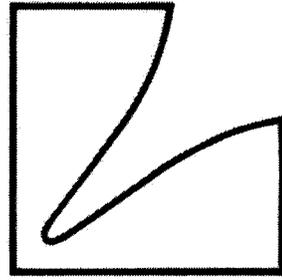




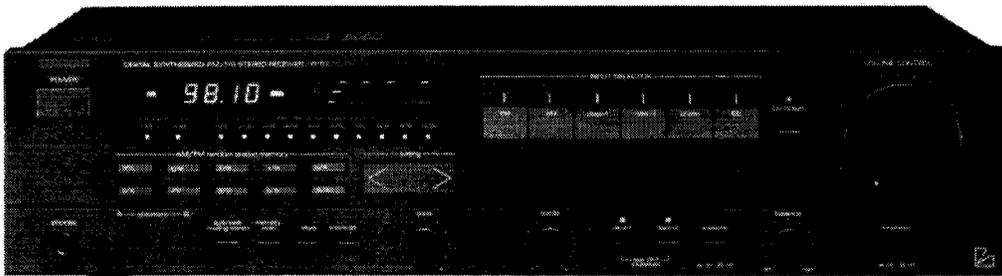
For more Hi-Fi manuals and set-up information
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SERVICE MANUAL



AM/FM Stereo Receiver

R-113



Contents

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Specifications

Audio Section

| | |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Rated Power Output/8 ohm (Input CD/AUX 1kHz) | Output : 35W 0.08% |
| Input Sensitivity (1kHz, at $P_o=40W$ Output) | Phono : $2.5 \pm 0.5mV$ CD/AUX : $150 \pm 20mV$ Tape-1/-2 : $150 \pm 20mV$ AV : $150 \pm 20mV$ |
| Input Impedance (1kHz) | Phono : 47k ohm +25-20% CD/AUX : 47k ohm +25-20% Tape-1/-2 : 47k ohm +25-20% AV : 47k ohm +25-20% |
| Frequency Response | Phono : $100Hz \pm 0.5dB$ Phono : $10kHz \pm 0.5dB$ CD/AUX : $10-50kHz \pm 2dB$ |
| Phono Overload (1kHz, Rec. Output, 0.08% THD) | Phono : 120mV |
| Cross Talk (1kHz) | CD/AUX : 55dB |
| Signal to Noise Ratio (Input Shorted) | Phono : 80dB CD/AUX : 86dB Tape-1/-2 : 86dB AV : 86dB |

FM Section

| | |
|-------------------------------------------|-----------------|
| Intermediate Frequency | 10.7MHz |
| Frequency Range | 87.9 ~ 107.9MHz |
| Usable Sensitivity (Mono 3%) | 17.2dBf |
| Signal to Noise Ratio (ST) | 68dB |
| Image Response Ratio | 32dB |
| Distortion (1kHz ST) | 0.4% |
| Stereo Separation (1kHz) | 40dB |
| Frequency Response (30Hz~15kHz) | +1 - 2.5dB |
| Quieting Sensitivity (ST, 50dB S/N) | 44dBf |
| Output Level (ST) | 610mV \pm 3dB |

AM Section

| | |
|---------------------------------------|-----------------|
| Intermediate Frequency | 450kHz |
| Frequency Range | 530 ~ 1,620kHz |
| Usable Sensitivity (20dB S/N) | 57.5dB/m |
| Signal to Noise Ratio | 45dB |
| Image Response Ratio (1,404kHz) | 35dB |
| I.F. Response Ratio (603kHz) | 50dB |
| Distortion | 0.5% |
| Frequency Response (120Hz~2kHz) | \pm 3dB |
| Output Level | 240mV \pm 3dB |

GENERAL

| | |
|-------------------------|-------------------------------------------------------------|
| Power Supply | AC120V, 60Hz |
| Power Consumption | 200W |
| Semiconductors | 12 IC's, 96 Transistors, 67 Diodes, 5 Zener Diodes, 9 FET's |
| Dimensions | 438 (W) \times 110 (H) \times 343 (D) mm |
| Weight | 6.1Kg |

NOTE : Due to continuing product improvement, specifications and design are subject to change without notice.

Parts Locations and Disassembly Instructions

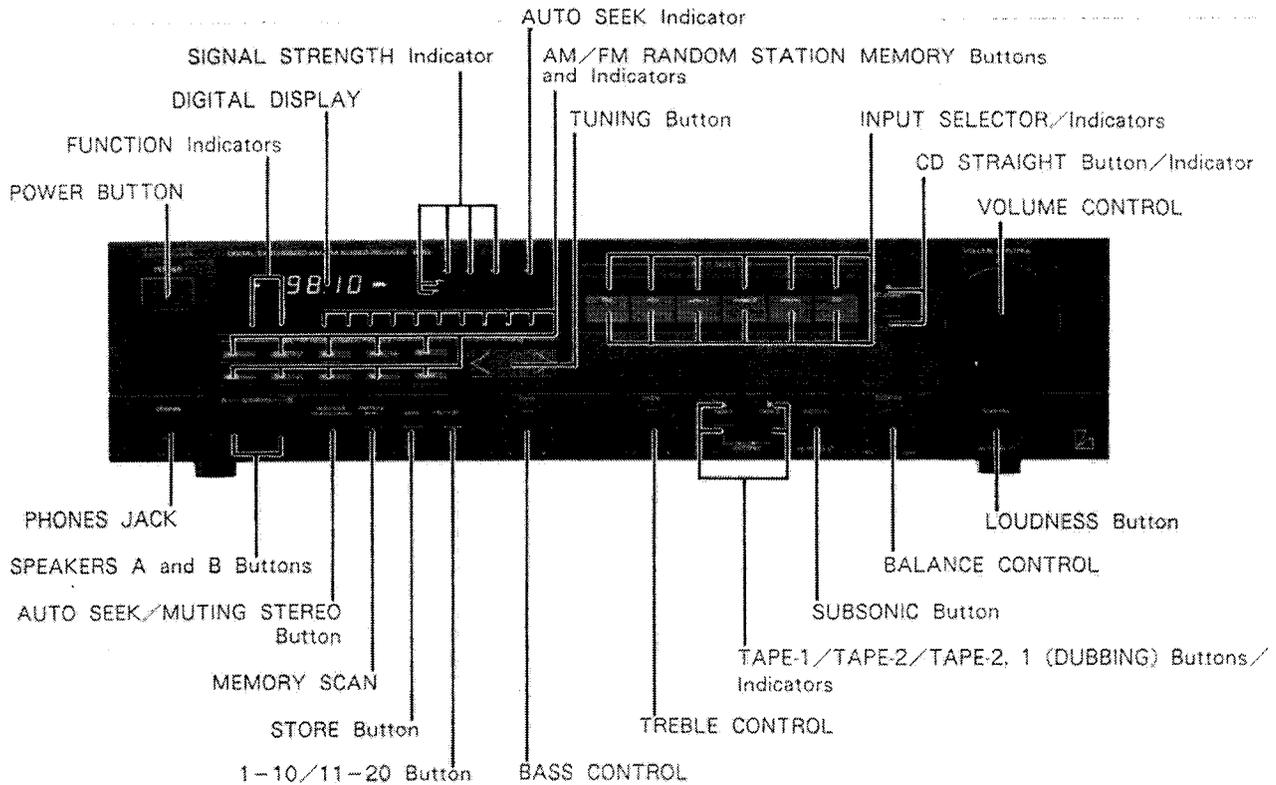


Figure 1

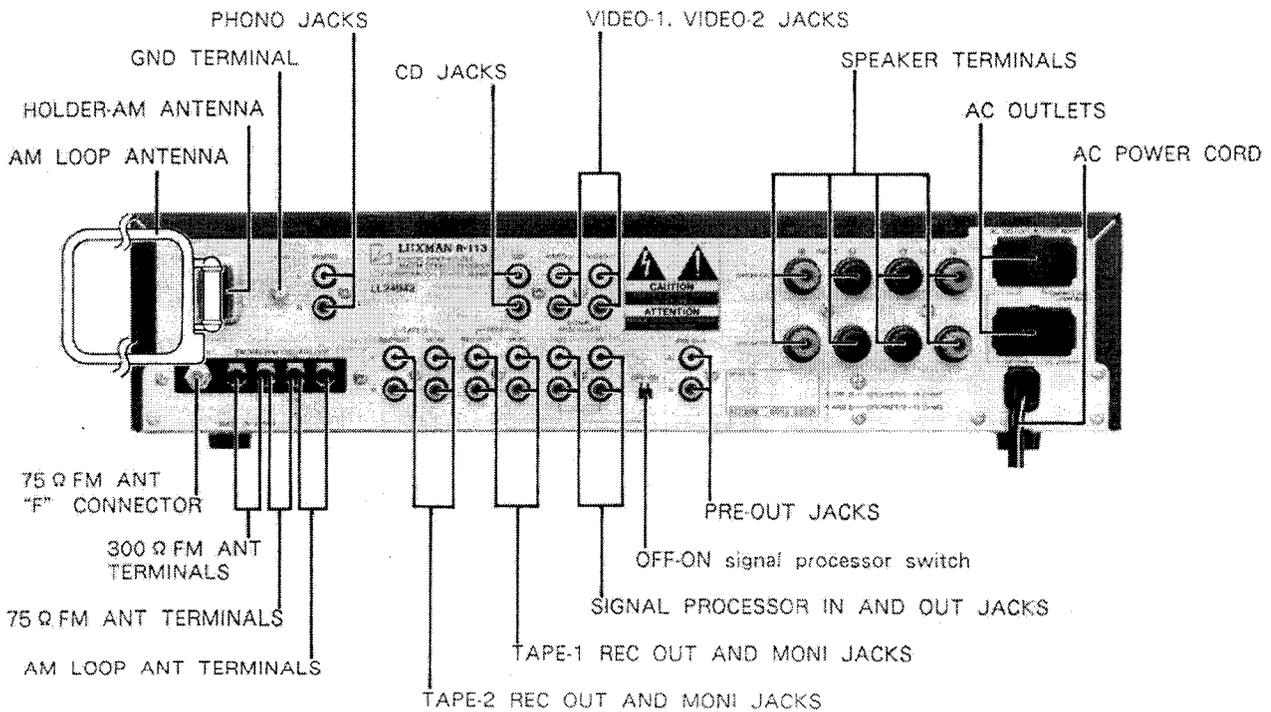


Figure 2

Adjustment Procedures

1. Audio Section

(1) Connection

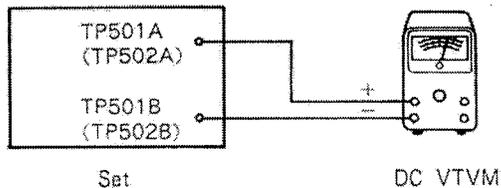


Figure 3

(2) Control Settings

- Power Switch ON (■)
- Volume Control Minimum
- Treble Control Center Position

- Bass Control Center Position
- Balance Control Center Position
- Other Switchs OFF

(3) Procedures

| Step | Description | Adjust Points | Test Points | Connection | Remark |
|------|-------------------|----------------------------|----------------------------------------|------------|---------------------------------------------------------------------------------------------|
| 1 | Idling Adjustment | SVR 501 (L) SVR 502 (R) | TP501A (TP502A) L TP501B (TP502B) R | Figure 3 | Push the power switch on and wait 5 minutes for warming-up. Adjust to $20 \pm 2\text{mV}$. |

2. AM Radio

(1) Connections

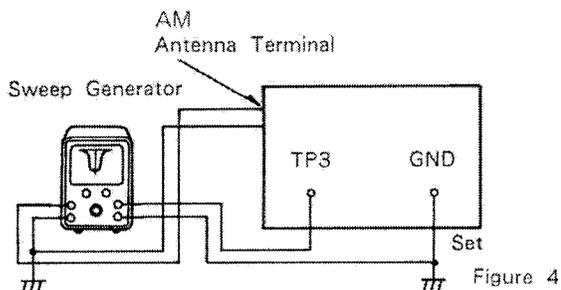


Figure 4

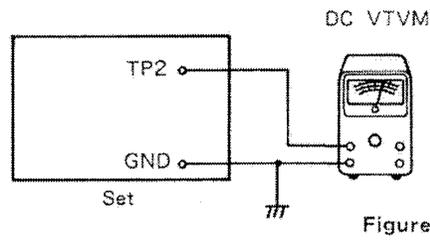


Figure 5

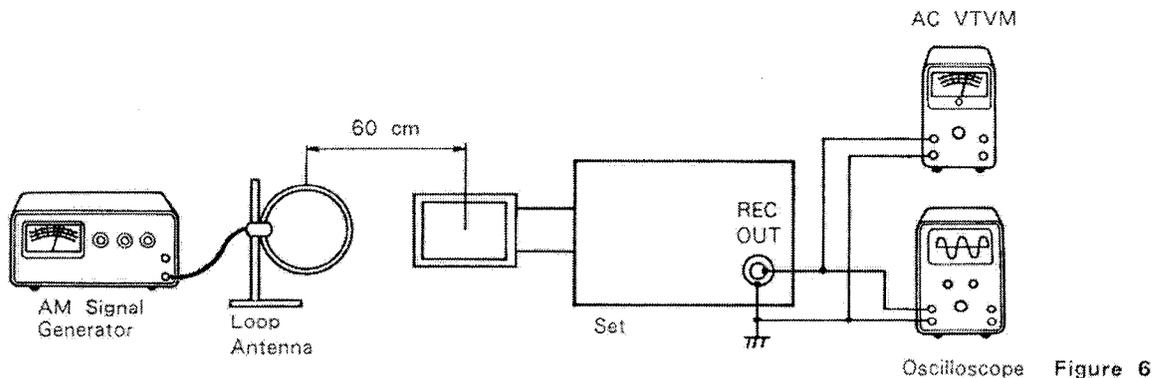
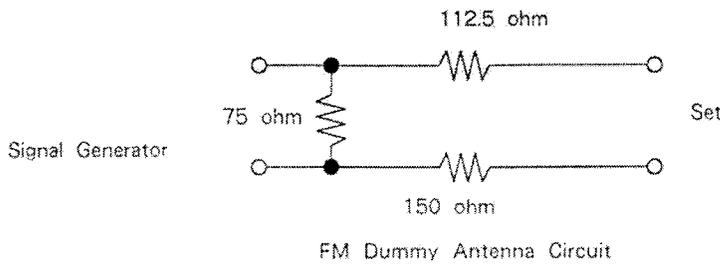


