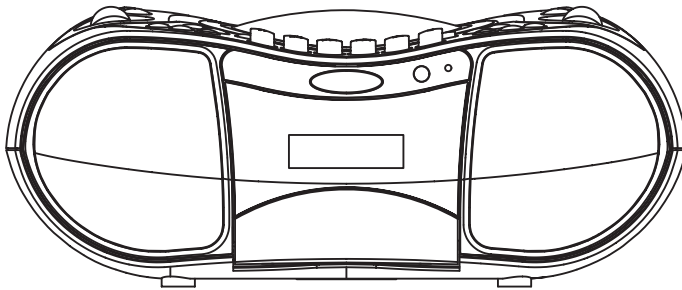


# Goodmans

**COMPACT DISC PLAYER & CASSETTE RECORDER  
WITH DAB, FM/MW RADIO**

**MODEL: GPS185DAB**

## Instruction Manual



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

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## What's in the Box

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

- 1 x GPS185DAB Main Unit
- 1 x Remote control
- 1 x Detachable mains power cord with 3 pin plug.
- 1 x Digital radio questionnaires
- 1 x Digital one station leaflet
- 1 x Instruction Manual
- 1 x External wire aerial

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

## Important Notes

Your 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

<u>Level dB</u>	<u>Example</u>
-----------------	----------------

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	<b>THRESHOLD OF PAIN</b> Gunshot 2 feet away.
180	Rocket Launching pad.

## Important Safeguards

### PRE FITTED MAINS PLUGS

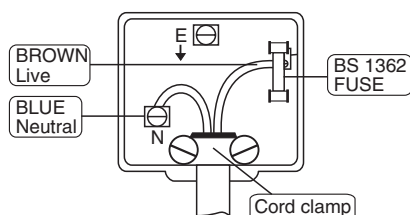
For your convenience a mains plug has been fitted to this appliance. For your safety please observe the following information.

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



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.

## Important Safeguards (Continued)

### 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 DON'T'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 equipment, 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.

## Power Supply

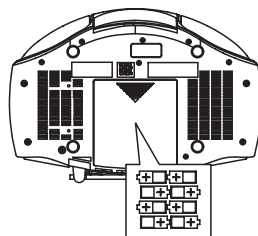
### BATTERY OPERATION

Remove the battery compartment cover by gently pushing the clips downward and outwards. Install 8 x "C" size batteries (UM-2 or equivalent) and ensure the correct polarities are observed. Replace the battery compartment cover.

**NOTE:**

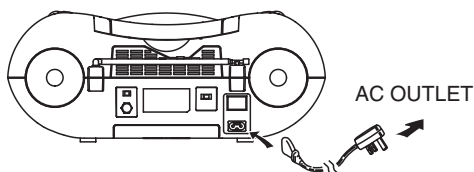
The batteries will only operate when the mains power lead is removed.

To avoid damage which may be result from leaking batteries, remove the batteries when they become weak or when the unit is not to be used for a long period of time.



### AC OPERATION

Connect the AC Cord to the AC socket at the back of the unit and insert the AC plug into a standard household outlet.

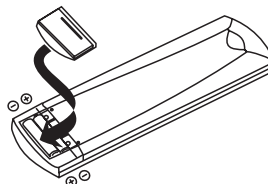


**NOTE:** When the AC line cord is connected to the AC socket of the unit, the batteries will not operate. To operate the set on batteries, check that the AC plug is detached from the AC socket of the unit.

**NOTE:** If the AC plug of this unit does not fit in your AC outlet, a plug adaptor should be used. Consult your local dealer on the right type of plug adaptor that is required.

### REMOTE CONTROL

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



## DBBS & EQ

### BASS BOOST SYSTEM

Press the DBBS button to enjoy music with more Bass effect, the icon of Bass will be on in the LCD. Press again this button to cancel Bass Effect.

### EQ SOUND EFFECTS

Press the EQ button continuously to select among the preset EQ sound effects for music enjoyment.

## Player Maintenance

### **CLEANING THE CABINET**

Wipe with a soft cloth. If the cabinet is very dirty, dampen the cloth with a weak solution of neutral detergent and water, and then wipe clean.

### **CLEANING THE UNIT**

To clean the unit, simply wipe off with a soft clean cloth moistened with plain lukewarm water.

Warning: Remove mains plug from mains outlet socket before clean.

