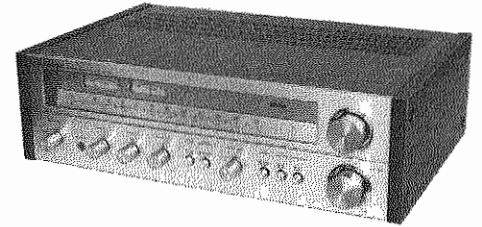


TOSHIBA

AM/FM STEREO RECEIVER

SA-725



SPECIFICATIONS

Power Output

Continuous Power Output is 25 watts per channel, min. RMS at 8 ohms from 20 to 20,000 Hertz with no more than 0.08% total harmonic distortion.

■ AMPLIFIER SECTION

Power Output:

| | |
|------------------------------------|------------------------------------|
| 20 Hz~20 kHz both channels driven: | 30W x 2 (4 ohm) |
| 1 kHz both channel driven: | 28W x 2 (8 ohm) 32W x 2 (4 ohm) |

Total Harmonic Distortion

| | |
|---------------------|------------------|
| Rated power output: | 0.08% (at 8 ohm) |
| 1W: | 0.05% (at 8 ohm) |

Intermodulation

| | |
|-------------|-------|
| Distortion: | 0.08% |
|-------------|-------|

Damping Factor:

40

Input (Sensitivity/

Impedance)

| | |
|--------|----------------|
| PHONO: | 2.5 mV/47K ohm |
| AUX: | 150 mV/47K ohm |
| TAPE: | 150 mV/47K ohm |

PHONO Overload Level:

Output Level

| | |
|-----------|--------|
| TAPE REC: | 150 mV |
| DIN: | 30 mV |

Frequency Response

PHONO (RIAA

| | |
|----------------|------------------------|
| Equalization): | 30 Hz to 15 kHz±0.5 dB |
| AUX, TAPE: | 10 Hz to 40 kHz±1 dB |

Tone Control

| | |
|-------------------|----------------------------------|
| BASS: | ±10 dB, (100 Hz) |
| TREBLE: | ±10 dB, (10 kHz) |
| Loudness Contour: | +8 dB (100 Hz) +4 dB (10 kHz) |

Signal to Noise Ratio

(IHF short-circuited A network, rated power)

| | |
|------------|-------|
| PHONO: | 70 dB |
| AUX, TAPE: | 90 dB |

Filter

| | |
|-------|-----------------|
| HIGH: | 7 kHz-6 dB/oct. |
|-------|-----------------|

■ FM TUNER SECTION

Usable Sensitivity: Mono 10.8 dBf (1.9 μV)

50 dB Quieting

| | |
|--------------|---|
| Sensitivity: | Mono 16.0 dBf (3.5 μV) Stereo 39.2 dBf (50 μV) |
|--------------|---|

Signal to Noise Ratio:

Mono 70 dB, Stereo 65 dB

Distortion

100 Hz: Mono 0.2%, Stereo 0.3%

1 kHz: Mono 0.2%, Stereo 0.3%

6 kHz: Mono 0.3%, Stereo 0.4%

Frequency Response:

20 Hz to 15 kHz+0.5 dB
-2.0 dB

Capture Ratio:

1.0 dB

Alternate Channel

Selectivity: 65 dB

Spurious Response Ratio:

75 dB

Image Rejection Ratio:

60 dB

IF Rejection Ratio:

80 dB

AM Suppression Ratio:

45 dB

Stereo Separation:

40 dB (1 kHz), 30 dB
(30 Hz to 15 kHz)

■ AM TUNER SECTION

Sensitivity:

300 μV/m (IHF, Ferrite antenna)

Selectivity:

35 dB

Signal to Noise Ratio:

50 dB

Image Rejection Ratio:

45 dB

■ MISCELLANEOUS

Power Requirements: AC 120V (60 Hz)

Power Consumption: 120 watts (UL) 1.5A (CSA)

Dimensions (WxHxD): 480 x 145 x 341 (mm)

Weight: 9.8kg

CONTENTS

| | |
|--|----------|
| 1. OPERATING CONTROLS | 3 |
| 2. DISASSEMBLY INSTRUCTIONS | 4 |
| 3. BLOCK DIAGRAM | 5 |
| 4. LEVEL DIAGRAM | 6 |
| 5. ADJUSTMENTS INSTRUCTIONS | 6 to 9 |
| 6. DIAL CORD RESTRINGING | 9 |
| 7. INTERNAL EQUIVALENT CIRCUIT OF IC (Q103, 201) | 10 |
| 8. ELECTRICAL PARTS LOCATIONS | 11 |
| 9. SCHEMATIC DIAGRAM | 12 |
| 10. CABINET PARTS LOCATIONS | 13 |
| 11. PARTS LIST | 14 to 16 |

1. OPERATING CONTROLS

REAR VIEW

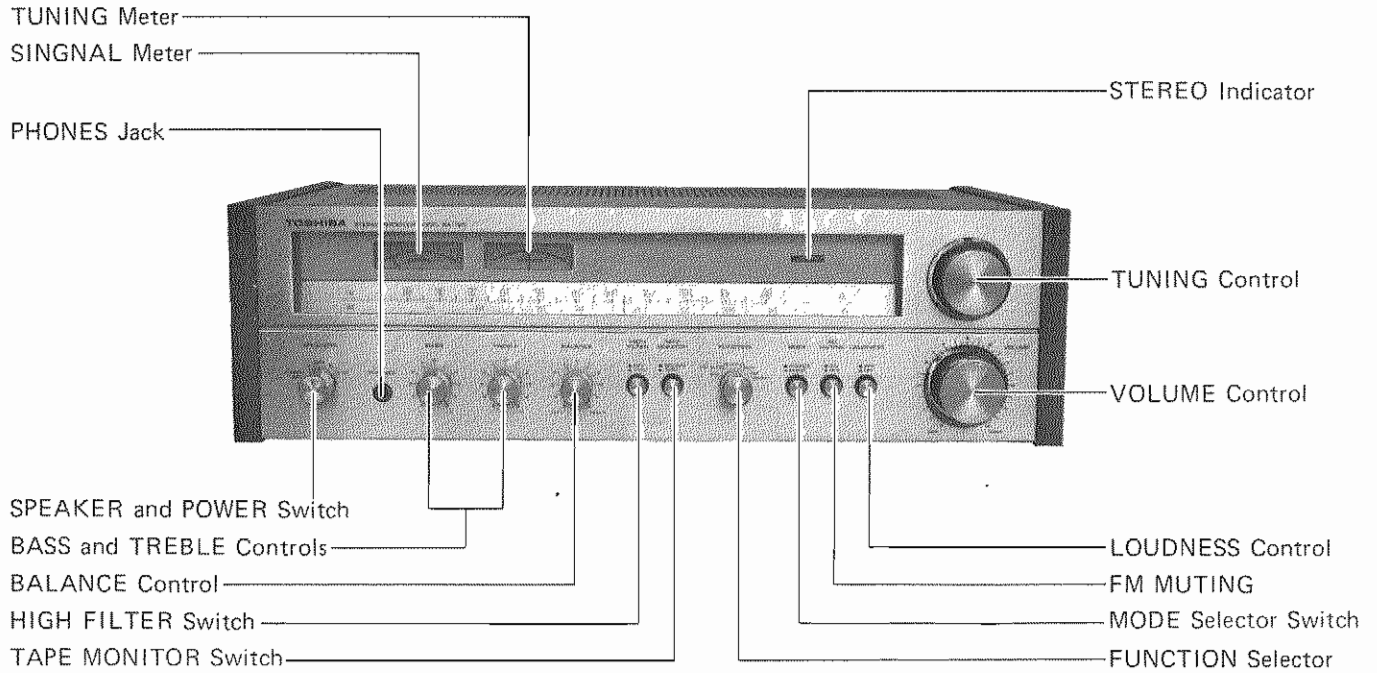


Figure 1.

FRONT VIEW

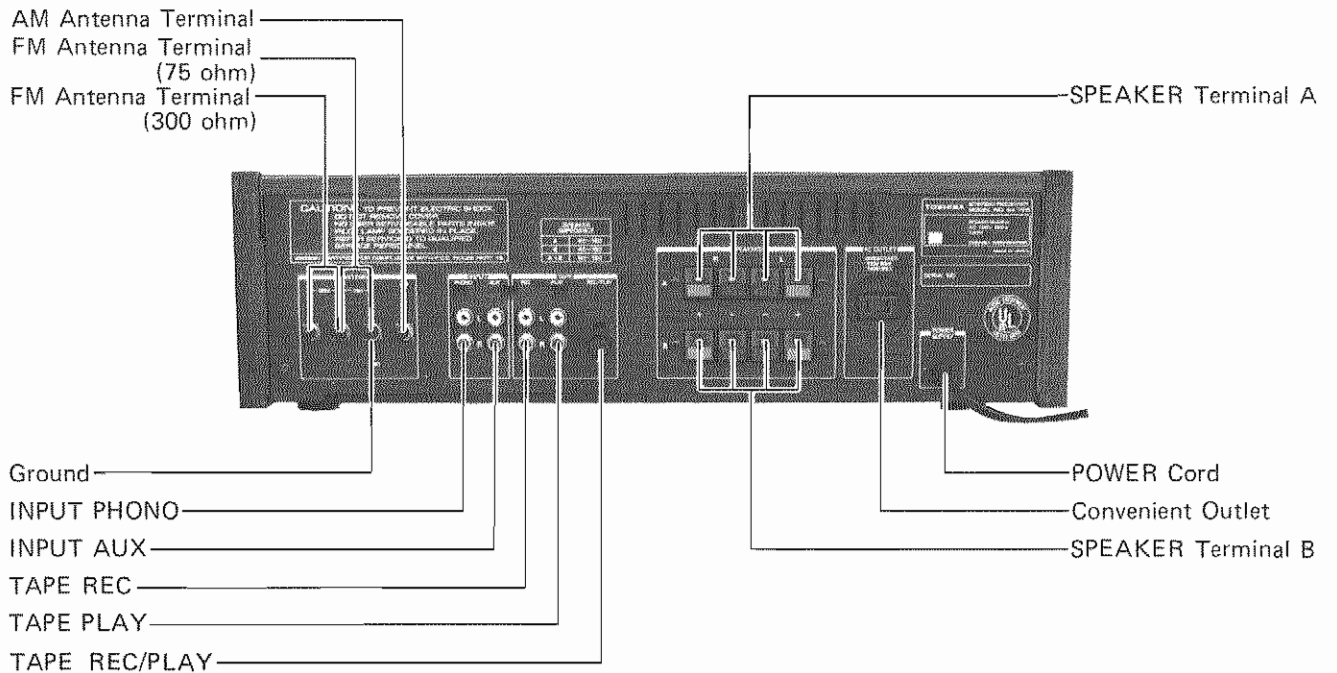


Figure 2.

