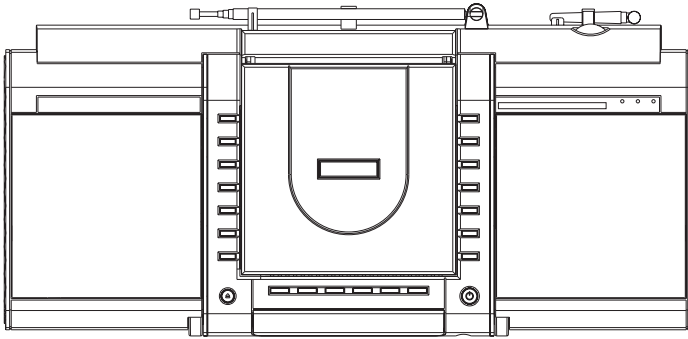# Goodmans

DAB Radio with FM/MW Analogue Radio And CD Player
GPS280

Instruction Manual

Please Read these Instructions prior to first use and retain for future reference.

Table of Contents

Important Notes

Hearing is very important to you and to us so please take care when operating this equipment. It is strongly recommended that you follow the listed guidelines in order to prevent possible damage or loss of hearing:

ESTABLISH A SAFE SOUND LEVEL
- Over time your hearing will adapt to continuous loud sounds and will give the impression that the volume has in fact been reduced. What seems normal to you may in fact be harmful. To guard against this **BEFORE YOUR HEARING ADAPTS** set the volume at a low level.
- Slowly increase the level until you can hear comfortably and clearly and without distortion.
- Damage to your hearing is accumulative and is irreversible.
- Any ringing or discomfort in the ears indicates that the volume is too loud.

Once you have established a comfortable listening level, DO NOT INCREASE THE SOUND LEVEL FURTHER.

The following list of typical sound levels may assist you in recognising just how loud you have set the volume level.

DECIBEL

Level dB   Example

30dB   Quiet library, soft whisper.
40   Living room, fridge freezer bedroom away from traffic.
50   Normal conversation, quiet office, light traffic.
60   Electric sewing machine,
70   Vacuum cleaner, hair dryer, noisy restaurant

THE FOLLOWING NOISE CAN BE HARMFUL UNDER CONSTANT EXPOSURE

80dB   Average city traffic, alarm clock buzzer at 2 feet, food mixer.
90dB   Motorcycle, heavy goods vehicle, petrol lawn mower.
100   Pneumatic drill, chain saw, garbage truck, discotec / night-club.
120   Rock band concert, thunderclap.

PERMANENT LOSS OF HEARING

140   **THRESHOLD OF PAIN** Gunshot 2 feet away.
180   Rocket Launching pad.

IMPORTANT SAFEGUARDS
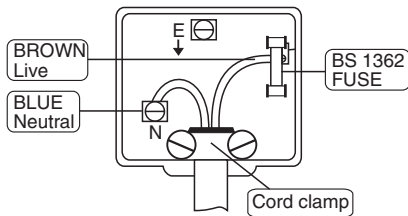
PRE FITTED MAINS PLUGS

For your convenience a mains plug has been fitted to this appliance. For your safety please observe the following information.

1. Should the fuse in the plug remove the plug from the wall socket and replace the fuse with a 3 Amp ASTA approved to BS 1362 fuse.

2. Never use the plug without the fuse cover fitted. Replacement fuse covers are available from your dealer or most electrical retail outlets.

3. If the cable of the mains plug is cut off the cable, rewire the replacement plug in accordance with instruction given in this manual.

4. CAUTION: Under no circumstances should the discarded plug be inserted mains socket. To prevent a shock hazard carefully dispose of the discarded plug. Do not leave the plug lying around where children might see it.

WARNING: To prevent fire or shock hazard do not expose this unit to rain or moisture.

CAUTION: DANGEROUS VOLTAGES EXIST INSIDE THIS UNIT, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DISCONNECT FROM MAINS SUPPLY WHEN NOT IN USE.

