SERVICE MANUAL ST-54/ST-54L

4822 725 50796

marantz®

model ST-54/ST-54L

Stereophonic Tuner

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National Service Department
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All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

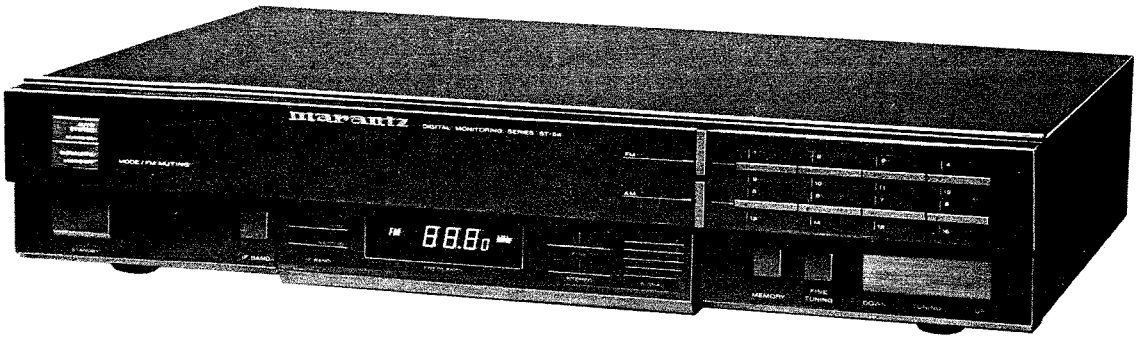
TABLE OF CONTENTS

How to use this service manual

- The "Common parts" which Marantz Japan, Inc. has established are eliminated from this service manual.
- These "Common parts" are applied to all models in the service manuals arranged and issued by MJI.
- To indicate clearly the common parts in the schematic diagram, a line is drawn above or under the Ref. Desig. No. of applicable parts.
- "Common parts" can be supplied from the Marantz service center as ever.
  In case of ordering, please establish the parts number of 12 N/C'S following the procedure mentioned in this service manual "How to establish the parts number for common parts".

1) Please correctly write the parts number of 12 N/C'S following the rule.

MODEL ST-54/ST-54L STEREOPHONIC TUNER



1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model ST-54/ST-54L consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Tuner . . . . . mounted on P.W. Board P100
2. Power Transf. . . . . mounted on P.W. Board PP00
3. Display . . . . . mounted on P.W. Board PR00
4. Power/Mode Switch . . mounted on P.W. Board PS00
5. Preset Switch . . . . . mounted on P.W. Board PT00
6. IF Band . . . . . mounted on P.W. Board PU00
7. Mode Lamp . . . . . mounted on P.W. Board PY00

2. TEST EQUIPMENT REQUIRED FOR SERVICING

Item	Use
AM Signal Generator	Signal source for AM alignment
Test Loop	Use with AM signal generator
FM Signal Generator	Signal source for FM alignment
MPX Signal Generator	Stereo separation alignment and trouble shooting
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Frequency Counter	MPX oscillator adjustment (VCO)
Circuit Tester	Trouble shooting
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to tuner
Line Voltmeter	Monitors potential of primary power to tuner
Variable Autotransformer (0 ~ 140V AC, 10A)	Adjusts level of primary power to tuner

3. TUNER ALIGNMENT PROCEDURES

A dummy resistor of 47 kohms must be connected across the tuner output terminals before alignment.

FM Alignment Procedures

(Function switch in the "FM" position, MODE/FM MUTING Switch in the MONAURAL/MUTING OFF position.)

1. FM RF Alignment (IF BAND switch in the "WIDE" position.)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator to FM antenna terminal (300 ohm) through matching network Set the SG RF output level so that some noise can be observed on the upper and lower side of the output waveform.	98.00 MHz	VTVM to L or R chnnel output (J102)	98.00 MHz	FRONT END IFT (L9) for maximum output and minimum distortion.
2	FM signal generator 1 mV output to FM antenna terminal (300 ohm) through matching network Modulation Level IHF 75 kHz DEV. DIN 40 kHz DEV.	98.00 MHz	"O" center meter or DC current meter in 100 μA range between (J100 1, 2)	98.00 MHz	L202 core so that the meter indicates its center or may read "O".
3	FM signal generator 1 mV output to FM antenna terminal (300 ohm) through matching network Modulation Level IHF 75 kHz DEV. DIN 40 kHz DEV.	98.00 MHz	"O" center meter or DC current meter in 100 μA range between (J200 1, 2)	98.00 MHz	L203 (Primary) core so that the meter indicates its center or may read "O".
4	FM signal generator 1 mV output to FM antenna terminal (300 ohm) through matching network.	98.00 MHz	Distortion meter to L or R channel output (J102)	98.00 MHz	L203 (Secondary) core for minimum distortion.

2. FM IF Alignment Procedures
(Function switch in the "FM" position, MODE/FM MUTING switch in the AUTO STEREO/MUTING ON position.)

IF BAND switch in the "WIDE" position.

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator 1 mV output modulated by MPX signal generator to FM antenna terminal (300 ohm) through matching network Modulation Level IHF 67.5kHz+9% Pilot DEV. DIN 40kHz +8% Pilot DEV.	No modulation	Frequency counter to (J300 1, 2)	98.00 MHz	R334 so that Frequency may precisely read 76,000 kHz (V.C.O)
2		Stereo left (1,000 Hz)	VTVM to left channel output (J102 L ch)		FRONT END IFT (L9) for minimum distortion
3		Stereo right (1,000 Hz)	VTVM to right channel output (J102 R ch)		

IF BAND switch in the "NARROW" position.

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator 1 mV output modulated by MPX signal generator to FM antenna terminal (300 ohm) through matching network Modulation Level IHF 67.5kHz+9% Pilot DEV. DIN 40kHz +8% Pilot DEV.	Stereo left (1,000 Hz)	VTVM to left channel output (J102 L ch)	98.00 MHz	L201 for minimum distortion
2		Stereo right (1,000 Hz)	VTVM to right channel output (J102 R ch)		
3	RF generator to FM antenna terminals through matching network (300 ohms, balanced) with the RF signal level set so that the signal strength LED may light 4 points at IF band switch "Wide"	98.00 MHz		98.00 MHz	IF Band switch "Narrow" R216 so that signal strength LED may light 4 points. (DT12)

3. Muting Level Alignment
(Function switch in the "FM" position, MODE/FM MUTING switch in the AUTO STEREO/MUTING ON position.)

IF BAND switch in the "WIDE" position.

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator 12.5 μV output to FM antenna terminal through matching network (300 ohm, balanced)	98.00 MHz	VTVM to L or R channel output (J102)	98.00 MHz	Adjust R233 until output is developed.

4. Multiplex Alignment Procedures
(Function switch in the "FM" position, MODE/FM MUTING switch in the AUTO STEREO/MUTING ON position.)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	FM signal generator 1 mV output modulated by MPX signal generator to FM antenna terminal (300 ohm) through matching network Modulation Level IHF 67.5kHz+9% Pilot DEV. DIN 40kHz +8% Pilot DEV.	Stereo left (1,000 Hz)	VTVM to right channel output (J102 R ch)	98.00 MHz	IF BAND WIDE R326 NARROW R325 for same separation in both channels.
2		Stereo right (1,000 Hz)	VTVM to left channel output (J102 L ch)		
3	Repeat steps 1 and 2.				
4	RF generator to FM antenna terminals through matching network (300 ohms, balanced) with 1 mV FM stereo signal.	Pilot only	VTVM to right and left channel output (J102)		R330 so that mimimum output should be the same in both channels

AM Alignment Procedures (Function switch in the "AM" position.)

1. AM IF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Sweep generator to AM Antenna Terminal.	450 kHz marker	Oscilloscope to J300 (2, 3)	———	LA05 for maximum and symmetric response.

2. AM RF Alignment

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Apply the signal to the AM loop antenna from the AM signal generator using the test loop.	600 kHz	VTVM to L or R channel output (J102)	600 kHz	LA01 for maximum output.
2		1,400 kHz		1,400 kHz	CA02 for maximum output.
3	Repeat steps 1 and 2.				

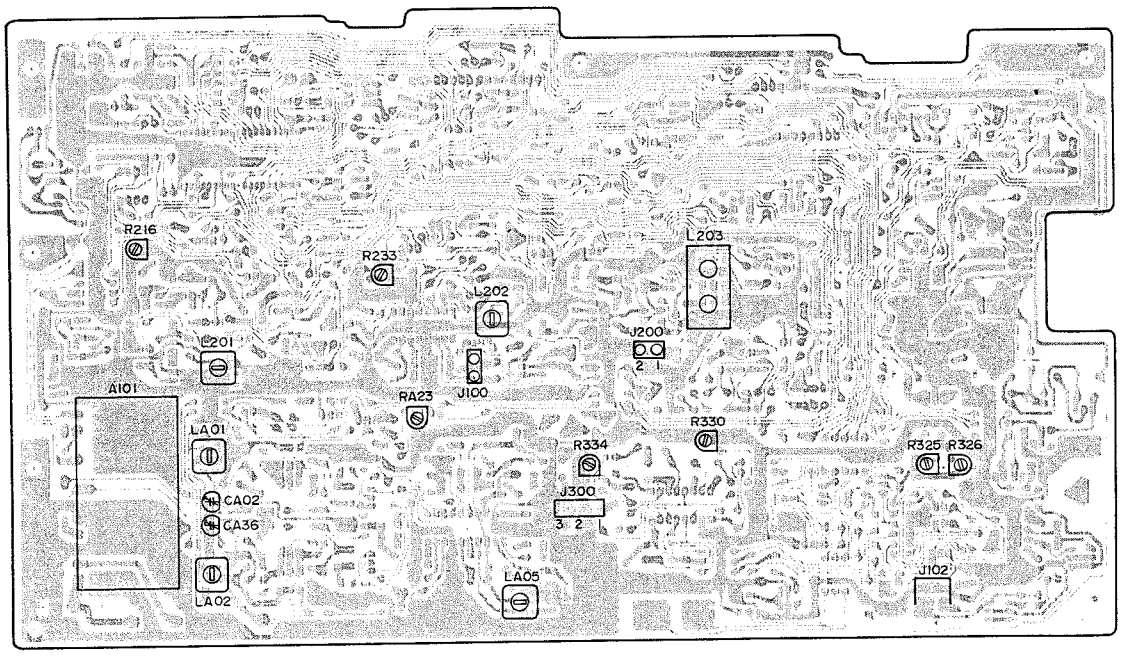
3. LW RF Alignment (Function in the "LW" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Apply the signal to the AM loop antenna from the RF generator using the test loop.	173 kHz	VTVM to L or R channel output (J102)	173 kHz	LA02 for maximum output.
2		272 kHz		272 kHz	CA36 for maximum output.
3	Repeat steps 1 and 2 as necessary to obtain maximum sensitivity.				

