

# Operating Instructions

Integrated Receiver  
**RA-6600**



(Simulated wood cabinet)

## Panasonic®

Before operating this set, please read these instructions completely



## DEAR MUSIC LOVER

Your new Panasonic Integrated Receiver with built-in 8-Track Tape Recorder was manufactured and assembled under exacting quality control standards. The incorporation of the latest advances in design and the use of the most modern components ensure outstanding performance with superb sensitivity and tone quality.

Just a few minutes of your time spent reading carefully through this instruction book will assure optimum performance that will bring you continued enjoyment for many years.

### NOTICE

The Serial Number of this product may be found on the REAR PANEL. You should note the Model Number and Serial Number in the spaces provided and retain this book as a permanent record of your purchase to aid in identification in case of theft.

MODEL NUMBER .....

SERIAL NUMBER .....

## SPECIAL FEATURES

### RECEIVER

- \* Equipped with "Automatic Frequency Control" (AFC) on "FM" and "FM STEREO" to help give you drift-free FM reception.
- \* Convenient "Tape Monitor" switch for recording and playback from an external tape deck.
- \* Separate Bass and Treble tone controls.
- \* Equipped with "Loudness Control".

### 8-TRACK TAPE RECORDER

- \* Equipped with push-button program selector, lighted program indicators, convenient fast forward button, repeat button, etc.
- \* Convenient "Pause" control for short intermissions during play and recording mode.
- \* The Recording "NOT READY" Indicator tells you that the Fast Forward button is left depressed once the Recording button is pushed in.
- \* The built-in "Auto-Eject" automatically disengages the cartridge at the end of the tape in the record mode or fast forward operation.
- \* Equipped with "Recording Mode Selector" which enables you to make recording by either manual or automatic record level adjust.
- \* Equipped with separate left and right "Recording Volume Controls" and "VU Meters" for manual recording level adjustment.

### OTHERS

- \* Equipped with "Speaker Selector" for you to choose between two pairs of speaker systems.
- \* Convenient unswitched "AC electrical outlets" for your additional components.

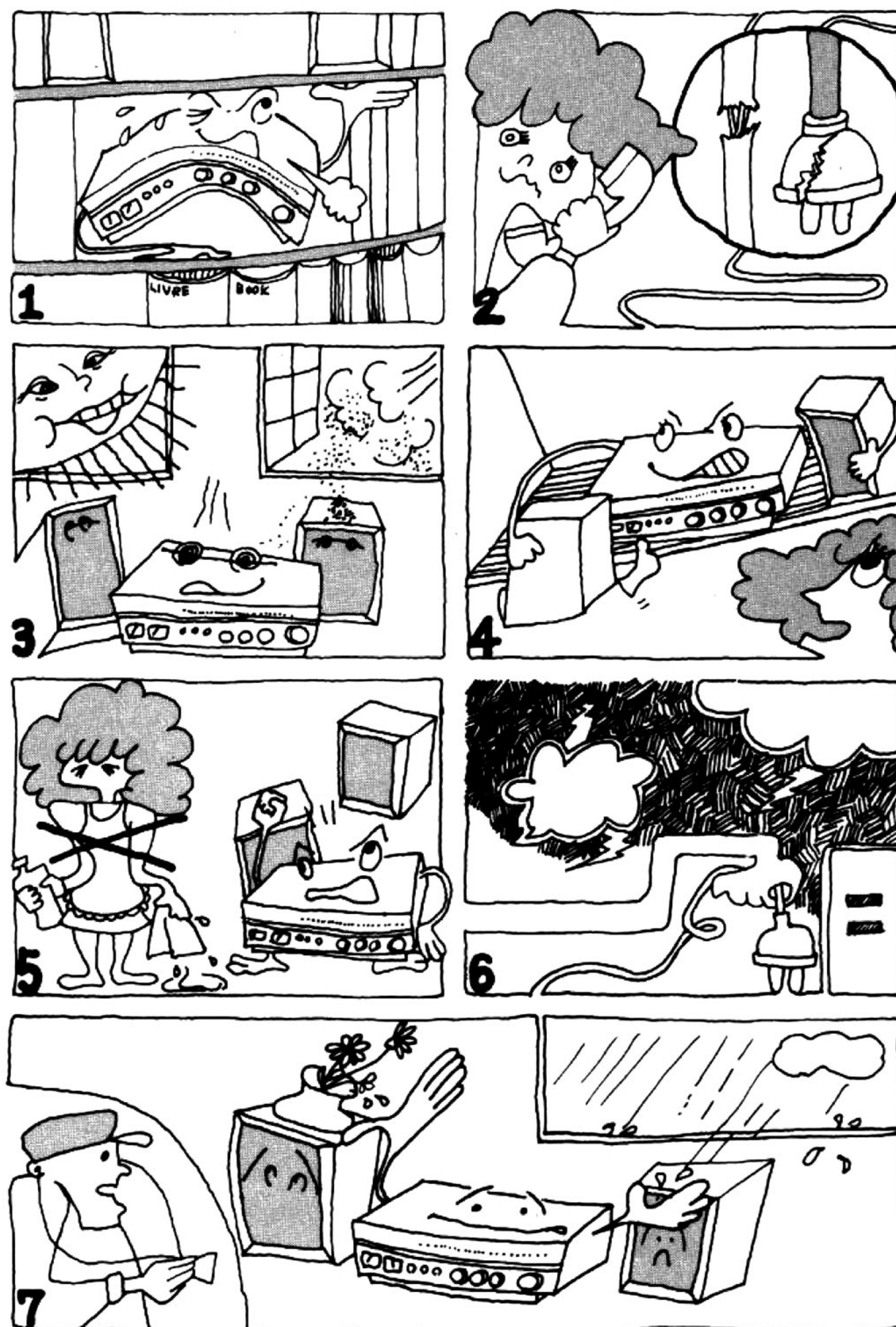
## Safety Tips

**CAUTION:** Please read and strictly observe the following precautionary measures for your safety.

Electrical energy can perform many useful functions. This unit has been engineered and manufactured to assure your personal safety. But improper use can result in potential electrical shock or fire hazards. In order not to defeat the safeguards incorporated in this unit, observe the following basic rules.

- 1 This unit is provided with ventilation openings in the cabinet to allow heat generated during operation to be released. Never block the ventilation grille and never place the set near or over radiator or heat register.
- 2 Overloaded AC outlets and extension cords are dangerous, and so are frayed power cords and broken plugs. Call your service technician for replacement of dangerous power cords.
- 3 This unit should not be directly exposed to sunlight, and should be kept free from dust, moisture and vibration.
- 4 To avoid personal injury, do not place the unit on a sloping shelf unless properly secured.
- 5 Turn off the unit before cleaning the cabinet. Use a slightly damp (not wet) cloth. Never use solvents such as alcohol, benzene, or thinner as they may mar the finish of the cabinet.
- 6 For added protection of the unit during a lightning storm or when the set is to be left unattended for an extended period of time, unplug it from the wall outlet. This will prevent possible shock and fire hazard due to lightning storms or power line surges.
- 7 Never expose the set to rain or water. Never operate the unit if liquid has been spilled into it. If the unit becomes damp or wet, pull the plug and have the set inspected by a service technician before further use. Rain or excessive moisture — even as a result of extended exposure on a back porch — as well as spilled liquid inside can cause electrical shorts which can result in fire or shock hazards.

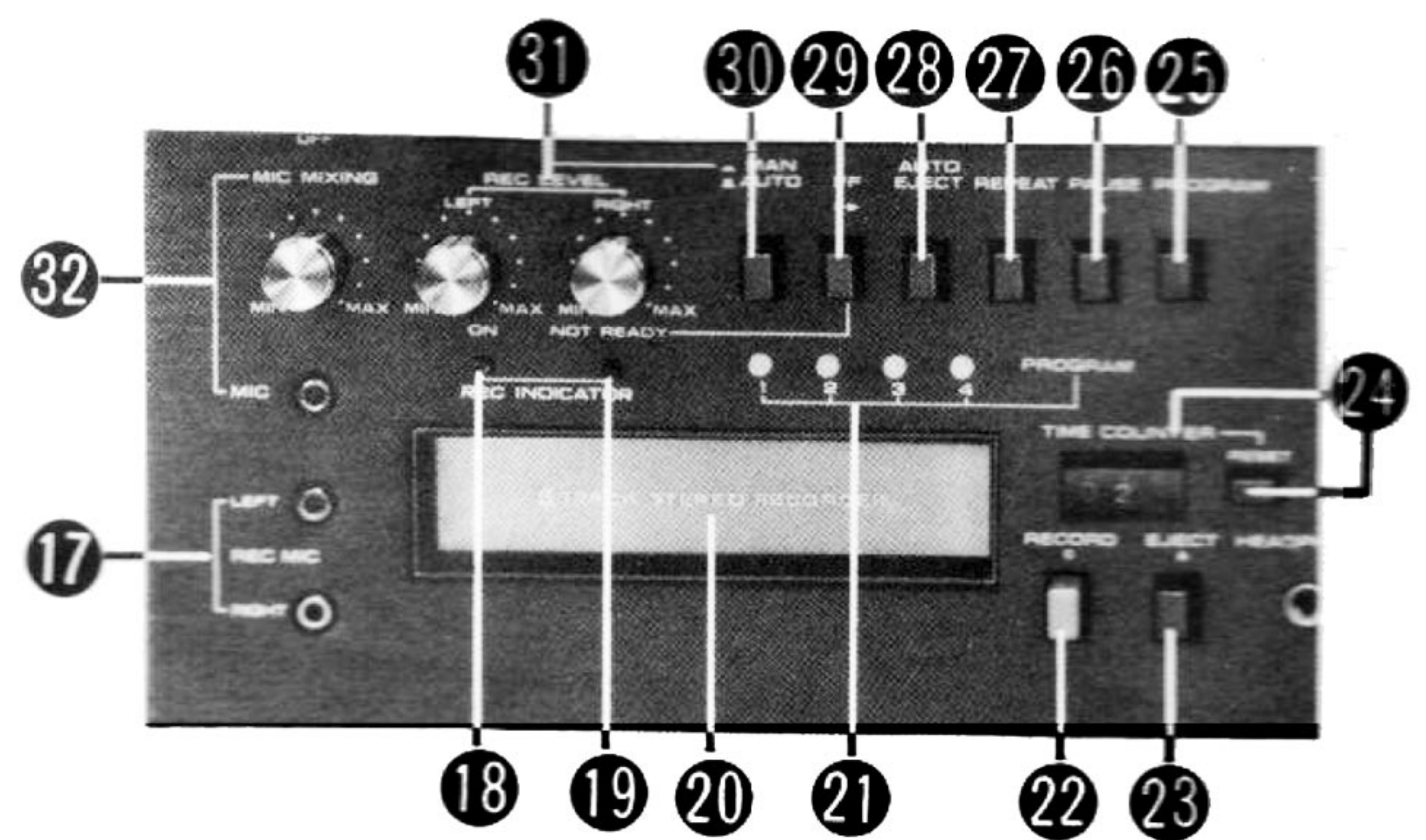
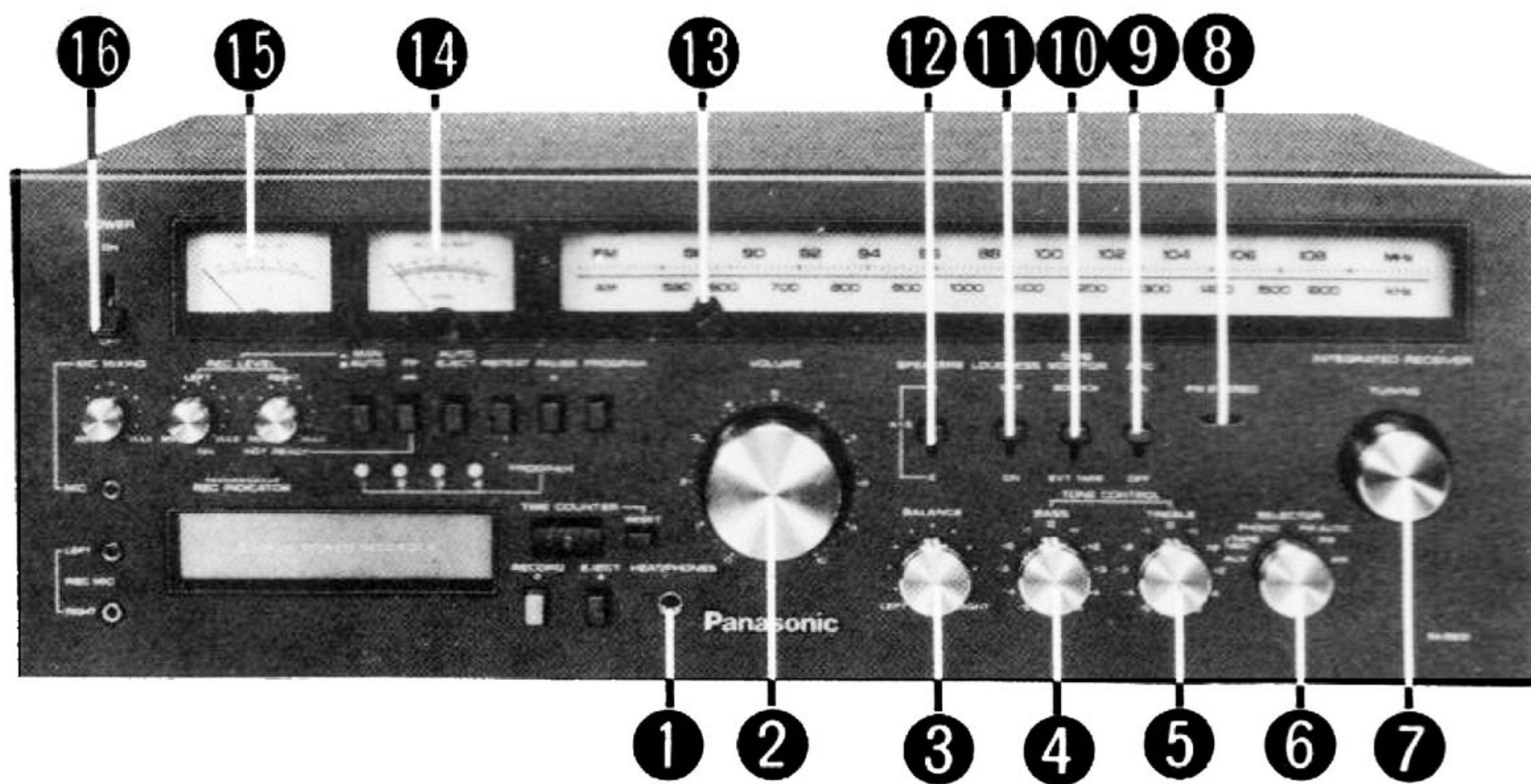
Do not attempt to repair the set by yourself, but contact your nearest Panasonic Servicenter for necessary repairs.