PLUG WIRING DETAILS

BROWN Live
BLUE Neutral
E
N
BS 1362 FUSE
Cord clamp

The wires in this mains lead are coloured in accordance with the following wiring codes:

Blue.. Neutral

Brown... Live

The wires in this mains lead must be connected to the terminals in the plugs as follows:

Blue Wire..................................... N or Black

Brown Wire..................................... L or Red

Only a 3 Amp fuse should be fitted in the plug or a 5 Amp fuse at the distribution board.

WARNING: UNDER NO CIRCUMSTANCES MUST THE LIVE OR NEUTRAL WIRES BE CONNECTED TO THE EARTH TERMINAL IN A 3-PIN MAINS PLUG.

 This symbol means that this unit is double insulated. An earth connection is not required.

CAUTION

CLASS 1 LASER PRODUCT

Use of Controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

LASER SAFETY

This unit employs a laser, only qualified service personnel should attempt repair.

DANGER: INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.

CAUTION: HAZARDOUS LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED.

CAUTION

CLEANING: Always disconnect unit from mains supply before attempting to clean it. Use soft cloth moistened with soapy water, wipe gently. Do not use solvents or abrasive materials.

SOME DO'S AND DONT'S ON THE SAFE USE OF EQUIPMENT

This equipment has been designed and manufactured to meet European safety standards but like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

Do read the operating instructions before you attempt to use the equipment.

Do ensure that all electrical connections (Including the mains plug, extension leads and interconnections between pieces of equipment) are properly made in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

Do consult your dealer if you are ever in doubt of the installation, operating, or safety of your equipment.

Don't continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way- switch off, withdraw the mains plug and consult your dealer.

Don't remove any fixed covers as this may expose dangerous voltages.

Don't leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family knows how to do this. Special arrangements may need to be made for infirm or handicapped people.

Don't listen to headphones at high volume, as such use can permanently damage your hearing.

Don't obstruct the ventilation of the equiment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the life of the equipment.

Don't allow electrical equipment to be exposed to rain or moisture.

Above all

— Never let anyone, especially children, push anything into holes, slots or any other opening as this could result in a fatal electric shock.

— Never guess or take chances with electrical equipment of any kind.

— It is better to be safe than sorry!

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE, DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE, DO NOT OPEN THE CABINET, REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

HELPLINE PHONE NUMBER 0870 873 0080

Getting Started

Congratulations on your purchase of the Worlds first integrated DAB and CD System, please read through the following pages and use the supplied Quick Start Guide to get the most out of this Gps 280.

What's in the Box

On unpacking the unit the following should be located within the packing.

1 x Gps 280 Main Unit
1 x Remote control
1 x AC figure of eight mains lead complete with 3 pin fitted plug
1 x Quick Start Guide
1 x Instruction Manual

Please retain all packaging materials as in the event of the product needing transportation or return for service these will be needed.

Getting Started

Power Sources

The Gps 280 can be powered either from the household 230V AC mains supply via the supplied lead or from 8 C size batteries.

■ **AC MAINS**
 Insert the small end of the AC mains lead to the socket on the rear of the Gps 280 and the 3 pin plug into a switched household AC supply socket. Switch the Power ON/OFF switch on the rear of the unit to the ON position and ensure the wall outlet socket is switched ON. The power indicator will now illuminate indicating power is reaching the unit. Press the standby button to switch the unit on.
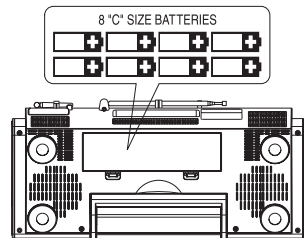 **Note:** Whilst using the AC supply the battery supply is disconnected automatically.

■ **Battery Operation**
 Remove the Battery Compartment cover and insert 8 x LR14 (C Size batteries), observing the correct polarity, replace the cover.

NOTE: BE SURE TO MATCH THE POLARITIES AS SHOWN BELOW.

