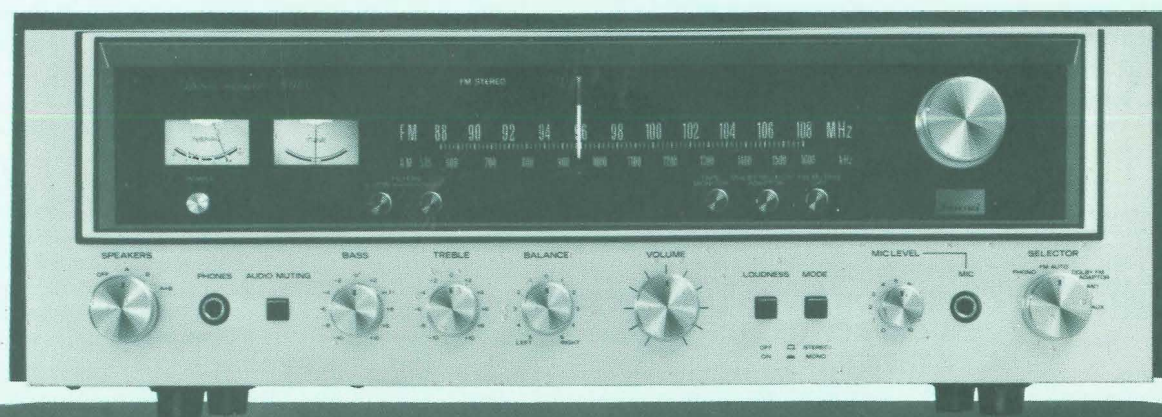


# SERVICE MANUAL

AM/FM STEREO RECEIVER

**SANSUI 6060/5050**



*Sansui*

SANSUI ELECTRIC CO., LTD.

This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the 5050, 6060 correctly. When ordering the parts, use the stock number and parts name specifically referring to the Parts Location and Parts Lists. For general usage and maintenance of the unit, please refer to the Operating Instructions attached with the unit.

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# 1. SPECIFICATIONS

## AUDIO SECTION

### POWER OUTPUT

#### MODEL 5050

Min. RMS, both channels driven, from 20 to 20,000Hz, with no more than 0.5% total harmonic distortion

30 watts per channel into 8 ohms

33 watts per channel into 4 ohms

Min. RMS, both channels driven, at 1,000Hz, with no more than 0.5% total harmonic distortion

33 watts per channel into 8 ohms

35 watts per channel into 4 ohms

#### MODEL 6060

Min. RMS, both channels driven, from 20 to 20,000Hz, with no more than 0.4% total harmonic distortion

40 watts per channel into 8 ohms

44 watts per channel into 8 ohms

Min. RMS, both channels driven, at 1,000Hz, with no more than 0.4% total harmonic distortion

44 watts per channel into 8 ohms

46 watts per channel into 4 ohms

LOAD IMPEDANCE ..... 4,8 ohms (SYSTEM A or B)  
8 ohms (SYSTEM A+B)

POWER BANDWIDTH..... 20 to 20,000Hz at or below  
rated min. RMS power output  
and total harmonic distortion

### TOTAL HARMONIC DISTORTION

MODEL 5050 ..... less than 0.5% at or below  
rated min. RMS power output

MODEL 6060 ..... less than 0.4% at or below  
rated min. RMS power output

### INTERMODULATION DISTORTION

(70Hz:7kHz=4:1 SMPTE method)

MODEL 5050 ..... less than 0.5%

MODEL 6060 ..... less than 0.4%

### FREQUENCY RESPONSE (at 1 watt)

..... 20 to 30,000Hz  $\pm$ 1.5dB

### RIAA CURVE DEVIATION (PHONO)

..... +1.0dB, -1.0dB  
(30Hz to 15kHz)

DAMPING FACTOR..... approximately 45 at 8 ohm load

### INPUT SENSITIVITY AND IMPEDANCE

(1 kHz, for rated power output)

PHONO ..... 2.5mV/50 kilohms

(Max. input capability. 160mV at 1kHz, less than 0.5%  
total harmonic distortion.)

MIC ..... 2.5mV/50 kilohms

TAPE PLAY, AUX ..... 150mV/50 kilohms

### OUTPUT LEVEL (1,000Hz)

TAPE REC (pin jacks) ..... 150mV

TAPE REC (DIN socket) ..... 30mV

### CHANNEL SEPARATION (at rated output 1,000Hz)

PHONO ..... better than 45dB

TAPE PLAY, AUX ..... better than 45dB

### HUM AND NOISE

PHONO ..... better than 70dB

TAPE PLAY, AUX ..... better than 80dB

### CONTROLS

#### MODEL 5050

BASS .....  $\pm$ 10dB (50Hz)

TREBLE .....  $\pm$ 10dB (10kHz)

LOUDNESS ..... +8dB (50Hz)

+6dB (10dB (10kHz))

HIGH FILTER ..... -10dB (10kHz)

#### MODEL 6060

BASS .....  $\pm$ 10dB (50Hz)

TREBLE .....  $\pm$ 10dB (10kHz)

LOUDNESS ..... +8dB (50Hz)

+6dB (10kHz)

LOW FILTER ..... -10dB (50Hz)

HIGH FILTER ..... -10dB (10kHz)

AUDIO MUTING ..... -20dB

## FM SECTION

TUNING RANGE ..... 88 to 108MHz

### SENSITIVITY

#### MODEL 5050

(IHF) ..... 11.2dBf (2.0 $\mu$ V)

(DIN) ..... 1.1 $\mu$ V

#### MODEL 6060

(IHF) ..... 10.8dBf (1.9 $\mu$ V)

(DIN) ..... 1.1 $\mu$ V

### 50dB QUIETING SENSITIVITY

STEREO (IHF) ..... 38dBf (45 $\mu$ V)

MONO (IHF) ..... 16dBf (3.5 $\mu$ V)

### TOTAL HARMONIC DISTORTION

STEREO ..... less than 0.5%

MONO ..... less than 0.4%

### SIGNAL TO NOISE RATIO (mono)

..... better than 65dB

SELECTIVITY ..... better than 60dB

CAPTURE RATIO ..... less than 2.2dB

IMAGE RESPONSE RATIO (IHF)..... better than 50dB (98MHz)

IF RESPONSE RATIO (IHF) ..... better than 75dB (98MHz)

SPURIOUS RESPONSE RATIO (IHF)

..... better than 70dB (98MHz)

SPURIOUS RADIATION ..... less than 34dB

STEREO SEPARATION ..... better than 40dB (1 kHz)

FREQUENCY RESPONSE ..... 30 to 15,000Hz  $\pm$ 1.0dB  
-3.0dB

ANTENNA INPUT IMPEDANCE ..75 $\Omega$  unbalanced  
300 $\Omega$  balanced

## AM SECTION

TUNING RANGE ..... 535 to 1,605kHz

SENSITIVITY (Bar antenna)..... 50dB/m (1,000kHz)

SELECTIVITY ..... better than 35dB (1,000kHz)

IMAGE RESPONSE RATIO (IHF)..... better than 35dB (1,000kHz)

IF RESPONSE RATIO (IHF) ..... better than 30dB (1,000kHz)

## OTHERS

#### MODEL 5050

### POWER REQUIREMENTS

POWER VOLTAGE..... 100, 120, 220, 240V 50/60Hz  
120V (Usable 110-130V)  
60Hz (for U.S.A. & Canada  
only)

POWER CONSUMPTION .... 125 watts (rated)  
210 watts, 250VA (max.)

#### MODEL 6060

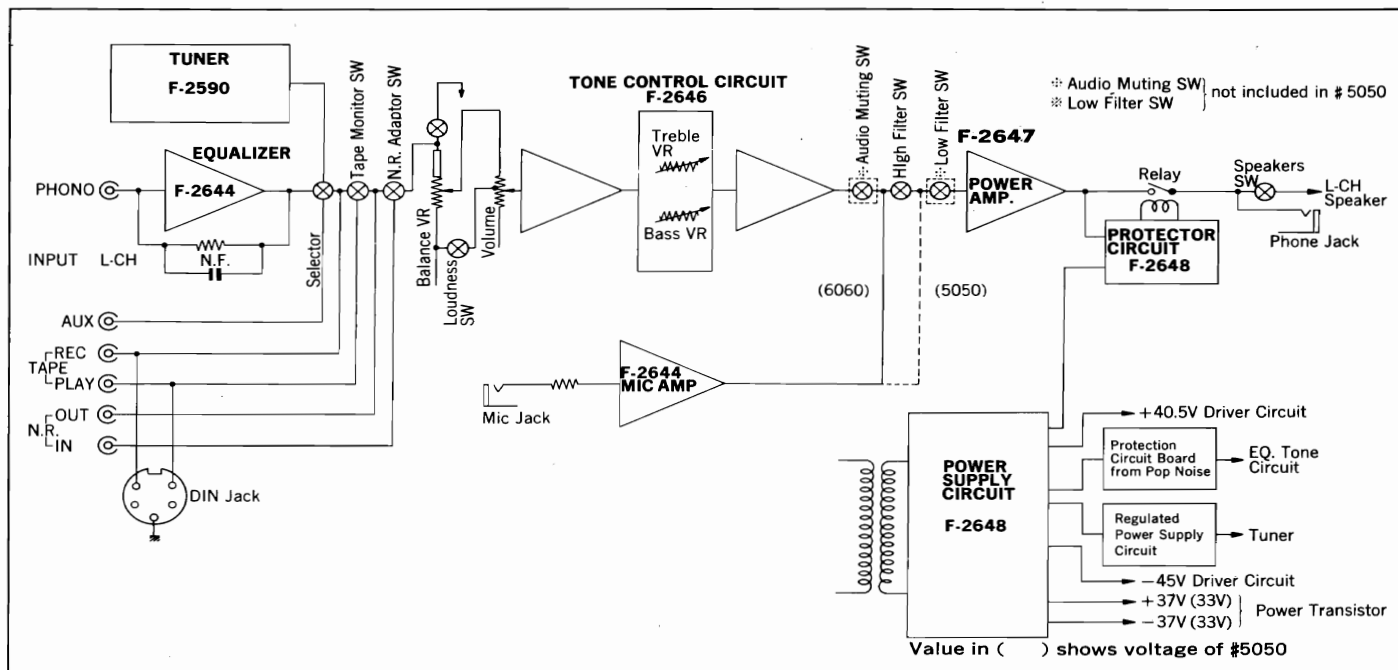
### POWER REQUIREMENTS

POWER VOLTAGE..... 100, 120, 220, 240V 50/60Hz  
120V (Usable 110-130V)  
60Hz (for U.S.A. & Canada  
only)

POWER CONSUMPTION .... 180 watts (rated)  
300 watts, 350VA (max.)

\*Design and specifications subject to change without notice for improvements.

## 2. BLOCK DIAGRAM



## 3. ADJUSTMENTS

### 3-1. Adjustment of Bias Current (See Fig. 3-1 & 3-2)

| STEP | SUBJECT           | EQUIPMENT     | MEASURE OUTPUT     | ADJUST         | ADJUST FOR     |
|------|-------------------|---------------|--------------------|----------------|----------------|
| 1    | Bias Current L-CH | DC Volt Meter | R05, R07<br>F-2648 | VR01<br>F-2647 | 15mV $\pm$ 1mV |
| 2    | Bias Current R-CH | DC Volt Meter | R06, R08<br>F-2648 | VR02<br>F-2647 | 15mV $\pm$ 1mV |

Fig. 3-1

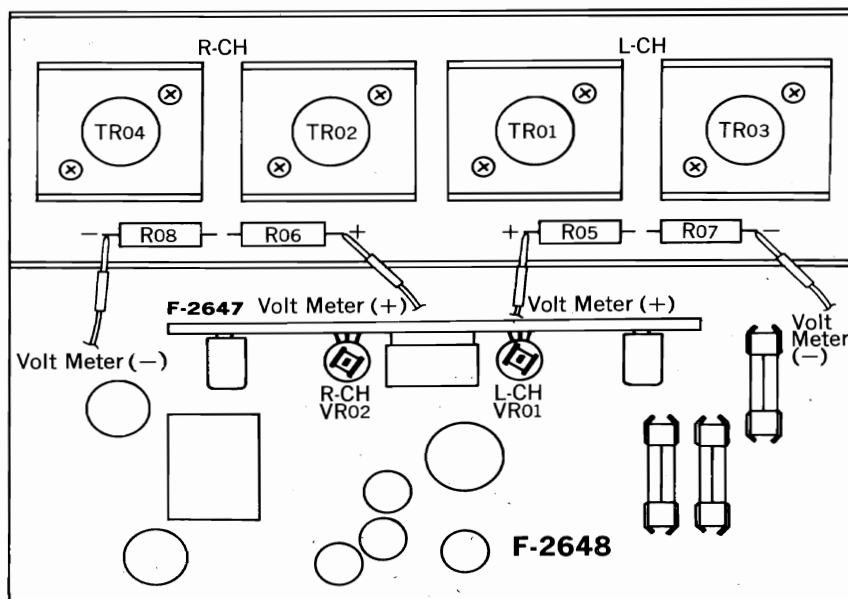
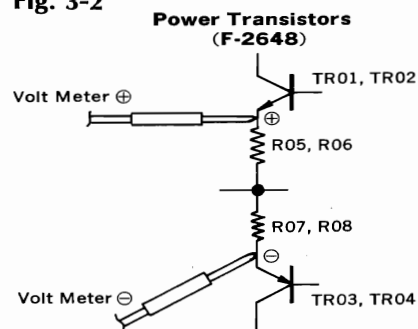