2. DISASSEMBLY INSTRUCTIONS

CABINET REMOVAL

1. Remove 8 screws (1).
 2. Remove 2 screws (2).
 3. Open the Cabinet in the direction (3).
- Separate the Cabinet from the Set.

(1) TRAN Screw 4φ x 25mm BLK

(2) TRAN Screw 4φ x 8mm, BLK

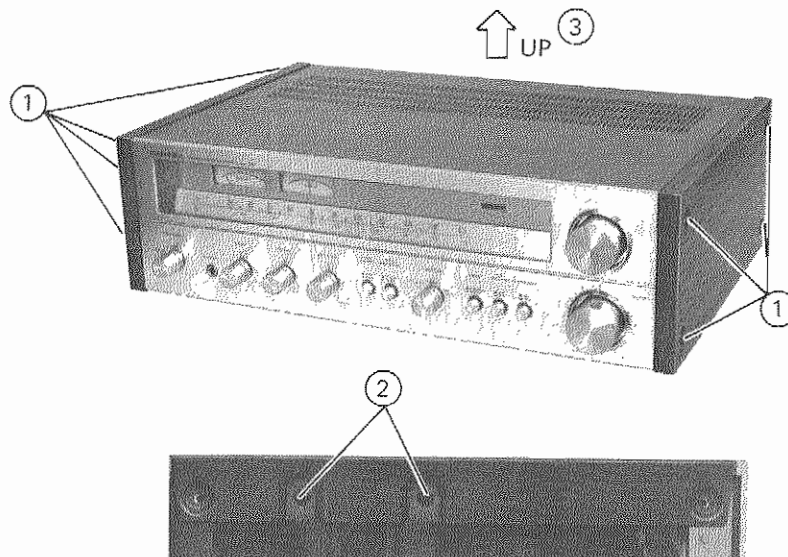


Figure 3.

FRONT PANEL REMOVAL

1. Remove the Cabinet
 2. Remove 7 Knobs (4). (Tuning, Volume, Function, Balance, Bass, Treble, Speaker)
 3. Remove 3 screws (5). (TOP)
 4. Remove 4 screws (6). (Bottom)
- Separate the Front panel from the Set.

(5) (6) Tapping Screw 3φ x 10mm

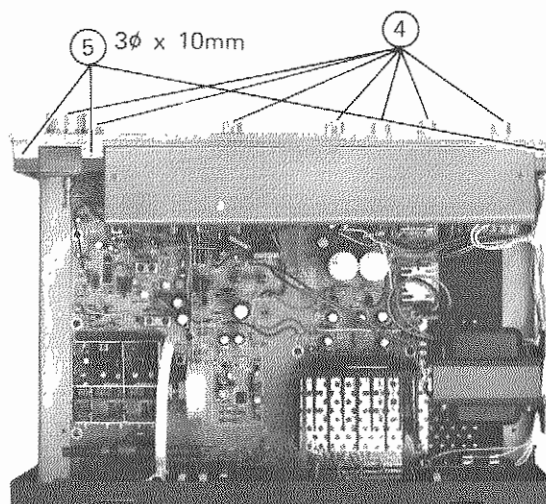
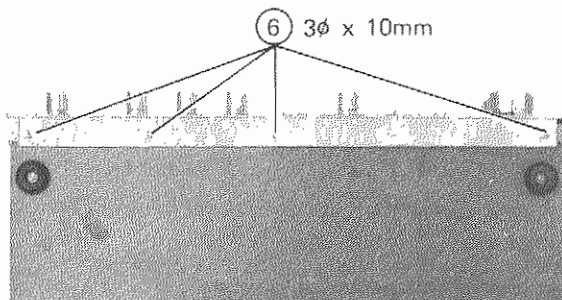


Figure 4.

BOTTOM BOARD REMOVAL

1. Remove the Cabinet.
2. Remove 2 screws (7).
3. Remove 4 screws (8).
4. Loosen the screw (9) which holds the Jack board.
5. Remove the bottom board by pulling it right or left as illustrated.

Separate the Bottom Board from the Set.

(7) Tapping Screw 3φ x 10mm

(8) Tapping Screw 3φ x 16mm

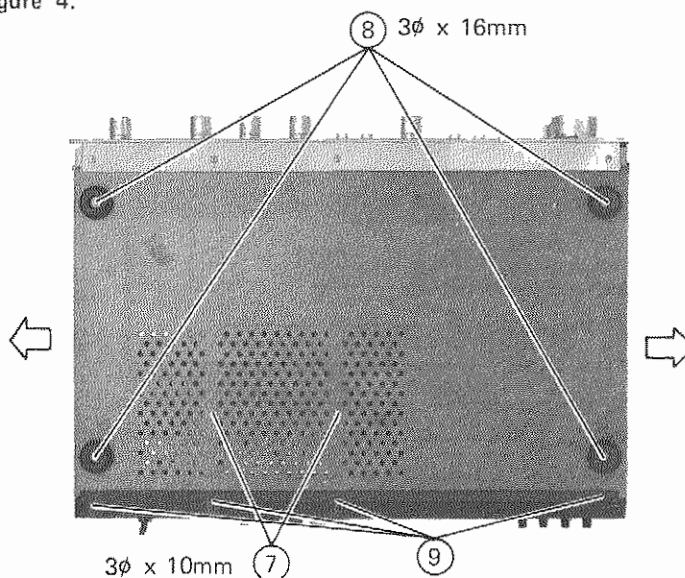


Figure 5.

3. BLOCK DIAGRAM

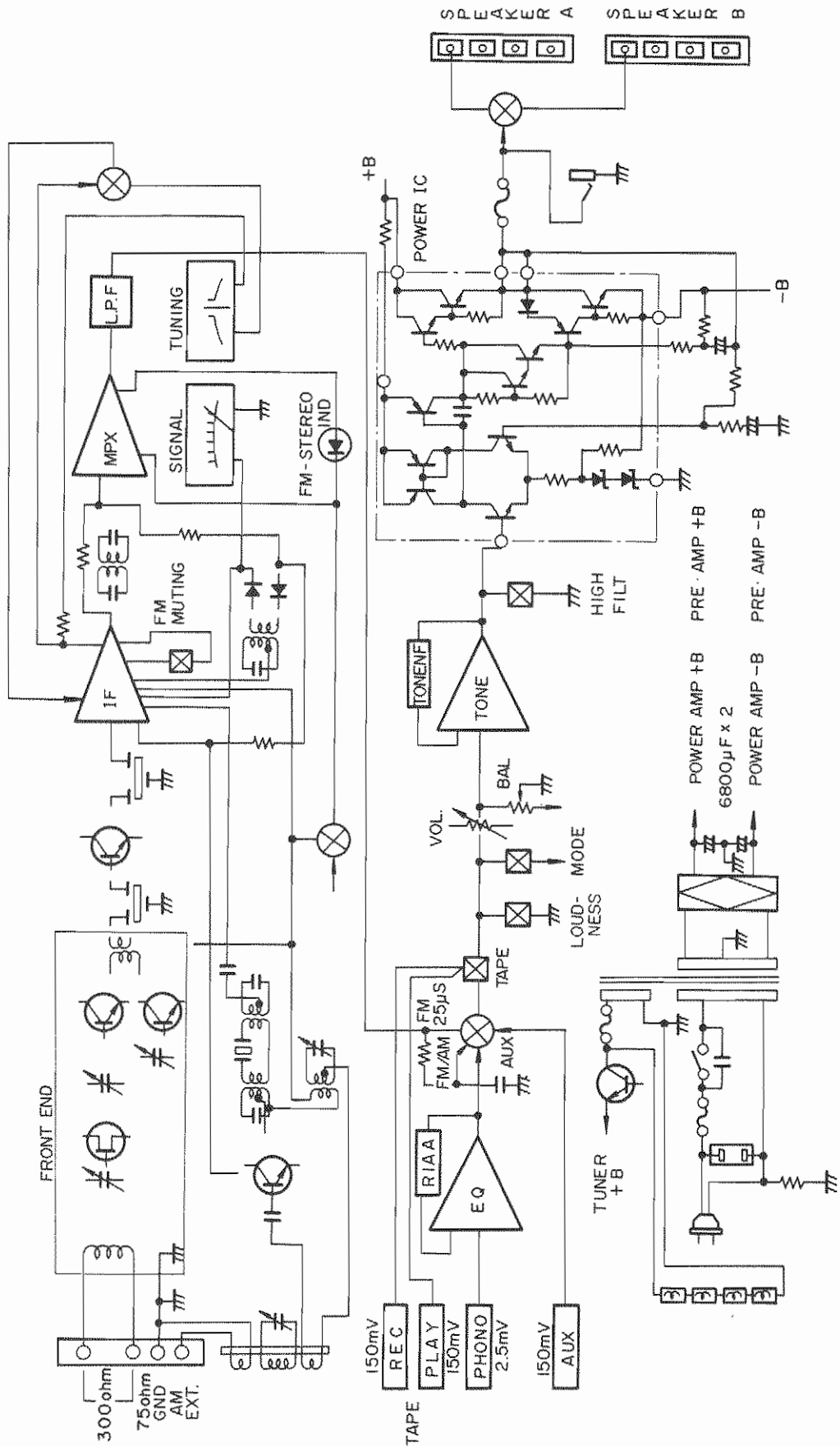


Figure 6.

