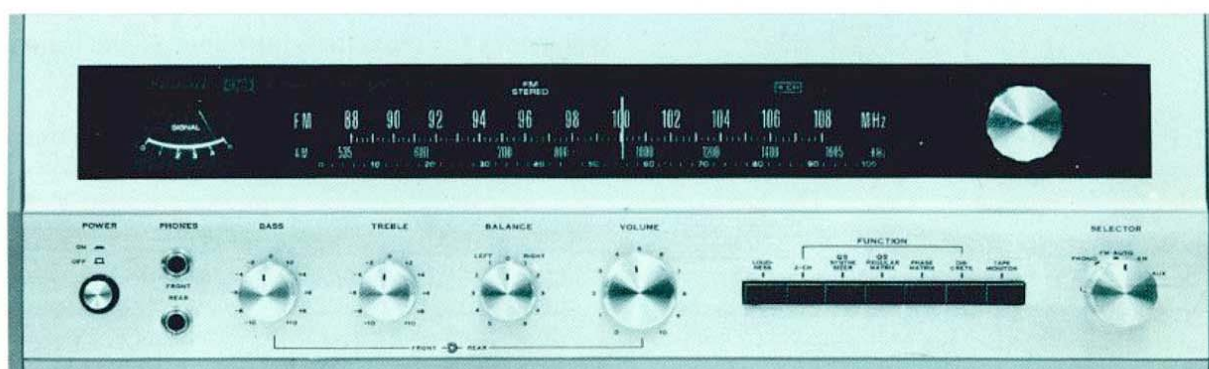


OPERATING INSTRUCTIONS

4-CHANNEL RECEIVER

SANSUI QRX-2000



SANSUI ELECTRIC CO., LTD.

We are grateful for your choice of the Sansui QRX-2000 4-channel receiver. Before you begin to operate it, we suggest that you read this booklet of operating instructions once carefully. You will then be able to connect and operate it correctly, and enjoy its superb performance for years.

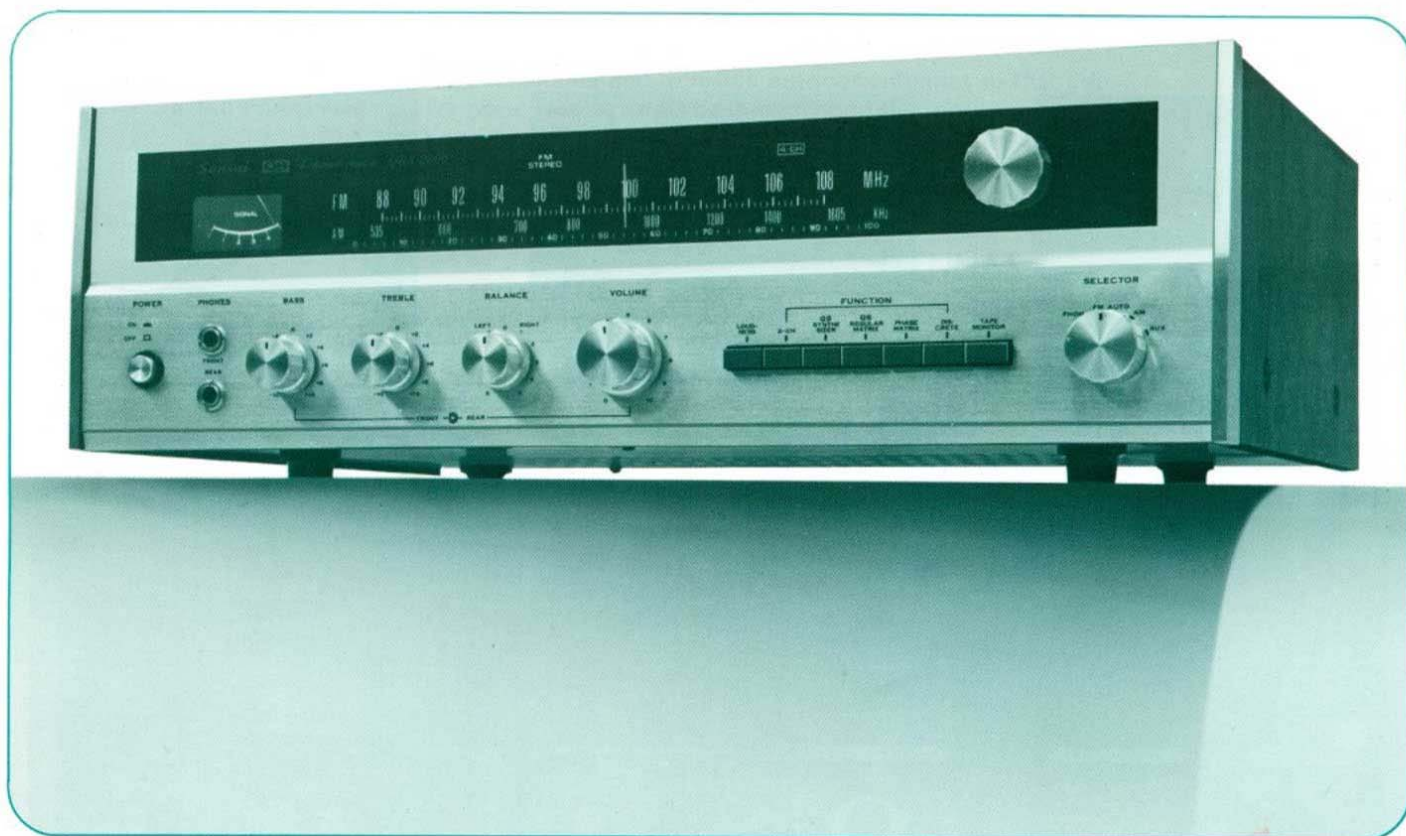
●FUNCTIONAL FEATURES

- ◆Includes the exclusive QS Synthesizer circuit to convert conventional 2-channel program sources into 4-channel stereo sound.
- ◆The built-in QS regular matrix system 4-channel decoder reproduces a perfect 4-channel sound field from encoded 4-channel program sources.
- ◆The built-in Phase Matrix circuit, featuring Sansui's own front-back logic, decodes records and tapes encoded with the SQ* system to properly reproduce them in 4-channel stereo.
- ◆Four-channel front input can be used in the same manner as 2-channel inputs, for either ordinary 2-channel reproduction or 4-channel reproduction through the built-in QS Synthesizer/Decoder circuit.
- ◆Provides for separate adjustment of the front and rear tone quality.

*SQ is a trademark of Columbia Broadcasting System, Inc.

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IMPORTANT PRECAUTIONS

To keep the set in top condition at all times, please observe these precautions:

1. Install the set where there is a good circulation of air.
2. Do not obstruct the ventilation openings of the cabinet.
3. Avoid extremely hot or dusty places.
4. If the set is placed on a shelf, be sure that the shelf board is thick and strong enough to hold it.