NOTE: Old batteries may swell and leak. To avoid damage to the unit, remove the batteries when the unit is to be stored for long periods of time, or if the batteries become exhausted (the Power Indicator will fade if the batteries are exhausted). And if radio sound is low or distorted, the batteries probably need replacing.
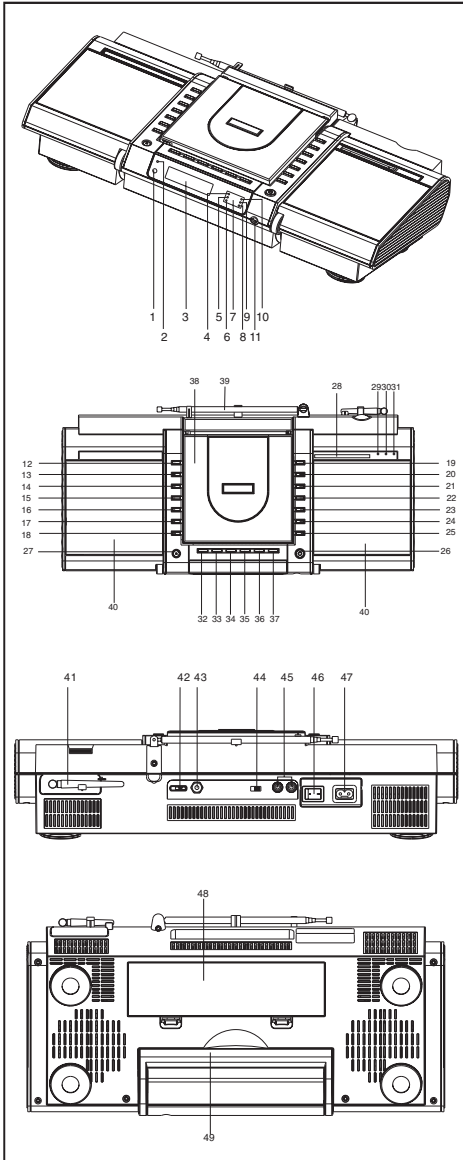
Remote Control

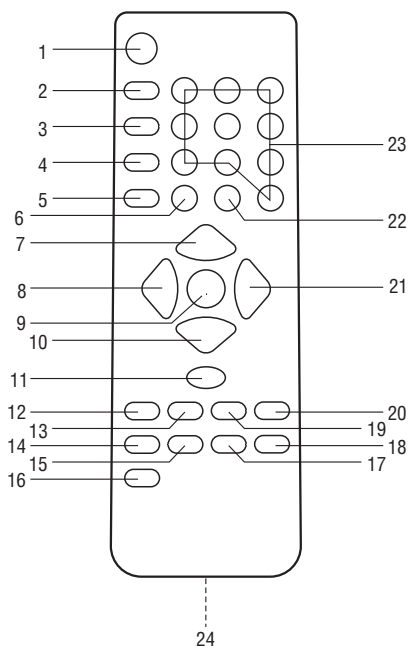The remote control uses two "AAA" or "UM-4" batteries.

1. Remote sensor
2. Stand-by indicator
3. LCD display(for dab)
4. CD repeat indicator
5. CD random indicator
6. DBBS indicator
7. Led display(for CD)
8. Mute indicator
9. CD program indicator
10. CD play/pause indicator
11. Headphones socket
12. Volume up button
13. Volume down button
14. DBBS button
15. DAB button
16. CD button
17. Tuner button
18. Band Button Analogue tuner
19. CD Skip UP button
20. CD skip down button
21. CD Programme button
22. CD Repeat button
23. CD Random button
24. CD play/pause button
25. CD stop button
26. Stand-by button
27. CD door eject button
28. Tuner dial scale
29. FM St. Indicator
30. FM indicator
31. MW indicator
32. Dab info button
33. DAB Setup
34. DAB auto tune
35. DAB select button
36. DAB down button
37. DAB up button
38. CD door
39. FM rod aerial
40. Speakers(L & R)
41. DAB int. ant.
42. DAB ant. Int/ext switch
43. DAB ext. ant. socket
44. FM mono/stereo switch
45. Line out socket
46. Power on/off switch
47. AC socket
48. Battery compartment
49. Handle

1. Stand by button
2. Tuner button
3. CD button
4. DAB button
5. Band button
6. Setup button
7. Volume Up button
8. Down button
9. Select button
10. Volume Down button
11. Auto Tune button
12. CD Play/Pause button
13. CD Stop button
14. CD Repeat button
15. CD Program button
16. Mute button
17. CD Random button
18. DBBS button
19. CD Backward Skip/Search button
20. CD Forward Skip/Search button
21. Up button
22. Info button
23. Numeric buttons
24. Battery compartment (rear)

