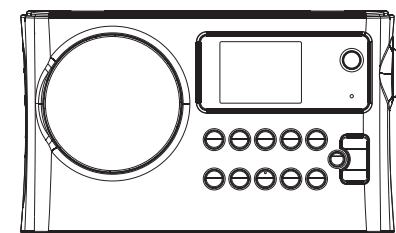


BTR-160 / DPR-16C



GB

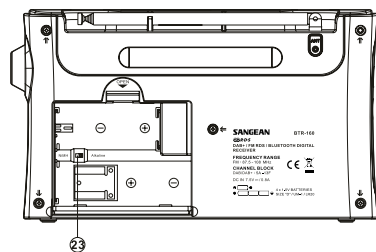
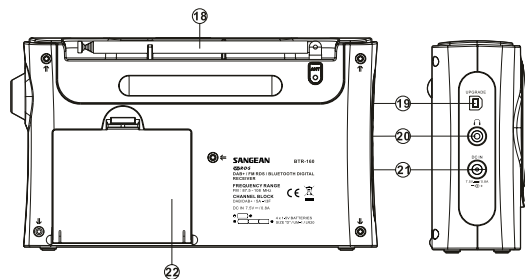
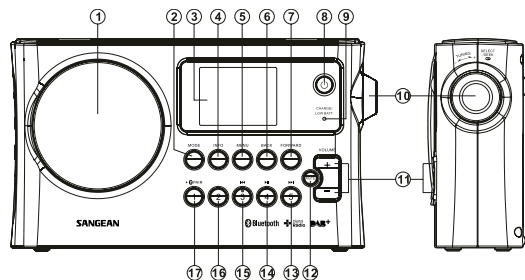
Revision 1



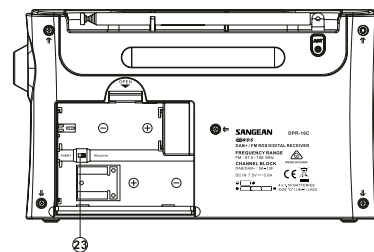
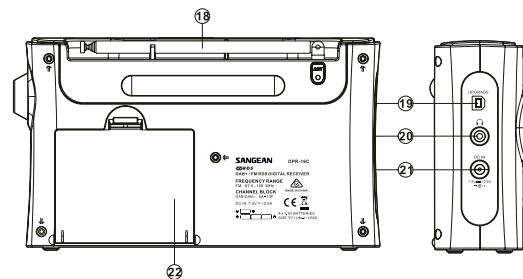
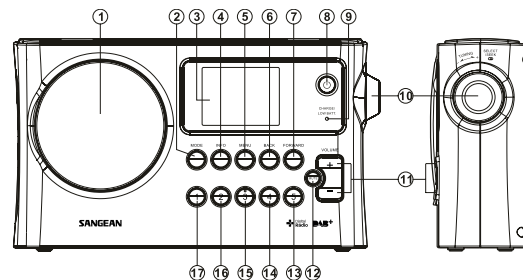
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Controls and connections

BTR-160



DPR-16C



Controls and connections

1. Speaker
2. Mode button
3. LCD display
4. Info button
5. Menu button
6. Back button
7. Forward button
8. Standby button
9. Battery charge indicator/Low battery indicator
10. Tuning Control Rotary/Select/Seek knob
11. Volume button
12. Mute button
13. BTR-160:Preset 5/Fast-forward button
DPR-16C: Preset 5
14. BTR-160: Preset 4/Play/Pause button
DPR-16C: Preset 4
15. BTR-160: Preset 3/Rewind button
DPR-16C: Preset 3
16. Preset 2
17. BTR-160:Preset 1/Bluetooth pairing button
DPR-16C: Preset 1
18. Telescopic aerial
19. USB socket for software upgrade
20. Headphone jack
21. DC in jack
22. Battery compartment
23. Alkaline / NiMH / NiCad rechargeable battery switch

Battery operation

Battery operation using alkaline batteries

1. Remove the battery cover on the rear of the unit by pressing the catch.

Note:

Before you insert the batteries, if you use non-rechargeable batteries, make sure the NiMH/Alkaline switch which located inside the battery compartment is switched to Alkaline position. If you use rechargeable batteries, make sure to switch NiMH/Alkaline switch to NiMH position.

2. Insert 4 UM-1(D size) batteries into the spaces in the compartment.
3. Take care to ensure all batteries are inserted with correct polarity as shown on the rear cabinet. Replace the battery cover.
4. Reduced power, distortion and a “stuttering sound” or low battery LED indicator in red color is on are all signs that the batteries need replacing or recharged.
5. If the radio is not to be used for any extended period of time, it is recommended that the batteries are removed from the radio.

Battery operation using rechargeable batteries

1. Slide the battery switch to the NiHM position.
2. Insert 4 UM-1 batteries into spaces in the compartment. Make sure all batteries are inserted with the correct polarity as shown on the rear cabinet. The radio is also designed to be used with NiMH rechargeable batteries.

Note:

Do not use a mix of old and new rechargeable batteries.
Do not use a mix of full and empty rechargeable batteries.
Do not use batteries that have a different mAh capacity
Do not use damaged or leaking batteries

3. Make sure the radio is switched off and connected to the AC adaptor. When the charge indicator flashes green indicating batteries are charging. Batteries will be fully charged in around 10 hours. The battery shows steady green light when the battery charging is complete.

Note:

Duration for charging your battery fully can be varied according to the mAh capacity of a battery. Higher mAh batteries required longer charging time.

Important:

Under some conditions the charging LED indicator may switch off after flashing briefly. This may happen if the batteries are already freshly charged, or if the radio detects that you may be attempting to recharge alkaline batteries or mixed different types or capacity of rechargeable battery. In these cases the charging will be stopped.

Using the AC power adaptor

The AC power adaptor required for this unit should be 7.5 volts DC at 0.8A center pin positive.

Insert the adaptor plug into the DC socket on the left side of the radio.

Plug the adaptor into a standard mains socket outlet.

Whenever the adaptor is used, the batteries are automatically disconnected.

The AC adaptor should be disconnected from the main supply when not in use.

Navigation controls

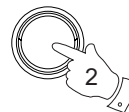
This page describes the basic means of controlling your radio.

Instructions for each operating mode are given in the later section of this book.

1. Pressing the **Standby** button brings your radio out of Standby mode. Pressing Standby while the radio is in use will cause it to return to the Standby mode with the clock display.
2. Pressing the **Mode** button gives you access to each of the operating modes: DAB+ radio, FM radio and BLUETOOTH (**available only in BTR-160**).
3. Pressing the **Menu** button will access the menu system, whereas the Info button allows the display of information relating to the radio station or music file being played.
4. Many operations require the user to make a selection from the menu. Highlight the menu item using the **Tuning Control Rotary** on the right side of the radio. Press the **Tuning Control Rotary** to select that item. If there are more than five items in a menu, then the display will automatically scroll up or down so that the additional items become visible. If there are many items in a menu, then the radio allows the menu to “wrap around” in either direction. This can make it easier to reach items at the end of a long menu.
5. If an error is made when navigating the menus, it is generally possible to go back to a higher level menu by pressing the **Back** button.



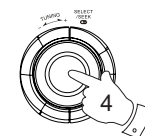
MODE



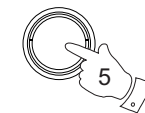
MENU



INFO



BACK



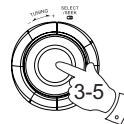
Using the radio for the first time

1. Place your radio on a flat surface and plug the mains lead into the mains socket located on the left side of your radio ensuring that the plug is pushed fully into the socket.
2. Plug the other end of the mains lead into the wall socket and switch on the wall socket.

