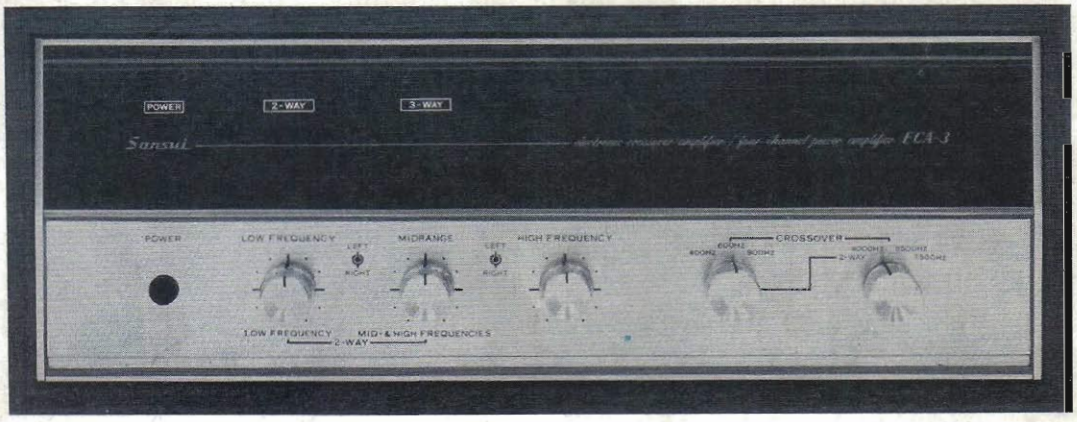
OPERATING INSTRUCTIONS & SERVICE MANUAL

ELECTRONIC CROSSOVER AMPLIFIER / FOUR CHANNEL POWER AMPLIFIER

SANSUI ECA-3



Sansui

SANSUI ELECTRIC COMPANY LIMITED

Congratulations on joining the thousands of proud, satisfied owners of quality stereo components from Sansui.

The ECA-3 integrated three-way electronic crossover and four-channel stereo amplifier is designed for use with a stereo pair of speaker systems to accomplish the two- or three- way electronic crossover system which has been widely acknowledged as the most effective method of reproducing original sounds and for use with two stereo pairs of speaker systems to achieve the exciting four-channel stereo arrangement without need of any other power amplifier. Crossover between low and mid ranges can be switch-selected to 400, 600 or 900Hz. Crossover between mid and high ranges can be selected to 4000, 5500 or 7500Hz. Cutoff can be also switch-selected to 12 or 6 dB/octave slope at both low and high crossovers.

This manual has been prepared to help you keep the ECA-3 in perfect operating conditions. It explains all of the ECA-3's unique features, connecting and operating procedures as well as some basic maintenance requirements.

Please read the contents of this manual carefully before operating the ECA-3. You will then be better prepared to enjoy the entirely new stereo sound to the fullest.

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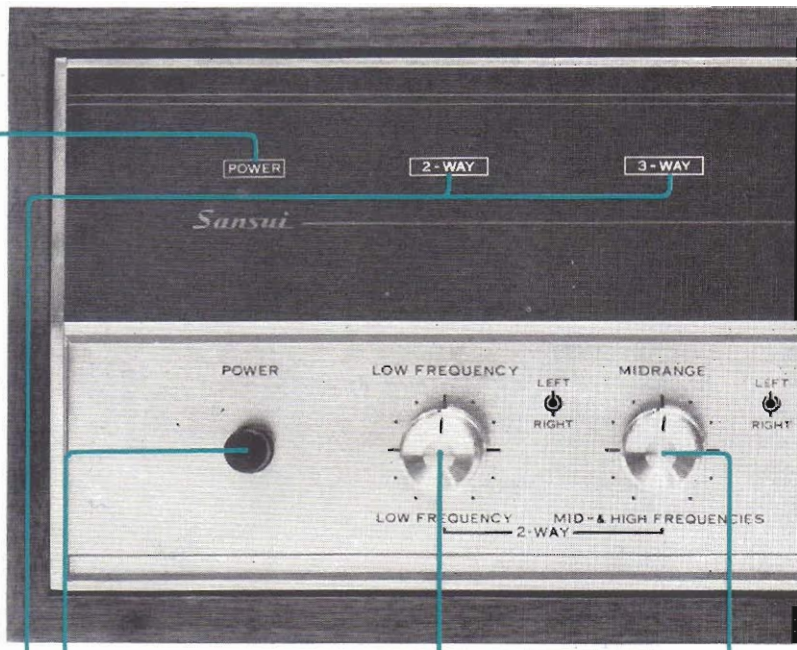
POWER
2-WAY
3-WAY
Sansui
electronic crossover amplifier / four-channel power amplifier ECA-3
POWER
LOW FREQUENCY
MIDRANGE
HIGH FREQUENCY
CROSSOVER
400CPS
800CPS
2-WAY
LOW FREQUENCY
MID- & HIGH FREQUENCIES
2-WAY

SWITCHES AND CONTROLS



Power Indicator

This indicator glows when the Power switch is pushed on. It remains lit while the amplifier is on.

2 & 3 Way Indicators

The **2-WAY** indicator glows when the right Crossover selector is set to the **2-WAY** position and the **3-WAY** indicator is illuminated when it is turned to any other position.

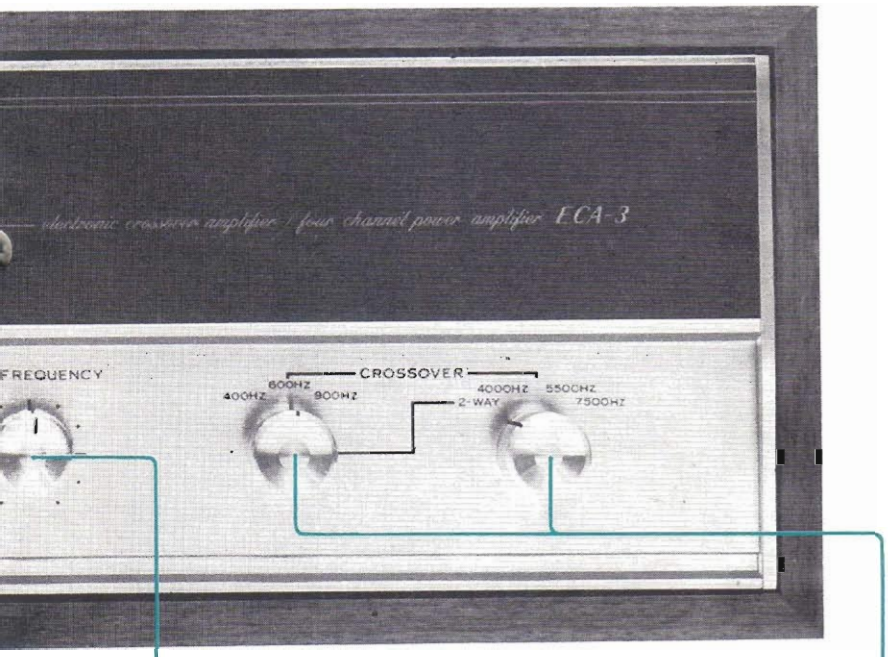
Power Switch

Power is applied to the amplifier when the Power switch is pushed. To turn off, push the Power switch again. The rear AC outlet marked SWITCHED is controlled by this switch.

Low-Frequency Level Control

This control is used to adjust the output level of low-frequency signals fed into the ECA-3 or the other stereo amplifier to which woofers are connected. To increase, turn it clockwise. To decrease, turn it counterclockwise.

Designed as a friction-coupled, dualconcentric control, it is actually two controls in one. The outer ring controls the strength of signals in the right channel; the inner knob controls the strength of signals in the left channel. Both outer and inner controls can be used simultaneously or independently, as required.



High-Frequency Level Control

In the three-way electronic crossover system, this control is used to adjust the output level of high-frequency signals fed into the ECA-3 or the other stereo amplifier to which tweeters are connected. Note that this control does not operate in case of two-way electronic crossover system.

Midrange Level Control

(Mid & High Frequency Level Control)

In the two-way electronic crossover system, this control allows adjustment of the output level of both mid and high frequency incoming signals fed into the ECA-3.

In the three-way electronic crossover system, this control determines only the midrange level of signals fed into the ECA-3 or the other stereo amplifier to which midranges are connected.

Crossover Selectors

In the three-way electronic crossover system, the left selector is used to select the crossover frequency between low and mid ranges 400, 600 or 900Hz; and the right selector is used to select the crossover between mid and high ranges 4000, 5500 or 7500Hz. In the two-way electronic crossover system, set the right selector to the **2 WAY** position and turn the left selector to the appropriate crossover.

OPERATIONS
—— ELECTRONIC CROSSOVER SYSTEM
—— TWO-WAY ELECTRONIC CROSSOVER

Electronic Crossover System

The design goal of an 'ideal' speaker is to achieve flat response over the entire audio frequency range of 20 to 20,000Hz without distortion. A single speaker such as this is not yet to be developed. Instead, two or more speakers (woofer, midrange and tweeter) are used to cover this range. Each specializes in a certain frequency range, and the incoming audio signal is split up between them.

Currently, there are two methods of channeling the signal; one is to use an L-C crossover network between the amplifier and speaker; the other is to use separate amplifiers to feed each driver within a speaker system, with the frequency separation accomplished electronically between the preamplifier and the power amplifier. The latter, called an electronic crossover system, has been acknowledged as the best hi-fi stereo system.

The ECA-3 allows simplified hookup of the electronic crossover system in combinations with the Sansui components as given in the chart below:

An Example of Connections for 3-Way Electronic Crossover System

Two-way Electronic Crossover System

1. Connect the left channel output of an external preamplifier to the left channel INPUT jack on the rear panel of the ECA-3 and the right channel output of the preamplifier to the right channel INPUT jack.

Important: Carefully read the operating instructions for the preamplifier connected to the ECA-3. To obtain the best results, be sure to connect the outputs of the preamplifier to the inputs of the ECA-3.

2. Connect the left channel MIDRANGE CROSSOVER OUTPUT in the top row of jacks on the rear of the ECA-3 to the left channel POWER AMP-2 INPUT(L_2) in the lower row and the right channel MIDRANGE CROSSOVER OUTPUT to the right channel POWER AMP-2 INPUT(R_2).
3. Connect the left channel LOW FREQUENCY CROSSOVER OUTPUT to the left channel POWER AMP-1 INPUT(L_1) and the right channel LOW FREQUENCY CROSSOVER to the right channel POWER AMP-1 INPUT(R_1).
4. Connect the left channel midrange and tweeter to the left channel SPEAKERS terminals of the POWER AMP-2(L_2) and the right channel midrange and tweeter to the right channel SPEAKERS terminals of the POWER AMP-2(R_2).
5. Connect the left channel woofer to the left channel SPEAKERS terminals of the POWER AMP-1 (L_1) and the right channel woofer to the right channel SPEAKERS terminals of the POWER AMP-1 (R_1).
6. By using the Low Frequency level control, determine the amount of amplification of low range signals fed into the POWER AMP-1.
7. Adjust the Mid & High Frequency level control so that the same level as in the low range is achieved.

Designed especially for the electronic crossover system, the Sansui 2000A and 3500 stereo receivers are provided with the separate preamplifier section which can be used independently of the power amplifier section. Remove the PM connectors from the 2000A or the 3500, and connect its PRE OUT-PUT's to the inputs of the ECA-3.

LEFT CHANNEL
RIGHT CHANNEL

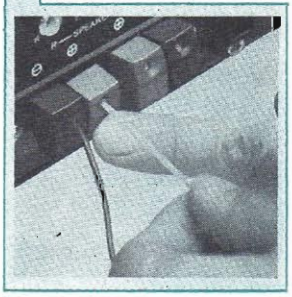
ELECTRONIC CROSSOVER SECTION
INPUT
FULLRANGE OUTPUT
CROSSOVER OUTPUT
HIGH FREQUENCY
MIDRANGE
LOW FREQUENCY
100-127V-4A
220-250V-3A
Replace with same type fuse
2-WAY
3-WAY
FILTER SLOPE
HIGH
LOW
12⇔6 dB/OCT 12⇔6
POWER AMP-2
M.P. 60W
RMS.P. 20W/CH
POWER AMP-1
M.P. 90W
RMS.P. 30W/CH
SWITCHED MAX 50VA
UNSWITCHED MAX 150VA
GND
ECA-3
Sansui
ELECTRONIC CROSSOVER AMPLIFIER
SANSUI ELECTRIC CO., LTD.
POWER AMPLIFIER SECTION

TO RECORD PLAYER PRE-AMP

WALL OUTLET

TWEETER
MIDRANGE
WOOFER
RIGHT SPEAKERS

WOOFER
MIDRANGE
TWEETER
LEFT SPEAKERS



CONNECTING TO SPEAKER TERMINALS

OPERATIONS
—— THREE-WAY ELECTRONIC CROSSOVER SYSTEM

Three-way Electronic Crossover System

To accomplish the three-way electronic crossover system, it is necessary to connect an additional stereo power amplifier to the ECA-3. As described in NOTES which follow this section, the power output of the additional amplifier determines which of the two other amplifiers should be used as a low-, mid- or high-range amplifier. If the additional amplifier has greater power than the Power Amp-1 of the ECA-3, below are the connecting procedures for the three-way electronic crossover system:

1. Connect the left channel output of an external preamplifier to the left channel INPUT jack on the rear panel of the ECA-3 and the right channel output of the preamplifier to the right channel INPUT jack.
2. Connect the left channel HIGH FREQUENCY CROSSOVER OUTPUT in the top row of jacks on the rear of the ECA-3 to the left channel POWER AMP-2 INPUT(L_2) in the lower row and the right channel HIGH FREQUENCY CROSSOVER OUTPUT to the right channel POWER AMP-2 INPUT (R_2).
3. Connect the left channel MIDRANGE CROSSOVER OUTPUT to the left channel POWER AMP-1 INPUT(L_1) and the right channel MIDRANGE CROSSOVER OUTPUT to the right channel POWER AMP-1 INPUT(R_1).
4. Connect the left channel LOW FREQUENCY CROSSOVER OUTPUT to the left channel input of an external power amplifier and the right channel LOW FREQUENCY CROSSOVER OUTPUT to the right channel input of the power amplifier.
5. Connect the left channel tweeter to the left channel SPEAKERS terminals of the POWER AMP-2(L_2) and the right channel tweeter to the right channel SPEAKERS terminals of the POWER AMP-2(R_2).
6. Connect the left channel midrange to the left channel SPEAKERS terminals of the POWER AMP-1(L_1) and the right channel midrange to the right channel SPEAKERS erminals of the POWER AMP-1(R_1).
7. Connect the left channel woofer to the left channel output of the external power amplifier and the right channel woofer to the right channel output.
8. By using the Low Frequency level control on the front panel of the ECA-3, determine the amount of amplification of low range signals fed into the amplifier.
9. Adjust the Midrange level control so that the same level as in the low range is achieved.
10. Adjust the High Frequency level control so that the same level as in the low and mid ranges is achieved.

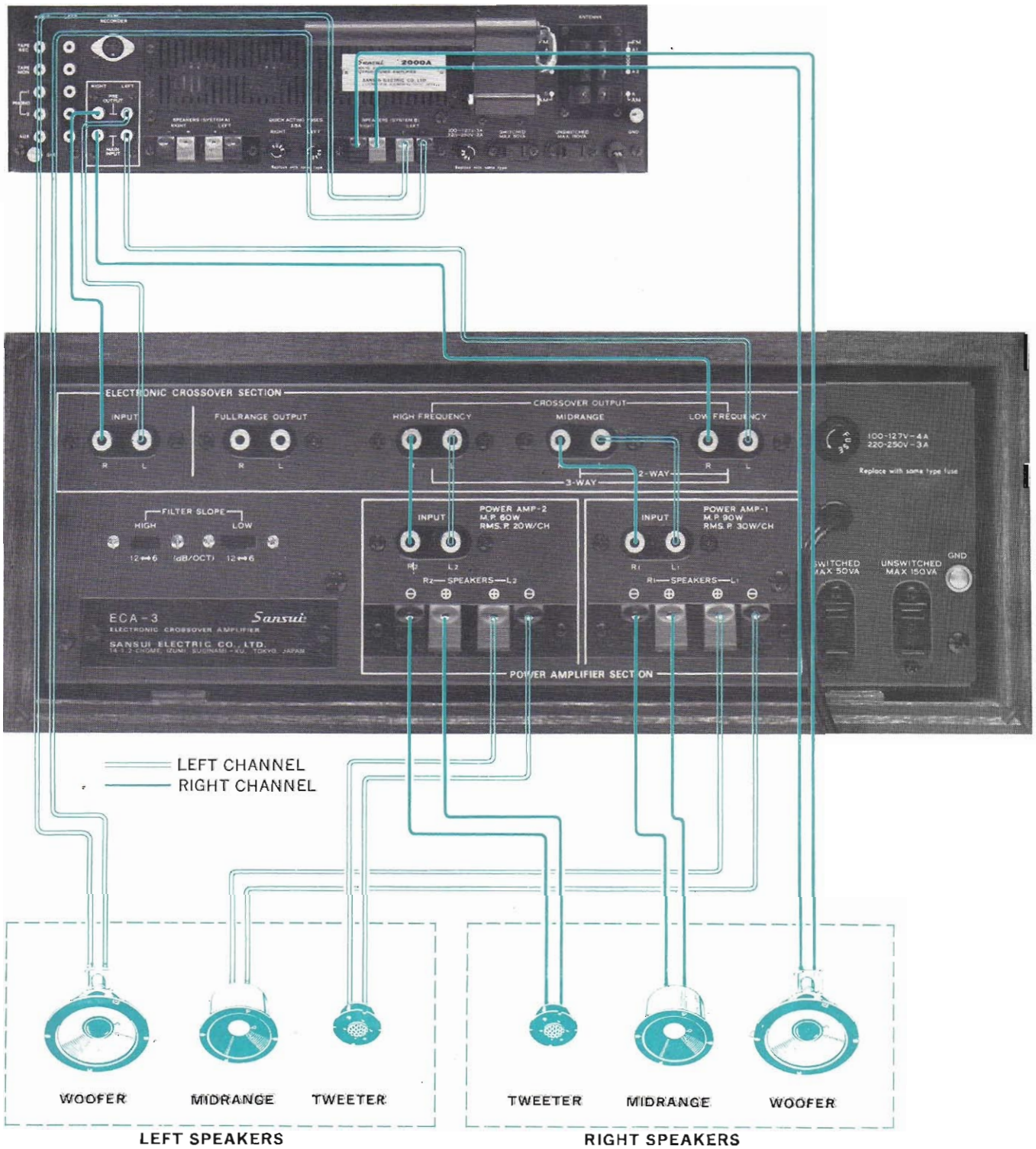
Notes:

a. If the amplifiers used in the electronic crossover system differ from each other in power output, the woofers should be connected to the amplifier rated at the greatest watts, the midranges to one rated at the second greatest watts, and the tweeters to one rated at the smallest watts. Another consideration is that the low-range amplifier must give better performance characteristics at low frequencies and the high-range amplifier must give better performance characteristics at high frequencies.

b. 'Phasing of Speakers' and 'Selection of Cutoff and Crossover' are given in the section entitled **HINTS ON USE,** p. 11.

c. The crossover has the input impedance of 100kΩ. Use a preamplifier rated at lower output impedance (less than 10kΩ).

d. Always use speakers of 4- to 16-ohm impedance.


