DAB+/FM/AM Digital Radio

BUSH

TR82DAB

Instruction Book

Toll Free Warranty and Service: 1800 509 394
The Gold Technical Support Line: 1902 215 259
(Charges will apply at $2.95 per minute for gold technical support only)

Introduction

Thank you for buying this **BUSH** product, which is designed to give you many years of trouble-free service.

You may already be familiar with using a similar unit, but please take the time to read these instructions.

Safety is important

Your safety is very important. Please therefore, ensure you read the "Safety Instructions" **before** you operate this unit.

Warranty

In the unlikely event that your product fails to work normally, please call one of our qualified service engineers on either of the below toll free phone numbers to discuss any issues directly.

Australia.

BUSH Warranty: 1800 509 394

New Zealand

BUSH Warranty: 0800 450 259

Safety Instructions

Ensure that you read all of the safety instructions before operating this unit.

Safety Considerations

- Ensure that the power cable and other connected cables are protected and are positioned so that they are not likely to be walked on, pinched or damaged.
- Do not position the unit in areas where it may experience humid or damp conditions.
- Do not allow the unit to get wet. You must keep it away from dripping or splashing water.
- Never allow children to insert foreign objects into the holes or slots on the unit.
- Do not cover the ventilation holes with items such as tablecloths or curtains, etc. This may cause the unit to overheat.
- No naked flame sources, such as candles, should be placed on or near the unit.
- Do not place objects filled with liquids, such as vases or jugs, on or near the unit.
- Do not place the unit in a closed cabinet without proper ventilation.

Cleaning

- Disconnect the unit from the mains supply before cleaning.
- Do not use any liquids or aerosol cleaners, as this may damage the unit.
- Use a dry, soft, dust free cloth.

Servicing

- There are no user serviceable parts in this unit. When servicing, refer to qualified service technician.
- Consult your retailer if you are ever in doubt about the installation/operation/safety of the product.

Contents

Controls & Outputs

No.	Button & sockets	Descriptions
1	Carry Handle	The **Carry Handle** has been designed to make the TR82DAB easily portable and stay true to its retro style.
2	LCD Display	The **LCD High Resolution Display** allows you to view the onscreen information and scrolling text.
3	Control Panel	The **Control Panel** features all the function Buttons to operate this digital radio.
4	Telescopic Antenna	It is recommended that you extended the **Telescopic Antenna** to ensure that you get the best possible reception.
5	Headphone Socket	The **Headphone Output** allows you to connect your Headphones for private listening.
6	Line Out Socket	The **Line Out Socket** means that you can connect the digital radio to your home entertainment system.
7	Tuning Dial and Pointer	The **Tuning Dial and Pointer** allows the frequency to be changed for the FM/MW/LW radio modes.
8	Speaker	There is one 2W **Speaker** that will provide you with crystal clear digital audio.
9	Battery Compartment	The **Battery Compartment** is where the 6 X C batteries can be inserted for battery power to be used.
10	Mains Power	The **Mains Power** Input allows you to connect the power lead to the unit to use mains power.

Top Control Panel

No.	Button	Descriptions
1	Auto Button	Press the **Auto Button** to conduct an automatic station scan in DAB+ mode.
2	MENU Button	Press the **Menu Button** to enter the Selected mode's Main Menu.
3	Display Button	Press the **Display Button** to display the DAB+ station information.
4	Shift Button (for presets 6 to 10)	Press the **Shift Button** to access presets 6-10.
6	Navigation and Select Buttons	Press the **Navigation Buttons** (Left and Right Arrows) to browse through the onscreen Menu or stations. Press the **Select Button** to confirm any settings or station Selections.
7	MW Button	Press the **MW Button** to Select MW radio mode.
8	LW Button	Press the **LW Button** to Select MW radio mode.
9	FM Button	Press the **FM Button** to Select MW radio mode.
10	DAB Button	Press the **DAB+ Button** to Select MW radio mode.
11	Preset 1 & 6	Press and hold the **Preset 1&6 Button** to save a preset station or briefly press to access your favourite DAB+ station.
12	Preset 2 & 7	Press and hold the **Preset 2&7 Button** to save a preset station or briefly press to access your favourite DAB+ station.
13	Preset 3 &8	Press and hold the **Preset 3&8 Button** to save a preset station or briefly press to access your favourite DAB+ station.
14	Preset 4 &9	Press and hold the **Preset 4&9 Button** to save a preset station or briefly press to access your favourite DAB+ station.
15	Preset 5 & 10	Press and hold the **Preset 5&10 Button** to save a preset station or briefly press to access your favourite DAB+ station.
16	Tone Control	Turn the **Tone Control** to adjust the Treble and Bass.
17	On/Off & Volume Control	Turn the **On/Off & Volume Control** to turn the unit on or off or to adjust the volume level.