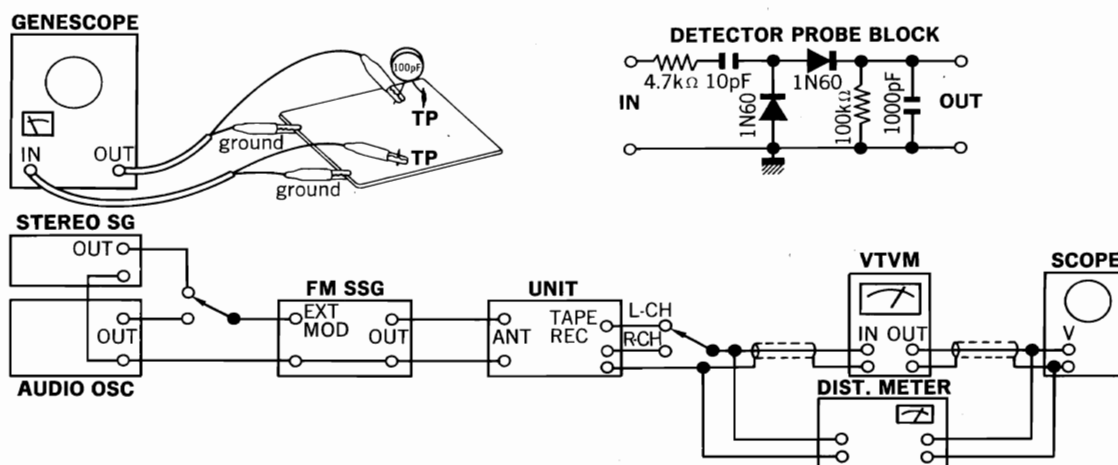
Fig. 3-2



## 3-2. FM & MPX Adjustment & Alignment (See Fig. 3-3 on page 5)

Note: 1. Selector.....FM AUTO  
2. FM Muting Switch .....OFF

3. Connection.....Connect the output of genescope to TP through 100pF ceramic capacitor.



### 1) FM IF Adjustment & Tracking

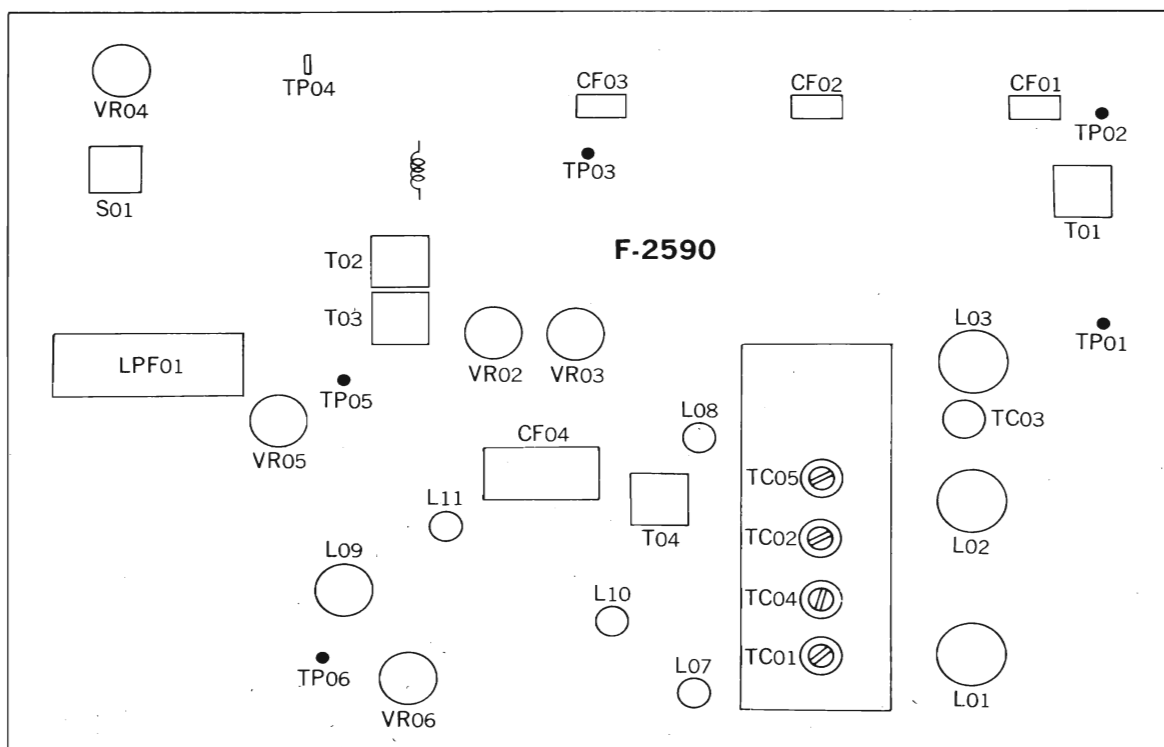
| STEP | SUBJECT                 | FEED SIGNAL                                      |                   | MEASURE OUTPUT                       | ADJUST               | ADJUST FOR                                                                                                                                           | CONDITION |
|------|-------------------------|--------------------------------------------------|-------------------|--------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|      |                         | FROM                                             | TO                |                                      |                      |                                                                                                                                                      |           |
| 1.   | IF Coil                 | Output 60dB Genescope                            | TP01 F-2590       | TP03 F-2590<br>Use Detector Probe    | T01 F-2590           | Max. IF waveform                                                                                                                                     |           |
| 2.   | Discriminator Coil      | Output 50dB Genescope                            | Same as above     | TP04 F-2590                          | T02<br>T03<br>F-2590 | Center indication on tune meter<br>Max. linearity of S curve<br>Steep linearity of S curve<br>Set output wave to dip point (It's minimum distortion) |           |
| 3.   | 90MHz Dial Calibration  | 90MHz ANT Input 60dB<br>400Hz (100% MOD) FM SSG  | ANT terminal 300Ω | REC OUT<br>L or R-CH<br>VTVM & Scope | L03 F-2590           | Max. Output                                                                                                                                          |           |
|      | 106MHz Dial Calibration | 106MHz ANT Input 60dB<br>400Hz (100% MOD) FM SSG | Same as above     | Same as above                        | TC03 F-2590          | Same as above                                                                                                                                        |           |
| 4.   | 90MHz RF Adj.           | 90MHz ANT Input 60dB<br>400Hz (100% MOD) FM SSG  | Same as above     | Same as above                        | L01, L02 F-2590      | Same as above                                                                                                                                        |           |
|      | 106MHz RF Adj.          | 106MHz ANT Input 60dB<br>400Hz (100% MOD) FM SSG | Same as above     | Same as above                        | TC01<br>TC02 F-2590  | Same as above                                                                                                                                        |           |
| 5.   | Signal Meter Volume     | 98MHz ANT Input 60dB<br>400Hz (100% MOD) FM SSG  | Same as above     | Signal Meter                         | VR02 F-2590          | 4.3 on Meter                                                                                                                                         |           |

## 2) MPX Adjustment

| STEP | SUBJECT                                         | FEED SIGNAL                                                                                                           |                                   | MEASURE OUTPUT                      | ADJUST         | ADJUST FOR                                               | CONDITION                                          |
|------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------|----------------|----------------------------------------------------------|----------------------------------------------------|
|      |                                                 | FROM                                                                                                                  | TO                                |                                     |                |                                                          |                                                    |
| 1.   | PLL VCO Adj.                                    | 98MHz<br>ANT Input 60dB<br>FM SSG<br>Pilot 19kHz<br>(10% MOD)<br>L-CH 1kHz<br>(45% MOD)<br>R-CH (0% MOD)<br>STEREO SG | ANT terminal<br>300Ω              | Stereo indicator                    | VR05<br>F-2590 | Light indicator                                          | Adjust the VR within center of lighting level.     |
|      | PLL VCO Adj.<br>In case of using Freq. counter. |                                                                                                                       | Make short between TP04 & chassis | TP05<br>F-2590<br>Use Freq. counter | VR05<br>F-2590 | 76kHz<br>±200Hz                                          | For this adjustment, run the unit over 30 seconds. |
| 2.   | Separation                                      | 98MHz<br>ANT Input 60dB<br>FM SSG<br>Pilot 19kHz<br>(10% MOD)<br>L-CH (0% MOD)<br>R-CH 1kHz<br>(45% MOD)<br>STEREO SG | ANT terminal<br>300Ω              | REC OUT L-CH<br>VTVM & Scope        | VR04<br>F-2590 | Min. Output<br>-35dB                                     | Confirm separation<br>L-CH→R-CH<br>-35dB           |
| 3.   | Muting level & indicator level                  | 98MHz<br>ANT Input 23dB<br>FM SSG<br>Pilot 19kHz<br>(10% MOD)<br>L-CH 1kHz<br>(45% MOD)<br>R-CH (0% MOD)<br>STEREO SG | Same as above                     | Stereo indicator                    | VR03<br>F-2590 | Muting level<br>23dB<br>Indicator lighting level<br>23dB |                                                    |

### ◇Adjusting or Connecting Points on AM, FM & FM MPX circuit board, F-2590

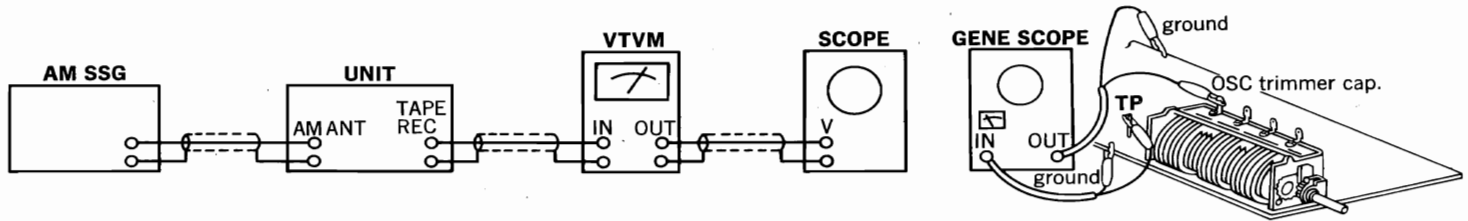
Fig. 3-3



### 3-3. AM IF Adjustment & Tracking (See Fig. 3-3 page 5)

Note: Selector.....AM

2. Confirm start point of dial pointer before alignment.



| STEP | SUBJECT                  | FEED SIGNAL                                   |                 | MEASURE OUTPUT                 | ADJUST           | ADJUST FOR       | CONDITION |
|------|--------------------------|-----------------------------------------------|-----------------|--------------------------------|------------------|------------------|-----------|
|      |                          | FROM                                          | TO              |                                |                  |                  |           |
| 1.   | IF Coil                  | Genescope Output 65dB                         | TC04 F-2590     | TP06 F-2590                    | CF04 F-2590      | Max. IF waveform |           |
| 2.   | 600kHz Dial Calibration  | 600kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG  | AM ANT terminal | REC OUT L or R-CH VTVM & Scope | T-04 F-2590      | Max. Output      |           |
|      | 1400kHz Dial Calibration | 1400kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG | Same as above   | Same as above                  | TC05 F-2590      | Same as above    |           |
| 3.   | 600kHz RF Adj.           | 600kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG  | Same as above   | Same as above                  | L702 Bar Antenna | Same as above    |           |
|      | 1400kHz RF Adj.          | 1400kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG | Same as above   | Same as above                  | TC04 F-2590      | Same as above    |           |
| 4.   | Signal Meter volume      | 1000kHz ANT Input 54dB 400Hz (MOD 30%) AM SSG | Same as above   | Signal Meter                   | VR06 F-2590      | 4 on meter       |           |

### Abbreviations

#### Equipment

AM FM Generator Oscilloscope.....Genescope  
 AM Standard Signal Generator .....AM SSG  
 FM Standard Signal Generator .....FM SSG  
 FM Stereo Generator.....Stereo SG  
 Oscilloscope .....Scope  
 Audio Oscillator .....Audio Osc.  
 Distortion Meter .....Dist. Meter

