



**FM/AM COMPACT STEREO
 WITH AUTOMATIC CHANGER
 MODEL SD - 3210
 SERVICE MANUAL**

No. 493

1972

SPECIFICATIONS

| | | | |
|---------------------------|---|----------------------|---|
| CIRCUIT SYSTEM | Solid state FM/AM 2 Band Superheterodyne with FM multiplex stereo adaptor | D 601 VO-6C | }Rectifier |
| TUNING RANGE | FM : 88~108MHz AM : 530~1,605kHz | D 602 VO-6C | |
| INTERMEDIATE FREQUENCY... | FM : 10.7MHz AM : 455kHz | D 603 VO-6C | |
| TRANSISTOR | | D 604 VO-6C | |
| FET | | Z 601 AW01-13..... | Voltage Stabilizer |
| IC | | VR 201 VD-1211 | Voltage stabilizer |
| IC 201 HA-1203 | FM IF Amp, | D 001 HV-80..... | Switching |
| IC 202 TRM-1207 | FM/AM IF Amp. | D 151 1N60 | AM AGC. |
| IC 203 TRM-1209 | FM IF Amp. & DC Amp. | LOUDSPEAKER..... | 7 $\frac{7}{8}$ "(20cm) (8 Ω) \times 2(Woofers) 2 $\frac{3}{16}$ "(6.5cm) (8 Ω) \times 2(Tweeter) |
| IC 401A FA-6001D } | Equalizer | AUDIO OUTPUT | |
| IC 401B FA-6001D } | | POWER SUPPLY | AC 120V 60Hz |
| IC 402 FA-6016 | Pre-amp. | POWER CONSUMPTION... | 75W |
| IC 501A STK-015 } | Power Amp. | ANTENNA | FM : Line cord or ext. antenna AM : Built-in ferrite-core antenna |
| IC 501B STK-015 } | | SENSITIVITY..... | FM : 5 μ V (Max.) 10 μ V (Practical) AM : 150 μ V (Max.) 200 μ V (Practical) |
| DIODE | | TERMINAL | Stereo head phone Jack Rec. jack AUX. jack |
| D 101 HV80..... | FM Llimit. | PLAYER SYSTEM..... | Auto. changer |
| D 102 1S85WT | FM AFC. | DIMENSIONS | RADIO : 4 $\frac{3}{16}$ "(H) \times 18 $\frac{1}{2}$ "(W) \times 15 $\frac{3}{4}$ "(D) (11.6 \times 47 \times 40cm) |
| D 201 1N60 } | FM Ratio Det. | SPEAKER BOX : | 18 $\frac{1}{2}$ "(H) \times 10 $\frac{7}{8}$ "(W) \times 7 $\frac{7}{8}$ "(D) (47 \times 27.5 \times 20cm) |
| D 202 1N60 } | | WEIGHT | RADIO : 25 lbs. 5 oz (11.5kg) SPEAKER BOX : 9 lbs. (4.1kg) \times 2 |
| D 203 1N34A | AM Det. | | |
| D 204 1N34A..... | AM Det. | | |
| D 205 1N60 } | FM Det. | | |
| D 206 1N60 } | | | |

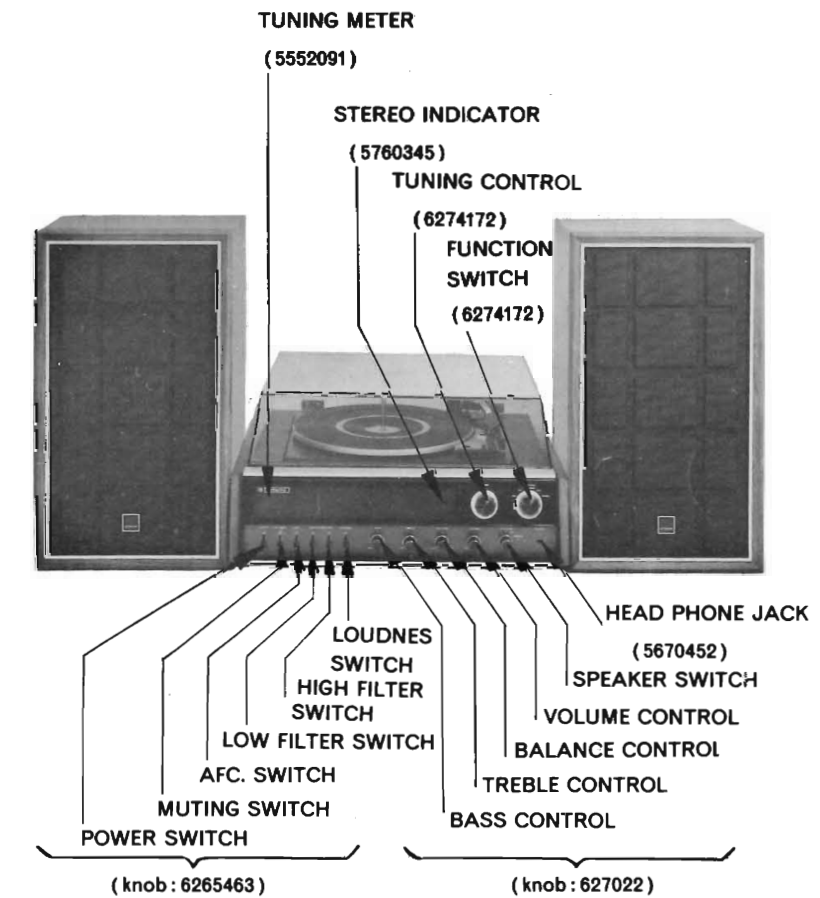
CONTROLS


Fig. 1

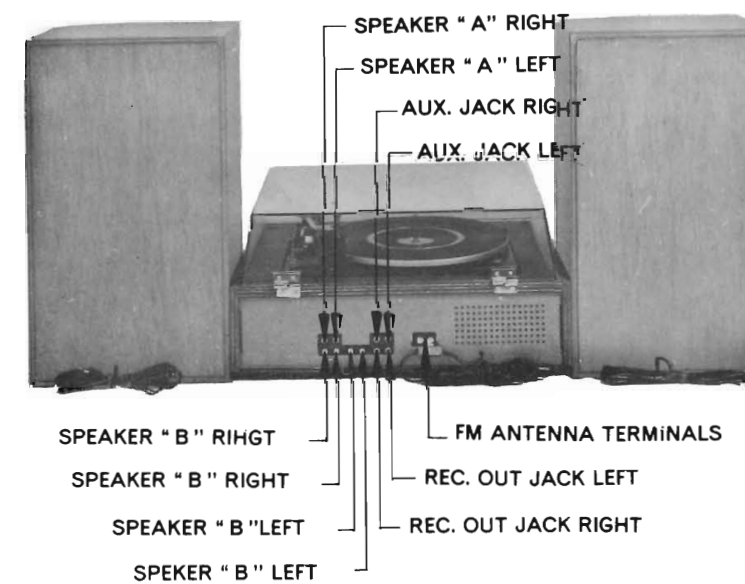


Fig. 2

DISASSEMBLY

1. Removal of back cover

Remove three screws holding back cover shown in Fig. 3.