**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**



# FRONT PANEL INFORMATION



## MAIN CONTROLS

- ① **Headphone jack**  
For private listening from all program sources, plug a stereo headphone (optional), 8 ohms or more, into the Headphone jack. The speakers will be automatically disconnected.  
**NOTE: Be sure to disconnect the headphones when playing at a high volume level. Such high level of audio power can overload and severely damage the headphone, not to mention your eardrums.**
- ② **Volume control (VOLUME)**
- ③ **Balance control (BALANCE)**
- ④ **Bass control (BASS)**
- ⑤ **Treble control (TREBLE)**
- ⑥ **Selector switch (SELECTOR)**
- ⑦ **Tuning control (TUNING)**
- ⑧ **FM Stereo indicator**
- ⑨ **AFC switch (AFC)**  
For "FM" or "FM STEREO" reception, keep this switch in "OFF" position while tuning. After the station is tuned in properly, set this switch to "ON" position for drift-free listening.
- ⑩ **Tape monitor switch**
- ⑪ **Loudness switch (LOUDNESS)**  
Use this switch to boost bass and treble response at low volume listening levels. Due to the characteristics of the human ear, both bass and treble seem greatly reduced at low listening levels. This switch compensates for this apparent loss.  
"OFF" position: When listening to your music center at normal or high volume setting.  
"ON" position: When listening at low volume.
- ⑫ **Speaker selector switch (SPEAKER)**  
"A": When you connect the speaker systems to the Speaker terminals "A", set this switch to this position.

- "A+B": When you connect two pairs of the speaker systems, one to the Speaker terminals "A" and one to "B", set this switch to this position.  
"B": When the speaker systems are connected to the Speaker jacks "B", set this button to this position.

**NOTE:** When the mode selector is set to "A" or "B" position, you can listen to one pair of speakers at a time ('A' or 'B'), while the other (not-selected) pair of speakers will remain silent. Only when the switch is set to the "A+B" position and speakers are connected to the 'A' and 'B' speaker terminals on the rear panel of this unit, can you listen to two pairs of speakers at same time.

- ⑬ **Dial pointer**
- ⑭ **VU meter (RIGHT)/Tuning meter**
- ⑮ **VU meter (LEFT)**
- ⑯ **Power ON-OFF switch**

## 8-TRACK TAPE RECORDER CONTROLS

- ⑰ **Microphone jacks (Left and Right)**
- ⑱ **Recording "ON" indicator lamp (ON)**
- ⑲ **Recording "NOT READY" indicator lamp (NOT READY)**
- ⑳ **Tape slot**
- ㉑ **Program indicator (PROGRAM INDICATOR)**
- ㉒ **Record button (RECORD)**
- ㉓ **Manual Eject button (EJECT)**
- ㉔ **Time counter with Reset button**
- ㉕ **Program selector (PROGRAM)**
- ㉖ **Pause button (PAUSE)**
- ㉗ **Repeat button (REPEAT)**
- ㉘ **End of Track Eject button (AUTO EJECT)**
- ㉙ **Fast Forward button (FF)**
- ㉚ **Recording mode selector switch**
- ㉛ **Recording volume controls (Left and Right) (REC LEVEL)**
- ㉜ **Mic-Mixing control with Mixing Mic-Jack**

# RADIO OPERATION

## Adjust the following controls:

- 1 Selector switch ⑥ → desired radio band, either FM, FM AUTO or AM.
- 2 Power ON-OFF switch ⑯ → to "ON" position, which also lights up the dial panel.
- 3 Tape Monitor switch ⑩ → to "SOURCE" position.
- 4 Tuning control ⑦ → desired radio station. The Dial pointer ⑬ indicates your station.  
**NOTE:** Keep the AFC switch ⑨ in "OFF" position until optimum tuning is achieved. (Refer to section Front Panel Information, "AFC" switch.)
- 5 Volume control ② → desired volume level.
- 6 Balance control ③ → so that sound seems to come from the center (between the 2 speakers) by adjusting the sound balance from your left and right speaker systems.
- 7 Bass ④ and Treble ⑤ controls → to obtain the desired tonal quality.