IMPORTANT:

The mains adaptor is used as the means of connecting the radio to the mains supply. The mains socket used for the radio must remain accessible during normal use. In order to disconnect the radio from the mains completely, the mains adaptor should be removed from the mains outlet completely.

3. When you apply power, the display on the radio will light up and say: 'SANGEAN'. The first time that you use your radio (or after Factory Reset) the display will show "Setup wizard" and "YES" will be highlighted on the screen. Press the **Tuning Control Rotary** to start the setup wizard. The screen will ask if you wish to run the setup wizard again at the next start up. This will lead to the main menu.
4. Rotate the **Tuning Control Rotary** on the right hand side of the unit to highlight the desired clock format (either 12 or 24 hour) then press the **Tuning Control Rotary** to enter your selection. A menu allowing you to specify the auto update option for the clock will appear on the display.
5. Rotate the **Tuning Control Rotary** to choose an auto-update option for the clock. This can be updated from DAB or FM radio, or not updated. The default is to auto update from the DAB. If you choose "No update" you will need to set the clock manually later(see the section of 'Manually setting the clock'). Press the **Tuning Control Rotary** to confirm your choice.



Setup wizard

Start now?

YES

NO

Time / Date

12/24 hour format

12

24*

Auto update

Update from DAB *

Update from FM

No update

Setup wizard

Run wizard again at
next start up?

YES *

NO

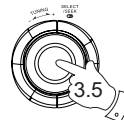
DAB Radio

Using DAB mode for the first time

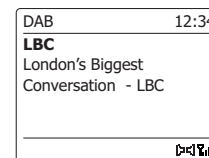
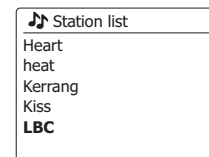
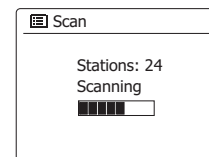
1. Carefully extend the telescopic aerial.
2. Press the **Standby** button to switch on the radio. If the radio has been used before the last used mode will be selected.
3. Press the **Mode** button and rotate the **Tuning control Rotary** as needed so that DAB radio mode is selected on the display. Press the **Tuning Control Rotary** to select the option.
4. If this is the first time that DAB mode is used a quick scan of the Band III DAB channels will be carried out. The display will show 'Scanning'. (If the radio has been used before the last used station will be selected instead.) During the scanning process, as new stations are detected the station counter will increase and the stations will be added to the list which is stored in the radio. The bar graph indicates the progress of the scan.
5. When scanning is completed the radio will list the stations found (in numeric-alpha order 0....9...A...Z), unless it has previously been tuned to a DAB station. Rotate the Tuning Control Rotary to scroll through the list of available DAB radio stations. Press the Tuning Control Rotary to select the highlighted station. The display may show 'Connecting...' while the radio re-tunes. Press the Volume buttons to set the sound level as needed.
6. If the station list is still empty after the scan the display will show "No stations found". If no stations are found it may be necessary to relocate your radio to a position giving better reception.



MODE



VOLUME

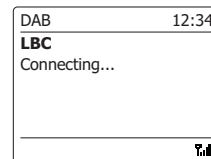
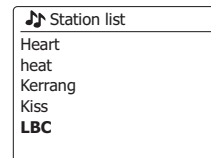
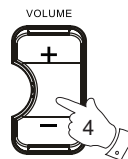
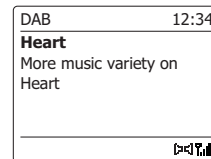
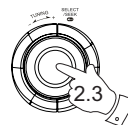


Selecting a DAB radio station

1. When playing a DAB radio station, the display normally shows the name of the current station with other related information.
2. Rotate the **Tuning Control Rotary** to access the radio station list and to scroll through the available stations.
3. Press the **Tuning Control Rotary** to select the highlighted station. The display may show 'Connecting...' while the radio re-tunes.
4. Use the **Volume** buttons to set the sound level as needed.

Note:

If the display shows 'Station Not Available' it may be necessary to relocate your radio to a position giving better reception. A question-mark in front of the station name merely indicates that the station has not recently been detected by the radio. It may still be available.

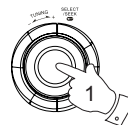


Secondary services

Some DAB radio stations can have one or more secondary stations associated with them.

Typically these are not broadcast continually. If a station has a secondary station available then the secondary will appear in the list of station names beneath the main (or primary) station. Examples are the programs 'Daily Service' and 'Parliament' on BBC Radio 4.

1. To listen to a secondary service, rotate the **Tuning Control Rotary** to scroll to the chosen station, and press the **Tuning Control Rotary** to tune to the station. If the secondary service is not available (off-air) then the primary service will be selected.



Display modes

Your radio has a range of display options when in DAB mode:

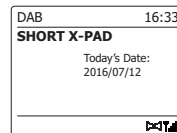
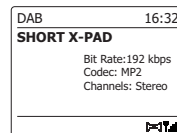
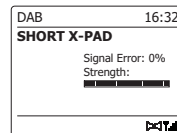
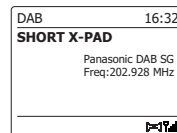
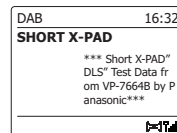
1. Press the **Info** button to cycle through the different options.

- | | |
|-------------------------------|--|
| a. Text | Displays text messages such as the artist or track name, phone in number, traffic alerts, etc. |
| b. Program Type | Displays the type of station being listened to such as Pop, Classic, News etc. |
| c. Multiplex Name / Frequency | Displays the name of the DAB multiplex to which the current station belongs as well as its broadcast frequency. |
| d. Signal error / strength | Displays the signal error and strength for the station being listened to. A lower 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. |
| e. Bit rate and audio type | Displays the digital bit rate and audio coding information for the station being listened to. |
| f. Date | Displays the current date. |

A signal strength indicator is always shown in the lower area of the display on the right hand side.

If the broadcast being received is in stereo, then the stereo speaker symbol will be shown.

If the currently tuned station has been stored as a preset, then the preset number will also be shown.

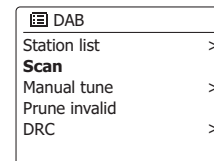


Finding new DAB radio stations

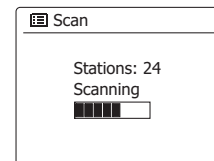
Should you wish to use your radio for DAB reception in a new location, or if no stations were detected during the initial scan, you can follow this procedure to allow your radio to find out which DAB radio stations are available.

1. Ensure that the telescopic antenna is extended, and then press the **Mode** button and rotate the **Tuning Control Rotary** as needed to highlight DAB radio mode. Press the **Tuning Control Rotary** to select the option.
2. Once in DAB mode press the **Menu** button.
3. Rotate the **Tuning Control Rotary** until 'Scan' is highlighted on the display.
4. Press the **Tuning Control Rotary** to initiate the scan. The display will show 'Scanning' and your radio will perform a scan of the DAB Band III frequencies. As new stations are found the station counter will increase and stations will be added to the list. The bar graph indicates the progress of the scan.

MODE



MENU

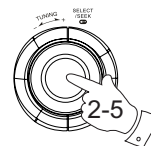


Manual Tuning

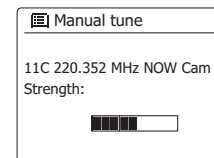
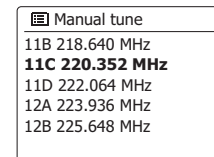
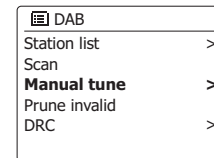
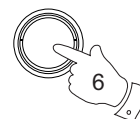
Manual tuning allows you to tune directly to the various Band III DAB channels (5A to 13F).