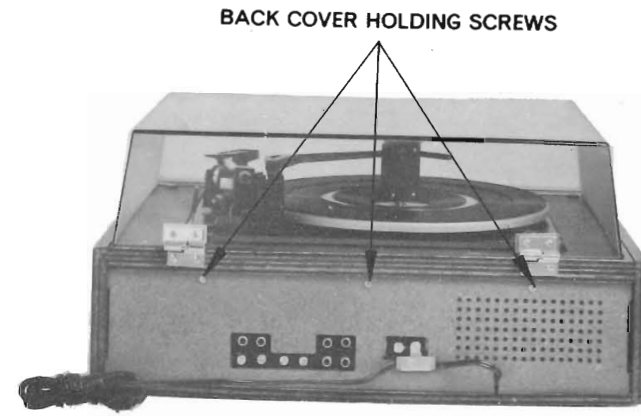


Fig. 3

2. Removal of cabinet

Remove four screws holding cabinet shown in Fig. 4.

3. Removal of chassis

Remove six screws holding chassis shown in Fig. 4.

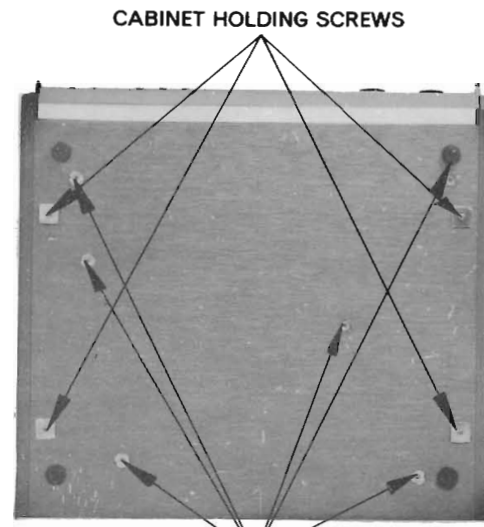


Fig. 4

4. Removal of front panel

After pulling out the thirteen knobs, remove three screws holding front panel shown in Fig. 5.

