BUSH

Real Life Technology

Stereo DAB/FM Digital Radio

3551848(D)/3434233(D)

Instruction Manual

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CDAB51R/RR Instruction manual

INTRODUCTION

Congratulations on purchasing the Bush CDAB51R.

We trust that this product will give you hours of listening pleasure, and provide years of unparalleled performance. As with any new electrical product please be patient and allow 36 hours of use before all components have acclimatized themselves with your surroundings and found their optimum working temperature.

GLOSSARY

DAB   Digital Audio Broadcasting
RDS   Radio Data System
UI   User Interface
DLS   Dynamic Label Segment
SNR   Signal to Noise Ratio

WHATS IS DAB?

DAB radio will change the way that people listen to radio over the next few years. You will probably not be aware that digital radio will become mandatory in the future as the terrestrial radio frequencies which you currently listen to will be re allocated for other uses such as emergency services. This means that today you are one of the pioneers using this technology, however in a short space of time everybody will benefit from clear digital radio.

Digital radio offers an abundance of new digital only stations and improved sound quality. There are no frequencies to remember so the CDAB51R can be tuned by searching through station names. The audio quality of DAB is near that of a CD with virtually no interference and no retuning. DAB is also enhanced with DLS (Digital Label Segment), this is data transmitted by the station which may include information about the station, program or song (see page 9).

The BBC was the pioneer of digital radio, beginning transmissions in September 1995. Digital One, the national commercial radio multiplex operator, began broadcasting in November 1999. There has been a growth in the number of digital radio stations throughout the UK and both the BBC and Digital One are committed to extending their coverage. Digital One currently covers 80% of the UK population, soon to increase to 85%, and the BBC covers 65% with the aim of increasing coverage to 90%

Your CDAB51R will receive DAB programs broadcast on Band 3 digital radio (174-240MHz). There are a total of 41 channels within this range numbered 5A to 13F, the number of channels you can receive will be dependant on your location and signal strength. The UK has been allocated seven multiplexes by the Radio Authority - in the spectrum 217.5-230.0 MHz, which are numbered 11B to 12D.
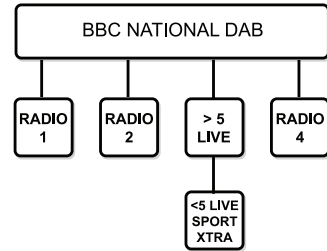
A multiplex is a broadcaster such as BBC National DAB or Digital One who will provide a host of different stations within their multiplex. If we consider the BBC as an example, the following diagram shows how the BBC multiplex may work.

Below the main multiplex provider (in this case 'BBC National DAB') will be a number of primary stations. These are labelled with the station name (e.g Radio 2) rather than the frequency. This allows you to tune the CDAB51R by station name, which is easier than trying to recall frequencies.

Sometimes a secondary service station may be provided by the broadcaster, for instance this is sometimes used when an alternative commentary is provided on a sporting match or event. These secondary service stations are not permanent and may not always be used for broadcast. When a secondary station is available below the primary station, a '>' symbol will be displayed after the primary station name. A secondary station can be recognise by the '<' symbol before the secondary station name.

Check how many stations you can get in your area by texting **DAB** and your postcode to **88600#**, or find out which stations are available on the website at:

www.getdigitalradio.com

```
              ┌─────────────────────────────────┐
              │        BBC NATIONAL DAB          │
              └─────────────────────────────────┘
                 │        │        │        │
            ┌─────────┐┌─────────┐┌─────────┐┌─────────┐
            │ RADIO   ││ RADIO   ││  > 5    ││ RADIO   │
            │   1     ││   2     ││  LIVE   ││   4     │
            └─────────┘└─────────┘└─────────┘└─────────┘
                                     │
                                ┌─────────┐
                                │ <5 LIVE │
                                │  SPORT  │
                                │  XTRA   │
                                └─────────┘
```

CARE & MAINTENANCE

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE ANY COVER. NO USER-SERVICEABLE PARTS INSIDE, REFER ANY SERVICING TO QUALIFIED SERVICE PERSONNEL.

IMPORTANT SAFETY INSTRUCTIONS

• Read and keep these instructions available for future reference.
• For indoor use only
• The unit must only be connected to a the UK mains power supply using the mains power adapter provided.
• To reduce the risk of fire or electrical shock, do not expose this unit to rain or moisture.
• The apparatus should not be exposed to dripping or splashing.
• No objects filled with liquids, such as vases, shall be placed on the apparatus.
• Take care that foreign objects do not enter, or liquids are not spilled, into the case through any openings. If this should happen, refer to qualified service personnel before attempting to use.
• Do not install near any heat source, such as radiators, or other equipment that produces heat.