1. When in DAB mode press the **Menu** button so that the display shows the DAB menu.
2. Rotate the **Tuning Control Rotary** until 'Manual tune' is highlighted.
3. Press the **Tuning Control Rotary** to enter manual tune option.
4. Rotate the **Tuning Control Rotary** to choose the required DAB channel.
5. Press the **Tuning Control Rotary** to cause the radio to tune to the chosen channel. When the radio has tuned, the display shows the channel number and frequency, and the name of the DAB multiplex found (if any). A bar graph shows the signal strength and is useful if you need to reposition the radio or its aerial. The minimum signal marker 'I' which separates the left and right parts of the signal graph shows the minimum signal level required for satisfactory reception. Any new radio stations found on the tuned DAB multiplex will be added to the list stored in the radio.
6. Press the **Back** button to choose a different frequency.
7. Press the **Menu** button a second time to access the main DAB menu then select 'Station list' to return to normal tuning.

MENU



BACK



GB

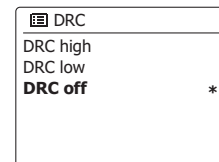
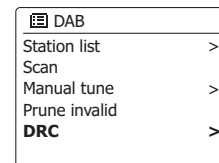
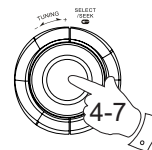
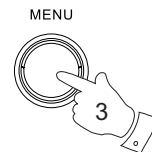
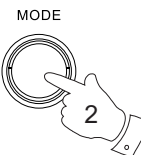
Dynamic Range Control setting

Dynamic Range Control (also known as DRC) can make quieter sounds easier to hear when your radio is used in a noisy environment by reducing the dynamic range of the audio signal.

1. Press the **Standby** button to switch on your radio.
2. Press the **Mode** button and rotate the **Tuning Control Rotary** as needed to highlight DAB radio mode. Press the Tuning Control to select the option.
3. Press the **Menu** button to enter the DAB menu.
4. Rotate the **Tuning Control Rotary** until 'DRC' is highlighted on the display.
5. Press the **Tuning Control Rotary** to enter the DRC adjustment mode. The current DRC setting will be indicated with an asterisk.
6. Rotate the Tuning Control Rotary to highlight the required DRC setting (the default is Off).
'DRC high' - DRC is set as sent by broadcaster.
'DRC low' - DRC level is set to 1/2 that sent by broadcaster.
'DRC Off' - DRC is switched off, Broadcast DRC will be ignored.
7. Press the **Tuning Control Rotary** to confirm the setting.

Note:

Not all DAB broadcasts use the DRC function. If the broadcast does not provide DRC information, then the DRC setting in the radio will have no effect.



Station order setup

Your radio has 3 station order settings from which you can choose. The station order settings are, alphanumeric, ensemble and valid.

Note:

The default station order on your radio is alphanumeric.

1. Press the **Standby** button to switch on your radio.
2. Press the **Mode** button and rotate the Tuning Control Rotary as needed to highlight DAB radio mode. Press the Tuning Control Rotary to select the option.
3. Press the **Menu** button to enter the DAB menu list.
4. Rotate the **Tuning Control Rotary** until 'Station order' is highlighted. Press the **Tuning Control Rotary** to enter the station order adjustment mode.
5. Rotate the **Tuning Control Rotary** to choose between 'Alphanumeric', 'Ensemble' and 'Valid'.
'Alphanumeric' - sorts the station list alpha-numerically 0...9 A...Z.
'Ensemble' - organizes the station list by DAB multiplex.
'Valid' - shows only those stations for which a signal can be found.

The current setting is indicated by an asterisk.

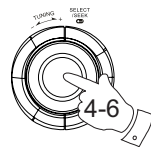
6. Press the **Tuning Control Rotary** to select the required station order.
7. Press the **Back** button as needed to return to the DAB menu or to the stations list.



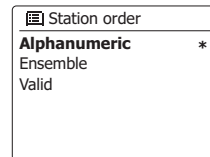
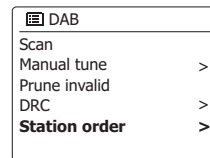
MODE



MENU



BACK



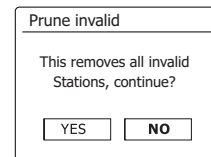
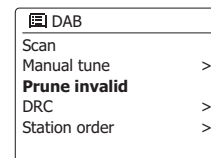
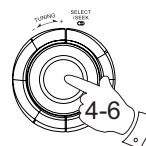
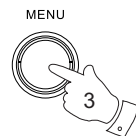
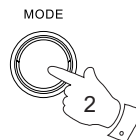
Prune stations

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 **Standby** button to switch on your radio.
2. Press the **Mode** button and rotate the **Tuning Control Rotary** as needed to highlight DAB radio mode. Press the **Tuning Control Rotary** to select the option.
3. Press the **Menu** button to enter the DAB menu.
4. Press the **Tuning Control Rotary** until 'Prune invalid' is highlighted. Press the **Tuning Control Rotary**.
5. To cause the stations list to be pruned, eliminating unavailable stations rotate the **Tuning Control Rotary** until 'YES' is highlighted on the display.
6. Press the **Tuning Control Rotary** to cause the invalid station names to be removed from the station list. If you do not wish to prune stations, highlight 'NO' and then press the **Tuning Control Rotary**. The display will revert to the previous menu.

Note:

If you have moved your radio to a different part of the country you should also carry out a search for new stations (please see the section 'Finding new stations').



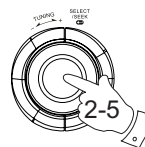
FM Radio

Operating your radio in FM mode

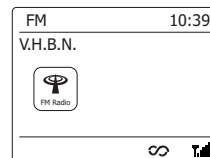
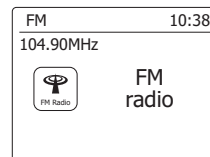
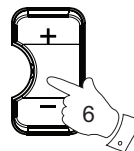
1. Carefully extend the telescopic aerial and press the **Standby** button to switch on your radio.
2. Press the **Mode** button and rotate the **Tuning Control Rotary** as needed to highlight FM radio mode. Press the **Tuning Control Rotary** to select the option.
3. Rotate the **Tuning Control Rotary** in a clockwise direction. The displayed frequency will increase. Press the **Tuning Control Rotary** to carry out an auto-tune. Your radio will scan up the FM band from the currently displayed frequency and will stop scanning when it finds a station of sufficient strength.
4. The display will show the frequency of the signal which has been found. If RDS information is available, after a few seconds the display will show the radio station name. If you only hear hiss or interference, simply press the **Tuning Control Rotary** to scan further. Your radio will scan further.
5. To find more FM stations press the **Tuning Control Rotary** to repeat the scan operation. To scan down in frequency, rotate the **Tuning Control Rotary** in a anti-clockwise direction first and then press the **Tuning Control Rotary**. Your radio will scan down the FM band from the currently displayed frequency and will stop scanning when it finds a signal of sufficient strength.
6. When the end of the waveband is reached your radio will recommence tuning from the opposite end of the waveband. Use the **Volume** buttons to adjust the sound level as needed.



MODE



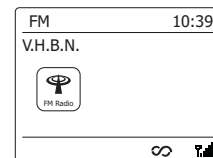
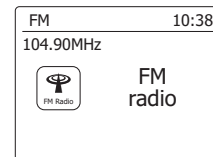
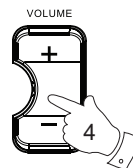
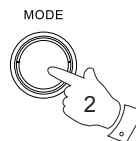
VOLUME



GB

Manual tuning

1. Carefully extend the telescopic aerial and press the **Standby** button to switch on your radio.
2. Press the **Mode** button and rotate the **Tuning Control Rotary** as needed to highlight FM radio mode. Press the **Tuning Control Rotary** to select the option.
3. Rotate the **Tuning Control Rotary** 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. Use the **Volume** buttons to adjust the sound level as needed.



