



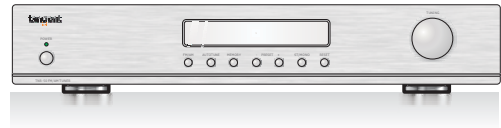
Instruction manual

TNR-50 FM/AM tuner

Accessories

- 1 1 x TNR-50
- 2 1 x Remote control
- 3 2 x Batteries (Optional)
- 4 1 x FM Antenna (Optional)
- 5 1 x Operation Manual

1



2



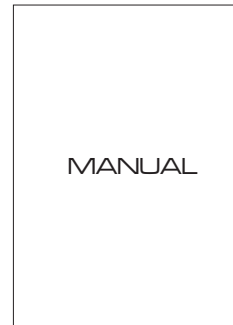
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This operation manual supplies all the information that you need to have about your Tangent TNR-50. Please read this operation manual carefully before you start using the unit!

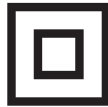
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A triangle with a lightning symbol draws the user's attention to "dangerous voltage" without insulation in the cabinet which may be high enough to entail a risk of electric shock.



A triangle with an exclamation mark draws the user's attention to important instructions for use and maintenance in the accompanying manual, which should be studied.



A symbol for CLASS II (double insulation)

WARNING: TO MINIMISE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE. DO NOT OPEN THE CABINET AS IT CONTAINS DANGEROUS VOLTAGE. ONLY QUALIFIED TECHNICIANS ARE ALLOWED TO CARRY OUT REPAIR AND SERVICE.

CAUTION: If the plug of the power cord needs to be replaced, it is important that the replacement is identical to the plug to be replaced, or that the new plug has been recommended by the manufacturer

TO AVOID ELECTRICAL SHOCK, IT IS IMPORTANT TO INSERT THE PLUG CORRECTLY INTO THE SOCKET.

WARNING: IT IS IMPORTANT THAT YOU READ AND OBSERVE BOTH THE INSTRUCTIONS IN THIS MANUAL AND THE INSTRUCTIONS ON THE UNIT. KEEP THIS MANUAL FOR FUTURE REFERENCE.

This unit was designed and manufactured with a view to providing maximum safety for the user. Incorrect use of the unit may cause electrical shock or fire. The protection devices built into this unit will protect the user if the procedures below are observed in connection with installation, use and repair. This unit is fully electronic and contains no parts that can be repaired by the user.

DO NOT REMOVE THE CABINET. RISK OF DANGEROUS VOLTAGE. ONLY QUALIFIED TECHNICIANS ARE ALLOWED TO REPAIR THE UNIT.

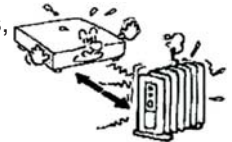
Read the manual

Upon unpacking the unit, please read the manual carefully and observe all the instructions given.



Heat

Do not place the unit near sources of heat such as radiators, heat registers, ovens or other units that produce heat.



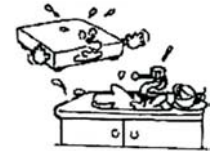
Power supply

Only the power supply indicated on the rating plate must be used for this unit. If you are not sure which power supply you have, please contact the distributor or the local electricity supplier.



Water and moisture

The unit must not be placed close to water, such as bathtub, wash basin, kitchen sink or laundry tub, in a damp cellar or close to a swimming pool, etc.



Earthing or polarisation

If the plug cannot be inserted properly into the socket, or if the plug does not fit, the unit must not be used in your country.

Cleaning

Unplug the unit before cleaning. Do not use liquid detergents and aerosol cleaning agents. Use a dry cloth.



Ventilation

The cabinet is provided with slots and openings to ensure ventilation and reliable operation and to protect the unit against overheating. Do not block or cover these openings. The openings must never be blocked, for instance by placing the unit on a bed, a sofa, a carpet or similar surface.

Power cords

Wiring must be organised to prevent people from stepping on the cables and to avoid pinching by objects placed on or beside them. Take special care around sockets and plug boxes and where the power cords leave the unit.



Overloading

Make sure that wall sockets, extension cords and plug boxes are not overloaded as this may lead to fire or electrical shock.



Lightning

Unplug the unit for additional protection during thunder or when the unit is not used for prolonged periods. This will prevent damage to the unit from lightning and power surges.

**Penetration of objects and liquid**

Never push any foreign objects through the openings into the unit, as they may touch dangerous voltage points or short-circuit parts and thus cause fire or electric shock. Do not spill liquid on the unit.