Figure 6

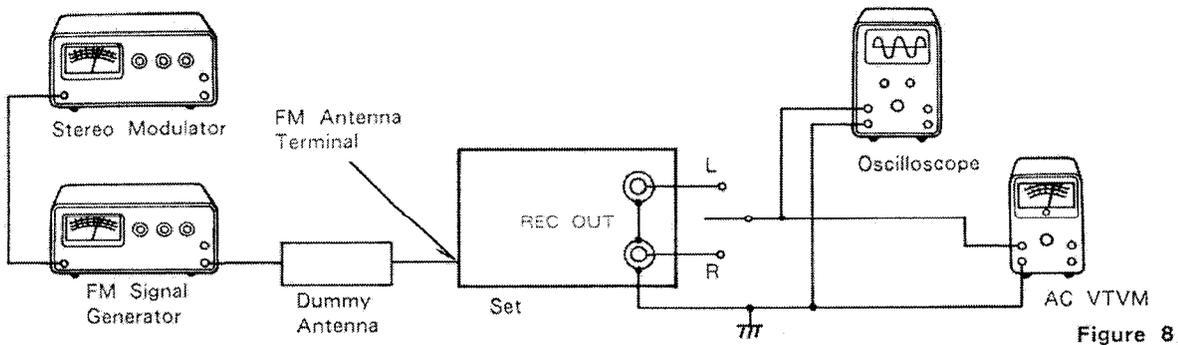
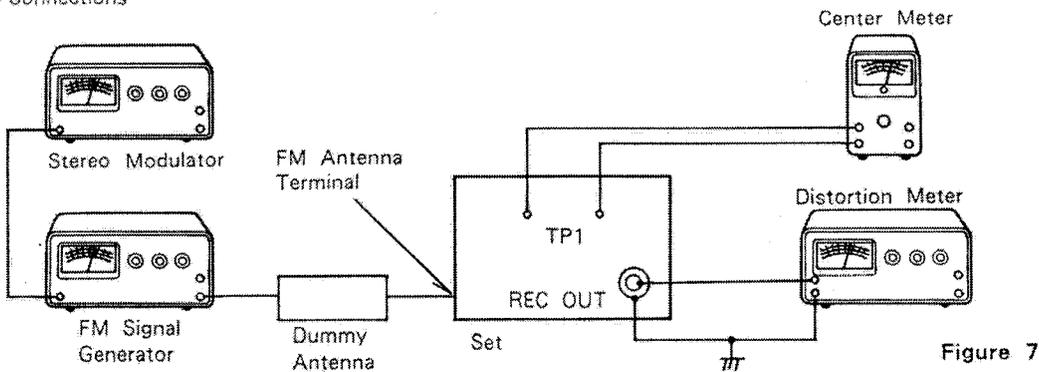
(2) Procedures

| Step | Description | Signal Generator | Dial Control | Adjustment Points | Test Points | Connections | Remarks |
|------|---------------|------------------------------------|--------------|-------------------|------------------------------------|-------------|-----------------------------------------------|
| 1 | IF Adjustment | IF Sweep Generator (450kHz) | 530kHz | IT202 | AM Loop Antenna Input Terminal TP3 | Figure 4 | 450kHz waveform for maximum. |
| 2 | f Cover | — | (1) 530kHz | L201 | TP2 | Figure 5 | 1.2±0.03V 8.2±0.05V Repeat (1) and (2). |
| | | | (2) 1,620kHz | TC201 | | | |
| 3 | Tracking | AM Signal Generator 400Hz 30% MOD. | (1) 600kHz | L202 | REC OUT | Figure 6 | Waveform for maximum. Repeat (1) and (2). |
| | | | (2) 1,400kHz | TC202 | | | |

3. FM Radio



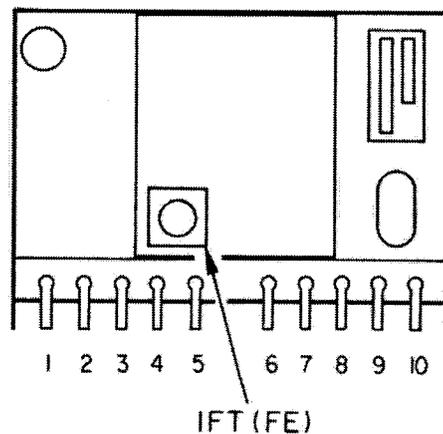
(1) Connections

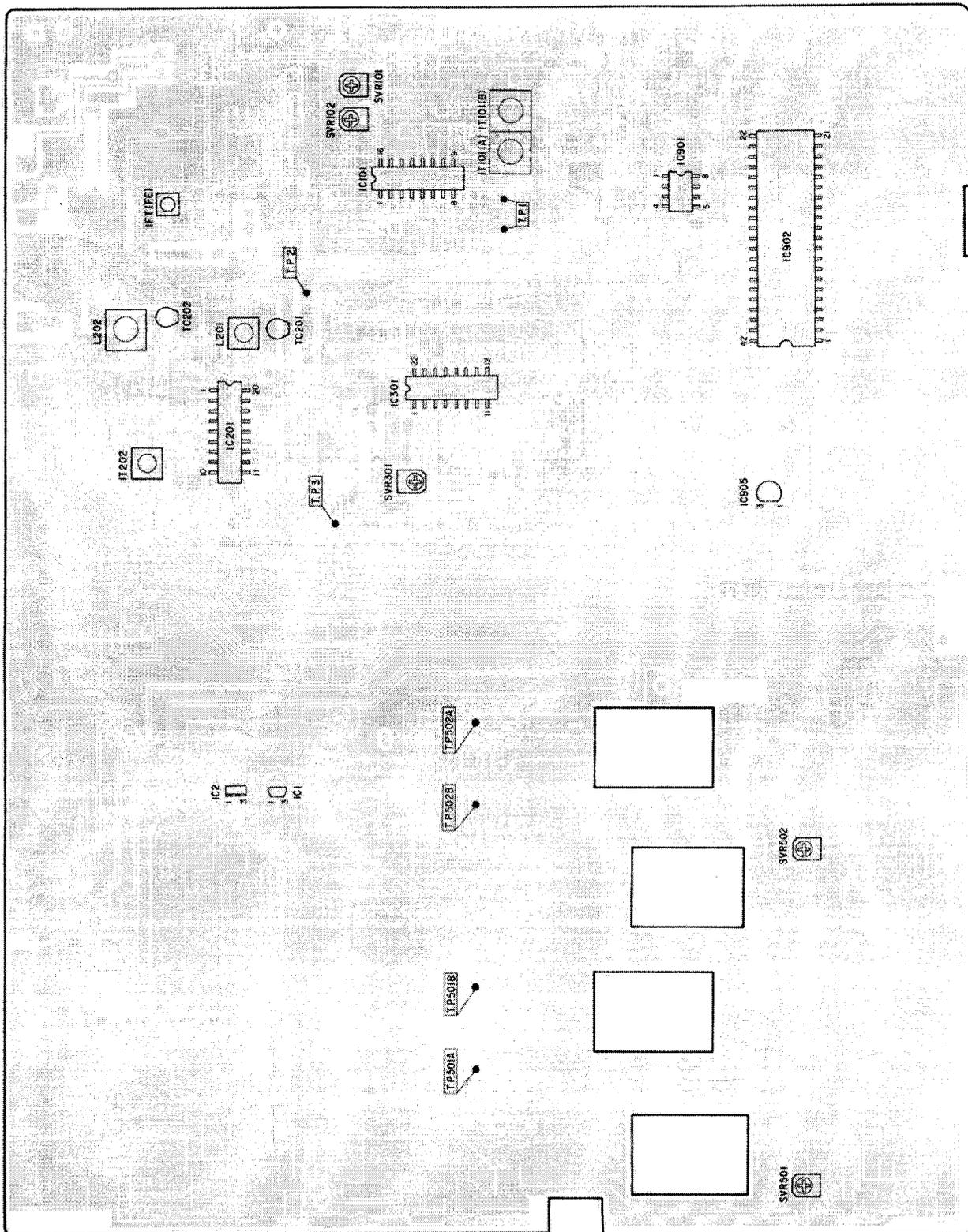


(2) Procedures

| Step | Description | Signal Generator | Dial Control | Adjustment Points | Test Points | Connection | Remarks |
|------|-------------------------|----------------------------------------------------------------|--------------|-------------------|--------------|------------|-------------------------------------------------------------------------------|
| 1 | IF Adjustment | FM Signal Generator 98.1MHz, 65dBf 1kHz, 100% | 98.1MHz | IT101 (A) | TP1 | Figure 7 | Mute Switch : OFF Adjust so that the center meter shows 0V. |
| 2 | IF Adjustment | | | IT101 (B) | REC OUT | | Adjust so that distortion is minimum. |
| 3 | IF Adjustment | FM Signal Generator, Stereo 98.1MHz, 65dBf 1kHz, 100% | 98.1MHz | IFT (FE) | REC OUT | Figure 7 | Mute Switch : ON (Stereo) Adjust so that distortion is minimum. |
| 4 | Muting Level Adjustment | 98.1MHz, 32dBf \pm 3dB 1kHz, 100% | 98.1MHz | SVR102 | REC OUT | Figure 8 | Mute Switch : ON Adjust so that the signal completely generates. |
| 5 | Signal Meter Adjustment | 98.1MHz, 62dBf \pm 3dB 1kHz, 100% | 98.1MHz | SVR101 | Signal Meter | Figure 8 | Adjust so that the fifth LED light up on signal strength indicator. |
| 6 | Separation Adjustment | 98.1MHz, 65dBf Stereo 1kHz, 100% | 98.1MHz | SVR301 | REC OUT | Figure 8 | Adjust so that signal leakage is minimum between the Right and Left channels. |