Display modes

Your radio has a range of display options when in FM mode:

1. Press the **Info** button to cycle through the different options.

- | | |
|-----------------|--|
| a. Text | Displays text messages such as the artist or track name, phone in number, traffic alerts, etc. |
| b. Program Type | Displays the type of station being listened to such as Pop, Classic, News etc. |
| c. Frequency | Displays the frequency of the FM signal. |
| d. Date | Displays the current date. |

Note:

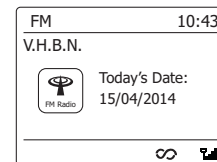
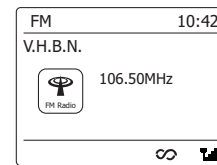
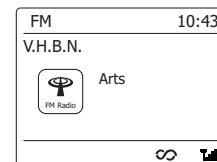
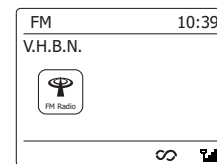
If no RDS information is available, then the radio will only be able to display the frequency.

There will be no text or program type information available under these conditions.

The radio only provides displays when there is information available. So if there is no text, for example, that display is not available.

The RDS indicator at the bottom of the display shows that there is some RDS data present in the broadcast being received.

The stereo speaker display shows that the radio is receiving a stereo broadcast (please see also 'Stereo/Mono switching').

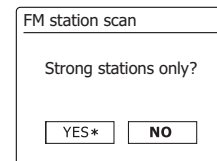
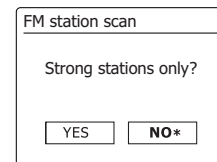
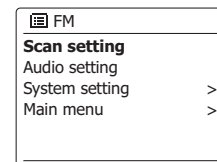
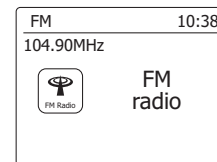
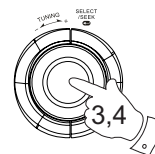
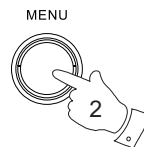
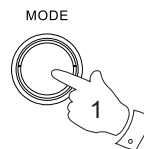


GB

Scan setting

When using the FM mode your radio can be set to either scan local stations or to scan all stations including distant radio stations.

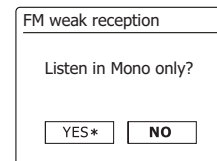
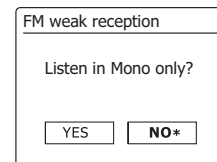
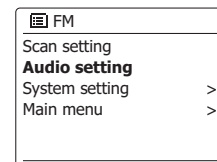
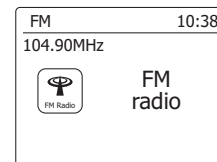
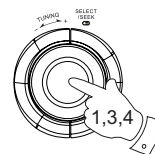
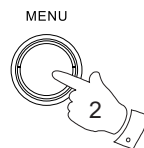
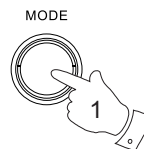
1. Press the **Mode** button and rotate the **Tuning Control Rotary** as needed to highlight FM radio mode. Press the **Tuning Control Rotary** to select the option.
2. Press the **Menu** button to enter the FM menu.
3. Rotate the **Tuning Control Rotary** until 'Scan setting' is highlighted and then press the **Tuning Control Rotary** to enter the scan adjustment mode. The current scan setting is indicated with an asterisk.
4. To set your radio so that only the stations with the strongest signals are found during scanning rotate **Tuning Control Rotary** until 'YES' is highlighted. Press the **Tuning Control Rotary** to confirm the setting. (Normally this will restrict scanning to local transmissions.) Alternatively, to set your radio so that all available stations are found during scanning (local and distant transmissions) rotate the Tuning Control Rotary until 'NO' is highlighted. Press the Tuning Control Rotary to confirm the setting.



Stereo / Mono switching

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 stereo.

1. Press the **Mode** button. Rotate and press the **Tuning Control Rotary** as needed to select the FM radio mode display and tune to the required FM station as previously described.
2. Press the **Menu** button to enter the FM menu.
3. Rotate the **Tuning Control Rotary** until 'Audio setting' is highlighted on the display. Press the **Tuning Control Rotary** to enter the audio setting mode. The current setting is indicated with an asterisk.
4. To switch to mono in order to reduce the hiss from a weak FM signal rotate the **Tuning Control Rotary** until 'YES' is highlighted. Press the **Tuning Control Rotary** to confirm the setting. Alternatively, to return to the normal automatic 'stereo or mono' mode press the **Tuning Control Rotary** until 'NO' is highlighted. Press the **Tuning Control rotary** to confirm the setting.



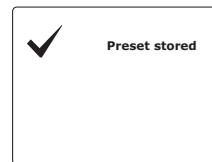
Presetting stations in DAB and FM modes

There are 5 memory presets each for DAB and FM radio. They are used in the same way for each operating mode.

1. Press the **Standby** button to switch on your radio.
2. Tune to the required radio station as previously described.
3. To store the station as a preset, press and hold the required **Preset** button (1-5) until the display shows 'Preset stored'. The station will be stored under the chosen preset button. Repeat this procedure as needed for the remaining presets.
4. Stations which are already stored in the presets may be over written by following the above procedure.

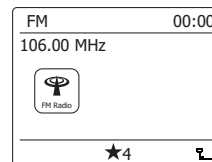
Note:

The radio station presets are retained in memory when the radio is switched off and disconnected from the mains supply.



Recalling a preset in DAB and FM modes

1. Press the **Standby** button to switch on your radio.
2. Select the required operating mode.
3. Momentarily press the required **Preset** button. Your radio will then tune to the station stored in the selected preset memory. The chosen preset number is also shown in the lower area of the radio display, e.g. '★4'.



Listening music via Bluetooth streaming (available only in BTR-160)

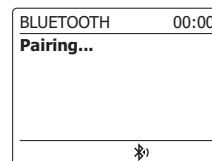
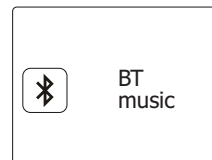
You need to pair your Bluetooth device with your BTR-160 before you can auto-link to play/stream Bluetooth music through your BTR-160. Pairing creates a 'bond' so two devices can recognize each other.

Pairing and playing your Bluetooth device for the first time

1. Press the **Mode** button and rotate the **Tuning Control Rotary** as needed to highlight BLUETOOTH mode. Press the **Tuning Control Rotary** to select the option. The "Pairing" will show on the display.
2. Activate Bluetooth on your device according to the device's user manual to link to the radio. Locate the Bluetooth device list and select the device named 'BTR-160' (With some Smartphone's that are equipped with earlier versions than BT2.1 Bluetooth device, you may need to input the pass code "0000")
3. Once connected, there will be a confirmation tone sound and the name of your connected Bluetooth device will show on the display. You can simply select and play any music from your source device. The volume control can be adjusted from your source device, or directly from the radio.
4. Use the controls on your Bluetooth-enabled device or on the radio to play/pause and navigate tracks.

Note:

- 1) If 2 Bluetooth devices are pairing for the first time, both must search for your radio, it will show its availability on both devices. However, if one device links with this unit first, then the other Bluetooth device won't find it on the list.
- 2) 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. Be aware that during the period of disconnection, no other Bluetooth device can pair or link with your radio.
- 3) If 'BTR-160' shows in your Bluetooth device list but your device cannot connect with it, please delete the item from your list and pair the device with the radio again following the steps described previously.



