SERVICE MANUAL

PURE POWER DC STEREO RECEIVER

SANSUI G-8000/801
G-9000/901

Sansui

SANSUI ELECTRIC CO., LTD.

SPECIFICATIONS

<G-8000/801>

Audio section

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.
120 watts per channel into 8 ohms
120 watts per channel into 4 ohms
Load impedance . . . . . 4 and 8 ohms
Total harmonic distortion
. . . . . less than 0.03% at or below rated min. RMS power output
Intermodulation distortion (70 Hz : 7 kHz = 4:1 SMPTE method) . . . . . less than 0.03% at rated power output
Frequency response (at 1 watt)
Overall (from AUX) . 5 to 50,000 Hz, +0.2 dB, −1.5 dB
POWER AMP IN . . . DC to 200 kHz, +0 dB, −3.0 dB
RIAA curve deviation (PHONO, 20 Hz to 20 kHz)
. . . . . +0.2 dB, −0.2 dB
Damping factor (20 Hz to 20 kHz, both channels driven)
. . . . . 60 into 8 ohms
Input sensitivity and impedance (at 1 kHz)
PHONO-1, 2 . . . . . 2.5 mV/47 kilohms
(Max. input capability: 240 mV at 1 kHz, less than 0.03% total harmonic distortion.)
MIC . . . . . 6 mV/10 kilohms
TAPE-1, 2 PLAY, AUX
. . . . . 150 mV/47 kilohms
Output level (at 1 kHz)
TAPE-1, 2 REC (pin jacks)
. . . . . 150 mV
TAPE-2 REC/PLAY (DIN socket)
. . . . . 43 mV
PRE AMP OUT . . . . 1.0 V
Hum and noise (short-circuit, A-network)
PHONO-1, 2 . . . . . 78 dB
TAPE-1, 2 PLAY, AUX
. . . . . 95 dB
Channel separation (at 1 kHz)
PHONO-1, 2 . . . . . 60 dB
TAPE-1, 2 PLAY, AUX
. . . . . 70 dB
Controls
BASS . . . . . ±10 dB at 50 Hz
MIDRANGE . . . . . ±5 dB at 1.5 kHz
TREBLE . . . . . ±10 dB at 10 kHz
SUBSONIC FILTER . −3 dB at 16 Hz (6 dB/oct)
HIGH FILTER . . . . −3 dB at 3 kHz (6 dB/oct)
LOUDNESS (VOLUME control: −30 dB position)
. . . . . 8 dB at 50 Hz
6 dB at 10 kHz
AUDIO MUTING . . −20 dB

FM section

Tuning range . . . . . 88 to 108 MHz
Usable sensitivity
Mono IHF . . . . . 9.3 dBf (1.6 μV)
DIN . . . . . 1.0 μV
Stereo IHF . . . . . 15.5 dBf
50 dB quieting sensitivity
Mono . . . . . 13.0 dBf
Stereo . . . . . 35.0 dBf
Signal to noise ratio (at 65 dBf)
Mono . . . . . 79 dB
Stereo . . . . . 75 dB
Distortion (at 65 dBf)
Mono . . . . . less than 0.07% at 100 Hz
less than 0.07% at 1,000 Hz
less than 0.1% at 6,000 Hz
Stereo . . . . . less than 0.12% at 100 Hz
less than 0.09% at 1,000 Hz
less than 0.1% at 6,000 Hz
Alternate channel selectivity (at 400 kHz)
. . . . . 80 dB
Capture ratio . . . . . 1.0 dB
Image response ratio . . . 95 dB
Spurious response ratio . 95 dB
IF response ratio . . . . . 100 dB
Stereo separation . . . . . 40 dB at 100 Hz
45 dB at 1,000 Hz
35 dB at 10,000 Hz
30 dB from 30 to 15,000 Hz
Frequency response . . . 30 to 15,000 Hz
+0.2 dB, −1.0 dB
Hum and noise (at 65 dBf)
. . . . . 75 dB
Antenna input impedance
. . . . . 300 ohms balanced
75 ohms unbalanced

To be continued

≪G-8000/801≫

AM section

Tuning range . . . . . 530 to 1,600 kHz
Usable sensitivity (bar antenna)
. . . . . 50 dB/m (300 μV/m)
Selectivity (±10 kHz) . . 30 dB
Signal to noise ratio . . . 50 dB
Distortion (at 30% Modulation, 80 dB/m)
. . . . . less than 0.5%

Others

Power requirements
Power voltage . . . . . 100, 120, 220, 240 V (50/60 Hz)
Power consumption
Rated consumption. 560 watts 630 VA
Dimensions . . . . . 560 mm (22-1/16") W
201 mm (7-15/16") H
475 mm (18-3/8") D
Weight . . . . . 24.6 kg (54.2 lbs) net
27.4 kg (60.4 lbs) packed

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

≪G-9000/901≫

Audio section

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.
160 watts per channel into 8 ohms
160 watts per channel into 4 ohms
Load impedance . . . . . 4 and 8 ohms
Total harmonic distortion
. . . . . less than 0.03% at or below rated min. RMS power output
Intermodulation distortion (70 Hz : 7 kHz = 4:1 SMPTE method) . . . . . less than 0.03% at rated power output
Frequency response (at 1 watt)
Overall (from AUX) . 5 to 50,000 Hz, +0.2 dB, −1.5 dB
POWER AMP IN . . . DC to 200 kHz, +0 dB, −3.0 dB
RIAA curve deviation (PHONO, 20 Hz to 20 kHz)
. . . . . +0.2 dB, −0.2 dB
Damping factor (20 Hz to 20 kHz, both channels driven)
. . . . . 60 into 8 ohms
Input sensitivity and impedance (at 1 kHz)
PHONO-1, 2 . . . . . 2.5 mV/47 kilohms
(Max. input capability: 330 mV at 1 kHz, less than 0.03% total harmonic distortion.)
MIC . . . . . 6 mV/10 kilohms
TAPE-1, 2 PLAY, AUX
. . . . . 150 mV/47 kilohms
Output level (at 1 kHz)
TAPE-1, 2 REC (pin jacks)
. . . . . 150 mV
TAPE-2 REC/PLAY (DIN socket)
. . . . . 43 mV
PRE AMP OUT . . . . 1.0 V
Hum and noise (short-circuit, A-network)
PHONO-1, 2 . . . . . 78 dB
TAPE-1, 2 PLAY, AUX
. . . . . 95 dB
Channel separation (at 1 kHz)
PHONO-1, 2 . . . . . 60 dB
TAPE-1, 2 PLAY, AUX
. . . . . 70 dB
Controls
BASS . . . . . ±10 dB at 50 Hz (BASS TURNOVER at 400 Hz)
Tone selector . . . . 200, 400 Hz
MIDRANGE . . . . . ±5 dB at 1.5 kHz
TREBLE . . . . . ±10 dB at 10 kHz (TREBLE TURNOVER at 1.5 kHz)
Tone selector . . . . 1.5, 3 kHz
SUBSONIC FILTER . −3 dB at 16 Hz (6 dB/oct)
HIGH FILTER . . . . −3 dB at 3 kHz (6 dB/oct)
LOUDNESS (VOLUME control: −30 dB position)
. . . . . 8 dB at 50 Hz
6 dB at 10 kHz
AUDIO MUTING . . −20 dB

FM section

Tuning range . . . . . 88 to 108 MHz
Usable sensitivity
Mono IHF . . . . . 8.7 dBf (1.5 μV)
DIN . . . . . 0.9 μV
Stereo IHF . . . . . 15.0 dBf
50 dB quieting sensitivity
Mono . . . . . 12.5 dBf
Stereo . . . . . 34.0 dBf
Signal to noise ratio (at 65 dBf)
Mono . . . . . 80 dB
Stereo . . . . . 76 dB
Distortion (at 65 dBf)
Mono . . . . . less than 0.06% at 100 Hz
less than 0.06% at 1,000 Hz
less than 0.08% at 6,000 Hz
Stereo . . . . . less than 0.1% at 100 Hz
less than 0.08% at 1,000 Hz
less than 0.1% at 6,000 Hz
Alternate channel selectivity (at 400 kHz)
WIDE . . . . . 55 dB
NARROW . . . . . 90 dB
Capture ratio . . . . . 0.9 dB
Image response ratio . . . 110 dB
Spurious response ratio . 110 dB
IF response ratio . . . . . 110 dB
Stereo separation . . . . . 40 dB at 100 Hz
50 dB at 1,000 Hz
40 dB at 10,000 Hz
30 dB from 30 to 15,000 Hz
Frequency response . . . 30 to 15,000 Hz
+0.2 dB, −1.0 dB
Hum and noise (at 65 dBf)
. . . . . 76 dB
Antenna input impedance
. . . . . 300 ohms balanced
75 ohms unbalanced

AM section

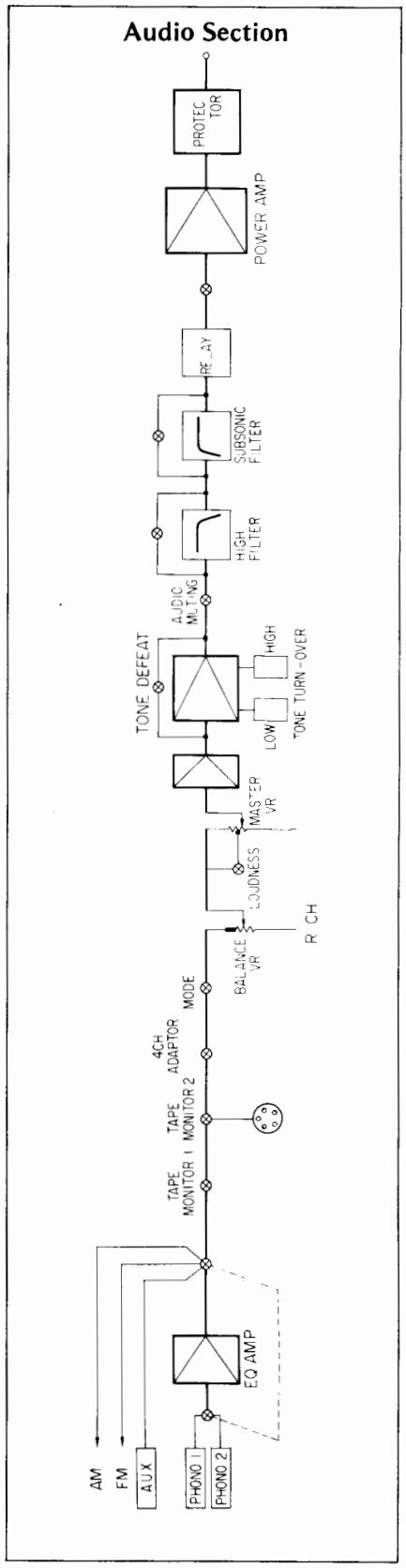
Tuning range . . . . . 530 to 1,600 kHz
Usable sensitivity (bar antenna)
. . . . . 50 dB/m (300 μV/m)
Selectivity (±10 kHz) . . 30 dB
Signal to noise ratio . . . 50 dB
Distortion (at 30% Modulation, 80 dB/m)
. . . . . less than 0.45%
Image response ratio . . . 70 dB at 1,000 kHz
IF response ratio . . . . . 70 dB at 1,000 kHz