- 8 Loudness switch ⑪ → as described in the "Front Panel Information".
- 9 After listening, switch the Power ON-OFF switch ⑯ to "OFF" position.

**Be sure that Mic-Mixing Control ⑳ is set to "MIN" position, when not in use.**

## FM STEREO RECEPTION

The FM STEREO indicator ⑧ will automatically light up when the program is being broadcast in FM stereo. This FM STEREO indicator will function when the Selector switch ⑥ is in either "FM AUTO" or "FM" position. But please remember, you are listening to FM stereo only when the FM STEREO indicator is lit and the Selector switch ⑥ is set to "FM AUTO". If the Selector switch is set to "FM" you are only listening monaurally although the FM STEREO indicator lights up.



# TAPE OPERATION

## GENERAL INTRODUCTION

### **Record Button** ② (Record)

While pushing the Record button, insert the tape cartridge into the Tape slot ⑳. The Recording "ON" indicator lamp ⑬ lights up when the Record button is pushed.

### **Pause Button** ②⑥ (PAUSE)

To interrupt the tape movement temporarily during playback or recording, press this button in. To resume playing (or when you are ready to start recording), release this button by pushing it once again.

NOTE: Do not leave the Pause button in "ON" (depressed) position for long period of time.

### **End of Track Eject Button** ②⑧ (AUTO EJECT)

When this button is pushed in during Playback, Recording or Fast Forward, the tape cartridge will eject automatically at the end of each track (program) or at the end of a selected track when pushed in while the program indicator lights the selected program number. This feature enables you to advance the tape in Fast Forward to the start of the selected track (end of the previous track) and record a single program only, if the "Auto Eject" button is left depressed, thereby preventing accidental erasure of recorded programs on subsequent tracks. (Auto Eject works also in "REPEAT" mode.)

NOTE: To release the Auto Eject button, push the button again for normal operation.

### **Fast Forward Button** ②⑨ (FF)

To advance the tape rapidly, press this button. Release this button by depressing it once again to resume normal playback.

NOTE: During recording the Fast Forward operation does not function.

### **Recording "NOT READY" Indicator Lamp** ①⑨ (NOT READY)

This indicator will light up to alert you that the Fast Forward button ②⑨ is left "depressed" when the Record button ②② is pushed in.

Release the FF button by depressing it again. The "NOT READY" indicator will go out and the recording can be started.

NOTE: The "NOT READY" lamp does not light up when the Pause button ②⑥ is in "ON" position.

### **Recording "ON" Indicator Lamp** ①⑧ (ON)

This will light up when the Record button ②② is pushed in.

### **Manual Eject Button** ②③ (EJECT)

To eject the tape cartridge manually, simply push this button.

NOTE: Do not push the Eject button half-way or hold it down or more than one second.

### **Time Counter and Reset Button** ②④

The Time Counter will automatically start to count when playing back or when recording. This counter will help you determine approximately where to re-play or re-record. Therefore, it will be convenient for you to set the Time Counter to "00<sup>00</sup>" by pushing the Reset button before the start of any playback or recording.

### **VU Meters** ①④ & ①⑤

The needle movement of these meters indicates when your unit is in "recording" mode.

### **Automatic Eject System**

When the tape reaches its end (i.e. end of program 4) during recording or fast forward operation, the cartridge will automatically eject.

NOTE: Remove the cartridge from the Tape slot when not in use.

## PLAYBACK

- 1) Set the Selector switch ⑥ to "TAPE/MIC."
- 2) **Inserting a pre-recorded tape cartridge:**  
Hold the cartridge, label side up and with the tape exposed

end toward the Tape slot ⑳, making sure the cartridge is not inverted. Then insert it firmly into the Tape slot. The program indicator ②① lights and playback starts. Playback continues in the order 1 - 2 - 3 - 4 - 1 - 2 -, etc. until manually ejected.

NOTE: When inserting the tape cartridge for the very first time (after setting up is done), the tape cartridge may "eject" from the Tape slot. This may occur even when the Eject button is not pushed. Please note, that this does not indicate any damage or defect. Simply re-insert the tape cartridge again and normal operation will start.

- 3) Adjust the volume, balance, bass, treble and loudness controls as you would for radio operation.

- To repeat a certain program, simply push the Repeat button ②⑦.

- To change a program, push the Program selector ②⑤.

The Program selector, if pushed, will change a program when a tape cartridge is inserted.

NOTE: Do not push the Program selector half-way or hold it down for more than one second.

- To stop the tape, push the Manual Eject button ②③ and remove the cartridge from the Tape slot.
- Be sure that the Tape Monitor Switch is in "SOURCE" position, when playing back from the built-in 8-Track tape recorder.

## RECORDING

This unit has provisions for monitoring through its speakers when making a recording. Volume ②, Balance ③, Bass ④, Treble ⑤ and Loudness ① control settings do not affect recording level and tonal quality.

### **Automatic Recording Level Control**

This unit's recording level control system adjust and maintains proper recording level automatically.

Set the Recording mode selector button ③① to "AUTO" position.

Thus, manual recording volume controls do not operate when you make a recording in the "AUTO" position.

### **Setting the recording level manually**

- 1) Push the Recording mode selector button ③① to "MANU" (▲) position.
- 2) While pressing the recording button ②②, set the recording level by adjusting the left and right recording volume controls ③② until the needles of the VU meters ①④ & ①⑤ deflect between the -20 and 0dB area even at very loud portions of the program to be recorded.

CAUTION: If the needle deflects into the far right area (between 0 and 3 dB), the recording level is set too high and the recorded sound may be distorted.