HEAT RADIATED BY THE SET

As transistors are sensitive to heat, the enclosure of this set is designed to provide good dissipation of the heat radiated inside. Thus, if you place something on top of the ventilation openings of the enclosure, place the set inside a closed box or operate it for abnormally long periods, it is possible that malfunctions may occur. Always try to provide sufficient circulation of air around the set. But removing the enclosure or the bottom plate to allow better ventilation is not only dangerous but undesirable from the standpoint of electrical performance.

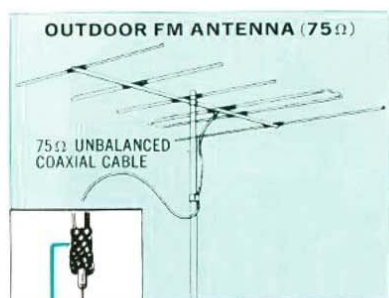
AC OUTLETS

The two AC outlets provided on the rear panel of the set have a combined capacity of 250 watts. Be careful that the combined power consumption of the instruments you may connect to them does not exceed this figure. The power consumption of each instrument is usually indicated on the unit.

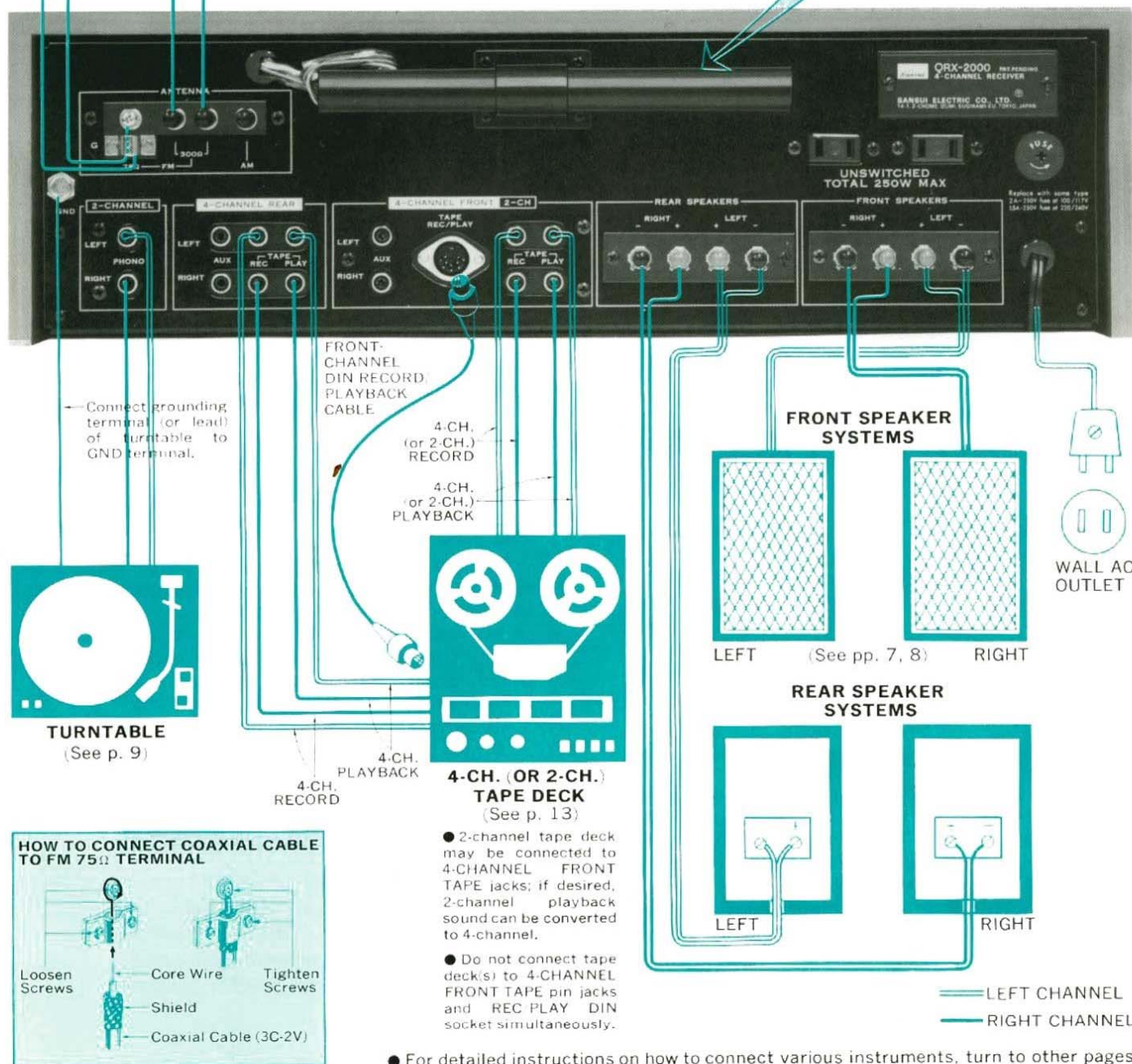
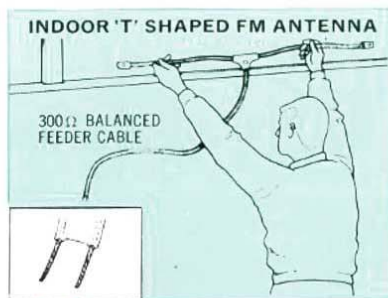
The voltage supplied at these AC outlets is the same as the power supply voltage used for the set.



REAR-PANEL CONNECTIONS



INSTALLING ANTENNAS
(See pp. 4, 10)

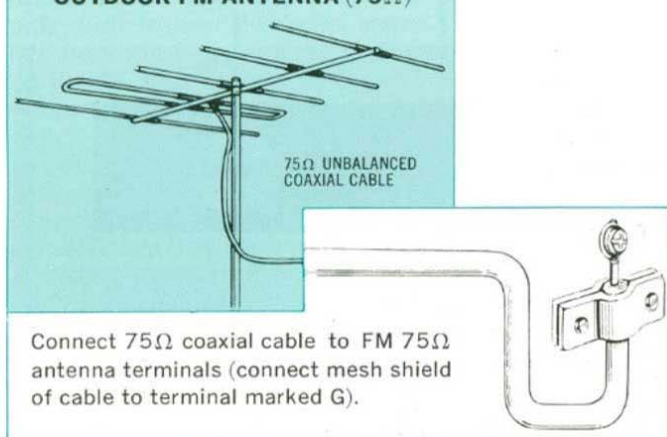


● For detailed instructions on how to connect various instruments, turn to other pages.

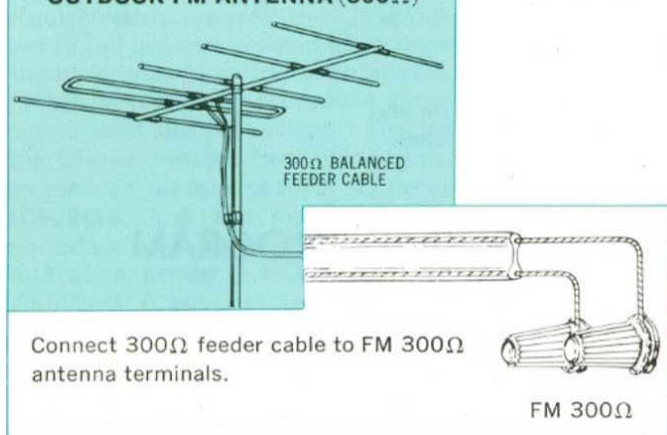
HINTS FOR BETTER RECEPTION

It is always recommended to install outdoor antennas so that you may receive noise-free FM and AM broadcasts with optimum tonal quality. You will find an outdoor antenna—especially one for FM—particularly effective if you are remote from broadcasting transmitters or surrounded by high mountains, buildings or other obstacles.

