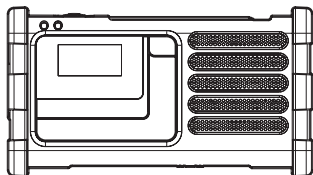


SURVIVOR DAB

MMR-88 DAB



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Revision 3

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.



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.

Controls

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- 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 USB charging socket to mobile phones or MP3 players
- ⑲ Micro USB charging outlet
- ⑳ Carrying strap holder
- ㉑ Telescopic antenna
- ㉒ Dynamo power hand crank
- ㉓ Battery compartment

The SURVIVOR DAB (MMR-88 DAB) is powered by an 850mAh rechargeable Lithium-ion battery (supplied). Before operating the radio for the first time, ensure that you fully charge the supplied battery.

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.

Recharging the radio

Note:

Please use one of the following methods to recharge your radio or when the battery power indicator LED blinks indicating the battery power is low.

1. Using the supplied USB to Micro USB cable simply plug the USB end into a USB socket on a computer, tablet or any USB power supply. Then plug the Micro USB end into the Micro USB socket on the right hand side of the radio.
2. Using an AC adapter with a Micro USB connector (not supplied) plug the AC adapter into a standard AC outlet. Then plug the Micro USB end into the Micro USB socket on the right hand side of the radio. The battery power icon will illuminate showing that charging is in progress. The CHARGE LED indicator will also be on at the same time during the charging process.

NOTE:

The radio will begin charging the Lithium-ion battery. Charging time will take approx. 2 hours to be fully charged. Reduced power, distortion, stuttering sounds or when the battery power indicator light is low are all signs that the battery needs to be recharged.

NOTE:

The radio can play approx. 10 hours when the battery is fully charged.

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.

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1. In order to recharge your SURVIVOR DAB (MMR-88 DAB) 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.

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.

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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 3 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.

Valid: shows only those stations for which a signal can be found.

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. As software updates become available software and information on how to update your radio can be found at:

<http://sg.sangean.com.tw/first/first.asp>

<http://www.sangean.eu/home.html>

www.sangean.com.au

For more information, please contact our Head Office by sending an email to info@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

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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.

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.

LED Flashlight

When the radio is switched on, the SURVIVOR DAB (MMR-88 DAB) features 4 selections for the LED Flashlight. Press the LED Flashlight button once for High, again for Low, again for Blinking once more for SOS (Morse Code Distress Signal, three short flashes, three long flashes, three short flashes) and one more time to shut the Flashlight off. Or in any mode you can hold the Flashlight button down until the Flashlight shuts off.

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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 mobile phones and MP3 players

The SURVIVOR DAB (MMR-88 DAB) features a USB charging socket to charge your mobile phone or MP3 player and related devices with the its built-in Lithium-ion battery.

1. In order not to interfere with radio listening, we suggest to charge your mobile phone, MP3 player and related devices when the radio is switched off.
2. The USB charging socket can provide a maximum of 300mA of charging current.

Strap holder

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

Conditional water resistant

This radio is a water resistant device NOT a waterproof device. Please ensure the rubber cover on the USB, Micro USB and Headphone jack section is properly secured.

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.

Specifications

Power Supply:

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

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Optional Power Supply:

AC power adaptor with Micro USB connector, (not included)

Audio Output: 400mW

DC In (5V/0.5A) Micro USB B Type Socket for Charging the SURVIVOR DAB (MMR-88 DAB).

USB A to Micro B Cable & Hand strap included.

Frequency Coverage

FM: 87.50–108 MHz

DAB+ Band III: 5A–13F

Antenna

Telescopic antenna: FM/DAB

Socket

DC Socket: DC IN Micro USB 5V 500mA

DC OUT USB Type A 5V 300mA

(not compatible with most USB C-type charging cables)

Earphones Jack:

3.5 mm in diameter, Stereo, 32 ohm Impedance

The company reserves the right to amend the specifications 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)