

YAMAHA

TX-480 TX-480L TX-580RDS

Natural Sound AM/FM Stereo Tuner

40 Station Random Access Preset Tuning

Automatic Preset Tuning

Multi-Status Station Memory

Rotary Encoder Tuning

Direct PLL Synthesizer Tuning

Preset Station Shifting Capability

Multi-Functions for RDS Broadcast Reception (TX-580RDS only)

Thank you for selecting this YAMAHA Stereo Tuner.



OWNER'S MANUAL

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IMPORTANT!

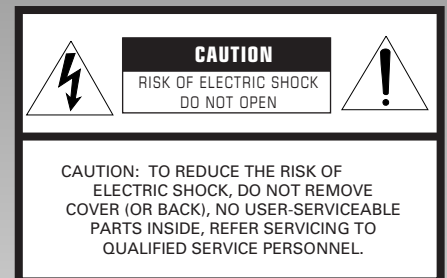
Please record the serial number of this unit in the space below.

Model:
Serial No.:

The serial number is located on the rear of the unit.
Retain this Owner's Manual in a safe place for future reference.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.



• Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you 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.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

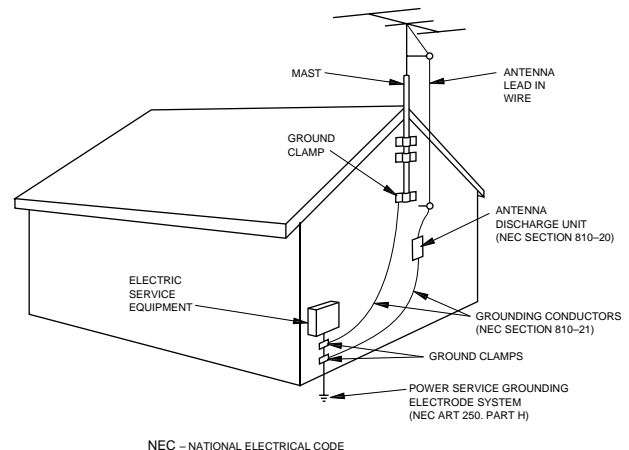
SAFETY INSTRUCTIONS

- 1 Read Instructions – All the safety and operating instructions should be read before the unit is operated.
- 2 Retain Instructions – The safety and operating instructions should be retained for future reference.
- 3 Heed Warnings – All warnings on the unit and in the operating instructions should be adhered to.
- 4 Follow Instructions – All operating and other instructions should be followed.
- 5 Water and Moisture – The unit should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
- 6 Carts and Stands – The unit should be used only with a cart or stand that is recommended by the manufacturer.
- 6A A unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit and cart combination to overturn.
- 7 Wall or Ceiling Mounting – The unit should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 8 Ventilation – The unit should be situated so that its location or position does not interfere with its proper ventilation. For example, the unit should not be situated on a bed, sofa, rug, or similar surface, that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- 9 Heat – The unit should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.
- 10 Power Sources – The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the unit.
- 11 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 unit.
- 12 Cleaning – The unit should be cleaned only as recommended by the manufacturer.
- 13 Nonuse Periods – The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.
- 14 Object and Liquid Entry – Care should be taken so that objects do not fall into and liquids are not spilled into the inside of the unit.
- 15 Damage Requiring Service – The unit should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the unit; or
 - C. The unit has been exposed to rain; or
 - D. The unit does not appear to operate normally or exhibits a marked change in performance; or
 - E. The unit has been dropped, or the cabinet damaged.



- 16 Servicing – The user should not attempt to service the unit beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.
- 17 Power Lines – An outdoor antenna should be located away from power lines.
- 18 Grounding or Polarization – Precautions should be taken so that the grounding or polarization is not defeated.
- 19 Outdoor Antenna Grounding – If an outside antenna is connected to this unit, be sure the antenna 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.

EXAMPLE OF ANTENNA GROUNDING



NEC – NATIONAL ELECTRICAL CODE

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.

We Want You Listening For A Lifetime

YAMAHA and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion – and, most importantly, without affecting your sensitive hearing. Since hearing damage from loud sounds is often undetectable until it is too late, YAMAHA and the Electronic Industries Association's Consumer Electronics Group recommend you to avoid prolonged exposure from excessive volume levels.



CAUTION: READ THIS BEFORE OPERATING YOUR UNIT

1. This unit is a sophisticated AM/FM stereo tuner. To assure proper operation and the best possible performance, please read this manual carefully.
2. Choose the installation location for the unit carefully. Avoid placing it in direct sunlight or close to a source of heat. Also avoid locations subject to vibration and excessive dust, heat, cold or moisture. Keep it away from such sources of hum as transformers or motors.
3. Do not open the cabinet, because this may result in damage to the unit or electrical shock. If a foreign object should get into the unit, contact your local dealer.
4. To prevent lightning damage, disconnect the AC power plug and disconnect the antenna cable when there is an electrical storm.
5. When disconnecting the power plug from the wall outlet, always pull directly on the plug; never pull the cord itself.
6. Do not use force when operating switches and other controls.
7. When moving the unit, be sure to first disconnect the power plug and disconnect all wires connected from the unit to other equipment.
8. Do not attempt to clean this unit with chemical solvents, because this may damage the finish. Use a clean, dry cloth.
9. Be sure to read the "TROUBLESHOOTING" section of this manual for advice on common operating errors before concluding that the unit is faulty.
10. Keep this manual in a safe place for future reference.

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE : DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. IMPORTANT : When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE : This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices.

This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices.

Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

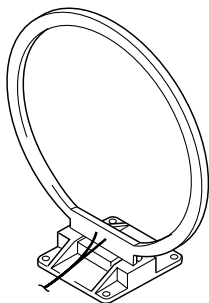
If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Electronics Corp., U.S.A. 6660 Orangethorpe Ave, Buena Park, CA 90620.

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

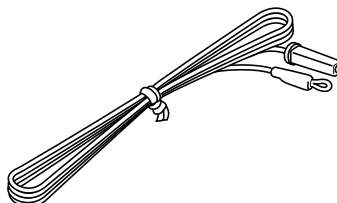
SUPPLIED ACCESSORIES

After unpacking, check that the following parts are contained.