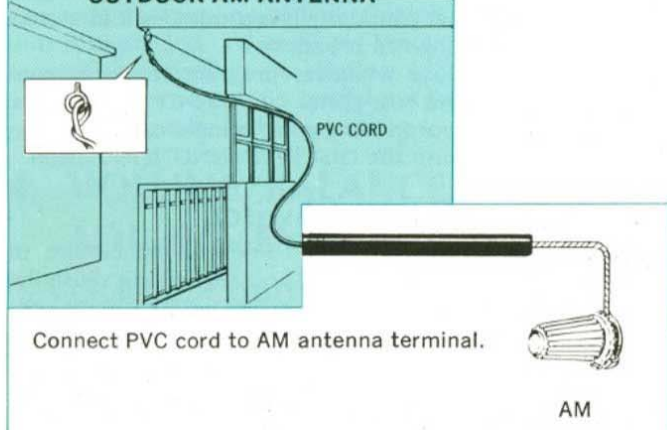
OUTDOOR FM ANTENNA (75 Ω)



OUTDOOR FM ANTENNA (300 Ω)



OUTDOOR AM ANTENNA



FM ANTENNAS

Outdoor FM antennas are commercially available with three, five or seven 'elements'. The more elements an antenna has, the greater distance it is generally intended to cover. You may connect an antenna to your set either by means of coaxial cable (75-ohm unbalanced) or feeder cable (300-ohm balanced). The former is more expensive but more effectively keeps out external noise—especially the ignition noise of nearby automobiles—and transmit the signals more efficiently.

It is advised that you decide on the type of antenna and cable to use after consultation with your Sansui dealer. Depending on the type of antenna, you may require an impedance matching transformer between the antenna and the connecting cable, and this too should be found out from the dealer.

How to connect: Connect the antenna to your set as illustrated in the diagram.

If you are using coaxial cable, connect it to the FM 75 Ω terminals; if you are using feeder cable, connect it to the FM 300 Ω terminals.

<Note for Installing>

- ◆ To avoid ignition noise produced by automobiles and motor-cycles, install the antenna as far away from the street as possible.
- ◆ As an antenna is directional, adjust its height and direction while actually receiving your favorite FM station.
- ◆ Be careful so that the antenna or the lead-in cable does not touch the electrical power line around your house.
- ◆ It is always advisable to keep the lead-in cable as short as possible.

AM ANTENNA

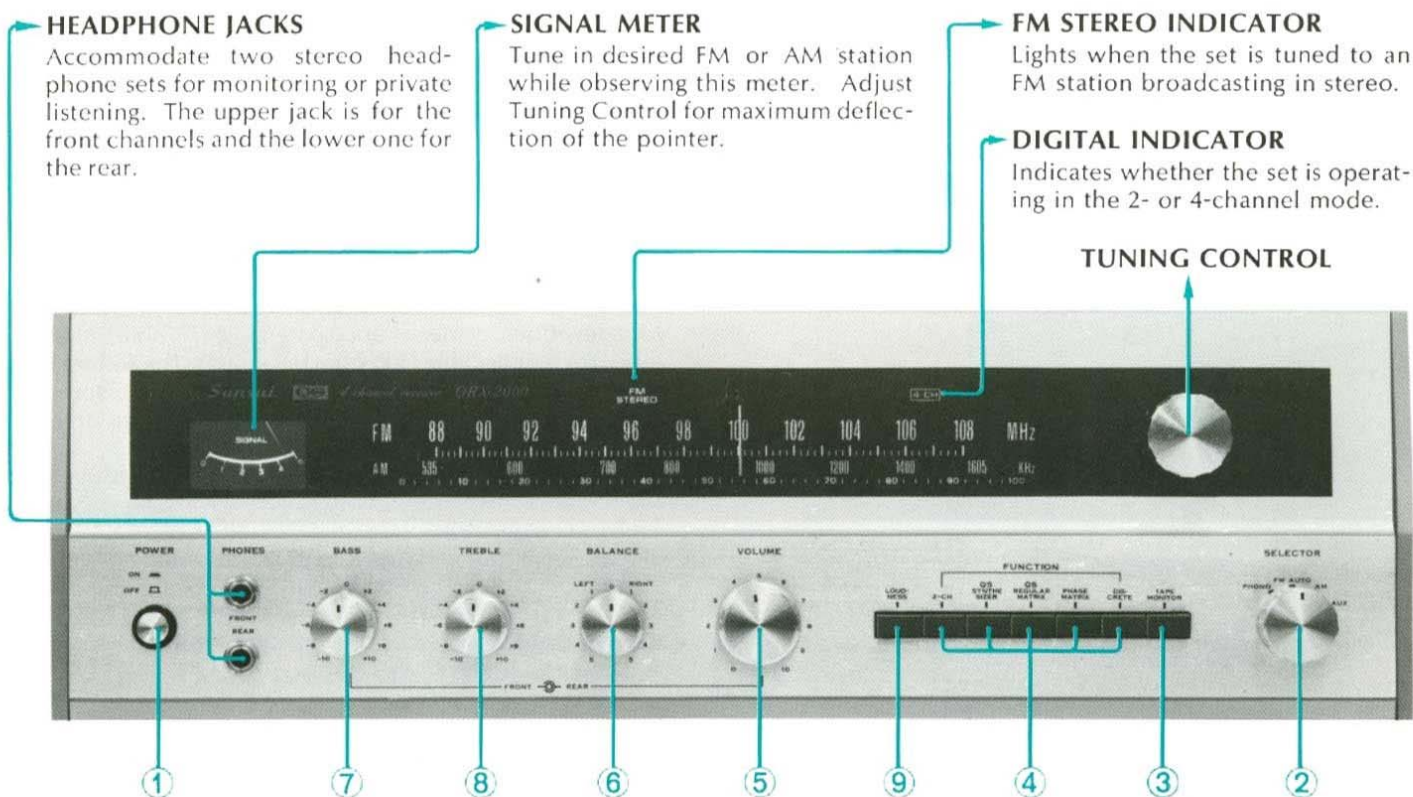
When you cannot obtain the desired results by using the AM ferrite bar antenna only, connect a PVC cord to the AM antenna terminal, extending it outdoors if possible.

GROUNDING

If you connect a grounding lead to the grounding terminal marked GND on the rear panel, the noise contained in radio broadcasts may decrease. It may also keep external noises from creeping into the set.

The grounding lead may either be standard PVC cord or enameled wire. Attach a small copper plate or carbon rod to its end, and bury it deep underground. Or if there is a special grounding wire or terminal in your room, or if your water piping is of iron, the grounding lead may be connected to them. NEVER connect it to your gas piping.