2000A
ELECTRONIC CROSSOVER SECTION
INPUT
FULLRANGE OUTPUT
CROSSOVER OUTPUT
HIGH FREQUENCY
MIDRANGE
LOW FREQUENCY
2-WAY
3-WAY
FILTER SLOPE
HIGH
LOW
12⇔6 (dB/OCT) 12⇔6
POWER AMP-2
M.P. 60W
RMS.P. 20W/CH
POWER AMP-1
M.P. 90W
RMS.P. 30W/CH
R2—SPEAKERS—L2
R1—SPEAKERS—L1
ECA-3
Sansui
ELECTRONIC CROSSOVER AMPLIFIER
SANSUI ELECTRIC CO., LTD.
POWER AMPLIFIER SECTION
100-127V-4A
220-250V-3A
Replace with same type fuse
UNSWITCHED
MAX 150VA
GND
LEFT CHANNEL
RIGHT CHANNEL
WOOFER
MIDRANGE
TWEETER
TWEETER
MIDRANGE
WOOFER
LEFT SPEAKERS
RIGHT SPEAKERS

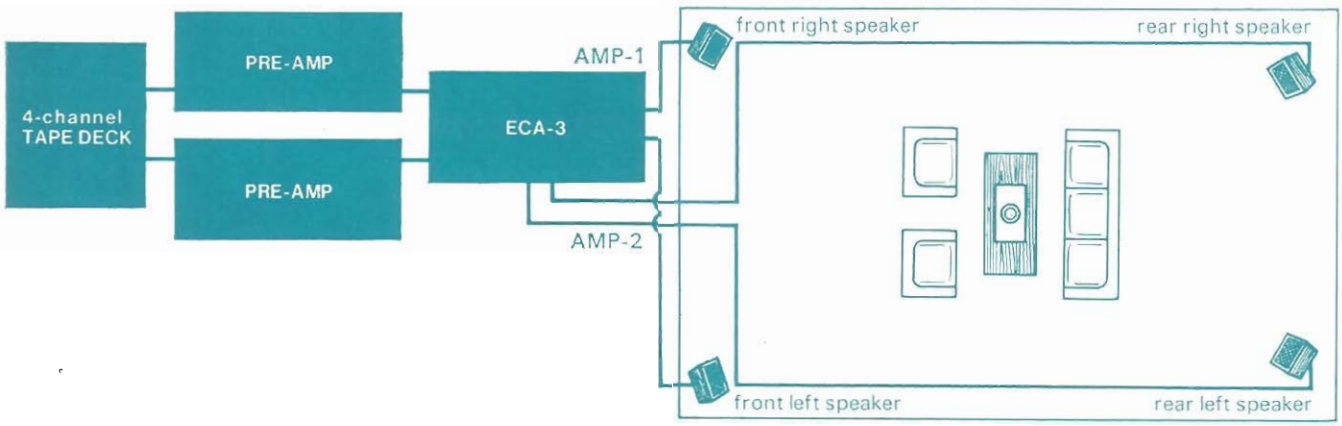
OPERATIONS
—— FOUR-CHANNEL STERER

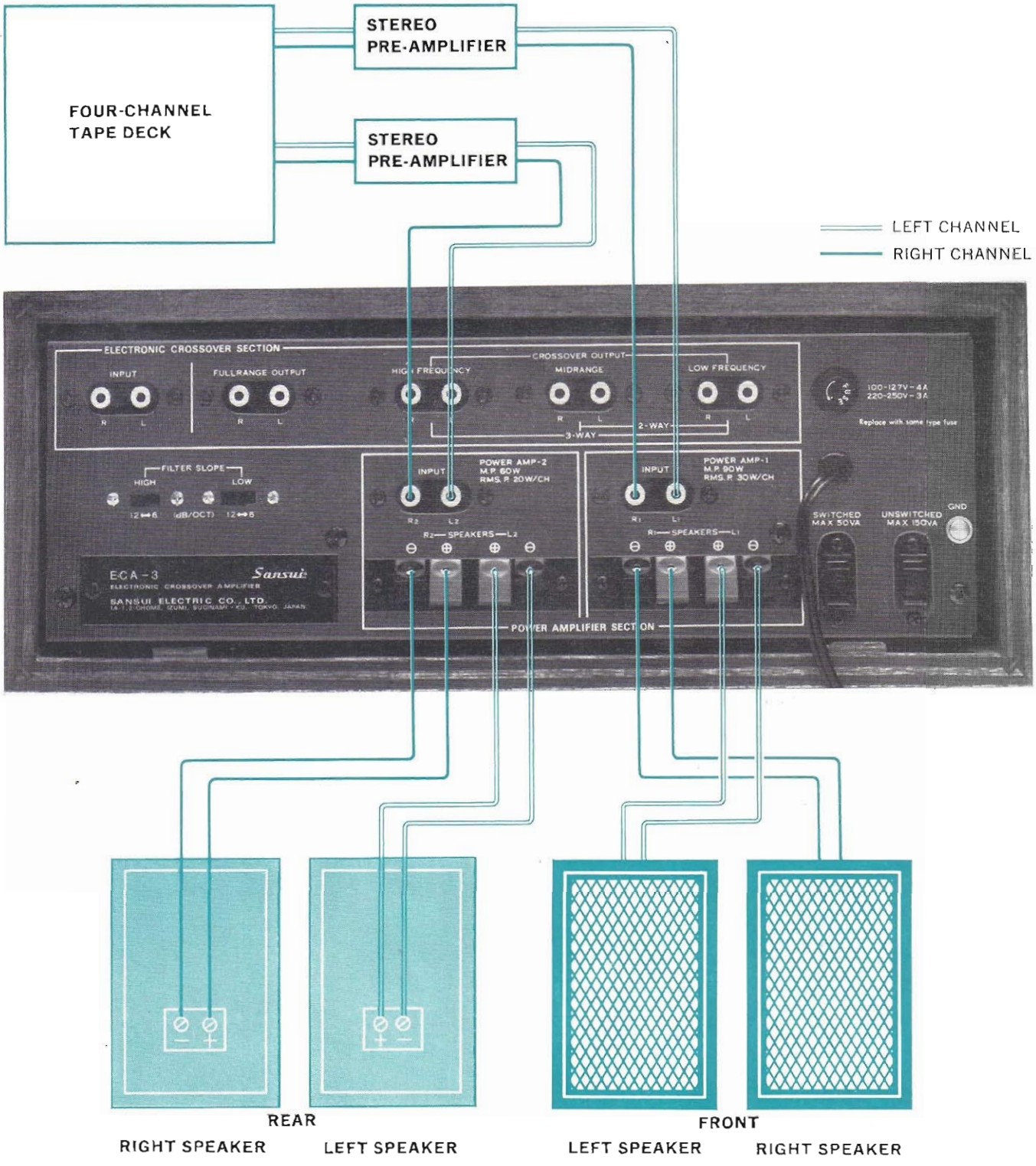
Four-channel Stereo

The four-channel or quadrasonic stereo system gives the most dramatic sound spread ever reproduced. Since the ECA-3 is provided with built-in four power amplifiers, it allows wiring up of two stereo pairs of speaker systems without need of any other power amplifier. To accomplish the four-channel stereo system, hook up additional components to the ECA-3 as illustrated on the opposite page:

1. Connect the front left-channel program source (of a quadrasonic tape, for instance) to the left-channel POWER AMP-1 INPUT(L_1) jack on the rear of the ECA-3 and the front right-channel program source to the right-channel POWER AMP-1 INPUT(R_1).
2. Connect the rear left-channel program source to the left-channel POWER AMP-2 INPUT(L_2) jack on the rear of the ECA-3 and the rear right-channel program source to the right-channel POWER AMP-2 INPUT(L_2).
3. Connect the front left-channel speaker to the left-channel SPEAKERS terminals of the POWER AMP-1(L_1) and the front right-channel speaker to the right-channel SPEAKERS terminals of the POWER AMP-1(R_1).
4. Connect the rear left-channel speaker to the left-channel SPEAKERS terminals of the POWER AMP-2(L_2) and the rear right-channel speaker to the right-channel SPEAKERS terminals of the POWER AMP-2(R_2).

Note: In this case, all of controls of the ECA-3 are turned off. To adjust the volume, tone etc., use the controls of the preamplifiers connected to the ECA-3.




FOUR-CHANNEL
TAPE DECK
STEREO
PRE-AMPLIFIER
STEREO
PRE-AMPLIFIER
LEFT CHANNEL
RIGHT CHANNEL
ELECTRONIC CROSSOVER SECTION
INPUT
FULLRANGE OUTPUT
CROSSOVER OUTPUT
HIGH FREQUENCY
MIDRANGE
LOW FREQUENCY
2-WAY
3-WAY
100-127V-4A
220-250V-3A
Replace with same type fuse
FILTER SLOPE
HIGH
LOW
12⇔6 (dB/OCT) 12⇔6
POWER AMP-2
M.P. 60W
RMS. P. 20W/CH
POWER AMP-1
M.P. 80W
RMS. P. 30W/CH
SPEAKERS
SWITCHED
MAX 50VA
UNSWITCHED
MAX 150VA
GND
ECA-3
ELECTRONIC CROSSOVER AMPLIFIER
SANSUI ELECTRIC CO., LTD.
POWER AMPLIFIER SECTION
REAR
RIGHT SPEAKER
LEFT SPEAKER
FRONT
LEFT SPEAKER
RIGHT SPEAKER

HINTS ON USE

Phasing of Speakers

The left and right speakers must be properly phased. They must push the sound waves out together. If one pushes while the other pulls, there is sound cancellation at some frequencies or in some listening locations. To correct this, reverse the leads to one speaker.

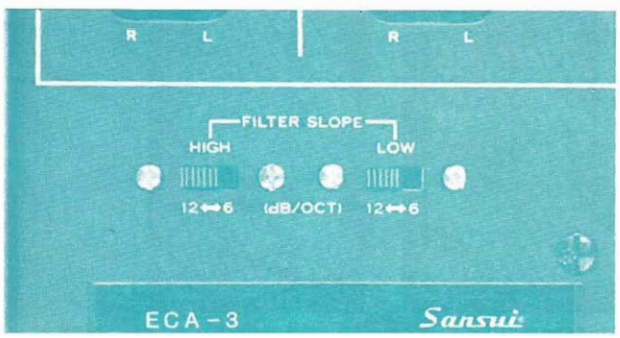
In the electronic crossover system, the speakers should be phased as given below:

In Case of 6 dB/octave Slope

Low-frequency output lags 45°, while midrange leads 45°; and midrange lags 45°, while high-frequency output leads 45°. The phase difference between outputs is equal to 90°. Thus, the woofers, midranges and tweeters may be connected either in phase or in phase opposition (usually in phase is better). But the acoustics of your listening room and positioning of speakers will also dictate the phasing of speakers. The speakers, in any case, should be phased for natural sound.

In Case of 12dB/octave Slope

Low-frequency output lags 90°, while midrange leads 90°; midrange lags 90°, while high-friquency output leads 90°. The phase difference between outputs is equal to 180°. Usually the midranges in a three-way system or the tweeters in a two-way system should be connected in phase opposition. But the acoustics of you listening room and positioning of speakers are important factors determining the speaker phasing. In conclusion, the speakers should be phased for natural sound.



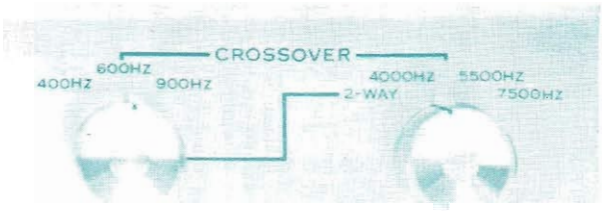
Filter Slope Switches

The Filter Slope switch marked HIGH is used to select the cutoff between 6 and 12 dB/octave slopes at mid and high frequencies. The switch marked LOW is used to select the cutoff between 6 and 12 dB/octave slopes at low and mid-frequencies.

Selection of Proper Cutoff and Crossover

As a general rule, when the horn-type midranges and tweeters are used, the Filter Slope switch should be set to the 12 dB/octave position and the Crossover selector should be set to a position 1½ or 2 times as large as their specified lower limit frequencies. This is because the horn-type speakers have relatively low sound pressure at the lower frequencies.

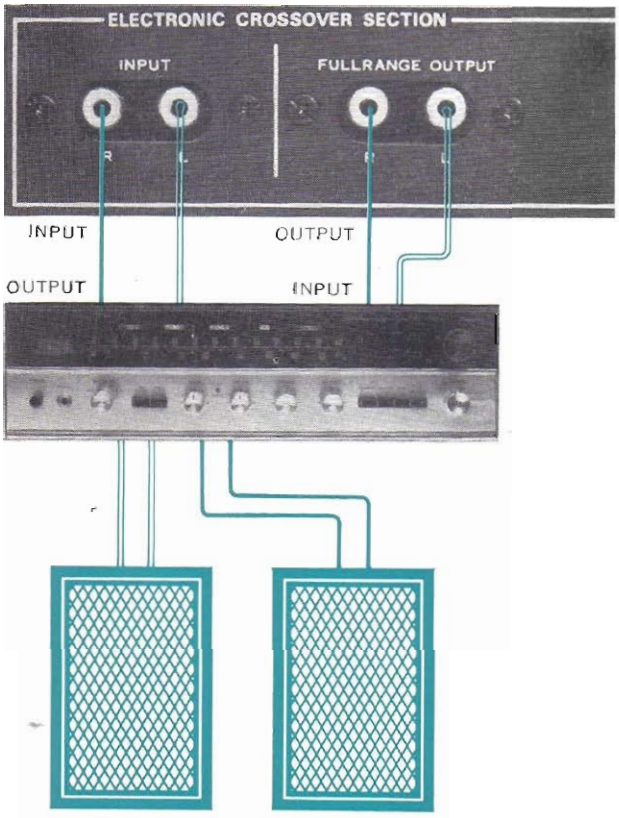
When cone-type speakers are used over entire range (for instance, in a two-way system in which a full-range speaker is used for lower range and a cone-type tweeter is used for higher range at crossover 2 times as large as the lower-limit frequency of the tweeter), the Filter Slope switches should be set to 6 dB/octave for better results. Since the 6 dB/octave slope is more gentle, care should be taken not to apply too big input to the horn-type speakers. This may cause damage to the system.



Fullrange Terminals

The Fullrange jacks are used for comparative listening tests between the electronic crossover system and the conventional L-C crossover network system, and for listening tests of additional components through the same program source without decomposing the built-up electronic crossover system. Undivided programs can be obtained from the Fullrange jacks.

The Fullrange jacks should be connected to the inputs of the additional power amplifier to which the fullrange speaker system is connected. The power amplifier required should have sufficiently high input impedance.



FULLRANGE SPEAKER SYSTEM

Wire Connections

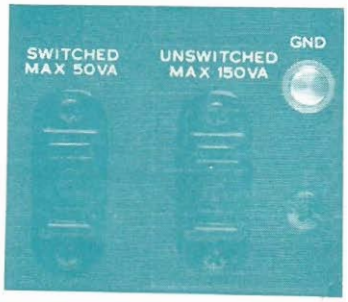
Shielded wire should be used for component connections. If connections are loose or in touch with other parts, the amplifier will not function properly, may pick up noise, and even breakdown over a long period of time.

Important: Be sure to read the manufacturer's instructions for any component before connecting it to the ECA-3.

AC Outlets

The ECA-3 is provided with two AC outlets on its rear panel. The left outlet marked SWITCHED is switched on and off by the Power switch on the front panel.

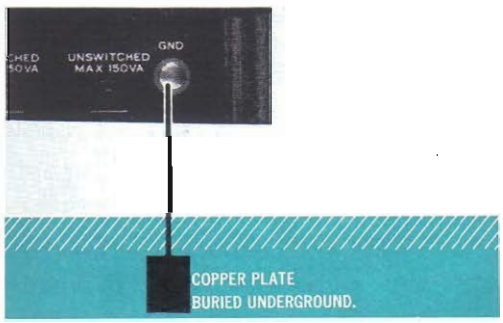
Caution: The SWITCHED outlet has a maximum capacity of 50 VA and the UNSWITCHED outlet 150 VA. Never use them beyond their rated capacities.



HINTS ON USE

Grounding

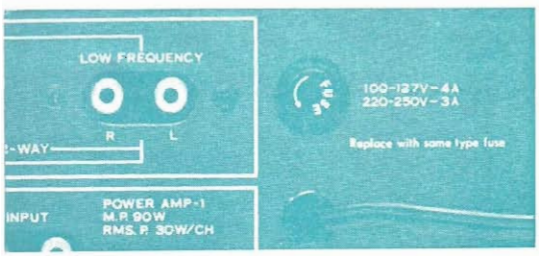
Connect one end of vinyl or enameled wire to the terminal screw marked GND on the rear of the amplifier, attach a copper plate to the other end and bury it underground. To prevent hum caused by interconnection of components, connect the body ground leads of the turntable, tape deck or other components to this terminal.



