SANGEAN

WR-16

FM / AM / Bluetooth Receiver

Bluetooth®

3A81cX0S10000   C E

Bluetooth®
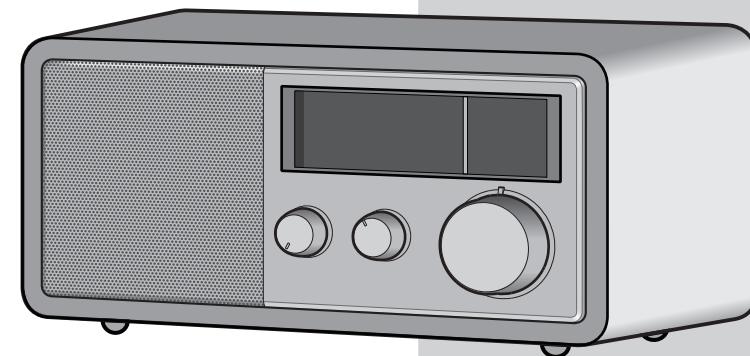
The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by SANGEAN ELECTRONICS INC. is under license.

Important safety instructions

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with clean dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet. consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at the power cords ends, wall outlet and where the power cord comes out of the radio.

11. Only use attachments / accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. To Reduce the Risk of Fire or Electric Shock, Do not Expose This Appliance To Rain or Moisture.

Important safety instructions

16. The Shock Hazard Marking and Associated Graphical Symbol is provided on the back of unit.

17. Apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids should be placed on the radio.

18. Excessive sound pressure on your ears with or without headphones could impair your hearing ability.

For United States:

FC **Cautions to the user**

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF exposure statements
IMPORTANT NOTE:

To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm (8 inches) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

Note:

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

● Reorient or relocate the receiving antenna.

● Increase the separation between the equipment and receiver.

● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

● Consult the dealer or an experienced radio / TV technician for help.

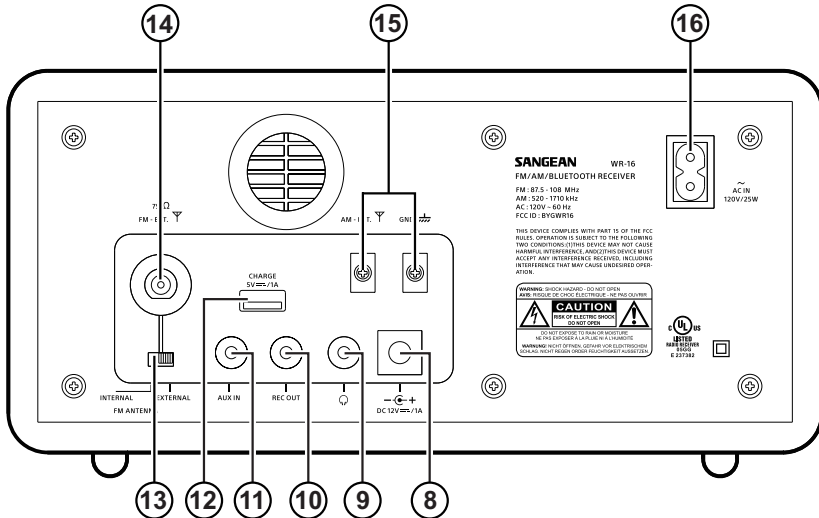# Controls and connections

Front view
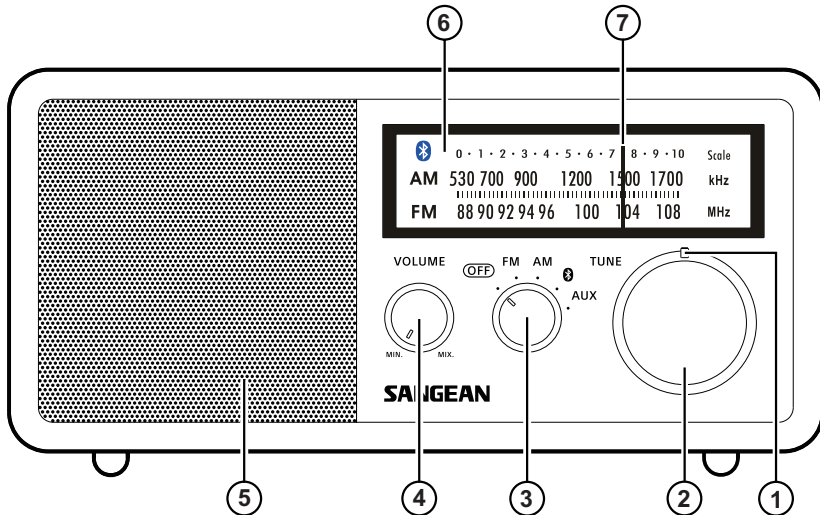
①	Tuning LED indicator
②	Tuning Control knob
③	Power and Band selecting knob
④	Volume Control knob

