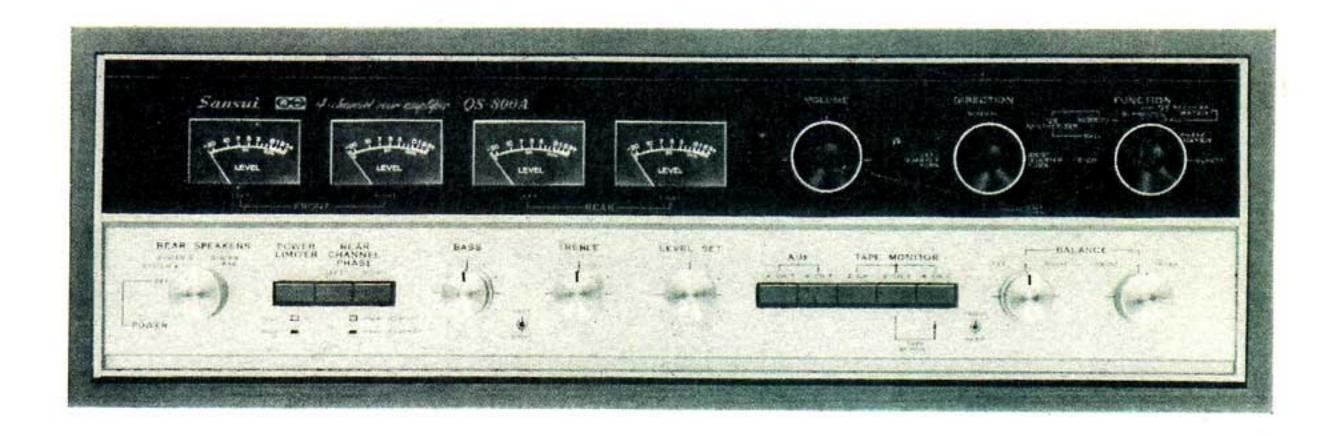


# OPERATING INSTRUCTIONS & SERVICE MANUAL

# 4-CHANNEL REAR AMPLIFIER

# SANSUI QS-800A





SANSUI ELECTRIC CO., LTD.

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

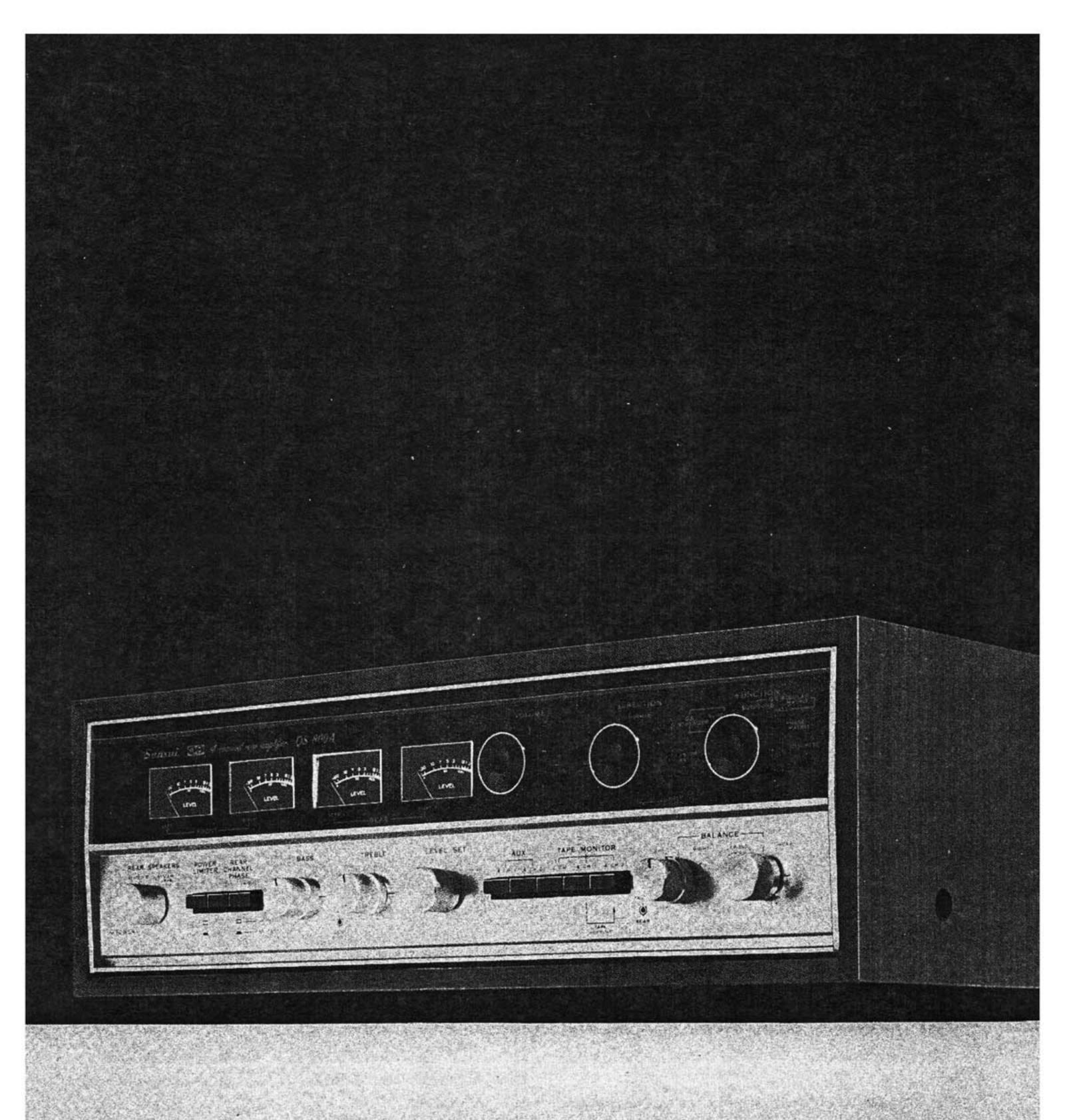
The QS-800A is a combination of Sansui's new QS regular matrix system 4-channel decoder and a high-performance 200-watt stereo amplifier to amplify the rear channel signals for 4-channel sound reproduction.

The decoder features the exclusive QS Vario-Matrix circuitry which provides optimum separation among the reproduced sounds. When added to your present stereo system, this decoder and the rear channel amplifier will work together to (1) decode encoded 4-channel program sources back into 4-channel, and (2) transform (synthesize) conventional 2-channel sources into 4-channel. The QS-800A as a whole also offers complete provisions for reproducing discrete 4-channel program sources and for reproducing 2-channel sources in 2-channel stereo if you so desire. As such, it is one of the most complete, most authentic means of upgrading your stereo system to immediate 4-channel status.

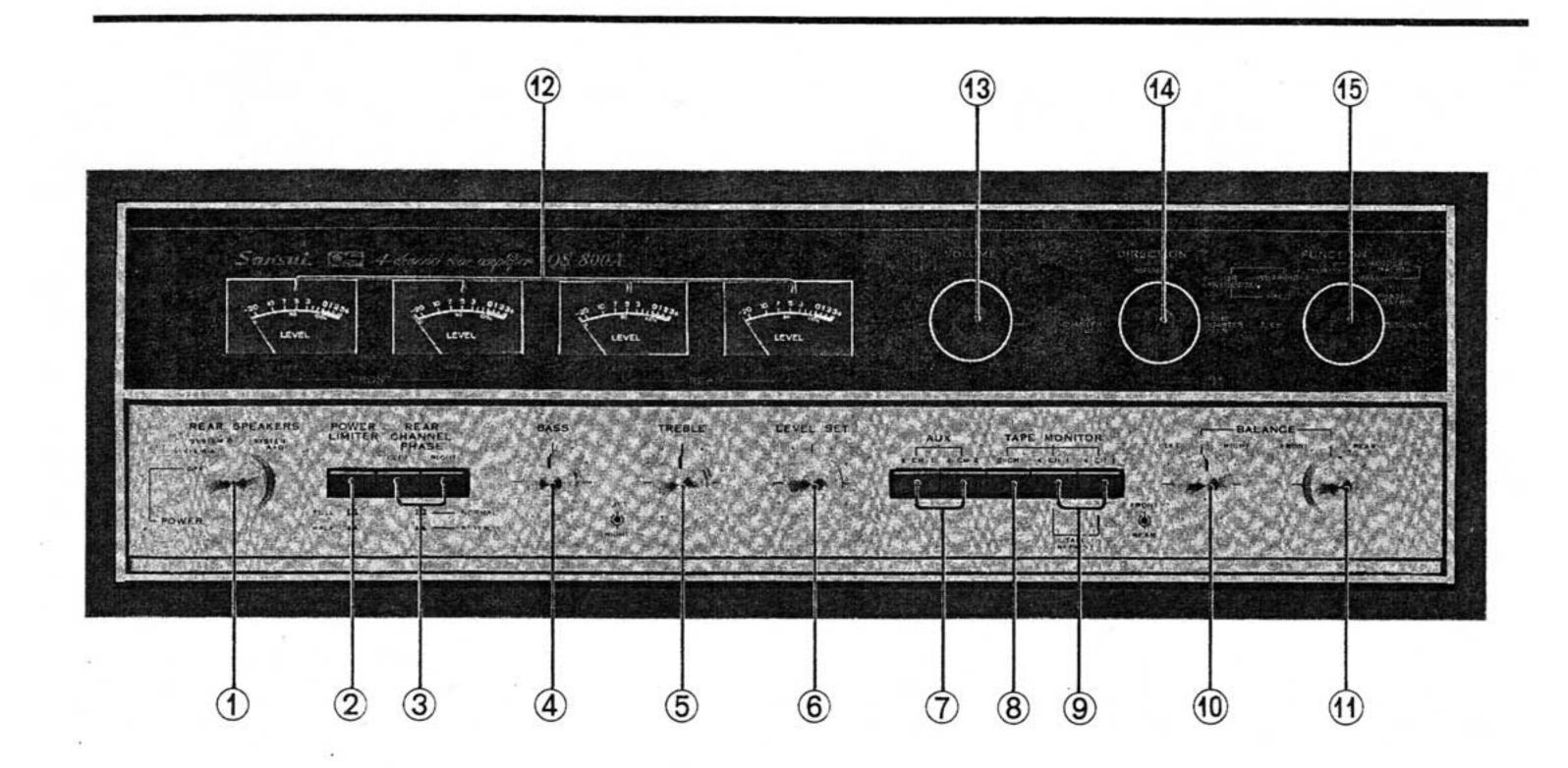
So that you may take full advantage of its immense versatility and high performance, it is very important that you read this booklet of operating instructions once carefully. Then you'll be better prepared to enjoy 4-channel stereo at its very best for years to come.

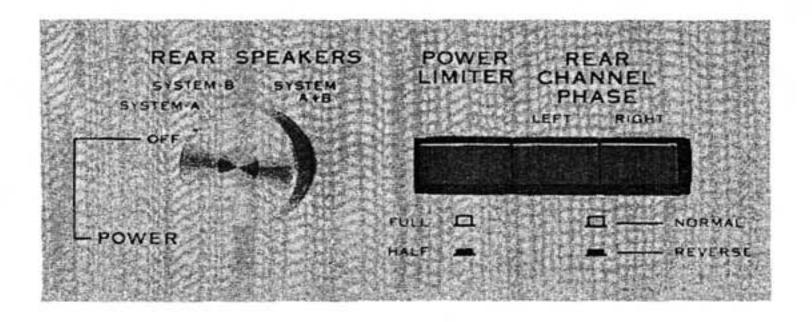
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# SWITCHES AND CONTROLS





## ①Power/Rear Speakers Switch

A double-function switch to control the power supply and the selection of rear-channel speaker systems.

OFF: Cuts off the power supply for the entire unit. SYSTEM-A: Turns on the power supply and energizes the speaker systems connected to the SYSTEM-A terminals on the unit's rear panel.

SYSTEM-B: Turns on the power supply and energizes the speaker systems connected to the SYS-TEM-B terminals.

SYSTEM A+B: Turns on the power supply and energizes both pairs of speaker systems.

### ②Power Limiter Switch

Changes the maximum output of the stereo power amplifier in the QS-800A. Leave it at 'FULL' ( ), and it delivers a continuous output of 65 watts per channel into 8 ohms. Push it in for 'HALF' ( ) and the output is cut down to half that figure.

Use the 'HALF' position if you are connecting speaker systems with small input capacities or if your front-channel amplifier has a considerably smaller power output.

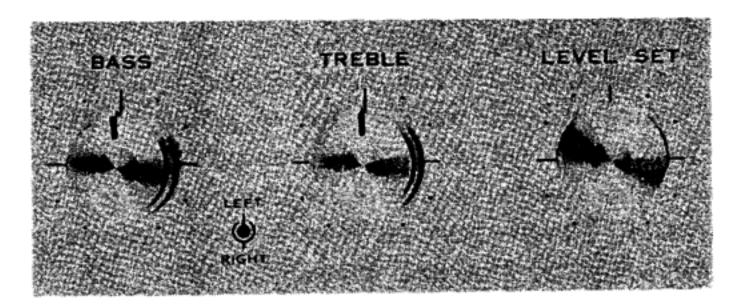
Caution: When switching from the 'HALF' position to the 'FULL,' be sure to turn the unit's volume control down beforehand.

### ③Rear Channel Phase Switches

Reverse the phases of the rear left and right channels.

Leave them untouched in their normal 'up' positions, and the phases in the two rear channels remain normal. Push both or either switch in to the 'REVERSE' position, however, and the phase of that channel is reversed.

Adjust the switches while actually listening to reproduced sound, so that you will hear most natural sound. (Refer to **Speaker Polarities**' on page 7.)



### 4 Rear Bass Control

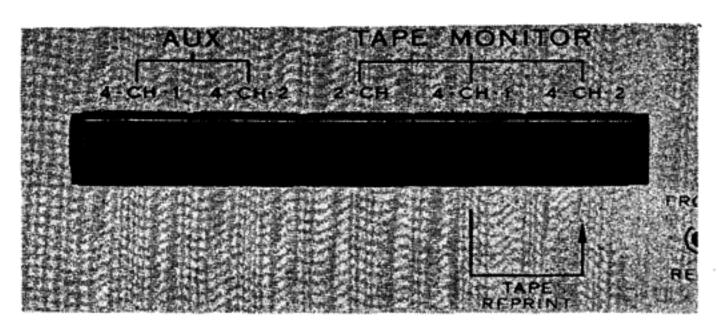
Turn clockwise to emphasize the unit's low-end response in the rear channel sounds. The smaller knob (controlling the rear left channel) and the larger ring (controlling the rear right channel) are friction-coupled and permit separate or simultaneous adjustment of the two rear channels.

### (5) Rear Treble Control

Use in the same manner as the Rear Bass Control to adjust the strength of the highs in the rear channel sounds.

### 

Use to adjust the levels of input signals. Adjust it so that the Level Meter pointers will swing between the red 0 (zero) and 2 marks at the loudest passages of the program source to be reproduced.



## 74-Channel AUX Switches

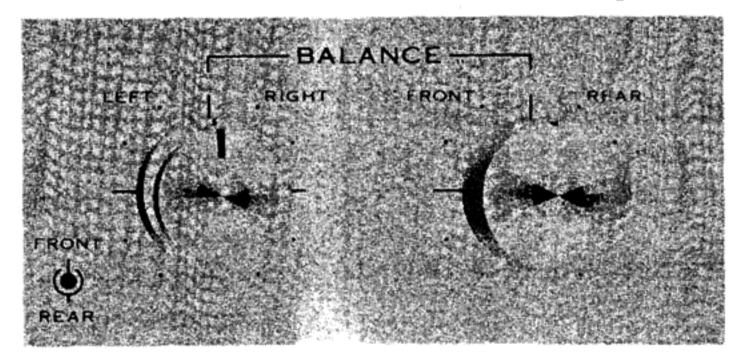
Your QS-800A is equipped with two sets of 4-channel AUX inputs on the rear panel, where such discrete 4-channel sources as a discrete 4-channel disc demodulator and an 8-track 4-channel cartridge player may be connected. Use these switches to turn those sources on or off.