Others

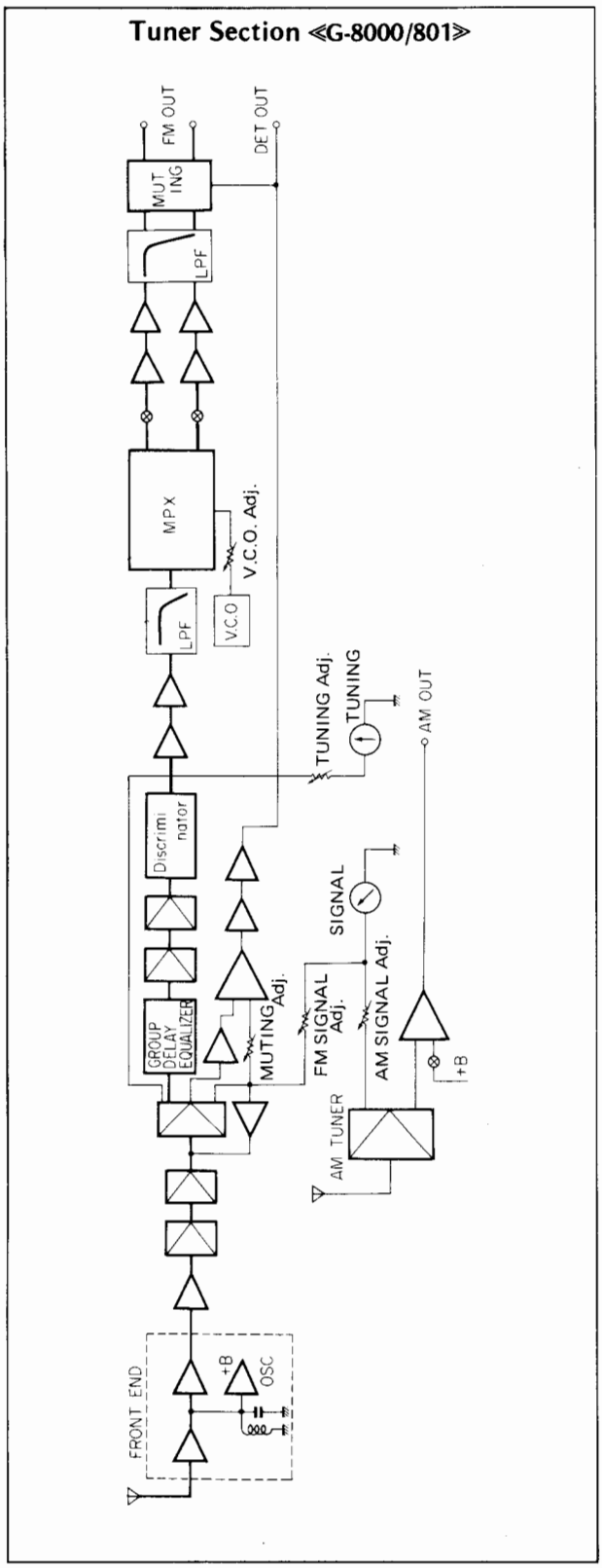
Power requirements
Power voltage . . . . . 100, 120, 220, 240 V (50/60 Hz)
Power consumption
Rated consumption. 680 watts 880 VA
Dimensions . . . . . 560 mm (22-1/16") W
201 mm (7-15/16") H
495 mm (19-1/2") D
Weight . . . . . 26.9 kg (59.3 lbs) net
29.7 kg (65.5 lbs) packed

Design and specifications subject to change without notice for improvements.

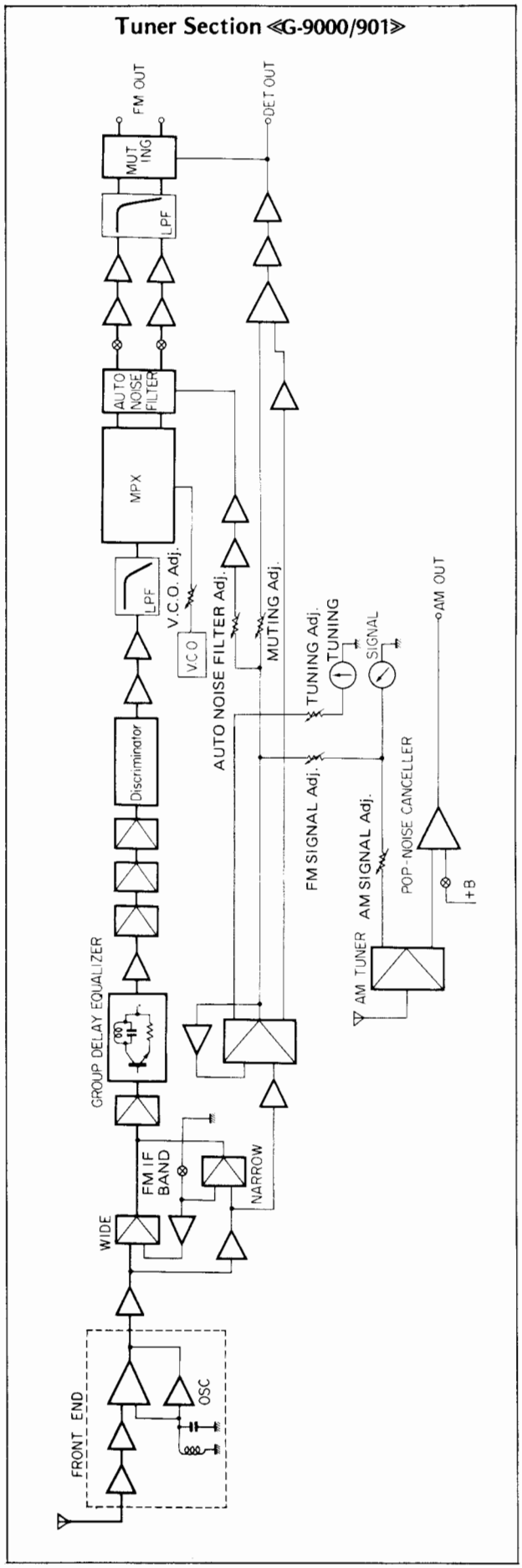
1. BLOCK DIAGRAM



Tuner Section ≪G-8000/801≫



Tuner Section ≪G-9000/901≫



2. ADVANTAGES

1. FM AUTO NOISE FILTER

This circuit is provided the function of high-cut filter to ordinary high-blend function and also is operated by monaural signal in proportion to the electric field intensity. As proportional signal to input is supplied to TR26, this transistor controls the current flowing to TR27 and photo-coupler. (Fig. 2-3)

The characteristic of photo-coupler is that the resistance of Cd cell is changed by the current flowing to photo-diode in Photo-coupler as shown in Fig. 2-1.

High-blend amount is determined by the time constant defined by this change of Cd cell resistance value, C103, and C104. (Fig. 2-3)

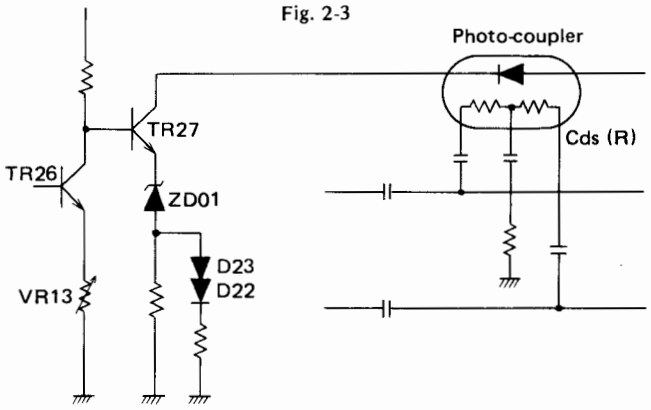
In high electric field intensity, the current flowing to photo coupler becomes low that Cds cell indicates high resistance value not to perform the high-blend function.

In low electric field intensity, the current flowing photo coupler becomes increased that Cd cell indicates low resistance value, therefore, the blend amount at high frequency range is increased and S/N ratio is improved.

The relations of input electric field intensity, the current flowing photo-coupler, and separation are indicated in Fig. 2-2.

Zener diode and varistor connected to emitter of TR27 determine the working range of this circuit, and VR13 is for adjusting the working point.

Fig. 2-3



2. Group Delay Equalizer

In the IF amplification stage of model G-9000, group delay equalizer and ceramic filter of distinguished characteristics are employed for the purpose of obtaining excellent-group delay characteristic.

Generally, characteristics of both selectivity and group delay are inversely related and hard to be compatible.

The group delay equalizer (Sansui patent) used in G-9000 is provided to improve the group delay characteristic without sacrifieing the selectivity in spite of its characteristic being inversely related to group delay characteristic of ceramic filter as shown in Fig. 2-4. Consequently, group delay characteristic is improved without changing selectivity characteristic after compounded both characteristic.