#### Others

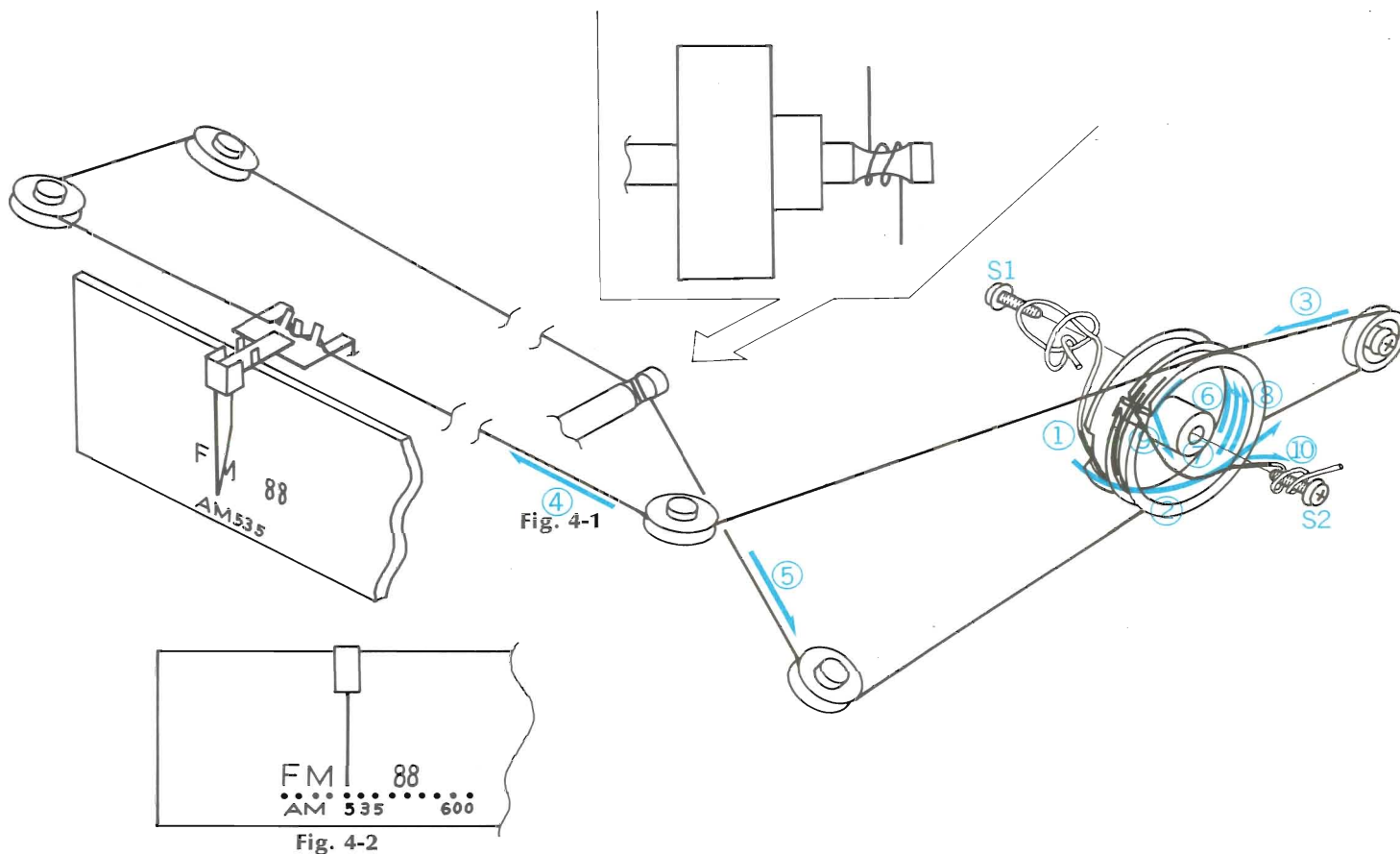
Clockwise .....CW.  
 Counterclockwise .....CCW.  
 Antenna .....ANT.  
 Modulation.....MOD.

## 4. THREADING OF DIAL CORD

\*If a dial cord is cut off or slips, replace it by following procedures.

As this unit uses 0.6mm $\phi$  cord, please replace it with the same type certainly.

\*The length of dial cord is approximately 160cm (65.3 inch).



### 4-1. Threading of Dial Cord

Thread the dial cord in numerical order from ① to ⑩ as Fig. 4-1.

- 1) Close the variable capacitor completely (Max. capacitance).
- 2) Tie dial cord to the screw S1 of the dial pulley.
- 3) Thread cord in the direction of arrow from ① to ⑩.
- 4) After ⑩, tie the cord to the screw S2 of the dial pulley.

### 4-2. Attachment of Dial Pointer

- 1) Close the variable capacitor completely.
- 2) Set the dial pointer as Fig. 4-2.

\*Confirm that the dial pointer runs smoothly on the dial scale by turning the tuning shaft.

### Parts List

| Stock No. | Description               |
|-----------|---------------------------|
| 6036050   | Dial Cord (0.6mm $\phi$ ) |
| 6146663   | D35 Type Pulley           |

# 5. PARTS LOCATION AND PARTS LIST

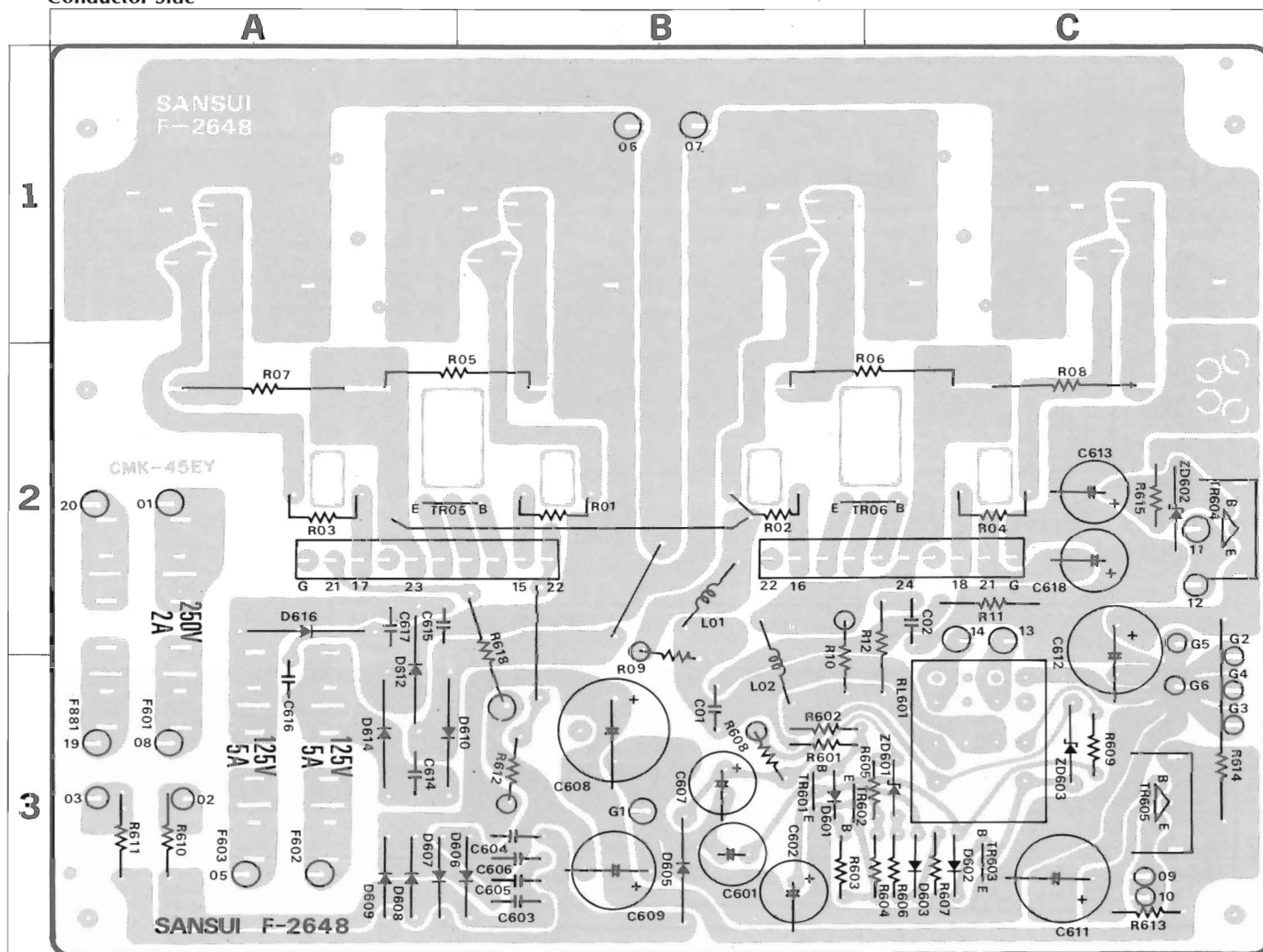
\*Values and Stock No. of most Resistors and Capacitors are shown in Common Parts Lists attached.

## 5-1. F-2648 Power Supply Circuit Board

(Stock No. 7501671 MODEL 5050)

(Stock No. 7501721 MODEL 6060)

Conductor Side



### Parts List

| Parts No. | Stock No.  | Description | Position     |
|-----------|------------|-------------|--------------|
| TR05, 06  | 0305731, 2 | 2SC711 E.F  | 2A, B, 2B, C |
| TR601     | 0305951, 2 | 2SC945 Q,P  | 3 B          |
| TR603     | 0306131, 2 | 2SC1364 6,7 | 3 C          |
| TR604     | 0308392, 3 | 2SD313 E,F  | 2 C          |
| TR605     | 0308392, 3 | 2SD313 E,F  | 3 C          |
| D601      | 0340090    | DS-430      | 3 B          |
| D602      | 0340090    | DS-430      | 3 C          |
| D603      | 0340090    | DS-430      | 3 C          |
| D605      | 0310350    | 10D-2 Diode | 3 B          |
| D606      | 0310350    | 10D-2 Diode | 3 B          |
| D607      | 0310350    | 10D-2 Diode | 3 A          |
| D608      | 0310350    | 10D-2 Diode | 3 A          |
| D609      | 0310350    | 10D-2 Diode | 3 A          |
| D610      | 0311530    | 30D-2 Diode | 3 A          |
| D612      | 0311530    | 30D-2 Diode | 2, 3 A       |
| D614      | 0311530    | 30D-2 Diode | 3 A          |
| D616      | 0311530    | 30D-2 Diode | 2 A          |
| ZD601     | 0316070    | EQA01-24R   | 3 C          |
| ZD602     | 0315970    | EQA01-13R   | 2 C          |
| ZD603     | 0315080    | EQB01-25    | E C          |
| C603      | 0655472    | 4700 pF     | 3 B          |
| C604      | 0655472    | 4700 pF     | 3 B          |
| C605      | 0655472    | 4700 pF     | 3 B          |
| C606      | 0655472    | 4700 pF     | 3 B          |

| Parts No. | Stock No. | Description               | Position     |
|-----------|-----------|---------------------------|--------------|
| C608      | 0549201   | 1000 μF 63V E.C.          | 3 B          |
| C614      | 0655472   | 4700 pF                   | 3 A          |
| C615      | 0655472   | 4700 pF                   | 2 A          |
| C616      | 0655472   | 4700 pF                   | 3 A          |
| C617      | 0655472   | 4700 pF                   | 2 A          |
| R01, 02   | 0193689   | 6.8 Ω 1/4 W Fuse R.       | 2 B          |
| R03, 04   | 0193689   | 6.8 Ω                     | 2 A, 2 C     |
| R05, 06   | 0152338   | 0.33 Ω                    | 2A, B, 2B, C |
| R07, 08   | 0152338   | 0.33 Ω                    | 2 A, 2 C     |
| R09, 10   | 0104479   | 4.7 Ω 1 W C.R.            | 2, E B       |
| R11, 12   | 0103479   | 4.7 Ω 1/2 W C.R.          | 2C, 2, 3 C   |
| R608      | 0202221   | 220 Ω 2 W M.R.            | 3 B          |
| R610      | 0192229   | 2.2 Ω                     | 3 A          |
| R611      | 0192229   | 2.2 Ω                     | 3 A          |
| R614      | 0183221   | 220 Ω 3 W Ce.R.           | 3 C          |
| L01, 02   | 4290210   | Filter Coil               | 2B, 2, 3B    |
| RL601     | 1150101   | Relay Switch              | 3 C          |
| F601      | 0432240   | 2A 250V AC Fuse           | 3 A          |
|           | 2410590   | 4P Pin Ass'y Type A       |              |
|           | 2420540   | 10P Conector Ass'y Type A |              |
|           | 2410730   | 6P Pin Ass'y Type A       |              |
|           | 2410850   | 4P Pin Ass'y Type B       |              |