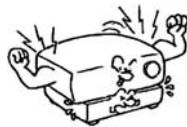
**Accessories**

Do not place the unit on unstable surfaces such as a trolley, stand, tripod, shelf or table. The unit may fall and injure children or adults or be seriously damaged. Use only trolley, stand, tripod, shelf or table that is very stable or provided with the unit. The unit must be installed in accordance with the manufacturer's instructions and by means of installation equipment recommended by the manufacturer.

If the unit is placed on a trolley, the trolley must be moved very carefully. Sudden stops, unnecessary force and uneven surfaces may cause the trolley to turn over.

**Loads**

Do not place heavy loads on the unit and do not step on it. The load may fall and cause serious injury to persons or damage to the unit.

**Damage**

Unplug the unit and contact qualified technicians in the following cases:

- A) If the power cord or the plug is damaged.
- B) If liquid has been spilled on the unit or objects have fallen into the unit.
- C) If the unit has been exposed to rain or water.
- D) If the unit does not work properly after adhering to the instructions in the operation manual. Only the settings described in the operation manual must be made as incorrect setting may result in damage and often will make it difficult for a qualified technician to make the unit work properly again.
- E) If the unit has been dropped or damaged in any other way.
- F) When the operation of the unit changes drastically, the unit requires service.

Service

Do not attempt to carry out any service work yourself. By opening or removing the cabinet, you will be exposed to dangerous voltage or other hazards. Any service work should be carried out by qualified technicians.

**Spare parts**

If spare parts are required, make sure that the service technician uses spare parts specified by the manufacturer or spare parts with the same characteristics as the original. Unauthorised spare parts may cause fire, electrical shock, etc.

Safety check

After service or repairs on the unit, ask the service technician to carry out a safety check to ensure that the unit is ready for use.



Handling instructions

- The top and back panel of the unit may become warm after prolonged use. This is not due to a defect.
- Turn off the power when the unit is not used.

Protect the power cord

Follow the instructions below to prevent abnormal operation, electrical shock, fire or personal injury:

- Hold the plug firmly when inserting it into the socket.
- Avoid heat-producing devices.
- Do not place objects on the power cord.
- Do not carry out service work on or change the power cord.

Positioning

Do not place the unit in any of the fol. places:

- In sunlight, close to heat-producing devices or in an enclosed rack.
- In places with high temperatures (40C or more) or high relative humidity (90% or more).
- In dirty places as some internal parts may be damaged.

Do not put your fingers or any other objects into the unit

- Touching the internal parts is dangerous and may cause injury or damage. Do not open the cabinet.
- Do not place any foreign matter in the unit.

Interference

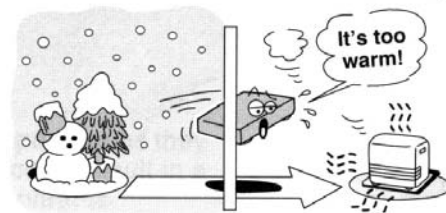
Placing the unit near a television set, radio or video player may cause poor picture and sound quality. In that case, move the unit further away from the television set, radio or video player.

Condensation

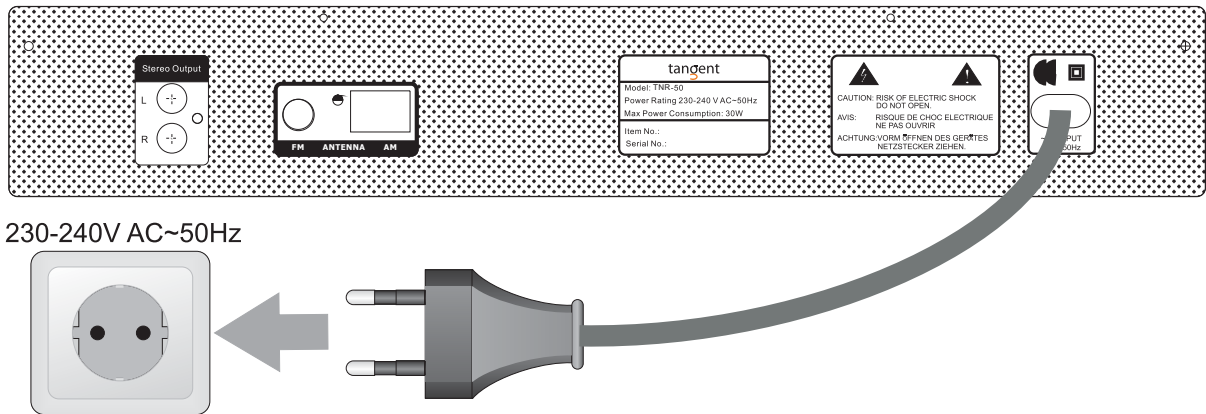
Condensation may occur in the following cases:

- When the unit is moved directly from a cold to a warm place.
- When the unit is used in a room where the radiator has just been switched on or a place where the cold air from the air-conditioning system is directed at the unit.
- If the unit is used in the summer in a warm and humid room just after it has been moved from an air-conditioned room.
- If there is steam or a high level of humidity in the room.

In case of condensation, the unit will not work properly. Turn off the unit. Unplug the unit and leave it for 2-3 hours. The unit will then have adapted to the environment and any condensation will have disappeared.



Connection to the mains



Do not turn on the power before all connections have been made correctly. Check that all connections have been made correctly before turning on the power. Check that the mains voltage is 230-240V AC50Hz before turning on the power.

Connection to the mains

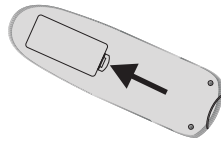
Check that all other connections have been made correctly before inserting the mains plug into the wall socket.

Then insert the plug into a suitable socket.

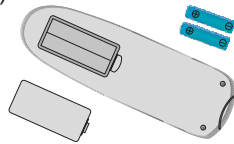
If the unit is to be used abroad, you may need an adapter.

Installation of batteries

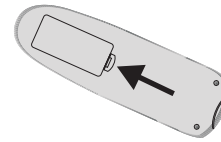
1 Remove the cover as illustrated.



2 Position two batteries of the type AAA/R03/UM4 in the battery compartment. Make sure that the orientation of the batteries is correct (see drawing at bottom).



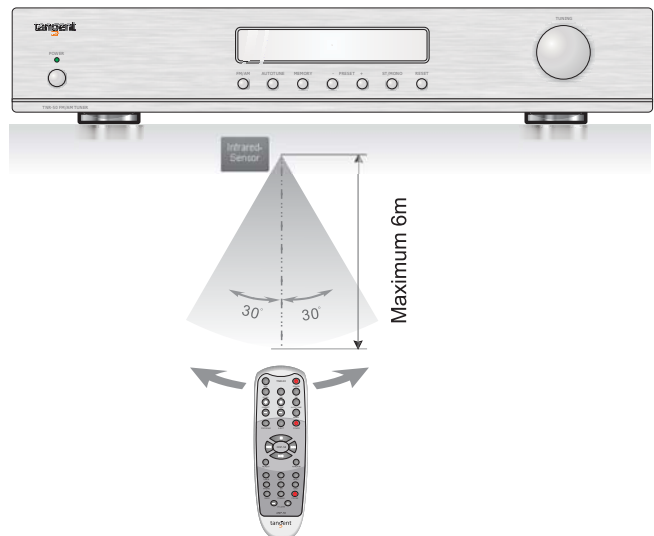
3 Replace the cover.



- Do not mix new and old batteries and do not use different types of batteries.
- If the remote control is not used for prolonged periods, remove the batteries from the remote control to avoid corrosion.