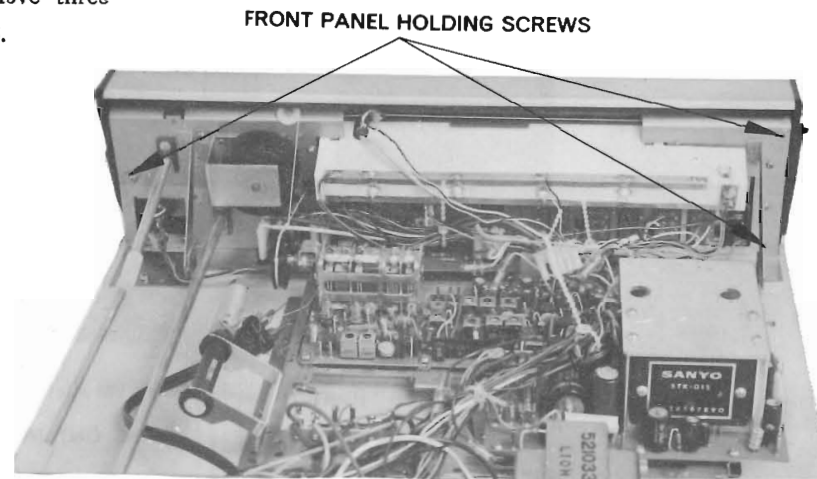


Fig. 5

DIAL CORD RESTRINGING

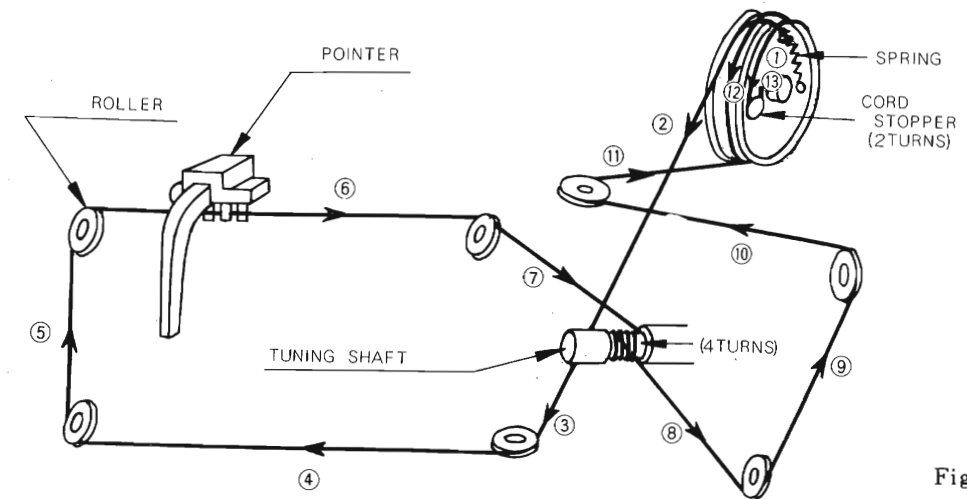


Fig. 6

V. C. POSITION: FULLY COUNTERCLOCKWISE
(HEIGHT FREQUENCY END)

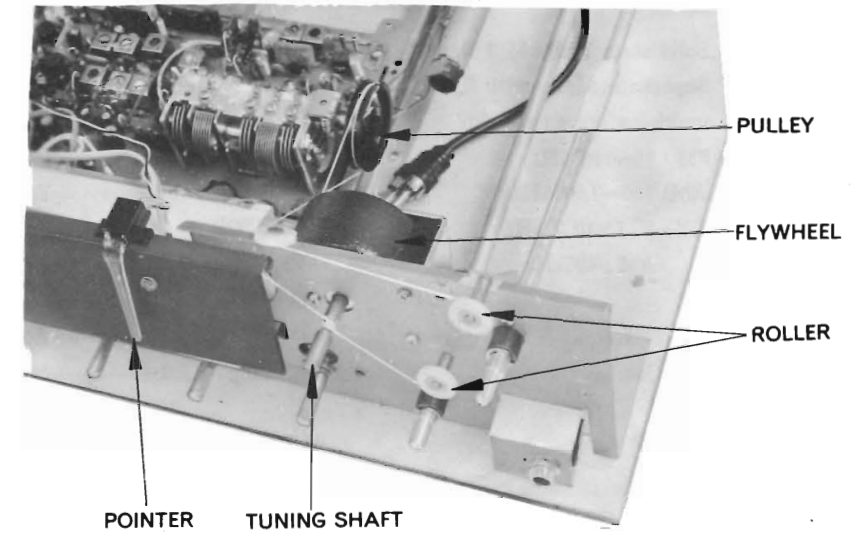


Fig. 7

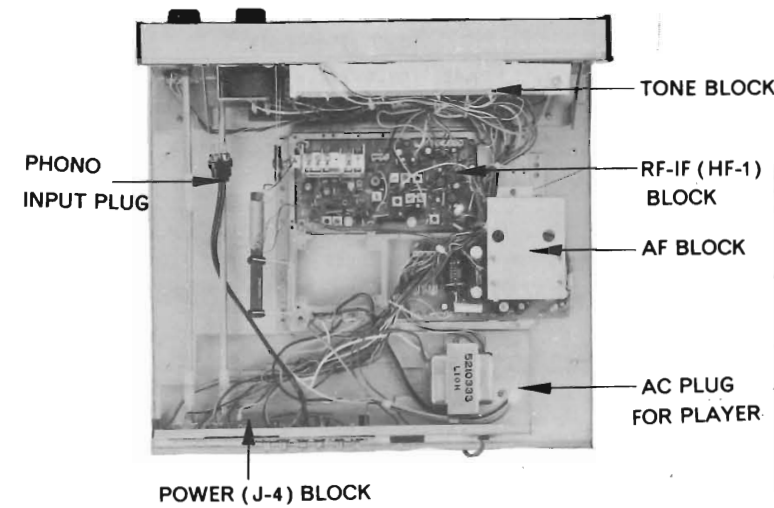


Fig. 8

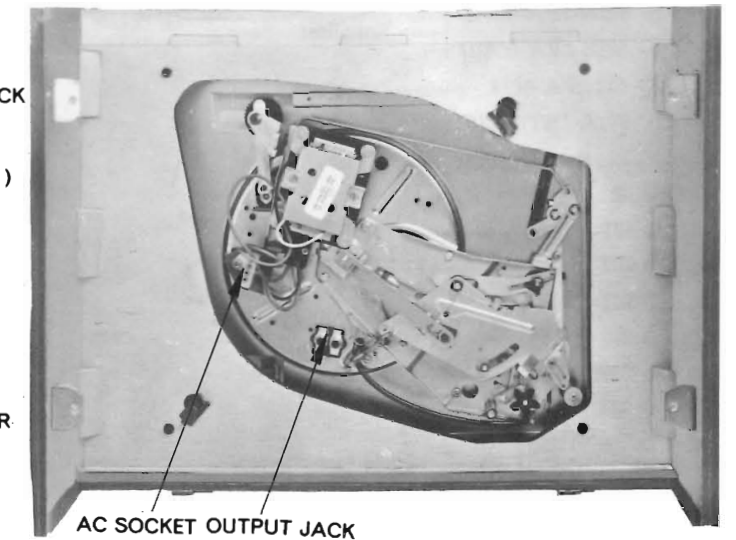


Fig. 9

REPLACEMENT PARTS

INTERNAL VIEW

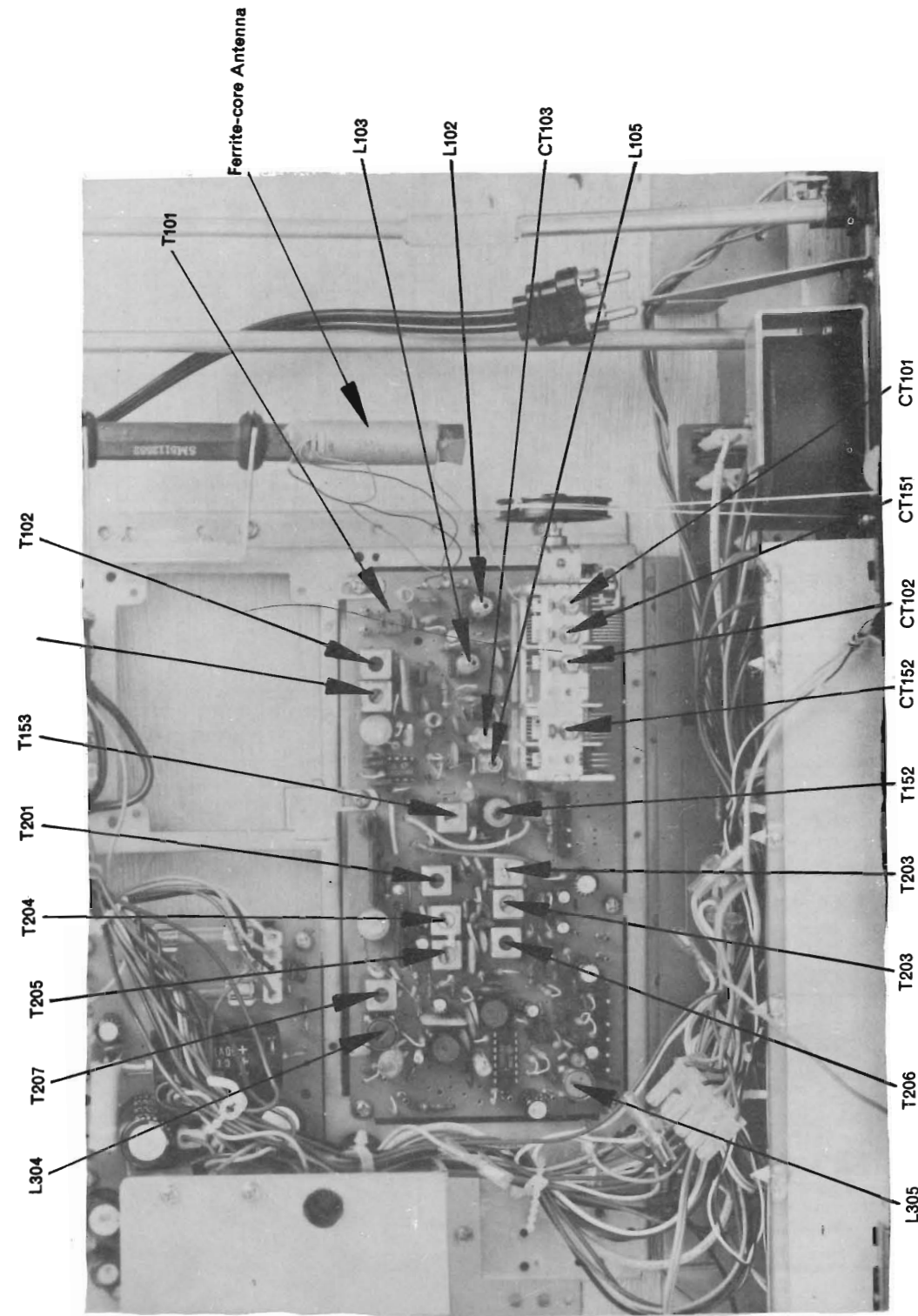
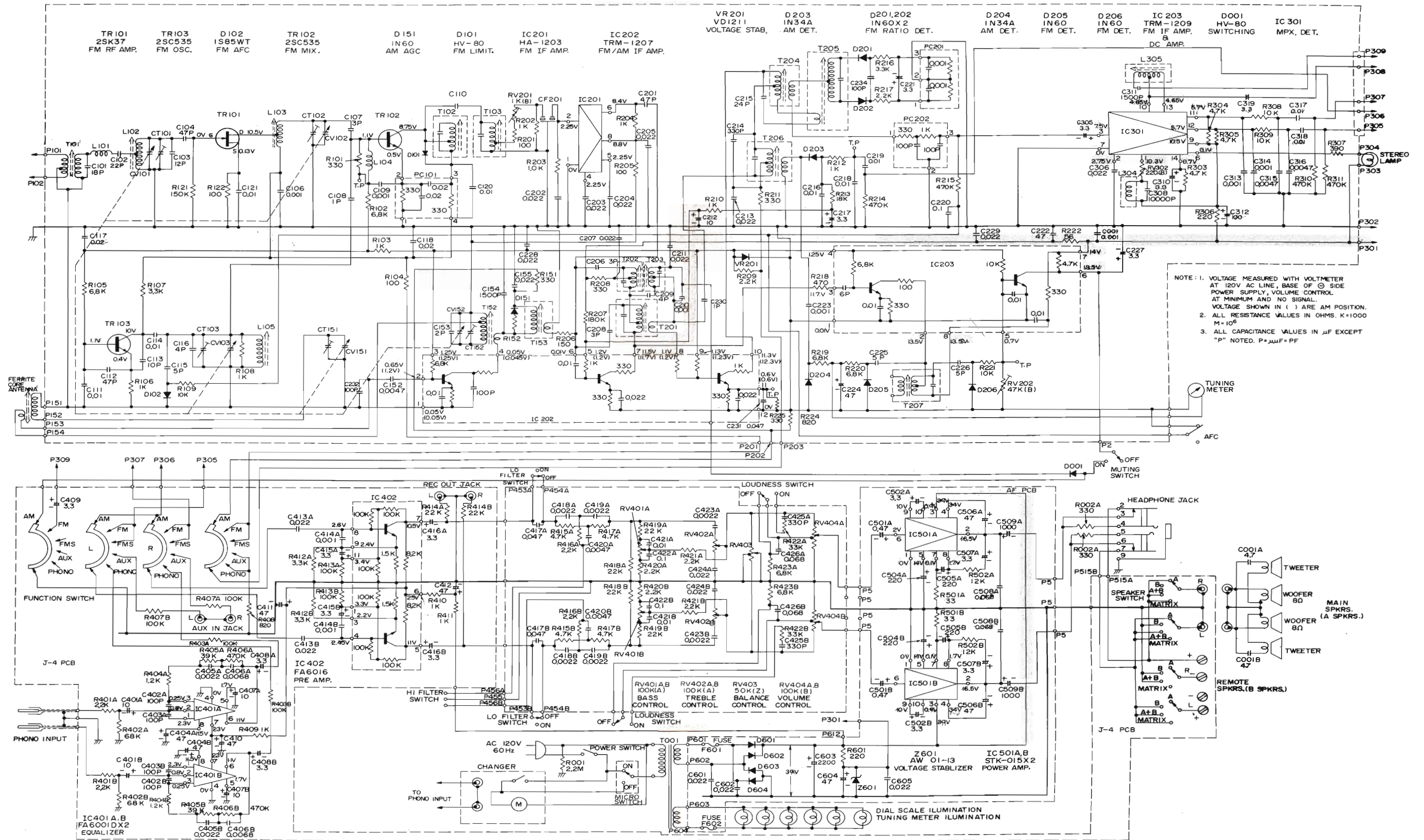