Fig. 2-1

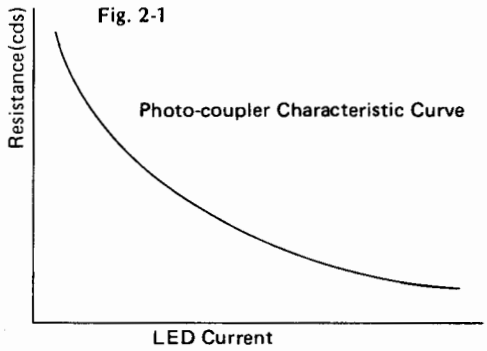


Fig. 2-2

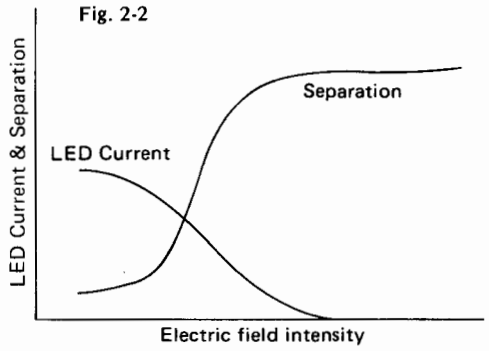
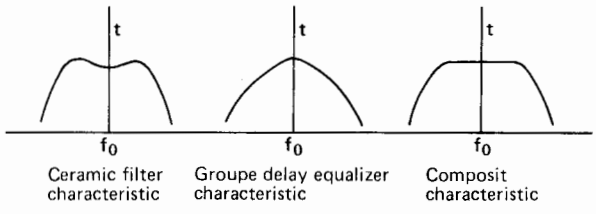


Fig. 2-4



3. METER A.G.C. CIRCUIT

The meter A.G.C. circuit provided with G-8000/G-9000 is installed for the purpose of the obtaining linear scale signal meter indication. The operation of this circuit is;

1. The IF input signal is supplied to pin 1 of IC (HA1137W), then, the proportional signal to the IF input for the signal meter is outputed from pin 13. (Fig. 2-6)
2. This outputed signal is not only making the signal meter function but also becoming the control signal of A.G.C. circuit consisting of TR06 and D11.
3. Since the bias is not applyed to TR06 by the function of D11 when IF input level is low, the internal impedance of TR06 is high that the A.G.C. is OFF state. The leading edge characteristic is shown in Fig. 2-5.
4. When the input signal over the certain level is applied to TR06, the impedance of TR06 dicreases proportionally to the input signal and changes amount of the input signal by-passing.
5. By the reason above, the voltage appears at pin 13 of IC varys as the Fig. 2-5, indicated just on the right side.

Fig. 2-5

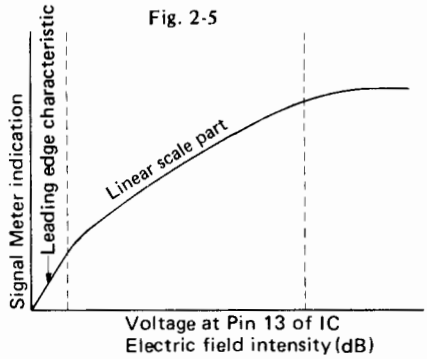
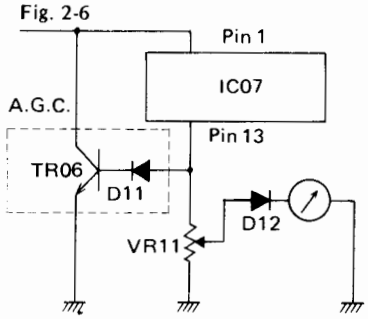


Fig. 2-6



3. ADJUSTMENTS

1. Tuner Section

Fig. 3-1

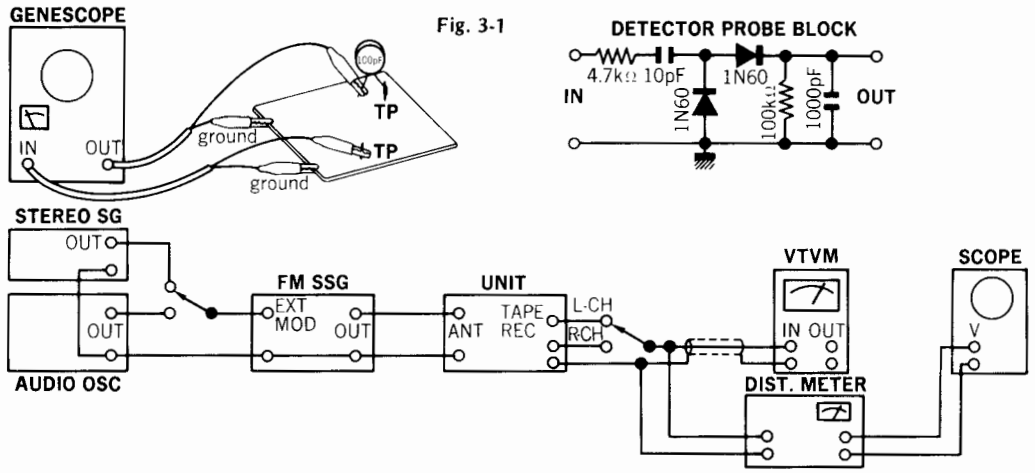
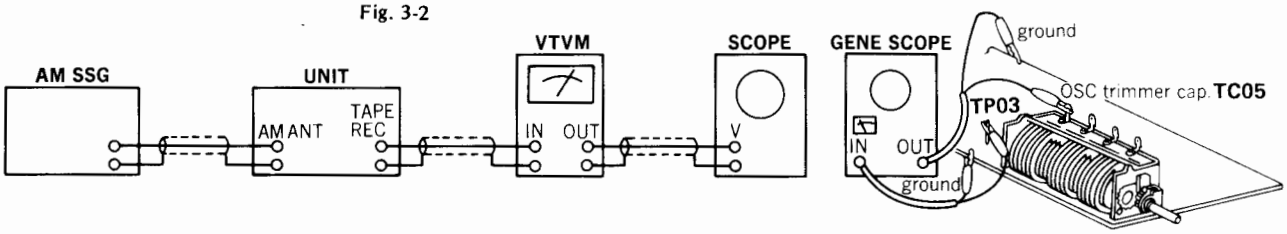


Fig. 3-2

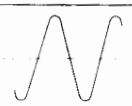
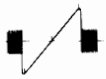
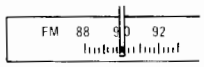
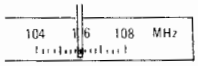
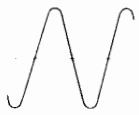


(A) Tune Section ≪G-8000/801≫

(1) FM IF, RF Adjustment and Dial Calibration (See Fig. 3-1 on Page 4 & Fig. 3-3 on Page 8)

Note: 1. SELECTOR . . . FM AUTO
2. MPX NOISE CANCELLER . . . . . OFF
3. DOLBY DE-EMPH . . . . . OFF
4. MODE . . . . . MONO
5. FM MUTING . . . . . OFF
6. Connection . . . Connect the output of genescope to TP through 100 pF ceramic capacitor.

• Dolby is a trademark of Dolby Laboratories, Inc.

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Tuning Meter IF Coil	98 MHz ANT Input 10 dBf (4.8 dB) 1000 Hz (100% MOD) FM SSG	ANT terminal 300Ω	REC OUT L or R-CH VTVM & Scope	Tune Dial	Make symmetrical Sine Curve	
		98 MHz ANT Input 15 dBf (9.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Tuning Meter	T01 F-2919 (F-2715)	Center on Tuning Meter	
			Same as above	Signal Meter	T01 Front end	Max.	
		98 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Between Connector Pin 11, 12 (Use Volt Meter)	T04 F-2919 (F-2715)	0V	
2.	Discriminator Coil In case of using Genescope	Output 98 dB Genescope	VC03 Front end	Connector Pin 11, 12 F-2919 (F-2715) Genescope	T03 F-2919 (F-2715)	Steep linearity of S curve	
	Discriminator Coil, Groupe Delay Equalizer Coil In case of using Dist Meter	98 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	ANT terminal 300Ω	REC OUT L or R-CH Dist Meter	T02, 03, VR06 F-2919 (F-2715)	Min. T.H.D.	
3.	90 MHz Dial Calibration	90 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	REC OUT L or R-CH VTVM & Scope	L05 Front end	Max. Indication on signal meter & VTVM & Scope Center Indication on Tuning Meter	
	106 MHz Dial Calibration	106 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Same as above	TC04 Front end		
4.	90 MHz RF Adj.	90 MHz ANT Input Minimum Value with sine wave 1000 Hz (100% MOD) FM SSG	Same as above	Same as above	L01, L02 L03 Front end	Same as above	
	106 MHz RF Adj.	106 MHz ANT Input Minimum Value with sine wave 1000 Hz (100% MOD) FM SSG	Same as above	Same as above	TC01, TC02, TC03 Front end	Same as above	
5.	Signal Meter Volume	98 MHz ANT Input 85 dBf (79.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Signal Meter	VR01 F-2919 (F-2715)	4.8 on Meter	

(2) FM STEREO Adjustment (See Fig. 3-1 on Page 4 & Fig. 3-3 on Page 8)

Note: 1. MODE . . . . . STEREO

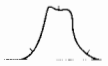
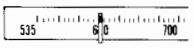
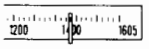
STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	PLL VCO Adj.	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) SUB 1 kHz + Pilot (100% MOD) STEREO SG	ANT terminal 300Ω	Stereo indicator	VR04 F-2919 (F-2715)	Light indicator	Adjust the VR04 within center of lighting level.