Power Fuse

If the unit remains completely dead when the power is switched on (Power indicator fails to light), the power fuse is probably blown. In this case, remove the power plug from its AC outlet and replace the fuse after finding and eliminating the trouble that caused the fuse to blow.

Caution: For the power supply voltage of 100 to 127 volts, use a glass-tubed 4-ampere fuse; for 220 to 250 volts, use a glass-tubed 3-ampere fuse. Never attempt to use a piece of wire or a fuse of a different capacity as a substitute.

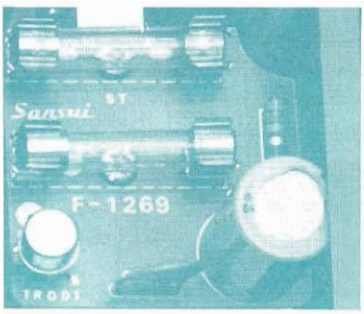


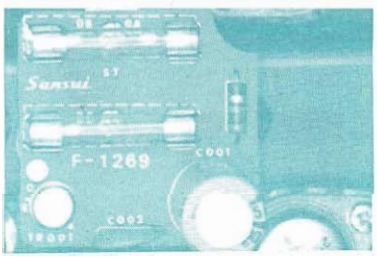
Quick-acting Fuses

The quick-acting fuses protect expensive power transistors of the built-in four power amplifiers. If one of the power transistors does not function when the Power switch is pushed on and the Power indicator is lit, its quick-acting fuse is probably blown. Immediatly remove the power plug from its AC outlet, remove the wood case from the chassis, and check the fuse; and, if necessary, replace it. Be sure to use:

2.5-ampere fuses for Power Amp-1
2-ampere fuses for Power Amp-2

Before replacing, check for the source of trouble that caused the fuse to blow. If the new fuse blows as soon as the Power switch is pushed on, check for the defective power circuit. If the trouble source cannot be located, contact the nearest Sansui dealer or Service Center.





Voltage Adjustment

To reach the voltage selector, remove the two screws from the nameplate on the rear panel and then remove the nameplate. The voltage selector make it possible to operate the ECA-3 at the correct voltage in any area.

The voltage has been pre-adjusted at the factory, but can be easily readjusted as follows:

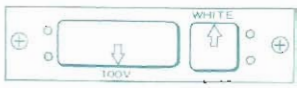
STEP I Set arrow of main voltage selector plug to required voltage: 100, 110, 117, 127, 220, 230, 240 or 250 volts.

STEP II If numerals of voltage are printed in red, set arrow of adjacent sub V.S. plug to position marked red. If they are printed in white, set arrow to position marked white.

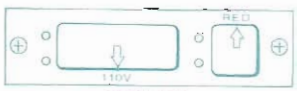
STEP III The power fuse should also be changed whenever the AC line voltage is changed. For 100-127 volt operation a 4-ampere fuse is required. For 220-250 volt operation the fuse should be changed to a 3-ampere unit.

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

117V (POWER FUSE 4A)

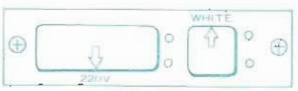


100V (4A)



110V (4A)

127V (4A)



220V (3A)

230V (3A)

240V (3A)

250V (3A)

SPECIFICATIONS/CHARACTERISTICS
ACCESSORIES

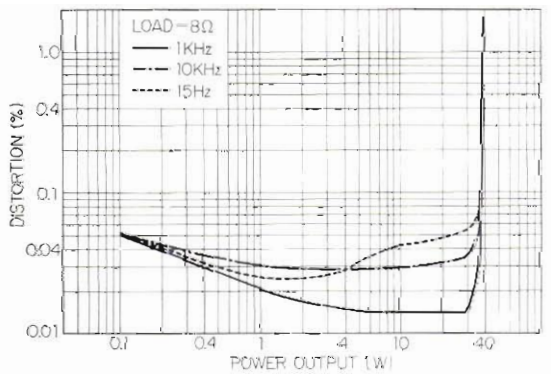
NO. 1 POWER AMPLIFIER SECTION

POWER OUTPUT:

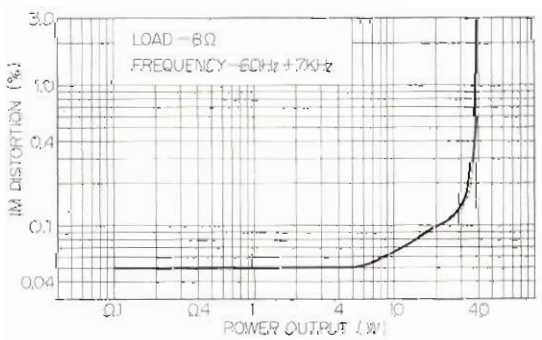
MUSIC POWER (IHF): 90W at 4 ohms load
70W at 8 ohms load

CONTINUOUS POWER: 35/35W at 4 ohms load
30/30W at 8 ohms load

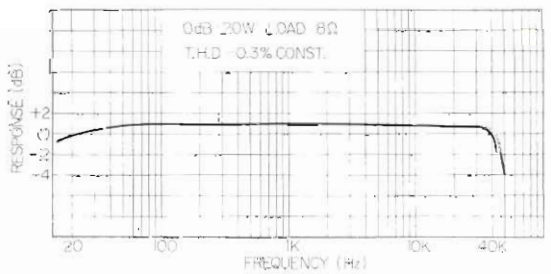
TOTAL HARMONIC DISTORTION:
less than 0,3% at rated output



INTERMODULATION DISTORTION (60Hz: 7,000 Hz=4:1 SMPTE method)
less than 0.3% at rated output



POWER BANDWIDTH (IHF): 15 to 40,000Hz



FREQUENCY RESPONSE (at normal listening level):
15 to 70,000Hz ± 1dB

CHANNEL SEPARATION: better than 50dB

HUM AND NOISE (IHF): better than 80dB

INPUT SENSITIVITY: 0.5V for rated output

INPUT IMPEDANCE: more than 47k ohms

LOAD IMPEDANCE: 4 to 16 ohms

DAMPING FACTOR: 30 at 8 ohms load

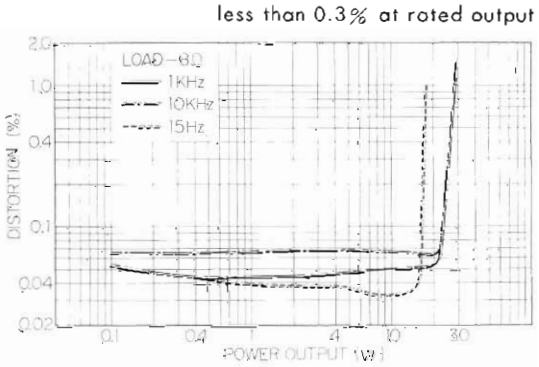
NO. 2 POWER AMPLIFIER SECTION

POWER OUTPUT:

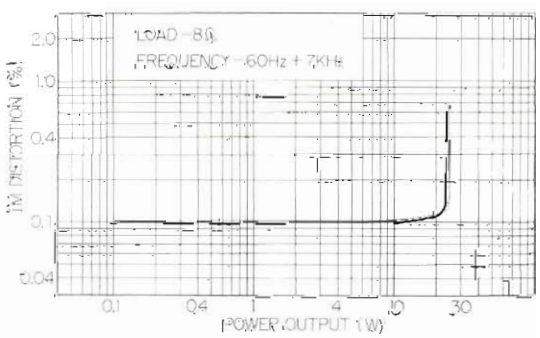
MUSIC POWER (IHF): 60W at 4 ohms load
50W at 8 ohms load

CONTINUOUS POWER: 25/25W at 4 ohms load
20/20W at 8 ohms load

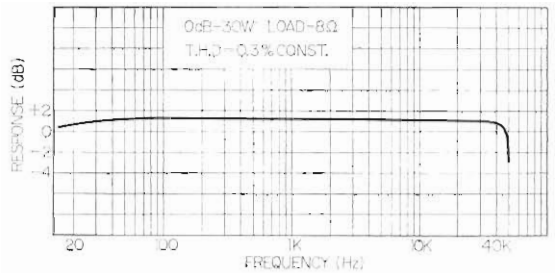
TOTAL HARMONIC DISTORTION:
less than 0.3% at rated output



INTERMODULATION DISTORTION (60Hz: 7,000Hz =4:1 SMPTE method):
less than 0.3% at rated output



POWER BANDWIDTH (IHF): 30 to 40,000Hz



FREQUENCY RESPONSE (at normal listening level): 30 to 40,000Hz ± 1dB

CHANNEL SEPARATION: better than 50dB at rated output

HUM AND NOISE (IHF): better than 80dB

INPUT SENSITIVITY: 0.5V for rated output

INPUT IMPEDANCE: more than 47k ohms

LOAD IMPEDANCE: 4 to 16 ohms

DAMPING FACTOR: 30 at 8 ohms load

ELECTRONIC CROSSOVER NETWORK SECTION

OUTPUT VOLTAGE:

MAXIMUM OUTPUT VOLTAGE: 3V

RATED OUTPUT VOLTAGE: 0.5V

INPUT VOLTAGE:

MAXIMUM INPUT VOLTAGE: 3.5V

RATED INPUT VOLTAGE: 0.55V for rated output Voltage

FILTER OUTPUT: LOW FREQUENCY, MIDRANGE, HIGH FREQUENCY

TOTAL HARMONIC DISTORTION: less than 0.3% at maximum output level

HUM AND NOISE (IHF): better than 90dB

CROSSOVER FREQUENCY SELECTOR: 400, 600, 900Hz (lower crossover of 2-way and 3-way Speaker System)
2-way, 4,000, 5,500, 7,500Hz (upper crossover of 3-way Speaker System)

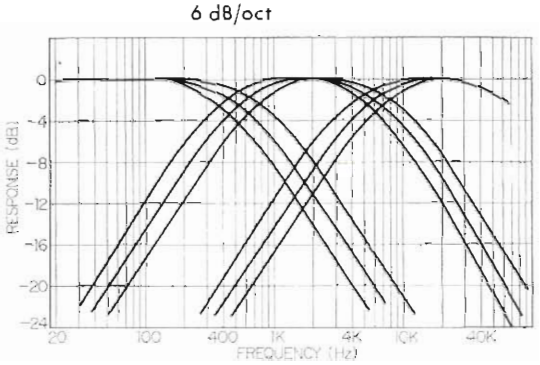
CROSSOVER FREQUENCY ERROR: less than 20%

CONSTANT LOSS: less than 3dB

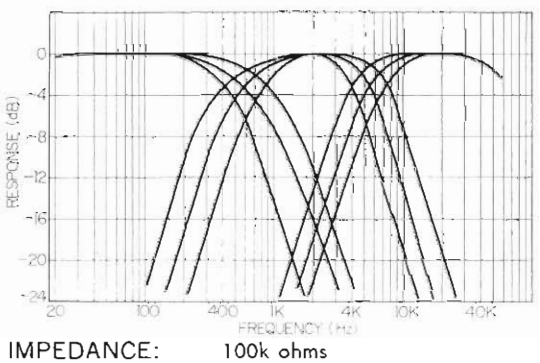
CROSSOVER ATTENUATION: 3dB ± 1dB

CUTOFF CHARACTERISTIC: 6dB/oct and 12dB/oct (upper and lower crossovers are switchable individualy)

6 dB/oct



12 dB/oct



INPUT IMPEDANCE: 100k ohms

LOAD IMPEDANCE: 10k ohms or more

SEMICONDUCTORS: Transistors: 49 Diodes: 4

POWER REQUIREMENTS

POWER VOLTAGE: 100, 110, 117, 127, 220, 230, 240, 250V 50/60Hz

POWER CONSUMPTION: 350VA (max. signal)

DIMENSIONS: 382mm(15 1/16")W, 162mm(6 3/8")H, 335mm (13 3/16")D

WEIGHT: 12.2kg (26.9 lbs.)

Accessories

1. OPERATING INSTRUCTIONS AND SERVICE MANUAL 1
2. OPERATING SHEET 1
3. CONNECTION CORDS WITH PIN-PLUGS 8
4. POLISHING CLOTH 1
5. QUICK ACTING FUSES (2A) 2
6. QUICK ACTING FUSES (2.5A) 2

TROUBLESHOOTING CHART

A Quick Check List

1) **Connections:** Are other components properly connected to the amplifier? Is the amplifier properly plugged into the wall AC outlet?

2) **Operation:** Are you operating the amplifier correctly as instructed in this booklet?

3) **Installation:** Is the amplifier properly positioned in relation to the speakers and phonograph?

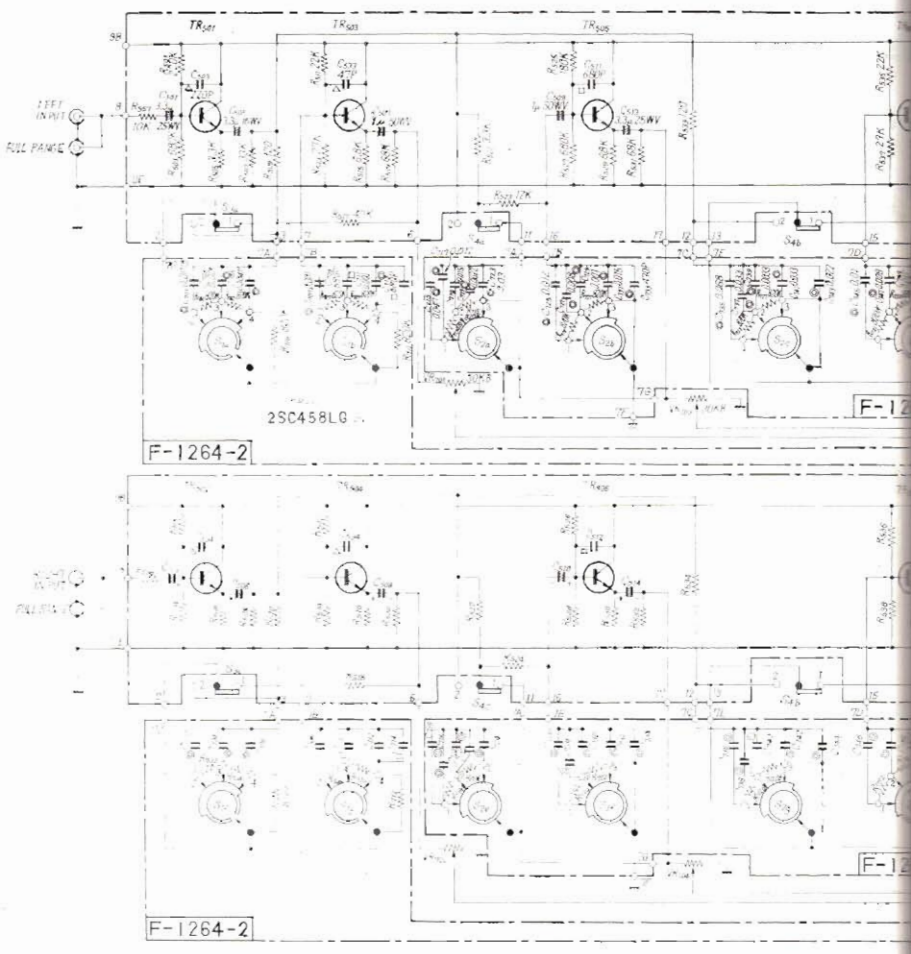
4) **Defective components:** Are the audio components connected to the amplifier defective?

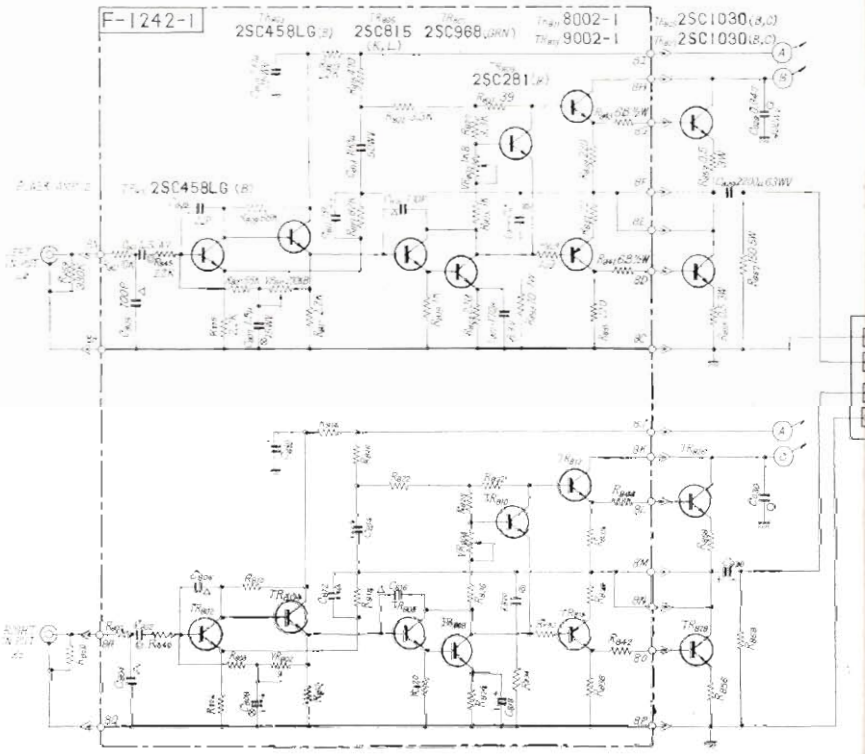
5) **Performance characteristic:** Are you not placing an excessive strain on the amplifier to raise some particular performance characteristic?

