

## DAB+U

### General user guide

DBU-9203-3



## 1. Introduction

The Dension DAB+U device is an easy to install solution for receiving Digital Audio Broadcast in cars or other media devices where USB connection is available with mp3 playback capability.

### Technical details

- Supports DAB, DAB+ and DMB-R (DMB-A)
- Compatible with Band III frequency range
- Service following
- SMB Antenna connector

### Package contents

- DAB+U device
- USB 'A-A' cable (Male to Male)
- Power wire for active antenna
- 2x 3M adhesive tape
- 2x cable tie
- Cable grommet
- User guide

### Optional accessories

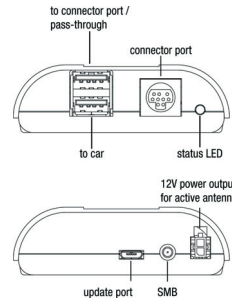
- DAB passive (non-amplified) antenna
- DAB active (amplified) antenna with external power source (DAB1ANT)

## 2. 'ABSA'

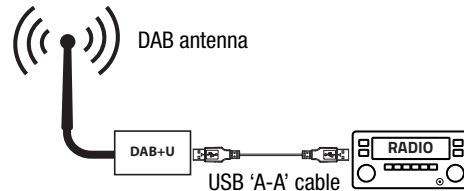
The Dension DAB+U device is equipped with an 'Automatic Buffer Size Assessment' (ABSA) function. Since the buffer size may be different in each playback device (head unit) the Dension DAB+U detects the buffering time. This is necessary for the device to function correctly. Upon first operation the assessment process is run automatically which takes about 5 minutes. During this period please do not switch station otherwise the process will start again. After this process the proper amount of buffer is used through future operations. Depending on the playback device the buffer time may vary between 15-40 seconds, so it is not possible to have 'radio like' station changing, but we designed the product to be the most versatile possible.

## 3. Device installation

Plug the DAB antenna (passive or active with external power source) to the Dension DAB+U receiver. Connect the power cable (12V) to the antenna (only if you are using an active aerial). Use the USB 'A-A' (Male to Male) cable to connect the bottom USB connector of the DAB device to the Radio. Please turn the ignition ON and check the status indicator LED on the DAB+U hardware. The steady light means that the DAB+U receives electric power. If the LED does not light up when the device is connected please check the power connection.



DAB+U installation diagram



## 4. Positioning the DAB antenna

The DAB reception and performance depends on many factors, both in the vehicle and other external conditions. Before you start the antenna installation and/or the product testing, please make sure that you have a good DAB coverage and reception.

Important notes:

- If your vehicle comes with metalized windscreen (e.g. windscreen heating) an external antenna is required
- The DAB module supports both amplified and non-amplified aerials. For amplified antennas 12V power is provided by the DAB+U receiver via the 2 pin molex connector

Read the manual of the antenna used carefully and follow the instructions in order to find the right place for installation. Always test (read next chapter) the DAB functions before finalizing the installation.

## 5. Configuration

In case of some specific head unit, it is necessary to use radio specific configuration files which you can download from [www.dension.com](http://www.dension.com). To configure please follow the steps below.

1. Plug the DAB+U device to your PC
2. Wait until it is recognized
3. Unzip and copy the configuration file to the root folder of the device
4. The update procedure will start automatically. When it is finished the device will be disconnected and reconnected automatically
5. Select the DAB device from the File explorer and run 'About.mp3' from the '\_Settings' folder
6. Check the ID3 tag information on the player's screen. If it displays the same version what you uploaded, that means the update procedure was successful

## 6. Operation

Switch your car radio ON; select the DAB+U module as a USB source from your radio. If in doubt how to select the USB source, please check the user guide of your radio.

First you need to perform DAB scan to find all available stations in your area therefore please go to the 'Settings' file folder and select / play scan.mp3.

The scanning procedure usually takes 40-60 seconds (within this time the system displays "Scanning" announcement). When it is finished the DAB device will reboot and the first DAB channel from the list of available stations will be selected and played automatically once the buffering is finished. Please note: all available stations will be listed as mp3 files in the root folder after scanning.

