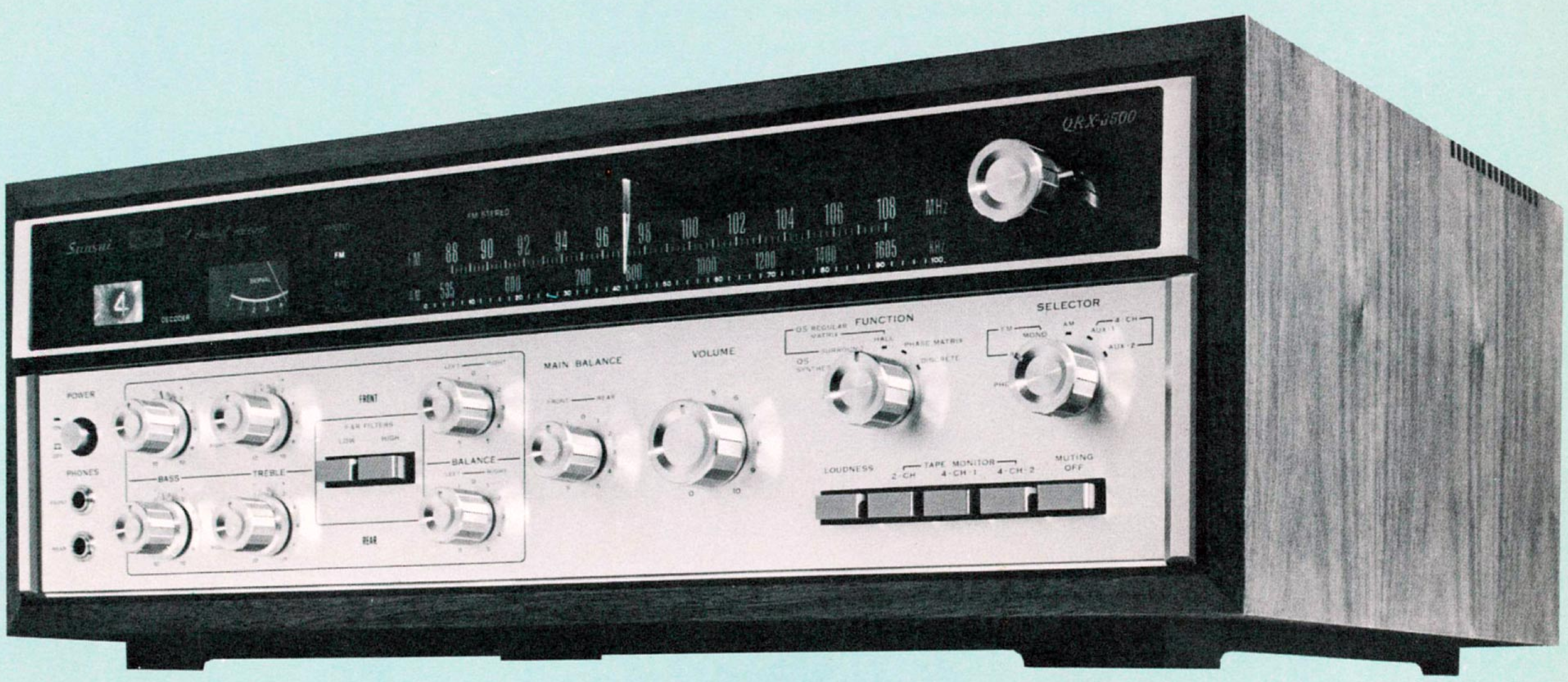
QS
REGULAR MATRIX

SERVICE MANUAL

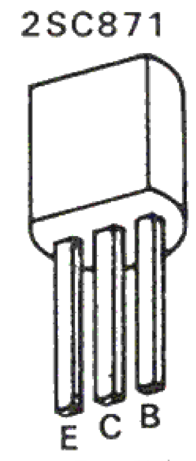
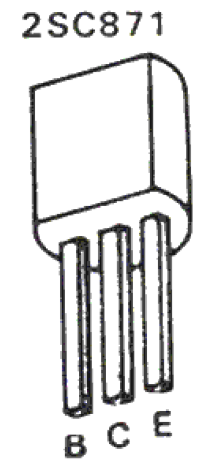
4-CHANNEL RECEIVER
SANSUI QRX-3500



Sansui

SANSUI ELECTRIC CO., LTD.

Please correct the following items in the QRX-3500 SERVICE MANUAL as indicated.

Page	Original Description	Correction
12	Fig. 1	Fig. 4–1
12	Fig. 2	Fig. 4–3
12	Fig. 3	Fig. 4–4
12	Fig. 4	Fig. 4–2
12	Fig. 5	Fig. 4–5
12	Fig. 6	Fig. 4–6
19	2SC871 	2SC871 
28	C_{705}, C_{706} 6800pF	C_{705}, C_{706} 6800μF

This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the QRX-3500 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 your unit.

TABLE OF CONTENTS

1. SPECIFICATIONS

AUDIO SECTION

POWER OUTPUT
MUSIC POWER (IHF) ..180 Watts into 4Ω
130 Watts into 8Ω
CONTINUOUS RMS POWER (1kHz, each channel driven) ....30 Watts/Channel into 4Ω
22 Watts/Channel into 8Ω
CONTINUOUS RMS POWER (1kHz, 4 channels driven) ....16 Watts × 4 into 8Ω
CONTINUOUS RMS POWER (4 channels driven, from 20Hz to 20,000Hz, at rated distortion)
..................15 Watts × 4 into 8Ω

TOTAL HARMONIC DISTORTION
..................less than 0.5% at rated output

INTERMODULATION DISTORTION (70Hz: 7,000Hz=4:1 SMPTE method) ......less than 0.5% at rated output

POWER BANDWIDTH (IHF)....10Hz to 33,000Hz

LOAD IMPEDANCE......4Ω to 16Ω

DAMPING FACTOR......approximately 30 at 8Ω load

INPUT SENSITIVITY AND IMPEDANCE (1kHz, for rated output)
PHONO 2.5mV 50kΩ
Max. Input Capability..100mV at 0.5% distortion
AUX..................150mV 50kΩ
TAPE PLAY (PIN) 150mV 50kΩ
TAPE REC/PLAY (DIN)..150mV 50kΩ

RECORDING OUTPUT
TAPE REC (PIN)........150mV
TAPE REC/PLAY (DIN)..30mV

FREQUENCY RESPONSE (at 1 Watt, output from AUX)
..............30 to 30,000Hz ±1.5dB

EQUALIZATION ....RIAA Curve
(30 to 15,000Hz ±1 dB)

CROSSTALK (1kHz, at rated output)
..............better than 45dB

HUM AND NOISE (IHF)
PHONO ....better than 70dB
AUX..................better than 75dB

CONTROLS
BASS ....±12dB at 50Hz
TREBLE ....±12dB at 15,000Hz
LOUDNESS ....+8dB at 50Hz,
+3dB at 10,000Hz

FILTERS
LOW ....−10dB at 50Hz (6dB/oct.)
HIGH ....−10dB at 10,000Hz (6dB/oct.)

SYNTHESIZER/DECODER QS regular matrix system with Vario-Matrix circuit

TUNER SECTION

<FM>

TUNING RANGE ....88 to 108 MHz

SENSITIVITY (IHF) 2.2μV

TOTAL HARMONIC DISTORTION
MONO ....less than 0.4%
STEREO ....less than 0.6%

SIGNAL TO NOISE RATIO (mono)
................better than 65dB

CAPTURE RATIO (IHF) ..less than 2dB

IMAGE REJECTION ......better than 75dB

IF REJECTION ....better than 90dB

SPURIOUS RESPONSE REJECTION
................better than 80dB

STEREO SEPARATION ....better than 35dB at 1,000Hz

FREQUENCY RESPONSE 30 to 12,000Hz $^{+1dB}_{-2dB}$

ANTENNA IMPEDANCE 300Ω balanced,
75Ω unbalanced

SELECTIVITY ....better than 50dB

<AM>

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

SENSITIVITY (bar antenna) 50dB/m

IMAGE REJECTION ......better than 80dB/m at 1,000kHz

IF REJECTION ....better than 80dB/m at 1,000kHz

SELECTIVITY ....better than 25dB

SEMICONDUCTORS
TRANSISTORS 110
FETS.................. 3
IC.................... 1
DIODES 61
ZENER DIODES........ 3

POWER REQUIREMENTS
VOLTAGE 100, 117, 220, 240V
CONSUMPTION ......110 Watts (rated), 300VA (max.)

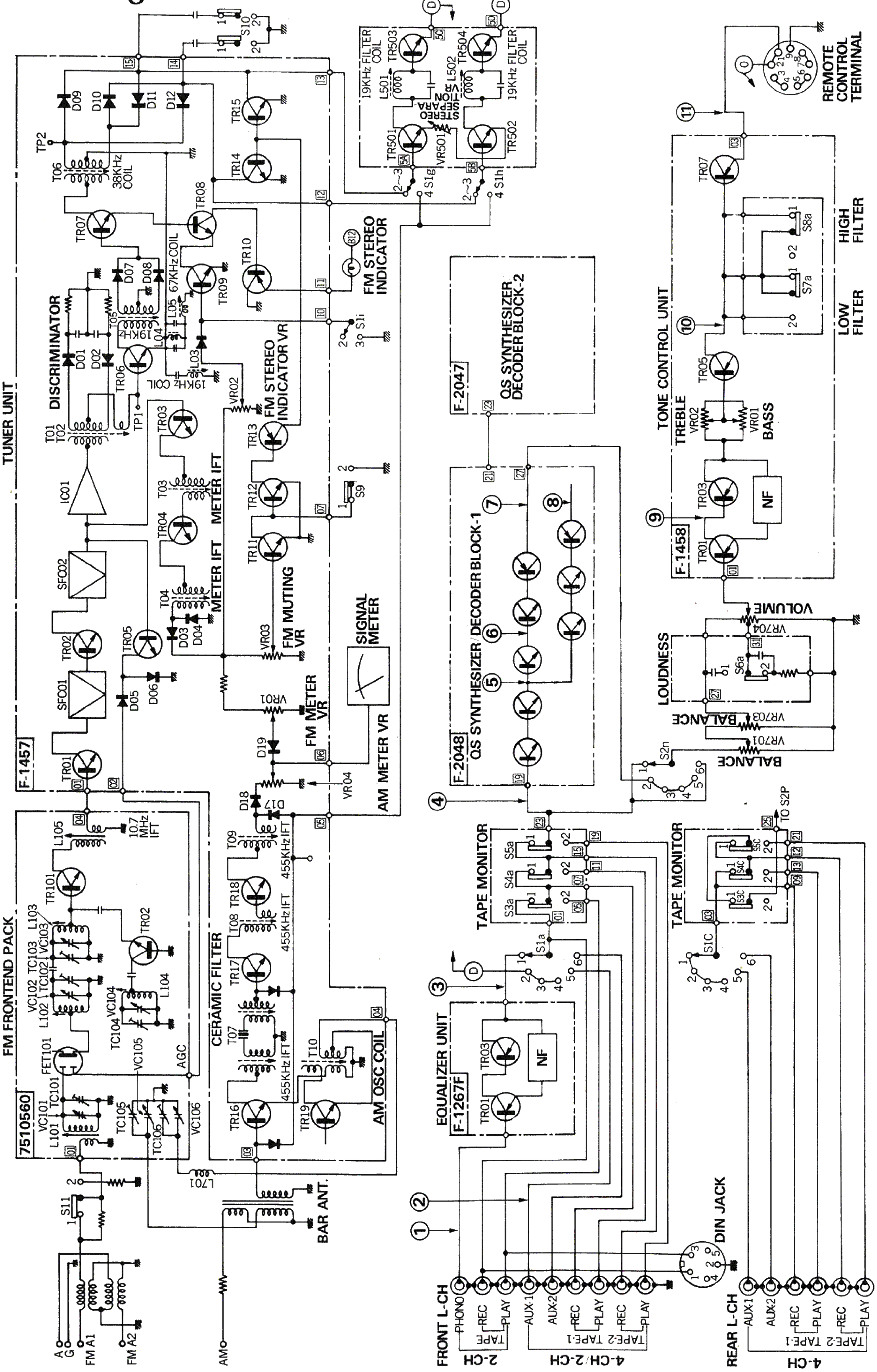
DIMENSIONS ....181mm (7⅛")H,
526mm (20¾")W,
350mm (13$\frac{13}{16}$") D

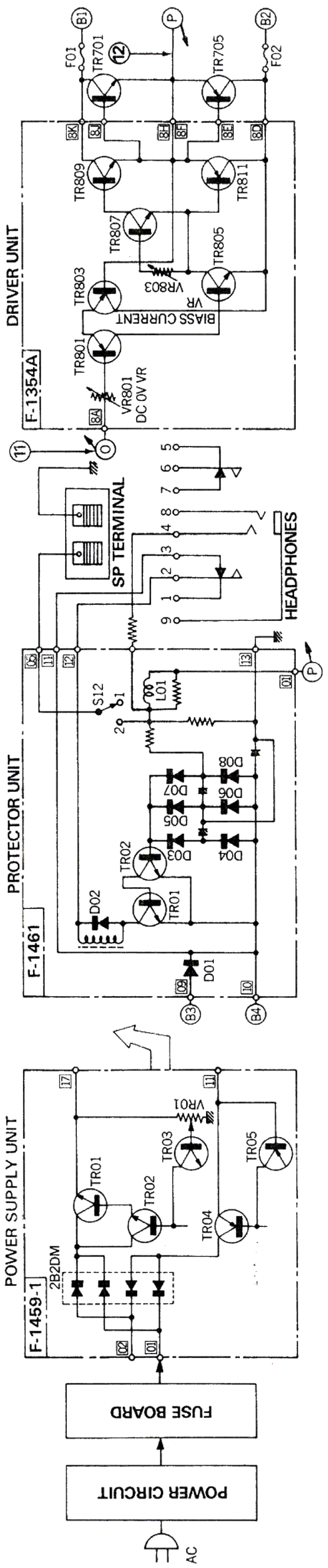
WEIGHT................18.5kg (40.8 lbs)

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

2. BLOCK DIAGRAM AND LEVEL DIAGRAM

2-1. Block Diagram





S 1a~n: Selector
1. Phono
2. FM-Auto
3. FM-Mono
4. AM
5. 4-CH Aux-1
6. 4-CH Aux-2

S 2a~g: Function
1. 2-CH
2. QS Synthesizer
3. Surround
4. Hall
5. Phase Matrix
6. Discrete

S 3a~d: Tape Monitor 2-CH
1. Off
2. On

S 4a~d: Tape Monitor 4-CH-1
1. Off
2. On

S 5a~d: Tape Monitor 4-CH-2
1. Off
2. On

S 6a~d: Loudness
1. Off
2. On

S 7a~d: Low Filter

S 8a~d: High Filter

S 9a : FM-Mutin Off
1. Muting
2. Muting Release

S 10a~b: FM De-Emphasis
1. 50μF
2. 75μF

S 11 : FM Antenna
1. Dist
2. Loc

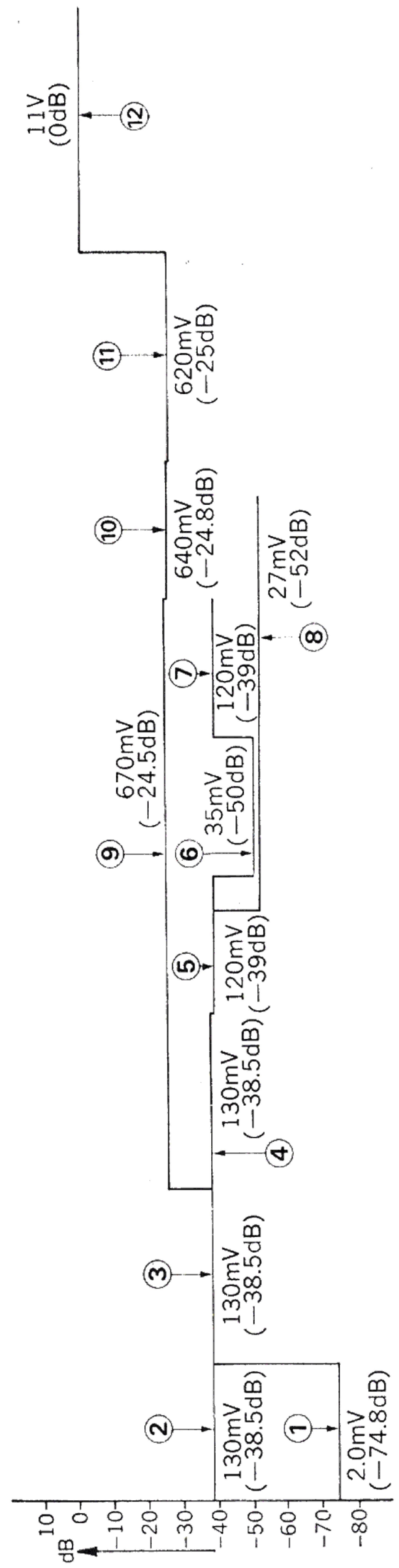
S 12 : Plotector Relay
1. Off
2. On

VR_{01} : Bass Volume
VR_{02} : Treble Volume
VR_{701}: Balance Volume
VR_{703}: Balance Volume
VR_{704}: Volume
VR_{801}: DC 0V Adj.
VR_{803}: Bias Current Adj.

2-2. Level Diagram

1. VOLUME control ....Maximum
2. BASS TREBLE BALANCE volume control ......Center
3. FUNCTION switch ....QS Synthesizer
4. Input ....PHONO 2.0mV 1kHz sine wave
   AUX 130mV 1kHz sine wave
   (output impedance of 600Ω at an audio signal generator)
5. Output 11V (15W) 8Ω

Note: Each voltage value is for reference and measured by a VTVM. In some recorders, the actual voltage value is in minor difference from the reference value.



3. ALIGNMENTS AND ADJUSTMENTS

Abbreviation

Equipment

AM FM Generator Oscilloscope ....Genescope
AM Signal Generator ....AM SG
FM Signal Generator ....FM SG
Multiplex Stereo Generator ....MSG
Oscilloscope ....Scope
Audio Oscillator ....Audio Osci.
Distortion Meter ....Dist. Meter

Others

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

3-1. Regulated Power Supply Board Adjustment (See Fig. 3-1)

Note:

1. Function ....QS Synthesizer
2. Volume ....Minimum

STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
1	Regulated Power supply	DC volt Meter	F-1459 16	F-1459 VR01	25V	

Fig. 3-1

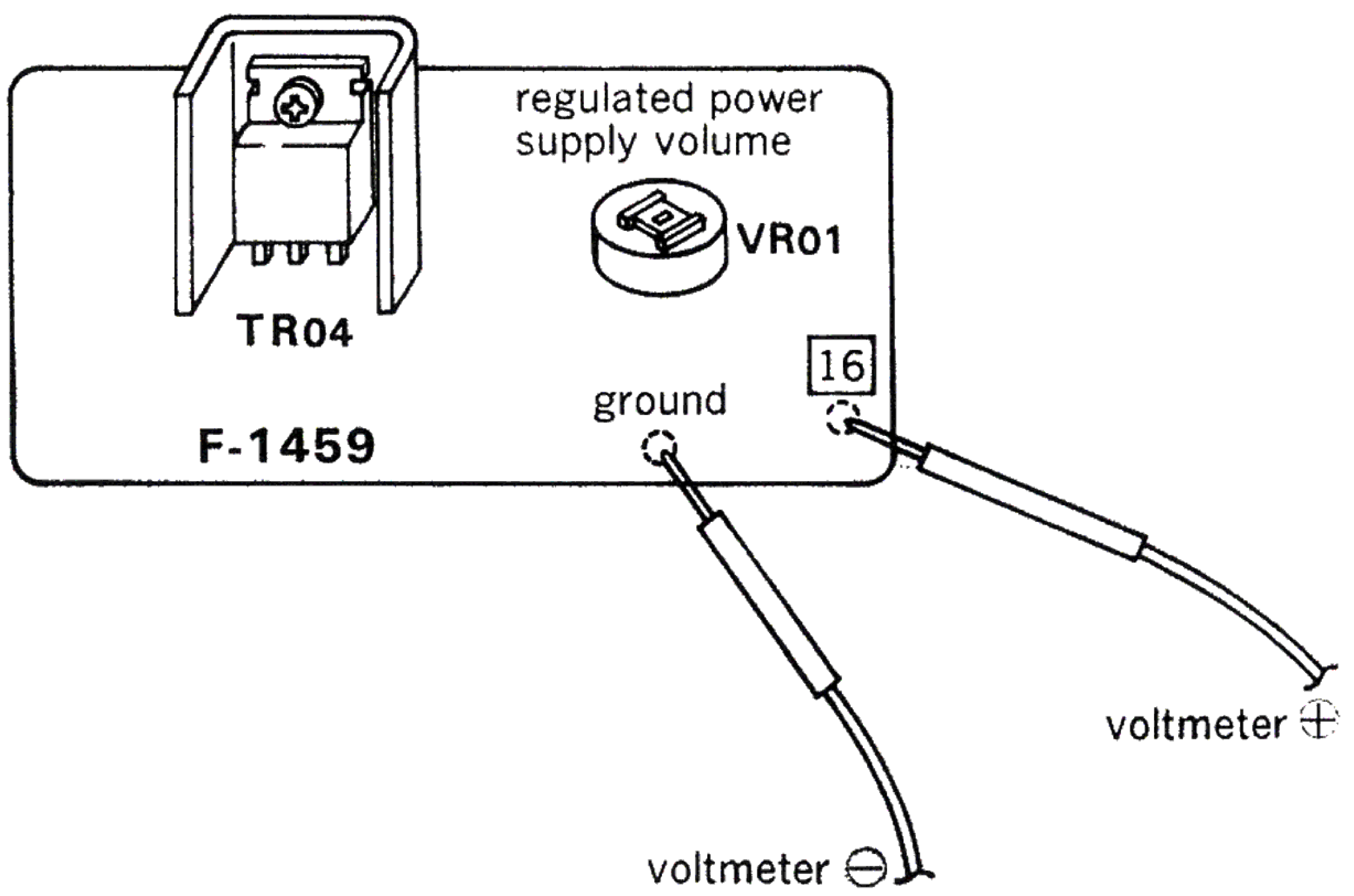
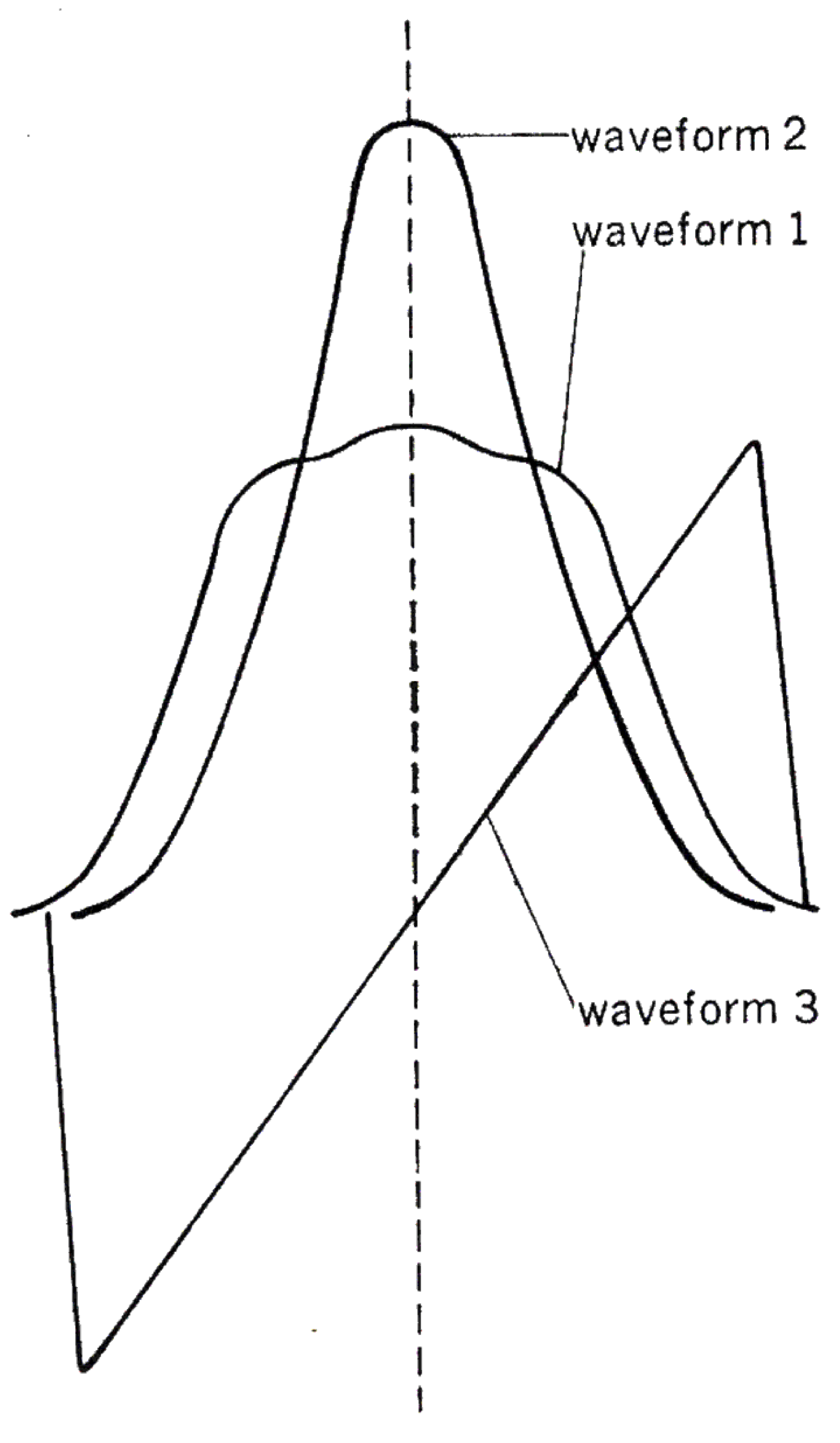


Fig. 3-2 FM IF and S curve waveforms



3-2. Driver Circuit Board Adjustment (See Figs. 3-7 and 3-8 on page 11)

Note:

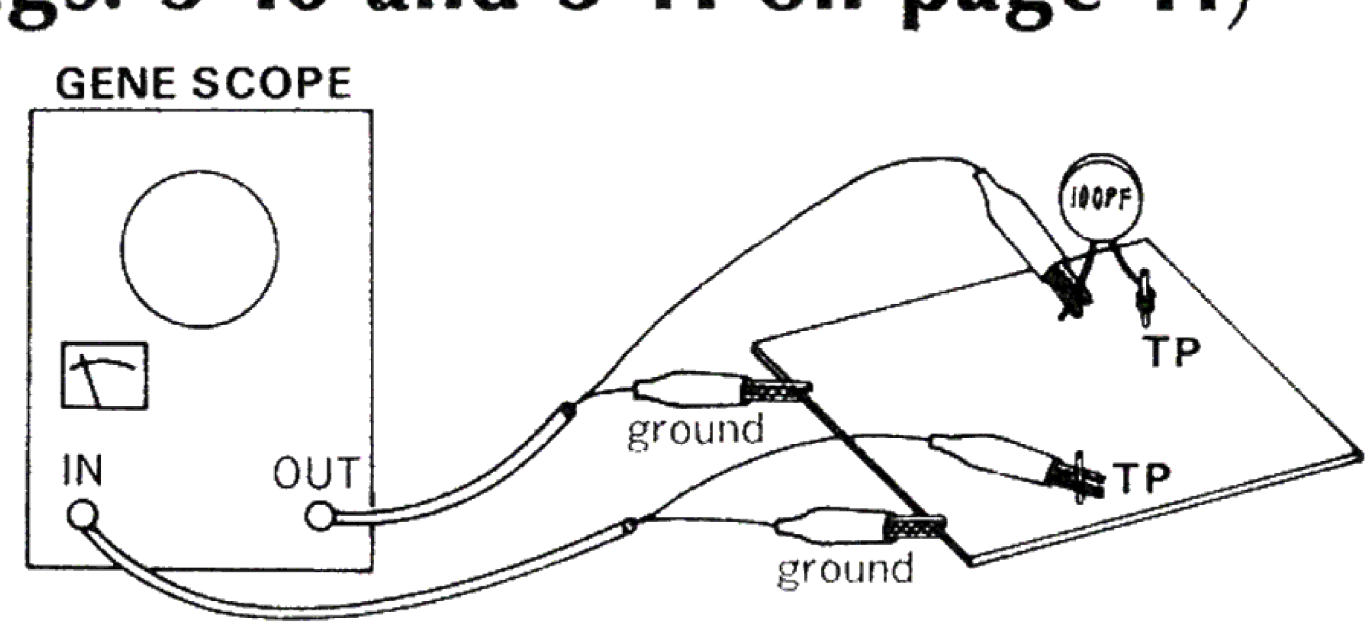
1. Volume.................................Minimum
2. Confirm the AC Power Supply voltage.
3. After adjustment, run the unit for more than 5 minutes, then check and readjust if necessary.
4. Room temperature should be 18~28°C (65~83°F) for bias current adjustment.

STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
1	DC 0 V Front L	DC volt meter	F-1461 01	VR801 Front board	0 V	◦Change lead's porarity if meter swings backward ◦Step down meter's range accordingly
2	DC 0 V Front R	Same as above	F-1461 02	VR802 Front board	Same as above	Same as above
3	DC 0 V Rear L	Same as above	F-1461 03	VR801 Rear board	Same as above	Same as above
4	DC 0 V Rear R	Same as above	F-1461 04	VR802 Rear board	Same as above	Same as above
5	Bias current Front L	DC miliammeter	F-2039 F01	VR803 Front board	25mA	◦Step down meter's range accordingly ◦Connect positive side of tester lead with rear panel side's ◦Leave fuse of minus side in the holder
6	Bias current Front R	Same as above	F-2039 F03	VR804 Front board	Same as above	Same as above
7	Bias current Rear L	Same as above	F-2039 F05	VR803 Rear board	Same as above	Same as above
8	Bias current Rear R	Same as above	F-2039 F07	VR804 Rear board	Same as above	Same as above

3-3. FM IF Alignment (See Fig. 3-2 on page 6, Figs. 3-10 and 3-11 on page 11)

Note:

1. Selector..........................FM AUTO
2. Volume..........................Minimum
3. Output level of genescope........After attenuator
4. Sweepwidth ....1.5~2cm/150kHz
5. Frequency band..................9.5~11.5MHz
6. Connection......................Connect the output of genescope to TP101 through 100pF ceramic capacitor

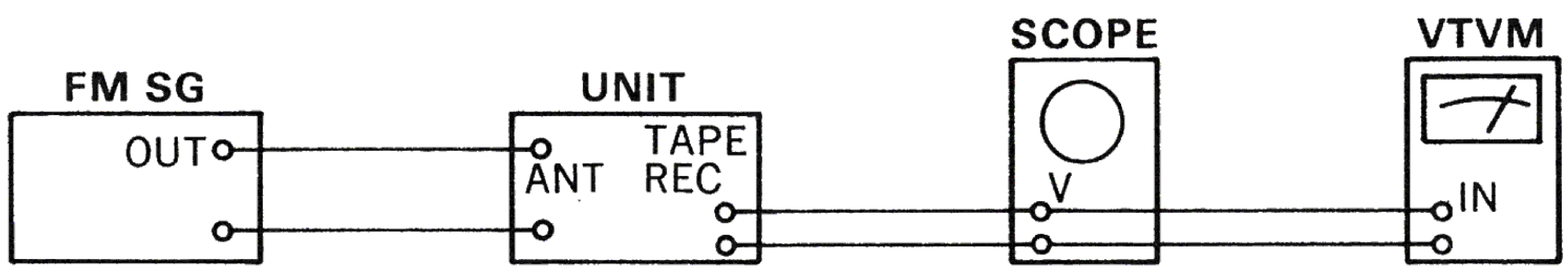


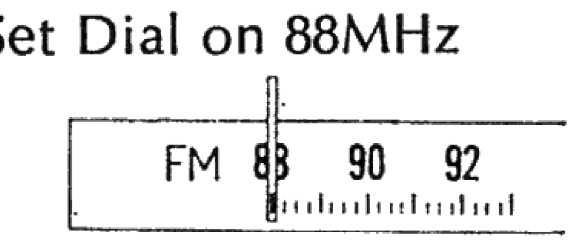
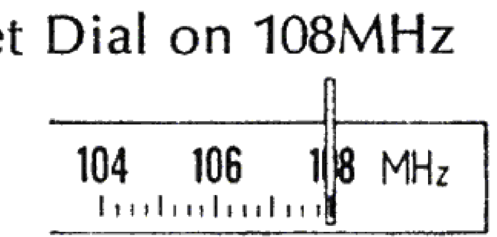
STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
1	IF coil	Output 45dB Genescope	TP101 Fig. 3-9	TP5 Detector probe	L105 Upper & lower cores	Max. IF waveform as Fig. 3-2	Turn core of T03 CCW.
2	Meter coil	Same as above	Same as above	TP4 Genescope (Direct)	T03 & T04	Set the center of waveform 2 with waveform 1 as Fig. 3-2	
3	Discriminator coil	Same as above	Same as above	TP1 Genescope (Direct)	T01 T02	Max. linearity of S curve Set the center of S curve with waveforms 1 & 2 as Fig. 3-2	

3-4. FM Dial Calibration and RF Alignment (See Fig. 3-10 on page 11)

Note:

1. Selector ....FM AUTO
2. Volume ....Minimum
3. Confirm start point of dial pointer befor alignment.
4. In Step 3 and 4, if Step 1 and 2 are readjusted, repeat Step 3 and 4 again.
5. Nonmetaric, plastic or bakelite, alignment tools should be used for RF alignment.

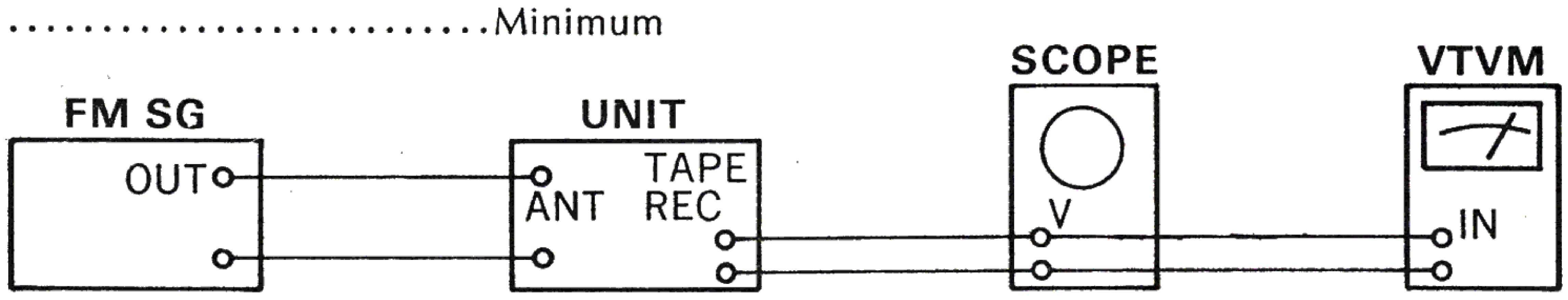


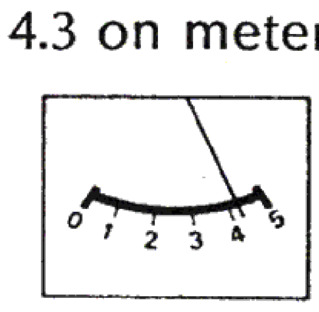
STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1	88MHz Dial Calibration	88MHz ANT input 10dB 1kHz (100% MOD) FM SG	ANT terminal 300Ω	VTVM & Scope REC OUT L or Rch	L104	Max.	Set Dial on 88MHz 
2	108MHz Dial Calibration	108MHz ANT input 10dB 1kHz (100% MOD) FM SG	Same as above	Same as above	TC104	Same as above	Set Dial on 108MHz 
3	Confirm 88MHz Dial Calibration	Same as Step 1	Same as above	Same as above		Confirm 88MHz Dial Calibration	∘If not, repeat from Step 1
4	Confirm 108MHz Dial Calibration	Same as Step 2	Same as above	Same as above		Confirm 108MHz Dial Calibration	∘If not, repeat from Step 2
5	90MHz RF Adj.	90MHz ANT input 10dB 1kHz (100% MOD) FM SG	Same as above	Same as above	L101 L102 L103	Max.	∘Tune FM SG (Max. indication of Signal Meter)
6	106MHz RF Adj.	106MHz ANT input 10dB 1kHz (100% MOD) FM SG	Same as above	Same as above	TC101 TC102 TC103	Same as above	Same as above

3-5. FM Meter, Muting and Mono Distortion Adjustment (See Fig. 3-11 on page 11)

Note:

1. Selector..................................FM AUTO
2. Volume..................................Minimum

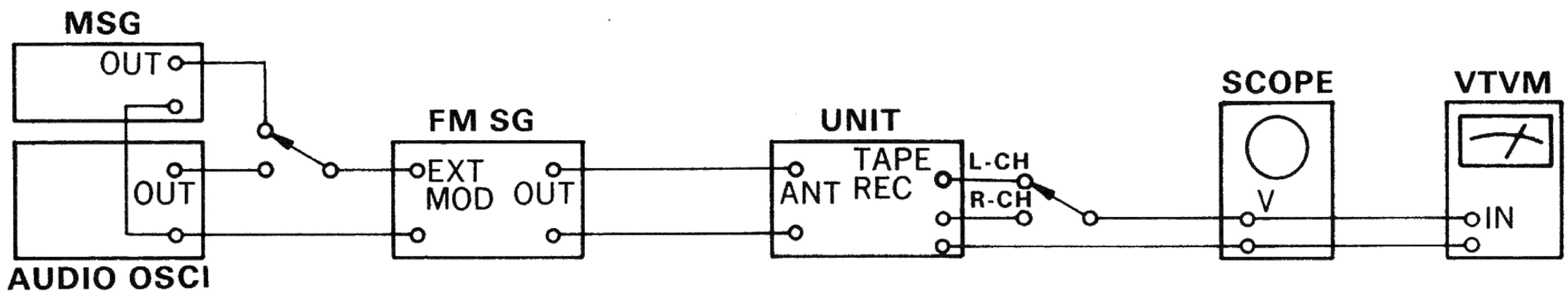


STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1	Meter	98MHz ANT input 60dB 1kHz (100% MOD) FM SG	ANT terminal 300Ω	Signal meter	VR01	4.3 on meter 	∘Tune FM SG (Max.indication of Signal Meter) ∘Before adjustment, if meter swang out or not enough, preadjust VR01 until the reasonable point
2	Distortion	Same as above	Same as above	Dist. meter & Scope REC OUT L or Rch	T02	Min. distortion	∘Tune FM SG (Max. indication of Signal Meter)
3	Muting level	98MHz ANT input 18dB 1kHz (100% MOD) FM SG	Same as above	VTVM & Scope REC OUT L or Rch	VR03	Audio signal just muted	∘Set MUTING switch to ON (Pushed out) ∘Confirm muting operation after adjustment

3-6. MPX Alignment (See Fig. 3-3, and Figs. 3-11 on page 11)

Note:

1. Selector.................................FM AUTO
2. Volume..................................Minimum



STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1	67kHz SCA coil	98MHz ANT input 60dB FM SG 67kHz (100% MOD) Audio Osci.	ANT terminal 300Ω	VTVM & Scope TP2	L05	Min. 67kHz	
2	19kHz & 38kHz coil	98MHz ANT input 60dB FM SG Pilot 19kHz (10% MOD) MSG	Same as above	Same as above	L03 T05 T06	Max. 38kHz	∘Turn cores of L03, T05 & T06 CCW (Max), before adjustment.
3	19kHz Trap coil	Same as above	Same as above	REC OUT L & Rch	L501 L502	Min. 19kHz	∘L501 is for Lch REC OUT ∘L502 is for Rch REC OUT
4	Indicator (Lighting level)	98MHz ANT input 20dB SM SG Pilot 19kHz (10% MOD) MSG	Same as above	Stereo indi. lamp	VR02	Lighting point	∘Confirm lighting level by increasing output of FM SG
5	Separation	98MHz ANT input 60dB FM SG Pilot 19kHz (10% MOD) Rch 1kHz (45% MOD) Lch (0% MOD) MSG	Same as above	VTVM & Scope REC OUT Lch	L03	Min.	∘Turn VR501 CCW.
6	Separation	Same as above	Same as above	Same as above	VR501	Same as above	
7	Confirm separation	98MHz ANT input 60dB FM SG Pilot 19kHz (10% MOD) Rch (0% MOD) Lch 1kHz (45% MOD) MSG	Same as above	VTVM & Scope REC OUT Rch		Confirm the output is equal to Lch's in Step 5	∘If not, repeat from Step 1

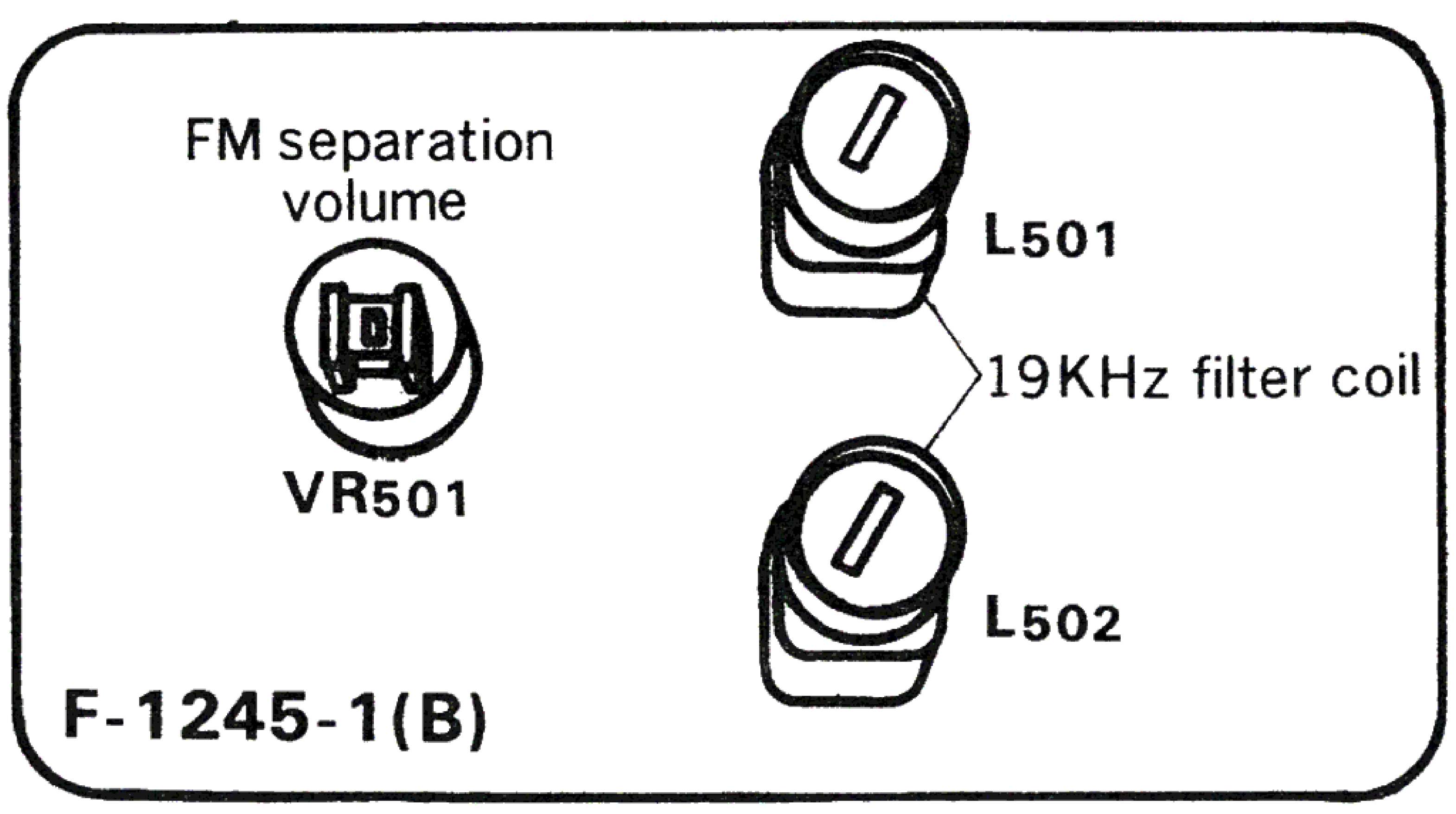
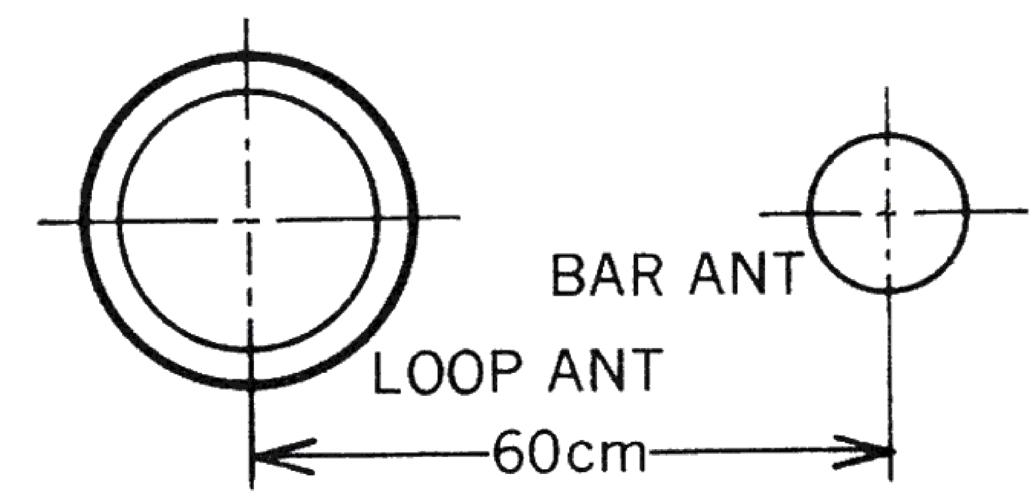


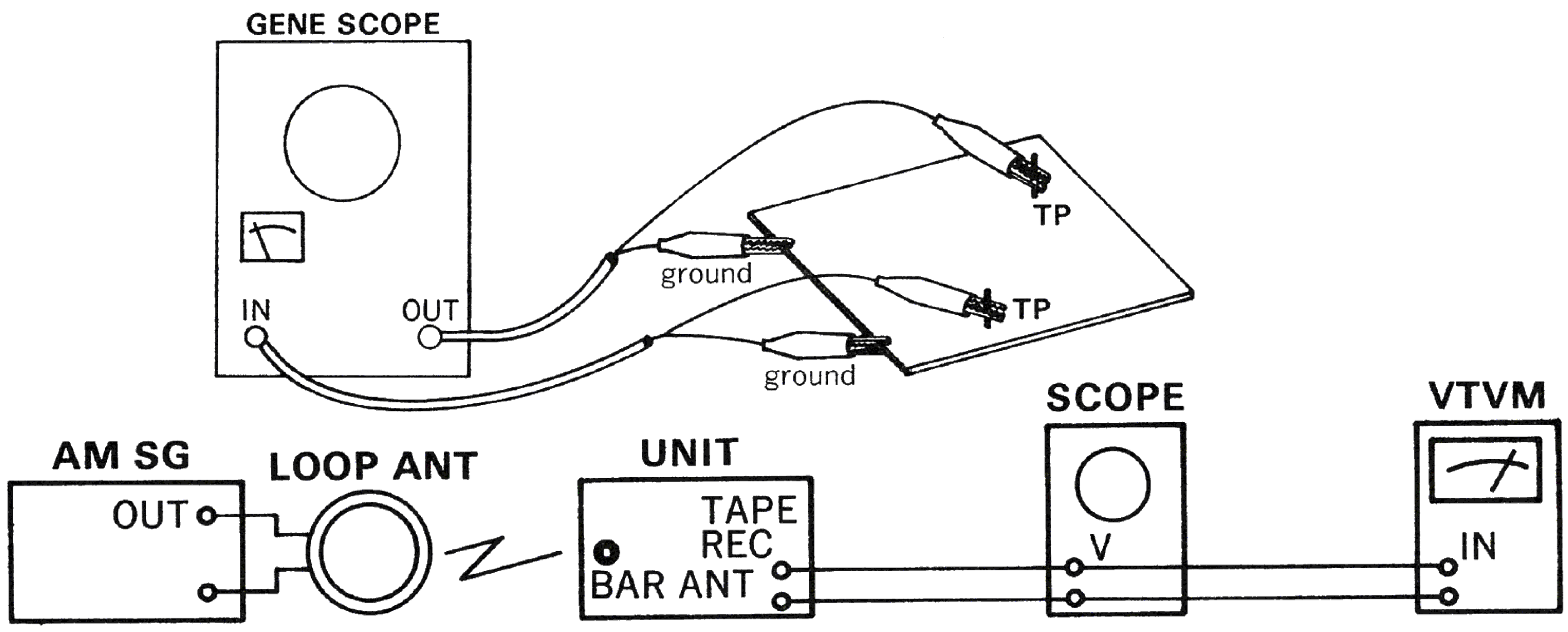
Fig. 3-3

3-7. AM IF, Dial Calibration, RF and Meter Alignment (See Figs. 3-10 and 3-11 on page 11)

Note:

1. Selector .... AM
2. Volume .... Minimum
3. Confirm start point of dial pointer befor aligment.
4. After adjustment of signal meter, confirm the meter, swing at FM. (If meter swang out or not enough, readjust VR01. (See Page 8)
5. In case of using loop antenna, increase output of AM SG for 26dB than bar antenna's input as it attenuates input sensitivity for 26dB.
6. Nonmetaric, plastic or bakelite, alignment tools should be used for RF alignment.