Using the Remote control Correctly

● Point the remote control at the REMOTE SENSOR located on the unit on the unit.
● When there is a strong ambient light source, the performance of the REMOTE SENSOR may be degraded, causing unreliable operation.
● The recommended effective distance for remote operation is about 6 Metres or around 19 feet.
● Replace two "AAA" or "UM-4" batteries when there is either no operation or operation becomes erratic. See page 6 for details of changing the batteries

General Operation

1. Switch the power switch on the rear on the unit to the ON position the standby indicator will illuminate. Press the **STAND-BY** button on the front panel of the unit the Standby indicator will then extinguish.
2. Select the required source by pressing either **CD, TUNER** or **DAB** source selector button.
    Press the CD button to listen to CD.
    Press the TUNER button to listen to Analogue Radio either FM or MW.
    Press the DAB button to select Digital Audio Broadcast Radio.
    NOTE: before selecting DAB mode the DAB rod aerial must be fully extended to ensure reception for the Auto tune function.

    Use the Volume UP/ DOWN buttons to increase or decrease the sound output level.

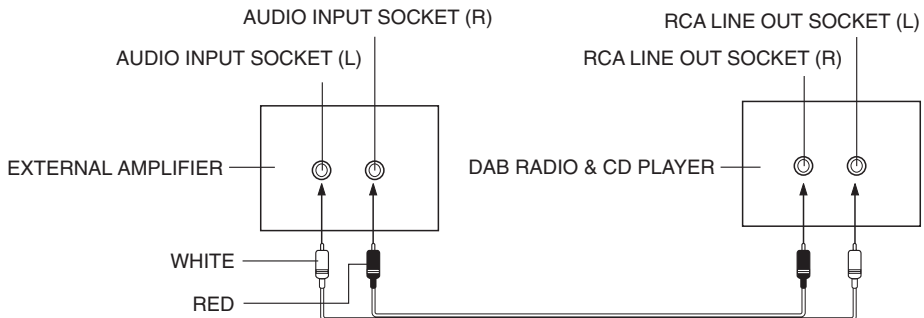   Use the DBBS button to enhance the Bass sound as required

    Use the MUTE button on the remote control to temporarily cut the Audio output , the MUTE indicator will illuminate, press this button again to restore the previous Audio level.

Headphones
A stereo headphone socket is provided for private listening. Connect a pair of low impedance (8-16Ω) headphones or earphones(not supplied) with a 3.5mm stereo jack plug. As the headphones are connected the main speakers will be automatically disconnected.

Connecting to an External Amplifier
The audio output from this unit can be played back through an external amplifier. Connect the two RCA line output sockets on the rear of the unit to suitable line input sockets on an external amplifier with a Twin RCA Phono lead (not supplied).

AUDIO INPUT SOCKET (R)   RCA LINE OUT SOCKET (L)
AUDIO INPUT SOCKET (L)   RCA LINE OUT SOCKET (R)

EXTERNAL AMPLIFIER   DAB RADIO & CD PLAYER

WHITE
RED

DAB Operation

DAB or Digital Audio Broadcasting represents a New age in broadcasting technology and as with all new technologies it is significantly different to traditional Analogue FM/AM broadcast methods. The new system no longer relies on the user tuning to a given frequency but instead allows the DAB receiver to provide an active service list of all available radio programmes/stations at the touch of one button.

IMPORTANT : Before selecting the DAB function for the first time please ensure the DAB Rod aerial is fully extended and upright.

1. Switch the main power switch on the rear of the unit to the ON position
2. Press the STANDBY button on the front of the unit or on the remote control to switch the unit ON the standby indicator will extinguish.
3. Press the DAB button, the LCD display will illuminate and will show Goodmans DAB , solid blocks will progress across the display from left to right. The 0 in the top right hand corner of the display will change as stations are found and after around 10 seconds now tuning will show in the display and the first station on the service list will be tuned to.

