

# — **RX-4105** — AM/FM STEREO RECEIVER

# SAFETY INSTRUCTIONS

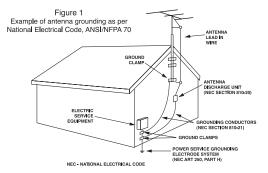
- 1. Read Instructions All the safety and operating instructions should be read before the product is operated.
- 2. Retain instructions The safety and operating instructions should be retained for future reference.
- 3. Heed Warnings All warnings on the product and in the operating instructions should be adhered to.
- 4. Follow Instructions All operating and use instructions should be followed.
- 5. Cleaning Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 6. Attachments Do not use attachments not recommended by the product manufacturer as they may cause hazards
- 7. Water and Moisture Do not use this product near water for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement, or near a swimming pool; and the like
- 8. Accessories Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
- 9. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
- 10. Ventilation Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be



should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

- 11. Power Sources This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
- 12. Grounding or Polarization This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replae your obsolete outlet. Do not defeat the safety purpose of the polarized plug. Alternate Warnings - This product is equipped with a three-wire grounding-type plug, a plug having a third(grounding) pin. This plug will only fit into a grounding-type power outlet. this is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the gronding-type plug.
- 13. Power-Cord Protection Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- 14. Outdoor Antenna Grounding If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit,

connection to grounding electrodes, and requirements for the grounding electrode. See Figure 1.



- 15. Lightning For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges
- 16. Power Lines An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 17. Overloading Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock
- 18. Object and Liquid Entry Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 19. Servicing Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 20. Damage Requiring Service Unplug this product form the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power-supply cord or plug is damaged,
  - If liquid has been spilled, or objects have fallen into the b) product.
  - If the product has been exposed to rain or water, C)
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - e) If the product has been dropped or damaged in any way, and When the product exhibits a distinct change in performance this indicates a need for service.
- 21. Replacement Parts When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 22. Safety Check Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- 23. Wall or Ceiling Mounting The product should be mounted to a wall or ceiling only as recommended by the manufacturer
- 24. Heat The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

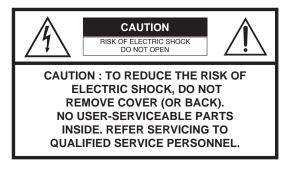
### Introduction

#### UNPACKING AND INSTALLATION

#### Congratulations on Your Purchase!

Your new high fidelity receiver is designed to deliver maximum enjoyment and years of trouble free service. Please take a few moments to read this manual thoroughly. It will explain the features and operation of your unit and help ensure a trouble free installation. Please unpack your unit carefully. We recommend that you save the carton and packing material. They will be helpful if you ever need to move your unit and may be required if you ever need to return it for service. Your unit is designed to be placed in a horizontal position and it is important to allow at least two inches of space behind your unit for adequate ventilation and cabling convenience.

To avoid damage, never place the unit near radiators, in front of heating vents, in direct sunlight, or in excessively humid or dusty locations. Connect your complementary components as illustrated in the following section.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

#### WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

# Caution : Do not block ventilation openings or stack other equipment on the top.

#### FOR U.S.A.

■Note to CATV System Installer: This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

#### **FCC INFORMATION**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### Caution regarding placement (Except for U.S.A. and Canada) To maintain proper ventilation, be sure

to leave a space around the unit (from the largest outer dimensions including projections) equal to, or greater than, shown below.



Left and right panels: 5 cm Rear panel: 10 cm Top panel: 20 cm

#### **READ THIS BEFORE OPERATING YOUR UNIT**

#### FOR U.S.A AND CANADA ..... 120 V

#### FOR YOUR SAFETY

Units shipped to the U.S.A and Canada are designed for operation on 120 V AC only.

Safety precaution with use of a polarized AC plug. However, some products may be supplied with a nonpolarized plug.

**CAUTION :** To prevent electric shock, match wide blade of plug to wide slot, fully insert.

#### FOR CHINA, EUROPE AND AUSTRALIA ...... 220V/230V/240V

#### FOR YOUR SAFETY

Units shipped to China are designed for operation on 220 V AC only.

Units shipped to Australia are designed for operation on 240 V AC only.

To ensure safe operation, the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth.

Improper extension cords are a major cause of fatalities. The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

PAN-EUROPEAN UNIFIED VOLTAGE

All units are suitable for use on supplies 230-240 V AC.

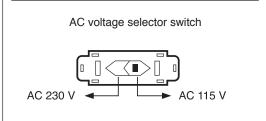
FOR OTHER COUNTRIES ...... 115 V/230 V

#### FOR YOUR SAFETY

Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

#### AC VOLTAGE SELECTION

This unit operates on 115/230 V AC. The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.



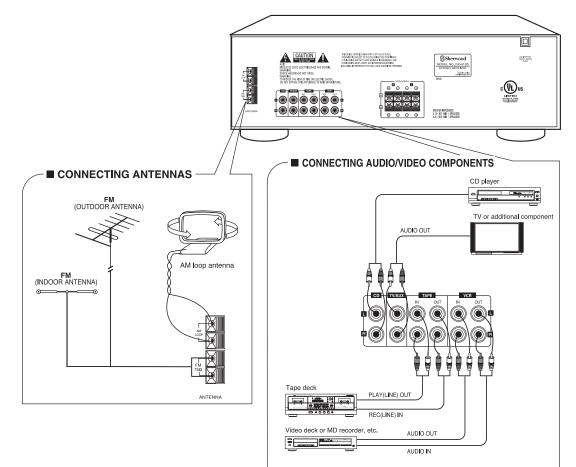
Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

# CONTENTS

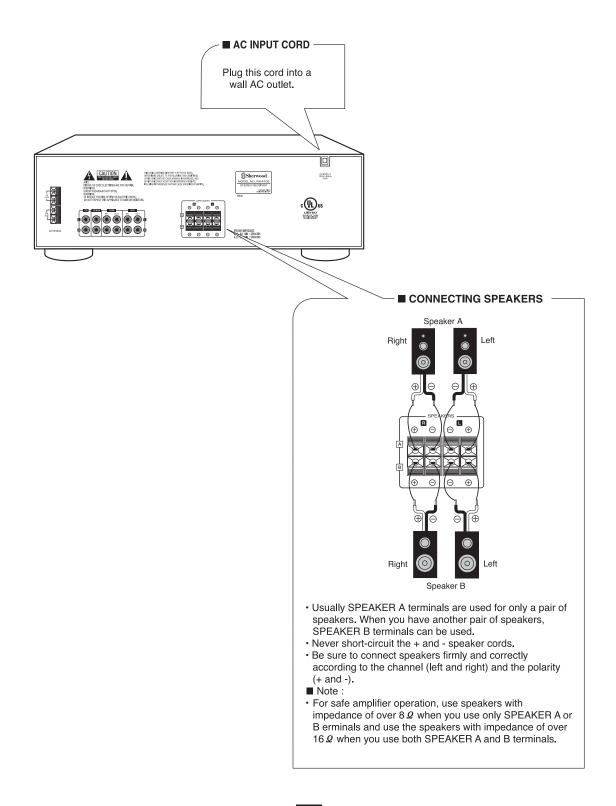
SAFETY INSTRUCTIONS	. 1
Introduction  • UNPACKING AND INSTALLATION • READ THIS BEFORE OPERATING YOUR UNIT	
System Connections	. 5
Front Panel & Remote Controls • REMOTE CONTROL OPERATION RANGE • LOADING BATTERIES	. 9
Operations  • LISTENING TO A PROGRAM SOURCE	12 14
Troubleshooting Guide	15
Specifications	16

