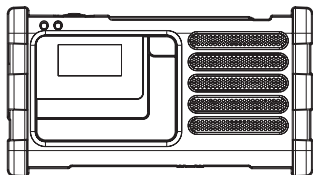# MMR-88DAB

Version 1

Important safety instructions

1. Please read these instructions carefully.
2. Please keep these instructions for future reference.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with 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 plugs, convenience receptacles and the point where they exit from the apparatus.
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 a long period 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. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the

apparatus.

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

17. The battery shall not be exposed to excessive heat such as sunshine, fire or the like.

18. **CAUTION:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

19. To prevent possible hearing damage, do not listen at high volume levels for long periods.

20. $===$ The symbol indicates DC voltage.

21. Use only power supplies listed in the user instructions.

22. Replacement of a battery with an incorrect type that can defeat a safeguard (for example, in the case of some lithium battery types).

23. Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.

24. Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

25. A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

CAUTION:
To reduce the risk of the electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Important Notes:

1. It is recommended to purchase an adapter from SANGEAN that matches the power range indicated on the gift box.

2. When using a non-SANGEAN adapter, the functionality of the radio may be affected, such as the reception of radio stations.

3. When using an adapter that does not fall within the power range indicated on the gift box, please pay attention to the following:

   (a) A higher-power PD adapter may be used, but the radio functionality, such as receiving radio stations, may be impacted.

   (b) A lower-power adapter should not be used to avoid unforeseen risks.

3
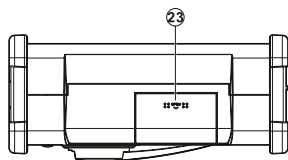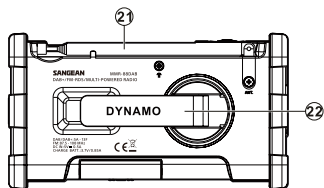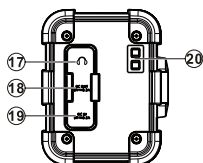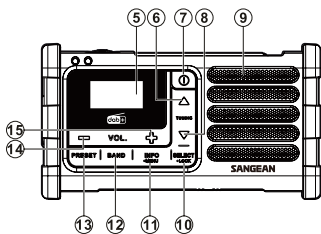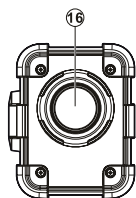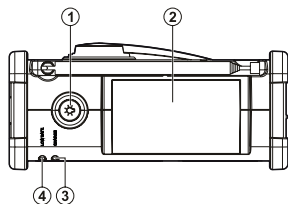
Controls

① LED Flashlight button
② Solar charging panel
③ Charging indicator
④ Low battery indicator
⑤ LCD display
⑥ Tuning up button
⑦ Power button
⑧ Tuning down button
⑨ Speaker
⑩ Select/Lock button
⑪ Info/Menu button
⑫ Band button
⑬ Preset button
⑭ Volume Control -down
⑮ Volume Control - up
⑯ LED Flashlight
⑰ 3.5 mm headphone socket
⑱ DC OUT USB-A charging socket
⑲ DC IN USB-C charging socket
⑳ Carrying strap holder
㉑ Telescopic antenna
㉒ Dynamo power hand crank
㉓ Battery compartment

The MMR-88DAB is powered by the supplied 850mAh rechargeable lithium-ion battery. Before using the radio for the first time, ensure that the battery is fully charged.

Inserting the supplied rechargeable battery

1. Open the battery compartment on the bottom of the unit by pushing the battery door following the arrow direction.
2. Insert the supplied rechargeable battery into the space in the compartment. Make sure the battery is inserted with correct polarity as shown in the compartment.

Charging the radio

Please use one of the following methods to charge your radio.

Using the DC IN socket

The radio is powered by the supplied lithium-ion battery, which can be recharged by connecting a USB power source to the radio's DC IN charging socket.

Use a USB power source that supplies 5V/0.5A to ensure proper charging and prevent battery issues.

Signs that the battery needs recharging include reduced power, audio distortion, stuttering sounds, or illumination of the low battery indicator.

To charge the battery:

1. Connect the USB-C end of the supplied charging cable to the USB-C socket on the right-hand side of the radio.
2. Connect the other end of the cable to a USB-A power source, such as a PC, USB charger, or power bank.
   - When the radio is turned on, a charging animation appears on the display and the charging indicator lights up. Once fully charged, the animation stops and the charging indicator turns off.
   - When the radio is turned off, only the charging indicator lights up during charging and turns off once the battery is fully charged. If no rechargeable battery is inserted into the battery compartment, the red charging indicator will flash.

Charging time is approximately 2 hours for a full charge. When fully charged, the radio can play for approximately 10 hours.