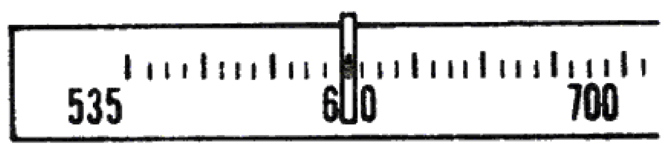
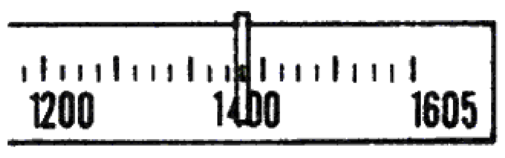
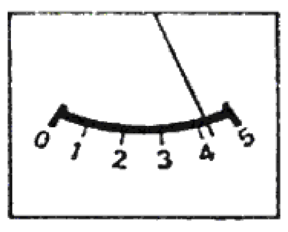
STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
1	IF coil	Output 80dB Genescope	OSC trimmer cap. Fig. 3-10	TP3 Genescope input	T07	IF waveform as Fig. 3-4	∘ Turn cores of TC8 & T09 CCW.
2	Same as above	Same as above	Same as above	Same as above	T08	IF waveform as Fig. 3-5	
3	Same as above	Output 55dB Genescope	Same as above	Same as above	T09	IF waveform as Fig. 3-6	∘ If not, readjust T07 & T08 slightly
4	600 kHz Dial Calibration	600kHz ANT input 60dB 400Hz (30% MOD) AM SG Use loop ANT	Bar ANT	VTVM & Scope REC OUT L or Rch	T10	Max.	∘ If broadcasting station is near, it might be used 
5	1400 kHz Dial Calibration	1400kHz ANT input 60dB 400Hz (30% MOD) AM SG Use loop ANT	Same as above	Same as above	TC106	Same as above	Same as above 
6	Confirm 600 kHz Dial Calibration	Same as Step 4	Same as above	Same as above		Same as above	∘ If not, repeat from Step 4
7	Confirm 1400 kHz Dial Calibration	Same as Step 5	Same as above	Same as above		Same as above	Same as above
8	600 kHz RF Adj	Same as Step 4	Same as above	Same as above	Bar ANT core	Same as above	
9	1400 kHz RF Adj	Same as Step 5	Same as above	Same as above	TC105	Same as above	
10	Meter	1000kHz ANT input 80dB 400Hz (30% MOD) AM SG Use loop ANT	Same as above	Signal meter	VR04	4. 3 on meter 	∘ Tune AM SG (Max. indication of signal meter) ∘ Before adjustment, if meter swang out or not enough, pre-adjust VR04 until the reasonable point

Fig. 3-4 AM IF waveform

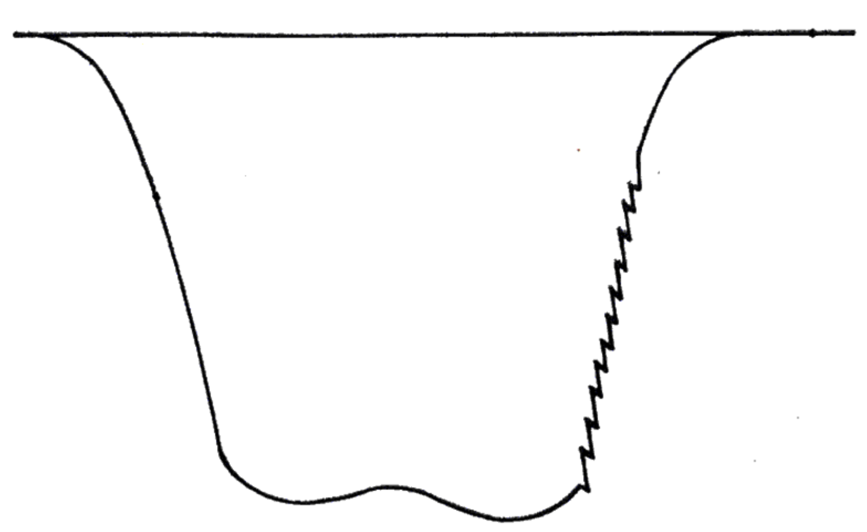


Fig. 3-5 AM IF waveform

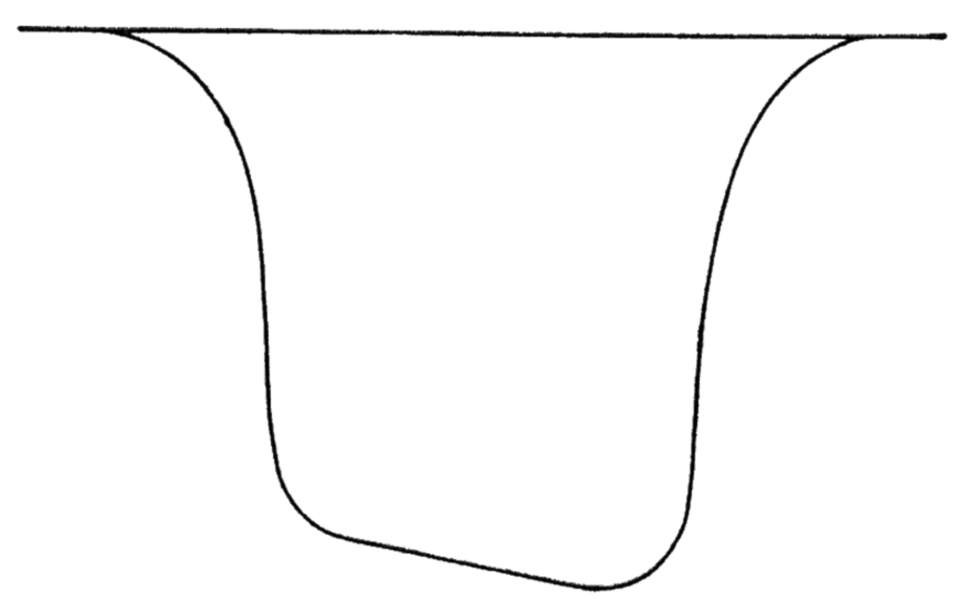


Fig. 3-6 AM IF waveform

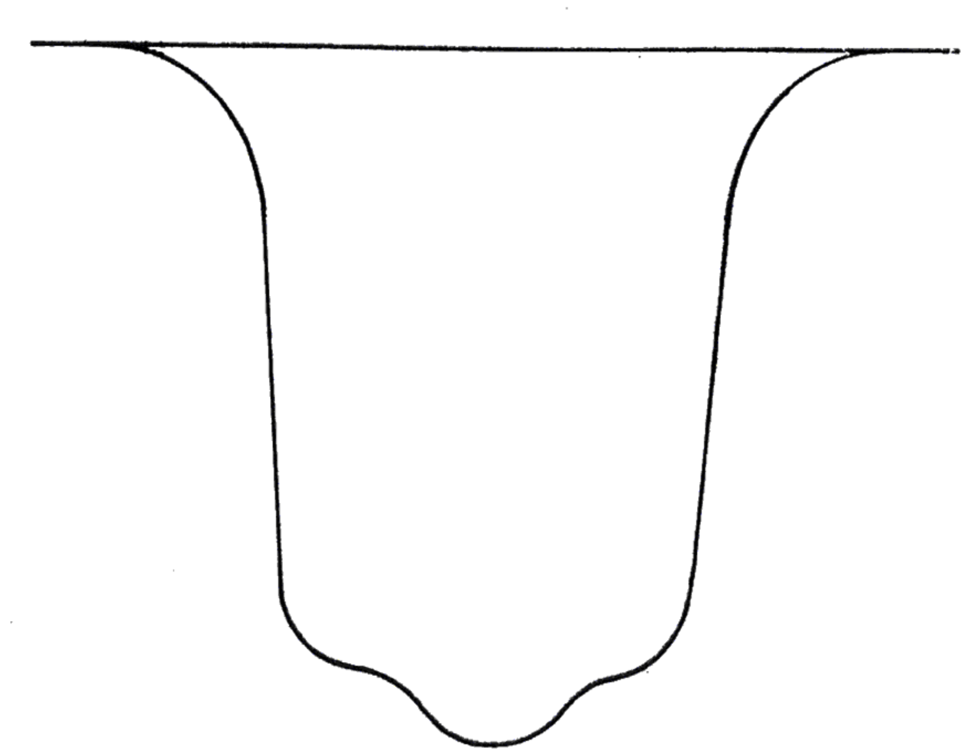
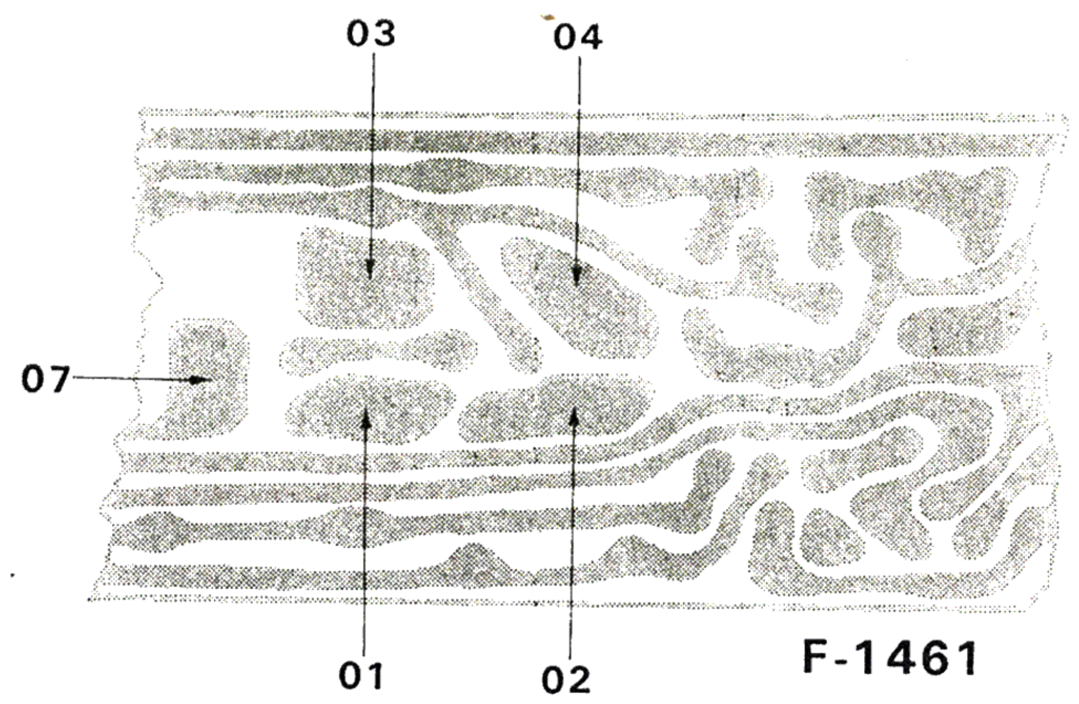


Fig. 3-7



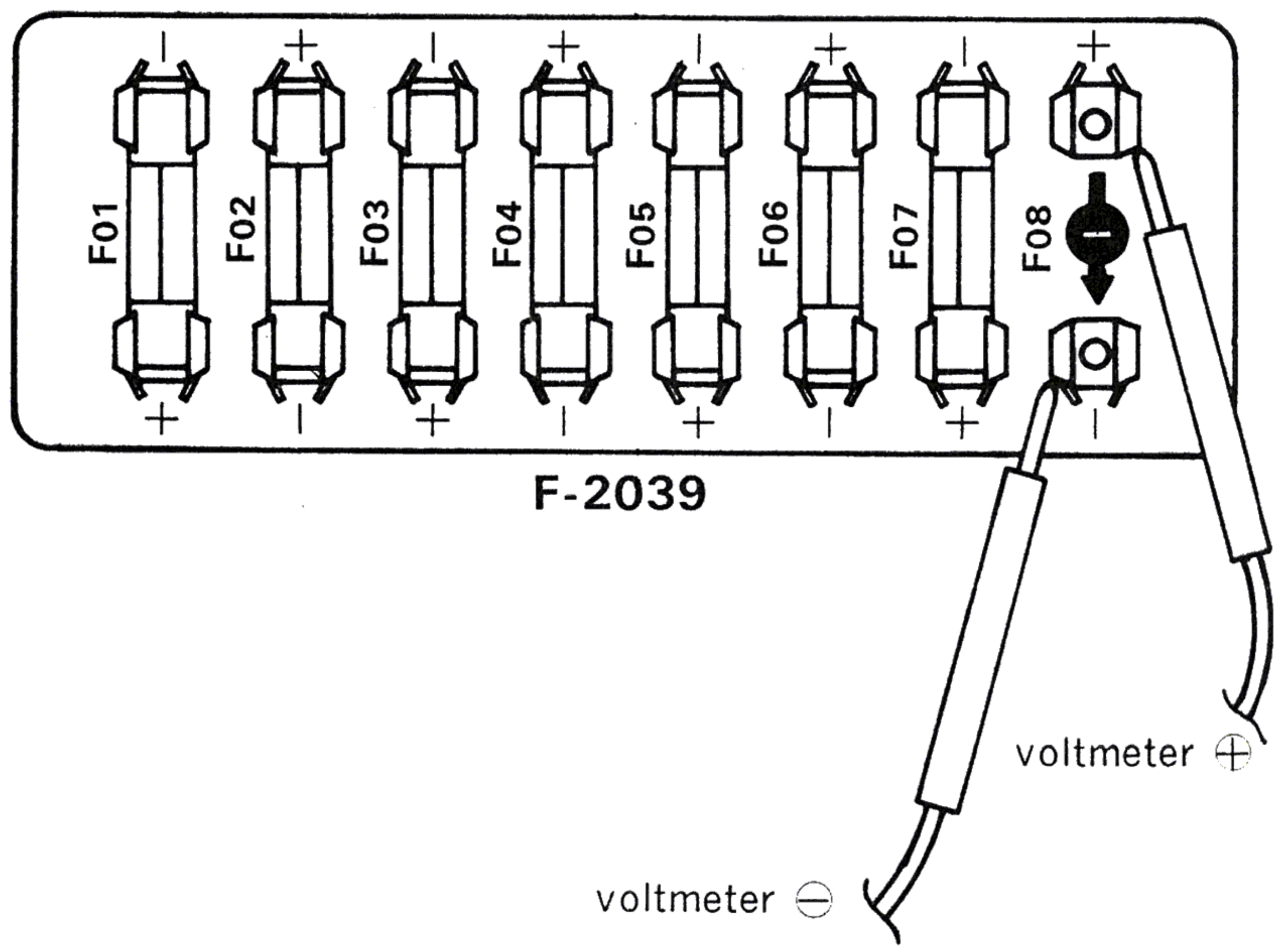


Fig. 3-8

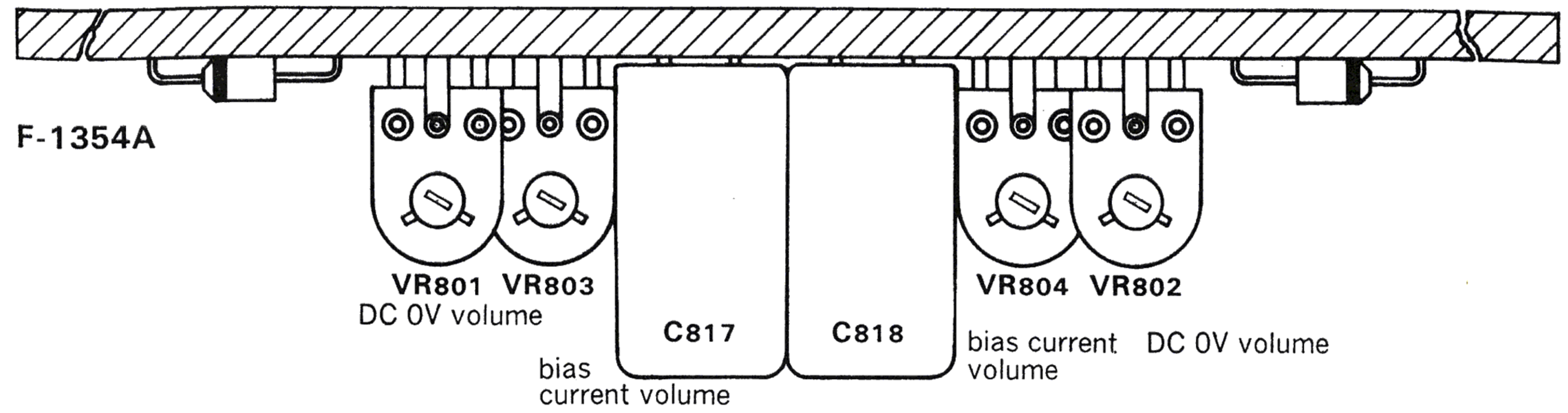


Fig. 3-9

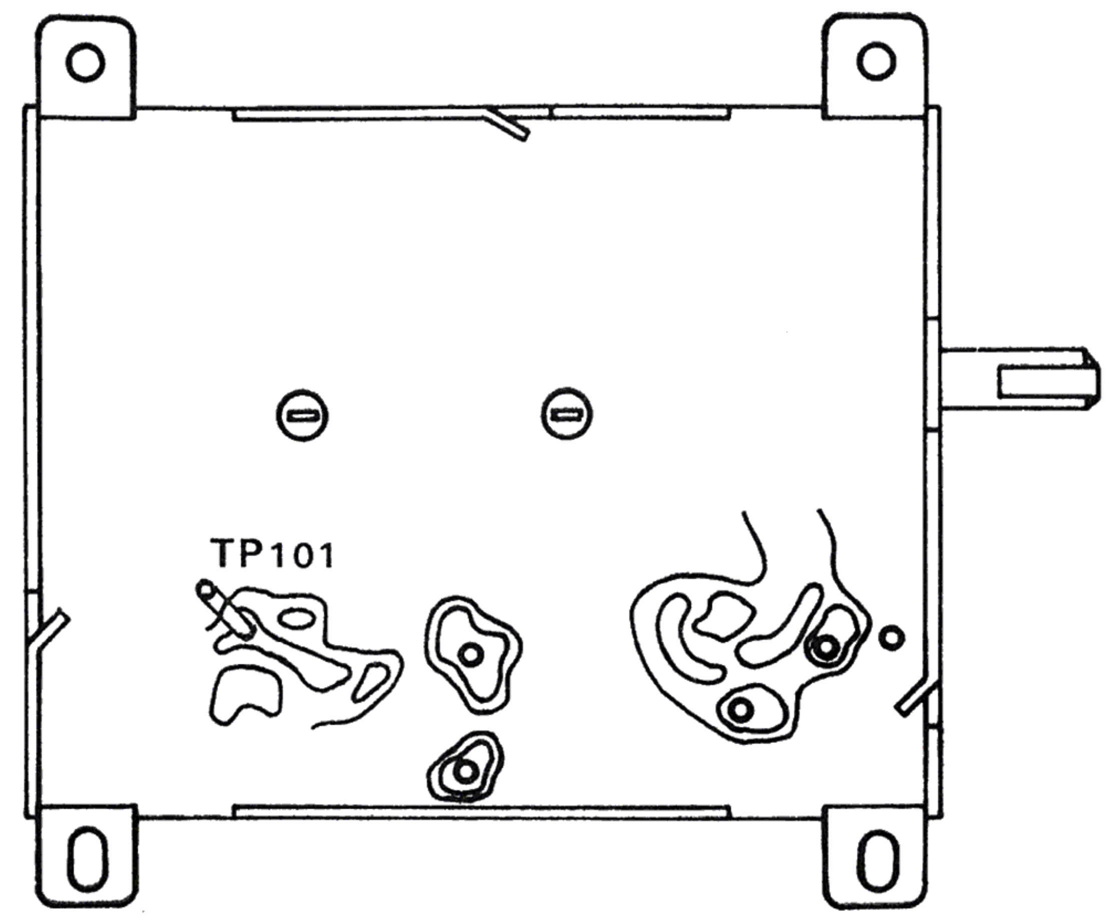


Fig. 3-10

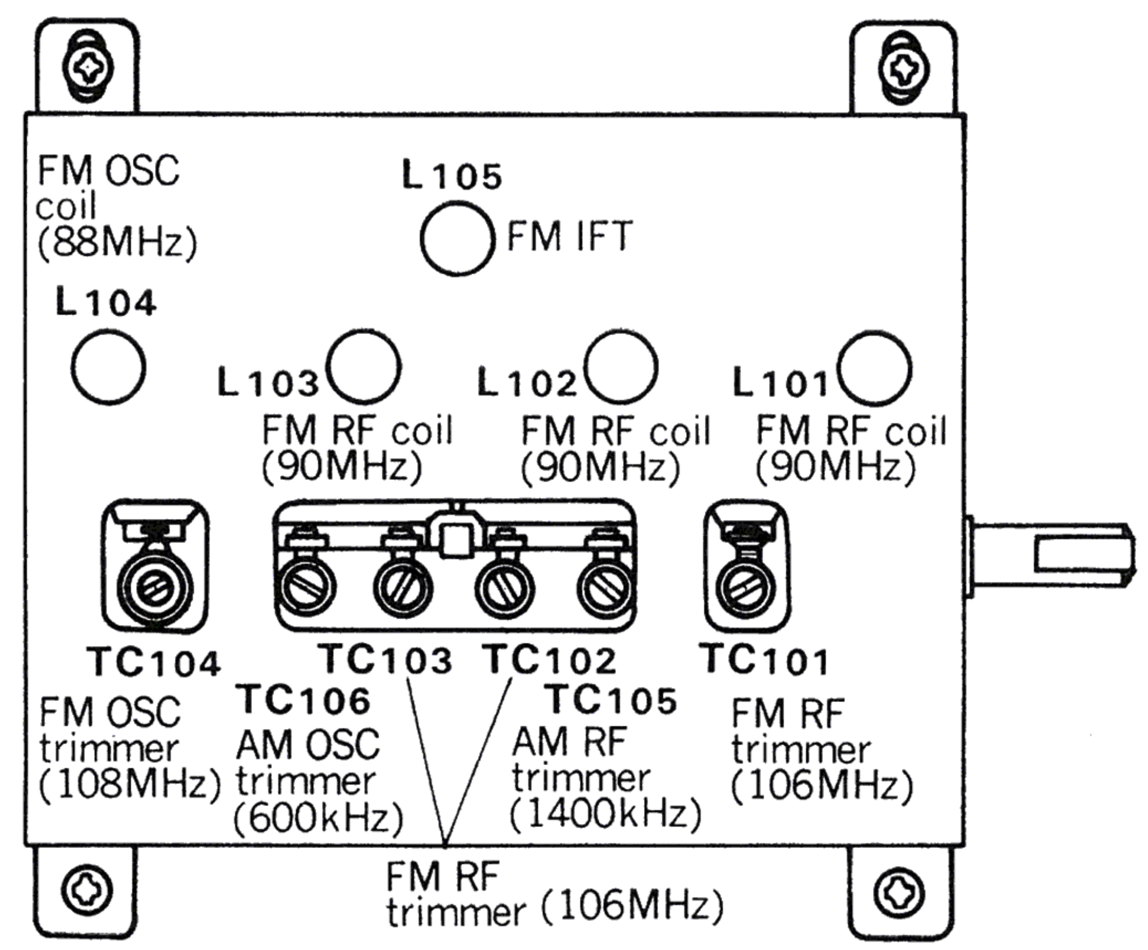
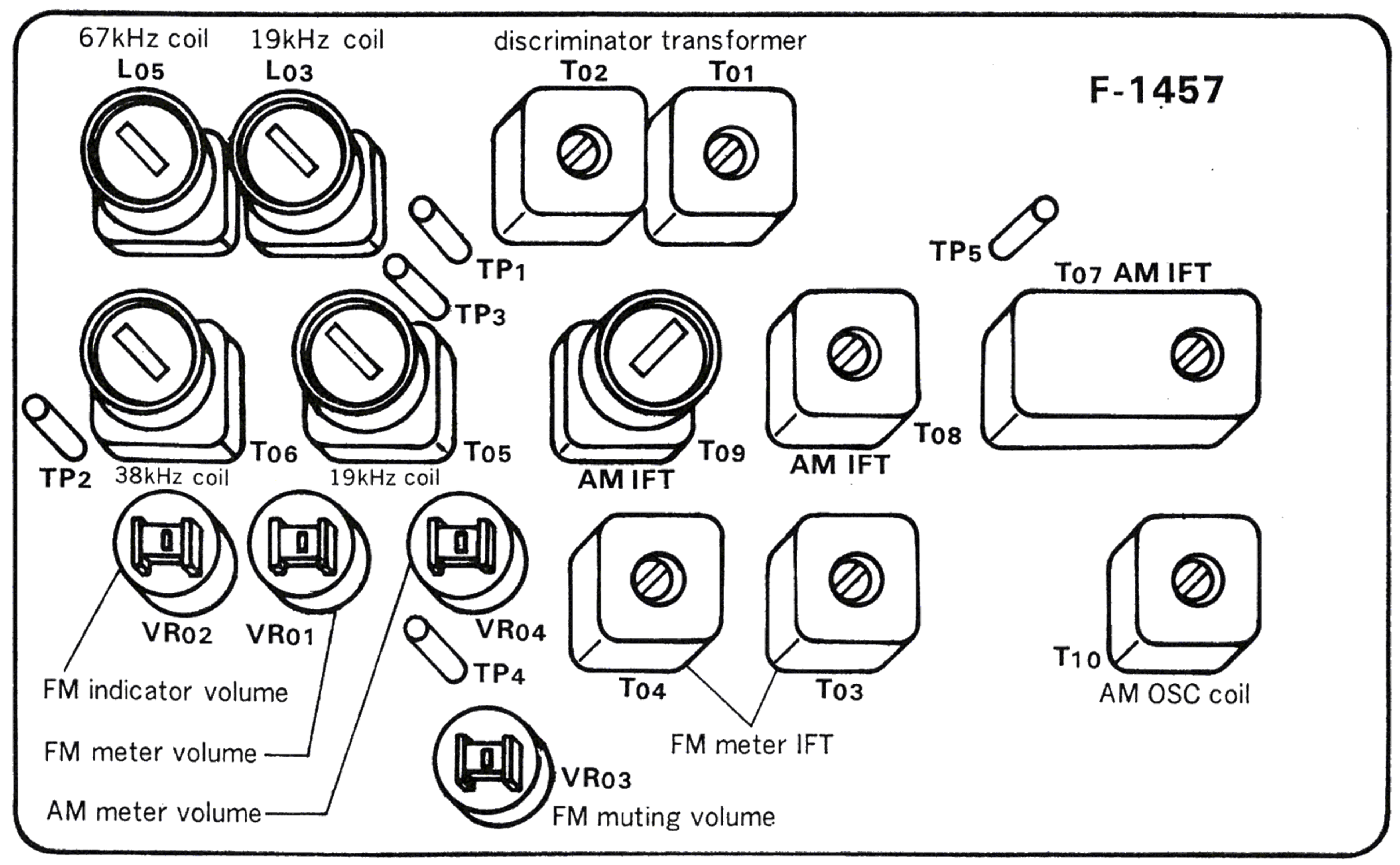


Fig. 3-11



4. THREADING OF DIAL CORD

If dial cord is cut or slips, replace cord by following procedures. QRX-3500 is used 0.7mmφ cord, so please replace it with same type certainly.