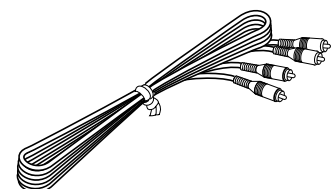
AM Loop Antenna



Indoor FM Antenna



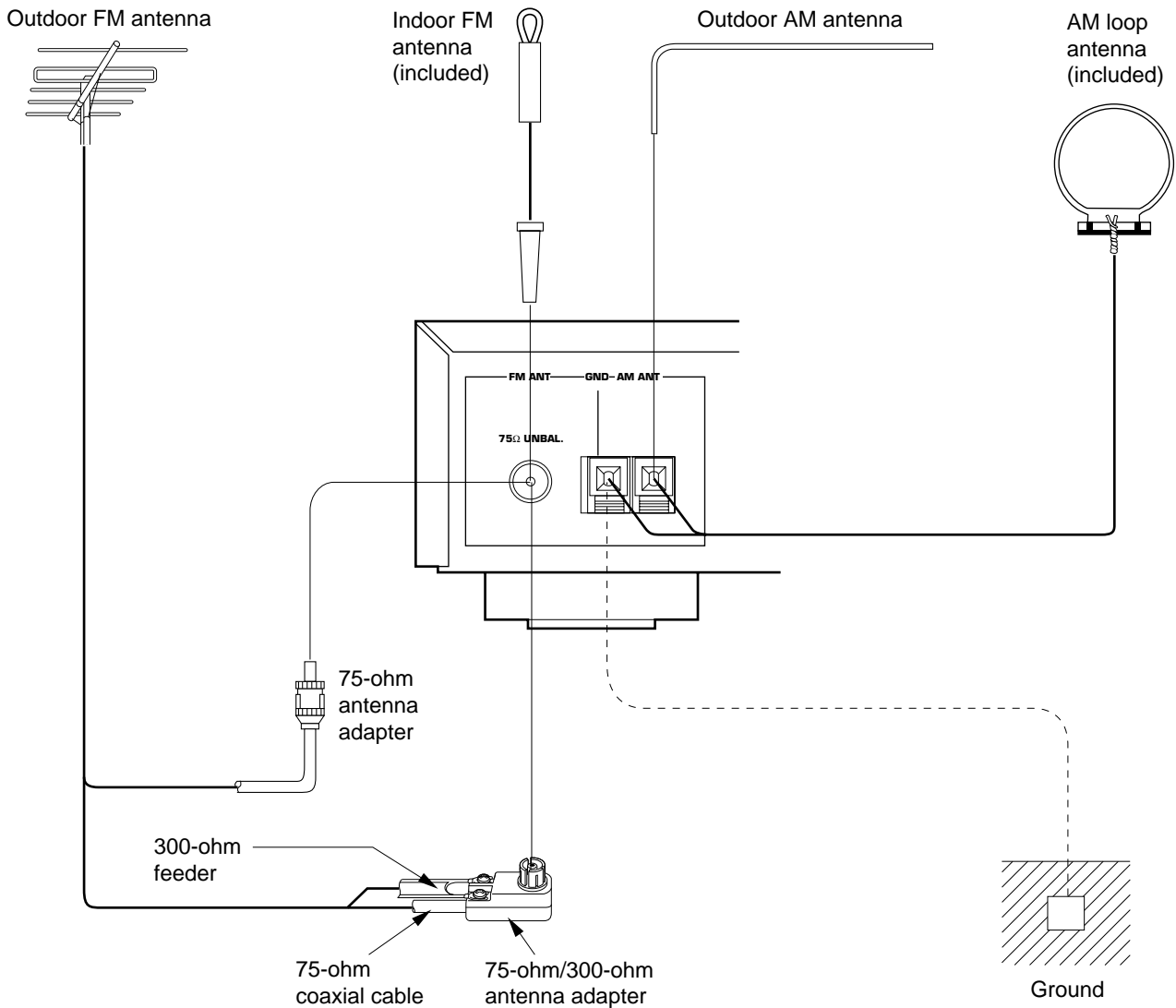
Audio connection cord



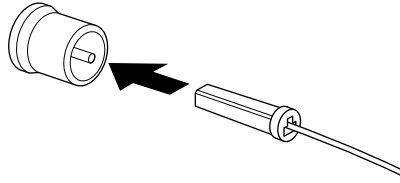
CONNECTIONS

ANTENNA CONNECTIONS

- Each antenna should be connected to the designated terminals correctly, referring to the following figure.
- Both AM and FM indoor antennas are included with this unit. In general, these antennas will probably provide sufficient signal strength. Nevertheless, a properly installed outdoor antenna will give clearer reception than an indoor one. If you experience poor reception quality, an outdoor antenna may result in improvement.

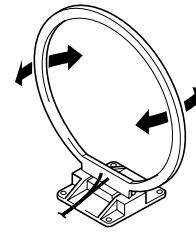
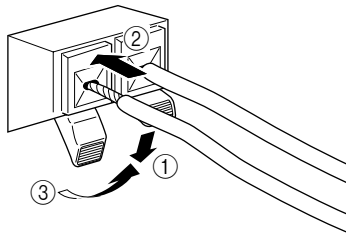


Connecting the indoor FM antenna



*If you connect an outdoor FM antenna to this unit, do not connect the indoor FM antenna to this unit.

Connecting the AM loop antenna



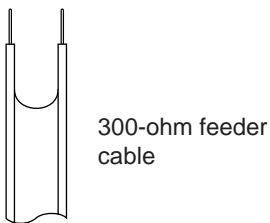
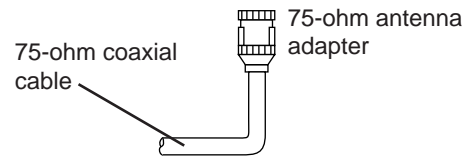
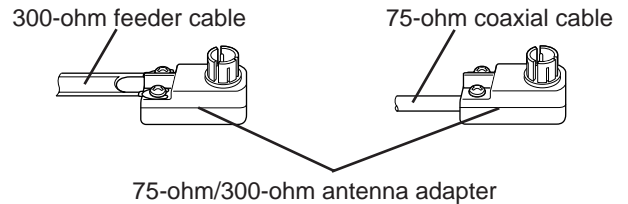
Orient so that the best reception is obtained.

- * The AM loop antenna should be placed apart from the main unit. The antenna may be hung on a wall.
- * The AM loop antenna should be kept connected, even if an outdoor AM antenna is connected to this unit.

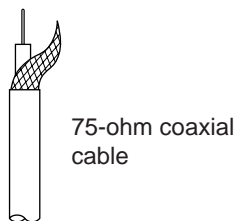
■ Optional outdoor FM antenna

Consult with your dealer or authorized service center about the best method of selecting and erecting an outdoor FM antenna. The choice of the feeder cable is also important. Flat ribbon-shaped twin-lead cable performs well electrically, and is cheaper and somewhat easier to handle when routing it through windows and around rooms. Coaxial cable is more expensive, does a much better job of minimizing interference, is less prone to the effects of weather and close-by metal objects, and is nearly as good a signal conductor as feeder cable, particularly for foam-type coaxial cables. Coaxial cable is somewhat more difficult to install at the point where the cable enters the building. If coaxial cable is selected, make sure the antenna is designed to be used with that type of cable.

- * Use a 75-ohm/300-ohm antenna adapter (not included) or a 75-ohm antenna adapter (not included) for connections.



300-ohm feeder cable



75-ohm coaxial cable

Notes for FM antenna installation

- To minimize automobile ignition noise, locate the antenna as far from heavy traffic as possible.
- Keep the feeder cable or coaxial cable as short as possible. Do not bundle or roll up excess cable.
- The antenna should be at least two meters (6.6 feet) from reinforced concrete walls or metal structures.

■ Optional outdoor AM antenna

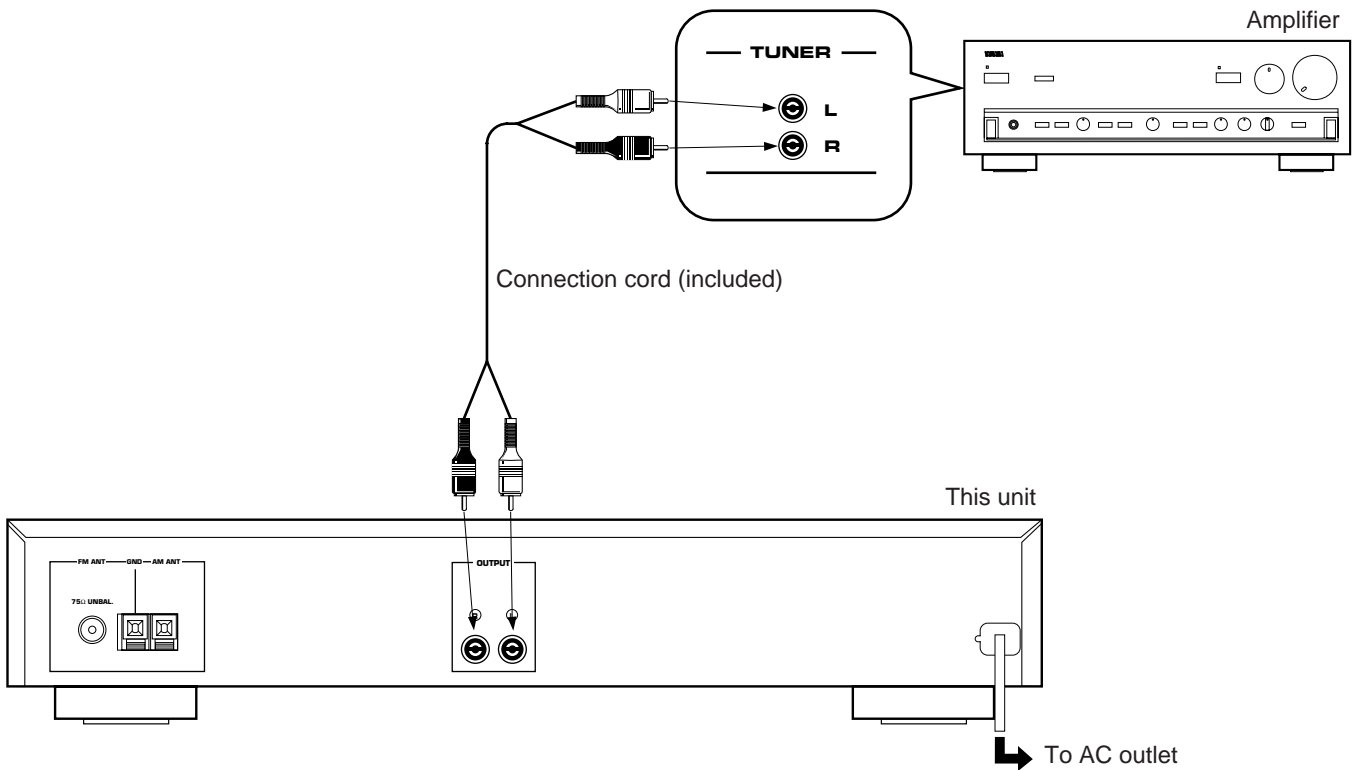
In steel buildings or at a great distance from the transmitter, it may be necessary to install an outside long wire antenna.

GND terminal

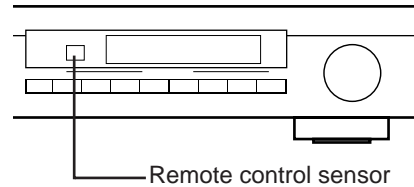
For maximum safety and minimum interference, connect the **GND** terminal to a good earth ground. A good earth ground is a metal stake driven into moist earth.

CONNECTIONS TO THE AMPLIFIER

- Before making any connections, switch OFF the power to this unit and the amplifier or other component.
- Be sure that the connections from the left ("L") and right ("R") OUTPUT terminals are connected to the corresponding (left and right) input terminals of the amplifier or other component.



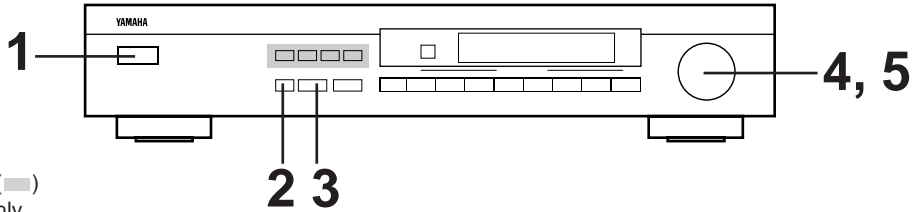
* This unit has a remote control sensor. It receives signals from a remote control transmitter provided with a YAMAHA amplifier.



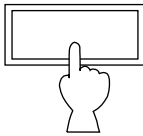
TUNING OPERATIONS

Normally, if station signals are strong and there is no interference, quick automatic-search tuning (AUTOMATIC TUNING) is possible. However, if signals of the station you want to select are weak, you must tune to it manually (MANUAL TUNING).

AUTOMATIC TUNING






* Parts in shaded area are (■) present on TX-580RDS only.





1  POWER

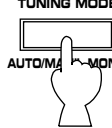
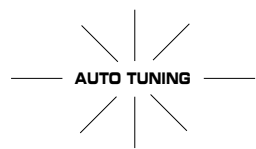
2 Select the reception band while watching the display.

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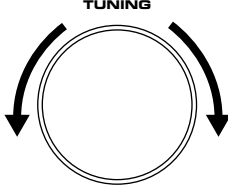
 →  or 

TX-480L

 → ,  or 

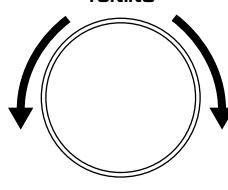
3  TUNING MODE
AUTO/MANUAL MONO →  AUTO TUNING

4 Tune to a desired station.



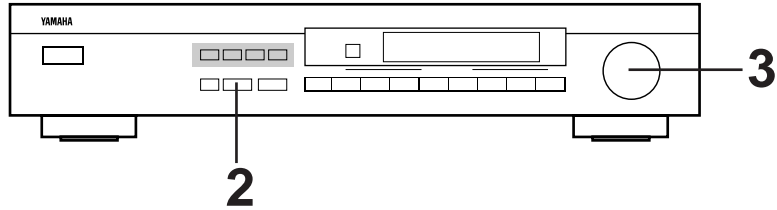
To tune to a higher frequency, slightly turn the control to the right. To tune to a lower frequency, slightly turn the control to the left.

5 If the station where tuning search stopped is not the desired one, turn again.



* If the tuning search does not stop at the desired station, change to the MANUAL TUNING method as described on the following page.

MANUAL TUNING



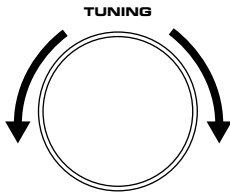
* Parts in shaded area are (■) present on TX-580RDS only.

1 Follow steps 1 and 2 on the previous page.

2

TUNING MODE
AUTOMA MONO → "AUTO TUNING" goes off.

3 Tune to a desired station manually.

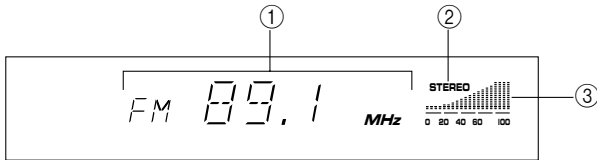


Note

If you tune to an FM station manually, it is received in monaural mode automatically to increase the signal quality.

Display information

TX-480, TX-480L



① Displays the band and frequency of the received station.

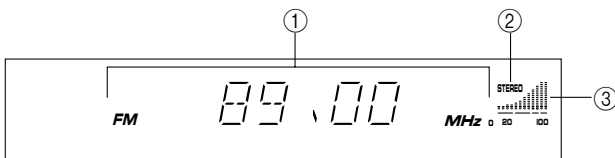
* **TX-580RDS only**

If an RDS station is received, the frequency is then replaced by the station name. (However, if the PS data cannot be received within 5 seconds, "NO PS" flashes, and then it returns to the frequency display.) Refer to page 14 for details.

② Illuminates when an FM stereo broadcast is received in stereo.

③ Indicates the signal level of the received station.

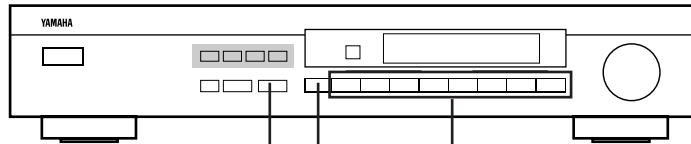
TX-580RDS



PRESET TUNING

MANUAL PRESET TUNING

This unit can store station frequencies (selected by tuning operation) by using the preset station buttons. With this function, you can select any desired station by only pressing the corresponding preset station button. Up to 40 stations (8 stations x 5 pages) can be stored.



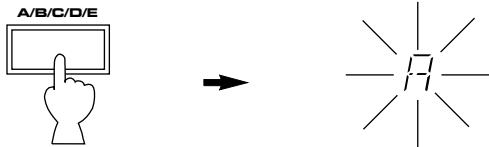
* Parts in shaded area are (■) present on TX-580RDS only.

3 2, 1 4, 2 (Preset station buttons)

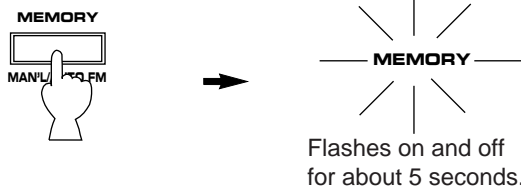
To store stations

1 Tune to a desired station.
(Refer to pages 7–8 for tuning procedure.)

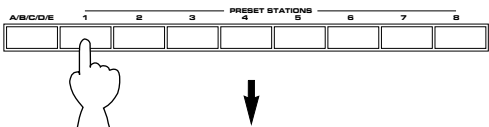
2 Select a desired page (A – E) of preset station buttons while watching the display.



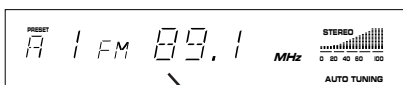
3 Press the MEMORY button. The display shows "MEMORY" and flashes on and off for about 5 seconds.



4 Press a preset station button before "MEMORY" goes off from the display.

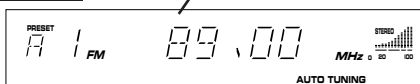


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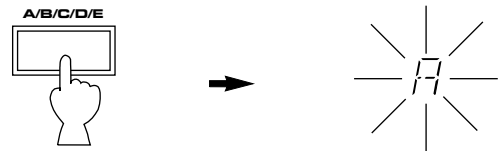
Shows the displayed station has been programmed to A1.

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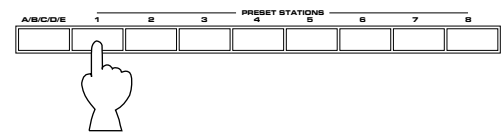


To recall a preset station

1 Select the page of preset station buttons.



2



Select the desired preset station button.

Notes

- A new setting can be programmed in place of the former one.
- For presets, the setting of the reception mode (stereo or monaural) is stored along with the station frequency.

Memory back-up

The memory back-up circuit prevents the programmed data from being lost even if the **POWER** switch is set off or the power plug is disconnected from the AC outlet or the power is cut due to temporary power failure. If, however, the power is cut for more than one week, the memory may be erased. If so, it can be re-programmed by simply following the PRESET TUNING steps.

* In the same way, program other stations to A2, A3 ... A8.

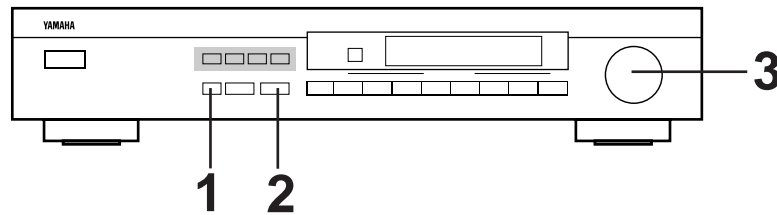
* You can program more stations to the preset station buttons on other pages in the same way by selecting other pages in step 2.

AUTOMATIC PRESET TUNING

You can also make use of an automatic preset tuning function for FM stations only. By this function, this unit performs automatic tuning and stores FM stations with strong signals sequentially. Up to 40 stations are stored automatically in the same way as in the manual preset tuning method on page 9.

TX-580RDS only

* Only RDS stations can be stored by this function.



* Parts in shaded area are (■) present on TX-580RDS only.

To store stations

1 **TX-480, TX-580RDS**

TX-480L

2

Press and hold for about 3 seconds.

Flashes.

3 Slightly turn the **TUNING** control to the right (or to the left).

* When turned to the right, automatic tuning is performed toward higher frequencies. When turned to the left, automatic tuning is performed toward lower frequencies.

This unit performs automatic tuning and received stations are programmed to A1, A2 ... A8 sequentially.

* If more than 8 stations are received, they are also programmed to other pages (B, C, D and E) of preset station buttons in that order.

If you want to store the first station received by the automatic preset tuning to a desired preset station number.

If, for example, you want to store the received first station to C5, select "C5" by using the A/B/C/D/E button and the preset station buttons after step 2, and then follow step 3. The received first station is stored to C5, and next stations to C6, C7 ... sequentially.

If stations are stored up to E8, the automatic preset tuning is finished automatically.

When the automatic preset tuning is finished

The display shows the frequency of the last preset station. Check the contents and the number of preset stations by following the procedure of the section "To recall a preset station" on page 9.

To recall a preset station

Simply follow the procedure of the section "To recall a preset station" on page 9.

TX-580RDS only

* A recalled station is shown by the frequency or station name on the display.

Notes

- You can replace a preset station by another FM or AM station manually by simply following the procedure of the section "To store stations" on page 9.
- The automatic preset tuning search will be performed through all frequencies until stations are stored up to E8. If the number of received stations is not enough to be stored up to E8, the search is finished automatically after searching through all frequencies.

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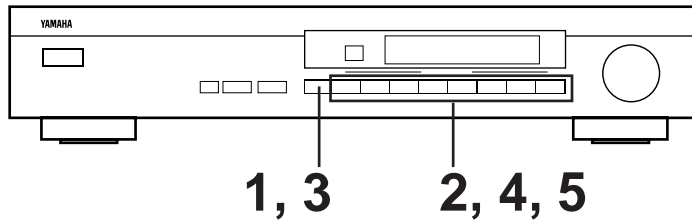
- With this function, only FM stations with sufficient signal strength are stored automatically. If the station you want to program is weak in signal strength, tune to it in monaural manually and program it by following the procedure of the section "To store stations" on page 9.

TX-580RDS

- With this function, only RDS stations with sufficient signal strength are stored automatically. If the station you want to program is weak in signal strength, tune to it in monaural manually and program it by following the procedure of the section "To store stations" on page 9.
- * There may be a case that this function cannot receive a station which could be received by the automatic tuning method. This is because this function receives a large volume of PI (Program Identification) data along with the station.

EXCHANGING PRESET STATIONS

You can exchange the places of two preset stations each other by easy operations.



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Example)
If you want to shift the preset station on E1 to A5, and vice versa.

1 Select page E.

2

Press and hold for about 3 seconds.

Flashes.

3 Select page A.

4

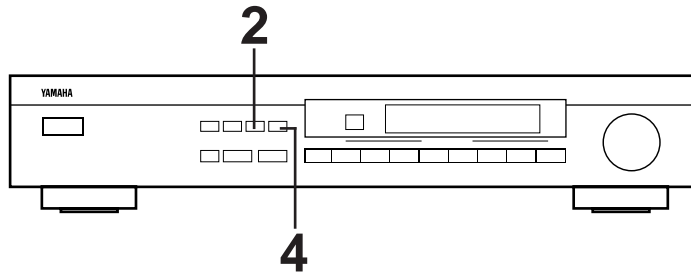
Flashes.

Listen to the station on A5 to confirm it. If it is not the station you want, re-select the proper station.

5 Press the same number again.

Lights up.

This shows the exchange of stations is completed.

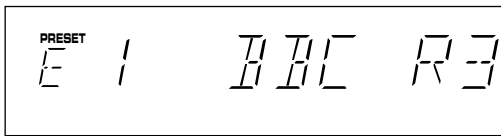


TX-580RDS

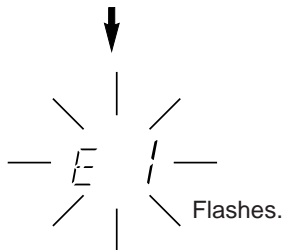
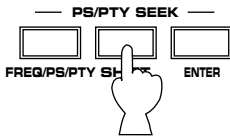
Example)

If you want to shift the preset station on E1 to A5, and vice versa.

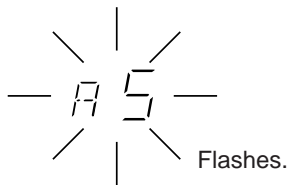
- 1** Recall the preset station on E1 (by following the method of "To recall a preset station" on page 9).



- 2** Press and hold for about 3 seconds.



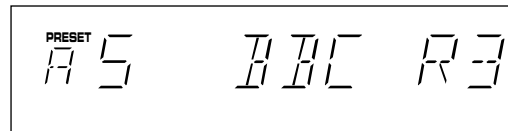
- 3** Next, recall the preset station on A5 by following the same method with step 1.



- 4**
-

E 1--A5

Lights up.



This shows the exchange of stations is completed.

RDS (Radio Data System) is a data transmission system gradually being introduced by FM stations in many countries. Stations using this system transmit an inaudible stream of data in addition to the normal radio signal.

RDS data contains various information, such as AF (Alternative Frequencies for the same program station), PI (Program Identification), PS (Program Service station name), PTY (Program Type name), etc.

RDS function is carried out among the network stations.

* This unit utilizes AF, PI, PS and PTY to receive RDS broadcast stations.

Displaying RDS data

This unit can be turned into the following two modes to display RDS data.

PS (Program Service station name) mode:

Displays the name of the RDS station now being received instead of the frequency.

BBC R3

PTY (Program Type name) mode:

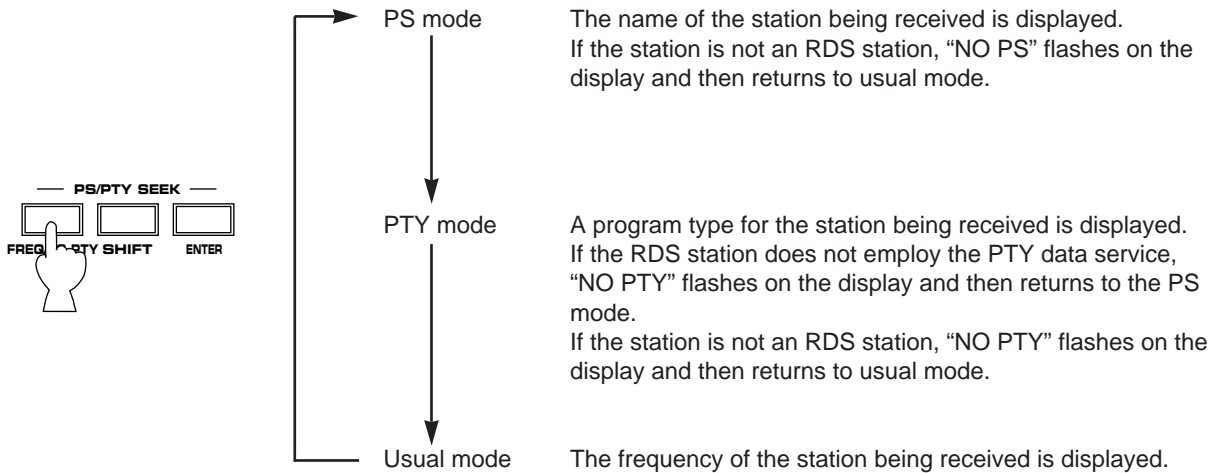
Displays the program type of the RDS station now being received. There are 15 program types to classify RDS stations as follows.

NEWS	News: Short accounts of facts, events and publicly expressed views, reportage and actuality.	VARIED	Varied: Used for mainly speech-based programs usually of light-entertainment nature, not covered by above categories. Examples are: quizzes, panel games, personality interviews, comedy and satire.
AFFAIRS	Current affairs: Topical program expanding or enlarging upon the news, generally in different presentation style or concept, including documentary debate, or analysis	POP M	Pop: Commercial music, which would generally be considered to be of current popular appeal, often featuring in current or recent record sales charts.
INFO	Information: Program whose purpose is to impart advice in the widest sense, including meteorological reports and forecasts, consumer affairs, medical help, etc.	ROCK M	Rock: Contemporary modern music, usually written and performed by young musicians.
SPORT	Sport: Program concerned with any aspect of sport.	MOR M	M.O.R.: (Middle of the Road Music). Common term to describe music considered to be "easy-listening", as opposed to Pop, Rock or Classical. Music in this category is often but not always, vocal, and usually of short duration (<5 min.)
EDUCATE	Education: Program intended primarily to educate, of which the formal element is fundamental.	LIGHT M	Light classics: Classical Musical for general, rather than specialist appreciation. Examples of music in this category are instrumental music, and vocal or choral works.
DRAMA	Drama: All radio plays and serials.	CLASSICS	Serious classics: Performances of major orchestral works, symphonies, chamber music etc., and including Grand Opera.
CULTURE	Culture: Programs concerned with any aspect of national or regional culture, including religious affairs, philosophy, social science, language, theatre, etc.	OTHER M	Other music: Musical styles not fitting into any of the above categories. Particularly used for specialist music, of which Jazz, Rhythm & Blues, Folk, Country, and Reggae are examples.
SCIENCE	Science: Programs about the natural sciences and technology.		

To turn the unit into the PS mode or PTY mode

Press the **FREQ/PS/PTY** button. Whenever pressed, the mode changes into the PS mode, PTY mode and returns to usual mode in turn.

* When an RDS station is received, the display is automatically turned into the PS mode. Do not press the **FREQ/PS/PTY** button until the display is turned into the PS mode. If the button is pressed before the display mode is changed, it may occur that "NO PS" flashes on the display. This is because the unit has not received all of the RDS data on the station yet.

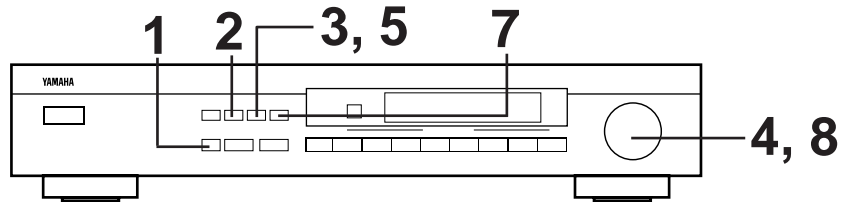




Note

When PS or PTY data reception is not possible due to poor reception conditions, "NO PS" or "NO PTY" flashes on the display in each mode. In such a case, press the **TUNING MODE** button so that "AUTO TUNING" goes off from the display. Though the reception mode is changed to monaural by this operation, when you changes to the PS or PTY mode, PS or PTY data may be displayed.


Calling a preset RDS station by the station name (PS SEEK)

You can call a desired RDS station stored in this unit by only inputting the name of the station in the PS mode. By this operation, this unit searches all preset stations for the station. You do not have to input a full name, even only the first letter can be used for calling. As many as 8 letters and/or numerals can be selected for inputting a name.


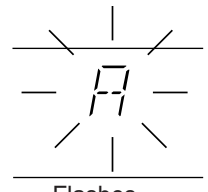


1  → 

2 Turn the unit into the PS mode.

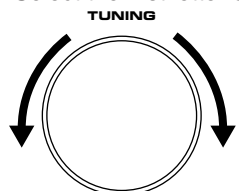
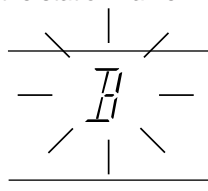
 → A station name is displayed or "NO PS" flashes.

* If "NO PS" flashes, proceed to the next step while flashing. If "NO PS" disappears before you proceed to the next step, press the **FREQ/PS/PTY** button again.

3  → 


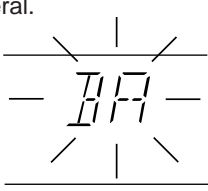
Flashes

4 Select the first letter or numeral of the station name.

 → 

* By turning the **TUNING** control, the display will change letters and numerals in sequence.
* If you will not input the second letter, skip to step 7.