- 4) The effective operation range between the system and the paired device is approximately 10 meters (30 feet). Any obstacle between the system and the device can reduce the operational range.
- 5) Bluetooth 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.
- 6) 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 BTR-160.




Display modes - Bluetooth

Your radio has a range of display options when in Bluetooth mode. Note that the availability of information depends on the specific media format.

1. Press the Info button to cycle through the different options.
 - a. Artist Displays the artist information for the track currently playing.
 - b. Album Displays the album information for the track currently playing.
 - c. Date Displays the current date.
 - d. Device name Displays the device name for the track currently playing.

Playing audio files in Bluetooth mode

When you have successfully connected your radio with the chosen Bluetooth device you can start to play your music using the controls on your connected Bluetooth device.

1. Once playing has started adjust the volume to the required setting using the Volume control on your radio or on your enabled Bluetooth device.
2. Use the controls on your device to play/pause and navigate tracks. Alternatively, control the playback using Play/Pause () , Next track () , Previous track buttons () on the radio.
3. Press and hold the Fast-forward or Rewind button to move through the current track. Release the button when the desired point is reached.

Note:

Not all player applications or devices may respond to all of these controls.

Playing a previously-paired Bluetooth source device

The BTR-160 can memorize up to 8 sets of paired Bluetooth source devices, when the memory exceed this amount, the earliest pairing device will be over written from the device.

If your Bluetooth source device already paired with the BTR-160 previously, the unit will memorize your Bluetooth source device and it attempts to reconnect with a Bluetooth source device in memory which is last connected.

To connect to the required memorized Bluetooth device, you can also press and release the Pair button to enter the Bluetooth device memory. Then rotate the **Tuning Control Rotary** to find the desired memorized Bluetooth device and press the **Tuning Control Rotary** to connect to the required Bluetooth device.

Disconnecting your Bluetooth device

Press and hold the Bluetooth pairing button for 2-3 seconds to disconnect with your Bluetooth device. You can also press the **Mode** button and rotate the **Tuning Control Rotary** to select any mode other than Bluetooth mode and then press the Tuning Control Rotary or turn off Bluetooth on your Bluetooth source device to disable the connection.

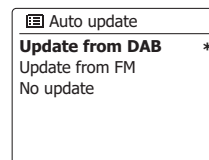
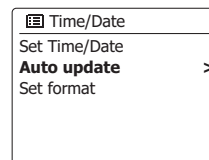
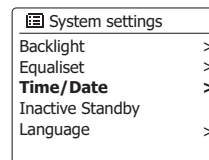
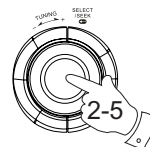
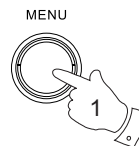
If you disconnect the Bluetooth device when you are in Bluetooth mode, the "Pairing" will show on the display, indicating Bluetooth is available again for pairing.

Clock and Alarms

Automatically updating the clock

You may specify that the radio sets its clock from DAB or FM radio broadcasts. After a power failure the radio will then set its clock the next time that you turn on the radio in DAB or FM mode. Alternatively you may specify that the time is not automatically updated. In this case the clock must always be set manually after a power interruption.

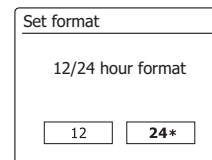
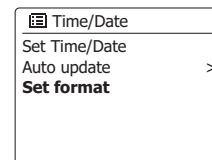
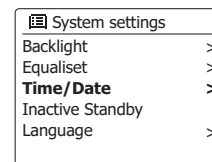
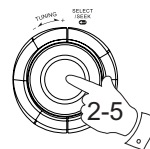
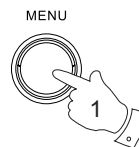
1. With your radio switched on, press the **Menu** button to access the menu for the current mode.
2. Rotate the **Tuning Control Rotary** until 'System settings' is highlighted on the display. Press the **Tuning Control Rotary** to enter the system settings menu.
3. Rotate the **Tuning Control Rotary** until 'Time/Date' is highlighted on the display. Press the **Tuning Control Rotary** to enter the time setup.
4. Rotate **Tuning Control Rotary** until 'Auto update' is highlighted on the display. Press **Tuning Control Rotary** to enter the auto-update menu.
5. Rotate the **Tuning Control Rotary** to choose an update option from 'Update from DAB', 'Update from FM', or 'No update' as required. Press the **Tuning Control Rotary** to confirm your choice. The radio will then exit to the previous menu display.



Setting the clock format

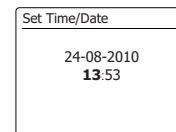
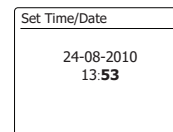
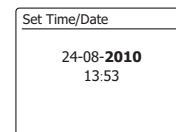
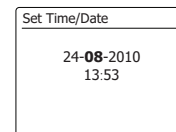
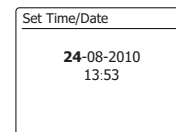
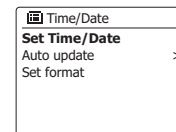
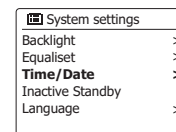
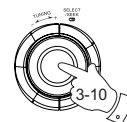
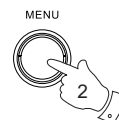
The clock display used in standby mode and on the playing mode screens can be set to 12 or 24 hour format. The selected format is then also used when setting the alarms.

1. With your radio switched on, press the **Menu** button to access the menu for the current mode.
2. Rotate the **Tuning Control Rotary** until 'System settings' is highlighted on the display. Press the **Tuning Control Rotary** to enter the system settings menu.
3. Rotate the **Tuning Control Rotary** until 'Time/Date' is highlighted on the display. Press the **Tuning Control Rotary** to enter the time setup.
4. Rotate the **Tuning Control Rotary** until 'Set format' is highlighted on the display. Press the **Tuning Control Rotary** to enter the clock format menu. The current clock display format is marked with an asterisk.
5. Rotate the **Tuning Control Rotary** to select either 12 or 24 hour format. Press the **Tuning Control Rotary** to confirm your choice of clock format. The display will then revert to the previous menu. If the 12 hour clock format is chosen, the radio will then use the 12 hour clock for the setting of alarms, and will display a 12 hour clock with an AM or PM indicator when in standby mode.