# **82-Channel Tape Monitor Switch**Push this switch to monitor a tape being recorded

by the 2-channel tape deck connected to the 2-channel tape monitor inputs on the unit's rear panel, or to reproduce a tape so recorded.

### 

These switches control 4-channel tape monitor circuit 1 and 2. Detailed instructions on the operation of such tape decks are given on page 12.



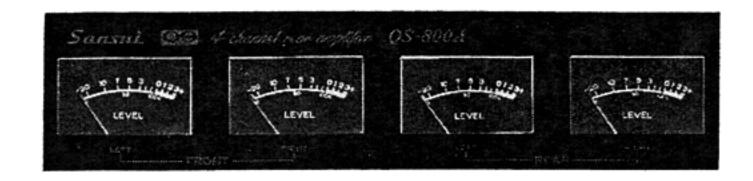
# ①Left-Right Balance Control

Use to adjust the left-right balance in the front and rear channels. Turn it clockwise toward RIGHT to emphasize the right channel sound, counterclockwise toward LEFT to accent the left channel sound. The smaller knob part (controlling the front channels) and the larger ring part (controlling the rear channels) are friction-coupled, and permit either simultaneous or separate adjustment of the front and rear channels.

# **11) Front-Rear Balance Control**

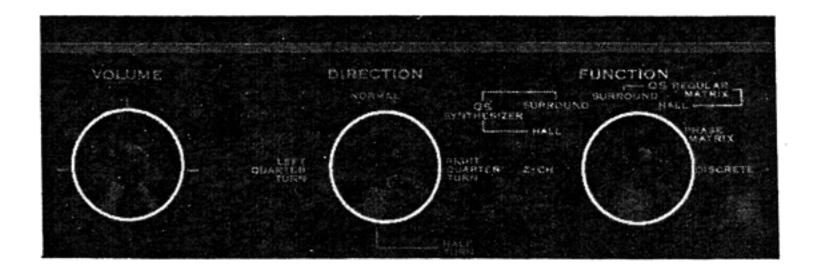
Use to balance the front and rear channels. Turn it clockwise to increase the sound volume in the rear channels, counterclockwise to increase that in the front channels.

# SWITCHES AND CONTROLS



### 12 Level Meters

Indicate the signal strength in each channel. From left to right, they represent the front left, front right, rear left and rear right channels.



### **13** Volume Control

Use to control the overall sound volume. Turn it clockwise to raise it, counterclockwise to lower.

### (4) Direction Switch

Lets you turn the 4-channel sound around by 90 degrees at a time.

NORMAL: For normal 4-channel sound.

RIGHT QUARTER TURN: To turn the sound around by 90 degrees clockwise. Use this position to obtain a normal 4-channel stereo effect when hearing vocal or other types of program source where sound is loud only on the left-hand side.

HALF TURN: To turn the sound around by a full 180 degrees. Used with vocal or other types of program source, this position will make you feel as if you were right in the middle of the stage.

LEFT QUARTER TURN: To turn the sound around by 90 degrees counterclockwise.

### (15) Function Control

Operate this switch to obtain the 4-channel sound most appropriate for the type of program source. Such sound will be further enhanced by employing a proper speaker positioning system (see page 6).

2-CH To hear only the front left and right channel sounds as 2-channel stereo.

QS SYNTHESIZER For transforming conventional 2-channel stereo program sources into 4-channel sound. Sansui's exclusive 2-4 Synthesizing Encoder will work in coordination with the QS Vario-Matrix, pre-processing 2-channel signals for optimum conversion into 4-channel.

HALL: To enjoy the kind of 'presence' you'd feel if you were seated front-and-center in a concert hall, theater or jazz club. The stage will be acoustically reconstructed in front of you, and the concert hall ambience in the rear to add the sense of depth and spaciousness.

SURROUND: To drown yourself in the middle of the music. The performing artists will surround you, making you feel as if you were participating.

QS REGULAR MATRIX To decode and reproduce QS-encoded 4-channel program sources (discs and FM broadcasts). The built-in QS Vario-Matrix circuit will retrieve all input information in the original 4-channel recording.

SURROUND: Offers a better-defined, more striking surround effect since encoded 4-channel sources contain a greater quantity of distinctively allocated audio information.

HALL: Reconstructs with greater fidelity the sound field originally present in the concert hall, reproducing the artists in the front and the hall ambience in the rear.

PHASE MATRIX To decode and reproduce 4-channel program sources (discs and FM broadcasts) encoded by the CBS SQ system. Sansui's own front-rear logic, which is part of the QS Vario-Matrix technique, will work in coordination with an accessory circuit to achieve perfect results.

DISCRETE To reproduce discrete 4-channel program sources—such as a 4-channel open reel tape deck, discrete 4-channel disc demodulator and 8-track 4-channel cartridge player—connected to the 4-CHANNEL AUX and 4-CHANNEL TAPE MON and REC jacks on the rear panel.

# TO ENJOY 4-CHANNEL STEREO AT ITS BEST

The 4-channel system far excels the conventional 2-channel system in its capability to faithfully reproduce the sound field normally present in any live musical performance.

Your QS-800A incorporates the now famous Sansui QS regular matrix system. Acclaimed world-wide for its technical ingenuity and already standardized in Japan, this system decodes encoded 4-channel program sources back into 4-channel on one hand, and synthesizes conventional 2-channel sources into 4-channel on the other. Both of these functions are now accomplished more effectively by the exclusive Sansui QS Vario-Matrix circuit.

Your QS-800A also offers complete provisions for connecting and controlling discrete 4-channel sources.

To enjoy 4-channel stereo music at its very best, it is of cource important that you know how to use all the controls and switches of the amplifier. But a few other useful hints are certain to help you hear the music more effectively, and these will be outlined below.

# Selecting and Positioning Speaker Systems

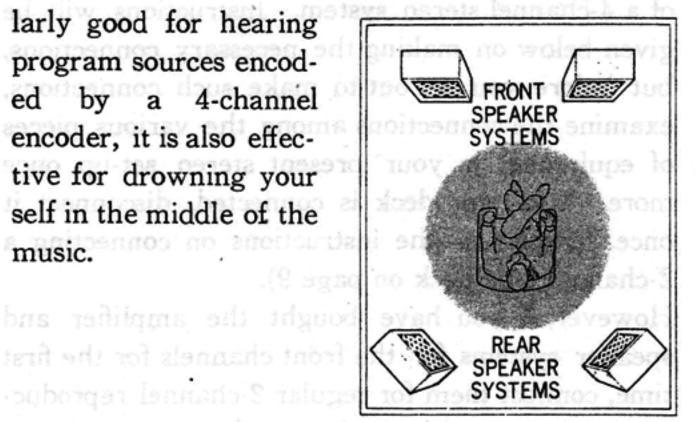
For optimum 4-channel effects, it is always advisable to select speaker systems designed to provide broad sound dispersion (such as the Sansui SF-2 or SF-1 Omni-Radial Sound Field Speaker Systems).

Once they are selected, it is essential that you place them appropriately to suit the type of program source you wish to hear. Remember that the positions of the four speaker systems in a 4-channel stereo system is a vital factor if you are to enjoy 4channel sound at its very best. Two basic positions will be explained on the right, but you are completely free to adapt them to the particular conditionsboth acoustic and physical—of your room.

# 1) 2-2 System A 1008 20 May

This is the 4-corner position widely accepted as the 'standard' for 4-channel stereo. While it is particu-

larly good for hearing program sources encoda 4-channel by encoder, it is also effective for drowning your self in the middle of the music.

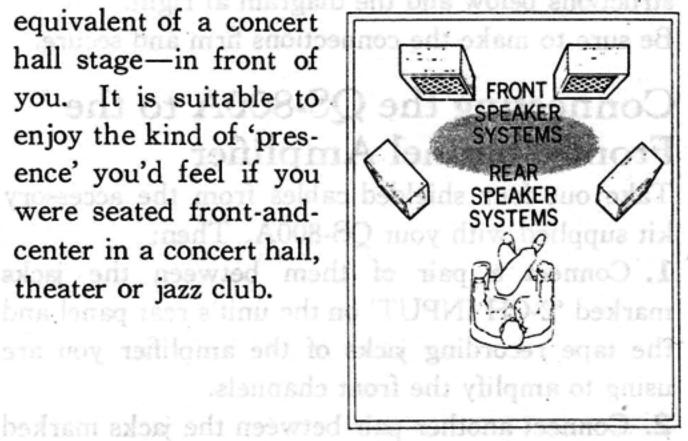


### 2) Front 2-2 System

ular Z-channel reproduc-

This system moves the rear speaker systems up front as shown below and creates a sound field-the

equivalent of a concert hall stage—in front of you. It is suitable to enjoy the kind of 'presence' you'd feel if you were seated front-andcenter in a concert hall, theater or jazz club.



# 3) Others on bon TUTUO

Variations of the above two systems are possible, and you are absolutely free to devise one to suit the particular conditions of your room.

# CONNECTIONS

Your QS-800A permits you to continue to use your present 2-channel stereo receiver, amplifier or music system and speaker systems for the front channels of a 4-channel stereo system. Instructions will be given below on making the necessary connections, but before you set out to make such connections, examine the connections among the various pieces of equipment in your present stereo set-up once more. If a tepe deck is connected, disconnect it once. (Refer to the instructions on connecting a 2-channel tape deck on page 9).

However, if you have bought the amplifier and speaker systems for the front channels for the first time, connect them for regular 2-channel reproduction, as instructed by their manufacturers.

When the above preparations are finished, proceed to make the connections, referring to both the instructions below and the diagram at right.

Be sure to make the connections firm and secure.

# Connecting the QS-800A to the Front-Channel Amplifier

Take out four shielded cables from the accessory kit supplied with your QS-800A. Then:

- 1. Connect a pair of them between the jacks marked '2-CH INPUT' on the unit's rear panel and the tape recording jacks of the amplifier you are using to amplify the front channels.
- 2. Connect another pair between the jacks marked 'FRONT OUTPUT' and the amplifier's tape playback or monitor jacks.

Be sure that the left and right channels are kept in the same order at both terminals. The accessory shielded cables are painted blue and yellow to facilitate this.

Note: Once you have made the above conncetions, turn on the tape monitor switch of the front-channel amplifier (or set it to PLAYBACK).

# Connecting the Rear-Channel Speaker Systems

Up to two pairs of speaker systems can be connected to the QS-800A to reproduce rear-channel sound, and may be driven either independently or simultaneously as selected by the unit's Power/Rear Speakers Switch.

If you are connecting only one pair, connect it to either the SYSTEM-A or SYSTEM-B terminals. Keep the left and right channels, plus and minus polarities in the correct order, referring to the diagram at right. Should you want to add another pair at a later date, connect it to the other set of terminals. If you connect two pairs of speaker systems to the QS-800A, however, it is suggested that you place one pair to form the '2-2 System' and the other to form the 'Front 2-2 System' of speaker position (see page 6).

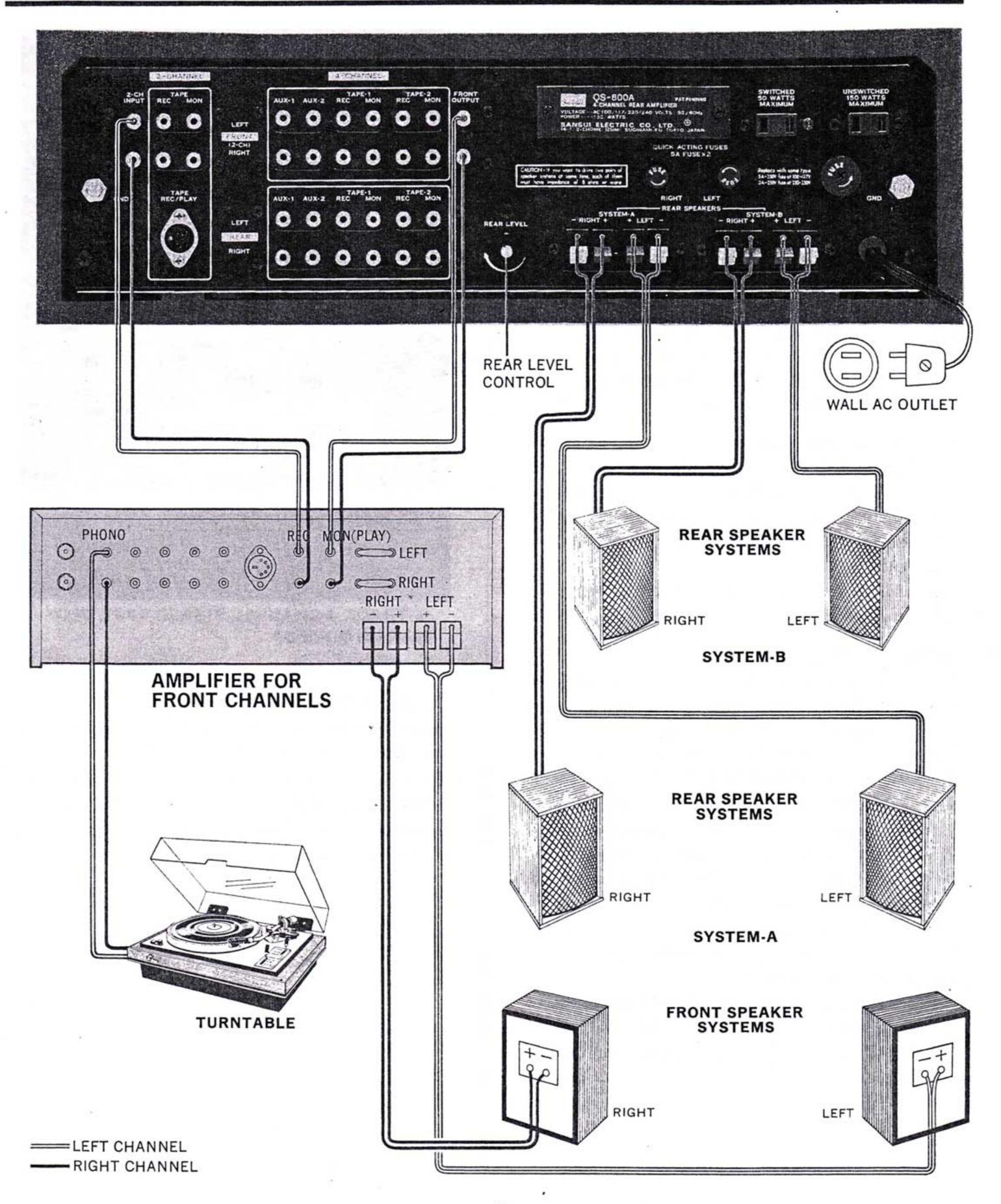
Note: The speaker systems connected to your QS-800A must possess an impedance of 4 to 16 ohms. If you want to connect two pairs and drive them simultaneously (by turning the unit's Power/Rear Speakers Switch to the 'SYSTEM A+B' position), they should each have an impedance of 8 ohms or more.

## Speaker Polarities

Whether or not the four speaker systems in your 4-channel stereo system are in phase with one another is a very important consideration for maximum enjoyment of 4-channel stereo sound.

When connecting the speaker systems, therefore, it is important that you pay special attention to their polarities. Even then, the front and rear channel might not be in phase if the front-channel amplifier should have a different circuit system from the QS-800A.