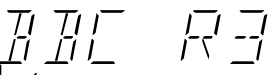
5 When the first letter or numeral of the station name appears, press the **SHIFT** button to proceed to the selection of the next letter or numeral.

 → 

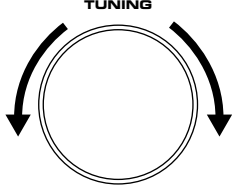
"A" will flash on the second letter or numeral position.

6 Repeat steps 4 and 5 for other letters and/or numerals, if necessary.

7 When inputting the name is finished, press the **ENTER** button.

 → 

The name is illuminated.

8  Slightly turn.

The unit begins searching for the station, and it is continued until the station is found.

You do not have to input a full name for searching for the station

You may input only the first letter of the station name. If doing so, you can skip steps 5 and 6. In step 8, the unit searches for and calls a nearest station which has the letter you input. If the station is not the desired one, turn the **TUNING** control again. The unit will begin searching for another station which has the same letter.

To cancel this function

Press the **AF**, **FREQ/PS/PTY**, **SHIFT**, **ENTER**, **FM/AM** or **MEMORY** button.

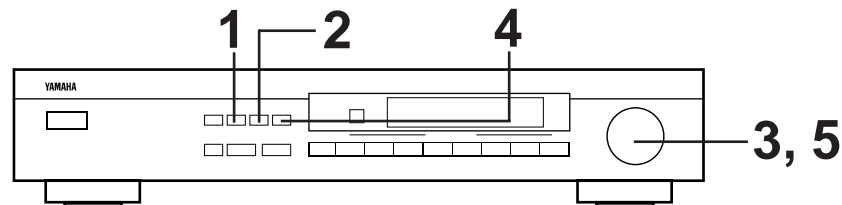
Notes

- If no station is found by this function after searching all preset stations, "NO PS" flashes for about 3 seconds on the display, and then it returns to the mode which had been obtained before the searching was performed.
- This function is useful especially for calling a station with weak signals which cannot be received by the automatic tuning method. By only storing such a station, you can call it any time easily.

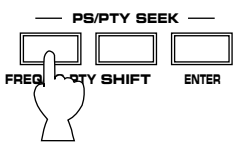
Calling a preset RDS station by the program type (PTY SEEK)

By designating a program type, the unit automatically searches all preset stations for RDS stations of that program type.

* There are 15 program types to classify RDS stations. For details, refer to page 13.

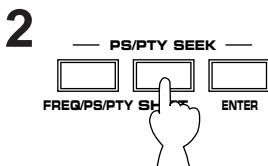


1 Turn the unit into the PTY mode.



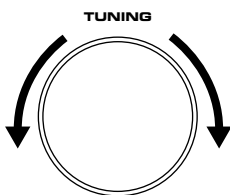
Press once or twice until a program type is displayed or "NO PTY" flashes.

* If "NO PTY" flashes, proceed to the next step while flashing. If "NO PTY" disappears before you proceed to the next step, press the **FREQ/PS/PTY** button once or twice.



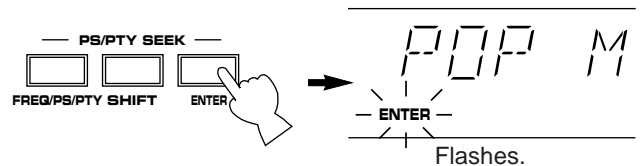
The program type of the station now being received or "NEWS" flashes on the display.

3 Select the desired program type.



* By turning the **TUNING** control, the display will change program types in sequence.

4 When the desired program type appears, press the **ENTER** button.



5 **TUNING**
Slightly turn.

The unit begins searching all preset stations, and calls a station of the program type if such a station is found.

* When the **TUNING** control is turned clockwise, the search is performed from "A1" toward higher numbers of the preset stations (A1, A2 ... A8, B1, B2, ...). If, however, "A3" is currently being called for example, the search begins from the next station "A4".

When the **TUNING** control is turned counterclockwise, the search is performed in reverse order.

If the called station is not the desired one, turn the **TUNING** control again to search for another station of the same program type.

To cancel this function

Press the **AF**, **FREQ/PS/PTY**, **SHIFT**, **ENTER**, **FM/AM** or **MEMORY** button.

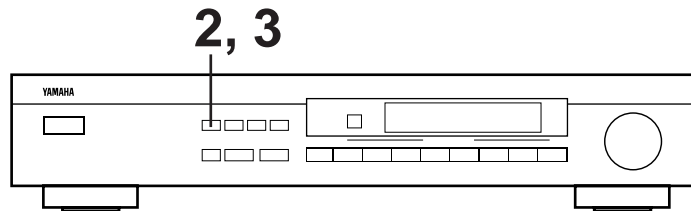
Note

If no station is found by this function, after searching all preset stations, "NO PTY" flashes for about 3 seconds on the display, and then it returns to the mode which had been obtained before the searching was performed.

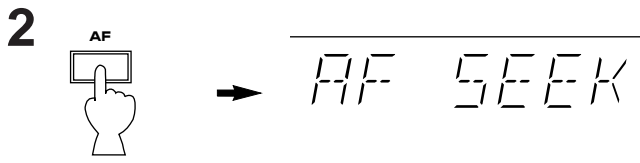
Calling the best quality RDS station which broadcasts the same program (AF SEEK)

This function automatically searches for and calls another RDS station of the best reception quality which broadcasts the same program now you are listening to.

This function utilizes AF (Alternative Frequencies for the same program station) and PI (Program Identification) of RDS data service. The search is carried out among the RDS network stations.



- 1** Tune to a desired RDS station.
 * Wait for about 10 seconds before proceeding to the next step. This is for making this unit carry out searching more stations.

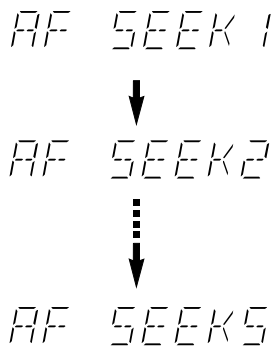


The unit searches network stations for other stations with the same program.

- * If the station is not an RDS station, or there is no other station with the same program, "NO AF" flashes.



Stations with the same program are all stored and numbered from the best quality station in sequence.



When the search is finished, the best quality station is called.

- 3** If desired, you can call the second station by pressing the **AF** button.



Whenever the **AF** button is pressed, stored stations are called in sequence.

When pressed after the last station is selected, the first one is restored.