Fig. 10

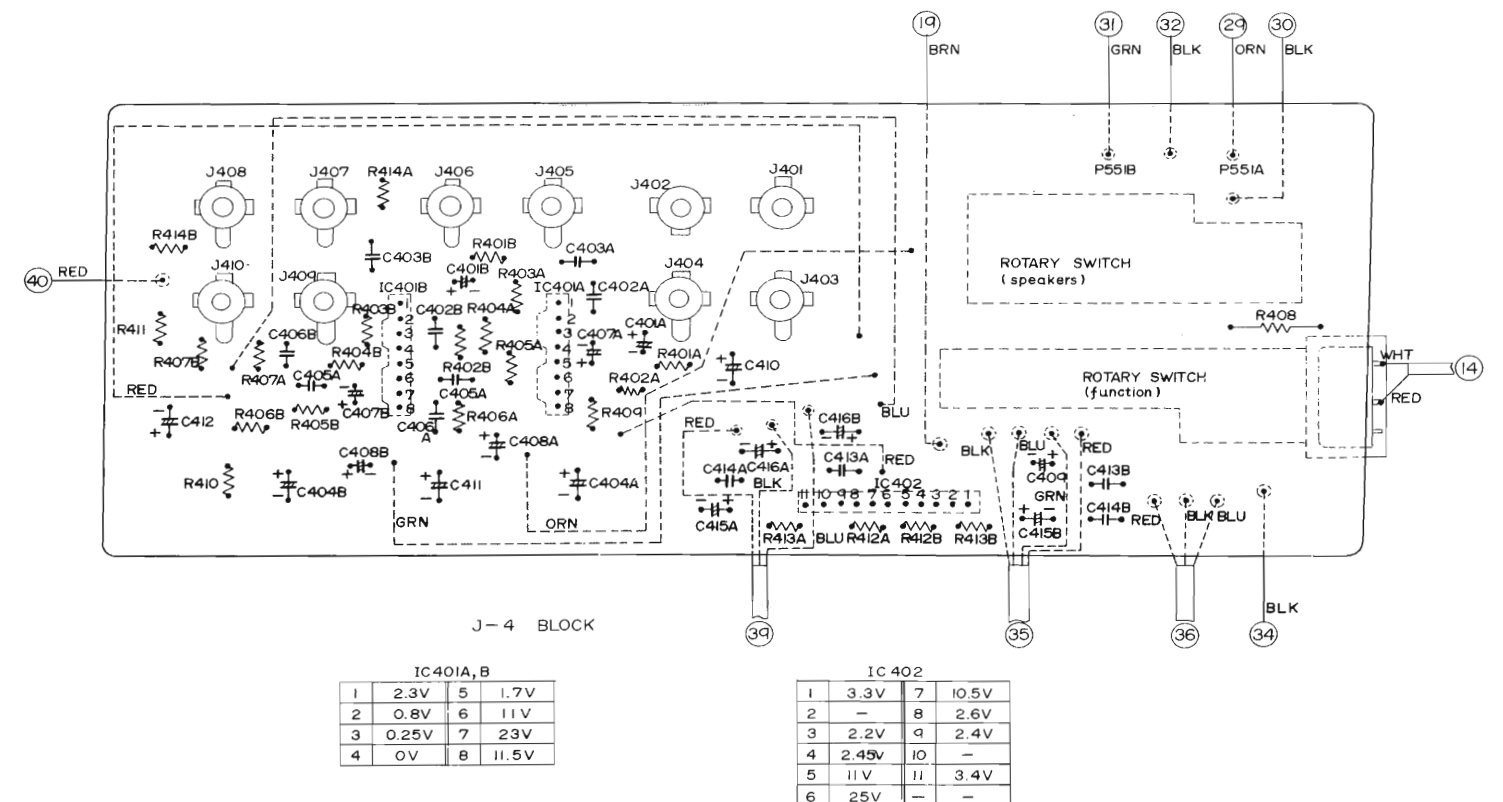
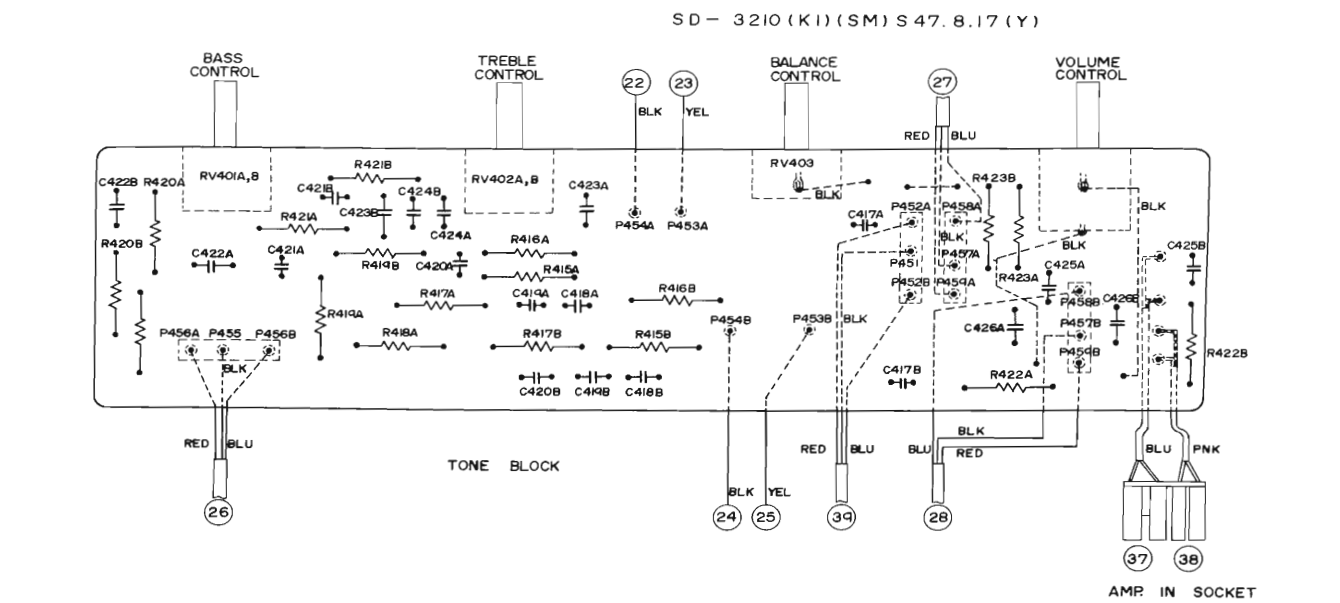
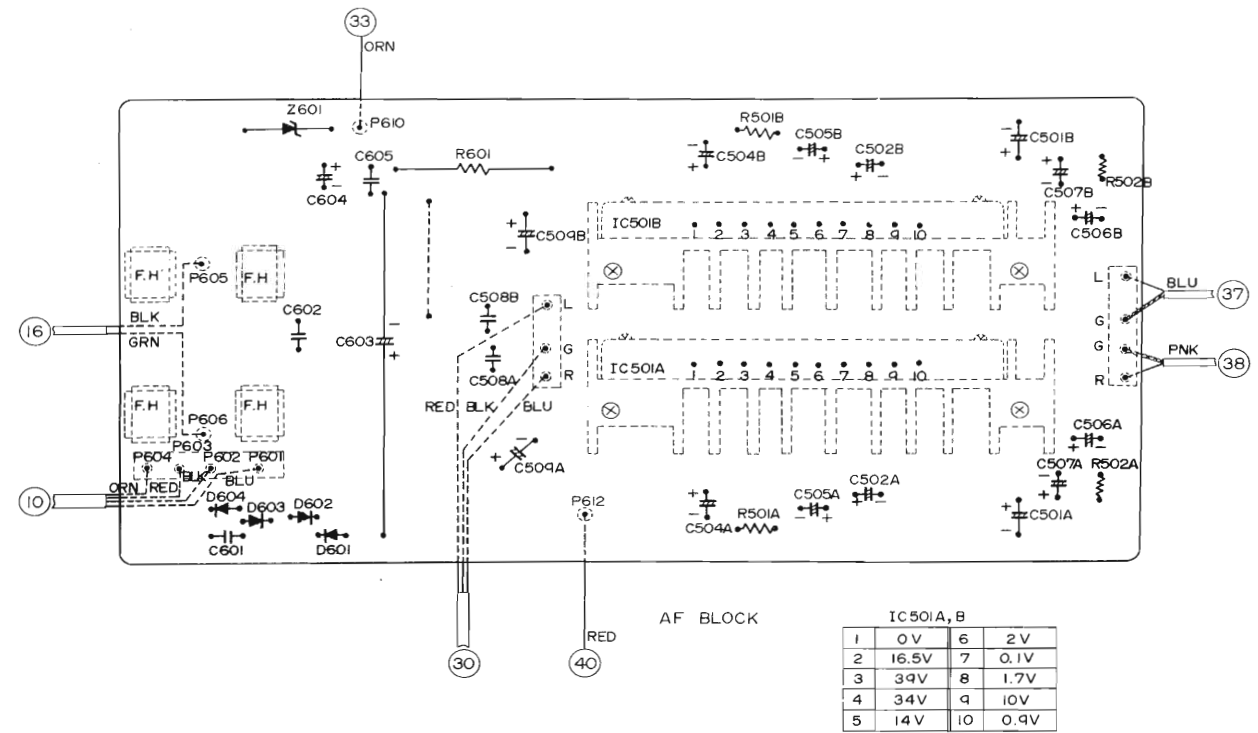
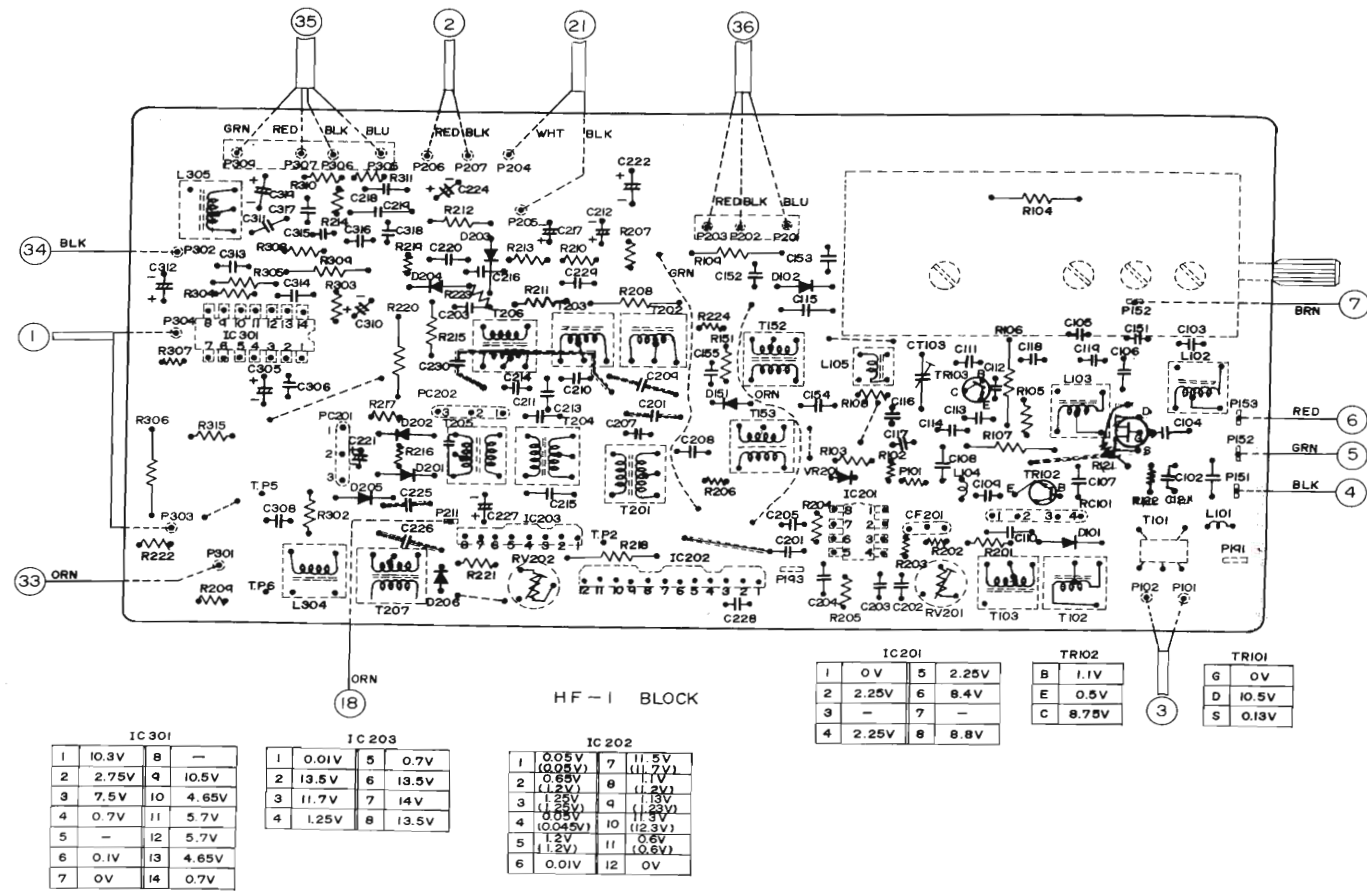
| Symbol No. | Stcok No. | Description | Symbol No. | Stcok No. | Description |
|--------------------|-----------|-----------------|------------|-----------|-----------------|
| CAPACITORS: | | | | | |
| C001A,B | | included SP box | | | |
| C 001 | 0244016 | Ceramic, diacal | C 232 | 0248724 | Ceramic, discal |
| C 101 | 0248706 | Ceramic, discal | C 234 | 0248724 | Ceramic, discal |
| C 102 | 0248708 | Ceramic, biscal | C 301 | 0274113 | Mylar |
| C 103 | 0248662 | Ceramic, discal | C 305 | 0252613 | Electrolytic |
| C 104 | 0248716 | Ceramic, discal | C 306 | 0275113 | Mylar |
| C 106 | 0244016 | Ceramic, discal | C 308 | 0217825 | Styrol |
| C 107 | 0248643 | Ceramic, discal | C 310 | 0252613 | Electrolytic |
| C 108 | 0248641 | Ceramic, discal | C 311 | 0217823 | Mylar |
| C 109 | 0244016 | Ceramic, discal | C 312 | 0252531 | Electrolytic |
| C 110 | 0248645 | Ceramic, discal | C 313 | 0274111 | Mylar |
| C 111 | 0245017 | Ceramic, discal | C 314 | 0274111 | Mylar |
| C 112 | 0248716 | Ceramic, discal | C 315 | 0274115 | Mylar |
| C 113 | 0246430 | Ceramic, discal | C 316 | 0274115 | Mylar |
| C 114 | 0245017 | Ceramic, discal | C 317 | 0275111 | Mylar |
| C 115 | 0241852 | Ceramic, discal | C 318 | 0275111 | Mylar |
| C 116 | 0246424 | Ceramic, discal | C 319 | 0252613 | Electrolytic |
| C 117 | 0245018 | Ceramic, discal | C401A,B | 0252621 | Electrolytic |
| C 118 | 0245018 | Ceramic, discal | C402A,B | 0249719 | Ceramic, discal |
| C 120 | 0275111 | Mylar | C403A,B | 0249719 | Ceramic, discal |
| C 121 | 0245017 | Ceramic, discal | C404A,B | 0252525 | Electrolytic |
| C 122 | 0274115 | Mylar | C405A,B | 0274113 | Mylar |
| C 123 | 0241434 | Ceramic, discal | C406A,B | 0274116 | Mylar |
| C 154 | 0217823 | Mylar | C407A,B | 0252621 | Electrolytic |
| C 155 | 0275113 | Mylar | C408A,B | 0252613 | Electrolytic |
| C 201 | 0248716 | Ceramic, discal | C 409 | 0252613 | Electrolytic |