The Rear Channel Phase Switches on the QS-800A let you correct such condition very simply. Use them as instructed on page 3 to reverse the phase of the rear left or right channel and obtain the most natural sound.



# CONNECTIONS

# Connecting Tape Decks 2. Channel Tape Deck

Since you have conneted your QS-800A to the tape recording and monitor jacks of your front-channel amplifier, you cannot connect a 2-channel tape deck to it. To solve this, your QS-800A is provided with connection terminals—both pin jacks and a DIN socket—for a 2-channel tape deck on the rear panel.

#### If Using Pin Jacks

- 1. Connect one pair of shielded cables between the '2-CHANNEL TAPE REC' jacks of the QS-800A and the recording input jacks your tape deck.
- 2. Connect another pair of such cables between the '2-CHANNEL TEPE MON' jacks and the playback output jacks of your tape deck.

#### If Using the DIN Socket

If your tape deck is equipped only with a DIN connector socket, plug the DIN connector cable extending from it into the 5-pin DIN connector socket (marked TAPE REC/PLAY) on the QS-800A's rear panel.

Caution: Never use the DIN socket and the pin jacks simultaneously.

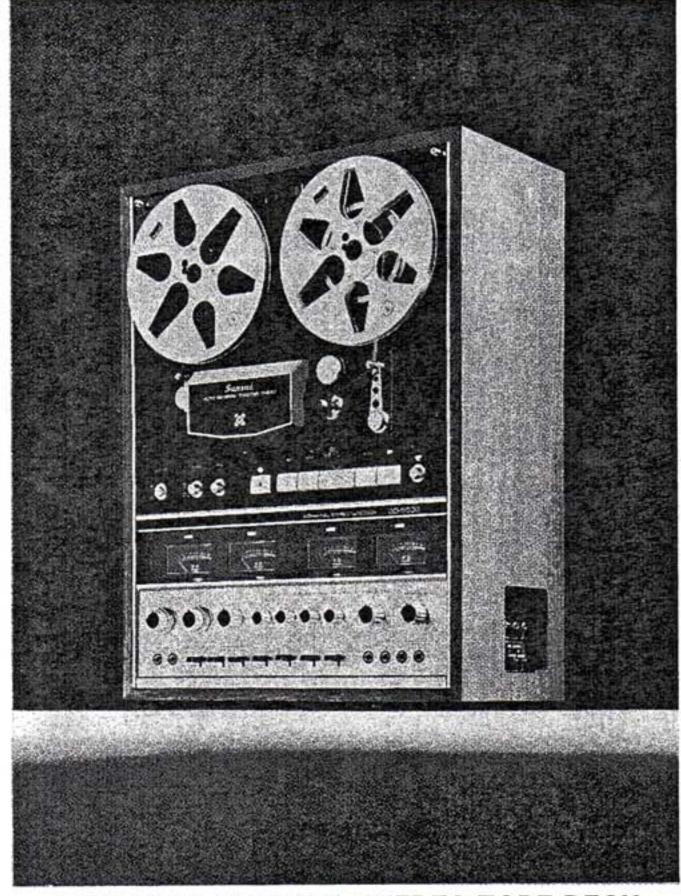
### 4-Channel Tape Decks

Your QS-800A is equipped with connection jacks for two 4-channel tape decks. Of those, only the ones indicated FRONT (2-CH) may be utilized to connect a second 2-channel tape deck, if necessary.

- 1. Connect the 4-CHANNEL TAPE 1 (or 2) REC jacks of the QS-800A with the input jacks of your 4-channel tape deck by means of shielded cables.
- 2. Then connect the 4-CHANNEL TAPE 1 (or 2) MON jacks with the output jacks of the tape deck, also by means of shielded cables.

Be sure not to confuse the front and rear, left and right channels. On many tape decks, the four channels are indicated as follows.

Front left	Channel	1	or	Track	1
Front right	Channel	3	or	Track	3
Rear left	Channel	2	or	Track	2
Rear right	Channel	4	or	Track	4

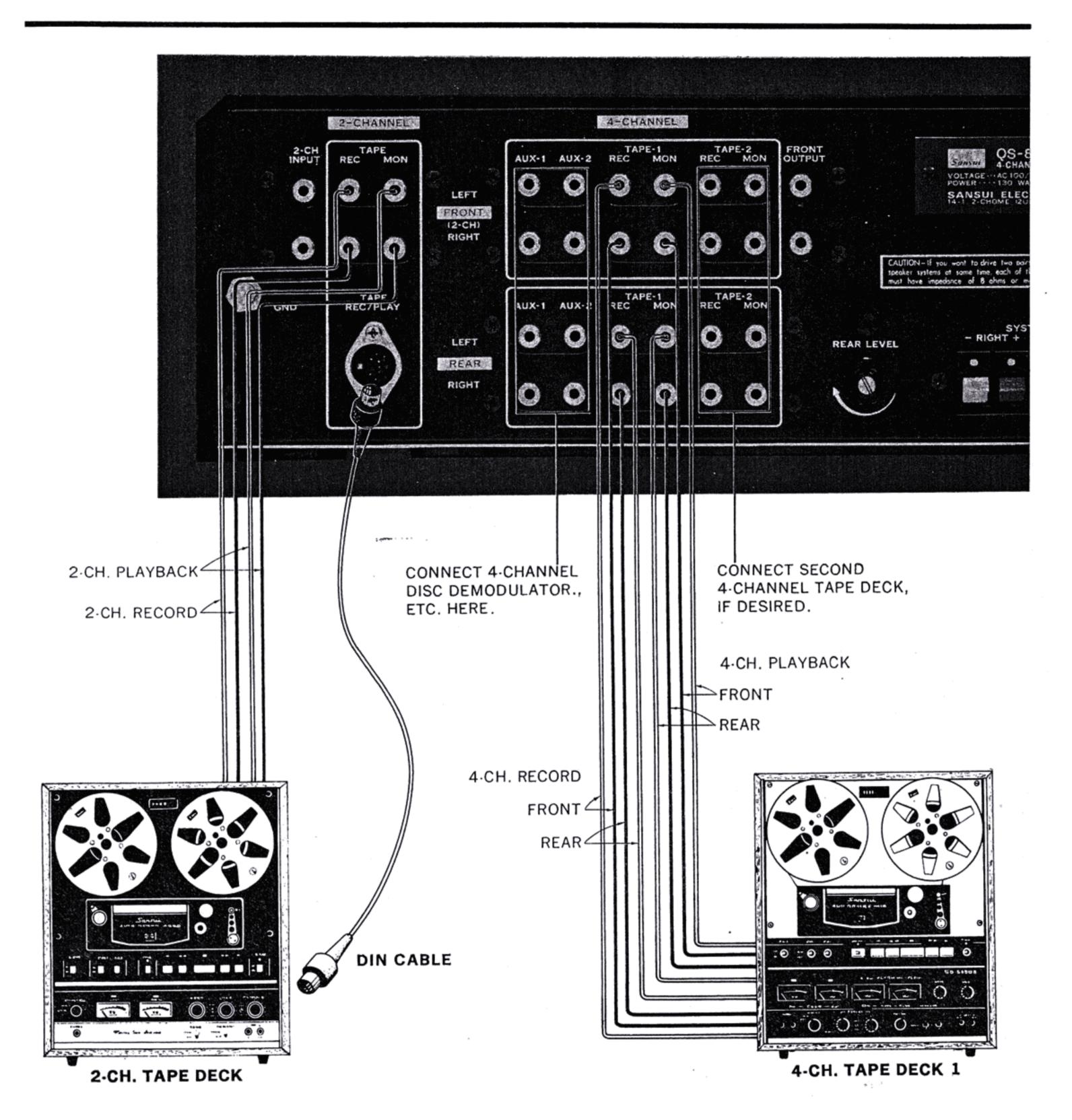


4-TRACK 4-CHANNEL STEREO TAPE DECK SANSUI QD-5500

#### 4-CHANNEL AUX jacks

Your QS-800A is equipped with two sets of 4-channel AUX input jacks (AUX-1, AUX-2).

They may be used to connect a 4-channel disc demodulator, 4-channel FM demodulator (when on the market), 8-track 4-channel cartridge tape player, or even a 4-channel reel-to-reel tape deck.



#### NOTE:

Do not use TAPE REC/MON terminals and DIN connectors socket simultaneously.

RIGHT CHANNEL

# ADJUSTMENTS OPERATIONS

# Preliminary Balancing of Front & Rear Sound Volumes

The sound volume balance between the front and rear channels is adjusted with the Front-Rear Balance Control. It can be simplified, however, by matching the front and rear channel sound volumes beforehand. This is accomplished as follows:

- 1. Turn down the volume control of your frontchannel amplifier completely, then set its balance control in its neutral position.
- 2. Turn up the QS-800A's Volume Control completely, then set its three Balance Controls in their center, neutral positions. At the same time, fully turn down the Rear Level Control (turn it fully counterclockwise) on the unit's rear panel.
- **3.** Operate the QS-800A and other equipment to play a record or receive an FM stereo broadcast. (See the right-hand column for instructions on record playing and FM reception.)
- **4.** Adjust the Level Set Control so that the front-channel Level Meter pointers will swing between the red 0 (zero) and 2 marks at the loudest passages of the program source played.
- 5. Turn up the volume control of the front-channel amplifier until you obtain the loudest sound volume you will normally require.
- **6.** Turn down the QS-800A's Volume Control gradually to your usual listening level.
- 7. Turn the Rear Level Control on the unit's rear panel slowly clockwise until the sound volume from the rear speaker systems is properly balanced with that of the front speaker systems.

Once the above adjustment is finished, the overall sound volume and front-rear, left-right balances can all be adjusted with the controls on the QS-800A, without touching anything on your front-channel amplifier.

# Reception of FM Stereo Broadcasts/ Playing Records, etc.

Operating your QS-800A to receive FM stereo broadcasts or to play records is very simple. Just turn on the tape monitor switch of your front-channel amplifier (or set it to 'PLAYBACK'), and the rest is the same as 2-channel reproduction. Make any volume and/or balance adjustments with the appropriate controls on the QS-800A. Use other controls on the unit for the best 4-channel stereo effect possible, following instructions on pp. 3~5.

# Recording and Playback on a 2-Channel Tape Deck

If you couple a 2-channel tape deck to your QS-800A, you'll be able to record and play back a 2-channel stereo tape. The playback sound can be synthesized (or decoded), if desired, into four channels by the QS regular matrix circuit in your QS-800A and reproduced out of the four speaker systems. If the tape deck is of a 3-head type (with separate record and playback heads), you'll be able to monitor the sound as it is recorded.

### To Record into a 2-Channel Tape Deck

- 1. Set the program source selector of your frontchannel amplifier to the program source you want to record.
- 2. Start the tape deck in the recording mode.
- **3.** To monitor the sound being recorded, push down the TAPE MONITOR 2-CH Switch on your QS-800A's front panel.

### To Reproduce a 2-Channel Recorded Tape

- 1. Push down the TAPE MONITOR 2-CH Switch
- 2. Adjust the Function Control to the position that gives you the sound most appropriate for the particular type of program source recorded on the tape.
- 3. Start the tape deck in the playback mode.
- 4. Adjust the Level Set Control for optimum input levels.
- 5. Use the other controls and switches on the unit to obtain the best 4-channel stereo effect possible.

# Recording and Playback on 4-Channel Tape Decks

Your QS-800A is equipped with connection jacks for two 4-channel tape decks. So you can record or reproduce 4-channel tapes, or even copy (reprint) a pre-recorded 4-channel tape from one tape deck onto another. You can also record or reproduce 2-channel tapes on a 4-channel tape deck by following a simple procedure.

### To Record into a 4-Channel Tape Deck

To record the program source connected to the 4-CHANNEL AUX-1 (or -2) jacks of the QS-800A, proceed as follows:

- 1. Push the AUX 4-CH-1 (or -2) Switch on the front panel.
- 2. Start the tape deck in the recording mode.
- **3.** Start the program source component to reproduce the source.
- 4. To monitor the recording, set the Function Control to DISCRETE and then, push the TAPE MONITOR 4-CH-1 (or -2) Switch on the front panel.

#### Note:

- The 4-channel signals converted from 2-channel program source signals by the QS regular matrix system in the QS-800A cannot be recorded into a 4-channel tape deck.
- 2. If you cannot two 4-channel tape decks to the QS-800A, you can record into both at one time.

### To Reproduce a 4-Channel Recorded Tape

- 1. Push down the TAPE MONITOR 4-CH-1 or -2 Switch depending on which of the two 4-channel tape monitor circuits is accommodating the tape deck at the moment.
- 2. Set the Function Control to DISCRETE.
- 3. Start the tape deck in the playback mode.
- 4. Adjust the Level Set Control for optimum input levels.
- 5. Use the other controls and switches on the unit to obtain the best 4-channel stereo effect possible.

### Copying a Pre-Recorded 4-Channel Tape

- 1. Push down the TAPE MONITOR 4-CH-1 Switch.
- 2. Start one tape deck (connected to the TAPE-2 jacks) in the recording mode.
- 3. Start the other tape deck (connected to the TAPE-1 jacks) in the playback mode to reproduce the 4-channel stereo tape.

# 2-Channel Recording & Playback on 4-Channel Tape Decks

Most 4-channel tape decks are also able to record and play back in 2-channel. Of course, if desired, the playback sound may be converted to 4-channel by the QS regular matrix system built into the QS-800A.

#### To Record in 2-Channel

- 1. Set the program source selector of your frontchannel amplifier to the program source you wish to record.
- 2. Start the 4-channel tape deck in the 2-channel recording mode.
- **3.** To monitor the sound being recorded, push the TAPE MONITOR 4-CH-1 (or-2) Switch of the QS-800A.

### To Reproduce in 2-Channel

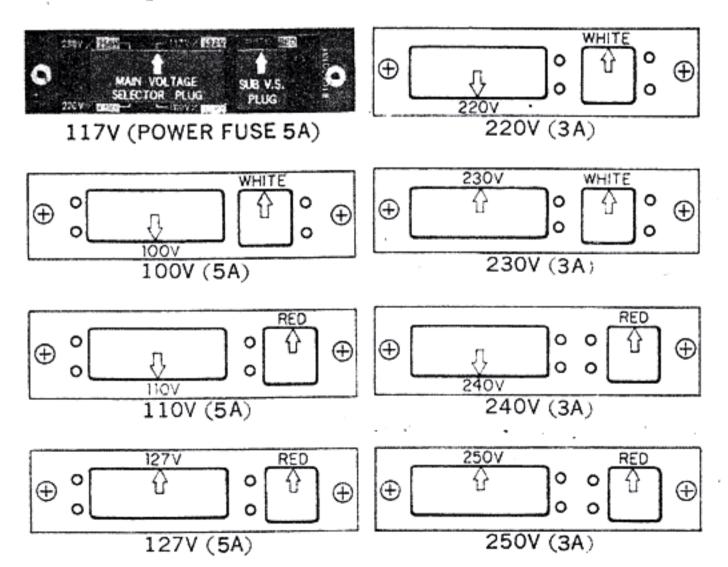
- 1. Push the TAPE MONITOR 4-CH-1 (or -2) Switch of the QS-800A.
- 2. Adjust the Function Control on the front panel to the position that gives you the sound most effective for the type of program source recorded on the tape.
- 3. Start the tape deck in the 2-channel playback mode.
- 4. Adjust the Level Set Control for optimum input levels.
- 5. Use the other controls and switches on the QS-800A to suit your own tastes and room acoustics.

