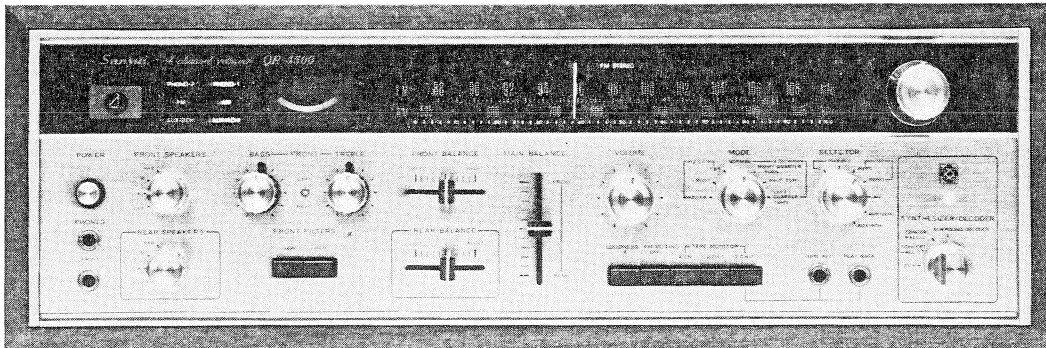




# SERVICE MANUAL

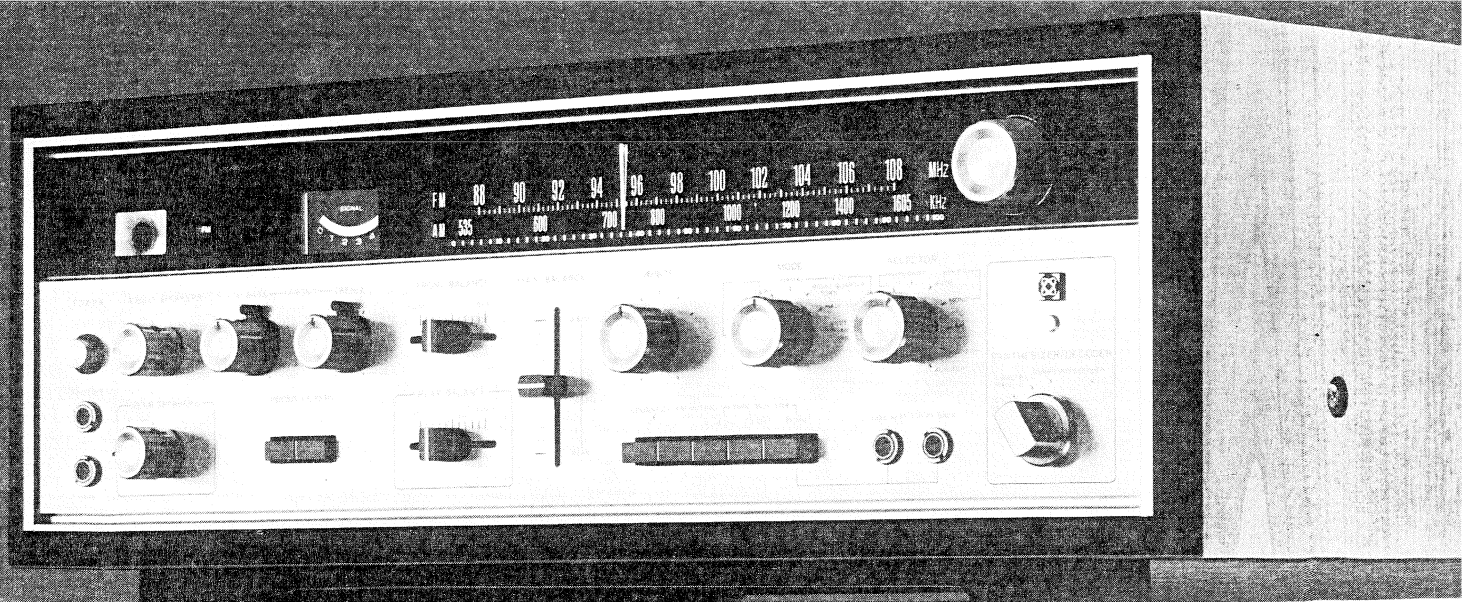
4-CHANNEL RECEIVER

## SANSUI QR-4500



**Sansui**

SANSUI ELECTRIC COMPANY LIMITED



# GENERAL TROUBLESHOOTING CHART

If the receiver is otherwise operating satisfactorily, the more common causes of trouble may generally be attributed to the following:

1. Incorrect connections or loose terminal contacts. Check the speakers, turntable, tape deck, antenna and power cord.
2. Improper operation. Before operating any audio com-

ponent, be sure to read its manufacture's instructions.

3. Improper location of audio components. The proper positioning of components, such as speakers and turntable, is essential to the maximum stereo enjoyment.

4. Defective audio components.

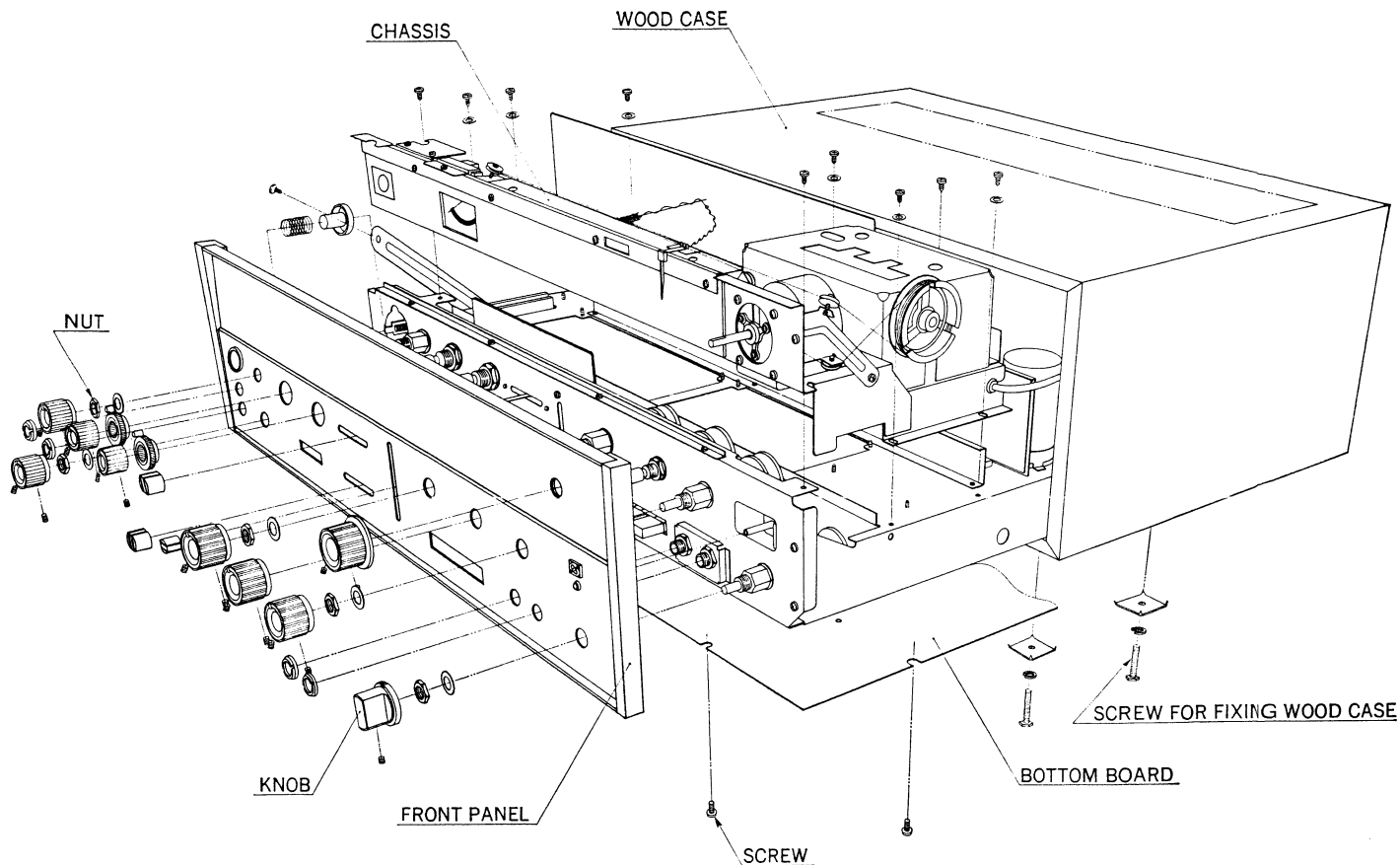
The following are some other common causes of malfunction and what to do about them.

| PROGRAM                 | SYMPTOM  | PROBABLE CAUSE  | WHAT TO DO   |
|-------------------------|--|---|--|
| AM, FM or MPX reception | A. Constant or intermittent noise heard at times or in certain areas   | <ul style="list-style-type: none"> <li>* Discharge or oscillation caused by electrical appliances, such as fluorescent lamp, TV set, D.C. motor rectifier or oscillator.</li> <li>* Natural phenomena, such as atmospheric, static or thunderbolts</li> <li>* Insufficient antenna input due to ferroconcrete wall or long distance from station</li> </ul> | <ul style="list-style-type: none"> <li>* Attach noise limiter to electrical appliance producing noise, or attach it to the receiver's power source</li> <li>* Install outdoor antenna and ground receiver to raise SN ratio</li> <li>* Reverse power cord plug/receptacle connections</li> <li>* If noise occurs at certain frequency, attach wave trap to input</li> <li>* Keep receiver at proper distance from other electrical appliances</li> </ul> |
| AM reception            | A. Noise heard at a particular time of a day, in a certain area or over part of dial   | * Peculiar to AM broadcasts   | <ul style="list-style-type: none"> <li>* Install antenna for maximum antenna efficiency. See "RADIO RECEPTION" in operating instructions booklet</li> <li>* In some cases, noise can be eliminated by grounding receiver or reversing power cord plug/receptacle connections</li> </ul>  |
|                         | B. High-frequency noise  | <ul style="list-style-type: none"> <li>* Adjacent-channel interference or beat interference</li> <li>* TV set too close to audio system</li> </ul>  | <ul style="list-style-type: none"> <li>* Such noise cannot be completely eliminated by the receiver, but it is advisable to turn Treble control counterclockwise turn on HighF filter</li> <li>* Keep TV set at proper distance from stereo system</li> </ul>  |
| FM reception            | A. Noisy   | * Poor noise limiter effect or too low SN ratio due to insufficient antenna input   | <ul style="list-style-type: none"> <li>* Install antenna (supplied) for maximum signal strength</li> <li>* If this does not prove effective, use exclusive FM outdoor antenna. If using TV antenna for both TV and FM with a divider, make sure TV reception is not affected</li> <li>* Exclusively long lead-in wire of antenna may cause noise</li> </ul>  |
|                         | Note: FM reception is affected considerably by transmission conditions of station, such as power and antenna efficiency. As a result, you may receive one station quite well while receiving another station poorly. |   |  |
|                         | B. A series of pops  | * Ignition noise caused by starting of nearby automobile engine   | * Install antenna and its lead-in wire at proper distance from street or increase antenna input as described before  |
|                         | C. Tuning noise between stations   | <ul style="list-style-type: none"> <li>* Results from nature of FM reception</li> <li>* FM Muting Release switch depressed</li> </ul>   | <ul style="list-style-type: none"> <li>* Release FM Muting Release switch</li> <li>* Ditto</li> </ul>  |

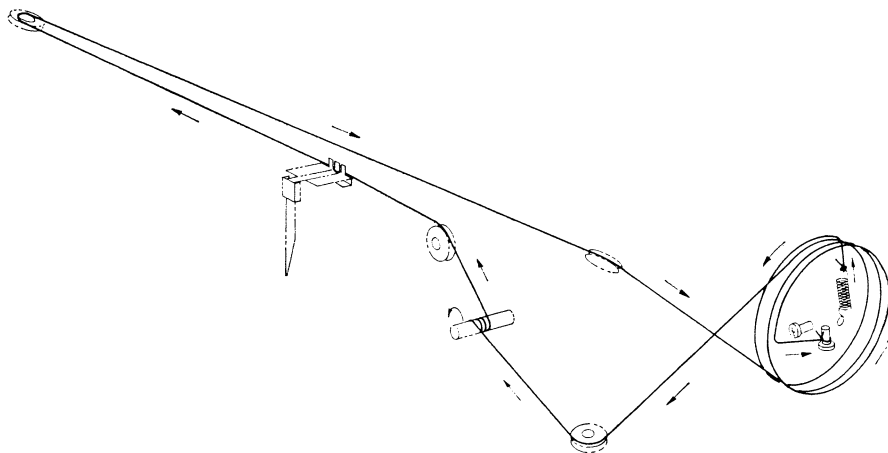
| PROGRAM                         | SYMPTOM   | PROBABLE CAUSE   | WHAT TO DO  |
|---------------------------------|---|--|---|
| FM-MPX reception                | A. Noise heard during FM-MPX reception but inaudible during FM mono reception | * Weaker signal because service area of FM-MPX broadcast is only half that of FM mono broadcast  | * Orient antenna for maximum antenna input<br>* Switch on High Filter and/on turn Treble control counterclockwise   |
|                                 | B. Channel separation deteriorates during reception                           | * Excess heat  | * Circulation of room air is important to receiver. Be sure that receiver is well ventilated  |
|                                 | C. Stereo indicator blinks on and off   | * Interference   | * Indicator is not faulty, adjust VR <sub>402</sub>   |
| Record playing or tape playback | A. Hum or howling   | * Turntable placed directly on speaker<br>* Wire other than shielded cable used<br>* Loose terminal contact<br>* Shielded cable too close to power cord, fluorescent lamp or other appliances<br>* Nearby amateur radio station or TV transmission antenna | * Place cushion between turntable and speaker cabinet or place them away from each other<br>* Connecting shielded cables should be as short as possible<br>* Turn on Low Filter and turn Bass control counterclockwise<br>* Consult nearest Radio Regulatory Bureau |
|                                 | B. Surface noise  | * Worn or old record<br>* Worn phono stylus<br>* Phono stylus is dusty<br>* Improper stylus pressure   | * Recondition playback head of tape deck or the stylus of turntable<br>* Turn Treble control counterclockwise<br>* Turn High Filter on  |
| 4-channel stereo playback       | A. Position of musical instruments and voice not clear                        | * Incorrect phasing of speakers or input connections   | * Check phasing of speakers and input connections<br>* Change rear speaker position and/or direction  |

# DISASSEMBLY PROCEDURE

## REMOVING THE FRONT PANEL, WOOD CASE AND BOTTOM BOARD



## DIAL MECHANISM

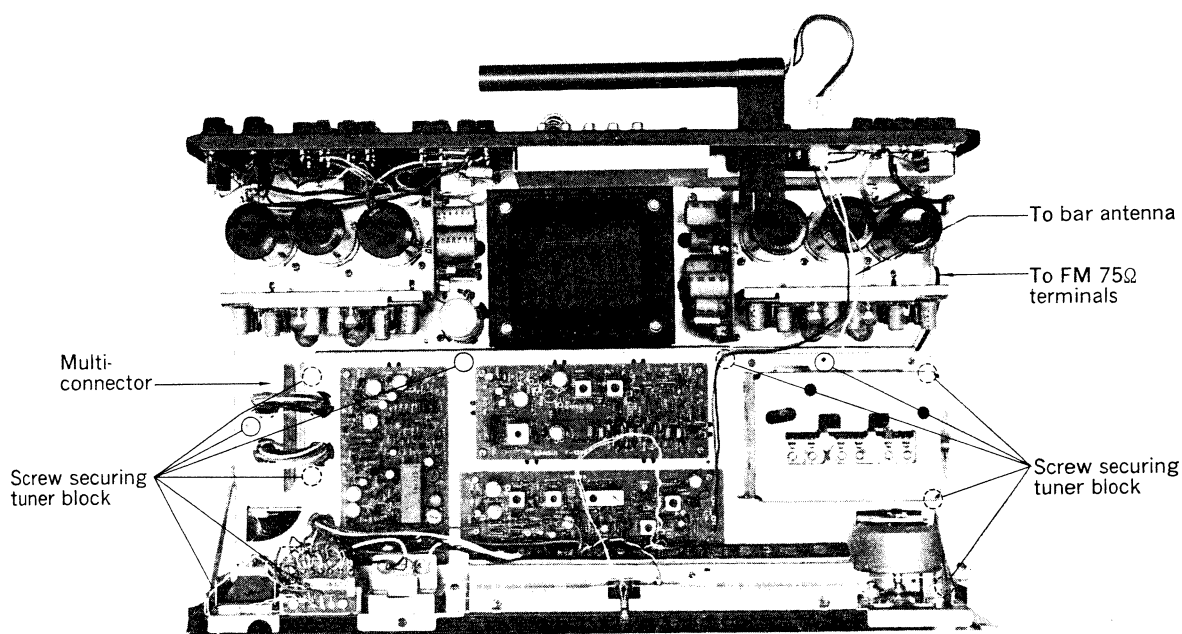


The Tuner Block, if necessary, can be independently separated from the rest of the receiver for examination and servicing purposes. To do so, follow these simple steps:

1. Remove the eleven screws fastening the Tuner Block to the receiver proper.
2. Free the Tuning Control and pull it out. The Tuner Block now floats freely off the receiver proper, but if you need disconnect it completely, move

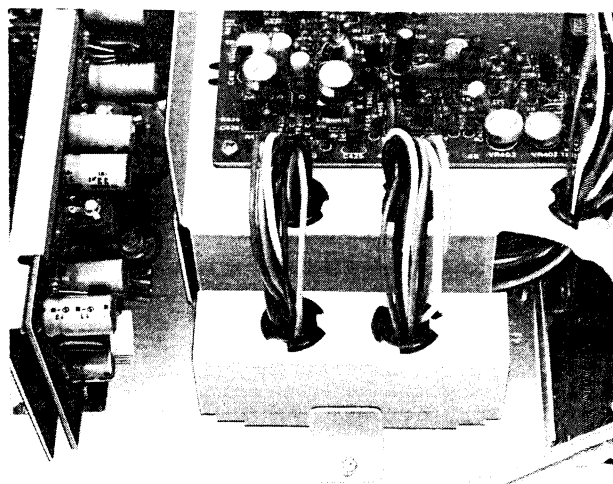
on to steps 3~5.