4. LEVEL DIAGRAM

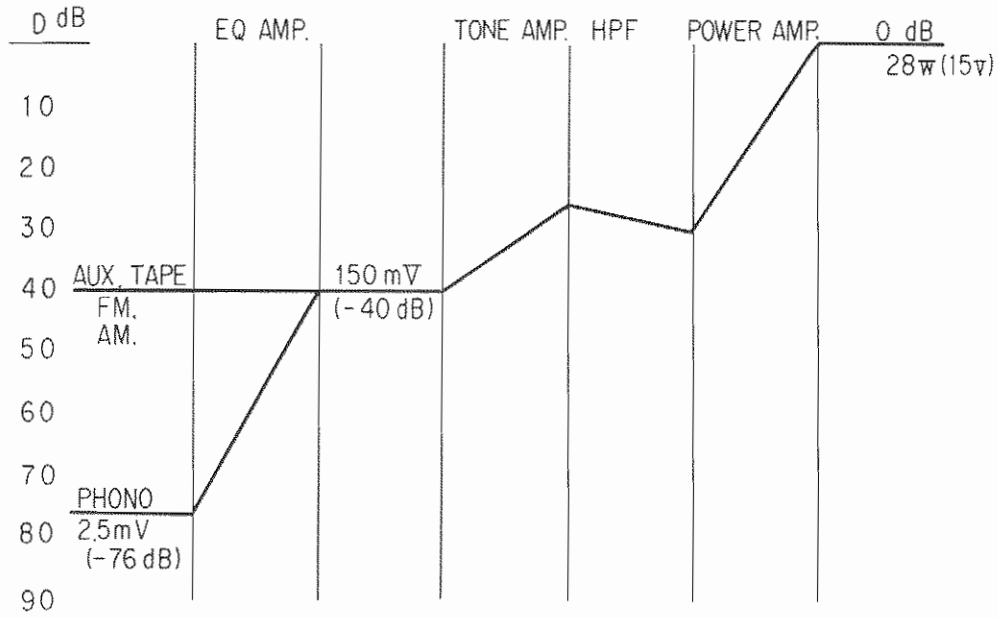


Figure 7.

5. ADJUSTMENTS INSTRUCTIONS

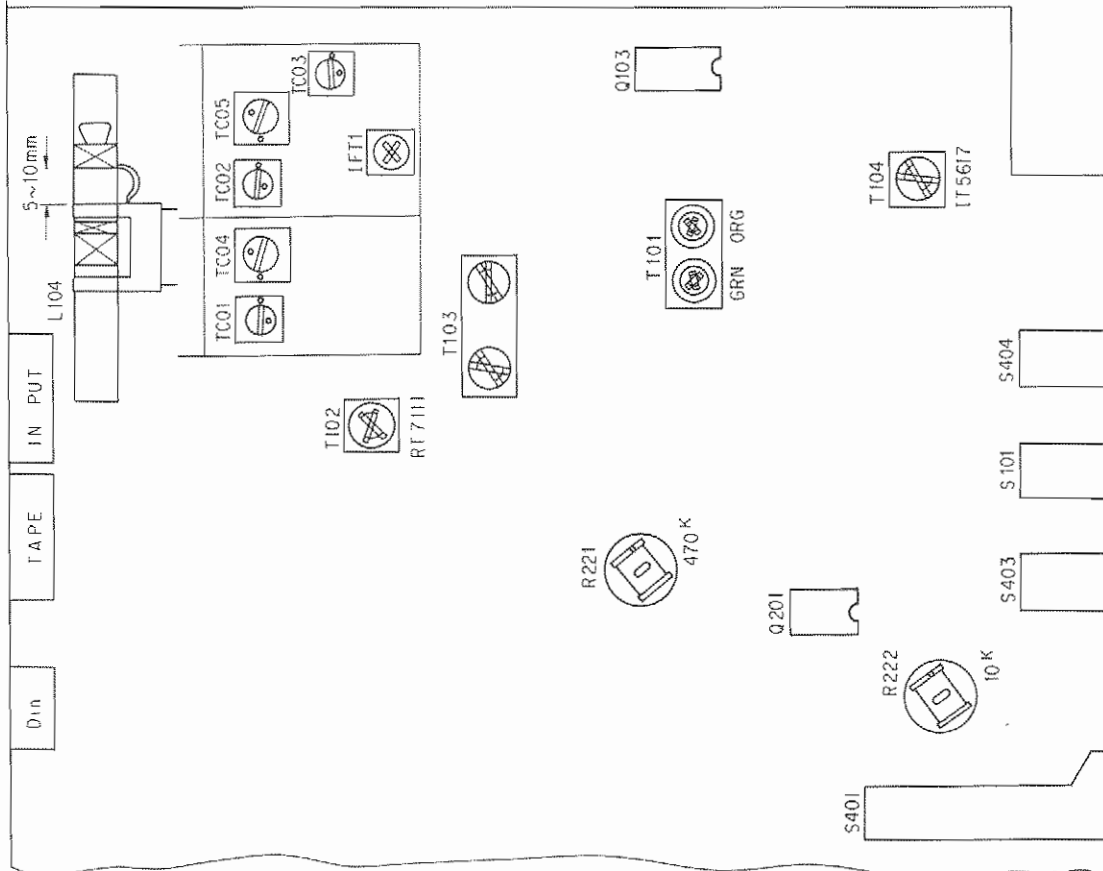


Figure 8.

AM ADJUSTMENT

Test equipments/Tools required

1. Signal generator
2. Sweep generator
3. Test loop antenna
4. VTVM
5. Adjusting screwdriver
6. Adjusting screwdriver (Use to antenna core)
7. Oscilloscope

IF ADJUSTMENT

| Step | Adjustment | Remarks |
|-------------|------------|---|
| IF Response | T103, 104 | Adjust for scope pattern with specified marker (455 kHz) as illustrated in Fig. 10. |

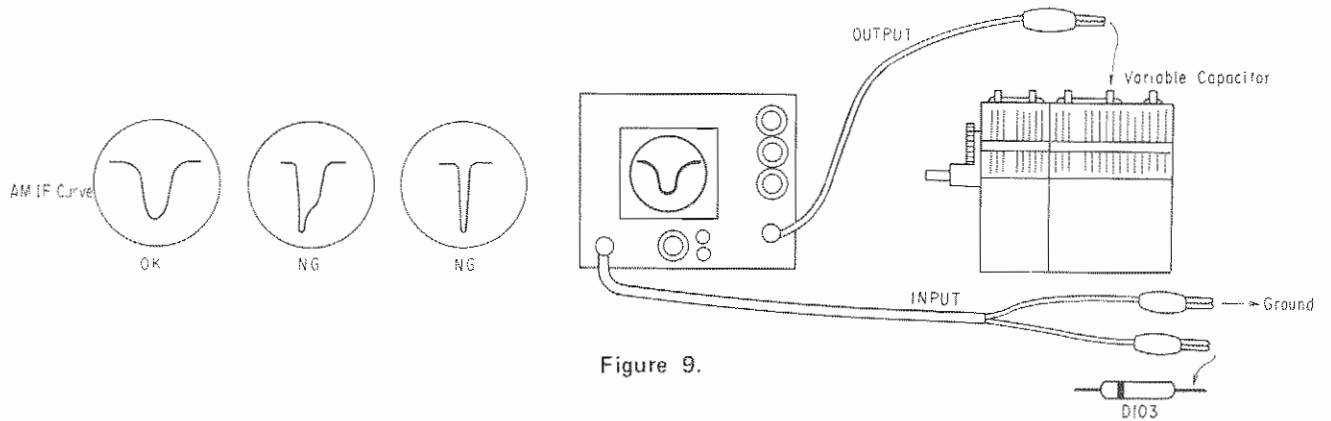


Figure 9.

FREQUENCY COVERAGE AND TRACKING ADJUSTMENT

| Step | Adjusting Circuit | Connection | | SG Frequency | Position of Tuning Dial | Adjustment | VTVM |
|-----------------------|--------------------------|--|-------------------------------------|----------------------------|-------------------------|------------------------|---------|
| | | Input | Output | | | | |
| 1 | OSC (Frequency Coverage) | Connect signal generator to test loop. | Connect VTVM to Speaker terminal A. | 515 kHz (400 Hz 30% MOD.) | Tune to 515 kHz signal | T102 | Maximum |
| 2 | | | | 1650 kHz (400 Hz 30% MOD.) | Tune to 1650 kHz signal | Trim TC05 | |
| Repeat steps 1 and 2. | | | | | | | |
| 3 | ANT (Tracking) | Connect signal generator to test loop. | Connect VTVM to Speaker terminal A. | 600 kHz (400 Hz 30% MOD.) | Tune to 600 kHz signal | Ferrite Ant. Coil L104 | Maximum |
| 4 | | | | 1400 kHz (400 Hz 30% MOD.) | Tune to 1400 kHz signal | Trim TC04 | |
| Repeat steps 3 and 4. | | | | | | | |

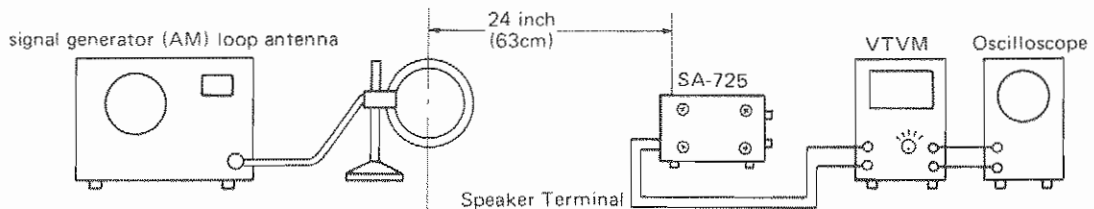


Figure 10.

