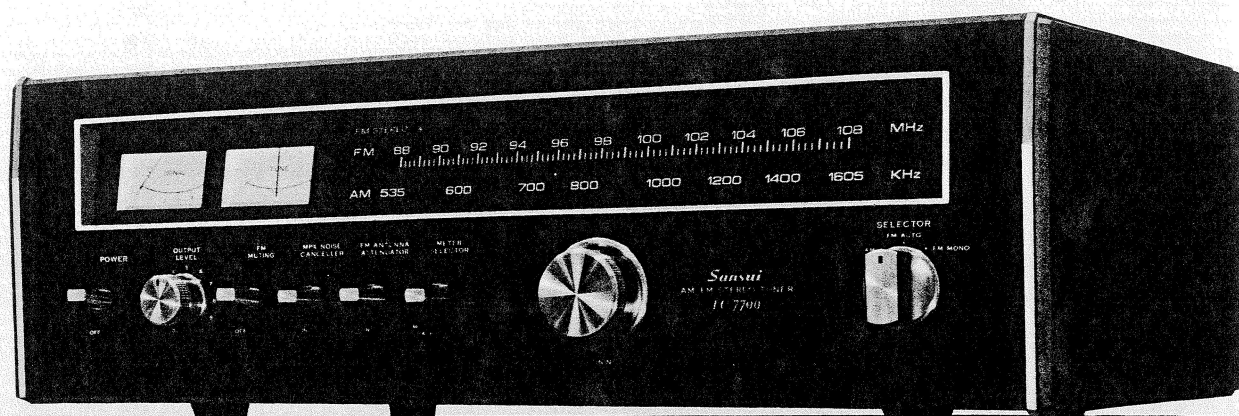


# SERVICE MANUAL

## AM/FM STEREO TUNER **SANSUI TU-7700**



**Sansui**

SANSUI ELECTRIC CO., LTD.

This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the TU-7700 correctly.

When ordering the parts, use the stock number and parts name specifically referring to the Parts Locations & Parts List.

For general usage and maintenance of the unit, please refer to the Operating Instructions attached with the unit.

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# 1. SPECIFICATIONS

## FM SECTION

TUNING RANGE .....	88 to 108MHz
SENSITIVITY (IHF) .....	1.8 $\mu$ V
QUIETING SLOPE .....	40dB 1.8 $\mu$ V, 50dB 3 $\mu$ V, 60dB 10 $\mu$ V, 70dB 50 $\mu$ V
TOTAL HARMONIC DISTORTION	
MONO .....	less than 0.2%
STEREO .....	less than 0.3%
SIGNAL TO NOISE RATIO .....	better than 75dB
SELECTIVITY .....	better than 80dB
CAPTURE RATIO (IHF) .....	less than 1.5dB
IMAGE FREQUENCY REJECTION	
.....	better than 75dB
IF REJECTION .....	better than 90dB
SPURIOUS RESPONSE REJECTION	
.....	better than 80dB
STEREO SEPARATION.....	better than 40dB at 1KHz better than 30dB at 10KHz
SPURIOUS RADIATION....	less than 34dB
FREQUENCY RESPONSE ...	20 to 15,000Hz
FM ANTENNA INPUT IMPEDANCE	
.....	300 $\Omega$ balanced
.....	75 $\Omega$ unbalanced
FM ANTENNA ATTENUATOR	
.....	- 20dB

## AM SECTION

TUNING RANGE .....	535 to 1,605KHz
SENSITIVITY (Bar Antenna) ..	50dB/m
SELECTIVITY .....	better than 30dB
IMAGE FREQUENCY REJECTION	
.....	better than 80dB/m at 1MHz
IF REJECTION .....	better than 80dB/m at 1MHz

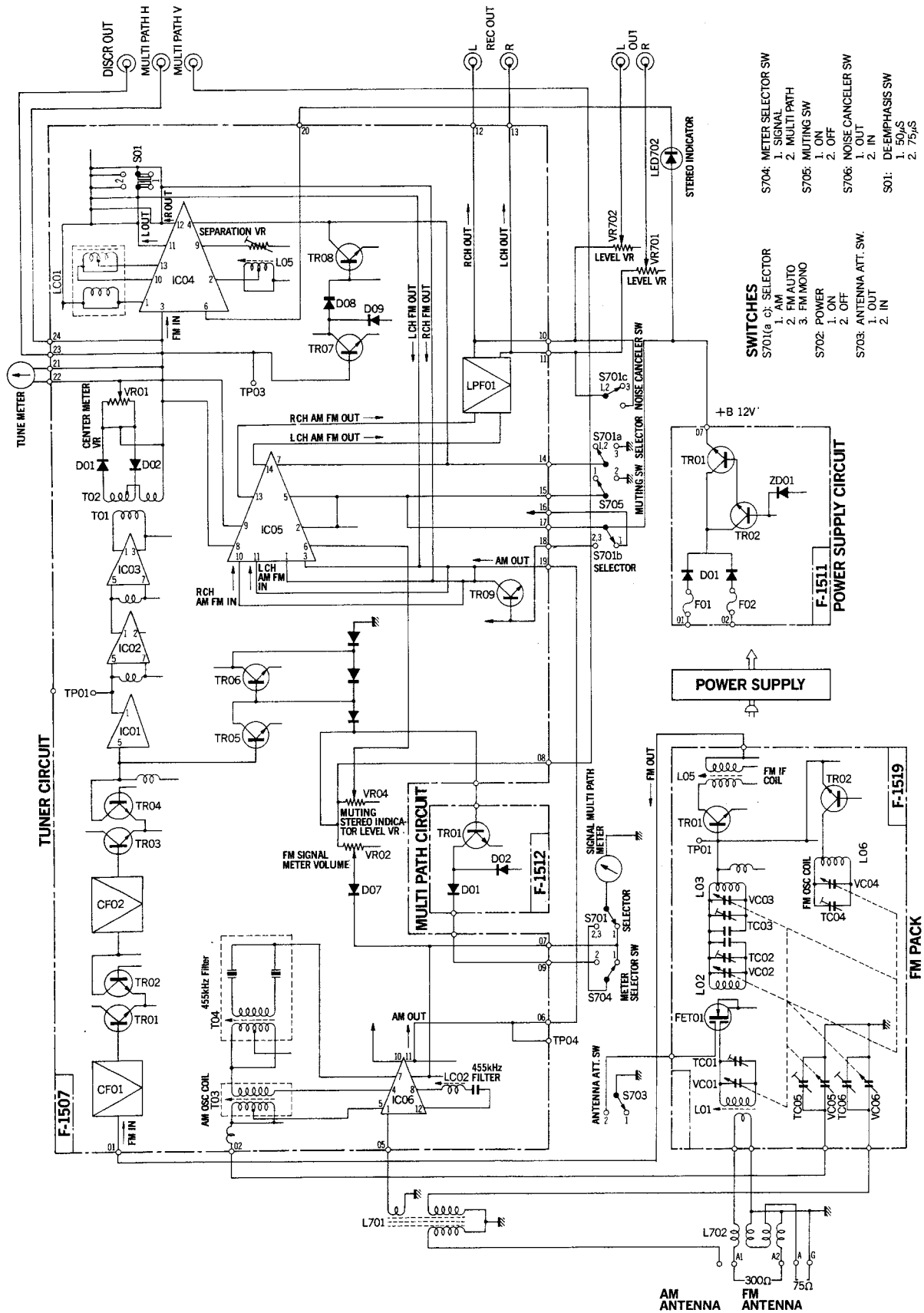
## OTHERS

### SEMICONDUCTORS

TRANSISTORS .....	14
FET .....	1
ICs .....	6
DIODES .....	14
ZENER DIODE .....	1
LEDs .....	2
OUTPUT .....	0 to 0.775V
REC OUTPUT .....	0.4V
POWER REQUIREMENTS	
POWER VOLTAGE .....	100, 117, 220, 240V 50/60Hz
POWER CONSUMPTION .....	9W (rated)
DIMENSIONS .....	
.....	434mm (17 $\frac{1}{8}$ " ) W
.....	130mm (5 $\frac{1}{8}$ " ) H
.....	243mm (9 $\frac{9}{16}$ " ) D
WEIGHT .....	
.....	6.9Kg (15.2 lbs) net
.....	8.3Kg (18.3 lbs) packed

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

## 2. BLOCK DIAGRAM





### 3. THREADING OF DIAL CORD

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

As TU-7700 uses 0.6mmφ cord, please replace it with the same type certainly.

\* The length of dial cord is approximately 170cm (66 inch).