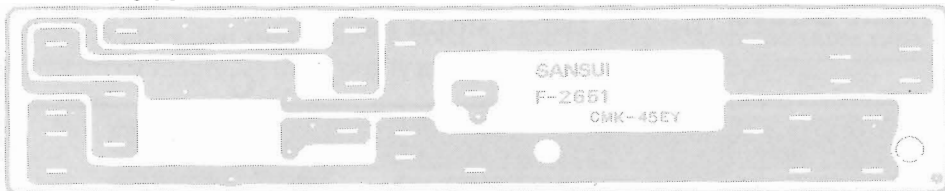
| Parts No.              | Stock No.  | Description    | Position |
|------------------------|------------|----------------|----------|
| <b>MODEL 5050 Only</b> |            |                |          |
| TR01, 02               | 0306511, 2 | 2SC1445 O,Y    |          |
| TR03, 04               | 0300881, 2 | 2SA765 O,Y     |          |
| TR602                  | 0300680, 1 | 2SA733 (2) P,Q | 3 B      |
| R612                   | 0202181    | 180 Ω 2W M.R.  | 3 B      |
| R618                   | 0202151    | 150 Ω 2W M.R.  | 2, 3 B   |
| F602                   | 0432280    | 4A 125V        | 3 A      |
| F603                   | 0432280    | 4A 125V        | 3 A      |
| <b>MODEL 6060 Only</b> |            |                |          |
| TR01, 02               | 0308541, 2 | 2SD188A R,Q    |          |
| TR03, 04               | 0303381, 2 | 2SB545A R,Q    |          |
| TR602                  | 0300510, 1 | 2SA733 P,Q     | 3 B      |
| R612                   | 0202121    | 120 Ω 2W M.R.  | 3 B      |
| R618                   | 0202101    | 100 Ω 2W M.R.  | 2, 3 B   |
| F602                   | 0432290    | 5A 125V        | 3 A      |
| F603                   | 0432290    | 5A 125A        | 3 A      |

## 5-2. F-2651 Illumination Circuit Board

(Stock No. 7594161 MODEL 5050)

(Stock No. 7594111 MODEL 6060)

Conductor Side



### Parts List

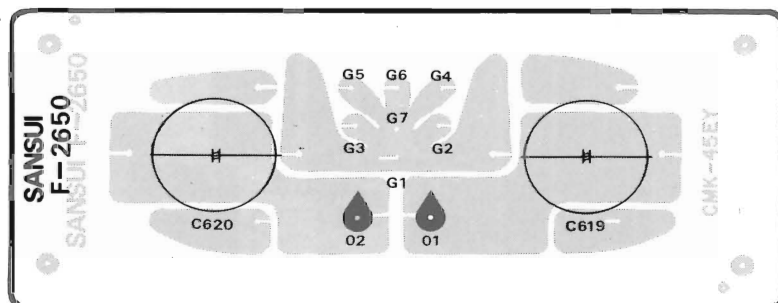
| Parts No. | Stock No. | Description               |
|-----------|-----------|---------------------------|
| D601      | 0310340   | 10D-1 Diode               |
| C601      | 0501331   | 330 $\mu$ F 10V E.C.      |
| R601      | 0191180   | 18 $\Omega$ 1/4 W Fuse R. |

## 5-3. F-2650 Capacitor Circuit Board

(Stock No. 7501681 MODEL 5050)

(Stock No. 7501711 MODEL 6060)

Conductor Side



### Parts List

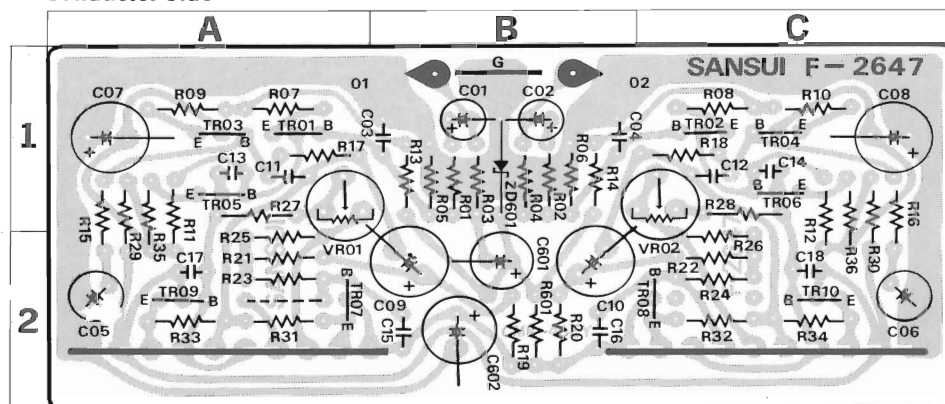
| Parts No.              | Stock No. | Description           |
|------------------------|-----------|-----------------------|
| <b>MODEL 5050 Only</b> |           |                       |
| C619                   | 0549112   | 4700 $\mu$ F 50V E.C. |
| C620                   | 0549112   | 4700 $\mu$ F 50V E.C. |
| <b>MODEL 6060 Only</b> |           |                       |
| C619                   | 0549111   | 6800 pF 50V E.C.      |
| C620                   | 0549111   | 6800 pF 50V E.C.      |

## 5-4. F-2647 Driver Circuit Board

(Stock No. 7571421 MODEL 5050)

(Stock No. 7571401 MODEL 6060)

Conductor Side



### Parts List

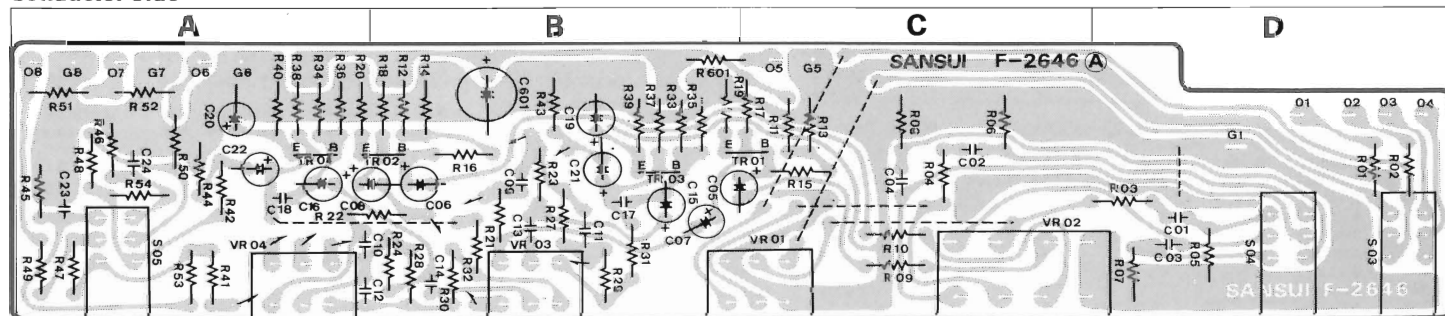
| Parts No. | Stock No.  | Description                | Position |
|-----------|------------|----------------------------|----------|
| TR01, 02  | 0300470, 1 | 2SA726 (W) F.G             | 1 A. 1 C |
| TR03, 04  | 0300470, 1 | 2SA726 (W) F.G             | 1 A. 1 C |
| TR05, 06  | 0306360, 1 | 2SC1951-1, -2              | 1 A. 1 C |
| TR07, 08  | 0308521, 2 | 2SD438 E.F                 | 2 A. 2 C |
| TR09, 10  | 0303361, 2 | 2SB560 E.F                 | 2 A. 2 C |
| ZD601     | 0315970    | EQA01-13R Zener Diode      | 1 B      |
| R31, 32   | 0193221    | 220 $\Omega$ 1/4 W Fuse R. | 2 A. 2 C |
| R33, 34   | 0193221    | 220 $\Omega$ 1/4 W Fuse R. | 2 A. 2 C |
| VR01, 02  | 1035310    | 1k $\Omega$ (B)            | 1 A. 1 C |

## 5-5. F-2646 Tone Control Circuit Board

(Stock No. 7561471 MODEL 5050)

(Stock No. 7561491 MODEL 6060)

Conductor Side

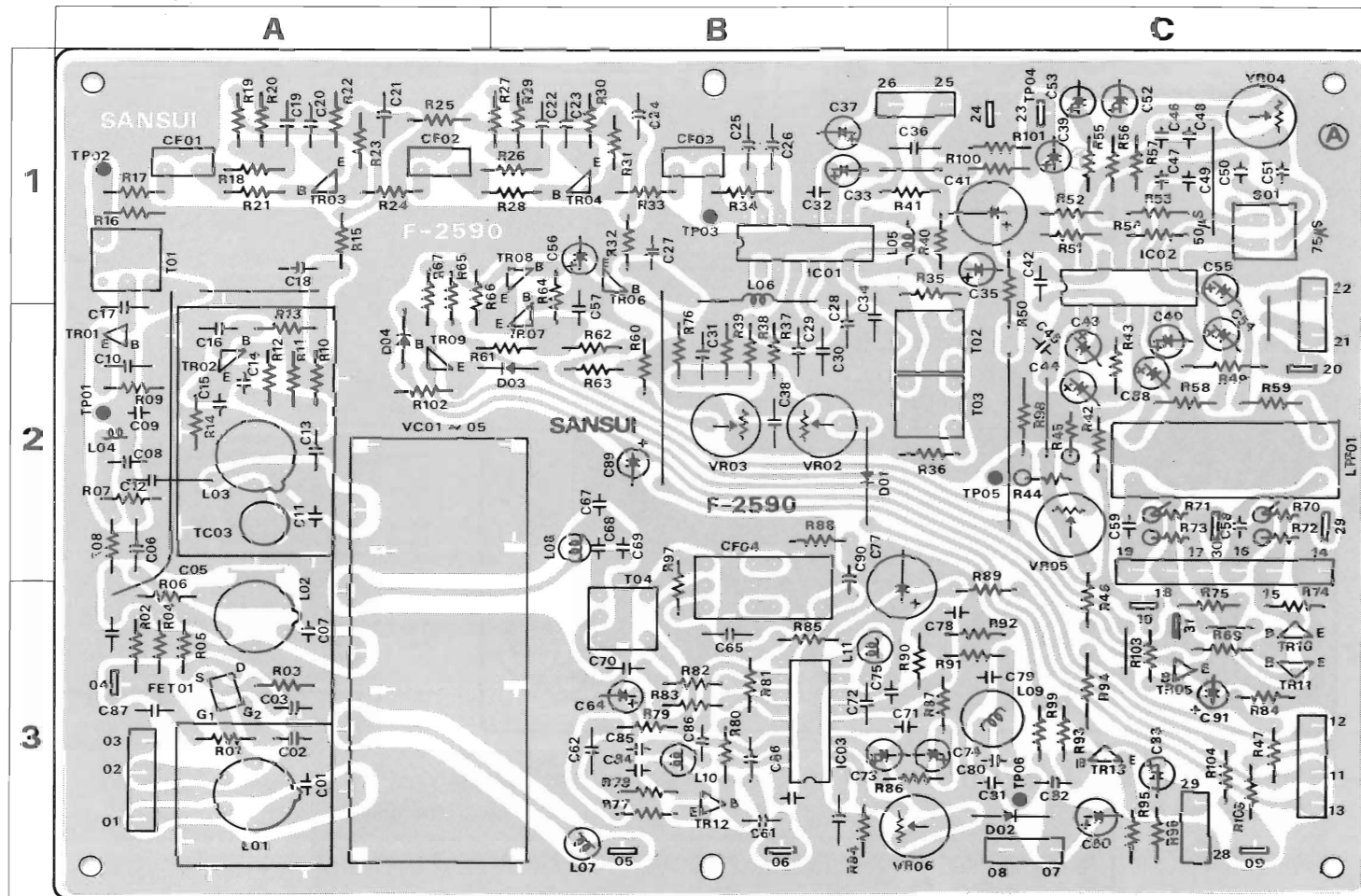


### Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------|
|-----------|-----------|-------------|