### **Choosing the starting point to record**

- 1) To record (or playback) from the start of the first program, simply depress the Program selector ②⑤ until the Program indicator ②① shows program "4". Then depress the Fast Forward button ②⑨. The tape will run fast forward and automatically eject at the starting point of the first program (end of program 4).

NOTE: When fast forward operation is not required, make sure to release the Fast Forward button ("out" position) to avoid unnecessary fast forward movement of the tape when it is engaged.

- 2) When you want to record only on one selected track (program), push the "Auto Eject" button ②⑧. At the end of that particular program, the tape is automatically disengaged. When this Auto Eject button is not pushed, recording will continue until the end of program 4. At the end of program 4 the cartridge will automatically eject.



### Preparing for recording

Choose the program you wish to record by following the previous instruction.

Press the Pause button 25. Then, while pressing the Record button 22 insert the tape cartridge into the Tape slot 20. The Recording "ON" indicator lamp 18 lights up and the needles of VU meters 14 & 15 move. As soon as you are ready to start the recording, simply release the Pause button.

NOTE: Make sure that the Recording "NOT READY" indicator 19 is NOT lit. When it is lit, it indicates that the FF button 29 is "depressed". It must be RELEASED before recording can start.

### Recording from built-in Radio

\* Be sure no microphone is connected to the Microphone jack 17

Then proceed as follows:

- 1) Operate as for Radio Operation and choose the program you wish to record.
- 2) Depress the Pause button 26
- 3) While pressing the Record button 22 insert the tape cartridge into the Tape slot 20  
Prepare for recording as previously explained.
- 4) To start recording, release the Pause button 26
  - To stop recording, depress the Manual Eject button 23. The Record button 22 will return to its original position, and the Recording "ON" indicator lamp 18 will go out.

### Recording from the Microphone(s)

- 1) Connect the microphone(s) (optional, not included with this unit) to the Microphone jack(s) 17.
- 2) Turn the Selector switch 6 to "TAPE/MIC" position.
- 3) Follow items 2, 3 and 4 of the "Recording from built-in Radio".

CAUTION: When NOT recording from the microphone(s), disconnect the microphone(s) from the Microphone jack(s).

- 1) Disconnect (unplug) the microphone(s) from the Microphone jack(s) 17.
- 2) Set the Selector switch 6 to "TAPE/MIC".
- 3) While pressing the Record button 22 insert the recorded tape cartridge into the Tape slot 20.
- 4) Let the tape run as if recording. All previous recordings will be erased.

NOTE: If microphone(s) are not unplugged, unwanted room and outside noises will be recorded during erasing.

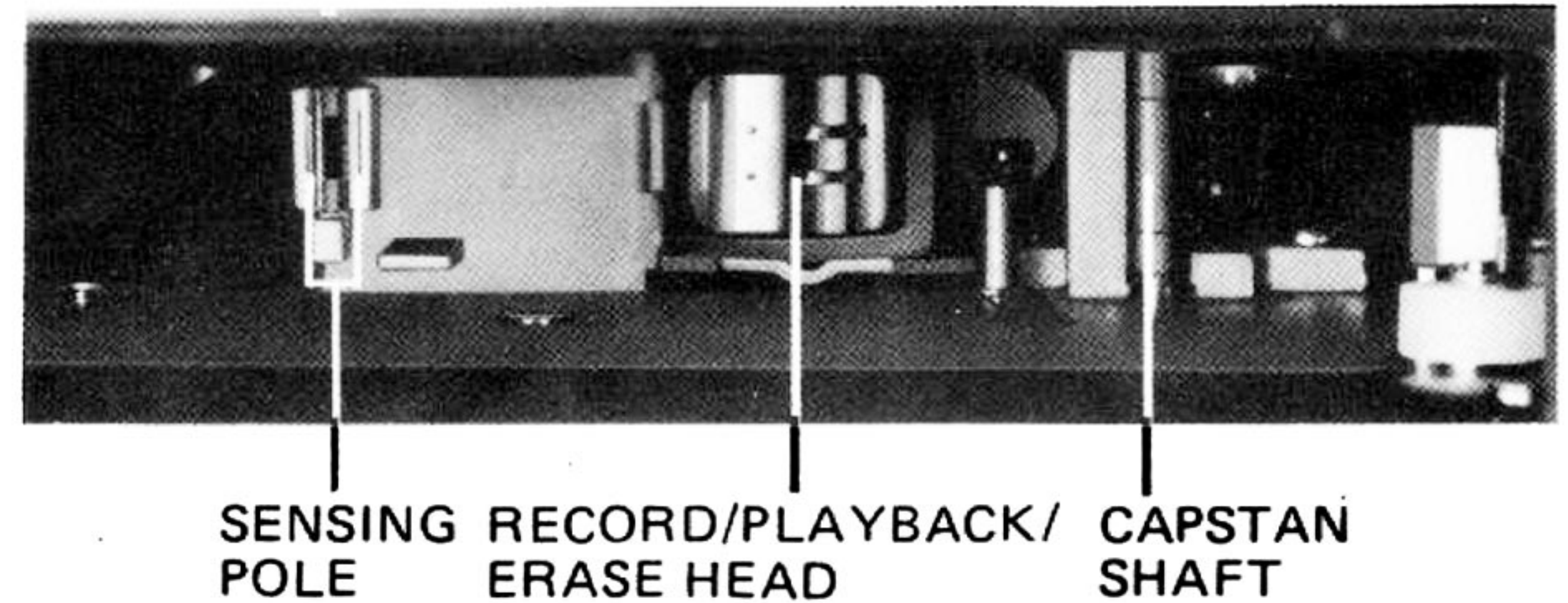
CAUTION: To prevent accidental erasure of your pre-recorded tapes make sure, before pushing the Record button that the tape you want to record on does not contain recorded program material which you would like to save for future use.

### HEAD CLEANING

The record/playback/erase head, sensing poles and capstan shaft in the tape slot may accumulate dust and tape residue, causing poor and wavering sound or incomplete erasure of a previous recording.

This residue should be cleaned periodically (about every 100 hours of playing and recording time). Clean the surface of the head, sensing and capstan gently with a cotton swab moistened with alcohol, or by loading a special head cleaning tape cartridge (optional) into the tape mechanism.