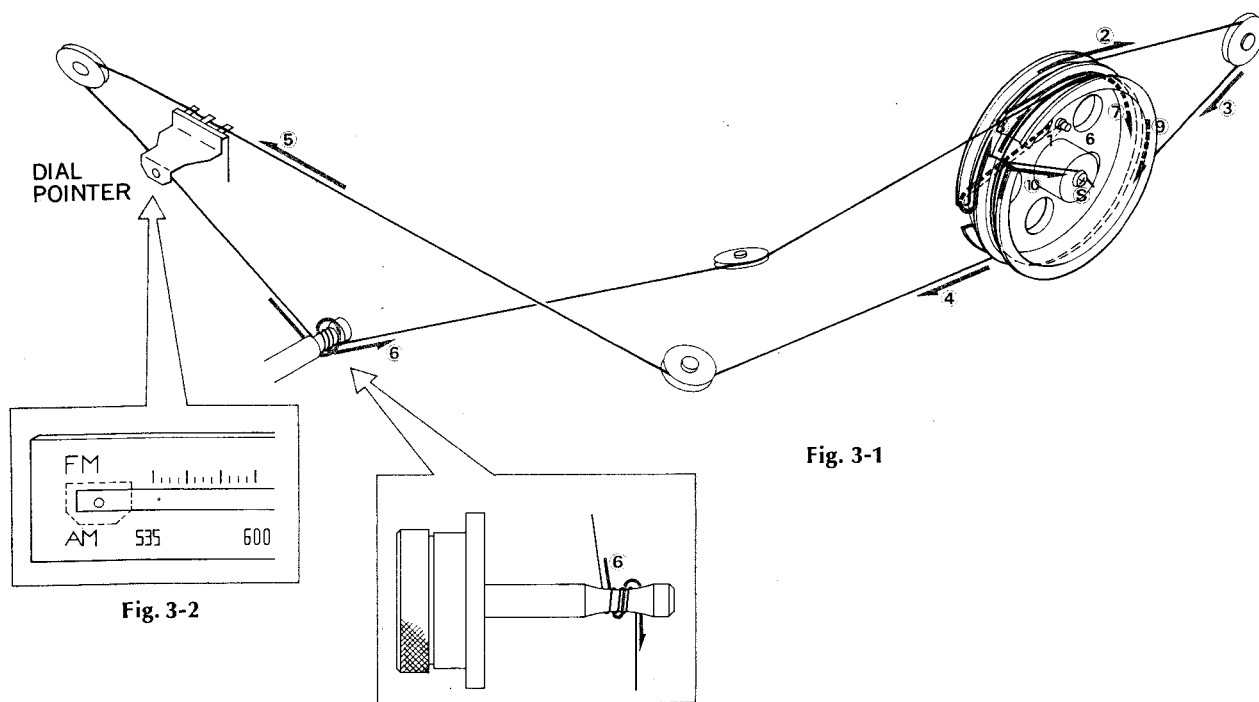


Fig. 3-1

Fig. 3-2

#### 3-1. Threading of Dial Cord

Thread the dial cord in numerical order from ① to ⑩ as Fig. 3-1.

- 1) Close the variable capacitor completely (Max. capacitance).
- 2) Only when you replace variable capacitor with new one, turn up the screw ⑤ completely so that the screw 6 on dial pulley is positioned as shown in Fig. 3-1.
- 3) Tie the cord to screw ⑥ and thread it in the direction of arrow from ① to ⑤
- 4) Then, after winding the cord 3 turns around the tuning shaft counterclockwise, thread it from ⑦ to ⑩.
- 5) After ⑩, tie the cord to the screw ⑤ of the dial pulley.

\*To strengthen the dial cord's tension, hold the end of cord, then pull it toward the front panel. Turn tuning shaft counterclockwise so that the cord's tension will be more obtained.

\*After procedure 5), lock the knot ⑩ of the cord and the screw ⑤ with paint.

#### 3-2. Attachment of Dial Pointer

- 1) Close the variable capacitor completely.
- 2) Set the dial pointer to the position on dial scale as shown in Fig. 3-2.

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

Stock No.	Description
6036050	Dial Cord (0.6mmφ)

## 4. ALIGNMENTS AND ADJUSTMENTS

### Abbreviation

#### Equipment

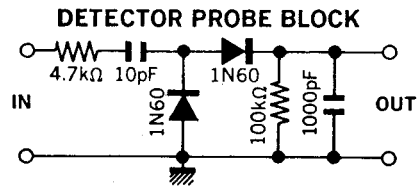
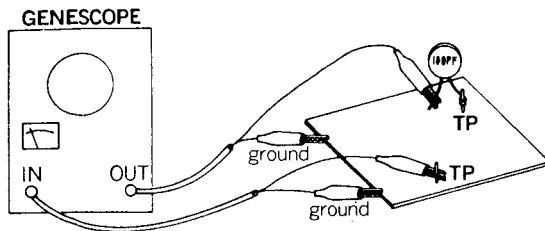
AM FM Generator Oscilloscope ..... Genescope  
 AM Standard Signal Generator..... AM SSG  
 FM Standard Signal Generator..... FM SSG  
 FM Stereo Generator ..... Stereo SG  
 Oscilloscope..... Scope  
 Audio Oscillator ..... Audio Osc.  
 Distortion Meter ..... Dist. Meter

#### Others

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

### 4-1. FM IF Alignment (See Figs. 4-4, 4-5, 4-6 and 4-7 on page 8)

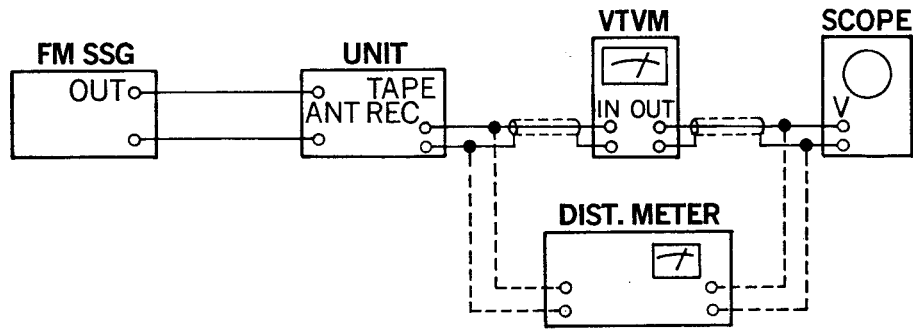
- Note.** 1. Selector ..... FM AUTO  
 2. Output level of genescope ..... After attenuator  
 3. Sweepwidth..... 1.5~2cm/150kHz  
 4. Frequency band ..... 9.5~11.5MHz  
 5. Connection ..... Connect the output of genescope to TP. 01 through 100pF ceramic capacitor  
 6. FM MUTING switch ..... OFF


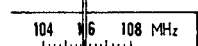

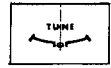


STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1	IF coil	Output 65dB Genescope	TP. 01 (F-1519) (Fig. 4-7)	TP01 (Fig. 4-5) Use Detector Probe	L05 (Fig. 4-6)	Max. IF waveform 1 as Fig. 4-4	
2	Discriminator coil	Same as above	Same as above	TP03 (Fig. 4-5) Direct from Genescope	T01 (Fig. 4-5) T02 (Fig. 4-5)	Max. linearity of S curve Set the center of S curve to center of waveform 1 as Fig. 4-4	

## 4-2. FM Dial Calibration, Mono Distortion and RF Alignment (See Figs. 4-5 and 4-6 on page 8)

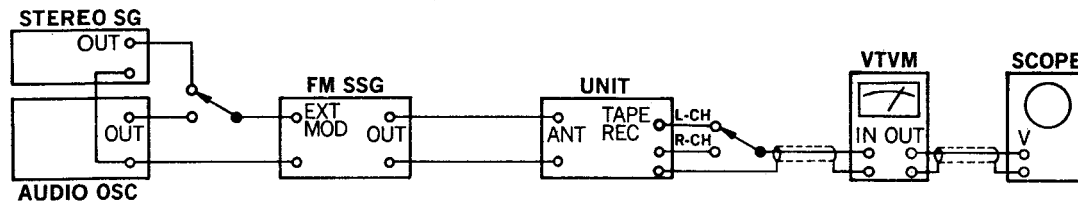
- Note: 1. Selector.....FM AUTO  
 2. Confirm start point of dial pointer before alignment.  
 3. FM MUTING switch .....OFF



STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1	90MHz Dial Calibration	90MHz ANT input 60dB 400Hz (100% MOD) FM SSG	ANT terminal 300Ω	REC OUT L or R-ch VTVM & Scope	L06 (Fig. 4-6)	Max. output	◦Set Dial on 90MHz 
2	106MHz Dial Calibration	106MHz ANT input 60dB 400Hz (100% MOD) FM SSG	Same as above	Same as above	Trimmer TC04 (Fig. 4-6)	Same as above	◦Set Dial on 106MHz 
3	Confirm 98MHz Dial Calibration	98MHz ANT input 60dB 1kHz (100% MOD) FM SSG	Same as above	Same as above		Confirm 98MHz Dial Calibration	◦If not, repeat from Steps 1, 2
4	90MHz RF Adj.	90MHz ANT input 50dB 400Hz (100% MOD) FM SSG	Same as above	Same as above	L01, L02, L03 (Fig. 4-6)	Max. output	◦Tune FM SSG (Max. indication of Signal Meter)
5	106MHz RF Adj.	106MHz ANT input 50dB 400Hz (100% MOD) FM SSG	Same as above	Same as above	Trimmer TC01, TC02 TC03 (Fig. 4-6)	Same as above	Same as above
6	Distortion	98MHz ANT input 66dB 400Hz (100% MOD) FM SSG	Same as above	REC OUT L or R-ch Dist. meter & Scope	T02 (Fig. 4-5)	Min. distortion	Same as above
7	Signal meter Volume	98MHz ANT input 80dB 400Hz (100% MOD) FM SSG	Same as above	Signal meter	VR02 (Fig. 4-5)	4.3 on meter 	
8	Tune meter Volume	98MHz ANT input 60dB 400Hz (100% MOD) FM SSG	Same as above	Tune meter	VR01 (Fig. 4-5)	Center on meter 	

### 4-3. MPX Alignment (See Figs. 4-5 and 4-6 on page 8)

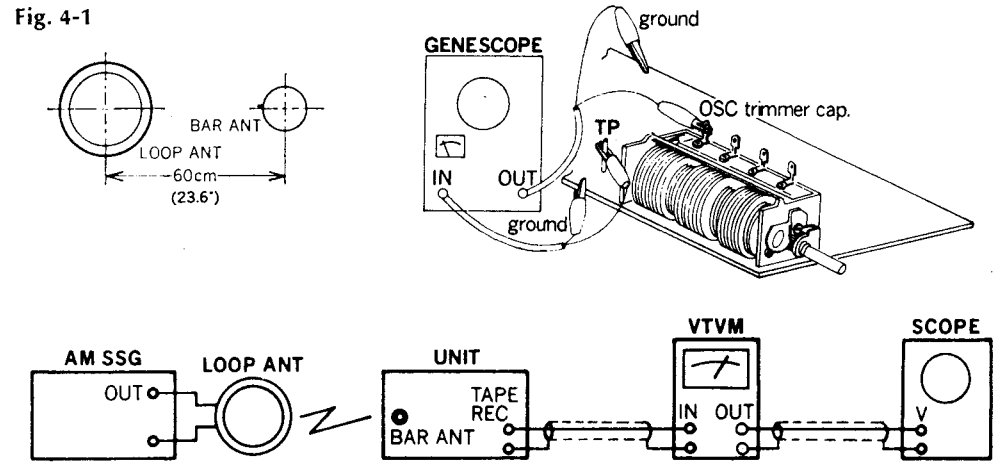
Note: 1. Selector .....FM AUTO  
 2. FM MUTING switch.....OFF