FM ADJUSTMENT

Test equipments/Tools required

- | | | |
|---------------------|-------------------------------|--------------------------|
| 1. Distortion meter | 4. VTVM | 7. Network |
| 2. Signal generator | 5. FM dummy antenna (300 ohm) | 8. Adjusting screwdriver |
| 3. Oscilloscope | 6. Dummy load resistor | 9. Adjusting bar |

| Step | Adjusting Circuit | Connection | | SG Frequency | Position of Tuning Dial | Adjustment | VTVM |
|-----------------------|---------------------------------|--|--|--------------|-------------------------|---------------------|---|
| | | Input | Output | | | | |
| 1 | IF Distortion Adjustment (MONO) | | | | No signal | T101 (Orange Color) | Adjust tuning meter pointer so as to keep center. |
| 2 | IF Distortion Adjustment (MONO) | Connect FM signal generator to FM antenna terminal. Connect the modulator to signal generator. | Connect VTVM oscilloscope and distortion meter to speaker terminal. | SG 98 MHz | Tune to 98 MHz signal | IT101 (Green Color) | Distortion Minimum |
| Repeat steps 1 and 2. | | | | | | | |
| 3 | Distortion Adjustment (Stereo) | Connect FM signal generator to FM antenna terminal. Connect the modulator to signal generator. | Connect VTVM, oscilloscope and distortion meter to speaker terminal. | SG 98 MHz | Tune to 98 MHz signal | IFT 1 | Distortion Minimum |
| 4 | OSC (Frequency coverage) | Connect FM signal generator to FM antenna terminal. | Connect VTVM to speaker terminal. | 87.4 MHz | Tune to 87.4 MHz signal | Trim TC03 | Maximum |
| 5 | RF (Tracking) | Connect FM signal generator to FM antenna terminal. | Connect VTVM to speaker terminal. | 98 MHz | Tune to 98 MHz signal | Trim TCO 1.02 | Maximum |

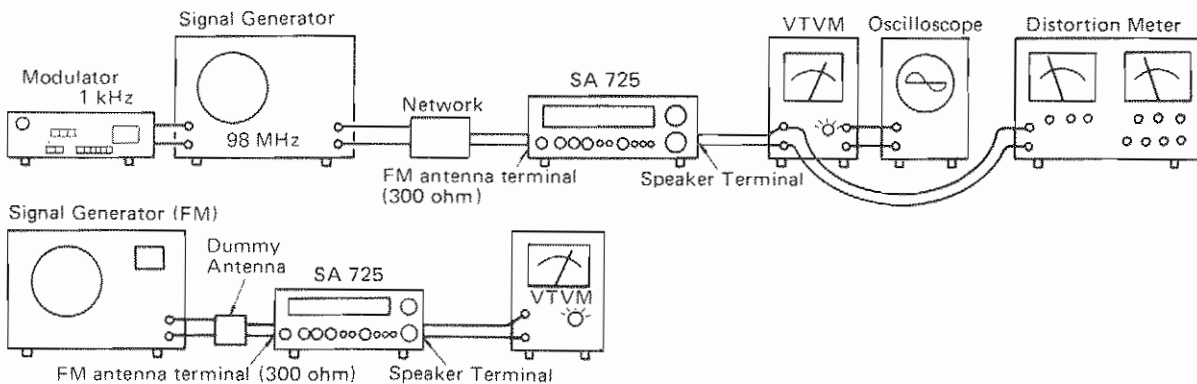


Figure 11.

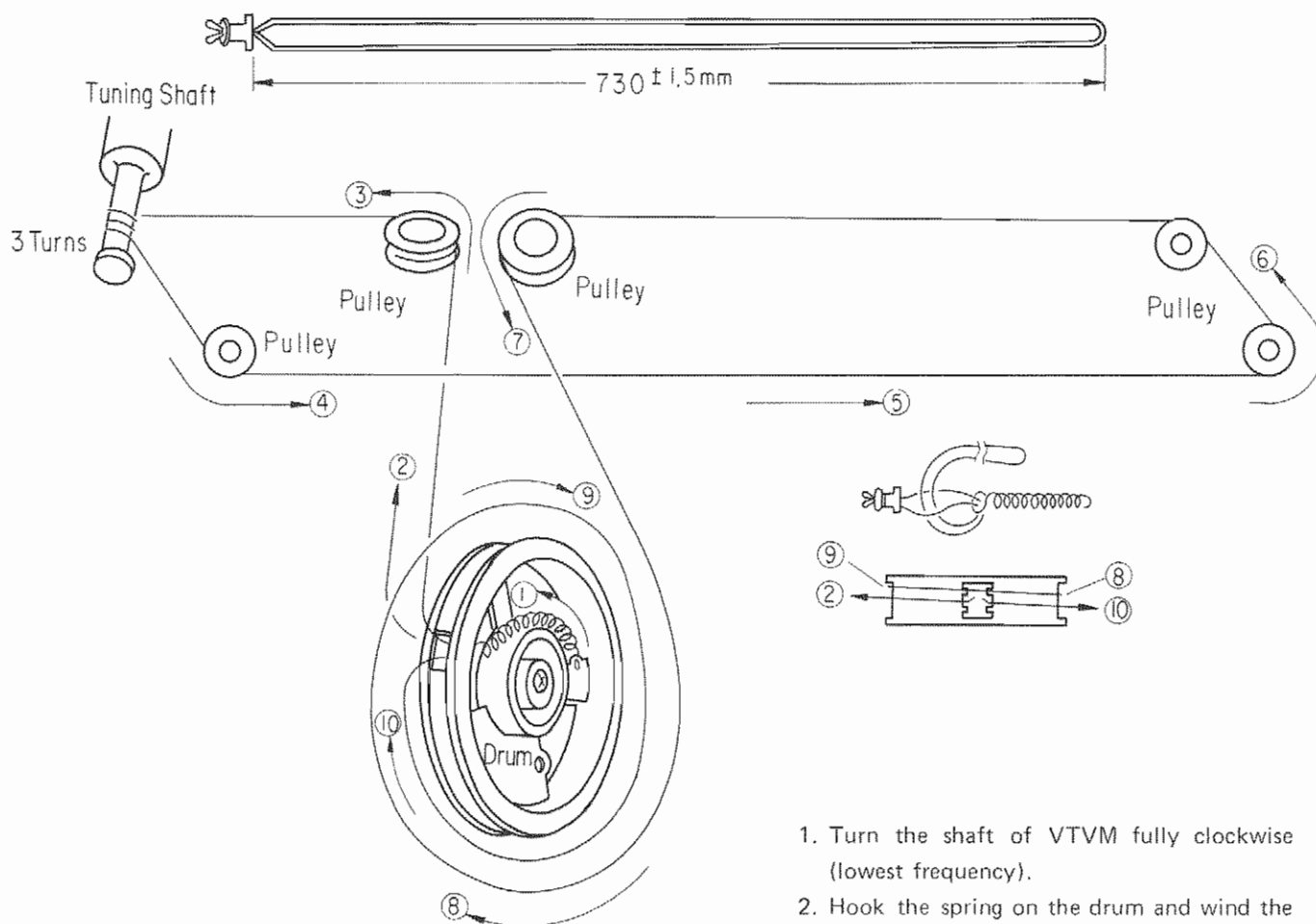
FM MPX ADJUSTMENT

Test Equipments/Tools required

- | | |
|----------------------|-----------------------------|
| 1. Frequency counter | 4. VTVM |
| 2. Signal generator | 5. 300 ohm FM dummy antenna |
| 3. Stereo modulator | 6. Oscilloscope |

| | |
|-------------------------|--|
| Pilot signal adjustment | Connect a frequency counter to the Test Point (FMSTA), and adjust the R222 for 19 kHz reading counter with no-signal input. |
| Separation adjustment | Receive the stereo signal and adjust the R221 for maximum channel separation. Note: Signal frequency: 98 MHz Frequency deviation: Pilot Signal 7.5 kHz L and R signals: 33.75 kHz |

6. DIAL CORD RESTRINGING



1. Turn the shaft of VTVM fully clockwise (lowest frequency).
2. Hook the spring on the drum and wind the dial cord from ① to ⑩ in order.

Figure 12.

7. INTERNAL EQUIVALENT CIRCUIT OF IC (Q103 201)

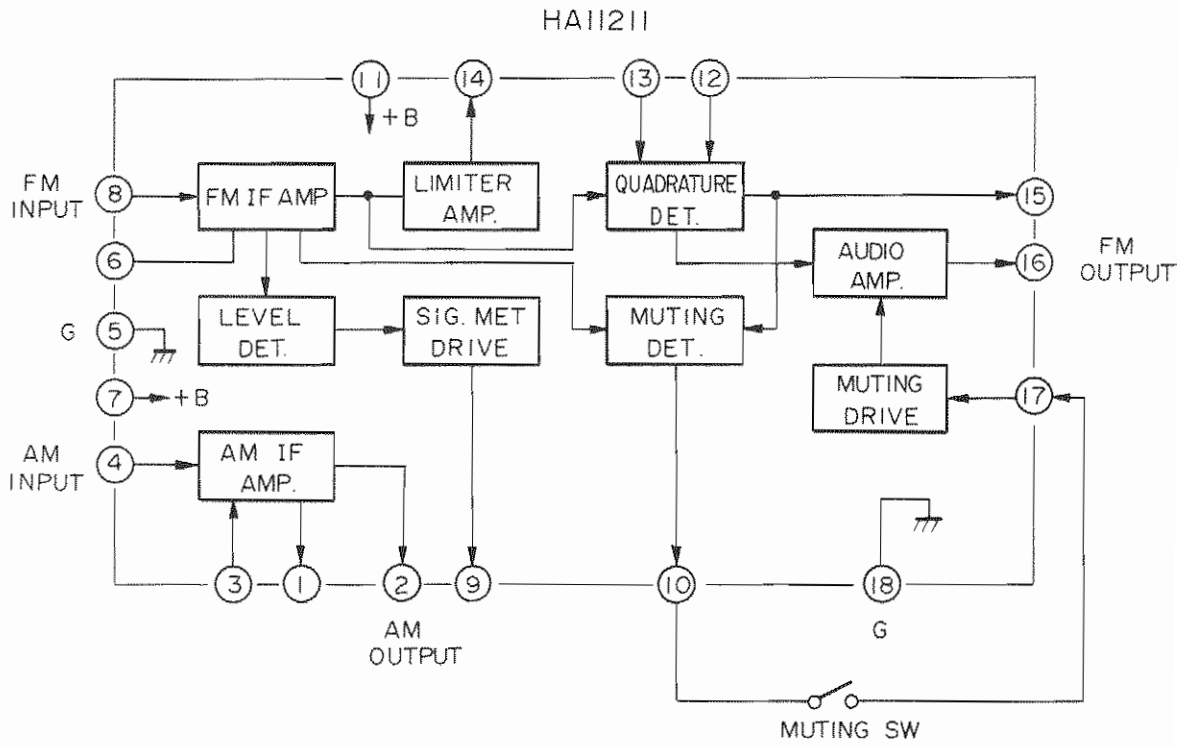


Figure 13.