Buffering (the device loads the data ahead of the player) is required to compensate internal (USB playback function of the radio) or external (signal loss) factors in order to keep the playback from stuttering.

The total buffering time usually takes 15-40 seconds (within this time the status indicator LED is flashing) while the device announces "Please Wait". Please note: This is playback device dependent. For more information please refer to chapter #2: 'ABSA'.

During playback the station name will be displayed on the radio screen or on the cluster display (radio dependent). You may need to press additional button(s) e.g. 'Disp' / 'Info' to change the type of information displayed.

You can select a different channel by pressing the next / previous track button on your radio or steering wheel.

Alternatively you can browse and select the desired station from the list of mp3 files (available DAB stations) in the root folder of your USB source menu on your radio.

### Important notes:

The 'Scan' function available on most of the mp3 playback devices plays certain amount of time from all available files on the drive, therefore it CANNOT be used to rescan the DAB stations. Please do not use this function because it might result in malfunction. To rescan the DAB stations always use the scan.mp3 file in the 'Settings' file folder

- When travelling frequently between different locations it is recommended to rescan all stations since the items in the previously saved list might not be available anymore
- This device has 'Service following' support, so the currently played station might be available even when moving from the area of the first transmitter, because the DAB+U automatically switches to the next available transmitter if the station is available on that one also. However please note that a rescan might still be needed to find the local transmissions.

## 7. About the 'SETTINGS' menu options

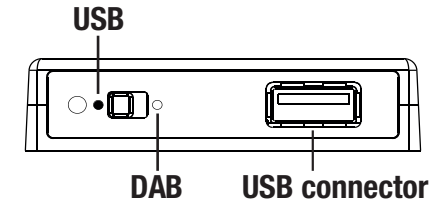
- If you are listening to a station while switching off the device, the last played station name will be duplicated when turning the device back ON and the station's name will be marked with '!'. This is part of the normal operation and will not cause any malfunction

The following items are available in the DAB settings Folder:

- About: provides information about the DAB device (e.g. software version)
- Scanning: use this option to scan all available stations in your area

## 8. Connector port

The connector port is an optional accessory allowing you to change the playback source from DAB radio to a USB-drive without unplugging your DAB+U.



The connector port has to be connected to the Round 9-pin connector of the DAB+U and the upper USB connector on the device. If the switch is set to DAB mode, the DAB+U is in active mode and you can listen to the DAB radio. When the switch is in USB position the DAB+U will be in bypass mode (DAB off) and you are able to access the content of the flash drive connected to the USB connector on the connector port.

## 9. Firmware update

We recommend to visit our website on a regular basis to get software updates for your product to enjoy the best performance and more features. Please follow steps explained thereof to perform the update process.

## 10. Troubleshooting

Symptom	Possible cause	Solution
No DAB channels available after scanning	1. Antenna position is not correct / not connected properly / compatible / or faulty 2. Poor DAB coverage	1. Check the installation and the specifications of the antenna 2. Test DAB reception with a different device or run scan at a different location
Playback is intermitten	Bad DAB coverage or antenna position	Try to change the antenna position
Missing channel	DAB signal strength is weak	Repeat scanning later
Station is selected but not played	Station is not available at the given territory	Apply scanning to see the stations currently available

## **11. Warranty**

Dension devices carry a one-year limited warranty that protects you from defects in material and workmanship of products sold by Dension or its authorized distributors and retailers. Dension does not warrant any installation work or assume liability for any damage caused due to negligence, improper installation or operation. For warranty claims, proof of purchase is required.

## **12. Support and compatibility**

Please check the download section for the latest firmware version and product documentation of your DAB+U device, as these may provide additional features or easier use of the product.

### **Further assistance**

If you need further assistance in using your Dension product, please contact your local supplier or visit [www.dension.com](http://www.dension.com).

### **Compatibility**

Please visit our website at [www.dension.com](http://www.dension.com) and check the list of recommended antennas.