4. AM Signal Alignment (Function switch in the "AM" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Set the Digital Readout Frequency	Adjust:
1	Apply a signal to the AM loop antenna from the RF generator via the test test loop. (5 mV/m)	1,000 kHz	———	1,000 kHz	Adjust RA23 so that 5 signal LEDs light. (DT13)

4. TEST POINT AND ALIGNMENT POINTS

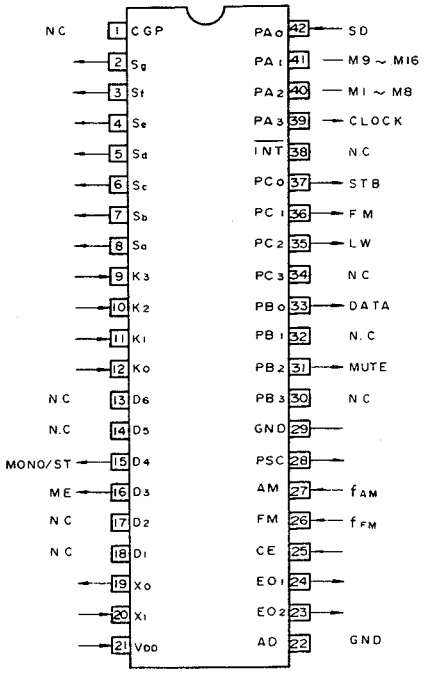


5. CIRCUIT DESCRIPTION

5.1 μPD1712CU-529 (Q501) FOR AM/FM TUNER

- Built-in PLL Frequency Synthesizer; one-chip microprocessor

Pin assignment



Pin description

Pin No.	Symbol	Name	Explanation of Functions	Type of Port
2 to 8	S_g to S_a	Segment Output	Active "H" at "key return" signal basic terminal.	P-Ch Open drain
9 to 12	K_3 to K_0	Key Return Signal Input	Terminal for input of key return signal from external key matrix.	Input
15	MONO/ST	MONO/ STEREO	Outputs "H" with the FM (Auto Stereo) mode.	N-Ch Open drain
16	ME	MEMORY	Outputs "H" when in the memory enabled state.	CMOS P-P
19, 20	X0, X1	Xtal	Connector terminal quartz oscillator (4.5 MHz)	CMOS P-P
21	VDD	VDD	Device output terminal.	—
23, 24	E02, E01	Error Out	Phase wave detector charge pump output.	CMOS Three states
25	CE	Chip Enable	"L" level during back up and "H" level when devices are operated.	Input
26	fFM	FM Local Oscillator Signal Inputs	Inputs frequencies divided into 1/16, 1/17 by prescaler (Q502) for FM broadcast output.	Input
27	fAM	AM Local Oscillator Signal Inputs	Inputs broadcast signal output for MW, LW.	Input
28	PSC	Prescaler Control	When the "pulse swallow" system is used as a frequency divider, the signal for the frequency divider ratios is output to the prescaler.	CMOS P-P
29	GND	GND	GND connector to ground system.	—
31	MUTE	MUTE	Muting output terminal to reduce shock and noise when the Pll lock is off.	N-Ch Open drain
33	DATA	DATA	Terminal for output of display data to frequency display driver (QR01).	N-Ch Open drain
35	LW	LW	Outputs "H" when the LW band is being received.	N-Ch Open drain
36	FM	FM	Outputs "H" when the LW band is being received.	N-Ch Open drain
37	STB	STB	Terminal for output of display data to frequency display driver (QR01).	N-Ch Open drain
39	CLOCK	CLOCK	Terminal for output of display data to frequency display driver (QR01).	CMOS P-P
40	M1 to M8	PRESET IND.	Outputs "H" when any of the present settings from M1—M8 are being received in the FM mode.	CMOS P-P
41	M9 to M16	PRESET IND.	Outputs "H" when any of the present settings from M9—M16 are being received in the FM mode.	CMOS P-P
42	SD	Station Detector	Inputs auto tuning stop signal.	Input

5.2 OUTLINE OF FUNCTIONS

• Receiving Bands

1. FM/MW/LW bands can be received in European region.

Destination	Band Name	Range of Receiving Frequency	Channel Space	Reference Frequency	IF
Europe	MW	531 ~ 1602kHz	9kHz	9kHz	450kHz
	LW	153 ~ 281kHz	1kHz	1kHz	450kHz
	FM	87.50 ~ 108.00MHz	50kHz	10kHz	10.7MHz

• Selection Function

(1) Auto UP/DOWN tunings (saw-tooth wave mode)
Selects automatically as long as "H" level input is obtained at SD terminal (42).

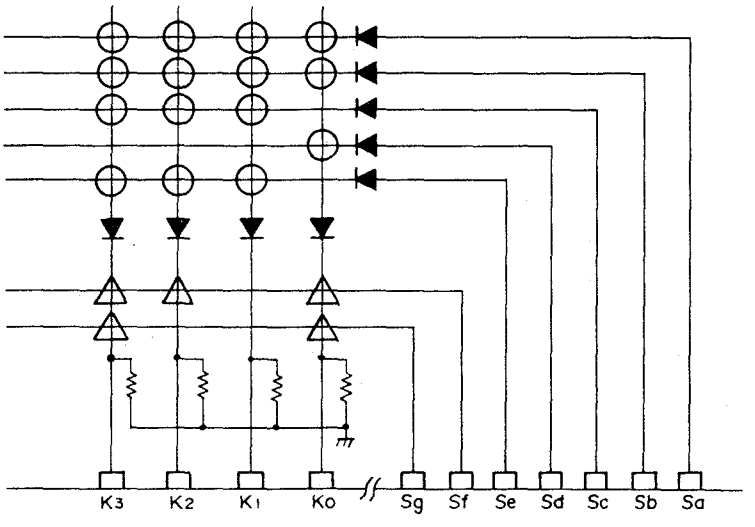
(2) Manual UP/DOWN tuning (saw-tooth wave mode)
Step tuning selection in momentary mode; fast manual tuning when button pressed for longer than 0.5 sec.

(3) Preset, Memory Recall
FM ..... 16 channels (M1/M9 ~ M8/M16)
LW/MW ..... 8 channels (M1/M8); random

• Preset, Memory Record
Press the preset key with "ME" lit to record frequency being received in the memory.

5.3 KEY MATRIX CONFIGURATION

	K_3	K_2	K_1	K_0	Kind of Keys
S_a	M1/M9	M2/M10	M3/M11	M4/M12	Momentary Switch ⊕
S_b	M5/M13	M6/M14	M7/M15	M8/M16	
S_c	UP	DOWN	MEMO		
S_d		FINE		FM IF BAND	
S_e	MW (AM)	FM	LW		
S_f	BAND 2	BAND 1		N/N+2	Initial Setting Diode Matrix ⏃
S_g	Tr. POINT PRESET			LW	



5.4 DESCRIPTION OF KEY MATRIX

• Momentary Key

1. M1/M9 ~ M8/M16
   Preset, Memory Record and Recall Keys.
   Sets M1 ~ M8 when pressed for less than 0.5 sec.;
   Sets M9 ~ M16 when pressed for more than 0.5 sec. (Only FM, both record and recall)

(1) Memory Record
After the MEMO key is pressed with ME lit, press any key from M1/M9 ~ M8/M16 within 5 sec. to record the contents of the memory for the channel being received (Frequency; FM mode: Mono/Auto Stereo FM only).

(2) Recall
Press any key from M1/M9 ~ M8/M16 to recall the contents of the memory for the key that was depressed (Frequency, FM Mode); 16 channels FM, 8 channels MW, LW (random).

2. MEMO
Indicates Preset, Memory Record condition; when this key is depressed "ME" lights for 5 secs., enabling memory.

3. UP/DOWN
Auto and Manual tuning keys (for saw-tooth wave mode)

(1) Manual
Each time either key is depressed, the frequency either increases or decreases 1 channel step; when either key is pressed for more than 5 secs., the manual fast tuning mode is obtained.

(2) Auto
Release either key while in the Manual Fast Tuning mode to enable Auto UP/DOWN selection.
When there is "H" level input at the S, D (Station Detector), terminal, or when the these keys are pressed a second time, the scan function is stopped.

4. FM, MW (AM), LW
When any of these keys are pressed, the last channel corresponding to the band of the key that was pressed is recalled. (Note: When LW selection is excluded with the diode matrix, the LW key is ignored.

5. FM IF BAND
WIDE or NARROW will be selested alternately each time this key is pressed.
The WIDE/NARROW mode can be entered into the preset memory (for FM only).

• Initial Setting of Diode Matrix

1. BAND 1 (D515), BAND 2 (D508)
Set the reception area.

	U.S.A.	Europe	Japan
BAND 1	0	0	1
BAND 2	0	1	1

1: Diode Connection
0: Open

2. LW (D510)
Designating the LW Band.
1: Includes LW Band
0: Excludes LW Band

3. N/N + 2 (D509, Q504)
Set Frequency for SD check of LW Band.
1: (9 x N) 153.162.171....270.279(kHz)
0: (9 x N + 2) 155.164,173....272.281(kHz)

4. Tr Point Preset
With the diode connected, turn the CE terminal from L to H (for Power ON) and the adjustment frequency will be recorded in the memory.

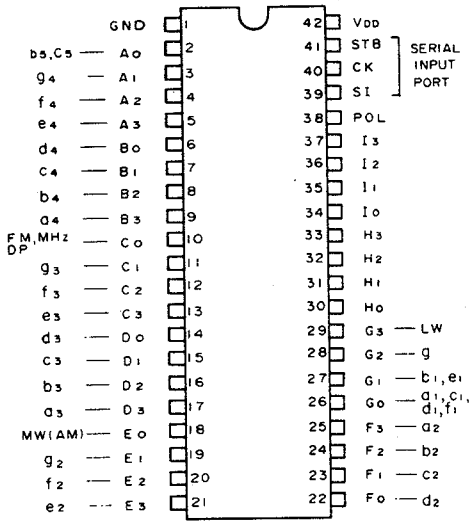
Tr Point Preset Frequency.

FM: M4 = 90.0 MHz, M5 = 98.0 MHz, M6 = 106.0 MHz.

AM: M1 = 603 kHz, M2 = 999 kHz, M3 = 1404 kHz,
M4 = 173 kHz, M5 = 209 kHz, M6 = 272 kHz.

5.5 STATIC DRIVER FOR FREQUENCY DISPLAY TC9180N (QR01)

Pin assignment



Pin description

Pin No.	Symbol	Terminal Name	Functional Description
2	A0	Segment A Output Port	The segment output ports The program controls these ports (from A to I) by unit as four bits. The Total Number is 36 segments. Built-in High-Voltage Correspond and N-ch MOS Driver for big current driving. (Sink current 10mA min. Correspond 18V min.) Output logic can be controlled by POL input.
3	A1		
4	A2		
5	A3		
6	B0	Segment B Output Port	
7	B1		
8	B2		
9	B3		
10	C0	Segment C Output Port	
11	C1		
12	C2		
13	C3		
14	D0	Segment D Output Port	
15	D1		
16	D2		
17	D3		
18	E0	Segment E Output Port	
19	E1		
20	E2		
21	E3		
22	F0	Segment F Output Port	
23	F1		
24	F2		
25	F3		
26	G0	Segment G Output Port	
27	G1		
28	G2		
29	G3		
30	H0	Segment H Output Port	
31	H1		
32	H2		
33	H3		
34	I0	Segment I Output Port	
35	I1		
36	I2		
37	I3		
38	(POL)	Controlling Input of Output Logic	Controls the positive and negative logic of the segments.
39	SI	Serial Input	Serial Input Port. Receive the data controlling the segment ports (given above) from controller.
40	CK	Clock Signal	
41	STB	Strobe Signal	
42	VDD	Terminal adding Supply Voltage	Add 5V ± 10%
1	GND		

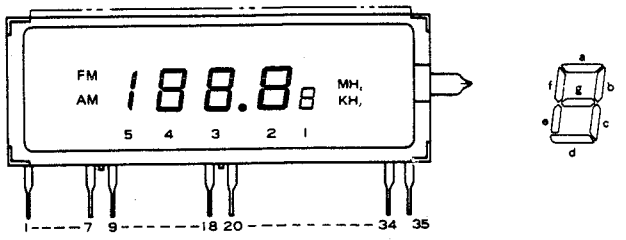
5.6 ELECTRODE CONNECTION (VR01)