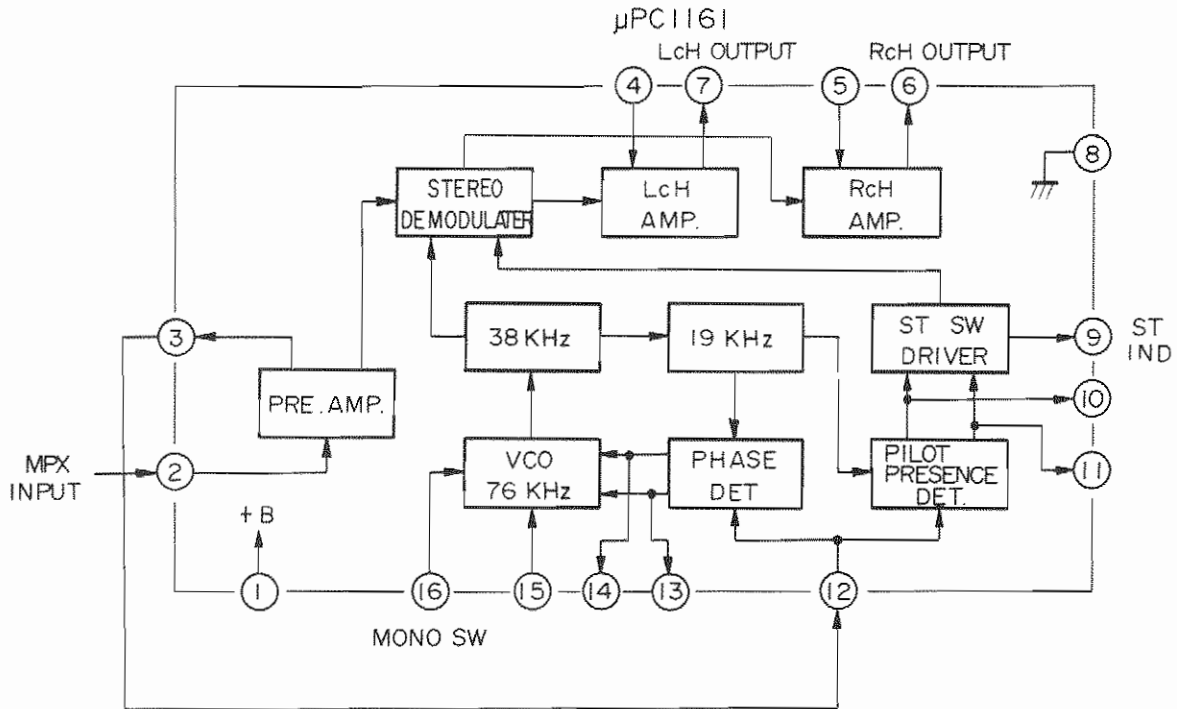
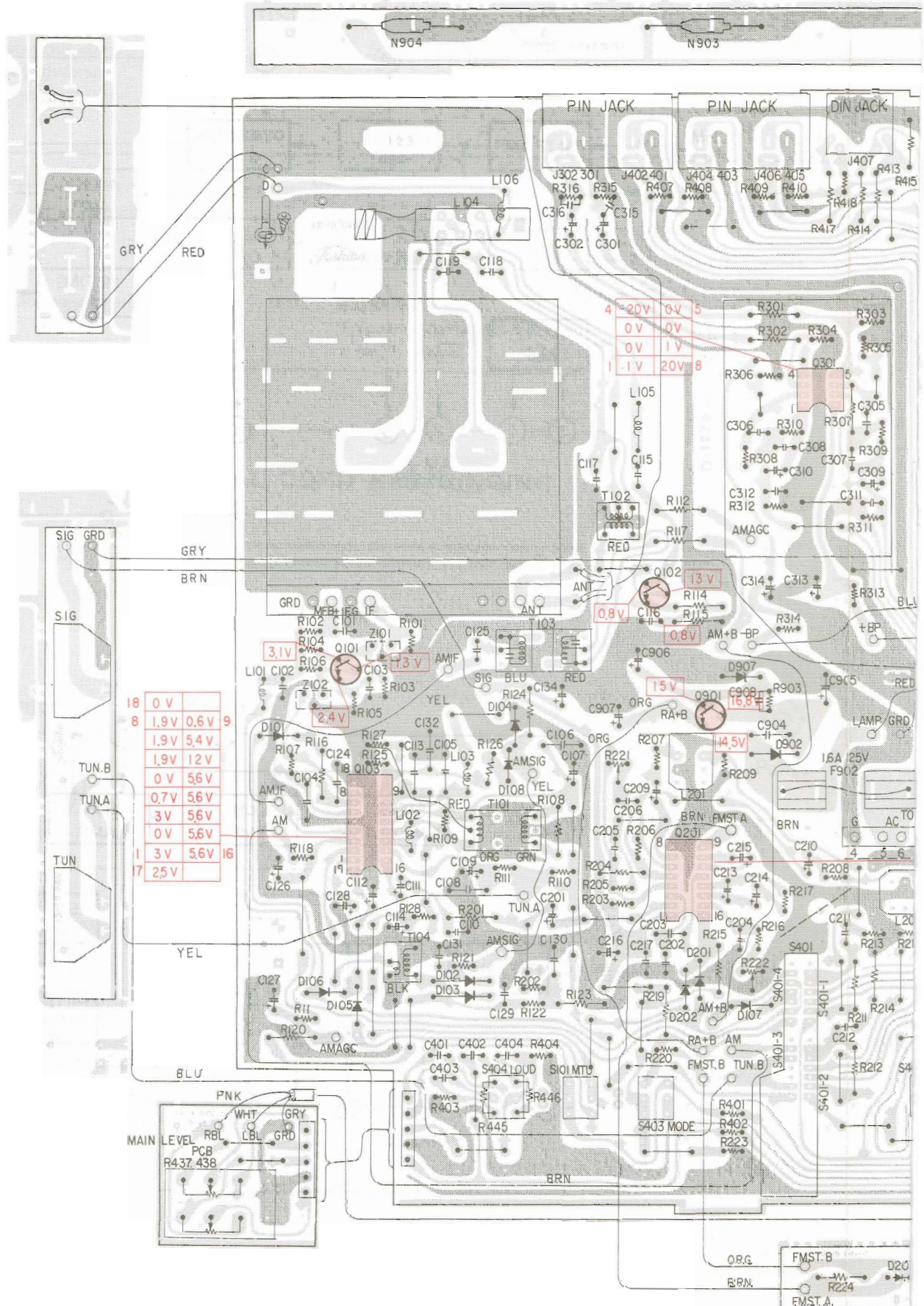


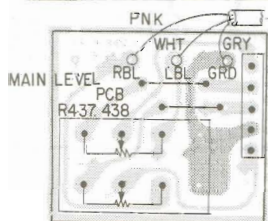
Figure 14.

8. ELECTRICAL PAR



| | | | |
|----|------|------|----|
| 18 | 0V | | 9 |
| 8 | 1.9V | 0.6V | |
| | 1.9V | 5.4V | |
| | 1.9V | 12V | |
| | 0V | 5.6V | |
| | 0.7V | 5.6V | |
| | 0V | 5.6V | |
| 1 | 3V | 5.6V | 16 |
| 17 | 25V | | |

| | | | |
|---|-----|-----|---|
| 4 | 20V | 0V | 5 |
| | 0V | 0V | |
| | 0V | 1V | |
| 1 | 1V | 20V | 8 |



PARTS LOCATIONS

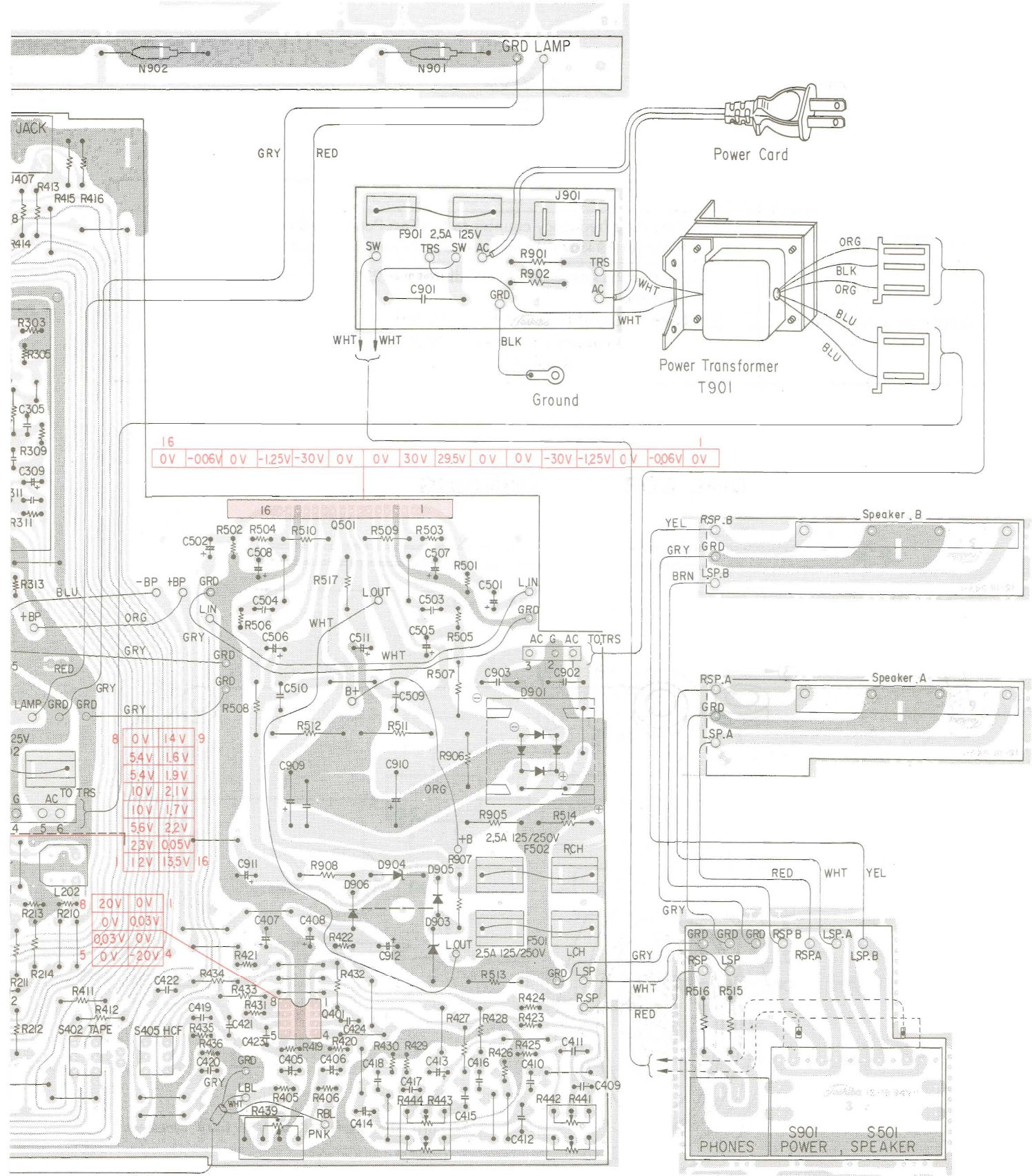
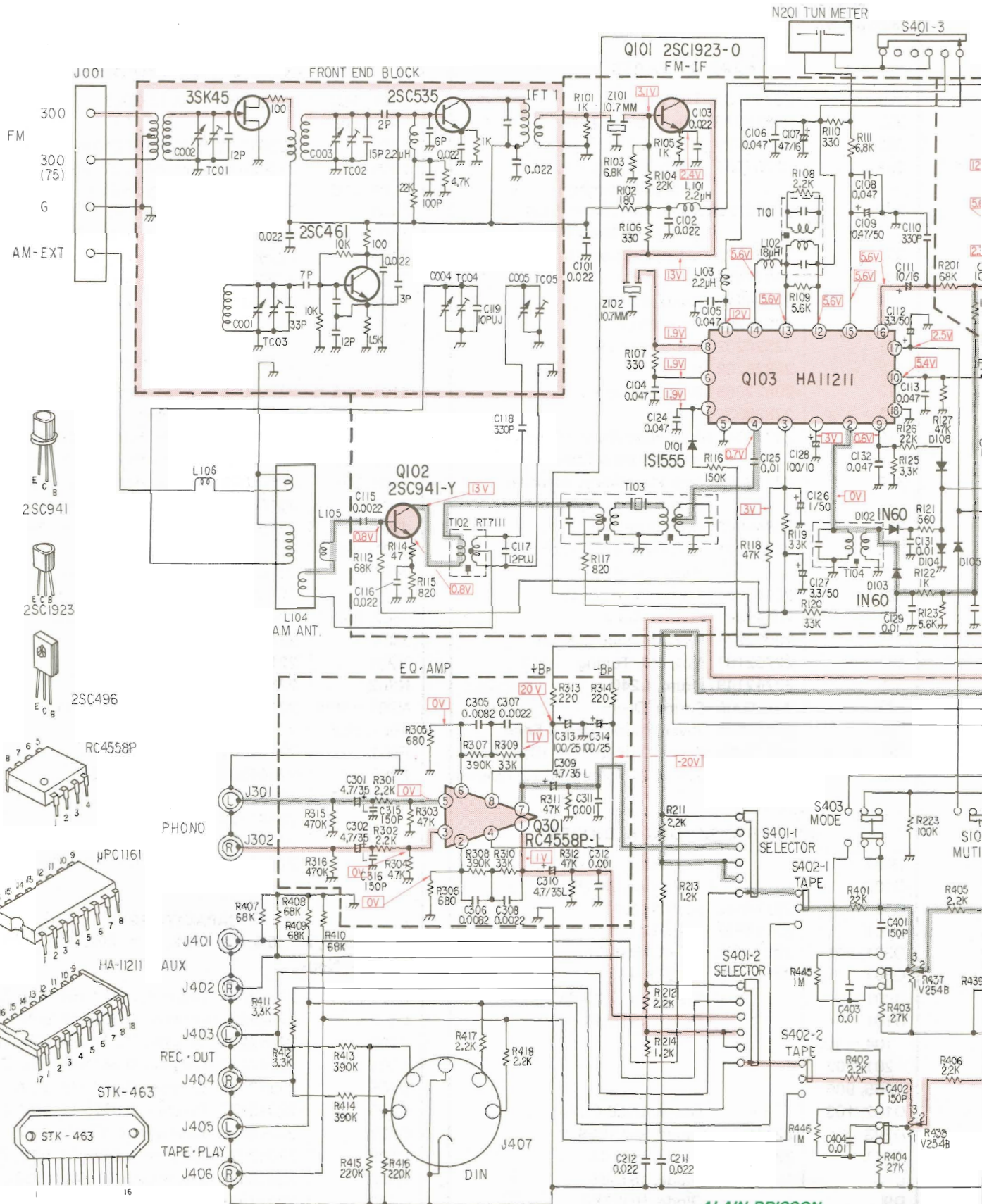


Figure 15.

9. SCHEMATIC



2SC941



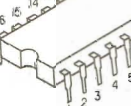
2SC1923



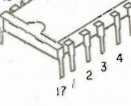
2SC496



RC4558P



μPC1161



HA-11211

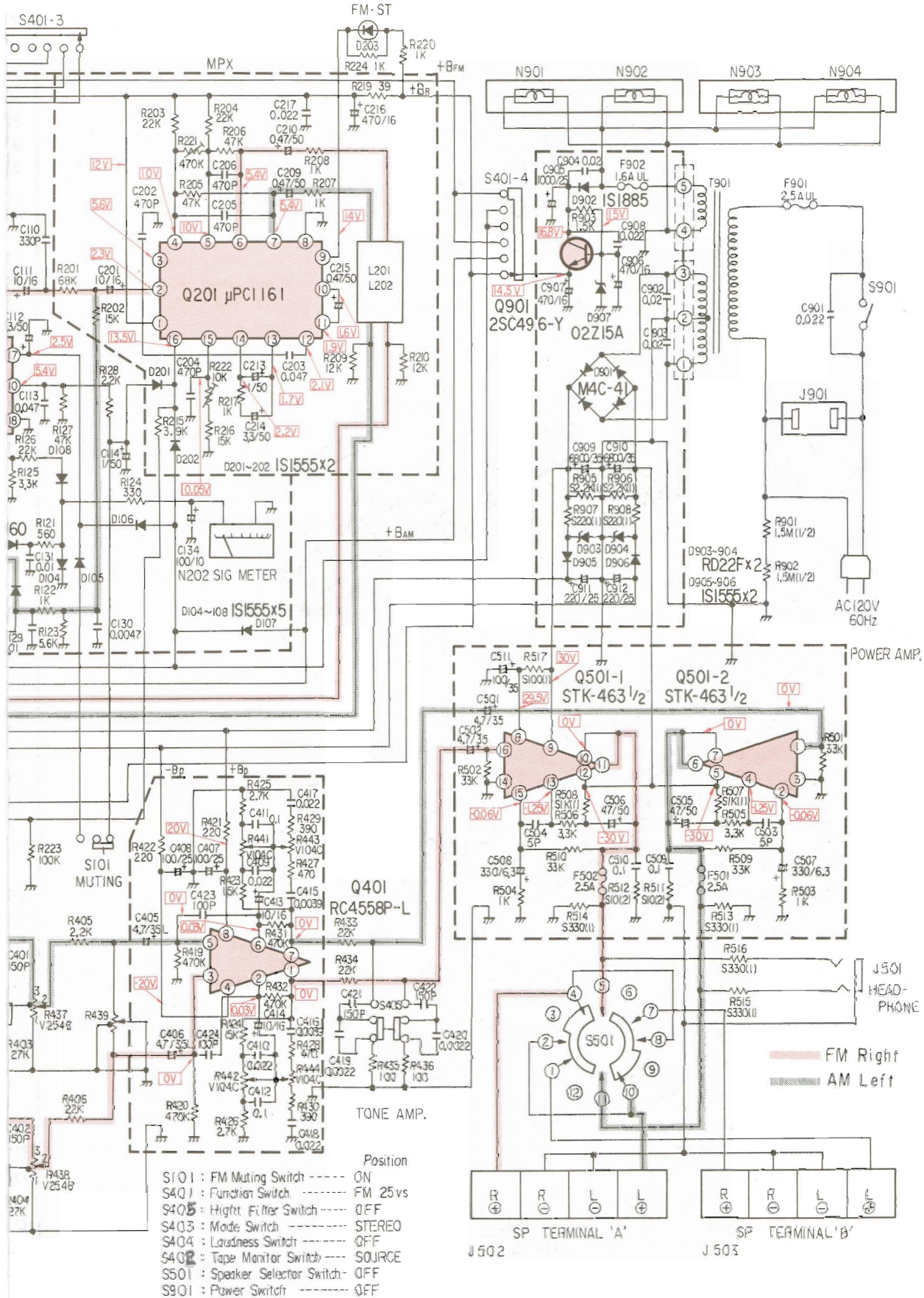


STK-463

ALAIN BRISSON
765 AV DE CHERBOURG
SAINTE-FOY QC
G1X 2W4

Figure 16.