# SIMPLE MAINTENANCE HINTS/ACCESSORIES

### Voltage Adjustment

Your QS-800A is adjusted in our factory to operate at the power supply voltage of your area. That voltage is indicated both on the carton box and on a round label on the bonnet of the amplifier. Should you, after purchasing the unit, move to an area where the power supply voltage is different from the one indicated, adjust the unit's voltage selector plugs as follows:

- 1. Remove the two screws securing the name plate on the unit's rear panel, then remove the name plate.
- 2. Set the arrow mark on the Main Voltage Selector Plug to the new voltage: 100, 110, 117, 127, 220, 230, 240 or 250 volts.
- **3.** If the new voltage is indicated in red, set the arrow mark on the adjacent Sub Voltage Selector Plug to "RED." If it is indicated in white, however, set that arrow to "WHITE."
- **4.** Change the power fuse as well whenever the power supply voltage has changed. For 100–127 volt operation, use a 5-ampere glass-tubed fuse. For 220–250 volt operation, use a 3-ampere one.
- **5.** Where the power supply voltage considerably fluctuates, the Main Voltage Selector Plug may be reset to avoid unpleasant side effects of such fluctuation. Reset it to the voltage immediately higher than the peak of the fluctuation.



### Place of Installation

The bonnet of the QS-800A is designed so that any heat radiated inside will escape through it. Due care should be taken of the dissipation of such heat if you wish to place something on top of the QS-800A or put the unit inside a closed cabinet, etc. Above all, avoid placing it where it may be exposed to the direct sunlight.

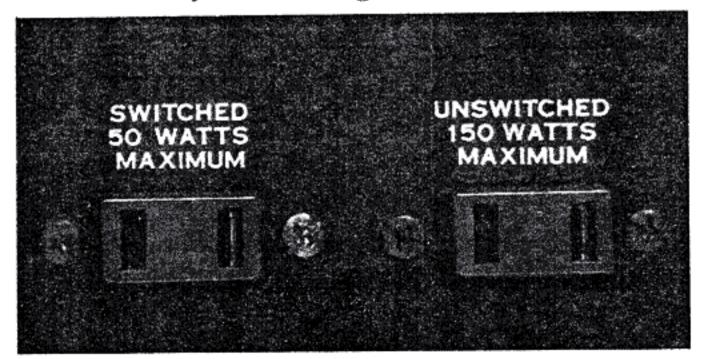
# To Connect the Front-Channel Amplifier, etc.

Use the pin plug-equipped shielded cables supplied with your QS-800A to connect your front-channel amplifier and QS-800A. If you should wish to use other cables for some reason, they should be relatively thick and have minimal distributed capacitance. Try to keep them as short as possible. Observe the same cautions when connecting tape decks.

### Rear-Panel AC Outlets

Of the two AC outlets provided on the rear-panel, the one marked 'SWITCHED' is controlled by the front-panel Power/Rear Speakers Switch. The other, marked 'UNSWITCHED,' is always 'live' and independent of the Power/Rear Speakers Switch. The voltage delivered at these outlets is the same as the power supply voltage used.

The 'SWITCHED' and 'UNSWITCHED' outlets have a power capacity of 50W and 150W, respectively. Before you connect any appliance to them, be sure that it is adjusted for use at the same power supply voltage, and that its power consumption is not beyond these figures.



### Should the Power Fuse Blow

If the Level Meters fail to glow and your QS-800A remains dead when you turn on the Power/Rear Speakers Switch, it is possible that its power fuse has blown.

Should this happen, disconnect the power cord from the AC outlet and examine the power fuse on the unit's rear panel. If you find it blown, find out the cause of the blowout and eliminate it, then replace the blown fuse with a new glass-tubed fuse of the rated capacity (5-ampere for 100 to 127 volts, 3ampere for 220 to 250 volts).

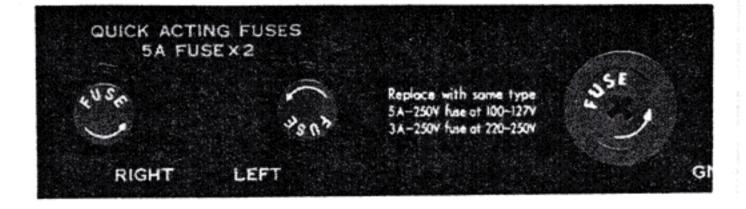
Never use a fuse of a different capacity or a piece of wire, even as a stopgap measure, or serious danger could result.

### Quick-Acting Fuses

If the Level Meters of your QS-800A illuminate but no sound is heard from both or either of the rear speaker systems, examine their connections and your operating procedure once. If nothing is wrong with them, it is possible that both or either of the quick-acting fuses protecting the power transistors has blown.

Should this happen, disconnect the power cord from the wall AC outlet and check the two quick-acting fuses on the unit's rear panel. If you find both or either of them blown, discover and eliminate the cause of the blowout, and replace it with a new 5ampere quick-acting fuse supplied.

Probable causes of the blowout include excessively large input signals and a short-circuit at the speaker terminals.



### Servicing

Should anything ever go wrong with your QS-800A, or if you have any question about it, please contact the Sansui dealer from whom you purchased it or your nearest Authorized Sansui Service Station.

### Accessories

1.	CONNECTION CABLE WITH 2 PIN PLUGS4
3.	QUICK-ACTING FUSES (5A)2
4.	POLISHING CLOTH1
5.	BUTTERFLY BOLTS2
6.	WASHERS2
7.	OPERATING INSTRUCTIONS AND SERVICE
	MANUAL1
8.	OPERATING INSTRUCTIONS SHEET1

# **SPECIFICATIONS**

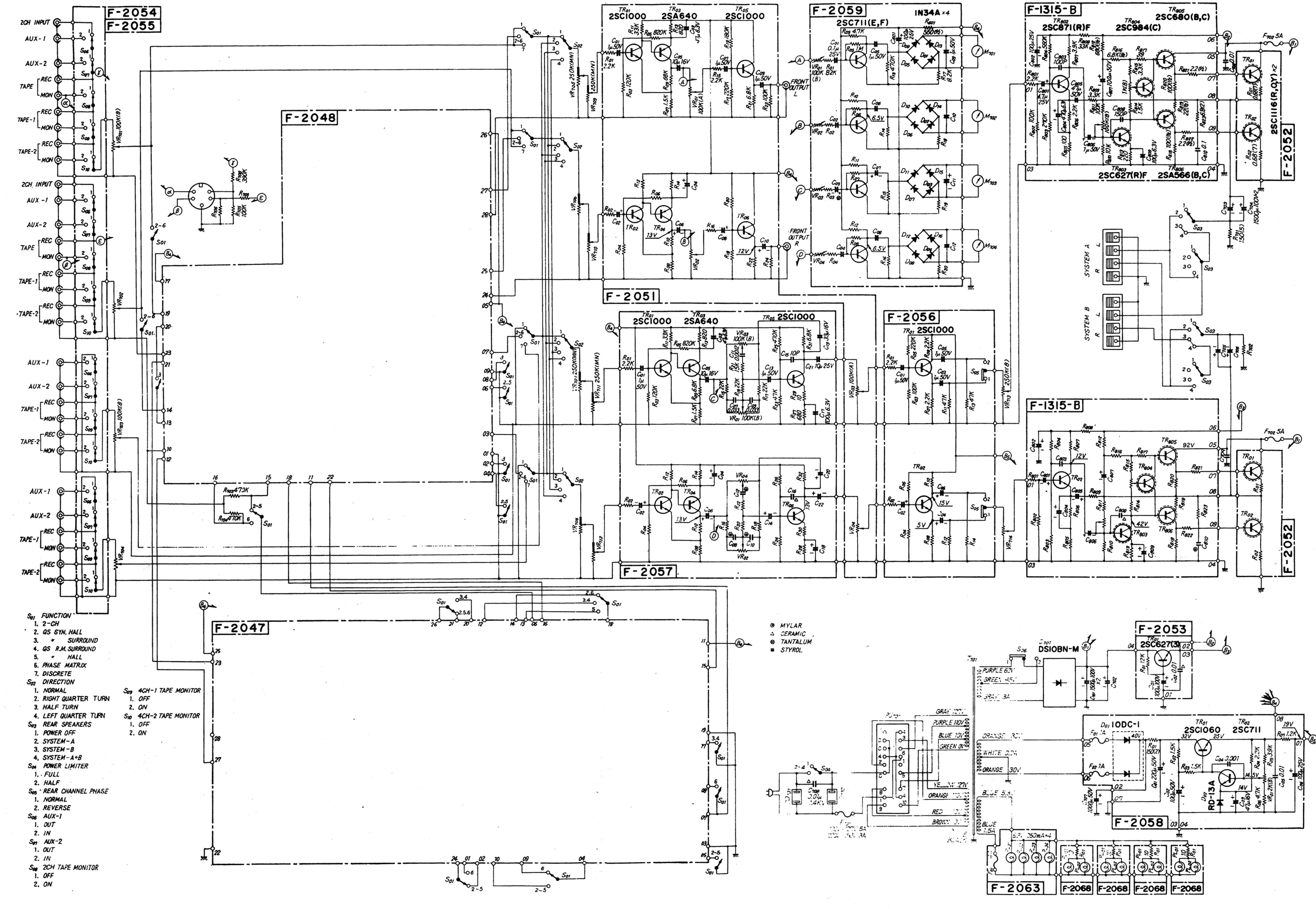
FRONT-Control Amplifier

(maximum output level)

800mV

4V (THD: less than 0.5%)

POWER OUTPUT (REAR—Overall):	REAR TONE CONTROLS:	filmod8
IHF MUSIC POWER: 200W (4Ω) at 1,000Hz	BASS: (friction type) +10.5dB -11.0	
160W (8Ω) at 1,000Hz	TREBLE: (friction type) +11.5dB -11.5	
CONTINUOUS RMS POWER: (each channel driven)	SYNTHESIZER/DECODER: QS regular matri	
85/85W (4Ω) at 1,000Hz	with Vario-Matr	ix circuit
65/65W (80) at 1,000Hz CONTINUOUS RMS POWER: (both channels driven)	SWITCHES:	أ المائد لحال
$67+67W$ (4 $\Omega$ ) at 1,000Hz	FUNCTION: 2-CH, QS-SYNTHESI	4.7
$56 + 56W (8\Omega)$ at 1,000Hz	QS-SYNTHESIZER SU	
CONTINUOUS RMS POWER: (both channels driven at	QS-REGULAR MATR	•
rated distortion, 20 to 20,000Hz)	QS-REGULAR MATR PHASE MATRIX, DIS	
$45+45W$ (8 $\Omega$ )	DIRECTION: NORMAL, RIGHT Q	
TOTAL HARMONIC DISTORTION: (at rated output)	HALF TURN, LEFT Q	
REAR—Overall less than 0.5%	4-CH AUX-1 and -2: OUT, IN	OTHER TORIN
FRONT—Control Amplifier less than 0.1%	2-CH TAPE MONITOR: OUT, IN	
INTERMODULATION DISTORTION: (at rated output,	4-CH TAPE MONITOR-1 and -2: OUT, I	N
70Hz:7,000Hz=4:1 SMPTE method)	REAR CHANNEL PHASE: NORMAL, REVE	ERSE
REAR—Overall less than 0.5%	POWER LIMITER: FULL, HALF	
IHF POWER BANDWIDTH: (each channel driven, at	POWER/REAR SPEAKERS SELECTOR:	
rated distortion).	POWER OFF, SYSTEM A	, SYSTEM B.
REAR—Overall 15 to 30,000Hz	SYSTEM A+B	
FREQUENCY RESPONSE	SEMICONDUCTORS: Transistors	61
REAR—Overall 20 to 30,000Hz +0.5dB, -2.0dB	FETs	2
(at 1W power output)	Diodes (includin	
FRONT—Control Amplifier 20 to 50,000Hz	diodes)	
+0.5dB, $-1.0$ dB (at rated output)	Zener diodes	1
DAMPING FACTOR: approximately 200 at 8Ω	POWER REQUIREMENT: 50/60Hz	in the second se
dummy load	100/110/117/12	7/220/230/240
LOAD IMPEDANCE: 4 to 16Ω	/250V	
	POWER CONSUMPTION	
CROSSTALK (rated output at 1,000Hz)  REAR—Overall better than 45dB	MAXIMUM CONSUMPTION: 300VA	
FRONT—Control Amplifier better than 45dB	RATED CONSUMPTION: 130W	
and the second of the second o	DIMENSIONS: 147mm ( 513/6")	
IHF HUM AND NOISE	462mm (18¼")	
REAR—Overall better than 80dB	335mm (13½″)	D
FRONT—Control Amplifier better than 80dB	WEIGHT: 15.5kg (34.2 lbs	s.)
Conditions stated above:		
INPUT from 4-CH AUX and FUNCTION at DISCRETE position		
INPUT SENSITIVITY AND IMPEDANCE: (at 1,000Hz)		
2-CH INPUT 150mV (50kΩ)		
2-CH TAPE MONITOR (pin) 150mV (50kΩ)		
2-CH TAPE MONITOR (DIN) 150mV (50kΩ)		
4-CH AUX-1 and -2 150mV (50kΩ)		
4-CH TAPE MONITOR -1 and -2 (pin)		
150mV (50kΩ)		
OUTPUT LEVEL (at 1,000Hz):		
2-CH TAPE REC (pin) 150mV 2-CH TAPE REC (DIN) 30mV		
2-CH TAPE REC (DIN) 30mV 4-CH TAPE REC-1 and -2(pin) 150mV		
- OIL IALE MEOTE and -Z(pin) 130m	· .	



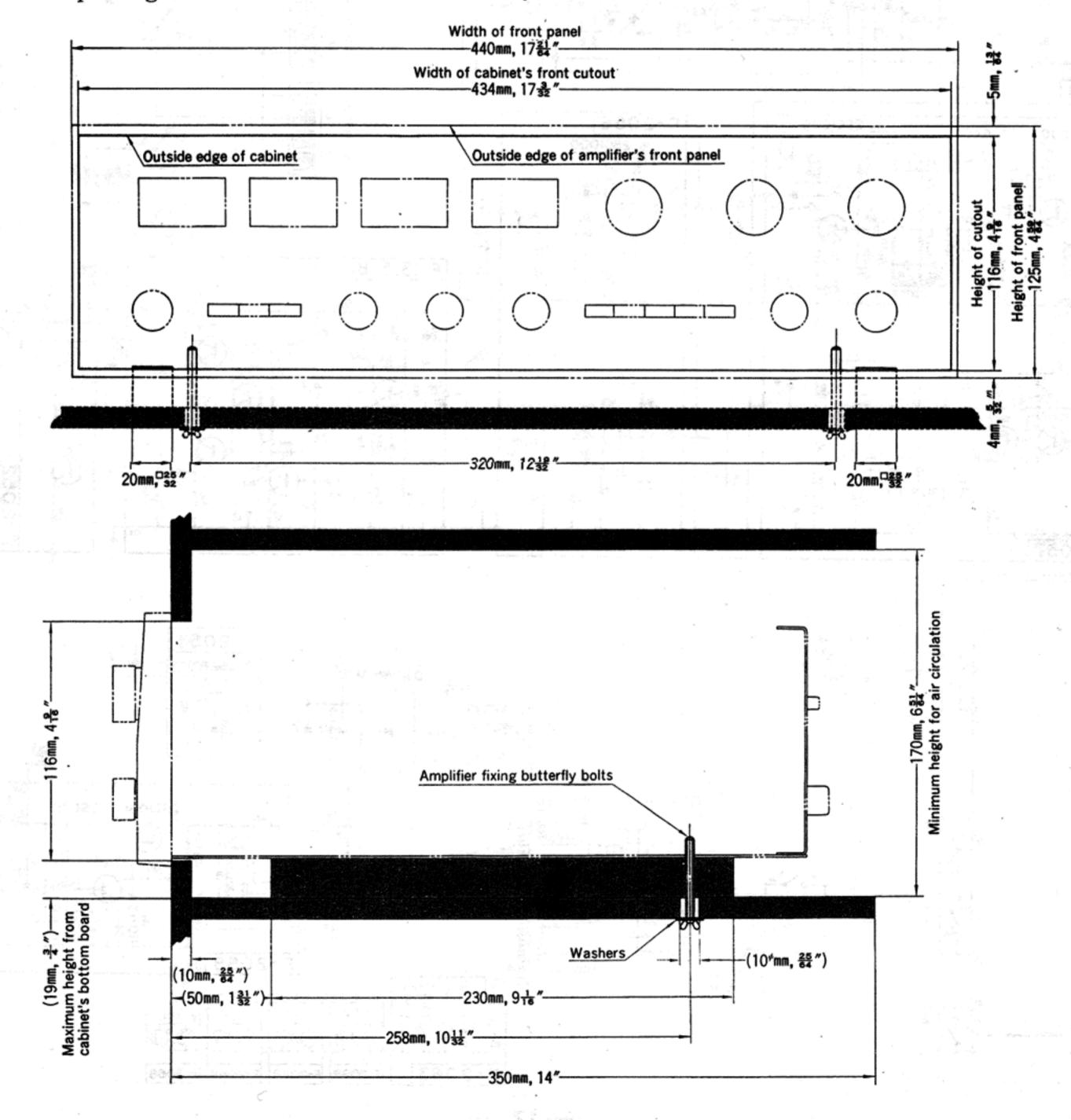
# **CUSTOM MOUNTING**

The diagrams below show the dimensions required for mounting the QS-800A into a custommade cabinet. Note that ample space is provided for complete air circulation above and below the unit.