| C 202 | 0275113 | Mylar | C 410 | 0252625 | Electrolytic |
| C 203 | 0275113 | Mylar | C 411 | 0252825 | Electrolytic |
| C 204 | 0275113 | Mylar | C 412 | 0252825 | Electrolytic |
| C 205 | 0275113 | Mylar | C413A,B | 0275113 | Mylar |
| C 206 | 0248643 | Ceramic, discal | C414A,B | 0274111 | Mylbr |
| C 207 | 0275113 | Mylar | C415A,B | 0252613 | Electrolytic |
| C 208 | 0248643 | Ceramic, discal | C416A,B | 0252613 | Electrolytic |
| C 209 | 0248644 | Ceramic, discal | C417A,B | 0275115 | Mylar |
| C 210 | 0274111 | Mylar | C418A,B | 0274113 | Mylar |
| C 211 | 0275113 | Mylar | C419A,B | 0274113 | Mylar |
| C 212 | 0252621 | Electrolytic | C420A,B | 0274115 | Mylar |
| C 213 | 0275113 | Mylar | C421A,B | 0275111 | Mylar |
| C 214 | 0248736 | Ceramic, discal | C422A,B | 0276111 | Mylar |
| C 215 | 0248669 | Ceramic, discal | C423A,B | 0274113 | Mylar |
| C 216 | 0275111 | Mylar | C424A,B | 0275113 | Mylar |
| C 217 | 0252613 | Electrolytic | C425A,B | 0248736 | Ceramic, discal |
| C 218 | 0275111 | Mylar | C426A,B | 0275116 | Mylar |
| C 219 | 0275111 | Mylar | C501A,B | 0257040 | Electrolytic |
| C 220 | 0276111 | Mylar | C502A,B | 0252613 | Electrolytic |
| C 221 | 0252613 | Electrolytic | C504A,B | 0252632 | Electrolytic |
| C 222 | 0252525 | Electrolytic | C505A,B | 0252332 | Electrolytic |
| C 223 | 0274111 | Mylar | C506A,B | 0252825 | Electrolytic |
| C 224 | 0252225 | Electrolytic | C507A,B | 0252613 | Electrolytic |
| C 225 | 0248645 | Ceramic, discal | C508A,B | 0275116 | Ceramic, discal |
| C 226 | 0248642 | Ceramic, discal | C509A,B | 0256074 | Electrolytic |
| C 227 | 0252613 | Electrolytic | C 601 | 0275113 | Mylar |
| C 228 | 0275113 | Mylar | C 602 | 0275113 | Mylar |
| C 229 | 0275113 | Mylar | C 603 | 0256108 | Electrolytic |
| C 230 | 0248641 | Ceramic, discal | C 604 | 0252525 | Electrolytic |
| C 231 | 0275115 | Mylar | C 665 | 0275113 | Mylar |
| | | | CV101 | | |
| | | | ~103, | | |
| | | | 151~152 | | |
| | | | CT101, | 0281579 | Variable |
| | | | 102, 151, | | |
| | | | 152 | | |
| | | | CT103 | 0283113 | Variable |