IATIC DIAGRAM



10. CABINET PARTS LOCATIONS

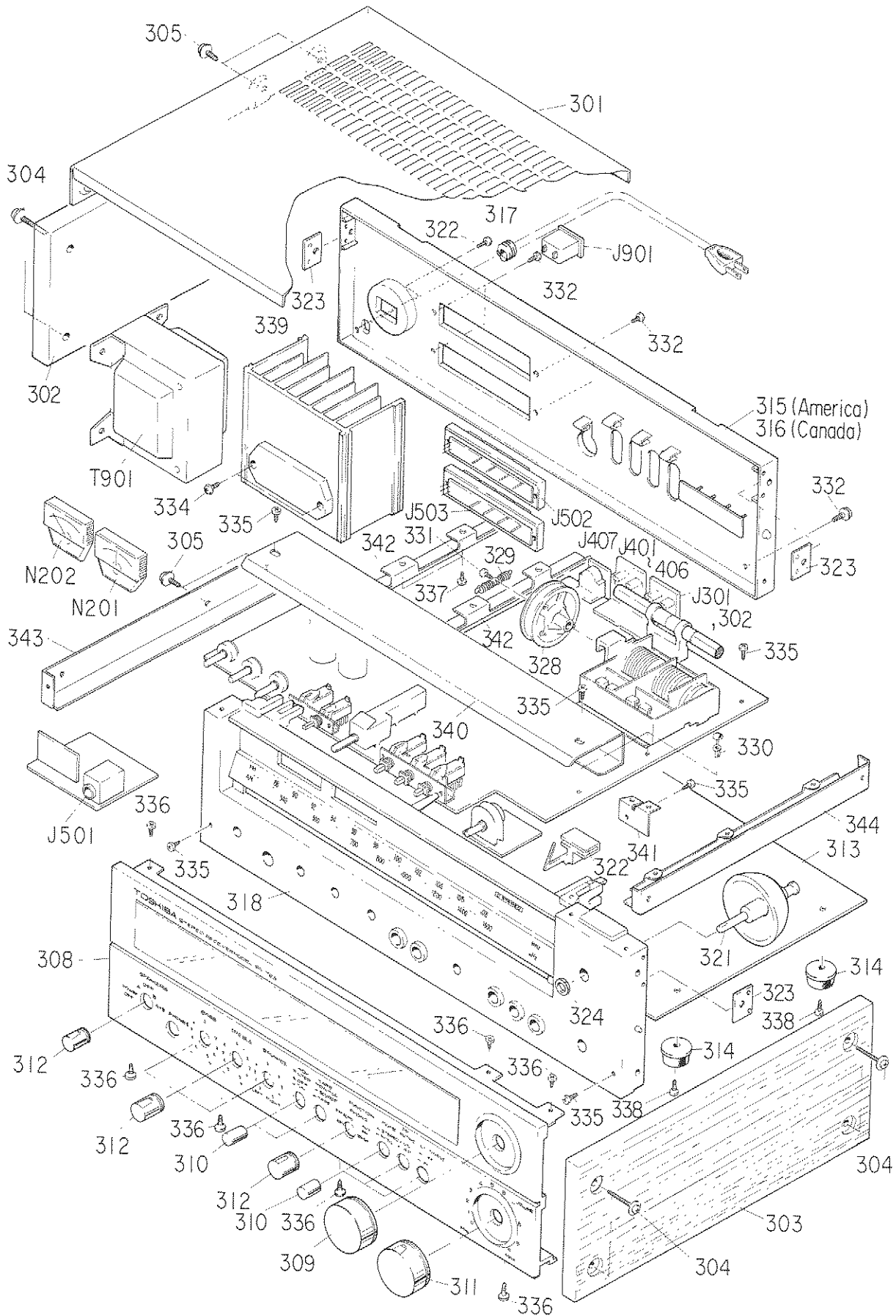


Figure 17.

11. PARTS LIST

| Symbol No. | Part No. | Description |
|---------------------------------------|----------|--|
| CABINET PARTS | | |
| 301 | 22711563 | Top Cover |
| 302 | 20816275 | Side Cabinet, Left |
| 303 | 20816276 | Side Cabinet, Right |
| 304 | 22707184 | Screw, 4 ϕ x 25mm, BLK PAN (with Washer) |
| 305 | 22707196 | Screw, 4 ϕ x 8mm, BLK, PAN (with Washer) |
| 307 | 22950823 | Label, Caution, (America) |
| 308 | 20017124 | Panel Ass'y |
| 309 | 22824243 | Knob, Tuning |
| 310 | 22824252 | Knob, Push |
| 311 | 22826202 | Knob, Volume |
| 312 | 22826209 | Knob |
| 313 | 20822069 | Bottom Board |
| 314 | 22828031 | Foot |
| 315 | 22718147 | Jack Plate Ass'y, (America) with Antenna Terminal |
| 316 | 22718148 | Jack Plate Ass'y, (Canada) with Antenna Terminal |
| 317 | 25844005 | Cord Bush |
| 318 | 22719131 | Dial Plate Ass'y, with Back Panel and Pulley |
| 321 | 22749174 | Tuning Shaft Ass'y |
| 322 | 20041061 | Pointer Ass'y |
| 323 | 20022224 | Nut, M4, Side Cabinet |
| 324 | 22702107 | Nut, M9, Tuning |
| 328 | 22742149 | Drum, L240 |
| 329 | 20866009 | Spring, Drum |
| 330 | 22705020 | Rivet, Plastic, 3 ϕ x 4.5mm |
| 331 | 70432606 | Screw, 2.6 ϕ x 6mm, BID, Drum |
| 332 | 22701326 | Screw, 3 ϕ x 8mm, BLK, Tapping |
| IC'S, TRANSISTORS & DIODES | | |
| Q101 | | Transistor, 2SC1923-O |
| Q102 | | Transistor, 2SC941-Y |
| Q103 | 22114626 | IC, HA11211 |
| Q201 | 22114627 | IC, μ PC1161 |
| Q301, 401 | 22114635 | IC, RC4558-P-L |
| Q501 | 22114639 | IC, STK-463 |
| Q901 | | Transistor, 2SC496-Y |
| D101 | | Diode, 1S1555V-JA |
| 104 ~ 108 | | |
| 201, 202 | | |
| 905, 906 | | |
| D102, 103 | | Diode, 1N60-FD1 |
| D203 | 22115383 | Diode, SEL103S |
| D901 | 22115460 | Diode, M4C-41 |
| D902 | | Diode, 1S1885 |
| D903, 904 | 22115474 | Diode, RD22F-B |
| D907 | | Diode, O2Z15A |

| Symbol No. | Part No. | Description |
|--|----------|---------------------------------------|
| COILS & TRANSFORMERS | | |
| L101, 103 105, 106 | 22291082 | Coil, LH3003 |
| L102 | 22241036 | Coil, RT8121036 |
| L104 | 22242678 | Coil, FA32D2678 |
| L201, 202 | 22135025 | Filter, Low Pass |
| T101 | 22267349 | Transformer, IF, IT1057349 |
| T102 | 22245206 | Coil, Oscillator, RT7111 |
| T103 | 22266337 | Transformer, IF, AM-M-CE |
| T104 | 22264617 | Transformer, IF, IT5617 |
| T901 | 22223155 | Transformer, Power |
| ELECTRICAL PARTS | | |
| S101, 403 404 | 22195098 | Switch, Push, Mode Muting Loudness |
| S401 | 22195097 | Switch, Rotary, Function |
| S402, 405 | 22146084 | Switch, Push, Filter, Monitor |
| S501, 901 | 22195096 | Switch, Rotary, Speaker, Power |
| J001 | 22162433 | Terminal, 1P, Antenna |
| J301, 302 401 ~ 406 | 22163671 | Jack, US-4P, Phono, Aux Rec, Play |
| J407 | 22163538 | Jack, Din, Rec/Play |
| J501 | 22163676 | Jack, 6D, Headphone |
| J502, 503 | 22162412 | Terminal, 4P, Speaker |
| J901 | 22167825 | AC Socket |
| N201 | 22104399 | Meter, Tuning |
| N202 | 22104400 | Meter, Signal |
| N901 ~ 904 | 22113434 | Lamp, 14V, 200mA |
| F501, 502 | 22144330 | Fuse, 2.5A/250V |
| F901 | 22144401 | Fuse, 2.5A/125V |
| F902 | 22144367 | Fuse, 1.6A/125V |
| Z101, 102 | 22153065 | Ceramic Filter, 10.7 MHz |
| | 22131350 | Front End Block |
| | 22165036 | Holder, Fuse/Lamp |
| | 22176573 | Power Cord, EPUC-19 |
| CAPACITORS | | |
| D = $\pm 0.5\mu\text{F}$, J = $\pm 5\%$, K = $\pm 10\%$, M = $\pm 20\%$, Z = $\begin{matrix} +80\% \\ -20\% \end{matrix}$, L = Low Noise | | |
| C101 | 22342223 | Ceramic, 0.022mfd, 50V, Z |
| C102 | 22342223 | Ceramic, 0.022mfd, 50V, Z |
| C103 | 22342223 | Ceramic, 0.022mfd, 50V, Z |
| C104 | 22342473 | Ceramic, 0.047mfd, 50V, Z |
| C105 | 22342473 | Ceramic, 0.047mfd, 50V, Z |
| C106 | 22342473 | Ceramic, 0.047mfd, 50V, Z |
| C107 | 22445470 | Electrolytic, 47mfd, 16V |
| C108 | 22342473 | Ceramic, 0.047mfd, 50V, Z |
| C109 | 22448478 | Electrolytic, 0.47mfd, 50V |
| C110 | 22321049 | Polypropylene, 330pF, 50V, J |
| C111 | 22445100 | Electrolytic, 10mfd, 16V |