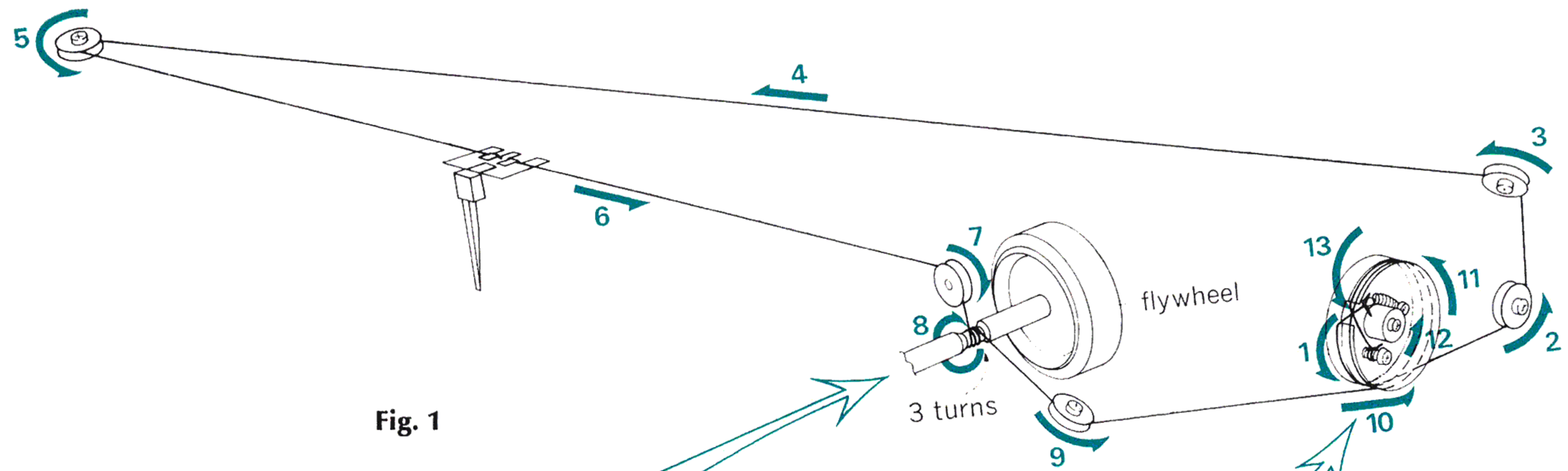


Fig. 1

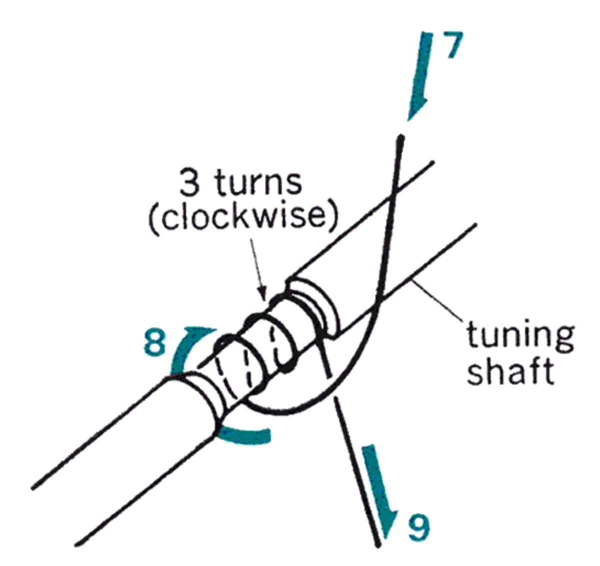


Fig. 4

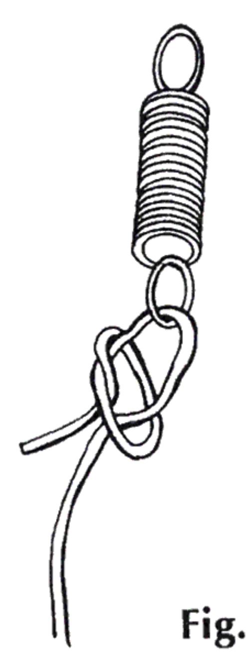


Fig. 2

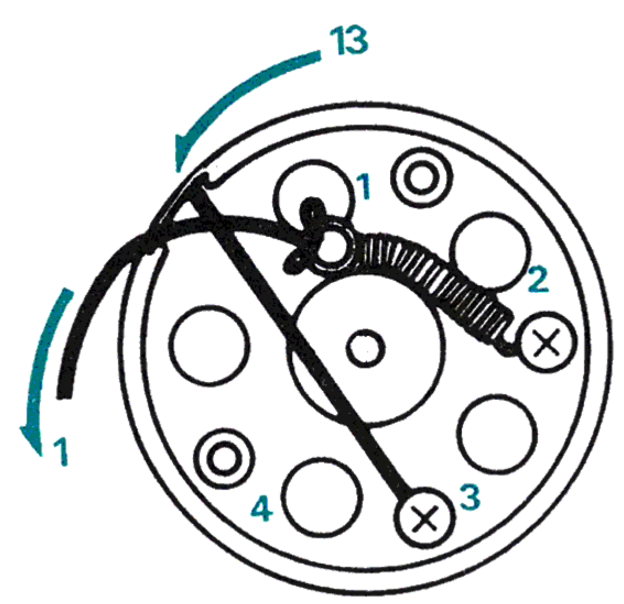


Fig. 3

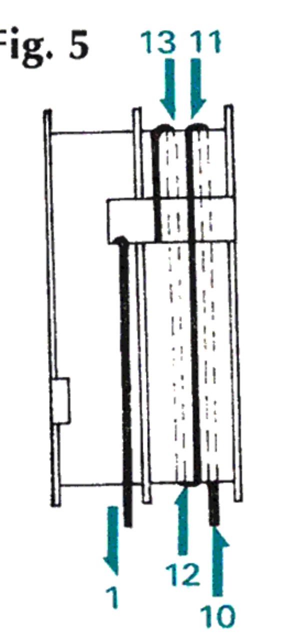


Fig. 5

1. Threading of Dial Cord

* Thread dial cord in numerical order from 1 to 13 as shown in Fig. 4-1.

1) Tie dial cord to the dial spring. (See Fig. 4-3.)
2) Fix the dial spring with screw to number 2 of the dial pulley. (See Fig. 4-4.)
3) Thread cord in the direction of arrow from 1 to 7 in Fig. 4-4.
4) Wind cord three times around the tuning shaft clockwise and toward the flywheel as Fig. 4-2.
5) Thread cord from 9 to 10 and wind around the dial pulley as Fig. 4-5.
6) After 13, tie cord on number 3 screw and tighten.

* Make sure that the dial mechanism operates correctly by turning the TUNING knob.
* After procedures, lock the knots of cord with paint certainly.

2. Attachment of Dial Pointer

1) Turn the TUNING knob and close the variable capacitor completely (maximum capacitance).
2) Set the dial pointer to "0" on dial scale and tighten the dial pointer ass'y. (See Fig. 4-6.)

* Make sure that the dial mechanism operates correctly by turning the TUNING knob.

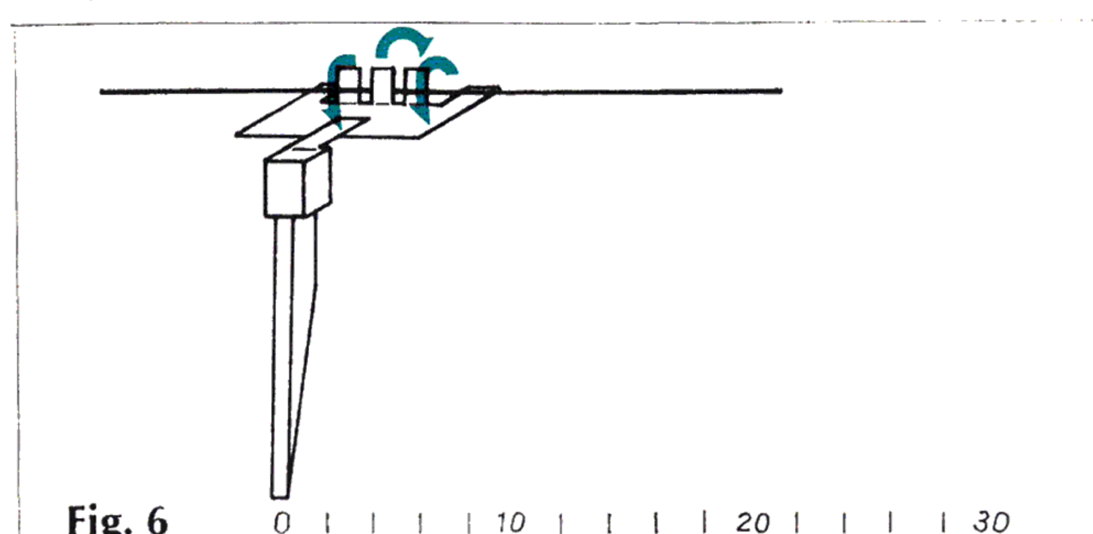


Fig. 6

Stock No.	Description	
6036020	Dial cord	0.7mmφ
6906041	Spring G	

5. TROUBLESHOOTING CHART

5-1. Troubleshooting on Power Supply Section

Symptom — Check Point — Cause & What to Do

1. No power supplied to each section

1-1. Each lamp not lighted
- 1. Imperfect contact of power supply cord
- 2. Power fuse F_{001} open
- 3. Imperfect contact of voltage selector
- 4. F_{01} open on F-2026

1-2. Each lamp lighted
- 1) +27 V not supplied to terminal [8K] and [8L] on F-1354A
  - 5. Defective D_{701}
  - 6. F_{01}, F_{03} open on F-2039
- 2) −27V not supplied to terminal [8D] and [8S] on F-1354A
  - 7. Defective D_{702}
  - 8. F_{02}, F_{04} open on F-2039
- 3) +24V not supplied to terminal [17] on F-1459
  - 9. F_{02}, F_{03} open on F-2026
  - 10. Defective D_{01} on F-1459
  - 11. Defective TR_{01}, TR_{02} on F-1459
  - 12. Defective D_{02} on F-1459
- 4) −37V not supplied to terminal [11] on F-1459
  - 13. Defective D_{01} on F-1459
  - 14. Defective TR_{04} on F-1459
- 5) +8V not supplied to terminal [06] on F-1459
  - 15. Defective D_{03} on F-1459

2. Wrong voltage supplied to each terminal on F-1459

- 1) Wrong voltage supplied to terminal [17] ([16], [14])
  - 16. Defective TR_{01}, TR_{02}, TR_{03} on F-1459
  - 17. VR_{01} out of adjustment
  - 18. Defective ZD_{01} on F-1459
- 2) Wrong voltage supplied to terminal [13]
  - 19. Defective ZD_{02} on F-1459
- 3) Wrong voltage supplied to terminal [11]
  - 20. Defective TR_{04}, TR_{05} on F-1459
  - 21. Defective ZD_{03} on F-1459

5-2. Troubleshooting on Audio Section

* Though one of four power amplifiers is defective, the protector circuit F-1461 operates and both front and rear speakers are released, so that no sound can be heard from any speakers.

Symptom	Check Point	Cause & What to Do

1. Quick Acting Fuse not open

1-1. Correct voltage not supplied to collector on each power transistor ($TR_{701} \sim TR_{704}$ +27V, $TR_{205} \sim TR_{706}$ −27V) — 1. Defective power supply section

1-2. Correct voltage supplied to collector on each power transistor (same as above)

- 1) Center voltage over 0±2V — 2. Defective driver circuit F-1354A (Protector circuit operates)
- 2) Center voltage within 0±2V
  - 2-1) Center voltage not adjustable by VR_{801} (VR_{802}) on F-1354A — 3. Defective driver circuit F-1354A (Protector circuit not operate)
  - 2-2) Center voltage adjustable by VR_{801} (VR_{802}) on F-1354A — 4. Driver circuit F-1354A normal

2. Quick Acting Fuse open

2-1. After replacement, fuse open again
- 5. Defective TR_{701}, TR_{705} (TR_{702}, TR_{706})
- 6. Defective TR_{807}, TR_{809}, TR_{811} (TR_{808}, TR_{810}, TR_{812})

2-2. After replacement, fuse not open

- 1) Center voltage within 0±500mV — 7. Set the bias current 25mA (See page 7)
- 2) Center voltage over 0±500mV
  - 2-1) Center voltage adjustable 0±5mV by VR_{801} (VR_{802}) — 8. Same as above
  - 2-2) Center voltage not adjustable 0±5mV by VR_{801} (VR_{802})
    - 9. Defective TR_{801}, TR_{803} (TR_{802}, TR_{804}) on F-1354A
    - 10. Defective TR_{805} (TR_{806})
    - 11. Defective D_{801}, D_{803} (D_{802}, D_{804}) on F-1354A
    - 12. Defective VR_{801} (VR_{802}) on F-1354A

3. 2-CH of FUNCTION inoperative

3-1. Both channels inoperative — 13. Defective power supply section

3-2. One channel inoperative
- 14. Imperfect contact of S2n (S2o) on FUNCTION switch
- 15. Imperfect contact of TAPE MONITOR switch on F-1460
- 16. Defective TR_{01}, TR_{03}, TR_{05}, TR_{07} (TR_{02}, TR_{04}, TR_{06}, TR_{08}) on F-1458
- 17. Imperfect contact of 1 (3) REMOTE CONTROL TERMINAL
- 18. Defective driver circuit (See Item 1-2)

4. QS SYNTHESIZER or QS REGULAR MATRIX of FUNCTION inoperative

Symptom / Check Point	Cause & What to Do
4–1. Change the FUNCTION switch to 2-CH	
1) Sound heard from L and R-ch	19. See page 13
2) Sound not heard from L and R-ch	20. Defective 4-CH circuit (F-2048)
4–2. Both front and rear inoperative	21. Defective TR_{01} TR_{03}, (TR_{02}, TR_{04}) on F-2048
4–3. Front inoperative	22. Defective TR_{05}, TR_{09}, TR_{13} (TR_{06}, TR_{10}, TR_{14}) on F-2048
4–4. Rear inoperative	23. Defective TR_{07}, TR_{11}, TR_{15} (TR_{08}, TR_{12}, TR_{16}) on F-2048

5. PHONO inoperative

Symptom / Check Point	Cause & What to Do
5–1. Both channels inoperative	24. Defective power supply section (See page 12)
5–2. One channel inoperative	
1) Reverse the output cord of L and R-ch from turntable	
1–1) Inoperative channel reverses	25. Defective turntable
1–2) Inoperative channel not reverse	26. Defective TR_{01}, TR_{03} (TR_{02}, TR_{04}) on F-1267F
	27. Imperfect contact of S_{1a} (S_{1b}) on SELECTOR switch

5-3. Troubleshooting on RF Section

1. Both FM and AM inoperative (PHONO operative)

Symptom / Check Point	Cause & What to Do
1–1. Both channels inoperative	1. Defective power supply section to tuner (See page 12)
1–2. One channel inoperative	2. Imperfect contact of S_{1g} (S_{1h}) on SELECTOR switch
	3. Imperfect contact of S_{1a} (S_{1b}) on SELECTOR switch
	4. Defective TR_{501}, TR_{503} (TR_{502}, TR_{504}) on F-1245-1A
	5. Defective L_{501} (L_{502}) on F-1245-1A

2. FM inoperative

* Before check, set MUTING switch to OFF (Pushed in).
* Confirm DC 24V supplied to terminal $\boxed{08}$ on F-1457.
* Confirm DC 12V supplied to terminal $\boxed{03}$ on FM Pack (7510560).

Symptom / Check Point	Cause & What to Do
2–1. Tune FM signal generator or broadcasting station	
1) Signal meter operative	6. Defective IC_{01} on F-1457
	7. Defective T_{01}, T_{02} on F-1457
	8. Defective D_{01}, D_{02} on F-1457
	9. Defective TR_{06} on F-1457
2) Signal meter inoperative (Interstation noise too low compared with proper unit)	10. Defective SFC_{01}, SFC_{02} on F-1457
	11. Defective TR_{01}, TR_{02} on F-1457
	12. Defective FM Pack

Symptom	Check Point	Cause & What to Do
3. Signal meter inoperative (FM broadcasting sound can be heard)		13. Defective TR_{03}, TR_{04} on F-1457
		14. Defective T_{03}, T_{04} on F-1457
		15. Defective D_{03}, D_{04} on F-1457
		16. Imperfect contact of VR_{01} on F-1457
		17. Defective D_{19} on F-1457
		18. Defective signal meter (AM too)
4. Muting circuit inoperative (Signal meter operative)		19. VR_{03} out of adjustment on F-1457
		20. Defective $TR_{11}\sim TR_{13}$ on F-1457
		21. Defective D_{14} on F-1457
		22. Defective TR_{14} (TR_{15}) on F-1457 [Inoperative L-ch (R-ch)]

5. No channel separation on FM stereo broadcasting

* Confirm that SELECTOR switch is set to FM AUTO.
* Confirm DC12V supplied to terminal $\boxed{06}$ on F-1459.
* Confirm signal meter operate.

Symptom	Check Point	Cause & What to Do
5-1. Indicator lamp	1) Not lighted	23. Defective PL702
		24. VR_{02} out of adjustment or imperfect contact
		25. T_{05}, T_{06} defective or out of adjustment
		26. Defective D_{07}, D_{08} on F-1457
		27. Defective TR_{06}, TR_{07} on F-1457
		28. Defective $TR_{08}\sim TR_{10}$ on F-1457
	2) lighted	29. T_{06} defective or out of adjustment
		30. Defective $D_{09}\sim D_{12}$ on G-1457
		31. VR_{501} out of adjustment or imperfect contact
		32. FM IF out of adjustment (By phase characteristic becoming wrong)
		33. T_{05} out of adjustment

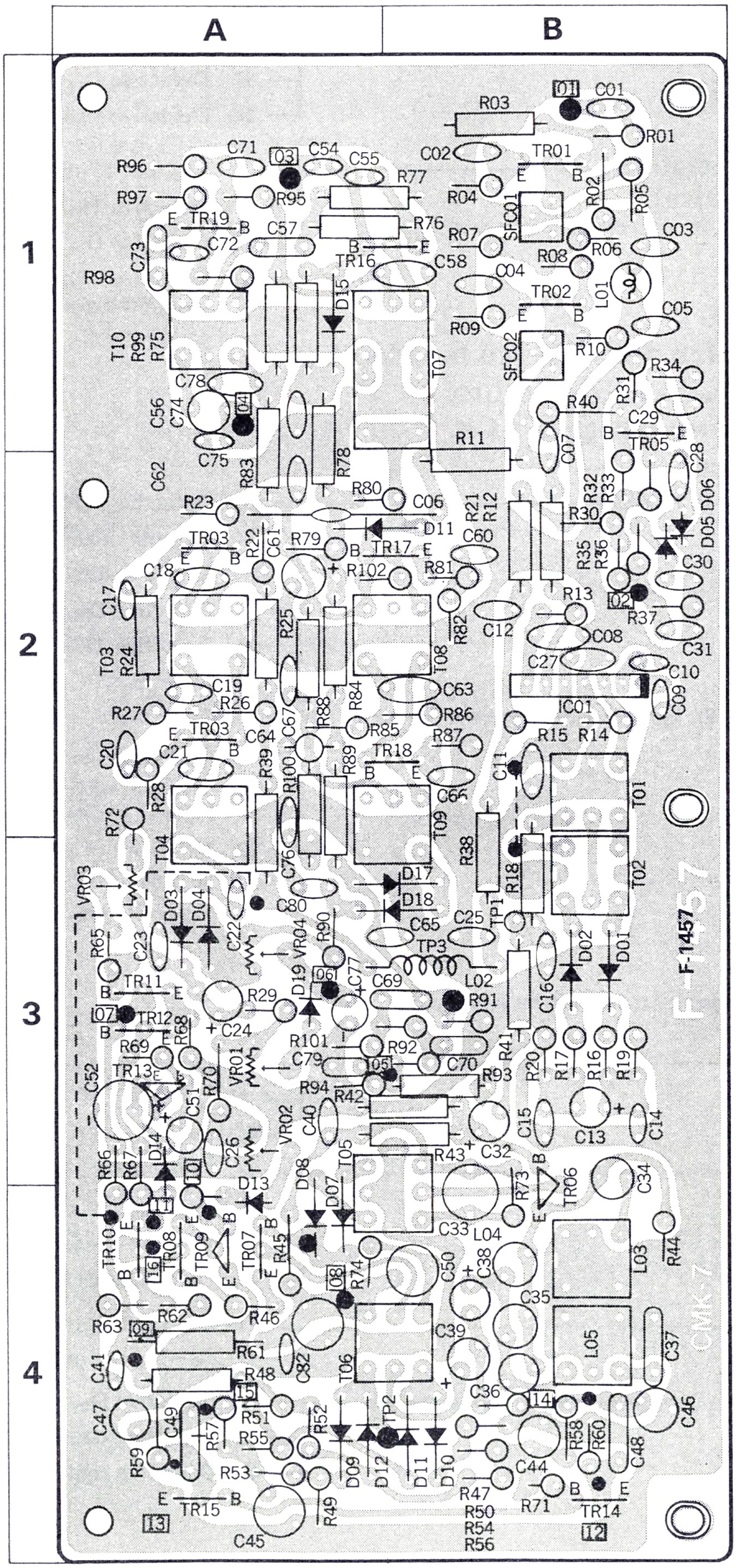
6. AM inoperative

Symptom	Check Point	Cause & What to Do
6-1. Interstation noise changes by touching the emitter on TR_{16} on F-1457	1) No change	34. Defective D_{17} on F-1457
		35. Defective $TR_{16}\sim TR_{18}$ on F-1457
		36. Defective $T_{07}\sim T_{09}$ on F-1457
	2) Increase	37. Defective T_{10} on F-1457
		38. Defective TR_{19} on F-1457
		39. Variable capacitor short
		40. Defective bar antenna
6-2. Distortion		41. Defective $D_{15}\sim D_{17}$ on F-1457
		42. $T_{07}\sim T_{09}$ out of adjustment
6-3. Signal meter inoperative (AM broadcasting sound can be heard)		43. Defective D_{18} on F-1457
		44. Imperfect contact of VR_{04} on F-1457
		45. Defective signal meter (FM too)

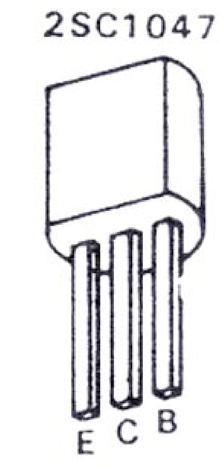
6. PARTS LOCATIONS AND PARTS LIST

6-1. F-1457 Tuner Circuit Board (Stock No. 7520610 Complete Circuit Board F-1457)

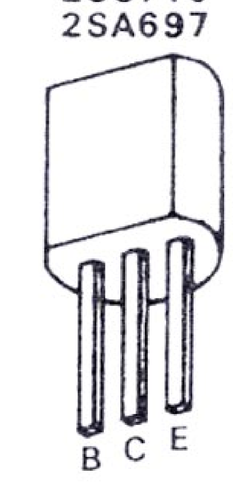
Conductor Side



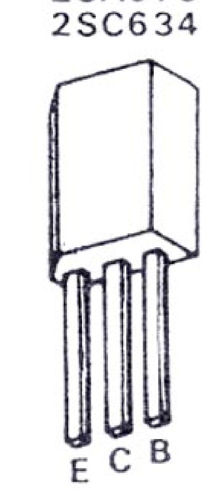
2SC1047



2SC711
2SC710
2SA697



2SA678
2SC634



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-Pola Electrolytic Capacitor
- **C.C.** : Ceramic Capacitor
- **Mi.C.** : Mica Capacitor
- **O.C.** : Oil Capacitor
- **P.C.** : Polystyrene Capacitor
- **T.C.** : Tantalum Capacitor