    NOTE: At this stage and in the unlikely event that the display shows Poor reception? this indicates the unit has been unable to locate any available stations this may be due to

    a. No DAB service in the local area Check with the DRDB at www.DRDB.org or call the reception Helpline on 08700 100 123
    b. The unit needs relocating to a better location in order to get adequate reception to help with this process a tuning aid can be accessed by pressing the select button this will bring up a manual tuning aid which will show the available signal strength for a given multiplex the incoming signal should exceed the outline box shown in the display to ensure good uninterrupted reception. Move the unit around in the location until an adequate signal is received.
    c. In the event that the available signal is still not sufficient it may be necessary to connect an external aerial to the socket on the rear of the Gps 280 in this case please ensure the aerial switch is set to the EXT position.
4. Assuming there is now a service list available the other stations on the list can be located by using the UP and DOWN buttons to scroll the list and then to listen to station shown on the bottom line of the display press the select button.

Important Reminder for DAB Reception

Please be reminded that this unit is specifically designed for reception of UK only DAB services restricted to Band 3 only it will therefore **NOT** receive DAB services in Europe which are broadcast on L band.

The additional functions of this unit in DAB mode are as follows.

Use of Menus

SELECT and UP/DOWN buttons

When navigating the DAB function through the integrated menu system all the menu options will scroll across the display and navigation is easy via the UP and DOWN buttons and then selection is performed by using the SELECT button. If any other button is pressed that has no function then the Menu will exit.

Note: Pressing the select button whilst listening to a station will show the signal strength of the received broadcast in the form of blocks moving from left to right.

INFO button

Pressing the INFO button changes the information displayed on the bottom line of the display.

Continue to press the INFO button to scroll through the options available these cycle as follows

Scrolling DLS text ➜ Program Type ➜ Service Type ➜ Time and Date ➜ Scrolling DLS Text

Scrolling DLS Text
This is text that accompanies a radio programme and can be used to provide additional information such as Title of the song being played or contact phone numbers or Web site addresses etc. Not all stations broadcast DLS text therefore this information may not be available on some stations/broadcasts.

Programme Type
This provides a static display of the type of material the station is broadcasting and allows the easy identification of stations that are new or unknown.

Service Type
This provides a static display of the identification of the Multiplex provider.

Time and Date
Selecting this mode will provide a static display of the current time and date; this is decoded from the incoming broadcast signal and therefore does not ever need setting or adjusting.

AUTOTUNE button

This button has 2 functions

If pressed for less than 2 seconds AUTOTUNE is activated the display will show a progress bar moving from left to right, this will add new found stations the initial service list. This feature is useful when the unit is moved from one location to another.
Note: Stations that are not receivable in the current location will have a "?" in front of the service name in the list. To remove these see the section Tidy stations later in this manual.

New Stations/Programmes
In normal static use this button will only need to be pressed periodically to check for new stations, as the unit will only tune to those in it's service list.

Factory Reset
If the AUTOTUNE button is pressed for longer than 2 seconds then Press Select to confirm reset shows in the display if the SELECT button is then pressed the unit will revert to the initial start up mode and will do a complete rescan, please note if this mode is invoked then all the favourites and Preset information will be lost.
The radio will contain the following default settings
--- No stations in service list
--- No presets allocated
--- Service order is alphanumeric order
--- DRC value is 1
--- Display mode is scrolling DLS

SETUP button

Pressing this button will bring up a menu list, navigate as follows using the UP /DOWN buttons the menu is cyclic and will continue to move one option on each button press. Press SELECT button to select the required option.

Station order ➡ Tuning Aid ➡ Dynamic Range ➡ SW version ➡ Channel +Freq. ➡ Sig error rate ➡

Station Order

Selecting this option provides the following sub menus navigate as follows using the UP /DOWN buttons the menu is cyclic and will continue to move one option on each button press. Press SELECT button to select the required option.

Fav Station ➡ Alphanumeric ➡ Tidy Stations ➡ ♥→Preset ➡ Fav Station etc

Station Order (Contd.)

Fav Station (Favourite station)

DAB has a unique feature whereby it remembers every time you listen to a station and stores this information, if this option is selected the service list will be sorted in the Favourite order i.e. most listen to station at the top of the list to make it faster to find when the unit is switched on.