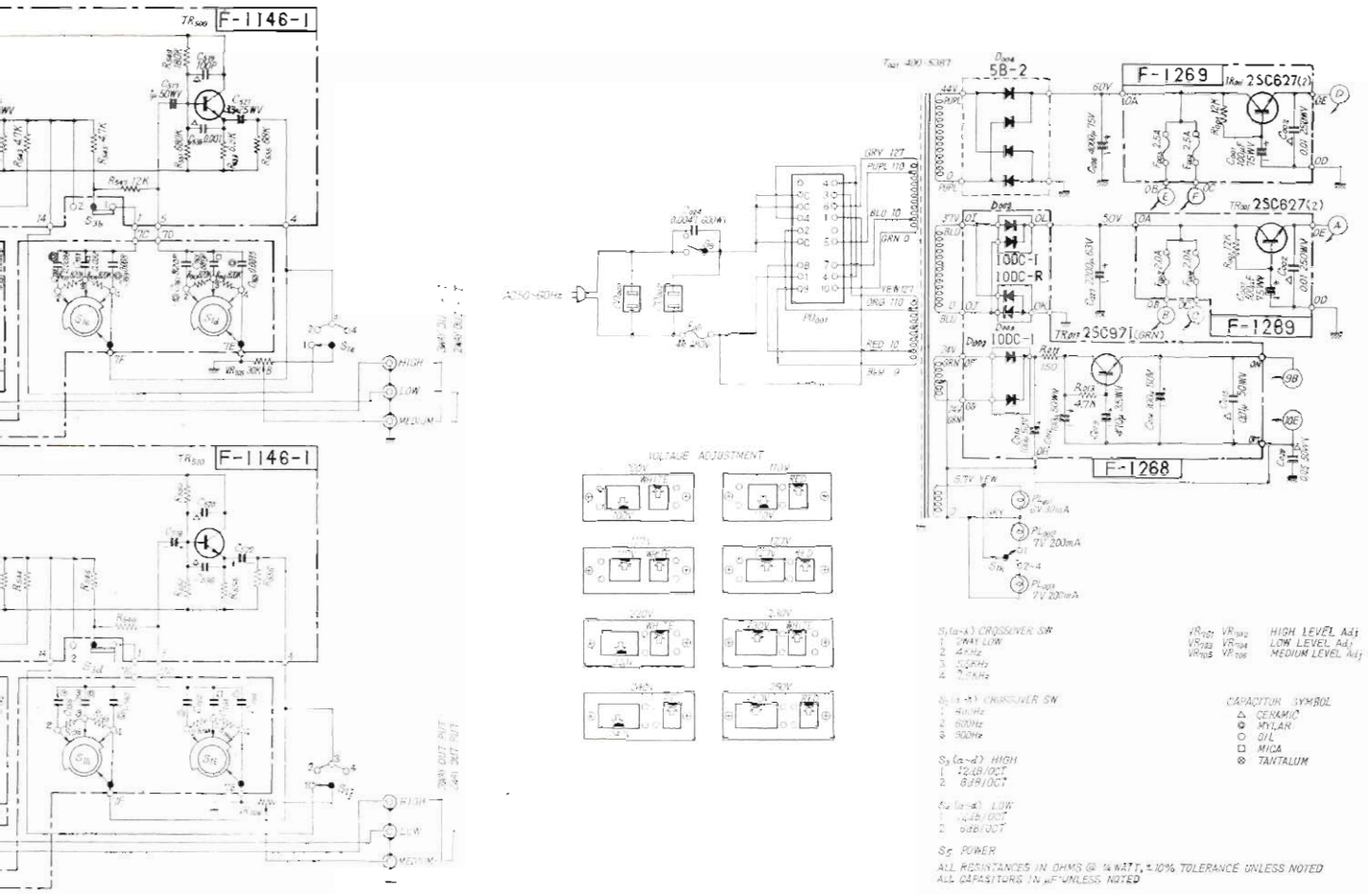
PROGRAM	SYMPTOM	PROBABLE CAUSE	REMEDY
Radio broadcast	Constant or intermittent noise heard at certain hours or in a certain area.	Electric discharge or oscillation by a fluorescent lamp, TV, series motor, electrical contact, rectifier, oscillator, etc. Insufficient antenna input due to long distance from broadcast stations or obstruction of signals by mountains or high ferroconcrete buildings. Interference by other radio waves. Natural phenomena such as an atmospheric discharge and lightning.	Attach a noise suppressor to the tuner or the electrical appliance producing the noise. Place the tuner away from the electrical appliance producing the noise. Install an outdoor antenna and ground the amplifier to improve its S/N ratio. If the noise occurs at a certain frequency, attach a wave trap to the antenna input circuit of the tuner. Reverse the inserted position of the power cord plug.
	Noise heard on AM band at certain hours, in a certain area or at particular broadcast frequencies.	Insufficient signal strength.	Install an outdoor AM antenna, or if it is already installed, reposition it for best reception. Ground the amplifier and/or reverse the inserted position of the power cord plug.
	High-frequency noise.	Interference by adjacent channel (beat interference). TV set near to the amplifier is in use.	While noise due to such causes cannot be eliminated by adjusting the amplifier, it can be made less disturbing by turning down the TREBLE tone control or turning on the HIGH filter switch on the preamplifier. Move the amplifier away from the TV set.
	FM broadcast reception is noisy.	Poor noise limiter effect and lowered S/N ratio due to insufficient antenna input, resulting either from poorly positioned FM antenna or long distance from stations.	Re-position the FM antenna for the least noise and best reception. If this proves ineffective, install an exclusive outdoor FM antenna and position it for the best reception.
	NOTE: Quality of FM broadcast reception is largely affected by the transmitting conditions (such as antenna efficiency) of broadcast stations. So you may receive one station quite well while having difficulty in receiving another.		TV antenna may be shared for FM broadcast reception, but be sure to use a divider and make certain the TV reception is not affected. Excessively long antenna may increase noise.
	A series of pops on FM band.	Ignition noise made by the starting of a nearby automobile engine.	No effective remedy except to move the antenna as far away from the street as possible or increase the antenna input as instructed above. Position the antenna so as to maximize the antenna input.

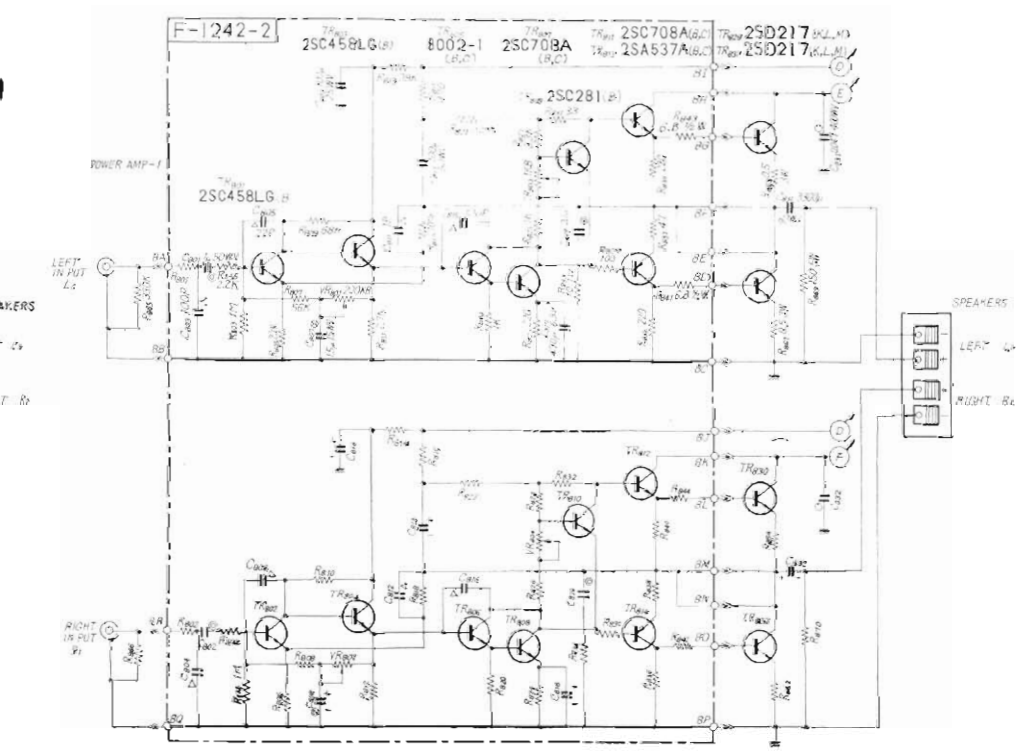
PROGRAM	SYMPTOM	PROBABLE CAUSE	REMEDY
Radio broadcast (cont'd)	Noise heard with FM MPX broadcasts that was not heard with FM monophonic broadcasts.	Unavoidable because of the nature of FM MPX signals which cut down effective service area to half that of FM monophonic signals.	Turning on HIGH FILTER Switch and/or turning down TREBLE tone control may considerably reduce the noise.
Record and tape	Hum or howling.	Phonograph is placed on top of or near one of the speakers.	Place a cushion underneath the phonograph.
		Use of wire other than shielded wire.	Try changing the location of the phonograph and speakers
		Incomplete connection.	Use regular shielded wire to make interconnections.
		Connection cord too close to power cord and/or electrical appliances such as a fluorescent lamp.	Turning on LOW FILTER switch may help.
			Minimize the length of connection cord.
		Existence of an amateur radio station or TV transmitting antenna in the vicinity.	Refrain from turning up BASS tone control too high.
			Consult your nearest governmental (or municipal) radio regulatory office.
	Surface noise.	Worn or damaged record, or dust on record	Turning down TREBLE tone control or turning on HIGH FILTER switch may help.
		Worn stylus, or dust on stylus.	Recondition (or replace) the phonograph stylus or tape head.
		Improper stylus pressure.	
All programs	BALANCE control is off the center position when sound volumes in the right and left channels are balanced.	Position of the BALANCE control which gives equal sound volume from both channels varies from program to program.	Set the preamplifier's MODE switch in MONO and adjust its BALANCE control for equal sound volume from both channels.
			Check if the efficiency of one speaker is balanced with that of the other.

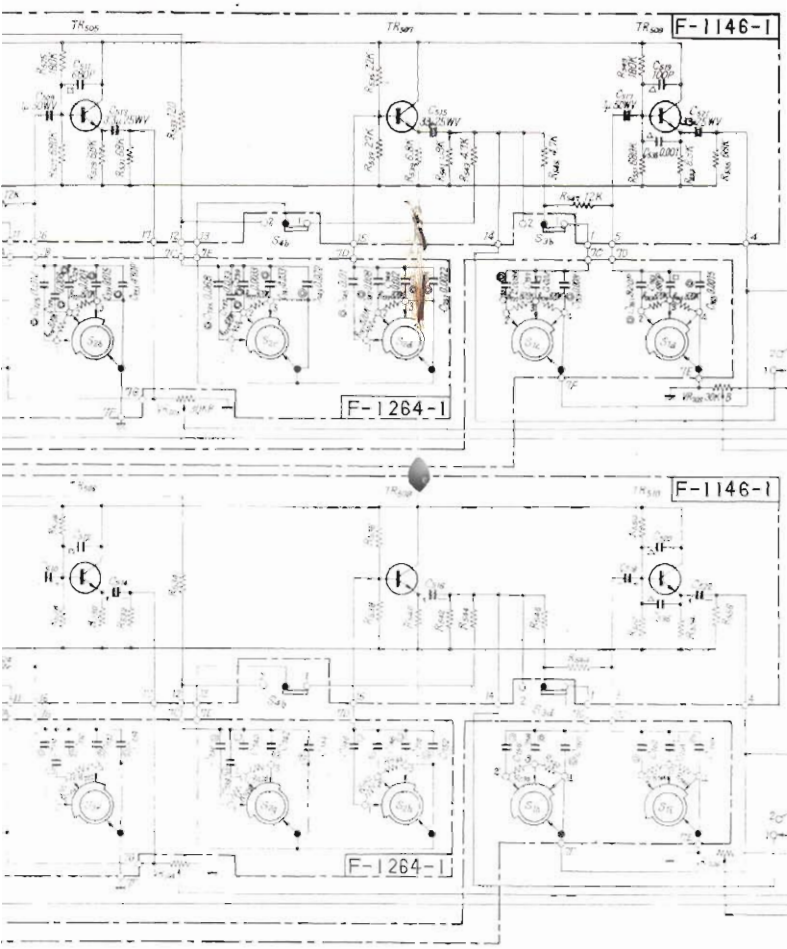
SCHEMATIC DIAGRAM

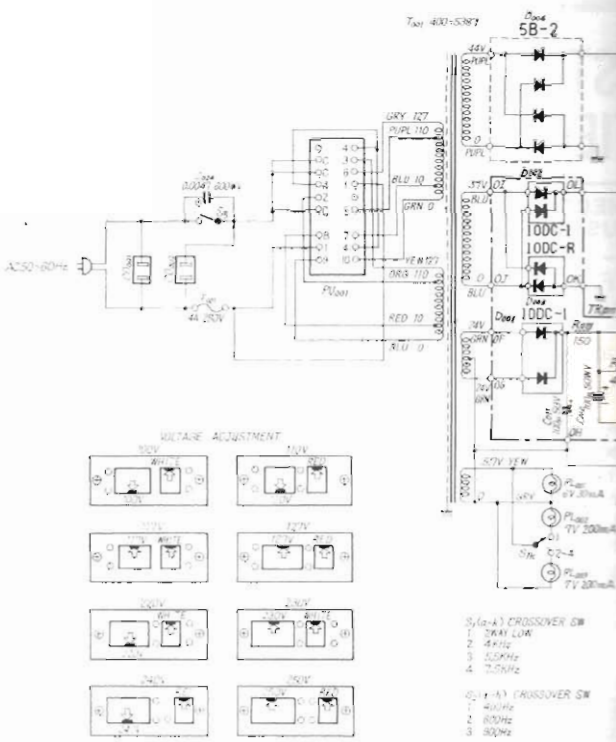


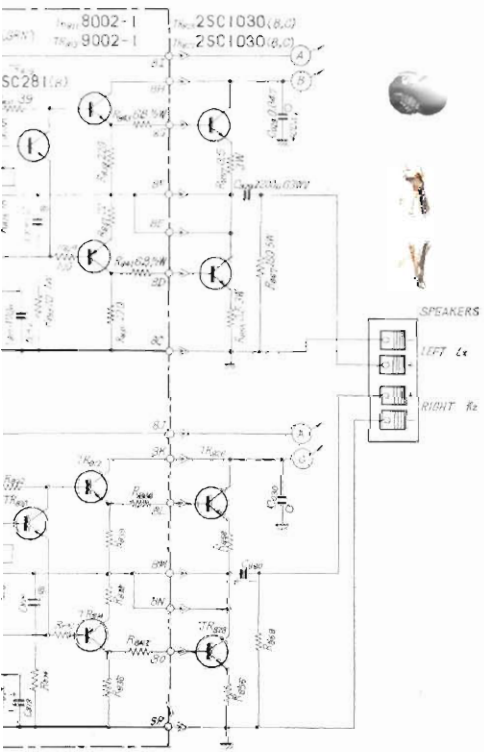


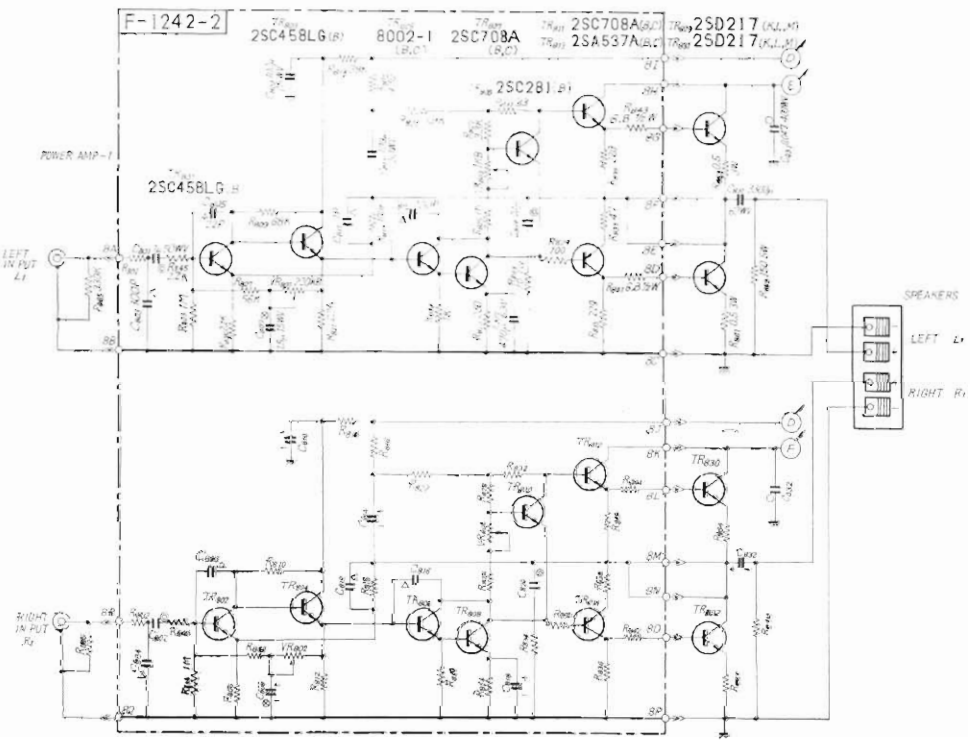

F-1146-1
F-1146-1
F-1269
F-1289
F-1268
5B-2
10DC-I
10DC-R
2SC627(2)
2SC971(GRN)
VOLTAGE ADJUSTMENT
HIGH
LOW
MEDIUM
ALL RESISTANCES IN OHMS @ ¼ WATT, ±10% TOLERANCE UNLESS NOTED
ALL CAPACITORS IN μF UNLESS NOTED