3. Unplug the multi-connector (see photo below) very carefully.
4. Pull off the lead wires of the AM ferrite bar antenna. (When you re-assemble, connect the grey wire to F-1038-5 (3A), the black one to F-1038-5 (3B), and the white one to VC<sub>001</sub>).
5. Disconnect, in the middle, the coaxial cable connecting the FM 75Ω terminals to the FM Frontend.

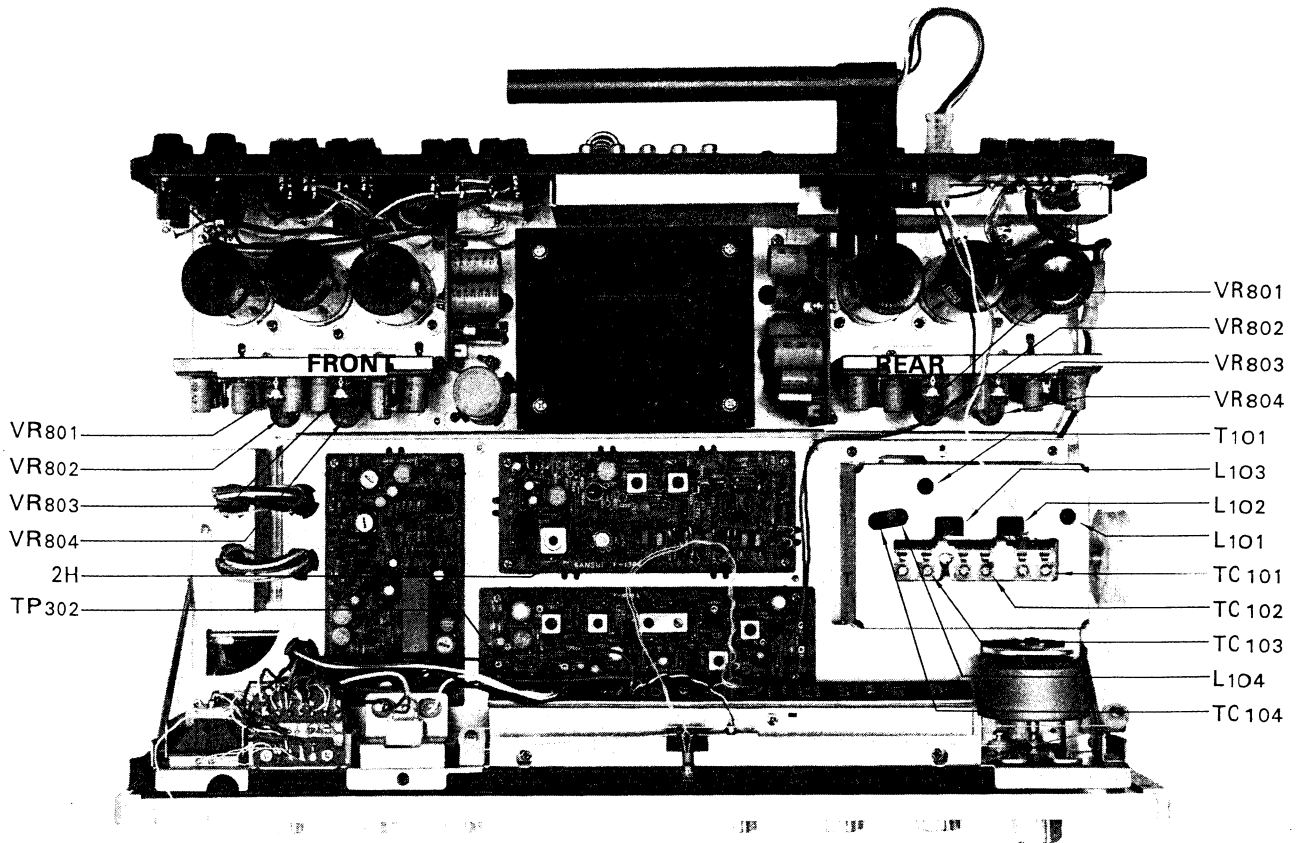


#### CAUTION

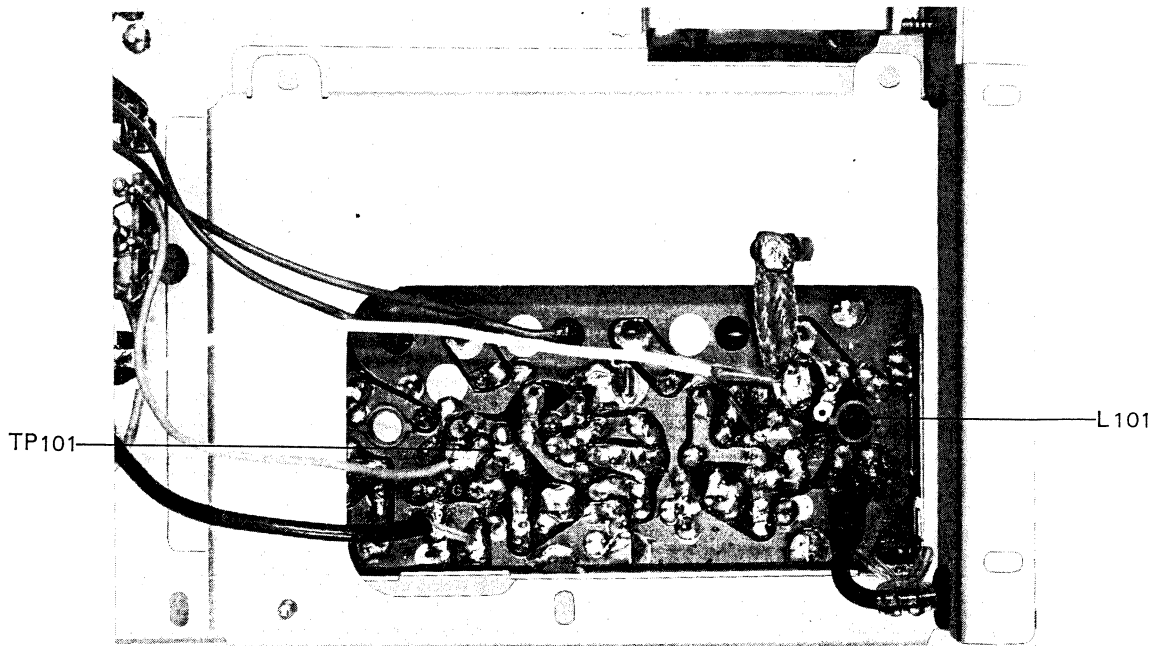
When re-inserting the multi-connector to align the Tuner Block already dismantled or to re-assemble the block itself, be very careful to insert it exactly the same way it was inserted before.



# TEST POINTS



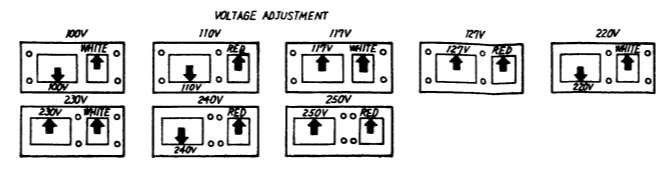
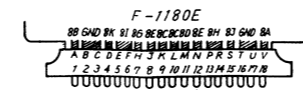
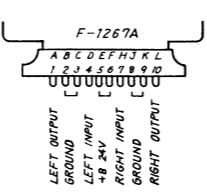
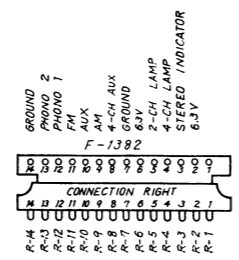
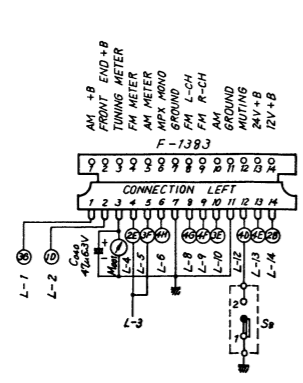
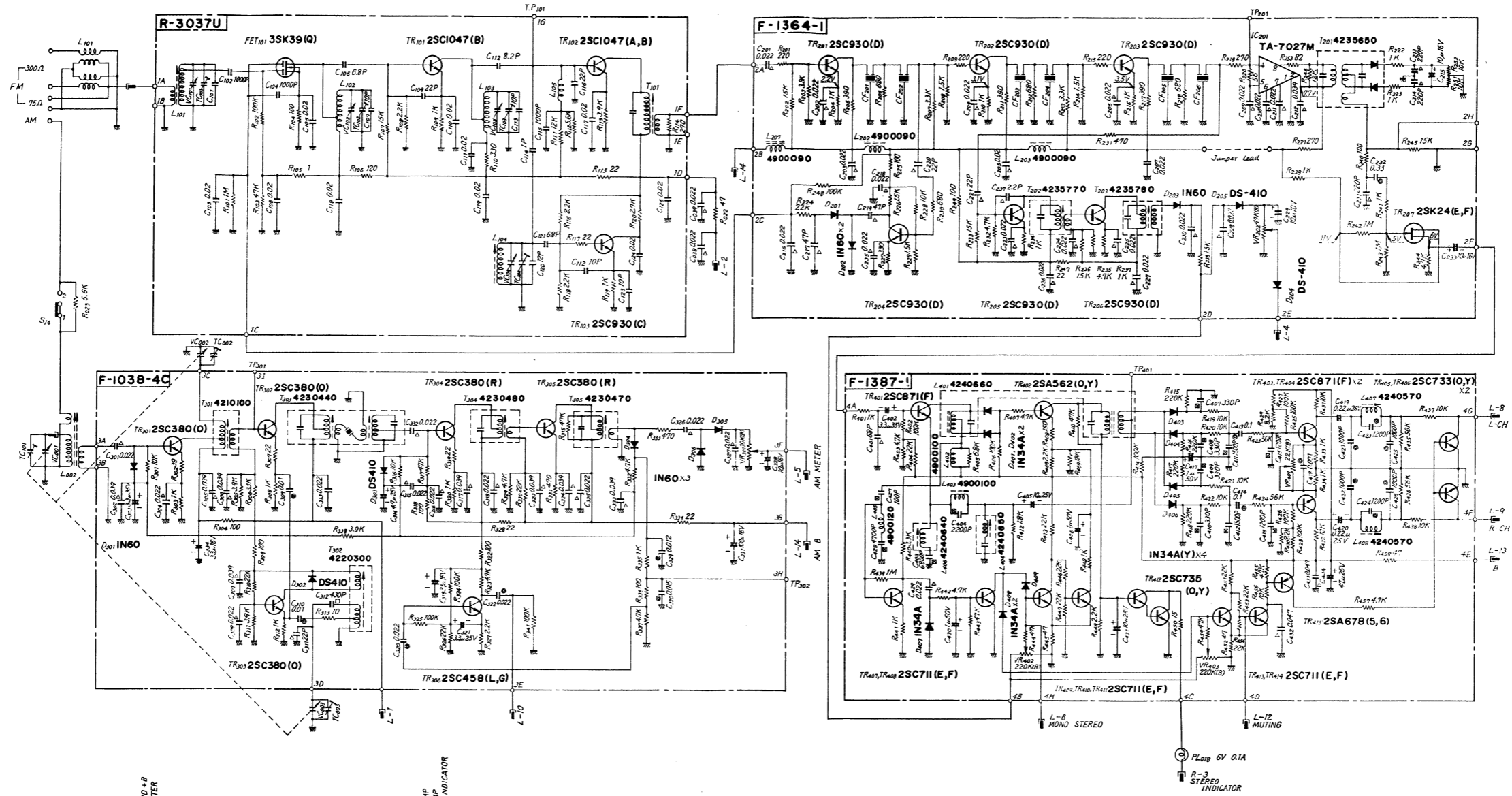
## BOTTOM VIEW OF FM FRONTEND







# SCHEMATIC DIAGRAM OF TUNER SECTION



- SWITCHES**
- SELECTOR S1(a-u)
  - 1. PHONO 2
  - 2. PHONO 1
  - 3. FM AUTO
  - 4. FM MONO
  - 5. AM
  - 6. AUX (2CH)
  - 7. AUX (4CH)
- SYNTHESIZER**
- DECODER S2(a-b)
  - 1. 2CH
  - 2. CONCERT
  - 3. CONCERT
  - 4. SURROUND/DECODER
  - 5. REAR
  - 6. FRONT
  - 7. S.F.R.
  - 8. NORMAL
  - 9. RIGHT QUARTER TURN
  - 10. HALF TURN
  - 11. LEFT QUARTER TURN

- TAPE MONITOR**
- 2CH - 1 S4(a-b)
  - 1. OFF
  - 2. ON
  - 2CH - 2 S5(a-b)
  - 1. OFF
  - 2. ON
  - 4CH S6(a-b)
  - 1. OFF
  - 2. ON
- LOUDNESS S7(a-b)**
- 1. OFF
  - 2. ON
- MUTING S8**
- 1. ON
  - 2. OFF
- HIGH FILTER S9(a-b)**
- 1. OFF
  - 2. ON
- LOW FILTER S10(a-b)**
- 1. OFF
  - 2. ON
- FRONT SPEAKERS S11**
- 1. OFF
  - 2. A
  - 3. B
  - 4. A + B
- REAR SPEAKERS S12**
- 1. OFF
  - 2. A
  - 3. B
  - 4. A + B

- CAPACITORS**
- △ CERAMIC
  - OIL
  - MILAR
  - MICA
  - ◇ STYROL
  - ⊙ TANTALUM

# ALIGNMENT

## FM ALIGNMENT PROCEDURE

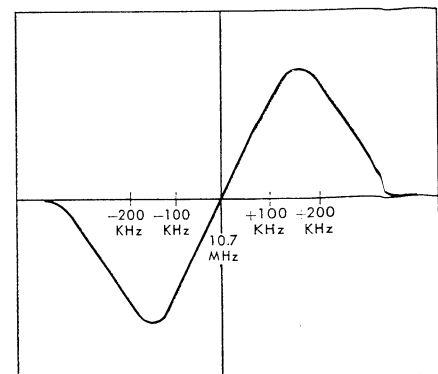
NOTE: Set the FM signal generator level to minimum first.

Any internal parts replacement or changes you make in the QR 4500 requires proper adjustment again, Test points, adjustment procedures and schematic diagrams are given on pages 7~14.

Equipment required: 1. Sweep Generator 2. Oscilloscope 3. FM Signal Generator 4. Multiplex Stereo Generator 5. AC V.T.V.M.

| STEP | ALIGN           | GENERATOR   | FEED SIGNAL   | OUTPUT INDICATOR                         | DIAL SETTING | ADJUST  | ADJUST FOR |
|------|-----------------|---|---|--|--------------|---|------------|
| 1.   | Discriminator   | 10.7MHz<br>±200kHz<br>Sweep generator               | To TP <sub>101</sub> via the 10pF ceramic capacitor | Oscilloscope is connected to 2H          |              | FM Discriminator transformer T <sub>201</sub> primary and secondary   | S curve    |
| 2.   | O.S.C.          | FM signal generator<br>88MHz 400Hz 100% Modulation  | To antenna terminals                                | Oscilloscope and V.T.V.M. at output load | 88MHz        | O.S.C. coil L <sub>104</sub>  | Maximum    |
| 3.   | O.S.C.          | FM signal generator<br>108MHz 400Hz 100% Modulation | To antenna terminals                                | Oscilloscope and V.T.V.M. at output load | 108MHz       | O.S.C. trimmer TC <sub>104</sub>                                      | Maximum    |
| 4.   | Repeat 2 and 3  |   |   |  |              |   |            |
| 5.   | RF Amp. Circuit | FM signal generator<br>90MHz 400Hz 100% Modulation  | To antenna terminals                                | Oscilloscope and V.T.V.M. at output load | 90MHz        | Antenna coil L <sub>101</sub> , L <sub>102</sub> and L <sub>103</sub> | Maximum    |
| 6.   | RF Amp. Circuit | FM signal generator<br>106MHz 400Hz 100% Modulation | To antenna terminals                                | Oscilloscope and V.T.V.M. at output load | 106MHz       | Trimmer TC <sub>101</sub> , TC <sub>102</sub> and TC <sub>103</sub>   | Maximum    |
| 7.   | Repeat 5 and 6  |   |   |  |              |   |            |

FM DISCRIMINATOR WAVE FORM



# ALIGNMENT

## FM MULTIPLEX CIRCUIT

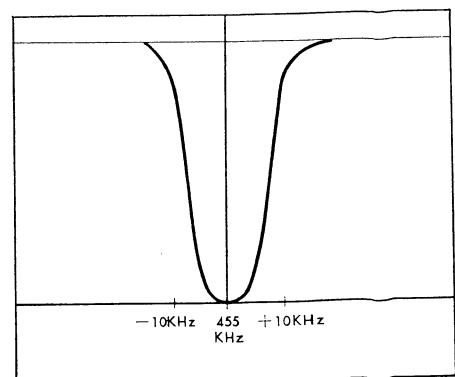
| STEP | ALIGN             | GENERATOR   | FEED SIGNAL         | OUTPUT INDICATOR  | DIAL SETTING  | ADJUST            | ADJUST FOR                     |
|------|-------------------|---|---------------------|---|---------------|-------------------|--------------------------------|
| 1.   | 19kHz phase       | FM signal generator—98MHz<br>Stereo signal generator—composite signal with pilot signal, left chan, 30% modulation. | To antenna terminal | Connect distortion meter to right channel load terminal | 98MHz         | L <sub>401</sub>  | Minimum distortion right chan. |
| 2.   | Stereo separation | Same as above   | Same as above       | Connect oscilloscope and V.T.V.M. to load terminal      | Same as above | VR <sub>401</sub> | Maximum separation             |

## AM ALIGNMENT PROCEDURE

NOTE: To align, set the AM signal generator level to minimum.

| STEP | ALIGN             | GENERATOR                                 | FEED SIGNAL       | OUTPUT INDICATOR                               | DIAL SETTING | ADJUST                                    | ADJUST FOR        |
|------|-------------------|---|-------------------|--|--------------|---|-------------------|
| 1.   | IF Transformer    | 455kHz $\pm$ 30kHz Sweep-generator        | Antenna terminals | Oscilloscope and V.T.V.M. at TP <sub>302</sub> |              | I.F.T. T <sub>303</sub> ~T <sub>305</sub> | Best IF wave form |
| 2.   | O.S.C.            | AM-generator 535kHz 400Hz 30% Modulation  | Antenna terminals | Oscilloscope and V.T.V.M. at output load       | 535kHz       | O.S.C. Coil T <sub>302</sub>              | Maximum           |
| 3.   | O.S.C.            | AM-generator 1600kHz 400Hz 30% Modulation | Antenna terminals | Oscilloscope and V.T.V.M. at output load       | 1600kHz      | O.S.C. Trimmer cap. TC <sub>003</sub>     | Maximum           |
| 4.   | Repeat 2 and 3    |   |                   |  |              |   |                   |
| 5.   | RF amp.           | AM-generator 600kHz 400Hz 30% Modulation  | Antenna terminals | Oscilloscope and V.T.V.M. at output load       | 600kHz       | RF transformer T <sub>301</sub>           | Maximum           |
| 6.   | Antenna circuit   | AM-generator 600kHz 400Hz 30% Modulation  | Antenna terminals | Oscilloscope and V.T.V.M. at output load       | 600kHz       | Ferrite bar Antenna coil L <sub>002</sub> | Maximum           |
| 7.   | RF amp.           | AM-generator 1400kHz 400Hz 30% Modulation | Antenna terminals | Oscilloscope and V.T.V.M. at output load       | 1400kHz      | RF Trimmer TC <sub>002</sub>              | Maximum           |
| 8.   | Antenna circuit   | AM-generator 1400kHz 400Hz 30% Modulation | Antenna terminals | Oscilloscope and V.T.V.M. at output load       | 1400kHz      | Antenna circuit Trimmer TC <sub>001</sub> | Maximum           |
| 9.   | Repeat 5, 6, 7, 8 |   |                   |  |              |   |                   |

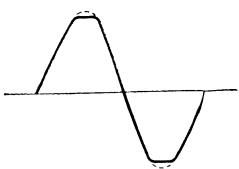
AM IF WAVE FORM

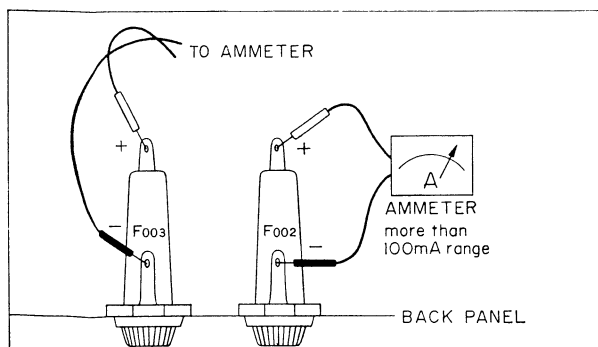


## CURRENT ADJUSTMENT

| STEP | SETTING OF AMMETER (TESTER) | WHAT TO DO  | NOTE   |
|------|-----------------------------|---|--|
| 1.   |                             | Remove F <sub>002</sub> and F <sub>003</sub>  | Use an ammeter with 100mA range                      |
| 2.   |                             | Set VR <sub>302</sub> (left and right channel) to minimum                             |  |
| 3.   |                             | Set Volume Control to minimum   |  |
| 4.   |                             | Turn on the receiver  | Be sure to switch on 1st and the connect the ammeter |
| 5.   | 100mA range.                | Connect ammeter to F <sub>002</sub> as illustrated in Fig. 1                          |  |
| 6.   |                             | Turn VR <sub>302</sub> (left channel) clockwise and adjust current to 30 to 20 mA     |  |
| 7.   | 100mA range.                | Turn off the receiver and replace F <sub>002</sub>                                    |  |
| 8.   |                             | Turn on the receiver and connect ammeter to F <sub>003</sub> as illustrated in Fig. 1 |  |
| 9.   |                             | Turn VR <sub>303</sub> (right channel) clockwise and adjust current to 30 to 20 mA    |  |
| 10.  |                             | Replace F <sub>003</sub>  |  |
| 11.  |                             | Adjust the rear channels as above   |  |

## OUTPUT ADJUSTMENT

| STEP | WHAT TO DO  | NOTE  |
|------|---|---|
| 1.   | Adjust volume control to minimum  |   |
| 2.   | Set oscillator to 1,000Hz and connect it to 4CH AUX LEFT FRONT input                            | Oscillator used should have oscillation frequency of 20 to 20,000Hz and output voltage of more than 200mV                                   |
| 3.   | Set Selector switch to AUX (4CH)  |   |
|      |   | Set other controls and switches as follows:<br>Balance to CENTER<br>Tape Monitor to OFF<br>Mode to NORMAL<br>Tone to CENTER<br>Other to OFF |
| 4.   | Connect 8- or 16-ohm load resistor with capacity of more than 30 watts to LEFT SPEAKER output   |   |
| 5.   | Connect oscilloscope to SPEAKER terminal  |   |
| 6.   | Turn on the receiver and slowly raise volume. Check output at terminal by means of oscilloscope |    |
| 7.   | Adjust VR <sub>301</sub> (left channel) so that peak of sine wave is clipped simultaneously     |   |
| 8.   | Adjust right channel similarly, and then rear channels  |   |



(Fig. 1) QUICK-ACTING FUSE HOLDER

# PRINTED CIRCUIT BOARDS AND PARTS LIST

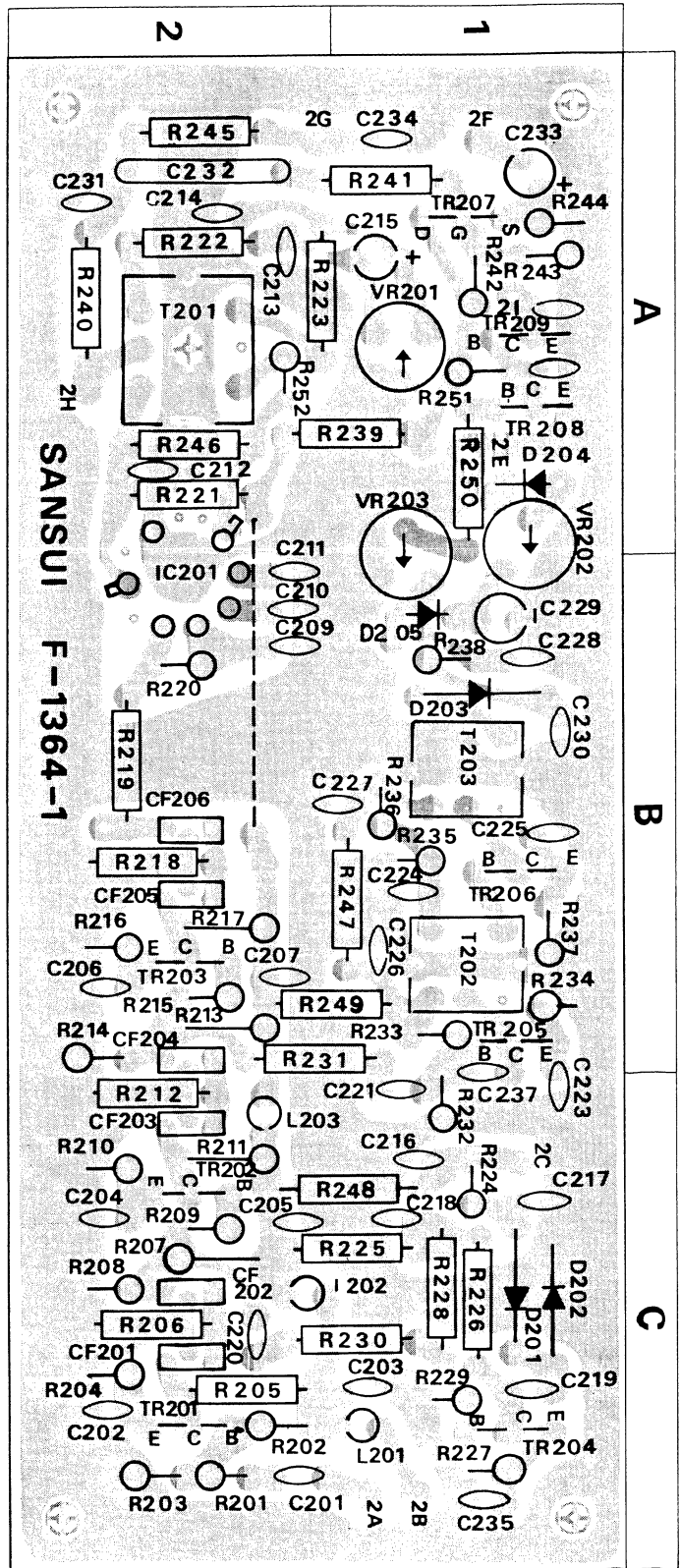
W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## FM IF BLOCK <F-1364-1>

| W    | X     | Y       | Z      | W     | X            | Y                     | Z              |     |
|------|-------|---------|--------|-------|--------------|-----------------------|----------------|-----|
| R201 | 220Ω  | 0100221 | 2 C    | VR202 | 47kΩ(B)      | 1035170               | 1 A, B         |     |
| R202 | 15kΩ  | 0100153 | 2 C    | C201  | 0.022μF      | 0656223               | 2 C            |     |
| R203 | 3.9kΩ | 0100392 | 2 C    | C202  | 0.022μF      | 0656223               | 2 C            |     |
| R204 | 1kΩ   | 0100102 | 2 C    | C203  | 0.022μF      | 0656223               | 1 C            |     |
| R205 | 390Ω  | 0101391 | 2 C    | C204  | 0.022μF      | 0656223               | 2 C            |     |
| R206 | 680Ω  | 0101681 | 2 C    | C205  | 0.022μF      | 0656223               | 2 C            |     |
| R207 | 3.3kΩ | 0100332 | 2 C    | C206  | 0.022μF      | +80%<br>-20% 25 V CC. | 0656223 2 B    |     |
| R208 | 1.5kΩ | 0100152 | 2 C    | C207  | 0.022μF      | 0656223               | 2 B            |     |
| R209 | 220Ω  | 0100221 | 2 C    | C209  | 0.022μF      | 0656223               | 2 B            |     |
| R210 | 1kΩ   | 0100102 | 2 C    | C210  | 0.022μF      | 0656223               | 2 B            |     |
| R211 | 390Ω  | 0100391 | 2 C    | C211  | 0.022μF      | 0656223               | 2 B            |     |
| R212 | 680Ω  | 0101681 | 2 C    | C212  | 0.039μF      | 0656393               | 2 A            |     |
| R213 | 3.3kΩ | 0100332 | 2 B    | C213  | 220pF        | ±10% 50 V CC.         | 0660221 2 A    |     |
| R214 | 1.5kΩ | 0100152 | 2 B    | C214  | 220pF        |                       | 0660221 2 A    |     |
| R215 | 220Ω  | 0100221 | 2 B    | C215  | 10μF         | 10 V CC.              | 0511100 1 A    |     |
| R216 | 1kΩ   | 0100102 | 2 B    | C216  | 0.022μF      | +80%<br>-20% 25 V CC. | 0656223 1 C    |     |
| R217 | 390Ω  | 0100391 | 2 B    | C217  | 47pF         | ±10% 50 V CC.         | 0660470 1 C    |     |
| R218 | 680Ω  | 0101681 | 2 B    | C218  | 0.022μF      | +80%<br>-20% 25 V CC. | 0656223 1 C    |     |
| R219 | 270Ω  | 0101271 | 2 B    | C219  | 47pF         | ±10% 50 V CC.         | 0660470 1 C    |     |
| R220 | 56Ω   | 0100560 | 2 B    | C220  | 22pF         | ±10% 50 V CC.         | 0660220 2 C    |     |
| R221 | 270Ω  | 0101271 | 2 A    | C221  | 22pF         |                       | 0660220 1 C    |     |
| R222 | 1kΩ   | 0101102 | 2 A    | C223  | 0.022μF      | ±10% 50 V CC.         | 0656223 1 B, C |     |
| R223 | 1kΩ   | 0101102 | 2 A    | C224  | 0.022μF      |                       | 0656223 1 B    |     |
| R224 | 22kΩ  | 0100223 | 1 C    | C225  | 0.022μF      | +80%<br>-20% 25 V CC. | 0656223 1 B    |     |
| R225 | 100Ω  | 0101101 | 1, 2 C | C226  | 0.022μF      |                       | 0656223 1 B    |     |
| R226 | 1.5kΩ | 0101152 | 1 C    | C227  | 0.022μF      | 0656223               | 1, 2 B         |     |
| R227 | 330Ω  | 0100331 | 1 C    | C228  | 0.022μF      | 0656223               | 1 B            |     |
| R228 | 10kΩ  | 0101103 | 1 C    | C229  | 10μF         | 10 V EC.              | 0511100 1 B    |     |
| R229 | 1.5kΩ | 0100152 | 1 C    | C230  | 0.022μF      | +80%<br>-20% 25 V CC. | 0656223 1 B    |     |
| R230 | 680Ω  | 0101681 | 1, 2 C | C231  | 220pF        | ±10% 50 V CC.         | 0660221 2 A    |     |
| R231 | 470Ω  | 0101471 | 1, 2 B | C232  | 0.33μF       | ±10% 50 V MC.         | 0601338 2 A    |     |
| R232 | 4.7kΩ | 0100472 | 1 C    | C233  | 10μF         | 10 V EC.              | 0511100 1 A    |     |
| R233 | 15kΩ  | 0100153 | 1 B    | C235  | 0.022μF      | +80%<br>-20% 25 V CC. | 0656223 1 C    |     |
| R234 | 1kΩ   | 0100102 | 1 B    | C237  | 2.2pF        | ±10% 50 V CC.         | 0660229 1 B    |     |
| R235 | 4.7kΩ | 0100472 | 1 B    | TR201 | 2SC930(D)    | 0305791               | 2 C            |     |
| R236 | 15kΩ  | 0101153 | 1 B    | TR202 |              | 0305791               | 2 C            |     |
| R237 | 1kΩ   | 0100102 | 1 B    | TR203 |              | 0305791               | 2 B            |     |
| R238 | 1.5kΩ | 0100152 | 1 B    | TR204 |              | 0305791               | 1 C            |     |
| R239 | 1kΩ   | 0101102 | 1, 2 A | TR205 |              | 0305791               | 1 B            |     |
| R240 | 100Ω  | 0101101 | 2 A    | TR206 |              | 0305791               | 1 B            |     |
| R241 | 1kΩ   | 0101102 | 1 A    | TR207 | 2SK24 (E, F) | 0370060, 1            | 1 A            |     |
| R242 | 1MΩ   | 0100105 | 1 A    | IC201 | TA-7027M     | 0360020               | 2 B            |     |
| R243 | 1MΩ   | 0100105 | 1 A    | D201  | IN60         | 0310330               | 1 C            |     |
| R244 | 4.7kΩ | 0100472 | 1 A    | D202  |              | 0310330               | 1 C            |     |
| R245 | 15kΩ  | 0101153 | 2 A    | D203  |              | 0310330               | 1 B            |     |
| R246 | 12kΩ  | 0101123 | 2 A    | D204  |              | DS-410                | 0340030        | 1 A |
| R247 | 22Ω   | 0101220 | 1 B    | D205  |              | DS-410                | 0340030        | 1 B |
| R248 | 100kΩ | 0101104 | 1, 2 C |       |              |                       |                |     |
| R249 | 100Ω  | 0101101 | 1, 2 B |       |              |                       |                |     |
| R251 | 10kΩ  | 0100103 | 1 A    |       |              |                       |                |     |
| R252 | 10kΩ  | 0100103 | 2 A    |       |              |                       |                |     |
| R253 | 82Ω   | 0101820 | 2 B    |       |              |                       |                |     |

| W     | X                          | Y       | Z  |
|-------|----------------------------|---------|----|
| CF201 | CFR 10.7M Ceramic Filter   | 0910101 | 2C |
| CF202 |                            | 0910101 | 2C |
| CF203 |                            | 0910101 | 2C |
| CF204 |                            | 0910101 | 2B |
| CF205 |                            | 0910101 | 2B |
| CF206 |                            | 0910101 | 2B |
| T201  | Discriminating Transformer | 4235650 | 2A |
| T202  | Meter Coil                 | 4235770 | 1B |
| T203  |                            | 4235780 | 1B |
| L201  | 3.3 $\mu$ H Micro Inductor | 4900100 | 1C |
| L202  |                            | 0100102 | 2C |
| L203  |                            | 0100104 | 2C |

| Abbreviations |   |
|---------------|---|
| <b>CR</b>     | : Carbon Resistor                       |
| <b>SR</b>     | : Solid Resistor                        |
| <b>CeR</b>    | : Cement Resistor                       |
| <b>MC</b>     | : Mylar Capacitor                       |
| <b>EC</b>     | : Electrolytic Capacitor                |
| <b>AEC</b>    | : Aluminum Solid Electrolytic Capacitor |
| <b>CC</b>     | : Ceramic Capacitor                     |
| <b>MiC</b>    | : Mica Capacitor                        |
| <b>SC</b>     | : Styrol Capacitor                      |
| <b>TC</b>     | : Tantalum Capacitor                    |
| <b>OC</b>     | : Oil Capacitor                         |



# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## FM MPX BLOCK <F-1387-1>

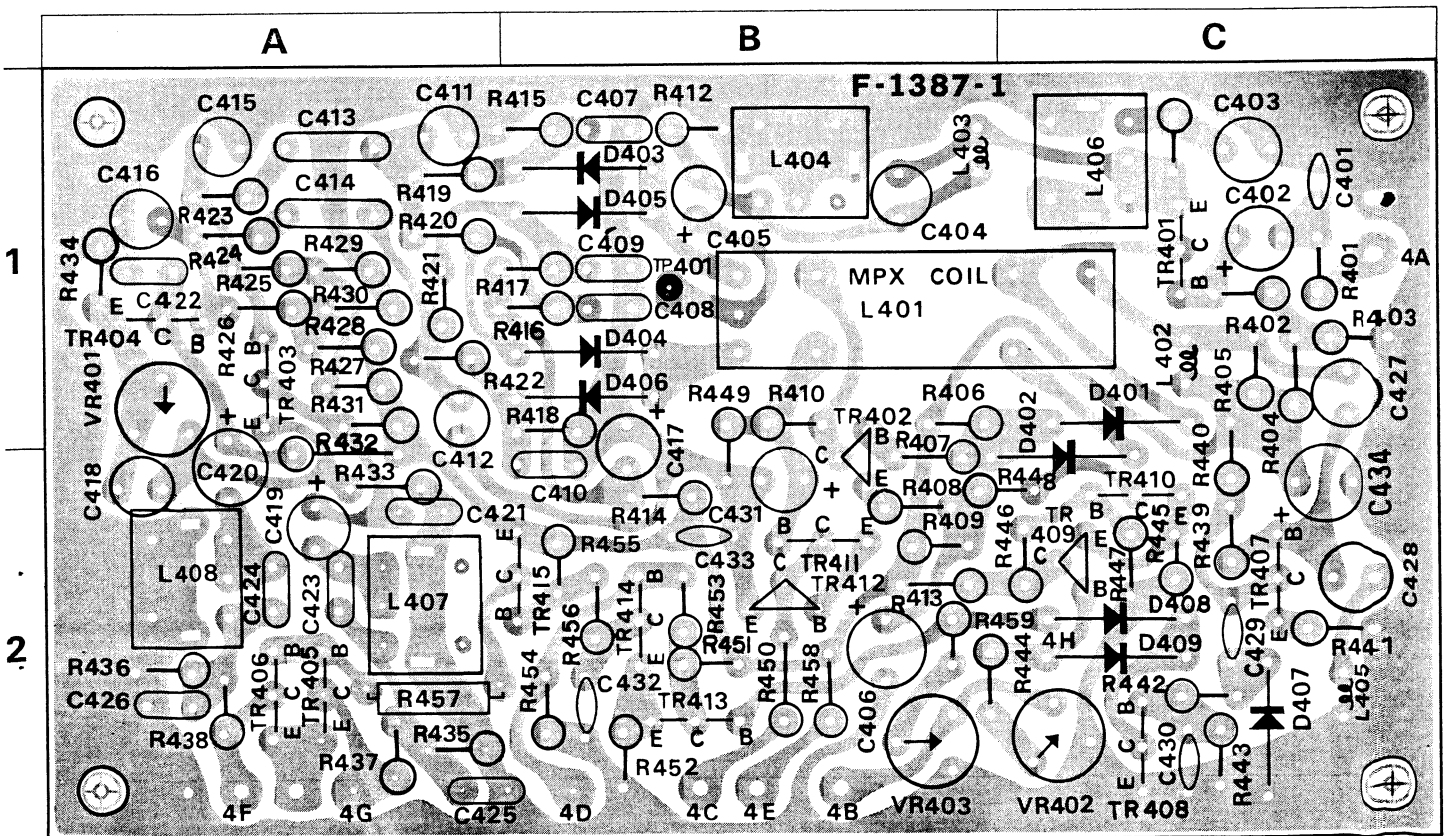
| W    | X             | Y       | Z     |
|------|---------------|---------|-------|
| R401 | 1k $\Omega$   | 0100102 | 1C    |
| R402 | 100k $\Omega$ | 0100104 | 1C    |
| R403 | 4.7k $\Omega$ | 0100472 | 1C    |
| R404 | 22k $\Omega$  | 0100223 | 1C    |
| R405 | 6.8k $\Omega$ | 0100682 | 1C    |
| R406 | 100k $\Omega$ | 0100104 | 1B    |
| R407 | 4.7k $\Omega$ | 0100472 | 2B    |
| R408 | 150 $\Omega$  | 0100151 | 2B    |
| R409 | 2.2k $\Omega$ | 0100222 | 2B    |
| R410 | 47k $\Omega$  | 0100473 | 1B    |
| R412 | 1.8k $\Omega$ | 0100182 | 1B    |
| R413 | 22k $\Omega$  | 0100223 | 2B    |
| R414 | 100k $\Omega$ | 0100104 | 2B    |
| R415 | 220k $\Omega$ | 0100224 | 1B    |
| R416 | 220k $\Omega$ | 0100224 | 1B    |
| R417 | 220k $\Omega$ | 0100224 | 1B    |
| R418 | 220k $\Omega$ | 0100224 | 1B    |
| R419 | 10k $\Omega$  | 0100103 | 1A    |
| R420 | 10k $\Omega$  | 0100103 | 1A    |
| R421 | 10k $\Omega$  | 0100103 | 1A    |
| R422 | 10k $\Omega$  | 0100103 | 1A    |
| R423 | 56k $\Omega$  | 0100563 | 1A    |
| R424 | 56k $\Omega$  | 0100563 | 1A    |
| R425 | 100k $\Omega$ | 0100104 | 1A    |
| R426 | 100k $\Omega$ | 0100104 | 1A    |
| R427 | 100k $\Omega$ | 0100104 | 1A    |
| R428 | 100k $\Omega$ | 0100104 | 1A    |
| R429 | 8.2k $\Omega$ | 0100822 | 1A    |
| R430 | 8.2k $\Omega$ | 0100822 | 1A    |
| R431 | 10k $\Omega$  | 0100103 | 1A    |
| R432 | 10k $\Omega$  | 0100103 | 2A    |
| R433 | 1k $\Omega$   | 0100102 | 2A    |
| R434 | 1k $\Omega$   | 0100102 | 1A    |
| R435 | 56k $\Omega$  | 0100563 | 2A    |
| R436 | 56k $\Omega$  | 0100563 | 2A    |
| R437 | 10k $\Omega$  | 0100103 | 2A    |
| R438 | 10k $\Omega$  | 0109103 | 2A    |
| R439 | 1M $\Omega$   | 0100105 | 2C    |
| R440 | 3.3k $\Omega$ | 0100332 | 1, 2C |
| R441 | 1k $\Omega$   | 0100102 | 2C    |
| R442 | 4.7k $\Omega$ | 0100472 | 2C    |
| R443 | 47k $\Omega$  | 0100473 | 2C    |
| R444 | 47k $\Omega$  | 0100473 | 2B    |
| R445 | 47 $\Omega$   | 0100470 | 2C    |
| R446 | 22k $\Omega$  | 0100223 | 2C    |
| R447 | 22k $\Omega$  | 0100223 | 2C    |
| R448 | 1k $\Omega$   | 0100102 | 2B, C |
| R449 | 2.2k $\Omega$ | 0100222 | 1, 2B |
| R450 | 15 $\Omega$   | 0100150 | 2B    |
| R451 | 22k $\Omega$  | 0100223 | 2B    |
| R452 | 47 $\Omega$   | 0100470 | 2B    |

$\pm 10\%$   $\frac{1}{4}W$  CR.

| W     | X                                  | Y          | Z     |
|-------|------------------------------------|------------|-------|
| R453  | 22k $\Omega$                       | 0100223    | 2B    |
| R454  | 22k $\Omega$                       | 0100223    | 2B    |
| R455  | 47k $\Omega$                       | 0100473    | 2B    |
| R456  | 10k $\Omega$                       | 0100103    | 2B    |
| R457  | 4.7k $\Omega$                      | 0101472    | 2A    |
| R458  | 47 $\Omega$                        | 0100470    | 2B    |
| R459  | 47k $\Omega$                       | 0100473    | 2B    |
| R469  | 18k $\Omega$                       | 0101183    |       |
| VR401 | 22k $\Omega$ (B)                   | 1035150    | 1A    |
| VR402 | 220k $\Omega$ (B)                  | 1035210    | 2C    |
| VR403 | 220k $\Omega$ (B)                  | 1035210    | 2B    |
| C401  | 68pF $\pm 10\%$ 50 V CC.           | 0660680    | 1C    |
| C402  | 3.3 $\mu$ F 25 V EC.               | 0513339    | 1C    |
| C403  | 6800pF $\pm 5\%$ 50 V SC.          | 0629001    | 1C    |
| C404  | 2200pF $\pm 10\%$ 50 V SC.         | 0621222    | 1B    |
| C405  | 10 $\mu$ F 25 V EC.                | 0513100    | 1B    |
| C406  | 1 $\mu$ F 50 V EC.                 | 0515109    | 2B    |
| C407  | 330pF                              | 0612331    | 1B    |
| C408  | 330pF                              | 0612331    | 1B    |
| C409  | 330pF $\pm 5\%$ 125V SC.           | 0612331    | 1B    |
| C410  | 330pF                              | 0612331    | 2B    |
| C411  | 1500pF $\pm 5\%$ 50V SC.           | 0620152    | 1A    |
| C412  | 1500pF                             | 0620152    | 1A    |
| C413  | 0.1 $\mu$ F $\pm 10\%$ 50 V MC.    | 0601108    | 1A    |
| C414  | 0.1 $\mu$ F                        | 0601108    | 1A    |
| C415  | 1200pF $\pm 5\%$ 50 V SC.          | 0620122    | 1A    |
| C416  | 1200pF                             | 0620122    | 1A    |
| C417  | 1 $\mu$ F 50 V EC.                 | 0515109    | 1, 2B |
| C418  | 0.001 $\mu$ F $\pm 10\%$ 50 V MC.  | 0601106    | 2A    |
| C419  | 0.22 $\mu$ F $\pm 20\%$ 25 V AEC.  | 0563228    | 2A    |
| C420  | 0.22 $\mu$ F                       | 0563228    | 1, 2A |
| C421  | 0.001 $\mu$ F $\pm 10\%$ 50 V MC.  | 0601106    | 2A    |
| C422  | 0.001 $\mu$ F                      | 0601106    | 1A    |
| C423  | 0.0012 $\mu$ F $\pm 10\%$ 50 V MC. | 0601126    | 2A    |
| C424  | 0.0012 $\mu$ F                     | 0601126    | 2A    |
| C425  | 0.001 $\mu$ F $\pm 10\%$ 50 V MC.  | 0601106    | 2A, B |
| C426  | 0.001 $\mu$ F                      | 0601106    | 2A    |
| C427  | 100pF $\pm 10\%$ 50 V SC.          | 0621101    | 1C    |
| C428  | 4700pF                             | 0621472    | 2C    |
| C429  | 0.022 $\mu$ F $\pm 80\%$ 25 V CC.  | 0656223    | 2C    |
| C430  | 1 $\mu$ F 50 V EC                  | 0515109    | 2C    |
| C431  | 10 $\mu$ F 25 V EC.                | 0513100    | 2B    |
| C432  | 0.047 $\mu$ F $\pm 80\%$ 25 V CC.  | 0656473    | 2B    |
| C433  | 0.047 $\mu$ F $\pm 20\%$           | 0656473    | 2B    |
| C434  | 47 $\mu$ F 25 V EC.                | 0513470    | 2C    |
| TR401 | 2SC871 (F)                         | 0305472    | 1C    |
| TR402 | 2SA562 (O, Y)                      | 0300220, 1 | 2B    |
| TR403 | 2SC871 (F)                         | 0305472    | 1A    |
| TR404 | 2SC871 (F)                         | 0305472    | 1A    |
| TR405 | 2SC733 (O, Y)                      | 0305370, 1 | 2A    |

| W     | X             | Y          | Z      |
|-------|---------------|------------|--------|
| TR406 | 2SC733 (O, Y) | 0305370, 1 | 2 A    |
| TR407 |               | 0305731, 2 | 2 C    |
| TR408 |               | 0305731, 2 | 2 C    |
| TR409 | 2SC711 (E, F) | 0305731, 2 | 2 C    |
| TR410 |               | 0305731, 2 | 2 C    |
| TR411 |               | 0305731, 2 | 2 B    |
| TR412 | 2SC735 (O, Y) | 0305640, 1 | 2 B    |
| TR413 | 2SC711 (E, F) | 0305731, 2 | 2 B    |
| TR414 |               | 0305731, 2 | 2 B    |
| TR415 | 2SA678 (5, 6) | 0300290, 1 | 2 B    |
| D401  | IN34A         | 0310400    | 1 C    |
| D402  |               | 0310400    | 2 C    |
| D403  |               | 0310401    | 1 B    |
| D404  | IN34A (Y)     | 0310401    | 1 B    |
| D405  |               | 0310401    | 1 B    |
| D406  |               | 0310401    | 1 B    |
| D407  | IN34A (BL)    | 0310400    | 2 C    |
| D408  | IN34A (Y)     | 0310401    | 2 C    |
| D409  |               | 0310401    | 2 C    |
| L401  | MPX Coil      | 4240660    | 1 B, C |

| W    | X                    | Y       | Z   |
|------|----------------------|---------|-----|
| L402 | 2.2mH Micro Inductor | 4900100 | 1 C |
| L403 |                      | 4900100 | 1 B |
| L404 |                      | 4240650 | 1 B |
| L405 | MPX Coil             | 4900120 | 2 C |
| L406 | 1mH Micro Inductor   | 4240640 | 1 C |
| L407 | MPX Coil             | 4240570 | 2 A |
| L408 |                      | 4240570 | 2 A |





# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## AM BLOCK <F-1038-4C>

| W     | X                                 | Y       | Z      |
|-------|-----------------------------------|---------|--------|
| R301  | 10k $\Omega$                      | 0101103 | 1, 2 C |
| R302  | 39 $\Omega$                       | 0101390 | 1 C    |
| R303  | 1k $\Omega$                       | 0101102 | 2 C    |
| R304  | 100 $\Omega$                      | 0101101 | 1 C    |
| R305  | 3.9k $\Omega$                     | 0101392 | 2 C    |
| R306  | 33k $\Omega$                      | 0101333 | 1 C    |
| R307  | 22 $\Omega$                       | 0101220 | 1, 2 B |
| R308  | 1k $\Omega$                       | 0101102 | 2 B    |
| R309  | 100 $\Omega$                      | 0101101 | 1 C    |
| R310  | 22k $\Omega$                      | 0101223 | 2 B, C |
| R311  | 3.9k $\Omega$                     | 0101392 | 1 B    |
| R312  | 1k $\Omega$                       | 0101102 | 2 B    |
| R313  | 10 $\Omega$                       | 0101100 | 2 B, C |
| R314  | 22 $\Omega$                       | 0101220 | 1 B    |
| R315  | 47k $\Omega$                      | 0101473 | 1 A    |
| R316  | 10k $\Omega$                      | 0101103 | 2 B    |
| R317  | 47k $\Omega$                      | 0101473 | 1 B    |
| R318  | 100 $\Omega$                      | 0101101 | 2 B    |
| R319  | 22 $\Omega$                       | 0101220 | 2 B    |
| R320  | 1k $\Omega$                       | 0101102 | 1 B    |
| R322  | 100 $\Omega$                      | 0101101 | 1 B    |
| R323  | 4.7k $\Omega$                     | 0101472 | 2 B    |
| R324  | 100k $\Omega$                     | 0101104 | 2 A, B |
| R325  | 100k $\Omega$                     | 0101104 | 2 A, B |
| R326  | 22k $\Omega$                      | 0101223 | 2 A    |
| R327  | 2.2k $\Omega$                     | 0101222 | 2 B    |
| R328  | 22 $\Omega$                       | 0101220 | 1 A, B |
| R329  | 4.7k $\Omega$                     | 0101472 | 1 A, B |
| R330  | 22k $\Omega$                      | 0101223 | 1 A    |
| R331  | 470 $\Omega$                      | 0101471 | 1 A    |
| R332  | 4.7k $\Omega$                     | 0101472 | 2 A    |
| R333  | 470 $\Omega$                      | 0101471 | 1 A    |
| R334  | 22 $\Omega$                       | 0101220 | 1 A    |
| R335  | 1k $\Omega$                       | 0101102 | 2 A    |
| R336  | 100 $\Omega$                      | 0101101 | 2 A    |
| R337  | 4.7k $\Omega$                     | 0101472 | 2 A    |
| R338  | 3.9k $\Omega$                     | 0101392 | 2 A    |
| R341  | 100k $\Omega$                     | 0101104 |        |
| VR301 | 10k $\Omega$ (B) AM Meter Adj.    | 1035130 | 1, 2 A |
| C301  | 0.022 $\mu$ F } +80% 25 V CC.     | 0656223 | 1 C    |
| C302  | 0.039 $\mu$ F } -20%              | 0656393 | 2 C    |
| C303  | 3.3 $\mu$ F 25 V EC.              | 0513339 | 2 C    |
| C304  | 0.022 $\mu$ F } +80% 25 V CC.     | 0656223 | 2 C    |
| C305  | 0.039 $\mu$ F } -20%              | 0656393 | 1 C    |
| C306  | 0.039 $\mu$ F } +80% 25 V CC.     | 0656393 | 2 C    |
| C307  | 0.039 $\mu$ F } -20%              | 0656393 | 1 C    |
| C308  | 0.022 $\mu$ F } +80% 25 V CC.     | 0656223 | 1 B    |
| C309  | 0.01 $\mu$ F } -20%               | 0601107 | 2 B    |
| C310  | 0.01 $\mu$ F } $\pm$ 10% 50 V MC. | 0601107 | 2 B    |
| C311  | 22pF $\pm$ 10% 50 V CC.           | 0660220 | 2 C    |
| C312  | 430pF $\pm$ 5% 50 V MiC.          | 0640431 | 2 C    |

| W     | X                                  | Y       | Z      |
|-------|------------------------------------|---------|--------|
| C313  | 0.022 $\mu$ F } +80% 25 V CC.      | 0656223 | 1 C    |
| C314  | 4.7 $\mu$ F } -20% 16 V EC.        | 0512479 | 2 B    |
| C315  | 0.022 $\mu$ F } +80% 25 V CC.      | 0656223 | 2 B    |
| C316  | 0.022 $\mu$ F } -20%               | 0656223 | 1 B    |
| C317  | 0.039 $\mu$ F } +80% 25 V CC.      | 0656393 | 2 B    |
| C318  | 0.022 $\mu$ F } -20%               | 0656223 | 1 B    |
| C319  | 33 $\mu$ F } 16 V EC.              | 0512330 | 2 B    |
| C320  | 0.022 $\mu$ F } $\pm$ 10% 50 V MC. | 0601227 | 2 A    |
| C321  | 3.3 $\mu$ F } 25 V EC.             | 0513339 | 2 B    |
| C322  | 0.022 $\mu$ F } $\pm$ 10% 50 V MC. | 0601227 | 2 A    |
| C323  | 0.039 $\mu$ F } +80% 25 V CC.      | 0656393 | 2 B    |
| C324  | 0.039 $\mu$ F } -20%               | 0656393 | 2 A    |
| C325  | 0.022 $\mu$ F } +80% 25 V CC.      | 0656223 | 1 A    |
| C326  | 0.022 $\mu$ F } -20%               | 0656223 | 1 A    |
| C327  | 0.022 $\mu$ F } +80% 25 V CC.      | 0656223 | 1 A    |
| C328  | 10 $\mu$ F } 16 V EC.              | 0512100 | 2 A    |
| C329  | 0.012 $\mu$ F } $\pm$ 10% 50 V MC. | 0601127 | 2 A    |
| C330  | 0.015 $\mu$ F } $\pm$ 10% 50 V MC. | 0601157 | 2 A    |
| C331  | 100 $\mu$ F } 16 V EC.             | 0512101 | 1 A    |
| C332  | 0.022 $\mu$ F } +80% 25 V CC.      | 0656223 | 1 B    |
| C333  | 0.039 $\mu$ F } -20%               | 0656393 | 2 A    |
| C334  | 33 $\mu$ F } 16 V EC.              | 0512330 | 1 C    |
| TR301 | } 2SC380 (O)                       | 0305331 | 1 C    |
| TR302 |                                    | 0305331 | 1 C    |
| TR303 |                                    | 0305331 | 2 B    |
| TR304 | } 2SC380 (R)                       | 0305330 | 1, 2 B |
| TR305 |                                    | 0305330 | 1 A    |
| TR306 | 2SC458LG (C)                       | 0305320 | 2 A    |
| D301  | IN60                               | 0310330 | 1, 2 C |
| D303  | } DS-410                           | 0340030 | 1 C    |
| D303  |                                    | 0340030 | 2 B    |
| D304  | } IN60                             | 0310330 | 1, 2 A |
| D305  |                                    | 0310330 | 1 A    |
| D306  |                                    | 0310330 | 1 A    |
| T301  | AM RFT                             | 4210100 | 1 C    |
| T302  | AM OSC Coil                        | 4220300 | 2 C    |
| T303  | Ceramic Filter                     | 4230440 | 1 B    |
| T304  | } AM IFT 455kHz                    | 4230480 | 1 B    |
| T305  |                                    | 4230470 | 1 A    |



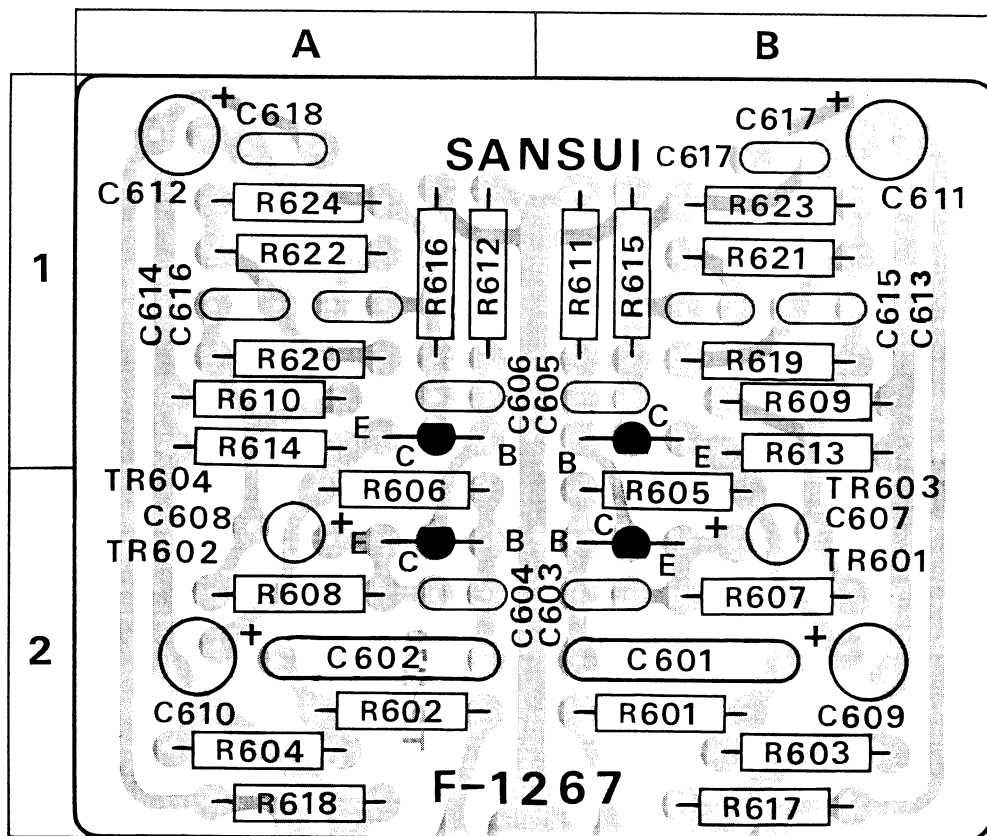
# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## EQUALIZER BLOCK <F-1267A>

| W    | X             | Y       | Z   |
|------|---------------|---------|-----|
| R601 | 2.2k $\Omega$ | 0101222 | 2 B |
| R602 | 2.2k $\Omega$ | 0101222 | 2 A |
| R603 | 56k $\Omega$  | 0101563 | 2 B |
| R604 | 56k $\Omega$  | 0101563 | 2 A |
| R605 | 390k $\Omega$ | 0101394 | 2 B |
| R606 | 390k $\Omega$ | 0101394 | 2 A |
| R607 | 3.9k $\Omega$ | 0101392 | 2 B |
| R608 | 3.9k $\Omega$ | 0101392 | 2 A |
| R609 | 330 $\Omega$  | 0101331 | 1 B |
| R610 | 330 $\Omega$  | 0101331 | 1 A |
| R611 | 180k $\Omega$ | 0101184 | 1 B |
| R612 | 180k $\Omega$ | 0101184 | 1 A |
| R613 | 820 $\Omega$  | 0101821 | 1 B |
| R614 | 820 $\Omega$  | 0101821 | 1 A |
| R615 | 6.8k $\Omega$ | 0101682 | 1 B |
| R616 | 6.8k $\Omega$ | 0101682 | 1 A |
| R617 | 82k $\Omega$  | 0101823 | 2 B |
| R618 | 82k $\Omega$  | 0101823 | 2 A |
| R619 | 270k $\Omega$ | 0101274 | 1 B |
| R620 | 270k $\Omega$ | 0101274 | 1 A |
| R621 | 1k $\Omega$   | 0101102 | 1 B |
| R622 | 1k $\Omega$   | 0101102 | 1 A |
| R623 | 22k $\Omega$  | 0101223 | 1 B |
| R624 | 22k $\Omega$  | 0101223 | 1 A |

| W     | X             | Y             | Z           |
|-------|---------------|---------------|-------------|
| C601  | 0.47 $\mu$ F  | ±10% 50 V MC. | 0601478 2 B |
| C602  | 0.47 $\mu$ F  |               | 0601478 2 A |
| C603  | 68 pF         | 50 V CC.      | 0660680 2 B |
| C604  | 68 pF         |               | 0660680 2 A |
| C605  | 68 pF         |               | 0660680 1 B |
| C606  | 68 pF         | 0660680 1 A   |             |
| C607  | 3.3 $\mu$ F   | 25 V EC.      | 0513339 2 B |
| C608  | 3.3 $\mu$ F   |               | 0513339 2 A |
| C609  | 100 $\mu$ F   | 6.3 V EC.     | 0510101 2 B |
| C610  | 100 $\mu$ F   |               | 0510101 2 A |
| C611  | 1 $\mu$ F     | 50 V EC.      | 0515109 1 B |
| C612  | 1 $\mu$ F     |               | 0515109 1 A |
| C613  | 0.012 $\mu$ F | 0601127 1 B   |             |
| C614  | 0.012 $\mu$ F | 0601127 1 A   |             |
| C615  | 0.003 $\mu$ F | ±10% 50 V MC. | 0601306 1 B |
| C616  | 0.003 $\mu$ F |               | 0601306 1 A |
| C617  | 0.047 $\mu$ F | 0601477 1 B   |             |
| C618  | 0.047 $\mu$ F | 0601477 1 A   |             |
| TR601 | 2SC871R (E)   | 0305474 2 B   |             |
| TR602 | 2SC871R (E)   | 0305474 2 A   |             |
| TR603 | 2SC871R (F)   | 0305475 2 B   |             |
| TR604 | 2SC871R (F)   | 0305475 2 A   |             |



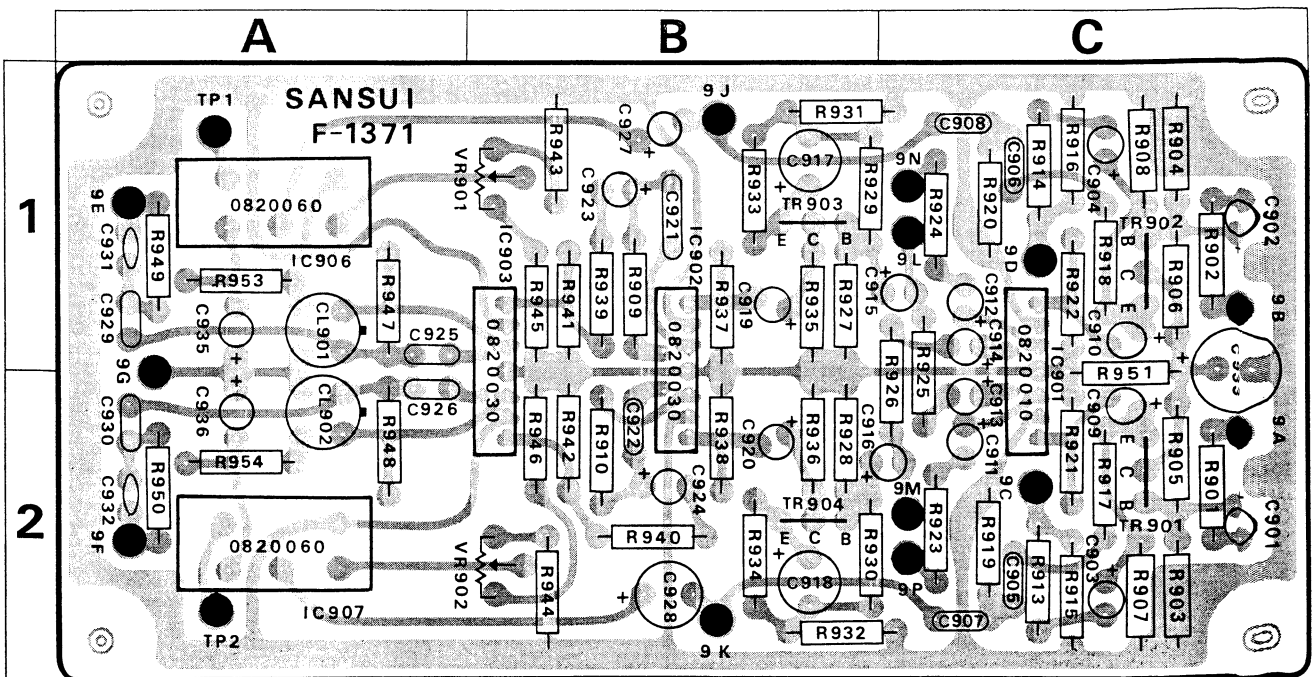
# SYNTHESIZER BLOCK <F-1371-1>

| W    | X     | Y       | Z     |
|------|-------|---------|-------|
| R901 | 1kΩ   | 0101102 | 2C    |
| R902 | 1kΩ   | 0101102 | 1C    |
| R903 | 150kΩ | 0101154 | 2C    |
| R904 | 150kΩ | 0101154 | 1C    |
| R905 | 100kΩ | 0101104 | 2C    |
| R906 | 100kΩ | 0101104 | 1C    |
| R907 | 6.8kΩ | 0101682 | 2C    |
| R908 | 6.8kΩ | 0101682 | 1C    |
| R909 | 5.6kΩ | 0101562 | 1B    |
| R910 | 5.6kΩ | 0101562 | 2B    |
| R913 | 56kΩ  | 0101563 | 2C    |
| R914 | 56kΩ  | 0101563 | 1C    |
| R915 | 18kΩ  | 0101183 | 2C    |
| R616 | 18kΩ  | 0101183 | 1C    |
| R917 | 10kΩ  | 0101103 | 2C    |
| R918 | 10kΩ  | 0101103 | 1C    |
| R919 | 8.2kΩ | 0101822 | 2C    |
| R920 | 8.2kΩ | 0101822 | 1C    |
| R921 | 100kΩ | 0101104 | 2C    |
| R922 | 100kΩ | 0101104 | 1C    |
| R923 | 4.7kΩ | 0101472 | 2C    |
| R924 | 4.7kΩ | 0101472 | 1C    |
| R925 | 15kΩ  | 0101153 | 1, 2C |
| R926 | 15kΩ  | 0101153 | 1, 2C |
| R927 | 1MΩ   | 0101105 | 1B    |
| R928 | 1MΩ   | 0101105 | 2B    |
| R929 | 56kΩ  | 0101563 | 1B    |
| R930 | 56kΩ  | 0101563 | 2B    |

±10% ¼W CR.

| W     | X       | Y       | Z     |
|-------|---------|---------|-------|
| R931  | 1.5kΩ   | 0101152 | 1B, C |
| R932  | 1.5kΩ   | 0101152 | 2B, C |
| R933  | 470Ω    | 0101471 | 1B    |
| R934  | 470Ω    | 0101471 | 2B    |
| R935  | 22kΩ    | 0101223 | 1B    |
| R936  | 22kΩ    | 0101223 | 2B    |
| R937  | 100kΩ   | 0101104 | 1B    |
| R938  | 100kΩ   | 0101104 | 2B    |
| R939  | 68kΩ    | 0101683 | 1B    |
| R940  | 68kΩ    | 0101683 | 2B    |
| R941  | 100kΩ   | 0101104 | 1B    |
| R942  | 100kΩ   | 0101104 | 2B    |
| R943  | 4.7Ω    | 0101479 | 1B    |
| R944  | 4.7Ω    | 0101479 | 2B    |
| R945  | 15kΩ    | 0101153 | 1B    |
| R946  | 15kΩ    | 0101153 | 2B    |
| R947  | 39kΩ    | 0101393 | 1A    |
| R948  | 39kΩ    | 0101393 | 2A    |
| R949  | 560kΩ   | 0101564 | 1A    |
| R950  | 560kΩ   | 0101564 | 2A    |
| R951  | 470Ω    | 0101471 | 1C    |
| R953  | 22Ω     | 0101220 | 1A    |
| R954  | 22Ω     | 0101220 | 2A    |
| R961  | 470kΩ   | 0101474 | 1A    |
| R962  | 470kΩ   | 0101474 | 2A    |
| R963  | 820kΩ   | 0101824 | 1A    |
| R964  | 820kΩ   | 0101824 | 2A    |
| VR901 | 2kΩ (B) | 1032070 | 1B    |
| VR902 | 2kΩ (B) | 1032070 | 2B    |

±10% ¼W CR.



# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## SYNTHESIZER BLOCK <F-1371> cont'd

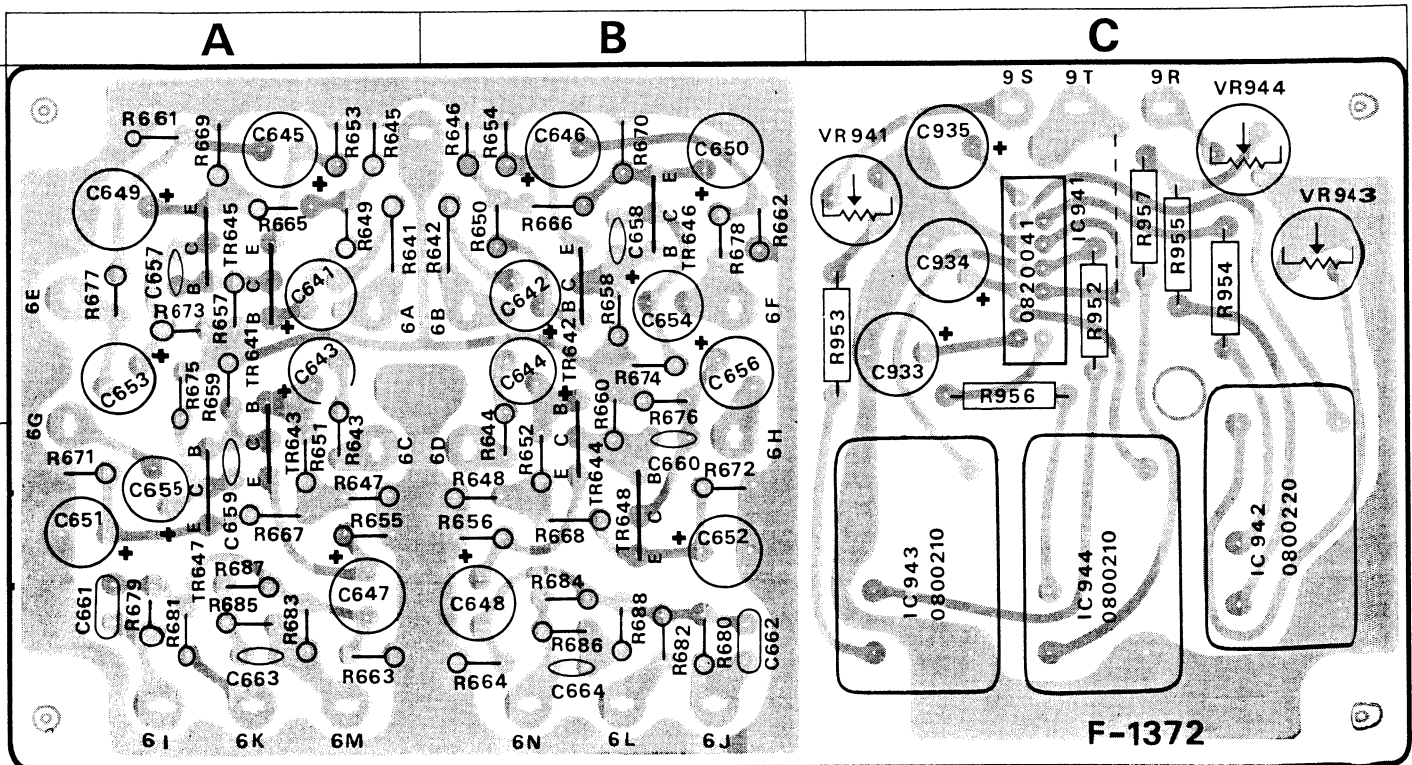
| W     | X               | Y          | Z      |
|-------|-----------------|------------|--------|
| C901  | 0.47 $\mu$ F    | 0563478    | 2 C    |
| C902  | 0.47 $\mu$ F    | 0563478    | 1 C    |
| C903  | 0.68 $\mu$ F    | 0563688    | 2 C    |
| C704  | 0.68 $\mu$ F    | 0563368    | 1 C    |
| C905  | 0.047 $\mu$ F   | 0601477    | 2 C    |
| C906  | 0.047 $\mu$ F   | 0601477    | 1 C    |
| C907  | 0.047 $\mu$ F   | 0601477    | 2 C    |
| C908  | 0.047 $\mu$ F   | 0601477    | 1 C    |
| C909  | 1 $\mu$ F       | 0515109    | 2 C    |
| C910  | 1 $\mu$ F       | 0515109    | 1 C    |
| C911  | 1 $\mu$ F       | 0515109    | 2 C    |
| C912  | 1 $\mu$ F       | 0515109    | 1 C    |
| C913  | 1 $\mu$ F       | 0515109    | 2 C    |
| C914  | 1 $\mu$ F       | 0515109    | 1 C    |
| C915  | 1 $\mu$ F       | 0515109    | 1 C    |
| C916  | 1 $\mu$ F       | 0515109    | 2 B, C |
| C917  | 100 $\mu$ F     | 0510101    | 1 B    |
| C918  | 100 $\mu$ F     | 0510101    | 2 B    |
| C919  | 1 $\mu$ F       | 0515109    | 1 B    |
| C920  | 1 $\mu$ F       | 0515109    | 2 B    |
| C921  | 0.1 $\mu$ F     | 0601108    | 1 B    |
| C922  | 0.047 $\mu$ F   | 0601477    | 2 B    |
| C923  | 1 $\mu$ F       | 0515109    | 1 B    |
| C924  | 1 $\mu$ F       | 0515109    | 2 B    |
| C925  | 0.0033 $\mu$ F  | 0601336    | 1 A    |
| C926  | 0.0033 $\mu$ F  | 0601336    | 2 A    |
| C927  | 1 $\mu$ F       | 0515109    | 1 B    |
| C928  | 1 $\mu$ F       | 0515109    | 2 B    |
| C929  | 0.047 $\mu$ F   | 0601477    | 1 A    |
| C930  | 0.047 $\mu$ F   | 0601477    | 2 A    |
| C931  | 12 pF           | 0660120    | 1 A    |
| C932  | 12 pF           | 0660120    | 2 A    |
| C933  | 100 $\mu$ F     | 0513101    | 1, 2 C |
| C937  | 15 pF           | 0660150    |        |
| C938  | 15 pF           | 0660150    |        |
| TR901 | 2SC458LG (B, C) | 0305313, 4 | 2 C    |
| TR902 |                 | 0305313, 4 | 1 C    |
| TR903 |                 | 0305313, 4 | 1 B    |
| TR904 |                 | 0305313, 4 | 2 B    |
| IC901 | Hybrid IC       | 0820010    | 1, 2 C |
| IC902 |                 | 0820030    | 1, 2 B |
| IC903 |                 | 0820030    | 1, 2 B |
| IC906 |                 | 0820070    | 1 A    |
| IC907 |                 | 0820070    | 2 A    |
| CL901 | MCL-706         | 0920021    | 1 A    |
| CL902 |                 | 0920021    | 2 A    |

## PHASE MODULATOR BLOCK <F-1372>

| W     | X                | Y       | Z        |
|-------|------------------|---------|----------|
| R641  | 1k $\Omega$      | 0101102 | 1 A      |
| R642  | 1k $\Omega$      | 0101102 | 1 B      |
| R643  | 1k $\Omega$      | 0101102 | 1, 2 A   |
| R644  | 1k $\Omega$      | 0101102 | 1, 2 B   |
| R645  | 120k $\Omega$    | 0101124 | 1 A      |
| R646  | 120k $\Omega$    | 0101124 | 1 B      |
| R647  | 120k $\Omega$    | 0101124 | 2 A      |
| R648  | 120k $\Omega$    | 0101124 | 2 B      |
| R649  | 39k $\Omega$     | 0101393 | 1 A      |
| R650  | 39k $\Omega$     | 0101393 | 1 B      |
| R651  | 39k $\Omega$     | 0101393 | 2 A      |
| R652  | 39k $\Omega$     | 0101393 | 2 B      |
| R653  | 2.2k $\Omega$    | 0101222 | 1 A      |
| R654  | 2.2k $\Omega$    | 0101222 | 1 B      |
| R655  | 2.2k $\Omega$    | 0101222 | 2 A      |
| R656  | 2.2k $\Omega$    | 0101222 | 2 B      |
| R657  | 100k $\Omega$    | 0101104 | 1 A      |
| R658  | 100k $\Omega$    | 0101104 | 1 B      |
| R659  | 100k $\Omega$    | 0101104 | 1 A      |
| R660  | 100k $\Omega$    | 0101104 | 1, 2 B   |
| R661  | 1k $\Omega$      | 0101102 | 1 A      |
| R662  | 1k $\Omega$      | 0101102 | 1 B, 2 B |
| R663  | 1.5k $\Omega$    | 0101152 | 2 A      |
| R664  | 1.5k $\Omega$    | 0101152 | 2 B      |
| R665  | 68k $\Omega$     | 0101683 | 1 A      |
| R666  | 68k $\Omega$     | 0101683 | 1 B      |
| R667  | 68k $\Omega$     | 0101683 | 2 A      |
| R668  | 68k $\Omega$     | 0101683 | 2 B      |
| R669  | 820 $\Omega$     | 0101821 | 1 A      |
| R670  | 820 $\Omega$     | 0101821 | 1 B      |
| R671  | 820 $\Omega$     | 0101821 | 2 A      |
| R672  | 820 $\Omega$     | 0101821 | 2 B      |
| R673  | 6.8k $\Omega$    | 0101682 | 1 A      |
| R674  | 6.8k $\Omega$    | 0101682 | 1 B      |
| R675  | 6.8k $\Omega$    | 0101682 | 1 A      |
| R676  | 6.8k $\Omega$    | 0101682 | 1 B      |
| R677  | 10k $\Omega$     | 0101103 | 1 A      |
| R678  | 10k $\Omega$     | 0101103 | 1 B      |
| R679  | 10k $\Omega$     | 0101103 | 2 A      |
| R680  | 10k $\Omega$     | 0101103 | 2 B      |
| R952  | 18k $\Omega$     | 0101183 | 1 C      |
| R953  | 39k $\Omega$     | 0101393 | 1 C      |
| R954  | 33k $\Omega$     | 0101333 | 1 C      |
| R955  | 150k $\Omega$    | 0101154 | 1 C      |
| R956  | 33k $\Omega$     | 0101333 | 1 C      |
| R957  | 120k $\Omega$    | 0101124 | 1 C      |
| VR941 | 47k $\Omega$ (B) | 1035170 | 1 C      |
| VR943 | 47k $\Omega$ (B) | 1035170 | 1 C      |
| VR944 | 47k $\Omega$ (B) | 1035170 | 1 C      |
| C641  | 1.5 $\mu$ F      | 0579003 | 1 A      |
| C642  | 1.5 $\mu$ F      | 0579003 | 1 B      |
| C643  | 1.5 $\mu$ F      | 0579003 | 1 A      |
| C644  | 1.5 $\mu$ F      | 0579003 | 1 B      |
| C645  | 33 $\mu$ F       | 0510330 | 1 A      |
| C646  | 33 $\mu$ F       | 0510330 | 1 B      |

| W     | X           | Y       | Z      |
|-------|-------------|---------|--------|
| C647  | 100 $\mu$ F | 0510101 | 2 A    |
| C648  | 100 $\mu$ F | 0510101 | 2 B    |
| C649  | 100 $\mu$ F | 0510101 | 1 A    |
| C650  | 100 $\mu$ F | 0510101 | 1 B    |
| C651  | 100 $\mu$ F | 0510101 | 2 A    |
| C652  | 100 $\mu$ F | 0510101 | 2 B    |
| C653  | 10 $\mu$ F  | 0513100 | 1 A    |
| C654  | 10 $\mu$ F  | 0513100 | 1 B    |
| C655  | 10 $\mu$ F  | 0513100 | 2 A    |
| C656  | 10 $\mu$ F  | 0513100 | 1 B    |
| C657  | 47pF        | 0660470 | 1 A    |
| C658  | 47pF        | 0660470 | 1 B    |
| C659  | 100pF       | 0660101 | 2 A    |
| C660  | 100pF       | 0660101 | 2 B    |
| C933  | 100 $\mu$ F | 0510101 | 1 C    |
| C934  | 100 $\mu$ F | 0510101 | 1 C    |
| C935  | 100 $\mu$ F | 0510101 | 1 C    |
| TR641 | 2SC871R (F) | 0305475 | 1 A    |
| TR642 |             | 0305475 | 1 B    |
| TR643 |             | 0305475 | 1, 2 A |
| TR644 |             | 0305475 | 1, 2 B |
| TR645 |             | 0305475 | 1 A    |
| TR646 |             | 0305475 | 1 B    |
| TR647 |             | 0305475 | 2 A    |
| TR648 |             | 0305475 | 2 B    |

| W     | X         | Y       | Z      |
|-------|-----------|---------|--------|
| IC941 | Hybrid IC | 0820040 | 1 C    |
| IC942 |           | 0800220 | 1, 2 C |
| IC943 |           | 0800210 | 2 C    |
| IC944 |           | 0800210 | 2 C    |



# PRINTED CIRCUIT BOARDS AND PARTS LIST

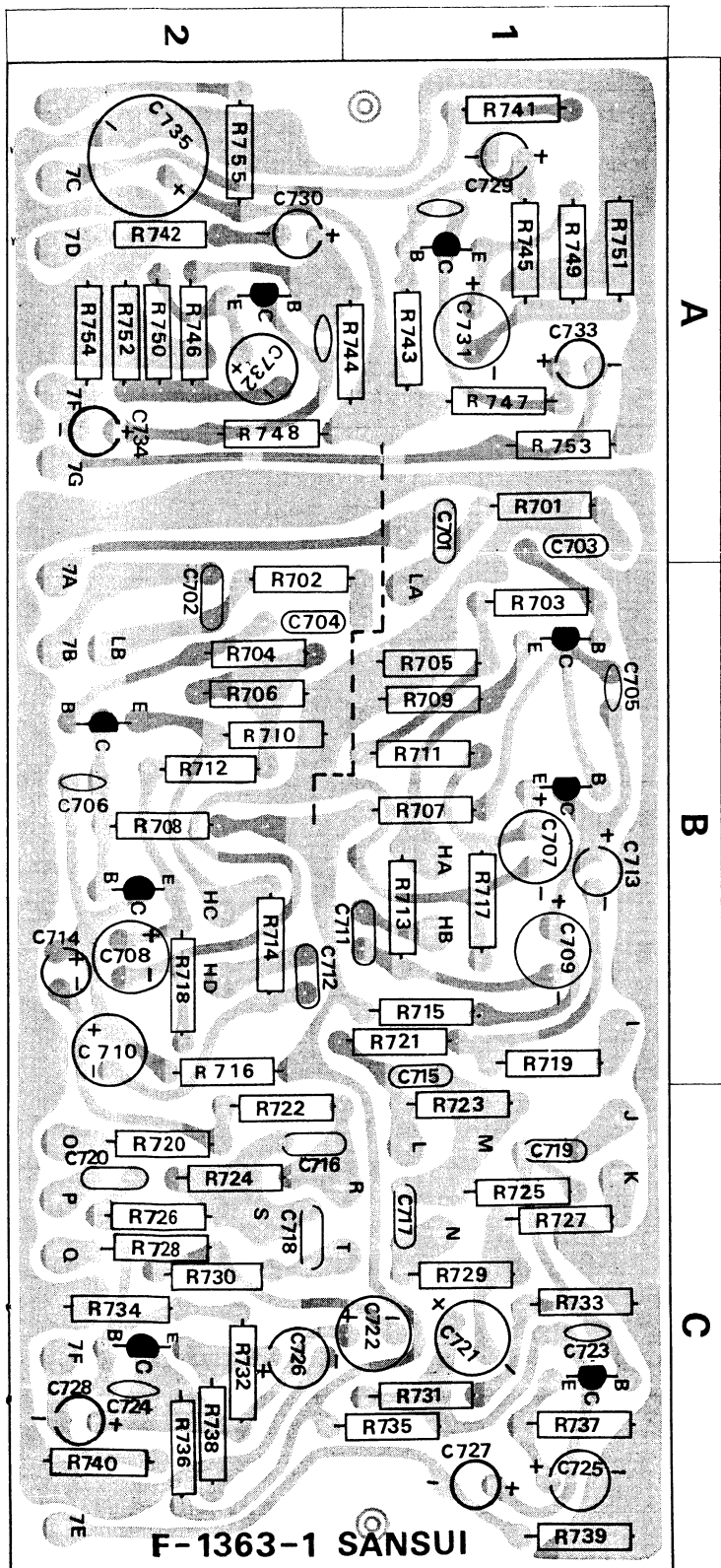
W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## tone block <F-1363-1>

| W    | X     | Y       | Z   |
|------|-------|---------|-----|
| R701 | 1kΩ   | 0101102 | 1 A |
| R702 | 1kΩ   | 0101102 | 2 B |
| R703 | 100kΩ | 0101104 | 1 B |
| R704 | 100kΩ | 0101104 | 2 B |
| R705 | 39kΩ  | 0101393 | 1 B |
| R706 | 39kΩ  | 0101393 | 2 B |
| R707 | 100kΩ | 0101104 | 1 B |
| R708 | 100kΩ | 0101104 | 2 B |
| R709 | 4.7kΩ | 0101472 | 1 B |
| R710 | 4.7kΩ | 0101472 | 2 B |
| R711 | 47kΩ  | 0101473 | 1 B |
| R712 | 47kΩ  | 0101473 | 2 B |
| R713 | 10kΩ  | 0101103 | 1 B |
| R714 | 10kΩ  | 0101103 | 2 B |
| R715 | 5.6kΩ | 0101562 | 1 B |
| R716 | 5.6kΩ | 0101562 | 2 B |
| R717 | 1.5kΩ | 0101152 | 1 B |
| R718 | 1.5kΩ | 0101152 | 2 B |
| R719 | 5.6kΩ | 0101562 | 1 B |
| R720 | 5.6kΩ | 0101562 | 2 C |
| R721 | 8.2kΩ | 0101822 | 1 B |
| R722 | 8.2kΩ | 0101822 | 2 C |
| R723 | 220kΩ | 0101224 | 1 C |
| R724 | 220kΩ | 0101224 | 2 C |
| R725 | 22kΩ  | 0101223 | 1 C |
| R726 | 22kΩ  | 0101223 | 2 C |
| R727 | 5.6kΩ | 0101562 | 1 C |
| R728 | 5.6kΩ | 0101562 | 2 C |
| R729 | 8.2kΩ | 0101822 | 1 C |
| R730 | 8.2kΩ | 0101822 | 2 C |
| R731 | 390kΩ | 0101394 | 1 C |
| R732 | 390kΩ | 0101394 | 2 C |
| R733 | 100kΩ | 0101104 | 1 C |
| R734 | 100kΩ | 0101104 | 2 C |
| R735 | 5.6kΩ | 0101562 | 1 C |
| R736 | 5.6kΩ | 0101562 | 2 C |
| R737 | 560Ω  | 0101561 | 1 C |
| R738 | 560Ω  | 0101561 | 2 C |
| R739 | 100kΩ | 0101104 | 1 C |
| R740 | 100kΩ | 0101104 | 2 C |
| R741 | 2.2kΩ | 0101222 | 1 A |
| R742 | 2.2kΩ | 0101222 | 2 A |
| R743 | 470kΩ | 0101474 | 1 A |
| R744 | 470kΩ | 0101474 | 1 A |
| R745 | 56kΩ  | 0101563 | 1 A |
| R746 | 56kΩ  | 0101563 | 2 A |
| R747 | 12kΩ  | 0101123 | 1 A |
| R748 | 12kΩ  | 0101123 | 2 A |
| R749 | 2.2kΩ | 0101222 | 1 A |
| R750 | 2.2kΩ | 0101222 | 2 A |
| R751 | 3.9kΩ | 0101392 | 1 A |
| R752 | 3.9kΩ | 0101392 | 2 A |
| R753 | 100kΩ | 0101104 | 1 A |
| R754 | 100kΩ | 0101104 | 2 A |
| R755 | 100Ω  | 0101101 | 2 A |

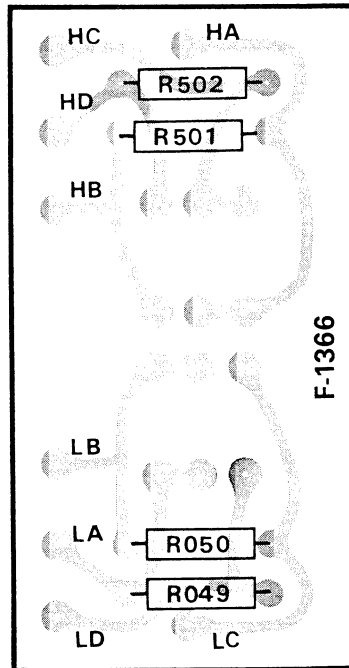
± 10% 1/4W CR.

| W     | X             | Y          | Z   |
|-------|---------------|------------|-----|
| C701  | 0.01μF        | 0601107    | 1 A |
| C702  | 0.01μF        | 0601107    | 2 B |
| C703  | 0.22μF        | 0601228    | 1 A |
| C704  | 0.22μF        | 0601228    | 2 B |
| C705  | 100pF         | 0660101    | 1 B |
| C706  | 100pF         | 0660101    | 2 B |
| C707  | 33μF          | 0510330    | 1 B |
| C708  | 33μF          | 0510330    | 2 B |
| C709  | 33μF          | 0512330    | 1 B |
| C710  | 33μF          | 0512330    | 2 B |
| C711  | 0.015μF       | 0601157    | 1 B |
| C712  | 0.015μF       | 0601157    | 2 B |
| C713  | 1μF           | 0515109    | 1 B |
| C714  | 1μF           | 0515109    | 2 B |
| C715  | 0.04μF        | 0601407    | 1 B |
| C716  | 0.04μF        | 0601407    | 2 C |
| C717  | 0.04μF        | 0601407    | 1 C |
| C718  | 0.04μF        | 0601407    | 2 C |
| C719  | 0.0015μF      | 0601156    | 1 C |
| C720  | 0.0015μF      | 0601156    | 2 C |
| C721  | 10μF          | 0515109    | 1 C |
| C722  | 10μF          | 0515109    | 1 C |
| C723  | 68pF          | 0660680    | 1 C |
| C724  | 68pF          | 0660680    | 2 C |
| C725  | 47μF          | 0511470    | 1 C |
| C726  | 47μF          | 0511470    | 2 C |
| C727  | 1μF           | 0515109    | 1 C |
| C728  | 1μF           | 0515109    | 2 C |
| C729  | 1μF           | 0515109    | 1 A |
| C730  | 1μF           | 0515109    | 2 A |
| C731  | 47μF          | 0511470    | 1 A |
| C732  | 47μF          | 0511470    | 2 A |
| C733  | 1μF           | 0515109    | 1 A |
| C734  | 1μF           | 0515109    | 2 A |
| C735  | 100μF         | 0513101    | 2 A |
| TR701 | 2SC871 (E, F) | 0305471, 2 | 1 B |
| TR702 | 2SC871 (E, F) | 0305471, 2 | 2 B |
| TR703 | 2SC871 (E, F) | 0305471, 2 | 1 B |
| TR704 | 2SC871 (E, F) | 0305471, 2 | 2 B |
| TR705 | 2SC871 (F)    | 0305472    | 1 C |
| TR706 | 2SC871 (F)    | 0305472    | 2 C |
| TR707 | 2SC871 (F)    | 0305472    | 1 A |
| TR708 | 2SC871 (F)    | 0305472    | 2 A |



### FILTER BLOCK <F-1366>

| W        | X                  | Y                           |
|----------|--------------------|-----------------------------|
| R049     | 1M $\Omega$        | 0101105                     |
| R050     | 1M $\Omega$        | 0101105                     |
| R051     | 1M $\Omega$        | 0101105                     |
| R052     | 1M $\Omega$        | 0101105                     |
|          |                    | $\pm 10\% \frac{1}{4}W$ CR. |
| S9(a,b)  | High Filter Switch | 1130380                     |
| S10(a,b) | Low Filter Switch  |                             |





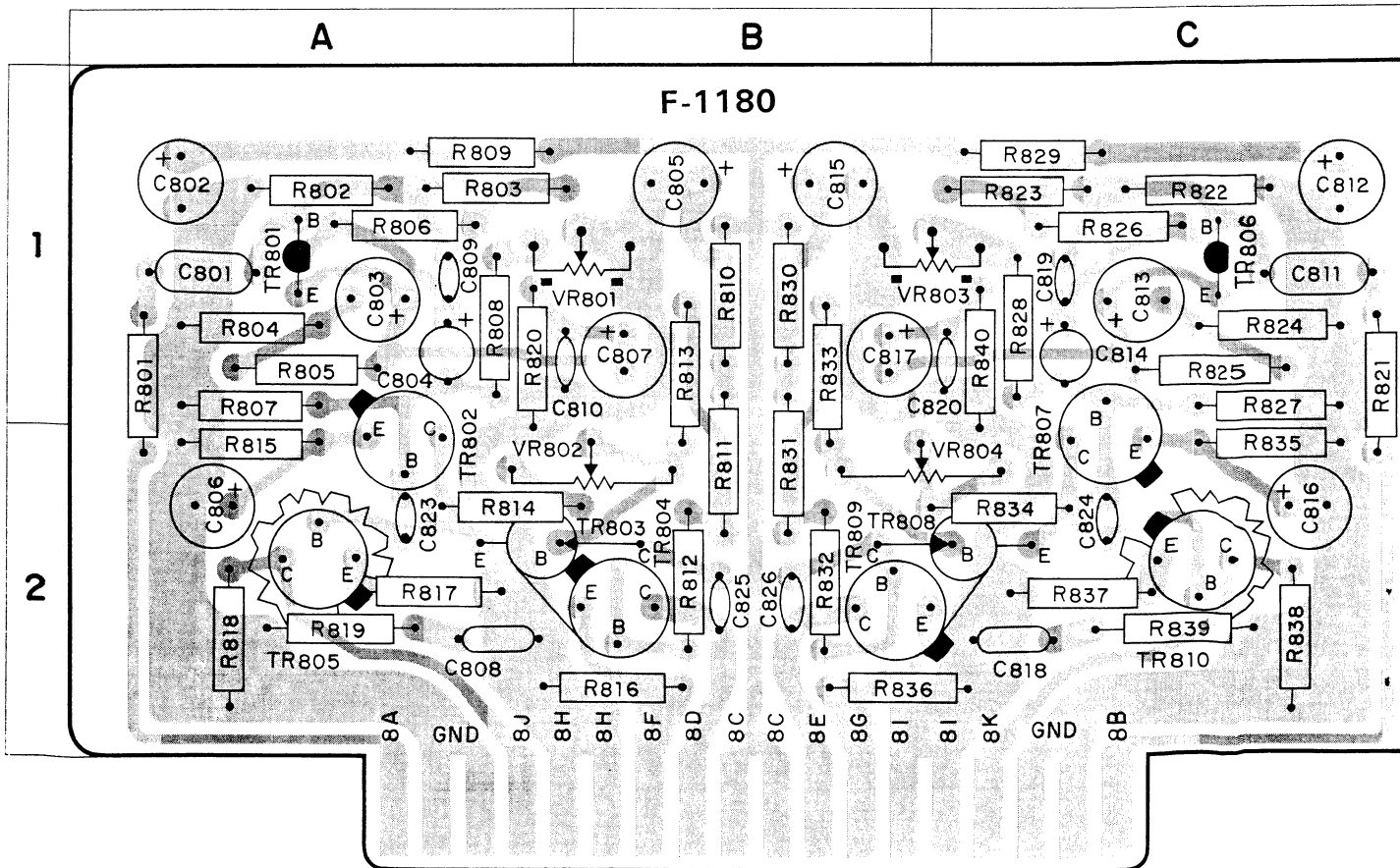
# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## DRIVER BLOCK <F-1180E>

| W    | X             | Y                           | Z           |
|------|---------------|-----------------------------|-------------|
| R801 | 2.2k $\Omega$ | 0101222                     | 1 A         |
| R802 | 150k $\Omega$ | 0101154                     | 1 A         |
| R803 | 560k $\Omega$ | 0101564                     | 1 A         |
| R804 | 470 $\Omega$  | 0101471                     | 1 A         |
| R805 | 3.3k $\Omega$ | 0101332                     | 1 A         |
| R806 | 3.3k $\Omega$ | 0101332                     | 1 A         |
| R807 | 10k $\Omega$  | 0101103                     | 1 A         |
| R808 | 47k $\Omega$  | 0101473                     | 1 A         |
| R809 | 56k $\Omega$  | 0101563                     | 1 A         |
| R810 | 1.8k $\Omega$ | 0101182                     | 1 B         |
| R811 | 3.9k $\Omega$ | 0101392                     | 2 B         |
| R812 | 39 $\Omega$   | 0101390                     | 2 B         |
| R813 | 3.3k $\Omega$ | 0101332                     | 1 B         |
| R814 | 1.5k $\Omega$ | 0101152                     | 2 A         |
| R815 | 220 $\Omega$  | 0101221                     | 2 A         |
| R816 | 100 $\Omega$  | 0101101                     | 2 B         |
| R817 | 4.7 $\Omega$  | 0101479                     | 2 A         |
| R818 | 100 $\Omega$  | 0101101                     | 2 A         |
| R819 | 6.8 $\Omega$  | $\pm 10\% \frac{1}{2}W$ SR. | 0101689 2 A |
| R820 | 8.2k $\Omega$ | 0101822                     | 1 A         |
| R821 | 2.2k $\Omega$ | 0101222                     | 1 C         |
| R822 | 150k $\Omega$ | $\pm 10\% \frac{1}{4}W$ CR. | 0101154 1 C |
| R823 | 560k $\Omega$ | 0101564                     | 1 C         |

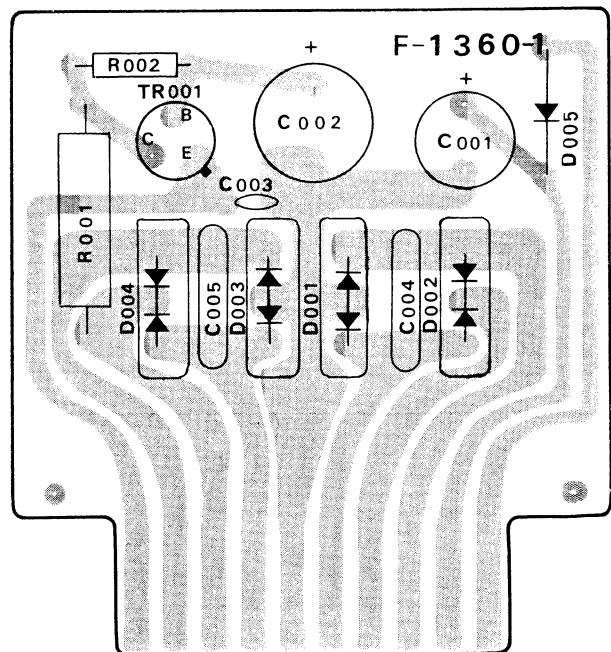
| W    | X             | Y                           | Z           |
|------|---------------|-----------------------------|-------------|
| R824 | 470 $\Omega$  | 0101479                     | 1 C         |
| R825 | 3.3k $\Omega$ | 0101332                     | 1 C         |
| R826 | 3.3k $\Omega$ | 0101332                     | 1 C         |
| R827 | 10k $\Omega$  | 0101103                     | 1 C         |
| R828 | 47k $\Omega$  | 0101473                     | 1 C         |
| R829 | 56k $\Omega$  | 0101563                     | 1 C         |
| R830 | 1.8k $\Omega$ | 0101182                     | 1 B         |
| R831 | 3.9k $\Omega$ | $\pm 10\% \frac{1}{4}W$ CR. | 0101392 2 B |
| R832 | 39 $\Omega$   | 0101390                     | 2 B         |
| R833 | 3.3k $\Omega$ | 0101332                     | 1 B         |
| R834 | 1.5k $\Omega$ | 0101152                     | 2 C         |
| R835 | 220 $\Omega$  | 0101221                     | 2 C         |
| R836 | 100 $\Omega$  | 0101101                     | 2 B         |
| R837 | 4.7 $\Omega$  | 0101479                     | 2 C         |
| R838 | 100 $\Omega$  | 0101101                     | 2 C         |
| R839 | 6.8 $\Omega$  | $\pm 10\% \frac{1}{2}W$ SR. | 0101689 2 C |
| R840 | 8.2k $\Omega$ | $\pm 10\% \frac{1}{4}W$ CR. | 0101822 1 C |
| C801 | 0.22 $\mu F$  | $\pm 10\%$ 50 V MC.         | 0601228 1 A |
| C802 | 100 $\mu F$   | 25 V EC.                    | 0513101 1 A |
| C803 | 220 $\mu F$   | 10 V EC.                    | 0511221 1 A |
| C804 | 1 $\mu F$     |                             | 0515109 1 A |
| C805 | 33 $\mu F$    | 50 V EC.                    | 0515330 1 B |



| W     | X                                     | Y                            | Z           |
|-------|---------------------------------------|------------------------------|-------------|
| C806  | 100 $\mu$ F                           | 6.3 V EC.                    | 0510101 2 A |
| C807  | 10 $\mu$ F                            | 50 V EC.                     | 0515100 1 B |
| C808  | 0.047 $\mu$ F                         | $\pm 10\%$ 50 V MC.          | 0601477 2 A |
| C809  | 47 pF                                 | $\pm 10\frac{1}{2}$ 50 V CC. | 0660470 1 A |
| C811  | 0.22 $\mu$ F                          | $\pm 10\%$ 50 V MC.          | 0601228 1 C |
| C812  | 100 $\mu$ F                           | 25 V EC.                     | 0513101 1 C |
| C813  | 220 $\mu$ F                           | 10 V EC.                     | 0511221 1 C |
| C814  | 1 $\mu$ F                             | 50 V EC.                     | 0515109 1 C |
| C815  | 33 $\mu$ F                            |                              | 0515330 1 B |
| C816  | 100 $\mu$ F                           | 6.3 V EC.                    | 0510101 2 C |
| C817  | 10 $\mu$ F                            | 50 V EC.                     | 0515100 1 B |
| C818  | 0.047 $\mu$ F                         | $\pm 10\%$ 50 V MC.          | 0601477 2 C |
| C819  | 47 pF                                 | $\pm 10\frac{1}{2}$ 50 V CC. | 0660470 1 C |
| C823  | 47 pF                                 |                              | 0660470 2 A |
| C824  | 47 pF                                 |                              | 0660470 2 C |
| C825  | 330 pF                                |                              | 0660331 2 B |
| C826  | 330 pF                                | 0660331 2 B                  |             |
| VR801 | 200k $\Omega$ (B) AC Balance Adjustor | 1030150                      | 1 A, B      |
| VR802 | 1k $\Omega$ (B) DC Bias Adjustor      | 1030690                      | 2 A, B      |
| VR803 | 200k $\Omega$ (B) AC Balance Adjustor | 1030150                      | 1 B, C      |
| VR804 | 1k $\Omega$ (B) DC Bias Adjustor      | 1030690                      | 2 B, C      |
| TR801 | 2SC458LG (B)                          | 0305310                      | 1 A         |
| TR802 | 2SC1124 (2, 3)                        | 0305900,1,2                  | 2 A         |
| TR803 | 2SC281 (B)                            | 0305141                      | 2 A, B      |
| TR804 | 2SC959 (L, M)                         | 0305741, 2                   | 2 B         |
| TR805 | 2SA606 (L, M)                         | 0300211, 2                   | 2 A         |
| TR806 | 2SC458LG (B)                          | 0305310                      | 1 C         |
| TR807 | 2SC1124 (2, 3)                        | 0305900,1,2                  | 2 C         |
| TR808 | 2SC281 (B)                            | 0305141                      | 2 B, C      |
| TR809 | 2SC959 (L, M)                         | 0305741, 2                   | 2 B         |
| TR810 | 2SA606 (L, M)                         | 0300211, 2                   | 2 C         |