Alphanumeric
Selecting this option sorts the service list in Alphanumeric order from A to Z.

Tidy Stations
Selecting this option removes any stations from the list that are not currently receivable (marked with a "?" in front of the service name).

♥→Presets
This menu option only becomes available once the Fav stations sort has been used and by selecting this the unit will automatically allocate the top 10 most frequently listened to stations to presets 1 to 10, with Preset 1 most listened to station, Preset 2 2nd most listen to station etc.

Tuning Aid

Selecting this option brings up the multiplex number and frequency in the display along with a signal strength meter and is useful in areas of poor reception. The multiplexes can be scrolled through using the UP and DOWN buttons and are listed as follows
11B ➡ 11C ➡ 11D ➡ 12A ➡ 12B ➡ 12C ➡ 12D ➡ 11B etc.
To check the signal strength for a multiplex press the SELECT button when the required multiplex number is in the display and the unit will tune to that multiplex and display the signal strength as a bar moving from left to right for correct reception the bar should pass the outline box shown in the display.
To exit this menu at any stage press the SETUP button.

NOTE: Some Multiplexes will appear to have no signal when checked using the above method this is normal and indicates that the selected multiplex is not broadcasting in the area where the unit is being used.
A single multiplex can carry a large number of individual stations therefore it is not necessary for all multiplexes to be used in all areas of the country.

Dynamic range (DRC)

DRC (Dynamic Range Control) enables the alteration of the dynamic range of the received audio (dependent on broadcast material). The DRC level of a broadcast is set by the broadcaster and transmitted with the service.

Changing the DRC value applies relative variance to the transmitted level.

When this option is selected the current DRC value is displayed on the top line of the display and the available adjustment is displayed as a scroll selection on the bottom line of the display, use the UP DOWN buttons to view the available adjustment options.

DRC 0: DRC adjustment is switched off.

DRC1/2: DRC adjustment is set to 1/2 of that sent with the transmitted service.

DRC 1: Applies the DRC scaling as sent with the transmitted service. This is the default setting.

SW version

This option shows the version number of the software installed in the unit. This option can only be viewed and is for information only, no adjustment is available.

Channel +freq.

This option shows the multiplex number and frequency of the current tuned service. This option can only be viewed and is for information only, no adjustment is available.

Sig error rate

This option shows the digital bit error rate of the current tuned service. This option can only be viewed and is for information only, no adjustment is available. The lower the figure the better the quality of the received broadcast.

Storing stations into the Preset Memory
With DAB using a service list with easy station identification it is not essential to store DAB stations as presets, however if this is required then proceed as follows.

1. Tune the to station to be stored in memory.
2. Press and hold the Number button on the remote control relating to the Preset memory position the station is to be stored into.
3. After a couple of seconds "Preset x saved" will show in the display where x is the Preset location number 1-10.

It is also possible to store presets from the second line of the display , scroll through the service list until the required station is located and follow steps 2 and 3 above.

To review the Preset numbers allocated to stations scroll through the service list using the UP/DOWN buttons, where a Preset number has been allocated to a station it will show on the right hand side of the display
i.e. **"← Classic 3 → "** indicating Classic is stored in Preset location 3.

Recalling a Preset Station

Briefly press the Number button on the remote control relating to the Preset memory position required.

Listening to a Compact Disc

1. Press the CD Function selector button.
2. Open the CD door by pressing Open/Close Button.
3. Load the DISC with the label side up.
4. Close the lid, the disc will rotate and the LED Display will show the total number of tracks on the disc.
5. Press the CD Play/Pause button. playback starts, from the first track. CD Play/Pause Indicator will illuminate.
6. To temporarily pause playback press the Play/pause button again, the CD Play/Pause Indicator will flash.
7. To skip tracks. Press the CD Skip UP/Search or Skip Down/Search buttons during playback to skip to the desired track.
8. Press the CD Skip UP/Search button to skip to the next track on the disc.
9. Press the CD Skip/Search Down button once to skip to the beginning of the track currently playing. Press twice to skip back to the previous track on the disc.
10. To search for a specific point in a track during playback Press and hold the CD Skip/Search Down or Up buttons. The unit will then search through the track at high speed. When the desired section of the track is found ,release the button, normal playback will resume.