What is DAB+

DAB+ was developed in **Europe** by a consortium of broadcasters and manufacturers. **DAB+** uses digital compression techniques to transform the source material, i.e. music and speech, into better quality audio.

Interference Free Reception

Analogue systems suffer from an effect called "multipath distortion". This is because waves do not behave in an orderly fashion, but bounce and reflect off buildings etc. **DAB+** sees this as an advantage and uses the directed and reflected signals to reinforce the end result, allowing for better service more of the time.

No Need to Re-tune

A single **DAB+** frequency can be used to cover the whole of the **Australia**, so solving many problems experienced with the earlier analogue system. **DAB+** scans automatically and tunes-in all of the available stations in your area.

Scrolling Text

Broadcasters can transmit text to your radio. This way you can read the name of the DJ, artist, song title or any other information they choose.

DAB+ Coverage

Check your local coverage at www.digitalradioplus.com.au, or alternatively text 0409-DRPLUS to receive an SMS confirming whether you reside in a DAB+ broadcast area.

Getting Started

Carefully remove your **DAB+ Receiver** from the box. You may wish to keep the packaging for future use.

In the Box

Inside the box you will find:

- DAB+ Radio (Main Unit)
- Mains Power Lead
- User Guide

Positioning your DAB+ Radio

Place your **DAB+ Receiver** on a flat / stable surface. Make sure it is not subject to vibrations or movement.

Avoid the following locations:

- Where it will be close to heat radiating sources.
- Where the humidity will be high and/or the ventilation will be poor.
- Where it will be dusty.
- Where it will be damp or a possibility of water dripping or splashing onto the unit.

Adjusting the Antenna

The antenna should be extended to ensure good reception in DAB+, FM, AM, MW & LW radio modes. It may be necessary to alter the position of the **DAB+ Radio** and /or antenna to achieve the best signal.

Using Headphones

To listen to your DAB+ Radio via Headphones, you will require headphones with a 3.5 mm diameter stereo plug (not included). The Headphone Socket is located on the back of the unit. Plug the Headphone Jack into the Headphone socket, the speaker sound will automatically turn off once the headphone is plugged in.

Turning on your DAB+ Radio

1. Connect the Power lead to the power socket on the back of the unit. Then connect the power lead to the mains wall outlet.

2. To switch on, turn the On/Off & Volume Control to the right. Press the DAB+ Button. When DAB Mode is selected for the first time, the display will illuminate and welcome to DAB will be displayed. Then carefully extend antenna for the best possible reception.

3. When you turn on your DAB+ Radio for the first time it will conduct a full station scan and store all the available Radio Stations in the stations list. This may take a few minutes.

✎ *Note: a. The DAB+ stations will be displayed in alphanumeric order. The first station in the list will be played after the scan has been completed.*

b. If no DAB+ signal is found in your area, it may be necessary for you to relocate your radio.

Changing Stations

To scroll through the station list and change the DAB+ Station playing, press the Navigation Buttons (left and right arrows on the top of the radio). Press the Buttons repeatedly to scroll through the list. The stations will be displayed on line 3 of the display.

Adjusting the Volume

To adjust the volume turn the volume wheel, located on the top of the radio. To increase the volume turn it to the right and to decrease the volume turn the wheel to the left.

Tone Dial

The tone dial is used to alter the audio output of the DAB digital radio between a high (treble) and low (bass) frequency range. Turn the tone dial right to enhance the high frequency (treble) content of the sound output. Turn the tone dial left to enhance the low frequency (bass) content of the sound output.

Scanning and Storing Stations

✎ *Note: with a DAB+ radio, it's a good idea to conduct a station scan every now and then to make sure that you have the most up to date station list stored in the memory of your radio. As new stations are often added or replaced.*

In DAB+ Mode, press the Auto Button to activate a full station search. The radio will begin automatically and will store all available stations. A bar graph will be display will searching and will indicate the number of stations found and the scan progress.