BASIC OPERATING PROCEDURES



● Always turn the VOLUME control counterclockwise and reduce the volume before you operate various switches.

1. POWER

① POWER Switch

Push the POWER switch once to turn the set on, once more to turn it off.

2. SELECTING PROGRAM SOURCES

② SELECTOR Switch

Adjust to the program source you wish to hear.

PHONO: For playing records.

FM AUTO: For receiving FM stereo or mono broadcasts. When an FM stereo broadcast is received, the legend FM STEREO appears in the dial window, indicating that your tuner is reproducing it in stereo.

AM: For receiving AM broadcasts.

AUX: To reproduce whatever program source is connected to the rear-panel 4-CHANNEL AUX inputs. Whenever reproducing a 4-channel discrete source, be sure to push the DISCRETE FUNCTION button.

③ TAPE MONITOR Switch

Use to reproduce a recorded 2- or 4-channel tape or to monitor a recording that you are making. Push the switch that governs the record/playback circuit connecting the tape deck in use at the moment. At all other times, push it once more to restore it to the off position (protruding).

3. 2-CHANNEL VS. 4-CHANNEL

④FUNCTION Switch

Use to select the sound reproduction mode most appropriate for your 2-channel or 4-channel program source.

Operate the FUNCTION switch to obtain the desired 4-channel function mode—QS SYNTHESIZER, QS REGULAR MATRIX, PHASE MATRIX or DISCRETE. If you only wish to hear 2-channel stereo sound from your two front speakers, push the 2-CH button.

2-CH: To hear 2-channel stereo program sources in stereo, utilizing your two front speakers only. Use this switch also to hear AM and FM mono broadcasts, mono records and tapes. The built-in QS Synthesizer converts 2-channel signals to 4-channel, but does not work with mono signals.

QS SYNTHESIZER: To convert (synthesize) conventional 2-channel stereo program sources to 4-channel stereo sound. The built-in QS Synthesizer operates to detect and separate certain plus/minus phase information contained in most conventional stereo recordings, and allows the set to reproduce them from your four speakers.

QS REGULAR MATRIX: To decode and reproduce 4-channel program sources (records, tapes and certain FM broadcasts) encoded into a 2-channel form with the QS regular matrix system. The QS vario-matrix circuit is put to full use and accomplishes impressive 4-channel sound reproduction from such sources.

PHASE MATRIX: To reproduce program sources encoded with the SQ system. The front-back logic of the QS vario-matrix circuit works in coordination with an extra circuit for 4-channel SQ decoding.

DISCRETE: Push this switch whenever you wish to reproduce discrete 4-channel sound from program sources connected to 4-CHANNEL AUX or TAPE inputs on the rear panel.

In such a case, it is also necessary to adjust the SELECTOR switch or the TAPE MONITOR switch to select the desired program source.

● The FUNCTION switch (five pushbutton switches located at the lower right hand side of the set) are interconnected. Therefore, a FUNCTION switch which has been depressed will remain in its operating condition until another one of the remaining four pushbuttons is depressed. When a new function is selected the previously depressed pushbutton will reset to its off position (protruding). Be careful not to depress two or more pushbuttons at the same time.

4. VOLUME/BALANCE ADJUSTMENTS

⑤VOLUME Control

⑥BALANCE Control

The volume and front and rear balance are adjusted by means of the VOLUME control. This control is fitted with a friction-coupled movable ring around the

inner core. The inner VOLUME control is for adjusting the volume of the front speakers and the outer ring for rear speakers. The overall volume is adjusted by turning the outer and inner controls together.

Balance of the front and rear sounds is very easy. Simply adjust the inner control knob for the VOLUME control (front volume) to the appropriate position while holding the outer ring in place, thus keeping the volume of the rear speakers at a fixed level. Balance between the left and right channels (FRONT) is adjusted by turning the inner core of the BALANCE control in the appropriate direction; left and right (REAR) balance is adjusted by the outer BALANCE ring. Overall left/right balance (FRONT and REAR together) is achieved by turning both sections of the BALANCE control at the same time. The standard practice in listening to 4-channel stereo sound is to sit at or near the center of the approximate square formed by your four speakers, placed in the so-called 2-2 arrangement. (See PLACEMENT OF SPEAKER SYSTEMS section, page 7).

Accordingly, it is the usual procedure to set the BALANCE control at its center position and both the inner and outer sections of the VOLUME control at the same position. If necessary, however, they can be adjusted to suit the particular arrangement of your speakers, your listening position, the nature of the program source being played, or your personal preference.

5. CONTROLLING SOUND TO SUIT YOUR TASTE

⑩BASS Tone Control

⑪TREBLE Tone Control

The strength of low-frequency sound, such as is produced by low-register musical instruments, is adjusted with the BASS tone control. Turning it clockwise from the center position increases the strength, while turning it counterclockwise reduces the strength. The inner-part regulates the front channels, and the outer ring part the rear channels.

Similarly, the strength of high-frequency sounds is adjusted with the TREBLE tone control.

If you wish to emphasize mid-frequency range sounds, such as human voice, reduce the strengths of the lows and highs by turning the BASS and TREBLE tone controls appropriately counterclockwise. If this makes you feel that the volume is reduced, then increase the overall volume with the VOLUME control.

⑫LOUDNESS Switch

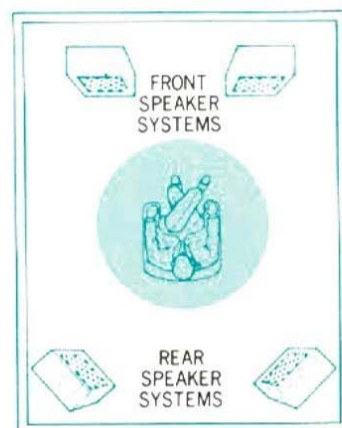
Pushing this switch when listening at a low volume level accents the lows and highs properly to render the reproduced sound more realistic. This compensates for the fact that the human ear becomes insensitive to the lows and highs as the sound volume is reduced.

PLACEMENT OF SPEAKER SYSTEMS

The placement of your four speaker systems is a very important consideration to enjoy 4-channel sound at its very best. Three basic placement systems are described below. Experiment with them and find the one that best suits the type of music you most often select or the layout of your room.

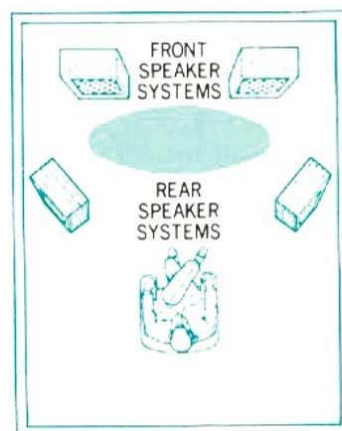
2-2 System

This is the standard 4-corner placement system, and is effective for hearing quiet background music, popular music, rock music and others. It is recommended for reproducing 4-channel program sources.