Using Dynamo power

1. Make sure the telescopic antenna is in the rest position before rotating the dynamo handle.
2. Take the Dynamo power handle from its rest position.
3. Rotate the Dynamo power handle approx. 120 rotations per minute, either clock-wise or counter-clock wise until the charging LED indicator appears red.

4. Under normal listening conditions, one minute of charging from Dynamo power will allow you to listen to the radio for approx. 5-7 minutes.
5. Make sure the handle is in its rest position after charging is completed.

Using solar power

Important:

The radio does not need to be switched on in order for the solar panel to operate.

1. In order to recharge your MMR-88DAB battery using solar power, position the radio so that the solar panel receives direct sunlight. The more direct sunlight that shines on the solar panel, the more electricity it can generate to power the radio.
2. Adjust the position of the radio to achieve maximum brightness of the CHARGE indicator LED.
3. It takes approx.15 hours to fully charge the battery under direct sunlight.

Note:

The best performance of the solar panel will be achieved when the sun is directly overhead, and the sunlight is unobstructed by clouds, foliage, curtains etc. In certain situations and poor light conditions, the solar panel may not be effective and should not be relied upon as the primary energy source for standard usage. The solar panel is designed as a supplementary energy source which under suitable light conditions is able to contribute up to 100% of the radio energy requirements.

The solar panel will charge the battery only under natural sunlight. It will not deliver a charge in artificial light.

DO NOT attempt to charge the battery by placing the solar panel directly under any kind of sun-lamp, this will cause irreversible damage to the radio and may damage the casing. (Doing so will void all warranties.)

Initial operation-DAB

1. Carefully straighten up the antenna and press the Power button to turn on the radio.
2. The display will show "Welcome to Digital Radio" and start to scan the entire DAB channel range and stop at the first found station. If the radio has been used before, the last used station will be selected. Press the Select button to play the station.
3. Press the Tuning up/down button to display station list and find desired station. Press the Select button to select the station. The radio will tune to the station and display the station name.
4. Adjust the volume control for comfortable listening.

Note:
Due to the conductivity of the human body the reception of DAB stations may not be possible or become unstable when the antenna touches your body or is very close to your body.

Service information-DAB

The Service Information display – Technical information on the current status of the station being broadcast.
While listening to DAB, press and release the Info/Menu button to cycle through information on:

- **a. Radio text-**Displays text messages such as the artist or track name, phone in number, traffic alerts, etc.
- **b. Signal error/strength-**Displays the signal error for the station being listened to. A low error number indicates a better quality of radio signal. The signal strength graph can be used when positioning the radio or its antenna. For good reception the graph should occupy three or more blocks.
- **c. Program type (PTY)-**Displays the type of station being listened to such as Pop, Classic, News etc.
- **d. Multiplex Name-**Displays the name of the DAB multiplex to which the current station belongs as well as its broadcast frequency.
- **e. Channel and frequency-**Displays the channel number and frequency for the current DAB radio station.
- **f. Bit rate and audio type-**Displays the digital bit rate and audio coding information for the station being listened to.
- **g. Format-**Displays the format for the station being listened to.
- **h. Date-**Displays the current date.

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Menu functions-DAB

Press the Power button to turn on the radio. Press and hold the Info/
Menu button to enter DAB menu list.

Then press the Tuning up/down button to scroll through the following
options: Full Scan/Manual tune/DRC value/Station order/Prune/System.
Press the Select button to confirm your selection.

A) Full scan:

Scan the whole DAB network in your area. Radio will tune to the first
station found after the scanning is completed.

B) Manual tune:

Press the Tuning up/down button to scroll through the whole DAB
channel. Press the Select button to select required channel.

C) DRC (Dynamic Range Control):

The DRC facility can make quieter sounds easier to hear when your
radio is used in a noisy environment. Use the Tuning up/down button
to highlight the required DRC setting.

DRC Off: DRC is switched off, broadcast DRC will be ignored.

DRC High: DRC is set as sent by broadcaster.

DRC Low: DRC level is set to 1/2 that sent by broadcaster.

Note:

Not all DAB broadcasts are able to use the DRC function. If the
broadcast does not support DRC, then the DRC setting in the radio
will have no effect.

D) Station order:

Your radio has 2 station order settings from which you can choose.
The station order settings are as following.

Alphanumeric: sorts the station list alpha-numerically 0…9…A…Z.

Ensemble: organizes the station listed by DAB multiplex.

The current setting is indicated by an asterisk.

E) Prune:
  If you move to a different part of the country, some of the stations which were listed may no longer be available. Also, from time to time, some DAB services may stop broadcasting, or may change location or frequency. Stations which cannot be found, or which have not been received for a very long time are shown in the station list with a question mark. The Prune stations function will delete the marked DAB stations from your station list.
    1) Press the Select button to enter prune station function.
    2) Press the Tuning up/down button to select "YES" or "NO" and press the Select button to confirm the setting. Select "YES" to cause the stations lists to be pruned, eliminating unavailable stations. If you do not wish to prune stations, select "NO" and the display will revert to the previous menu.
F) System:
  Press the Select button to select from the following settings.