Pin assignments

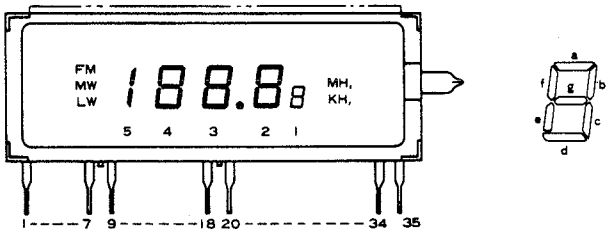
Pin number		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Electrode connected	HQ30903060	F	b_5 c_5	a_4	f_4	e_4	d_4	c_4		g_4	b_4	a_3	f_3	e_3	d_3	c_3	g_3	b_3	a_2
	HQ31002060	F	b_5 c_5	a_4	f_4	e_4	d_4	c_4		g_4	b_4	a_3	f_3	e_3	d_3	c_3	g_3	b_3	a_2

Pin number		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Electrode connected	HQ30903060		f_2	e_2	d_2	c_2	g_2	b_2	b_1 e_1	g_1	kHz	MHz	FM Dp	AM	a_1 d_1 c_1 f_1	G	G	F
	HQ31002060		f_2	e_2	d_2	c_2	g_2	b_2	b_1 e_1	g_1	kHz	MHz	FM Dp a_1 c_1 d_1 f_1	MW	LW	G	G	F

VR01
(ST-54)



VR01
(ST-54L)



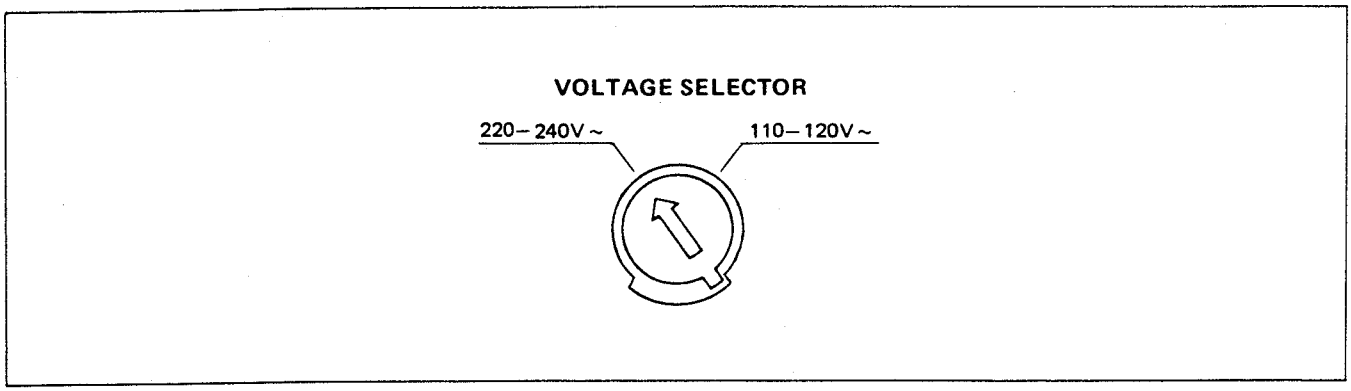
6. VOLTAGE CONVERSION

- **(E) VERSION ONLY**

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

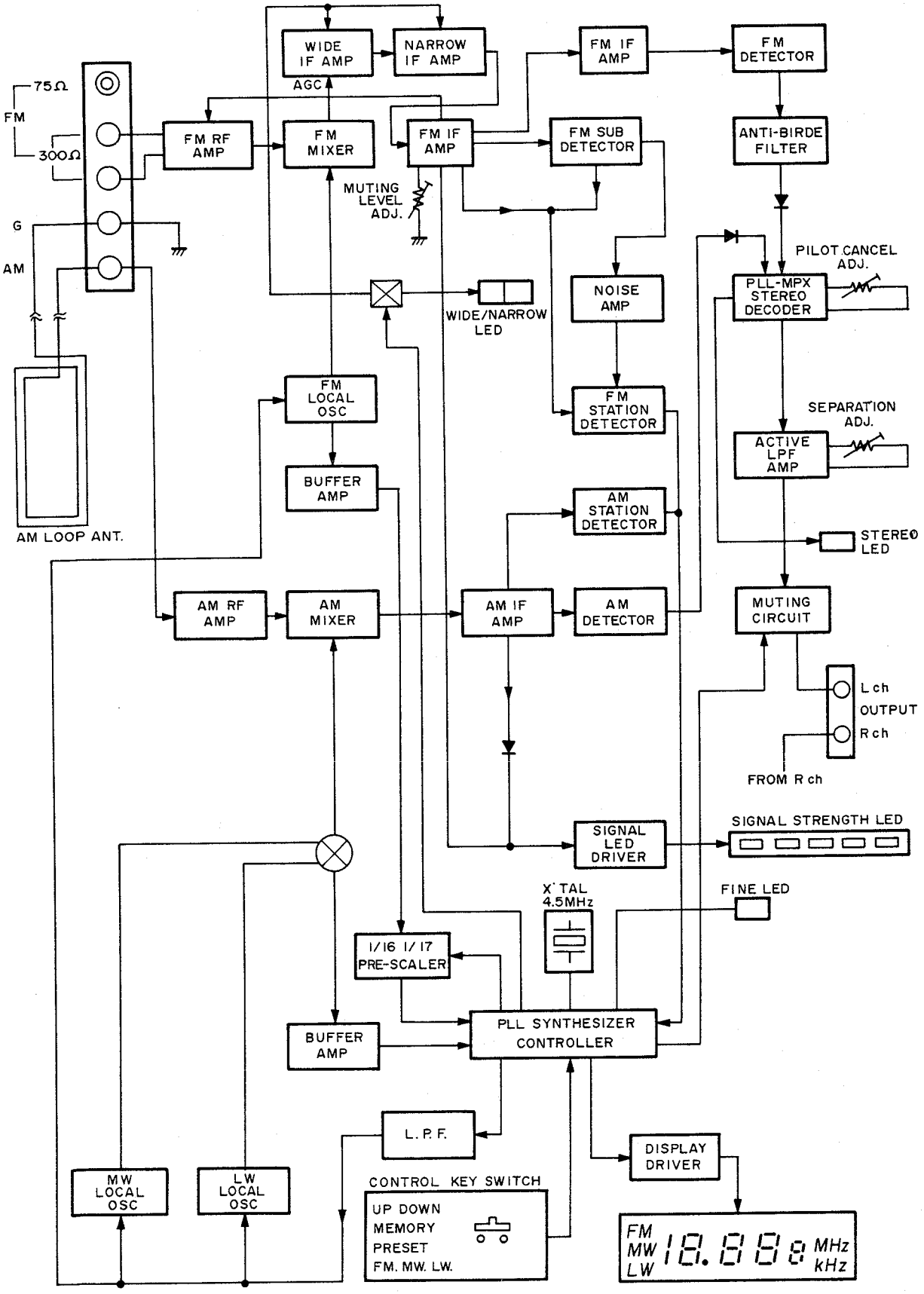
CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



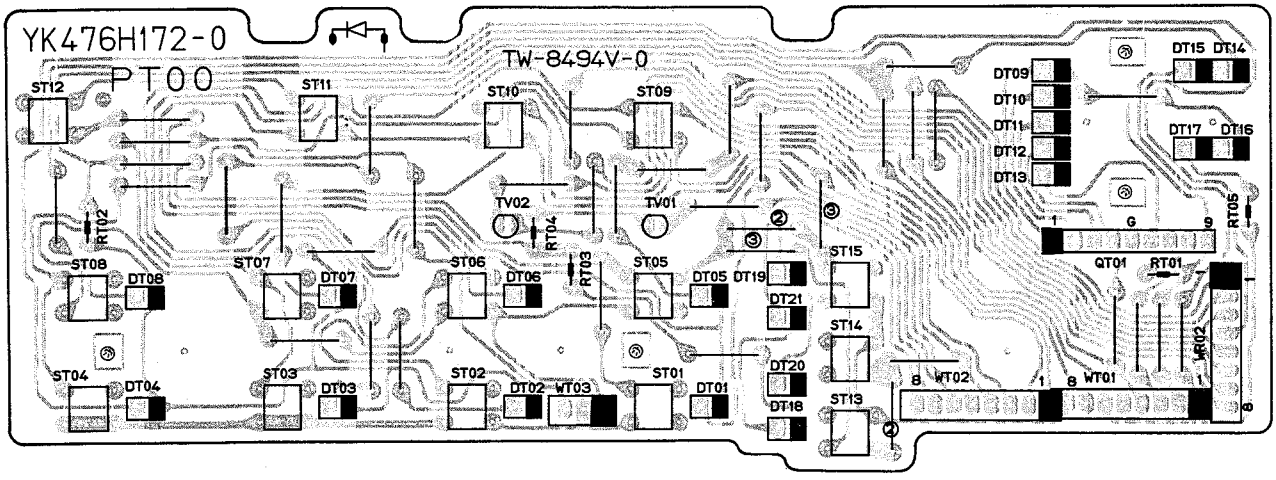
Note on safety: Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

7. BLOCK DIAGRAM

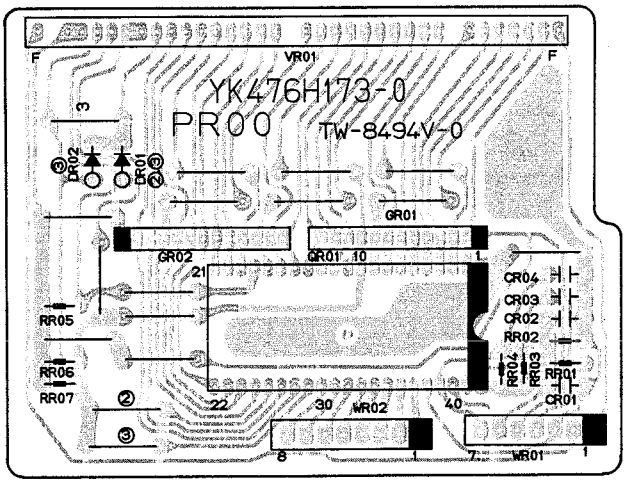


8. COMPONENT LOCATIONS

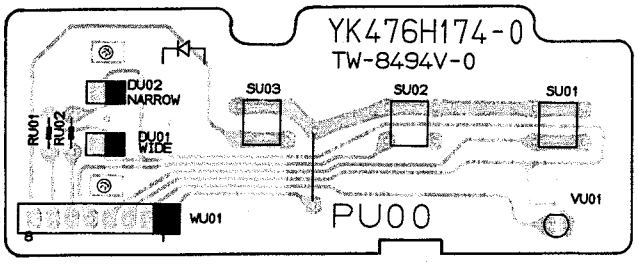
8.1 Preset Switch Assembly (PT00) Component Locations



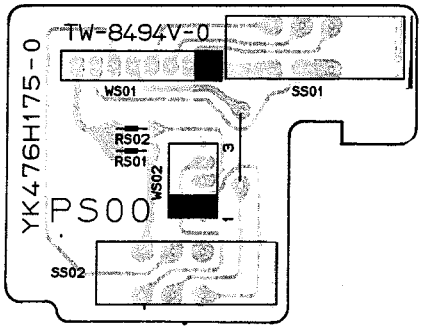
8.2 Display Assembly (PR00) Component Locations



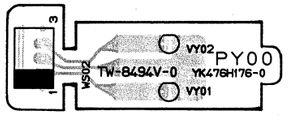
8.3 IF Band Assembly (PU00) Component Locations



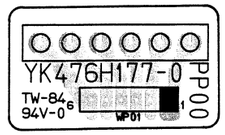
8.4 Power/Mode Switch Assembly (PS00) Component Locations