CIRCUIT DIAGRAM

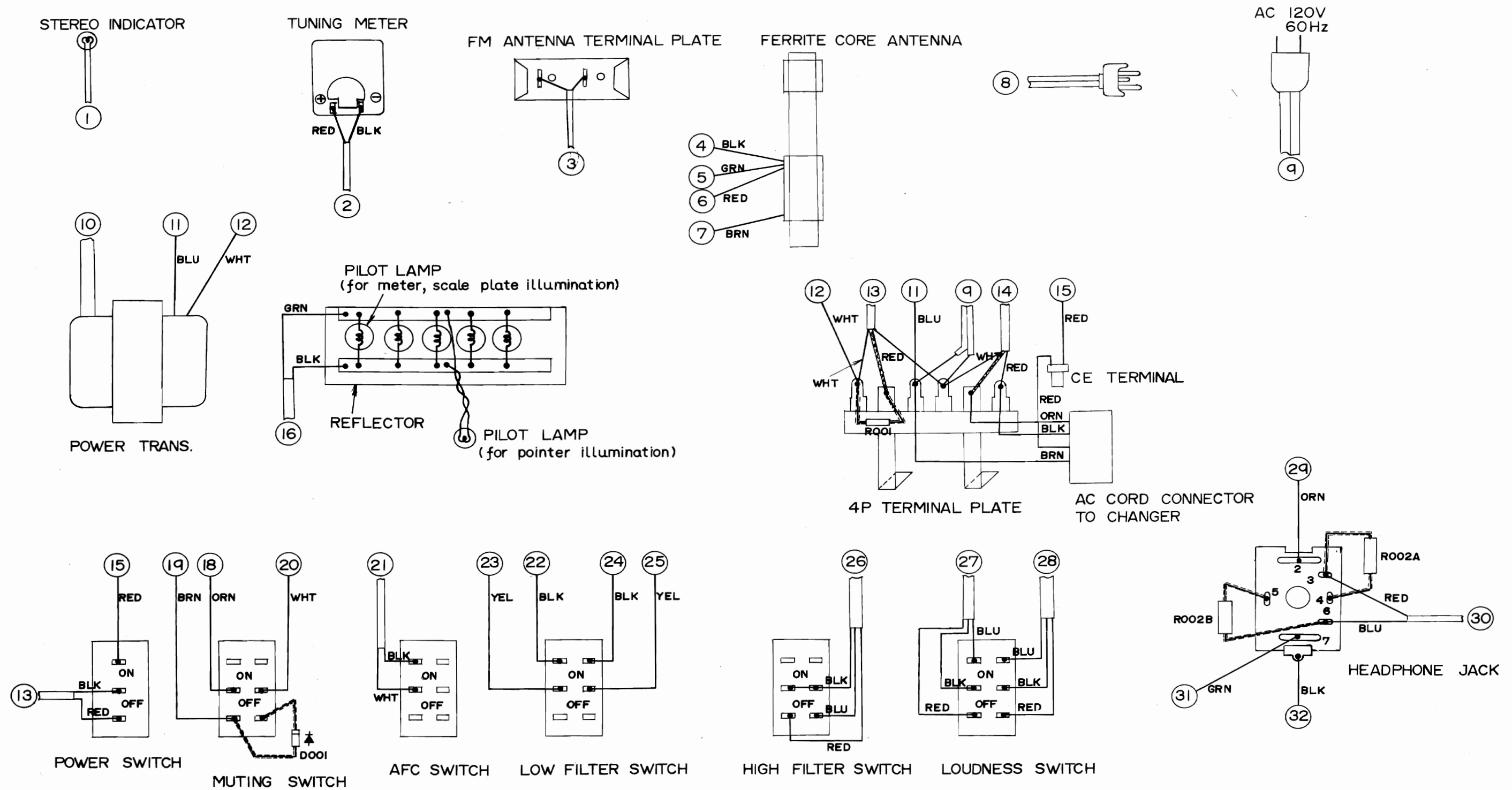


V60-604 V66CX4 RECTIFIER

CIRCUIT BOARD DIAGRAM



WIRING DIAGRAM



| Symbol No. | Stock No. | Description | Symbol No. | Stock No. | Description |
|-------------------|-----------|-------------|------------|-----------|----------------|
| RESISTORS: | | | | | |
| R 001 | 0134477 | Composition | R 412A, B | 0137857 | Carbon film |
| | | 2.2MΩ | R 413A, B | 0137951 | Carbon film |
| R 002A, B | 0134367 | Composition | R 414A, B | 0137905 | Carbon film |
| | | 330Ω ±10% | R 415A, B | 0170259 | Carbon film |
| R 101 | 0114447 | Carbon film | R 416A, B | 0170255 | Carbon film |
| R 102 | 0137861 | Carbon film | R 417A, B | 0170259 | Carbon film |
| R 103 | 0137851 | Carbon film | R 418A, B | 0170275 | Carbon film |
| R 104 | 0170231 | Carbon film | R 419A, B | 0170275 | Carbon film |
| R 105 | 0137861 | Carbon film | R 420A, B | 0170255 | Carbon film |
| R 106 | 0170251 | Carbon film | R 421A, B | 0170255 | Carbon film |
| R 107 | 0170257 | Carbon film | R 422A, B | 0170277 | Carbon film |
| R 108 | 0137851 | Carbon film | R 423A, B | 0170261 | Carbon film |
| R 109 | 0170271 | Carbon film | R 501A, B | 0137765 | Carbon film |
| R 121 | 0137953 | Carbon film | R 502A, B | 0137902 | Carbon film |
| R 122 | 0137801 | Carbon film | R 601 | 0111707 | Oxide metal |
| R 151 | 0137807 | Carbon film | PC 101 | 0186368 | CR pack |
| R 201 | 0137801 | Carbon film | PC 201 | 0186385 | CR pack |
| R 202 | 0137851 | Carbon film | PC 202 | 0186386 | CR pack |
| R 203 | 0137851 | Carbon film | RV 201 | 0151883 | Semi variable |
| R 204 | 0137851 | Carbon film | RV 202 | 0151888 | Semi variable |
| R 205 | 0137801 | Carbon film | RV 302 | 0151881 | Semi variable |
| R 206 | 0137803 | Carbon film | RV401A, B | 0151444 | Variable |
| R 207 | 0137954 | Carbon film | RV402A, B | 0151444 | Variable |
| R 208 | 0170237 | Carbon film | RV 403 | 0151423 | Variable |
| R 209 | 0137855 | Carbon film | RV404A, B | 0151464 | Variable |
| R 210 | 0137851 | Carbon film | CF 201 | 5160211 | Ceramic filter |
| R 211 | 0137807 | Carbon film | | | |
| R 212 | 0114461 | Carbon film | | | |
| R 213 | 0137904 | Carbon film | | | |
| R 214 | 0137959 | Carbon film | | | |
| R 215 | 0137959 | Carbon film | | | |
| R 216 | 0137857 | Carbon film | | | |
| R 217 | 0137855 | Carbon film | | | |
| R 218 | 0170239 | Carbon film | | | |
| R 219 | 0137861 | Carbon film | | | |
| R 220 | 0170261 | Carbon film | | | |
| R 221 | 0114521 | Carbon film | | | |
| R 222 | 0137768 | Carbon film | | | |
| R 224 | 0137812 | Carbon film | | | |
| R 225 | 0137807 | Carbon film | | | |
| R 303 | 0137859 | Carbon film | | | |
| R 304 | 0137859 | Carbon film | | | |
| R 305 | 0137859 | Carbon film | | | |
| R 306 | 0170222 | Carbon film | | | |
| R 307 | 0137808 | Carbon film | | | |
| R 308 | 0170271 | Carbon film | | | |
| R 309 | 0137901 | Carbon film | | | |
| R 310 | 0137959 | Carbon film | | | |
| R 311 | 0137959 | Carbon film | | | |
| R 401A, B | 0137855 | Carbon film | | | |
| R 402A, B | 0137911 | Carbon film | | | |
| R 403A, B | 0137951 | Carbon film | | | |
| R 404A, B | 0137852 | Carbon film | | | |
| R 405A, B | 0137908 | Carbon film | | | |
| R 406A, B | 0137717 | Carbon film | | | |
| R 407A, B | 0137951 | Carbon film | | | |
| R 408 | 0134372 | Carbon film | | | |
| R 409 | 0137851 | Carbon film | | | |
| R 410 | 0137851 | Carbon film | | | |
| R 411 | 0137851 | Carbon film | | | |