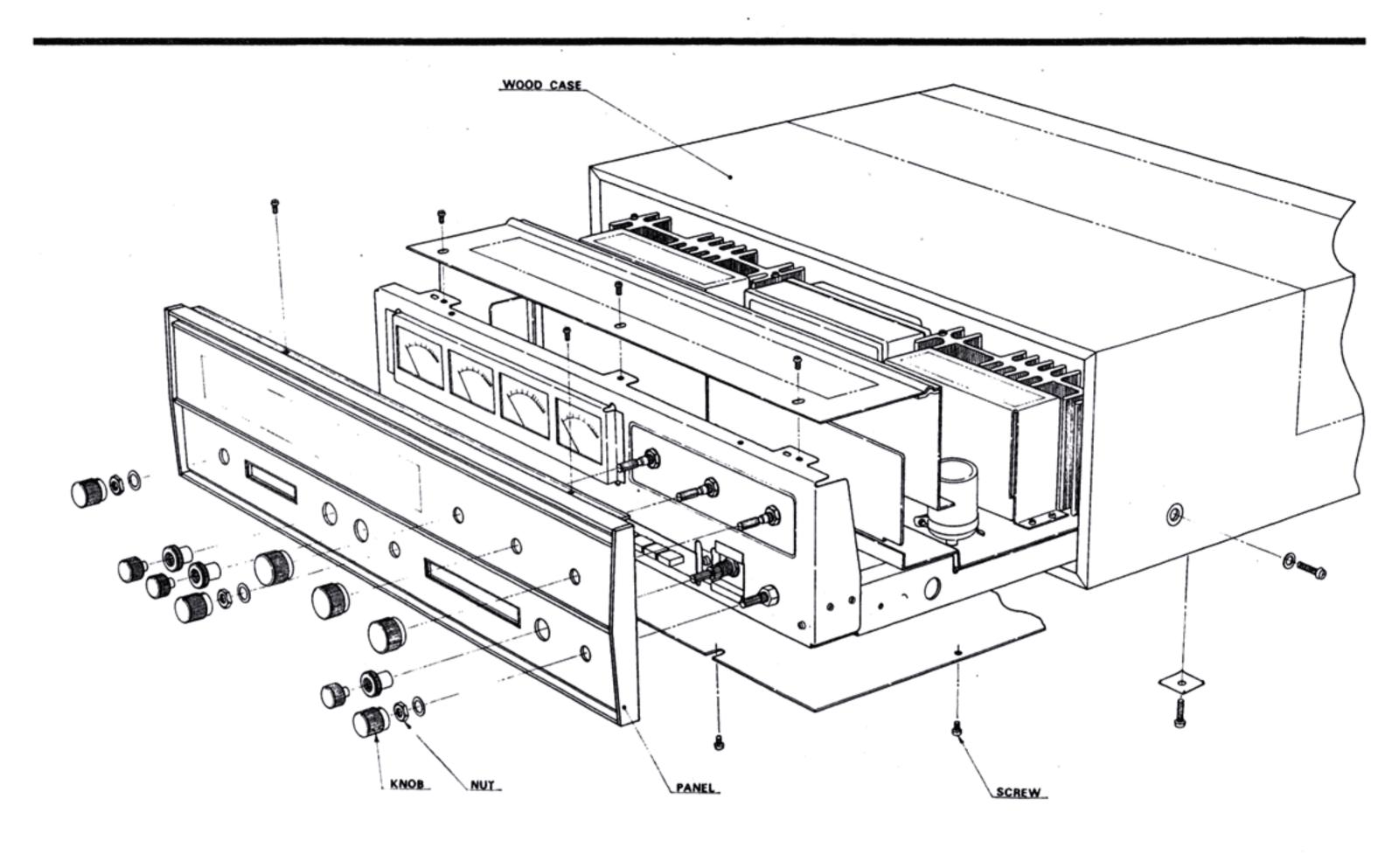
- 1. Be sure the cabinet cutout measures  $17^{8}/_{32}'' \times 4^{9}/_{16}''$  as indicated in the diagram.
- **2.** Place two bars on the floor of the cabinet as illustrated. Each bar should measure  $^{25}/_{32}'' \times ^{25}/_{32}'' \times 9^{1}/_{16}''$ .
- 3. Drill two holes in the bottom of the cabinet at points corresponding to holes in the bottom of the

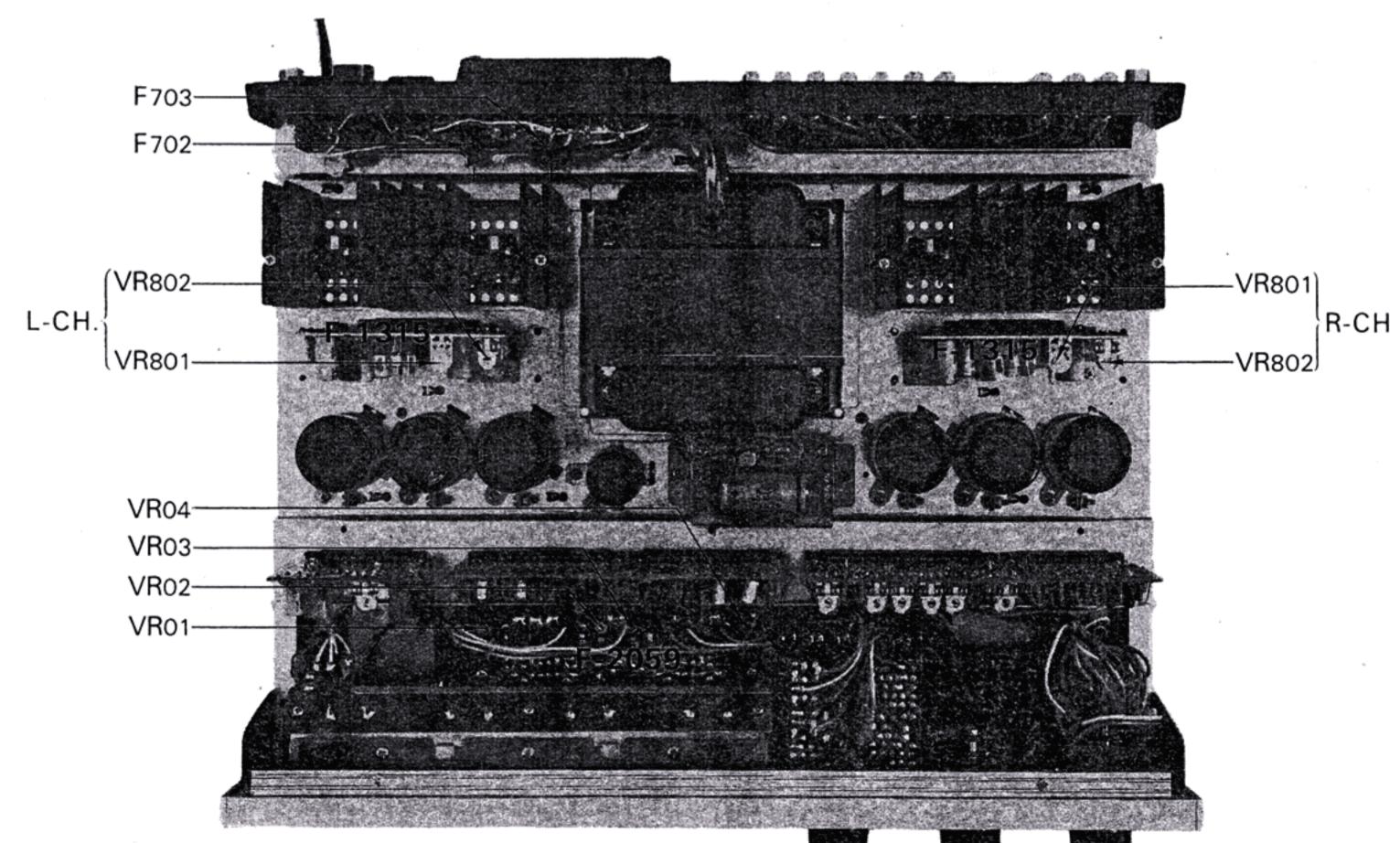
receiver.

- 4. Remove the receiver from the wood case (refer to "DISASSEMBLY PROCEDURE" on page 19).
- 5. Remove the two screws on the front panel side of the receiver's bottom board.
- 6. Insert the QS-800A into the cabinet through the cutout until the edges of its front panel are flush with the cabinet, and secure both receiver and cabinet with the two butterfly bolts and washers (supplied).



# DISASSEMBLY PROCEDURE / TEST POINTS





# **ALIGNMENT**

# OUTPUT ALIGNMENT OF REAR-CHANNEL POWER AMPLIFIER

STEP	CONNECT/ADJUST	REMARKS
1.	Turn Level Set Control fully counterclockwise.	-
2.	Turn Rear Level and Vol- ume Controls fully clock- wise.	
3.	Set oscillator to 1kHz, then connect it to AUX-1 rear left-channel input.	Use oscillator with output capacity greater than 1V.
4.	Connect 8-ohm (or 16-ohm) resistor (minimum rating of 80 watts) to SYSTEM-A rear left-channel speaker terminal.	
<b>5.</b>	Connect oscilloscope to same speaker terminal.	
6.	Push down AUX 4-CH-1 Switch.	
7.	Turn Direction Switch to NORMAL.	
8.	Set Power/Rear Speakers Switch to SYSTEM-A posi- tion.	- · · · · · · · · · · · · · · · · · · ·
9.	Turn Level Set Control clockwise slowly.	
10.	Adjust VR <sub>801</sub> (left channel) so that both peaks of output waveform are clipped simultaneously.	
11.	For rear right-channel repeat above procedure, but adjust VR <sub>801</sub> (right channel) in step 10.	

# ALIGNMENT OF LEVEL METERS

STEP	CONNECT/ADJUST				
1.	Set your QS-800A's three Balance Controls at respective center positions.				
2.	Turn Direction Switch to NORMAL.				
3.	Push down AUX 4-CH-1 Switch.				
4.	Connect oscillator (1kHz, 150mV) to AUX-1 front left-channel input.				
5	Turn Level Set Control fully clockwise.				
6.	Adjust VR <sub>03</sub> so that front left-channel Level Meter swings to '0'.				
7.	Make same adjustments with VR <sub>04</sub> , VR <sub>01</sub> , VR <sub>02</sub> for front right, rear left and rear right channel Level Meters, respectively.				

# CURRENT ALIGNMENT OF REAR-CHANNEL POWER AMPLIFIER

STEP	CONNECT/ADJUST	REMARKS
1.	Remove F <sub>002</sub> and F <sub>003</sub> .	
2.	Turn Rear Level Control fully counterclockwise.	
3.	Turn VR <sub>802</sub> (left and right channels) fully counter- clockwise.	
4.	Turn on Power/Rear Speakers Switch.	
5.	Connect ammeter (or tester) where F <sub>002</sub> was.	Be sure power is turned on before connecting ammeter. Set ammeter to 50~100 mA range.
6.	Turn VR <sub>802</sub> (left channel) slowly clockwise until ammeter shows 30±3mA.	
7.	Turn off power, then replace F <sub>002</sub> .	
8.	Turn on power again.	
. 9.	Now, connect ammeter (tester) where F <sub>008</sub> was.	Same as step 5.
10.	Turn VR <sub>802</sub> (right channel) slowly clockwise until ammeter shows 30±3mA.	
11.	Turn off power, then replace F <sub>003</sub> .	

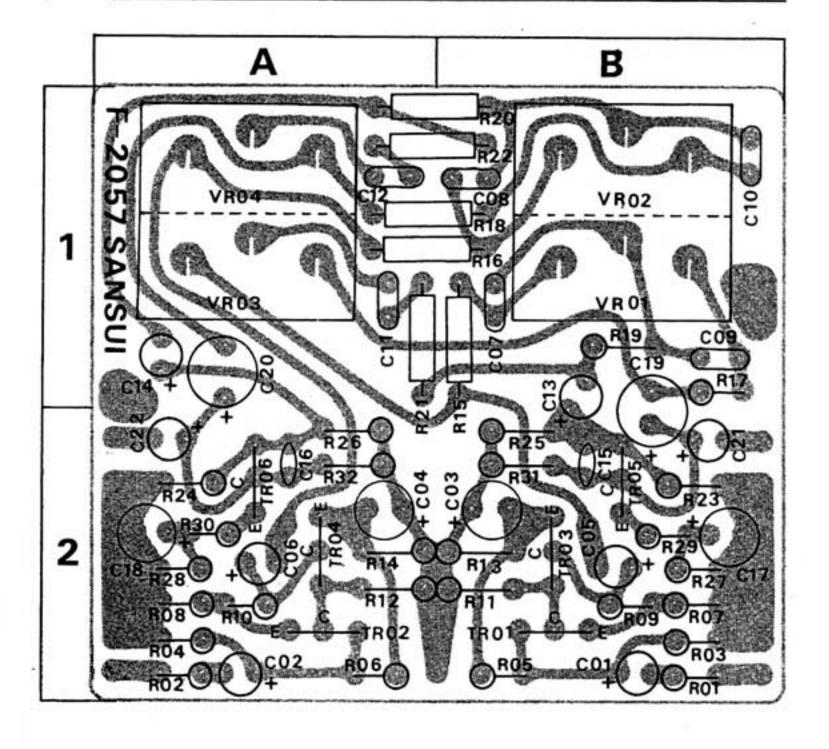
# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