# System Connections

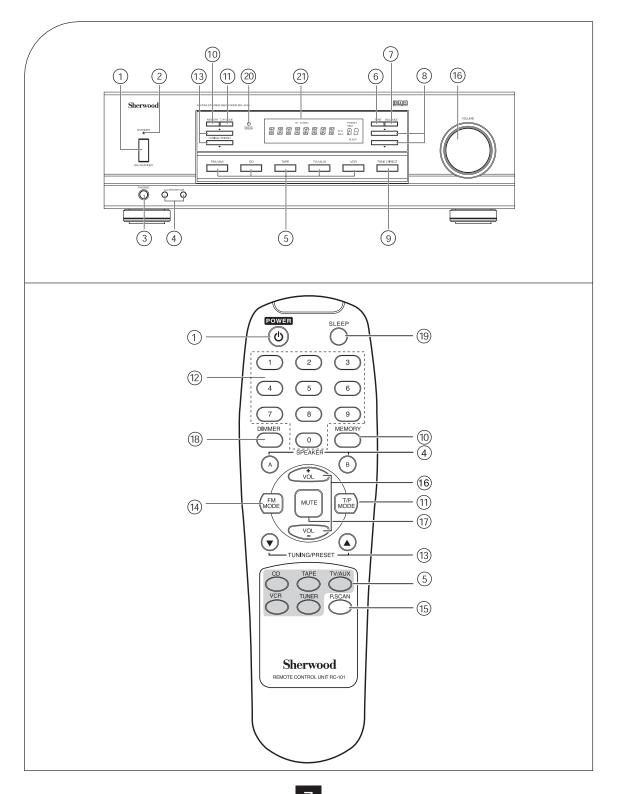
- · Do not plug the AC input cord into the wall AC outlet until all connections are completed.
- Be sure to connect the white RCA pin cords to the L(left) and the red RCA pin cords to the R(right) jacks when making audio connections.
- · Change the position of the FM indoor antenna until you get the best reception of your favorite FM stations.
- A 75  $\Omega$  outdoor FM antenna may be used to further improve the reception.
- Disconnect the indoor antenna before replacing it with the outdoor one.
- Place the AM loop antenna as far as possible from the receiver, TV set, speaker cords and the AC input cord and set it to a direction for the best reception.
- If the reception is poor with the AM loop antenna, an AM outdoor antenna can be used in place of the AM loop antenna.
- · Make connections firmly and correctly. If not, it can cause loss of sound, noise or damage to the receiver.
- If the electricity fails or the AC input cord is left unplugged for more than several days, the memorized contents will be cleared. Should this happen, memorize them again.



- The VCR jacks may also be connected to an additional component such as MD recorder, tape deck, etc.
- The TV/AUX jacks may also be connected to an additional component such as a TV, DVD player, etc.



Front Panel & Remote Controls



#### **(1) POWER BUTTON**

Each time the POWER button is pressed, this unit is turned on to enter the operating mode or off to enter the standby mode.

#### **(2) STANDBY INDICATOR**

#### **(3) HEADPHONE JACK**

Stereo headphones with a standard 1/4 inch plug can be plugged into this jack for private listening.

#### **④ SPEAKER A, B SELECTOR BUTTONS**

These buttons allow you to select various combinations of speakers as follows:

- To drive A speakers, press only the SPEAKER A button ("SPK A" is displayed).
- To drive B speakers, press only the SPEAKER B button ("SPK B" is displayed).
- To drive both A and B speakers, press the SPEAKER A(or B) and B(or A) buttons in order.("SPK A B" is displayed).
- When using headphones for private listening, press these buttons in order to switch off the speaker A and B ("SPK OFF" is displayed).

#### **(5) INPUT SELECTOR BUTTONS**

Press the button to select the desired input source.

#### **(6) TONE BUTTON**

When adjusting the tone (bass and treble), press this button to select the desired tone mode.

• Each time this button is pressed, the tone mode is changed to bass or treble.

#### **(7) BALANCE BUTTON**

When adjusting the sound volume balance, press this button to enter the balance mode.

#### ⑧ BALANCE, TREBLE/BASS UP/DOWN (▲/▼) BUTTONS

- (a) At the balance mode, adjust the sound volume balance between left and right speakers with these buttons.
- (b) At the desired tone mode, adjust the tone as desired with these buttons.