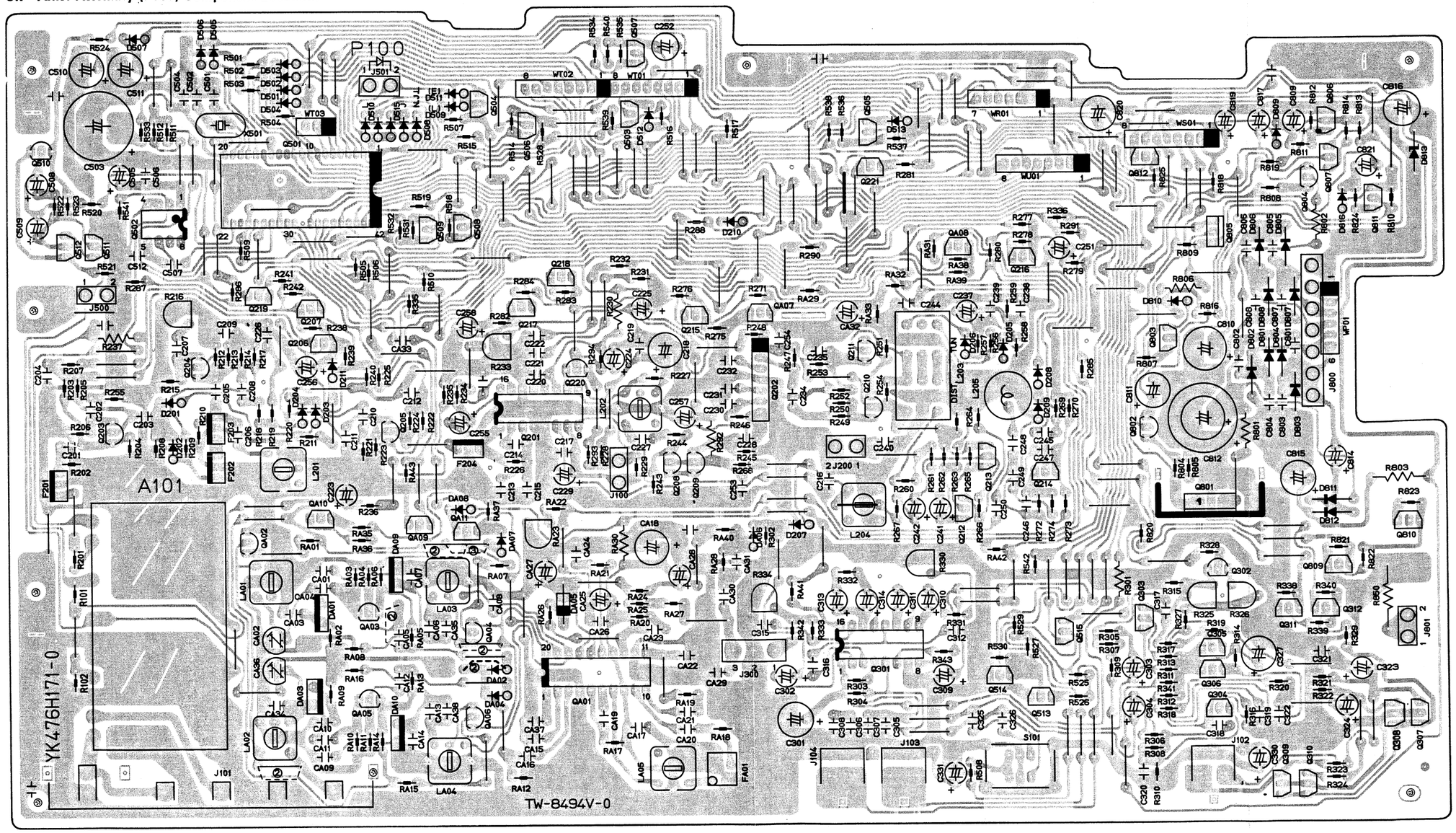
8.5 Mode Lamp Assembly (PY00) Component Locations