### **CLEANING THE LENS**

A dirty lens will cause sound skipping and, if the lens is very dirty, the CD may not work. Open the disc cover and clean the lens as follows:

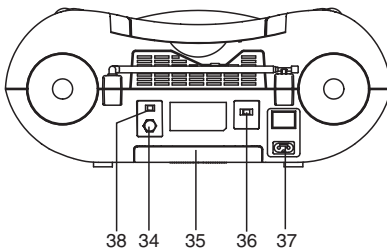
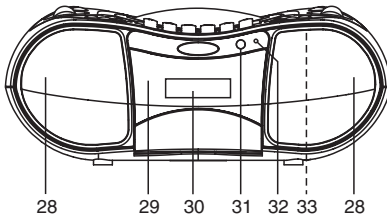
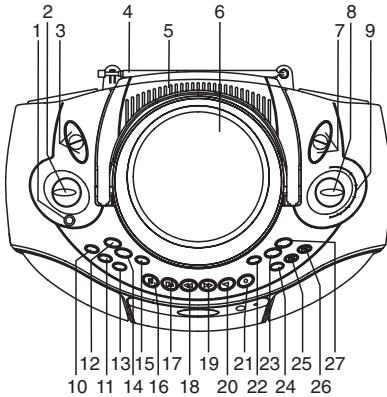
### **DUST OR DRY PARTICLES**

Using a camera lens brush/blower to blow on the lens couple times, then wipe it lightly with the brush to remove dust and blow on the lens once more.

### **FINGER PRINTS**

If the lens cannot be cleaned by using a brush/blower, use a dry cotton swab.

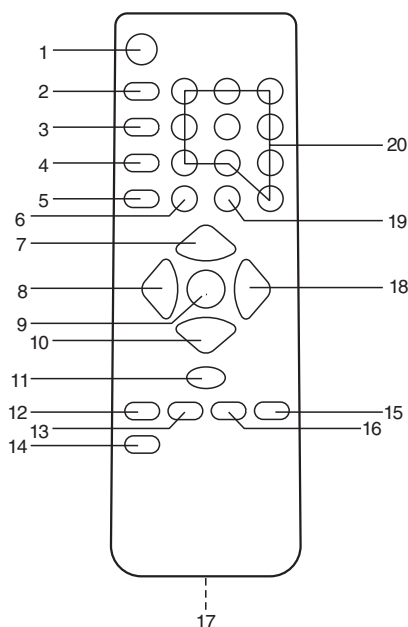
## Location of Controls



1. EARPHONES SOCKET
2. VOLUME CONTROL
3. DAB&CD SELECT BUTTONS
4. FM/DAB TELESCOPIC AERIAL
5. FOLDING HANDLE
6. CD DOOR
7. TAPE&RADIO SELECT BUTTONS
8. TUNING CONTROL
9. DIAL SCALE
10. MUTE BUTTON
11. EQ BUTTON
12. DBBS BUTTON
13. CD REPEAT&DAB SETUP BUTTON
14. CD PROGRAM&DAB PRESET BUTTON
15. CD RANDOM&DAB SELECT BUTTON
16. CASSETTE PAUSE BUTTON
17. CASSETTE STOP/EJECT BUTTON
18. CASSETTE FAST FORWARD BUTTON
19. CASSETTE REWIND BUTTON
20. CASSETTE PLAY BUTTON
21. CASSETTE RECORD BUTTON
22. CD DOOR OPEN BUTTON
23. CD STOP&RADIO BAND&DAB INFO, BUTTON
24. STAND BY BUTTON
25. DAB DOWN&CD SKIP/SEARCH BACK BUTTON
26. DAB UP&CD SKIP/SEARCH FORWARD BUTTON
27. CD PLAY/PAUSE&DAB AUTO SCAN BUTTON
28. SPEAKERS
29. CASSETTE DOOR
30. LCD DISPLAY
31. REMOTE SENSOR
32. STAND BY INDICATOR
33. BUILT-IN CONDENSER MICROPHONE
34. DAB EXTERNAL WIRE AERIAL CONNECTOR
35. BATTERY COMPARTMENT
36. FM STEREO/MONO OUTPUT SELECTOR
37. AC SOCKET
38. INTERNAL&EXTERNAL DAB AERIAL SELECTOR



## Location of Controls (Remote control)



1. STAND BY BUTTON
2. TUNER BUTTON
3. CD BUTTON
4. DAB BUTTON
5. TAPE BUTTON
6. +10 BUTTON
7. VOLUME UP BUTTON
8. DOWN/SKIP BUTTON
9. CD PLAY/PAUSE&DAB AUTO SCAN BUTTON
10. VOLUME DOWN BUTTON
11. CD STOP&RADIO BAND&DAB INFO
12. CD REPEAT&DAB SETUP BUTTON
13. CD RANDOM&CD SELECT BUTTON
14. EQ BUTTON
15. DBBS BUTTON
16. CD PROGRAM&DAB PRESET BUTTON
17. BATTERY COMPARTMENT(REAR)
18. UP/SKIP FORWARD BUTTON
19. MUTE BUTTON
20. NUMERIC BUTTONS

### 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.

Replace the two "AAA" or "UM-4" batteries when there is either no operation or operation becomes erratic.

## Listening to the Radio

Press **STANDBY** button to turn the unit on then press the **Radio** button or the **TUNER** button on the remote controller.

Select the desired band with the **BAND** button. MW tuner or FM tuner will show in the display.