To cancel this function

Press a button other than the **AF** button.
 All of the stored stations will be also cleared.

TROUBLESHOOTING

If the unit fails to operate normally, check the following points to determine whether the fault can be corrected by the simple measures suggested. If it cannot be corrected, or if the fault is not listed in the SYMPTOM column, disconnect the power cord and contact your authorized YAMAHA dealer or service center for help.

	SYMPTOM	CAUSE	REMEDY
FM	Crackling sounds from time to time (especially in weak signal areas).	Ignition noise from passing vehicles.	The FM antenna should be put up as high as possible, away from the road, and a coaxial cable used.
		Noise from thermostats or other electrical equipment.	Attach a noise suppressor to the equipment causing the noise.
	FM stereo reception is noisy.	Because of the characteristics of FM stereo broadcasts, this is limited to cases where the transmitter is far away or the antenna input is poor.	Check the antenna connections. Try using a high quality directional FM antenna. Set the TUNING MODE button to the manual tuning mode.
	The STEREO indicator flickers and reception is noisy.	Insufficient antenna input.	Use an antenna appropriate for the reception condition in your area.
		Not tuned correctly.	Tune again.
	There is distortion and clear reception cannot be obtained even with a good FM antenna.	There is multipath interference.	Adjust antenna placement to eliminate multipath interference.
	No stereo effect even with a stereo broadcast.	The TUNING MODE button is set to the manual tuning mode.	Set the button properly.
	A desired station cannot be tuned in with Automatic tuning.	The station is too weak.	Use the manual tuning mode. Use a high quality directional FM antenna.
Previously preset stations can no longer be tuned in.	The tuner has been unplugged for a long period.	Repeat the presetting procedure.	
AM	Insufficient sensitivity.	Weak signal or loose antenna connections.	Tighten the AM loop antenna connections and rotate it for best reception.
	A desired station cannot be tuned in with Automatic tuning.		Use the manual tuning mode.
	There are continuous crackling and hissing noises.	These noises result from lightning, fluorescent lamps, motors, thermostats and other electrical equipment.	Use an outdoor antenna and a ground wire. This will help somewhat but it is difficult to eliminate all noises.
	There are buzzing and whining noises (especially in the evening).	Another station is interfering with the received station.	This is impossible to remedy.
A television set is being used nearby.		Relocate this unit away from the TV.	

SPECIFICATIONS

FM SECTION

Tuning Range	
[U.S.A. and Canada models]	87.5 to 107.9 MHz
[U.K., Australia, Europe and General models]	87.5 to 108 MHz
50 dB Quieting Sensitivity (IHF) [Except Europe model]	
75 ohms Mono	1.6 μ V (15.3 dBf)
75 ohms Stereo	21 μ V (37.7 dBf)
Usable Sensitivity	
[Except Europe model]	
75 ohms, 1 kHz, 100% mod. (30 dB S/N Quieting)	0.8 μ V (9.3 dBf)
[Europe model] (DIN)	
75 ohms Mono (S/N 26 dB)	0.9 μ V
75 ohms Stereo (S/N 46 dB)	24 μ V
Image Response Ratio	
[Except Europe model]	45 dB
[Europe model]	80 dB
IF Response Ratio	
<TX-480, TX-480L>	70 dB
<TX-580RDS>	80 dB
Spurious Response Ratio	70 dB
AM Suppression Ratio	55 dB
Capture Ratio	1.5 dB
Alternate Channel Selectivity	
[Except Europe model]	85 dB
Selectivity (two signals, 40 kHz Dev., \pm 300 kHz)	
[Europe model only]	70 dB
Signal-to-Noise Ratio	
[Except Europe model] (IHF)	
Mono	82 dB
Stereo	76 dB
[Europe model] (DIN-weighted)	
Mono (40 kHz Dev.)	75 dB
Stereo (40 kHz Dev.)	70 dB
Harmonic Distortion (1 kHz)	
[Except Europe model]	
Mono/Stereo	0.1%/0.2%
[Europe model (40 kHz Dev.)]	
Mono/Stereo	0.1%/0.2%
Stereo Separation	
[Except Europe model]	1 kHz 52 dB
[Europe model (40 kHz Dev.)]	1 kHz 45 dB
Frequency Response	
30 Hz to 15 kHz	0 \pm 0.5 dB

AM (MW) SECTION

Tuning Range	
[U.S.A., Canada and General models]	530 to 1,710 kHz
[U.K., Australia and Europe models]	531 to 1,611 kHz
Usable Sensitivity	
<TX-480, TX-480L>	200 μ V/m
<TX-580RDS>	100 μ V/m
Selectivity	32 dB
Signal-to-Noise Ratio	50 dB
Image Response Ratio	40 dB
Spurious Response Ratio	50 dB
Harmonic Distortion; 400 Hz	0.3%

AM (LW) SECTION <TX-480L only>

Tuning Range	153 to 288 kHz
Usable Sensitivity	400 μ V/m
Selectivity	32 dB
Signal-to-Noise Ratio	50 dB
Image Response Ratio	30 dB
Spurious Response Ratio	45 dB
Harmonic Distortion; 400 Hz	0.3%

AUDIO SECTION

<TX-480, TX-480L>

Output Level/Impedance	
FM (100 % mod. 1 kHz)	
[Except Europe model]	550 mV/2.2 k-ohms
[Europe model (40 kHz Dev.)]	400 mV/2.2 k-ohms
AM (30% mod. 400 Hz)	
[Except Europe model]	180 mV/2.2 k-ohms
[Europe model]	150 mV/2.2 k-ohms

<TX-580RDS>

Output Level/Impedance	
FM (100 % mod. 1 kHz)	
[U.K. model]	600 mV/2.2 k-ohms
[Europe model (40 kHz Dev.)]	600 mV/2.2 k-ohms
AM (30% mod. 400 Hz)	
[U.K. model]	200 mV/2.2 k-ohms
[Europe model]	150 mV/2.2 k-ohms

GENERAL

Power Supply	
[U.S.A. and Canada models]	120V, 60 Hz
[Europe model]	230V, 50 Hz
[U.K. and Australia models]	240V, 50 Hz
[General model]	110-120/220-240V, 50/60 Hz
Power Consumption	
<TX-480, TX-480L>	7W
<TX-580RDS>	10W
Dimensions (W x H x D)	435 x 86 x 294 mm (17-1/8" x 3-3/8" x 11-9/16")
Weight	3.2 kg (7 lbs. 1 oz.)
Accessories	Audio connection cord AM loop antenna Indoor FM antenna

* Specifications subject to change without notice.

YAMAHA

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