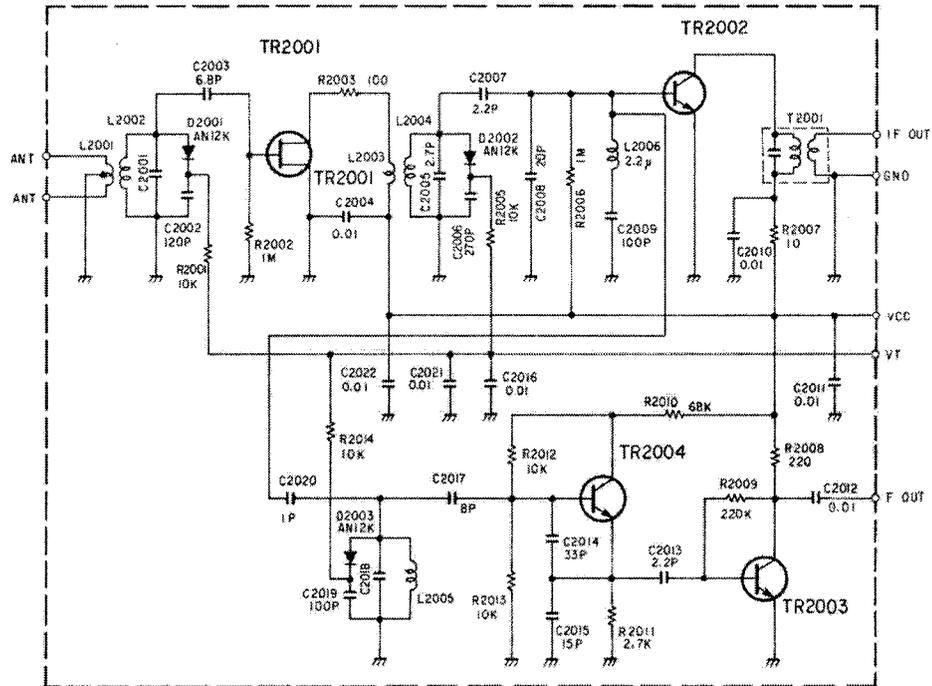
Adjustment Locations



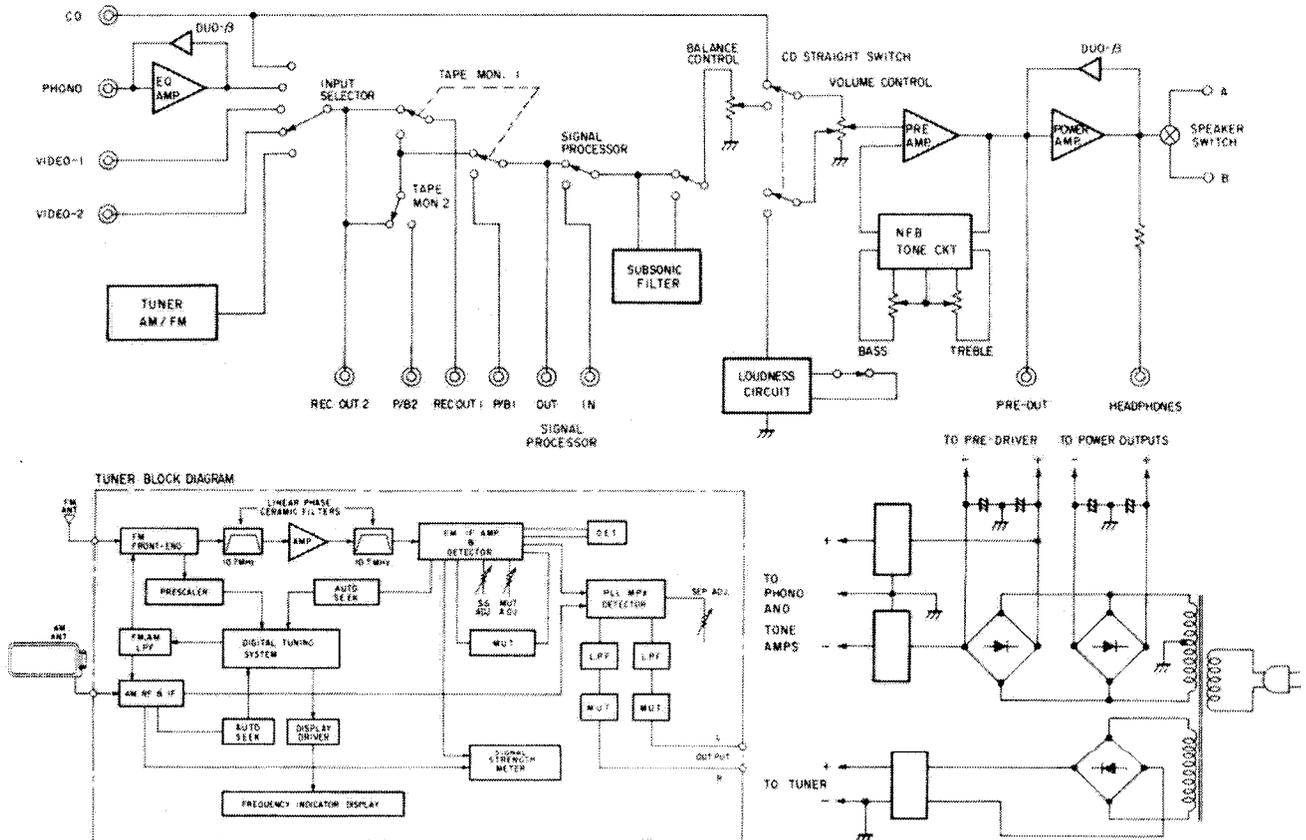


Main P. C. Board

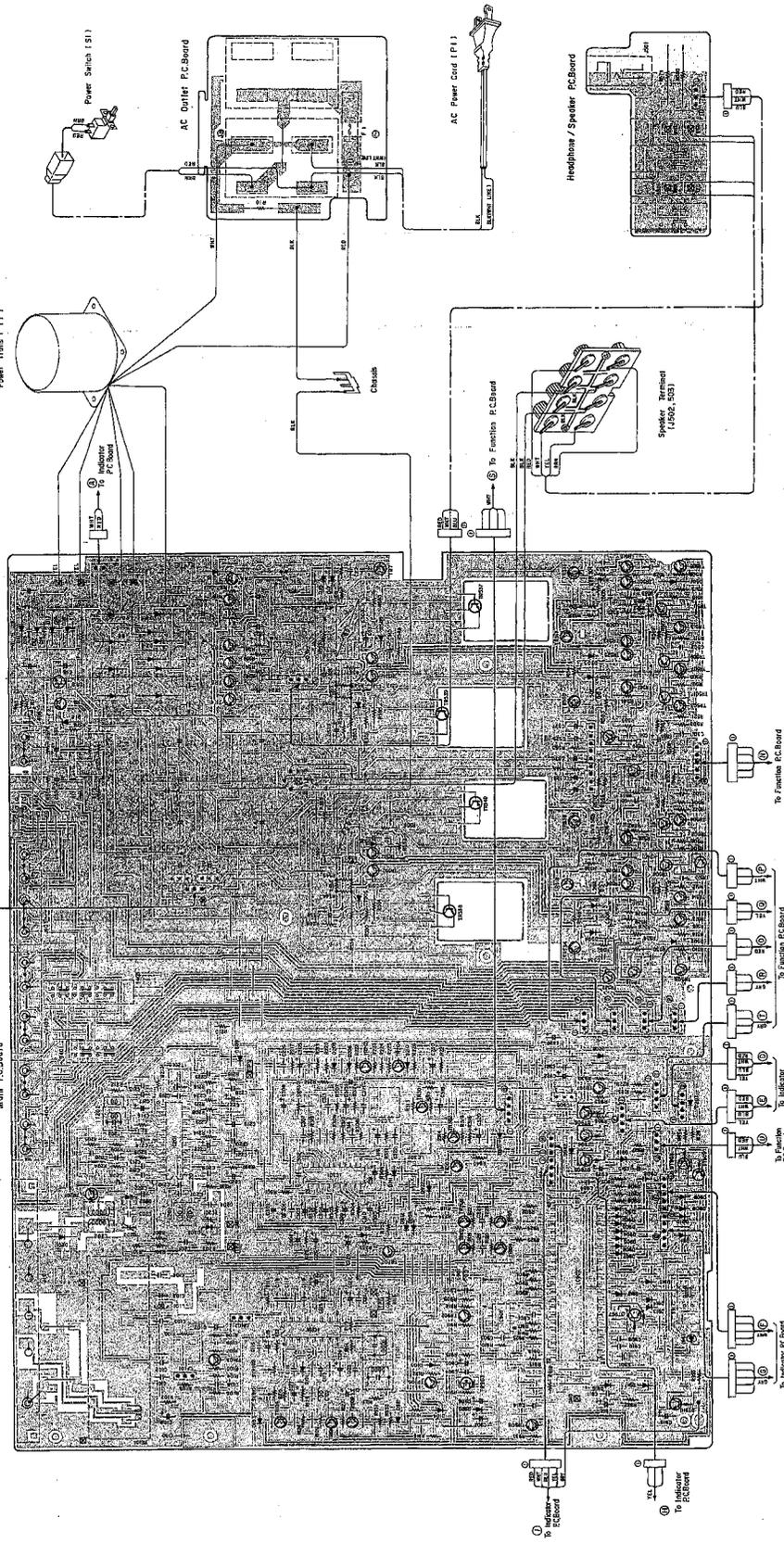
FM Tuner Schematic Diagram



Block Diagram

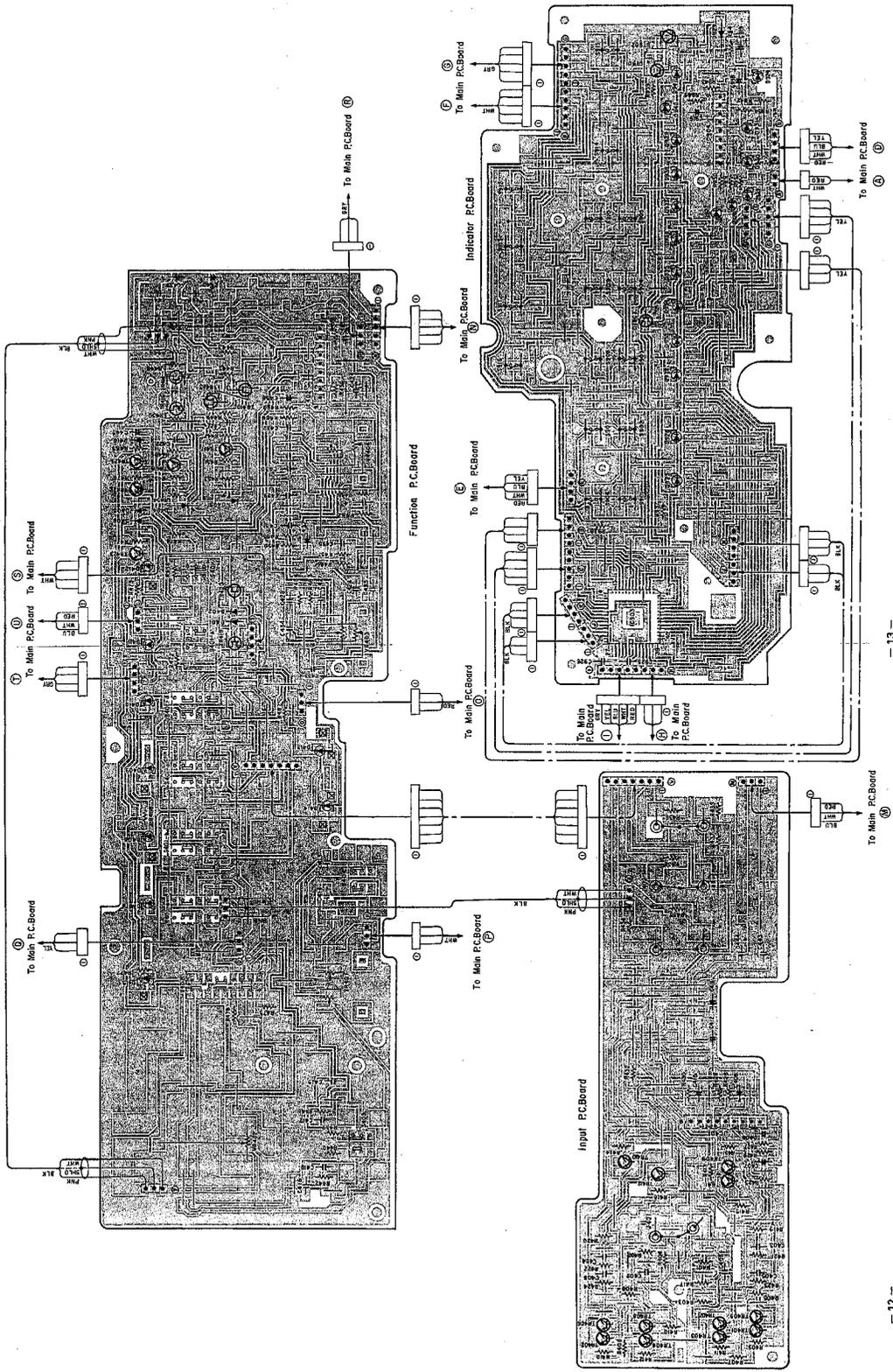


Parts Layout on P.C. Boards and Wiring Diagram (1/2)
Main P.C. Board



- BLU Blue
- GRN Green
- GRY Gray
- WHI White
- BRN Brown
- BLK Black
- YEL Yellow
- WHT White
- GRY/WHT Gray/White
- GRN/WHT Green/White
- GRN/YEL Green/Yellow
- SHLD Shield

Parts Layout on P.C. Boards and Wiring Diagram (2/2)



- BLU Blue
- BLK Black
- GRY Gray
- WHT White
- BRN Brown
- ORG Orange
- VIO Violet
- GRN/WHI Green/White
- GRN/YEL Green/Yellow
- GRN/BLK Green/Black
- GRN/YEL Green/Yellow
- SHLD Shield

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
 uF = microfarads, pF = picofarads

| Abbreviations | | | | | Symbol No. | Part No. | Description | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|--|--|----------------------------------------------------------------------|----------|-------------------------------|--|--|
| RES. = Resistor CAP. = Capacitor C.F. = Carbon Film ELY. = Electrolytic M.F. = Metal Film CER. = Ceramic M.O. = Metal Oxide Film MYL. = Mylar M.P. = Metal Plate TAN. = Tantalum TR. = Transistor POLY. = Polystyrol TRANS. = Transformer PP. = Polypropylene CP. = Chip PLT. = Polyethylene | | | | | | | | | |
| Symbol No. | Part No. | Description | | | Switches | | | | |
| Indicator P. C. Board | | | | | S901 | 92196901 | Tact. KEY01C1PE | | |
| IC's | | | | | S902 | 92196901 | Tact. KEY01C1PE | | |
| IC903 | 92128033 | UPD6321G | | | S903 | 92196901 | Tact. KEY01C1PE | | |
| IC904 | 92117628 | BA6154 | | | S904 | 92196901 | Tact. KEY01C1PE | | |
| Transistors | | | | | S905 | 92196901 | Tact. KEY01C1PE | | |
| DT901 | 92128028 | DTC114TF | | | S906 | 92196901 | Tact. KEY01C1PE | | |
| DT902 | 92128028 | DTC114TF | | | S907 | 92196901 | Tact. KEY01C1PE | | |
| DT903 | 92128028 | DTC114TF | | | S908 | 92196901 | Tact. KEY01C1PE | | |
| Diode/LEDs | | | | | S909 | 92196901 | Tact. KEY01C1PE | | |
| D923 | 37110017 | Zener. 05Z5.6Y | | | S910 | 92196901 | Tact. KEY01C1PE | | |
| D924 | 92119303 | LED, LN210RP (RED) | | | S911 | 92196612 | Tact. KEY101K-Y-E B3F-1152 | | |
| D925 | 92119312 | LED, LN21RPL (RED) | | | S912 | 92196612 | Tact. KEY1C1K-Y-E B3F-1152 | | |
| D926 | 92119312 | LED, LN21RPL (RED) | | | S913 | 92196612 | Tact. KEY1C1K-Y-E B3F-1152 | | |
| D927 | 92119303 | LED, LN210RP (RED) | | | S914 | 92196901 | Tact. KEY01C1PE | | |
| D928 | 92119303 | LED, LN210RP (RED) | | | S915 | 92196901 | Tact. KEY01C1PE | | |
| D929 | 92119303 | LED, LN210RP (RED) | | | S916 | 92196612 | Tact. KEY1C1K-Y-E B3F-1152 | | |
| D930 | 92119303 | LED, LN210RP (RED) | | | Capacitors | | | | |
| D931 | 92119303 | LED, LN210RP (RED) | | | C916 | 90416220 | ELY., 22 u F/25V | | |
| D932 | 92119312 | LED, LN21RPL (RED) | | | C919 | 90415330 | ELY., 33 u F/16V | | |
| D933 | 92119312 | LED, LN21RPL (RED) | | | C925 | 90353471 | Axial CER., 470pF | | |
| D934 | 92119312 | LED, LN21RPL (RED) | | | C926 | 90353471 | Axial CER., 470pF | | |
| D935 | 92119312 | LED, LN21RPL (RED) | | | Resistors (All resistors are Carbon 1/6W±5% unless otherwise noted.) | | | | |
| D936 | 92119312 | LED, LN21RPL (RED) | | | R937 | 90512151 | 150 ohm | | |
| D937 | 92119312 | LED, LN21RPL (RED) | | | R938 | 90512151 | 150 ohm | | |
| D938 | 92119312 | LED, LN21RPL (RED) | | | R939 | 90512151 | 150 ohm | | |
| D939 | 92119312 | LED, LN21RPL (RED) | | | R941 | 90512473 | 47k ohm | | |
| D940 | 92119312 | LED, LN21RPL (RED) | | | R942 | 90512103 | 10k ohm | | |
| D941 | 92119312 | LED, LN21RPL (RED) | | | R943 | 90512682 | 6.8k ohm | | |
| | | | | | R949 | 90512103 | 10k ohm | | |
| | | | | | R950 | 90512821 | 820 ohm | | |
| | | | | | R951 | 90512821 | 820 ohm | | |
| | | | | | R952 | 90512821 | 820 ohm | | |
| | | | | | R953 | 90512821 | 820 ohm | | |
| | | | | | R954 | 90512821 | 820 ohm | | |

| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|-----------------------------------------------------------------------------|----------|------------------------------------|--|--|----------------------|----------|---------------------------------|--|--|
| Input P. C. Board | | | | | | | | | |
| IC | | | | | | | | | |
| IC401 | 92128047 | NJM2043SD | | | R406 | 90512154 | 150k ohm | | |
| Transistors | | | | | R407 | 90512154 | 150k ohm | | |
| TR401 | 36325845 | 2SC2240NEW-BL | | | R408 | 90512154 | 150k ohm | | |
| TR402 | 36325845 | 2SC2240NEW-BL | | | R409 | 90512393 | 39k ohm | | |
| TR403 | A6533645 | 2SA970NEW-BL | | | R410 | 90512393 | 39k ohm | | |
| TR404 | A6533645 | 2SA970NEW-BL | | | R411 | 90512393 | 39k ohm | | |
| TR405 | 36325845 | 2SC2240NEW-BL | | | R412 | 90512393 | 39k ohm | | |
| TR406 | 36325845 | 2SC2240NEW-BL | | | R413 | 90512102 | 1k ohm | | |
| TR407 | A6533645 | 2SA970NEW-BL | | | R414 | 90512102 | 1k ohm | | |
| TR408 | A6533645 | 2SA970NEW-BL | | | R415 | 90512102 | 1k ohm | | |
| TR409 | A6533645 | 2SA970NEW-BL | | | R416 | 90512102 | 1k ohm | | |
| TR410 | A6533645 | 2SA970NEW-BL | | | R417 | 90520014 | M.F., 130 ohm ($\pm 1\%$) | | |
| TR411 | 36325845 | 2SC2240NEW-BL | | | R418 | 90520014 | M.F., 130 ohm ($\pm 1\%$) | | |
| TR412 | 36325845 | 2SC2240NEW-BL | | | R419 | 90512101 | 100 ohm | | |
| Capacitors | | | | | R420 | 90512101 | 100 ohm | | |
| C401 | 90353221 | Axial CER., 220pF | | | R421 | 92570733 | M.F., 6.8k ohm ($\pm 1\%$) | | |
| C402 | 90353221 | Axial CER., 220pF | | | R422 | 92570733 | M.F., 6.8k ohm ($\pm 1\%$) | | |
| C403 | 90380005 | PP., 0.011 μ F $\pm 2\%$ | | | R423 | 90520037 | M.F., 110k ohm ($\pm 1\%$) | | |
| C404 | 90380005 | PP., 0.011 μ F $\pm 2\%$ | | | R424 | 90520037 | M.F., 110k ohm ($\pm 1\%$) | | |
| C405 | 90380006 | PP., 0.039 μ F $\pm 2\%$ | | | R425 | 90512104 | 100k ohm | | |
| C406 | 90380006 | PP., 0.039 μ F $\pm 2\%$ | | | R426 | 90512104 | 100k ohm | | |
| C407 | 90450019 | ELY., Non Polar 4.7 μ F/16V | | | R427 | 90512104 | 100k ohm | | |
| C408 | 90450019 | ELY., Non Polar 4.7 μ F/16V | | | R428 | 90512104 | 100k ohm | | |
| C409 | 90450019 | ELY., Non Polar 4.7 μ F/16V | | | R429 | 90512682 | 6.8k ohm | | |
| C410 | 90450019 | ELY., Non Polar 4.7 μ F/16V | | | R430 | 90512682 | 6.8k ohm | | |
| C411 | 90416470 | ELY., 47 μ F/25V | | | R431 | 90512102 | 1k ohm | | |
| C412 | 90416470 | ELY., 47 μ F/25V | | | R432 | 90512102 | 1k ohm | | |
| C443 | 90351223 | Axial CER., 0.022 μ F | | | R433 | 90512102 | 1k ohm | | |
| C444 | 90351223 | Axial CER., 0.022 μ F | | | R434 | 90512102 | 1k ohm | | |
| Resistors (All resistors are Carbon 1/6W $\pm 5\%$ unless otherwise noted.) | | | | | R435 | 90512102 | 1k ohm | | |
| R401 | 90512563 | 56k ohm | | | R436 | 90512102 | 1k ohm | | |
| R402 | 90512563 | 56k ohm | | | R437 | 90512102 | 1k ohm | | |
| R403 | 90512101 | 100 ohm | | | R438 | 90512102 | 1k ohm | | |
| R404 | 90512101 | 100 ohm | | | Function P. C. Board | | | | |
| R405 | 90512154 | 150k ohm | | | IC/Transistors | | | | |
| | | | | | IC402 | 92128047 | IC, NJM2043SD | | |
| | | | | | TR413 | A6041840 | Field Effect, 2SK117-Y | | |
| | | | | | TR414 | A6041840 | Field Effect, 2SK117-Y | | |
| | | | | | TR415 | A6041840 | Field Effect, 2SK117-Y | | |
| | | | | | TR416 | A6041840 | Field Effect, 2SK117-Y | | |

| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|-------------|----------|----------------------------------|--|--|-------------------------------------------------------------------------------|----------|-------------------------------------|--|--|
| TR417 | 36317480 | 2SC1815NEW-BL | | | C418 | 90353271 | Axial CER., 270pF | | |
| TR418 | 36317480 | 2SC1815NEW-BL | | | C421 | 90329222 | Axial CER., 2200pF | | |
| TR419 | 36044630 | Field Effect, 2SK246-GR | | | C422 | 90329222 | Axial CER., 2200pF | | |
| TR420 | 36044630 | Field Effect, 2SK246-GR | | | C423 | 90329332 | Axial CER., 3300pF | | |
| TR421 | 36317480 | 2SC1815NEW-BL | | | C424 | 90329332 | Axial CER., 3300pF | | |
| TR422 | 36534060 | 2SA1015-GR | | | C425 | 90371392 | Polyester Film, 3900pF | | |
| TR423 | 36317480 | 2SC1815NEW-BL | | | C426 | 90371392 | Polyester Film, 3900pF | | |
| Diodes/LEDs | | | | | C427 | 90371273 | Polyester Film, 0.027 μ F | | |
| D401 | 92119223 | 1SS131 | | | C428 | 90371273 | Polyester Film, 0.027 μ F | | |
| D402 | 92119223 | 1SS131 | | | C429 | 90371273 | Polyester Film, 0.027 μ F | | |
| D403 | 92119311 | LED, LN2G- (TA) (RED) | | | C430 | 90371273 | Polyester Film, 0.027 μ F | | |
| D404 | 92119311 | LED, LN2G- (TA) (RED) | | | C431 | 92370329 | T.F., 0.18 μ F | | |
| D405 | 92119223 | 1SS131 | | | C432 | 92370329 | T.F., 0.18 μ F | | |
| D406 | 92119223 | 1SS131 | | | C433 | 90353101 | Axial CER., 100pF | | |
| D407 | 92119312 | LED, LN21RPL (RED) | | | C434 | 90353101 | Axial CER., 100pF | | |
| D408 | 92119312 | LED, LN21RPL (RED) | | | C435 | 90353330 | Axial CER., 33pF | | |
| D409 | 92119312 | LED, LN21RPL (RED) | | | C436 | 90353330 | Axial CER., 33pF | | |
| D410 | 92119312 | LED, LN21RPL (RED) | | | C437 | 90450019 | ELY., Non Polar, 4.7 μ F/16V | | |
| D411 | 92119312 | LED, LN21RPL (RED) | | | C438 | 90450019 | ELY., Non Polar, 4.7 μ F/16V | | |
| D412 | 92119312 | LED, LN21RPL (RED) | | | C439 | 90416470 | ELY., 47 μ F/25V | | |
| D413 | 92119312 | LED, LN21RPL (RED) | | | C440 | 90416470 | ELY., 47 μ F/25V | | |
| D414 | 92119312 | LED, LN21RPL (RED) | | | C441 | 90351223 | Axial CER., 0.022 μ F | | |
| D415 | 92119312 | LED, LN21RPL (RED) | | | C442 | 90351223 | Axial CER., 0.022 μ F | | |
| D416 | 92119223 | 1SS131 | | | C445 | 90417330 | ELY., 33 μ F/35V | | |
| Switches | | | | | Resistors (All resistors are Carbon 1/6W \pm 5% unless otherwise noted.) | | | | |
| S401 | 92190245 | Push, SPEA 64 | | | R439 | 90512223 | 22k ohm | | |
| S402 | 92190247 | Push, SPEC 12 | | | R440 | 90512223 | 22k ohm | | |
| S403 | 92190242 | Push, SPEC 12 | | | R441 | 90512473 | 47k ohm | | |
| S404 | 92190242 | Push, SPEC 12 | | | R442 | 90512473 | 47k ohm | | |
| Capacitors | | | | | R443 | 90512471 | 470 ohm | | |
| C413 | 92370345 | T.F., 0.15 μ F | | | R444 | 90512471 | 470 ohm | | |
| C414 | 92370345 | T.F., 0.15 μ F | | | R445 | 90512223 | 22k ohm | | |
| C415 | 90371333 | Polyester Film, 0.033 μ F | | | R446 | 90512223 | 22k ohm | | |
| C416 | 90371333 | Polyester Film, 0.033 μ F | | | R447 | 90512223 | 22k ohm | | |
| C417 | 90353271 | Axial CER., 270pF | | | R448 | 90512223 | 22k ohm | | |
| | | | | | R449 | 90512391 | 390 ohm | | |
| | | | | | R450 | 90512391 | 390 ohm | | |
| | | | | | R451 | 90512102 | 1k ohm | | |
| | | | | | R452 | 90512102 | 1k ohm | | |
| | | | | | R453 | 90512223 | 22k ohm | | |

| Symbol No. | Part No. | Description | | |
|-------------------------------|----------|----------------------------------|--|--|
| R454 | 90512223 | 22k ohm | | |
| R455 | 90512391 | 390 ohm | | |
| R456 | 90512391 | 390 ohm | | |
| R457 | 92570737 | M.F., 15k ohm (±1%) | | |
| R458 | 92570737 | M.F., 15k ohm (±1%) | | |
| R459 | 92570727 | M.F., 2.2k ohm (±1%) | | |
| R460 | 92570727 | M.F., 2.2k ohm (±1%) | | |
| R461 | 90512152 | 1.5k ohm | | |
| R462 | 90512152 | 1.5k ohm | | |
| R463 | 90512331 | 330 ohm | | |
| R464 | 90512331 | 330 ohm | | |
| R467 | 90512102 | 1k ohm | | |
| R468 | 90512102 | 1k ohm | | |
| R469 | 90512152 | 1.5k ohm | | |
| R470 | 90512154 | 150k ohm | | |
| R471 | 90512154 | 150k ohm | | |
| R472 | 90512103 | 10k ohm | | |
| R473 | 90512391 | 390 ohm | | |
| R474 | 90512154 | 150k ohm | | |
| R475 | 90512223 | 22k ohm | | |
| R476 | 90512223 | 22k ohm | | |
| R477 | 90512102 | 1k ohm | | |
| R956 | 90512473 | 47k ohm | | |
| VR401 | 92650214 | Variable Volume, 100k ohm-D | | |
| VR402 | 92650213 | Variable Volume, 200k ohm-D-T | | |
| VR403 | 92650215 | Variable Volume, 100k ohm-D | | |
| VR404 | 92650215 | Variable Volume, 100k ohm-D | | |
| Headphone/Speaker P. C. Board | | | | |
| Resistors | | | | |
| R579 | 90524181 | M.O., 180 ohm 2W | | |
| R580 | 90524181 | M.O., 180 ohm 2W | | |
| AC Outlet P. C. Board | | | | |
| Resistor | | | | |
| R10 | 90516335 | C.F., 3.3M ohm 1/2W | | |