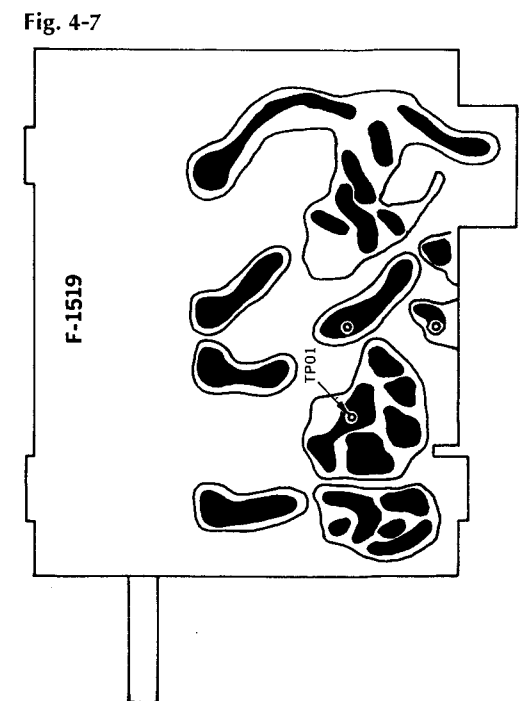
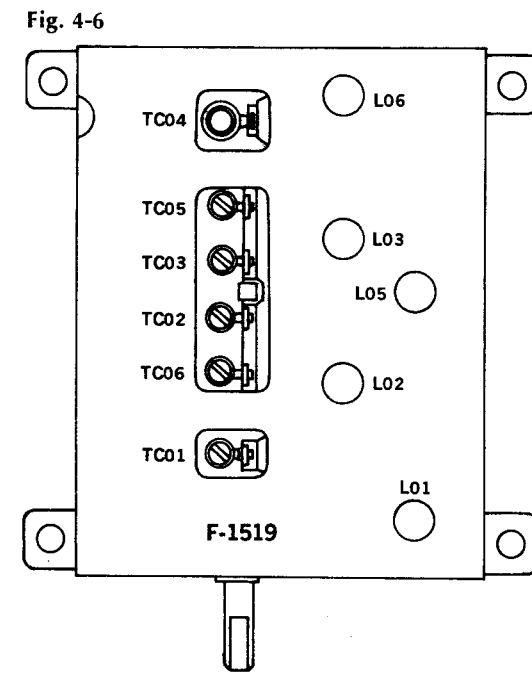
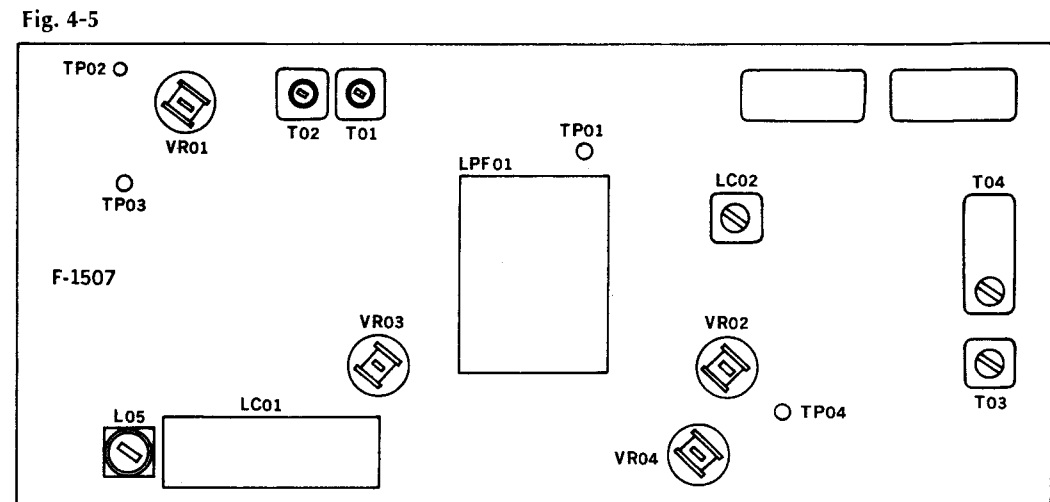
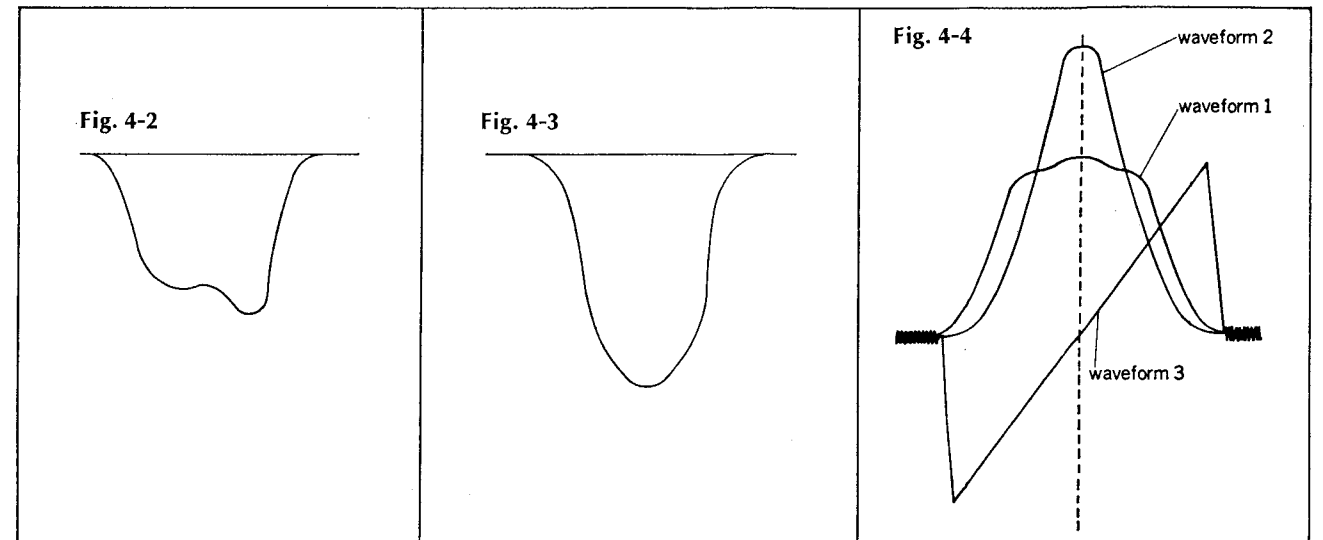
STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1	19kHz coil	98MHz ANT input 60dB FM SSG Pilot 19kHz (10% MOD) L-ch 1kHz (45% MOD) R-ch (0% MOD) Stereo SG	ANT terminal 300Ω	REC OUT L-ch VTVM & Scope	L05 (Fig. 4-6)	Max. output	◦ Tune FM SSG (Max. indication of signal meter)
2	Separation	Same as above	Same as above	REC OUT R-ch VTVM & Scope	VR03 (Fig. 4-5)	Min. output	
3	Confirm Separation	98MHz ANT input 60dB FM SSG Pilot 19kHz (10% MOD) L-ch (0% MOD) R-ch 1kHz (45% MOD) Stereo SG	Same as above	REC OUT L-ch VTVM & Scope		Min. output	◦ If less than 40dB, adjust VR03
4	Indicator (Lighting level) muting level	98MHz ANT input 32dB FM SSG Pilot 19kHz (10% MOD) Stereo SG L-ch (0% MOD) R-ch (45% MOD)	Same as above	Stereo indi- cator lamp REC OUT R-ch VTVM & Scope	VR04 (Fig. 4-5)	Lighting Point, Muting Point 32dB	◦ Tune FM SSG (Max. indication of signal meter)

### 4-4. AM IF, Dial Calibration and RF Alignment (See Figs. 4-2, 4-3, 4-5 and 4-6 on page 8)

- Note: 1. Selector.....AM  
 2. Confirm start point of dial pointer before alignment.  
 3. In case of using loop antenna, increase output of AM SSG for 26dB than bar antenna's direct input as it attenuates input sensitivity for 26dB (See Fig. 4-1).



STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1	IF coil	Output 70dB Genescope	OSC trimmer cap. TC05 (Fig. 4-6)	TP04 (Fig. 4-5)	T04 (Fig. 4-5)	Max. IF waveform Fig. 4-2	
2	IF coil	Output 60dB Genescope	Same as above	Same as above	LC02 (Fig. 4-5)	Max. IF waveform Fig. 4-3	
3	IF coil	Output 70dB Genescope	Same as above	Same as above	Same as above	Max. IF waveform Fig. 4-3	
4	535kHz Dial Calibration	535kHz ANT input 86dB 400Hz (30% MOD) AM SSG Use loop ANT	Bar ANT	REC OUT L or R-ch VTVM & Scope	T03 (Fig. 4-5)	Max. output	◦ If not, readjust T04 & LC02 slightly ◦ If broadcasting station is near, it might be used
5	1400kHz Dial Calibration	1400kHz ANT input 86dB 400Hz (30% MOD) AM SSG Use loop ANT	Same as above	Same as above	Trimmer TC05 (Fig. 4-6)	Same as above	Same as above
6	Confirm 1000kHz Dial Calibration	1000kHz ANT input 86dB 400Hz (30% MOD) AM SSG Use loop ANT	Same as above	Same as above	Same as above	Confirm 1000kHz Dial Calibration	◦ If not, repeat from Step 4, 5
7	600kHz RF Adj.	600kHz ANT input 76dB 400Hz (30% MOD) AM SSG Use loop ANT	Same as above	Same as above	Bar ANT L701	Max. output	
8	1400kHz RF Adj.	1400kHz ANT input 96dB 400Hz (30% MOD) AM SSG Use loop ANT	Same as above	Same as above	Trimmer TC06 (Fig. 4-6)	Same as above	



## 5. TROUBLESHOOTING CHART

### 5-1. Troubleshooting on Power Supply Section

Symptom	Check Point	Cause & What to Do
1-1. Each lamp on dial scale not lighted		1. Imperfect function of power cord, plug or power switch, S702 2. Opened power fuse F701 or F03
1-2. +12V not supplied to point 07 on F-1511		3. Opened fuse, F01 or F02 4. Defective diode D01 or zener diode ZD01 5. Defective transistor TR01, TR02
1-3. Power indicator not lighted		6. Defective light emitted diode, LED701

### 5-2. Troubleshooting on Tuner Section

#### 1. Both AM and FM reception inoperative

1. +12V not supplied to points 16, 17, 18 on F-1507	
2. Defective IC05	
3. Opened low pass filter LPF01	

#### 2. FM reception only inoperative

\* Before check, set FM MUTING switch to OFF

##### 2-1. Signal meter inoperative (Meter circuit on F-1507 is normally operative)

1. Incorrect adjustment of frontend pack, F-1519	
2. Defective frontend pack, F-1519	
3. Defective transistor, TR01~TR04 on F-1507	
4. Defective ceramic filter, CF-1, CF-2 on F-1507	
5. Defective IC01~IC03 on F-1507	
6. Defective diode, D01, D02 on F-1507	
7. Discriminator coil, T01, T02, defective or out of adjustment	

##### 2-2. Signal meter operative

\* Confirm that FM signal supplied to test point, TP03 on F-1507

##### 3-1. MPX signal including R and L-ch not supplied to points 11, 12, of IC04

##### 3-2. No channel separation & no light on stereo indicator

1. Defective IC04	
2. L05, LC01 defective or out of adjustment	
3. Defective separation volume, VR03	
4. Incorrect adjustment of muting volume VR04	
5. Defective muting volume, VR04	
6. Selector, S701c short	
7. Defective IC05	
8. Transistor, TR08 short	
9. Defective stereo indicator, LED702	

Symptom	Check Point	Cause & What to Do
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3-3. The MPX indicator lamp is flickered by FM background noise		1. Defective transistor, TR07, TR08 2. Defective diode, D08, 09
---	--	--

#### 4. Signal meter circuit inoperative

\* FM or AM sound can be heard

1. Defective transistor, TR05, TR06	
2. Defective diode, D03~D07	
3. Meter volume, VR02 defective or out of adjustment	
4. Defective meter selector switch, S704 or selector, S701	
5. Defective signal meter	

#### 5. Multi path meter inoperative

\* Multi path meter (signal meter) inoperative when setting METER SELECTOR switch, S704 to 2

1. Defective selector S704, meter selector switch, S701	
2. Defective diode, D01~D03 on F-1512	
3. Defective transistor, TR01 on F-1512	

#### 6. FM muting function inoperative

##### 6-1. FM reception inoperative when setting switch to ON

1. Poor sensitivity due to incorrect tracking IF adjustment	
2. Incorrect adjustment of muting volume, VR04	
3. FM antenna attenuator switch is set to ON in a weak electric field intensity area	

##### 6-2. FM muting function inoperative

4. Defective muting switch, S705	
5. Defective muting volume, VR04	

#### 7. AM reception inoperative

##### 7-1. Signal meter operative (AM sound can not be heard)

\* The output, TP. 04 on F-1507 is normally operative

1. Shorted transistor, TR09 on F-1507	
2. Defective IC05	
3. Defective low pass filter, LPF01	

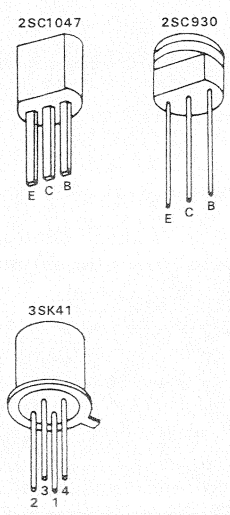
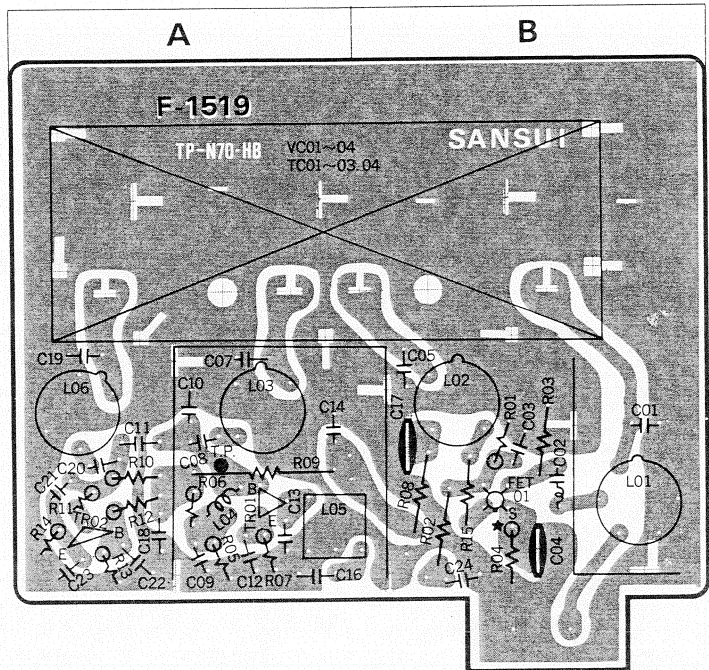
##### 7-2. Signal meter inoperative (AM sound can not be heard)

4. Defective IC06	
5. Bar antenna coil, L701 opened or out of adjustment	
6. Incorrect tracking, IF adjustment	
7. Opened osc coil T03, IF coil T04 or LC02	

# 6. PARTS LOCATIONS AND PARTS LISTS

## 6-1. F-1519 Frontend Pack (Stock No. 7510630 Frondend Pack F-1519)

Conductor Side



### Parts List

Parts No.	Stock No.	Description	Position
TR01	0305800, 1	2SC1047A, B	A
TR02	0305790, 1	2SC930C, D	A
FET01	0370132 0370021	3SK41K } FET 3SK41L }	B
L01	4200640	Antenna Coil	B
L02	4210220	RF Coil (1)	B
L03	4210220	RF Coil (2)	A
L04	4290110	Choke Coil	A
L05	4235910	IF Coil	A, B
L06	4220430	OSC Coil	A
VC01-04	1220130	FM, AM Variable Capacitor	A, B
TC01-03			A, B
TC04	1230090	Trimmer Capacitor	A, B
C01	0669342	5.6pF	B
C02	0657102	1000pF	B
C03	0657223	0.022μF	B
C04	0659015	2200pF	B
C05	0669345	10pF	B
C06	0679023	0.39pF	500V Gimmick Capacitor
C07	0669345	10pF	A
C08	0669210	10pF	A
C09	0657102	1000pF	A
C10	0661220	22pF	A
C11	0669003 0669202	2.2pF	50V C.C.
C12	0657223	0.022μF	A
C13	0660121	120pF	A
C14	0657223	0.022μF	A
C15	0660181	180pF	A
C17	0659015	2200pF	B

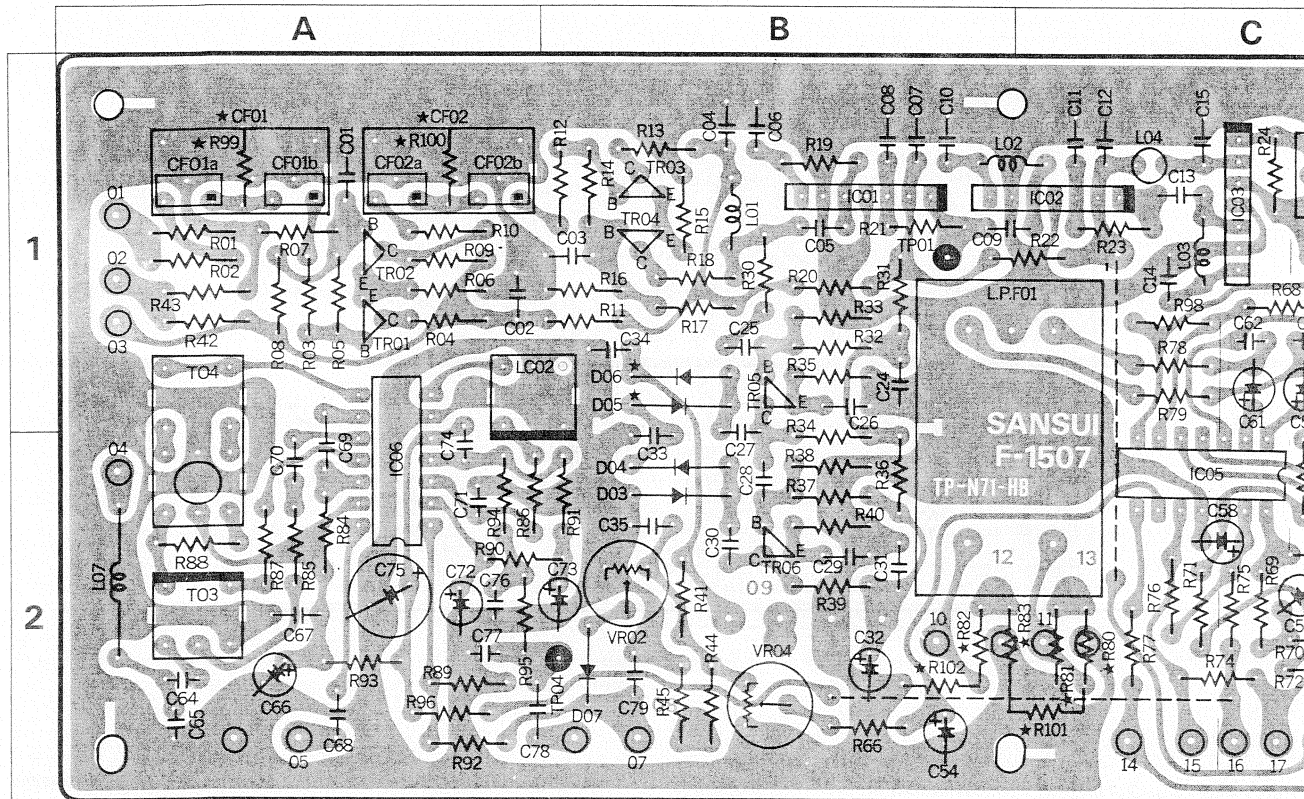
Parts No.	Stock No.	Description	Position
C18	0657223	0.022μF	A
C19	0669350	15pF	A
C20	0657102	1000pF	A
C21	0669369	8.2pF	A
C22	0657223	0.022μF	50V C.C.
C23	0661220 0669221	22pF	A
C24	0657223	0.022μF	B
R01	0106105	1MΩ	1/4W C.R. (E.L.R.)
R02	0113104	100kΩ	B
R03	0113104	100kΩ	1/4W S.R.
R04	0106101 0106151	100Ω 150Ω	B
R05	0106392	3.9kΩ	1/4W C.R. (E.L.R.)
R06	0106123	12kΩ	A
R07	0106392	3.9kΩ	A
R08	0113121	120Ω	B
R09	0113271	270Ω	1/4W S.R.
R10	0106392	3.9kΩ	A
R11	0106121	120Ω	A
R12	0106682	6.8kΩ	1/4W C.R.
R13	0106222	2.2kΩ	A
R14	0106182	1.8kΩ	A
R15	0113470	47Ω	1/4W S.R.
	2260010	Test Pin	B