#### **(9) TONE DIRECT BUTTON**

Press this button to listen to a program source without the tone effect.

#### **(i) MEMORY BUTTON**

Press this button to store preset stations.

#### **(I)TUNING/PRESET MODE BUTTON**

Press this button to select the tuning mode or the preset mode.

#### 12 NUMERIC BUTTONS(0 ~ 9)

Press these buttons to select or to store preset stations directly.

#### ① TUNING/PRESET UP/DOWN(▲/▼) BUTTONS

Press these buttons to tune in the desired stations.

#### () FM MODE BUTTON

Press this button to select the desired FM mode.

 Each time this button is pressed, the FM mode is changed to the stereo mode or the mono mode.

#### (15) PRESET SCAN BUTTON

Press this button to scan the stations in the preset sequence.

#### (6) VOLUME CONTROL KNOB, UP/DOWN(+/-) BUTTONS

Adjust the volume to a comfortable listening level with this knob or these buttons.

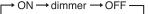
#### **MUTE BUTTON**

Press this button to temporarily mute the sound. Press again to resume the previous sound level.

#### **18 DIMMER BUTTON**

Press this button to select the brightness of the fluorescent display as desired.

 Each time this button is pressed, the brightness of the fluorescent display changes together as follows:



#### (19) SLEEP BUTTON

Press this button to activate the sleep timer for a specified period of time.

 Each time this button is pressed, the sleep time changes as follows:

→ 
$$10 \rightarrow 20 \rightarrow 30 \rightarrow 60 \rightarrow 90 \rightarrow OFF$$
 —  
Unit : minutes

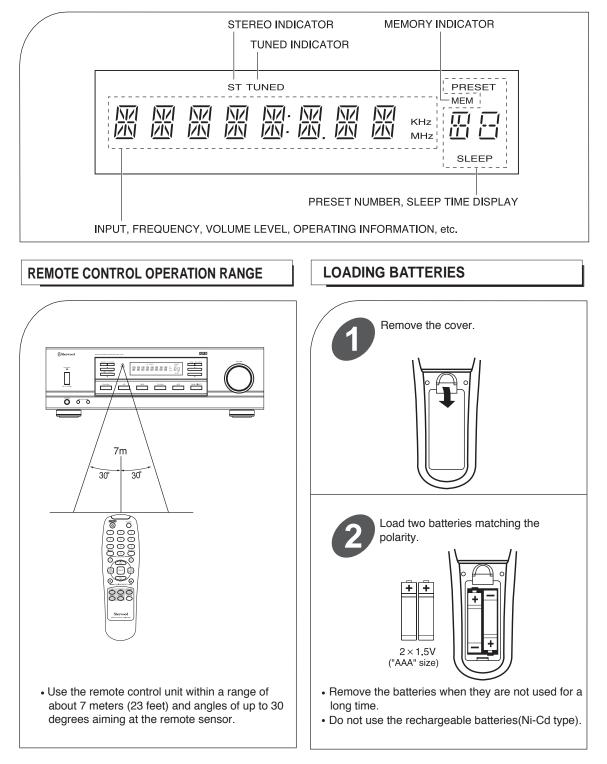
#### ② REMOTE SENSOR

This receives the signals from the remote control unit.

#### **(2) FLUORESCENT DISPLAY**

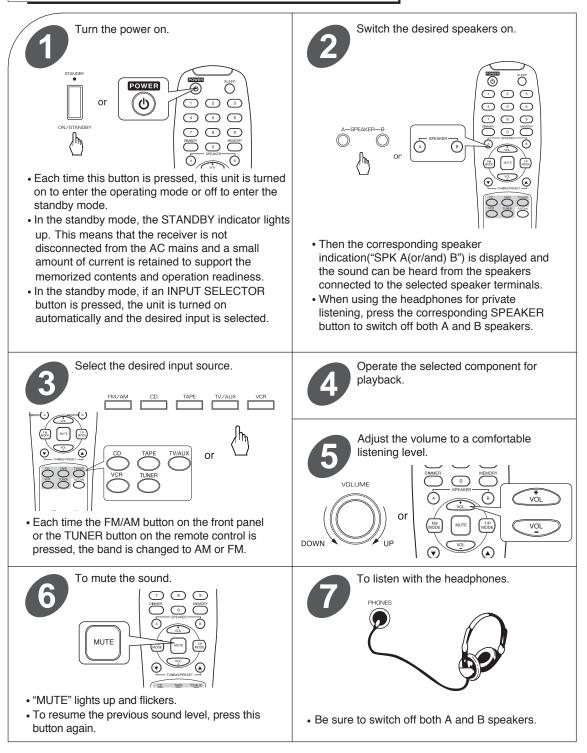
For details, see the next page.