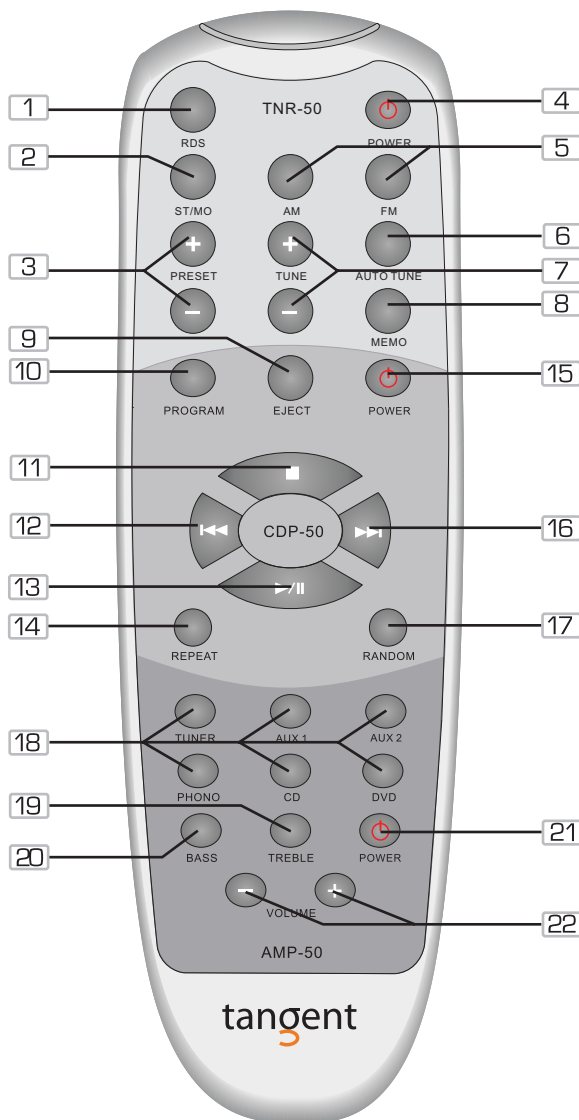
Using the remote control

Direct the remote control at the sensor on the front panel of the unit. When the remote control signal is received, the unit reacts accordingly. The remote control works within a range of 6 metres.



- Sometimes the remote control does not work well in strong light. You may have to move the unit if it is a problem.
- Malfunction may occur if other remote controls are used near the unit.
- Do not place any objects on the remote control, as the batteries may become flat if a key is depressed constantly.
- Make sure that there are no obstacles between remote control and unit.
- Do not position the unit behind tinted glass as it may reduce the maximum range of the remote control.

Remote control functions



TNR-50 FUNCTIONS:

- 1 **RDS:** Switches between RDS information of the selected channel.
- 2 **St/Mono:** Switches between MONO and STEREO on the FM band.
- 3 **Preset +/-:** Changes up or down between stored stations.
- 4 **Power:** Sets the TNR-50 in standby mode.
- 5 **AM and FM:** Press these buttons to change between FM and AM.
- 6 **Autotune:** (Auto Preset Search) Press this button once and the tuner will auto tune and store all available stations.
- 7 **Tune +/-:** Press these buttons to manually search up or down in frequency.
- 8 **Memo:** After Manually searching with the Tune +/- button, press the Memo button and the frequency will be stored on the current preset.

CDP-50 FUNCTIONS:

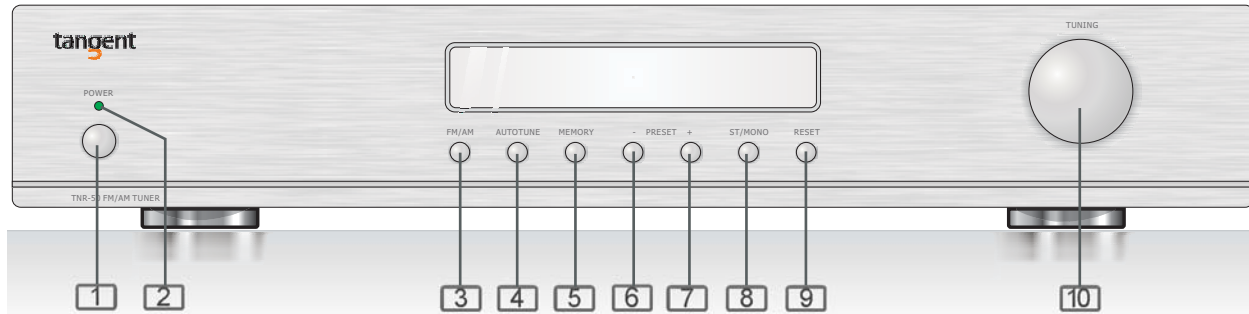
- 9 **Eject:** Opens the CD tray.
- 10 **Program:** Allows playback of the music tracks on a CD in a certain order.
- 11 **Stop:** Stops playback.
- 12 **Previous:** Selects the previous track. Depress button to rewind.
- 13 **Play/Pause:** Starts and pauses playback.
- 14 **Repeat:** Repeats a single track or all tracks on a CD.
- 15 **Power:** Sets the CDP-50 in standby mode.
- 16 **Next:** Selects the next track. Depress button for fast forward.
- 17 **Random:** All tracks are played in random order.

AMP-50 FUNCTIONS

- 18 **Input buttons:** Selects input of amplifier.
- 19 **Treble:** Adjusts treble level by means of VOL + and -.
- 20 **Bass:** Adjusts bass level by means of VOL + and -.
- 21 **Power:** Sets the AMP-50 in standby mode.
- 22 **Volume +/-:** Adjusts the master volume.