Tune to the desired station by rotating the **TUNING** control after locating a station slowly turn the Tuning control to fine tune to the station to achieve the best reception.

The built-in MW aerial and external FM **TELESCOPIC AERIAL** are directional.

When listening to an FM broadcast, fully extend the **TELESCOPIC AERIAL** and rotate it for the best reception.

For MW broadcast, rotate the whole set until the best reception is heard.

Adjust the volume level to a comfortable listening level.

To turn off the radio, press the **STANDBY** button to turn the unit to **STAND BY** mode.

### **NOTES:**

If a particular FM (**STEREO**) station is weak, or there is too much background noise, slide the FM **ST./FM** selector to the FM (**MONO**) position. This will often result in a much clearer reception.

When the FM **ST./FM** selector is in the FM **STEREO** position and a station is broadcasting, the FM **STEREO** indicator will be lit.

### **STEREO HEADPHONE SOCKET**

A stereo headphone socket has been provided on the unit in order that headphones can be used to listen without disturbing others. To use plug in the headphones/earphones (not supplied) and adjust the **VOLUME** control to a comfortable listening level.

**NOTE:** When external headphones/earphones are connected, the sound of the unit's speakers will be automatically muted.

## Listening to a Compact Disc

### COMPACT DISC OPERATION

#### HANDLING A DISC

Although built to withstand the effects of dust, dirt and scratches, discs should be treated with care and according to rules applicable to conventional analog discs.

Always protect a disc against scratches, dirt and dust etc. It is recommended that during non-use periods the discs should be retained in the original case. If a disc is treated with reasonable care, the only maintenance needed to retain the excellent sound reproduction is to wipe it with a cloth as indicated below.



To handle a disc use only one of the two methods illustrated (Do not touch the rainbow - coloured side).



To wipe a disc, use only a soft cloth. Do not use alcohol based liquids or thinner which will damage the disc. The disc should always be wiped in a straight line from the centre to the edge. It should never be wiped in a circular motion.



Never place the disc on other equipment or near any heat source. Avoid positions where the disc would be subjected to direct sunlight for long periods.

#### PLAYING A CD COMPACT DISC

Press CD button to select the CD function, the LCD will show "No Disc".

Press the CD DOOR OPEN BUTTON to open the CD Door.

Insert a CD with the **LABEL** side **UP**. If the disc is upside down, the Display will show "No Disc").

Close the CD Door by gently pushing the Door down.

The Display will show the total number and time of tracks (songs) on the CD.

To start the music, press the CD Play/Pause Button (wait a few seconds for music to start). The first track number "Tr 01" will appear in the Display, and playback will begin.

To pause playback, press the Play/Pause Button, the elapsed time of the current track flashes in the display to indicate the unit is in the Pause mode .

To resume playback, press the Play/Pause Button again, the elapsed time of the current track stops flashing and playback resumes.

To stop playback, press the CD Stop Button.

To turn the unit off, press the standby button, the standby indicator will illuminate.

**NOTE:** Always stop the CD player by using the CD Stop Button before taking a disc out of the compartment.

**NOTE:** If you hit or move the CD during play, the music will stop for a second or two and then start again. This is a normal phenomenon for all portable CD players and is not a fault.

#### SKIPPING TRACKS (SKIP)

This function enables you to find the beginning of any track during playback. If the CD Forward Skip ( **▶▶** ) Button is pressed once, the **NEXT TRACK** on the disc will be selected for each press of the button. The display will show the track or song number.

## Listening to a Compact Disc (Continued)

If the CD Backward Skip ( **⏮** ) Button is pressed twice or more in rapid succession, play will go **BACK** one track per press.

Whilst in the pause mode, it is also possible to select the beginning of a track by using the CD Forward Skip ( **⏭** ) Button and CD Backward Skip ( **⏮** ) Button to reach the desired track. After selection, press Play.

### TO PROGRAM TRACKS

Press the CD Stop Button during playback. The total number of tracks will be shown in the display.

Press the CD Program Button, "Tr01 Pr-01" appears in the LCD together with a flashing " PROG".

Select the desired track by pressing Backward or Forward Skip Button ( **⏮** or **⏭** ).

Press CD Program Button again to store the selected track in memory.

Repeat steps ③ and ④ (up to 20 tracks may be programmed).

After all tracks have been programmed in order, press the CD Play/Pause Button to start the programmed playback from the first programmed track, and "PROG" will show to indicate the unit is in Programmed playback mode.

### TO CLEAR A PROGRAM

Press the CD Stop Button twice during programmed playback to clear the program.

Open the CD door, the disc will stop rotating, and the program will be erased.

Unplug the unit.

**NOTE:** Programming can only be done when the disc is stopped.

### REPEAT PLAY SINGLE SONG

To repeat the **SAME** song over and over again:

Press the Skip Button during playback to select the track to repeat.

Press the Repeat Button twice.

"REPEAT One" will show in the display.

The song selected will play over and over, until the Stop button is pressed. To cancel the repeat function, press Repeat Button once.