Parts List

Parts No.	Stock No.	Description		Position
TR01	0305802	2SC1047 (C)		1 B
TR02	0305802	2SC1047 (C)		1 B
TR03	0305802	2SC1047 (C)		2 A
TR04	0305802	2SC1047 (C)		
TR05	0305802	2SC1047 (C)		1 B
TR06	0305733	2SC711 (G)		3, 4 B
TR07	0305732	2SC711 (F)		4 A
TR08	0305732	2SC711 (F)		4 A
TR09	0305733	2SC711 (G)		4 A
TR10	0300311	2SA697 (D)	Transistor	4 A
TR11	0305733	2SC711 (G)		3 A
TR12	0305732	2SC711 (F)		3 A
TR13	0300291,2	2SA678 (6, 7)		3 A
TR14	0305891	2SC634A (6)		4 B
TR15	0305891	2SC634A (6)		4 A
TR16	0305943	2SC710 (D)		1 A, B
TR17	0305943	2SC710 (D)		2 A, B
TR18	0305943	2SC710 (D)		2 A, B
TR19	0305943	2SC710 (D)		1 A
IC01	0360060	TA7061AP		2 B
D01	0311016	1N60P		3 B
D02	0311016	1N60P		3 B
D03	0310400	1N34A (Black)		3 A
D04	0310400	1N34A (Black)		3 A
D05	0310400	1N34A (Black)		2 B
D06	0310400	1N34A (Black)	Diode	2 B
D07	0310400	1N34A (Black)		3, 4 A
D08	0310400	1N34A (Black)		3, 4 A
D09	0311180	1S1588		4 A
D10	0311180	1S1588		4 B
D11	0311180	1S1588		2A, B, 4B
D12	0311180	1S1588		4 A
D13	0340090	DS-430	Varistor	4 A
D14	0310340	10D-1		3, 4 A
D15	0310400	1N34A (Black)		1 A
D16	0310400	1N34A (Black)	Diode	
D17	0310400	1N34A (Black)		3 A, B
D18	0310400	1N34A (Black)		3 A, B
D19	0340090	DS-430	Varister	3 A
T01	4235750	Y-19782BM (Pink)		2 B
T02	4235760	Y-19782BM (Blue)	FM IFT	3 B
T03	4235770	Y-19782BM (Green)		2 A
T04	4235780	Y-19782BM (Brown)		2, 3 A
T05	4240630	19Hz (Orange)	MPX Coil	3, 4 A B
T06	4240620	38KHz (White)		4 A, B
T07	0910180,1	YEL-455E2 (FW-455B)	Ceramic Filter	1 A, B
T08	4230510	Y-19782BM (Black)	AM IFT	2 A, B
T09	4230500	P-1196 (Blue)		2, 3 A B
T10	4220280	AM OSC Coil (Red)		1 A
SFC01	0910120	SFC-10.7MA	Ceramic Filter	1 B
SFC02	0910120	SFC-10.7MA		1 B
L01	4900100	3.3µH	Ferri-Inductor	1 B
L02	4290011	3.5µH	Peaking Coil	3 A, B
L03	4240640	MPX Coil	(Yellow)	4 B
L04	4900030	4.7mH	Ferri-Inductor	4 B
L05	4240610	MPX Coil	(Black)	4 B

Parts No.	Stock No.	Description				Position
C01	0656223	0.022µF	25V			1 B
C02	0656223	0.022µF	25V			1 B
C03	0656223	0.022µF	25V		C.C.	1 B
C04	0656223	0.022µF	25V			1 B
C05	0656223	0.022µF	25V			1 B
C06	0660470	47pF	50V	±10%	C.C.	2 A, B
C07	0660220	22pF	50V			1, 2 B
C08	0656223	0.022µF	25V			2 B
C09	0656223	0.022µF	25V			2 B
C10	0656223	0.022µF	25V		C.C.	2 B
C11	0656473	0.047µF	25V			2 B
C12	0656223	0.022µF	25V			2 B
C13	0513100	10µF	25V		E.C	3 B
C14	0660221	220pF	50V			3 B
C15	0660221	220pF	50V	±10%	C.C.	3 B
C16	0660221	220pF	50V			3 B
C17	0656223	0.022µF	25V			2 A
C18	0656223	0.022µF	25V			2 A
C19	0656223	0.022µF	25V			2 A
C20	0656223	0.022µF	25V		C.C.	2 A
C21	0656223	0.022µF	25V			2 A
C22	0656223	0.022µF	25V			3 A
C23	0656473	0.047µF	25V			3 A
C24	0573338	0.33µF	25V		T.C	3 A
C25	0656223	0.022µF	25V			3 B
C26	0656223	0.022µF	25V			3 A
C27	0656473	0.047µF	25V			2 B
C28	0656102	0.001µF	25V		C.C.	2 B
C29	0656223	0.022µF	25V			1 B
C30	0656223	0.022µF	25V			2 B
C31	0656223	0.022µF	25V			2 B
C32	0515339	3.3µF	50V		E.C.	3 B
C33	0629001	6800pF	50V			3, 4 B
C34	0629001	6800pF	50V	± 5%	P.C.	3, 4 B
C35	0620102	1000pF	50V			4 B
C36	0620101	100pF	50V			4 B
C37	0640271	270pF	50V	± 5%	Mi.C.	4 B
C38	0513100	10µF	25V		E.C.	4 B
C39	0513100	10µF	25V			4 B
C40	0656223	0.022µF	25V		C.C.	3 A
C41	0656223	0.022µF	25V			4 A
C44	0620122	1200pF	50V			4 B
C45	0620122	1200pF	50V	± 5%	P.C.	4 A
C46	0620152	1500pF	50V			4 B
C47	0620152	1500pF	50V			4 A
C48	0601108	0.1µF	50V	±10%	M.C.	4 B
C49	0601108	0.1µF	50V			4 A
C50	0620272	2700pF	50V	± 5%	P.C.	4 B
C51	0573159	1.5µF	25V		T.C.	3 A
C52	0515339	3.3µF		50V	E.C.	3 A
C54	0656223	0.022µF	25V		C.C.	1 A
C55	0660330	33pF	50V	±10%	C.C.	1 A
C56	0656473	0.047µF	25V		C.C.	1 A
C57	0601107	0.01µF	50V	±10%	M.C.	1 A
C58	0656473	0.047µF	25V		C.C.	1 A, B
C60	0656473	0.047µF	25V			2 B
C61	0515339	3.3µF	50V		E.C.	2 A
C62	0656473	0.047µF	25V		C.C.	2 A
C63	0656473	0.047µF	25V			2 B
C64	0533339	3.3µF	25V		BP.E.C.	2 A
C65	0656472	0.0047µF	25V		C.C.	3 A, B
C66	0656473	0.047µF	25V			2 B

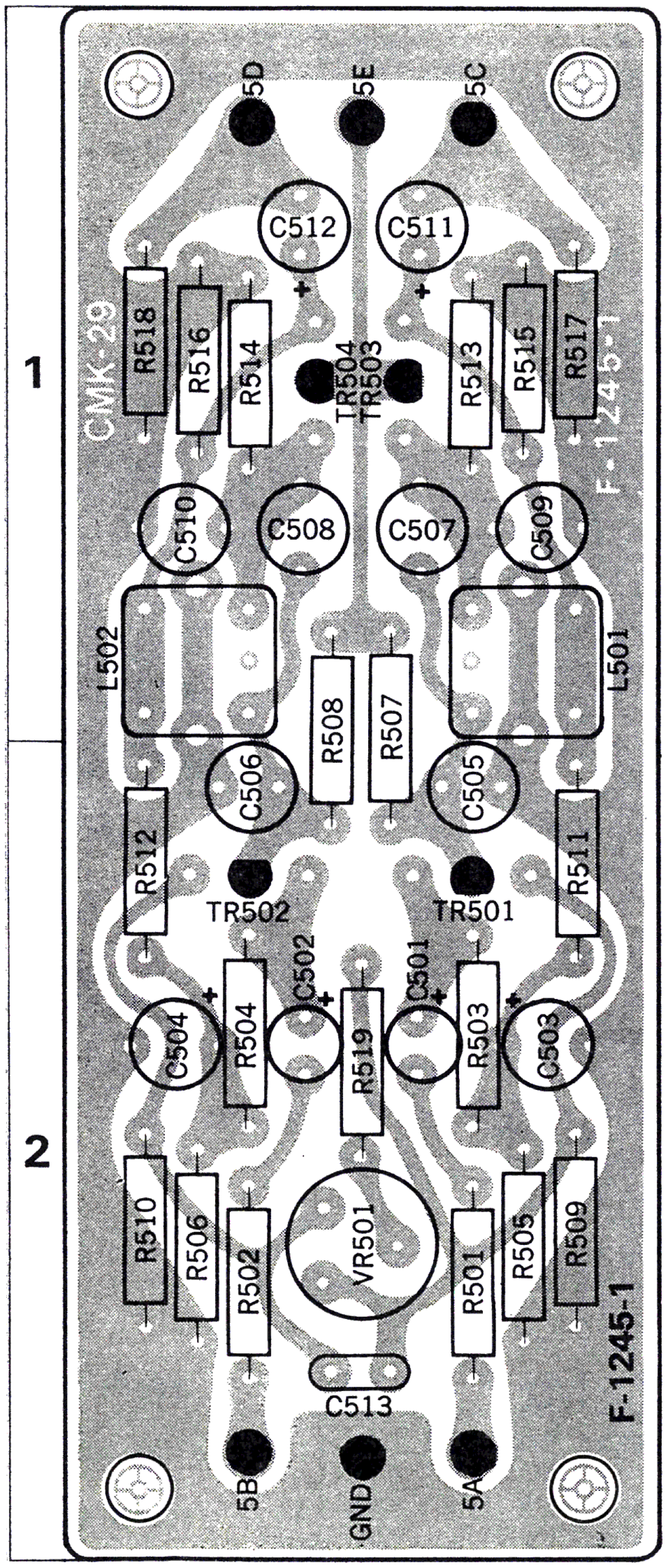
F-1457 Parts List

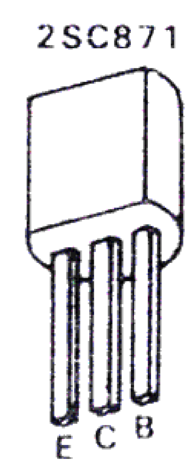
Parts No.	Stock No.	Description	Position
C67	0656473	0.047μF 25V C.C.	2A
C68	0656103	0.01μF 25V	
C69	0601687	0.068μF 50V ±10% M.C.	3A, B
C71	0656473	0.047μF 25V ±10% C.C.	1A
C72	0660150	15pF 50V	1A
C73	0601107	0.01μF 50V ±10% M.C.	1A
C74	0620361	360pF 50V ± 5% P.C.	1A
C75	0660100	10pF 50V ±10% C.C.	1A
C76	0656473	0.047μF 25V C.C.	2, 3A
C77	0510470	47μF 6.3V E.C.	3A
C78	0656473	0.047μF 25V C.C.	1A
C79	0600206	0.002μF 50V ± 5% M.C.	3A
C80	0656103	0.01μF 25V C.C.	3A
C81	0510330	33μF 6.3V E.C.	
C82	0656473	0.047μF 25V C.C.	4A
C83	0660150	15pF 50V ±10% C.C.	
R01	0106221	220kΩ ±5% ¼W C.R.	1B
R02	0106682	6.8kΩ (E.L.R.)	1B
R03	0107272	2.7kΩ ±5% ¼W C.R.	1B
R04	0106102	1kΩ	1B
R05	0106331	330Ω	1B
R06	0106682	6.8kΩ	1B
R07	0106272	2.7kΩ ±5% ¼W C.R.	1B
R08	0106101	100Ω (E.L.R.)	1B
R09	0106102	1kΩ	1B
R10	0106331	330Ω	1B
R11	0107102	1kΩ ±5% ¼W C.R.	2B
R12	0107221	220Ω	2B
R13	0106151	150Ω	2B
R14	0106562	5.6kΩ	2B
R15	0106221	220Ω ±5% ¼W C.R.	2B
R16	0106102	1kΩ (E.L.R.)	3B
R17	0106102	1kΩ	3B
R18	0107101	100Ω ±5% ¼W C.R.	2, 3B
R19	0106682	6.8kΩ ±5% ¼W C.R.	3B
R20	0106682	6.8kΩ (E.L.R.)	3B
R21	0107101	100Ω ±5% ¼W C.R.	2B
R22	0106153	15kΩ ±5% ¼W C.R.	2A
R23	0106472	4.7kΩ (E.L.R.)	2A
R24	0107102	1kΩ ±5% ¼W C.R.	2A
R25	0107101	100Ω	2A
R26	0106153	15kΩ	2A
R27	0106472	4.7kΩ	2A
R28	0106102	1kΩ	2A
R29	0106221	220Ω	3A
R30	0106101	100Ω	2B
R31	0106153	15kΩ ±5% ¼W C.R.	1B
R32	0106473	47kΩ (E.L.R.)	2B
R33	0106222	2.2kΩ	2B
R34	0106102	1kΩ	1B
R35	0106564	560kΩ	2B
R36	0106184	180kΩ	2B
R37	0106564	560kΩ	2B
R38	0107100	10Ω ±5% ¼W C.R.	2, 3B
R39	0107102	1kΩ	2, 3A
R40	0106151	150Ω ±5% ¼W C.R. (E.L.R.)	1B
R41	0107102	1kΩ	3B
R42	0107104	100kΩ ±5% ¼W C.R.	3A, B
R43	0107224	220kΩ	3A, B
R44	0106102	1kΩ ±5% ¼W C.R.	4B
R45	0106101	100Ω (E.L.R.)	4A
R46	0106471	470Ω ±5% ¼W C.R.	4A
R47	0106332	3.3kΩ (E.L.R.)	4B
R48	0107102	1kΩ ±5% ¼W C.R.	4A
R49	0106104	100kΩ	4A
R50	0106104	100kΩ	4B
R51	0106104	100kΩ	4A
R52	0106104	100kΩ	4A
R53	0106822	8.2kΩ	4A
R54	0106822	8.2kΩ	4B
R55	0106822	8.2kΩ	4A
R56	0106822	8.2kΩ	4B
R57	0106563	56kΩ	4A
R58	0106563	56kΩ	4B
R59	0106823	82kΩ	4A
R60	0106823	82kΩ	4B
R62	0106223	22kΩ ±5% ¼W C.R.	4A
R63	0106473	47kΩ (E.L.R.)	4A
R64	0106103	10kΩ	
R65	0106473	47kΩ	3A
R66	0106105	1MΩ	3, 4A
R67	0106153	15kΩ	3, 4A
R68	0106330	33Ω	3A
R69	0106473	47kΩ	3A
R70	0106221	220Ω	3A
R71	0106472	4.7kΩ	4B
R72	0106153	15kΩ	2, 3A
R73	0106224	220kΩ	3, 4B
R74	0106683	68kΩ	4A
R75	0107103	10kΩ	1A
R76	0107220	22Ω ±5% ¼W C.R.	1A, B
R77	0107102	1kΩ	1A, B
R78	0107123	12kΩ	1, 2A
R79	0106823	82kΩ	2A
R80	0106103	10kΩ	2A, B
R81	0106680	68Ω ±5% ¼W C.R.	2B
R82	0106821	820Ω (E.L.R.)	2B
R83	0107121	120Ω ±5% ¼W C.R.	1, 2A
R84	0107822	8.2kΩ	2A
R85	0106153	15kΩ	2A
R86	0106472	4.7kΩ ±5% ¼W C.R.	2B
R87	0106561	560Ω (E.L.R.)	2B
R88	0107121	120Ω ±5% ¼W C.R.	2A
R89	0107103	10kΩ	2, 3A
R90	0106221	220Ω	3A
R91	0106103	10kΩ	3B
R92	0106472	4.7kΩ	3A, B
R93	0106393	39kΩ	3B
R94	0106562	5.6kΩ ±5% ¼W C.R.	3A
R95	0106223	22kΩ (E.L.R.)	1A
R96	0106562	5.6kΩ	1A
R97	0106102	1kΩ	1A
R98	0106561	560Ω	1A
R99	0107561	560Ω ±5% ¼W C.R.	1A
R100	0107121	120Ω	2, 3A
R101	0106473	47kΩ ±5% ¼W C.R.	3A
R102	0106822	8.2kΩ (E.L.R.)	2A, B
VR01	1035150	22kΩ (B) Semi-Variable	3A
VR02	1035150	22kΩ (B) Resistor	3A
VR03	1035190	100kΩ (B) (Solid Type)	3A
VR04	1035150	22kΩ (B)	3A
	2260010	Test Pin	

6-2. F-1245-1(B) Separation and Filter Circuit Board

(Stock No. 7591740 Complete Circuit Board F-1245-1(B))

Conductor Side





Parts List

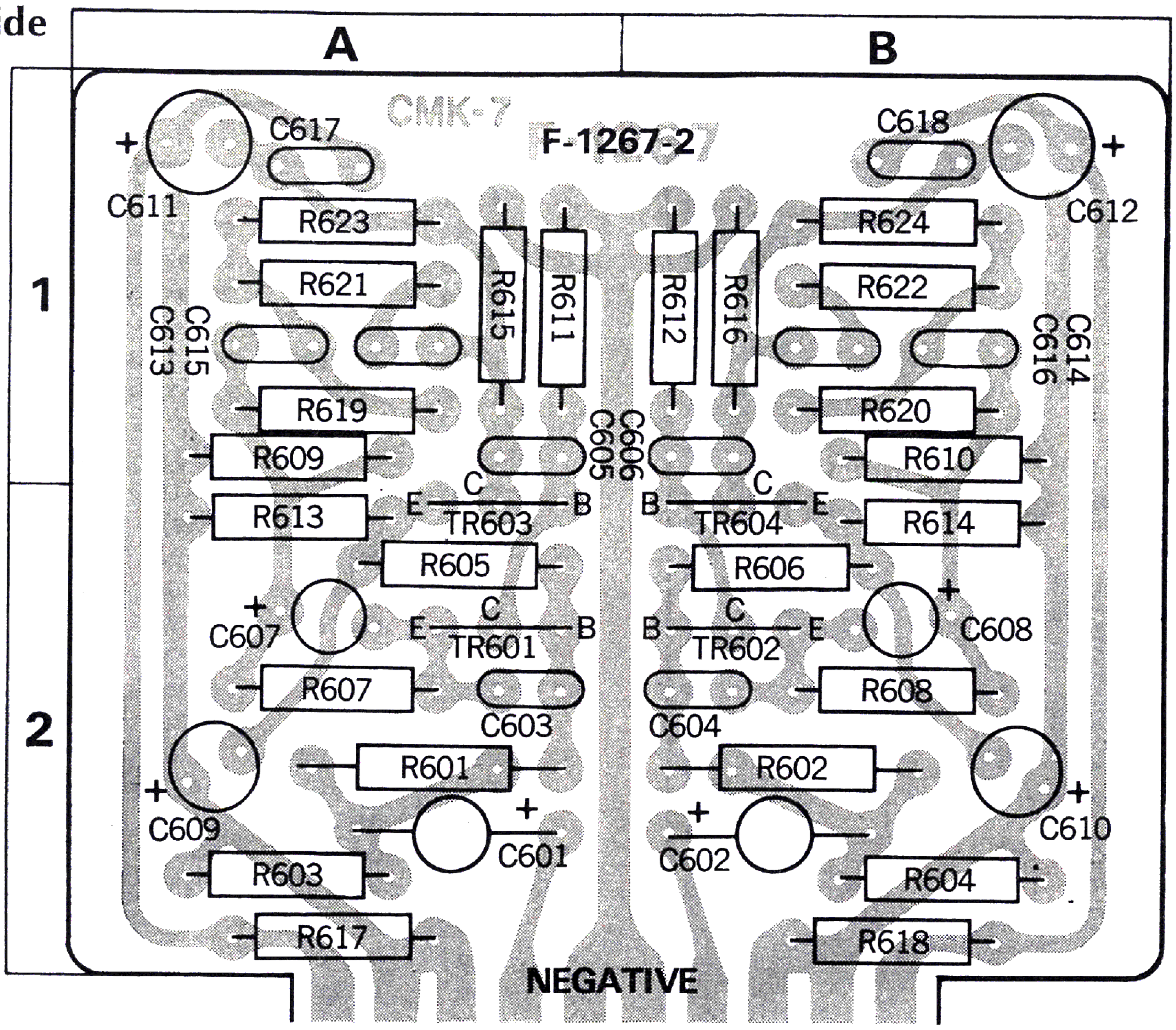
Parts No.	Stock No.	Description		Position
TR501	0305475	2SC871 Ⓡ (F)		2
TR502	0305475	2SC871 Ⓡ (F)	Transistor	2
TR503	0305475	2SC871 Ⓡ (F)		1
TR504	0305475	2SC871 Ⓡ (F)		1
L501	4240570	CLN-1651HM	19kHz MPX	1
L502	4240570	CLN-1651HM	Coil	1
C501	0515109	1μF 50V		2
C502	0515109	1μF 50V	E.C.	2
C503	0513100	10μF 25V		2
C504	0513100	10μF 25V		2
C505	0620471	470pF 50V		2
C506	0620471	470pF 50V		2
C507	0620122	1200pF 50V	± 5 % P.C.	1
C508	0620122	1200pF 50V		1
C509	0620102	1000pF 50V		1
C510	0620102	1000pF 50V		1
C511	0519106	4.7μF 50V	E.C.	1
C512	0519106	4.7μF 50V		1
C513	0601336	0.0033μF 50V	±10% M.C.	2
C514	0656473	0.047μF 25V	C.C.	
R501	0107222	2.2kΩ		2
R502	0107222	2.2kΩ		2
R503	0107154	150kΩ		2
R504	0107154	150kΩ		2
R505	0107223	22kΩ		2
R506	0107223	22kΩ		2
R507	0107103	10kΩ		1, 2
R508	0107103	10kΩ		1, 2
R509	0107102	1kΩ		2
R510	0107102	1kΩ		2
R511	0107104	100kΩ	± 5 % ¼W C.R.	2
R512	0107104	100kΩ		2
R513	0107473	47kΩ		1
R514	0107473	47kΩ		1
R515	0107472	4.7kΩ		1
R516	0107472	4.7kΩ		1
R517	0107104	100kΩ		1
R518	0107104	100kΩ		1
R519	0107221	220Ω		2
R521	0107821	820Ω		
R522	0107821	820Ω		
VR501	1035130	10kΩ (B) Semi-Variable Resistor (Solid Type)		2

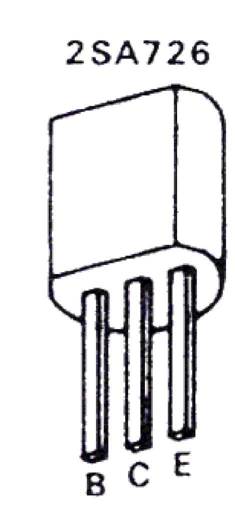
Abbreviations

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-Pola Electrolytic Capacitor
C.C. : Ceramic Capacitor
Mi.C. : Mica Capacitor
O.C. : Oil Capacitor
P.C. : Polystyrene Capacitor
T.C. : Tantalum Capacitor

6-3. F-1267-2(F) Equalizer Circuit Board (StocK No. 7550500 Complete Circuit Board F-1267-2(F))

Conductor Side





Parts List

Parts No.	Stock No.	Description			Position
TR601	0300410	2SA726 Ⓡ (F)			2 A
TR602	0300410	2SA726 Ⓡ (F)		Transistor	2 B
TR603	0300410	2SA726 Ⓡ (F)			2 A
TR604	0300410	2SA726 Ⓡ (F)			2 B
C601	0573339	3.3μF	25V	T.C.	2 A
C602	0573339	3.3μF	25V		2 B
C603	0660220	22pF	50V		2 A
C604	0660220	22pF	50V	±10% C.C.	2 B
C605	0660220	22pF	50V		1 A
C606	0660220	22pF	50V		1 B
C607	0511330	33μF	10V		2 A
C608	0511330	33μF	10V		2 B
C609	0510101	100μF	6.3V		2 A
C610	0510101	100μF	6.3V	E.C.	2 B
C611	0515479	4.7μF	50V		1 A
C612	0515479	4.7μF	50V		1 B
C613	0600107	0.01μF	50V		1 A
C614	0600107	0.01μF	50V	± 5 % M.C.	1 B
C615	0600336	0.0033μF	50V		1 A
C616	0600336	0.0033μF	50V		1 B
R601	0107222	2.2kΩ			2 A
R602	0107222	2.2kΩ			2 B
R603	0107563	56kΩ		± 5 % ¼W C.R.	2 A
R604	0107563	56kΩ			2 B
R605	0107824	820kΩ			2 A