F-1242-2
2SC458LG
8002-1
2SC708A
2SA537A
2SD217
2SC281
POWER AMP-I
LEFT IN PUT
RIGHT IN PUT
SPEAKERS


F-1146-1
F-1264-1
F-1146-1
F-1264-1


5B-2
1DDC-I
1DDC-R
1DDC-I
VOLTAGE ADJUSTMENT


SPEAKERS
LEFT
RIGHT


F-1242-2
2SC458LG
8002-I
2SC708A
2SA537A
2SD217
2SC281
POWER AMP-I
SPEAKERS
LEFT
RIGHT

ALIGNMENT

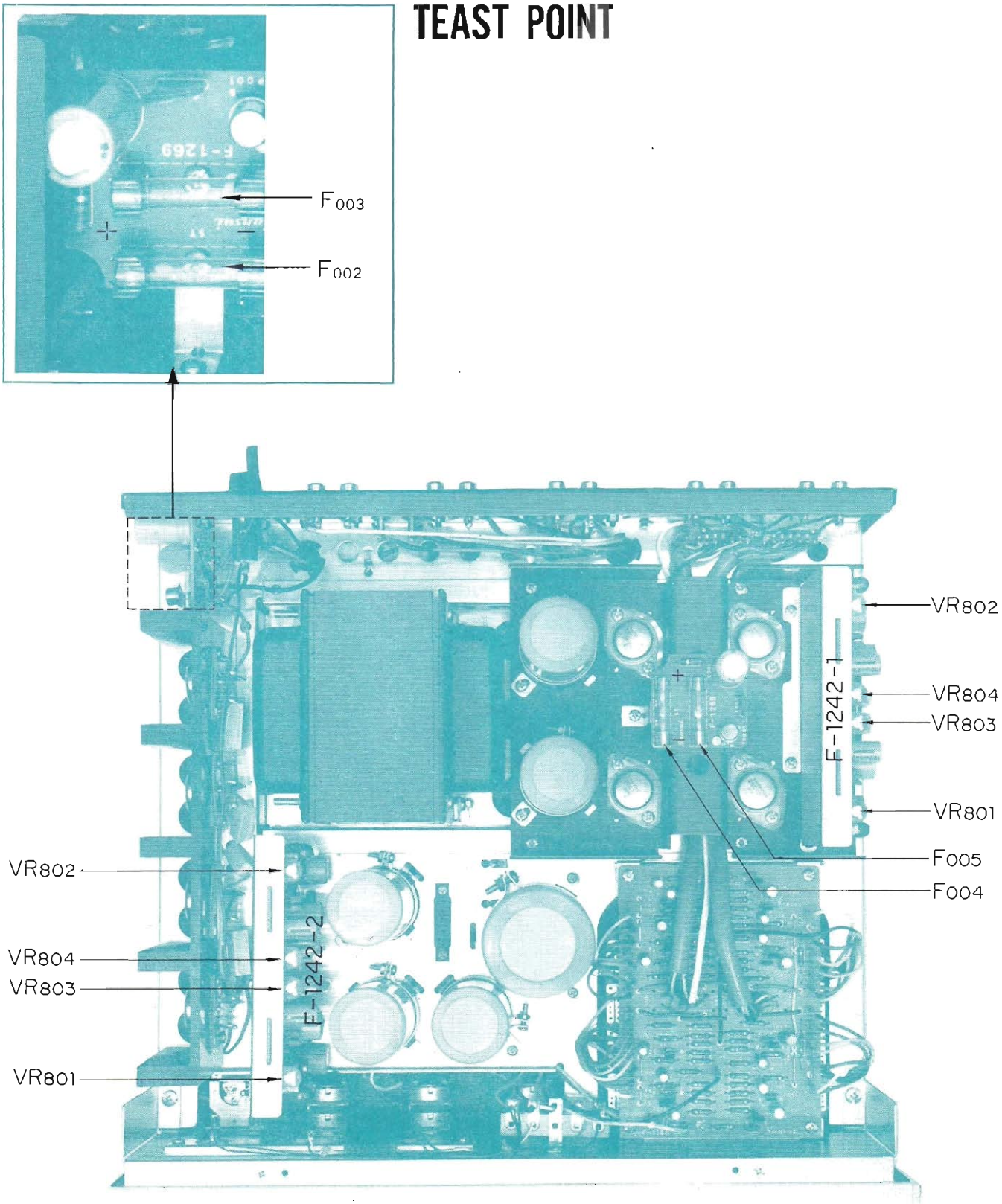
CURRENT ADJUSTMENT OF POWER AMPLIFIERS

STEP	AMMETER (TESTER)	CONNECTION & ADJUSTMENT	REMARKS
1.		Remove F_{003} (F_{005}) and F_{002} (F_{004}).	Use ammeter having 50 or 100mA range
2.		Set resistance of VR_{803} and VR_{804} to maximum.	
3.	Set to 100mA range.	Turn power switch on and connect ammeter in place of F_{003} (F_{005}). Its ⊕ terminal should be connected to OA and ⊖ terminal to OB in schematic diagram.	Be sure to connect ammeter after turning power switch on.
4.		Turn VR_{803} little by little and adjust current to 30mA.	
5.		Turn power switch off and reset F_{003} (F_{005}) in its original position.	
6.	Set to 100mA range.	Turn power switch on and connect ammeter in place of F_{002} (F_{004}). Its ⊕ terminal should be connected to OA and ⊖ terminal to OC in schematic diagram.	Be sure to connect ammeter after turning power switch on.
7.		Turn VR_{804} little by little and adjust current to 30mA.	
8.		Turn power switch off and reset F_{002} (F_{004}) in its original position.	
9.		Adjust current of power amplifier 2 as indicated above but parenthesized.	

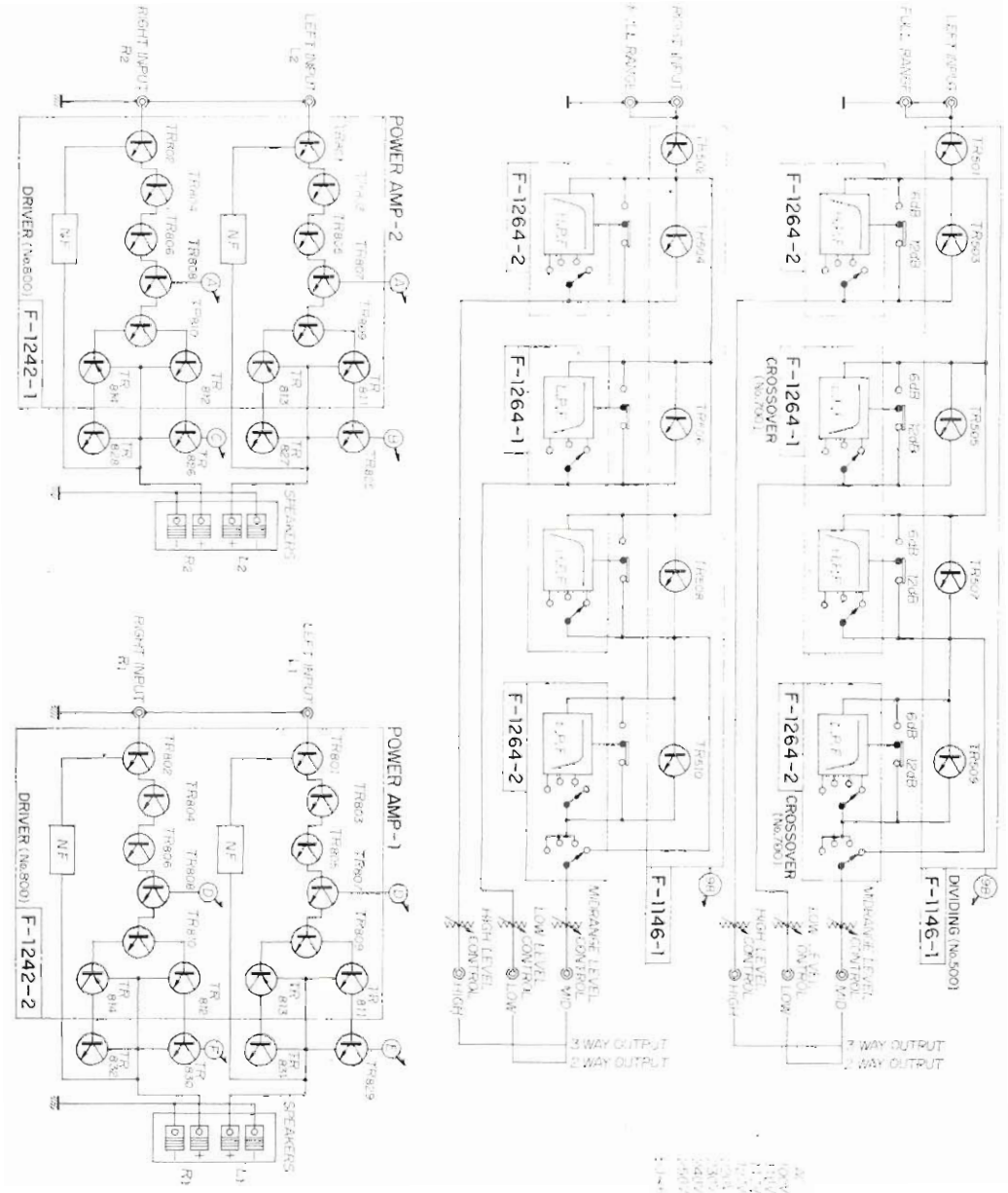
OUTPUT ADJUSTMENT OF POWER AMPLIFIERS

STEP	CONNECTION & ADJUSTMENT	REMARKS
1.	Set oscillator to 1,000 Hz and its output to minimum, and connect it to L-(R-) channel input of power amplifier 1.	Use oscillator having oscillation frequency of 20 to 20,000 Hz and output voltage of more than 500mV
2.	Connect an 8- or 16-ohm load resistor (minimum rating of 50 watts) to L-(R-) channel speaker terminal of power amplifier 1.	
3.	Connect oscilloscope to speaker terminal.	
4.	Turn power switch on and advance oscillator output little by little to check whether output appears at speaker terminal by means of oscilloscope.	
5.	Adjust VR_{801} (VR_{802}) so that both crests of output wave form are clipped simultaneously.	
6.	For adjustment of output in R-channel, follow same procedure as indicated above but parenthesized.	
7.	Adjust output of power amplifier 2 as above.	