# TONE AMP. BLOCK (F-2057)

			S	tock No. 7	560670
w	x			Y	z
Roı	2.2kΩ)	-,		0106222	2 B
R02	2.2kΩ			0106222	2 A
R <sub>03</sub>	120kΩ			0106124	2 B
Ro4	120kΩ			0106124	2 A
Ros	820kΩ			0106824	2 B
R06	820kΩ			0106824	2 A
R07	1.5kΩ			0106152	2 B
Ros	1.5kΩ			0106152	2A .
R09	6.8kΩ			0106682	2 B
R10	6.8kΩ			0106682	2A
R11	33kΩ			0106333	2 B
R12	33kΩ			0106333	2 A
R13	820Ω			0106821	2 B
R14	820Ω			0106821	2 A
R15	22kΩ			0107223	1 B
R16	22kΩ \ ± 5%	1/4 W	CR.	0107223	1A, B
R17	22kΩ			0106223	1 B
R18	22kΩ			0107223	1A, B
R19	22kΩ			0106223	1B .
R20	22kΩ			0107223	1A, B
R21	15kΩ			0106153	18
R22	15kΩ			0106153	1A, B
R23	47kΩ			0106473	2 B
R24	47kΩ			0106473	2 A
R25	470kΩ			0107474	2 B
R26	470kΩ			0107474	2 A
R27	680Ω			0107681	2 B
R28	680Ω			0107681	2 A
R29	10Ω			0107100	2 B
R30	10Ω			0107100	2 A
R31	6.8kΩ			0107682	2 B
R32	6.8kΩ )			0107682	2 A
VR01,02	100kΩ (B)×2 Bas	s Contr	rol	1020230, 1	1 B
VR03,04	100kΩ (B)×2 Trel	ble Cor	ntrol	1020230, 1	1 A
C01	1 μF)	50V	EC.	0515109	2 B
C02	1 <i>μ</i> F∫	301	LC.	0515109	2 A
C03	47 μF)	6.3V	EC.	0510470	2 B
C04	47 μF)	0.51	LC.	0510470	2 A
C05	10 <i>μ</i> F)	16V	EC.	0512100	2 B
C06	10 <i>μ</i> FJ			0512100	2 A
C07	0.033 μF ).			0601337	1 B
C08	0.033 <i>μ</i> F			0601337	1 B
C09	$0.033 \mu F$ ( $\pm 10\%$	50 V	MC.	0601337	1 B
C10	0.033μ	30 4	MC.	0601337	1 B
C11	0.0012 <i>μ</i> F			0601126	1 A
C12	0.0012μF)			0601126	1 A
C13	1 μF)	50V	EC.	0515109	1,2B
C14	1 μFJ			0515109	1 A
C15	10pF) ±10%	50V	CC.	0660100	2 B
C16	10pF)		2.70950	0660100	2 A
C17	100μF)	6.3V	EC.	0510101	2 B
C18	100μFJ			0510101	2 A
C19	33μF)	16V	EC.	0512330	1,2B
C20	33 <i>μ</i> FJ	etsa (ti		0512330	1 A

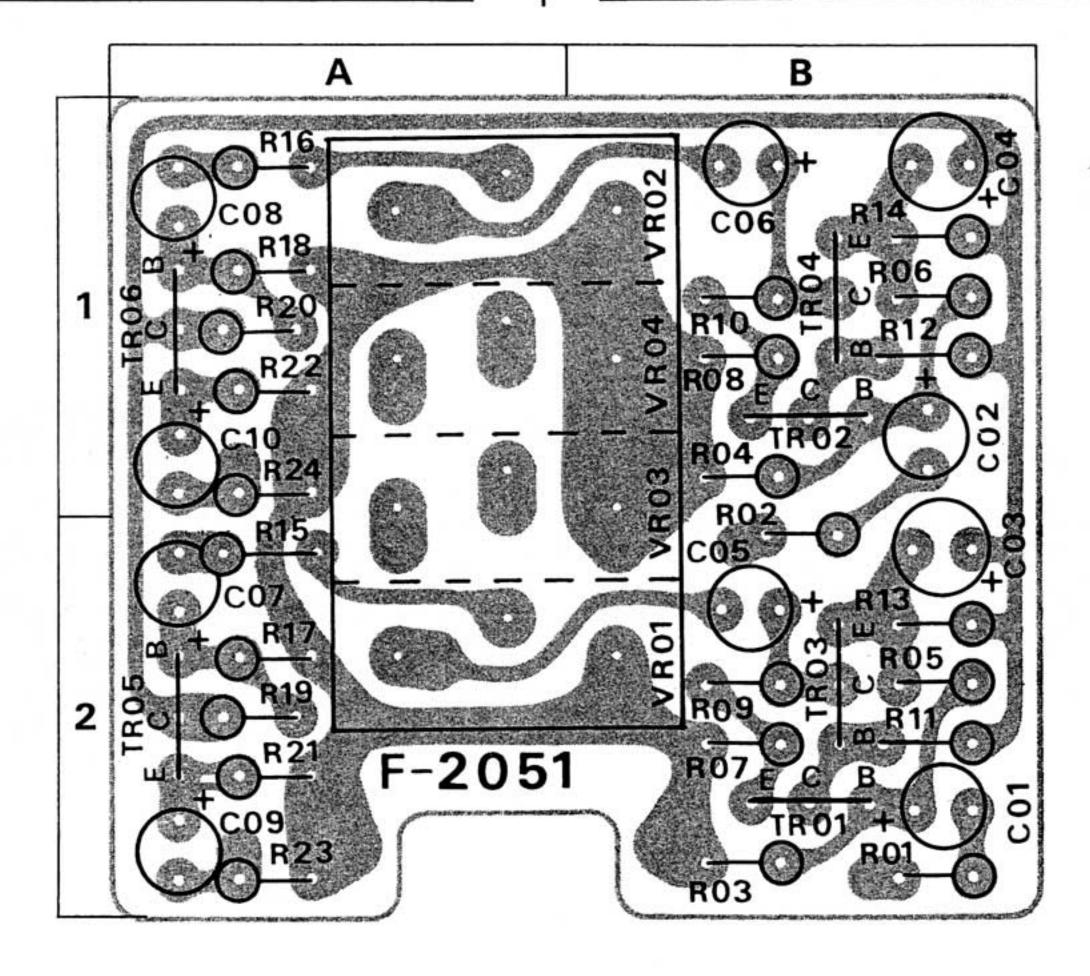
W	×	Y	Z
C21	10μF)	0513100	2 B
C22	10μF) 25V EC	0513100	2 A
TRoi	0001000 (00)	0305880	2 B
TR <sub>02</sub>	2SC1000 (GR)	0305880	2 A
TR <sub>03</sub>	054440(14.1)	0300301, 2	2 B
TR <sub>04</sub>	2SA640 (M, L)	0300301, 2	2 A
TR <sub>05</sub>	0501000 (CD)	0305880	2 B
TR06	2SC1000 (GR)	0305880	2 A
	Printed Circuit Board F-2057	2560590	



# BUFFER AMP. BLOCK (F-2051)

		x			Y	Z	
	2.2kΩ				0106222	2 B	
	2.2k $\Omega$			1	0106222	2 B	
	120k $\Omega$				0106124	2 B	
	$120k\Omega$			1	0106124	1 B	
	820k $\Omega$			1	0106824	2 B	
	820k $\Omega$			1	0106824	1 B	
	1.5k $\Omega$				0106152	2 B	
	1.5k $\Omega$				0106152	1 B	
	$6.8k\Omega$				0106682	2 B	
	6.8k $\Omega$	+ 59/			0106682	1 B	
	33k $\Omega$		1/14/	CD.	0106333	2 B	
	33k $\Omega$	± 5%	1/4 W	CR.	0106333	1 B	
	$820\Omega$			- 1	0106821	2 B	
	$820\Omega$			0106821	1 B		
-	$2.2k\Omega$					0106222	2 A
	$2.2k\Omega$				0106222	1 A	
	220k $\Omega$				0106224	2 A	
	220k $\Omega$				0106224	1 A	
	180k $\Omega$			f	0106184	2 A	
	180kΩ				0106184	1 A	
	6.8k $\Omega$				0106682	2 A	
	6.8kΩ				0106682	1 A	
	100kΩ				0106104	2 A	

w	x			Y	Z
R24	100kΩ ± 5%	¼W	CR.	0106104	1 A
VR01~04	100kΩ (B)×4 Vol	ume Co	ntrol	0160140, 1	1,2 A , B
C01	1 μF)	50V	EC.	0510109	2 B
C02	1 μF J	301	LC.	0510109	1 B
C03	47 μF)	6.3V	EC.	0510470	1,2B
C04	47 μF∫	0.51	LC.	0510470	1 B
C05	10μF)	167	EC.	0510100	2 B
C06	10μF)	104	EC.	0510100	1 B
C07	1 μF )			0510109	2 A
C08	1 μF			0510109	1 A
C09	1 μ Ε	50V	EC.	0510109	2 A
C10	1 μF			0510109	1 A
TRoi	0001000 (00)			0305880	2 B
TR02	2SC1000 (GR)			0305880	1 B
TR03				0300301, 2	2 B
TR04	2SA640 (M, L)			0300301, 2	1 B
TR05				0305880	2 A
TRo6	2SC1000 (GR)			0305880	1 A
	Printed Circuit Boar	d F-20	51	2591470	



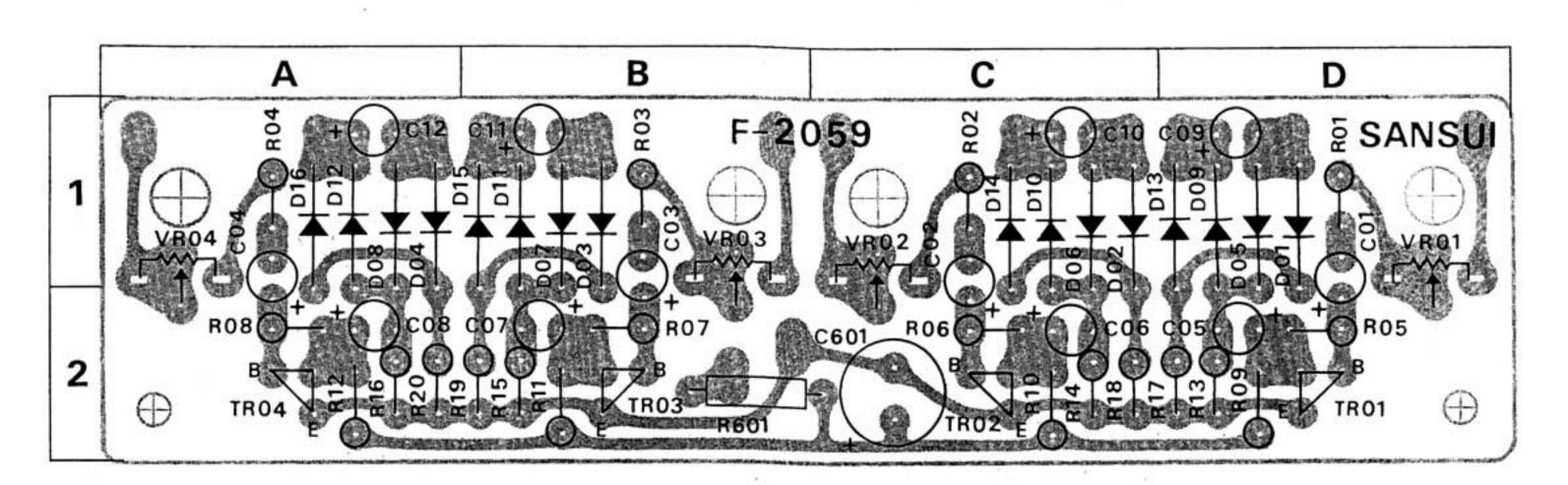
# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

# METER AMP. BLOCK (F-2059)

W	x	İ	Y	Z
Roı	82kΩ )		0106823	10
R02	82kΩ		0106823	10
Roз	82kΩ		0106823	1 B
Ro4	82kΩ		0106823	1 A
Ros	1ΜΩ		0106105	2 D
R06	1ΜΩ		0106105	2C
R07	1ΜΩ		0106105	2 B
Ro8	1ΜΩ		0106105	2 A
R09	4.7kΩ		0106472	2 D
R10	$4.7k\Omega$ $\pm$ 5% $\frac{1}{4}W$	CR.	0106472	2C
R11	4.7kΩ ( - 5/6 74 VV	CK.	0106472	2 B
R12	4.7kΩ	- 1	0106472	2 A
R13	470kΩ		0106474	2 D
R14	470kΩ		0106474	2C
R15	470kΩ		0106474	2 B
R16	470kΩ		0106474	2 A
R17	8.2kΩ		0106822	2 D
R18	8.2kΩ		0106822	2C
R19	8.2kΩ		0106822	2 B
R20	8.2kΩ)		0106822	2 A
R601	560Ω ±10% ½W	SR.	0111561	2 B
VR01	100kΩ (B))		1030780	1,20
VR02	100kΩ (B)		1030780	1,20
VR <sub>03</sub>	100kΩ (B) Meter Adju	st	1030780	1, 2 B
VR04	100kΩ (B)		1030780	1, 2 A
C01	0.1 μF )		0573108	1,20
C02	0.1 μF		0573108	1,20
C03	0.1 μF ( 25V	TC.	0573108	1, 2 B
C04	0.1 μF)	- 1	0573108	1, 2 A
C05	1 μF 50 V	EC.	0515109	2 D

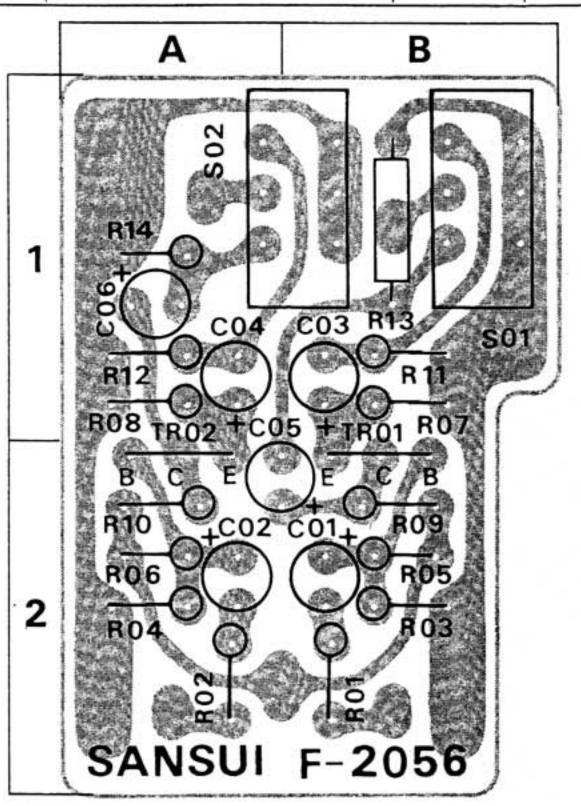
W	X	Y	Z
C06	1 μF )	0515109	2 C
C07	1 μF	0515109	2 B
C08	1 μF	0515109	2 A
C09	$1 \mu F$ 50V EC.	0515109	1 D
C10	1 μF	0515109	10
C11	1 μF	0515109	1 B
C12	1 μ Ε )	0515109	1 A
C601	100 μF 25V EC.	0513101	2C
TRoi	)	0305731, 2	2 D
TR <sub>02</sub>	(	0305731, 2	2C
TR <sub>03</sub>	2SC711(E, F)	0305731, 2	2 B
TR <sub>04</sub>	l)	0305731, 2	2 A
D01	)	0310400, 1	10
D02		0310400, 1	10
D03		0310400, 1	1 B
D04		0310400, 1	1 A
D05	1N34A (B, Y)	0310400, 1	1 D
D06	(IN34A (B, T)	0310400, 1	1 C
D07		0310400, 1	1 B
D08		0310400, 1	1 A
D09		0310400, 1	1 D
D10	l)	0310400, 1	1 C
D11		0310400, 1	1 B
D12		0310400, 1	1 A
D13	1N34A (B, Y)	0310400, 1	1 D
D14	( IINS4A (B, T)	0310400, 1	1 C
D15		0310400, 1	1 B
D16		0310400, 1	1 A
	Printed Circuit Board F-2059	2591520	