8.6 Power Transf. Assembly (PP00) Component Locations

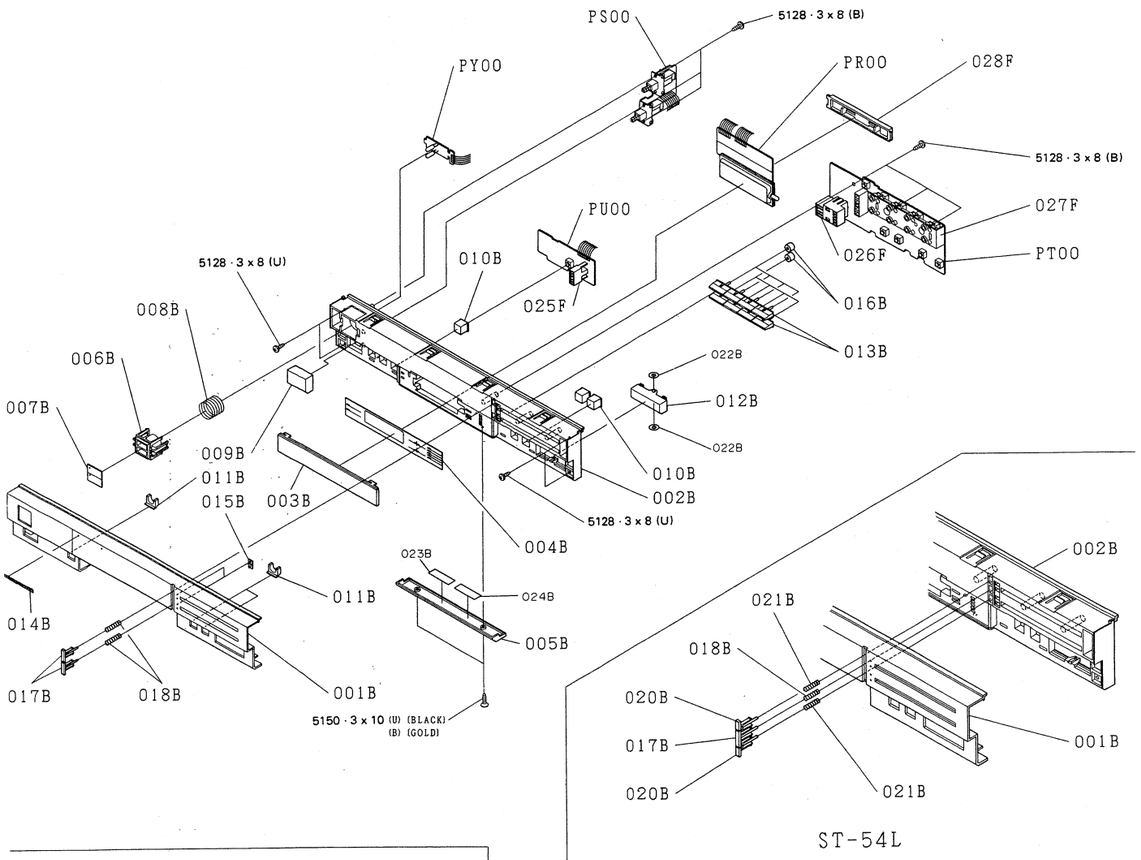


8.7 Tuner Assembly (P100) Component Locations

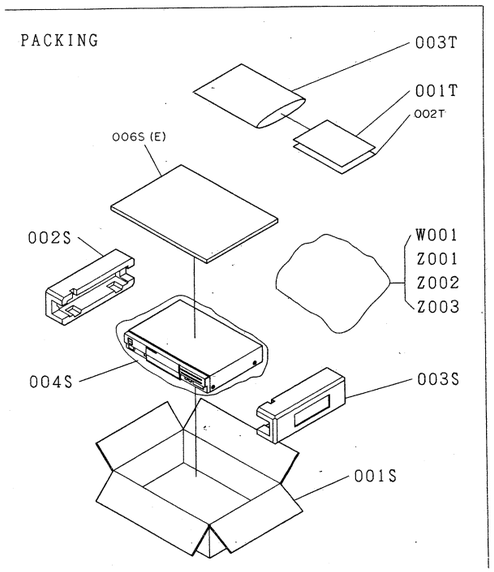


9. EXPLODED VIEW AND PARTS LIST

● [P01-99] Front Panel and Packing Materials



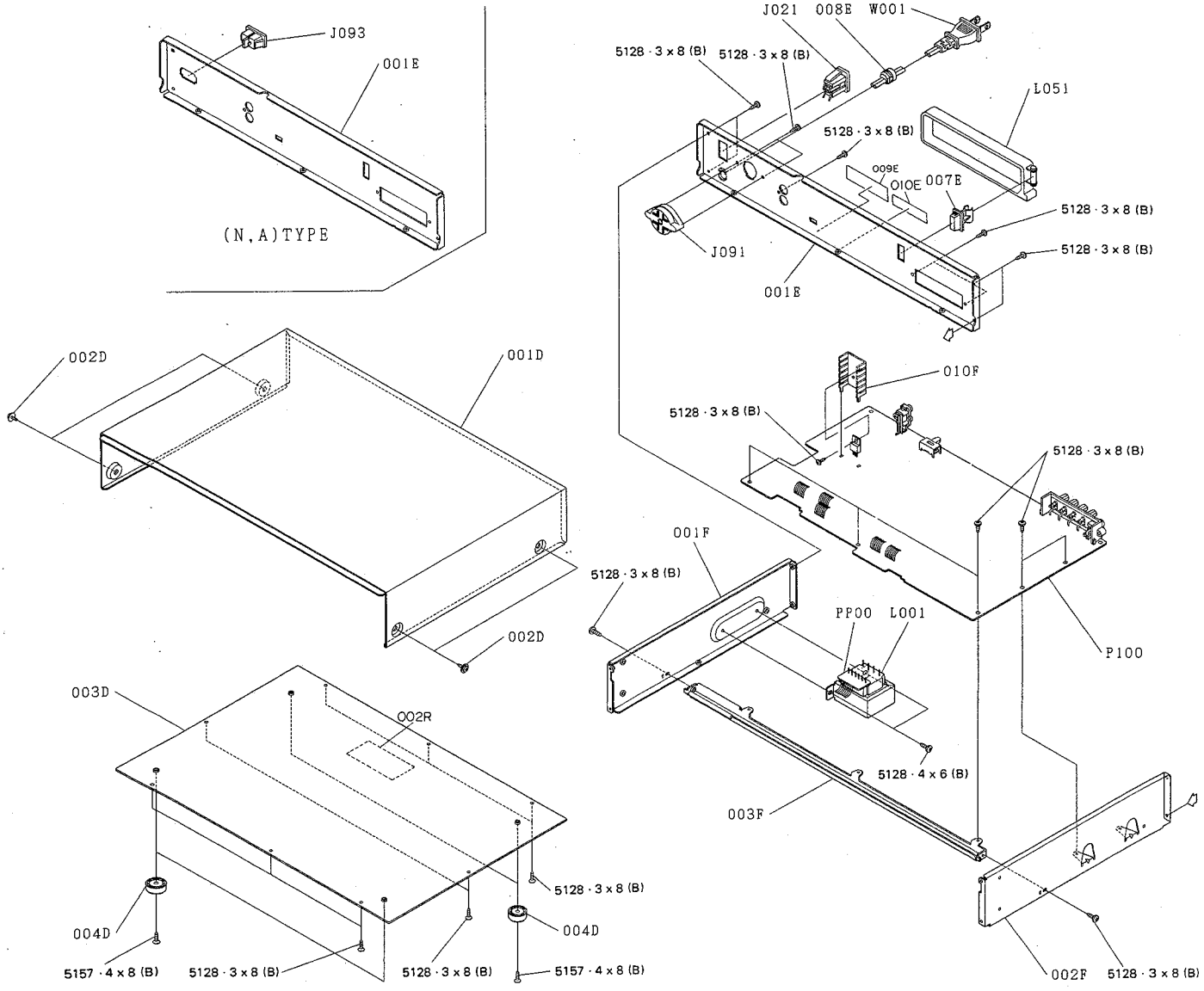
ST-54L



REF. DESIG.	PART NO.	DESCRIPTION
001B	4822 426 51207	Front Panel, Black (ST-54)
	4822 426 51195	Front Panel, Gold (ST-54)
	4822 426 51196	Front Panel, Gold (ST-54L)
	4822 426 51197	Front Panel, Black (ST-54L)
002B	4822 464 70396	Chassis, Front, Black (ST-54L)
003B	4822 459 20334	Window, Digitron
004B	4822 443 30649	Mask, Digitron
005B	4822 443 50765	Cover, Gold
	4822 443 50766	Cover, Black
006B	4822 410 24712	Button, Mode; Gold
	4822 410 24715	Button, Mode; Black
007B	4822 454 11338	Introducer, Mode; Gold
	4822 454 11339	Introducer, Mode; Black
008B	4822 492 41572	Spring, Mode Switch
009B	4822 410 24633	Button, Power; Gold
	4822 410 24635	Button, Power; Black
010B	4822 410 24704	Button, Gold
	4822 410 24707	Button, Black
011B	4822 381 10774	Lens, Memory Fine
012B	4822 410 24713	Button, Tuning; Gold
	4822 410 24716	Button, Tuning; Black
013B	4822 410 24717	Button Assembly, Preset; Gold
	4822 410 24718	Button Assembly, Preset; Black
014B	4822 454 11825	Badge, MARANTZ
015B	4822 381 10901	Lense, Preset
016B	4822 462 71404	Buffer, Preset Button
017B	4822 410 24714	Button
018B	4822 492 41574	Spring
020B	4822 410 24719	Button, MW/LW (ST-54L)
021B	4822 492 41575	Spring (ST-54L)
025F	4822 255 40597	Holder, IF Band LED
026F	4822 255 40598	Holder, Signal LED
027F	4822 255 40599	Holder, Preset LED
028F	4822 466 91467	Hook, Digitron

REF. DESIG.	PART NO.	DESCRIPTION
		PACKING
001S	4822 600 70477	Packing Case (ST-54L)
002S	4822 600 70482	Cushion (L)
003S	4822 600 70483	Cushion (R)
004S	4822 600 70347	Polyethylene Sheet
001T	4822 736 13578	User Manual
003T	4822 600 70363	Polyethylene Bag
⚠W001	4822 321 21123	A.C. Power Cord [N, W]
Z001	4822 303 30314	EXT Antenna, FM
Z002	4822 321 21438	Connective Cord, Output
⚠Z003	4822 265 10092	Jack, AC Adaptor (ST-54) [E]

● [P02-99] Top Cover and Rear Panel



REF. DESIG.	PART NO.	DESCRIPTION
001D	4822 426 50869	Lid, Top Cover; Gold
	4822 426 50871	Lid, Top Cover; Black
002D	4822 532 11276	B.T. Screw B4 x 8
003D	4822 426 50919	Lid, Bottom Cover
004D	4822 462 71361	Leg
001E	4822 426 20122	Rear Panel (ST-54) [W]
	4822 426 20123	Rear Panel (ST-54) [N]
	4822 426 20124	Rear Panel (ST-54) [E]
	4822 426 20125	Rear Panel (ST-54L)
007E	4822 256 90548	Holder, Loop Antenna
008E	4822 532 51314	Bushing, AC Cord (ST-54) [E]
010E	4822 454 11873	Indicator, Made in Japan [N, W]
001F	4822 464 70449	Chassis (L)
002F	4822 464 70451	Chassis (R)
003F	4822 404 60244	Stay, Center
010F	4822 255 40532	Heatsink

REF. DESIG.	PART NO.	DESCRIPTION
001R	4822 600 70348	Label, Caution
002R	4822 600 70299	Label, Caution
⚠ J021	4822 267 20334	Jack, AC Outlet (ST-54) [E]
⚠ J091	4822 272 10235	Voltage Selector (ST-54) [E]
⚠ J093	4822 265 20222	Plug, AC Inlet [N, W]
⚠ L001	4822 148 80345	Power Transformer [N, W]
	4822 148 80336	Power Transformer (ST-54) [E]
L051	4822 157 52069	Antenna Coil, Loop
⚠ W001	4822 321 10429	A.C. Power Cord (ST-54) [E]

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R***: (1) GD05---140, Carbon film fixed resistor, ±5%, 1/4W

R***: (2) GD05---160, Carbon film fixed resistor, ±5%, 1/6W

① — Resistance value

Examples

① Resistance value

0.1Ω...001	10Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	100Ω...101	10kΩ...103	1MkΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MkΩ...475

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C***: CERAMIC CAP.

(1) DD1---370, Ceramic condenser
Disc type
①② Temp. coeff. P350 ~ N1000, 50V
Capacity value
Tolerance

Examples

① Tolerance (Capacity deviation)
±0.25pF...0
±0.5pF...1
±5%...5

* Tolerance of COMMON PARTS handled here are as follows:
0.5pF ~ 5pF...±0.25pF
6pF ~ 10pF...±0.5pF
12pF ~ 560pF...±5%

② Capacity value

0.5pF...005	3pF...030	100pF...101
1pF...010	10pF...100	220pF...221
1.5pF...015	47pF...470	560pF...561

C***: CERAMIC CAP.

(1) DK16---300, High dielectric constant ceramic condenser
Disc type
① Temp. chara. 2B4, 50V
Capacity value

Example

② Capacity value

100pF...101	1000pF...102	10000pF...103
470pF...471	2200pF...222	

C***: ELECTROLY CAP. (⧧), FILM CAP. (⧦)

(1) EA------10, Electrolytic condenser
One-way lead type, Tolerance ±20%
①②
Dielectric strength
Capacity value

Examples

① Capacity value

0.1μF...104	4.7μF...475	100μF...107
0.33μF...334	10μF...106	330μF...337
1μF...105	22μF...226	1100μF...108
		2200μF...228

② Working voltage

6.3V...006	25V...025
10V...010	35V...035
16V...016	50V...050

(2) DF15---350, Plastic film condenser
One-way type, Mylar ±5% 50V
①
Capacity value

Examples

① Capacity value

0.001μF (1000pF)...102	0.1μF...104
0.0018μF.....182	0.56μF...564
0.01μF.....103	1μF...105
0.015μF.....153	

10. ELECTRICAL PARTS LIST

REF. DESIG.	PART NO.	DESCRIPTION
		PP00-POWER TRANSFORMER CIRCUIT BOARD
⚠ L001	4822 148 80345	Power Transformer [N, W]
	4822 148 80336	Power Transformer (ST-54) [E]
		PR00-DISPLAY CIRCUIT BOARD
CR01	4822 122 32486	Ceramic Cap. 0.01μF +80% –20%
CR02	4822 122 32486	Ceramic Cap. 0.01μF +80% –20%
GR01	4822 111 91394	Resistor Composite 10KΩx12 ±5% 1/10W
GR02	4822 111 91394	Resistor Composite 10KΩx12 ±5% 1/10W
DR01	4822 130 33305	Diode 1SS133, etc.
DR02	4822 130 33305	Diode 1SS133, etc. (ST-54L)
QR01	4822 209 83777	IC TC9180N
VR01	4822 130 90303	Display Unit, FIP7B8AS (ST-54)
	4822 130 90152	Display Unit, FIP7A8AS (ST-54L)
WR01	4822 323 10193	Jumper Lead, 7P
WR02	4822 323 10158	Jumper Lead, 8P
		PS00-POWER/MODE SWITCH CIRCUIT BOARD
SS01	4822 276 11682	Push Switch, Power
SS02	4822 276 20331	Push Switch, Mode
WS01	4822 323 10121	Jumper Lead, 8P
WS02	4822 323 10106	Jumper Lead, 3P
		PT00-PRESET SWITCH CIRCUIT BOARD
DT01 ~ DT08	4822 130 32179	L.E.D. SLP-981C-50
DT09 ~ DT17	4822 130 32918	L.E.D. GL-9PR26
DT18 ~ DT21	4822 130 33506	L E.D. SEL1121R
QT01	4822 209 71272	IC AN6876
ST01 ~ ST13	4822 270 11195	Push Switch
ST14	4822 270 11195	Push Switch, LW (ST-54L)
ST15	4822 270 11195	Push Switch, AM
VT01	4822 134 40667	Lamp, Memory; 50mA 8V
VT02	4822 134 40667	Lamp, Fine; 50mA 8V
WT01	4822 323 10121	Jumper Lead, 8P
WT02	4822 323 10121	Jumper Lead, 8P
WT03	4822 323 10141	Jumper Lead, 3P

REF. DESIG.	PART NO.	DESCRIPTION
		PU00-IF BAND CIRCUIT BOARD
DU01	4822 130 32918	L.E.D. GL-9PR26
DU02	4822 130 32918	L.E.D. GL-9PR26
SU03	4822 276 11195	Push Switch, IF Band
WU01	4822 323 10121	Jumper Lead, 8P
		PY00-MODE LAMP CIRCUIT BOARD
VY01	4822 134 40556	Lamp, Mono; 50mA 8V
VY02	4822 134 40556	Lamp, Auto Stereo; 50mA 8V
		P100-TUNER CIRCUIT BOARD
		P100-CAPACITORS
CA01	4822 122 32486	Ceramic 0.01μF +80% −20%
CA02	4822 125 60104	Trimming 16pF
CA05	4822 122 32486	Ceramic 0.01μF +80% −20% (ST-54L)
CA06	4822 121 42466	Film 390pF ±5%
CA08	4822 122 40306	Ceramic 0.047μF +80% −20%
CA09	4822 122 32486	Ceramic 0.01μF +80% −20% (ST-54L)
CA12	4822 122 32486	Ceramic 0.01μF +80% −20% (ST-54L)
CA13	4822 122 10367	Ceramic 150pF ±5% (ST-54L)
CA15	4822 122 40306	Ceramic 0.047μF +80% −20%
CA16	4822 122 32486	Ceramic 0.01μF +80% −20%
CA17	4822 122 40306	Ceramic 0.047μF +80% −20%
CA19	4822 122 32486	Ceramic 0.01μF +80% −20%
CA20	4822 122 32486	Ceramic 0.01μF +80% −20%
CA21	4822 122 32486	Ceramic 0.01μF +80% −20%
CA23	4822 122 32486	Ceramic 0.01μF +80% −20%
CA24	4822 122 32486	Ceramic 0.01μF +80% −20%
CA26	4822 122 40306	Ceramic 0.047μF +80% −20%
CA33	4822 122 32486	Ceramic 0.01μF +80% −20%
CA35	4822 122 32917	Ceramic 33pF ±5%
CA36	4822 125 60104	Trimming 16pF (ST-54L)
C201 ~ C205	4822 122 32486	Ceramic 0.01μF +80% −20%
C207	4822 122 32486	Ceramic 0.01μF +80% −20%
C212		
C213	4822 122 40306	Ceramic 0.047μF +80% −20%
C215	4822 122 40306	Ceramic 0.047μF +80% −20%
C217	4822 122 40306	Ceramic 0.047μF +80% −20%
C219	4822 122 40306	Ceramic 0.047μF +80% −20%
C220	4822 122 40306	Ceramic 0.047μF +80% −20%
C221	4822 122 40306	Ceramic 0.047μF +80% −20%
C222	4822 122 40306	Ceramic 0.047μF +80% −20%
C226	4822 122 32486	Ceramic 0.01μF +80% −20%
C227	4822 122 32486	Ceramic 0.01μF +80% −20%
C228	4822 122 32486	Ceramic 0.01μF +80% −20%
C230	4822 122 32486	Ceramic 0.01μF +80% −20%
C231	4822 122 32486	Ceramic 0.01μF +80% −20%
C232	4822 122 32486	Ceramic 0.01μF +80% −20%
C234	4822 122 32486	Ceramic 0.01μF +80% −20%

REF. DESIG.	PART NO.	DESCRIPTION
C235	4822 122 32486	Ceramic 0.01μF +80% −20%
C241	4822 124 90352	Elect 10μF 16V
C242	4822 124 90361	Elect 22μF 25V
C244	4822 122 40306	Ceramic 0.047μF +80% −20%
C245	4822 122 40306	Ceramic 0.047μF +80% −20%
C246	4822 122 40306	Ceramic 0.047μF +80% −20%
C253	4822 122 40306	Ceramic 0.047μF +80% −20%
C254	4822 122 32486	Ceramic 0.01μF +80% −20%
C257	4822 124 90354	Elect 100μF 16V (ST-54)
	4822 124 90355	Elect 100μF 16V (ST-54L)
C301	4822 124 90365	Elect 220μF 25V
C302	4822 124 90361	Elect 22μF 25V
C303	4822 124 22273	Elect 0.47μF 50V
C304	4822 124 22273	Elect 0.47μF 50V
C307	4822 121 42327	Film 470pF ±5%
C308	4822 121 42327	Film 470pF ±5%
C315	4822 121 41626	Film 470pF ±5%
C319	4822 121 42327	Film 470pF ±5%
C320	4822 121 42327	Film 470pF ±5%
C323	4822 124 90357	Elect 2.2μF 50V
C324	4822 124 90357	Elect 2.2μF 50V
C327	4822 124 90355	Elect 100μF 50V
C503	4822 124 41265	Elect 47000μF 5.5V
C504	4822 122 32486	Ceramic 0.01μF +80% −20%
C506	4822 122 32486	Ceramic 0.01μF +80% −20%
C507	4822 122 32486	Ceramic 0.01μF +80% −20%
C510	4822 124 90365	Elect 220μF 25V
C801 ~ C808	4822 122 32486	Ceramic 0.01μF +80% −20%
C812	4822 124 90356	Elect 1000μF 35V
C815	4822 124 90355	Elect 100μF 50V
C816	4822 124 90355	Elect 100μF 50V
		P100-RESISTORS
RA23	4822 100 10922	22KΩ, Trimming
RA30	4822 111 30815	100Ω ±5% ¼W
R216	4822 100 10762	100Ω, Trimming
R230	4822 111 30815	100Ω ±5% ¼W
R233	4822 100 10784	47KΩ, Trimming
R237	4822 116 52846	150Ω ±5% ¼W (ST-54) [E, W]
	4822 111 30815	100Ω ±5% ¼W (ST-54) [N]
R292	4822 111 30815	100Ω ±5% ¼W
⚠R301	4822 116 60295	47Ω ±5% ¼W, Fusible
R303	4822 116 53691	4.6KΩ ±1% 1/6W
R304	4822 116 53691	4.6KΩ ±5% 1/6W
R325	4822 100 10922	22KΩ, Trimming [N, W]
	4822 100 20188	100KΩ, Trimming (ST-54) [E]
R326	4822 100 10782	220KΩ, Trimming
R330	4822 100 10783	4.7KΩ, Trimming
R334	4822 100 10783	4.7KΩ, Trimming
⚠R801	4822 116 60314	10Ω ±5% ¼W, Fusible
⚠R802	4822 116 60314	10Ω ±5% ¼W, Fusible
R803	4822 111 91406	820Ω ±5% ½W
R806	4822 116 52846	150Ω ±5% ¼W
		P100-SEMICONDUCTORS
DA01	4822 130 31542	Varicap SVC321SP
DA02	4822 130 33305	Diode 1SS133, etc. (ST-54L)
DA03	4822 130 31542	Varicap SVC321SP (ST-54L)
DA04	4822 130 33305	Diode 1SS133, etc. (ST-54L)
DA05	4822 130 32918	L.E.D. GL-9PR26

REF. DESIG.	PART NO.	DESCRIPTION	
DA06	4822 130 33305	Diode	1SS133, etc.
DA07	4822 130 33305	Diode	1SS133, etc. (ST-54L)
DA08	4822 130 33305	Diode	1SS133, etc. (ST-54L)
DA09	4822 130 31542	Varicap	SVC321SP
DA10	4822 130 31542	Varicap	SVC321SP (ST-54L)
D201 ~ D210	4822 130 33305	Diode	1SS133, etc.
D501 ~ D507	4822 130 33305	Diode	1SS133, etc.
D508	4822 130 33305	Diode	1SS133, etc. (ST-54)[N,W]
D509	4822 130 33305	Diode	1SS133, etc. (ST-54L)
D510	4822 130 33305	Diode	1SS133, etc. (ST-54L)
D511	4822 130 33305	Diode	1SS133, etc. (ST-54)[E]
D512	4822 130 33305	Diode	1SS133, etc.
D515	4822 130 33305	Diode	1SS133, etc.
⚠D801 ~ ⚠D808	4822 130 32508	Diode	DSF10C, etc.
D809	4822 130 33305	Diode	1SS133, etc.
D810	4822 130 33305	Diode	1SS133, etc.
D811	4822 130 32508	Diode	DSF10C, etc.
D812	4822 130 32508	Diode	DSF10C, etc.
D813	4822 130 33433	Zener	RD24E
D816	4822 130 33305	Diode	1SS133, etc.
QA01	4822 209 82544	IC	LA1245
QA02	4822 130 42125	Transistor	2SD1302(S, T)(ST-54L)
QA03	4822 130 42081	F.E.T.	2SK55D
QA04	4822 130 42121	F.E.T.	2SK30A(Y) (ST-54L)
QA05	4822 130 42081	F.E.T.	2SK55D (ST-54L)
QA06	4822 130 42121	F.E.T.	2SK30A(Y) (ST-54L)
QA07	4822 130 42483	Transistor	2SC536SP(F, G), etc.
QA08	4822 130 42715	Transistor	2SA608SP(F, G), etc.
QA09	4822 130 42483	Transistor	2SC536SP(F, G)(ST-54L)
QA10	4822 130 42715	Transistor	2SA608SP(F,G)(ST-54L)
QA11	4822 130 42715	Transistor	2SA608SP(F,G)(ST-54L)
Q201	4822 209 82543	IC	LA1231N
Q202	4822 209 80499	IC	μPC1163H
Q203	4822 180 42082	Transistor	2SC1047(C)
Q204	4822 180 42082	Transistor	2SC1047(C)
Q205	4822 180 42082	Transistor	2SC1047(C)
Q206	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q207	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q208	4822 130 42082	Transistor	2SC1047(C)
Q209	4822 130 42082	Transistor	2SC1047(C)
Q210	4822 130 42082	Transistor	2SC1047(C)
Q211	4822 130 42082	Transistor	2SC1047(C)
Q212	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q213	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q214	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q215	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q216	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q217	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q218	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q219	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q220	4822 130 42121	F.E.T.	2SK30A(YI)

REF. DESIG.	PART NO.	DESCRIPTION	
Q301	4822 209 80501	IC	KB4437
Q302	4822 130 42121	F.E.T.	2SK30A(YI)
Q303	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q304	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q305	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q306	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q307	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q308	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q309	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q310	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q311	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q312	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q501	4822 209 70075	IC	μPD1712CU-529
Q502	4822 209 83678	IC	μPB553AC
Q503	4822 130 42715	Transistor	2SA608SP(F, G), etc.
Q504	4822 130 42715	Transistor (ST-54) [E]	2SA608SP(F, G), etc.
	4822 130 42715	Transistor (ST-54L)	2SA608SP(F, G), etc.
Q506	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q507	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q508	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q509	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q510	4822 130 42121	F.E.T.	2SK30A(YI)
Q511	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q512	4822 130 42483	Transistor	2SC536SP(F, G), etc.
⚠Q801	4822 209 82829	IC	NJM78M15A
⚠Q802	4822 130 43377	Transistor	2SD863(E)
Q803	4822 130 42483	Transistor	2SC536SP(F, G), etc.
⚠Q804	4822 130 43377	Transistor	2SD863(E)
Q805	4822 130 42129	Transistor	2SD985(L, K)
Q806	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q807	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q811	4822 130 42483	Transistor	2SC536SP(F, G), etc.
Q812	4822 130 42483	Transistor	2SC536SP(F, G), etc.
		P100-MISCELLANEOUS	
A101	4822 210 10271	V.H.F. Tuner, FE407-A12 ST-54/ST-54L, ST-54(E), ST-54L	
	4822 210 10297	V.H.F. Tuner, FE407-G28 (ST-54) [N, W]	
FA01	4822 242 71397	Ceramic Filter, SFP450H	
F201	4822 242 70335	Ceramic Filter, SFE10.7MS3G [N, W]	
	4822 242 70911	Ceramic Filter, SFE10.7MA8-A (ST-54) [E]	
F202	4822 242 70911	Ceramic Filter, SFE10.7MA8-A	
F203	4822 242 70911	Ceramic Filter, SFE10.7MA8-A	
F204	4822 242 70911	Ceramic Filter, SFE10.7MA8-A	
J100	4822 265 10158	Plug, 2P	
J101	4822 267 10133	Terminal, Din Antenna	
J102	4822 267 30498	Terminal, Output	
J200	4822 265 10158	Plug, 2P	
J300	4822 265 20205	Plug, 3P	
J501	4822 265 10158	Plug, 2P	
J800	4822 265 10118	Plug, 7P (ST-54) [E]	

REF. DESIG.	PART NO.	DESCRIPTION
LA01	4822 157 52328	Antenna Coil, AM
LA02	4822 157 52437	Antenna Coil, LW (ST-54L)
LA03	4822 157 52073	OSC Coil, MW
LA04	4822 157 52455	OSC Coil, LW (ST-54L)
LA05	4822 157 52439	I.F.T. Coil, AM
L201	4822 156 40893	I.F.T. Coil, FM
L202	4822 157 52442	I.F.T. Coil, FM Det
L203	4822 157 52451	I.F.T. Coil, FM Det
L204	4822 156 10794	M.P.X. Coil [N, W]
L205	4822 156 10843	Choke Coil, 4.7mH
S101	4822 277 20968	Slide Switch, Scan/Step (ST-54) [E]
	4822 277 20968	Slide Switch, LW (ST-54L)
WP01	4822 323 10057	Jumper Lead, 6P
X501	4822 242 71407	Crystal, 45MHz

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY :
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

11. TECHNICAL SPECIFICATIONS

FM TUNER SECTION

Frequency Range		87.5 ~ 108 MHz
Usable Sensitivity		
Mono	(S/N 26 dB, 75 ohms)	0.7 μV
Stereo	(S/N 46 dB, 75 ohms)	20 μV
Alternate Channel Selectivity 98 MHz (W/N)		40/75 dB
Image Response Rejection		80 dB
IF Rejection		110 dB
Spurious Response Rejection		95 dB
AM Suppression		60 dB
Signal-to-Noise Ratio		
Unweighted	Mono	78 dB
	Stereo	73 dB
Weighted	Mono	85 dB
	Stereo	76 dB
Pilot Signal & Subcarrier Rejection		
19 kHz		60 dB
38 kHz		65 dB
Total Harmonic Distortion		
Mono (W/N)		0.05/0.15%
Stereo (W/N)		0.08/0.3%
Frequency Response		
30 Hz ~ 15 kHz		+0.5 dB, −1.5 dB
Separation		
Stereo (W/N)		55/50 dB
Channel Balance		0.2 dB
Output level (1 kHz, 75 kHz Dev.)		940 mV

MW TUNER SECTION

Frequency Range	531 ~ 1602 kHz
Usable Sensitivity 20 dB S/N 30% Mod., 999 kHz	350 μV/m
Selectivity 999 kHz, ±9 kHz	40 dB
Image Rejection, 999 kHz	45 dB
IF Rejection, 999 kHz	70 dB
Signal-to-Noise Ratio, 999 kHz	54 dB
Total Harmonic Distortion, 999 kHz	0.3%