NOTE: This unit is designed to enter **STANDBY** mode automatically after **20 MINUTES** of inactivity in DAB mode only. Press the **STANDBY** button to wake the unit.

To clean the CDAB51R radio, wipe the case with a slightly moist, lint-free cloth. Do not use any cleaning fluids containing alcohol, ammonia or abrasives. Do not spray an aerosol at or near the radio. Always use original packaging if it is necessary to transport the unit at any time. If this unit is used in a dusty environment, it may be necessary to have the unit serviced at your local dealer periodically. It is not advisable to allow large deposits of dust to accumulate within the unit as it may prevent adequate cooling. Similarly dust deposits which become damp can sometimes lead to electrical problems which may cause severe damage to the delicate electronics within this unit.

WEEE marking
"Information for the consumer"
Disposal of your old product
Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.
When this crossed out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
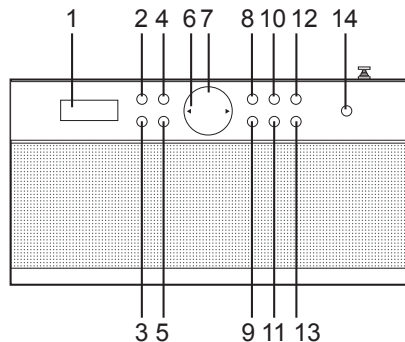Please make yourself aware of the local collection system for electrical and electronic products.
Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.
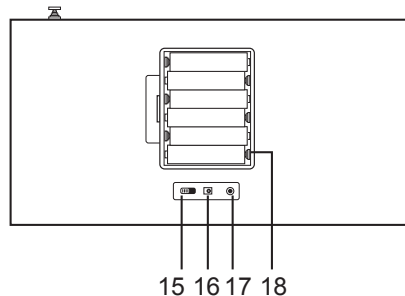
This product complies with European low voltage (73/23/EEC) and electromagnetic compatibility (89/336/EEC) directives.

1. LCD display
2. DAB/FM button
3. INFO/MENU button
4. BACK/SCAN
5. ENTER button
6. ◀ / ▶ buttons
7. VOLUME +/- controls
8. 1/6 preset button
9. 4/9 preset button
10. 2/7 preset button
11. 5/10 preset button
12. 3/8 preset button
13. PRESET button
14. SLEEP / ⏻ button

15. POWER switch
16. DC power input
17. EARPHONE output
18. Battery compartment

Switching on your radio for the first time

1a Mains Adaptor (supplied with the package)
Connect the mains adaptor to the DC power socket on the rear of the radio
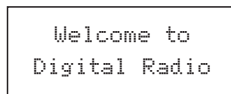**1b Battery (not supplied)**
Open the battery door and insert 6 x "AA" size batteries.
NOTE: Insert batteries correctly. Pay attention to the **+/-** polarities
2 Extend the telescopic aerial as far as it can go.
3 Slide the **Power ON/OFF** switch to **ON** to turn on the radio.
The radio will automatically tune and operate the quick scan.

```
    Welcome to
  Digital Radio
```

```
▮▮▮▮▮▮▮▮▮▯▯▯ 34
Searching...
```

During scan mode, the LCD will display a slide bar that indicates the progress of the scan, and the amount of radio stations that have been found so far. Once the scan has finished, the radio will select the first alphanumeric station.

NOTE: The name of the found group of DAB radio stations will be displayed on the bottom half of the display.

Memory

When you power up the radio again, the radio plays the same mode (**DAB** or **FM**) as the last operation.

If you hear no sound, then press the "**VOL +**" control until you reach a desired level. If the volume is too high, then press the "**VOL -**" control to decrease the volume level.

To listen the stations that have been stored press either ◀ / ▶ buttons to cycle through. Each time you press the ◀ / ▶ buttons you will skip to the next or previous stored station. The radio will switch to display the station name.

Press the "**SLEEP/ ⏻**" button for 2 seconds to turn off the radio whenever it is on.