# PHASE SWITCH BLOCK (F-2056)

Stock No. 7591530

W	x		Y	Z
Roı	2.2kΩ)		0106222	2 B
R02	2.2kΩ		0106222	2 A
. Ro3	100kΩ		0106104	2 B
R04	100kΩ		0106104	2 A
Ros	220kΩ	1	0106224	2 B
R06	220kΩ		0106224	2 A
R07	2.2kΩ + 5% 1/W	co l	0106222	1 B
Ros	$\frac{2.2k\Omega}{2.2k\Omega}$ ± 5% $\frac{1}{4}$ W	CR.	0106222	1 A
R09	2.2kΩ		0106222	2 B
R10	2.2kΩ		0106222	2 A
R11	47kΩ		0106473	1 B
R12	47kΩ		0106473	1 A
R13	47kΩ		0106473	1 B
R14	47kΩ )		0106473	1 A
C01	1 μF )		0510109	2 B
C02	1 μF		0510109	2 A
C03	1 μF		0510109	1 B
C04	1 μF ( 50V	EC.	0510109	1 A
C05	1 μF	- 1	0510109	2A, B
C06	1 μF)		0510109	1 A
TRoi	0561000 (68)		0305880	2 B
TR02	2SC1000 (GR)	- 1	0305880	2 A
Soi	Left Phase Switch			1 B
S02	Right Phase Switch	ļ	1130540	1 A , B
S04	Power Limiter Switch	1		,
	Printed Circuit Board F-20	056	2591510	



# SWITCH BLOCK (F-2054)

Stock No. 7591510

W	X	Y
S06	AUX-I Switch	1
S07	AUX-2 Switch	
S08	2-CH Tape Monitor Switch	1130670
S09	4-CH-1 Tape Monitor Switch	
S10	4-CH-2 Tape Monitor Switch	)
	Printed Circuit Board F-2054	2591500

# METER LAMP BLOCK (F-2063)

Stock No. 7591550

W	X	Y
PL01	6.3V 0.25A F-type Lamp	0420020
PL02	6.3V 0.25A F-type Lamp	0420020
PL <sub>03</sub>	6.3V 0.25A F-type Lamp	0420020
PL <sub>04</sub>	6.3V 0.25A F-type Lamp	0420020
F01	4A Fuse w/Lead	0432890
	Fuse Holder Pin (×8)	2310030
	Printed Circuit Board F-2063	2991480

# METER POINTER ILLUMINATION BLOCK (F-2068) Stock No. 7591450

w	X	Y
Roı	$10\Omega$ $\pm 5\%$ $\frac{1}{4}$ W Fuse Resistor	0191100
PLoi	5V 60mA) PHANE	0400100, 1
PL02	5V 60mA Pilot Lamp	0400100, 1
	Printed Circuit Board F-2068	2591420

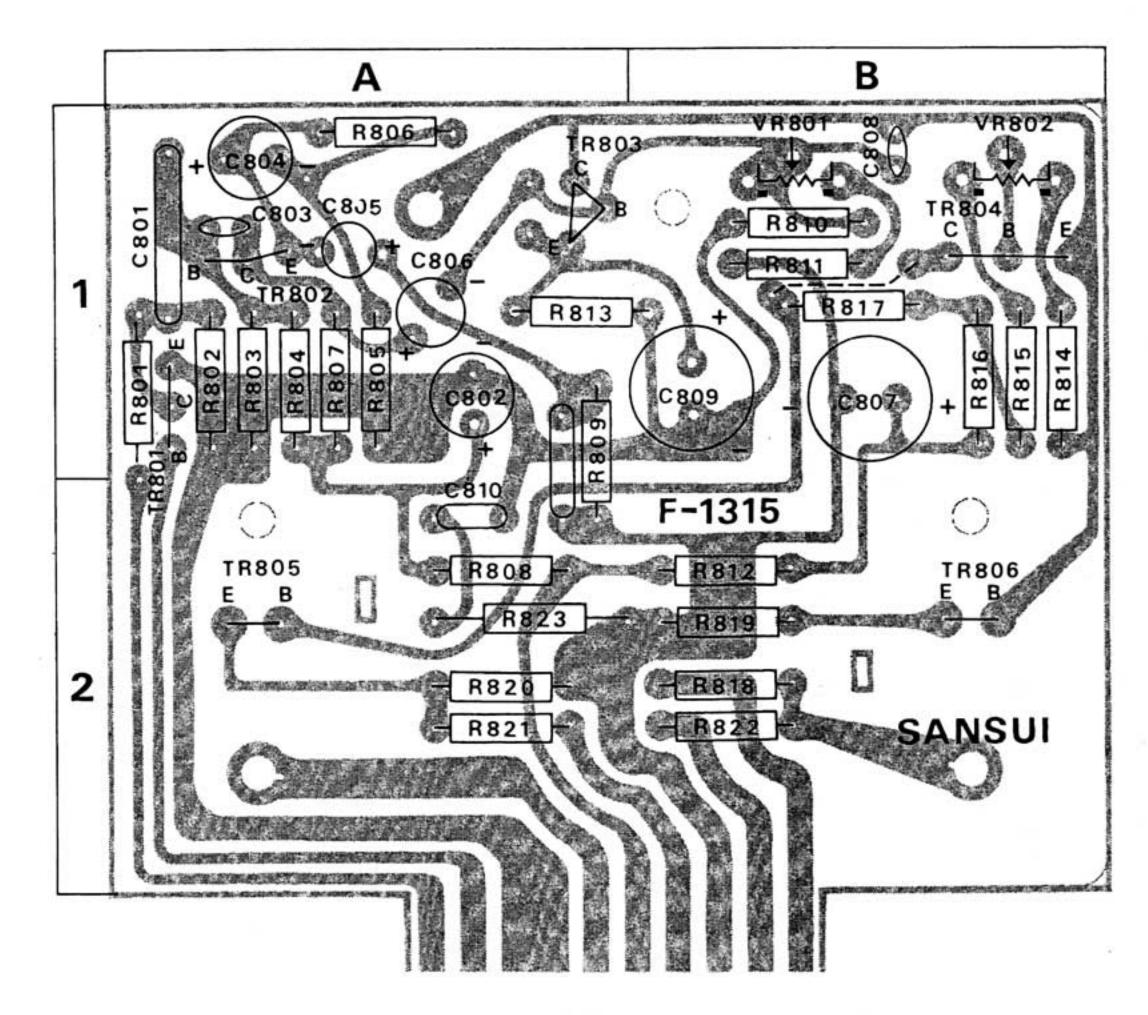
# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

# DRIVER BLOCK (F-1315B)

Z	Y			X		w
1 A	0107222				2.2kΩ)	R801
1 A	0107104				100kΩ	R802
1 A	0107274				270kΩ	R803
1 A	0107564				560kΩ	R804
1 A	0107101				100Ω	R805
1 A	0107222	CR.	1/4 W	± 5%	2.2kΩ	R806
1 A	0107392				3.9kΩ	R807
2 A	0107333	3			33kΩ	R808
1,2A	0107332	1			3.3kΩ	R809
1 B	0107103	- 1			10kΩ	R810
1 B	0107104				100kΩ)	R811
2 B	0111681	SR.	1/2W	±10%	$\Omega$ 086	R812
1 A , B	0107224				220kΩ)	R813
1 B	0107152	CR.	1/4W	± 5%	1.5kΩ	R814
1 B	0107332				3.3kΩ	R815
1 B	0111682	SR.	1/2W	±10%	6.8kΩ	R816
1 B	0107390	CR.	1/4W	± 5%	39Ω	R817
2 B	0111101				100Ω)	R818
2 B	0111220				22Ω	R819
2 A	0111101	SR.	1/2W	±10%	100Ω	R820
2 A	0111229				2.2Ω	R821
2 B	0111229				2.2\Omega)	R822

w	X			Y	Z
R823	6.8Ω ±10%	2W	CeR.	0132689	2 A
VR801	100k $\Omega$ (B)			1031140	1 B
VR802	$1k\Omega(B)$			1031050, 2	1 B
C801	4.7 μF)	OFV	EC.	0513479	1 A
C802	100 <i>μ</i> F)	25V	EC.	0513101	1 A
C803	100pF ±10%	50V	CC.	0660101	1 A
C804	470 <i>μ</i> F	6.3V	EC.	0510471	1 A
C805	100μF)			0515101	1 A
C806	1 μF >	50V	EC.	0515109	1 A
C807	100 μF )			0515101	1 B
C808	150pF ±10%	50V	CC.	0660151	1 B
C809	100 <i>μ</i> F	6.3V	EC.	0510101	1 B
C810	$0.1 \mu F \pm 10\%$	50V	MC.	0601108	2 A
TR802	2SC871R (F)			0305475	1 A
TR803	2SC627 (3)			0305582	1 A
TR804	2SC984 (C)			0305872	1 B
TR805	2SC684 Blue (B, C	)		0305621, 2	2 A
TR806	2SA566 (B, C)			0300151, 2	2 B
	Printed Circuit Boa	rd F-	315	2570340	

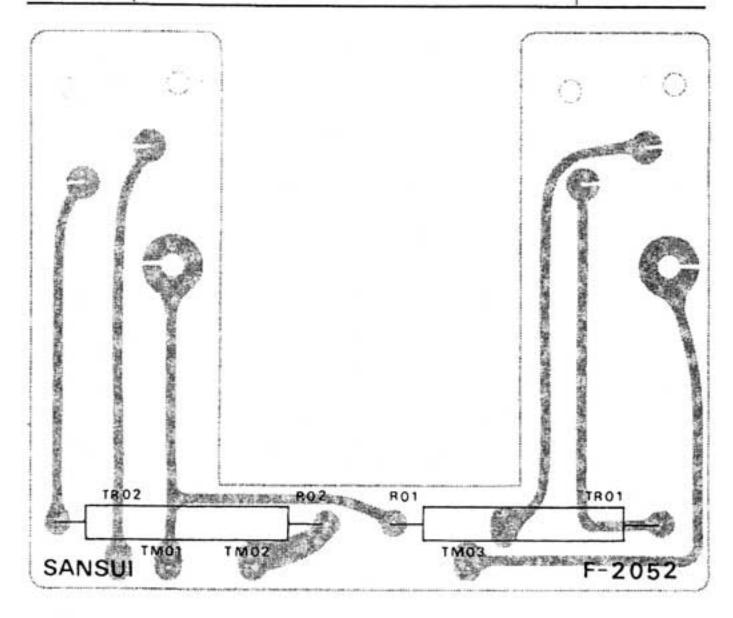


# POWER TRANSISTOR BLOCK

⟨F-2052⟩

Stock No. 7591500

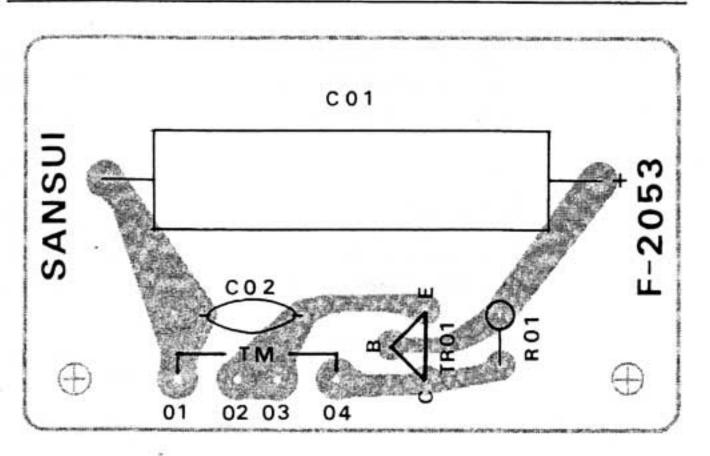
W	x	Y
Roı	$0.68\Omega$ $\pm 10\%$ 7W CeR.	0137688
R02	$0.68\Omega$ $\pm 10\%$ 7W CeR.	0137688
TRoi	0.0000000000000000000000000000000000000	0305840,1,2
TR <sub>02</sub>	2SC1116 (R, O, Y)	0305840,1,2
	Printed Circuit Board F-2052	2570480



# POWER (1) BLOCK (F-2053)

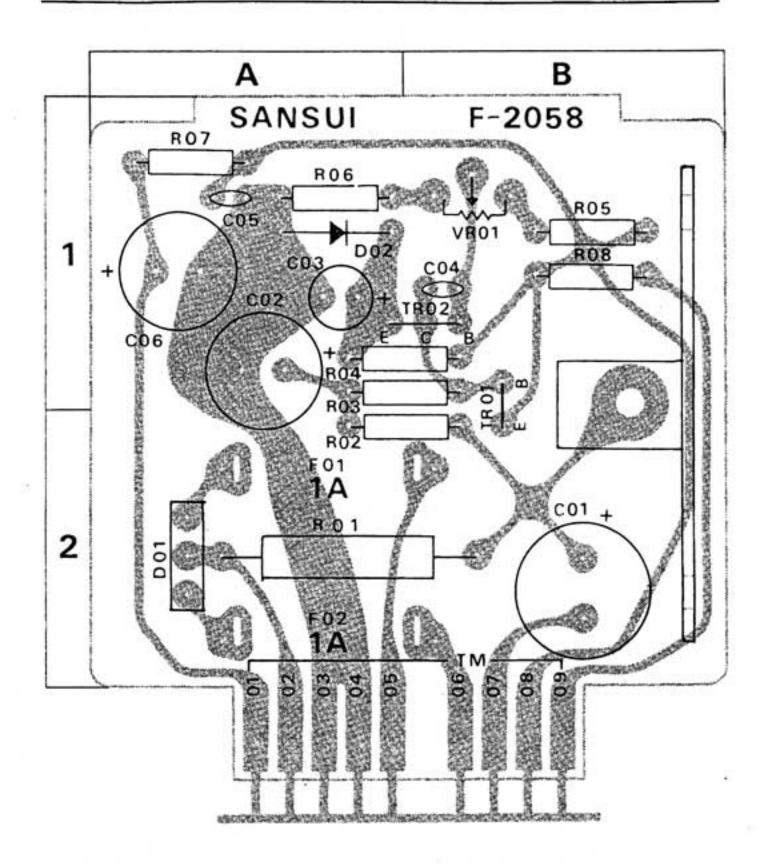
Stock No. 7500780

W	x	Y
Roı	12kΩ ± 5% ¼W CR.	0106123
C01	100 μF · 100V EC.	0507101
C02	$0.01  \mu F  {}^{+80}_{-20}\%$ 500V CC.	0659011
TRoi	2SC627(3)	0305582
	Printed Circuit Board F-2053	2500660



# POWER (2) BLOCK (F-2058)

W	X			Y	Z
Roı	100Ω ±10%	2W	CR.	0105101	2A, B
R02	1.5kΩ)			0107152	2A, B
Ro3	1.5kΩ			. 0107152	1 A, B
R04	2.2kΩ ± 5%	1/4W	CR.	0107222	1A, B
Ros	3.9kΩ ( - 3/6	/4 ***	CK.	0107392	1 B
R06	4.7kΩ			0107472	1 A
R07	1.2kΩ )			0107122	1 A
VR01	2kΩ (B)			1031070, 1	1 B
C01	220μF)	501/		0515221	2 B
C02	100μF)	50 V	EC.	0515101	1,2A
C03	47 μF	167	EC.	0512470	1 A
C04	0.001 µF) +80 o/	501/	00	0657102	1 B
C05	$0.001 \mu F$ $+80 \%$ $-20 \%$	50V	CC.	0657103	1 A
C06	100μF	25V	EC.	0513101	1 B
TRoi	2SC1060 (B, C)			0305711, 2	1, 2 B
TR02	2SC711 (E, F)			0305731, 2	1 A , B
D01	10DC-1 (Black)			9310680	2 A
D02	RD-13A			0315290	1 A
F01	1A )			0432830	2A, B
F02	1A Fuse w/I	Ledd		0432830	2A, B
	Printed Circuit Boar	d F-20	58	2500670	