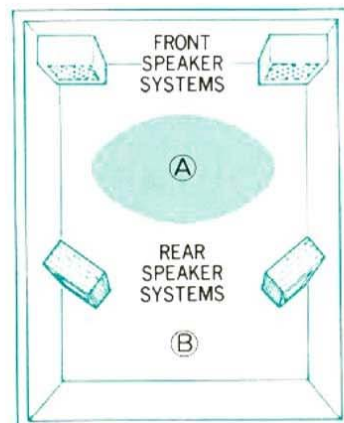
Front 2-2 System

This system moves the rear two speakers to the front, and sides, and is good for objective appreciation of music.



2-2/ Front 2-2 Compatible System

If your room is deep, you can place the rear speaker systems as illustrated and enjoy either system. To create the 2-2 system, situate yourself near point (A); to enjoy the front 2-2 system, sit near point (B).



CONNECTION OF SPEAKER SYSTEMS

CONNECTING SPEAKER SYSTEMS

This set connects a speaker system with an impedance of 4 to 16 ohms in each of the four channels. Connect the front two speaker systems to the FRONT SPEAKERS terminals on the rear panel, and the rear two speaker systems to the REAR SPEAKERS terminals. Be sure not to confuse the left and right channels, the plus and minus polarities at the terminals of the set or of the systems.

If you wish to connect two pairs of speaker systems in parallel, to either the speaker terminals, it is absolutely necessary that each speaker system has an impedance of 8 ohms or more. The impedance of a speaker system is usually indicated on its back cover, so be sure to check it out before connecting. If a speaker system with a lower impedance is ever connected, it could eventually cause the set to break down. This is because connecting two speaker systems in parallel, one or both of which has a impedance lower than 8 ohms, is equivalent to connecting a speaker system having an impedance lower than 4 ohms to the set.

CONNECTING HEADPHONES

Stereo headphones are connected to the PHONES jack(s) on the front panel. When listening to your favorite 2-channel stereo program source with headphones, push the 2-CH button of the FUNCTION switch and you will hear the sounds normally heard from the front speaker systems. Insert the plug of your headphones into the FRONT jacks.

When desiring to listen to the rear sounds for monitoring during 4-channel stereo recording, connect the headphones plug to the REAR jack. The sounds emanating from the front speaker systems on this occasion should be adjusted to the appropriate level by the VOLUME control.

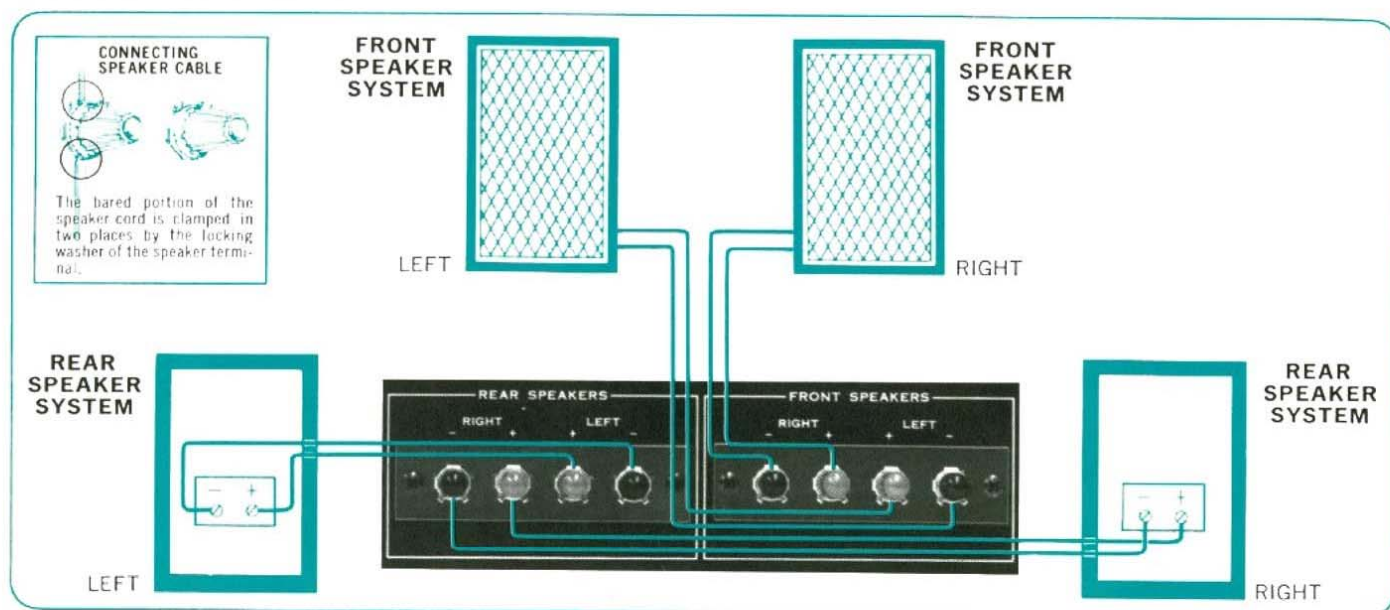
IF SPEAKER SYSTEMS ARE OUT OF PHASE.....

If you were careless when connecting the speaker systems and the plus and minus polarities are not in the same order for the left speaker system and the right speaker system, they would be reverse-phased. This will cause a 'drop-out' of sound at the extreme ends and the middle of the line between the two speaker systems, creating a sense of discontinuation and damaging the sense of stereo perspective. Also, the bass sound would lose much of its powerfulness and become rather unnatural.

While wrong connection of plus and minus polarities is most commonly seen at the speaker terminals, it could also happen in the phono cartridge or at the time of connecting various program source components.

Once that condition is corrected and the polarities are in order, you can detect it by reproducing a mono source (such as AM broadcast). Sound will seem to come from a point halfway between the two speakers.

CONNECTIONS



PLAYING RECORDS



1. Set the SELECTOR switch to PHONO.
2. Operate your turntable to play the record.
3. Push the appropriate FUNCTION switch to hear the record in either 2-channel or 4-channel stereo. In other words:
 - * If you want to hear in 2-channel stereo using only the front speaker systems, push the 2-CH button. Use the same button for any monophonic record also.
 - * If you want to convert your stereo record to 4-channel, push the QS SYNTHESIZER button.
 - * To listen to a 4-channel record produced with the regular matrix system, push the QS REGULAR MATRIX button.
 - * To hear a 4-channel record produced with the SQ matrix system, push the PHASE MATRIX button.
 - * If you have a discrete 4-channel disc demodulator coupled to the 4-CHANNEL AUX inputs, and want to hear a discrete 4-channel record, push the DISCRETE button. The SELECTOR switch must be turned to AUX at the same time.

HOW TO USE AUX INPUTS

The term AUX is an abbreviation of the word 'auxiliary.' If your turntable is equipped with a crystal or ceramic cartridge, connect it to these inputs.

The AUX inputs have the same electrical function as the TAPE PLAY inputs, and so may be used, if necessary, to connect a tape deck or tape player. Use them if the TAPE PLAY inputs of the set are already occupied for some other purpose. Tape playback—but not recording—will become possible.