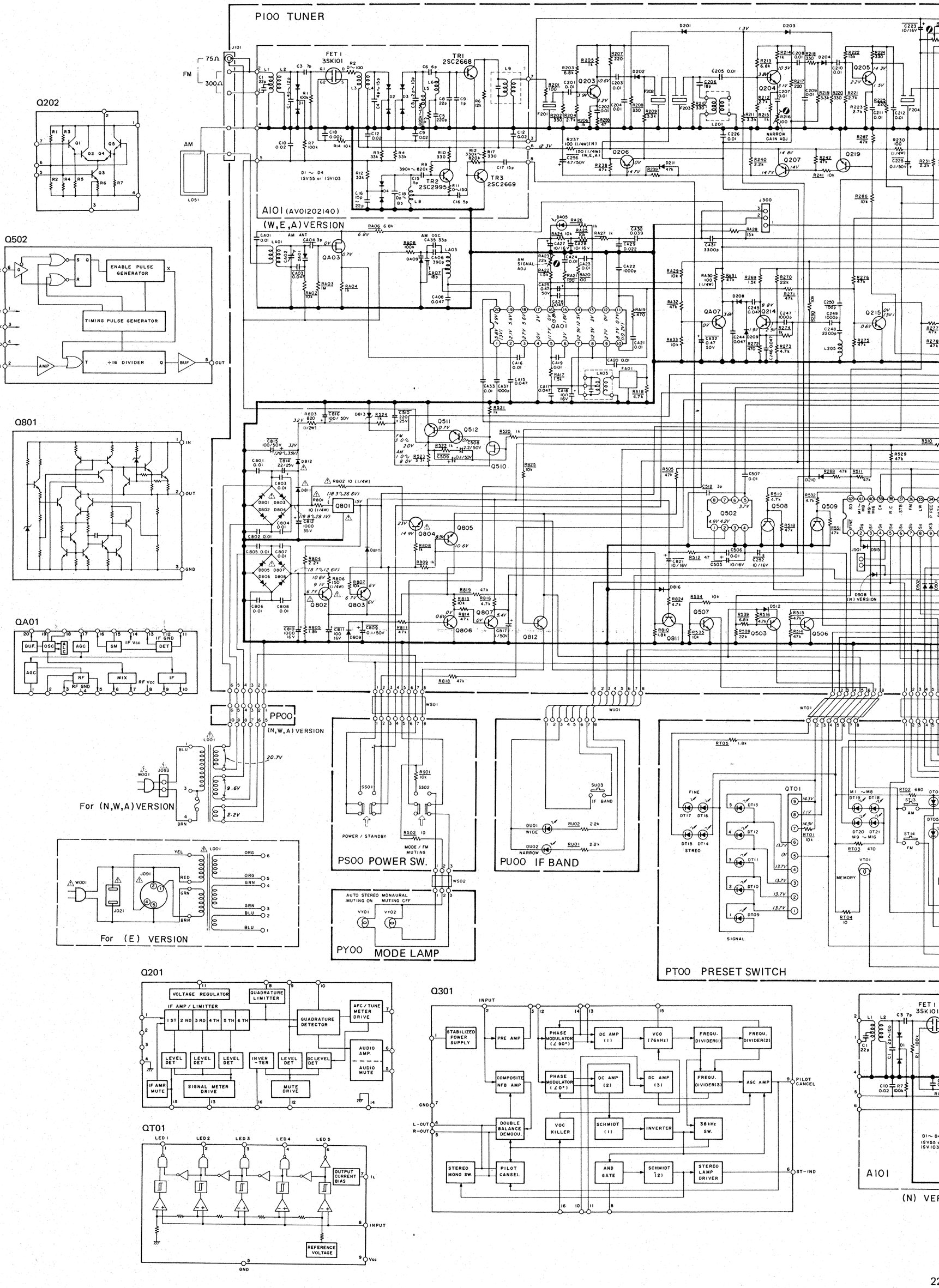
LW TUNER SECTION

Frequency Range	153 ~ 281 kHz
Usable Sensitivity 20 dB S/N 30% Mod., 209 kHz	800 μV/m
Image Rejection, 209 kHz	50 dB
IF Rejection, 209 kHz	65 dB
Signal-to-Noise Ratio, 209 kHz	50 dB

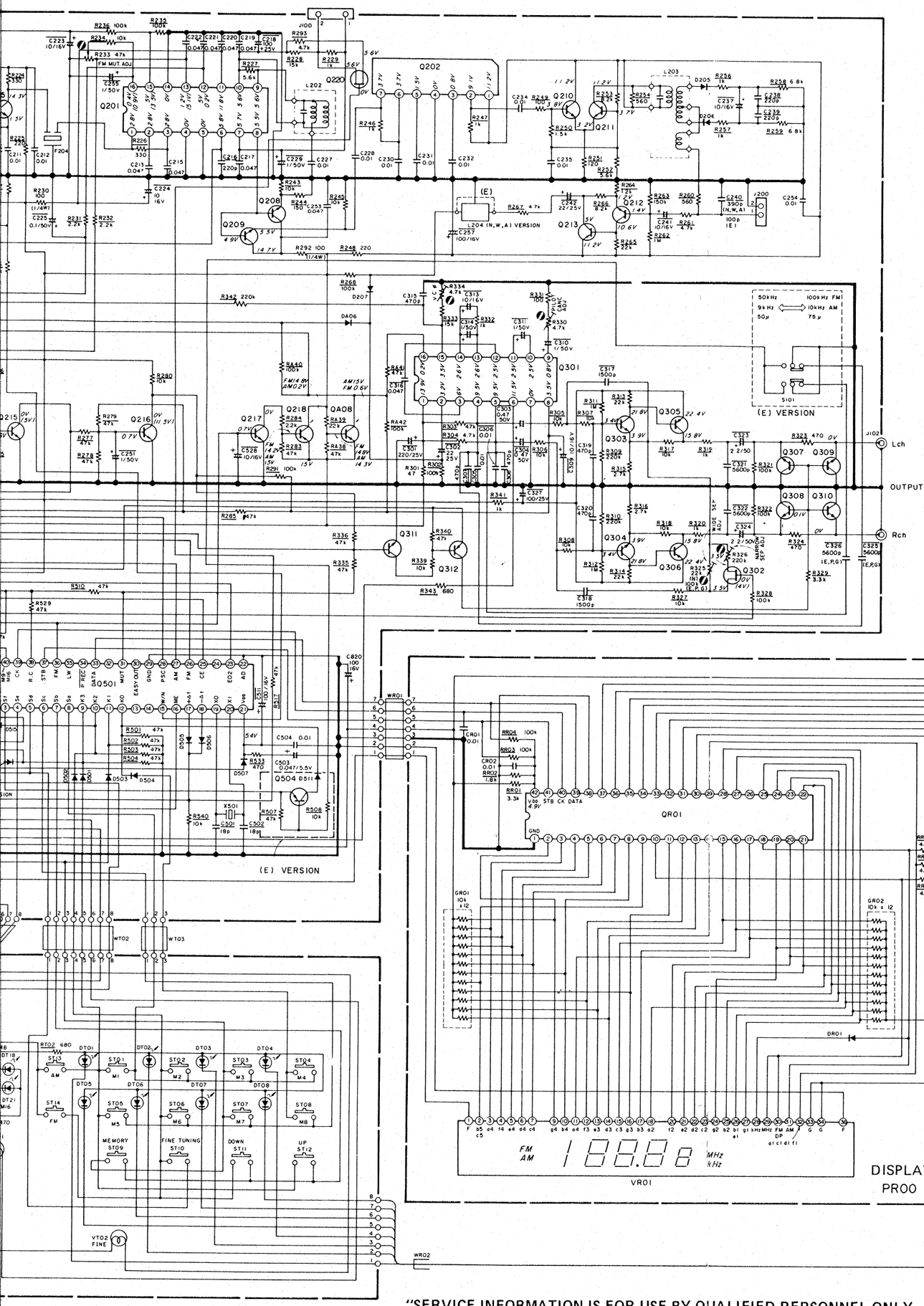
GENERAL

Power Requirements	N and T versions	220/240V AC, 50/60 Hz
	E version	110/120/220/240V AC, 50/60 Hz
Power Consumption at Rated Output, Both Channels Operating		12W
Dimensions		
Panel Width		416 mm
Panel Height		73 mm
Depth		295 mm
Weight		
Unit Alone		3.4 kg

12. SCHEMATIC DIAGRAM



Model ST-54

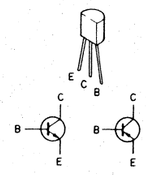


QA01

LA1245

QT01

AN6876



Q201

LA1231N

Q202

μPC1163H

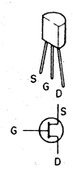
Q301

KB4437

2SC1740S(R or S) 2SA933SP(R or S) 2SD985(L,
2SC1047C

Q501

μPD1712CU-529

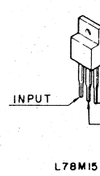


Q502

μPB553AC

Q801

NJM78M15A



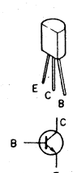
L78M15

QR01 Q203～Q205 2SK30A(Y)
Q208～Q211

TC9180N 2SC1047C

QA03

2SK55D



Q220,Q510,Q302

2SK30A(Y)

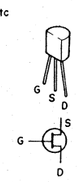
Q207, Q212
Q214～Q217, Q219, Q303,
Q304, Q307～Q311, Q506
Q507～Q509, Q511, Q512
Q803, Q806, Q807, Q811, Q812

2SD863(E)

2SC536SP(F,G), 2SC2458(Y,GR), etc

QA08, Q206
Q207, Q213, Q218, Q305
Q306, Q312, Q503, Q504

2SA1048(Y,GR), 2SA608SP(F,G), etc



Q802, Q804

2SD863(E)

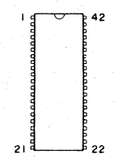
2SK55D

Q805

2SD985(L,K)

TOP VIEW

μPD1712CU-529



DA06, D201, D202, D203
D204, D205, D206, D207
D208, D209, D210, D211
D501～D508, D511, D512
D515, D809, D810, D816, DR01

ISS133, ISS176, MA165, etc
D810,

ISS133, ISS176, MA165, etc

DT01～DT08

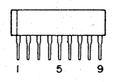
SLP-981C-50

DT09～DT17, DU01, DU02
DA05

GL-9PR26

FRONT VIEW

AN6876



D801～D808, D811, D812

ISR35, RL103E, DSF10C

DA01, DA09

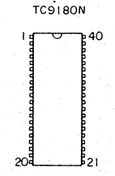
SVC321SP

D813

RD24E

TOP VIEW

TC9180N



DT18～DT21

SEL1121R

TOP VIE
μPD553
LA1231
LA1245
FRONT V
μPC1163

"SERVICE INFORMATION IS FOR USE BY QUALIFIED RERSONNEL ONLY –
ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY
REPAIR BY ANY MARANTZ SERVICE CENTRE – "

Kind of Common Parts

RESISTOR

R*** (1) GD05 - - - 140, Carbon film fixed resistor, ±5% 1/4W
R*** (2) GD05 - - - 160, Carbon film fixed resistor, ±5% 1/6W

C* : CERAMIC CAP.**

(1) DD1 - - - - 370, Ceramic condenser,
disc type (titan condenser)
Temp. coeff. P350～N1000 50V

C* : CERAMIC CAP.**

(1) DK16 - - - 300, High dielectric constant ceramic condenser,
disc type (titan variable)
Temp. chara. 2B4 50V

C* : ELECTROLY CAP. (⧺) / FILM CAP. (⧦)**

(1) EA - - - - - - 10, Electrolytic condenser,
one-way lead type, tolerance ±20%
(2) DF15 - - - 350, Plastic film condenser,
one-way type, Mylar, ±5% 50V

* In case of ordering the common parts, please establish the co
parts number of 10 figures by the procedure "ASSIGNMEN
COMMON PARTS CODES"

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Components and wiring are subject to change for modification without notice.