### REPEAT PLAY ALL SONGS

To repeat play **ALL SONGS** on a disc and play them again and again, do the following.

Press Repeat Button once during playback.

"REPEAT ALL" Indicator will show in the display.

All the songs on the CD will play in its original order and then start all over again. To cancel the repeat function, press Repeat Button twice.

### RANDOM PLAY

Press Random button on the remote controller when the CD is in the STOP mode, the unit will select the tracks in a random order for playing immediately.

To cancel random playback press the Random button again or press the CD Stop button.

## Cassette Operation

### CASSETTE TAPE SELECTION

1. The quality and condition of the cassette tapes used will have a direct effect on the performance of this unit. Low quality tapes tend to stretch, and a stretched tape can easily become entangled in the drive mechanism, causing major damage. Stretched tapes will run at uneven speeds and will distort anything recorded on them.
2. Use only well known brands of tape.
3. Use of C-120 (120 minutes) cassettes are not recommended. The extreme thinness of this tape may result in breakage or other problems.
4. Check to ensure there are no loose layers of tape visible through the cassette center window. Tighten these loose layers with a pencil or ballpoint pen before inserting the cassette into the unit.

### NORMAL PLAYBACK

1. Press TAPE button.
2. Press the STOP/EJECT key to open the cassette compartment and insert a pre-recorded tape with the exposed portion of the tape facing uppermost and the full spool to the right. Gently push the door to close.
3. Press the PLAY key to start playback, adjusting the VOLUME to the desired level.
4. To briefly pause playback press the PAUSE key, press again to resume normal playback.
5. To advance or rewind the tape rapidly press the FAST FORWARD or REWIND keys.
6. To stop playback press the STOP/EJECT key, press again to EJECT the cassette.

**NOTE:** When the cassette reaches its end during playback or recording, the mechanism will stop and the keys will return to their normal position.

### RECORDING FROM THE RADIO

1. Follow the instructions of RADIO OPERATION to tune to the desired station.
2. Ensure the RADIO button is pressed.
3. Load a blank cassette tape into the Deck. (Full spool to the right)
4. Locate the portion of the tape where recording is to start by using Rewind or Fast Forward.
5. Press the Record and Play simultaneously. Both keys will remain in the down position.
6. The set is now recording from the Radio, the recording process will automatically stop at the end of the tape.
7. To stop the recording manually, press the Stop/Eject Key.

**NOTE:** To hear what has been recorded, Press TAPE button, then press the rewind key to rewind the tape to the point where the recording was started, then press the Play key to start playback. Adjust the volume control as required.

## Cassette Operation (Continued)

### RECORDING FROM THE BUILT - IN MICROPHONE

1. Press TAPE button.
2. Load a blank cassette tape into the Cassette Compartment with full spool to the right.
3. Press the Play and Record keys simultaneously. Both keys will remain in the down position.
4. Speak or talk in front of the unit. It is now recording from the Built-In Microphone and the recording process will automatically stop at the end of the tape.
5. To stop the recording manually, press the Stop/Eject.
6. To hear what has been recorded , press TAPE button, and then press the rewind key to rewind the tape to the point where the recording was started, then press the Play key to start playback. Adjust the volume control as required.

### RECORDING FROM COMPACT DISC

1. Load a cassette tape into the cassette compartment.
2. Load a disc and close the CD Door.
3. Press CD button.
4. Press the Cassette Pause Key.
5. Press the Cassette Record and Play Keys for recording stand-by.
6. Start the CD playing by pressing the CD Play/Pause button.
7. Release the Cassette Pause Key to start recording.
8. Press the Cassette Stop/Eject Key to stop the recording.
9. To Hear what has been recorded , press TAPE button, and then press the rewind key to rewind the tape to the point where the recording was started, then press the Play key to start playback. Adjust the volume control as required.

### RECORDING FROM DAB RADIO

1. Press DAB button
2. Load the cassette tape into the Cassette Door (full reel on the right side).
3. Tune into the DAB station to be recorded, press the Cassette RECORD Key and Cassette PLAY Key both at the same time. Both keys should remain depressed when released.
4. The recording process will automatically stop at the end of the tape.
5. To stop the recording manually, press the Cassette STOP/EJECT Button.
6. When you want to play the cassette tape after recording, press TAPE button, and then press Cassette REWIND Key, then press the Cassette PLAY Key. Adjust the VOLUME Control as required.

### CLEANING THE TAPE HEADS

Clean the heads frequently to remove dust and tape residue. Dirt on the heads will impair the sound quality of both recording and playback.

The simple method is to use a head-cleaning cassette, which is available at most audio stores. Follow the instructions supplied with the cleaning cassette.

## 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. 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.
2. Press the DAB button, the LCD display will illuminate and will show welcome to DAB, solid blocks will progress across the display from left to right 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 No station available 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.digitalradionow.co.uk](http://www.digitalradionow.co.uk) or call the reception Helpline on 08707 747474
  - 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 this unit. In this case please ensure the aerial switch is set to the EXT position.
3. 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.