You may see some symbols displayed alongside the stations names. These are defined as follows:

- ? - This will indicate that the station is not active or available
- >> - This symbol indicates that the station is a primary station with secondary services
- << - This symbol indicates that the station is secondary station

Station Presets

✎ *Note: each preset Button holds two presets. For example, the 1/6 preset Button, on the DAB digital radio, holds preset positions one and six.*

The Bush TR82DAB Radio allows you to set up to 10 Station Presets. This means you can easily access all of your favourite stations at a touch of a Button.

1. To store a station preset, you must first tune to the station you wish to set as a preset.
2. Then press and hold one of the preset Buttons (e.g. 1/6). Preset, # saved will appear on the third line of the display, where the # is the number of the preset position.
3. To select the second set of preset positions – 6-10, hold down the shift Button then press and hold the desired preset Button.
4. If you have already saved a station in that preset position the new Selection with override the previous station saved.

Playing a Preset Station

1. To play a stored preset station, just press the relevant preset Button.

2. To select presets 6-10, hold down the shift Button and then press the relevant preset Button.

3. If you have not stored a station in the Select preset, 'Empty preset' will be displayed. The display will revert to the previously selected station after a few seconds.

Resetting Preset Stations

You can delete all of the preset stations and return the DAB+ digital radio to its factory settings.

1. Press and hold the Menu Button.

2. The display will show 'Press Select to confirm reset...'

3. Press the Select Button. The display will show 'Welcome to DAB' before performing a new scan for stations. The DAB+ digital radio will be returned to its factory condition.

4. If you do not wish to reset the DAB+ radio, wait a few seconds without pressing any Buttons and it will revert to its previous operation condition.

Viewing Station Information

While listening to a DAB+ station you can view the station information provided by the broadcaster (see information provided on the next page. To view the information press the Display Button repeatedly to scroll through the information provided.

Dynamic Label Segment (DLS): DLS is the scrolling text information supplied by the DAB+ station or by the broadcaster.

Program Type (PTY): This is a description of the type of program provided by the DAB+ station or by broadcaster.

Multiplex Name: This will show the multiplex that is broadcasting the program you are listening to.

Time and Date: This will display the time and date and is provided by the broadcaster.

Channel and Frequency: This is the transmission frequency of the station you are listening to.

Signal Information: Shows the digital bit rate and the signal mode.

Signal Strength: Shows a signal bar with the strength of the current station you are listening to. The indicator on the signal bar shows the minimum acceptable signal level.

Stations with signal strength below the minimum signal level will not provide a steady stream of audio.

DAB+ Menu Options

The Menu Button allows you to change some of the system options on your DAB+ digital radio. Pressing the Menu Button will enter the Menu control.

Station Order

This function enables you define how the stations are arranged when scrolling the station list.

1. Press the Menu Button to access the Menu control.
2. Press the Navigation Buttons until 'Station order' is displayed.
3. Press the Select Button to access 'Station Order'.
4. Use the Navigation Buttons to display the desired option.
5. Press the Select Button to confirm.

Manual Tune

You can manually scan through the radio frequencies to find a specific station. This is useful for weak stations or stations that are not found in the auto scan.

1. Press the Menu Button to access the Menu control.
2. Press the Navigation Button until 'Manual tune' is displayed.
3. Press the Select Button to access 'Manual tune'.
4. Use the Navigation Buttons to select the desired channel/frequency.
5. Press the Select Button.

A rectangle will be displayed on the second line of the display. The position of this rectangle indicates the signal strength (the further towards the right, the greater the signal strength).

6. Adjust the position of the aerial to obtain the optimum signal strength.
7. Press the Select Button to confirm.

Dynamic Range Control

DRC adds or removes a degree of compression to compensate for the difference in the dynamic range between radio stations. For example, a station broadcasting popular music may a high level of compression applied since the emphasis is on a constant high listening level, whereas a station broadcasting classical music will have little or no compression as the listener requires all of the highs and lows in the music to define the detail.

There are three levels of compression:

- DRC 0 No compression applied.
- DRC 1 Maximum Compression applied (this is the default).
- DRC ½ Medium Compression applied.