# 5-6. F-2590 Tuner Circuit Board (Stock No. 7521321 MODEL 5050) (Stock No. 7521291 MODEL 6060)

Conductor Side



## Parts List

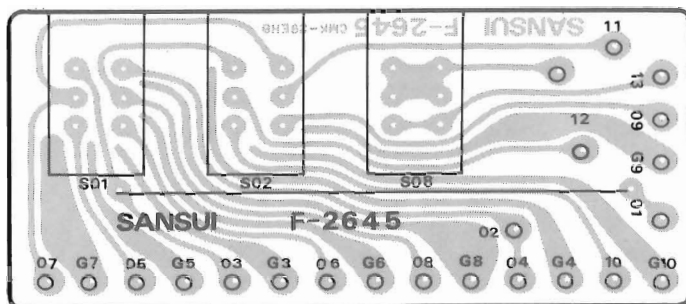
| Parts No. | Stock No.  | Description          | Position |
|-----------|------------|----------------------|----------|
| TR01      | 0305801    | 2SC1047 (B)          | 2 A      |
| TR02      | 0305801    | 2SC1047 (B)          | 2 A      |
| TR03      | 0306113    | 2SC738 (D)           | 1 A      |
| TR04      | 0306112    | 2SC738 (C)           | 1 B      |
| TR05      | 0305731, 2 | 2SC711 (E, F)        | 3 C      |
| TR06      | 0305731, 2 | 2SC711 (E, F)        | 1 B      |
| TR07      | 0305731, 2 | 2SC711 (E, F)        | 2 B      |
| TR08      | 0305731, 2 | 2SC711 (E, F)        | 1 B      |
| TR09      | 0300470    | 2SA726 (F)           | 2 A      |
| TR10, 11  | 0305641    | 2SC735 (Y)           | 3 C      |
|           | 0306390    | 2SC1636-I            |          |
| TR12      | 0300283    | 2SA628 (F)           | 3 B      |
| TR13      | 0305731, 2 | 2SC711 (E, F)        |          |
| TR15      | 0300510, 1 | 2SA733 (P, Q)        |          |
| IC01      | 0360350    | IC HA1137 (W)        | 1 B      |
| IC02      | 0360320    | IC HA1196            | 1 C      |
| IC03      | 0360150    | IC HA-1151           | 3 B      |
| FT01      | 0370131, 2 | 3SK41 (1) (L, K) FET |          |
| D01       | 0340120    | VD1212 Varistor      | 2 B      |
| D02       | 0310330, 1 | 1N60 Diode           | 3 C      |
| D03       | 0340120    | VD1212 Varistor      | 2 B      |
| D04       | 0311160    | 1S2473D              |          |

| Parts No. | Stock No. | Description      | Position |
|-----------|-----------|------------------|----------|
| C01       | 0669350   | 15 pF            | 3 A      |
| C05       | 0659015   | 2200 pF          | 2 A      |
| C07       | 0669350   | 15 pF            | 3 A      |
| C11       | 0669355   | 20 pF            | 2 A      |
| C12       | 0679012   | 1.5 pF 500V G.C. | 2 A      |
| C45       | 0629005   | 360 pF           | 2 C      |
| C48, 49   | 0620101   | 100 pF           | 1 C      |
| C50, 51   | 0620561   | 560 pF           |          |
| C67       | 0669400   | 15 pF 50V C.C.   | 2 B      |
| C69       | 0620361   | 360pF 50V P.C.   |          |
| L01       | 4200720   | Antenna Coil     | 3 A      |
| L02       | 4210340   | RF Coil          | 3 A      |
| L03       | 4220400   | OSC Coil         | 2 A      |
| L04       | 4290110   | Choke Coil       | 2 A      |
| L07       | 4900100   |                  | 3 B      |
| L08       | 4900100   |                  | 2 B      |
| L09       | 4900220   | Inductor         | 3 C      |
| L10       | 4900110   |                  | 3 B      |
| L11       | 4900110   |                  | 3 B      |
| T01       | 4235930   | IF Coil          | 1 A      |
| T02       | 4235970   |                  | 2 B, C   |
| T03       | 4235980   | FM Coil          | 2 B, C   |
| T04       | 4220650   | OSC Coil         | 3 B      |

| Parts No. | Stock No. | Description           | Position |
|-----------|-----------|-----------------------|----------|
| T05       | 4290280   | Inductor              |          |
| T06       | 4290011   | Choke Coil            |          |
| CF01      | 0910150   | 10.7MHz               | 1 A      |
| CF02      | 0910150   | 10.7MHz               | 1 A      |
| CF03      | 0910150   | 10.7MHz               | 1 B      |
| CF04      | 0910280   | 455kHz                | 2, 3 B   |
| LF01      | 0910220   | 19kHz Low Pass Filter |          |
| VR02      | 1035170   | 47kΩ (B)              | 2 B      |
| VR03      | 1035190   | 100kΩ (B)             | 2 B      |
| VR04      | 1035210   | 220kΩ (B)             | 1 C      |
| VR05      | 1034250   |                       | 2 C      |
| VR06      | 1035110   | 4.7kΩ (B)             |          |
| S01       | 1110270   | Slide Switch          |          |
| VC01      | 1220250   | Variable Capacitor    | 2 A      |
| TC03      | 1230090   | Trimmer Capacitor     |          |
|           | 2410600   | 6P Pin Ass'y Type D   |          |
|           | 2410910   | 2P Pin Ass'y Type E   |          |
|           | 2410920   | 3P Pin Ass'y Type E   |          |

## 5-7. F-2645 Muting Circuit Board (Stock No. 7594151 MODEL 5050) (Stock No. 7594101 MODEL 6060)

Conductor Side

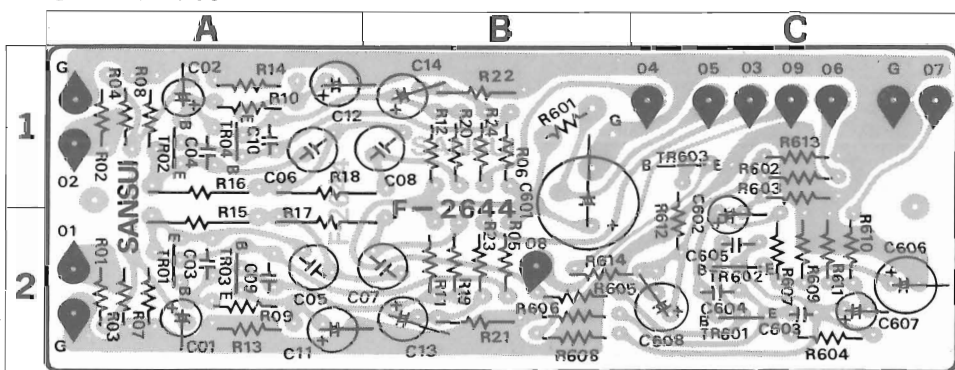


### Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------|
| S01       | 1131320   | Push Switch |

## 5-8. F-2644 Equalizer Circuit Board (Stock No. 7550941 MODEL 5050) (Stock No. 7550961 MODEL 6060)

Conductor Side

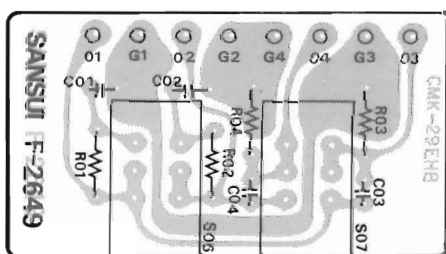


### Parts List

| Parts No. | Stock No.  | Description         | Position |
|-----------|------------|---------------------|----------|
| TR01, 02  | 0306070, 1 | 3SC1313 F,G         | 2 A. 1 A |
| TR03, 04  | 0306070, 1 | 2SC1313 F,G         | 2 A. 1 A |
| TR01      | 0306070, 1 | 2SC1313 F,G         | 2 C      |
| TR02      | 0306070, 1 | 2SC1313 F,G         | 2 C      |
| C01, 02   | 0573339    | 3.3μF 35V T.C.      | 2 A. 1 A |
| C05, 06   | 0625103    | 10000 pF            | 2 A. 1 A |
| C07, 08   | 0625272    | 2700 pF             | 2 B. 1 B |
| C602      | 0573339    | 3.3μF 35V T.C.      | 2 C      |
| R15, 16   | 0231394    | 390kΩ               | 2 A. 1 A |
| R17, 18   | 0231273    | 27kΩ 1/2W M.R.      | 2 A. 1 A |
| R601      | 0200221    | 220Ω                | 1 B      |
|           | 2410920    | 3P pin Ass'y Type E |          |
|           | 2410930    | 4P Pin Ass'y Type E |          |

## 5-9. F-2649 Filter Circuit Board (Stock No. 7561501 MODEL 6060 Only)

Conductor Side



## 5-10. Figures

### Connector & Pin Ass'y

#### Connector

| Type A (3~10 pins) | Type B (2~6 pins) | Stock No.            |
|--------------------|-------------------|----------------------|
|                    |                   | 2 Pins 2420450       |
|                    |                   | 3 Pins 2420460       |
|                    |                   | 3 Pins (RED) 2420650 |
|                    |                   | 4 Pins 2420470       |
|                    |                   | 5 Pins 2420480       |
|                    |                   | 6 Pins 2420490       |

NOTE: Since stock number of female connectors (type B) with wires are not shown in each parts list of Complete circuit board, please refer to the above parts list when ordering the connector.

#### Pin Ass'y

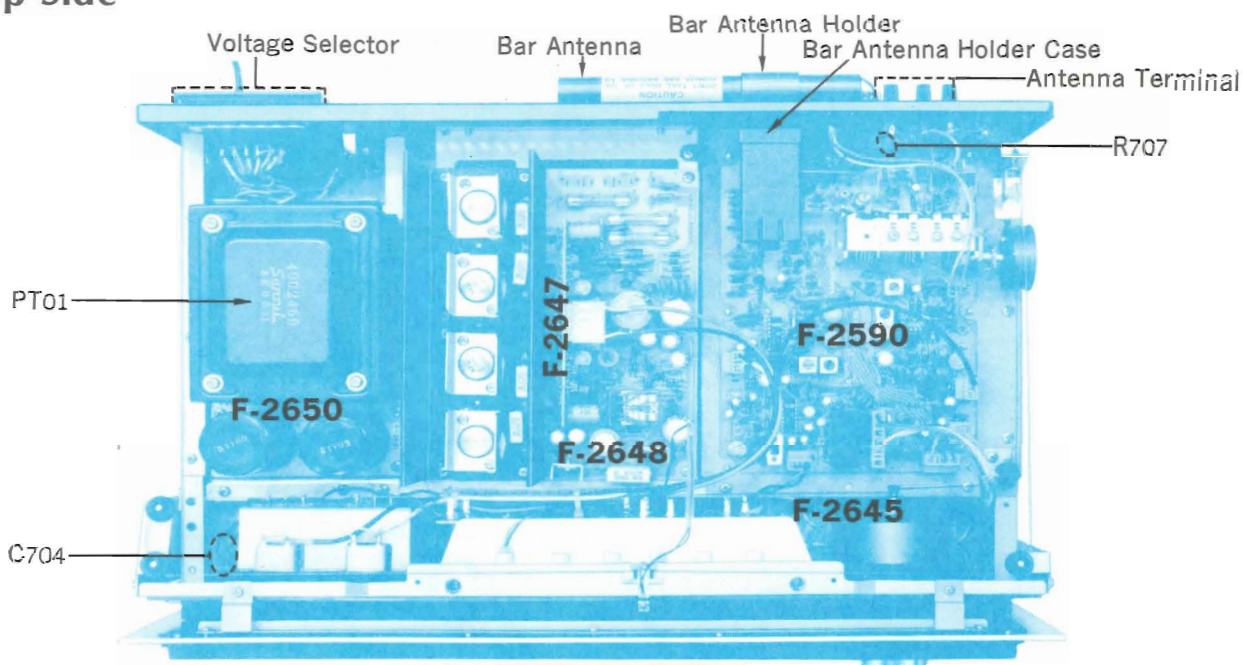
| Type A (3~10 pins) | Type B (3~10 pins) | Type C (3~10 pins) |
|--------------------|--------------------|--------------------|
|                    |                    |                    |
| Type D (2~6 pins)  | Type E (2~6 pins)  | Type F (2~6 pins)  |
|                    |                    |                    |

### Abbreviations

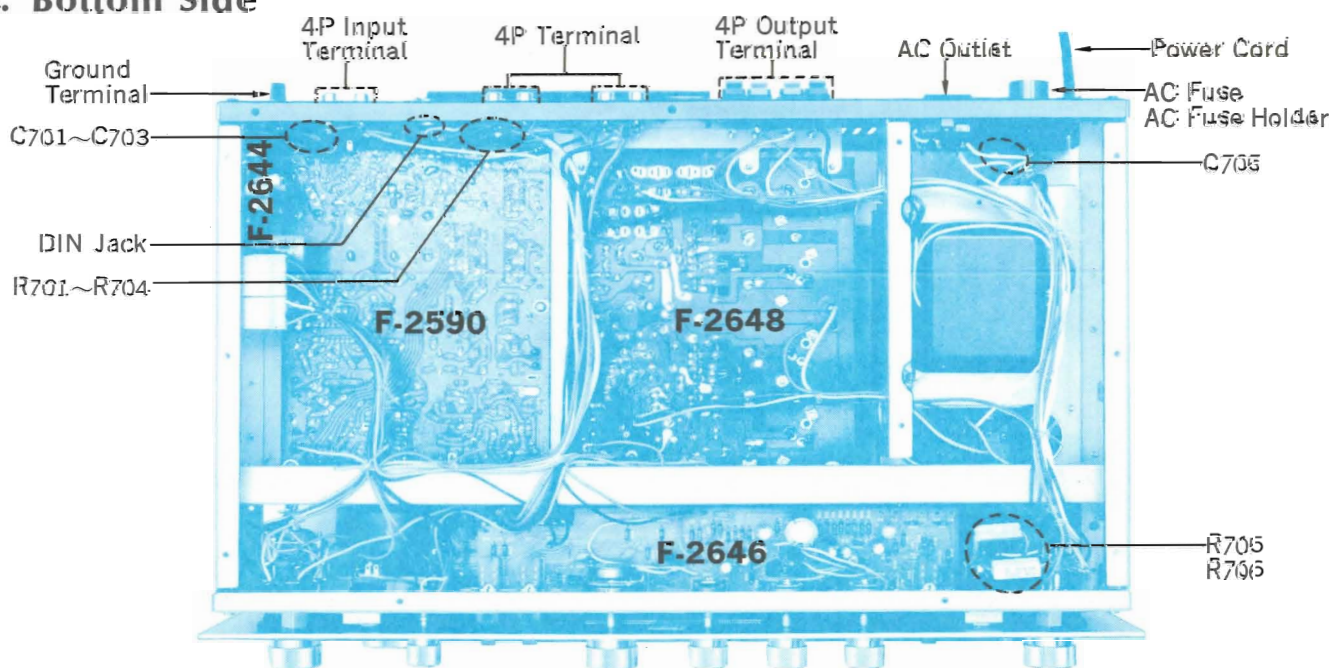
|                                        |                                                 |
|----------------------------------------|-------------------------------------------------|
| <b>C.R.</b> : Carbon Resistor          | <b>BP.E.C.:</b> Bi-Polar Electrolytic Capacitor |
| <b>S.R.</b> : Solid Resistor           | <b>C.C.</b> : Ceramic Capacitor                 |
| <b>Ce.R.</b> : Cement Resistor         | <b>Mi.C.</b> : Mica Capacitor                   |
| <b>M.R.</b> : Metallized Film Resistor | <b>O.C.</b> : Oil Capacitor                     |
| <b>M.C.</b> : Mylar Capacitor          | <b>P.C.</b> : Polystyrene Capacitor             |
| <b>E.C.</b> : Electrolytic Capacitor   | <b>E.C.</b> : Tantalum Capacitor                |

## 6. OTHER PARTS

### 6-1. Top Side



### 6-2. Bottom Side



Parts List (Top Side & Bottom Side)

| Parts No.  | Stock No. | Description        |
|------------|-----------|--------------------|
| C701~703   | 0657473   | 4700pF 50V C.C.    |
| C704       | 0605337   | 0.032uF 250V M.C.  |
| C705       | 0658102   | 0.0047uF 160V C.C. |
| R701, 702  | 0240104   | 100kΩ 1/4W C.R.    |
| R703, 704  | 0241224   | 200kΩ 1/4W C.R.    |
| R705, 706  | 0163221   | 220Ω 1/4W C.R.     |
| R707       | 00050122  | 1.0kΩ 1/4W C.R.    |
| R708       | 0240122   | 1.2kΩ 1/4W C.R.    |
| L702       | 4200830   | Bar Antenna        |
| CO701, 702 | 2450060   | AC Outlet          |

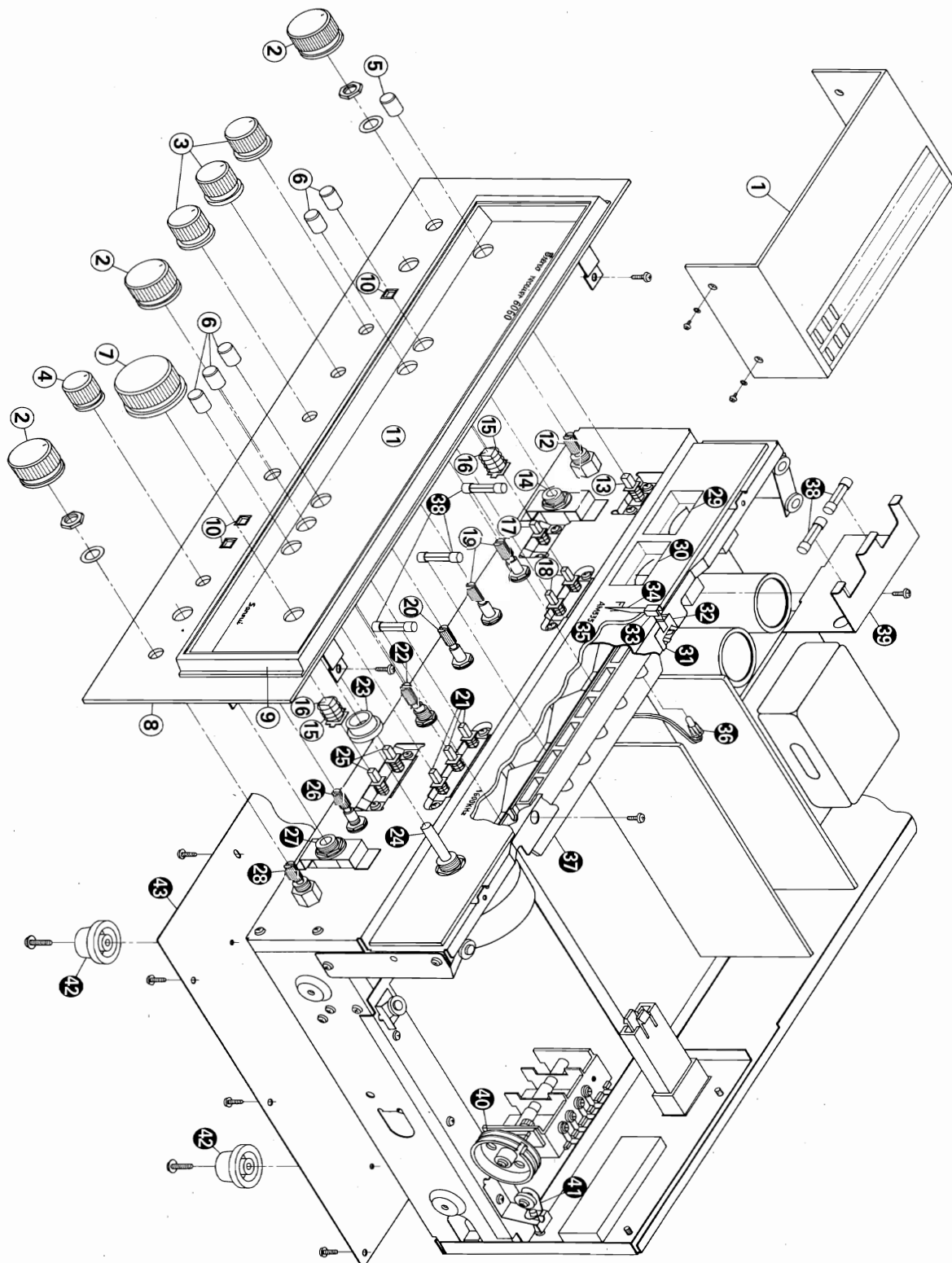
| Parts No. | Stock No. | Description                   |
|-----------|-----------|-------------------------------|
| J703      | 2400047   | DIN Jack                      |
| F701      |           | AC Fuse                       |
|           | 0432260   | 3A 250V (220/240V) MODER 5050 |
|           | 0432290   | 5A 250V (100/120V) MODER 5050 |
|           | 0432260   | 2A 250V (220/240V) MODER 5050 |
|           | 0432280   | 4A 125V (100/120V) MODER 5050 |
|           | 2200020   | 4P Terminal                   |
|           | 2200000   | Antenna Terminal              |
|           | 2230150   | Ground Terminal               |
|           | 2250160   | 4P Output Terminal            |
|           | 2300000   | Fuse Holder                   |

| Parts No. | Stock No. | Description                    |
|-----------|-----------|--------------------------------|
|           | 2200030   | P Type Fuse Holder             |
|           | 2410091   | 6P Voltage Selector Plug       |
|           | 2400030   | 10P Voltage Selector Socket    |
|           | 3800010   | Power Cord                     |
|           | 3500090   | Strain Relief                  |
|           | 526442    | Bar Antenna Holder             |
|           | 5287200   | Bar Antenna Holder Case        |
| PT01      | 4002460   | Power Transformer (MODEL 5050) |
|           | 4002470   | Power Transformer (MODER 5050) |

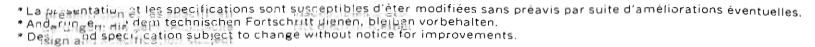
# 6-3. Exploded View

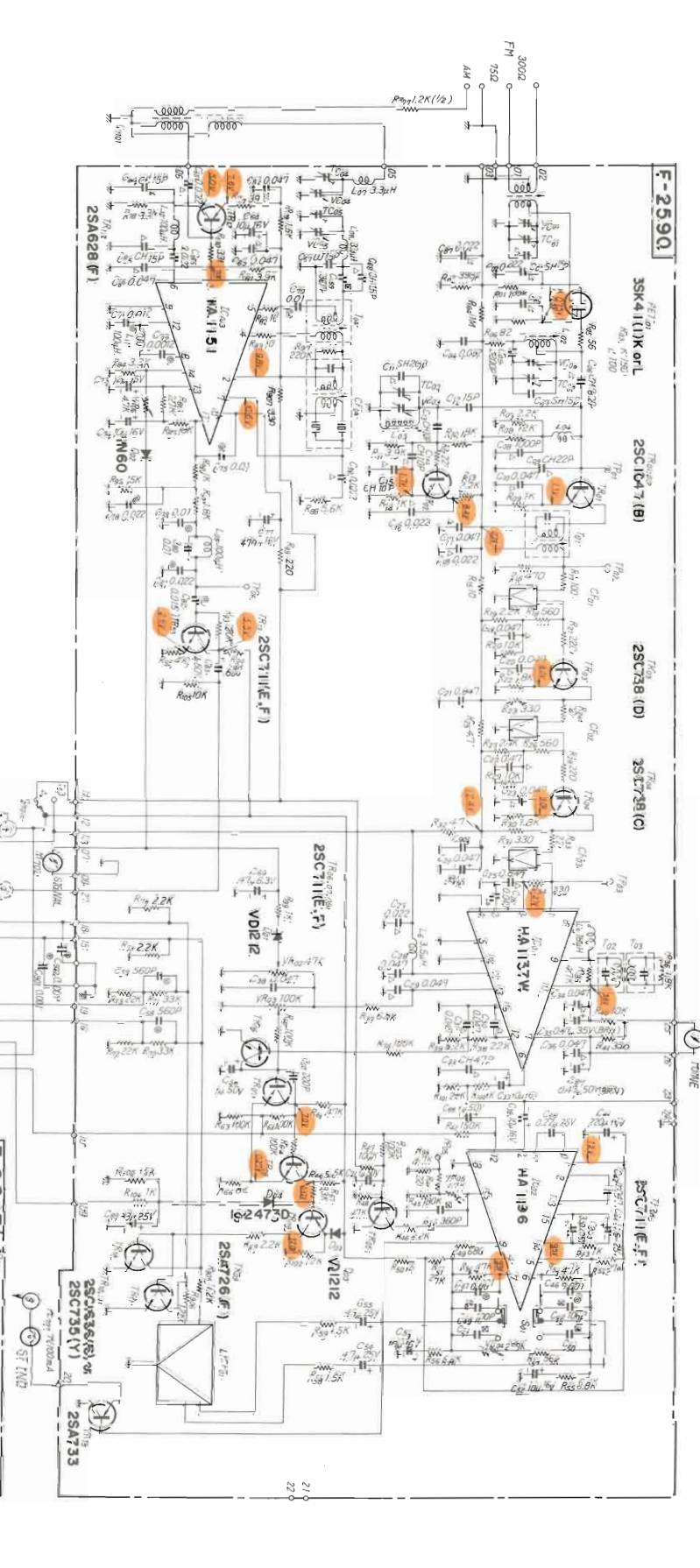
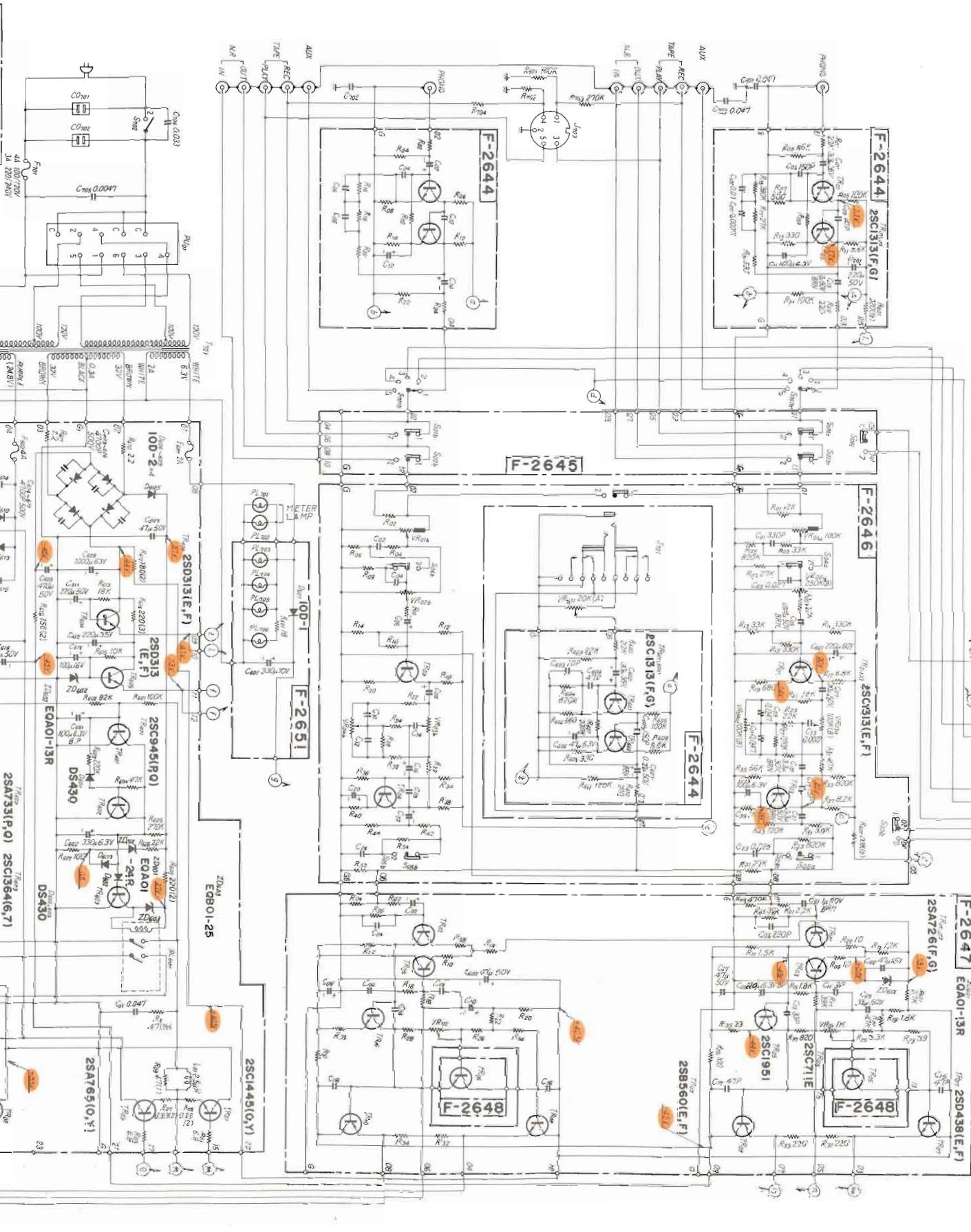
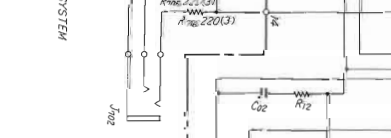
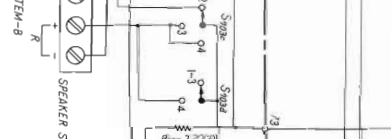
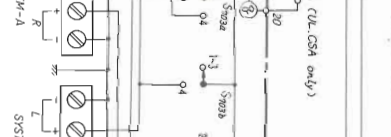
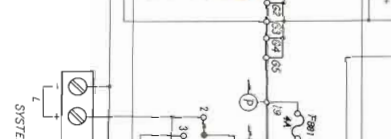
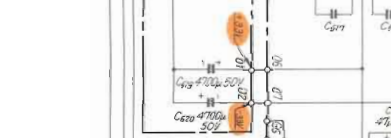
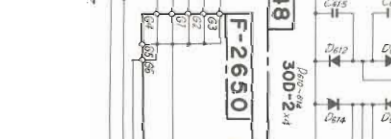
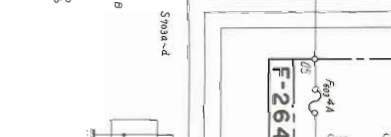
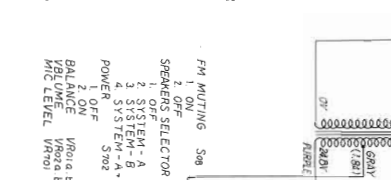
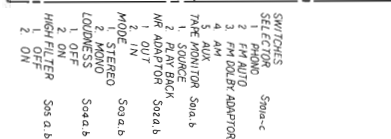
Parts List

| Parts No. | Stock No. | Description              | Parts No. | Stock No.  | Description                          | Parts No. | Stock No.  | Description           | Parts No. | Stock No. | Description                  |
|-----------|-----------|--------------------------|-----------|------------|--------------------------------------|-----------|------------|-----------------------|-----------|-----------|------------------------------|
| 1         | 5727020   | Wood Bonnet (MODEL 5050) | 11        | 5446291    | Smoked Plate (MODEL 5050)            | 21        | 1131320    | Push Switch           | 33        | 0400200   | Dial Pointer Lamp, 6.3V 75mA |
| 2         | 5727010   | Wood Bonnet (MODEL 6060) | 12        | 5446281    | Smoked Plate (MODEL 6060)            | 22        | 1010920, 1 | Volume, 250Ω B x 2    | 34        | 5416050   | Dial Pointer                 |
| 3         | 5318380   | M-7 Type Knob            | 13        | 1101470    | Speakers Switch                      | 23        | 5393300    | Misting Ring          | 35        | 5408090   | Dial Glass                   |
| 4         | 5318410   | S-10 Type Knob           | 14        | 1131190    | Power Switch                         | 24        | 7036491    | Tuning Unit As'y      | 36        | 0400450   | FM STEREO Lamp, TV 100mA     |
| 5         | 5318721   | E-13 Type Knob           | 15        | 2430190    | Head Phone Jack                      | 25        | 1131310    | MODE, LOUDNESS Switch | 37        | 5058270   | Illumination Box             |
| 6         | 5326550   | Push Knob (B)            | 16        | 6906480    | Spring                               | 26        | 1005170, 1 | 20KΩ, MIC Volume      | 38        | 0420040   | Meier Lamp, TV 320mA         |
| 7         | 5326580   | Push Knob (C)            | 17        | 5326530    | Push Knob                            | 27        | 2430170    | MIC Jack              | 39        | 5288130   | Meier Holder                 |
| 8         | 5318420   | T-12 Type Knob           | 18        | 1131290    | (High Filter Switch (MODEL 5050)     | 28        | 1102690, 1 | Selector              | 40        | 6146663   | D35 Type Pulley              |
| 9         | 5304850   | Front Panel (MODEL 5050) | 19        | 1131300    | (Audio Muting Switch (MODEL 6060)    | 29        | 4301000    | Signal Meter          | 41        | 7134082   | Tension Unit                 |
| 10        | 5304840   | Front Panel (MODEL 6060) | 20        | 1015180, 1 | Low, High Filter Switch (MODEL 6060) | 30        | 4300990    | Tune Meter            | 42        | 5516821   | Leg                          |
|           |           | Panel Window             |           |            | Tone Control Volume, 100KΩ B x 2     | 31        | 5416350    | Holider, Dial Pointer | 43        | 5058651   | Bottom Plate                 |
|           |           | Knob Guide               |           |            | Balance Volume, 100KΩ M.N            | 32        | 5516030    | Tellon Sheet          |           |           |                              |