DAB OPERATION
1 Storing stations
it is possible to store up to 10 of your favorite stations to the preset keys. This will enable you to access your favorite stations quickly & easily.
To store a preset, you must first be listening to the station that you would like to save, press & hold the **PRESET** button for 2 seconds. The LCD will then show the following.

```
  Preset Store
< 1: (Empty) >
```

```
   Preset 1
    Stored
```

Use the ◀ / ▶ buttons to choose the preset number from 1-10 you wish to use. Then press the **ENTER** button to store.
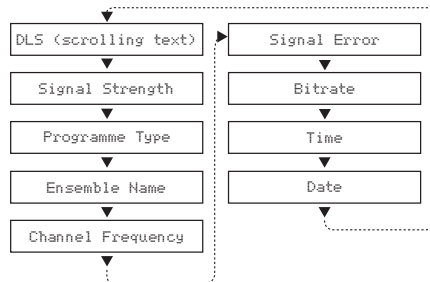
2 Recalling a stored station
Once you have saved a station to one of the preset buttons, you can recall by pressing the **PRESET** button. Then use the ◀ / ▶ buttons to select the desired preset station. Once selected press the **ENTER** button to activate.
If you choose a preset that hasn't been allocated a station, then "**Preset Empty**" will be displayed.
Alternatively you can use the preset buttons, press one of the buttons to use the first digit preset ie:- 1-6 will be 1. To use the preset 6 press and hold the 1-6 button.

3 Display modes
Every time you press the "**INFO/MENU**" button, the display will cycle through the following display modes: *The information is displayed on the lower segment of the LCD display.*

```
DLS (scrolling text) ──▶ Signal Error
         │                    │
         ▼                    ▼
  Signal Strength          Bitrate
         │                    │
         ▼                    ▼
  Programme Type            Time
         │                    │
         ▼                    ▼
  Ensemble Name             Date
         │                    │
         ▼                    ▼
 Channel Frequency
```

4 DLS (Dynamic Label Segment)
Dynamic label segment is a scrolling message that the broadcaster may include with their transmissions. This message usually includes information, such as program detail etc.

5 Program type
This describes the "**Style**" or "**genre**" of music that is being broadcast e.g. "**Rock** "or "**Classical**".

6 Ensemble/Multiplex (Group name)
A multiplex/ensemble is a collection of radio stations that are bundled and transmitted on one frequency. There are national and local multiplexes. Local ones contain stations that are specific to that area e.g. MXR West.

NOTE: DAB – unlike normal radio, groups together several radio stations and transmits them on one frequency.

7 Time & Date
The time & date can be set automatically from the DAB broadcast or set manually.
1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Full Scan> option appears press either ◀ or ▶ and find <System>.
3. Press the **ENTER** button, use the ◀ / ▶ buttons to find <Time> and press **ENTER**.

Inside the <Time> menu there are several options. <Set 12/24 Hour>, <Set Time/Date>, <Set Date Format> & <Auto Update>.

<Set 12/24 Hour> Use the ◀ / ▶ buttons to select 12 or 24 hour and then press the **ENTER** button to activate.

<Set Time/Date> When activated the Hour digit flashes, use the ◀ / ▶ buttons to set the digit to the correct hour then press ENTER, repeat for the minutes again pressing **ENTER** when set.
The process for setting the date is exactly the same as the above. Press ENTER to finalise the setting once complete.

<Auto Update> Use the ◀ / ▶ buttons to cycle through the various options for auto setting the time & date. These range from. <Update from any>, < Update from DAB>, < Update from FM> and <No Update>.

NOTE: When the power is switched OFF (not standby) the settings will be lost.

8 Alarm Setting

1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Full Scan> option appears press either ◀ or ▶ and find <System>.
3. Press the **ENTER** button, use the ◀ / ▶ buttons to find <Alarm> and press **ENTER.**

Alarm Setup

Press the **ENTER** button to initiate the setup process.

1. Use the ◀ / ▶ buttons to select Alarm **ON** or **OFF** then press **ENTER** to activate.
2. Use the ◀ / ▶ buttons to set the Alarm ON hour digits. Press **ENTER** to set.
3. Set the Minute digits the same way and press **ENTER** once set.
4. Choose the source of the alarm between BUZZER, DAB & FM using the ◀ / ▶ buttons.

   If you choose DAB or FM the next step is to choose the station you want to play when the alarm sounds. There is a choice of Last station listened to, or a preset (if any stored).

5. There is the option to only have the alarm activate on WEEKDAYS, DAILY, ONCE and WEEKENDS. Choose which you require using the ◀ / ▶ buttons. The **ENTER** button stores the setting.
6. The next step is to set the volume level you require. use the ◀ / ▶ buttons to set and press ENTER to activate the alarm.

7. To disable the alarm return to the <Alarm> screen and use the ◀ / ▶ buttons to choose **OFF** and press **ENTER** to save.
8. To turn the silence the alarm when sounding press the **ENTER** button.

NOTE: In standby the alarm icon ♣ will display when activated.

Snooze Mode

When the alarm sounds (if in BUZZER mode) you can press the **SLEEP / ↻** button to activate the **SNOOZE** mode and delay the alarm for **5** minutes.

9 Scan modes

There are two types of scan, one is **Quick scan** and the other is **Auto scan**.
Quick scan: searches the UK DAB band III
Auto scan: searches all DAB channels.

1. To activate the quick scan press and hold the "**BACK/SCAN**" button.
2. To perform a AUTO SCAN, press and hold the **INFO/MENU** button for 3 seconds.
3. When the <Full Scan> option appears press the **ENTER** button.

Manual Tuning

As well as an auto tune function, you can manually tune the receiver. This can help you when aligning your aerial or when adding stations that were missed while auto tuning.

DAB OPERATION

1. 1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Full Scan> option appears press either ◀ or ▶ and find <Manual Tune>.
3. Use the ◀ / ▶ buttons to cycle through the DAB channels, which are numbered from 5A to 13F.
4. Now press the **ENTER** button to enter the current ensemble/multiplex, the top line will now display the first station in the ensemble/multiplex.
5. To see what stations are present in the found ensemble/multiplex, just press either ◀ or ▶ buttons. When you've located a station that you would like to listen to, just press the **ENTER** button
6. Once you have reached the last station in the found ensemble, it will revert back to the first station again. If you wish to exit the manual tuning mode, just press the **ENTER** button.

10 Pruning
When the radio has performed a Scan in several locations you may find there are stored stations that you can no longer receive. This function automatically removes them from the stored station list.
1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Full Scan> option appears press either ◀ or ▶ and find <Prune>, press the **ENTER** button.
3. Use the ◀ or ▶ buttons to select **YES** or **NO** and press **ENTER** to select.

DAB OPERATION

11 DRC (Dynamic Range Control)
The causes the radio to reduce the dynamic range of the audio signal. The purpose of this is to adapt the dynamic range of the audio signal to listening in a noisy environment.

NOTE: this is not available on many DAB stations.

1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Full Scan> option appears press either ◀ or ▶ and find <DRC>, press the **ENTER** button.
3. Choose between **DRC off**, **DRC Low** and **DRC High.**
4. Press **ENTER** to save the setting.

1 Switching from DAB to FM
Press the **DAB/FM** button once to switch. The display will show **FM Mode**.
Once activated the radio will automatically tune to the nearest available station.

2 Storing stations

The operation for FM is the same as DAB. See Page 5.

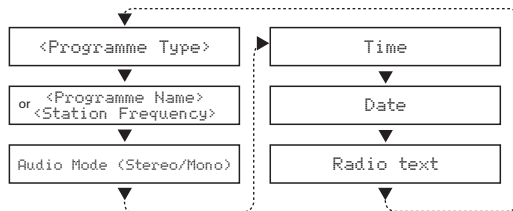**3 Recalling a stored station**

The operation for FM is the same as DAB. See Page 5.

3 Display modes

Every time you press the "**INFO/MENU**" button, the display will cycle through the following display modes: *The information is displayed on the lower segment of the LCD display.*

4 Program type

This describes the "**Style**" or "**genre**" of music that is being broadcast e.g. "**Rock** "or "**Classical**".

```
┌─────────────────────┐   ┌─────────────────────┐
│  <Programme Type>   │ ▸ │        Time         │
└─────────────────────┘   └─────────────────────┘
         ▼                          ▼
┌─────────────────────┐   ┌─────────────────────┐
│or <Programme Name>  │   │        Date         │
│  <Station Frequency>│   └─────────────────────┘
└─────────────────────┘            ▼
         ▼                ┌─────────────────────┐
┌─────────────────────┐   │     Radio text      │
│Audio Mode (Stereo/Mono)│ └─────────────────────┘
└─────────────────────┘            ▼
         ▼
```

5 Programme Name

Station name (if broadcast). Frequency of the station if no name is broadcast.

6 Audio Mode (Stereo/Mono)

Denotes if the broadcast is in Stereo or Mono.

To specify that a station can be only played in mono or that stereo is allowed.

1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Scan Setting> option appears press either ◀ or ▶ and find <Audio Setting>, press the **ENTER** button.
3. Use the ◀ or ▶ buttons to cycle through the 2 options <Forced Mono> or <Stereo Allowed>. Press **ENTER** to select.

Stereo allowed: Means any station broadcast in stereo with a strong enough signal will be played in stereo.

Mono only: Plays ALL stations in mono regardless of the availability of a stereo signal.

7 Time

Displays the current time. Please see Page 6 for setting.

8 Date

Displays the current date. Please see Page 6 for setting.

9 Radio Text

Displays scrolling text broadcast by the station (only if broadcast).

FM OPERATION

10 Scan Modes

Auto Scan

The Auto scan setting will scan up or down depending on where the starting frequency is. Once it finds a station it will stop.

There are 2 options to use when using this function.
NOTE: Ensure you are in the FM mode before following the below steps.

1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Scan Setting> option appears, press the **ENTER** button.
3. You will have the choice of either **<Strong Stations Only>** or **<All Stations>** using the ◀ or ▶ buttons.
   Strong stations only, will only stop at stations with a strong signal. All stations will stop at any station found with a strong or weak signal.
4. Make your choice by pressing the **ENTER** button to activate the setting.

Now when you press and hold the **BACK/SCAN** button the auto scan searches depending on what setting you chose.

GENERAL OPERATION

Factory Reset

To reset the radio to the factory settings follow the below steps.

1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Scan Setting> option appears press either ◀ or ▶ and find <System>, press the **ENTER** button.
3. Use the ◀ or ▶ buttons to find the <Factory Reset> option and press **ENTER**.
4. Choose <Yes> and press the **ENTER** button.

Backlight

To set the backlight

1. Press and hold the **INFO/MENU** button for 3 seconds.
2. When the <Scan Setting> option appears press either ◀ or ▶ button and find <System>, press the **ENTER** button.
3. Use the ◀ or ▶ buttons find the <backlight> option and press the **ENTER** button to find <Time Out>.
4. Press the **ENTER** button to enter <time out> and choose the available duration: <ON>, <10 sec>, <20 sec>, <30 sec>, <45 sec>, <60 sec > , <90 sec>, <120 sec> and <180 sec>.

TROUBLESHOOTING

In the unlikely event of difficulties with your appliance please follow the trouble shooting guide below. If the problem persists, contact the retailer if the machine is still under guarantee.
Customer **helpline:** 0345 600 3021

PROBLEM	CAUSE	SOLUTION
No Sound	Volume not turned up	Adjust the main volume knob.
Static Sound	Signal reception too low.	Adjust the antenna or move the unit to a stronger signal location.
Sound is distorted	Volume is too high.	
Desired station not found	Weak signal	Use the Manual Tune function.
The display shows "SERVICES N/A"	No DAB coverage in your area. Poor reception	Adjust the position of the aerial.
The display is blank	This may occur if the broadcaster changes the label of a service or removes a label while tuned.	the radio will try to retune. perform a scan.
I can hear a burbling noise on some stations.	Battery power is low Weak signal	Insert some new batteries Use mains power try re-positioning the aerial

SPECIFICATION

Power Supply Adaptor:	100-240V AC to 8V DC
Battery:	6 x 1.5V AA
Power consumption:	5 Watts
RF section:	Band III 174 ~ 240Mhz
Input:	50R, nominal
Sensitivity:	-95dBm typical
FM frequency:	FM (87.5-108MHz)
Headphone Output:	3.5mm stereo jack socket

Argos

Product Guarantee

This product is guaranteed against manufacturing defects for a period of
1 Year

This product is guaranteed for twelve months from the date of original purchase. Any defect that arises due to faulty materials or workmanship will either be replaced, refunded or repaired free of charge where possible during this period by the dealer from whom you purchased the unit.

The guarantee is subject to the following provisions:

- The guarantee does not cover accidental damage, misuse, cabinet parts, knobs or consumable items.
- The product must be correctly installed and operated in accordance with the instructions contained in this manual.
- It must be used solely for domestic purpose.
- The guarantee will be rendered invalided if the product is re-sold or has been damaged by inexpert repair.
- Specifications are subject to change without notice.
- The manufacturer disclaims any liability for the incidental or consequential damages.
- The guarantee is in addition to, and does not diminish your statutory or legal rights.

Guarantor: Argos Limited
489 - 499 Avebury Boulevard
Central Milton Keynes MK9 2NW