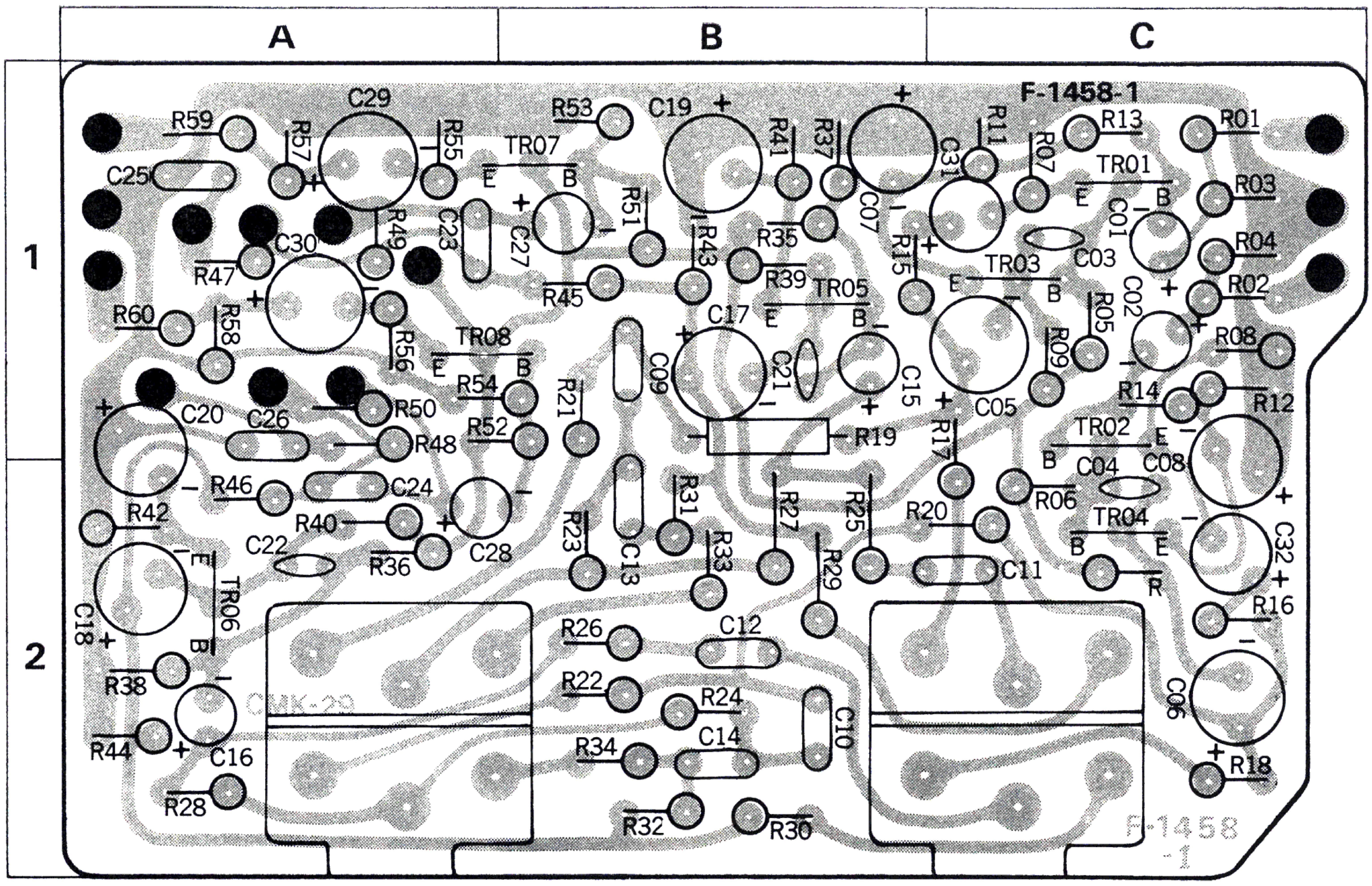
Parts No.	Stock No.	Description		Position
R606	0107824	820kΩ		2 B
R607	0107681	680Ω		2 A
R608	0107681	680Ω		2 B
R609	0107471	470Ω		1 A
R610	0107471	470Ω		1 B
R611	0107184	180kΩ		1 A
R612	0107184	180kΩ		1 B
R613	0107681	680Ω		2 A
R614	0107681	680Ω		2 B
R615	0107123	12kΩ	± 5 % ¼W C.R.	1 A
R616	0107123	12kΩ		1 B
R617	0107474	470kΩ		2 A
R618	0107474	440kΩ		2 B
R619	0107334	330kΩ		1 A
R620	0107334	330kΩ		1 B
R621	0107102	1kΩ		1 A
R622	0107102	1kΩ		1 B
R623	0107223	22kΩ		1 A
R624	0107223	22kΩ		1 B

Abbreviations

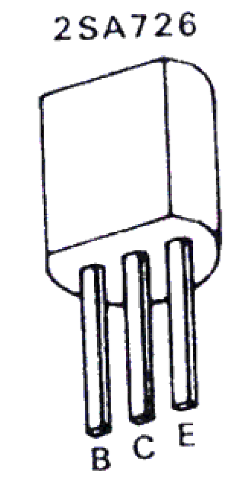
C.R.	Carbon Resistor	BP.E.C.	Bi-Pola Electrolytic Capacitor
S.R.	Solid Resistor	C.C.	Ceramic Capacitor
Ce.R.	Cement Resistor	Mi.C.	Mica Capacitor
M.R.	Metallized Film Resistor	O.C.	Oil Capacitor
M.C.	Mylar Capacitor	P.C.	Polystyrene Capacitor
E.C.	Electrolytic Capacitor	T.C.	Tantalum Capacitor

6-4. F-1458 Tone control Circuit Board (Stock No. 7560690 Complete Circuit Board F-1458)

Conductor Side



2SA726



Parts List

Parts No.	Stock No.	Description			Position
TR01	0300410	2SA726 Ⓡ (F)			1 C
TR02	0300410	2SA726 Ⓡ (F)			1 C
TR03	0300410	2SA726 Ⓡ (F)			1 C
TR04	0300410	2SA726 Ⓡ (F)			2 C
TR05	0300410	2SA726 Ⓡ (F)	Transistor		1 B
TR06	0300410	2SA726 Ⓡ (F)			2 A
TR07	0300410	2SA726 Ⓡ (F)			1 A, B
TR08	0300410	2SA726 Ⓡ (F)			1 A, B
C01	0519101	1μF 50V		E.C.	1 C
C02	0519101	1μF 50V			1 C
C03	0660220	22pF 50V		C.C.	1 C
C04	0660220	22pF 50V			2 C
C05	0515100	10μF 50V			1 C
C06	0515100	10μF 50V		E.C.	2 C
C07	0511330	33μF 10V			1 B, C
C08	0511330	33μF 10V			1, 2 C
C09	0600477	0.047μF 50V			1 B
C10	0600477	0.047μF 50V			2 B
C11	0600106	0.001μF 50V	± 5 %	M.C.	2 B, C
C12	0600106	0.001μF 50V			2 B
C13	0600477	0.047μF 50V			2 B
C14	0600477	0.047μF 50V			2 B
C15	0515109	1μF 50V			1 B
C16	0515109	1μF 50V			2 A
C17	0515479	4.7μF 50V		E.C.	1 B
C18	0515479	4.7μF 50V			2 A

Parts No.	Stock No.	Description			Position
C19	0511470	47μF 10V		E.C.	1 B
C20	0511470	47μF 10V			1, 2 A
C21	0660470	47pF 50V		C.C.	1 B
C22	0660470	47pF 50V			2 A
C23	0600157	0.015μF 50V			1 A
C24	0600157	0.015μF 50V	± 5 %	M.C.	2 A
C25	0600227	0.022μF 50V			1 A
C26	0600227	0.022μF 50V			1 A
C27	0573478	0.47μF 25V		T.C.	1 B
C28	0573478	0.47μF 25V			2 A, B
C29	0515100	10μF 50V			1 A
C30	0515100	10μF 50V			1 A
C31	0513479	4.7μF 25V		E.C.	1 C
C32	0513479	4.7μF 25V			2 C
R01	0106222	2.2kΩ			1 C
R02	0106222	2.2kΩ			1 C
R03	0106334	330kΩ			1 C
R04	0106334	330kΩ			1 C
R05	0106473	47kΩ			1 C
R06	0106473	47kΩ			2 C
R07	0106472	4.7kΩ	± 5 %	¼W C.R. (E.L.R.)	1 C
R08	0106472	4.7kΩ			2 C
R09	0106562	5.6kΩ			1 C
R10	0106562	5.6kΩ			2 C
R11	0106152	1.5kΩ			1 C
R12	0106152	1.5kΩ			1 C

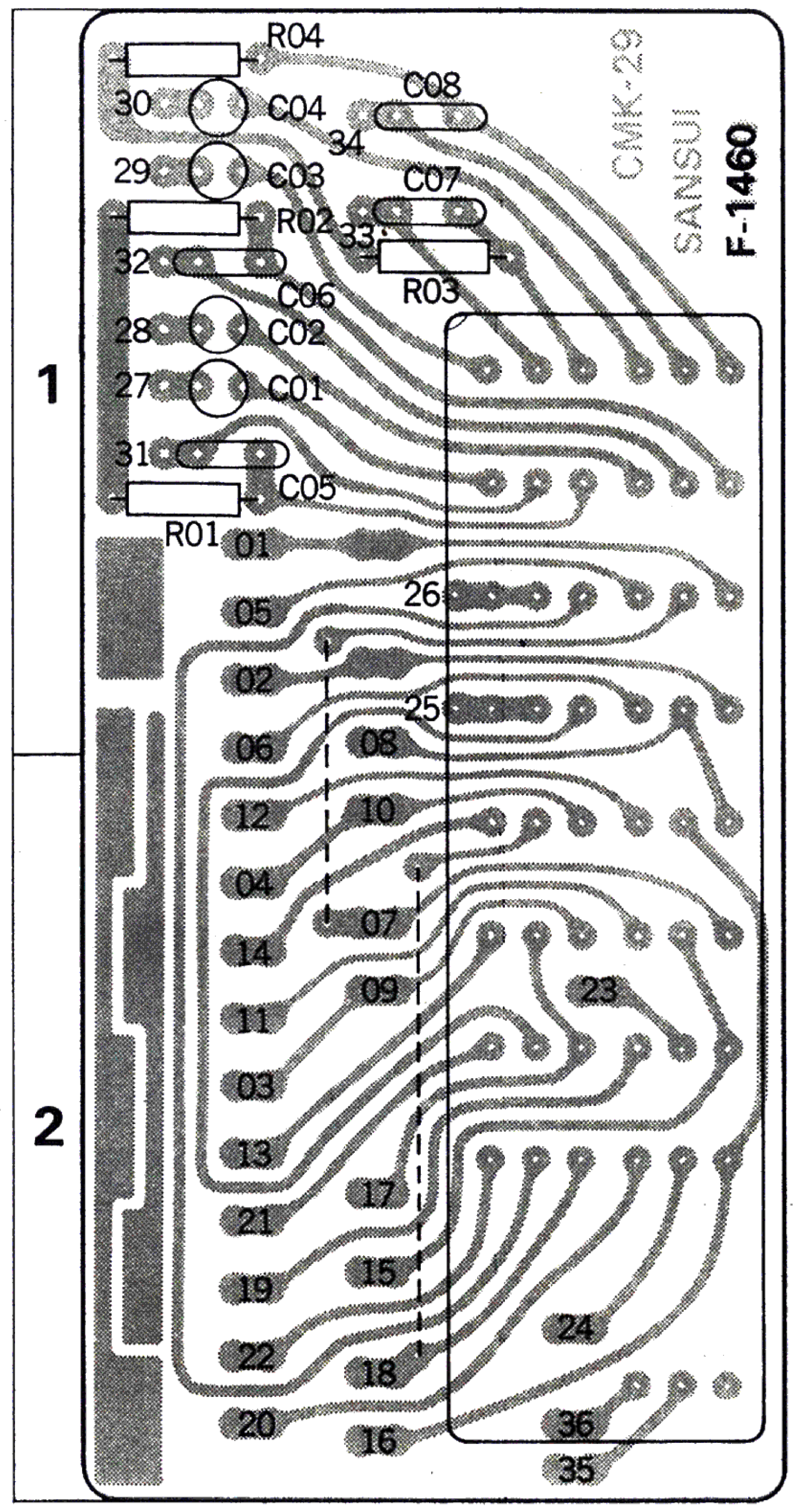
F-1458 Parts List

Parts No.	Stock No.	Description		Position
R13	0106334	330kΩ		1 C
R14	0106334	330kΩ		1 C
R15	0106223	22kΩ		1 B
R16	0106223	22kΩ	± 5 % ¼W C.R. (E.L.R.)	2 C
R17	0106392	3.9kΩ		1, 2 C
R18	0106392	3.9kΩ		2 C
R19	0107153	15kΩ	± 5 % ¼W C.R.	1 B
R20	0106153	15kΩ		2 C
R21	0106331	330Ω		1 B
R22	0106331	330Ω		2 B
R23	0106122	1.2kΩ		2 B
R24	0106122	1.2kΩ		2 B
R25	0106561	560Ω		2 B
R26	0106561	560Ω		2 B
R27	0106223	22kΩ		2 B
R28	0106223	22kΩ		2 A
R29	0106682	6.8kΩ		2 B
R30	0106682	6.8kΩ		2 B
R31	0106153	15kΩ		2 B
R32	0106153	15kΩ		2 B
R33	0106331	330Ω		2 B
R34	0106331	330Ω		2 B
R35	0106274	270kΩ		1 B
R36	0106274	270kΩ		2 A
R37	0106104	100kΩ		1 B
R38	0106104	100kΩ		2 A
R39	0106562	5.6kΩ		1 B
R40	0106562	5.6kΩ	± 5 % ¼W C.R. (E.L.R.)	2 A
R41	0106332	3.3kΩ		1 B
R42	0106332	3.3kΩ		2 A
R43	0106104	100kΩ		1 B
R44	0106104	100kΩ		2 A
R45	0106222	2.2kΩ		1 B
R46	0106222	2.2kΩ		2 A
R47	0106824	820kΩ		1 A
R48	0106824	820kΩ		1 A
R49	0106824	820kΩ		1 A
R50	0106824	820kΩ		1 A
R51	0106334	330kΩ		1 B
R52	0106334	330kΩ		1 A, B
R53	0106104	100kΩ		1 B
R54	0106104	100kΩ		1 A, B
R55	0106472	4.7kΩ		1 A
R56	0106472	4.7kΩ		1 A
R57	0106104	100kΩ		1 A
R58	0106104	100kΩ		1 A
R59	0106331	330Ω		1 A
R60	0106331	330Ω		1 A
VR01	1020240	100kΩ (B)×2	Dual Shaft Variable Resistor	
VR02	1020240	100kΩ (B)×2		

6-5. F-1460 Switch Circuit Board

(Stock No. 7591680 Complete Circuit Board F-1460)

Conductor Side

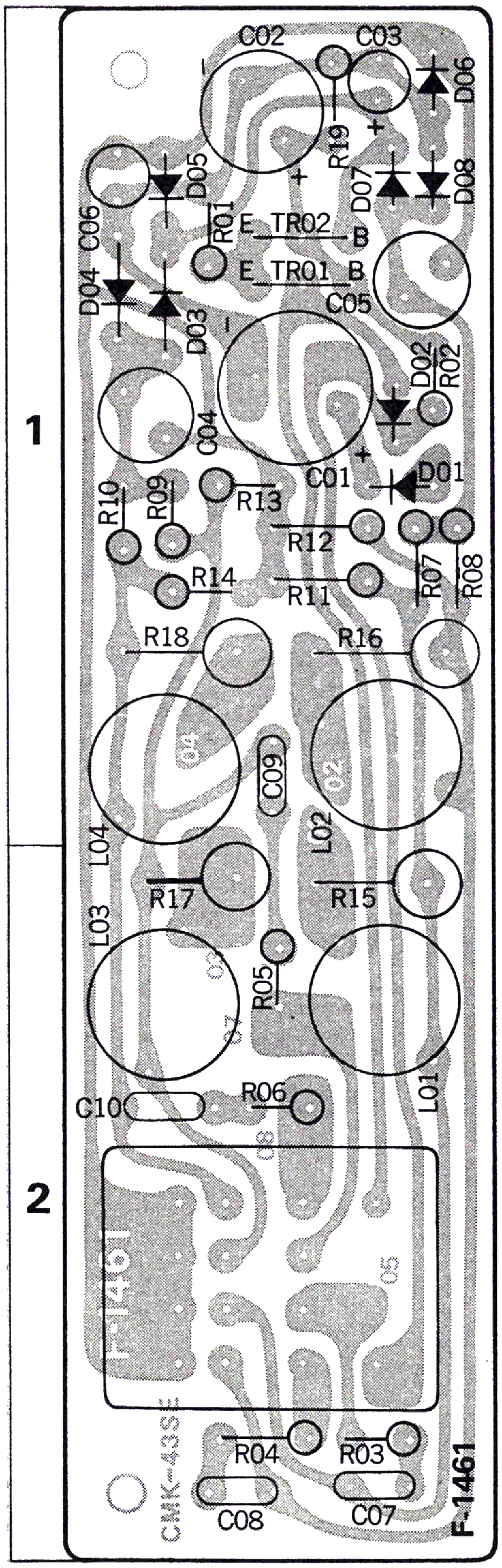


Parts List

Parts No.	Stock No.	Description		Position
R01	0107273	27kΩ		1
R02	0107273	27kΩ	± 5 % ¼W C.R.	1
R03	0107273	27kΩ		1
R04	0107273	27kΩ		1
C01	0620151	150 pF 50V		1
C02	0620151	150 pF 50V		1
C03	0620151	150 pF 50V	± 5 % P.C.	1
C04	0620151	150 pF 50V		1
C05	0600227	0.022μF 50V		1
C06	0600227	0.022μF 50V		1
C07	0600227	0.022μF 50V	M.C.	1
C08	0600227	0.022μF 50V		1
S3, S4, S5, S6, S9	1130690	Push Switch (5 Stage)		

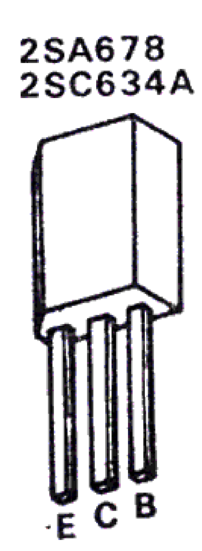
6-6. F-1461 Protector Circuit Board (Stock No. 7591630 Complete Circuit Board F-1461)

Conductor Side



Parts List

Parts No.	Stock No.	Description	Position
TR01	0305892,3	2SC634A (7,8) Transistor	1
TR02	0305892,3	2SC634A (7,8)	1
D01	0310340	10D-1	1
D02	0310340	10D-1	1
D03	0310400	1N34A (Black)	1
D04	0310400	1N34A (Black) Diode	1
D05	0310400	1N34A (Black)	1
D06	0310400	1N34A (Black)	1
D07	0310400	1N34A (Black)	1
D08	0310400	1N34A (Black)	1
L01	4290210	2.5μH	2
L02	4290210	2.5μH Ferri-Inductor	1
L03	4290210	2.5μH	2
L04	4290210	2.5μH	1
C01	0515101	100μF 50V	1
C02	0510471	470μF 6.3V E.C.	1
C03	0515109	1μF 50V	1
C04	0530470	47μF 6.3V	1
C05	0530470	47μF 6.3V B.P.E.C.	1
C06	0535109	1μF 50V	1
C07	0601108	0.1μF 50V	2
C08	0601108	0.1μF 50V ±10% M.C.	2
C09	0601108	0.1μF 50V	1
C10	0601108	0.1μF 50V	2
R01	0106100	10Ω ±5% 1/4W C.R.	1
R02	0106823	82kΩ (E.L.R.)	1
R03	0103100	10Ω	2
R04	0103100	10Ω ±5% 1/2W C.R.	2
R05	0103100	10Ω	2
R06	0103100	10Ω	2
R07	0106473	47kΩ	1
R08	0106473	47kΩ	1
R09	0106473	47kΩ	1
R10	0106473	47kΩ ±5% 1/4W C.R.	1
R11	0106332	3.3kΩ (E.L.R.)	1
R12	0106332	3.3kΩ	1
R13	0106332	3.3kΩ	1
R14	0106332	3.3kΩ	1
R15	0171689	6.8Ω	2
R16	0171689	6.8Ω ±5% 1W M.R.	1
R17	0171689	6.8Ω	2
R18	0171689	6.8Ω	1
R19	0106562	5.6kΩ ±5% 1/4W C.R. (E.L.R.)	1
	1150101	MY4-US-SA Relay	

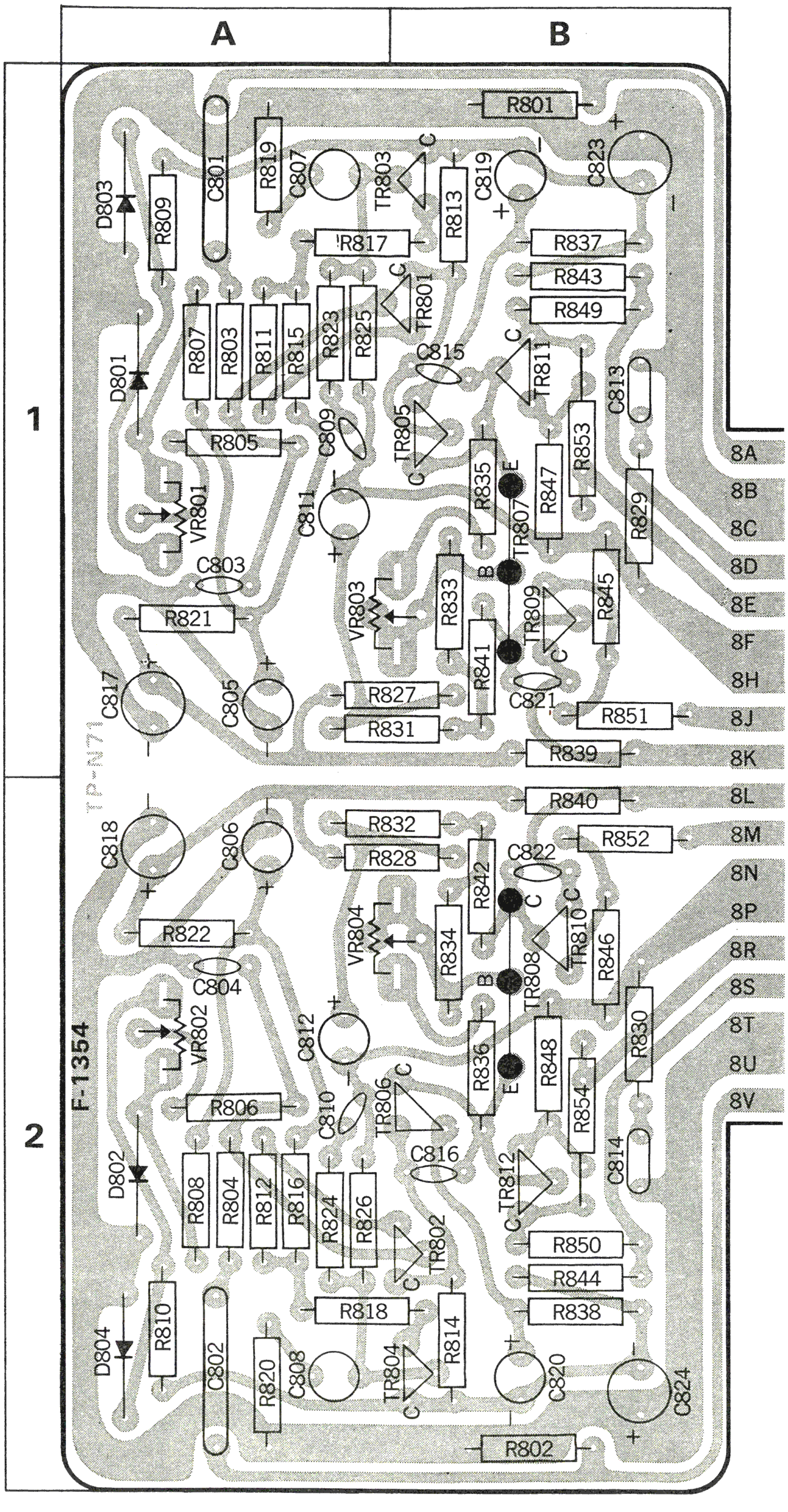


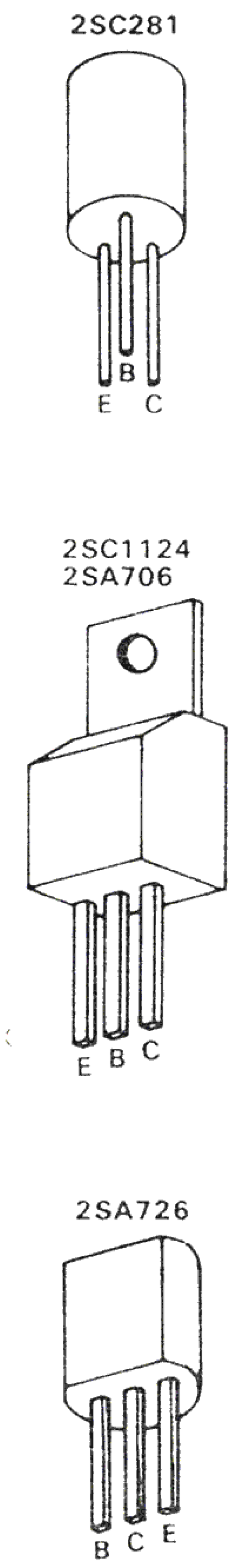
Abbreviations

- **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-Pola Electrolytic Capacitor
- **C.C.** : Ceramic Capacitor
- **Mi.C.** : Mica Capacitor
- **O.C.** : Oil Capacitor
- **P.C.** : Polystyrene Capacitor
- **T.C.** : Tantalum Capacitor

6-7. F-1354A Driver Circuit Board (Stock No. 7570740 Complete Circuit Board F-1354 A)

Conductor Side





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-Pola Electrolytic Capacitor
C.C. : Ceramic Capacitor
Mi.C. : Mica Capacitor
O.C. : Oil Capacitor
P.C. : Polystyrene Capacitor
T.C. : Tantalum Capacitor

Parts List

Parts No.	Stock No.	Description		Position
TR801	0300470	2SC726 Ⓦ (F)		1 A, B
TR802	0300470	2SC726 Ⓦ (F)		2 B
TR803	0300470	2SC726 Ⓦ (F)		1 B
TR804	0300470	2SC726 Ⓦ (F)		2 B
TR805	0305901,2	2SC1124 (2,3)		1 B
TR806	0305901,2	2SC1124 (2,3)		2 B
TR807	0305121,2	2SC281 (C,B)	Transistor	1 B
TR808	0305121,2	2SC281 (C,B)		2 B
TR809	0305900～2	2SC1124(1,2,3)		1 B
TR810	0305900～2	2SC1124(1,2,3)		2 B
TR811	0300380～2	2SA706 (1,2,3)		1 B
TR812	0300380～2	2SA706 (1,2,3)		2 B
D801	0310880	10D05		1 A
D802	0310880	10D05	Diode	2 A
D803	0310880	10D05		1 A
D804	0310880	10D05		2 A
C801	0573109	1 µF 25V	±20% T.C.	1 A
C802	0573109	1 µF 25V		2 A
C803	0660470	47pF 50V	±10% C.C.	1 A
C804	0660470	47pF 50V		2 A
C805	0515470	47 µF 50V	E.C.	1 A
C806	0515470	47 µF 50V		2 A
C807	0531470	47 µF 10V	BP.E.C.	1 A
C808	0531470	47 µF 10V		2 A
C809	0660479	4.7pF 50V	C.C.	1 A
C810	0660479	4.7pF 50V		2 A
C811	0515470	47 µF 50V	E.C.	1 A
C812	0515470	47 µF 50V		2 A
C813	0601477	0.047 µF 50V	±10% M.C.	1 B
C814	0601477	0.047 µF 50V		2 B
C815	0660330	33pF 50V	±10% C.C.	1 B
C816	0660330	33pF 50V		2 B
C817	0515101	100 µF 50V		1 A
C818	0515101	100 µF 50V	E.C.	2 A
C819	0510221	220 µF 6.3V		1 B
C820	0510221	220 µF 6.3V		2 B
C821	0660151	150pF 50V	±10% C.C.	1 B
C822	0660151	150pF 50V		2 B
C823	0515101	100 µF 50V	E.C.	1 B
C824	0515101	100 µF 50V		2 B
R801	0107474	470kΩ		1 B
R802	0107474	470kΩ		2 B
R803	0107103	10kΩ		1 A
R804	0107103	10kΩ		2 A
R805	0107473	47kΩ		1 A
R806	0107473	47kΩ	± 5 % ¼W C.R.	2 A
R807	0107183	18kΩ		1 A
R808	0107183	18kΩ		2 A
R809	0107183	18kΩ		1 A
R810	0107183	18kΩ		2 A
R811	0107121	120Ω		1 A