Of course, a tuner or an amplifier-equipped adaptor may also be connected here. Since the AUX inputs have an input sensitivity of 170mV, almost any audio instrument having an output voltage of 170mV or so can be connected. To see if any particular instrument can be connected to the AUX inputs or not, consult its operating instructions (especially, its specifications) or check with our dealer.

Of the four inputs marked 4-CHANNEL AUX, the FRONT ones may be used in the same manner as the 2-channel inputs. Furthermore, any 2-channel signals fed into these FRONT inputs may be converted to 4-channel by the QS Synthesizer built into this set.

CONNECTIONS

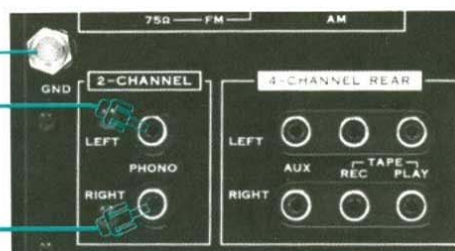


TURNTABLE
(with Magnetic Cartridge)

RIGHT LEFT

GROUNDING WIRE

Be sure to connect grounding terminal (or lead) of turntable or other instrument to GND terminal of set. Hum noise may be suppressed.



RECEIVING RADIO BROADCASTS



1. Set the SELECTOR switch to FM AUTO or AM (to FM AUTO to receive an FM broadcast, to AM to receive an AM broadcast). If the received broadcast is stereophonic, the legend FM STEREO will appear in the dial window.
2. Tune in the desired station by adjusting the Tuning Control. It is correctly pinpointed when the Signal Meter pointer has deflected as far to the right as possible.
3. Push the appropriate FUNCTION switch to hear the broadcast in 2-channel or 4-channel stereo. In other words:

If you are receiving an AM or FM mono broadcast (with the FM STEREO indicator remaining unlit), push the 2-CH button.

To hear a regular FM stereo broadcast in 2-channel stereo, push the 2-CH button. To convert such a stereo broadcast to 4-channel, push the QS SYNTHESIZER button.

To receive a 4-channel FM broadcast of the regular matrix system, push the QS REGULAR MATRIX button.

To receive a similar broadcast of the SQ matrix system, push the PHASE MATRIX button.

INSTALLING ANTENNAS

AM ANTENNA: Once the set is in place, simply slide out the ferrite bar antenna built into the rear panel.

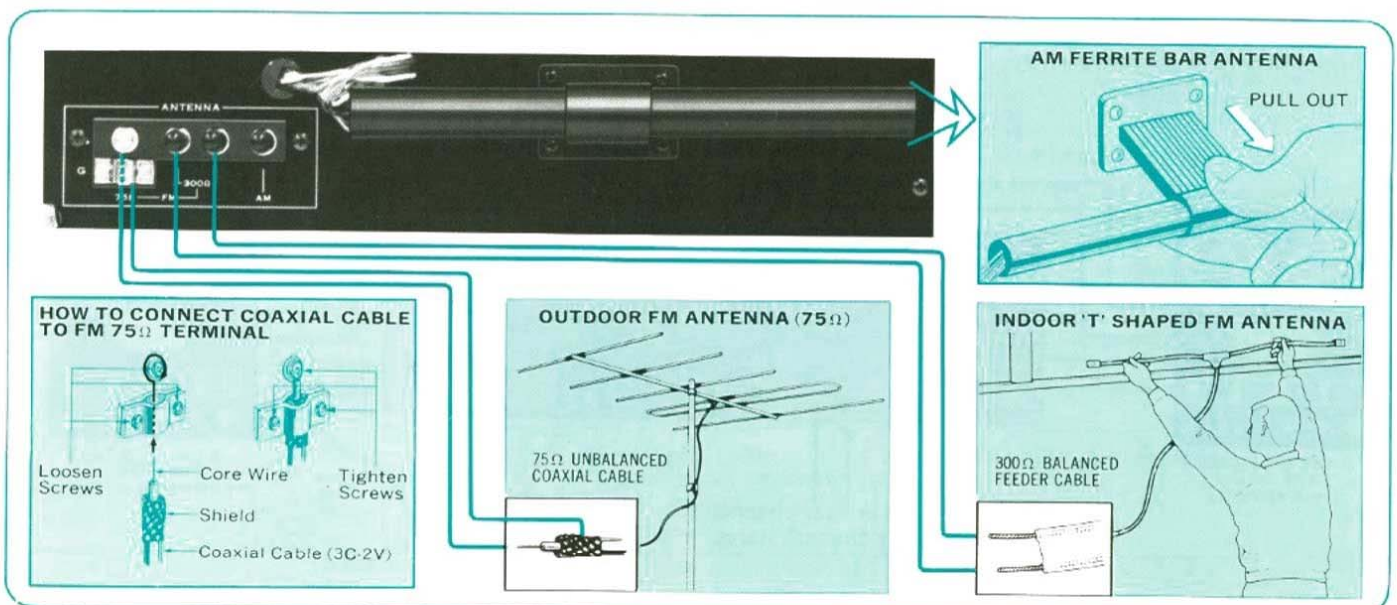
Since AC power supply cords and speaker cables are often the causes of noise, be sure that they are not allowed to come close to the antenna.

FM ANTENNA: When ever possible, a special outdoor FM antenna should be installed for stable, noise-free reception of your favorite FM stations.

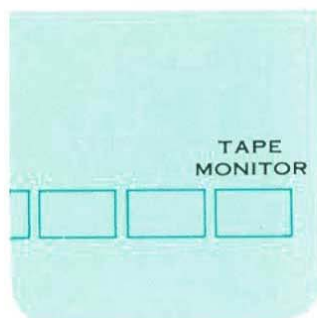
If the antenna input signals are very weak, then really good hi-fi reception cannot be expected, even with sets of the highest performance efficiency. To get the very best performance out of your set it is necessary to use an FM antenna similar to those used for television pick up. Install the outdoor FM antenna referring to "HINTS FOR BETTER RECEPTION."

When using the "T" shaped feeder FM antenna, supplied with this set, as a temporary measure, connect it to the FM 300 Ω ANTENNA terminals on the rear panel of the set. Spread the antenna out in the shape of a "T". Then while listening to your favorite FM station change the direction and location until the position where optimum, noise-free reception is found. Then secure the antenna (avoid contact with metal fasteners).

CONNECTIONS



TAPE RECORDING & PLAYBACK



Playback Procedure: 1. Push the TAPE MONITOR switch, depending on which tape playback circuit is connecting the tape deck in use.

2. Operate the appropriate controls on your tape deck to play the tape.

3. If you want to, you may transform 2-channel signals from a stereo tape sound into 4-channel by pushing the QS SYNTHESIZER FUNCTION button. QS- or SQ-encoded 4-channel material can also be carried on a 2-channel tape and decoded into 4-channel by pushing the appropriate QS REGULAR MATRIX or PHASE MATRIX button. If the tape is already recorded in discrete 4-channel, be sure to push the DISCRETE button.

Recording Procedure: 1. Prepare the program source you wish to record and keep it ready to go. The SELECTOR switch must be adjusted.