Manually setting the clock

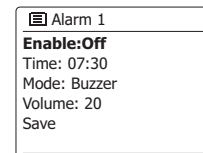
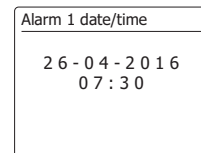
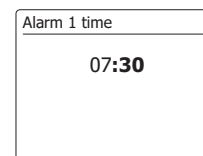
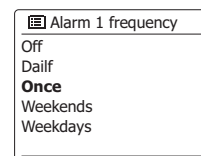
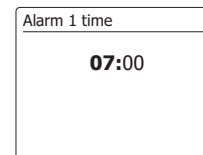
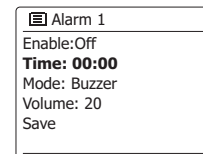
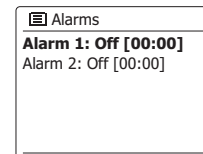
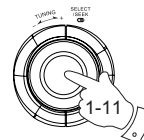
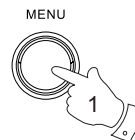
1. Press the Standby button to switch on your radio.
2. To set all time settings press the **Menu** button to access the menu for the current mode.
3. Rotate the **Tuning Control Rotary** until 'System settings' is highlighted on the display. Press the **Tuning Control Rotary** to enter the system settings menu.
4. Rotate the **Tuning Control Rotary** until 'Time/Date' is highlighted on the display, then press the **Tuning Control Rotary** to enter the time and date setting screen.
5. Rotate the **Tuning Control Rotary** until 'Set Time/Date' is highlighted on the display. Press the **Tuning Control Rotary** to enter the clock setup. The day digits will flash.
6. Rotate the **Tuning Control Rotary** until the correct day is shown on the display. Press the **Tuning Control Rotary** to enter the selection. The month digits will then flash.
7. Rotate the **Tuning Control Rotary** to select the correct month. Press the **Tuning Control Rotary**. The year digits will then flash.
8. Rotate the **Tuning Control Rotary** to select the correct year. Press the **Tuning Control Rotary** to enter the selection. The hour digits will then flash.
9. Rotate the **Tuning Control Rotary** to select the correct hour. Press the **Tuning Control Rotary** to enter the selection. The minute digits will then flash.
10. Rotate the **Tuning Control Rotary** to select the correct minutes. Press the **Tuning Control Rotary** to enter the selection. The display will then return to the previous menu.
 - If the radio has been set to use a 12 hour format, there will be an option here for setting AM or PM for the clock time.



Setting the alarm clock

Your radio has two separate alarms which can be set to wake you to either the radio or a buzzer alarm. In the event of a power interruption your radio has built in memory that will retain your alarm settings. Ensure that the time is set correctly before setting the alarms.

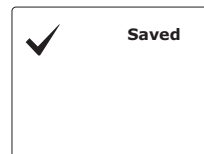
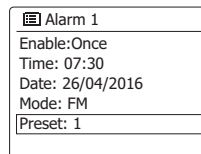
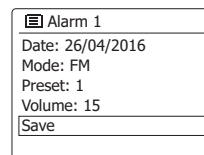
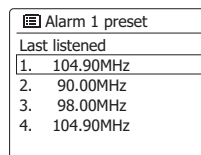
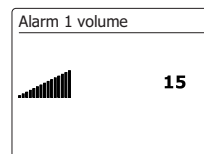
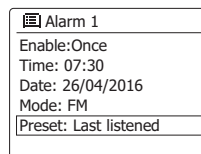
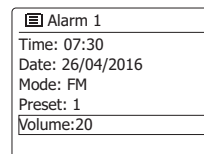
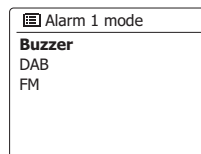
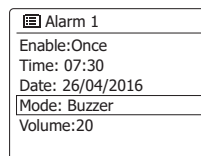
1. Press the **Menu** button and rotate the **Tuning Control Rotary** until 'Main menu' is highlighted. Press the **Tuning Control Rotary** to enter the menu.
2. Rotate the **Tuning Control Rotary** until 'Alarms' is highlighted and then press the **Tuning Control Rotary** to enter the selection.
3. Rotate the **Tuning Control Rotary** until the desired alarm (1 or 2) is highlighted on the display. Press the **Tuning Control Rotary** to enter alarm setup.
4. Rotate the **Tuning Control Rotary** until 'Time' is highlighted on the display. Press the **Tuning Control Rotary** to adjust the alarm time.
5. Rotate the **Tuning Control Rotary** to choose the alarm hour. Press the **Tuning Control Rotary** to confirm the setting.
6. Rotate the **Tuning Control Rotary** to choose the alarm minute. Press the **Tuning Control Rotary** to confirm the setting. The display will then return to the alarm setting menu. If the radio has been set to use a 12 hour clock format, there will also be an option here for setting AM or PM for the alarm time.
7. Rotate the **Tuning Control Rotary** to highlight 'Enable' and press the **Tuning Control Rotary**. The display will show the Frequency options for the alarm. The alarm frequency options are as follows:
 - 'Off' - the alarm will be disabled
 - 'Daily' - the alarm will sound everyday
 - 'Once' - the alarm will sound once
 - 'Weekends' - the alarm will sound only at weekends
 - 'Weekdays' - the alarm will sound on weekdays only
 Rotate the **Tuning Control Rotary** to choose the required alarm frequency option. Choosing Off will disable the alarm. Press the Tuning Control Rotary to confirm the selection. If you choose to set the alarm to Once you will also need to set the date using the **Tuning Control Rotary**.



8. The alarm can be set to buzzer, DAB radio, FM radio. For whichever radio mode is selected, the radio alarm may be set to any of the stations which have been stored as presets or to the station most recently listened to. Rotate the **Tuning Control Rotary** to highlight the current 'Mode' option for the alarm, then press the Tuning Control Rotary if you wish to change it. Rotate the Tuning Control Rotary to highlight either 'Buzzer' or the required mode. Press the **Tuning Control Rotary** to confirm the selection.
9. If setting the alarm to a radio option, rotate the **Tuning Control Rotary** to highlight the 'Preset:' option then press the **Tuning Control Rotary** if you wish to change it. Choose from either the radio station 'Last listened' to, or from the presets 1 - 5. Scroll to the chosen option and press the **Tuning Control Rotary** to confirm the selection. Note that you can only set the alarm to use a preset which has already been stored.
10. Rotate the **Tuning Control Rotary** until the 'Volume:' option is highlighted on the display and press the **Tuning Control Rotary** if you wish to change it. The radio uses the saved volume setting for each alarm when it sounds. Set the required volume using the **Tuning Control Rotary** to confirm the setting.
11. In order to store the alarm settings rotate the **Tuning Control Rotary** until 'Save' is highlighted. Press the **Tuning Control Rotary** to store the alarm settings. Your radio will show 'saved' and will then go back to the list of alarms with the new alarm setting shown in the display. If you decide not to save the settings, press the **Back** button. The display will show 'Save changes' with a 'YES' or 'NO' option. Rotate the Tuning Control Rotary to choose 'NO' and then press the **Tuning Control Rotary**. 'Alarm not saved' will show on the display. Active alarms are shown using small alarm indicators at the bottom of the playing displays and on the clock display when in standby.

Note:

If you make a mistake at any point while setting the alarms, use the Back button to go back to the previous screen.

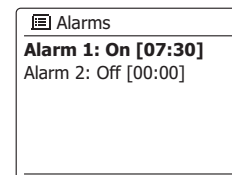


When the alarm sounds

The buzzer or radio alarm will sound at the selected times for up to 60 minutes unless cancelled. The volume used for the alarm will be as specified during the alarm setting procedure. If the radio cannot connect to the specified radio station, the buzzer alarm will be used instead. To cancel an alarm, press the Standby button to return to standby mode. The alarm icon will flash at the bottom of the playing mode displays, and the radio will automatically switch back to standby mode when the 60 minutes have elapsed.

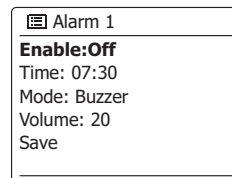
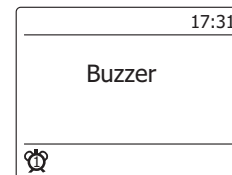
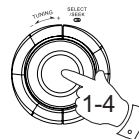
Note:

If you have your earphone insert while the alarm is sounding, the sound of the alarm will come out from your earphone.



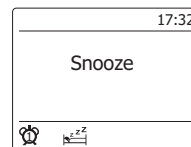
Disabling alarms

1. To disable a single alarm enter the alarm setup menu and rotate the **Tuning Control Rotary** until the desired alarm is highlighted on the display. Press the **Tuning Control Rotary** to confirm.
2. Rotate the **Tuning Control Rotary** until the 'Enable:' option is highlighted on the display. Press the **Tuning Control Rotary**.
3. Rotate the **Tuning Control Rotary** to highlight 'Off' and press the **Tuning Control Rotary**.
4. Rotate the **Tuning Control Rotary** until the 'Save' option is highlighted on the display then press the **Tuning Control Rotary** to save the new setting. The chosen alarm will now be disabled.