| Symbol No. | Part No. | Description | | |
|------------------|----------|----------------------------|--|--|
| Main P. C. Board | | | | |
| IC's | | | | |
| IC1 | 92128066 | L78M24CX | | |
| IC2 | 92128067 | L7924CV | | |
| IC101 | 92128029 | LA1235 | | |
| IC201 | 92128031 | LA1247 | | |
| IC301 | 92128030 | LA3401 | | |
| IC901 | 92117452 | UPB553AC | | |
| IC902 | 92128032 | UPD1704C-025 | | |
| IC905 | 92128064 | NJM78L06A | | |
| Transistors | | | | |
| TR1 | 92128068 | 2SC2062-C | | |
| TR2 | 36317480 | 2SC1815NEW-BL | | |
| TR3 | 36317480 | 2SC1815NEW-BL | | |
| TR4 | 36317480 | 2SC1815NEW-BL | | |
| TR5 | 36317480 | 2SC1815NEW-BL | | |
| TR6 | 36317480 | 2SC1815NEW-BL | | |
| TR7 | A6361300 | 2SC3419 | | |
| TR8 | A6044640 | Field Effect, 2SK246-BL | | |
| TR9 | 92128115 | 2SD1761-F | | |
| TR101 | 36534060 | 2SA1015-GR | | |
| TR102 | 36534060 | 2SA1015-GR | | |
| TR103 | 36319020 | 2SC1923-O | | |
| TR104 | 36317480 | 2SC1815NEW-BL | | |
| TR105 | 36317480 | 2SC1815NEW-BL | | |
| TR106 | 36317480 | 2SC1815NEW-BL | | |
| TR201 | 36042640 | Field Effect, 2SK161-GR | | |
| TR202 | 36534060 | 2SA1015-GR | | |
| TR203 | 36317480 | 2SC1815NEW-BL | | |
| TR204 | 36317480 | 2SC1815NEW-BL | | |
| TR205 | 36317480 | 2SC1815NEW-BL | | |
| TR207 | 36534060 | 2SA1015-GR | | |
| TR301 | 36342210 | 2SC2878-B | | |
| TR302 | 36342210 | 2SC2878-B | | |
| TR303 | 36534060 | 2SA1015-GR | | |
| TR501 | 36325845 | 2SC2240NEW-BL | | |
| TR502 | 36325845 | 2SC2240NEW-BL | | |
| TR503 | 36325845 | 2SC2240NEW-BL | | |
| TR504 | 36325845 | 2SC2240NEW-BL | | |
| TR505 | 36317480 | 2SC1815NEW-BL | | |
| TR506 | 36317480 | 2SC1815NEW-BL | | |

| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|------------|----------|----------------------------|--|--|-------------|----------|-----------------------------------|--|--|
| TR507 | A6533645 | 2SA970NEW-BL | | | Diodes/LEDs | | | | |
| TR508 | A6533645 | 2SA970NEW-BL | | | D1 | 92119219 | 1N5402 | | |
| TR509 | A6533645 | 2SA970NEW-BL | | | D2 | 92119219 | 1N5402 | | |
| TR510 | A6533645 | 2SA970NEW-BL | | | D3 | 92119219 | 1N5402 | | |
| TR511 | 36317480 | 2SC1815NEW-BL | | | D4 | 92119219 | 1N5402 | | |
| TR512 | 36317480 | 2SC1815NEW-BL | | | D5 | 92119310 | 1A2-E | | |
| TR513 | A6533645 | 2SA970NEW-BL | | | D6 | 92119310 | 1A2-E | | |
| TR514 | A6533645 | 2SA970NEW-BL | | | D7 | 92119310 | 1A2-E | | |
| TR515 | A6540520 | 2SA1145-Y | | | D8 | 92119310 | 1A2-E | | |
| TR516 | A6540520 | 2SA1145-Y | | | D9 | 92119310 | 1A2-E | | |
| TR517 | 92128068 | 2SC2062-C | | | D10 | 92119310 | 1A2-E | | |
| TR518 | 92128068 | 2SC2062-C | | | D11 | 92119310 | 1A2-E | | |
| TR519 | 36317480 | 2SC1815NEW-BL | | | D12 | 92119310 | 1A2-E | | |
| TR520 | 36317480 | 2SC1815NEW-BL | | | D13 | 92119310 | 1A2-E | | |
| TR521 | 36534060 | 2SA1015-GR | | | D14 | 92119310 | 1A2-E | | |
| TR522 | 36534060 | 2SA1015-GR | | | D15 | 92119310 | 1A2-E | | |
| TR523 | 36325845 | 2SC2240NEW-BL | | | D16 | 37110017 | Zener, 05Z5.6Y | | |
| TR524 | 36325845 | 2SC2240NEW-BL | | | D17 | A7110461 | Zener, 05Z13-X | | |
| TR525 | 36325845 | 2SC2240NEW-BL | | | D18 | A7110461 | Zener, 05Z13-X | | |
| TR526 | 36325845 | 2SC2240NEW-BL | | | D101 | 92119223 | 1SS131 | | |
| TR527 | 36317480 | 2SC1815NEW-BL | | | D103 | 92119223 | 1SS131 | | |
| TR528 | 36317480 | 2SC1815NEW-BL | | | D104 | 92119223 | 1SS131 | | |
| TR529 | 36317460 | 2SC1815NEW-GR | | | D105 | 92119223 | 1SS131 | | |
| TR530 | 36317460 | 2SC1815NEW-GR | | | D201 | 92115201 | Gelma, 20A90 | | |
| TR531 | 36534060 | 2SA1015-GR | | | D202 | 92115848 | Variable Capacitance, KV1236Z2 | | |
| TR532 | 36534060 | 2SA1015-GR | | | D204 | 92119223 | 1SS131 | | |
| TR533 | A6363620 | 2SC3665-Y | | | D205 | 92119223 | 1SS131 | | |
| TR534 | A6363620 | 2SC3665-Y | | | D206 | 92119223 | 1SS131 | | |
| TR535 | A6548820 | 2SA1425-Y | | | D207 | 92119223 | 1SS131 | | |
| TR536 | A6548820 | 2SA1425-Y | | | D208 | 92119223 | 1SS131 | | |
| TR537 | A6358038 | 2SC3181N | | | D209 | 92119223 | 1SS131 | | |
| TR538 | A6358038 | 2SC3181N | | | D210 | 92119223 | 1SS131 | | |
| TR539 | A6545938 | 2SA1264N | | | D211 | 92119223 | 1SS131 | | |
| TR540 | A6545938 | 2SA1264N | | | D212 | 92119223 | 1SS131 | | |
| TR541 | 36342210 | 2SC2878-B | | | D213 | 92119223 | 1SS131 | | |
| TR542 | 36342210 | 2SC2878-B | | | D301 | 92119223 | 1SS131 | | |
| TR543 | 36534060 | 2SA1015-GR | | | D501 | 92119311 | LED, LN2G- (TA) (RED) | | |
| TR902 | 36317480 | 2SC1815NEW-BL | | | D502 | 92119311 | LED, LN2G- (TA) (RED) | | |
| TR903 | 36044630 | Field Effect, 2SK246-GR | | | D503 | 92119223 | 1SS131 | | |
| TR907 | 36317480 | 2SC1815NEW-BL | | | D504 | 92119223 | 1SS131 | | |
| TR908 | 36317480 | 2SC1815NEW-BL | | | D505 | 92119223 | 1SS131 | | |
| TR909 | 36317480 | 2SC1815NEW-BL | | | D506 | 92119223 | 1SS131 | | |
| DT904 | 92128062 | TR., DTC144TF | | | D507 | 92119223 | 1SS131 | | |
| DT905 | 92128062 | TR., DTC144TF | | | D508 | 92119223 | 1SS131 | | |
| DT906 | 92128062 | TR., DTC144TF | | | D509 | 92119223 | 1SS131 | | |
| DT907 | 92128069 | TR., DTA114YF | | | D510 | 92119223 | 1SS131 | | |
| DT908 | 92128062 | TR., DTC144TF | | | | | | | |
| DT909 | 92128062 | TR., DTC144TF | | | | | | | |
| DT910 | 92128062 | TR., DTC144TF | | | | | | | |

| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|------------|----------|--------------------------------------------|--|--|--------------------------|----------|--------------------------------|--|--|
| D901 | 92119223 | 1SS131 | | | Relay/ Switches/ Crystal | | | | |
| D902 | 92119223 | 1SS131 | | | RL1 | 92148506 | Relay | | |
| D903 | 92119223 | 1SS131 | | | S406 | 92190219 | Switch Slide, SSSU 12 | | |
| D904 | 92119223 | 1SS131 | | | S501 | 92190244 | Switch Push, SPUL 24 | | |
| D905 | 92119223 | 1SS131 | | | S917 | 92190219 | Switch Slide, SSSU 12 | | |
| D906 | 92119223 | 1SS131 | | | X901 | 92153470 | Crystal, 4.5MHz | | |
| D907 | 92119223 | 1SS131 | | | Jacks | | | | |
| D908 | 92119223 | 1SS131 | | | J1 | 92169303 | Outlet - 2P | | |
| D909 | 92119223 | 1SS131 | | | J2 | 92169303 | Outlet - 2P | | |
| D910 | 92119223 | 1SS131 | | | J101 | 92186456 | Terminal, Antenna | | |
| D911 | 92119223 | 1SS131 | | | J401 | 92198322 | US - 2P | | |
| D912 | 92119223 | 1SS131 | | | J402 | 92198321 | US - 6P | | |
| D913 | 92119223 | 1SS131 | | | J403 | 92163901 | US4P | | |
| D914 | 92119223 | 1SS131 | | | J404 | 92163901 | US4P | | |
| D915 | 92119223 | 1SS131 | | | J405 | 92163901 | US4P | | |
| D916 | 92119223 | 1SS131 | | | J406 | 92163904 | US2P | | |
| D917 | 92119223 | 1SS131 | | | J501 | 92198320 | 6.5ST | | |
| D918 | 92119223 | 1SS131 | | | Trimmers | | | | |
| D919 | 37110208 | Zener, 05Z8.2Y | | | TC201 | 92309265 | CER., 10pF | | |
| D920 | 92119223 | 1SS131 | | | TC202 | 92309265 | CER., 10pF | | |
| D921 | 92119223 | 1SS131 | | | Filters | | | | |
| D922 | 92119223 | 1SS131 | | | FE101 | 92131272 | FM - FRONTEND | | |
| D942 | 92119310 | 1A2 - E | | | CF101 | 92153469 | Filter CER., SFE10.7MMK - A | | |
| D943 | 92119312 | LED. LN21RPL (RED) | | | CF102 | 92153469 | Filter CER., SFE10.7MMK - A | | |
| Coils | | | | | CF201 | 92153471 | CER., Filter, BFU450C4N | | |
| L101 | 92211364 | Choke - 229 - T, 2.2 μ H | | | CF301 | 92153476 | CER., Resonator, CSB456F11 | | |
| L102 | 92211364 | Choke - 229 - T, 2.2 μ H | | | Capacitors | | | | |
| L201 | 92245521 | OSC - MW | | | C1 | 90341223 | CER., 0.022 μ F | | |
| L202 | 92243122 | ANT - MW | | | C2 | 90341223 | CER., 0.022 μ F | | |
| L501 | 92211364 | Choke - 229 - T, 2.2 μ H | | | C3 | 90410017 | ELY., 6800 μ F / 50V | | |
| L502 | 92211364 | Choke - 229 - T, 2.2 μ H | | | C4 | 90410017 | ELY., 6800 μ F / 50V | | |
| L503 | 92211228 | Choke - AF | | | C5 | 90341223 | CER., 0.022 μ F | | |
| L504 | 92211228 | Choke - AF | | | | | | | |
| L901 | 92211364 | Choke - 229 - T, 2.2 μ H | | | | | | | |
| LC301 | 92232335 | Low Pass Filter | | | | | | | |
| LC302 | 92232335 | Low Pass Filter | | | | | | | |
| IT101 | 92267467 | IFT - FM - D | | | | | | | |
| IT201 | 92266410 | IFT - AM - M | | | | | | | |
| IT202 | 92266411 | Cerasizer, IFT - AM - M - CE, 450kHz | | | | | | | |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|------------|----------|----------------------------------|------------|----------|----------------------------------|
| C6 | 90341223 | CER., 0.022 μ F | C204 | 90321120 | Axial CER., 12pF |
| C7 | 90410018 | ELY., 2200 μ F/50V | C205 | 92321227 | PP., 470pF |
| C8 | 90410018 | ELY., 2200 μ F/50V | C206 | 90353471 | Axial CER., 470pF |
| C9 | 90341223 | CER., 0.022 μ F | C207 | 90351223 | Axial CER., 0.022 μ F |
| C10 | 90341223 | CER., 0.022 μ F | C208 | 90328103 | Axial CER., 0.01 μ F |
| C11 | 90418479 | ELY., 4.7 μ F/50V | C209 | 90328103 | Axial CER., 0.01 μ F |
| C12 | 92403077 | ELY., Non Polar 1 μ F/50V | C210 | 90321100 | Axial CER., 10pF |
| C13 | 90351223 | Axial CER., 0.022 μ F | C211 | 90351223 | Axial CER., 0.022 μ F |
| C14 | 90351223 | Axial CER., 0.022 μ F | C212 | 90353102 | Axial CER., 1000pF |
| C15 | 90351223 | Axial CER., 0.022 μ F | C213 | 90351223 | Axial CER., 0.022 μ F |
| C16 | 90351223 | Axial CER., 0.022 μ F | C214 | 90328103 | Axial CER., 0.01 μ F |
| C17 | 90415222 | ELY., 2200 μ F/16V | C215 | 90351223 | Axial CER., 0.022 μ F |
| C18 | 90415331 | ELY., 330 μ F/16V | C216 | 90417100 | ELY., 10 μ F/35V |
| C19 | 90351223 | Axial CER., 0.022 μ F | C217 | 90328103 | Axial CER., 0.01 μ F |
| C20 | 90351223 | Axial CER., 0.022 μ F | C218 | 90353102 | Axial CER., 1000pF |
| C21 | 90416220 | ELY., 22 μ F/25V | C219 | 90418339 | ELY., 3.3 μ F/50V |
| C22 | 90351223 | Axial CER., 0.022 μ F | C220 | 90418339 | ELY., 3.3 μ F/50V |
| C23 | 92340228 | CER., 0.01 μ F/250V | C221 | 90351223 | Axial CER., 0.022 μ F |
| C101 | 90351104 | Axial CER., 0.1 μ F | C222 | 90418478 | ELY., 0.47 μ F/50V |
| C102 | 90351223 | Axial CER., 0.022 μ F | C223 | 90328103 | Axial CER., 0.01 μ F |
| C103 | 90351223 | Axial CER., 0.022 μ F | C224 | 90371822 | Polyester Film, 8200pF |
| C104 | 90353102 | Axial CER., 1000pF | C225 | 90371222 | Polyester Film, 2200pF |
| C105 | 90353101 | Axial CER., 100pF | C226 | 90371473 | Polyester Film, 0.047 μ F |
| C106 | 90415221 | ELY., 220 μ F/16V | C227 | 90416101 | ELY., 100 μ F/25V |
| C107 | 90351223 | Axial CER., 0.022 μ F | C228 | 90351223 | Axial CER., 0.022 μ F |
| C108 | 90353102 | Axial CER., 1000pF | C229 | 90328103 | Axial CER., 0.01 μ F |
| C109 | 90351223 | Axial CER., 0.022 μ F | C230 | 90416220 | ELY., 22 μ F/25V |
| C111 | 90351223 | Axial CER., 0.022 μ F | C231 | 90418479 | ELY., 4.7 μ F/50V |
| C112 | 90351223 | Axial CER., 0.022 μ F | C301 | 90416101 | ELY., 100 μ F/25V |
| C113 | 90351223 | Axial CER., 0.022 μ F | C302 | 90371473 | Polyester Film, 0.047 μ F |
| C114 | 90416101 | ELY., 100 μ F/25V | C303 | 90418109 | ELY., 1 μ F/50V |
| C115 | 90418478 | ELY., 0.47 μ F/50V | C304 | 90418228 | ELY., 0.22 μ F/50V |
| C116 | 90351223 | Axial CER., 0.022 μ F | C305 | 90418109 | ELY., 1 μ F/50V |
| C117 | 90351223 | Axial CER., 0.022 μ F | C306 | 90417100 | ELY., 10 μ F/35V |
| C118 | 90351223 | Axial CER., 0.022 μ F | C307 | 90353102 | Axial CER., 1000pF |
| C119 | 90351223 | Axial CER., 0.022 μ F | C308 | 90417100 | ELY., 10 μ F/35V |
| C120 | 90418229 | ELY., 2.2 μ F/50V | C309 | 90418479 | ELY., 4.7 μ F/50V |
| C121 | 90351223 | Axial CER., 0.022 μ F | C310 | 90418109 | ELY., 1 μ F/50V |
| C122 | 90418229 | ELY., 2.2 μ F/50V | C311 | 90417100 | ELY., 10 μ F/35V |
| C123 | 90351223 | Axial CER., 0.022 μ F | C313 | 90380004 | PP., 750pF |
| C124 | 90415221 | ELY., 220 μ F/16V | C314 | 90380004 | PP., 750pF |
| C125 | 90321330 | Axial CER., 33pF | C315 | 90418229 | ELY., 2.2 μ F/50V |
| C126 | 90417100 | ELY., 10 μ F/35V | C316 | 90418229 | ELY., 2.2 μ F/50V |
| C127 | 90418478 | ELY., 0.47 μ F/50V | C319 | 90418229 | ELY., 2.2 μ F/50V |
| C128 | 90328103 | Axial CER., 0.01 μ F | C320 | 90418229 | ELY., 2.2 μ F/50V |
| C129 | 90418109 | ELY., 1 μ F/50V | C321 | 90371102 | Polyester Film, 1000pF |
| C130 | 90353102 | Axial CER., 1000pF | C322 | 90371102 | Polyester Film, 1000pF |
| C201 | 90351223 | Axial CER., 0.022 μ F | C501 | 90353221 | Axial CER., 220pF |
| C202 | 90351104 | Axial CER., 0.1 μ F | C502 | 90353221 | Axial CER., 220pF |
| C203 | 90321100 | Axial CER., 10pF | C503 | 90321479 | Axial CER., 4.7pF |

| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|------------|----------|------------------|--|--|------------|----------|--------------------------------|--|--|
| R128 | 90512223 | 22k ohm | | | R315 | 90512104 | 100k ohm | | |
| R135 | 90512102 | 1k ohm | | | R316 | 90512104 | 100k ohm | | |
| R201 | 90512102 | 1k ohm | | | R317 | 90512473 | 47k ohm | | |
| R202 | 90512683 | 68k ohm | | | R318 | 90512473 | 47k ohm | | |
| R203 | 90512683 | 68k ohm | | | R319 | 90512103 | 10k ohm | | |
| R204 | 90512101 | 100 ohm | | | R501 | 90512471 | 470 ohm | | |
| R205 | 90512101 | 100 ohm | | | R502 | 90512471 | 470 ohm | | |
| R206 | 90512221 | 220 ohm | | | R503 | 90512473 | 47k ohm | | |
| R207 | 90512103 | 10k ohm | | | R504 | 90512473 | 47k ohm | | |
| R208 | 90512103 | 10k ohm | | | R505 | 90512561 | 560 ohm | | |
| R209 | 90512152 | 1.5k ohm | | | R506 | 90512561 | 560 ohm | | |
| R210 | 90520017 | M.O., 220 ohm 1W | | | R507 | 90512472 | 4.7k ohm | | |
| R211 | 90512683 | 68k ohm | | | R508 | 90512472 | 4.7k ohm | | |
| R212 | 90512103 | 10k ohm | | | R509 | 90512561 | 560 ohm | | |
| R213 | 90512471 | 470 ohm | | | R510 | 90512561 | 560 ohm | | |
| R214 | 90512820 | 82 ohm | | | R511 | 90512102 | 1k ohm | | |
| R215 | 90512222 | 2.2k ohm | | | R512 | 90512102 | 1k ohm | | |
| R216 | 90512222 | 2.2k ohm | | | R513 | 90512103 | 10k ohm | | |
| R217 | 90512273 | 27k ohm | | | R514 | 90512103 | 10k ohm | | |
| R218 | 90520015 | M.O., 100 ohm 1W | | | R515 | 90530005 | Carbon Fuse, 47 ohm 1/4W | | |
| R219 | 90512822 | 8.2k ohm | | | R516 | 90530005 | Carbon Fuse, 47 ohm 1/4W | | |
| R220 | 90512822 | 8.2k ohm | | | R517 | 90512882 | 6.8k ohm | | |
| R221 | 90512822 | 8.2k ohm | | | R518 | 90512882 | 6.8k ohm | | |
| R222 | 90512473 | 47k ohm | | | R519 | 92570743 | M.F., 47k ohm ($\pm 1\%$) | | |
| R223 | 90512473 | 47k ohm | | | R520 | 92570743 | M.F., 47k ohm ($\pm 1\%$) | | |
| R224 | 90512123 | 12k ohm | | | R521 | 92570729 | M.F., 3.3k oh ($\pm 1\%$) | | |
| R225 | 90512473 | 47k ohm | | | R522 | 92570729 | M.F., 3.3k oh ($\pm 1\%$) | | |
| R226 | 90512123 | 12k ohm | | | R523 | 90512152 | 1.5k ohm | | |
| R227 | 90512473 | 47k ohm | | | R524 | 90512152 | 1.5k ohm | | |
| R228 | 90512103 | 10k ohm | | | R525 | 90512472 | 4.7k ohm | | |
| R229 | 90512681 | 680 ohm | | | R526 | 90512472 | 4.7k ohm | | |
| R232 | 90512473 | 47k ohm | | | R527 | 90512472 | 4.7k ohm | | |
| R233 | 90512104 | 100k ohm | | | R528 | 90512472 | 4.7k ohm | | |
| R234 | 90512104 | 100k ohm | | | R529 | 90530003 | Carbon Fuse, 10 ohm 1/4W | | |
| R235 | 90512153 | 15k ohm | | | R530 | 90530003 | Carbon Fuse, 10 ohm 1/4W | | |
| R236 | 90512123 | 12k ohm | | | R533 | 90530003 | Carbon Fuse, 10 ohm 1/4W | | |
| R301 | 90520015 | M.O., 100 ohm 1W | | | R534 | 90530003 | Carbon Fuse, 10 ohm 1/4W | | |
| R302 | 90512332 | 3.3k ohm | | | R535 | 90530004 | Carbon Fuse, 22 ohm 1/4W | | |
| R303 | 90512103 | 10k ohm | | | R536 | 90530004 | Carbon Fuse, 22 ohm 1/4W | | |
| R304 | 90512103 | 10k ohm | | | R537 | 90512472 | 4.7k ohm | | |
| R305 | 90512473 | 47k ohm | | | | | | | |
| R306 | 90512473 | 47k ohm | | | | | | | |
| R307 | 90512104 | 100k ohm | | | | | | | |
| R308 | 90512104 | 100k ohm | | | | | | | |
| R309 | 90512124 | 120k ohm | | | | | | | |
| R310 | 90512124 | 120k ohm | | | | | | | |
| R311 | 90512222 | 2.2k ohm | | | | | | | |
| R312 | 90512222 | 2.2k ohm | | | | | | | |
| R313 | 90512472 | 4.7k ohm | | | | | | | |
| R314 | 90512472 | 4.7k ohm | | | | | | | |

| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|------------|----------|----------------------------------|--|--|------------|----------|-------------------------------|--|--|
| R538 | 90512472 | 4.7k ohm | | | R585 | 90530009 | Carbon Fuse, 2.2 ohm | | |
| R539 | 90512332 | 3.3k ohm | | | R586 | 90530009 | Carbon Fuse, 2.2 ohm | | |
| R540 | 90512332 | 3.3k ohm | | | R587 | 90512221 | 220 ohm | | |
| R541 | 90530003 | Carbon Fuse, 10 ohm 1/4W | | | R588 | 90512221 | 220 ohm | | |
| R542 | 90530003 | Carbon Fuse, 10 ohm 1/4W | | | R589 | 90512221 | 220 ohm | | |
| R543 | 90512103 | 10k ohm | | | R590 | 90512221 | 220 ohm | | |
| R544 | 90512103 | 10k ohm | | | R901 | 90512333 | 33k ohm | | |
| R545 | 90512103 | 10k ohm | | | R902 | 90512333 | 33k ohm | | |
| R546 | 90512103 | 10k ohm | | | R903 | 90512333 | 33k ohm | | |
| R547 | 90530004 | Carbon Fuse, 22 ohm 1/4W | | | R904 | 90512333 | 33k ohm | | |
| R548 | 90530004 | Carbon Fuse, 22 ohm 1/4W | | | R905 | 90512333 | 33k ohm | | |
| R549 | 90512821 | 820 ohm | | | R906 | 90512333 | 33k ohm | | |
| R550 | 90512821 | 820 ohm | | | R907 | 90512333 | 33k ohm | | |
| R551 | 90512821 | 820 ohm | | | R908 | 90512333 | 33k ohm | | |
| R552 | 90512821 | 820 ohm | | | R909 | 90512472 | 4.7k ohm | | |
| R553 | 92134183 | M.P., PEC-RR, 0.22 ohm x 2 5W | | | R910 | 90520016 | M.O., 47 ohm 1W | | |
| R554 | 92134183 | M.P., PEC-RR, 0.22 ohm x 2 5W | | | R911 | 90512151 | 150 ohm | | |
| R555 | 90523220 | M.O., 220 ohm 1W | | | R912 | 90512332 | 3.3k ohm | | |
| R556 | 90523220 | M.O., 220 ohm 1W | | | R913 | 90512332 | 3.3k ohm | | |
| R557 | 90523100 | M.O., 10 ohm 1W | | | R914 | 90512102 | 1k ohm | | |
| R558 | 90523100 | M.O., 10 ohm 1W | | | R915 | 90512102 | 1k ohm | | |
| R559 | 90512103 | 10k ohm | | | R916 | 90520015 | M.O., 100 ohm 1W | | |
| R560 | 90512103 | 10k ohm | | | R917 | 90512473 | 47k ohm | | |
| R561 | 90512472 | 4.7k ohm | | | R918 | 90512473 | 47k ohm | | |
| R562 | 90512472 | 4.7k ohm | | | R919 | 90512473 | 47k ohm | | |
| R563 | 90512104 | 100k ohm | | | R922 | 90512221 | 220 ohm | | |
| R564 | 90512104 | 100k ohm | | | R923 | 90512473 | 47k ohm | | |
| R565 | 90512104 | 100k ohm | | | R924 | 90512473 | 47k ohm | | |
| R566 | 90512104 | 100k ohm | | | R925 | 90512473 | 47k ohm | | |
| R567 | 90512473 | 47k ohm | | | R927 | 90512103 | 10k ohm | | |
| R568 | 90512473 | 47k ohm | | | R930 | 90512473 | 47k ohm | | |
| R569 | 90523332 | M.F., 3.3k ohm 1W | | | R931 | 90512473 | 47k ohm | | |
| R570 | 90523332 | M.F., 3.3k ohm 1W | | | R932 | 90512473 | 47k ohm | | |
| R571 | 90512561 | 560 ohm | | | R933 | 90512473 | 47k ohm | | |
| R572 | 90512561 | 560 ohm | | | R934 | 90512102 | 1k ohm | | |
| R573 | 90512333 | 33k ohm | | | R935 | 90512102 | 1k ohm | | |
| R574 | 90512333 | 33k ohm | | | R936 | 90512102 | 1k ohm | | |
| R575 | 90512104 | 100k ohm | | | R940 | 90512562 | 5.6k ohm | | |
| R576 | 90512104 | 100k ohm | | | R955 | 90513471 | 470 ohm 1/4W | | |
| R577 | 90512104 | 100k ohm | | | R957 | 90512104 | 100k ohm | | |
| R578 | 90512104 | 100k ohm | | | SVR101 | 92658993 | Semi-Variable, 30k ohm(B) | | |
| R581 | 90512470 | 47 ohm | | | SVR102 | 92658944 | Semi-Variable, 10k ohm(B) | | |
| R582 | 90512470 | 47 ohm | | | SVR301 | 92658947 | Semi-Variable, 100k ohm(B) | | |
| R583 | 90530009 | Carbon Fuse, 2.2 ohm | | | SVR501 | 92658943 | Semi-Variable, 5k ohm(B) | | |
| R584 | 90530009 | Carbon Fuse, 2.2 ohm | | | SVR502 | 92658943 | Semi-Variable, 5k ohm(B) | | |