⑤	Speaker
⑥	Dial scale
⑦	Dial indicator

Controls and connections

Back view

⑧	12V DC input socket		⑬	External / Internal antenna switch
⑨	Headphone socket		⑭	F-type external antenna terminal
⑩	REC out socket		⑮	AM external antenna terminal (USA version only)
⑪	Aux in socket			
⑫	USB charging socket		⑯	AC power cord socket

Controls and connections

Top view
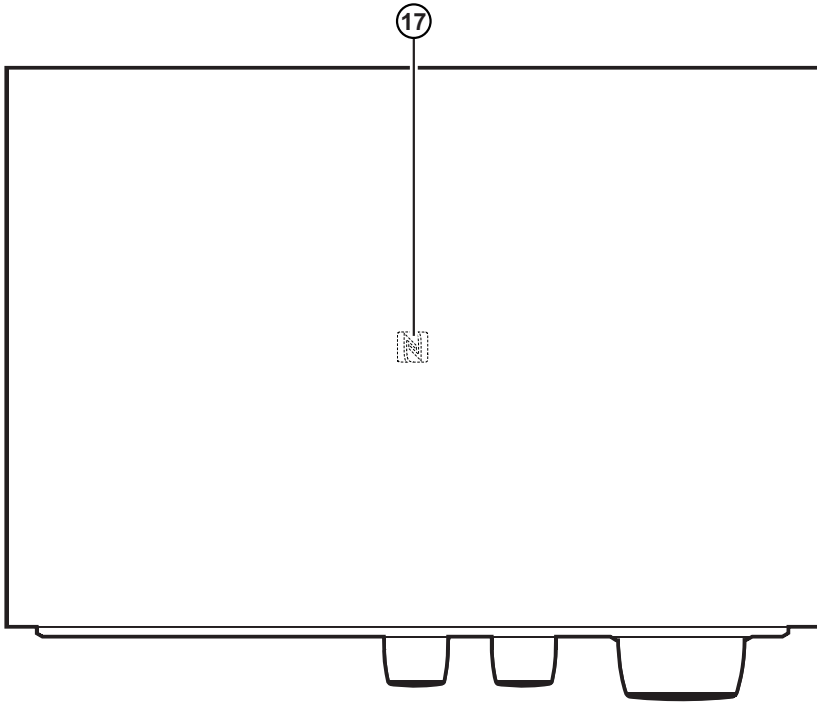
17	NFC detection area

Power your radio

AC operation

Before you plug the AC cord into the radio, be sure the AC voltage is correct. Insert the plug on the end of the supplied power cord into the AC power socket on the back of the radio.

DC operation

For outdoor use, you can power the radio by using a 12V DC input socket from a DC power supply (not included) (example, from the power supply of vehicles or boats). An AC power adaptor with 1 Ampere and center positive in polarity can also power the radio in house.

Operating your radio FM

1. **Connect the Antenna**

The radio comes with a built-in AM / FM antenna. To improve FM reception, insert the end of the supplied FM wire antenna into the F-type antenna terminal and adjust the wire for best reception. A 75 ohm coaxial cable to an outdoor antenna may also be attached to the terminal. Be sure to switch external / internal antenna switch to external position while using the supplied wire antenna or connected to an outdoor antenna. In some European countries, you may have to connect the supplied antenna terminal adaptor to connect with an outdoor antenna.

2. Turn on your radio by rotating the Power knob to the FM position.

3. Rotate the Tuning Control knob to select the desired station. On FM, the tuning scale is marked in MHz (Megahertz). The tuning LED indicator will appear brightest when the best tuning has been achieved.