## DAB Operation (Continued)

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

### TUNING FOR THE FIRST TIME

When you switch on your unit for the first time an auto-scanning process will be performed automatically. A progress indicator on the display shows that auto-tuning is underway.

If stations are found during the auto-scanning

The stations will be stored in alphanumeric order and the first station on the list will be selected and it will be heard.

If no stations are found during the auto-scanning

"No station available" will be shown on the display for a few seconds and then a menu of options will be seen.

Use the Up and Down buttons to scroll through the options and press Select to choose that option.

### ADJUSTING THE VOLUME

Once the Radio is tuned the volume can be adjusted using the volume control.

### CHANNEL

Displays the channel identifier and frequency for the station to which you are tuning in.

### MODE

Displays the mode of the current service, Stereo or Mono and the data rate at which the audio signal is being transmitted. This rate is set by the broadcaster to suit the type and quality of material being transmitted.

### SIGNAL ERROR RATE

Displays the signal error rate for the signal to which you are tuned. As a guide values from 0 to 15 indicate good reception, 16 to 30 borderline reception and 31 or more poor reception. This error rate can be improved by adjusting the aerial position using the Tuning aid option .



## DAB Operation (Continued)

### GUIDE TO DIGITAL RADIO

This unit enables you to receive and listen to DAB radio programmes. Digital Audio Broadcast (DAB) uses digital signals rather than traditional analogue signals, the result of which enables near CD-quality audio and virtually interference-free reception. DAB also enables broadcasters to transmit additional data along with the audio including other audio channels, text and in the future, perhaps computer data and images.

Digital radio is broadcast as groups of data called ensembles or multiplexes. Each multiplex can contain a number of stations (services) and each station contains a primary service and can contain secondary services.

Each multiplex is transmitted in a set frequency range and received by the unit for decoding. This unit enables the reception of multiplex broadcasts in frequency band III (174-240 MHz) and store the services in each multiplex for you to access. The number of multiplexes you receive will vary depending on your location. Band III is divided into 41 channels identified as 5A to 13F. Each channel can contain one multiplex. Channels allocated to the UK are in the range 11B to 12D.

Multiplexes and stations have labels (names) which are used to identify them. Instead of needing to know a particular frequency to listen to a favourite station it is simply selected via the station name in the station list. Secondary services and additional data such as text containing programme or multiplex information are also easily accessed using this unit.

### DAB OPERATION

1. Press the DAB button to select DAB operation.
2. Search for available DAB stations by pressing the Auto Scan button.
3. The number of available stations will be shown in the LCD display.

### USER INTERFACE

This section details all the menus and structured sub menus the user can access via the interface.

Each illustration shows the symbols, text and format of each menu displayed, reflecting what may be displayed on the LCD. The LCD defines the character set shown and therefore this is only an example of the text displayed.

### GENERAL BEHAVIOUR

When navigating through menus, any list will cycle to the beginning once all the menus have been scrolled through.

If a button has no specific function in a menu or mode then pressing it will exit the menu or mode currently selected.

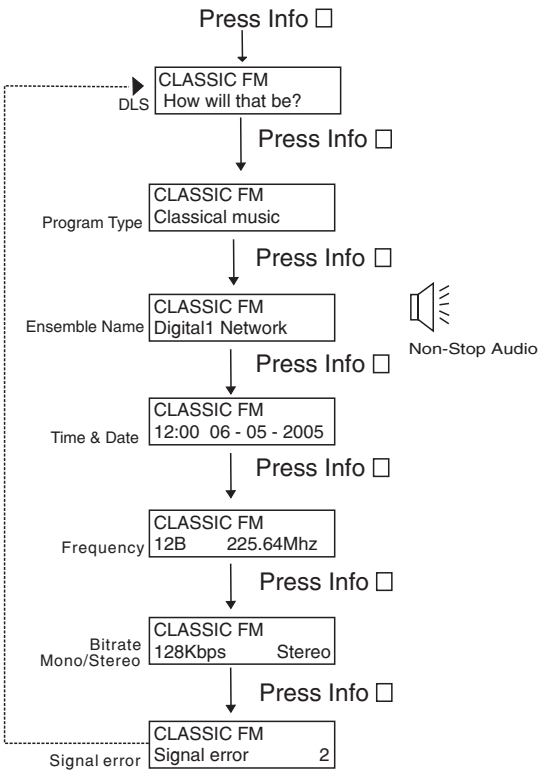
# DAB Operation (Continued)

## KEY FUNCTION

## INFO BUTTON

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

Continue to press the INFO button to scroll through the options available.