The best way to determined which of these settings suits you best is to experiment with them on a variety of source material.

1. Press the Menu Button to access the Menu control.
2. Press the Navigation Buttons until 'DRC value' is displayed.
3. Press the Select Button to access 'DRC value'. The current DRC level will be displayed on line 2 of the display.
4. Press the Navigation Buttons to select between the three DRC values. The available option appears on line 3 of the display.
5. When the required DRC value is displayed press the Select Button to confirm. You should be hear the difference in compression immediately.
6. Prune Station – No or Yes.

SW Version

To view the software version of this product, press the Menu Button and then use the Navigation Buttons to scroll through Menu options to select software version.

Using the MW/LW/FM Radio

If the DAB+ digital radio is in DAB+ mode, press the desired frequency band (MW, LW or FM). You may hear background noise as no stations has been tuned in.

Tuning the radio

To tune into a radio broadcast/station, turn the tuning control left or right until pointer is aligned with the desired frequency markings on the tuning dial.

When the pointer is horizontal you have either reached the start, or end of the frequency range. Do not attempt to force the dial further in the same direction.

Adjusting the Volume

To adjust the volume turn the volume wheel, located on the top of the radio. To increase the volume turn it to the right and to decrease the volume turn the wheel to the left.

Tone Dial

The tone dial is used to alter the audio output of the DAB digital radio between a high (treble) and low (bass) frequency range. Turn the tone dial right to enhance the high frequency (treble) content of the sound output. Turn the tone dial left to enhance the low frequency (bass) content of the sound output.

Using Line Out

The signal from the DAB+ digital radio can be connected to another stereo audio device via the 3.5 mm Line Out Socket on the right hand side of the radio.

You will require a stereo cable which is terminated with connectors which match the sockets on your other audio device.

Note: The signal level from the line out socket is fixed and cannot be adjusted using the Volume control.

Troubleshooting

If a fault occurs, first check the points listed below before taking the radio for repair. If you are unable to solve a problem by following the below hints we suggest you consult you retailer or service professional.

WARNING: Under no circumstances should you try to repair the unit yourself, as this would invalidate the warranty.

PROBLEM	POSSIBLE CAUSE	SOLUTION
No Sound	Your Headphones may be connected. The Volume may have been set to low. The Power Cord may not be connected correctly/firmly.	Disconnect your Headphones from the unit. Adjust the Volume level of the radio. Reconnect the Power Cord firmly.
The Buttons on the Unit are not Responding	Electrostatic discharge or interference from other electrical equipment.	Turn the unit off and disconnect the Power Cord. Wait for 5 – 10 seconds, then reconnect and turn the unit back on
Radio Poor Reception	There is weak aerial signal or there may be interference from other electrical equipment.	Reposition the aerial and the unit for best reception possible reception. Ensure the aerial is connected. Keep the unit away from other electrical equipment, where possible.

Technical Specifications

Specifications ……………………………………………..   DAB+ / FM / AM(MW/LW) Digital Radio

Speaker power……………………………………………..   7W

Frequency Range………………………………………….   Band III, 174 – 240 MHz

Battery Operation…………………………………………   6 x 1.5v (C) batteries (not include)

Power Supply…………………………………………….   AC Power Input: 230V, 50Hz

Warranty

Please keep your receipt as proof of purchase. This product is warranted for any defect in the materials or workmanship for one year after the original date of purchase. This product is for normal domestic and office use only.

This warranty does not cover damage from misuse or neglect, accidental damage, vermin infestation, excessive voltages such as lightning or power surges or any alteration that affects the performance or reliability of the product.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

In the unlikely event that your product fails to work normally, please contact the **BUSH Warranty on 1800 509 394 (Australia) or 0800 450 259 (New Zealand)** and have your receipt of purchase on hand.

This warranty is subject to the following provisions:

- It is only valid within boundaries of the country of purchase
- The product must be correctly assembled and operated in accordance with the instructions contained in the manual
- This product must be used solely for domestic purposes
- The warranty does not cover accidental damage
- The warranty will be rendered invalid if the product is resold or has been damaged by inexpert repair
- The manufacturer disclaims any liability for incidental or consequential damaged

This warranty is in addition to, and does not diminish, your statutory or legal rights.

PO BOX 6287

Silverwater NSW 1811

www.bushaustralia.com.au

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