4. Adjust the Volume Control knob for comfortable listening.

5. To switch off the radio,turn the Power knob to the OFF position.

Operating your radio AM

1. **Connecting the antenna**
   The radio comes with a built-in AM antenna which should be enough for normal listening. To improve the AM reception, you may connect an outdoor AM antenna (not included) to the AM antenna terminal (USA version only).

2. Turn on your radio by switching the Power knob to the AM position.

3. Rotate the Tuning Control knob to select the desired station. On AM, the tuning scale is marked in kHz (Kilohertz). The tuning LED will appear brightest when best tuning has been achieved.

4. Rotate your radio for best reception.

5. Adjust the Volume Control knob for comfortable listening.

6. To switch off your radio, turn the power knob to the OFF position.

Listening to Bluetooth music

You need to pair your Bluetooth device with your radio before you can auto-link to play / stream Bluetooth music through your WR-16. Paring creates a 'bond' so two devices can recognize each other.

Pairing your Bluetooth device for the first time

1. Rotate the Band selecting knob to select the Bluetooth function.
   The Bluetooth icon on the panel will flash blue.

2. Activate Bluetooth on your device according to the device's user manual to link to your WR-16. Some smartphones that are equipped with earlier Bluetooth versions older than BT2.1 may need to input the pass code "0000".

3. Once connected, there will be a beep sound and the Bluetooth icon will remain illuminated blue. You can now play the music from your Bluetooth-enabled device to the WR-16.

⚠ NOTE

- If there are 2 Bluetooth devices searching for WR-16, it will show its availability on both devices. However, if one device links with the WR-16 first, then the other Bluetooth device won't find the WR-16 on its list.

- If you take your source device out of range, the connection will be temporarily disconnected to your radio. Your radio will automatically reconnect if the source device is brought back in range within 3 minutes. Otherwise you need to manually reconnect your device again to the radio. Be aware that during the period of disconnection, no other Bluetooth device can pair or link with your radio.

- If 'SANGEAN WR-16 shows in your Bluetooth device list but your device cannot connect with it, please delete the Sangean WR-16 item from your list and pair the device with the WR-16 again following the steps described previously.

- The effective operation range between the WR-16 and your paired device is approximately 10 meters (30 feet). Any obstacle between the system and the device can reduce the operational range.

- Bluetooth / NFC connectivity performance may vary depending on the connected Bluetooth devices. Please refer to the Bluetooth capabilities of your device before connecting to your radio. All features may not be supported on some paired Bluetooth devices.

- With some mobile phones, making / receiving calls, text messages, e-mails or any other activities unrelated to audio streaming may mute the Bluetooth audio streaming or even temporarily disconnect from your device. Such behavior is a function of the connected device and does not indicate a fault with your radio.

Playing a previously-paired Bluetooth source device

The WR-16 can memorize up to 2 paired Bluetooth source devices, when the memory exceeds this amount, the earliest paring device will be over written from the device.

If your Bluetooth source device was already paired with the WR-16 previously, the unit will memorize your Bluetooth source device and will attempt to reconnect with a Bluetooth source device in the memory that was last connected. If the last connected Bluetooth source device is not available, the WR-16 will try to connect to the second last Bluetooth source device.

Disconnecting your Bluetooth device

Rotate the Band selecting knob to any other band or off position or disconnect the Bluetooth-enabled device. The LED light for Bluetooth icon will then start to flash indicating deactivation of Bluetooth.

Pairing and playing your device via NFC

The WR-16 is equipped with wireless NFC (Near Field Communication) feature which allows NFC-enabled devices to pair and play music to the WR-16. For non-NFC devices, please refer to the above section for standard Bluetooth pairing.

1. Rotate the Band selecting knob to the Bluetooth setting.
The Bluetooth icon on the panel will flash blue.

2. Turn on your NFC feature on your device.

3. Touch the NFC area of your playing device against the NFC area of the radio. The WR-16 will automatically pair your device. If you are pairing with the WR-16 for the first time, your NFC-enabled device will be asked for the permission to link with the WR-16. Once paired with a device, there will be a beep sound and the Bluetooth icon will remain illuminated blue.

4. Use the controls on your device to play / pause and navigate tracks.

⚠ **NOTE**

- If you would like to link another Bluetooth device via NFC, disconnect the existing linked Bluetooth device first.