### Abbreviations

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

### 6-2. F-1507 Tuner Circuit Board (Stock No. 7520950 Complete Circuit Board F-1507)

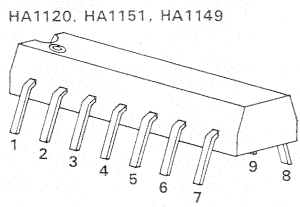
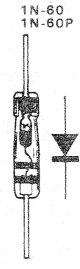
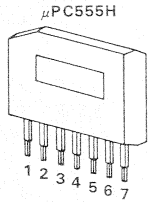
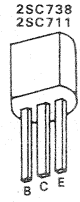
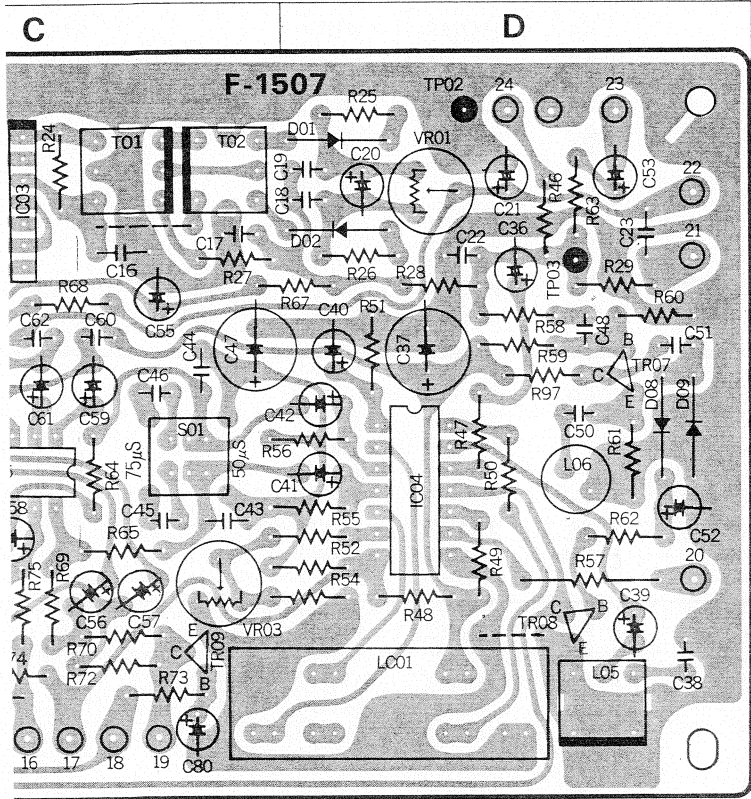
#### Conductor Side



#### Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	
TR01	0306112, 3	2SC738C, D	1 A	CF01	0910260	SFG10.7MA-6	Ceramic Filter	
TR02	0306112, 3	2SC738C, D	1 A	CF02	0910260	SFG10.7MA-6		
TR03	0306112, 3	2SC738C, D	1 B	T04	0910270	YFL455E6	1, 2 A	
TR04	0306112, 3	2SC738C, D	1 B	L01	4900200	10 $\mu$ H	Inductor	
TR05	0306112, 3	2SC738C, D	1 B	L02	4900200	10 $\mu$ H		
TR06	0306112, 3	2SC738C, D	2 B	L03	4900200	10 $\mu$ H		
TR07	0305731, 2	2SC711E, F	1 D	L04	4900100	3.3 $\mu$ H	1 C	
TR08	0305731, 2	2SC711E, F	2 C	L05	4240720	19kHz Coil	2 D	
TR09	0305731, 2	2SC711E, F	2 C	L06	4900120	1mH Inductor	2 D	
TR901	0305731, 2	2SC711E, F		L07	4290011	3.5 $\mu$ H Peaking Coil	2 A	
IC01	0360120	$\mu$ PC555H	1 B	LC01	4240710	MPX Coil Block	2 D	
IC02	0360120	$\mu$ PC555H	1 B, C	LC02	4230620	AM IF Coil	1 A, B	
IC03	0360120	$\mu$ PC555H	1 C	T01	4235750	FM Discriminator Coil	1 C	
IC04	0360080	HA1120	2 D	T02	4235760		1 C	
IC05	0360140	HA1149	2 C	T03	4220550	AM OSC Coil	2 A	
IC06	0360150	HA1151	1, 2 A	LPF01	0910210	BL-11 Low Pass Filter	1, 2 B C	
D01	0311060	1N60P	Diode	VR01	1035150	22k $\Omega$ (B) Tune Meter Volume	1 D	
D02	0311060	1N60P		1 D	VR02	1035170	47k $\Omega$ (B) Signal Meter Volume	2 B
D03	0310330, 1	1N60		2 B	VR03	1035070	1k $\Omega$ (B) MPX Separation Volume	2 C
D04	0310330, 1	1N60		2 B	VR04	1035190	100k $\Omega$ (B) Muting, FM Indicator Volume	2 B
D05	0310330, 1	1N60		1 B	C01	0657223	50V C.C.	1 A
D06	0310330, 1	1N60		1 B	C02	0657223		1 A
D07	0310330, 1	1N60		2 B	C03	0657223		1 B
D08	0310330, 1	1N60		1, 2 D				
D09	0310330, 1	1N60		1, 2 D				





Parts No.	Stock No.	Description	Position
C04	0657223	0.022μF	1B
C05	0657223	0.022μF	1B
C06	0657223	0.022μF	1B
C07	0657223	0.022μF	1B
C08	0657223	0.022μF	1B
C09	0657223	0.022μF	1B, C
C10	0657223	0.022μF	1B
C11	0657223	0.022μF	1C
C12	0657223	0.022μF	1C
C13	0657223	0.022μF	1C
C14	0657223	0.022μF	1C
C15	0657223	0.022μF	1C
C16	0657223	0.022μF	1C
C17	0660101	100pF	1C
C18	0660101	100pF	1D
C19	0660101	100pF	1D
C20	0512100	10μF 16V E.C.	1D
C21	0513479	4.7μF 25V E.C.	1D
C22	0660101	100pF	1D
C23	0657223	0.022μF	1D
C24	0657223	0.022μF	1B
C25	0661470	47pF	1B
C26	0657223	0.022μF	1B
C27	0661330	33pF	2B
C28	0661470	47pF	2B
C29	0657223	0.022μF	2B
C30	0661470	47pF	2B
C31	0657223	0.022μF	2B

Parts No.	Stock No.	Description	Position
C32	0512100	10μF 10V E.C.	2B
C33	0660221	220pF	2B
C34	0660221	220pF	1B
C35	0657223	0.022μF	2B
C36	0515229	2.2μF 50V E.C.	1D
C37	0512221	100μF 16V E.C.	1D
C38	0629001	6800pF 50V P.C.	2D
C39	0513479	4.7μF	2D
C40	0513479	4.7μF	1D
C41	0515109	1μF	2D
C42	0515109	1μF	1D
C43	0600127	0.012μF	2C
C44	0600127	0.012μF	1C
C45	0600826	0.0082μF	
C46	0600826	0.0082μF	
C47	0512101	100μF 16V E.C.	1D
C48	0620221	220pF 50V P.C.	1D
C50	0600126	0.0012μF	1D
C51	0601106	0.001μF	1D
C52	0515339	3.3μF 50V E.C.	2D
C53	0512100	10μF 16V E.C.	1D