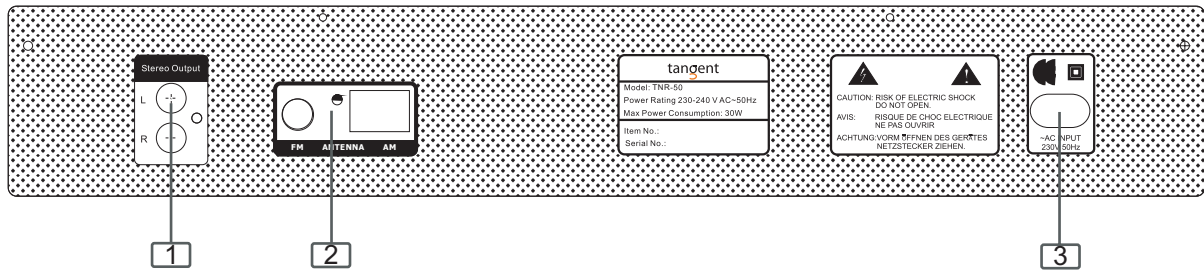
Some of the functions of the unit can only be performed by means of the remote control. Some functions are connected with the selected signal input source. Some buttons on the remote control may therefore not be available if the corresponding signal input source has not been selected.

Front panel



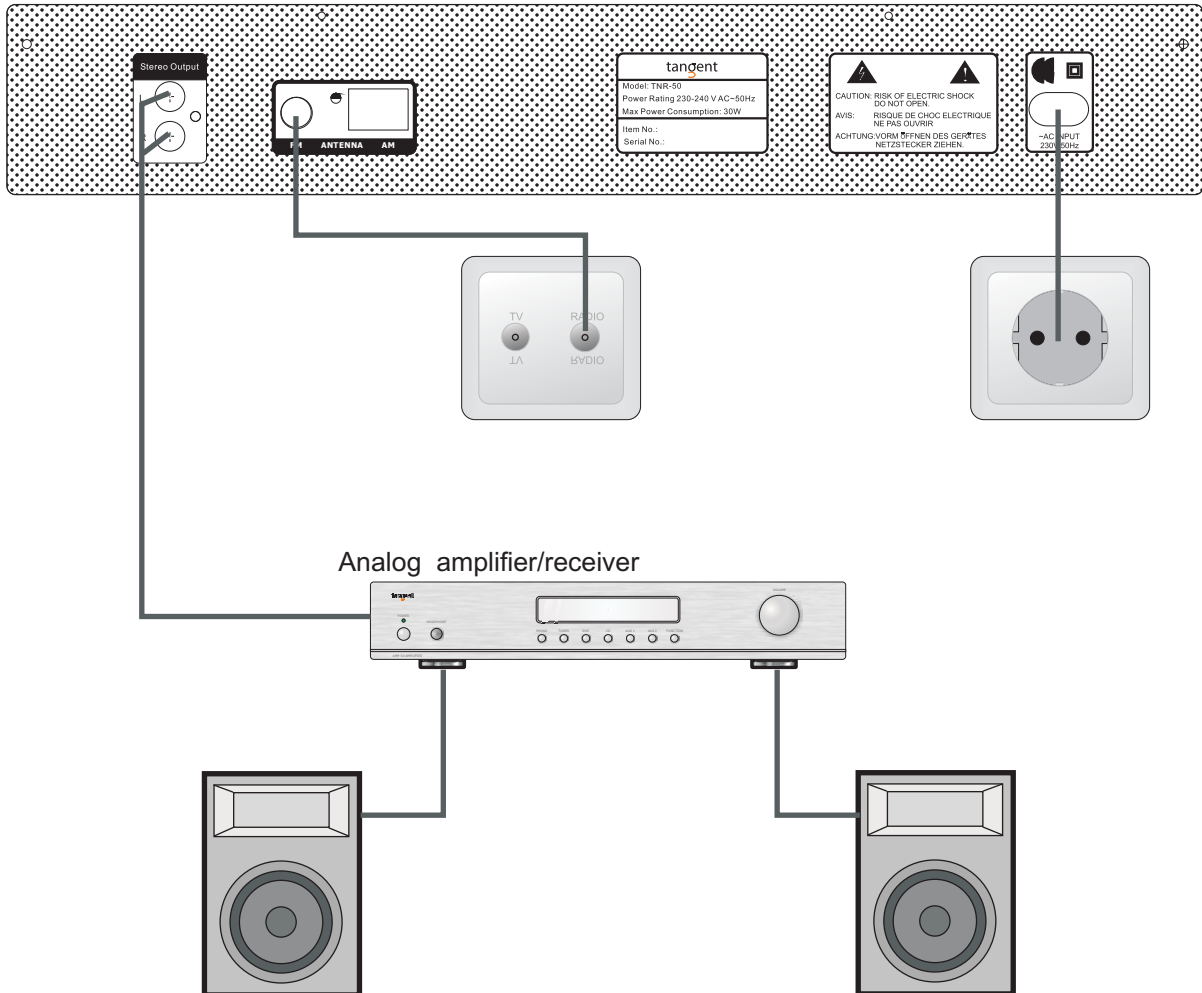
- 1 **Mains switch:** Used to interrupt the mains voltage.
- 2 **LED indicator:** Lights green when the unit is turned on. Lights red when the unit is in standby mode or in operation.
- 3 **FM/AM:** Switches between FM and AM.
- 4 **Autotune:** Press this button once and the tuner will start to automatically tune and store all available stations.
- 5 **Memory:** After manually tuning in station, press this button once and the tuned in channel will be stored on the current preset.
- 6 **Preset -:** Changes down in presets.
- 7 **Preset +:** Changes up in presets.
- 8 **St/Mono:** Changes between stereo and mono on the FM band.
- 9 **Reset:** Resets the tuner.
- 10 **Tuning:** Turn this button clockwise to tune up in frequency, and counter clockwise to tune down in frequency.

Connections



- 1 **Stereo Output:** Analogue stereo output. For connection to stereo amplifier or receiver with analogue input.
- 2 **Antenna:** For connection of FM or AM antenna or for the communal antenna system.
- 3 **AC input:** For connection of mains voltage. Make sure that the plug has been correctly inserted, and that the voltage corresponds to the text printed on the back panel of the cabinet.

Audio connection layout



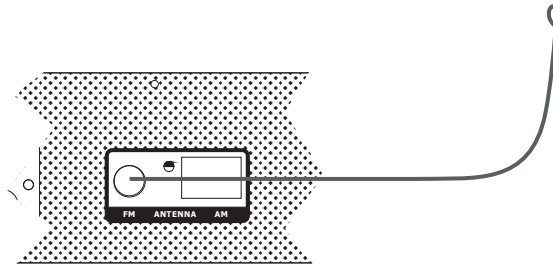
This page only contains suggestions for connection of your Tangent TNR-50. Note that the accessories in the pictures on this page are not included in the supply.

Adjusting the antenna

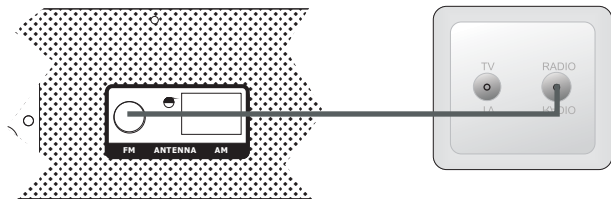
As it applies to all other radios, the sound quality depends on the signal strength of the antenna inputs. The position of the radio in relation to the transmitter thus directly influences the quality of the signal received. For an optimal result it is therefore very important that you make sure that the radio receives the best possible antenna signal.

The FM antenna must be adjusted for the best possible result.

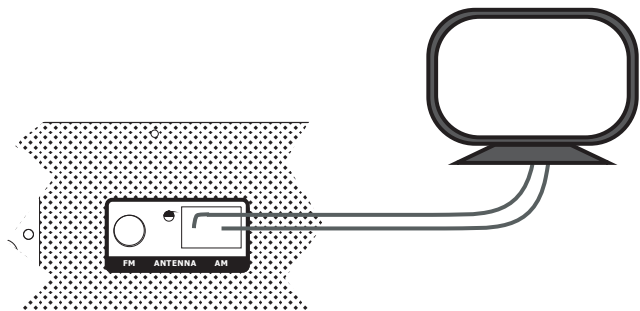
A good tip is to let the antenna end point in a vertical direction and fix it on a wall.



For an optimal result it is recommended to install a FM antenna on the roof or on the loft.