TEAST POINT

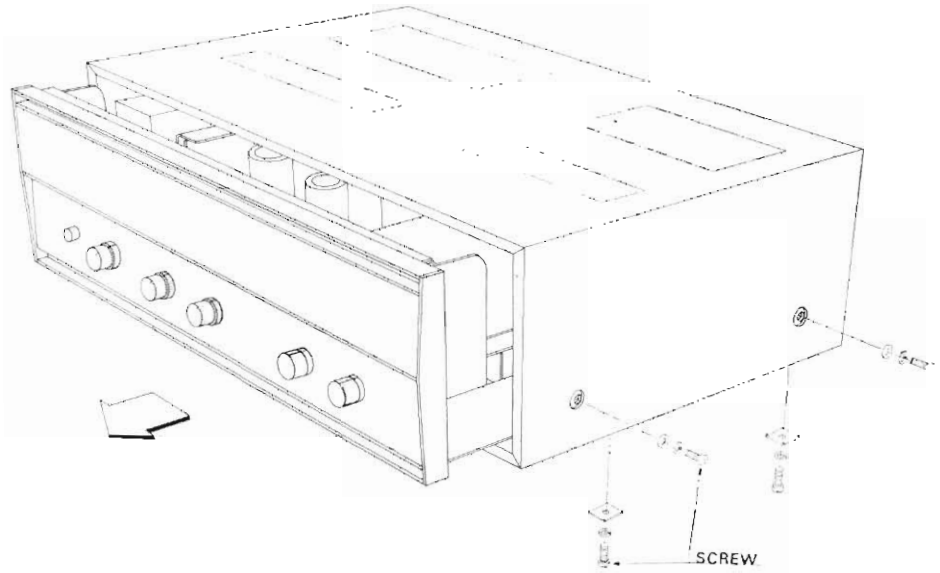

F003
F002
VR802
VR804
VR803
VR801
F005
F004
F-1242-1
VR802
VR804
VR803
VR801
F-1242-2

BLOCK DIAGRAM

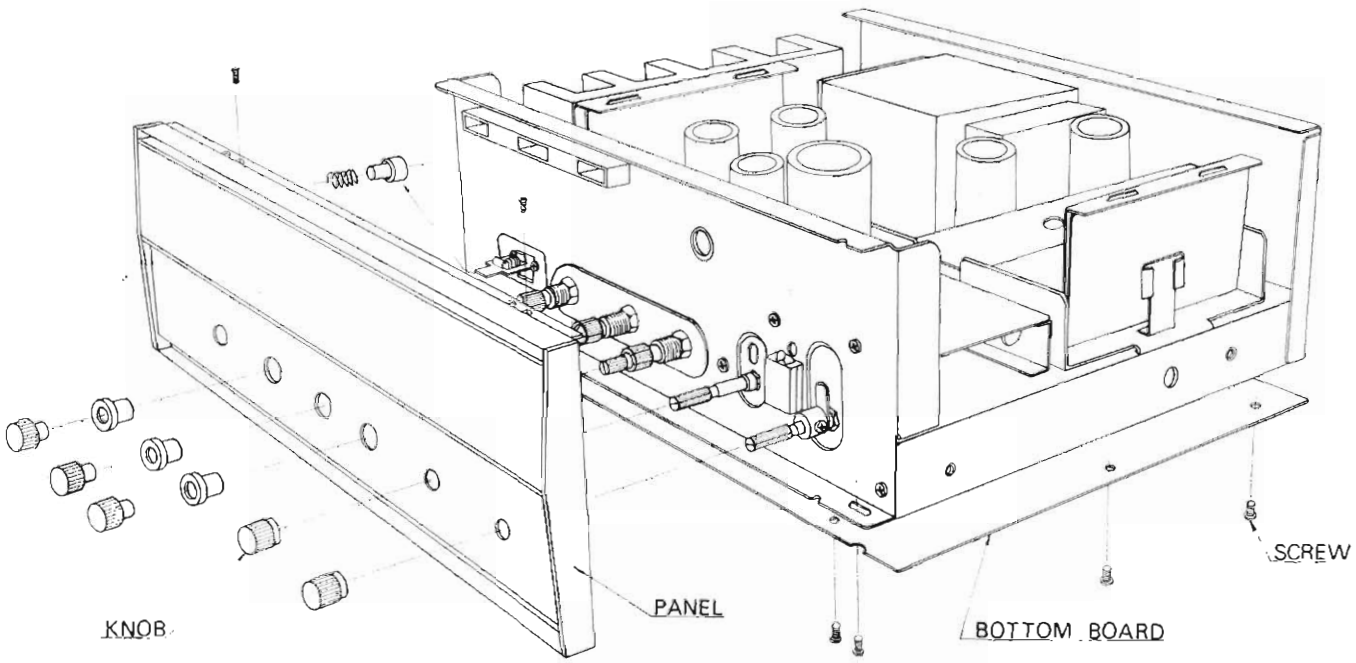


DISASSEMBLY PROCEDURE

REMOVING THE WOOD CASE



REMOVING THE FRONT PANEL, AND BOTTOM BOARDS

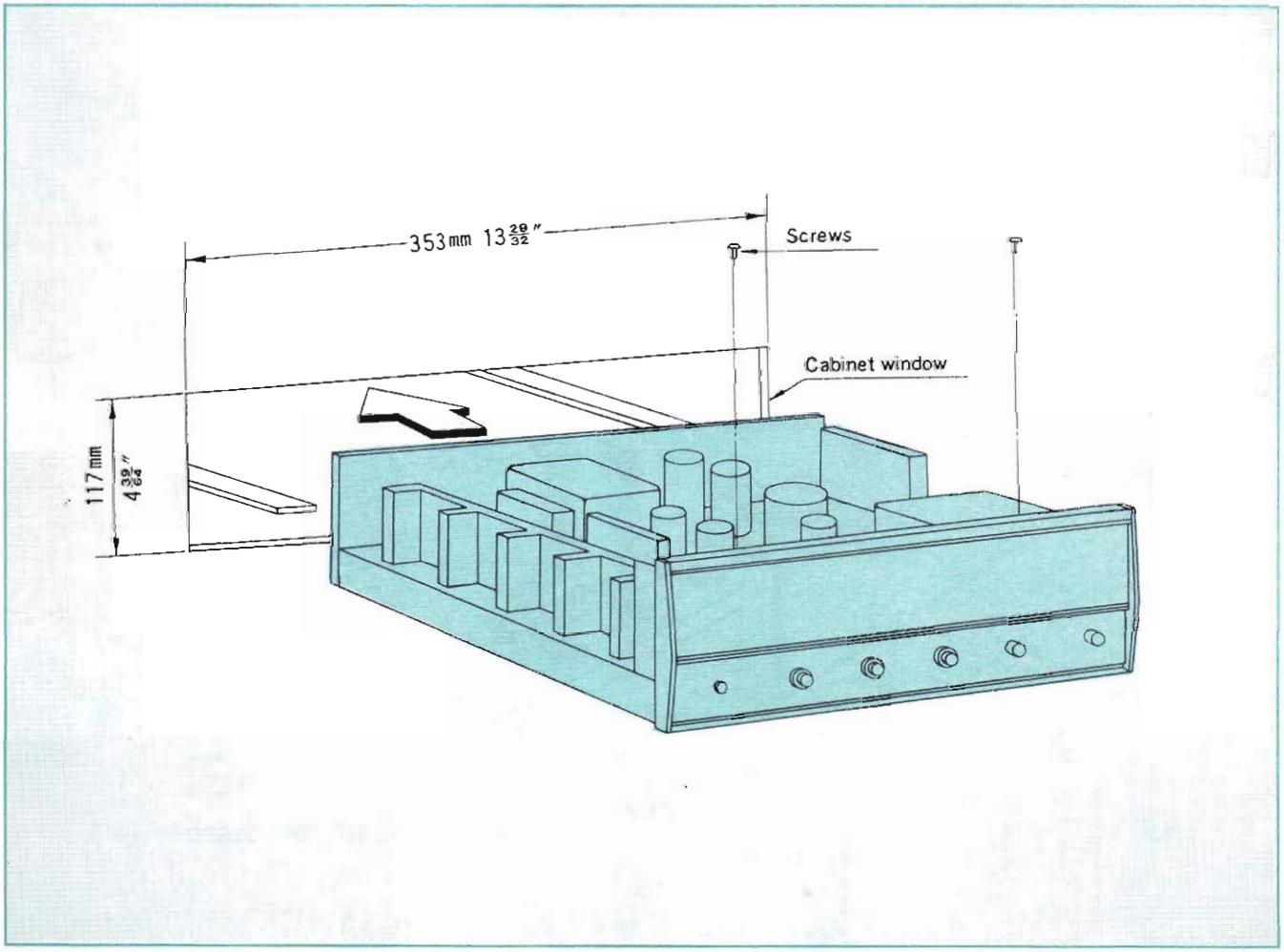


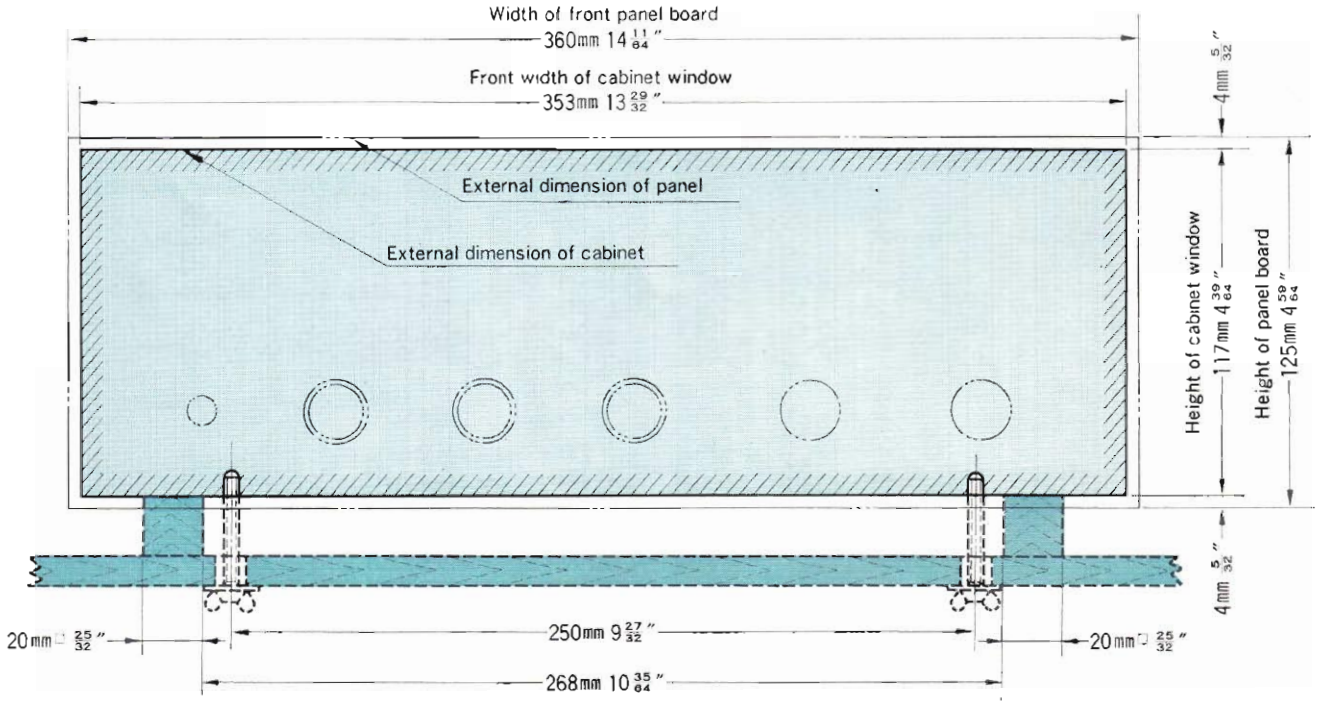
CUSTOM MOUNTING

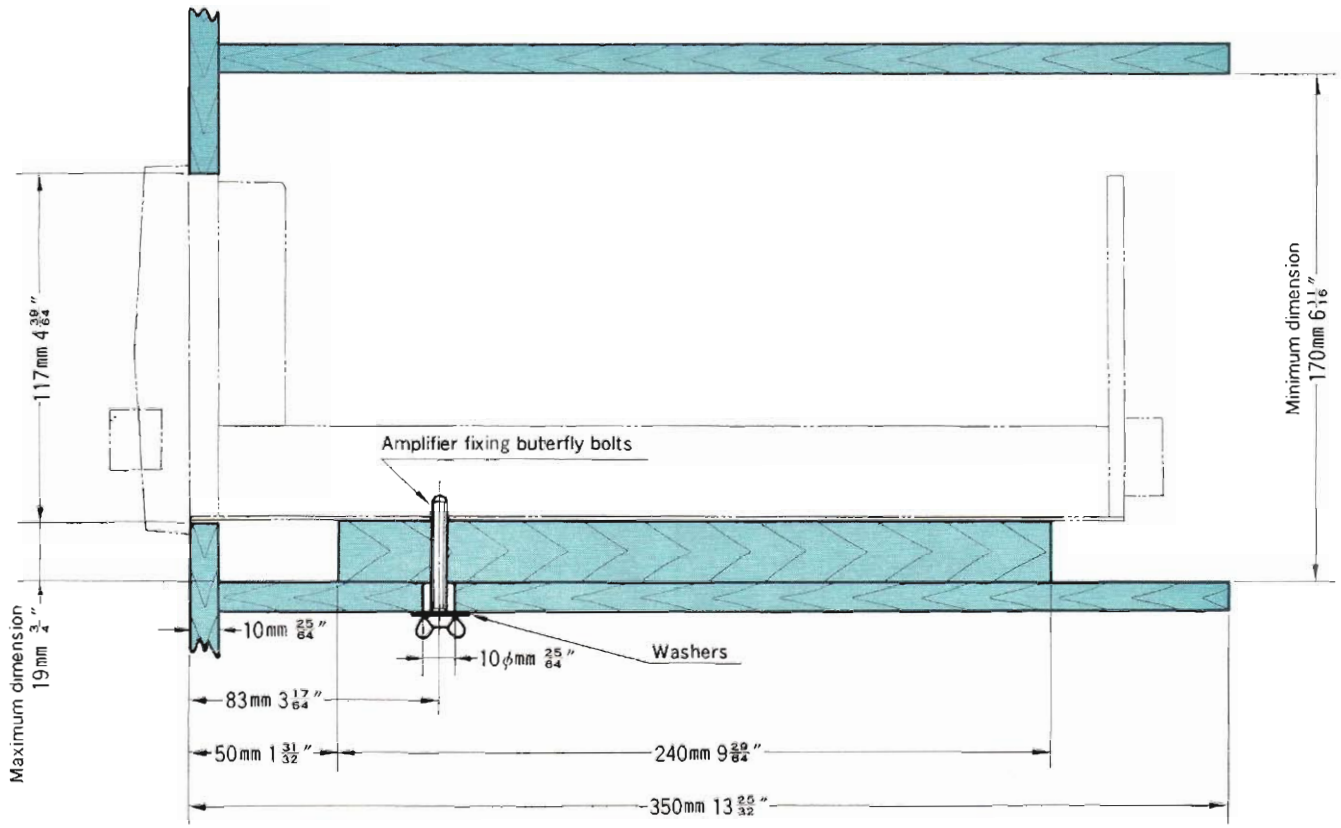
How to Install the Amplifier in a Custom Cabinet

1. Make a Cabinet window of 353mm or $13^{29}/_{32}$" in width and 117mm or $4^{39}/_{64}$" in height.
2. Place two square pieces of wood ($20 \times 20 \times 240$mm or $^{25}/_{32}" \times ^{25} \times _{32}" \times 9^{29}/_{64}"$) for supporting the amplifier in the bottom board of the cabinet.
3. Cut two holes for attachment bolts on the bottom board of the cabinet.
4. Remove the amplifier from the wood case (Refer to the section entitled 'DISASSEMBLY PROSEDURE').
5. Place the amplifier in position throuth the cabinet window.
6. Make sure the amplifier is in position, then put the washers in butterfiy bolts (4×40mm) and fix the amplifier to the cabinet with the butterfly bolts.

Note: When the amplifier is built into the custom cabinet, the wood case assembly including screws and washers is not used. Retain it for future use.




Width of front panel board
360mm 14 11/64"
Front width of cabinet window
353mm 13 29/32"
External dimension of panel
External dimension of cabinet
4mm 5/32"
Height of cabinet window
117mm 4 39/64"
Height of panel board
125mm 4 59/64"
4mm 5/32"
20mm 25/32"
250mm 9 27/32"
20mm 25/32"
268mm 10 35/64"


117mm 4 39/64"
Minimum dimension
170mm 6 11/16"
Amplifier fixing buterfly bolts
Maximum dimension
19mm 3/4"
10mm 25/64"
10φmm 25/64"
Washers
83mm 3 17/64"
50mm 1 31/32"
240mm 9 29/64"
350mm 13 25/32"

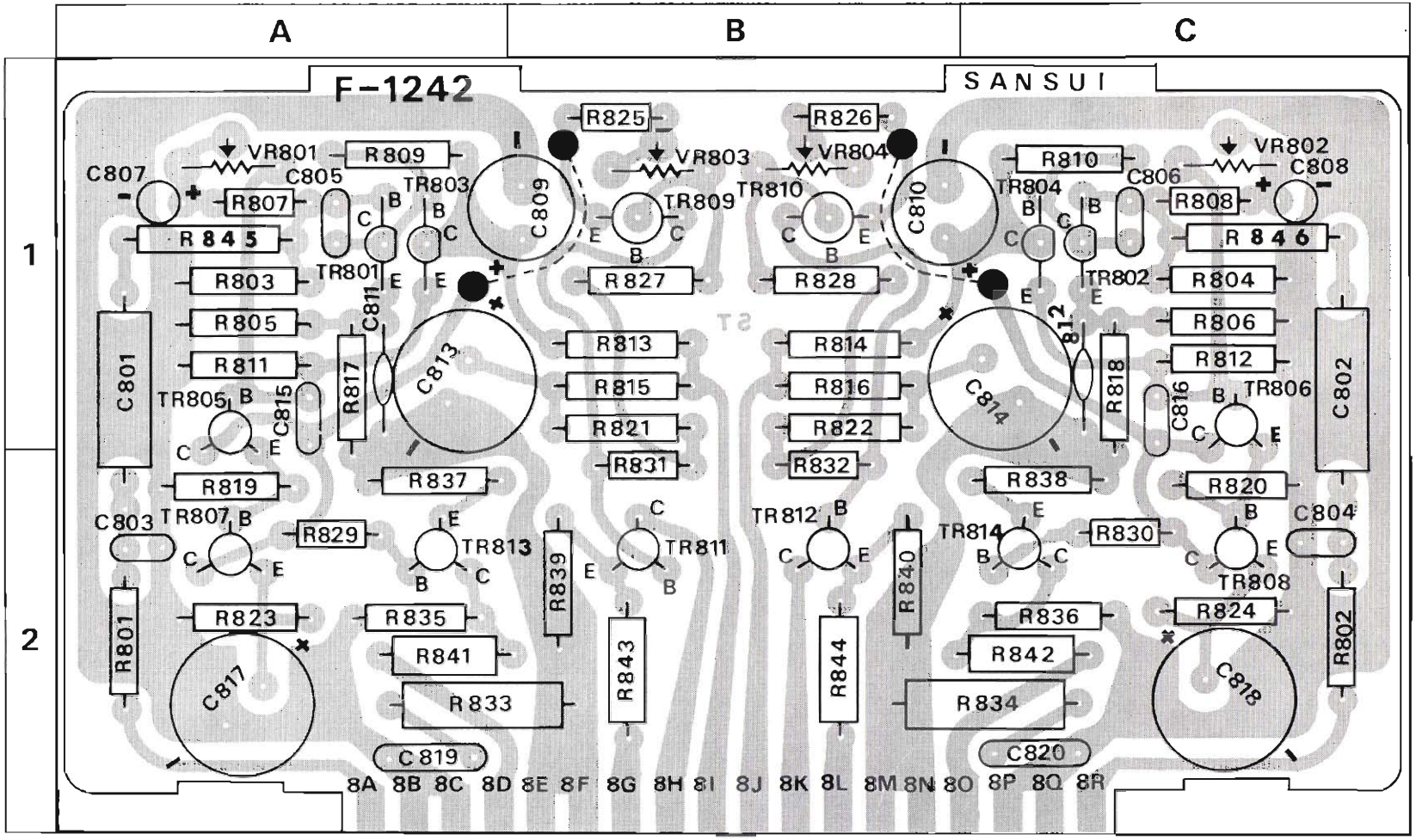
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

DRIVER BLOCK 〈F-1242-1〉

X	Y	Z
R801	10kΩ } ±10% ¼W Carbon Resistor	2 A
R802	10kΩ }	2 C
R805	2.2kΩ }	1 A
R806	2.2kΩ }	1 C
R807	56kΩ } ±10% ¼W Solid Resistor	1 A
R808	56kΩ }	1 C
R809	68kΩ } ±10% ¼W Carbon Resistor	1 A
R810	68kΩ }	1 C
R811	2.2kΩ }	1 A
R812	2.2kΩ }	1 C
R813	22kΩ }	1 B
R814	22kΩ }	1 B
R815	470Ω }	1 B
R816	470Ω }	1 B
R817	82kΩ }	1 A
R818	82kΩ }	1 C
R819	1kΩ }	2 A
R820	1kΩ }	2 C
R821	3.3kΩ }	1 B
R822	3.3kΩ }	1 B
R823	220Ω }	2 A
R824	220Ω }	2 C
R825	1kΩ } ±10% ¼W Solid Resistor	1 B
R826	1kΩ }	1 B
R827	3.3kΩ } ±10% ¼W Carbon Resistor	1 B
R828	3.3kΩ }	1 B
R829	100Ω } ±10% ¼W Solid Resistor	2 A
R830	100Ω }	2 C
R831	39Ω }	2 B
R832	39Ω }	2 B
R833	10Ω } ±10% 1W Metal Film Resistor	2 A, B
R834	10Ω }	2 B, C
R835	220Ω } ±10% ¼W Carbon Resistor	2 A
R836	220Ω }	2 C
R837	22Ω }	2 A
R838	22Ω }	2 C
R839	220Ω }	2 B
R840	220Ω }	2 B
R841	6.8Ω } ±10% ½W Solid Resistor	2 A
R842	6.8Ω }	2 C
R843	6.8Ω }	2 B
R844	6.8Ω }	2 B
R845	2.2kΩ } ±10% ¼W Carbon Resistor	1 A
R846	2.2kΩ }	1 C
VR801	200kΩ(B) } AC Balance Adjustor (103015-2)	1 A
VR802	200kΩ(B) }	1 C
VR803	1kΩ(B) } DC Balance Adjustor (103053-1)	1 B
VR804	1kΩ(B) }	1 B
C801	1μF } ±10% 50WV Mylar Capacitor	1 A
C802	1μF }	1 C
C803	100pF } ±10% 50WV Ceramic Capacitor	2 A
C804	100pF }	2 C
C805	22pF }	1 A
C806	22pF }	1 C
C807	1.5μF } 15WV Tantalum Capacitor	1 A
C808	1.5μF }	1 C

X	Y	Z
C809	100μF } 25WV Electrolytic Capacitor	1 A, B
C810	100μF }	1 B, C
C811	1pF } ±10% 50WV Ceramic Capacitor	1 A
C812	1pF }	1 C
C813	100μF } 50WV Electrolytic Capacitor	1 A
C814	100μF }	1 C
C815	100pF } ±10% 50WV Ceramic Capacitor	1 A
C816	100pF }	1 C
C817	470μF } 6.3WV Electrolytic Capacitor	2 A
C818	470μF }	2 C
C819	0.1μF } ±10% 50WV Mylar Capacitor	2 A
C820	0.1μF }	2 C
TR801	2SC458LG(B) } (030531)	1 A
TR802	2SC458LG(B) }	1 C
TR803	2SC458LG(B) }	1 A
TR804	2SC458LG(B) }	1 C
TR805	2SC815(L, K) } (030543-1, 2)	1 A
TR806	2SC815 (L, K) }	1 C
TR807	2SC968 (GRN) } (030556-1)	2 A
TR808	2SC968 (GRN) }	2 C
TR809	2SC281 White(B) } (030514-1)	1 B
TR810	2SC281 White(B) }	1 B
TR811	CDC8002-1(A) } (030555)	2 B
TR812	CDC8002-1(A) }	2 B
TR813	CDC9002-1(A) } (030014)	2 A, B
TR814	CDC9002-1(A) }	2 B, C


A
B
C
1
2
F-1242
SANSUI
VR801
VR802
VR803
VR804
R809
R810
R825
R826
C807
C805
C806
C808
R807
R808
TR803
TR804
TR809
TR810
C809
C810
R845
R846
R803
R804
R827
R828
TR801
TR802
R805
R806
C811
C812
R811
R812
C801
C802
R813
R814
R817
R818
C813
C814
TR805
C815
C816
TR806
R815
R816
R819
R820
R821
R822
R831
R832
R837
R838
C803
TR807
TR812
TR814
C804
R829
R830
TR813
TR811
TR808
R839
R840
R801
R823
R835
R836
R824
R841
R842
R843
R844
R802
C817
R833
R834
C818
C819
C820
8A 8B 8C 8D 8E 8F 8G 8H 8I 8J 8K 8L 8M 8N 8O 8P 8Q 8R

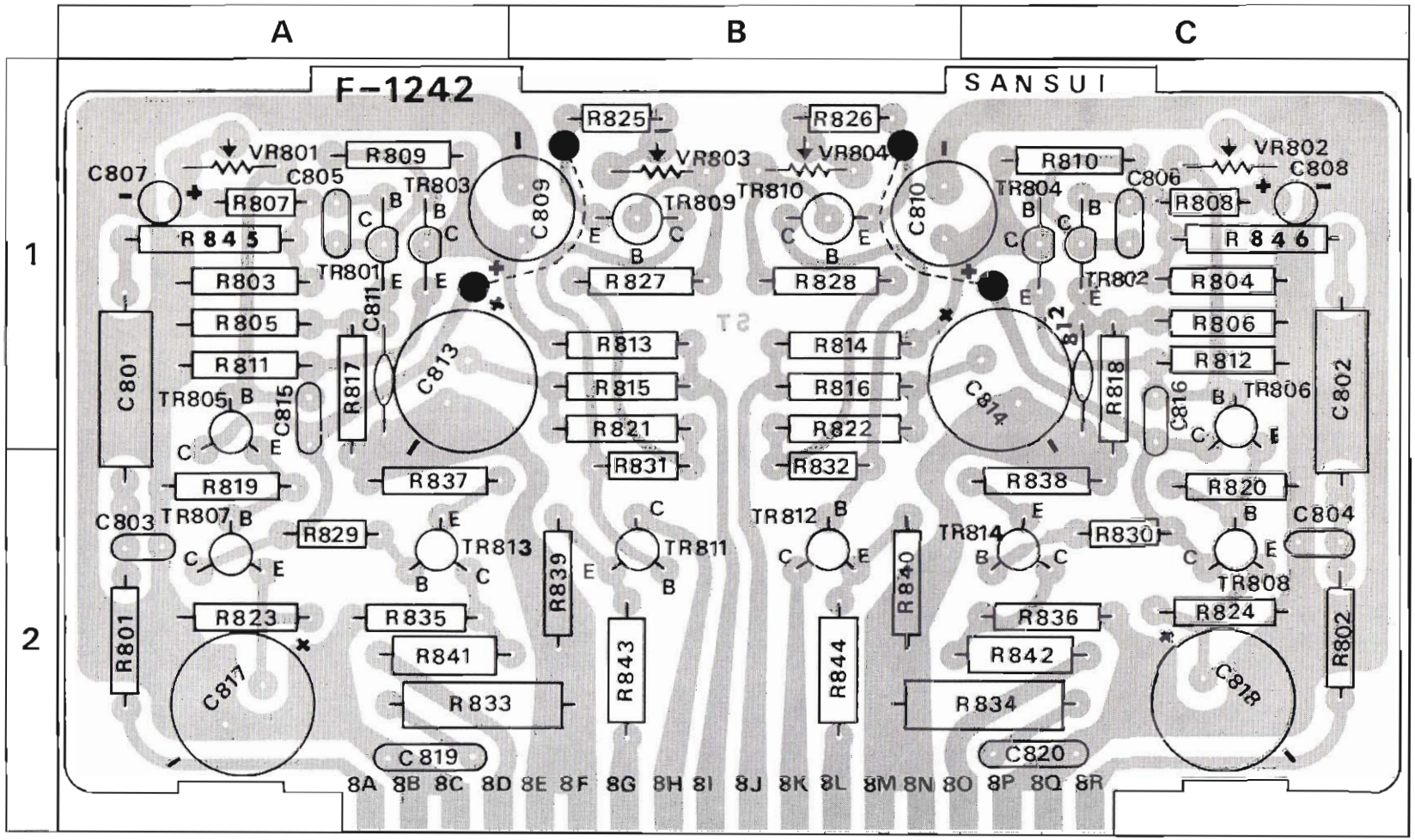
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

DRIVER BLOCK 〈F-1242-2〉

X	Y	Z
R801	10kΩ } ±10% ¼W Carbon Resistor	2 A
R802	10kΩ }	2 C
R803	1MΩ }	1 A
R804	1MΩ }	1 C
R805	2.2kΩ }	1 A
R806	2.2kΩ }	1 C
R807	56kΩ } ±10% ¼W Solid Resistor	1 A
R808	56kΩ }	1 C
R809	68kΩ }	1 A
R810	68kΩ }	1 C
R811	2.7kΩ }	1 A
R812	2.7kΩ }	1 C
R813	39kΩ }	1 B
R814	39kΩ }	1 B
R815	470Ω }	1 B
R816	470Ω } ±10% ¼W arbon Resistor	1 B
R817	100kΩ }	1 A
R818	100kΩ }	1 C
R819	1kΩ }	2 A
R820	1kΩ }	2 C
R821	3.9kΩ }	1 B
R822	3.9kΩ }	1 B
R823	220Ω }	2 A
R824	220Ω }	2 C
R825	1kΩ } ±10% ¼W Solid Resistor	1 B
R826	1kΩ }	1 B
R827	3.3kΩ } ±10% ¼W Carbon Resistor	1 B
R828	3.3kΩ }	1 B
R829	100Ω } ±10% ¼W Solid Resistor	2 A
R830	100Ω }	2 C
R831	33Ω } ±10% ¼W Solid Resistor	2 B
R832	33Ω }	2 B
R833	10Ω } ±10% 1W Metal Film Resistor	2 A, B
R834	10Ω }	2 B, C
R835	220Ω }	2 A
R836	220Ω }	2 C
R837	47Ω }	2 A
R838	47Ω } ±10% ¼W Carbon Resistor	2 C
R839	220Ω }	2 B
R840	220Ω }	2 B
R841	6.8Ω }	2 A
R842	6.8Ω }	2 C
R843	6.8Ω } ±10% ½W Solid Resistor	2 B
R844	6.8Ω }	2 B
R845	2.2kΩ } ±10% ¼W Carbon Resistor	1 A
R846	2.2kΩ }	1 C
VR801	200kΩ(B) } AC Balance Adjustor (103015-2)	1 A
VR802	200kΩ(B) }	1 C
VR803	1kΩ(B) } DC Balance Adjustor (103053-1)	1 B
VR804	1kΩ(B) }	1 B
C801	1μF } ±10% 50WV Mylar Capacitor	1 A
C802	1μF }	1 C
C803	100pF }	2 A
C804	100pF } ±10% 50WV Ceramic Capacitor	2 C
C805	22pF }	1 A
C806	22pF }	1 C

X	Y	Z
C807	1.5μF } 15WV Tantalum Capacitor	1 A
C808	1.5μF }	1 C
C809	100μF } 25WV Electrolytic Capacitor	1 A, B
C810	100μF }	1 B, C
C811	1pF } ±10% 50WV Ceramic Capacitor	1 A
C812	1pF }	2 D
C813	100μF } 50WV Electrolytic Capacitor	1 A
C814	100μF }	1 C
C815	100pF } ±10% 50WV Ceramic Capacitor	1 A
C816	100pF }	1 C
C817	470μF } 6.3WV Electrolytic Capacitor	2 A
C818	470μF }	2 C
C819	0.1μF } ±10% 50WV Mylar Capacitor	2 A
C820	0.1μF }	2 C
TR801	2SC458LG(B) } (030531)	1 A
TR802	2SC458LG(B) }	1 C
TR803	2SC458LG(B) }	1 A
TR804	2SC458LG(B) }	1 C
TR805	CDC8002-1(A) } (030555)	1 A
TR806	CDC8002-1(A) }	1 C
TR807	2SC708A(B,C) } (030548-1, 2)	2 A
TR808	2SC708A(B,C) }	2 C
TR809	2SC281 White(B) } (030514-1)	1 B
TR810	2SC281 White(B) }	1 B
TR811	2SC708A(B,C) } (030548-1, 2)	2 B
TR812	2SC708A(B,C) }	2 B
TR813	2SA537A(B,C) } (030012-1, 2)	2 A, B
TR814	2SA537A(B,C) }	2 B, C


A
B
C
1
2
F-1242
SANSUI
VR801
VR803
VR804
VR802
C807
C805
C809
C810
C808
C806
R809
R825
R826
R810
R807
R845
R846
R808
TR803
TR809
TR810
TR804
TR801
TR802
R803
R827
R828
R804
R805
R806
C801
C811
C813
C814
C812
R811
R813
R814
R812
R817
R815
R816
R818
C815
C816
TR805
TR806
R821
R822
C802
R819
R837
R831
R832
R838
R820
C803
TR807
TR813
TR811
TR812
TR814
R829
R839
R840
R830
C804
TR808
R801
R823
R835
R843
R844
R836
R824
R841
R842
R802
C817
R833
R834
C818
C819
C820
8A 8B 8C 8D 8E 8F 8G 8H 8I 8J 8K 8L 8M 8N 8O 8P 8Q 8R

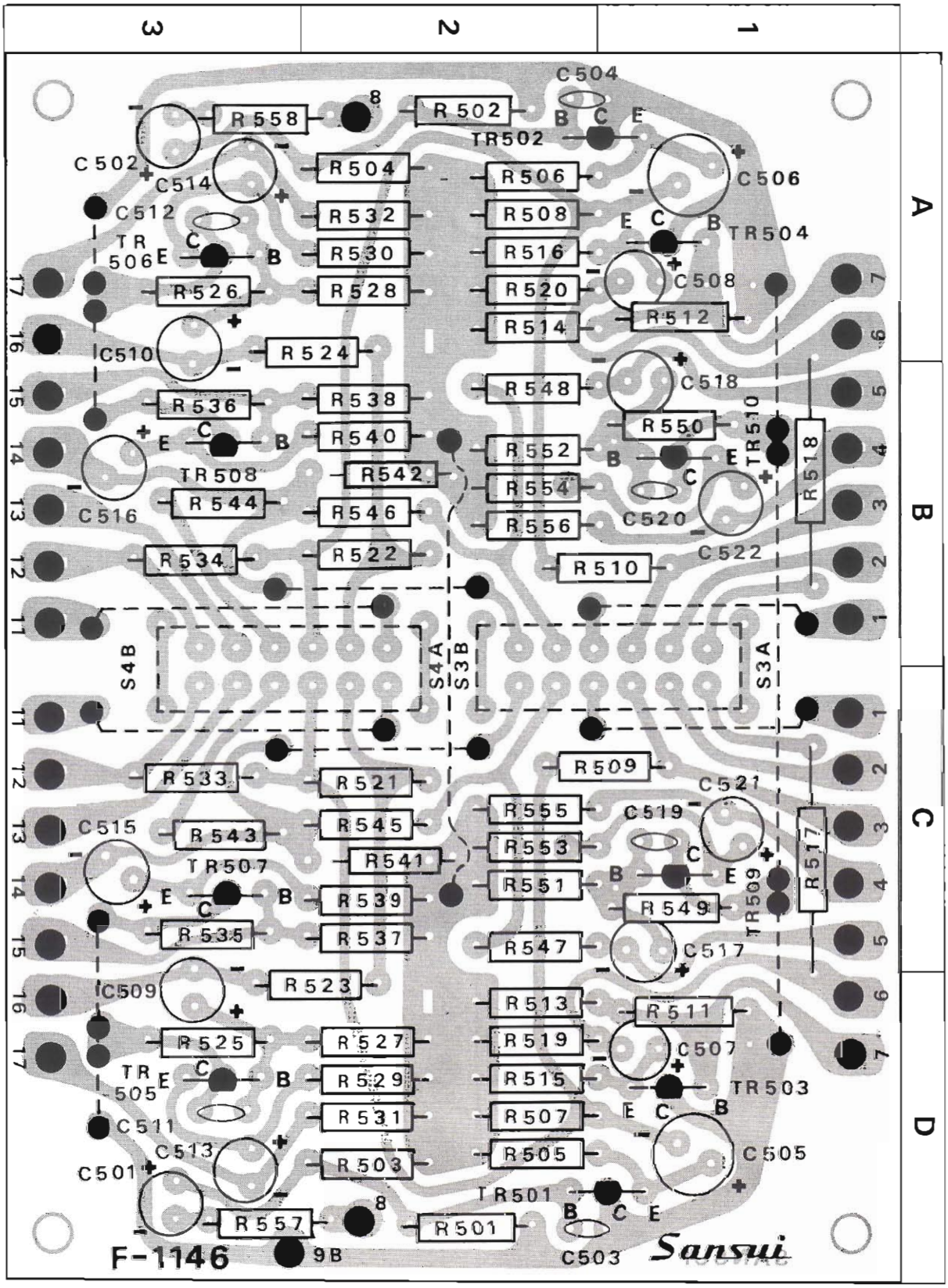
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No **Y:** Parts Name **Z:** Position of Parts

DIVIDING BLOCK ⟨F-1146-1⟩

X	Y	Z
R501	220kΩ	2 D
R502	220kΩ	2 A
R503	680kΩ	2 D
R504	680kΩ	2 A
R505	3.3kΩ	2 D
R506	3.3kΩ	2 A
R507	33kΩ	2 D
R508	33kΩ	2 A
R509	120Ω	1, 2 C
R510	120Ω	1, 2 B
R511	22kΩ	1 D
R512	22kΩ	1 A
R513	27kΩ	2 D
R514	27kΩ	2 A
R515	6.8kΩ	2 D
R516	6.8kΩ	2 A
R517	4.7kΩ	1 C
R518	4.7kΩ	1 B
R519	68kΩ	2 D
R520	68kΩ	2 A
R521	3.3kΩ	2 C
R522	3.3kΩ	2 B
R523	12kΩ	2, 3 D
R524	12kΩ	2, 3 A
R525	180kΩ	3 D
R526	180kΩ	3 A
R527	680kΩ	2 D
R528	680kΩ	2 A
R529	6.8kΩ ±10% 1/4W Carbon Resistor	2 D
R530	6.8kΩ	2 A
R531	68kΩ	2 D
R532	68kΩ	2 A
R533	120Ω	3 C
R534	120Ω	3 B
R535	22kΩ	3 C
R536	22kΩ	3 B
R537	27kΩ	2 C
R538	27kΩ	2 B
R539	6.8kΩ	2 C
R540	6.8kΩ	2 B
R541	68kΩ	2 C
R542	68kΩ	2 B
R543	4.7kΩ	3 C
R544	4.7kΩ	3 B
R545	4.7kΩ	2 C
R546	4.7kΩ	2 B
R547	12kΩ	2 C
R548	12kΩ	2 B
R549	180kΩ	1 C
R550	180kΩ	1 B
R551	680kΩ	2 C
R552	680kΩ	2 B
R553	6.8kΩ	2 C
R554	6.8kΩ	2 B
R555	68kΩ	2 C
R556	68kΩ	2 B
R557	10kΩ	3 D
R558	10kΩ	3 A

X	Y	Z
C501	3.3μF 50WV Electrolytic Capacitor	3 D
C502	3.3μF 50WV Electrolytic Capacitor	3 A
C503	220 pF ±10% 50WV Ceramic Capacitor	1, 2 D
C504	220 pF ±10% 50WV Ceramic Capacitor	1, 2 A
C505	3.3μF 50WV Electrolytic Capacitor	1 D
C506	3.3μF 50WV Electrolytic Capacitor	1 A
C507	1μF 50WV Electrolytic Capacitor	1 D
C508	1μF 50WV Electrolytic Capacitor	1 A
C509	1μF 50WV Electrolytic Capacitor	3 D
C510	1μF 50WV Electrolytic Capacitor	3 A
C511	680 pF ±10% 50WV Mica Capacitor	3 D
C512	680 pF ±10% 50WV Mica Capacitor	3 A
C513	3.3μF 50WV Electrolytic Capacitor	3 D
C514	3.3μF 50WV Electrolytic Capacitor	3 A
C515	3.3μF 50WV Electrolytic Capacitor	3 C
C516	3.3μF 50WV Electrolytic Capacitor	3 B
C517	1μF 50WV Electrolytic Capacitor	1 C
C518	1μF 50WV Electrolytic Capacitor	1 B
C519	100 pF ±10% 50WV Ceramic Capacitor	1 C
C520	100 pF ±10% 50WV Ceramic Capacitor	1 B
C521	3.3μF 50WV Electrolytic Capacitor	1 C
C522	3.3μF 50WV Electrolytic Capacitor	1 B
C533	47 pF ±10% 50WV Ceramic Capacitor	
C534	47 pF ±10% 50WV Ceramic Capacitor	
C535	0.001μF ±10% 50WV Ceramic Capacitor	
C536	0.001μF ±10% 50WV Ceramic Capacitor	
TR501	2SC458LG(B,C)	2 D
TR502	2SC458LG(B,C)	2 A
TR503	2SC458LG(B,C)	1 D
TR504	2SC458LG(B,C)	1 A
TR505	2SC458LG(B,C)	3 D
TR506	2SC458LG(B,C) (030531,-1)	3 A
TR507	2SC458LG(B,C)	3 C
TR508	2SC458LG(B,C)	3 B
TR509	2SC458LG(B,C)	1 C
TR510	2SC458LG(B,C)	1 B


3
2
1
A
B
C
D
C504
R558
R502
TR502
C502
C514
R504
R506
C506
C512
R532
R508
TR504
TR 506
R530
R516
C508
R526
R528
R520
R512
R514
C510
R524
C518
R548
R536
R538
R550
TR510
R540
R552
R518
TR508
R542
R554
C520
R544
R546
R556
C516
C522
R534
R522
R510
S4B
S4A
S3B
S3A
R533
R521
R509
C521
C515
R543
R545
R555
C519
R541
R553
TR507
R539
R551
TR509
R549
R535
R537
R547
C517
C509
R523
R513
R511
R525
R527
R519
C507
TR 505
R529
R515
TR503
C511
R531
R507
C513
C505
C501
R503
R505
TR501
R557
R501
C503
F-1146
9B
Sansui

PRINTED CIRCUIT BOARDS AND PARTS LIST

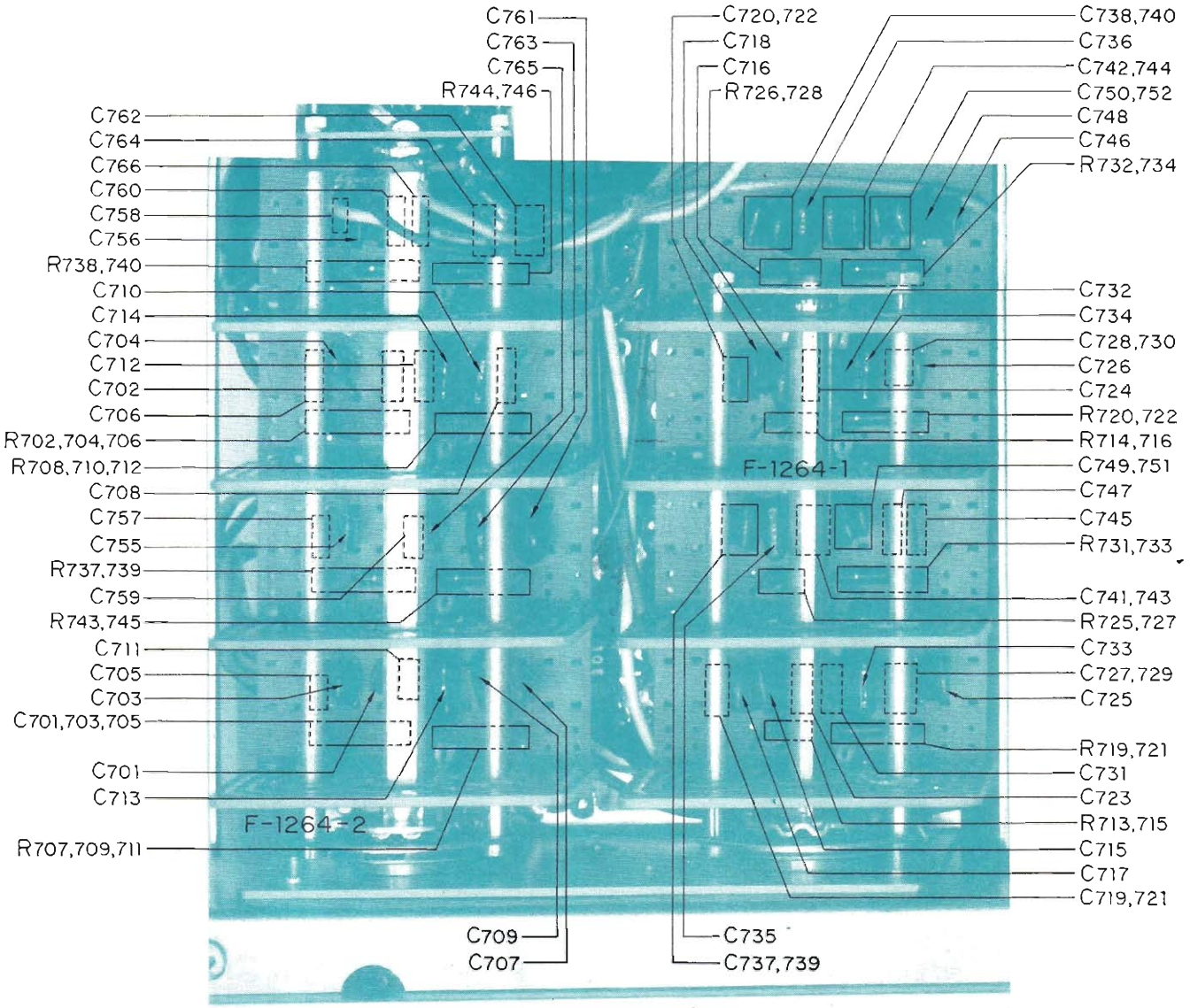
X: Parts No **Y:** Parts Name

CROSSOVER BLOCK ⟨F-1264-1⟩

X	Y	
R713～716	820kΩ	±10% ¼W Solid Resistor
R719～722	820kΩ	
R725～728	820kΩ	
R731～734	820kΩ	
C715	0.047μF	±10% 50WV Mylar Capacitor
C716	0.047μF	
C717	0.012μF	
C718	0.012μF	
C719	0.015μF	
C720	0.015μF	
C721	0.0022μF	
C722	0.0022μF	
C723	0.03μF	
C724	0.03μF	
C725	0.012μF	
C726	0.012μF	
C727	0.008μF	
C728	0.008μF	
C729	0.001μF	
C730	0.001μF	
C731	0.015μF	
C732	0.015μF	
C733	450pF	±10% 50WV Mica Capacitor
C734	450pF	
C735	0.068μF	±10% 50WV Mylar Capacitor
C736	0.068μF	
C737	0.033μF	
C738	0.033μF	
C739	0.0033μF	
C740	0.0033μF	
C741	0.033μF	
C742	0.033μF	
C743	0.022μF	
C744	0.022μF	
C745	0.01μF	
C746	0.01μF	
C747	0.008μF	
C748	0.008μF	
C749	0.012μF	
C750	0.012μF	
C751	0.0022μF	
C752	0.0022μF	
S2(a～h)	Crossover Selector	4-8-3 (110417-1

CROSSOVER BLOCK ⟨F-1264-2⟩

X	Y	
R701～712	820kΩ	±10% ¼W Solid Resistor
R737～740	820kΩ	
R743～746	820kΩ	
C701	0.0015μF	±10% 50WV Mylar Capacitor
C702	0.0015μF	
C703	0.001μF	
C704	0.001μF	
C705	0.0047μF	
C706	0.0047μF	
C707	0.001μF	
C708	0.001μF	
C709	680pF	±10% 50WV Mica Capacitor
C710	680pF	
C711	0.001μF	±10% 50WV Mylar Capacitor
C712	0.001μF	
C713	680pF	±10% 50WV Mica Capacitor
C714	680pF	
C755	0.0033μF	±10% 50WV Mylar Capacitor
C756	0.0033μF	
C757	0.002μF	
C758	0.002μF	
C759	0.008μF	
C760	0.008μF	
C761	820pF	±10% 50WV Mica Capacitor
C762	820pF	
C763	680pF	
C764	680pF	
C765	0.0015μF	±10% 50WV Mylar Capacitor
C766	0.0015μF	
S1(a～j)	Crossover Selector	5-10-4 (110506-1)


C761
C763
C765
R744,746
C762
C764
C766
C760
C758
C756
R738,740
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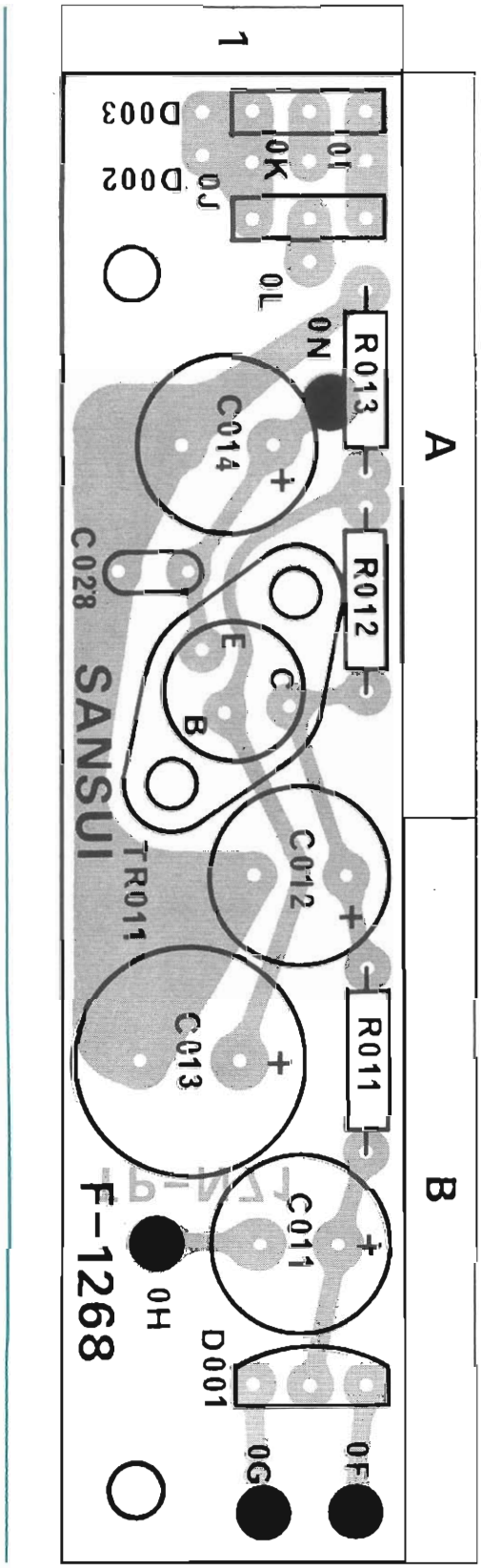
C714
C704
C712
C702
C706
R702,704,706
R708,710,712
C708
C757
C755
R737,739
C759
R743,745
C711
C705
C703
C701,703,705
C701
C713
R707,709,711
F-1264-2
C709
C707
C720,722
C718
C716
R726,728
C738,740
C736
C742,744
C750,752
C748
C746
R732,734
C732
C734
C728,730
C726
C724
R720,722
R714,716
C749,751
C747
C745
R731,733
C741,743
R725,727
C733
C727,729
C725
R719,721
C731
C723
R713,715
C715
C717
C719,721
C735
C737,739
F-1264-1

PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No Y: Parts Name Z: Position of Parts

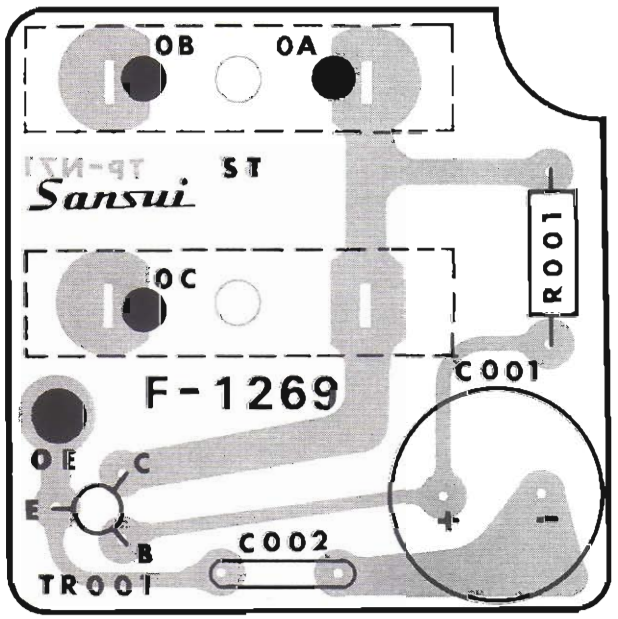
POWER BLOCK ⟨F-1268⟩

X	Y	Z
R011	150Ω } ±10% ½W Solid Resistor	1 B
R012	4.7kΩ }	1 A
C011	100μF } 50WV Electrolytic Capacitor	1 B
C012	100μF }	1 B
C013	470μF 35WV Electrolytic Capacitor	1 B
C014	100μF 50WV Electrolytic Capacitor	1 A
C028	0.01μF 50WV Ceramic Capacitor	1 A
TR011	2SC971(3) GRN (030553-3)	1 A
D001	10DC1 (031068)	1 B
D002	10DC1 (031068)	1 A
D003	10DC1R (031067)	1 A



POWER BLOCK 〈F-1269〉

X	Y
R001	12kΩ ±10% ½W Solid Resistor
C001	100μF 75WV Electrolytic Capacitor
C002	0.01μF ±10% 250WV Ceramic Capacitor
TR001	2SC627(2) (030558-1)



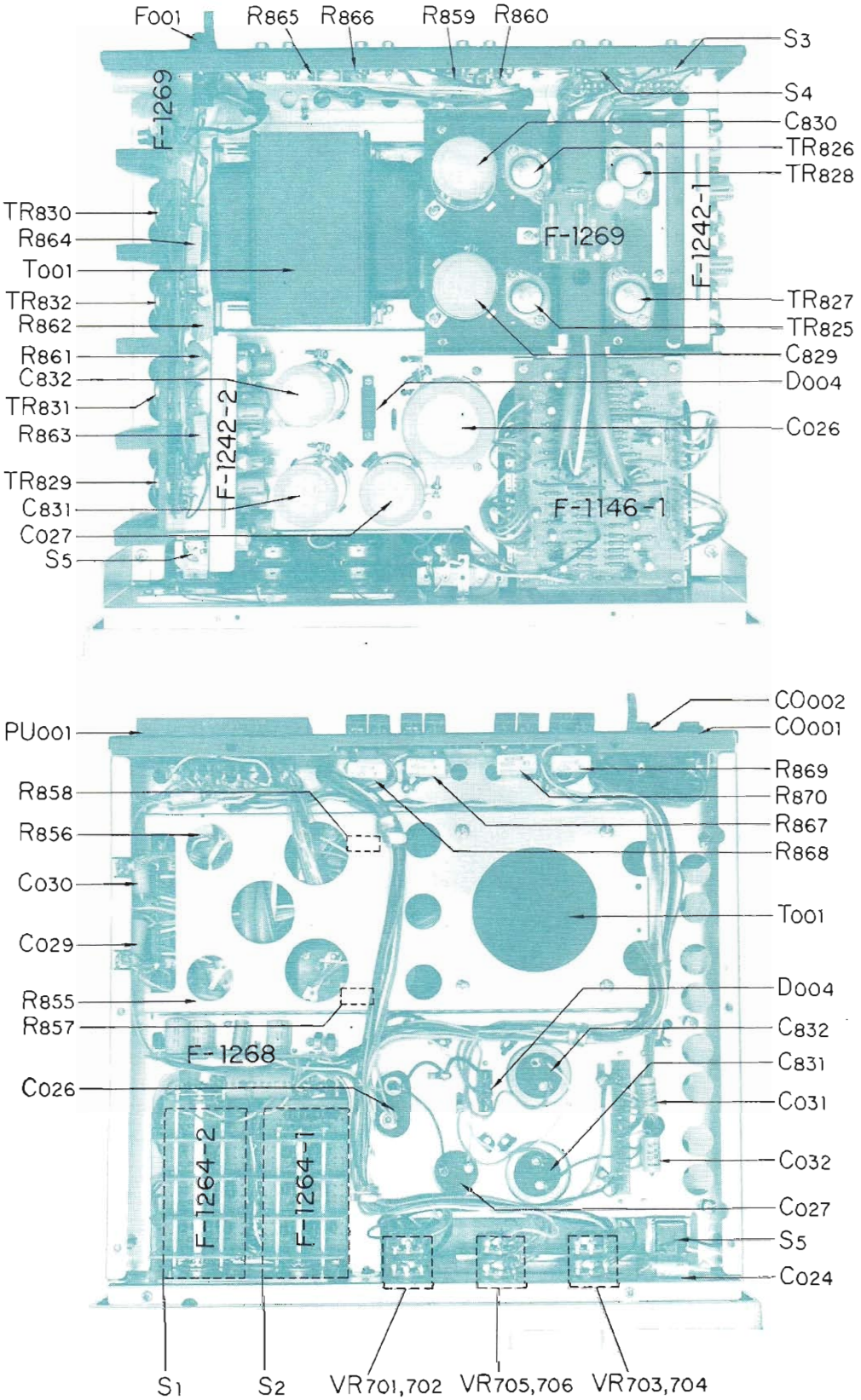
OTHER PARTS AND THEIR POSITION ON CHASSIS

X: Parts No Y: Parts Name

OTHER PARTS LIST

X	Y	
R855	0.5Ω } ±20% 3 W Cement Resistor	
R856	0.5Ω	
R857	0.5Ω	
R858	0.5Ω	
R859	330kΩ } ±10% ¼W Carbon Resistor	
R860	330kΩ	
R861	0.5Ω } ±20% 3 W Cement Resistor	
R862	0.5Ω	
R863	0.5Ω	
R864	0.5Ω	
R865	330kΩ } ±10% ¼W Carbon Resistor	
R866	330kΩ	
R867	150Ω } ±10% 5 W Cement Resistor	
R868	150Ω	
R869	150Ω	
R870	150Ω	
VR701,702	30kΩ(B)×2 High Level Adjustor	(102006)
VR703,704	30kΩ(B)×2 Low Level Adjustor	(102006)
VR705,706	30kΩ(B)×2 Midrange Level Adjustor	(102006)
C024	0.0047μF 600WV Oil Capacitor	
C026	4000μF 75WV Electrolytic Capacitor	
C027	2200μF 63WV Electrolytic Capacitor	
C028	0.05μF 50WV Ceramic Capacitor	
C029	0.047μF } 400WV Oil Capacitor	
C030	0.047μF	
C031	0.047μF	
C032	0.047μF	
C829	2200μF } 63WV Electrolytic Capacitor	
C830	2200μF	
C831	3300μF	
C832	3300μF	
TR825	2SC1030(B, C) }	(030563-1,2)
TR826	2SC1030(B, C)	
TR827	2SC1030(B, C)	
TR828	2SC1030(B, C)	
TR829	2SD217(K,L,M) }	(030827-2,1,0)
TR830	2SD217(K,L,M)	
TR831	2SD217(K,L,M)	
TR832	2SD217(K,L,M)	
D004	5B2	(031066)
PL001	6V 30mA } Pilot Lamp	(040011)
PL002	7V 200mA	(040015)
PL003	7V 200mA	(040015,1)
T001	400-5387 Power Transformer	(400061)
F001	4A Fuse	(043005-1)
F002	2.5A } Quick Acting Fuse	(043011)
F003	2.5A	(043011)
F004	2A	(043024)
F005	2A	(043024)

X	Y	
CO001	AC Outlet	(245001)
CO002		(245001)
PU001	Power Voltage Selector	(241017) (241018) (241019)
S1K	2 Way Selector Micro Switch	(116007)
S3(a~b)	Attenuation Selector	(111016)
S4(a~b)		
S5	Power Switch	(113016)


F001
R865
R866
R859
R860
S3
S4
C830
TR826
TR828
F-1269
F-1242-1
TR830
R864
T001
TR832
R862
R861
C832
TR831
R863
TR829
C831
C027
S5
F-1242-2
F-1146-1
TR827
TR825
C829
D004
C026
CO002
CO001
PU001
R858
R856
C030
C029
R855
R857
F-1268
C026
R869
R870
R867
R868
T001
D004
C832
C831
C031
C032
C027
S5
C024
F-1264-2
F-1264-1
S1
S2
VR701,702
VR705,706
VR703,704

Sansui

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