2. Operate the tape deck and start recording. Adjust the record levels with controls provided on the tape deck. The FUNCTION switch, the volume and tone controls on the set do not affect the sound to be recorded. If you wish to convert 2-channel sound to 4-channel, it should be done at the time of playback.

3. To monitor the sound being recorded, follow the same procedure as for playback after making certain

that the tape deck itself is adjusted to permit monitoring. If the tape deck only has a combined record/playback head, keep the TAPE MONITOR switch at the off position (protruding) and hear the sound before it is recorded.

CONNECTIONS FOR A 2-CHANNEL STEREO TAPE DECK

The 4-CHANNEL FRONT (TAPE or AUX) terminals can be used in the same manner as the 2-CHANNEL TAPE terminals for input. When using a 2-channel tape deck it should be connected to the FRONT terminals. Tapes recorded in 2-channel stereo, or tapes recorded by the QS or SQ matrix-encoding method, can be reproduced by this set with a superb 4-channel stereo sound field. Also by using the front channels only, even with a 4-channel tape deck connected to the 4-CHANNEL TAPE terminals, 2-channel programs can be reproduced without having to change connections.

Depress the appropriate FUNCTION switch according to the function mode you require (2-CH, QS SYNTHESIZER, QS REGULAR MATRIX, PHASE MATRIX or DISCRETE).

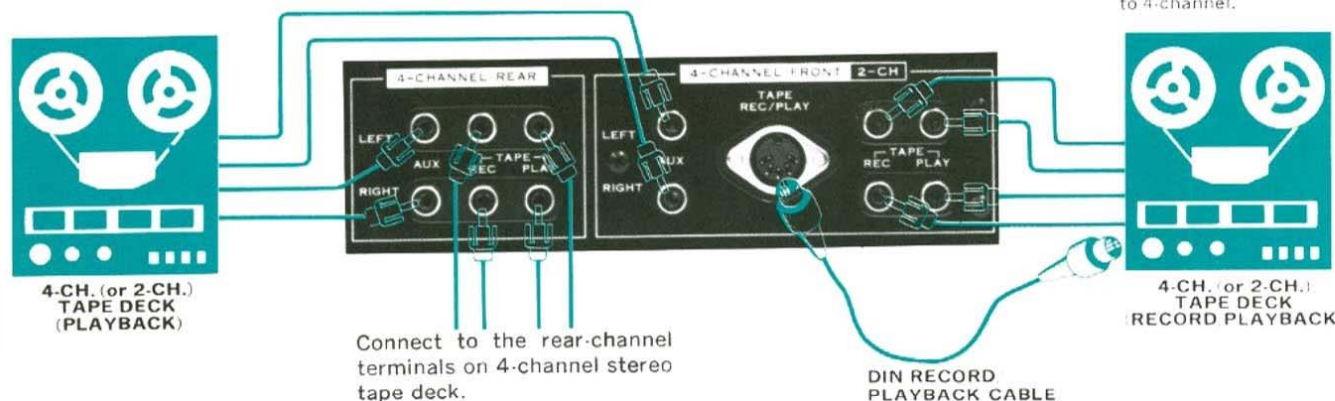
CONNECTIONS

● Tape deck or tape player may be connected to AUX inputs for playback function only.

* If using pin plug cables, connect input terminals of tape deck to TAPE REC jacks of set, and its output terminals to PLAY jacks of same circuit.

● Do not connect tape deck(s) to 4-CHANNEL FRONT TAPE pin jacks and REC PLAY DIN socket simultaneously.

● 2-channel tape deck may be connected to 4-CHANNEL FRONT TAPE jacks; if desired, 2-channel playback sound can be converted to 4-channel.



CONDITIONS MISTAKEN FOR BREAKDOWNS

PROGRAM SOURCE	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
Tuner.	* Noise during AM reception.	* Interference by adjacent stations (called beat interference). * TV set is being used simultaneously.	* Peculiar to AM waves, and unavoidable to some extent. * Move TV set away from the set.
	* Noise heard at certain hours, in certain areas or over part of dial during AM reception.	* Interference from nearby electrical appliances.	* Attach noise limiter to appliance producing noise. * In some cases, can be eliminated by reversing power cord plug-AC outlet connections.
	* Pop noise during FM reception.	* Ignition noise from nearby automobile, motorcycle, etc. Note: In many cases, high-frequency noise during radio reception cannot be entirely eliminated. Try turning set's TREBLE control counter-clockwise.	* Adjust antenna location and height for maximum sensitivity. * Keep antenna away from streets.
Turntable.	* Hum noise.	* Unshielded cables used to connect turntable. * Minus (ground) wire of connecting cable is not connected completely. * Turntable motor or tonearm is not grounded.	* Use regular shielded cables. * Examine connecting cables, especially their plugs. * Connect grounding lead of turntable to set's GND terminal.
	* Loud oscillating noise.	* Turntable is placed on top of or too close to speaker systems.	* Place thick cushion between turntable and speaker systems. * Change location of turntable and speaker system.
	* Sound is shaky.	* Dust on record or pickup stylus. * Worn pickup stylus. * Improper stylus pressure.	* Clean record and pickup stylus. * Replace pickup stylus. * Adjust stylus pressure.
Tape Deck.	* Hiss noise.	* Tape heads are magnetized.	* Demagnetize heads. * Connect noise reduction adaptor.
	* Sound is not clear.	* Dust on magnetic heads. * Tape it not pressed tightly against heads.	* Clean heads. * Align tape transport mechanism.
General.	* When left and right channel sound volumes are balanced with set's BALANCE control, sound does not come from center position.	* Left and right channel signal strengths vary with program source. * Left and right speaker systems have different efficiencies.	* Optimum stereo effect is obtained by adjusting BALANCE control so that sound comes from midway point between two speaker systems.
	* Musical instruments or singer not located clearly.	* Left-right, plus-minus connections of speaker systems input cables are wrong.	* Examine connections.

SIMPLE MAINTENANCE HINTS

BEFORE SENDING THE SET OUT FOR SERVICING

Some of the symptoms and conditions which seem to indicate a breakdown of the set could instead be caused by mis-operation or by external components. These can be spotted with a simple examination and restored to normal. If you suspect a breakdown, please confirm the connections and your operating procedure once more.

Here are some useful hints:

First, if you hear absolutely no sound from the set, inspect your turntable, tape deck and other program source components, then examine this set and your speakers in that order, paying attention to both their connections and operation. Be sure to reduce the volume control beforehand.

Second, if the sound fails to come out only when you play records or try to reproduce a recorded tape, then chances are that only the particular program source component is wrongly connected.

If a loud hum noise of constant intensity is heard, it may be suppressed by connecting the grounding lead or terminal of your turntable or tape deck to the set's GND terminal, using a PVC cord. Or, more simply, reversing the connection between the set's power cord plug and the AC outlet may stop it.

CHECK LIST OF OPERATION

1. Is the power switch turned on?
2. Is the tape monitor switch pushed in even though you do not wish to reproduce a recorded tape?
3. Is the SELECTOR switch turned to the correct position?
4. Is the volume control turned to an appropriate level?