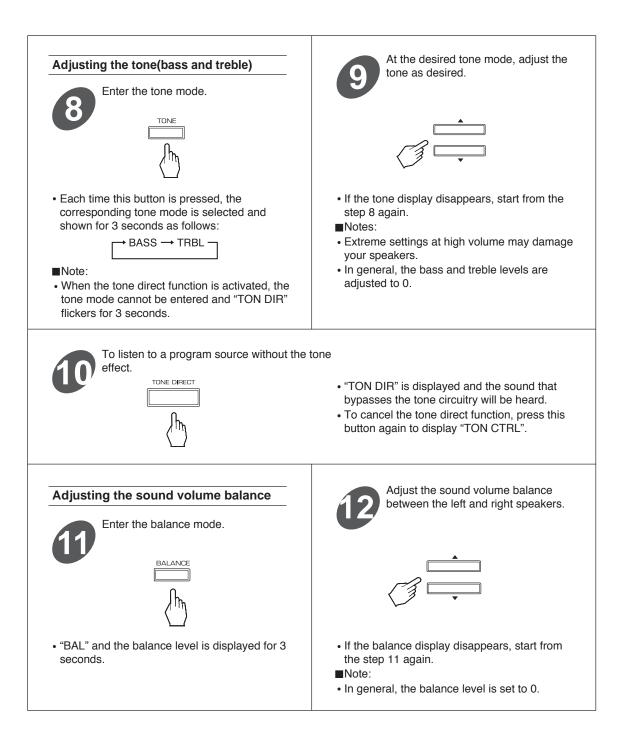
#### ■FLUORESCENT DISPLAY

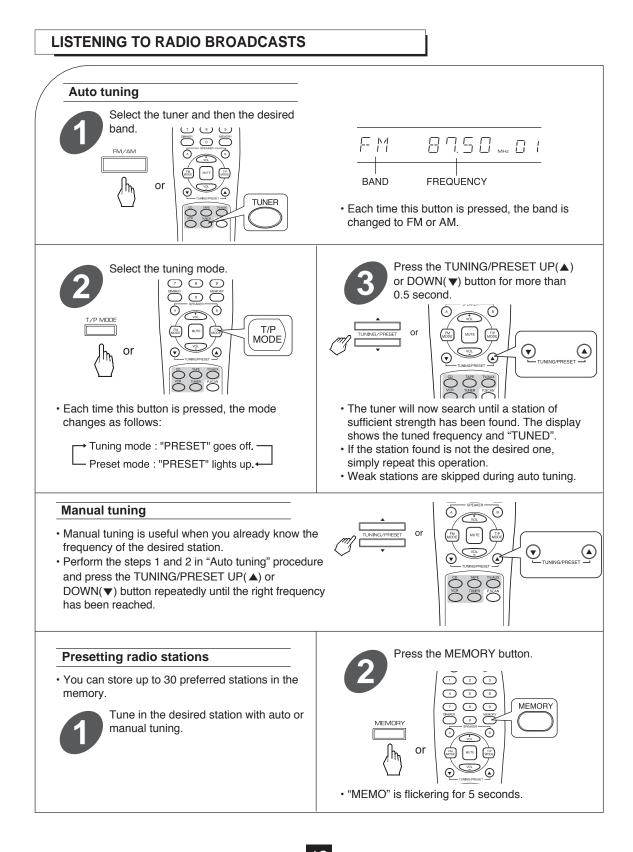


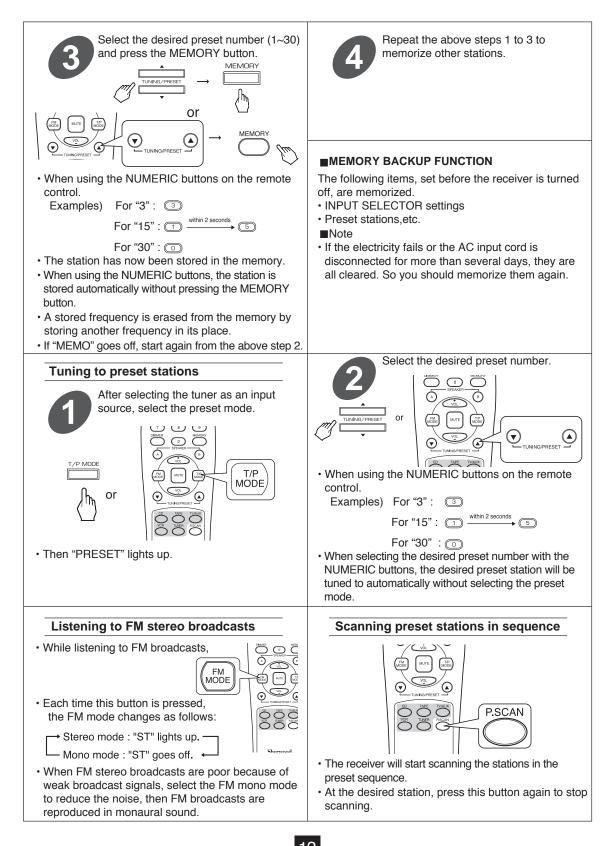
# **Operations**

#### LISTENING TO A PROGRAM SOURCE



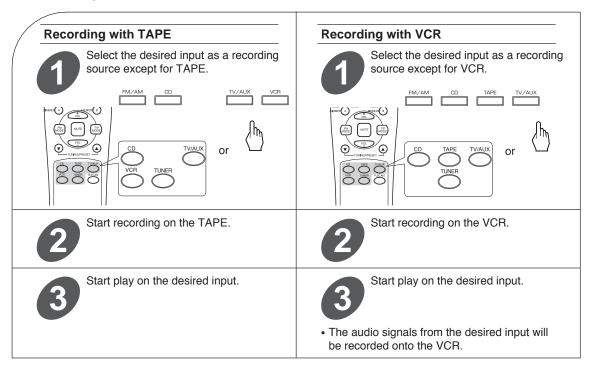


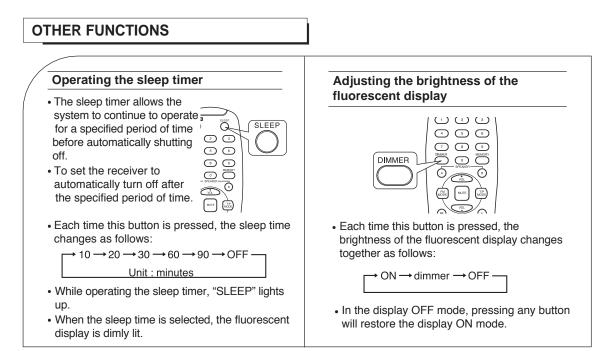




#### RECORDING

- The volume, tone(bass, treble) and balance settings have no effect on the recording signals.
- When you select tuner, CD or TV/AUX as a recording source, recording may be made on TAPE or VCR, or both simultaneously.





# Troubleshooting Guide

If a fault occurs, run through the table below before taking your receiver for repair. If the fault persists, attempt to solve it by switching the receiver off and on again. If this fails to resolve the situation, consult with your dealer. Under no circumstances should you repair the receiver yourself as this could invalidate the warranty.