Parts No.	Stock No.	Description		Position
R812	0107121	120Ω		2 A
R813	0107332	3.3kΩ		1 B
R814	0107332	3.3kΩ		2 B
R815	0107183	18kΩ		1 A
R816	0107183	18kΩ		2 A
R817	0107121	120Ω		1 A, B
R818	0107121	120Ω		2 A, B
R819	0107182	1.8kΩ		1 A
R820	0107182	1.8kΩ	± 5 % ¼W C.R.	2 A
R821	0107332	3.3kΩ		1 A
R822	0107332	3.3kΩ		2 A
R823	0107224	220kΩ		1 A
R824	0107224	220kΩ		2 A
R825	0107393	39kΩ		1 A
R826	0107393	39kΩ		2 A
R827	0107182	1.8kΩ		1 A, B
R828	0107182	1.8kΩ		2 A, B
R829	0111100	10Ω	±10% ½W S.R.	1 B
R830	0111100	10Ω		2 B
R831	0107472	4.7kΩ		1 A, B
R832	0107472	4.7kΩ		2 A, B
R833	0107332	3.3kΩ		1 B
R834	0107332	3.3kΩ		2 B
R835	0107821	820Ω		1 B
R836	0107821	820Ω		2 B
R837	0107221	220Ω		1 B
R838	0107221	220Ω		2 B
R839	0107181	180Ω		1 B
R840	0107181	180Ω		2 B
R841	0107390	39Ω	± 5 % ¼W C.R.	1 B
R842	0107390	39Ω		2 B
R843	0107151	150Ω		1 B
R844	0107151	150Ω		2 B
R845	0107221	220Ω		1 B
R846	0107221	220Ω		2 B
R847	0107221	220Ω		1 B
R848	0107221	220Ω		2 B
R851	0107100	10Ω		1 B
R852	0107100	10Ω		2 B
R853	0107100	10Ω		1 B
R854	0107100	10Ω		2 B
VR801	1031092	5kΩ (B)		1 A
VR802	1031092	5kΩ (B)	Semi-Variable	2 A
VR803	1031042	500Ω (B)	Resistor (Stand Type)	1 A, B
VR804	1031042	500Ω (B)		2 A, B

6-8. Special Parts List

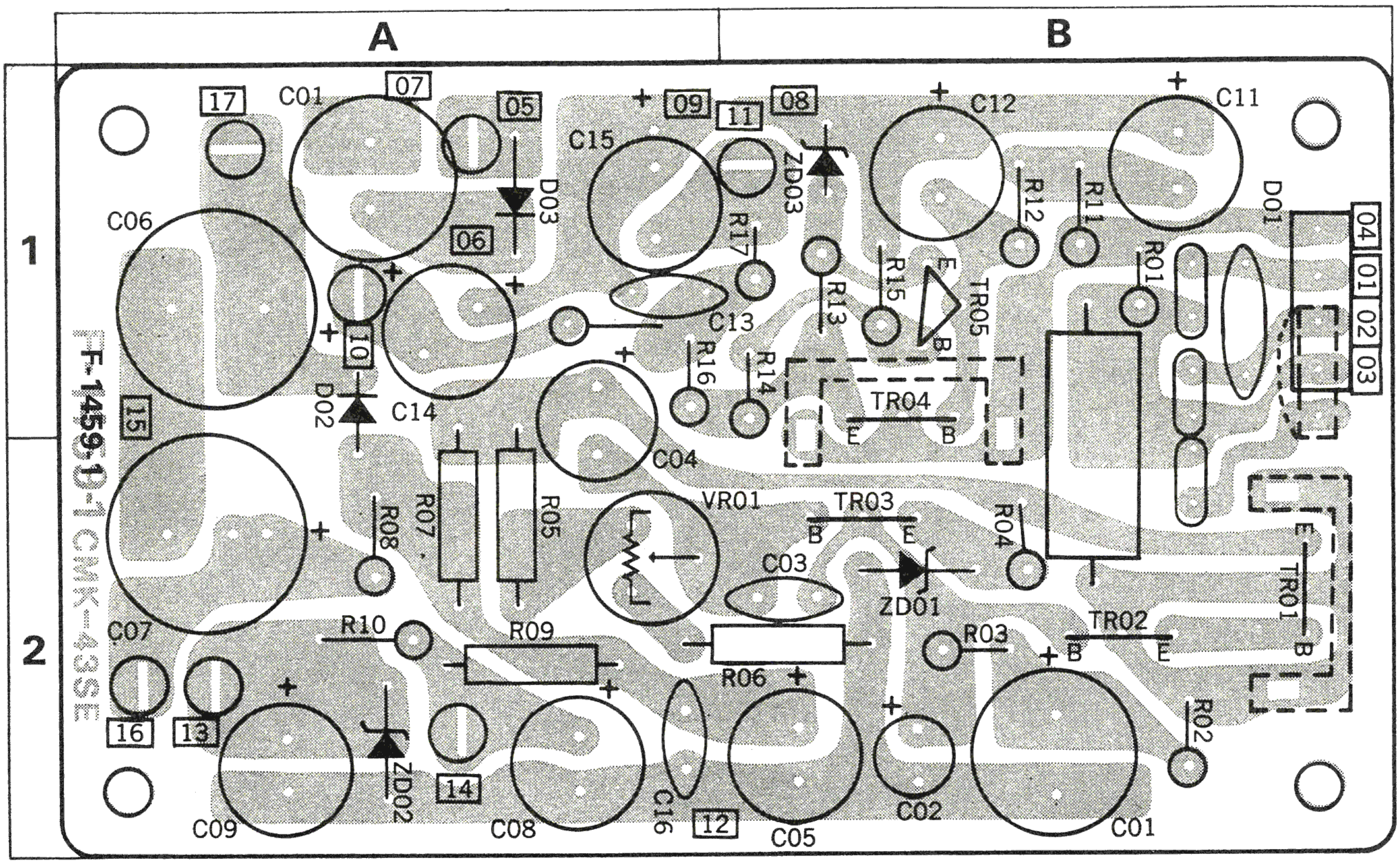
※F-2048 QS SYNTHESIZER/DECODER BLOCK-1
Stock No. 7650120 Complete Circuit Board

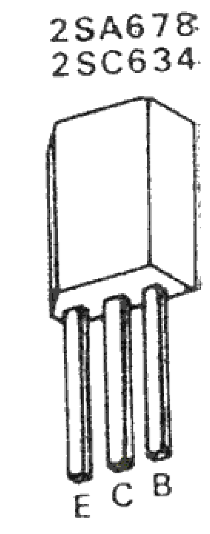
※F-2047 QS SYNTHESIZER/DECODER BLOCK-2
Stock No. 7650110 Complete Circuit Board

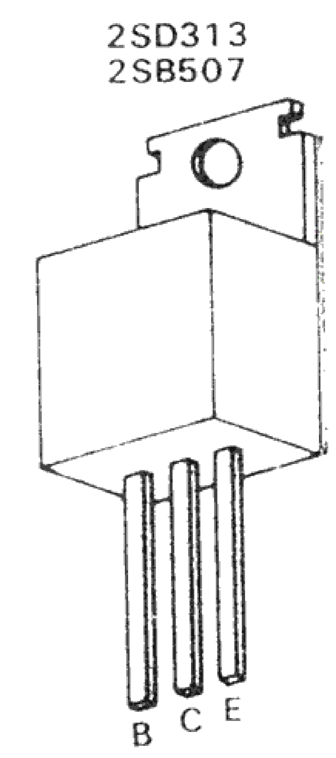
Parts List in FM Pack

TR101	0305801	2SC1047(B)	Transistor
TR102	0305790	2SC930 (C)	
FET101	0370120～2	3SK41	FET

6-9. F-1459-1 Power Supply Circuit Board (Stock No. 7500820 Complete Circuit Board F-1459-1)
Conductor Side







Parts List

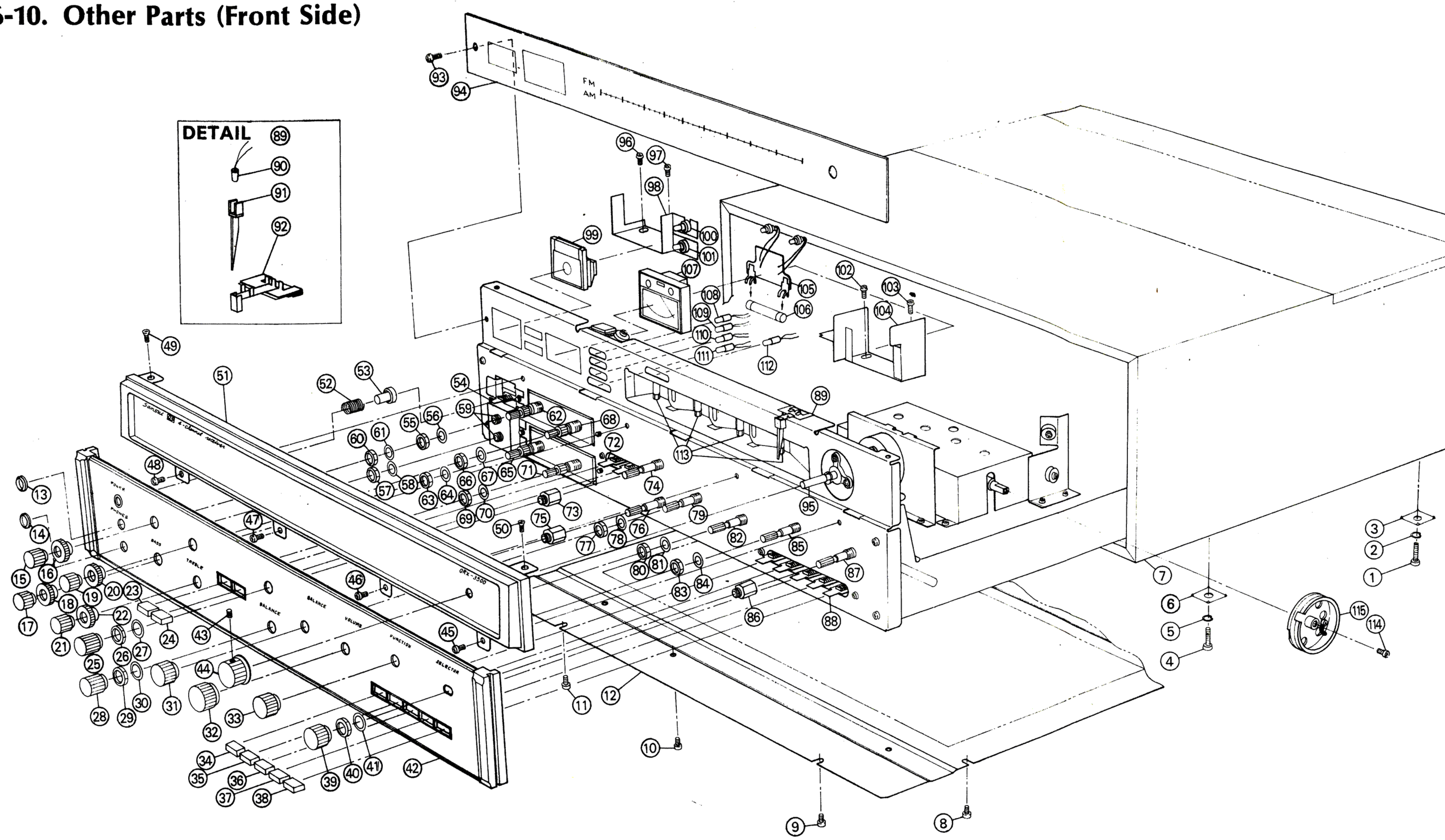
Parts No.	Stock No.	Description	Position
TR01	0308391, 2	2SD313 (D, E) Transistor	2 B
TR02	0305930	2SC1211 (C) Transistor	2 B
TR03	0305891	2SC634A (6) Transistor	2 B
TR04	0303231, 2	2SB507 (D, E) Transistor	1 B
TR05	0300291	2SA678 (6) Transistor	1 B
D01	0311070	2B2DM Diode	1 B
D02	0310340	10D-1 Diode	1, 2 A
D03	0310340	10D-1 Diode	1 A
ZD01	0315970	13V 0.5W ±10% Zener Diode	2 B
ZD02	0315970	13V 0.5W ±10% Zener Diode	2 A
ZD03	0315970	13V 0.5W ±10% Zener Diode	1 B
C01	0515101	100µF 50V ±10% E.C.	1 A 2 B
C02	0515109	1µF 50V ±10% E.C.	2 B
C03	0660101	100pF 50V ±10% C.C.	2 B
C04	0515100	10µF 50V ±10% E.C.	1, 2 A
C05	0515470	47µF 50V ±10% E.C.	2 B
C06	0513331	330µF 25V ±10% E.C.	1 A
C07	0513471	470µF 25V ±10% E.C.	2 A
C08	0513470	47µF 25V ±10% E.C.	2 A
C09	0513470	47µF 25V ±10% E.C.	2 A
C10	0511471	470µF 10V ±10% E.C.	
C11	0515470	47µF 50V ±10% E.C.	1 B
C12	0515470	47µF 50V ±10% E.C.	1 B
C13	0657223	0.022µF 50V ±10% C.C.	1 A
C14	0515470	47µF 50V ±10% E.C.	1 A
C15	0515471	470µF 50V ±10% E.C.	1 A
C16	0657223	0.022µF 50V ±10% C.C.	2 A

Parts No.	Stock No.	Description	Position
R01	0152330	33Ω ±10% 2W Ce.R.	1 B
R02	0106332	3.3kΩ ±5% ¼W C.R. (E.L.R.)	2 B
R03	0106332	3.3kΩ ±5% ¼W C.R. (E.L.R.)	2 B
R04	0106103	10kΩ ±5% ¼W C.R. (E.L.R.)	2 B
R05	0107472	4.7kΩ ±5% ¼W C.R.	1, 2 A
R06	0107562	5.6kΩ ±5% ¼W C.R.	2 A, B
R07	0111689	6.8Ω ±10% ½W S.R.	1, 2 A
R08	0111220	22Ω ±10% ½W S.R.	2 A
R09	0107150	15Ω ±5% ¼W C.R.	2 A
R10	0172271	270Ω ±10% 2W M.R.	2 A
R11	0106152	1.5kΩ ±5% ¼W C.R. (E.L.R.)	1 B
R12	0106562	5.6kΩ ±5% ¼W C.R. (E.L.R.)	1 B
R13	0106103	10kΩ ±5% ¼W C.R. (E.L.R.)	1 B
R14	0106822	8.2kΩ ±5% ¼W C.R. (E.L.R.)	1 B
R15	0106472	4.7kΩ ±5% ¼W C.R. (E.L.R.)	1 B
R16	0106220	22Ω ±5% ¼W C.R. (E.L.R.)	1 A
R17	0106151	150Ω ±5% ¼W C.R. (E.L.R.)	1 B
R18	0172271	270Ω ±10% 2W M.R.	
VR01	1035100	3.3kΩ (B) Semi-Variable Resistor (Solid Type)	2 A

Abbreviations

C.R.	Carbon Resistor	BP.E.C.	Bi-Pola 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

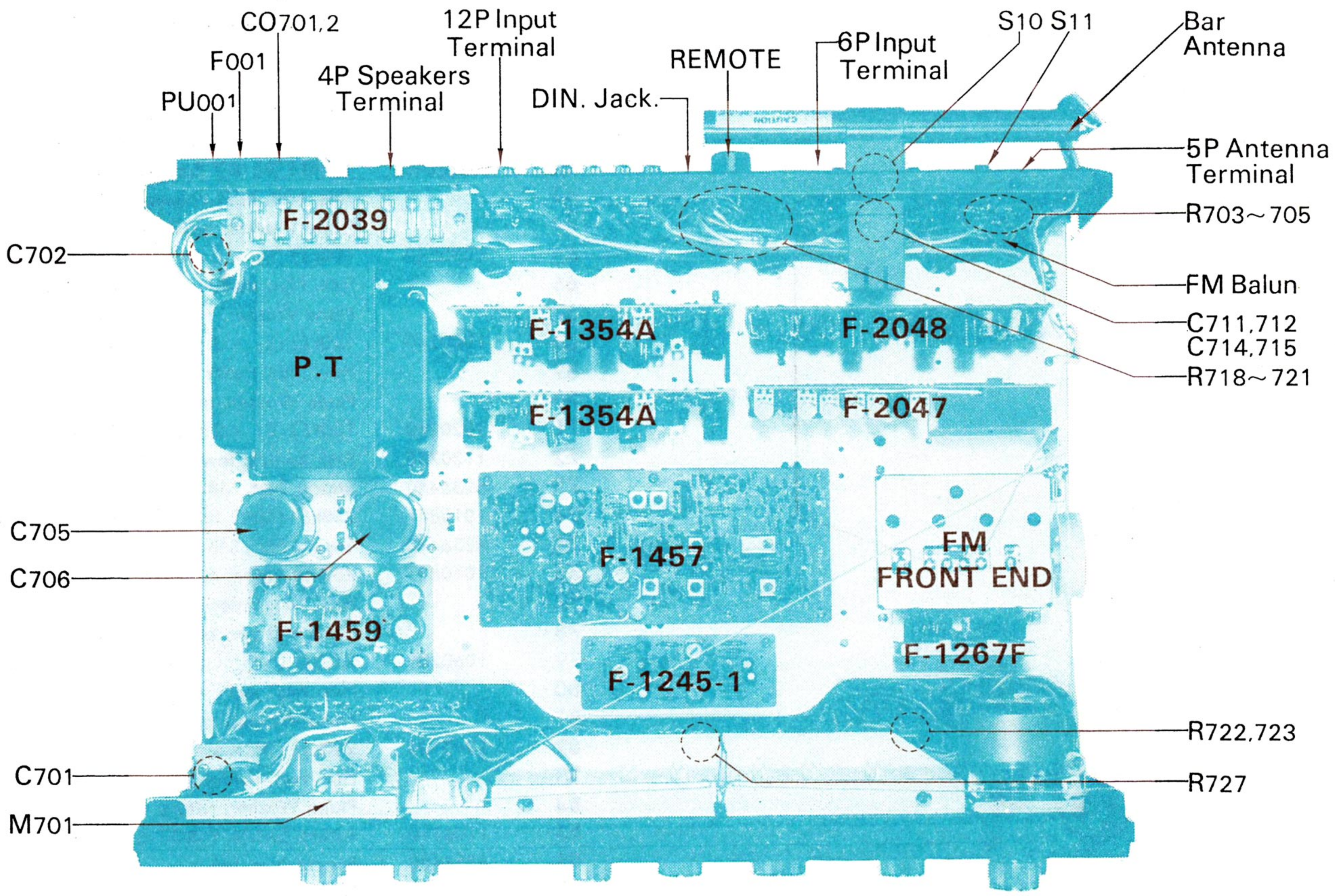
6-10. Other Parts (Front Side)



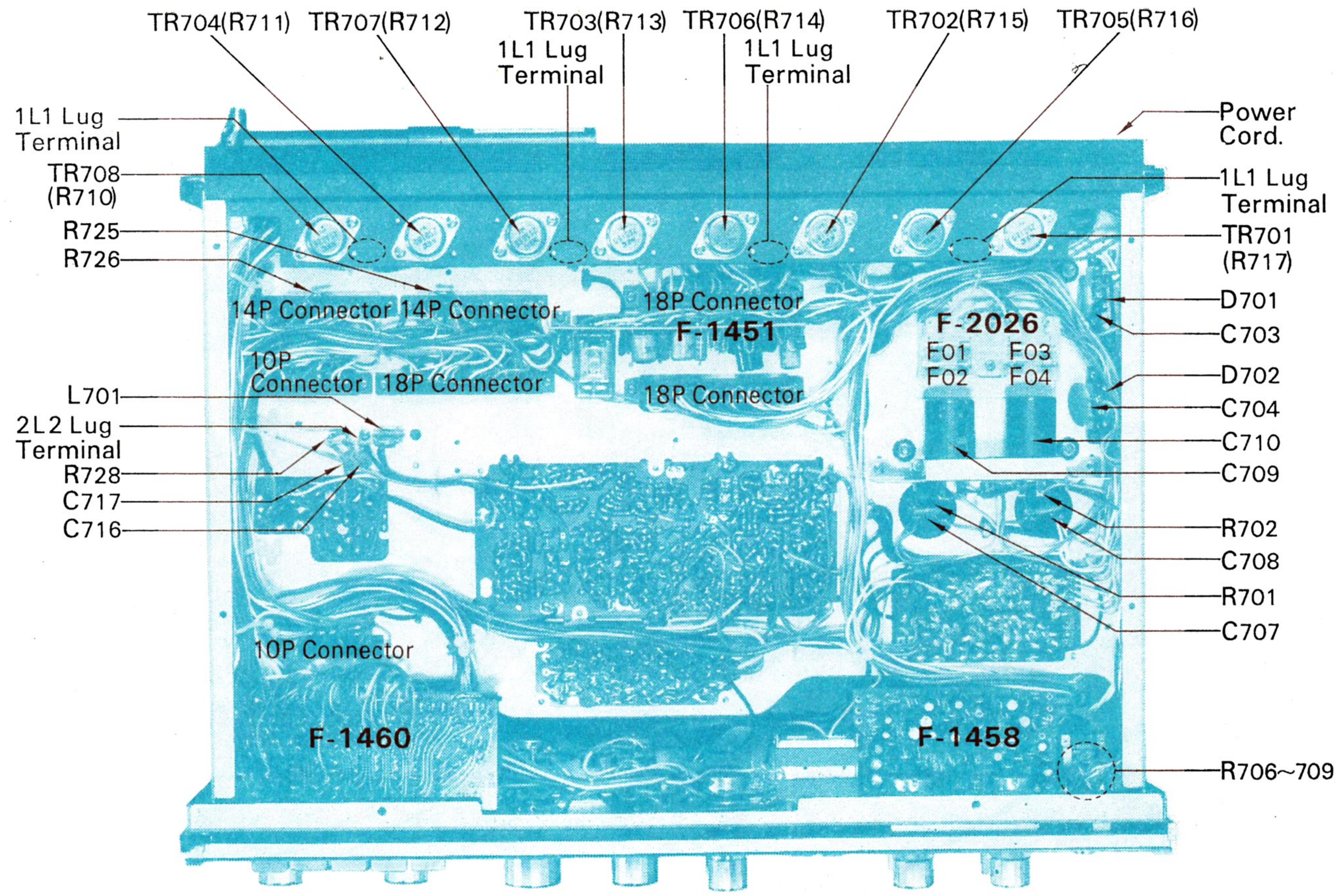
Parts List

Parts No.	Stock No.	Description
1	5104571	Hexagon Head Bolt, M4×23
2	5121260	Spring Washer, 4φ
3	5186091	Washer (with nail)
4	5104571	Hexagon Head Bolt, M4×23
5	5121260	Spring Washer, 4φ
6	5186091	Washer (with nail)
7	5726773	Wood Case
8	5101161	Binding Head Screw, M4×6
9	5101161	Binding Head Screw, M4×6
10	5101161	Binding Head Screw, M4×6
11	5101161	Binding Head Screw, M4×6
12	5058011	Bottom Plate
13	5176052	Hex. Nut, headphones
14	5176052	Hex. Nut, headphones
15	5317671	WO-1 Type Knob, bass
16	5317682	WI-1 Type Knob, bass
17	5317671	WO-1 Type Knob, bass
18	5317682	WI-1 Type Knob, bass
19	5317671	WO-1 Type Knob, treble
20	5317682	WI-1 Type Knob, treble
21	5317671	WO-1 Type Knob, treble
22	5317682	WI-1 Type Knob, treble
23	5326380	Button, low filter
24	5326380	Button, high filter
25	5317651	S-2 Type Knob, balance
26	5110781	Hex. Nut, balance M9
27	5120184	Plane Washer, balance 9φ
28	5317651	S-2 Type Knob, balance
29	5110781	Hex. Nut, balance M9
30	5120184	Plane Washer, balance 9φ
31	5317642	M-2 Type Knob, balance
32	5317632	L-2 Type Knob, volume
33	5317642	M-2 Type Knob, function
34	5326380	Button, loudness
35	5326380	Button, tape monitor 2-ch
36	5326380	Button, tape monitor 4-ch-1
37	5326380	Button, tape monitor 4-ch-2
38	5326380	Button, muting
39	5317642	M-2 Type Knob, selector
40	5110781	Hex. Nut, selector
41	5120184	Plane Washer, selector 9φ
42	7006871	Front Panel
43	5106061	Hex Socket Setscrew, M4×6
44	5317780	N-5 Type Knob, tuning
45	5101143	Binding Head Screw, M3×6
46	5101143	Binding Head Screw, M3×6
47	5101143	Binding Head Screw, M3×6
48	5101143	Binding Head Screw, M3×6
49	5101143	Binding Head Screw, M3×6
50	5101143	Binding Head Screw, M3×6
51	5308700	Smoked Plate Frame
	5047621	Smoked Plate
52	6906031	Spring, power switch
53	7106083	Button A (power)
54	1130350	Push Switch, power (UEH 12 CK)
55		Hex. Nut, headphone jack M12
56		Plane Washer, 12φ
57		Hex. Nut, headphone jack M12
58		Plane Washer, 12φ
59	2430210	Jack, headphones
60		Hex. Nut, bass volume M11
61		Plane Washer, bass volume 11φ
62	1020240	100kΩ (B) ×2 Bass Volume, front
63		Hex. Nut, bass volume M11
64		Plane Washer, bass volume 11φ
65	1020240	100kΩ (B) ×2 Bass Volume, rear
66		Hex. Nut, treble volume M11
67		Plane Washer, treble volume 11φ
68	1020240	100kΩ (B) ×2 Treble Volume, front
69		Hex. Nut, treble volume M11
70		Plane Washer, treble volume, 11φ
71	1020240	100kΩ (B) ×2 Treble Volume, rear
72	1130700	Push Switch, low high filter
73	5236450	Spacer Nut, M8
74	1010881	250kΩ (MN) ×2 Balance Volume, front
75	5236450	Spacer Nut, M8
76	1010881	250kΩ (MN) ×2 Balance Volume, rear
77		Hex. Nut, balance volume M8
78		Plane Washer, balance volume 8φ
79	1060200	250kΩ (MN)×4 Barance Volume, right. left
80		Hex. Nut, main volume M8
81		Plane Washer, main volume 8φ
82	1060120	250kΩ (B) ×4 Main Volume
83		Hex. Nut, rotary switch
84		Plane Washer, rotary switch
85	1106110	Rotary Switch Y-6-17-6
86	5236480	Spacer Nut, M9
87	1106100	Rotary Switch Y-6-14-6
88	1130690	Push Switch, tape monitor
89		Dial Pointer Ass'y
90	0400200	Pilot Lamp, lead type (6.3V 75mA)
91	5416311	Dial Pointer
92	5416300	Holder, dial pointer
93	5109222	Binding Head Tapping Screw, M3×8
94	5407430	Dial Scale
95	7036330	Tuning Ass'y
96	5109122	Binding Head Screw, M3×8
97	5109122	Binding Head Screw, M3×8
98	5269041	Holder, digital indicator
99	7726030	Digital Indicator Ass'y
100	0400155	Lead Type Lamp, digital indicator(7V 160mA
101	0400154	Lead Type Lamp, digital indicator(7V 160mA)
102	5109122	Binding Head Screw, M3×8
103	5109122	Binding Head Screw, M3×8
104		Holder, tuning meter
105	7726050	Tuning Meter Lamp Unit A
106	0420040	Fuse Type Lamp (7V 300mA)
107	4300610	Tuning Meter
108	0400141	Lead Type Lamp, PHONO indicator (7V 160mA)
109	0400154	Lead Type Lamp, FM indicator (7V 160mA)
110	0400155	Lead Type Lamp, AM indicator (7V 160mA)
111	0400153	Lead Type Lamp, AUX indicator (7V 160mA)
112	0400110	Lead Type Lamp, FM STEREO indicator (6V 30mA)
113	0420040	Fuse Type Lamp (7V 300mA)
114	5101123	Binding Head Screw, M2.6×6
115	6146590	Dial Pully