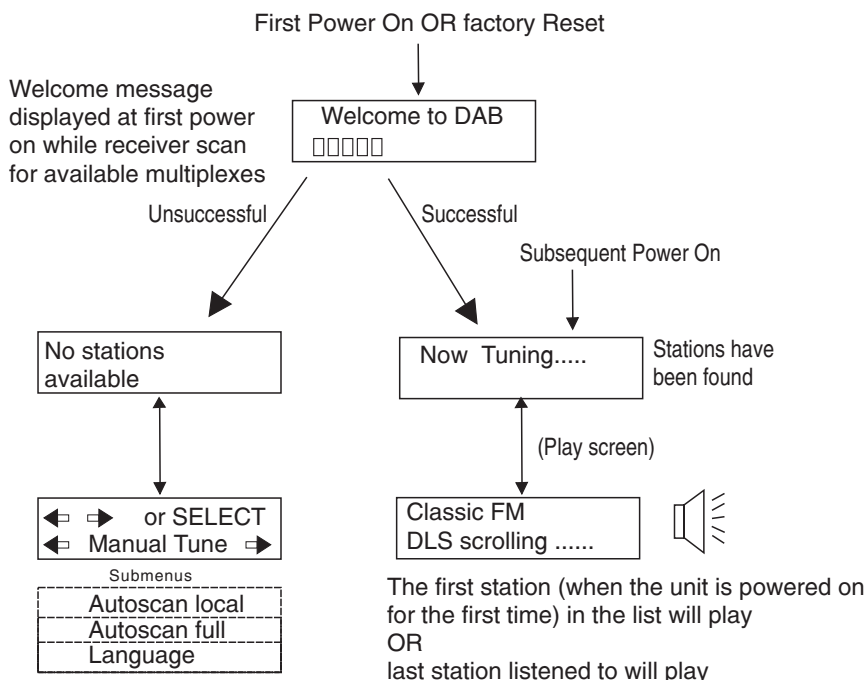
## DAB Operation (Continued)

### POWER ON AND TUNING

On first power up or if a factory reset has been initiated, the display will show "welcome to DAB" while it scans to find all available DAB stations. "Now Tuning" will briefly show in the display and the unit will tune to the first station found in the alphanumeric list.

If no stations are found, a message "Station not available" will be displayed in the LCD.

On subsequent power ups, the radio will show Now Tuning on the screen(see below) and will acquire/tune to the last listened to station.



## DAB Operation (Continued)

### STATION SELECTION AND NAVIGATION

#### Selecting a station

Once this unit has been tuned a digital radio station can be selected by using the Up and Down button followed by the select button. If stations have been assigned to presets they can be selected directly by pressing the relevant numbered button(1-10).

1. The top line of the display shows the name of the currently selected station. Press the Up and Down buttons to see the names of other stored stations on the bottom line of the display. Stop when a required station is located.
2. Press the Select button to listen to the selected station. The display may show 'Now tuning..' Briefly as it finds the new station.

If a station has one or more secondary services available the display will show '>>' next to the station name on the station list and they will appear after the primary service as you press the Up and Down buttons.

A secondary service will display "◀▶" before the station name on the station list indicating that it belongs to the primary service before it in the list.

If the station has ' ? ' Before its name the service is currently inactive or invalid. If a station is selected which has this symbol the unit tries to tune to that station. If still unavailable 'Service not avail' or 'Service off-air' will be displayed and the unit will attempt to tune to an alternative station. A flashing cursor will indicate that this is in progress. To try to manually tune to this station there is a maximum of 5 seconds during which to press the Up and Down buttons and the manual tuning bar will be displayed to enable adjustment of the aerial.

Classic FM  
◀▶ BBC5Live ▶

Classic FM  
◀▶ BBCSports ▶

Classic FM  
◀▶ ?Virgin ▶

Station not  
available

When scrolling through stations the following indicators may be seen. They can be seen individually or as any combination together.

Classic FM  
◀▶ Classic ♥ ▶

Heart icon denotes favourite station

Classic FM  
◀▶ ?Classic ▶

? Denotes station saved in list,  
but not currently available

Classic FM  
◀▶ Classic 2 ▶

Number 2 denotes station stored in Preset 2

## DAB Operation (Continued)

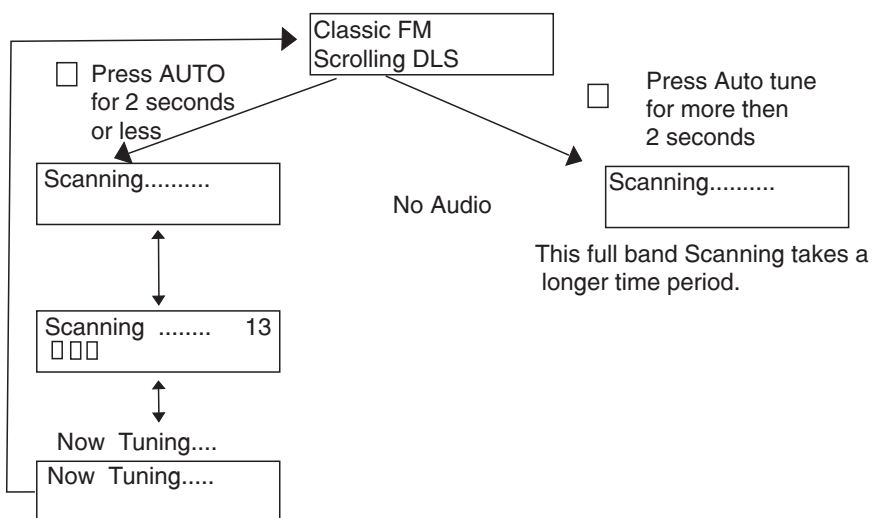
### AUTO SCAN

The AUTO button has two function.