—Abbreviations—

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

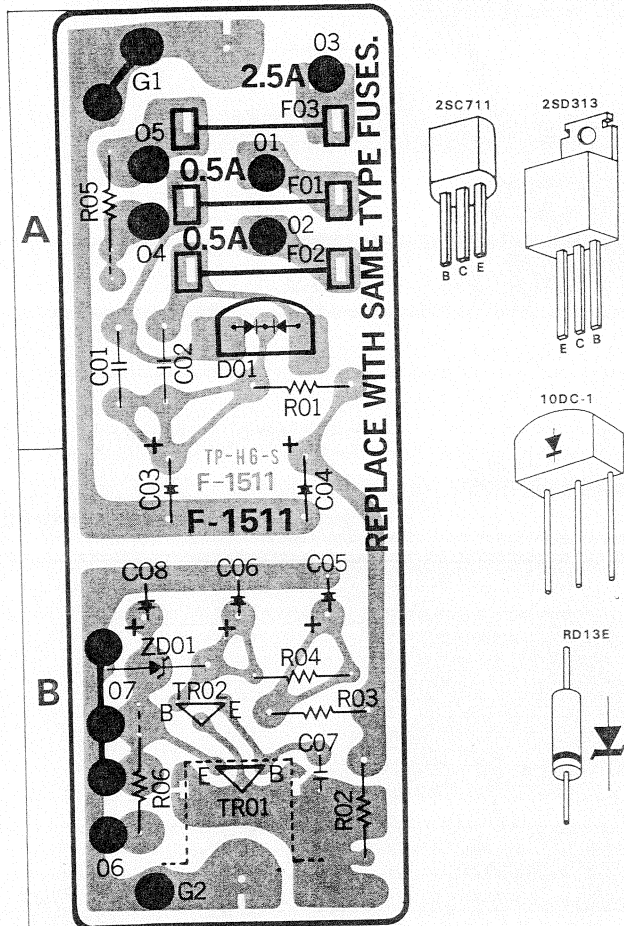
**F-1507 Parts List**

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
C54	0515109	1 $\mu$ F	2 B	R37	0113223	22k $\Omega$	2 B
C55	0515339	3.3 $\mu$ F	1 C	R38	0113183	18k $\Omega$	2 B
C56	0515109	1 $\mu$ F	2 C	R39	0113102	1k $\Omega$	2 B
C57	0515109	1 $\mu$ F	2 C	R40	0113102	1k $\Omega$	2 B
C58	0512100	10 $\mu$ F 16V E.C.	2 C	R41	0113222	2.2k $\Omega$	2 B
C59	0519102	3.3 $\mu$ F 50V E.C.	1 C	R42	0113104	100k $\Omega$	1 A
C60	0601686	0.0068 $\mu$ F 50V M.C.	1 C	R43	0113333	33k $\Omega$	1 A
C61	0519102	3.3 $\mu$ F 50V E.C.	1 C	R44	0113473	47k $\Omega$	2 B
C62	0601686	0.0068 $\mu$ F 50V M.C.	1 C	R45	0113104	100k $\Omega$	2 B
C64	0620361	360pF 50V P.C.	2 A	R46	0113104	100k $\Omega$	1 D
C65	0669400	15pF 50V C.C.	2 A	R47	0113562	5.6k $\Omega$	} $\frac{1}{4}$ W S.R.
C66	0512100	10 $\mu$ F 16V E.C.	2 A	R48	0113221	220 $\Omega$	
C67	0657223	0.022 $\mu$ F	2 A	R49	0113334	330k $\Omega$	2 D
C68	0657223	0.022 $\mu$ F	2 A	R50	5113181	180 $\Omega$	2 D
C69	0657223	0.022 $\mu$ F	2 A	R51	0113472	4.7k $\Omega$	1 D
C70	0601107	0.01 $\mu$ F	2 A	R52	0113151	150 $\Omega$	2 D
C71	0601106	0.001 $\mu$ F	2 A	R54	0113101	100 $\Omega$	2 D
C72	0515109	1 $\mu$ F 50V E.C.	2 A	R55	0113392	3.9k $\Omega$	2 D
C73	0515339	10 $\mu$ F 16V E.C.	2 B	R56	0113392	3.9k $\Omega$	2 D
C74	0601107	0.01 $\mu$ F 50V M.C.	2 A	R57	0107102	1k $\Omega$	} $\frac{1}{4}$ W C.R.
C75	0512101	100 $\mu$ F 16V E.C.	2 A	R58	0113222	2.2k $\Omega$	
C76	0601107	0.01 $\mu$ F	2 A	R59	0113104	100k $\Omega$	1 D
C77	0601826	0.0082 $\mu$ F	2 A	R60	0113333	33k $\Omega$	1 D
C78	0601108	01. $\mu$ F	2 A	R61	0113122	1.2k $\Omega$	2 D
C79	0657223	0.022 $\mu$ F	2 B	R62	0113333	33k $\Omega$	2 D
C80	0510470	47 $\mu$ F 63V E.C.	2 C	R63	0113471	470 $\Omega$	1 D
R01	0113471	470 $\Omega$	1 A	R64	0113332	3.3k $\Omega$	2 C
R02	0113151	150 $\Omega$	1 A	R65	0113332	3.3k $\Omega$	2 C
R03	0113680	68 $\Omega$	1 A	R66	0113104	100k $\Omega$	2 B
R04	0113151	150 $\Omega$	1 A	R67	0113223	22k $\Omega$	1 C, D
R05	0113391	390 $\Omega$	1 A	R68	0113223	22k $\Omega$	1 C
R06	0113681	680 $\Omega$	1 A	R69	0113562	5.6k $\Omega$	2 C
R07	0113153	15k $\Omega$	1 A	R70	0113183	18k $\Omega$	2 C
R08	0113103	10k $\Omega$	1 A	R71	0113562	5.6k $\Omega$	2 C
R09	0113331	330 $\Omega$	1 A	R72	0113183	18k $\Omega$	2 C
R10	0113100	10 $\Omega$	1 A	R73	0113472	4.7k $\Omega$	2 C
R11	0113479	4.7 $\Omega$	1 B	R74	0113222	2.2k $\Omega$	2 C
R12	0113470	47 $\Omega$	1 B	R75	0113472	4.7k $\Omega$	2 C
R13	0113151	150 $\Omega$	1 B	R76	0113222	2.2k $\Omega$	2 C
R14	0113391	390 $\Omega$	1 B	R77	0113103	10k $\Omega$	} $\frac{1}{4}$ W S.R.
R15	0113221	220 $\Omega$	1 B	R78	0113102	1k $\Omega$	
R16	0113562	5.6k $\Omega$	1 B	R79	0113102	1k $\Omega$	1 C
R17	0113103	10k $\Omega$	1 B	R80	0113472	4.7k $\Omega$	2 C
R18	0113151	150 $\Omega$	1 B	R81	0113562	5.6k $\Omega$	2 C
R19	0113102	1k $\Omega$	1 B	R82	0113472	4.7k $\Omega$	2 B
R20	0113479	4.7 $\Omega$	1 B	R83	0113562	5.6k $\Omega$	2 B
R21	0113102	1k $\Omega$	1 B	R84	0113392	3.9k $\Omega$	2 A
R22	0113479	4.7 $\Omega$	1 B	R85	0113100	10 $\Omega$	2 A
R23	0113102	1k $\Omega$	1 C	R86	0113101	100 $\Omega$	2 A
R24	0113682	6.8k $\Omega$	1 C	R87	0113100	10 $\Omega$	2 A
R25	0113102	1k $\Omega$	1 D	R88	0113224	220k $\Omega$	2 A
R26	0113102	1k $\Omega$	1 D	R89	0113182	1.8k $\Omega$	2 A
R27	0113101	100 $\Omega$	1 C	R90	0113682	6.8k $\Omega$	2 A
R28	0113471	470 $\Omega$	1 D	R91	0113103	10k $\Omega$	2 B
R29	0113393	39k $\Omega$	1 D	R92	0113152	1.5k $\Omega$	2 A
R30	0113152	1.5k $\Omega$	1 B	R93	0113151	150 $\Omega$	2 A
R31	0113220	22 $\Omega$	1 B	R94	0113182	1.8k $\Omega$	2 A
R32	0113333	33k $\Omega$	1 B	R95	0113682	6.8k $\Omega$	2 A
R33	0113822	8.2k $\Omega$	1 B	R96	0113101	6.8k $\Omega$	2 A
R34	0113102	1k $\Omega$	2 B	R97	0113272	2.7k $\Omega$	1 D
R35	0113391	390 $\Omega$	1 B	R98	0113104	100k $\Omega$	1 D
R36	0113220	22 $\Omega$	2 B	R903	0107333	33k $\Omega$	} $\frac{1}{4}$ W C.R.
				S01	1110270	DE-EMPHASIS switch	

### 6-3. F-1511 Power Supply Circuit Board

(Stock No. 7500890 Complete Circuit Board F-1511)

#### Conductor Side



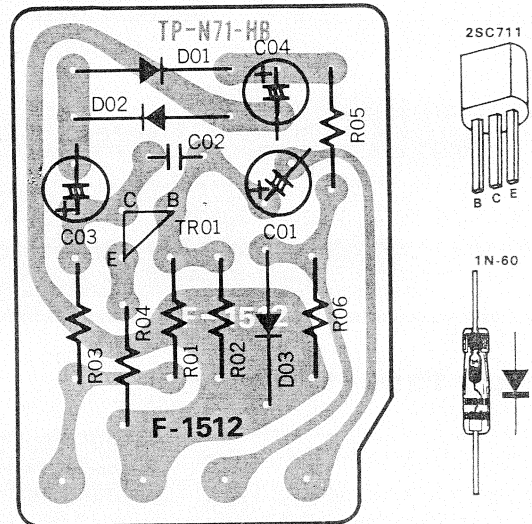
#### Parts List

Parts No.	Stock No.	Description	Position	
TR01	0308392, 3	2SD313 (E, F)	Transistor	B
TR02	0305732, 3	2SC711 (E, G)		B
D01	0310680	10DC-1	Diode	A
ZD01	0315310	RD13A (N)	Zener Diode	B
C01	0659011	0.01 $\mu$ F	500V C.C.	A
C02	0659011	0.01 $\mu$ F		A
C03	0514471	470 $\mu$ F	35V E.C.	B
C04	0514471	470 $\mu$ F		B
C05	0513470	47 $\mu$ F	25V E.C.	B
C06	0513470	47 $\mu$ F		B
C07	0601107	0.01 $\mu$ F	50V M.C.	B
C08	0512101	100 $\mu$ F	16V E.C.	B
R01	0103100	10 $\Omega$	$\frac{1}{2}$ W C.R.	A
R02	0107100	10 $\Omega$		B
R03	0107102	1k $\Omega$	$\frac{1}{4}$ W C.R.	B
R04	0107391	390 $\Omega$		B
R05	0103100	10 $\Omega$	$\frac{1}{2}$ W C.R.	A
R06	0107102	1k $\Omega$		B
F01	0430810	250V 0.5A	Power Fuse	A
F02	0430810	250V 0.5A		A
F03	0430860	250V 2.5A		A