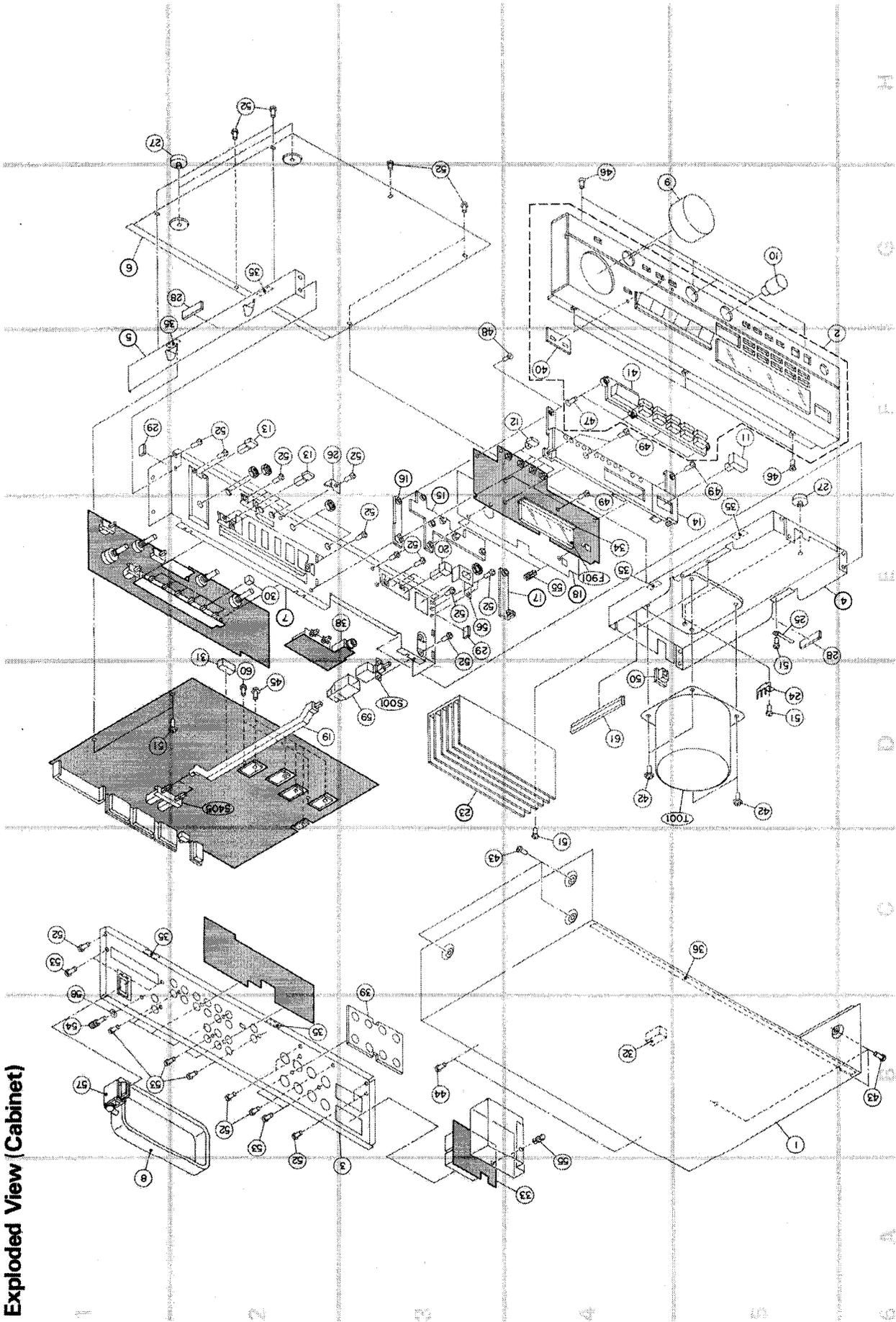
| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|---------------|----------|--------------------|--|--|------------|----------|-------------|--|--|
| Miscellaneous | | | | | | | | | |
| T001 | 92225633 | Trans. Power | | | | | | | |
| S001 | 92190246 | Switch, Push, SDDL | | | | | | | |
| S405 | 92190243 | Switch, Push | | | | | | | |
| P001 | 92176751 | AC Power Cord | | | | | | | |
| FL901 | 92104679 | FL Tube, FIP7F85 | | | | | | | |

Cabinet Assembly Parts List

| Symbol No. | Index | Part No. | Description | | | Symbol No. | Index | Part No. | Description | | |
|------------|-------|----------|---------------------------------------------|--|--|------------|-------|----------|-----------------------------------|--|--|
| 1 | 5-B | 92882649 | Top-Cover | | | 49 | | 92701995 | BID Tapping Screw (M3 x 14) | | |
| 2 | 6-F | 95829760 | Assy. Front Panel | | | 50 | 4-D | 95844322 | Cord-Bush | | |
| 3 | 3-A | 90826849 | Plate-Lack | | | 51 | | 92708962 | Flange, Tapping Screw (M3 x 8) | | |
| 8 | 1-A | 92124825 | Loop-Antenna | | | 52 | | 92707445 | BID Tapping Screw (M3 x 6) | | |
| 9 | 4-G | 90872720 | Knob-Main- Volume | | | 53 | | 92707842 | BID Tapping Screw (M3 x 8) | | |
| 10 | 5-G | 90872728 | Knob-Volume | | | 54 | 1-B | 90794122 | Screw | | |
| 11 | 5-F | 95826942 | Knob-Power | | | 55 | | 90798769 | Special-Rivet | | |
| 12 | 4-F | 95826937 | Button-Push | | | 56 | 3-E | 92755903 | Bracket-Jack | | |
| 13 | 2-F | 95826934 | Knob-Push | | | 57 | 1-B | 92757549 | Holder-Antenna | | |
| 14 | 5-E | 92755900 | Holder-FL | | | 58 | 1-B | 74001030 | Washer (M3) | | |
| 19 | 2-D | 92746739 | Joint-Switch | | | 59 | 3-D | 92758261 | Cover-Switch | | |
| 20 | 3-E | 90872721 | Knob-Push | | | 60 | 2-D | 92708279 | Tapping Screw (M3 x 12) | | |
| 24 | 5-D | 92186459 | Pin-Terminal-8P | | | 61 | 4-D | 92747668 | Barrier | | |
| 25 | 5-E | 92754981 | Lug-Clamp | | | | | | | | |
| 26 | 2-F | 90024231 | Bracket-Panel-A | | | | | | | | |
| 28 | | 92758622 | Cushion-Rubber | | | | | | | | |
| 29 | | 92756664 | Cushion-Rubber | | | | | | | | |
| 30 | 2-E | 92753803 | Spacer-Switch | | | | | | | | |
| 31 | 2-D | 92758624 | Cushion-Rubber | | | | | | | | |
| 32 | 4-B | 92766691 | Cushion-Rubber | | | | | | | | |
| 33 | 4-A | 92747667 | Barrier | | | | | | | | |
| 34 | 4-E | 92766692 | Cushion-NF | | | | | | | | |
| 35 | | 92766613 | Cushion | | | | | | | | |
| 36 | 5-C | 92766690 | Cushion-NF | | | | | | | | |
| 38 | 3-E | 92198320 | JACK-6.5ST | | | | | | | | |
| 39 | 3-C | 92186458 | Terminal-8P | | | | | | | | |
| 40 | 4-F | 92766701 | Cushion-Joint | | | | | | | | |
| 41 | 4-F | 92884899 | Button-Preset | | | | | | | | |
| 42 | | 92708961 | Pan W./Washer, Tapping Screw (M4 x 8) | | | | | | | | |
| 43 | | 92707040 | BID Tapping Screw (M4 x 6) BLK | | | | | | | | |
| 44 | 3-B | 92708330 | BID Tapping Screw (M3 x 8) BLK | | | | | | | | |
| 45 | 2-D | 92701744 | Tapping Screw (M3 x 12) | | | | | | | | |
| 46 | | 92707924 | Counter Sink, Tapping Screw (2.6 x 6) | | | | | | | | |
| 47 | 4-F | 92708349 | Tapping Screw (M2.6 x 6) | | | | | | | | |
| 48 | 3-F | 92708960 | Counter Sink, Tapping Screw (M3 x 16) | | | | | | | | |

NOTE: The parts without part numbers are not supplied.

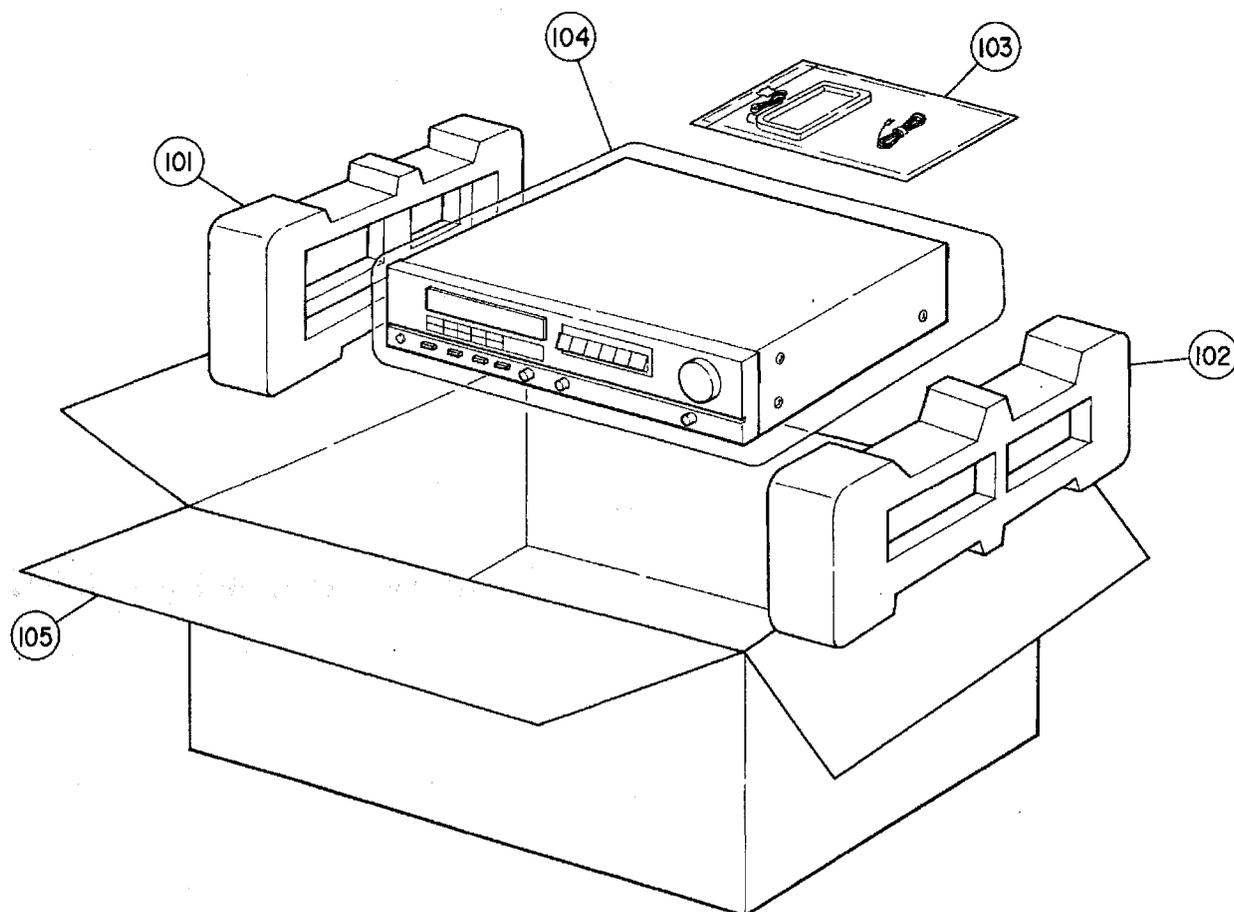
Exploded View (Cabinet)



Packing Assembly Parts List

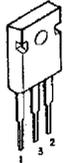
| Symbol No. | Part No. | Description | | | Symbol No. | Part No. | Description | | |
|------------|----------|------------------|--|--|------------|----------|--------------------|--|--|
| 101 | 90939601 | Tray Packing (L) | | | 103-4 | 92954796 | Owners Manual | | |
| 102 | 90939602 | Tray Packing (R) | | | 103-5 | 92124825 | Loop-Antenna | | |
| 103-1 | 92124972 | FM-Antenna | | | 103-6 | 90941655 | Sack, Polyethylene | | |
| 103-2 | 92906880 | Card, Warranty | | | 104 | 92941840 | Sack, Polyethylene | | |
| 103-3 | 92957646 | Card-B-Reply | | | 105 | 92929659 | Carton-Package | | |