| Symbol No. | Part No. | Description |
|------------|----------|------------------------------|
| C112 | 22448339 | Electrolytic, 3.3mfd, 50V |
| C113 | 22342473 | Ceramic, 0.047mfd, 50V, Z |
| C114 | 22448109 | Electrolytic, 1mfd, 50V |
| C115 | 22371222 | Mylar, 0.0022mfd, 50V, J |
| C116 | 22342223 | Ceramic, 0.022mfd, 50V, Z |
| C117 | 22360176 | Ceramic, 12pF, 50V, J, UJ |
| C118 | 22349331 | Ceramic, 330pF, 50V, K |
| C119 | 22360029 | Ceramic, 10pF, 50V, D, UJ |
| C124 | 22342473 | Ceramic, 0.047mfd, 50V, Z |
| C125 | 22372103 | Mylar, 0.01mfd, 50V, K |
| C126 | 22448109 | Electrolytic, 1mfd, 50V |
| C127 | 22448339 | Electrolytic, 3.3mfd, 50V |
| C128 | 22443101 | Electrolytic, 100mfd, 10V |
| C129 | 22372103 | Mylar, 0.01mfd, 50V, K |
| C130 | 22371472 | Mylar, 0.0047mfd, 50V, J |
| C131 | 22372103 | Mylar, 0.01mfd, 50V, K |
| C132 | 22342473 | Ceramic, 0.047mfd, 50V, Z |
| C134 | 22443101 | Electrolytic, 100mfd, 10V |
| C201 | 22445100 | Electrolytic, 10mfd, 16V |
| C202 | 22321028 | Polypropylene, 470pF, 50V, K |
| C203 | 22372473 | Mylar, 0.047mfd, 50V, K |
| C204 | 22321028 | Polypropylene, 470pF, 50V, K |
| C205 | 22321028 | Polypropylene, 470pF, 50V, K |
| C206 | 22321028 | Polypropylene, 470pF, 50V, K |
| C209, 210 | 22448478 | Electrolytic, 0.47mfd, 50V |
| C211, 212 | 22372223 | Mylar, 0.022mfd, 50V, K |
| C213 | 22448109 | Electrolytic, 1mfd, 50V |
| C214 | 22448339 | Electrolytic, 3.3mfd, 50V |
| C215 | 22448478 | Electrolytic, 0.47mfd, 50V |
| C217 | 22342223 | Ceramic, 0.022mfd, 50V, Z |
| C219 | 22445471 | Electrolytic, 470mfd, 16V |
| C301, 302 | 22467479 | Electrolytic, 4.7mfd, 35V, L |
| C305, 306 | 22371822 | Mylar, 0.0082mfd, 50V, J |
| C307, 308 | 22371222 | Mylar, 0.0022mfd, 50V, J |
| C309, 310 | 22467479 | Electrolytic, 4.7mfd, 35V, L |
| C311, 312 | 22372102 | Mylar, 0.001mfd, 50V, K |
| C313, 314 | 22446101 | Electrolytic, 100mfd, 25V |
| C315, 316 | 22349151 | Ceramic, 150pF, 50V, K |
| C401, 402 | 22349151 | Ceramic, 150pF, 50V, K |
| C403, 404 | 22372103 | Mylar, 0.01mfd |
| C405, 406 | 22467479 | Electrolytic, 4.7mfd, 35V, L |
| C407, 408 | 22446101 | Electrolytic, 100mfd, 25V |
| C409, 410 | 22372223 | Mylar, 0.022mfd, 50V, K |
| C411, 412 | 22372104 | Mylar, 0.1mfd, 50V |
| C413, 414 | 22445100 | Electrolytic, 10mfd, 16V |
| C415, 416 | 22372392 | Mylar, 0.0039mfd, 50V, K |
| C417, 418 | 22372223 | Mylar, 0.022mfd, 50V, K |
| C419, 420 | 22371222 | Mylar, 0.0022mfd, 50V, J |
| C421, 422 | 22349151 | Ceramic, 150pF, 50V, K |
| C423, 424 | 22349101 | Ceramic, 100pF, 50V, K |
| C501, 502 | 22447479 | Electrolytic, 4.7mfd, 35V |
| C503, 504 | 22361509 | Ceramic, 5pF, 50V, D |
| C505, 506 | 22448470 | Electrolytic, 47mfd, 50V |

| Symbol No. | Part No. | Description |
|------------|----------|-------------------------------------|
| C507, 508 | 22442331 | Electrolytic, 330mfd, 6.3V |
| C509, 510 | 22372104 | Mylar, 0.1mfd, 50V, K |
| C511 | 22447101 | Electrolytic, 100mfd, 35V |
| C901 | 22321206 | Polypropylene, 0.022mfd, AC 125V, M |
| C902 | 22340032 | Ceramic, 0.02mfd, 500V, Z |
| C903 | 22340032 | Ceramic, 0.02mfd, 500V, Z |
| C904 | 22340032 | Ceramic, 0.02mfd, 500V, Z |
| C905 | 22446102 | Electrolytic, 1000mfd, 25V |
| C906 | 22445471 | Electrolytic, 470mfd, 16V |
| C907 | 22445471 | Electrolytic, 470mfd, 16V |
| C908 | 22445471 | Electrolytic, 470mfd, 16V |
| C909 | 22447682 | Electrolytic, 6800mfd, 35V |
| C910 | 22447682 | Electrolytic, 6800mfd, 35V |
| C911 | 22446221 | Electrolytic, 220mfd, 25V |
| C912 | 22446221 | Electrolytic, 220mfd, 25V |

RESISTORS

All resistors are Carbon film $\frac{1}{4}W$, $\pm 5\%$, unless otherwise noted, K = 1000, M = 1000000

| | | |
|-----------|----------|----------|
| R101 | 22555102 | 1K ohm |
| R102 | 22555181 | 180 ohm |
| R103 | 22555682 | 6.8K ohm |
| R104 | 22555223 | 22K ohm |
| R105 | 22555102 | 1K ohm |
| R106 | 22555331 | 330 ohm |
| R107 | 22555331 | 330 ohm |
| R108 | 22545222 | 2.2K ohm |
| R109 | 22545562 | 5.6K ohm |
| R110 | 22555331 | 330 ohm |
| R111 | 22555682 | 6.8K ohm |
| R112 | 22545683 | 68K ohm |
| R114 | 22545470 | 47 ohm |
| R115 | 22545821 | 82 ohm |
| R116 | 22555154 | 150K ohm |
| R117 | 22545821 | 820 ohm |
| R118 | 22555473 | 47K ohm |
| R119 | 22555333 | 33K ohm |
| R120 | 22545333 | 33K ohm |
| R121 | 22555561 | 560 ohm |
| R122 | 22555102 | 1K ohm |
| R123 | 22545562 | 5.6K ohm |
| R124 | 22555331 | 330 ohm |
| R125 | 22555332 | 3.3K ohm |
| R126 | 22555223 | 22K ohm |
| R127 | 22555473 | 47K ohm |
| R128 | 22555222 | 2.2K ohm |
| R201 | 22545683 | 68K ohm |
| R202 | 22555153 | 15K ohm |
| R203, 204 | 22555223 | 22K ohm |

| Symbol No. | Part No. | Description |
|------------|----------|--------------------------------|
| R205, 206 | 22555472 | 4.7K ohm |
| R207, 208 | 22555102 | 1K ohm |
| R209, 210 | 22555123 | 12K ohm |
| R211, 212 | 22545222 | 2.2K ohm |
| R213, 214 | 22555122 | 1.2K ohm |
| R215 | 22545392 | 3.9K ohm |
| R216 | 22555153 | 15K ohm |
| R217 | 22555102 | 1K ohm |
| R219 | 22545390 | 39 ohm |
| R220 | 22555102 | 1K ohm |
| R221 | 22658282 | 470K ohm, Semi-fixed Variable |
| R222 | 22658257 | 10K ohm, Semi-fixed Variable |
| R223 | 22555104 | 100K ohm |
| R224 | 22555102 | 1K ohm |
| R301, 302 | 22545222 | 2.2K ohm |
| R303, 304 | 22555473 | 47K ohm |
| R305, 306 | 22555681 | 680 ohm |
| R307, 308 | 22545394 | 390K ohm |
| R309, 310 | 22555333 | 33K ohm |
| R311, 312 | 22555473 | 47K ohm |
| R313, 314 | 22555221 | 220 ohm |
| R315, 316 | 22555474 | 470K ohm |
| R401, 402 | 22555222 | 2.2K ohm |
| R403, 404 | 22555273 | 27K ohm |
| R405, 406 | 22555222 | 2.2K ohm |
| R407, 408 | 22555683 | 68K ohm |
| R409, 410 | 22555683 | 68K ohm |
| R411, 412 | 22545332 | 3.3K ohm |
| R413, 414 | 22545394 | 390K ohm |
| R415, 416 | 22545224 | 220K ohm |
| R417, 418 | 22555222 | 2.2K ohm |
| R419, 420 | 22555474 | 470K ohm |
| R421, 422 | 22555221 | 220 ohm |
| R423, 424 | 22555153 | 15K ohm |
| R425, 426 | 22555272 | 2.7K ohm |
| R427, 428 | 22545471 | 470 ohm |
| R429, 430 | 22555391 | 390 ohm |
| R431, 432 | 22555474 | 470K ohm |
| R433, 434 | 22545223 | 22K ohm |
| R435, 436 | 22555101 | 100 ohm |
| R437, 438 | 22650438 | 250K ohm, B, Variable, Volume |
| R439 | 22620406 | 250K ohm, W, Variable, Balance |
| R441, 442 | 22651473 | 100K ohm, C, Variable, Bass |
| R443, 444 | 22651473 | 100K ohm, C, Variable, Treble |
| R445, 446 | 22555105 | 1M ohm |
| R501, 502 | 22545333 | 33K ohm |
| R503, 504 | 22555102 | 1K ohm |
| R505, 506 | 22555332 | 3.3K ohm |
| R507, 508 | 22570274 | 1K ohm, 1W, Metal Oxided Film |
| R509, 510 | 22545333 | 33K ohm |
| R511, 512 | 22570295 | 10 ohm, 2W, Metal Film |
| R513, 514 | 22570268 | 330 ohm, 1W, Metal Oxided Film |
| R515, 516 | 22570268 | 330 ohm, 1W, Metal Oxided Film |

| Symbol No. | Part No. | Description |
|--------------------|----------|---------------------------------|
| R517 | 22570262 | 100 ohm, 1W, Metal Oxided Film |
| R901 | 22563155 | 1.5M ohm, ½W, Composition |
| R902 | 22563155 | 1.5M ohm, ½W, Composition |
| R903 | 22555152 | 1.5K ohm |
| R905 | 22570278 | 2.2K ohm, 1W, Metal Oxided Film |
| R906 | 22570278 | 2.2K ohm, 1W, Metal Oxided Film |
| R907 | 22570266 | 220 ohm, 1W, Metal Oxided Film |
| R908 | 22570266 | 220 ohm, 1W, Metal Oxided Film |
| ACCESSORIES | | |
| | 22124461 | Feeder Ass'y, Antenna |
| | 22902051 | Owner's Manual (America) |
| | 22902053 | Owner's Manual (Canada) |
| | 22956405 | Tag Card |

MANUFACTURED BY

TOSHIBA CORPORATION

2-1, GINZA 5-CHOME, CHUO-KU, TOKYO 104, JAPAN