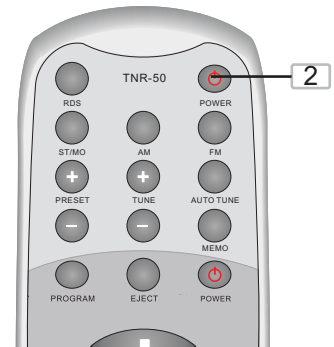


For receiving AM station an AM loop antenna must be installed. Adjust the antenna for the best possible reception.



On, Off and standby

- 1 Turn on the unit by pressing the mains switch.
- 2 Press the standby button on the remote control to switch to standby mode. The display will turn off and all functions will be reduced to a minimum to make sure that the unit uses minimal power. When in standby mode the unit only reacts to the standby button of the remote control.
- 3 If you wish to turn off the unit to avoid any power consumption, you must press the mains switch.

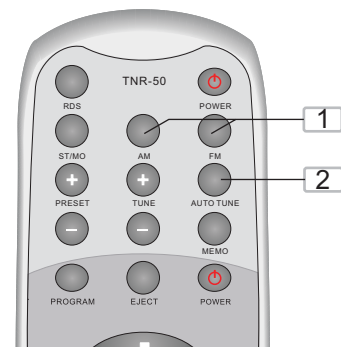
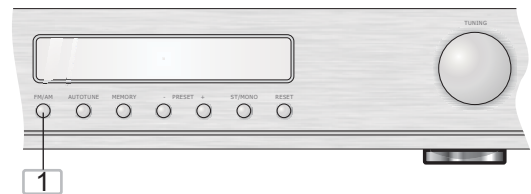


Protect the environment and turn off the unit after use.



RDS and FM/AM

- 1 As this tuner can receive both normal FM radio and AM, it features a function that can switch between the two reception types. To switch between FM and AM, you must either press the FM/AM button on the front panel or the FM or AM buttons on the remote control.
- 2 This tuner features information possibilities on FM called RDS. To activate this information, you must press the RDS button on the remote control. The display will show information about for name of station, PTY information, Radio text, etc.

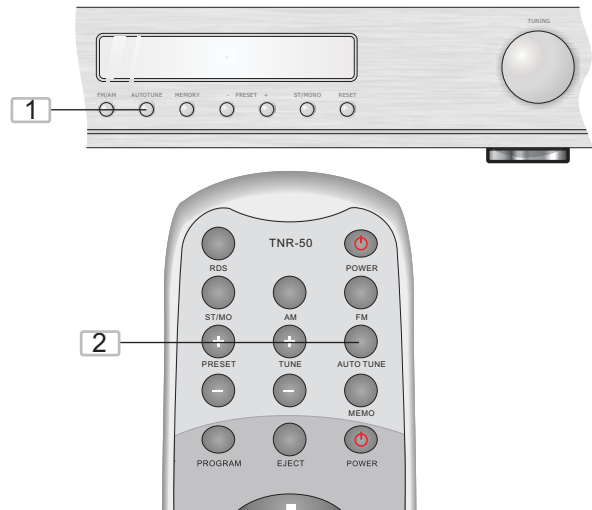


Tuning

When the unit is turned on for the first time, all settings will be default settings. The settings can be changed according to your preference. When the unit is turned off the next time, these settings will naturally be saved as the new default settings. This also applies if you unplug the unit.

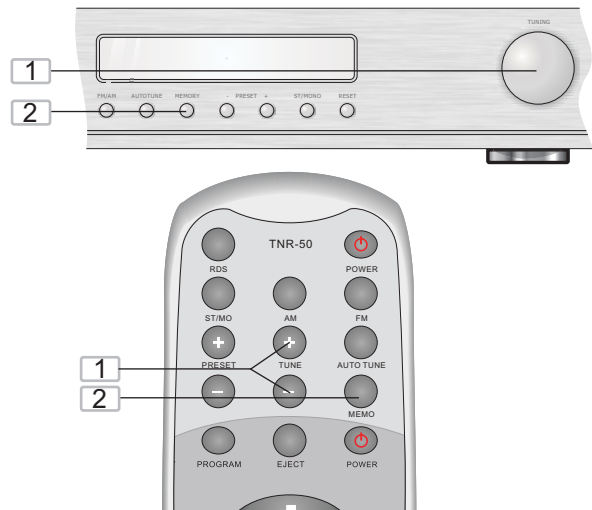
When the unit has been turned on, channels must be saved. This is done by means of the autotune function.

- 1 To use the autotune function through the front panel controls, press the AUTOTUNE button. All available channels on the current tuner band will be saved.
- 2 You can also press the AUTOTUNE button on the remote control.