Packing Method View

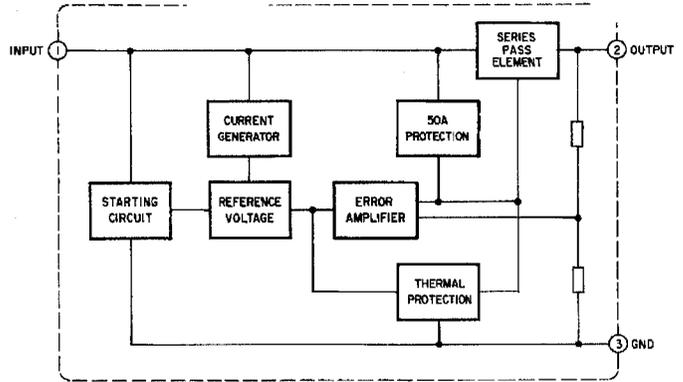


Semi-Conductor Lead Identifications

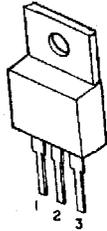
L78M24CX : IC1



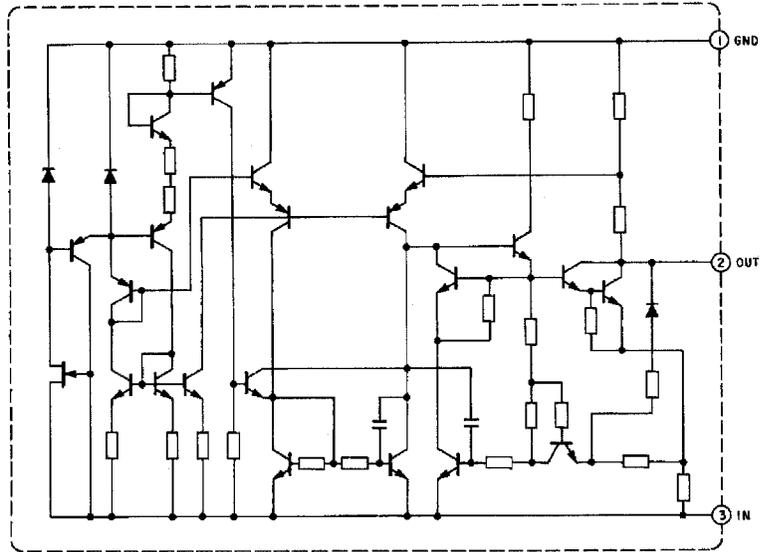
- 1 : INPUT
- 2 : OUTPUT
- 3 : GND



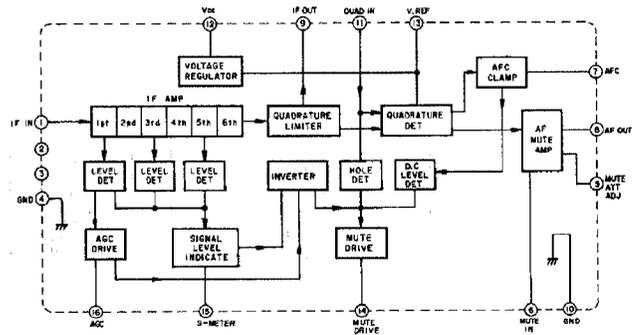
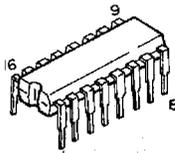
L7924CV : IC2



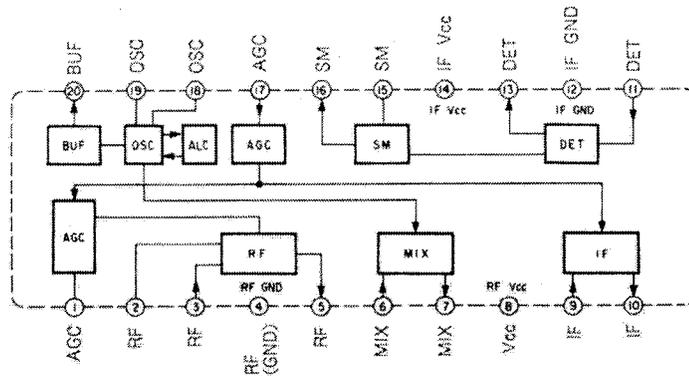
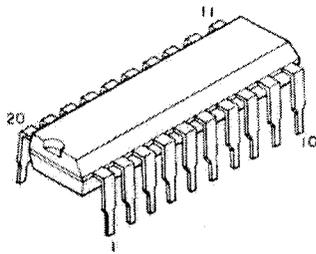
- 1 : GND
- 2 : INPUT
- 3 : OUTPUT



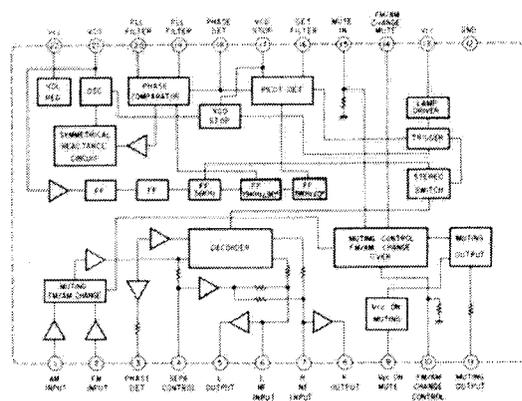
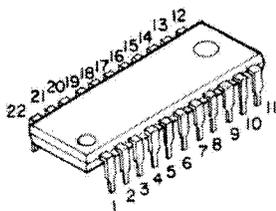
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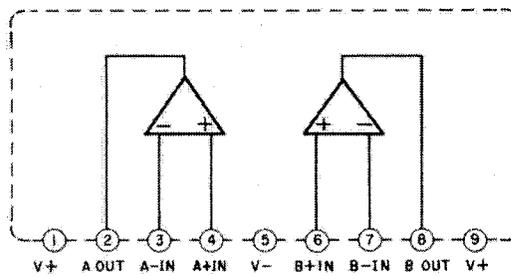
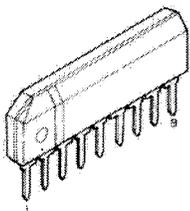
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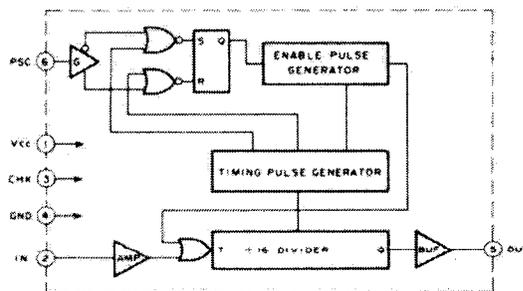
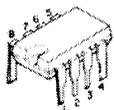
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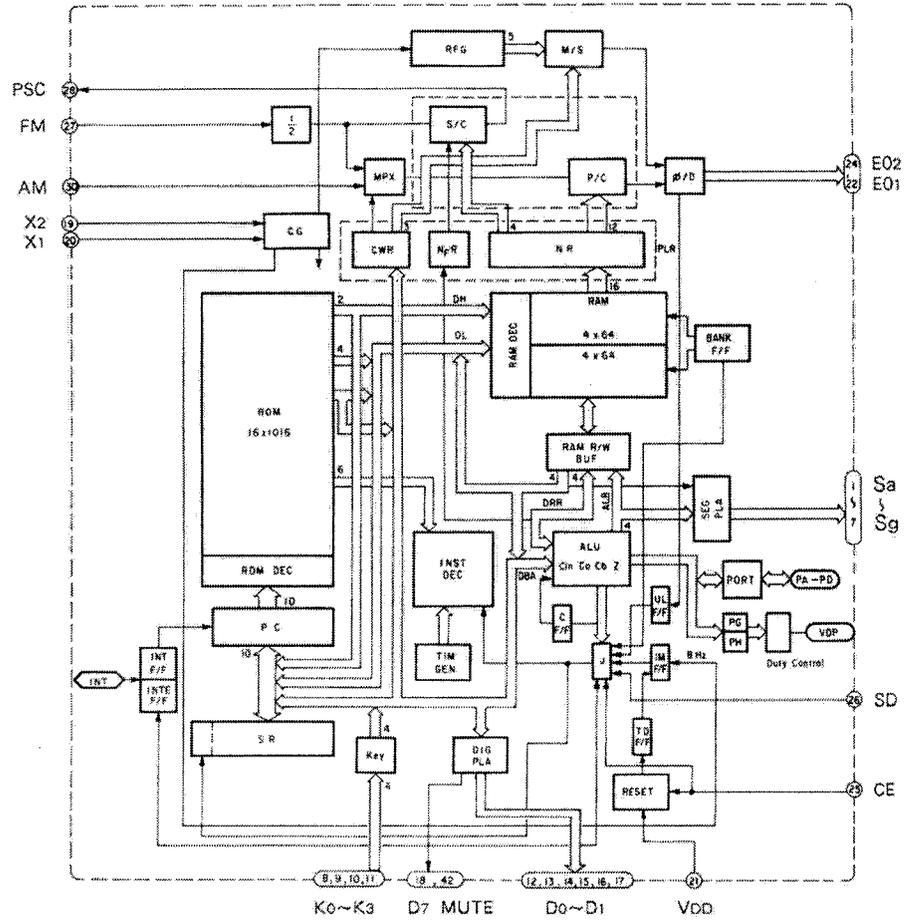
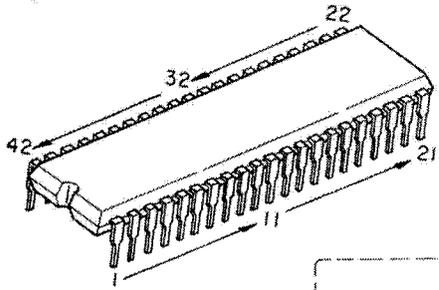
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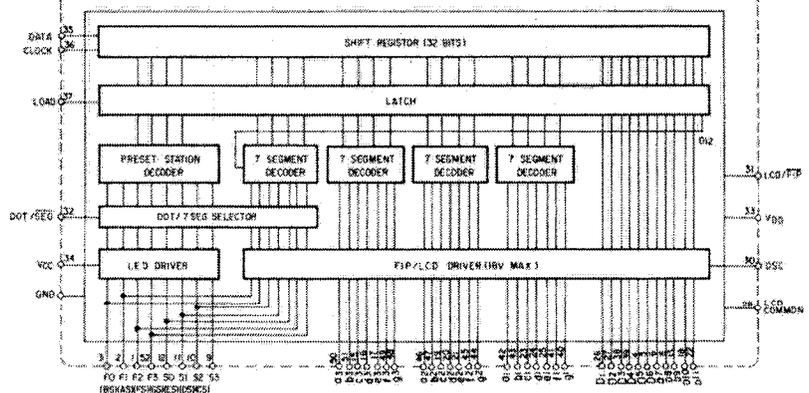
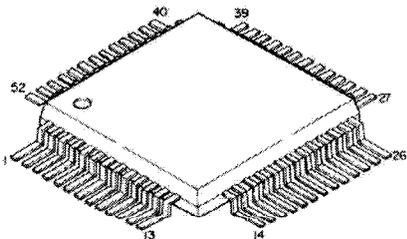
μ PB553AC : IC901



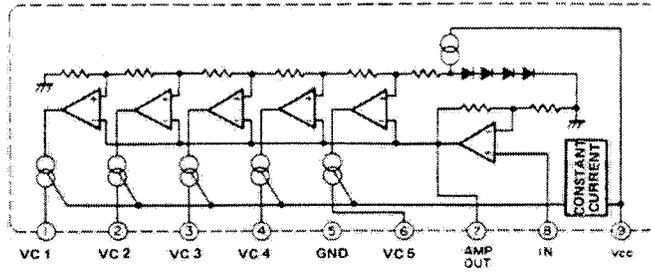
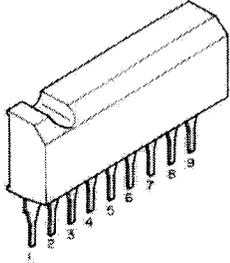
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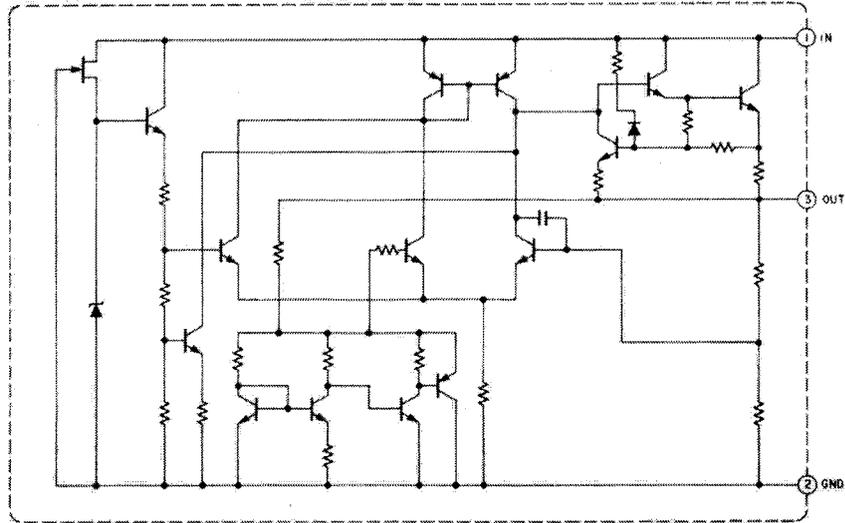
μ PD6321G : IC903



BA6154 : IC904



NJM78L06A : IC905





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LUXMAN R-113 SERVICE MANUAL ERRATA

1. My example does not have idle adjustment testing points TP501A, TP501B, TP502A, and TP502B. However, one can easily take idle adjustment measurements from the outside pins of R553 and R554;
2. My example's Main Board right channel is a mirror image of the left channel the opposite of the schematic in the Service Manual;
3. My example's TR521 and TR522 are silk screened TR551 and TR552.