To be continued

	PLL VCO Adj. In case of using Freq. counter.	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG (no MOD)	Same as above	TP01 F-2919 (F-2715) Use Freq. counter	VR04 F-2919 (F-2715)	19 kHz ±30 Hz F-2919 76 kHz ±100 Hz (F-2715)	
2.	(19 kHz B.P.F. Adj.)	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) L Mode 100 Hz + Pilot (100% MOD) STEREO SG	Same as above	REC OUT L-CH VTVM & Scope	T05 F-2715	Max.	
	(19 kHz B.P.F. Adj.) In case of using Dist. Meter	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) SUB 100 Hz + Pilot (100% MOD) STEREO SG	Same as above	REC OUT L-CH Use Dist. Meter	T05 F-2715	Min. T.H.D.	
3.	Separation	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) R Mode 1 kHz + Pilot (100% MOD) STEREO SG	Same as above	REC OUT L-CH VTVM & Scope	VR05 F-2919 (F-2715)	−40 dB	Confirm separation L-CH → R-CH
4.	Muting level & indicator level	98 MHz ANT Input 17 dBf (11.8 dB) FM SSG Pilot 19 kHz (9% MOD) SUB 1 kHz + Pilot (100% MOD) STEREO SG	Same as above	Stereo indicator REC OUT L or R-CH VTVM & Scope	VR02 F-2919 (F-2715)	Muting level 17 dBf (11.8 dB) Indicator lighting level 17 dBf (11.8 dB)	FM MUTING Switch ON

(3) FM IF Adjustment & Dial Calibration (See Fig. 3-2 on Page 4 & Fig. 3-3 on Page 8)

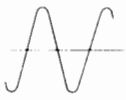
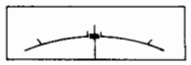
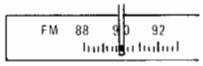
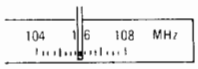
Note: 1. Selector . . . . . AM

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	IF Coil	Genescope Output 70 dB	TC05 Front end	TP03 F-2919 (F-2715)	CF31, T32 F-2919 (F-2715)	Max. IF waveform	
2.	600 kHz Dial Calibration	600 kHz ANT Input 60 dB 400 Hz (MOD 30%) AM SSG	AM ANT terminal	REC OUT L or R-CH VTVM & Scope	L33 F-2919 (F-2715)	Max. Indication on Signal Meter & V.T.V.M.	
	1400 kHz Dial Calibration	1400 kHz AN Input 60 dB 400 Hz (MOD 30%) AM SSG	Same as above	Same as above	TC05 Front end		
3.	600 kHz RF Adj.	600 kHz ANT Input 50 dB 400 Hz (MOD 30%) AM SSG	Same as above	Same as above	Bar Antenna	Same as above	
	1400 kHz RF Adj.	1400 kHz ANT Input 50 dB 400 Hz (MOD 30%) AM SSG	Same as above	Same as above	TC06, Front end	Same as above	
4.	Signal Meter volume	1000 kHz ANT Input 80 dB 400 Hz (MOD 30%) AM SSG	Same as above	Signal Meter	VR31 F-2919 (F-2715)	4.3 on meter	
5.	460 kHz Trap	460 kHz ANT Input 80 dB 400 Hz (MOD 30%) AM SSG	Same as above	REC OUT L or R-CH VTVM & Scope	L31, T31 F-2919 (F-2715)	Min. Output	

(B) Tuner Section ≪G-9000/901≫

(1) FM IF, RF Adjustment and Dial Calibration (See Fig. 3-1 on Page 4 & Fig. 3-4 on Page 8)

Note: 1. SELECTOR . . . FM AUTO
2. FM AUTO NOISE FIL . . . . . OFF
3. DOLBY DE-EMPH . . . . . OFF
4. MODE . . . . . MONO
5. MUTING . . . . . OFF
6. FM IF BAND . . . . . WIDE
7. Connection . . . Connect the output of genescope to TP through 100 pF ceramic capacitor.

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Tuning Meter IF Coil	98 MHz ANT Input 10 dBf (4.8 dB) 1000 Hz (100% MOD) FM SSG	ANT terminal 300Ω	REC OUT L or R-CH VTVM & Scope	Tune Dial	Make symmetrical Sin Curve	
		98 MHz ANT Input 15 dBf (9.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Tuning Meter	T05 F-2920 (F-2719)	Center on Tuning Meter	
			Same as above	Signal Meter	T04 F-2920 (F-2719) IFT01 Front end	Max.	
		98 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Between Connector Pin 15, 16 F-2920 (F-2719)	T03 F-2920 (F-2719)	0V	(Use Volt Meter)
2.	Discriminator Coil In case of using Genescope	Output 90 dB Genescope	VC03 Front end	Between Connector Pin 15, 16 F-2920 (F-2719) Genescope	T02 F-2920 (F-2719)	Steep linearity of S curve	
	Discriminator Coil In case of using Dist Meter	98 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	ANT terminal 300Ω	REC OUT L or R-CH Dist Meter	T01, T02 F-2920 (F-2719)	Min. T.H.D.	
3.	90 MHz Dial Calibration	90 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	REC OUT L or R-CH VTVM & Scope	Dial pointer	Max. Indication on signal meter & VTVM & Scope Center Indication on Tuning Meter	
	106 MHz Dial Calibration	106 MHz ANT Input 65 dBf (59.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Same as above	TC05 Front end		
4.	90 MHz RF Adj.	90 MHz ANT Input Minimum Value with sine wave 1000 Hz (100% MOD) FM SSG	Same as above	Same as above	T02, T03 T04 Front end	Same as above	
	106 MHz RF Adj.	106 MHz ANT Input Minimum Value with sine wave 1000 Hz (100% MOD) FM SSG	Same as above	Same as above	TC01, TC02 TC03, TC04 Front end	Same as above	
5.	Signal Meter Volume	98 MHz ANT Input 85 dBf (79.8 dB) 1000 Hz (100% MOD) FM SSG	Same as above	Signal Meter	VR11 F-2920 (F-2719)	4.8 on Meter	

(2) FM STEREO Adjustment (See Fig. 3-1 on Page 4 Fig. 3-4 on Page 8)

Note: 1. MODE . . . . . STEREO

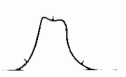
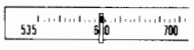
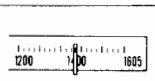
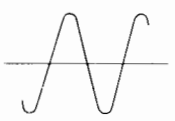
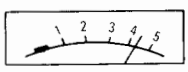
STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	PLL VCO Adj.	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) SUB 1 kHz + Pilot (100% MOD) STEREO SG	ANT terminal 300Ω	Stereo indicator	VR01 F-2920 (F-2715)	Light indicator	Adjust the VR01 within center of lighting level.

To be continued

	PLL VCO Adj. In case of using Freq. counter.	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG (no MOD)	Same as above	TP29 F-2920 (F-2719) Use Freq. counter	VR01 F-2920 (F-2719)	19 kHz ±30 Hz F-2920 76 kHz ±100 Hz (F-2719)	
2.	(19 kHz B.P.F. Adj.)	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) L Mode 100 Hz + Pilot (100% MOD) STEREO SG	Same as above	REC OUT L-CH VTVM & Scope	T06 F-2920 (F-2719)	Max.	
	(19 kHz B.P.F. Adj.) In case of using Dist. Meter	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) SUB 100 Hz + Pilot (100% MOD) STEREO SG	Same as above	REC OUT L-CH Use Dist Meter	T06 F-2920 (F-2719)	Min. T.H.D.	
3.	Separation	98 MHz ANT Input 65 dBf (59.8 dB) FM SSG Pilot 19 kHz (9% MOD) R Mode 1 kHz + Pilot (100% MOD) STEREO SG	Same as above	REC OUT L-CH VTVM & Scope	VR02 F-2920 (F-2719)	−45 dB	Confirm separation L-CH → R-CH
4.	Muting level & indicator level	98 MHz ANT Input 17 dBf (11.8 dB) FM SSG Pilot 19 kHz (9% MOD) SUB 1 kHz − Pilot (100% MOD) STEREO SG	Same as above	Stereo indicator	VR12 F-2920 (F-2719)	Muting level 17 dBf (11.8 dB) Indicator lighting level 17 dBf (11.8 dB)	FM MUTING Switch ON
5.	Auto Noise Filter Adj.	98 MHz ANT Input 45 dBf (39.8dB) 10 kHz (100% MOD) FM SSG	Same as above	REC OUT L or R-CH VTVM & Scope	VR13 F-2920 (F-2719)	OUT −3 dB Standard (Auto Noise Filter OFF)	Auto Noise Filter Switch ON

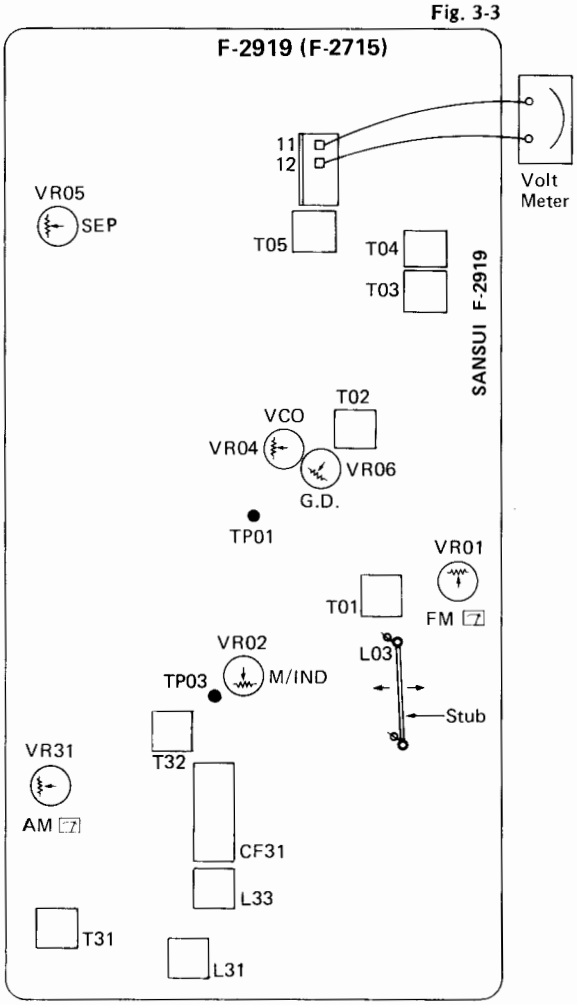
(3) FM IF Adjustment & Dial Calibration (See Fig. 3-2 on Page 4 & Fig. 3-4 on Page 8)