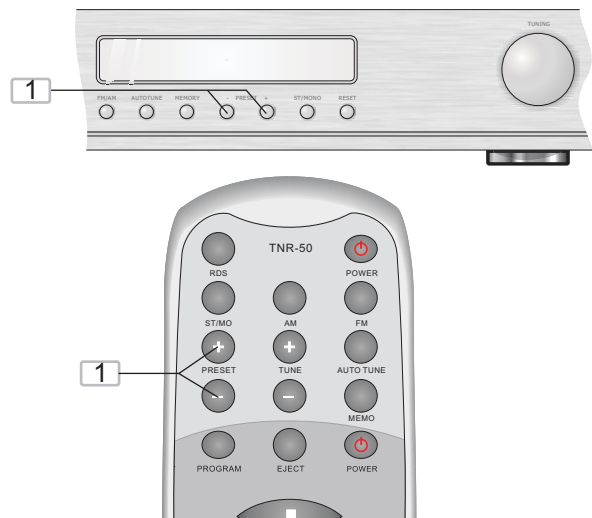
- 1 If you want to manual tune a channel, you must press the tune + or - button on the remote control, or turn the tuning knob on the front panel. For every push on the button, the frequency will change 0,05MHz on FM and 9 KHz on AM.

- 2 To store the manually tuned channel, simply press the Memory button on the front panel or the Memo button on the remote. The channel will then be stored on the current preset.



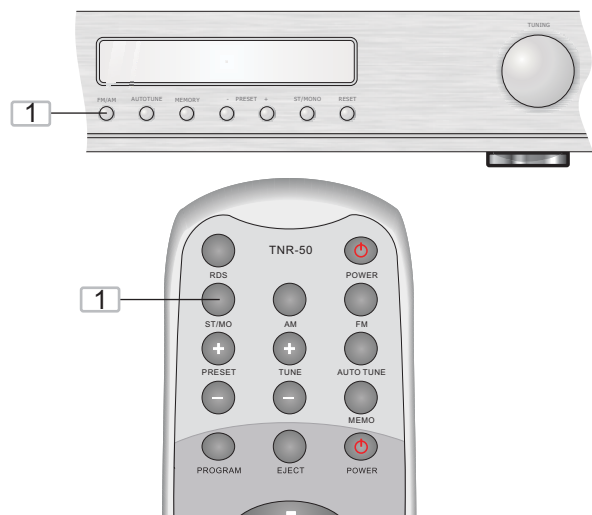
Selecting presets

- 1 Channels that have been saved can be selected either by means of the Preset + and Preset - buttons on the remote control or on the front panel.



Stereo and Mono

- 1 In some areas not all stations can be received noise free, because it is not possible to get a strong enough antenna signal. In this case there will be a lot of noise on some radio stations. It is possible to reduce the noise quite a bit by listening to the radio station in mono instead of in stereo. This can make the radio station acceptable to listen to. Change to mono by pressing the ST/MO button on the remote or the ST/MONO button on the front panel. To change back to stereo again, simply press the button once again.



Reset

This tuner can be reset. This is used to delete channels stored in the unit. Press the RESET button on the front panel to reset the unit.

Troubleshooting

PROBLEM	CAUSE/REMEDY
No power when the unit is turned on.	<ul style="list-style-type: none">- Switch on the electric current at the socket.- Check that the plug has been correctly inserted into the socket.- The internal fuse has blown and must be replaced by a qualified service technician.- The power cord has been damaged and must be replaced.
No sound.	<ul style="list-style-type: none">- The unit has not been turned on.- Incorrect connection to the amplifier.- No loudspeakers have been connected to the amplifier.- The TNR-50 has not found any stations.
The display does not show RDS information.	<ul style="list-style-type: none">- The TNR-50 has not found any stations.- The selected station does not broadcast any information.- The antenna signal is too poor. See the section on adjusting the antenna.

Technical data

RF section:		
Tuner bands	FM AM	87.5-108.0MHz 522-1620KHz
Sensitivity		-96dBm type
Display:		
		2 lines of 16 characters LED backlight
Presets		
		40
Audio outputs		
		Stereo, 2.5Vpp 48kHz sample rate 16 bit sample resolution
Voltage and power consumption		
		See back panel
Dimensions (WxDxH)		
		430 x 290 x 75mm
Weight		
		4.5 kg

We reserve the right to change the technical data and the design of the product without notice as a result of further development.

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For further information please visit our website:

www.tangent-audio.com

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