000573	Integrated Circuit TD6301AP
IC501-502	IC00001530	Integrated Circuit Adcom 5E
IC531-532	IC00001486	Integrated Circuit TC9152P
IC551-552	IC00001670	Integrated Circuit Adcom 5F
IC553	IC00001292	Integrated Circuit NJM2041DD
IC554	IC00001474	Integrated Circuit NJM4556D
IC701	IC00001589	Integrated Circuit CX20106A
IC702	IC00001498	Integrated Circuit TC9150P
IC703	IC00001528	Integrated Circuit LC4013
IC801	IC00000883	Integrated Circuit LB1423
IC851-852	IC00001437	Integrated Circuit TC4017BP
Q101	TR50000140	Transistor 3SK107
Q102-103	TR30000133	Transistor 2SC1674
Q104	TR50000139	Transistor 2SK168-F
Q151	TR30000108	Transistor 2SC1570/1571 (E.F)
Q152-153	TR30000248	Transistor 2SC945
Q201	TR50000097	Transistor 2SK49 (F,H)

Repair Parts List Model GTP-500 (cont'd)

Schematic Location	Part #	Description
Q302	TR30000248	Transistor 2SC 945
Q303	TR10000126	Transistor 2SA608K (F,G)
Q401	TR10000126	Transistor 2SA608K (F,G)
Q402	TR50000127	Transistor 032 2SK246-Y
Q403	TR30000431	Transistor 2SC1570 (E,F)
Q404-405	TR30000248	Transistor 2SC945
Q406-407	TR10000140	Transistor 2SA984
Q408-409	TR10000126	Transistor 2SA608K (F,G)
Q451-452	TR30000248	Transistor 2SC945
Q711	TR30000248	Transistor 2SC945
Q712	TR10000047	Transistor 2SB631K (E,F)
Q713-714	TR10000126	Transistor 2SA608K (F,G)
Q715-724	TR30000248	Transistor 2SC945
Q851-855	TR30000248	Transistor 2SC945
Q856-860	TR10000126	Transistor 2SA608K (F,G)
Q861-864	TR30000248	Transistor 2SC945
Q865-868	TR10000126	Transistor 2SA608K (F,G)
Q901-902	TR30000029	Transistor W/Mica 2SC1826 (O.Y.) D313D
Q903-904	TR30000431	Transistor 2SC1570 (E,F)
Q905	TR30000121	Transistor 2SC2274
Q906	TR10000140	Transistor 2SA984
Q908	TR30000248	Transistor 2SC945
Q909-910	TR30000121	Transistor 2SC2274 (E,F)
Q911-912	TR10000140	Transistor 2SA984
Q913	TR30000121	Transistor 2SC2274 (E,F)
Q914-915	TR30000248	Transistor 2SC945
Q916	TR40000069	Transistor 2SD600
Q917	TR10000047	Transistor 2SB631K (E,F)
L001	LB01130005	Loop Antenna 021 RLA113A00
L101	LC31124005	Balun Coil 021 RKA124A00
L102	LC02370009	FM ANT Coil RL-237T
L103	LC22200006	FM RF Coil TRL-220
L104	LC22210000	FM RF Coil TRL-221
L105	LM00000073	Micro Inductor 2,2uH TRL-239
L106	LC02330000	FM IF Coil RL-233T
L107	LC31120000	FM OSC Coil RLV-112T
L108	LM00000346	Micro Inductor RL-247T
L151	LC31090007	IF Coil RLV-109T
L202	LC31070008	AM ANT Coil 021 RLV107A00
L203	LC31050009	AM OSC Coil RKV-105T
L204	LC23230006	AM IF Coil TRL-323
L301-302	LC21940006	FM MPX Filter TRL-194
X151	LF00000270	Ceramic Filter (RED) 023 SFE10.7MLH-A
X152-154	LF00000269	Ceramic Filter (RED) 023 SFE10.7MP3H-A
X201	LF00000191	Ceramic Filter 023 BFU450C4N
X202	LF00000245	Ceramic Filter SFP450H
X301	LF00000257	Ceramic Filter 023 CSB456F10
CT101-103	CF00000238	Film Trimmer Capacitor 045 CVSSA1001 10PF
CT104	CF00000240	Film Trimmer Capacitor 045 CVSSA0701 7PF
CT201-202	CF00000238	Film Trimmer Capacitor 045 CVSSA1001 10PF
T001	PT22215099	Power Transformer TT-215-GF

Repair Parts List Model GTP-500 (cont'd)

Schematic Location	Part #	Description
VR151,201	RV20000193	Semi-Fixed Resistor 08-301 10KB
VR152,301	RV20000235	Semi-Fixed Resistor 08-301 50KB
VR552-553	RV10000433	Variable Resistor 4TR-1742 20KBx2 Bass, Treble
VR554	RV10001024	Variable Resistor W/Motor 051 C-4170A08 50KBx2 Volume
RY551	LY00000058	Relay AG-2024/OMF-S224D
RY901	LY00000125	Relay 063 AP24D4
RY991	LY00000137	Relay 063 VS-24MB-NR
S1	SH11000227	1 Key Push Switch 4TR-2306 Power
S2,S3,S14,S15	SH60000203	Key Board Switch 061 C-4177A03 Down, Up Recording, Listening
S4-S13	SH60000185	Key Board Switch With L.E.D. 061 C-4177A01 RED
S16-20	SH15000222	Auto Scan, Enter, M1-M8 5 Key Push Switch 4TR-2229 Mono, Contour, Tone in, Lo Filter, Hi Filter
S21-22	SH12000296	2 Key Push Switch 4TR-2227 FM/AM, Mute/Hi Blend
	AA80000535	Front Panel (GTP-500) 2TUN-1B#1
	AA80000729	Front Panel (GTP-500W) 2TUN-1B#2
	KB10001205	Knob/LED 4TR-2210A#1 34F
	KB10001230	Knob/LED 4TR-2210A#3 34F.W
	KB10001217	Knob 4TR-2211#1 23F
	KB20001410	Knob 4TR-2211#2 23F.W
	KB20001342	Push Button 4TR-2212#1 19x19
	KB20001421	Push Button 4TR-2212#2 19x19.W
	KB20001354	Push Button 4TR-2213#1 9F
	KB20001421	Push Button 4TR-2213#2 9F.W
	KB20001366	Push Button 4TR-2214#1 9Fx2F
	KB20001433	Push Button 4TR-2214#2 9Fx2F.W
	BU00000645	Button Ring 4TR-2215#1 19x19
	BU00000670	Button Ring 4TR-2215#2 19x19.W
	AU00000610	Upper Cover 3TR-2221#1