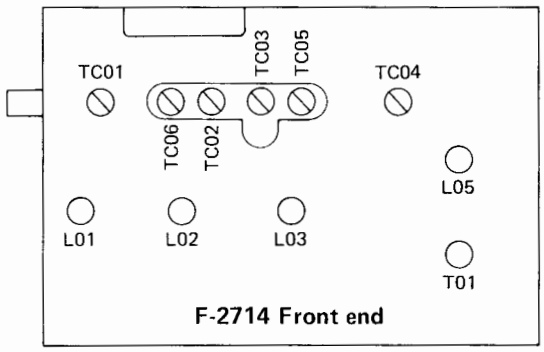
Note: 1. Selector . . . . . AM

STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil	Genescope Output 70 dB	TC07 Front end	TP06 F-2920 (F-2719)	CF51, T56 F-2920 (F-2719)	Max. IF waveform	
2.	600 kHz Dial Calibration	600 kHz ANT Input 60 dB 400 Hz (MOD 30%) AM SSG	AM ANT terminal	REC OUT L or R-CH VTVM & Scope	L54 F-2920 (F-2719)	Max. Indication on Signal Meter & V.T.V.M.	
	1400 kHz Dial Calibration	1400 kHz AN Input 60 dB 400 Hz (MOD 30%) AM SSG	Same as above	Same as above	TC07 Front end		
3.	600 kHz RF Adj.	600 kHz ANT Input 50 dB 400 Hz (MOD 30%) AM SSG	Same as above	Same as above	Bar Antenna L55 F-2920 (F-2719)	Same as above	
	1400 kHz RF Adj.	1400 kHz ANT Input 50 dB 400 Hz (MOD 30%) AM SSG	Same as above	Same as above	TC06, TC08 Front end	Same as above	
4.	Signal Meter volume	1000 kHz ANT Input 80 dB 400 Hz (MOD 30%) AM SSG	Same as above	Signal Meter	VR52 F-2920 (F-2719)	4.3 on meter	
5.	460 kHz Trap	460 kHz ANT Input 80 dB 400 Hz (MOD 30%) AM SSG	Same as above	REC OUT L or R-CH VTVM & Scope	L53, L56 T51 F-2920 (F-2719)	Min. Output	

≪G-8000/801≫

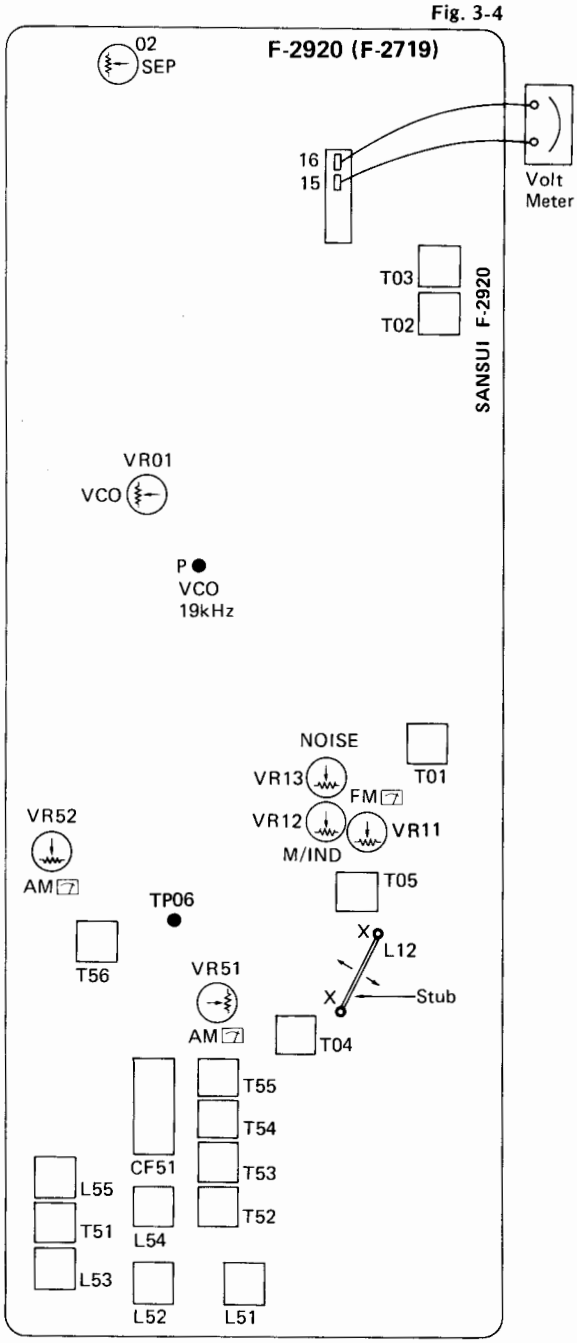
Fig. 3-3

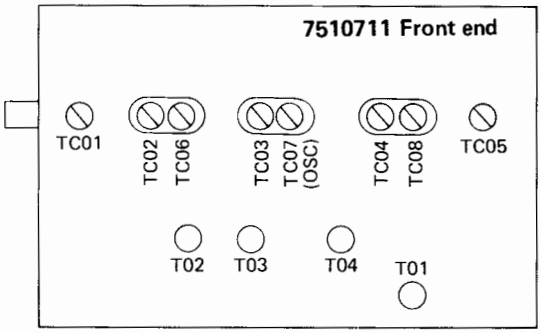




≪G-9000/901≫

Fig. 3-4





Note: 1. Tuner circuit board F-2919 is employed in ≪G-8000/801≫ and F-2920 in ≪G-9000/901≫, however some of F-2715 for ≪G-8000/801≫ and F-2719 for ≪G-9000/901≫ are commonly used.

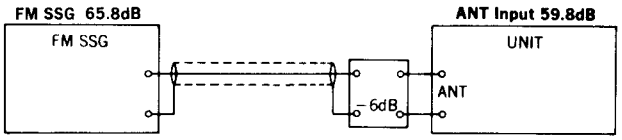
2. To set the Tuning meter indication to center on meter without input signal on FM adjustment, move the Stub to vary the coupling coefficient of induction between L12 and the stub.

• NEW MEASUREMENT FOR FM.

Input signal level under the provision of IHFM-T-200, a new measurement method is indicated by available power ratio "dBf" To obtain approximate available power ratio "dBf", abstract 0.8 from attenuater indication of general FMSG (open load indication type); however, the former measurement, IHFM-T-100 is designated together too.
The way of modulation on IHFM-T-200 is shown below.

	modulation frequency	modulation mode	modulation fuctor
FM MONO	1000Hz		100%
FM STEREO	1000Hz	SUB	Pilot 9% Pilot+SUB 100%

※The relation between the standerd input 65dBf of IHFM-T-200 and the former indication "dB" is shown below.



• Abbreviations

Equipment

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

Others

Clockwise . . . . . CW.
Counterclockwise . . . . . CCW.
Antenna . . . . . ANT.
Modulation . . . . . MOD.
Total Harmonic Distortion . . . . . T.H.D.

2. Audio Section

(A) Driver Circuit Board Adjustment (See the picture of top view on page 17.)

Note: 1. Master Volume . . . . . Minimum
2. For adjustment, run the unit for more than 3 minutes after the power is switched on.

STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	DC 0V L-CH	DC Volt Meter	Speaker Terminal	VR01, VR02 F-2806	DC 0V ±5mV	○ Set VR01 and VR02 to center position. ○ Then, for the purpose of proceeding the accurate adjustment, set the voltage to 0 volt by VR01 first and VR02 next.
2.	DC 0V R-CH	Same as above	Same as above	VR01, VR02 F-2806	DC 0V ±5mV	
3.	Bias Current L-CH	Same as above	TP Terminal (+) (−)	VR03 F-2806	DC 16mV ±1mV	○ By turning VR03 counterclockwise, the bias current is decreased gradually.
4.	Bias Current R-CH	Same as above	TP Terminal (+) (−)	VR03 F-2806	DC 16mV ±1mV	

(B) Power Meter Adjustments (See the picture of bottom view on page 18.)

Note: 1. Master Volume . . . . . Maximum
2. For this adjustment, run the unit for more than 2 minutes after turning on the power switch.

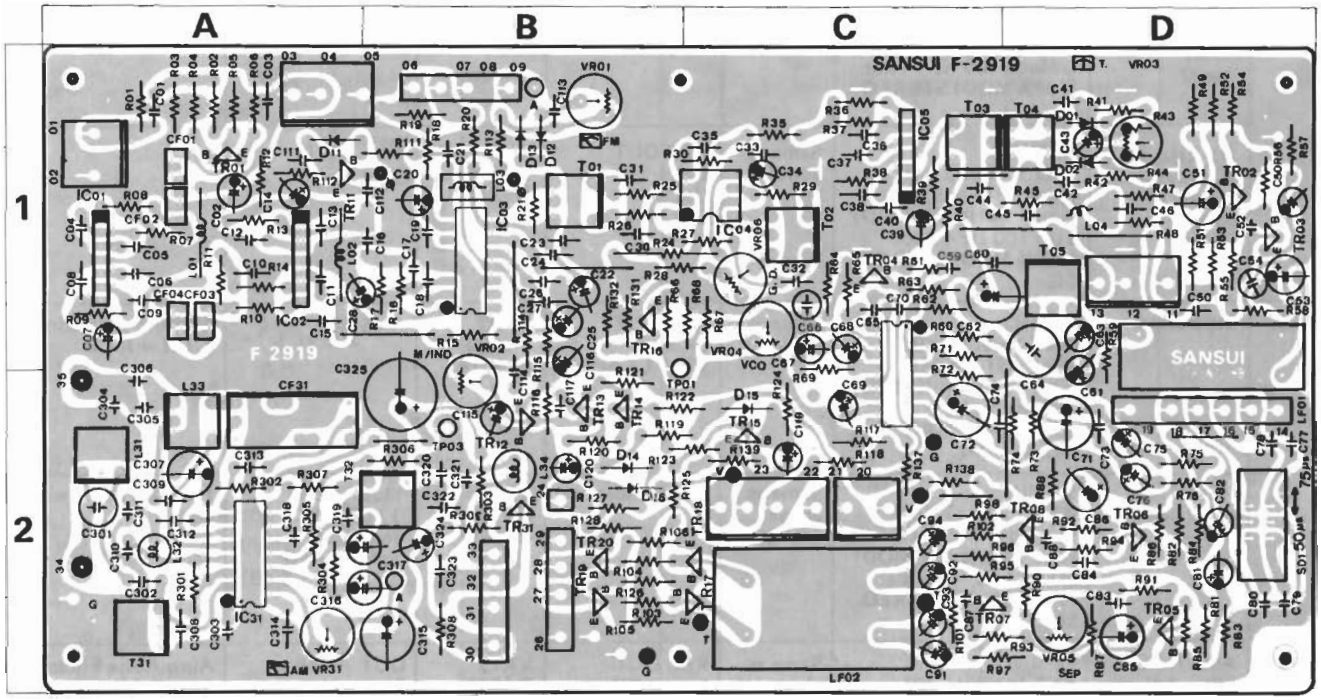
AUDIO OSCILLATOR		OUTPUT TERMINAL	ADJUST	ADJUST FOR
OUTPUT	CONNECTING POINT			
At 1 kHz Sine wave, set the amplifier-output to 20V on both channels by adjusting O.S.C.-output level	Input terminal of Amplifier	Speaker terminal 8Ω VTVM Oscilloscope	VR01 (L-CH) VR02 (R-CH) on F-2809	Set the pointer of power meter to 50W on both channels

4. PARTS LOCATION & PARTS LIST

Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors which was appended previously to each Sansui Manual.