| Symbol No. | Stock No. | Description | Symbol No. | Stock No. | Description |
|------------------------------|-----------|---|----------------|-----------|---|
| VR201 | 5340022 | Varistor | 8781438 | | Tapping screw-3mmφ×8mm (2 req'd) for scale plate mounting |
| D 601 | 5330101 | Diode | 6462572 | | Scale plate |
| D 602 | 5330101 | Diode | 6710493 | | Indicator |
| D 603 | 5330101 | Diode | 7662641 | | Rubber plate for pilot lamp (stereo) |
| D 604 | 5330101 | Diode | 5760345 | | Pilot lamp for stereo lamp |
| TRANSFORMERS: | | | | | |
| T 101 | 0318543 | FM balun | 6392491 | | Pointer assembly |
| T 102 | 5142021 | FM IFT | 7666741 | | Rubber plate for pilot lamp (Pointer) |
| T 103 | 5142023 | FM IFT | 5760586 | | Pilot lamp for pointer assembly illumination |
| T 152 | 5120174 | MW (AM) oscillator | 6714211 | | Nylon rivet-3mmφ for reflector plate mounting |
| T 153 | 5132002 | AM IFT | 7722332 | | Reflector plate } (5 req'd) for scale plate illumination |
| T 201 | 0329606 | FM IFT | 7257013 | | Antenna holder |
| T 202 | 0322116 | AM IFT | 8781438 | | Tapping screw-3mmφ×8mm (2 req'd) for antenna supporter mounting |
| T 203 | 0322137 | AM IFT | 0638351 | | Wedge for ferrite-core antenna |
| T 204 | 0326026 | Discriminator | 5112552 | | Ferrite-core antenne |
| T 205 | 0326028 | Discriminator | 5670452 | | Headphone jack |
| T 206 | 0322120 | AM IFT | 5680682 | | FM terminal plate |
| T 207 | 5142022 | FM IFT | 8781438 | | Tapping screw-3mmφ×8mm (6 req'd) for P. C. B (AF-12) mounting (5 req'd) for P. C. B (HF-1) mounting (2 req'd) for P. C. B (JACK) mounting |
| COILS: | | | | | |
| L 101 | 0318530 | FM trap | 8781438 | | Tapping screw-3mmφ×8mm (4 req'd) for radiator plate mounting |
| L 102 | 5123231 | FM antenna | 7255601 | | Radiator plate |
| L 103 | 5123119 | FM antenna | 8781438 | | Tapping screw-3mmφ×8mm (2 req'd) for radiator plate mounting |
| L 104 | 5123271 | FM trap | 5680823 | | 4P terminal plate |
| L 105 | 5126007 | FM oscillator | 8781438 | | Tapping screw-3mmφ×8mm (2 req'd) for 4P terminal plate mounting |
| L 304 | 5120187 | 19KHz tuner | 0043793 | | Bushing for power cord |
| L 305 | 5120189 | 38KHz tuner | 5210333 | | Power transformer |
| for Final assembly | | | | | |
| 6128372 | | Front case assembly | 8781638 | | Tapping screw 4mmφ×8mm (2 req'd) for power transformer mounting |
| 6272022 | | Knob (BASS, TREBLE, BALANCE, VOLUME and SPEAKER) | 5552091 | | Tuning meter |
| 6274171 | | Knob (TUNING) | 7667604 | | Pannel sheet for tuning meter |
| 6274173 | | Knob (FUNCTION) | 7533103 | | Shaft |
| 6310162 | | Spring washer (7 req'd) for knob mounting | 7532345 | | Shaft (B) |
| 6265463 | | Knob-9 (POWER, MUTING, AFC, LOW FILTER, HIGH FILTER and LOUDNESS) | 7532338 | | Shaft |
| 7736801 | | Spacer for knob | 7230903 | | "E" ring |
| 6128181 | | Cabinet bottom plate | 7723061 | | Terminal cover for 4P terminal plate |
| 7780143 | | Screw with washer (6 req'd) for chassis bottom Plate mounting | 6341862 | | Pulley |
| 6128171 | | Cabinet | 6316232 | | Spring for pulley |
| 8711616 | | Pan head screw-4mmφ×16mm } (2 req'd) for lock washer cabinet mounting | 5741042 | | AC cord |
| 0040045 | | | 5741322 | | Phono cable |
| 6725264 | | Dust cover | 5741666 | | Power cord (BROWN) 8Feet |
| 6191072 | | Back cover | 7197661 | | Cord holder } for power cord |
| 8788412 | | Tapping screw-3mmφ×12mm (3 req'd) for button cover mounting | 0043791 | | Cord cover } |
| 6170381 | | Pin jack cover | 6724792 | | U joint |
| 5598531 | | Magnetic cartridge | 5631511 | | Power switch |
| for Chassis assembly | | | | | |
| 6715061 | | Rollar-13mmφ | 8721406 | | Flat screw-3mmφ×6mm (12 req'd) for slide switch mounting |
| 7230902 | | "E" ring-3mmφ (6 req'd) for roller | 5631811 | | Lever slide switch for muting AFC, low filter, high filter and loudness |
| 7253531 | | Switch bracket | 5720263 | | Fuse (4A) |
| 8781438 | | Tapping screw-3mmφ×8mm (2 req'd) for switch bracket mounting | 5650481 | | 3P socket (TONE↔LOUDNESS) ℓ=250 |
| 6371051 | | Flywheel assembly | 5650483 | | 3P socket (TONE↔HI FILTER) ℓ=150 |
| 8711404 | | Pan head screw-3mmφ×4mm (3 req'd) for flywheel bracket mounting | 5650619 | | 4P socket (TONE↔AF) ℓ=50 |
| for P. C. B. assembly | | | | | |
| P305 | ~309 | 5660623 | 5P plug | | |
| P101 | ~102 | | | | |
| P204 | ~207 | 0542109 | Plug | | |
| P301 | ~304 | | | | |
| | | 5680692 | Earth terminal | | |

MODEL SD-3210 SERVICE MANUAL

| Symbol No. | Stock No. | Description | Symbol No. | Stock No. | Description |
|------------|-----------|--|------------|-----------|--|
| | 8781436 | Tapping screw- $3\text{mm}\phi\times 6\text{mm}$ (4 req'd) for radiator plate mountina | | 5610633 | Rotary switch for function |
| | 8781442 | Tapping screw- $3\text{mm}\phi\times 12\text{mm}$ (4 req'd) for IC mounting | | 5660621 | 3P plug |
| | 7255602 | Radiator plate | | 5660622 | 4P plug |
| | 5720221 | Fuse holder | P201 | 0542109 | GT pin |
| | 0542109 | Plug | ~203 | 5660621 | 3P plug |
| | 5660621 | 3P plug | | 6152751 | Speaker box |
| | 5660622 | 4P piug | | 7772452 | Nut (16 req'd) for speaker mounting |
| | 7263151 | Radiafor plate | | 5411431 | Speaker- 20cm |
| | 0541209 | GT pin | | 5410621 | Speaker- 6.5cm |
| | 5671531 | Jack pin | | 8775413 | Oval wood screw- $3.1\text{mm}\phi\times 13\text{mm}$ (16 rep'd) for bottom cover mounting |
| | 5680951 | Screw terminal | | 5742811 | Speaker cord |
| | 5610521 | Rotary switch for speaker | | | |



Head Office : 5,1-chome, Marunouchi, Chiyoda-ku, Tokyo
 Tel. Tokyo (212) 1111 (80 lines)
 Cable Address : "HITACHY" TOKYO
 Codes : All Codes Used

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 '72 Aug. (Y)