CAUTION: Never bring a magnet and/or metal objects such as screwdrivers close to the recording/playback/erase head or to any portion of the tape mechanism. It may cause costly damage to your tape recorder.



### ERASING

Any previously recorded material is automatically erased when the tape is again used for recording and only the newly recorded sound will remain. To erase the tape without adding a new recording, proceed as follows.

### RELATIONSHIP BETWEEN THE VARIOUS 8-TRACK OPERATING BUTTONS

This chart enables you to understand the consequences if two (or more) buttons are pushed at one time.

	RECORD BUTTON	PROGRAM SELECTOR BUTTON	REPEAT BUTTON	PAUSE BUTTON	AUTO EJECT BUTTON	FAST FORWARD BUTTON	MANUAL EJECT BUTTON
RECORD BUTTON		Program changes	Repeat does not function	Pause operates	Auto Eject operates	Recording inoperative and "not ready" lamp lights up	Manual Eject operates
PROGRAM SELECTOR	Program changes		Program changes and program will repeat	Pause operates, Program Selector is inoperative	Program changes and Auto Eject operates	Program changes and FF operates	Manual Eject operates
REPEAT BUTTON	Repeat does not function	Program changes and program will repeat		Pause operates	Auto Eject operates	FF works and Repeat operates	Manual Eject operates
PAUSE BUTTON	Pause operates	Pause operates, Program Selector is inoperative	Pause operates		Pause operates	Pause operates	Pause operates, Manual Eject inoperative
AUTO EJECT BUTTON	Auto Eject operates	Program changes and Auto Eject operates	Auto Eject operates	Pause operates		FF operates and Auto Eject operates	Manual Eject operates
FAST FORWARD BUTTON	Recording inoperative and "not ready" lamp lights up	Program changes and FF operates	FF works and Repeat operates	Pause operates	FF operates and Auto Eject operates		Manual Eject operates
MANUAL EJECT BUTTON	Manual Eject operates	Manual Eject operates	Manual Eject operates	Pause operates, Manual Eject inoperative	Manual Eject operates	Manual Eject operates	



## TO ENJOY "MIC-MIXING"

To enjoy "Mixing-Play" through an optional microphone, please refer to the following instructions.

- 1) Choose your desired mixing source. (AM, FM, 8-Track Tape, an external Phono or an external tape recorder, through 'AUX IN' 34, etc.)
- 2) Power ON-OFF switch 16 → to "ON" position.
- 3) Connect your microphone (optional) into the Mixing Mic-Jack 32.

**NOTE:** Use a low-impedance (600 ohms) microphone.

- 4) Adjust the Volume, Balance, Bass and Treble control settings to obtain your desired sound quality of the mixing source.
- 5) Then set the mixing volume control to your desired microphone level.

**CAUTION:** When enjoying "Mixing-Play" through your microphone, a feedback or howling sound may be heard from the speakers. This is because the microphone is located too near the speakers or because the mixing volume level is too high. Please adjust the volume setting to a lower sound level and keep the microphone away from the speakers.

**Be sure that the Mic-Mixing Control 32 is always set to "MIN" position when not in use.**

- You can record your original "Mic-mixing" program onto the built-in 8-Track recorder or an external tape deck through "REC OUT" terminals on the rear panel of the unit. As for the recording procedure, please refer to the "RECORDING" section under 'TAPE OPERATION'.

**NOTE:** An external program played back through the "TAPE IN" terminals 40 cannot be recorded through the "REC OUT" terminals 41 on the rear panel of this unit.

## TO USE EXTERNAL TAPE DECK THROUGH "TAPE IN" & "REC OUT" TERMINALS

You may record and playback any program source to which you are listening by connecting an external tape deck to this unit's "REC OUT" & "TAPE IN" jacks using appropriate "RCA" type connecting cables (not included with this unit).

### RECORDING

Please refer to the "Instruction Manual" of the external tape deck for details.

- 1) Tape Monitor 12 – to "SOURCE" position.
- 2) Select the program you wish to record by turning the Selector switch 6.

### NOTES:

1. It is not recommended to make recordings on the built-in tape deck and on an external tape deck simultaneously, because abnormal or beat sounds may be recorded in addition to the desired program material.
2. Do not place an external tape deck too close to this unit, especially when making an AM broadcast recording, to avoid abnormal noise pick-up between the two units.
3. Do not connect this unit to any low level input(s) on the external tape unit such as "MICROPHONE" jack. The recordings will be severely overloaded and distorted.

### MONITORING

If your stereo tape unit has true tape-monitor facilities (separate circuits and heads for recording and for playback), you may monitor the tape while making the recording. This will allow you to compare its sound quality with that of the original program material. To monitor the tape, alternate the Tape monitor switch 12 between "SOURCE" (to hear the original program material) and "TAPE" (to hear the the same material a fraction of a second later, as it is recorded on the tape.)

### PLAYBACK

When playing back tapes from your external tape deck, set the Tape monitor to "TAPE". The recorded sound will then be heard. Adjust the volume, balance, bass and treble as you would for radio operation.

## Some Helpful Hints Chart

When Using	Symptom	Probable Cause	Possible Remedy
RADIO	• Background noise (hiss) is higher during FM STEREO broadcast than during FM MONO reception.	• It is normal for FM Stereo to have higher noise level than FM Mono broadcast.	• Turn Bass and Treble controls to "Low" (minimum) position. • Connect an external FM Antenna to the FM ANT terminal on the rear panel for better reception.
	• Noise is heard when motor vehicles pass nearby.	• Ignition noise from the engine of the motorvehicle.	• Change direction of FM external antenna away from the street.
	• Noise is heard continually during "FM Stereo & FM monaural broadcasts" reception.	• Antenna placement is incorrect.	• Select the best location of the FM external antenna by trying different directions and placement until optimum reception is achieved.
8-TRACK TAPE RECORDER	• No Sound (mechanical defects)	• 8-track tape cartridge is worn out, or is caught on the head or the sensing poles. • The tape cartridge is inserted incorrectly.	• Replace or remove the tape cartridge from the tape slot.
		• Fast forward button is left in the "depressed" ON position.	• Be sure the Fast forward button is not "depressed". It must be in "OFF" position.
		• Pause button is left "depressed". (Tape does not move)	• Release the Pause button to "out" position.
	• Poor or Weak Recording or playback, or incomplete erasure	• Dirty Rec/Play/Erase head	• Clean head of tape mechanism according to "Head Cleaning" instructions in this booklet.
COMMON	• No Sound (from Speakers)	• AC cord loose or disconnected.	• Make sure AC cord and speaker cords are securely connected.
		• Speaker cords are disconnected.	
		• Speaker selector is not properly set.	• Set the Speaker selector correctly
		• Selector switch is not correctly set.	• Set the Selector switch to the correct function to which you want to listen.
		• Headphones left in the headphone jack.	• Unplug the headphones.
	• Volume control is set to "MIN" position.	• Turn Volume control toward "MAX" position.	
	• The fuse or fuses are blown.	• The speaker connection is not proper. • The Impedance of speakers is not proper.	• Please check your speaker systems. Refer to the "Rear Panel Information" section.