1. If the button is pressed quickly (2 seconds or less ) the radio will rescan only UK Band III (11B to 12D) for available stations.

A scanning screen appears and a progress bar is displayed. Audio is suspended. On completion the radio will tune and return to play the station being listened to.

2. If the button is held for more than 2 seconds or more the unit completes a full band III scan (5A to 13F).



## DAB Operation (Continued)

### TUNING AND PLAYING

Once the station list is available and playing, the station name will appear on the top line. On the line below a scrolling line of text will be seen called DLS.

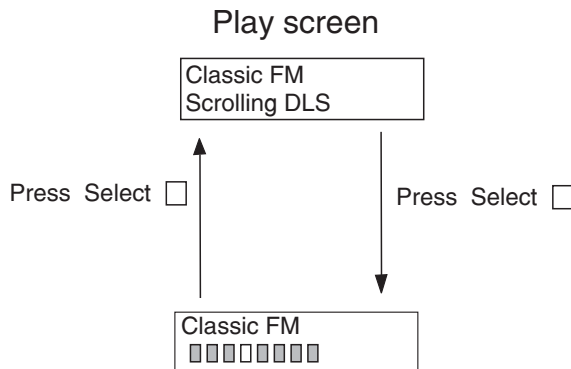
Pressing the Info button changes the information displayed on the bottom line. See the INFO function for the options available.

### SELECT BUTTON

The Select key has 2 functions.

In normal navigation it confirms the highlighted selection.

When pressed in normal mode it will display the signal strength. The grey bars are the current signal level and the central highlighted bar is the minimum signal required. Press Select to cancel the signal level display.



## DAB Operation (Continued)

### SET UP BUTTON

Pressing the Set up key will bring a menu that allows access using the UP and DOWN buttons to a number of system settings. Press UP and DOWN buttons to locate a required option and press select to access it. Use the UP and DOWN buttons and SELECT to navigate within the sub menus.

The sub menus available are Station Order, Manual Tune, DRC value, Language, SW Version. Pressing and holding the set up button initiates a factory reset which requires the select button to be pressed to confirm the action. All stations will be deleted from memory and the unit will conduct a rescan on restart

### STATION ORDER

In use the radio creates a full list of the stations it can receive in all the locations it has been used. Using the station order function the way this list is displayed can be changed.

- Alphanumeric. For numerical order 0-9, the station with lowest number will be placed at the start of the list. For alphabetical order Aa-Zz, the station with the most preceding letter will be placed at the start of the list [case insensitive]. For punctuation characters order, the station with the lowest ANSI character value will be put in the foremost front of the list.

- Favourite. The services defined as the 10 favourite stations are saved at the top of the service list in a small sub-group. This sub-group service list is in alphanumerical order. The remaining stations are in their own alphanumerical order.

- Active. The services defined as the active (or valid) stations are saved at the top of the service list in a sub-group. This sub-group list is in alphanumeric. The remaining inactive (invalid) services are placed on the list after the valid sub-group, in their own alphanumeric order.

- Prune. Cut the list of stations to show only those in your location. Any station with a ? in front of the name will be removed.

### LANGUAGE

This provides English as the only option.

### SW VERSION

This option displays the version number of the software installed in this unit. This option can only be viewed, no adjustment is possible.

## DAB Operation (Continued)

### MANUAL TUNE

Use Up/Down buttons to select a DAB channel. When a channel is selected the radio tunes to this frequency. Once tuned, the signal strength will be displayed using the signal strength meter. This function can be used to check for the best position for the antenna. As the antenna is moved the indicator will fluctuate according to the change in signal strength. To exit this menu press Select.

1. Press the UP and Down key to scroll through different channels and press the select button to select one.

**Note:** the list includes all channels, UK Stations are in the range 11B to 12D. A signal quality display will be seen. The empty block indicates the minimum required level for reception and the solid blocks indicate the current level.

2. Move the aerial or radio whilst watching the display and to try to raise the current level to the empty block or beyond. The display will change to show the multiplex name on the bottom line of the display once a good signal is received and the multiplex will be added to the service list.
3. Push the **Setup** button to exit Scanning or press the Up and Down key to select another channel.