1. F-2919 Tuner Circuit Board (Stock No. 7521841●G-8000/801)

Conductor Side



Parts List

Parts No.	Stock No.	Description	Position
TR01	0306341, 2	2SC 1674 L, K	1A
TR02	0300920, 1 0300930, 1	2SA 726 (F), (G) 2SA 872 D, E	1D
TR03	0306010, 1 0306070, 1	2SC 1222 (2) U, E 2SC 1313 F, G	1D
TR05	0300920, 1 0300930, 1	2SA 726 (F), (G) 2SA 872 D, E	2D
TR06	0300920, 1 0300930, 1	2SA 726 (F), (G) 2SA 872 D, E	2D
TR07	0306010, 1 0306070, 1	2SC 1222 (2) U, E 2SC 1313	2C
TR08	0306010, 1 0306070, 1	2SC 1222 (2) U, E 2SC 1313 F, G	2D
TR11	0306341, 2	2SC 1674 L, K	1A
TR12	0305731 ~ 3 0305951 ~ 3	2SC 711 E, F, G 2SC945 Q, P, K	2B
TR13	0305731 ~ 3 0305951 ~ 3	2SC 711 E, F, G 2SC 945 Q, P, K	2B
TR14	0305731 ~ 3 0305951 ~ 3	2SC 711 E, F, G 2SC 945 Q, P, K	2B
TR15	0300510 ~ 2	2SA 733 P, Q, R	2C
TR16	0300510 ~ 2	2SA 733 P, Q, R	1B
TR17	0305731 ~ 3 0306580 ~ 2	2SC 711 E, F, G 2SC 1634 (5), (6), (7)	2C
TR18	0305731 ~ 3 0306580 ~ 2	2SC 711 E, F, G 2SC 1634 (5), (6), (7)	2C
TR19	0305731 ~ 3 0306580 ~ 2	2SC 711 E, F, G 2SC 1634 (5), (6), (7)	2B
TR20	0305731 ~ 3 0306580 ~ 2	2SC 711 E, F, G 2SC 1634 (5), (6), (7)	2B
TR31	0306580 ~ 2	2SC 1634 (5), (6), (7)	2B
IC 01	0360590	TA 7302P	1A
IC 02	0360540	μPC 1163H	1A

(Transistor)

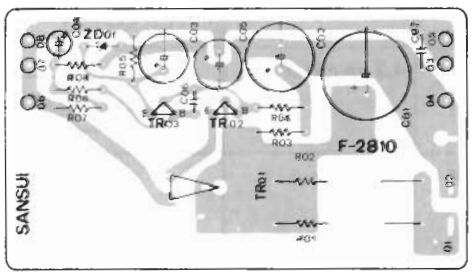
Parts No.	Stock No.	Description	Position
IC 03	0360350	HA 1137W	1B
IC 04	0360510	LA 122	1C
IC 05	0360540	μPC 1163H	1C
IC 06	0360700	μPC 1173C	1C
IC 31	0360390	HA 1197	2A
D 01	0311160 0311180	1S 2473D 1S 1588	1D
D 02	0311160 0311180	1S 2473D 1S 1588	1D
D 11	0340120 0340150	VD1212 MV 12	1A
D 12	0311160 0311180	1S 2473D 1S 1588	1B
D 13	0311160 0311180	1S 2473D 1S 1588	1B
D 14	0311160 0311180	1S 2473D 1S 1588	2B
D 15	0340120 0340150	VD1212 MV 12	2C
D 16	0311160 0311180	1S 2473D 1S 1588	2B
D 17	0311160 0311180	1S 2473D 1S 1588	
LD01	0319060	SG2 12C (red) LED	
C 54	0620391	390 pF 50V P C	1D
C 64	0629001	6800 pF 50V P C	1D
C 66	0629005	360 pF 50V P C	1C
C 67	0573339	3.3 μF 35V T C	1C
C 68	0573159	1.5 μF 35V T C	1C
C 69	0573228	0.22 μF 35V T C	2C
C 301	0620562	5600 pF 50V P C	2A
C 304	0669400	15 pF 50V C C	2A
C 306	0620331	330 pF 50V P C	2A

(Diode; Varistor; Diode; Varistor; Diode)

Parts No.	Stock No.	Description	Position
L 01	4290011	3.5 μH Peaking Coil	1A
L 02	4290011	3.5 μH Peaking Coil	1A
L 03	4290300	18 μH	1B
L 04	4900110 4900400	100 μH Inductor 100 μH Inductor	1D
L 31	4290250	21 μH Choke Coil	2A
L 32	4900110	100 μH Inductor	2A
L 33	4220590	OSC Coil	2A
L 34	4900220	100 mH Inductor G 801 only	2B
T 01	4235860	FM IF Coil	1B
T 02	4235860	FM IF Coil	1B
T 03	4236010	FM IF Coil	1C
T 04	4236020	FM IF Coil	1D
T 31	4230620	IF Coil	2A
T 32	4230620	IF Coil	2B
CF 01	0910420	Ceramic Filter	1A
CF 02	0910420	Ceramic Filter	1A
CF 03	0910420	Ceramic Filter	1A
CF 04	0910420	Ceramic Filter	1A
CF 31	0910370	Ceramic Filter	2A
LF 01	0910400	Filter	2D
LF 02	0910360	Low Pass Filter	2C
VR01	1035130	10 kΩ (B) Volume, FM signal	2C
VR02	1035190	100 kΩ (B) Volume, muting	2B
VR03	1035130	10 kΩ (B) Volume	
VR04	1034250	4.7 kΩ (B) Volume, V C O	1C
VR05	1034310	47 kΩ (B) Volume, SEP	2D
VR31	1035070	1 kΩ (B) Volume, AM Signal	2A
S 01	1110240	Slide Switch, DE EMPHASIS	2D
	2410590	4P Pin Ass'y Type D	
	2410910	2P Pin Ass'y Type E	

2. F-2810 RF Power Supply Circuit Board (Stock No. 7502681●G-8000/801) (Stock No. 7502651●G-9000/901)

Conductor Side

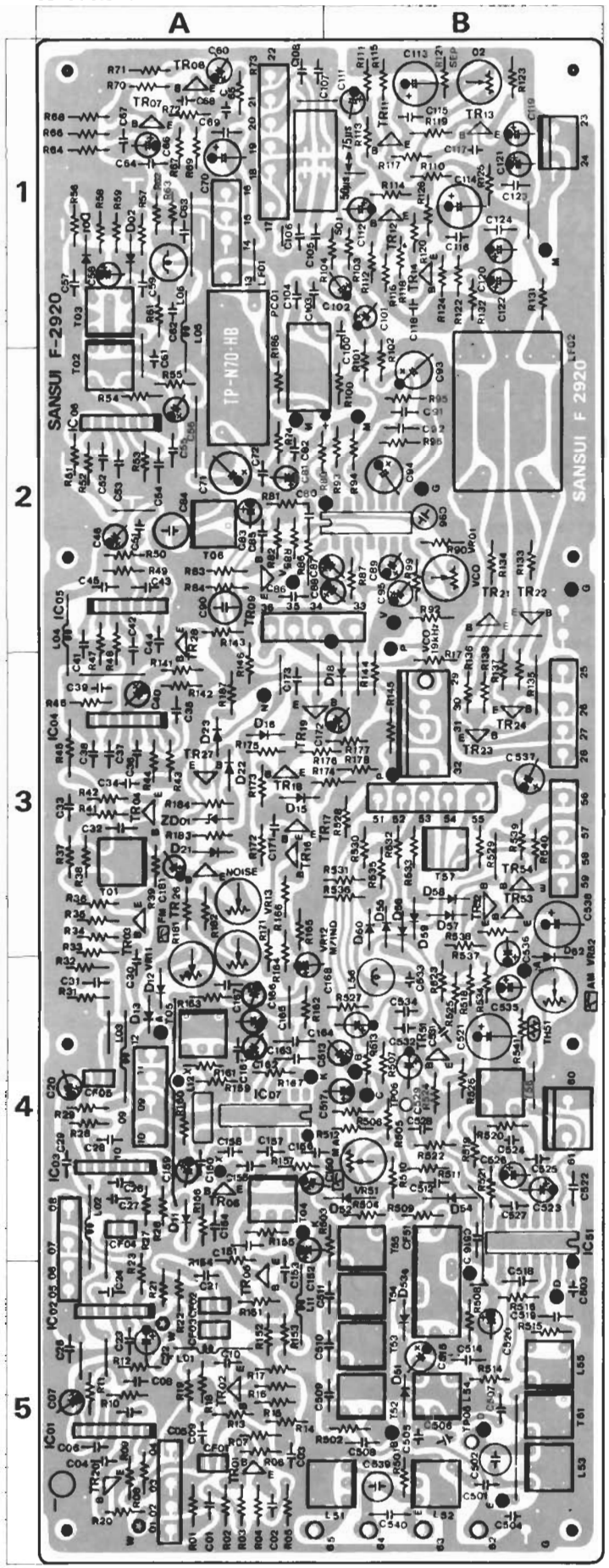


Parts List

Parts No.	Stock No.	Description
TR01	0308551, 2	2SD315V10 D, E (Transistor)
TR02	0305951 ~ 3	2SC945 Q, P, K (Transistor)
TR03	0305951 ~ 3	2SC945 Q, P, K (Transistor)
ZD01	0316390	RD6.2E B Diode
R 01	0135151	150 Ω 5W Ce,R,
R 02	0135151	150 Ω 5W Ce,R,