Note: Low level Audio will be heard during the search process to assist in location of the required point in the track

Single Track Repeat

1. Press the CD Repeat Button once during playback. CD Repeat Indicator will flash.
2. Press the CD Down or Up Skip/Search button to select the desired track.
3. The track selected will be played over and over again until you press the CD Stop Button.
4. To Cancel Single track repeat playback press the repeat button until the repeat indicator is extinguished

ALL Track (Disc) Repeat

1. Press the CD Repeat Button twice during playback. CD Repeat Indicator will illuminate.
2. All tracks will be played over and over again until you press the CD Stop Button.
3. To Cancel All Tracks Repeat playback press the repeat button until the repeat indicator is extinguished.

Listening to a Compact Disc (Continued)

Programme Playback

1. Press the CD Function selector button.
2. Open the CD door by pressing Open/Close Button.
3. Load the DISC with the label side up.
4. Close the lid, the disc will rotate and the LED Display will show the total number of tracks on the disc.
5. Press the CD Programme Button, "Pr " and Programme Indicator will flash.
6. Select the required track by pressing the CD Skip/Search Down or up buttons.
7. Press the CD Programme Button again to store the track in memory.
8. Repeat steps and (up to 16 selections).
9. After all tracks have been programmed in the desired order, press the CD Play/Pause Button to start the programmed play from the first programmed track, the Programme Indicator will stop flashing.

To Cancel Programme Playback

Press the CD Stop Button twice during playback to cancel programmed playback, or open the CD door or switch to another function.

Random Playback

This function enables the tracks on a disc to be played in a random sequence.

1. With the CD in stop mode press the **RANDOM** button both the Random and repeat indicators will illuminate.
2. Press the CD **PLAY/PAUSE** button random playback will commence and will continue until it is cancelled.
3. To stop random playback either press the **RANDOM** button again or Press the **STOP** button twice.

Note: Due to the nature of the random playback process and the variety of track numbers on audio discs some repeat of tracks may occur before all tracks on a disc have been heard, this is normal and not a fault. The repeat function cannot be used whilst in random playback mode.

Using the FM/MW Analogue Tuner

1. Press the TUNER Function selector button.
2. Press the BAND button to select the required band the relevant FM or MW indicator will illuminate.
3. Rotate the Tuning Control in the appropriate direction until the desired broadcasting station is received.
4. For FM reception ensure the telescopic aerial is fully extended, and adjust it appropriately to obtain best reception.
5. For MW , rotate the unit to obtain the best reception.
6. Adjust the Volume Control to the required level.
7. When listening to FM the FM Stereo Indicator illuminates showing a stereo broadcast is being received.
8. To eliminate hiss on stereo FM stations switch the FM Mono/Stereo Selector switch from STEREO. to MONO to listen to the broadcast in MONO.

DBBS Bass Boost

To enhance the bass performance when listening at low volume press the DBBS button.
Press the button again to switch the function off.

PRODUCT SPECIFICATIONS

PICK-UP

System	Compact disc digital audio system
Laser diode	material: GaAIAs
Properties	Wavelength: λ =780nm Emission Duration: continuous Laser output: <44.6μW
Error correction	Cross-interleave Reed-solomon code

AUDIO

D/A conversion	1-bit DAC 8 times oversampling
Frequency response	20-20,000Hz (+1/-3 dB)
Wow and flutter	Below measurable limits
No. of channels	2 channels (stereo)
Output level	Earphone: 20mW x 2 (32Ω)
Speakers	4" 8Ω 3W x 2 2 x Piezo Super Tweeter

RADIO

Receiving bands	MW/FM
Frequency range	MW 522-1620 KHz FM 87.5 -108.0 MHz

GENERAL

Power requirements	AC 230V/50Hz
Power consumption	25W
Dimension	Approx. 422 (L) x 238 (W) x 200 (H) mm
Weight	Approx. 3.30kg

Goodmans Product Information Helpline 0870 873 0080