6-11. Other Parts (Top Side)



6-12. Other Parts (Bottom Side)



Top Side Parts List

Parts No.	Stock No.	Description
	7510560	FM Front End Pack
C701	0659801	0.01μF 150V C.C.
C702	0659801	0.01μF 150V C.C.
C705	0559106	6800pF 35V E.C.
C706	0559106	6800pF 35V E.C.
C711	0640821	820pF 100V Mi. C.
C712	0640821	820pF 100V Mi. C.
C714	0657473	0.047μF 50V
C715	0657473	0.047μF 50V
R703	0107681	680Ω ±5% ¼W C.R.
R704	0107680	68Ω ±5% ¼W C.R.
R705	0107562	5.6kΩ ±5% ¼W C.R.
R718	0107104	100kΩ ±5% ¼W C.R.
R719	0107394	390kΩ ±5% ¼W C.R.
R720	0107394	390kΩ ±5% ¼W C.R.
R721	0107104	100kΩ ±5% ¼W C.R.
R722	0107474	470kΩ ±5% ¼W C.R.
R723	0107474	470kΩ ±5% ¼W C.R.
R727	0107180	18Ω ±5% ¼W C.R.
F001	0431280	5A Power Fuse (100~127V)
F001	0431260	3A Power Fuse (220~240V)
F001	2300060	Power Fuse Holder

Parts No.	Stock No.	Description
S10	1110040	Slide Switch
S11	1110040	Slide Switch
PU001	2410080	Voltage Selector, socket
PU001	2410090	Voltage Selector, plug
M701	4300060	Signal Meter
CO701,2	2450040	AC Outlet
	4290021	75Ω: 300Ω FM Balun
	4200550	AM Bar Antenna
	2430040	DIN Jack
	4001310	Power Transformer
	2410540	9P Dummy Plug (REMOTE)
	2290100	4P Speakers Terminal
	2290110	5P Antenna Terminal
	2200330	6P Input Terminal
	2200360	12P Input Terminal

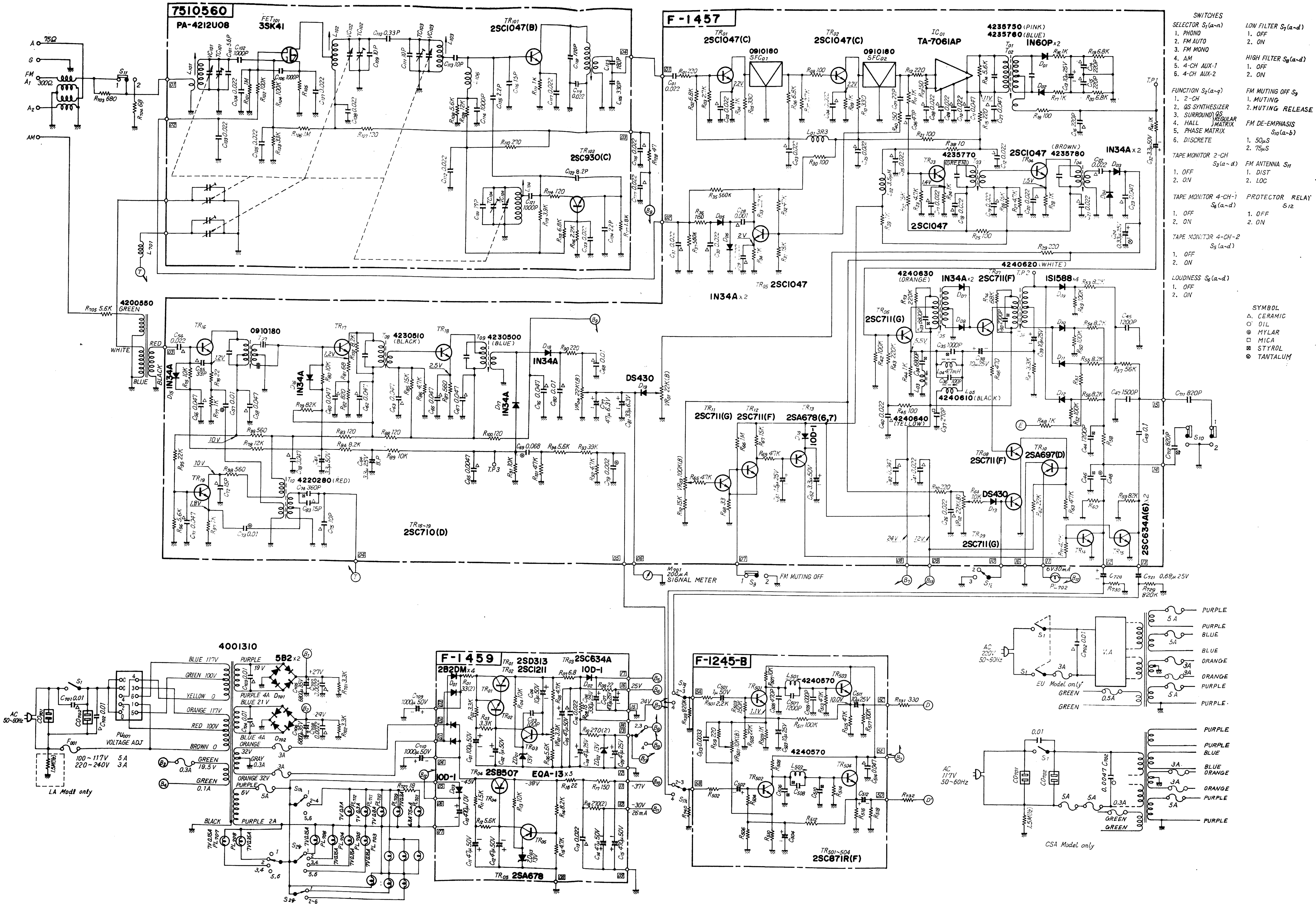
Bottom Side Parts List

Parts No.	Stock No.	Description
TR701	0308061,2	2SD180 (L, M) Transistor
TR702	0308061,2	2SD180 (L, M) Transistor
TR703	0308061,2	2SD180 (L, M) Transistor
TR704	0308061,2	2SD180 (L, M) Transistor
TR705	0300540,1	2SA626 (L, M) Transistor
TR706	0300540,1	2SA626 (L, M) Transistor
TR707	0300540,1	2SA626 (L, M) Transistor
TR708	0300540,1	2SA626 (L, M) Transistor
D701	0310660	5B2 Diode
D702	0310660	5B2 Diode
L701	4290011	3.5μH Peaking Coil
C703	0659801	0.01μF 150V C.C.
C704	0659801	0.01μF 150V C.C.
C707	0659803	0.0022μF 150V C.C.
C708	0659803	0.0022μF 150V C.C.
C709	0559302	1000μF 50V E.C.
C710	0559302	1000μF 50V E.C.
C716	0657223	0.022μF 50V C.C.
C717	0657223	0.022μF 50V C.C.
R701	0104332	3.3kΩ ±5% ¼% C.R.
R702	0104332	3.3kΩ ±5% ¼% C.R.
R706	0171331	330Ω 1W M.R.
R707	0171331	330Ω 1W M.R.
R708	0171331	330Ω 1W M.R.
R709	0171331	330Ω 1W M.R.

Parts No.	Stock No.	Description
R710	0152478	0.47Ω 2W Ce. R.
R711	0152478	0.47Ω 2W Ce. R.
R712	0152478	0.47Ω 2W Ce. R.
R713	0152478	0.47Ω 2W Ce. R.
R714	0152478	0.47Ω 2W Ce. R.
R715	0152478	0.47Ω 2W Ce. R.
R716	0152478	0.47Ω 2W Ce. R.
R717	0152478	0.47Ω 2W Ce. R.
R725	0107104	100kΩ ±5% ¼W C.R.
R726	0107104	100kΩ ±5% ¼W C.R.
R728	0107470	47Ω ±5% ¼W C.R.
F01	0432900	Wired-in Fuse (5A 250V)
F02	0432871	Wired-in Fuse (3A 250V)
F03	0432871	Wired-in Fuse (3A 250V)
F04	0432801	Wired-in Fuse (0.3A 250V)
	3800020	Power Cord KP-200
	2420020	18P Multi Connector
	2420040	14P Multi Connector
	2420030	10P Multi Connector
	2110070	2L2 Lug Terminal
	2110060	1L1 Lug Terminal

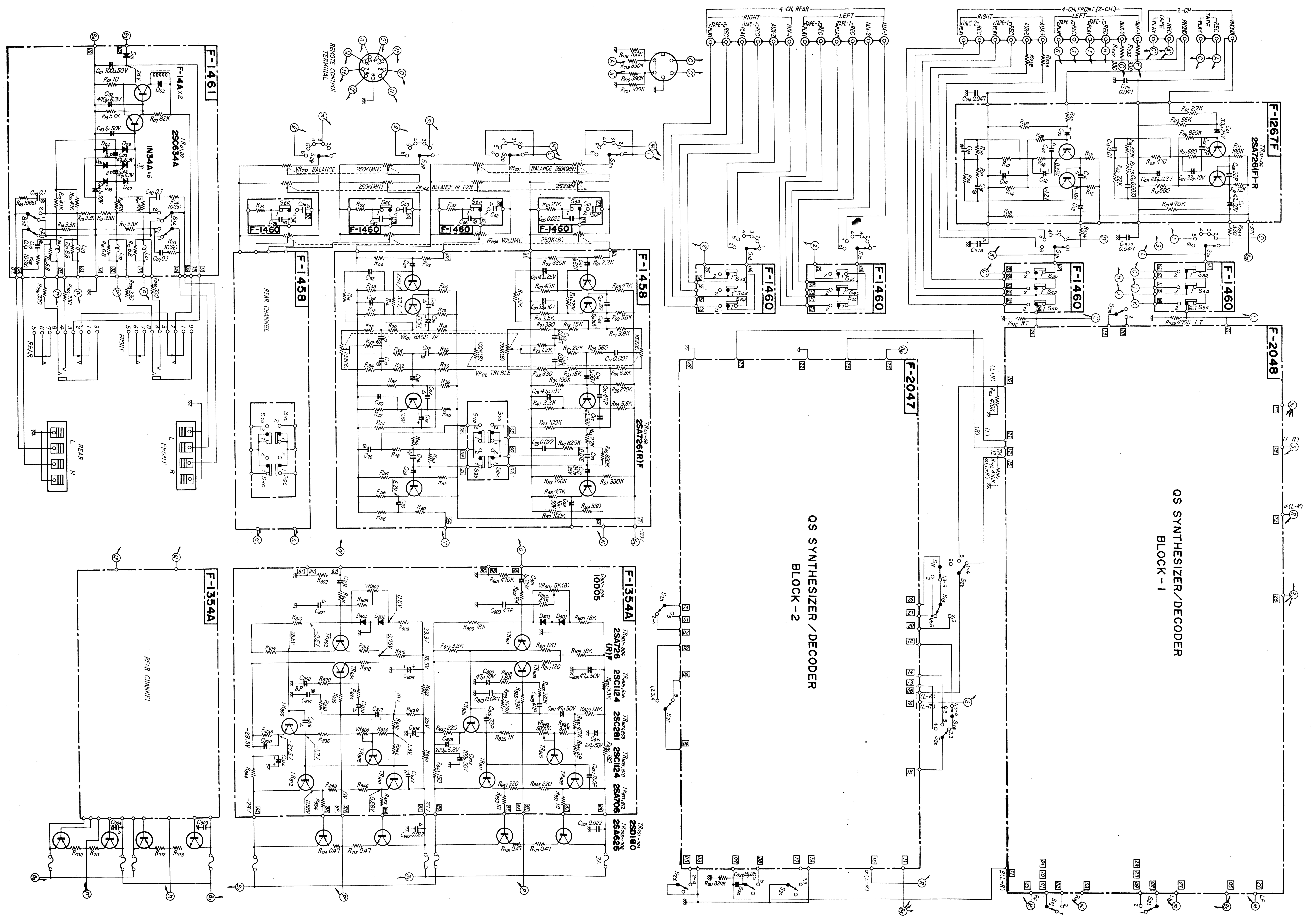
7. SCHEMATIC DIAGRAM OF TUNER SECTION

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



8. SCHEMATIC DIAGRAM OF AUDIO SECTION

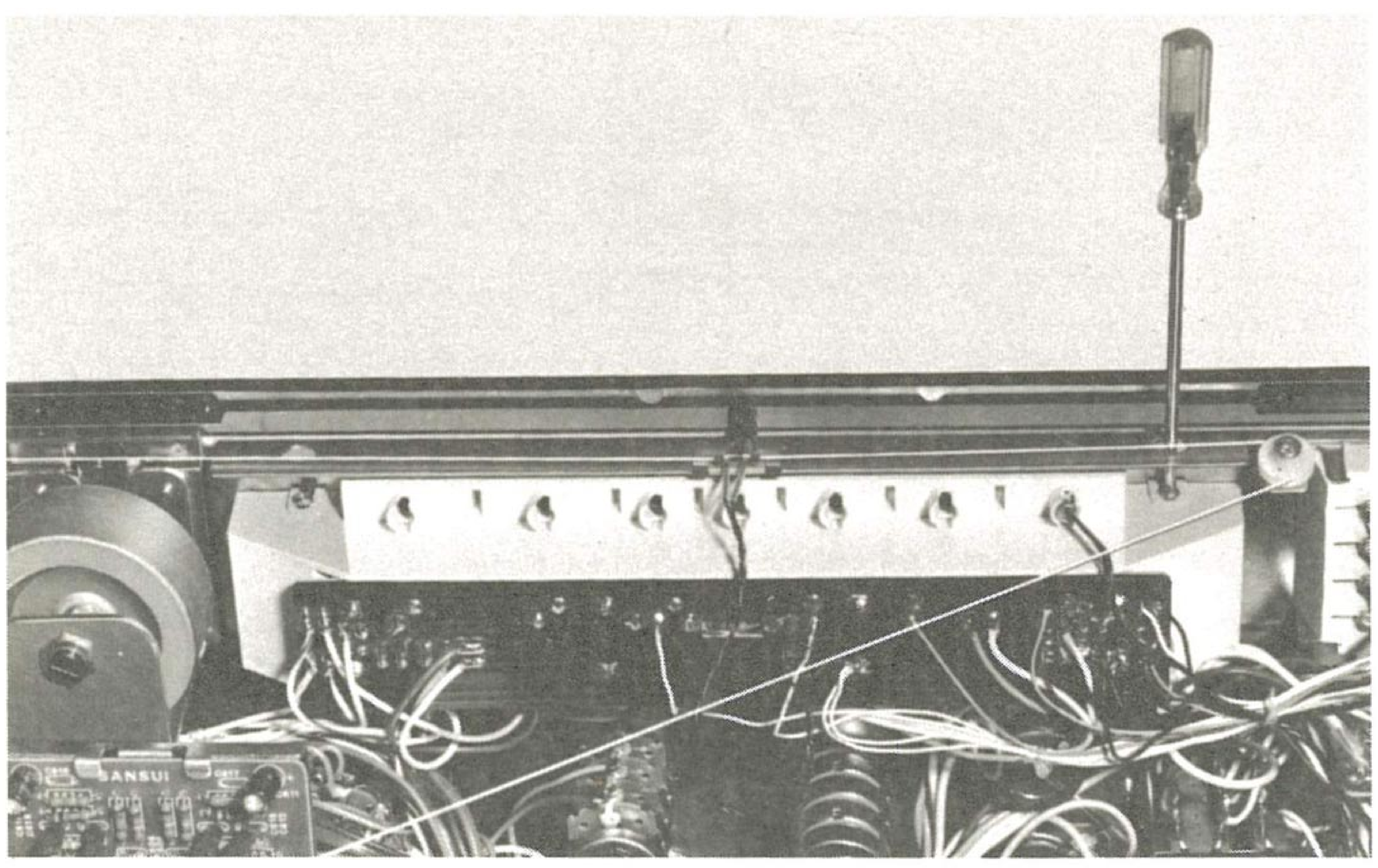
* Design and specifications subject to change without notice for improvements.



9. REPLACEMENT OF MAIN PARTS

1. Dial Lamp

1) Remove wood case.
2) Insert a screwdriver into hole on upper side of back panel and loosen two screws, then remove reflector box.
3) Remove defective lamp.
4) Replace the lamp with same type of 7 V 300mA Fuse Type Lamp.



2. Dial Plate

1) Remove wood case.
2) Remove all knobs and nuts on front panel.
3) Remove dial pointer ass'y.
4) Remove screws fixing front left side of dial plate. Peel off the dial plate by removing double face tape on back upper and lower sides of dial plate.
5) Stick double face tape on back of a new dial plate and attach.
6) For attachment of dial pointer, see Fig. 4-6 on page 12.
7) After replacement, confirm Dial Calibration certainly. If any miscalibration exists, recheck attachment of dial plate and proceed the dial calibration adjustment (see page 8 for FM and page 10 for AM).

3. Power Transistor

1) Remove wood case and bottom plate.
2) Remove defective power transistor.
3) As silicon grease is applied on mica insulator and easy to catch solder scraps and so on, please handle with care.
4) When new mica insulator is used, apply silicon grease certainly.

10. MAINTENANCE

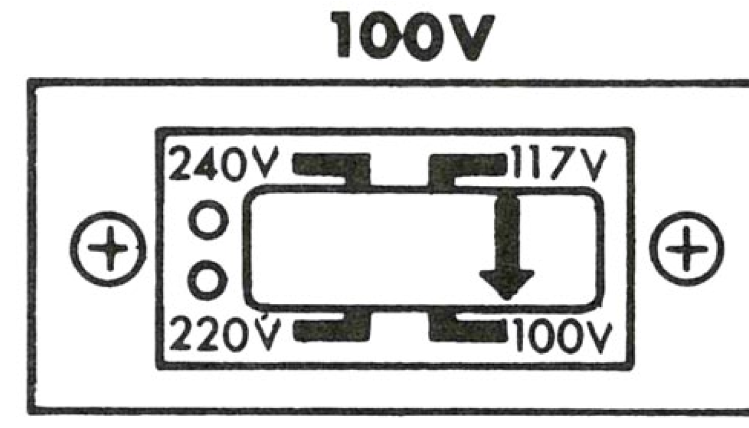
1. Voltage Adjustment

The voltage Selector on the rear panel enables you to operate at correct voltage in any areas. The voltage has been preadjusted at the factory, but can be easily changed as follows.

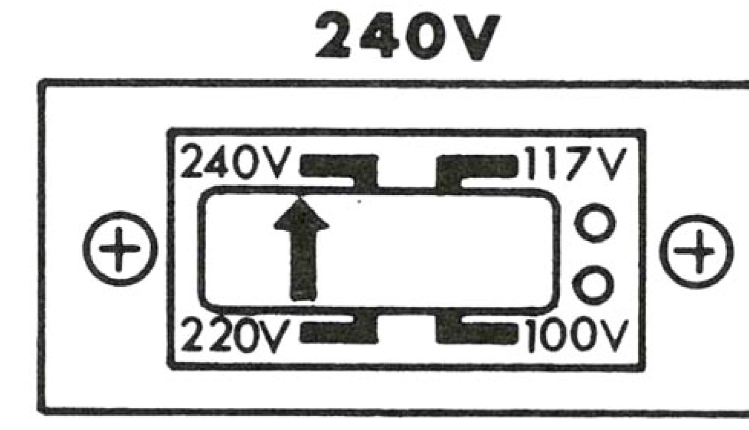
1) Remove the two screws securing the name plate on the unit's rear panel, then remove the name plate.
2) Unplug the Voltage Selector plug once, and reset it so that the arrow mark on it faces the correct voltage indication. Also change the power fuse when the power supply voltage has changed. For 100/117 volt operation, use a 5-ampere glass-tubed fuse. For 220/240 volt operation, use a 3-ampere one.

Note: The Voltage Selector can be used to eliminate the trouble caused by the considerable voltage fluctuation. In this case, it should be set to the peak voltage.

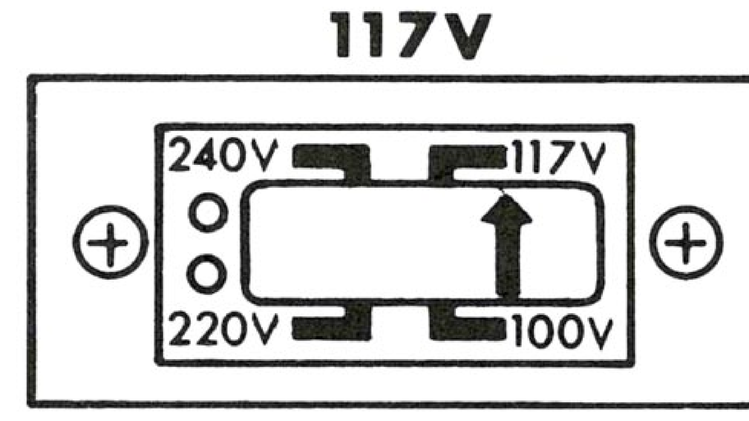
100V



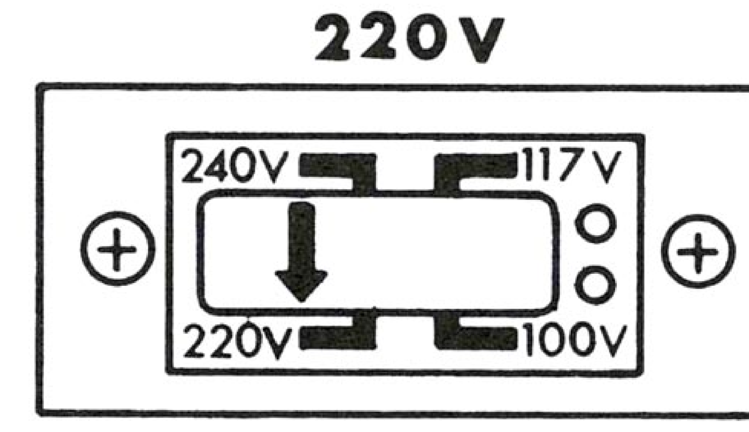
240V



117V



220V



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