Snooze timer

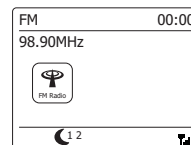
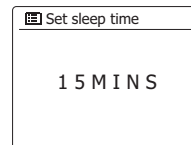
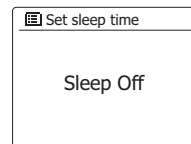
1. The buzzer or radio alarm can be silenced for 5 minutes by pressing any button other than the Standby button.
2. Should you wish for a longer snooze duration this can be extended. Press the **Menu** button to access the menu for the current mode. Rotate the **Tuning Control Rotary** until 'Main menu' is highlighted. Press the **Tuning Control Rotary** to enter the menu. Rotate the **Tuning Control Rotary** until 'Snooze' is highlighted and press the **Tuning Control Rotary** to enter the setting. Rotate the **Tuning Control Rotary** to select the desired snooze time. The options are **5,10,15,20,25,30** minutes. Press the **Tuning Control Rotary** to confirm the setting.
3. In order to cancel the Snooze timer while the alarm is suspended, press the Standby button. The display will briefly show an 'Alarm Off' message.



Sleep timer

Your radio can be set to turn off after a preset time has elapsed. The sleep timer setting can be adjusted between 15 and 120 minutes in 15 minute increments.

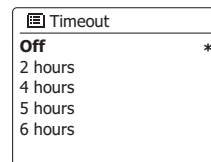
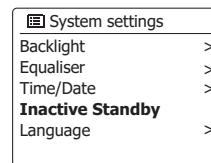
1. Press the **Menu** button and rotate the **Tuning Control Rotary** until 'Main menu' is highlighted. Press the **Tuning Control Rotary** to enter the menu.
2. Rotate the **Tuning Control Rotary** until 'Sleep' is highlighted. Press the **Tuning Control Rotary** to enter the setup. 'Sleep off' will appear on the display.
3. Rotate the **Tuning Control Rotary** to select the desired sleep time. The options are 15 to 120 minutes in 15 minutes increment. Use the OFF option to cancel the sleep function.
4. Your radio will switch off after the preset sleep time has elapsed.
5. Your radio will switch into standby mode after the preset time has elapsed. An active sleep timer is shown using a small timer indicator at the bottom of the playing displays. This indicator also shows the sleep time remaining before the radio switches itself into standby mode.
6. To cancel the sleep time before the preset time has elapsed and to turn off the radio, press the Standby button to turn the unit off manually. To cancel the sleep timer and leave the radio playing, go back into the sleep timer settings (steps 1 to 3 above) and select the Off option in step 3. Alternatively, simply press the **Standby** button twice in succession to cancel the timer and switch the radio back on again.



Inactive standby

Your radio can be set to standby mode automatically if it idles for a preset period of time. The idle time setting can be adjusted between 2, 4, 5 and 6 hours.

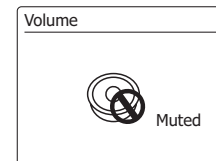
1. Press the **Menu** button and rotate the **Tuning Control Rotary** until 'System Settings' is highlighted. Press the **Tuning Control Rotary** to enter the menu.
2. Rotate the **Tuning Control Rotary** until 'Inactive Standby' is highlighted. Press the **Tuning Control Rotary** to enter the setup. Options for idle time will appear on the display.
3. Rotate the **Tuning Control Rotary** to select the desired idle time. Use the OFF option to cancel the inactive standby function.
4. Your radio will switch to standby mode when your radio idle for a preset period of time.



Mute function

Pressing the **Mute button** will mute the output from the loudspeakers.

1. Press the **Mute button** to mute the sound output.
2. Press the **Mute button** again or one of Volume buttons to un-mute the sound output.



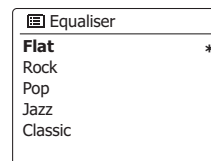
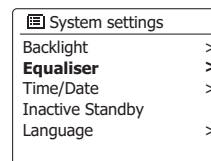
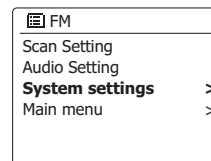
Display and Audio

Equalizer function

The sound on your radio can be adjusted to suit your personal taste for the material that you are listening to. The radio has a range of equalizer modes. Alternatively you may set the treble and bass levels to your own preferences which can be accessed from the My EQ menu item.

1. Press the **Menu** button and rotate the **Tuning Control Rotary** until 'System settings' is highlighted. Press the **Tuning Control Rotary** to enter the setup.
2. Rotate the **Tuning Control Rotary** until 'Equalizer' is highlighted on the display. Press the **Tuning Control Rotary** to confirm.
3. Rotate the **Tuning Control Rotary** to cycle through and highlight the various modes. Press the **Tuning Control Rotary** to confirm your selection.
 - a - Flat
 - b - Rock
 - c - Pop
 - d - Jazz
 - e - Classic
 - f - News
 - g - Movie
 - h - My EQ

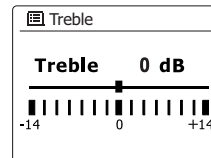
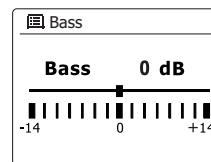
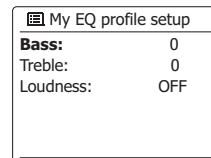
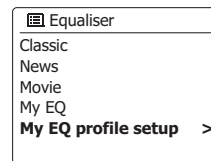
The currently selected mode is marked with an asterisk.



Setting up your My EQ profile

If you find the preset equalizer functions not to your liking, you may set up a custom treble and bass setting as follows:

1. Follow steps 1-2 in the previous section in order to enter the Equalizer menu.
2. Rotate the **Tuning Control Rotary** until 'My EQ profile setup' is highlighted on the display. Press the **Tuning Control Rotary** to enter the adjustment mode.
3. To adjust the bass level rotate the **Tuning Control Rotary** until 'Bass' is highlighted on the display. Press the **Tuning Control Rotary** to enter the adjustment mode and rotate the **Tuning Control Rotary** until the desired level (between -14 and +14) is displayed. The sound will change as you adjust the level. Press the **Tuning Control Rotary** when you are happy with the bass setting.
4. To adjust the treble level rotate the **Tuning Control Rotary** until 'Treble' is highlighted on the display. Press the **Tuning Control Rotary** to enter the adjustment mode and rotate the **Tuning Control Rotary** until the desired level (between -14 and +14) is displayed. The sound will change as you adjust the level. Press the **Tuning Control Rotary** when you are happy with the treble setting.
5. To adjust the loudness rotate the **Tuning Control Rotary** until 'Loudness' is highlighted on the display. Press the **Tuning Control Rotary** to enter the setting and repeatedly press the **Tuning Control Rotary** to choose to activate or deactivate the loudness function.
6. Press the **Back** button and the display will prompt you to save the changes. If you wish to save the changes highlight 'YES'. If you do not wish to save the changes highlight 'NO'. Press the **Tuning Control Rotary** to enter the selection.
7. To use the 'My EQ' profile rotate the **Tuning Control Rotary** until 'My EQ' is highlighted, and then press the **Tuning Control Rotary** to make the selection. The treble and bass settings will be remembered for the next time that you wish to use the 'My EQ' setting.



Brightness control

The brightness of the display can be adjusted for when the radio is in standby and for when it is in use. If you use the unit in the bedroom, you may prefer a lower standby brightness level than a higher brightness setting.