● **Time/Date**
Manual setting the clock
1) Press the Tuning up/down button until 'Time/Date' is highlighted. Then press the Select button to enter the setting.
2) Press the Tuning up/down button until 'Set Time/Date' is highlighted. Then press the Select button to enter the time setup. The day digits will flash.
3) Press the Tuning up/down button until the correct day is shown on the display. Press the Select button to confirm the setting. The month digits will then flash. Press the Tuning up/down button to select the correct month. Press the Select button to confirm the setting. The year digits will then flash. Press the Tuning up/down button to select the correct year. Press the Select button to confirm the setting.
4) Follow the same procedure above for the hour/ minute setting. If the radio has been set to use a 12 hour format, there will be an option for setting AM or PM for the clock time.

Automatically updating the clock
1) Press the Tuning up/down button until 'Time/Date' is highlighted. Then press the Select button to enter the setting.
2) Press the Tuning up/down button until 'Auto update' is highlighted. Then press the Select button to enter the auto-update menu.
3) Press the Tuning up/down button to choose an update option from 'Update from Any', 'Update from DAB', 'Update from FM', 'No update.' Press the Select button to confirm your choice.

Setting the clock format:
The clock display can be set to 12 or 24 hour format.
1) Press the Tuning up/down button until 'Time/Date' is highlighted. Then press the Select button to enter the setting.
2) Press the Tuning up/down button until 'Set format' is highlighted on the display. Press the Select button to enter the clock format setting. The current clock format is marked with asterisk.

3) Press the Tuning up/down to select either 12 or 24 format. Press the Select button to confirm your choice.
● **Contrast:** the contrast of the display can be adjusted.
   Press the Tuning up/down button to adjust the contrast. The contrast level indication on the screen will change at the same time. When you find the setting that gives the best legibility for the location in which the radio is used, press the Select button to save the setting.
● **Language:** your radio can be configured to a different language.
   Press the Tuning up/down button until your required language is highlighted on the display. Press the Select button to confirm your choice.
● **Factory reset:** by performing a factory reset, all users entered settings will be erased.
   Press the Tuning up/down button to select "YES" or "NO". If you do not wish to carry out a system reset, select "NO" and press the Select button. Select "YES" to erase all saved settings and all settings will revert to factory default. Press the Select button to confirm the setting.
● **Software upgrade**
   Software updates for your radio may be available in the future. When available, the update software and instructions can be found at:
   www.sangean.com
   For further information, please contact our Head Office at:
   contact@sangean.com
   IMPORTANT:
   Do not perform software updates unless instructed by our technician.
● **SW version:** The software display cannot be altered and is just for your reference Press the Select button to view the software version installed in the radio. Press the Select button again to revert to the previous menu.

Operating your radio-FM (Manual tuning)

1. Carefully straighten the antenna and turn on the radio by pressing the Power button.
2. Press the Band button to select FM radio mode.
3. Press the Tuning up/down button to control the frequency that the radio will tune to. The frequency will change in steps of 50KHz. When the end of the waveband is reached the radio will recommence tuning from the opposite end of the waveband.
4. Press the Volume buttons to adjust the sound level as needed.
5. To switch off your radio, press the Power button.

Scan tuning-FM

1. Press and hold the Tuning up/down button.
2. The radio will search in an upwards or downwards direction until it finds a station of sufficient signal strength. If the signal is strong enough and there is RDS data present then the radio will display the station name. When the waveband end is reached, your radio will recommence tuning from the opposite waveband end.

Service information-FM RDS

Your radio has a range of display options when in FM mode:
1. Press and release the Info/Menu button to cycle through the different options.
   a. **Radio text-**Displays scrolling text messages such as artist/track name, phone in number etc.
   b. **Program type-**Displays the information for the station being listened to e.g. Pop, Classic. News, etc.
   c. **Frequency-**Displays the frequency of the FM signal.
   d. **Audio type-**Displays the audio type of the station being listened to.
   e. **Date-**Displays the current date.

Note:
If no RDS information is available, the radio will be unable to display the station name, radio text and program type information.
The radio only provides displays when there is information available.
The stereo speaker display shows that the radio is receiving a stereo broadcast.

Menu functions-FM

Press and hold the Info/Menu button to enter FM menu list. Then press the Tuning up/down button to scroll through the following options: FM Scan zone/FM audio/System (for the functions of System, please refer to the above sections described in DAB mode). Press the Select button to confirm your selection.