3. F-2920 Tuner Circuit Board (Stock No. 7521831●G-9000/901)

Conductor Side

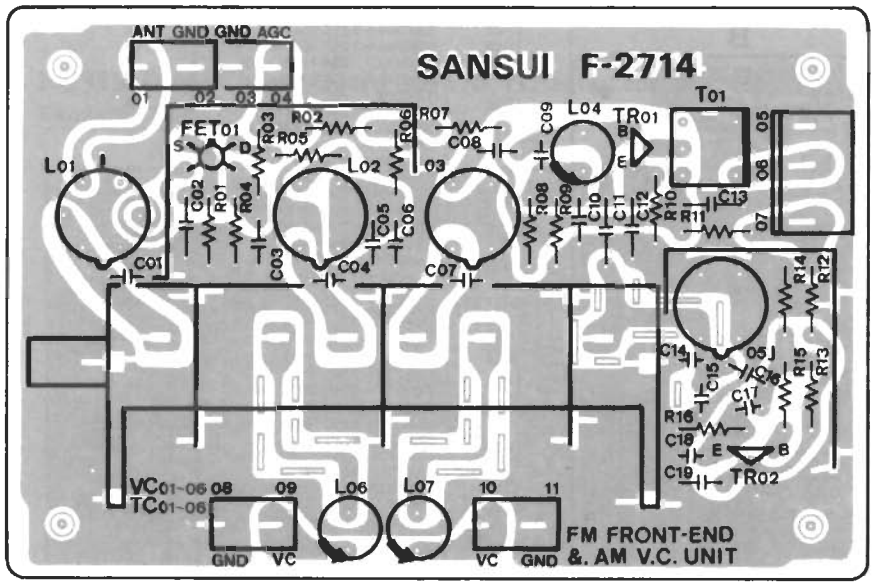


Parts List

Parts No.	Stock No.	Description	Position
TR01	0360340 ~ 2	2SC 1674 M, L, K	5A
TR02	0360340 ~ 2	2SC 1674 M, L, K	5A
TR03	0360340 ~ 2	2SC 1674 M, L, K	3A
TR04	0360340 ~ 2	2SC 1674 M, L, K	3A
TR05	0360340 ~ 2	2SC 1674 M, L, K	5A
TR06	0360340 ~ 2	2SC 1674 M, L, K	4A
TR07	0300920, 1	2SA 726 (F), (G)	1A
	0300930, 1	2SA 872 D, E	
TR08	0306010, 1	2SC 1222 (2) U, E	1A
	0306070, 1	2SC 1313 F, G	
TR11	0300920, 1	2SA 726 (F), (G)	1B
	0300930, 1	2SA 872 D, E	
TR12	0300920, 1	2SA 726 (F), (G)	1B
	0300930, 1	2SA 872 D, E	
TR13	0306010, 1	2SC 1222 (2) U, E	1B
	0306070, 1	2SC 1313 F, G	
TR14	0306010, 1	2SC 1222 (2) U, E	1B
	0306070, 1	2SC 1313 F, G	
TR16	0305731 ~ 3	2SC 711 E, F, G	3A
	0305951 ~ 3	2SC 945 Q, P, K	
TR17	0305731 ~ 3	2SC 711 E, F, G	3A
	0305951 ~ 3	2SC 945 Q, P, K	
TR18	0305731 ~ 3	2SC 711 E, F, G	3A
	0305951 ~ 3	2SC 945 Q, P, K	
TR19	0300510 ~ 2	2SA 733 P, Q, R	3A
TR20	0305731 ~ 3	2SC 711 E, F, G	5A
	0305951 ~ 3	2SC 945 Q, P, K	
TR21	0305731 ~ 3	2SC 711 E, F, G	2B
	0306580 ~ 2	2SC 1634 (5), (6), (7)	
TR22	0305731 ~ 3	2SC 711 E, F, G	2B
	0306580 ~ 2	2SC 1634 (5), (6), (7)	
TR23	0305731 ~ 3	2SC 711 E, F, G	3B
	0306580 ~ 2	2SC 1634 (5), (6), (7)	
TR24	0305731 ~ 3	2SC 711 E, F, G	3B
	0306580 ~ 2	2SC 1634 (5), (6), (7)	
TR26	0305731 ~ 3	2SC 711 E, F, G	3A
	0305951 ~ 3	2SC 945 Q, P, K	
TR27	0305731 ~ 3	2SC 711 E, F, G	3A
	0305951 ~ 3	2SC 934 Q, P, K	
TR28	0300510 ~ 2	2SA 733 P, Q, R	2A
TR54	0306580 ~ 2	2SC 1634 (5), (6), (7)	3B
		(Transistor)	
IC 01	0360590	TA 7302P	5A
IC 02	0360590	TA 7302P	5A
IC 03	0360590	TA 7302P	4A
IC 04	0360590	TA 7302P	3A
IC 05	0360270	μPC 577H	2A
IC 06	0360540	μPC 1163H	2A
IC 07	0360350	HA 1137W	4A
IC 08	0360700	μPC 1173C	
IC 51	0360390	HA 1197	4B
		(IC)	
D 01	0311160	1S 2473D	1A
	0311180	1S 1588	
		(Diode)	
D 02	0311160	1S 2473D	1A
	0311180	1S 1588	
D 11	0340120	VD1212	4A
	0340150	MV 12	
		(Varistor)	
D 12	0311160	1S 2473D	4A
	0311180	1S 1588	
		(Diode)	
D 15	0311160	1S 2473D	3A
	0311180	1S 1588	
D 16	0340120	VD1212	3A
	0340150	MV 12	
		(Varistor)	
D 18	0311160	1S 2473D	3B
	0311180	1S 1588	
D 19	0311160	1S 2473D	
	0311180	1S 1588	
		(Diode)	
D 21	0311160	1S 2473D	3A
	0311180	1S 1588	
D 22	0340120	VD1212	3A
	0340150	MV 12	
D 23	0340120	VD1212	3A
	0340150	MV 12	
		(Varistor)	
ZD01	0316390	RD6 2E B	3A
	0316400	RD6 2E C	
PC 01	0920080	P873 G35-911 Composit part	1A
C 32	0669505	5 pF 50V C C	3A
C 65	0620391	390 pF 50V P C	1A
C 80	0601477	0 047 μF 50V M C	2A
C 87	0573109	1 0 μF 35V	2A
C 88	0573339	3 3 μF 35V	2A
C 89	0573228	0 22 μF 35V	2B
		(T C)	
C 90	0629005	360 pF 50V P C	2A
C 96	0620511	510 pF P C	2B
C 504	0669395	10 pF 50V C C	5B
C 505	0620301	300 pF 50V P C	5B
L 01	4290011	3 5 μH	5A
L 02	4290011	3 5 μH	4A
L 03	4290011	3 5 μH	4A
L 04	4290011	3 5 μH	2A
L 05	4290011	3 5 μH	1A
		(Peaking Coil)	
L 06	4900110	100 μH	1A
	4900400	100 μH	
		(Inductor)	
L 11	4290011	3.5 μH Peaking Coil	5A
L 12	4290300	18 μH Inductor	4A
L 54	4220590	OSC Coil	5B
L 55	4210360	RF Coil	5B
L 56	4900220	100 mH Inductor G-901 only	4B
T 01	4236030	FM IF Coil	3A
T 02	4236010	FM IF Coil	2A
T 03	4236020	FM IF Coil	1A
T 04	4235930	FM IF Coil	4A
T 05	4235860	FM IF Coil	4A
T 56	4230620	IF Coil	4B
CF 51	0910370	Ceramic Filter	5B
LF 01	0910400	Low Pass Filter	1A
LF 02	0910360	Low Pass Filter	2B
VR01	1034250	4 7 kΩ (B) Volume, V C O	2B
VR02	1034310	47 kΩ (B) Volume, SEP	
VR11	1035130	10 kΩ (B) Volume, FM signal	4A
VR12	1035190	100 kΩ (B) Volume, muting	3A
VR13	1035110	4 7 kΩ (B) Volume, noise	3A
VR52	1035070	1 kΩ (B) Volume, AM signal	4B
S 01	1110240	Slide Switch, DE-EMPHASIS	1B
	0990020	Ceramic Filter	
	2410590	4P Pin Ass'y Type D	
	2410910	2P Pin Ass'y Type E	

4. F-2714 Front-end Pack Circuit Board (Stock No. 7510721●G-8000/801)

Conductor Side



Parts List

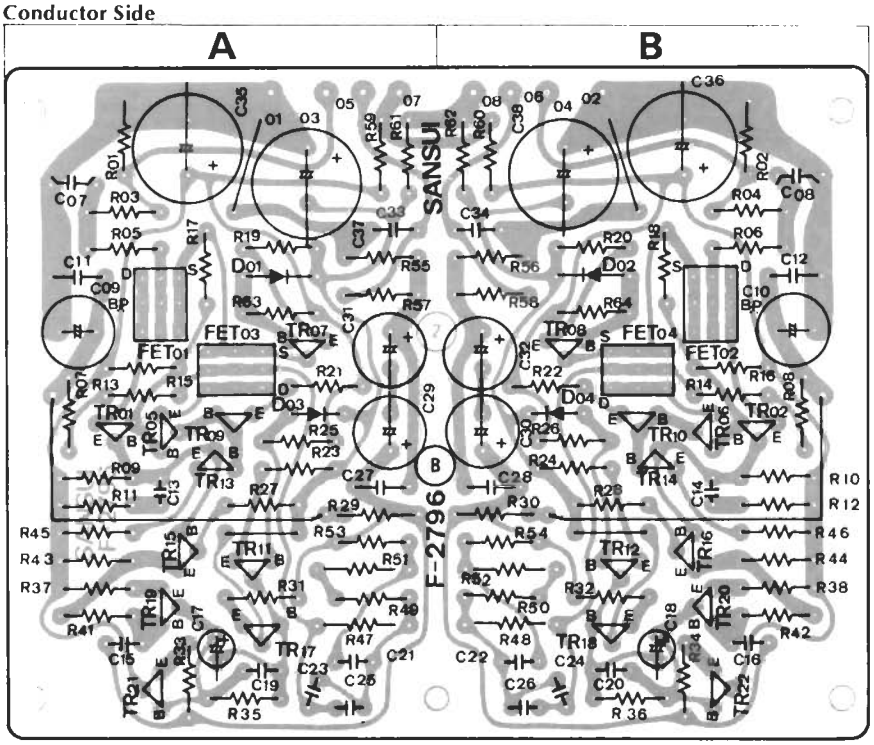
Parts No.	Stock No.	Description
TR01	0306341, 2	2SC1674 L, K } Transistor
TR02	0306341, 2	2SC1674 L, K
FT01	0370130, 1	3SK41 (i) M, L FET
C 01	0669328	18 pF 50V } C.C.
C 04	0669328	18 pF 50V
C 07	0669328	18 pF 50V
C 08	0669506	6 pF 50V
C 11	0679025	0.47 pF 500V
C 14	0669322	12 pF 50V
C 15	0669297	12 pF 50V
C 16	0669295	10 pF 50V
C 17	0669295	10 pF 50V
C 18	0669295	10 pF 50V
L 01	4200720	Antenna Coil
L 02	4210340	RF Coil
L 03	4210340	RF Coil
L 04	4900280	1.0 μH Inductor
L 05	4220400	OSC Coil
L 06	4900280	1.0 μH Inductor
L 07	4900280	1.0 μH Inductor
T 01	4235930	IF Ciol
VT01	1220270	AM,FM Variable Capacitor
	2410660	2P Pin Ass'y Type F
	2410920	3P Pin Ass'y Type E

5. Front-end Pack Circuit Board (Stock No. 7510711●G-9000/901)

Note: As parts on the Front-end Pack would not be supplied individually, change whole the Front-end Pack Ass'y when repair.

6. F-2796 Equalizer AMP Circuit Board (Stock No. 7551211●G-9000/901)

Conductor Side



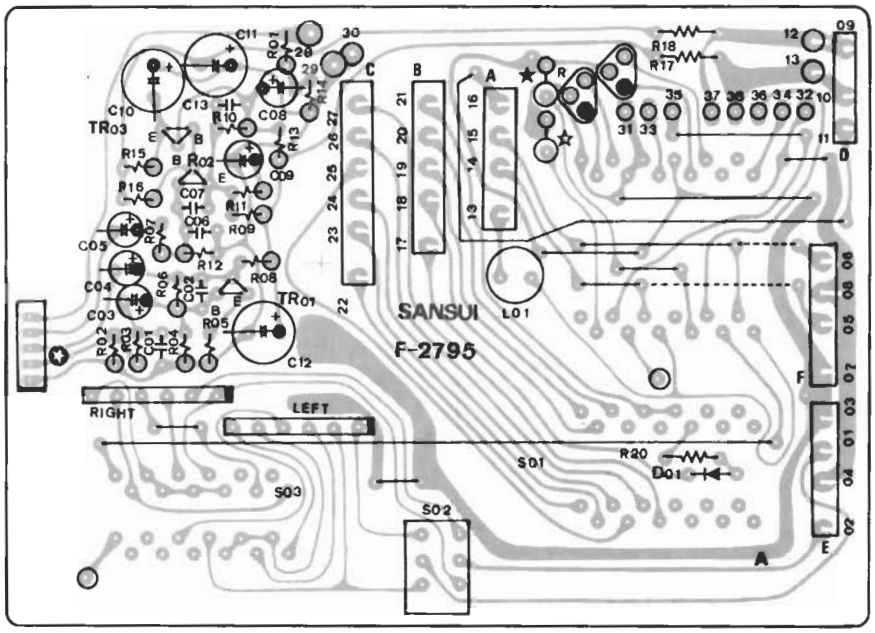
Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0306550, 1	2SC-1775 E, F } Transistor	A, B
TR05, 06	0306550, 1	2SC-1775 E, F	A, B
TR07, 08	0306550, 1	2SC-1775 E, F	A, B
TR09, 10	0300930, 1	2SA-872 D, E	A, B
TR11, 12	0306550, 1	2SC-1775 E, F	A, B
TR13, 14	0300930, 1	2SA-872 D, E	A, B
TR15, 16	0300930, 1	2SA-872 D, E	A, B
TR17, 18	0303361, 2	2SB560 E, F	A, B
TR19, 20	0300930, 1	2SA-872 D, E	A, B
TR21, 22	0308521, 2	2SD438 E, F	A, B
FT01, 02	0370302, 3	2SK-117 GR, BL } FET	A, B
FT03, 04	0370302, 3	2SK-117 GR, BL	A, B
D 01, 02	0340120	VD1212 } Varistor	A, B
D 03, 04	0340120	VD1212	A, B
C 07, 08	0620101	100 pF 50V } P.C.	A, B
C 13, 14	0620121	120 pF 50V	A, B
C 21, 22	0625103	10000 pF 50V	A, B
C 23, 24	0620151	150 pF 50V	A, B
C 25, 26	0625272	2700 pF 50V	A, B
R 47, 48	0231273	27 kΩ ½W } M.R.	A, B
R 51, 52	0231304	300 kΩ ½W	
	2410590	4P Pin Ass'y Type D	

7. F-2795 Mic. AMP Circuit Board

(Stock No. 7595791●G-8000/801)
(Stock No. 7595871●G-9000/901)

Conductor Side



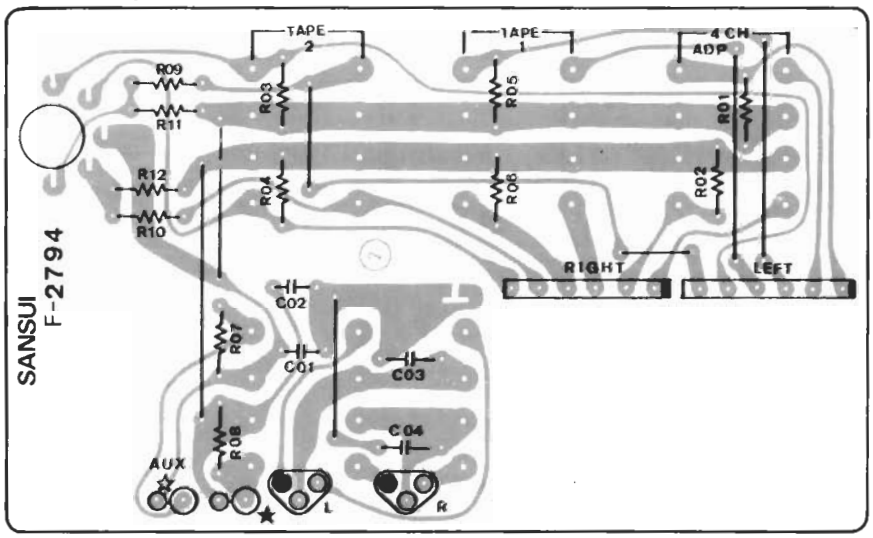
Parts List

Parts No.	Stock No.	Description
TR01	0306550, 1	2SC-1775 E, F
TR02	0300930, 1	2SA-872 D, E
TR03	0306550, 1	2SC-1775 E, F
D 01	0310340	10D1 (1S2226) Diode
C 03	0573687	0.068 μF 35V T C
C 05	0573687	0.068 μF 35V T C
C 13	0620681	680 pF 50V P.C.
L 01	4900090	Inductor
S 01	1104370	Rotary Switch, selector
S 02	1102660	Rotary Switch, tape monitor
S 03	1131550	Push Switch, 4 CH/NR ADAPTOR
	2410570	5P Pin Ass'y Type D
	2410590	4P Pin Ass'y Type D
	2410600	6P Pin Ass'y Type D
	2410670	3P Pin Ass'y Type F

8. F-2794 Input Terminal Circuit Board

(Stock No. 7595781●G-8000/801)
(Stock No. 7595861●G-9000/901)

Conductor Side



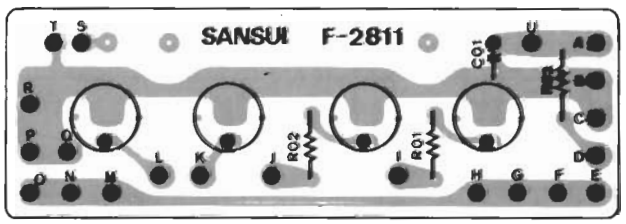
Parts List

Parts No.	Stock No.	Description
	2090030	5P DIN Socket
	2200490	12P Input Terminal
	2200530	6P Input Terminal

9. F-2811 Indicator Circuit Board

(Stock No. 7595841●G-8000/801)
(Stock No. 7595921●G-9000/901)

Conductor Side



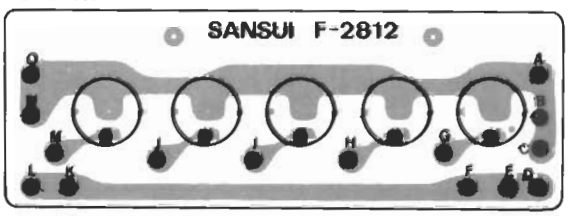
Parts List

Parts No.	Stock No.	Description
LD01	0319050	SG2-13C (green) LED
LD02 ~ 04	0319060	SG2-12C (red) LED

10. F-2812 Selector Indicator Circuit Board

(Stock No. 7595851●G-8000/801)
(Stock No. 7595931●G-9000/901)

Conductor Side



Parts List

Parts No.	Stock No.	Description
LD01 ~ 05	0319060	SG2-12C (red) LED