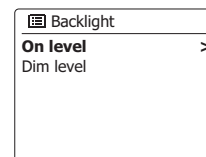
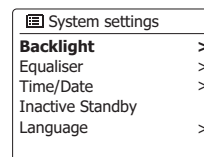
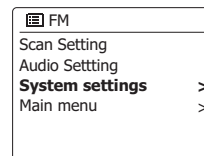
1. Press the **Standby** button to switch on your radio. Access the menu for the current mode by pressing the **Menu** button.
2. Rotate the **Tuning Control Rotary** until 'System settings' is highlighted on the display. Press the **Tuning Control Rotary** to enter the system settings menu. Rotate the **Tuning Control Rotary** until 'Backlight' is highlighted on the display. Press the **Tuning Control Rotary** to confirm the setting.

3. In Backlight menu, there are 2 settings:

On level: to adjust the brightness when the radio is in use.

Dim level: to adjust the brightness when the radio is in standby.

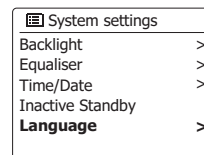
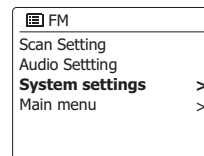
Rotate the **Tuning Control Rotary** to select your option and press the **Tuning Control Rotary** to confirm your setting.



Language selection

By default your radio will display all menus and messages in English. You can choose your preferred language.

1. Access the menu for the current mode by pressing the **Menu** button. Rotate the **Tuning Control Rotary** until 'System settings' is highlighted on the display. Press the **Tuning Control Rotary** to enter the settings menu.
2. Rotate the **Tuning Control Rotary** until 'Language' is highlighted on the display. Press the **Tuning Control Rotary** to enter the menu.
3. Rotate the **Tuning Control Rotary** until your preferred language is highlighted and press the **Tuning Control Rotary** to confirm the setting.



Headphone socket

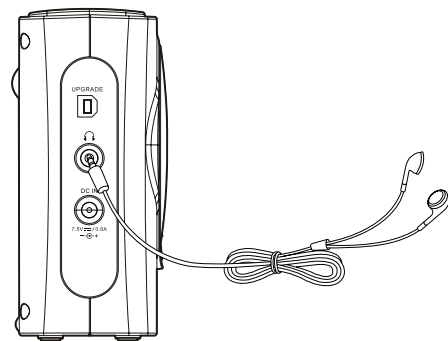
A 3.5mm Headphone Socket located on the left hand side of your radio is provided for use with headphones. Inserting a plug automatically mutes the internal loudspeaker.

Please be aware that the sensitivity of headphones can vary widely. We therefore recommend setting volume to a low level before connecting headphones to the radio. It is also recommended to reduce the volume before unplugging your headphones.

IMPORTANT:

Excessive sound pressure from earphones and headphones can cause hearing loss.

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



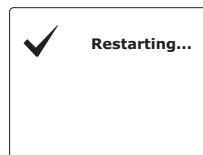
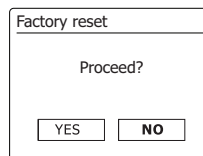
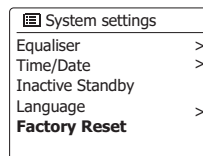
Information

Factory reset

If you wish to completely reset your radio to its initial state this may be performed by following this procedure. By performing a factory reset, all user entered settings will be erased.

1. Access the menu for the current mode by pressing the **Menu** button. Rotate the **Tuning Control Rotary** to highlight the 'Main menu' option, then press the **Tuning Control Rotary** to confirm.
2. Rotate the **Tuning Control Rotary** until 'System settings' is highlighted and then press the **Tuning Control Rotary** to confirm the setting.
3. Rotate the **Tuning Control Rotary** until 'Factory Reset' is highlighted and then press the **Tuning Control Rotary** to confirm the setting. Rotate the **Tuning Control Rotary** to highlight 'YES' to proceed. If you do not wish to carry out a system reset, highlight 'NO' and then press the **Tuning Control Rotary** to confirm the setting. The display will revert to the previous menu.
4. With 'YES' highlighted, a full reset will be performed and the radio will restart as if first plugged in. The DAB stations list together with any preset stations will be erased. All configuration settings will be restored to their defaults, the clock and alarms will be reset.

In case of malfunction for any reason, reset the product as described above to resume normal operation. It may be necessary in some cases to disconnect the mains power, then reconnect power after 10 seconds. In case of malfunction due to electrical fast transient (burst), reset the product as above (reconnection of the power source may be required) to resume normal operation.



USB socket for software upgrade

From time to time, new software features for your radio may be developed. Your radio has therefore been designed to allow its internal software to be updated using your USB upgrade port.

You should not attempt to update your radio unless it is recommended to you by Sangean Customer Services. Updating the software may remove radio station presets and alarm settings from your radio.

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:

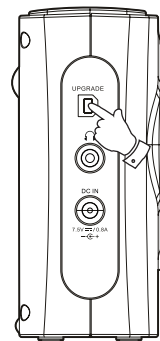
<http://sg.sangean.com.tw/first/first.asp>

<http://www.sangean.eu/first/first.asp>

www.sangean.com.au

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

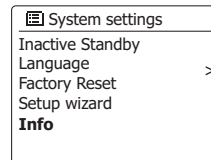
1. Using the micro USB cable (not supplied) to connect the USB socket on the left hand side of the radio and your PC USB port.
2. Go to the website above to download the latest software. Follow the on-screen instructions on your PC provided with the upgrade software to complete the software upgrade.



Software version display

The software version display is provided for reference and customer support purposes and cannot be changed.

1. Access the menu for the current mode by pressing the **Menu** button. Rotate the Tuning Control Rotary until 'System settings' is highlighted on the display. Press the **Tuning Control Rotary** to enter the System settings menu.
2. Rotate the **Tuning Control Rotary** until 'Info' is highlighted on the display. Press the **Tuning Control Rotary** to display the software version.

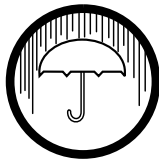


Cautions

Do not allow your radio to be exposed to water, steam or sand.

Do not leave your radio where excessive heat could cause damage.

The name plate is located on the rear of the radio.



- The radio shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the radio.
- It is recommended to operate the product such that there is a minimum distance (10cm recommended) to adjacent objects in order to ensure good ventilation.
- The ventilation of the product should not be restricted by covering it with items such as newspapers, tablecloths, curtains etc.
- No naked flame sources such as lighted candles should be placed on the product.
- It is recommended to avoid using or storing the product at extremes of temperature. Avoid leaving the unit in cars, on windows sills, in direct sunlight etc.
- The radio must be used in a moderate climate.
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- The batteries shall not be exposed to excessive heat such as sunshine, fire or the like.
- The MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

Specifications

Power Requirements

Mains Power Supply	AC 100- 240 V/50/60 Hz/12W
Batteries	4 x UM-1(D size, LR20), Alkaline or NiMH battery

Frequency Coverage

FM	87.5 - 108 MHz
DAB	174.928 - 239.200 MHz

Bluetooth (available only in BTR-160)

Bluetooth specification	Bluetooth® 4.1 EDR compliant
Profile Support	A2DP, AVRCP
Bluetooth Audio CODEC	AAC, SBC
Transmitting Power	Power Class 2
Line of sight range	10 meters/30 feet

Circuit features

Output power	1W
Headphone socket	3.5 mm diameter, stereo
Aerial System	DAB Telescopic aerial
	FM Telescopic aerial

*The company reserves the right to amend the specification without notice.
Different model names are applied according to various market areas.*



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)