### 6-4. F-1512 Multi Path Circuit Board

(Stock No. 7592140 Complete Circuit Board F-1512)

#### Conductor Side



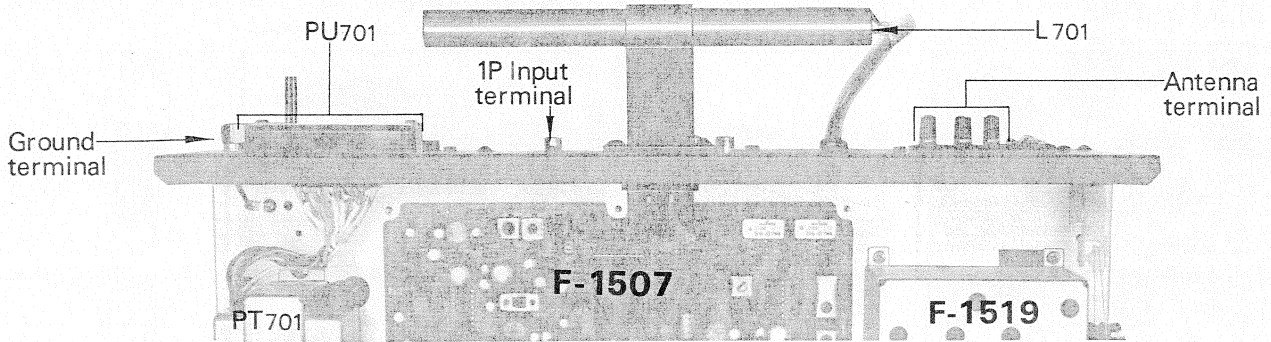
#### Parts List

Parts No.	Stock No.	Description	
TR01	0305731	2SC711E, F Transistor	
D01	0310330, 1	1N60 } Diode	
D02	0310330, 1		
D03	0310330, 1		
C01	0515109	1 $\mu$ F 50V E.C.	
C02	0660101	100pF 50V C.C.	
C03	0513479	4.7 $\mu$ F 25V E.C.	
C04	0512100	10 $\mu$ F 16V E.C.	
R01	0113563	56k $\Omega$ } $\frac{1}{4}$ W S.R.	
R02	0113103		10k $\Omega$
R03	0113182		1.8k $\Omega$
R04	0113331		330 $\Omega$
R05	0113223		22k $\Omega$
R06	0113223		22k $\Omega$

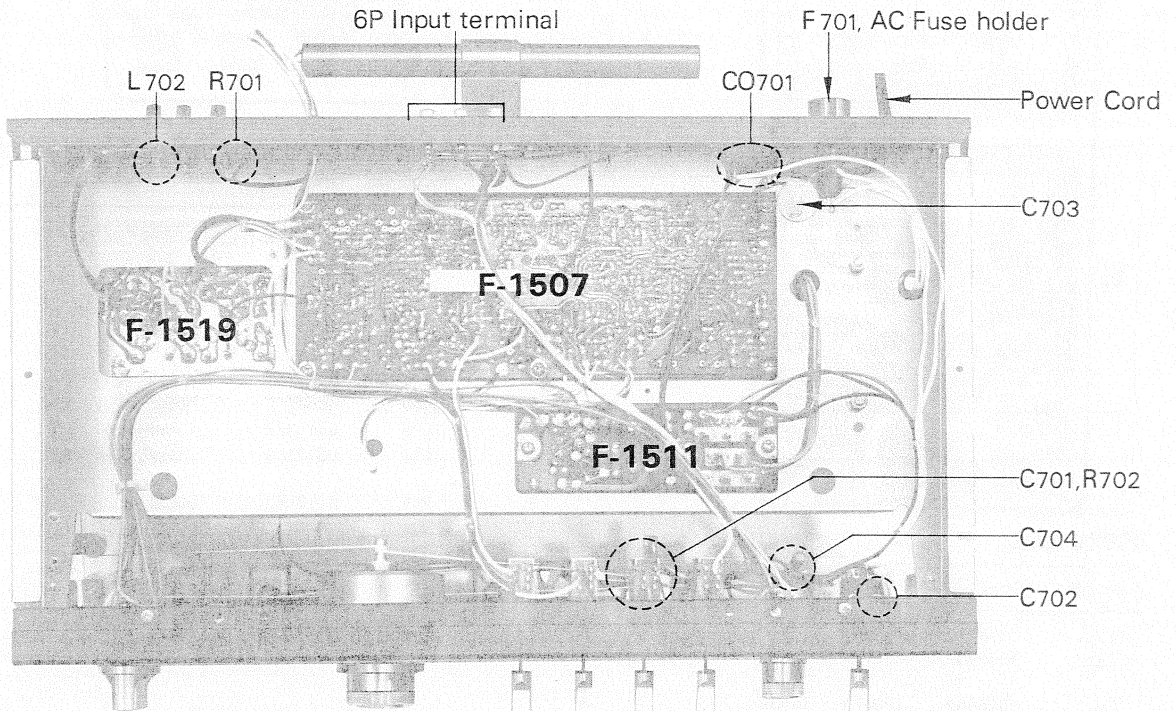
#### Abbreviations

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

**6-5. Other Parts (Top Side)**



**6-6. Other Parts (Bottom Side)**



**Other Parts List (Top, Bottom Side)**

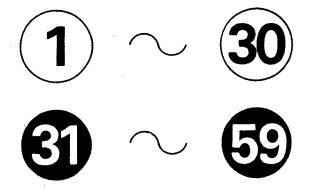
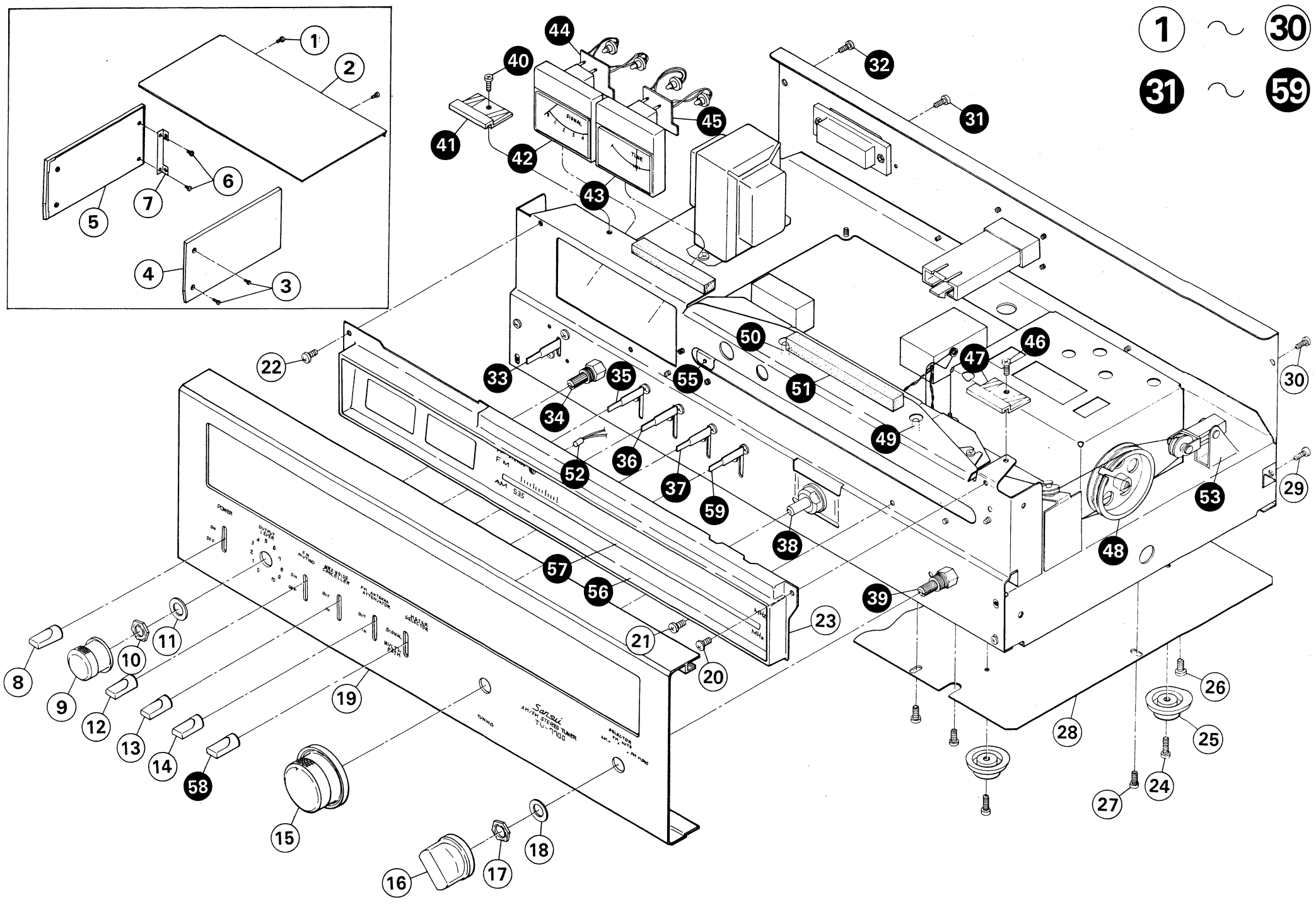
Parts No.	Stock No.	Description
C701	0601157	0.015 $\mu$ F 50V Mylar Capacitor
C702	0659801	0.01 $\mu$ F 1.4kV Ceramic Capacitor
C703	0659802	0.0047 $\mu$ F 1.4kV Ceramic Capacitor
C704	0510470	47 $\mu$ F 6.3V Electrolytic Capacitor
R701	0113122	1.2k $\Omega$ 1/4W Solid Resistor
R702	0113681	680 $\Omega$ 1/4W Solid Resistor
F701	0431221	1A Power fuse (100~117V)
	0431212	0.5A (220~240V)
	2300060	AC Fuse holder
CO701	2450050	AC Outlet