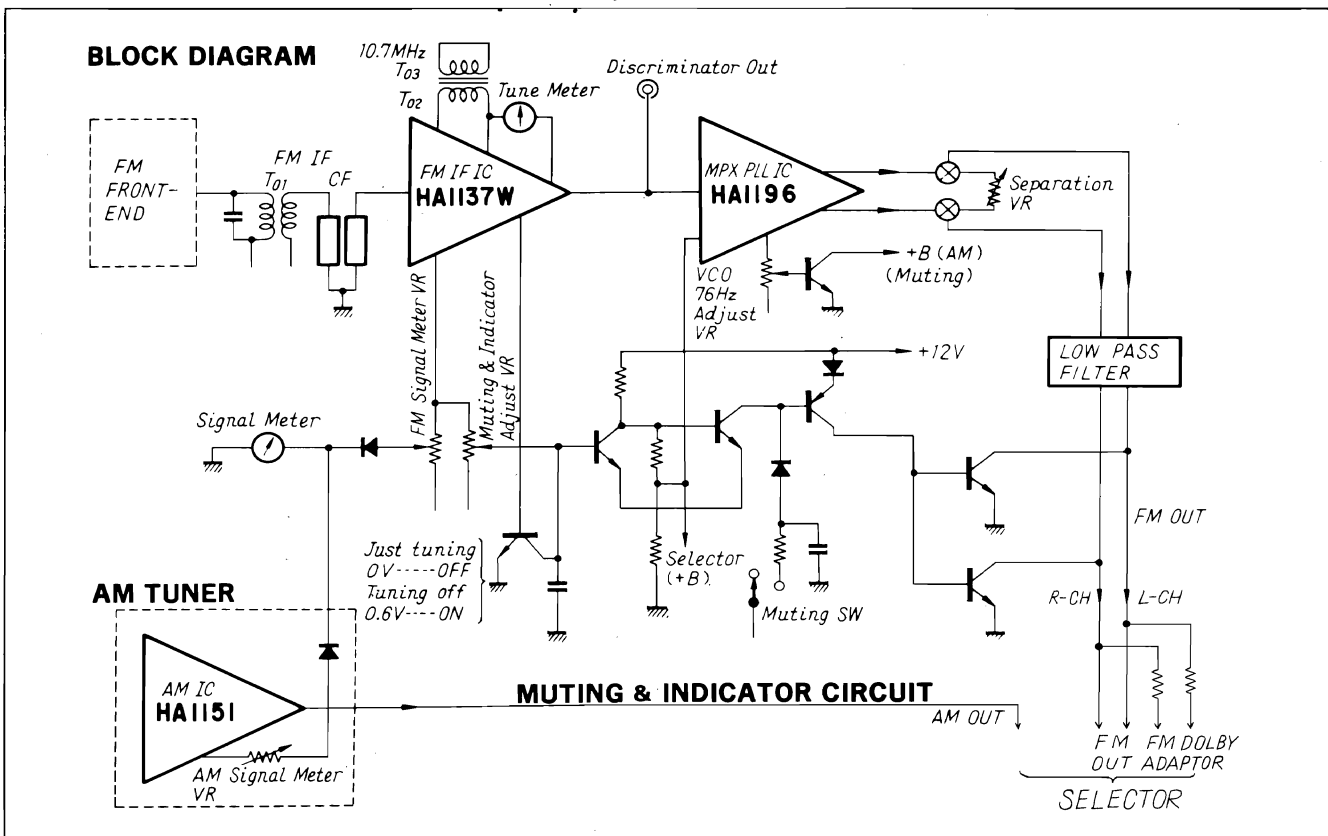
1 ~ 20  
21 ~ 43



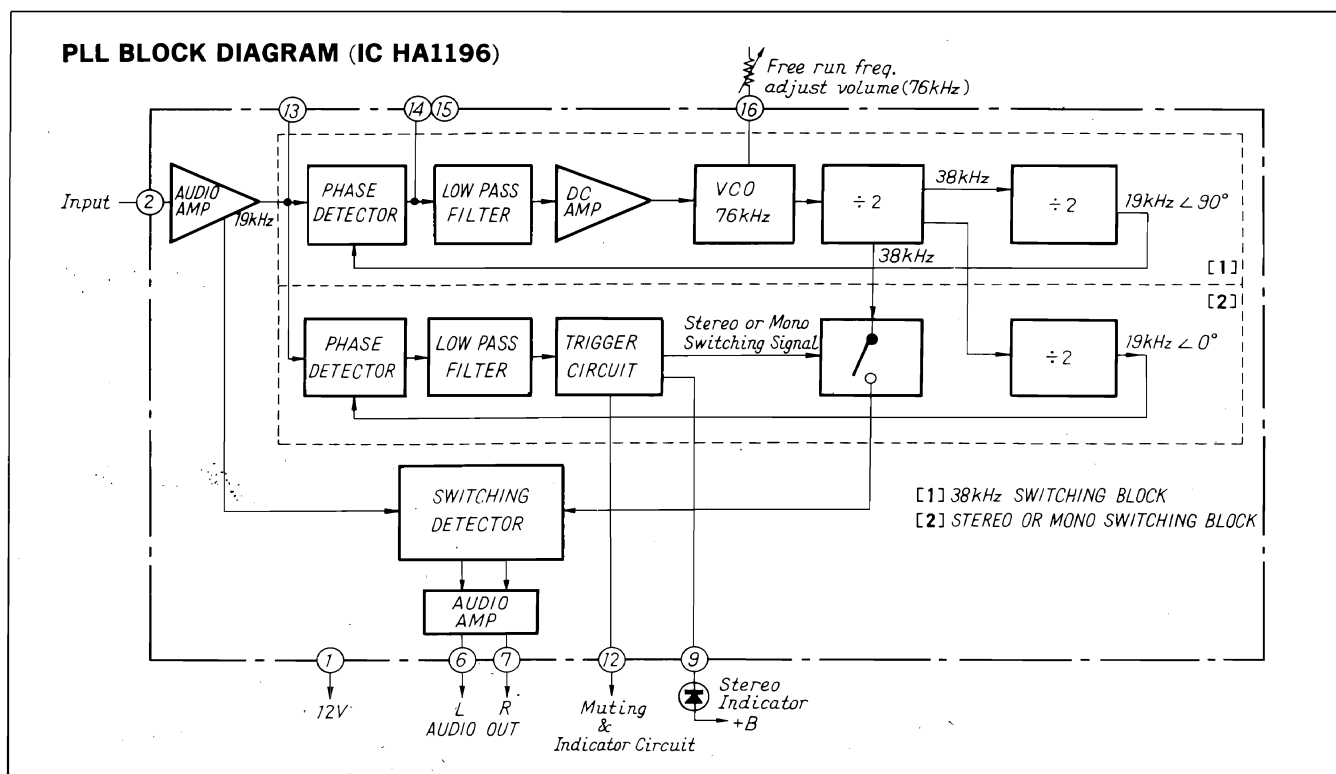




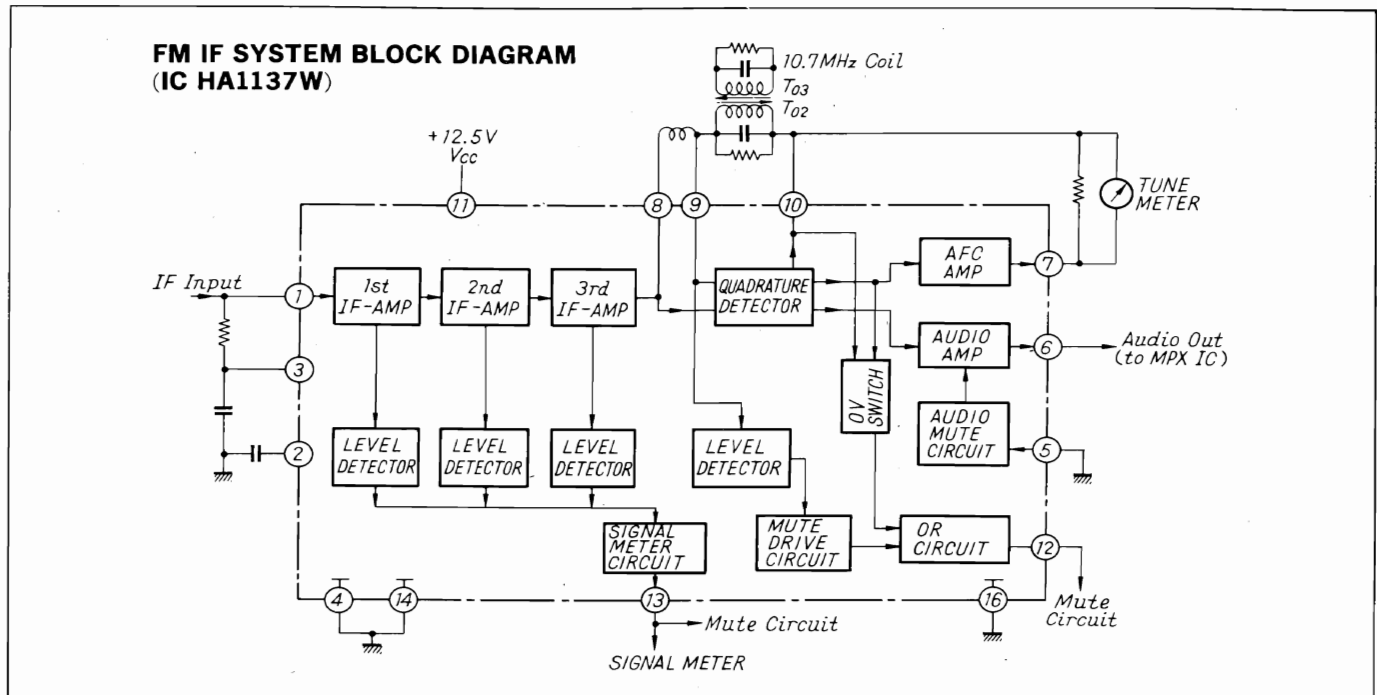
## 8-2. Block Diagram of Tuner Section



## 8-3. PLL Block Diagram (IC HA1196)



## 8-4. FM IF System Block Diagram (IC HA1137W)



### ※ Functions (IC HA1137W)

This IC has operating functions of various circuits as listed below.

- 1) IF AMP.
- 2) Quadrature detection.
- 3) Low-Noise audio Preamp.
- 4) Delayed AGC detector and driver for Front-end.
- 5) Signal meter circuit.
- 6) Center meter circuit.
- 7) Muting (operation to input signal strength).
- 8) Muting (operation at detuning).
- 9) Multipass circuit.

### ※ Main features (IC HA1137W)

1. This IC includes all functions required in FM IF stage.
2. As indicated above, this IC has functions of Muting circuit which operates below a certain input signal level. And also the IC includes new muting circuit, namely it has 0 volt switch which operates the muting circuit when the difference (absolute value) of detector output voltage between Tuning-ON and Detuning exceeds a certain voltage, utilizing S-curve characteristics of FM detector. By this advantage, it is possible to eliminate or avoid "Pop noise" caused by variation of the DC voltage at tuning-OFF.
3. The IC makes it possible to produce high-quality tuner having better selectivity and sensitivity by connecting 6-element filters between Front-end and the IC, as it has higher gain and better suppression ratio in amplitude modulation.
4. Linear swing of signal meter is obtained.

### ※ Main features of PLL (IC HA1196)

In the multiplex demodulation circuit, because of sub-carrier wave (38kHz) being required for demodulation, the pilot signal (19kHz) sent from FM stereo broadcasting station is being made while doubling.

It is necessary for this sub-carrier wave that its phase confirms to that of pilot signal correctly, and if there is any phase difference between them, FM stereo separation becomes poor.

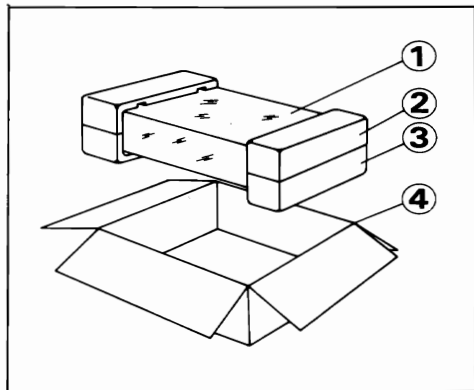
In the conventional products, LC resonance circuit has been used so far for the circuit of this section, on the other hand, in model 7070, IC in PLL is used, which prevents FM stereo separation from becoming poor due to deviation in resonance frequency or phase to temperature change and, in result, ensures stereo separation of more than 50dB at 1kHz.

### Advantages

- 1) Selectivity is superior.
- 2) Phase characteristics is good.
- 3) It is virtually not affected by temperature.
- 4) No secular change occurs.

## 9. PACKING LIST

| Parts No. | Stock No. | Description              |
|-----------|-----------|--------------------------|
| 1         | 9116690   | Vinyl Cover              |
| 2         | 9028000   | Styrofoam Packing        |
| 3         | 9009220   | Carton Case (MODEL 6060) |
|           | 9009230   | Carton Case (MODEL 5050) |
| 4         | 5996080   | Curl Stopper             |



## 10. ACCESSORY PARTS LIST

| Stock No. | Description                         |
|-----------|-------------------------------------|
| 9209850   | Operating Instructions (MODEL 6060) |
| 9209860   | Operating Instructions (MODEL 5050) |
| 9237390   | Schematic Diagram (MODEL 6060)      |
| 9237400   | Schematic Diagram (MODEL 5050)      |

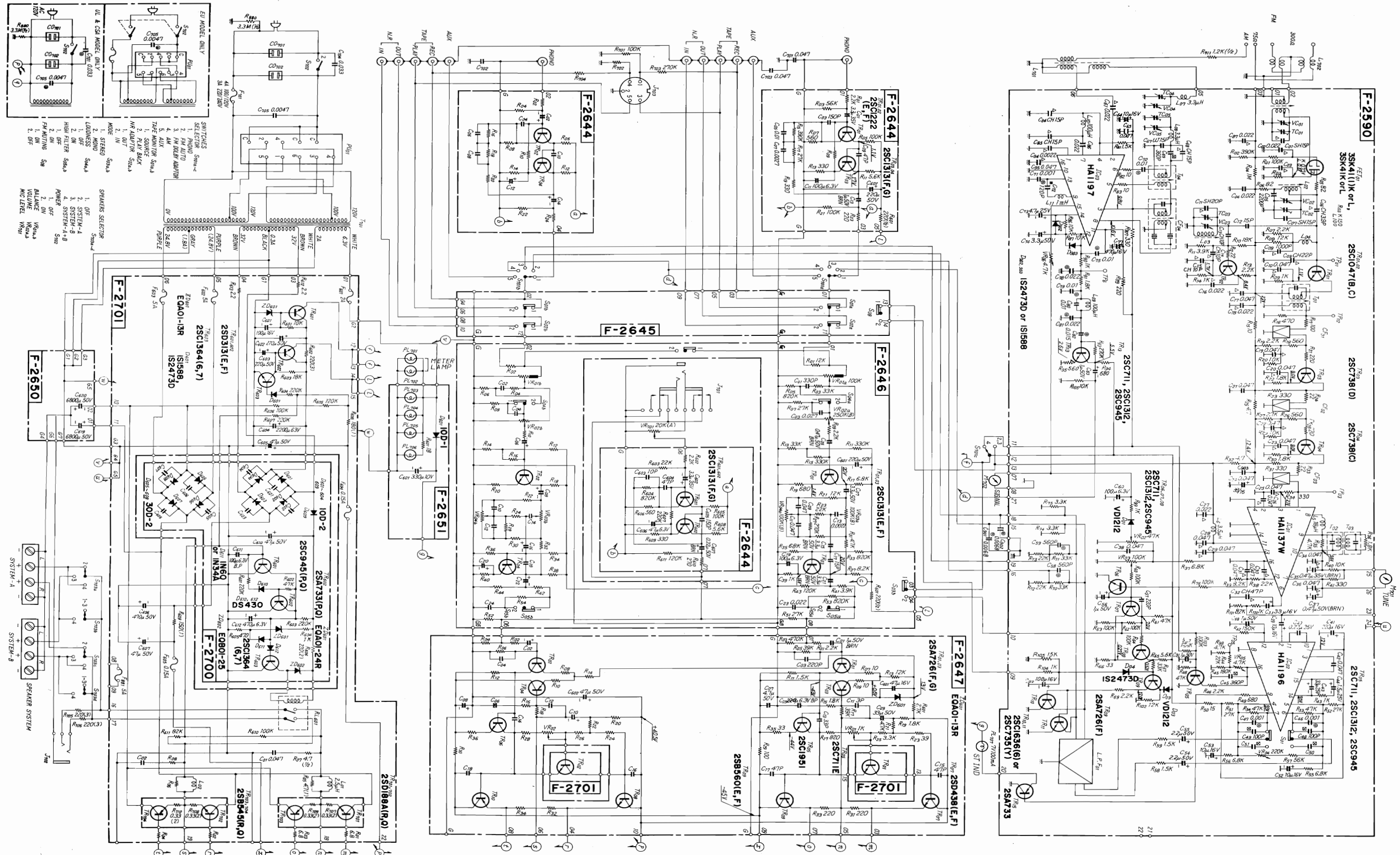
**Sansui**

**SANSUI ELECTRIC CO., LTD.**  
14-1, 2-chome, Izumi, Suginamiku, Tokyo 168, Japan.  
TELEPHONE: (03) 323-1111 / TELEX: 232-2076

## SANSUI 5050 SCHEMATIC DIAGRAM

- \* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- \* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
- \* Design and specifications subject to change without notice for improvement.

*Sansui*



## SANSUI 6060 SCHEMATIC DIAGRAM

- \* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- \* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
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*Sansui*