## POWER BLOCK <F-1360-1>

| W     | X   | Y                           |         |
|-------|---|-----------------------------|---------|
| R001  | 47 $\Omega$ $\pm 10\%$ 2 W CeR.             | 0152470                     |         |
| R002  | 12k $\Omega$ $\pm 10\%$ $\frac{1}{4}$ W CR. | 0101123                     |         |
| C001  | 1000 $\mu$ F                                | 10 V EC.                    | 0511102 |
| C002  | 100 $\mu$ F                                 | 75 V EC.                    | 0519301 |
| C003  | 0.022 $\mu$ F                               | $+80\%$<br>$-20\%$ 50 V CC. | 0657223 |
| C004  | 0.0047 $\mu$ F                              | $+80\%$<br>$-20\%$ 500V CC. | 0659012 |
| C005  | 0.0047 $\mu$ F                              |                             | 0659012 |
| TR001 | 2SC959 (L, M)                               | 0305741, 2                  |         |
| D001  | ESAC02N-03                                  | 0310910                     |         |
| D002  | ESAC02C-03                                  | 0310900                     |         |
| D003  | ESAC02N-03                                  | 0310910                     |         |
| D004  | ESAC02C-03                                  | 0310900                     |         |
| D005  | 10D1  | 0310340                     |         |



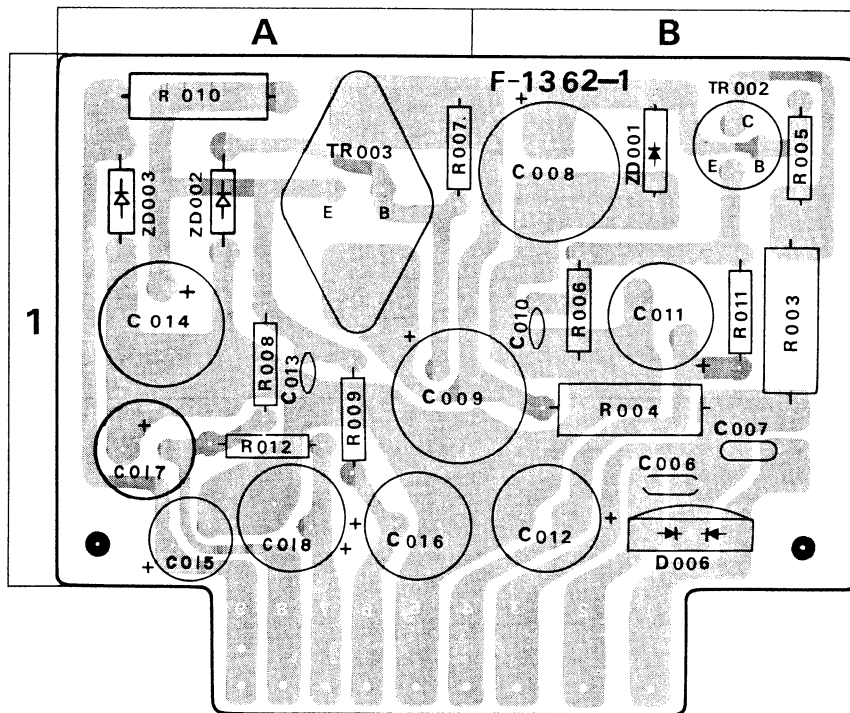
# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## POWER BLOCK <F-1362-1>

| W    | X            | Y       | Z      |
|------|--------------|---------|--------|
| R003 | 100Ω         | 0152101 | 1 B    |
| R004 | 22Ω          | 0152220 | 1 B    |
| R005 | 3.3kΩ ± 10%  | 0101332 | 1 B    |
| R007 | 1.2kΩ ± 10%  | 0101122 | 1 A    |
| R008 | 47Ω ± 10%    | 0111470 | 1 A    |
| R009 | 820Ω ± 10%   | 0101821 | 1 A    |
| R010 | 270Ω ± 10%   | 0152271 | 1 A    |
| R011 | 10Ω ± 10%    | 0101100 | 1 B    |
| C006 | 0.01μF +80%  | 0659011 | 1 B    |
| C007 | 0.01μF -20%  | 0659011 | 1 B    |
| C008 | 220μF        | 0515221 | 1 B    |
| C009 | 220μF        | 0515221 | 1 A, B |
| C010 | 0.022μF +80% | 0657223 | 1 B    |
| C012 | 470μF        | 0513221 | 1 B    |

| W     | X             | Y            | Z   |
|-------|---------------|--------------|-----|
| C013  | 0.022μF +80%  | 0657223      | 1 A |
| C014  | 220μF -20%    | 0515221      | 1 A |
| C015  | 100μF         | 0512101      | 1 A |
| C016  | 220μF         | 0513221      | 1 A |
| C017  | 220μF         | 0513221      | 1 A |
| C018  | 220μF         | 0513221      | 1 A |
| TR002 | 2SC971 (2, 3) | 0305530, 1   | 1 B |
| TR003 | 2SD92 (Y, BL) | 0308072, 3   | 1 A |
| D006  | 10DC-IN       | 0310680      | 1 B |
| ZD001 | RD24A (M, N)  | 0315410, 20  | 1 B |
| ZD002 | ZB1-27A       | 0315110      | 1 A |
| ZD003 | RD13A (L, M)  | 0315290, 300 | 1 A |



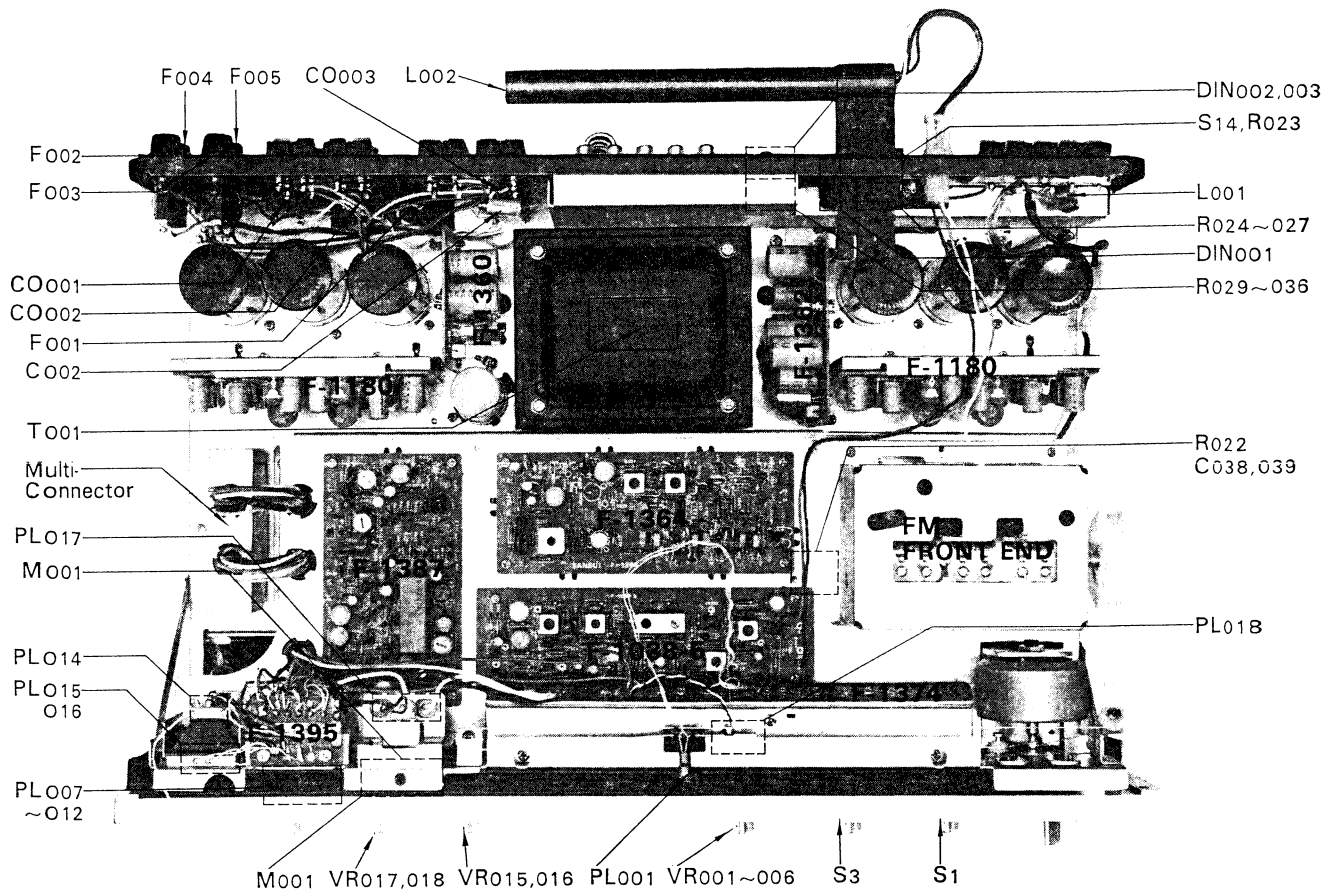
# OTHER PARTS AND THEIR POSITION ON CAHSSIS

W: Parts No. X: Parts Name Y: Stock No.

| W          | X  | Y                             |
|------------|--|-------------------------------|
| R022       | 47Ω  | 0101470                       |
| R023       | 5.6kΩ  | 0101562                       |
| R024       | 100kΩ  | 0101104                       |
| R025       | 100kΩ  | 0101104                       |
| R026       | 390kΩ  | 0101392                       |
| R027       | 390kΩ  | 0101392                       |
| R028       | 18kΩ   | 0101183                       |
| R029       | 100kΩ  | 0101104                       |
| R030       | 100kΩ  | 0101104                       |
| R031       | 390kΩ  | 0101392                       |
| R032       | 390kΩ  | 0101392                       |
| R033       | 100kΩ  | 0101104                       |
| R034       | 100kΩ  | 0101104                       |
| R035       | 390kΩ  | 0101394                       |
| R036       | 390kΩ  | 0101394                       |
| R037       | 8.2kΩ  | 0101822                       |
| R038       | 8.2kΩ  | 0101822                       |
| R053       | 330Ω   | 0111331                       |
| R054       | 330Ω   | 0111331                       |
| R055       | 330Ω   | 0111331                       |
| R056       | 330Ω   | 0111331                       |
| R057       | 0.47Ω  | 0152478                       |
| R058       | 0.47Ω  | 0152478                       |
| R059       | 0.47Ω  | 0152478                       |
| R060       | 0.47Ω  | 0152478                       |
| R061       | 0.47Ω  | 0152478                       |
| R062       | 0.47Ω  | 0152478                       |
| R063       | 0.47Ω  | 0152478                       |
| R064       | 0.47Ω  | 0152478                       |
| R065       | 27kΩ   | 0101273                       |
| R066       | 24kΩ   | 0101273                       |
| R067       | 47kΩ   | 0101473                       |
| R068       | 47kΩ   | 0101473                       |
| R069       | 560Ω   | 0111561                       |
| R072       | 560Ω   | 0111561                       |
| R073       | 4.7Ω   | 0111479                       |
| VR001~006  | 250kΩ(B)×4 }<br>100kΩ(B)×2 } Volume                    | 1090020, 1<br>1090020, 1      |
| VR007, 008 | 250kΩ(MN) Front Balance                                | 1040090, 1                    |
| VR009, 010 | 250kΩ(MN) Rear Balance                                 | 1040090, 1                    |
| VR011~014  | 250kΩ(MN)×2 Main Balance                               | 1040100, 1                    |
| VR015, 016 | 100kΩ(B)×2 Treble                                      | 1020130, 1                    |
| VR017, 018 | 100kΩ(B)×2 Bass  | 1020130, 1                    |
| C021       | 0.022μF }<br>0.0047μF } 600V OC.                       | 0591227<br>0591476            |
| C023       | 2200μF }<br>2200μF } 80 V EC.                          | 0559820<br>0559820            |
| C024       | 2200μF }<br>1000μF } 50 V EC.                          | 0559304<br>0559820            |
| C034       | 2200μF }<br>2200μF } 80 V EC.                          | 0559820<br>0559820            |
| C035       | 2200μF }<br>2200μF } 80 V EC.                          | 0559820<br>0559820            |
| C036       | 2200μF }<br>2200μF } 80 V EC.                          | 0559820<br>0559820            |
| C037       | 2200μF }<br>0.022μF } +80%<br>0.022μF } -20% 25 V CC.  | 0559820<br>0656223<br>0656223 |
| C038       | 0.022μF }<br>0.022μF } +80%<br>0.022μF } -20% 25 V CC. | 0656223<br>0656223            |
| C040       | 47μF 6.3 V EC.   | 0510470                       |
| C041       | 330μF 25 V EC.   | 0513331                       |
| TR004      | } 2SD180 (L, M, N)                                     | 0308061, 2, 3                 |
| TR005      |  | 0308061, 2, 3                 |

| W         | X  | Y                             |
|-----------|--|-------------------------------|
| TR006     | } 2SD180 (L, M, N)   | 0308061, 2, 3                 |
| TR007     |  | 0308061, 2, 3                 |
| TR008     |  | 0308061, 2, 3                 |
| TR009     |  | 0308061, 2, 3                 |
| TR010     |  | 0308061, 2, 3                 |
| TR011     |  | 0308061, 2, 3                 |
| S1(a~n)   | Selector Switch  | 1105110, 1                    |
| S2(a~f)   | Function Switch  | 1102320                       |
| S3(a~g)   | Mode Switch  | 1103391                       |
| S11(a~b)  | Front Speakers Switch Y-1-4-4  | 1101360, 1                    |
| S12(a~b)  | Rear Speakers Switch Y-1-4-4   | 1101360, 1                    |
| S13       | Power Switch   | 1130350                       |
| S14       | AM Antenna Switch  | 1110090                       |
| T001      | Power Transformer  | 4001000                       |
| L001      | 300Ω : 75Ω FM balloon  | 4290021                       |
| L002      | AM Bar Antenna   | 4200490                       |
| J001      | Headphones Jack (Front)  | 2430071                       |
| J002      | Headphones Jack (Rear)   | 2430071                       |
| J003      | Tape Rec. 2 Jack   | 2430060                       |
| J004      | Tape Mon. 2 Jack   | 2430060                       |
| DIN001    | DIN Connector (2-Channel)  | 2430040                       |
| DIN002    | DIN Connector (4-Channel Front)  | 2430040                       |
| DIN003    | DIN Connector (4-Channel Rear)   | 2430040                       |
| PU001     | { Voltage Selector Socket<br>Main Voltage Selector Plug<br>Sub Voltage Selector Plug | 2410170<br>2410180<br>2410190 |
| CO001~003 | AC Outlet  | 2450040                       |
| M001      | Signal Meter 200μA   | 4300470                       |
| F001      | 5A Power Fuse (100~127V)<br>3A Power Fuse (220~250V)                                 | 0430062<br>0430020            |
| F002~005  | 2.5A Quick Acting Fuse   | 0433242                       |
| PL001     | 6.3V 0.075A Dial Pointer Lamp  | 0400200                       |
| PL007     | 7V 0.2A PHONO 2 Indicator  | 0400150                       |
| PL008     | 7V 0.2A PHONO 1 Indicator  | 0400150                       |
| PL009     | 7V 0.2A FM Indicator   | 0400150                       |
| PL010     | 7V 0.2A AM Indicator   | 0400150                       |
| PL011     | 7V 0.2A AUX (2CH) Indicator  | 0400150                       |
| PL012     | 7V 0.2A AUX (4CH) Indicator  | 0400150                       |
| PL013     | 7V 0.2A 4-Channel Indicator  | 0400150                       |
| PL014     | } 6.3V 0.075A 2, 4 Digital Indicator   | 0400154                       |
| PL015     |  | 0400200                       |
| PL016     |  | 0400200                       |
| PL017     | 6.3V 0.25A Signal Meter Lamp   | 0420020                       |
| PL018     | 6V 0.1A FM Stereo Indicator  | 0400160                       |

# OTHER PARTS AND THEIR POSITION ON CHASSIS



\* Manufacturer reserves right to change design and/or specifications without notice for purpose of improvement.