CHECK LIST OF CONNECTIONS

1. Is the power cord inserted into an AC outlet?
2. Are the connection cords for your turntable and tape deck loose or touching some other object? Are you using unshielded cords?
3. Are the speaker connection cords loose from set or your speakers?

VOLTAGE ADJUSTMENT

Your set is adjusted to operate at the correct power supply voltage of your area prior to shipment from our factory.

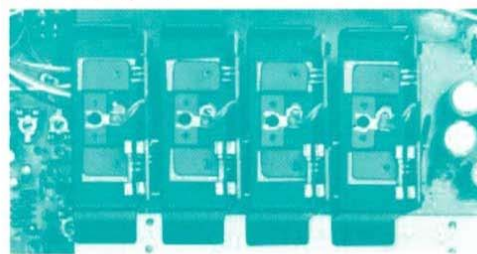
If you move after purchasing it, or send it as a gift to a friend living in an area where the voltage is different, it may be necessary to adjust its Voltage Selector.

To adjust it, disconnect AC power, remove the two screws securing the name plate on the rear panel, then set the arrow mark on the Voltage Selector Plug to the correct voltage indication (100, 117, 220 or 240 volts). It may be necessary to replace the power fuse as well whenever the voltage has changed. For operation at 100 to 117 volts, use a 2-ampere fuse. For operation at 220 to 240 volts use a 1.5-ampere one.

THE QUICK-ACTING FUSES

When a Dial Indicator is glowing, and/or if no sound comes out of one or more of the four speaker systems, examine their connections and operation once. If nothing is wrong with them, it is possible that the quick-acting fuse or fuses protecting the power transistor have blown.

If this should happen, disconnect the power cord from the AC outlet immediately and check the four quick-acting fuses inside the rear panel. To reach them, remove the cover from the set. If you find any of them blown, eliminate the cause of the malfunction and replace fuse(s) with the new 2-ampere quick-acting fuses supplied. Probable causes of the blowout include excessively large input signals, a shortcircuit at the speaker terminals, etc.



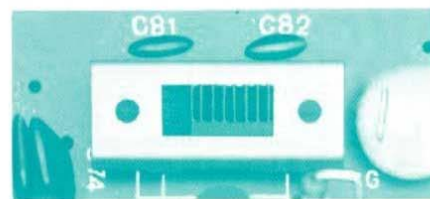
SHOULD THE POWER FUSE BLOW

If no Dial Indicator should glow and the set simply remains dead even after you have turned on its POWER switch, it is possible that its power fuse has blown.

If this happens, disconnect the power cord from the AC outlet at once and examine the power fuse on the rear panel. If you find it blown, replace it with a new glass-tubed fuse of the rated capacity (2-ampere for 100 to 117 volts, 1.5-ampere for 220 to 240 volts). NEVER use a fuse of a different capacity or a piece of wire, even as a stop-gap measure.

THE FM DE-EMPHASIS SWITCH

Use this switch inside the set only if you move to an area where the FM de-emphasis characteristic is different. It is adjusted to the correct de-emphasis characteristic of your area in our factory prior to shipment, so there is normally no need to touch it. The correct de-emphasis is 50 μ sec. for Japan and Europe, and 75 μ sec. for the U.S.A. and Southeast Asia.



After you have made the above examinations and made the required corrections, if the set fails to operate normally there may be something wrong with the set itself. In such a case, please contact the dealer from whom you purchased it or your nearest SANSUI AUTHORIZED SERVICE STATION.

SPECIFICATIONS

AUDIO SECTION

POWER OUTPUT (at rated distortion)	
MUSIC POWER (IHF)	80Watts into 4Ω 60Watts into 8Ω
CONTINUOUS POWER (1kHz, each channel driven)	17 Watts/Channel into 4Ω 12 Watts/Channel into 8Ω
CONTINUOUS POWER (1kHz, 4-channel driven)	7 × 4 Watts into 8Ω
2-CHANNEL OPERATED CONTINUOUS POWER (1kHz, 2-channel driven)	11 × 2 Watts into 8Ω
TOTAL HARMONIC DISTORTION	less than 0.8% at rated output
INTERMODULATION DISTORTION (70Hz:7,000Hz=4:1 SMPTE method)	less than 0.8% at rated output
POWER BANDWIDTH	25 to 30,000Hz
LOAD IMPEDANCE	4 to 16Ω
DAMPING FACTOR	approximately 20 at 8Ω load
INPUT SENSITIVITY AND IMPEDANCE (1kHz, for rated output)	
PHONO	3mV 50kΩ Max. Input Capability .. more than 80mV at 0.5% distortion
AUX	170mV 50kΩ
TAPE PLAY (Pin Jack)	170mV 50kΩ
TAPE REC/PLAY (DIN Socket)	170mV 50kΩ
RECORDING OUTPUT	
TAPE REC (Pin Jack)	170mV
TAPE REC/PLAY (DIN Socket)	30mV
FREQUENCY RESPONSE (at 1Watt output, from AUX)	30 to 30,000Hz ±1.5dB
EQUALIZATION	RIAA Curve (30 to 15,000Hz ±1dB)
CROSSTALK (FUNCTION: 2-CH)	better than 50dB
HUM AND NOISE (IHF)	
PHONO	better than 70dB
AUX	better than 80dB
CONTROLS	
BASS	±10dB at 50Hz
TREBLE	±10dB, at 15,000Hz
LOUDNESS	+8dB at 50Hz, +3dB at 10,000Hz
SYNTHESIZER/DECODER	QS regular matrix system with vario-matrix circuit

TUNER SECTION

<FM>	
TUNING RANGE	88 to 108MHz
SENSITIVITY (IHF)	2.5μV Max. Input Capability .. more than 100dB
TOTAL HARMONIC DISTORTION	
MONO	less than 0.5%
STEREO	less than 0.8%
SIGNAL TO NOISE RATIO (mono)	better than 60dB
CAPTURE RATIO (IHF)	less than 2.5dB
IMAGE REJECTION	better than 50dB
IF REJECTION	better than 60dB
SPURIOUS RESPONSE REJECTION	better than 60dB
STEREO SEPARATION	better than 35dB at 1,000Hz
FREQUENCY RESPONSE	30 to 15,000Hz ± $\frac{1}{3}$ dB
ANTENNA IMPEDANCE	300Ω balanced, 75Ω unbalanced
SELECTIVITY	better than 50dB
<AM>	
TUNING RANGE	535 to 1,605kHz
SENSITIVITY (bar antenna)	50dB/m
IMAGE REJECTION	better than 80dB/m
IF REJECTION	better than 80dB/m
SELECTIVITY	better than 25dB

POWER REQUIREMENTS

VOLTAGE	100, 117, 220, 240V 50/60Hz
CONSUMPTION	80Watts (rated), 160VA(max.)
DIMENSIONS	140mm (5 $\frac{9}{16}$ ") H 460mm (18 $\frac{1}{8}$ ") W 329mm (13") D
WEIGHT	9.0 kg (19.8 lbs.) Net 10.7 kg (23.6 lbs.) Packed

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

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