Parts No.	Stock No.	Description
PT701	4002020	Power transformer
	3800021	Power cord
	2200330	6P Input terminal
	2200290	1P Input terminal
	2230051	Ground terminal
	2210190	Antenna terminal
L701	4200660	Bar Antenna
L702	4290021	75 $\Omega$ : 300 $\Omega$ FM Balun
PU701	2410080	Voltage selector, socket
	2410070	Voltage selector, plug
	5268600	Voltage selector, cover

6-7. Other Parts (Front Side)

Parts List

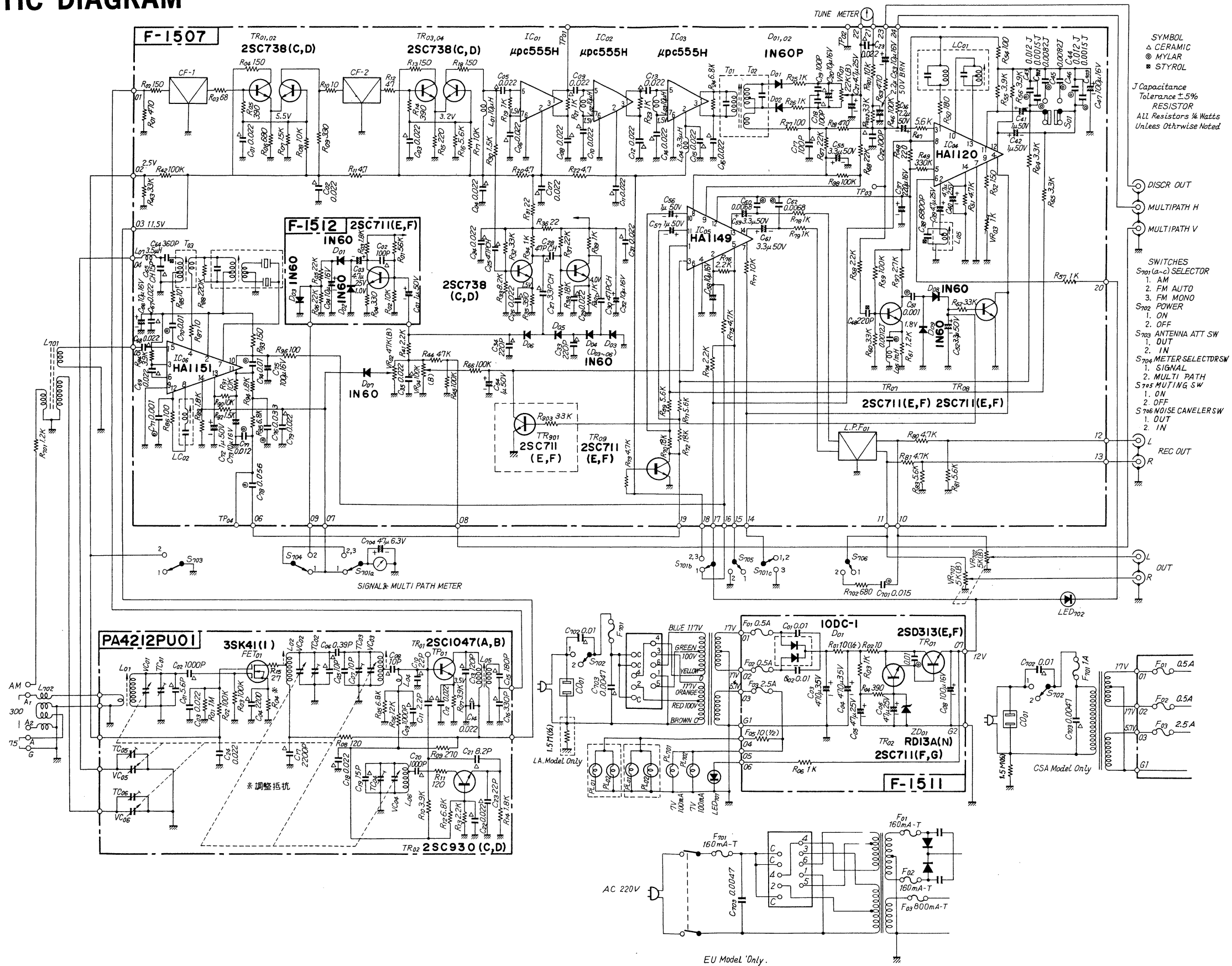
Parts No.	Stock No.	Description
1	5101143	Binding Head Screw, M3×6
2	5006330	Bonnet
3	5101161	Binding Head Screw, M4×6
4	5309260	Side Panel R
5	5309270	Side Panel L
6	5109121	Binding Head Tapping Screw, M3×6
7	5269830	Retainer (Side Panel)
8	5326460	Knob (Power Switch)
9	5317880	S-5 TY Type Knob (Level Volume)
10	5110780	Hex. Nut, M8
11	5120183	Plain washer, 8φ
12	5326460	E-1 Type Knob (Muting)
13	5326460	E-1 Type Knob (Noise Canceller)
14	5326460	E-1 Type Knob (Antenna Att.)
15	5317921	T-7 Type Knob (Tuning)
16	5318041	S-5 Metal Type Knob (Selector Switch)
17	5110781	Hex. Nut, M9
18	5120184	Plain Washer, 9φ
19	5309320	Front Panel
20	5101043	Binding Head Screw, M3×6
21	5101043	Binding Head Screw, M3×6
22	5101043	Binding Head Screw, M3×6
23	5309451	Dial Scale Flame
24	5166520	Washer Head Tapping Screw, M3×2
25	5516940	Foot
26	5109222	Binding Head Tapping Screw, M3×8
27	5109222	Binding Head Tapping Screw, M3×8
28	5058211	Bottom Plate
29	5109222	Binding Head Tapping Screw, M3×8
30	5109222	Binding Head Tapping Screw, M3×8
31	5109222	Binding Head Tapping Screw, M3×8
32	5109222	Binding Head Tapping Screw, M3×8
33	1170330	Power Switch
34	1011051	Level Volume
35	1170390	Lever Switch (Muting)
36	1170390	Lever Switch (Noise Canceller)
37	1170390	Lever Switch (FM Antenna Att.)
38	7036392	Tuning Unit Ass'y
39	1101590, 1	Selector Switch
40	5101143	Binding Head Screw, M3×6
41	5269880	Panel Holder
42	4300690	Signal Meter
43	4300680	Tune Meter
44	7726040	Lamp Unit
45	7726040	Lamp Unit
46	5101143	Binding Head Screw, M3×6
47	5269880	Panel Holder
48	6146670	D-44 Pulley
49	0400330	7V 100mA Dial Lamp
50	6400330	7V 100mA Dial Lamp
51	5446191	Cover Plate, Dial Lamp
52	7726090	LED Ass'y (B) FM Stereo Indicator
53	7136050	Tention Unit
55	7726070	Dial Pointer Ass'y
56	5407711	Dial Scale
57	5047770	Smoked Plate
58	5326460	E-1 Type Knob (Meter Selector)
59	1170390	Lever Switch (Meter Selector)





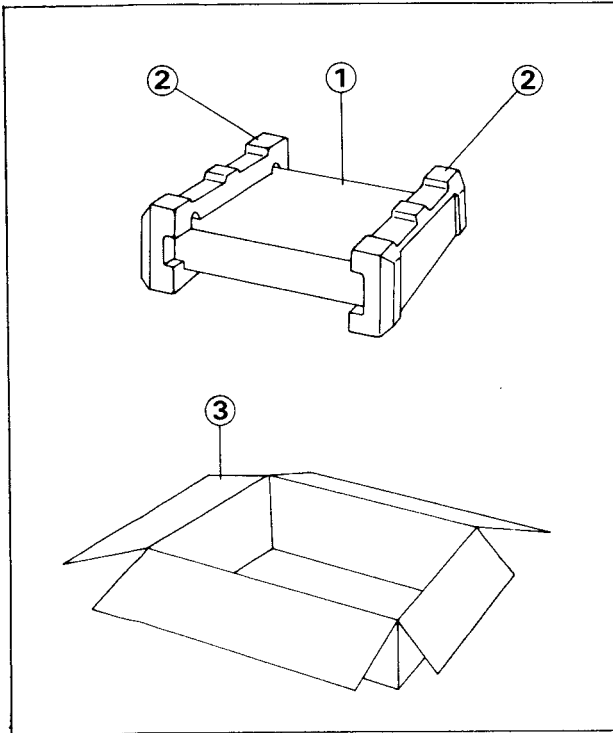
# 7. SCHEMATIC DIAGRAM

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



## 8. PACKING LIST

Parts No.	Stock No.	Description
1	9116640	Vinyl Cover
2	9027790	Stylofoam Packing
3	9008040	Carton Case



## 9. ACCESSORY PARTS LIST

Stock No.	Description
3820091	FM Antenna
3810180	Pinplug Cord
9208350	Operating instructions
9228350	Operating instruction sheet