### DRC VALUE

DRC ( Dynamic Range Control ) enables adjustment of the dynamic range of the received audio ( dependent on broadcast material). The DRC level of a broadcast is set by a broadcaster and transmitted with the service. Changing this DRC value enables you to apply a scaling factor to this level.

When you select this option you see the current DRC value on the top line of the display and a scroll list on the bottom.

Press the Up and Down keys to scroll through the following options and Press the select button to choose the required value:

DRC 0 : DRC scaling is switched off.

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

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



### DAB Operation (Continued)



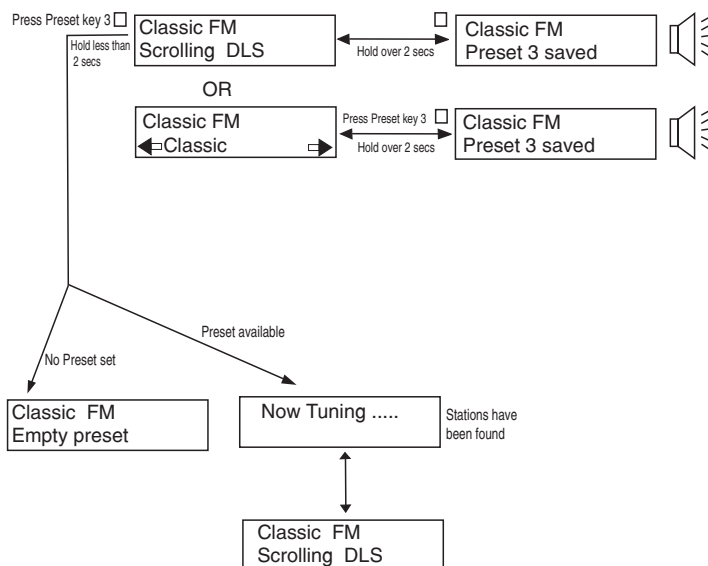
## DAB Operation (Continued)

### PRESETS

There are 10 DAB presets available

Presets are assigned using the remote control as follows:.

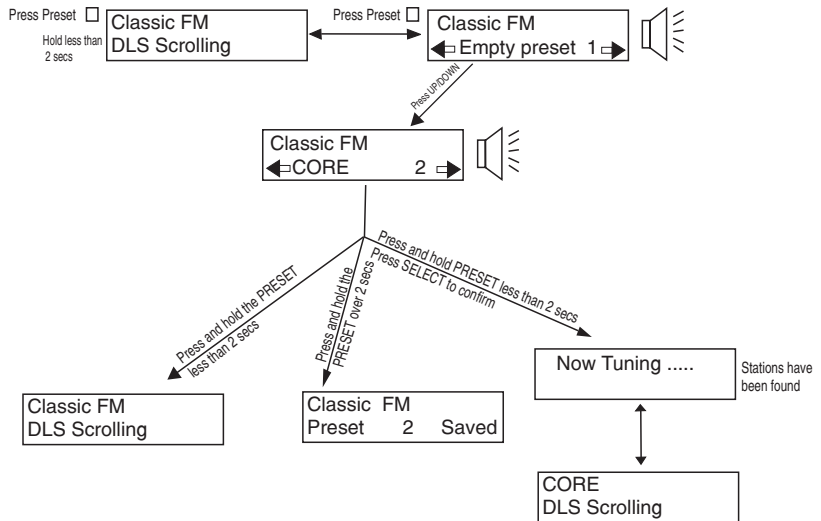
- Listen to the station to be stored. Press and hold a Preset button (1-10) for two seconds.
- Alternatively the station you wish to assign can be displayed in the second line of the display when you are browsing stations. Again press and hold the Preset button (1-10) for two seconds. In both cases a confirmation message will show that the preset has been saved.
- Once assigned to a station, the preset button can be pressed and the radio will tune to the required station.
- If you are browsing stations a preset will be shown by the number of the preset displayed at the end of the line.
- If a Preset button is pressed with no station assigned, then it will be shown as empty. See the diagram below for full details.



## DAB Operation (Continued)

Presets can also be made using the DAB controls on the main unit as follows:

- Listen to the station to be stored. Press Preset button briefly.
- Use UP or DOWN button to select a preset memory position.
- Press and hold Preset button, a message that show that the chosen station has been saved appears on the LCD.
- If you are browsing stations a preset will be shown by the number of the preset displayed at the end of the line.
- To recall one of the preset stations, press PRESET button briefly, then press t UP or DOWN button. When the desired Preset appears, press SELECT button to begin tune to this station.



## Product Specifications

### PICK-UP

System	Compact disc digital audio system
Laser diode	material: GaAlAs
Properties	Wavelength: $\approx 780\text{nm}$ Emission Duration: continuous Laser output: $<44.6\mu\text{W}$
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 (32 )      Main Unit 2 x 3W Rms

### 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	16.4W
Dimension	Approx. 344(L)X237.5(W)X136(H)mm
Weight	Approx. 2.44kg(without batteries)