R702   150Ω   ±10% 5W CeR.   015515   R703   470 kΩ   R704   470 kΩ   R705   100 kΩ   E706   100 kΩ   E706   100 kΩ   E707   100 kΩ   E707   100 kΩ   E708   390 kΩ   E708   390 kΩ   E708   250 kΩ (M, N) × 2   Front-Rear Balance Control   1060050, 250 kΩ (M, N) × 2   Left-Right Balance Control   1060050, 250 kΩ (M, N) × 2   Left-Right Balance Control   1060050, 250 kΩ (M, N) × 2   Left-Right Balance Control   1060050, 250 kΩ (M, N) × 2   Left-Right Balance Control   10500 μF   1500 μF   15	w		x	Y
R702   150Ω   ±10% SW CeR.   015515   10747	R701	150Ω)		015515
R703 R704 R704 R705 R706 R706 R706 R707 R707 R707 R708 R709 R709 R709 R709 R709 R709 R709 R709		- > ±10%	5W CeR.	015515
R704         470kΩ         010747           R705         100kΩ         010kΩ           R706         100kΩ         ± 5% ¼W CR.           R707         100kΩ         010716           R709         390kΩ         010733           R709         390kΩ         1060010,           VR705~708         250kΩ (M, N) × 2 Front-Rear Balance Control         1060050,           VR709~712         250kΩ (M, N) × 2 Left-Right Balance Control         1060100,           VR713, 714         250kΩ (B) × 2 Rear Level Control         1015040,           VR713, 714         250kΩ (B) × 2 Rear Level Control         1015040,           C701         1500 μF         05598,           C702         1500 μF         05598,           C703         1500 μF         05598,           C704         1500 μF         05598,           C705         1500 μF         05598,           C706         1500 μF         50V EC.         05598,           C707         1000 μF         50V EC.         05598,           C708         0.01 μF + 80 % 50V CC.         06590           C701         D510BN-M         03109           S01         Function Control         11051           S02<				
R705   100kΩ   100kΩ   ± 5% ¼ W CR.   010716   1001716   100kΩ   R707   100kΩ   B708   390kΩ   390kΩ   250kΩ (M, N) × 2   Front-Rear Balance   Control   1060050,				010747
R706         100kΩ         ± 5%         ¼ W CR.         010710           R707         100kΩ         ± 5%         ¼ W CR.         010710           R708         390kΩ         100kΩ (B) × 4         Level Set Control         1060010,           VR705~708         250kΩ (M, N) × 2         Front-Rear Balance Control         1060050,           VR709~712         250kΩ (M, N) × 2         Left-Right Balance Control         1060100,           VR713, 714         250kΩ (B) × 2         Rear Level Control         1060050,           VR713, 714         250kΩ (B) × 2         Rear Level Control         1015040,           VR713, 714         250kΩ (B) × 2         Rear Level Control         1015040,           VR713, 714         250kΩ (B) × 2         Rear Level Control         105040,           C701         1500 μF         0.00 μF         0.5598,           C702         1500 μF         0.0598,         0.5598,           C703         1500 μF         50V EC.         0.5598,           C704         1500 μF         50V EC.         0.5593,           C707         1000 μF         50W EC.         0.5593,           C708         0.01 μF         +80 %         50W EC.         0.6590,           C709				
R707 R708 390kΩ R709 712 250kΩ (M, N) × 2 Front-Rear Balance Control VR709~712 250kΩ (M, N) × 2 Left-Right Balance Control VR713, 714 250kΩ (B) × 2 Rear Level Control R702 1500μF C702 1500μF C703 1500μF C704 1500μF C705 1500μF C705 1500μF C706 1500μF C706 1500μF C707 1000μF S0V EC. 05598 05			1/W CR	
R708 R709 390kΩ R709 390kΩ VR701~704 VR705~708 250kΩ (M, N) × 2 Front-Rear Balance Control VR709~712 250kΩ (M, N) × 2 Left-Right Balance Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR713, 714 250kΩ (B) × 2 Rear Level Control VR704 VF004 VF004 VF004 VF005 VF004 VF0			/4 ** CK.	
R709   390kΩ   010735   010				
VR705~708  VR705~708  VR709~712  250kΩ (M, N) × 2				010739
VR709~712  250kΩ (M, N) × 2 Left-Right Balance Control  VR713, 714  250kΩ (B) × 2 Rear Level Control  1015040,  C701 1500 μF C702 1500 μF C703 1500 μF C704 1500 μF C706 1500 μF C706 1500 μF C707 1000 μF C707 1000 μF C707 1000 μF C709 0.01 μF C709 0.05598 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.0599 0.	VR701~704	100kΩ (B)×4	Level Set Control	1060010,
VR709~712         250kΩ (M, N) × 2 Left-Right Balance Control         1060100, control           VR713, 714         250kΩ (B) × 2 Rear Level Control         1015040, control           C701         1500 μF C702         1500 μF C703         1500 μF C704         1500 μF C705         05598-0598-0	VR705~708	,		1060050,
VR713, 714  C701  C701  1500 μF  C702  1500 μF  C703  1500 μF  C704  1500 μF  C706  1500 μF  C706  1500 μF  C707  1500 μF  C708  1500 μF  C707  1000 μF  C708  0.01 μF  C709  0.01 μF  C709  0.01 μF  C709  0.01 μF  S01  Function Control  Direction Switch  Power/Rear Speakers Switch  T701  Power Transformer  M701~704  Level Meter  F701  Power Fuse 5A (100~127V)  Power Fuse 3A (220~250V)  Power Fuse Holder  F702, 703  Quick-Acting Fuse 5A  Quick-Acting Fuse Holder  CO701, 702  AC Outlet  Voltage Selector Plug  Sub Voltage Selector Plug  J701  DIN Connector  Power Supply Cord  18P Multi-Connector (× 2)  10P Multi-Connector (× 4)  Printed Circuit Board	VR709~712	250k $\Omega$ (M, N) $ imes$ 2 1	Left-Right Balance	1060100,
C702	VR713, 714			1015040,
C703         1500 μF         05598-           C704         1500 μF         05598-           C705         1500 μF         05598-           C706         1500 μF         05598-           C707         1000 μF         50V EC.         05593-           C708         0.01 μF   +80 / -20 / 500V CC.         06590           C709         0.01 μF   +80 / -20 / 500V CC.         06590           C710         0.01 μF   +80 / -20 / 500V CC.         06598-           D701         DS10BN-M         03109-           S01         Function Control         11051-           S02         Direction Switch         11023           S03         Power/Rear Speakers Switch         11015           T701         Power flear Flear Speakers Switch         40012           F702, 703         Quick-Acting Flear Speakers Switch         23000           F702, 703         Quick-Acting Flear Speakers Switch         24300           CO701, 702         AC Outlet         24500           PU001         Voltage Sele	C701	1500 <i>μ</i> F )		055984
1500 μF	C702	1500μF		055984
C704	C703	1500 <i>μ</i> F	100V FC	055984
C706 C707 C708 C707 C708 C708 C709 C709 C710 C710 C710 C710 C710 C710 C710 C710	C704	1 <i>5</i> 00 <i>μ</i> F }	TOOY EC.	055984
C707         1000 μF         50V EC.         055930           C708         0.01 μF   +80 %         500V CC.         06590           C709         0.01 μF   +80 %         500V CC.         06590           C710         0.01 μF   +80 %         1.4kV CC.         06598           D701         DS10BN-M         03109           S01         Function Control         11051           S02         Direction Switch         11023           S03         Power/Rear Speakers Switch         11015           T701         Power Transformer         40012           M701~704         Level Meter         43006           F701         Power Fuse 5A (100~127V)         04312           Power Fuse 3A (220~250V)         04312           Power Fuse Holder         23000           F702, 703         Quick-Acting Fuse 5A         04332           Quick-Acting Fuse Holder         23000           CO701, 702         AC Outlet         24500           PU001         Voltage Selector Socket         24101           Main Voltage Selector Plug         24101           Sub Voltage Selector Plug         3800020           18P Multi-Connector         24300           14P Multi-Connector (× 2)	C705	1500 μF		055984
C708         0.01 μF   +80 % 500 V CC.         06590 06590 06590           C709         0.01 μF   +80 % 500 V CC.         065980 065980           C710         0.01 μF   +80 % 1.4kV CC.         065980 065980           D701         DS10BN-M         031090 065980           S01         Function Control 110510 11023         110510 0530 0530 0530 0530 0530 0530 053	C706	1500 <i>μ</i> F)		055984
C709         0.01 μF         −20%         500V         CC.         06590           C710         0.01 μF         +80 %         1.4kV         CC.         06598           D701         DS10BN-M         03109           S01         Function Control         11051           S02         Direction Switch         11023           S03         Power/Rear Speakers Switch         11015           T701         Power Transformer         40012           M701~704         Level Meter         43006           F701         Power Fuse 5A (100~127V)         04312           Power Fuse 3A (220~250V)         04312           Power Fuse Holder         23000           F702, 703         Quick-Acting Fuse 5A         04332           Quick-Acting Fuse Holder         23000           CO701, 702         AC Outlet         24500           PU001         Voltage Selector Socket         24101           Main Voltage Selector Plug         24101           Sub Voltage Selector Plug         3800020           18P Multi-Connector         24300           14P Multi-Connector (× 2)         24200           10P Multi-Connector (× 4)         24200           Printed Circuit Board <td>C707</td> <td>1000<i>μ</i>F</td> <td>50V EC.</td> <td>055930</td>	C707	1000 <i>μ</i> F	50V EC.	055930
C709	C708	$0.01 \mu F$ $+80 \%$	5001 66	065901
D701         DS10BN-M         031099           S01         Function Control         11051           S02         Direction Switch         11023           S03         Power/Rear Speakers Switch         11015           T701         Power Transformer         40012           M701~704         Level Meter         43006           F701         Power Fuse 5A (100~127V)         04312           Power Fuse 3A (220~250V)         04312           Power Fuse Holder         23000           F702, 703         Quick-Acting Fuse 5A         04332           Quick-Acting Fuse Holder         23000           CO701, 702         AC Outlet         24500           PU001         Voltage Selector Socket         24101           Main Voltage Selector Plug         24101           Sub Voltage Selector Plug         24101           J701         DIN Connector         24300           Power Supply Cord         3800020           18P Multi-Connector (×2)         24200           14P Multi-Connector (×4)         24200           Printed Circuit Board	C709	7 00/0	500V CC.	065901
Soling	C710	$0.01  \mu \text{F}  ^{+80}_{-20}\%  1$	1.4kV CC.	065980
So2	D701	DS10BN-M		031092
S03         Power/Rear Speakers Switch         11015           T701         Power Transformer         40012           M701~704         Level Meter         43006           F701         Power Fuse 5A (100~127V)         04312           Power Fuse 3A (220~250V)         04312           Power Fuse Holder         23000           F702, 703         Quick-Acting Fuse 5A         04332           Quick-Acting Fuse Holder         23000           CO701, 702         AC Outlet         24500           PU001         Voltage Selector Socket         24101           Main Voltage Selector Plug         24101           Sub Voltage Selector Plug         24101           J701         DIN Connector         24300           Power Supply Cord         3800020           18P Multi-Connector         24200           14P Multi-Connector (×2)         24200           10P Multi-Connector (×4)         24200           Printed Circuit Board	Soı	Function Control		110516
T701 Power Transformer 40012  M701~704 Level Meter 43006  F701 Power Fuse 5A (100~127V) 04312     Power Fuse 3A (220~250V) 04312     Power Fuse Holder 23000     Power Fuse Holder 23000     Quick-Acting Fuse 5A 04332     Quick-Acting Fuse Holder 23000  CO701, 702 AC Outlet 24500  PU001 Voltage Selector Socket 24101     Main Voltage Selector Plug 24101     Sub Voltage Selector Plug 24101     J701 DIN Connector 24300     Power Supply Cord 3800020     18P Multi-Connector 24200     14P Multi-Connector (×2) 24200     10P Multi-Connector (×4) 24200     Printed Circuit Board	S02	Direction Switch		110238
M701~704         Level Meter         43006           F701         Power Fuse 5A (100~127V)         04312           Power Fuse 3A (220~250V)         04312           Power Fuse Holder         23000           F702, 703         Quick-Acting Fuse 5A         04332           Quick-Acting Fuse Holder         23000           CO701, 702         AC Outlet         24500           PU001         Voltage Selector Socket         24101           Main Voltage Selector Plug         24101           Sub Voltage Selector Plug         24101           J701         DIN Connector         24300           Power Supply Cord         3800020           18P Multi-Connector         24200           14P Multi-Connector (×2)         24200           10P Multi-Connector (×4)         24200           Printed Circuit Board	S03	Power/Rear Speaker	s Switch	110151
F701	T701	Power Transformer	•	400128
Power Fuse 3A (220~250V) Power Fuse Holder  Quick-Acting Fuse 5A Quick-Acting Fuse Holder  CO701, 702  AC Outlet  PU001  Voltage Selector Socket Main Voltage Selector Plug Sub Voltage Selector Plug  J701  DIN Connector Power Supply Cord 18P Multi-Connector 14P Multi-Connector (×2) 10P Multi-Connector (×4)  Printed Circuit Board	M701~704	Level Meter		430062
Power Fuse Holder   23000   04332   Quick-Acting Fuse   5A   Quick-Acting Fuse   5A   Quick-Acting Fuse Holder   23000   CO701, 702   AC Outlet   24500   PU001   Voltage Selector Socket   Main Voltage Selector Plug   24101   Sub Voltage Selector Plug   24101   Sub Voltage Selector Plug   24101   DIN Connector   24300   18P Multi-Connector   24200   14P Multi-Connector   24200   14P Multi-Connector   24200   Printed Circuit Board   Printed Circuit Board   Connector   C	F701	Power Fuse 5A (100	)∼127V)	043128
Power Fuse Holder		Power Fuse 3A (220	~250V)	04312
Quick-Acting Fuse Holder   23000		•	,	23000
Quick-Acting Fuse Holder   23000	F702, 703	Quick-Acting Fuse	5A	04332
PU001 Voltage Selector Socket 24101		_		23000
Main Voltage Selector Plug   24101	CO701, 702	AC Outlet		24500
Sub Voltage Selector Plug   24101	PU001	Voltage Selector Sc	ocket	24101
J701   DIN Connector   24300		Main Voltage Selec	tor Plug	24101
Power Supply Cord 3800020  18P Multi-Connector 24200  14P Multi-Connector (×2) 24200  10P Multi-Connector (×4) 24200  Printed Circuit Board		Sub Voltage Selecto	or Plug	241019
18P Multi-Connector       24200         14P Multi-Connector (×2)       24200         10P Multi-Connector (×4)       24200         Printed Circuit Board	<b>J</b> 701	DIN Connector		24300
14P Multi-Connector (×2) 24200 10P Multi-Connector (×4) 24200 Printed Circuit Board				3800020
10P Multi-Connector (×4) 24200 Printed Circuit Board				24200
Printed Circuit Board		1		24200
		10P Multi-Connecto	or (×4)	24200
F-2055 (For Switch Block) 25914				25914

#### **Abbreviations**

CR: Carbon Resistor CeR: Cement Resistor SR : Solid Resistor CC: Ceramic Capacitor

EC: Electrolytic Capacitor

MC: Mylar Capacitor

TC: Tantalum Capacitor