PROBLEM	POSSIBLE CAUSE	REMEDY
No power	<ul> <li>The AC input cord is disconnected.</li> <li>Poor connection at AC wall outlet or the outlet is inactive.</li> </ul>	<ul> <li>Connect the cord securely.</li> <li>Check the outlet using a lamp or another appliance.</li> </ul>
No sound	<ul> <li>The speaker cords are disconnected.</li> <li>The volume is adjusted too low.</li> <li>The MUTE button on the remote control is pressed to ON.</li> <li>Speakers are not switched on.</li> <li>Incorrect selection of the input source.</li> <li>Incorrect connections between the components.</li> </ul>	<ul> <li>Check the speaker connections.</li> <li>Adjust the volume.</li> <li>Press the MUTE button to cancel the muting effect.</li> <li>Press the SPEAKER A or B button to ON.</li> <li>Select the desired input source correctly.</li> <li>Make connections correctly.</li> </ul>
Stations cannot be received	<ul> <li>No antenna is connected.</li> <li>The desired station frequency is not tuned in.</li> <li>The antenna is in wrong position.</li> </ul>	Connect an antenna.     Tune in the desired station frequency.     Move the antenna and retry tuning.
Preset stations cannot be received	<ul> <li>An incorrect station frequency has been memorized.</li> <li>The memorized stations are cleared.</li> </ul>	Memorize the correct station frequency.     Memorize the stations again.
Poor FM reception	<ul> <li>No antenna is connected.</li> <li>The antenna is not positioned for the best reception.</li> </ul>	Connect an antenna.     Change the position of the antenna.
Continuous hissing noise during FM reception, especially when a stereo broadcast is received.	• Weak signals.	<ul> <li>Change the position of the antenna.</li> <li>Install an outdoor antenna.</li> </ul>
Continuous or intermittent hissing noise during AM reception, especially at night.	Noise is caused by motors, fluorescent lamps or lightning, etc.	<ul> <li>Keep the receiver away from noise sources.</li> <li>Install an outdoor AM antenna.</li> </ul>
No recording	<ul> <li>Incorrect selection between the components.</li> <li>Incorrect operation of each component for playback and recording.</li> </ul>	Make connections correctly.     Operate each component correctly.
Remote control unit does not operate.	Batteries are not loaded or exhausted.     The remote sensor is obstructed.	Replace the batteries.     Remove the obstacle.

# Specifications

AMPLIFIER SECTION	
- Power output, stereo mode, 8 $\Omega,$ THD 0.08 %, 40 Hz~20 kH	z 2X105 W
- Total harmonic distortion, 8 $\Omega,$ 100 W, 20 Hz~20 kHz $\hfill $	
<ul> <li>Intermodulation distortion</li> </ul>	
60 Hz : 7 kHz= 4 : 1 SMPTE, 8 Ω, 100 W	
<ul> <li>Input sensitivity, 47 kΩ</li> </ul>	
Line	
<ul> <li>Signal to noise ratio, IHF "A" weighted</li> </ul>	
Line	
Frequency response	
Line, 10 Hz~100 kHz	±3 dB
Output level	
TAPE/VCR OUT, 2.2 kΩ	
Bass/Treble control, 100 Hz/10 kHz	±10 dB
■ FM TUNER SECTION	
Tuning frequency range	
Usable sensitivity, THD 3%, S/N 30 dB	15 dBf
• 50 dB quieting sensitivity, mono/stereo	
Signal to noise ratio, 65 dBf, mono/stereo	
• Total harmonic distortion, 65 dBf, 1 kHz, mono/stereo	
Frequency response, 25 Hz~14 kHz	$\pm$ 3 dB
Stereo separation, 1 kHz	
Capture ratio	
• IF rejection ratio	
■ AM TUNER SECTION	
Tuning frequency range	520~1710 kHz
Usable sensitivity	
Signal to noise ratio	,
Selectivity	
Power supply	
• Power consumption	
Weight (Net)	

Note: Design and specifications are subject to change without notice for improvements.

# O P E R A T I N G I N S T R U C T I O N S



RX-4105 AM/FM STEREO RECEIVER

5707-04740-004-1