- The location of the NFC detection area is not the same on all devices. When connecting with other Bluetooth device via NFC, refer to the User guide of the your device for more information.

- Some metallic cases or covers for mobile phones may reduce the sensitivity of NFC. Make sure you remove it, before activating the NFC.

Disconnecting your NFC-enabled device

To disconnect your device, simply touch it again on the top of the unit. The LED light for Bluetooth icon will then start to flash blue indicating deactivation of Bluetooth.

Headphone use

Headphone use with this radio should be fitted with a 3.5 mm connector. Insert the headphones connector into the socket marked 🎧 on the back side of the radio. When the headphones are plugged in, the loudspeaker is automatically disconnected.

AUX IN socket

A 3.5mm Auxiliary Input socket is provided on the back of your radio to permit an audio signal to be fed into the unit from an external audio device such as iPod, MP3 or CD player.

1. Rotate the Band selecting knob to select "AUX".

2. Connect an external audio source (for example, iPod, MP3 or CD player) to the Auxiliary Input socket.

3. Adjust the volume setting on your iPod, MP3 or CD player to ensure an adequate signal level from the player, and then rotate the Volume control knob on the radio as needed for comfortable listening.

REC Out socket

The radio can be used as a separate tuner by connecting this output to a stereo receiver or pre-amplifier or you can use this output to make recordings in mono from audio programs.

Charging with USB socket

Your radio has a USB socket which is intended for charging an iPhone, smart phone or similar devices. Charge time may vary and in some cases may take longer to charge than when using the manufacturers charging unit supplied with the smart phone. The radio can charge the iPhone, smart phone or similar devices when the radio is ~~in power off mode.~~

⚠ **IMPORTANT**

- The USB jack can only provide power to USB devices with a 1A 5V maximum input. It does not support external Hard disk drives, and some mobile phones or electronic devices.

- The charger may not supply power to some USB devices.

- Do not connect a power source to the USB port. Otherwise there is a risk of fire. The USB port is only intended for charging lower voltage devices.

- Do not insert a nail, wire, etc. into USB power supply port. Otherwise a short circuit may cause smoke or fire.

- Do not connect this USB socket with your PC USB port, as it is highly possible that it may cause breakdown of both units.

- Never use the USB socket in rainy or moist conditions to prevent moisture from entering the radio.

Specifications

Frequency Coverage:	FM 87.50 - 108 MHz
	AM 520 - 1710 kHz
Power:	AC 120V / 60Hz / 25W (USA version)
	AC 230V / 50Hz / 25W (European version)
	(For actual power requirement please refer to the back panel)
Internal Antenna System:	AM Built-in ferrite antenna
	FM Built-in wire antenna
External Antenna Terminal:	AM antenna terminal (USA version only)
	FM F-type antenna terminal
Output Power:	6.5W 10% T.H.D. @ 100Hz
Headphones Socket:	3.5mm dia. Stereo jack
Output:	3mW + 3mW
Aux In Socket:	3.5mm dia. Stereo jack.
Input Sensitivity:	IN 300mV Output 7W @ 100Hz
Input Impedance:	47kohm
REC OUT:	output impedance: 2.2kohm
DC IN:	12V / 1A center pin positive (operational voltage 9-14V)
External Diameter:	5.5mm
Internal Diameter:	2.0mm
Maximum Supplying Power of USB Socket:	5V, 1A
Bluetooth	
Bluetooth Specification	Bluetooth$^{®}$ Ver 4.1
Profile Support	A2DP
Bluetooth Audio CODEC	SBC
Transmitting Power	Specification Power Class 2
Line of Sight Range	10meters / 30feet

Specifications

Operating Temperature Range:	0°C to +35°C
Accessories:	FM F-terminal antenna wire
	AC Power Cord
	F to PAL terminal adapter (European version only)
Dimension:	240 (W) x 119 (H) x 168 (D) mm
	9.44" (W) x 4.68" (H) x 6.61" (D)
Weight:	2.375kg.
	5.23lbs.

Sangean reserves the right to amend the specification without notice.

If at any time in the future you should need to dispose of this product please note that: Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice. (Waste Electrical and Electronic Equipment Directive)