P100 TUNER

AI01 (AV01202140)

PP00

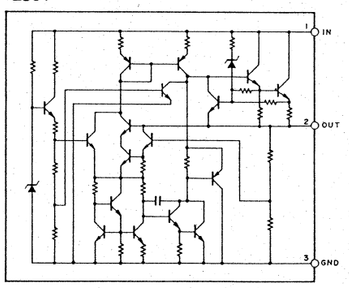
PS00 POWER SW.

PU00 IF BAND

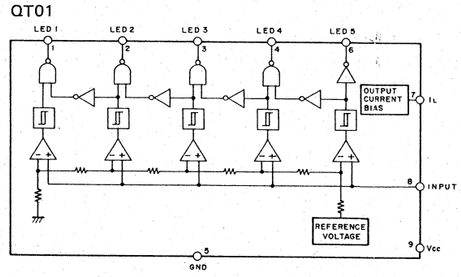
PY00 MODE LAMP

PT00 PRESET SWITCH

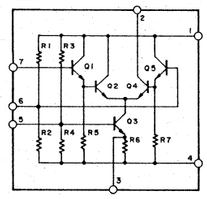
Q801



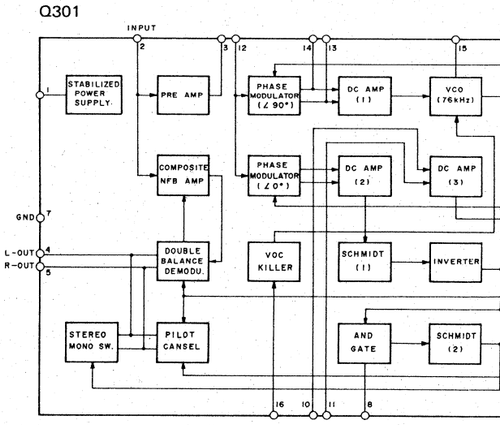
QT01



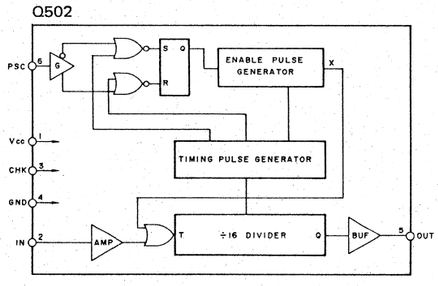
Q202



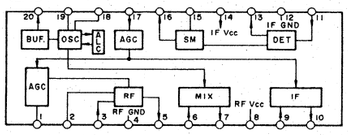
Q301



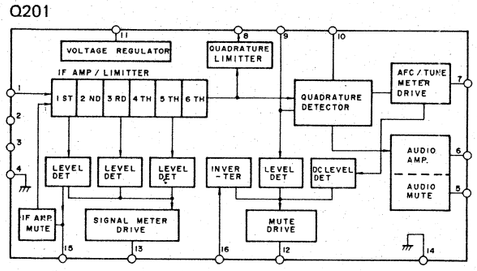
Q502



QA01



Q201



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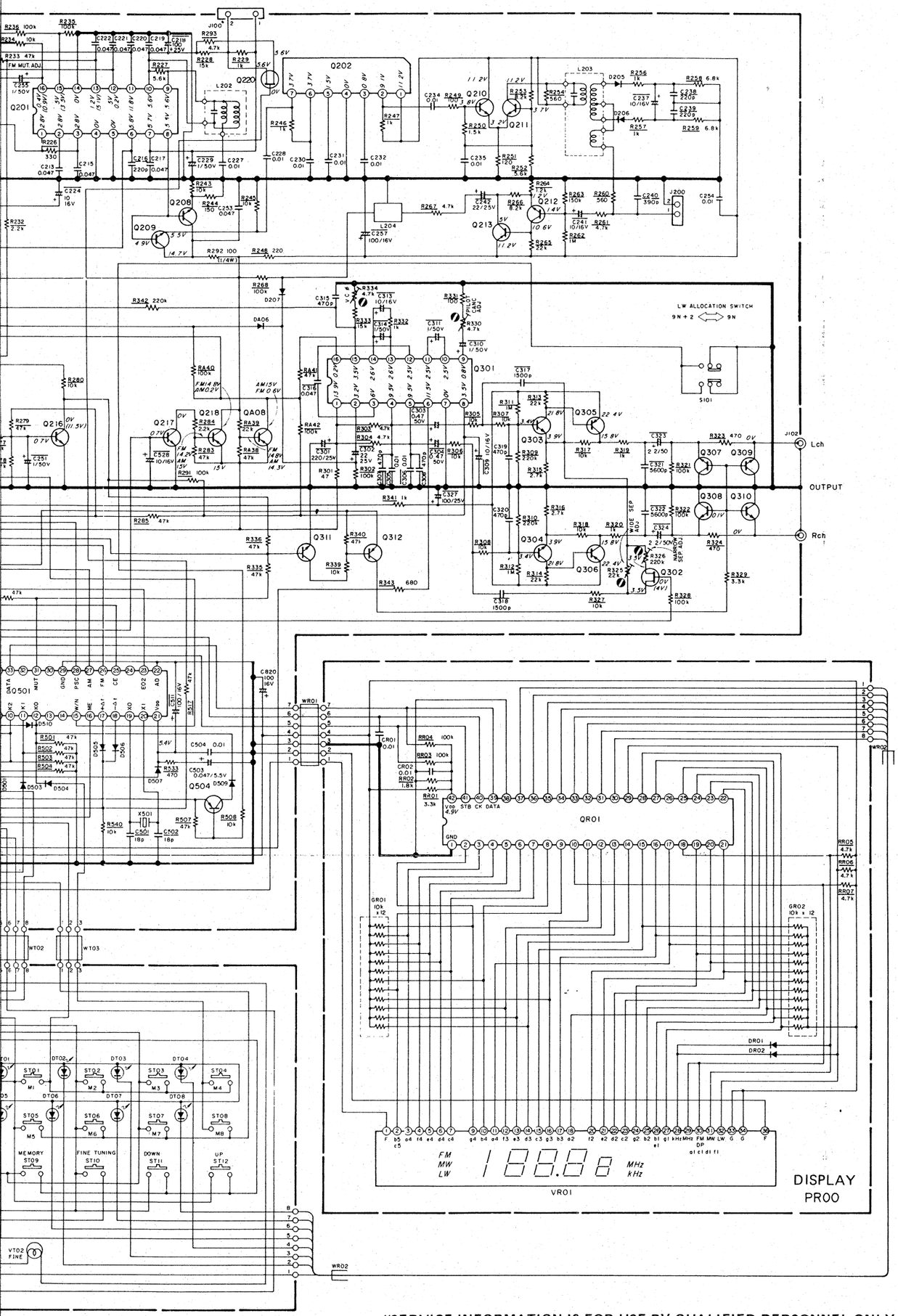
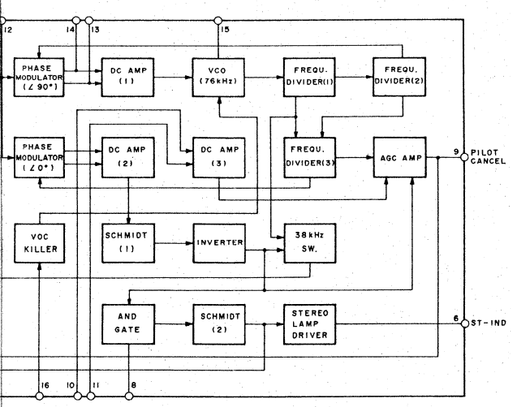
Model ST-54L





QA01

LA1245

QT01

AN6876

Q201

LA1231N

Q202

μPC1163H

Q301

KB4437

Q501

μPD1712CU-529

Q502

μPB553AC

Q801

NJM78M15A

QR01 Q203～Q205 2SK30A(Y)
Q208～Q211
TC9180N 2SC1047C

QA03, QA05

2SK55D

QA02

2SD1302(S,T)

QA04, QA06, Q302, Q510
Q220
2SK30A(Y)

QA07, Q212, QA09
Q214～Q217, Q219, Q303,
Q304, Q307～Q311, Q506
Q507～Q509, Q511, Q512
Q803, Q806, Q807, Q811, Q812

2SC536SP(F,G), 2SC2458(Y,GR), etc

QA08, QA10, QA11, Q206
Q207, Q213, Q218, Q305
Q306, Q312, Q503, Q504

2SA1048(Y,GR), 2SA608SP(F,G), etc

Q802, Q804

2SD863(E)

Q805

2SD985(L,K)

DA02, DA04, DA06, DA07
DA08, D201, D202, D203
D204, D205, D206, D207
D208, D209, D210, D211, D501
D502, D503, D504, D505
D506, D507, D508, D509
D510, D512
D515, D809
D810, D816, DR01, DR02

ISS133, ISS176, MA165, etc

DT01～DT08

SLP-981C-50

DT09～DT17, DU01, DU02
DA05

GL-9PR26

D811, D812, D801～D808

RL103E, DSF10C

DA01, DA03, DA09, DA10

SVC321SP

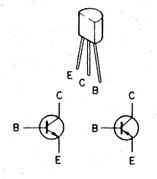
D813

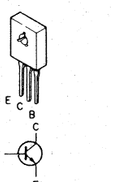
RD24E

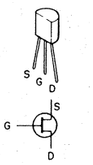
DT18～DT21

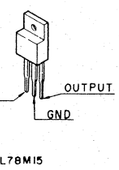
SEL1121R

2SD1302(S,T)
2SC1740S(R or S) 2SA933SP(R or S) 2SD985(L,K)
2SC1047C





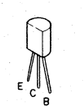


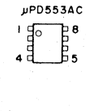


L78M15

2SK30A(Y)

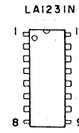
TOP VIEW
μPD553AC

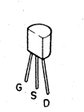




2SD863(E)

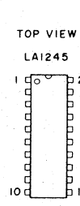
TOP VIEW
LA1231N



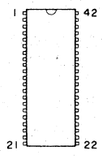


2SK55D

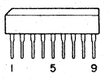
TOP VIEW
LA1245



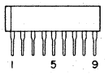
TOP VIEW
μPD1712CU-529



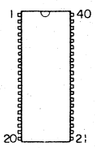
FRONT VIEW
μPC1163N



FRONT VIEW
AN6876



TOP VIEW
TC9180N



"SERVICE INFORMATION IS FOR USE BY QUALIFIED RERSONNEL ONLY –
ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY
REPAIR BY ANY MARANTZ SERVICE CENTRE –"

Kind of Common Parts

RESISTOR

R*** (1) GD05 - - - 140, Carbon film fixed resistor, ±5% 1/4W
R*** (2) GD05 - - - 160, Carbon film fixed resistor, ±5% 1/6W

C*** : **CERAMIC CAP.**
(1) DD1 - - - - 370, Ceramic condenser,
disc type (titan condenser)
Temp. coeff. P350 ~ N1000 50V

C*** : **CERAMIC CAP.**
(1) DK16 - - - 300, High dielectric constant ceramic condenser,
disc type (titan variable)
Temp. chara. 2B4 50V

C*** : **ELECTROLY CAP. (⧧) / FILM CAP. (⇌)**
(1) EA - - - - - - 10, Electrolytic condenser,
one-way lead type, tolerance ±20%
(2) DF15 - - - 350, Plastic film condenser,
one-way type, Mylar, ±5% 50V

* In case of ordering the common parts, please establish the correc
parts number of 10 figures by the procedure "ASSIGNMENT O
COMMON PARTS CODES"

Components and wiring are subject to change for modification without notice.