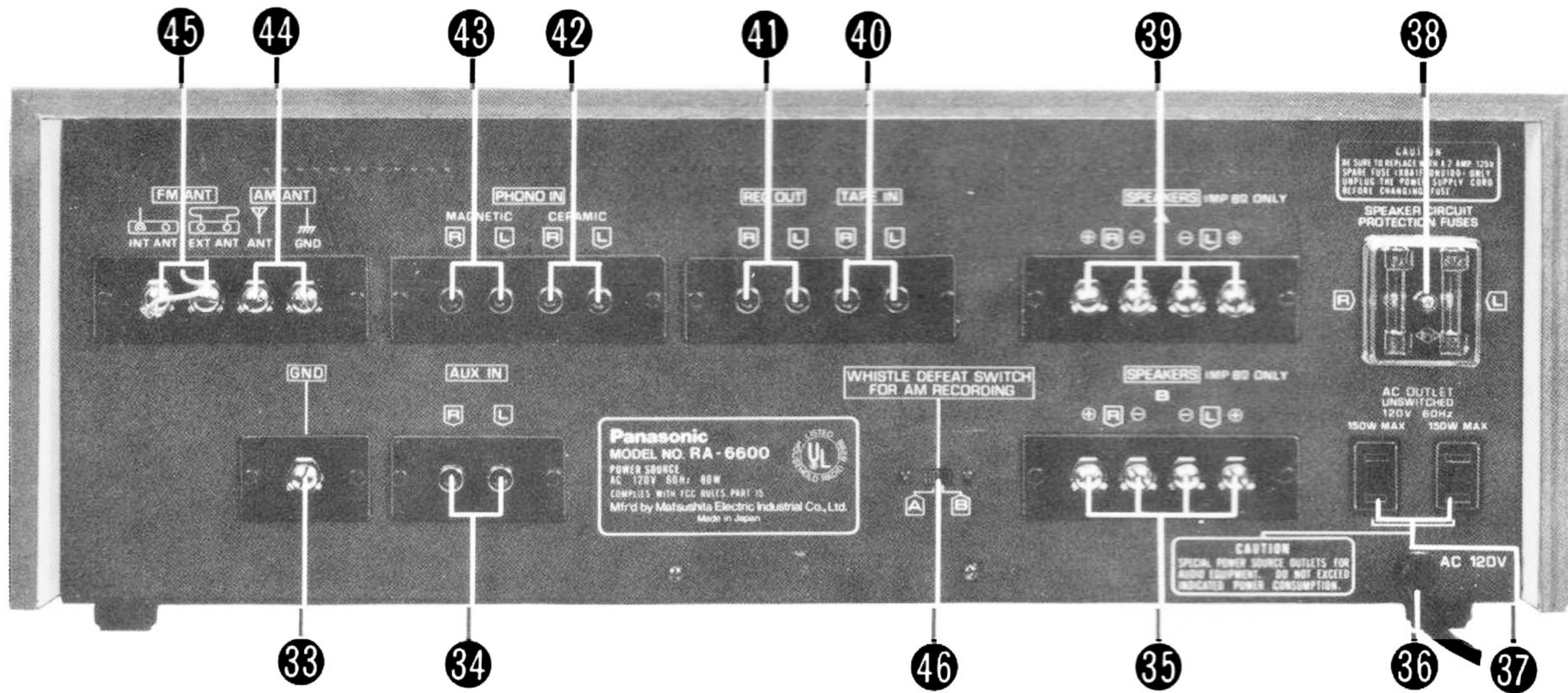


# REAR PANEL INFORMATION

**LOCATION:** Find a suitable place for this unit away from any source of heat, and one that allows at least 2–3 inches of ventilation space above and behind the chassis. Keep this unit away from large metallic objects which may interfere with the proper operation of the set.

**SPEAKER PLACEMENT:** For best results speakers should be positioned about ear level. Place them at an equal distance from your listening position, not more than 10 – 15 feet apart to prevent exaggerated stereo effects. A few listening tests will determine the best location for maximum clarity.

**NOTE:** Please use the speakers having '8Ω' impedance.



**33 Phono Ground terminal (GND)**

Ground terminal for your external record player unit (optional) connected to the "PHONO IN" jacks 42 or 43 of this unit.

**34 Auxiliary Input jacks (AUX IN)**

This unit may be used for playing an additional stereo program source through these jacks. Connect these jacks to the line output jacks of the additional source using appropriate connecting cords. (You may record the additional program source on this unit's 8-Track tape recorder.)

The Selector switch 6 should be set to the "AUX" position.

**35 & 39 Speaker terminals "B" & "A" (SPEAKERS)**

Connect the speaker systems (optional) to the speaker jacks "A" 39. If you wish to add two speakers in another location, connect the additional speakers to the "B" terminals 35. The speakers connected to the "A" terminals will function only when the Speaker selector 12 is switched to "A", and the other speakers, connected to the "B" terminals will operate only when the Speaker selector 12 is switched to "B".

If you would like to listen to two pairs of the speakers simultaneously, set the Speaker selector 12 to the "A+B" position.

**CAUTION:** To prevent damage to your receiver do not operate this unit without speakers.

**36 AC Power Cord**

First, connect the speaker systems. Then plug this unit's power cord into a convenient AC electrical outlet.

**IMPORTANT:** This unit must be powered from a 120V AC line (60 Hz). For your own safety and that of your unit do not attempt to operate this set from any other type of power source which may result in potential electrical shock or fire hazard.

**37 Convenient AC OUTLETS (UNSWITCHED 150W, AC 120V, 60Hz)**

For connecting auxiliary accessories, such as a record player unit or tape deck with a power requirement of not more than 150W at a 120V, 60 Hz AC line.

These AC outlets are always "ON" and are not controlled by the Power switch, on the front panel of the unit.

**CAUTION:** Accessories connected to these outlets must not consume more than 150 watts.

**38 Speaker Circuit Protection Fuses**

Be sure to replace with 2 Amp, 125V spare fuses (XBA1F20-NU100) only. Unplug the power supply cord before changing the fuse or fuses.

**40 TAPE IN jacks (TAPE IN) and 41 Recording Output Jacks (REC OUT)**

In addition to the built-in 8-Track tape recorder of this unit, you also may connect an external tape recorder to these jacks. For more details, please refer to the "Additional Component" section.

**42 & 43 PHONO IN jacks (CERAMIC) & (MAGNETIC)**

This unit has provisions for connecting a conventional stereo record player or changer (optional) through the "PHONO IN" (Magnetic) or "PHONO IN" (Ceramic) jacks with appropriate connecting cords, corresponding to the type of your phono-cartridge, i.e. 'magnetic' type or 'ceramic' type.

**However please note that you cannot use two different types of record players at same time through "PHONO IN" (MAGNETIC) & "PHONO IN" (CERAMIC) jacks.**

When connecting a record player to this unit, carefully read the instruction manual enclosed with it in order to obtain best results and to become more familiar with the unit.

**NOTE:** Connect the ground wire of your record player unit to the ground terminal "GND" 33 of this unit to reduce hum or noise.

**44 AM External Antenna (AM ANT) and Ground (GND)**

The built-in extra-sensitive ferrite core antenna assures excellent AM reception in most areas. However, should you wish to receive a very distant broadcast, connect an external AM antenna to this unit's AM external antenna terminal (ANT).

To reduce noise, connect a wire between the ground terminal (GND) and ground.

**45 FM External Antenna (FM ANT)**

**Built-in line antenna (INT ANT):** This set has been connected to the built-in FM line antenna at the factory. Stretch out the power cord completely and change the direction of the power cord until optimum FM or FM Stereo reception is obtained.

**External FM antenna (EXT ANT):** Convenient FM antenna terminals are provided at the rear panel. For FM or FM Stereo reception in fringe areas, or where the built-in line antenna does not provide satisfactory reception, connect the dipole antenna to the FM antenna terminals.

**For best result disconnect the built-in line antenna wire from the FM antenna terminal before connecting an external FM antenna.**

Your Panasonic dealer is most familiar with the type of reception in your particular area and, if necessary, should be consulted for further information.

**46 WHISTLE DEFEAT SWITCH FOR AM RECORDING**

When recording from AM radio through the built-in 8-track tape recorder, some "whistle sound" noise may be heard from the speakers. When this occurs, simply shift this switch either "A" or "B" until the "whistle sound" noise disappears. Then satisfactory AM radio recording will be achieved.

**NOTE:** However, when "whistle sound" or "interference" noise comes from other external electrical devices, (i.e. T.V., fluorescent lamps, refrigerators, etc.) this switch is not effective.

**FINAL CHECK:** Carefully re-check all connections made to the music center. Then plug the power cord into a standard electrical outlet (120V AC, 60 Hz) and proceed operation.



# PRODUCT SERVICE

## Before calling your Panasonic Servicenter .....

Before bringing your set to a servicenter, check the "Some Helpful Hints" chart for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the Directory of Authorized Servicenters (enclosed with this unit) for the Servicenter nearest you, or consult your Panasonic dealer for instructions.

## Location of Serial Number

You will find the SERIAL NUMBER on the rear panel of this unit.

## RA-6600 SPECIFICATIONS

### AMPLIFIER SECTION

**Output Power:** 12W per Channel THD 0.8%

**Input Sensitivity/Impedance:**

Phono; Magnetic	5mV, 40k ohms
Ceramic	400mV, 1M ohms
MIC (Mixing);	0.5mV, 15k ohms
AUX;	300mV, 50k ohms
EXT. TAPE;	300mV, 10k ohms

**Output Level/Impedance:**

150mV, 3.5k ohms

**Tone Controls:** Bass;  $\pm 10$ dB at 100Hz

Treble;  $\pm 10$ dB at 10kHz

**S/N (IHF A):** PH; 70dB (Open)

AUX; 80dB (Open)

### FM TUNER SECTION

**Usable Sensitivity:**  $2.0\mu\text{V}$  (S/N 30dB MOD. 30%)

**Harmonic Distortion:** MONO; 0.3% (at 1kHz)

STEREO; 0.4% (at 1kHz)

**Selectivity:** 45dB

**S/N:** 68dB (at 1kHz)

**Stereo Separation:** 40dB (at 1kHz)

**Frequency Range:** 88MHz ~ 108MHz

**Antenna:** 300 ohms, Balanced

### AM TUNER SECTION

**Sensitivity:**  $100\mu\text{V/m}$  for 50mW

**Selectivity:** 25dB

**Image Ratio:** 40dB

**IF Frequency Rejection:**

40dB

**Frequency Range:** 525kHz ~ 1605kHz

### TAPE DECK SECTION

**Recording System:** AC Bias (47kHz) Manual/ALC

**Erasing System:** AC Erase (47kHz)

**Tape Speed:** 9.5cm/sec. (3-3/4 I.P.S.)

**Frequency Response:**

40Hz ~ 12kHz (Normal)

**S/N Ratio:** 48dB/Linear

**Wow & Flutter:** 0.25% (RMS)

0.2% (WRMS)

**AC POWER SUPPLY:**

AC 120V, 60Hz

**POWER CONSUMPTION:**

80W

**DIMENSION:** 482 x 177 x 325mm

(7") (19") (12-3/4")

**WEIGHT:** 8.4kg (18 lb 8 oz)

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