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A) FM scan zone:

   Your radio includes a local/distant option for the auto-scan function. By setting the radio to the 'local' scan option, weaker signals from more distant transmitters can be ignored by the radio, making stronger signals easier to find.

   Press the Tuning up/down button to choose between 'Local' (Strong stations only) and 'Distant' (All stations including distant radio stations) options. Then press the Select button to confirm the setting. The current setting is indicated with an asterisk.

B) FM audio:

   If the FM radio station being listened to has a weak signal, some hiss may be audible. It is possible to reduce this hiss by forcing the radio to play the station in mono rather than auto.

   Press the Tuning up/down button to select the options between 'Mono' and 'Auto'. Then press the Select button to confirm your selection.

Presetting stations-FM/DAB

You may store your preferred DAB and FM radio stations to the preset station memories. There are 40 memory presets in your radio 20 for DAB and 20 for FM. Presets are remembered by your radio in the event of a power failure.

1. Tune to the required station following the above steps.
2. Repeatedly press and release the Preset button until 'MEM Store' is shown at the bottom of the display.
3. Press the Tuning up/down button to select your required preset number "Px". The preset number flashes on the display indicating the preset is still empty. Press the Select button to store the currently tuned station. The display will show 'Saved' when the station is stored to the preset station memory. Repeat this procedure for the remaining presets. Alternatively, you can simply press the Select button (without the use of Tuning up/down button to select your required preset number) to preset the currently tuned station. The station will be stored in the remaining empty preset in sequence (i.e. if preset 1 to 4 are used, the station required to be preset will be stored in preset 5 automatically).

Note:

Stations stored in preset memories may be overwritten by following the above procedure.

Recalling a preset station-FM/DAB

1. Press the Band button to select the required mode.
2. Repeatedly press and release the Preset button until 'MEM Browse' is shown at the bottom of the display.
3. Press the Tuning up/down button to select your required station.

Note:

The display will only show the preset number which has preset stored.

Using the LED Flashlight

- **When the radio is on:**
  Press the Flashlight button to cycle through the following modes:
  High → Low → Blinking → SOS (Morse code distress signal: three
  short flashes, three long flashes, three short flashes) → **Off**.
  Press and hold the Flashlight button at any time to turn off the flashlight.

- **When the radio is off:**
  Press the Flashlight button to toggle between **High** and **Off**.

Listening with Headphones

Plug the headphones into the headphone socket for private listening.
This will disconnect the external speaker.
Important:
Excessive volume levels from earphones and headphones may cause damage to your hearing.

Note:
Never use the headphone socket in rainy or moist conditions to prevent moist from entering the radio. Always keep the rubber cover well closed under these conditions.

Charging USB devices

This radio features a USB-A socket on the right-hand side for charging low-voltage devices using the supplied lithium-ion battery.
Note: The USB-A charging socket supplies a maximum current of 0.3A and may not charge devices that require a higher minimum current.

To charge an external USB device:
1. Ensure that the radio is turned off.

2. Connect the device using the supplied USB charging cable. Charging will begin automatically.

Note: If the radio is turned on during charging, USB charging will be automatically disabled.

Strap holder

You may attach the supplied carrying strap into the strap holder for easy transport.

Conditional water resistance

This radio is water-resistant, not waterproof. Please ensure that the rubber cover is securely closed over the headphone, USB-A, and USB-C ports when they are not in use.

Key lock

The key lock function is used to prevent unintentional operation of the radio.

1. Press and hold the Select/Lock button until 'Keys Locked' is shown on the display. The power button and all other buttons will be disabled to prevent accidental operation.
2. To disable the key lock function, press and hold the Select/Lock button again until 'Keys Unlocked' is shown on the display.
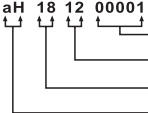
Supplied accessories

- 3.7V 850mAh rechargeable lithium-ion battery
- USB-A to USB-C charging cable
- Hand strap

Specifications

Power Supply	850mAh rechargeable Lithium-ion battery (supplied) x 1
	Dynamo-charging to rechargeable Lithium battery
	Solar panel-charging to rechargeable Lithium battery

Optional Power Supply	AC power adaptor with USB-C connector (not included)

Audio Output	400mW

Frequency Coverage	
FM	87.50-108 MHz
DAB+ Band III	5A-13F

Antenna	
Telescopic antenna	FM / DAB

DC Socket	DC OUT: USB-A 5V / 0.3A (Not compatible with most USB-C charging cables due to low output current.)
	DC IN: USB-C 5V / 0.5A

Headphone Jack	3.5 mm in diameter, Stereo, 32 ohm Impedance

Operating Temperature Range	0°C to 40°C

※ **The barcode label on the product is defined as below:**

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aH 18 12 00001
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aH181200001

- Serial number
- Production month
- Production year
- Product code

Sangean reserves the right to amend the specifications without notice.

RECYCLING This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment.