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Preface

Copyright and Acknowledgements

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The information in this guide is believed to be correct at the time of publication. However, our policy is one of continuous development and so the information is subject to change without notice.

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Safety Warnings

Do not operate this radio near water.
Avoid small objects and liquids from getting into this product.
Do not remove screws or casing parts.
Use only the power supply unit supplied.

EEC: This product has been designed and type-tested to comply with EU requirements and carries a CE mark.

RoHS
COMPLIANT



Technical Support

Should you encounter any difficulties with the operation of your Pico RS, or should you suspect that it may be faulty in some way, please call our technical support department on the number below:

01555 66 61 61

Alternatively, email support@revo.co.uk or visit the troubleshooting section of our website at: www.revo.co.uk/support

Welcome to Pico RS

Thank you for buying our Pico RS digital radio, we feel sure that it will provide you with years of enjoyment and reliable service.

This guide has been designed to quickly get you up-and-running and listening to your radio, offer guidance on the more complex features of this product and provide information on safety, warranty and registration.

Pico RadioStation Overview

Pico RS is the ultimate 'one box' portable digital radio, providing an unprecedented choice of over 13,000 stations from around the globe. Whether your preferred station is broadcasting from your own country on DAB or DAB+ digital radio, or on the other side of the world via internet radio.

Pico is capable of receiving new DAB+ digital radio broadcasts without the need for any software upgrades or modification, and all in a splashproof design with the convenience of internal battery power.

Pico also provides coverage of traditional FM radio and the added benefit of doubling as an iPod ® speaker system.

Throw-in high-quality audio performance and the ability to stream music from your PC or Mac, and Pico RS becomes the ultimate go-anywhere digital radio.

Warranty

Revo Technologies Ltd warrants to the purchaser that this product will be free from parts and manufacturing defects in the course of normal use for a period of one year from the date of purchase.

This warranty does not apply in cases of accidental damage, where the case has been removed, wear and tear, negligence, modification or inappropriate use.

Should you encounter problems with this product, please contact your supplier or alternatively see page 2 of this guide for technical support contact details.

Warranty Registration

It is a warranty condition that you register your purchase by either completing the warranty card enclosed with your radio or alternatively registering online at www.revo.co.uk/register

Before Getting Started

IMPORTANT

To ensure that your Pico RS is running the latest software release (and therefore has access to the latest software

features), we advise you to perform a software update. Please see page 14 of this operating guide for full details.

Network Connection

In order to use the internet radio functions of your Pico RS you will require either a wireless (Wi-Fi) or wired LAN broadband internet connection.

For setup instructions please see page 6.

NB. If your wireless network is configured to use Wired Equivalent Privacy (WEP), or Wi-Fi Protected Access (WPA or WPA2) data encryption, you need to know the WEP or WPA code (Web Key) in order to allow Pico to connect to your wireless network.

Registering Your Radio and Accessing Additional Services

Some of Pico RS's more advanced internet radio features can only be accessed by visiting the Frontier Internet Radio Portal (www.wifiradio-frontier.com).

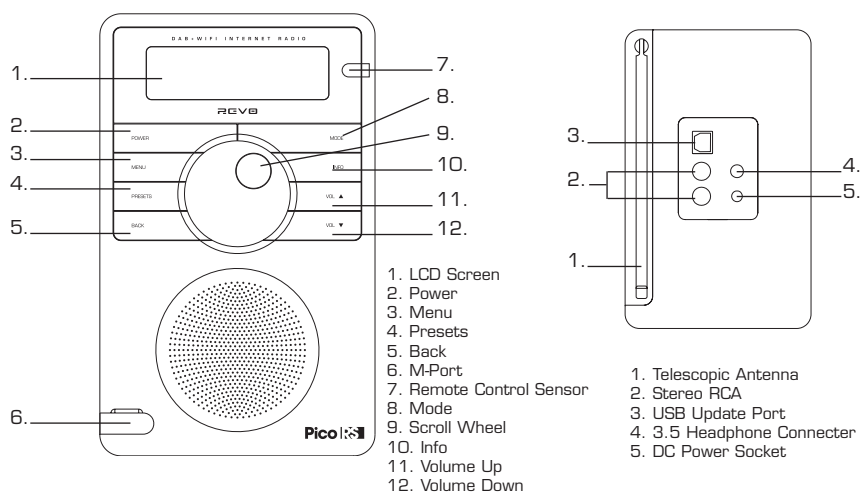
These features include the ability to create a "Favourites" list and add unlisted radio stations and podcasts. See page 8 for instructions on how to register your radio.

Pico RadioStation and DAB+

At the time of writing, Pico RS is one of the first digital radio products that are capable of receiving broadcasts on the new DAB+ digital radio platform - without the need for modification or additional software.

Meaning that Pico is ready for future developments. This facility is in addition to Pico's reception of standard DAB signals.

Controls and Connectors



Remote Control



Powering Pico RS

Your Pico radio is powered from the mains using the power adaptor supplied, or from its own internal rechargeable battery pack.

To power from the mains, insert the power adaptor plug into the DC power socket on the rear of Pico. When Pico is connected to mains power, its internal battery pack will commence charging. On a full charge, Pico's internal battery pack has a 12 hour life.

Only use the power adaptor supplied. Replacements are available from www.revo.co.uk

Getting Started

Pico RS is a sophisticated digital radio device, with several modes of operation and many advanced features.

In order for you to get the most out of Pico's functions, it is important that you learn how to use the cursor based control system, and also understand how Pico's menus work.

Pico's Control Method

Pico's control method is based around a central scroll wheel (with push to select function).

SCROLL WHEEL:

Rotate clockwise and anti-clockwise to scroll through menu options.

PUSH TO SELECT:

Press the scroll wheel to select the current menu option. In FM mode, pressing the scroll wheel will initiate an FM scan.

BACK:

Press to return to the previously selected menu entry. Repeatedly pressing will return you to the top level of the Mode menu (for the mode you are in).

MENU:

Press to enter (or return to) the Mode menu for the mode of operation you are currently in. Pressing for a second time will return you to the 'playing' screen.

MODE:

Sequentially cycles through each of the modes of operation.

Using these keys, you will be able to perform most functions and navigate through Pico's various menus.

Pico's Menus Explained

Pico has three types of menu as follows:

Main Menu

This is Pico's principle (top level) menu, and allows you to enter different operating modes, setup the radio, and view information such as software version and your radio's ID number.

Mode Menus

The Mode menus are so called because they show the functions available within the context of each of the operating modes (DAB mode, FM mode etc.).

Pressing the **MENU** button at any time will take you to the Mode menu of the operating mode your radio is currently in. Each Mode menu includes a listing for Main Menu – selecting this option will return you to the top level Main Menu (as described above).

Main Menu


The Main menu provides access to the following modes and sub-menus:

DAB	Info	System
FM		Setup

To select an option from the menu, simply use the scroll wheel to move through the menu options, then press to select.

Internet Radio Mode

Connecting to your broadband network

- In order to access Pico RS's internet radio features, first you must connect Pico to your broadband connection.
- Firstly, select 'Internet Radio' by pressing the **MODE** key until 'Internet Radio Mode' appears on the display, or alternatively select from Pico's main menu.
- Pico will now ask you to select a 'Wlan region'. To do so, simply rotate the scroll wheel to cycle through the list of available options, then push to make your selection.
- Pico will ask you to choose the network you'd like to use. If there is more than one available, all will be listed.
- If the Wi-Fi network you have chosen doesn't require a password, Pico will automatically connect.
- If your chosen network has security enabled, you will be asked to input the relevant key or password. Remember, the password will be case-sensitive.
- Use the scroll wheel to move through the banks of characters and push the wheel to select your chosen character. When the password has been entered, move the flashing cursor to the  symbol at the end of the line and push to enter the code. Pico will now connect to the network.
- Pico will remember the security key or password, you will not be required to enter it again, even after Pico has been used on another network in a different location.
- Pico can also remember keys and passwords for multiple Wi-Fi networks.
- If at some time you would like to connect to another Wi-Fi network, you can do so by selecting 'Wizard' from the 'Internet Setup' option on the main menu, and entering the required key/password.
- Advanced users can edit their Wi-Fi settings by accessing the 'System Setup' option from the Main menu.

>Most of Europe
USA

[Rescan]

>My Home Network

>Connected

Key:
0123456789<?C

Please wait
Connecting...

>Internet setup
Time setup

Using Internet Radio Features

The internet radio mode allows you to choose from a number of services, including listening to live radio or Podcasts. There are five options on the internet radio menu as follows:

- My Favourites: Used to navigate to your favourite stations. This list is compiled using your PC/Mac via the internet radio portal. See page 8 for details.
- Stations: Find stations by location, genre, most popular, new station or by alphabetical search.
- Podcast: Find Podcasts or 'Listen-Again' services by location, genre or search.
- My Added Stations: Shows stations which you have personally added to Pico RS's list through the vTuner internet radio portal. See page 8 for details.
- Help: Find your **Access Code** here, see page 8.

Choosing A Station

- To select a station select 'Internet Radio' by pressing the **MODE** key until 'Internet Radio Mode' appears on the display, or alternatively select from Pico's main menu.
- Using the scroll wheel, scroll to the 'Stations' option and press to select.
- You now have the option of selecting a station by **location** (country), **genre**, **alphabetical search**, **most popular stations** or **new stations**. Using the scroll wheel, scroll through the options and press to choose your search criteria.
- Choosing **location** will give you an alphabetical list of continents/regions and then a list of countries. Use the scroll wheel to scroll through the list and push to select your chosen country. You will then be given the option of choosing a genre, to further refine your search.
- After selecting your search criteria, you will be presented with a list of stations that meet your requirements. Simply select a station from the list to begin listening.

Choosing A Podcast

- Podcasts (also referred to as 'Listen Again') are selected in the same way as a regular station.
- Select 'Podcast' from the 'Internet Radio' menu, you can search for a station by location, genre or a combination of both.
- The main difference is that when you have selected a station, you will then be presented with a list of 'shows' or Podcasts available from that station.
- Select your choice using the scroll wheel before pushing to select your choice.



My Favourites

- It is possible to compile a list (or lists) of your favourite stations, allowing quick and easy access to a number of varied stations. To do this you must first register your radio and then choose your favourites by visiting the Frontier Internet Radio Portal - see 'Internet Radio Portal' section below for details.
- When in 'Internet Radio Mode', choose 'Station List' from the options, then select 'My Favourites'.
- If you have set up a 'My Favourites' list via the Frontier Portal, your list will appear on Pico's screen.

My Added Stations

- If you have added any of your own stations to Pico's already huge station list (via the Frontier Portal - see section below), they will be listed here. The 'My Added Stations' option can be found under 'Station List' in 'Internet Radio Mode'.

Help

- The 'Help' option is where you can find the **Access Code** that you require to register your radio on the Frontier Portal (see below for full instructions). A helpful FAQ audio track can also be found under this heading.



Internet Radio Portal

Access Additional Features

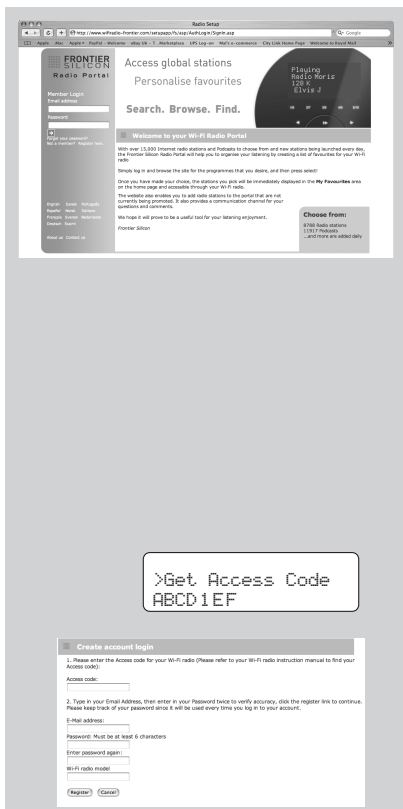
- Some of Pico RS's more advanced internet radio features can only be accessed by visiting the Frontier Internet Radio Portal.
- In order to access these features you must first register your radio.

Registering Your Radio

- Firstly, open your web browser on your PC or Mac and go to the Frontier Portal at <http://www.wifiradio-frontier.com>
- Click on the **Register** link, (located on the left hand panel) to begin the registration process.

You will now be asked for an **Access Code**.

- To find your **Access Code** enter 'Internet Radio Mode', select 'Station List' from the options, then select 'Help'. From the 'Help' menu now select "Get Access Code".
- Now fill-in the rest of the form to complete the registration process. You will now be able to login and take advantage of the various additional features and services offered by the Frontier Internet Radio Portal.



Music Player Mode

Music Player Operation

■ Pico RS's media player functionality allows you to play audio files (AIFF, AU, MP3, RM, WAV and WMA) and playlists (M3U) stored on a networked PC or Apple Mac. The media player functions have been tested and certified to operate with Windows 2000, Windows XP, Windows Vista and Mac OSX 10.2 – 10.4.9.

Windows PC Set-Up

There are two Music Player modes available. Each of them requires different settings, and either one can be used to playback music from a media server.

Shared Folders (CIFS)

In order to set up the device to playback ■ music stored on shared network drives, user name, password and domain settings must be configured to work with the PC share settings. This is only required if the user has set a password on his/her shared folders.

PC: Domain/Workgroup configuration

The Domain configuration item can be found on a Windows XP machine as follows:

1. From the start menu, select Control Panel > System then select the Computer Name tab.
2. The Domain or Workgroup that this Computer is a member of is displayed in this tab.
3. If the PC is not a member of any Domain or Workgroup then one must be joined. To do this click on the change button on the computer name tab and enter the name of the domain (default on Windows XP is MSHOME).
4. A reboot of the PC may be prompted if the Domain or Workgroup has been changed.

PC: Setting up a new user account (Windows XP)

Pico RS may require you to set-up a user account on each PC that you wish to browse. By default most PCs have at least one user account associated with it. The user name and password (optional) needs to be the same on each PC as the Internet Radio only stores one user name and one password. For windows XP this can be set up as follows:

1. From the start menu, select Control Panel -> User accounts
2. From this screen left click the 'Add ...', and enter the new user name and the Domain/Workgroup setting noted above. Select the type of user (limited) and then select 'create account'.

3. Select the user just created, select 'Create Password ...' and enter a password for this user.

4. Note the User Name and Password.

Note for Windows VISTA : Users have to turn on the Guest account via manage user accounts in the control panel in VISTA, then add access to either 'Everyone' or 'Guest' on the shared drive. They could create a new account for the internet radio, with a password, if they are concerned about security. The Guest account has no password by default, so the Wi-Fi radio will connect to it from its factory default settings.

PC: Configuring A Shared Drive

From the Start menu select My Computer and navigate to the directory you wish to share. Right click on the directory and select Sharing and Security. Configure the shared drive as read only, and ensure that the User Name created above has read access to the share.

Wi-Fi Radio: Storing The Username And Password

Before the radio can stream music from a PC, you need to ensure you have shared folder available on the PC, and set up the radio so that it knows the username and password (if one has been set) for the shared folder on the PC. This can be set up using the PC settings menu.

Shared Media (UPnP)

Media sharing uses Windows Media Player (WMP) 11 and above as media server. This mode does not require any setting in the radio, but the PC needs to be configured to allow the radio access to the media. You will only have to do it once, following the next steps.

1. The PC must be connected to network (wired or wireless) that will be used to share media with the radio.
2. Ensure that the radio is powered on and connected to the same network as the PC.
3. In WMP, add to the media library the audio files and folders you want to share with your internet radio (in Library > Add to library).
4. In the WMP main window, click on Library, then Media sharing.

The Internet radio is presented as an "Unknown Device". Make sure that the device has access to the shared media by selecting it and clicking <Allow>. Then click <OK>.

The PC is now ready to stream the music to the radio.

Music Player Mode

Apple Mac Set-Up

Set-Up for OSX 10.2.1 --> 10.4.9

Setup Windows File Sharing on the MAC:

From the 'Dock', click 'System Preferences'. From the 'System Preferences' window (under the 'Internet & Network' section) click 'Sharing'.

From the 'Sharing' window, do the following:

Under the 'Services' section, enable 'Personal File Sharing' and 'Windows Sharing'. Also, click 'Start' for each of these services. Under Windows file sharing you will also need to 'enable' the account you wish to share from (This needs your administrator password).

Under the 'Firewall' section, keep firewall off.

Under the 'Internet' section, keep 'Internet Sharing' off.

Setup an Account:

From the 'System Preferences' window, under the 'System' section, click 'Accounts'. Select an account and remember its 'Short Name' and password. This information will be used by Pico RadioStation when connecting to your Mac.

Directory Setup:

From the 'Dock', click 'Finder'. From the 'Finder' window, click 'Applications > Utilities'. Holding Ctrl click on 'Directory Access' then select 'Get Info' and ensure that read / write enabled. Next double click on 'Directory Access' and enable the following:

- | | |
|---|--|
| <input checked="" type="checkbox"/> AppleTalk | <input checked="" type="checkbox"/> LDAPv3 |
| <input checked="" type="checkbox"/> SLP | <input checked="" type="checkbox"/> SMB/CIFS |

Also, for the 'SMB/CIFS' item, click 'Configure' and select an appropriate workgroup.

To allow your Pico RS you need to add your login details, by following the path Main Menu -> System Setup -> Internet Setup -> PC Settings. You should input your short username and administrator password here. Ensure that your Mac is successfully connected to the wireless network. Note, you may need to wait for few minutes for the changes to take effect. You should now be able to access the audio files on your Mac by selecting Browse -> Shared Folders on Pico, then selecting the workgroup chosen in the step above. On selecting your Mac scroll through the available folders until you find the one which contains your music files.

Apple Mac Set-Up

Set-Up for OSX Leopard 10.5.1-->

Setup Windows File Sharing on the MAC:

From the 'Dock', click 'System Preferences'. From the 'System Preferences' window (under the 'Internet & Network' section) click 'Sharing'.

From the 'Sharing' window, do the following:

Under the 'Services' section, enable 'File Sharing' click 'Start' for this service. Then under the shared folders click the "+" and select the folder which contains your music files. Then Select the music folder from the shared folders area, in the users area make sure "Everyone" is set to read and write. Finally click on "Options" and make sure "Share files and folders using AFP" is checked and "Share files and folders using SMB" (This will require your admin password to activate) lastly make sure your account is also checked as active.

Ensure that your Mac is successfully connected to the wireless network. Note, you may need to wait for few minutes for the changes to take effect. You should now be able to access the audio files on your Mac by selecting 'Browse > Shared Folders' on Pico, then selecting your Mac from the list of devices. On selecting your Mac, you should see your folder that you selected above.

DAB Mode Menu Options

Pico RS has a number of additional functions that are accessed through the DAB Mode menu, as follows:

Station Order

- Press the **MENU** key in DAB Mode then press select Station order.

To specify the order in which stations are displayed

- Select the **Station order** option.
- Use the scroll wheel to move through the available options, then push the wheel to make your selection.

The following table describes the options available under the 'Station Order' menu:

Station order	Description
Alphanumeric	Lists stations in alphabetical order.
Ensemble	Lists stations by multiplex.
Valid	Lists only active stations.

Manual Tune

- Choose the Manual Tune option from the DAB Mode menu.
- The Manual Tune selection screen allows you to select a particular frequency to tune to. The list of frequencies displayed is dependant on the currently-set frequency band and contains all of the frequencies within that band. It starts with the short name of the frequency, for example 12B, and is followed by the actual frequency in MHz.
- If there is a station corresponding to this station number and frequency, the display will show the name, frequency, and a tuning meter will show the signal strength.

DRC - Dynamic Range Control

- Pico RS includes a dynamic range control that automatically boosts the volume of quieter sounds for listening in noisy environments.
- The DRC control is found in the DAB Mode menu under 'DRC'. There are three pre-defined settings as follows:

DRC	Description
DRC Low	Dynamic Range Control is set to half
DRC High	The recommended setting for noisy environments
DRC Off	Dynamic Range Control is switched off

Local and Full Scan

- As time passes, new stations will become available in your area. To find them and add them to your station list it is necessary to perform either a 'Local' or 'Full' scan. Both operations can be accessed via the DAB Mode menu.
- A Local Scan performs a shorter scan of only the 'local' ensemble range.
- A Full Scan will take longer, but will cover the complete DAB ensemble range.

Favourite Station Presets

- Pico allows you to store 12 favourite station presets, either via the **PRESET** button on Pico itself, or via the optional Pico remote control.
 - To save the station you are currently listening to as a preset, simply press the **PRESET** button then use the scroll wheel to find an unused location. Now press the scroll wheel to store.
- To listen to a stored station press the
- **PRESET** button then use the scroll wheel to locate your desired preset, then press to select.

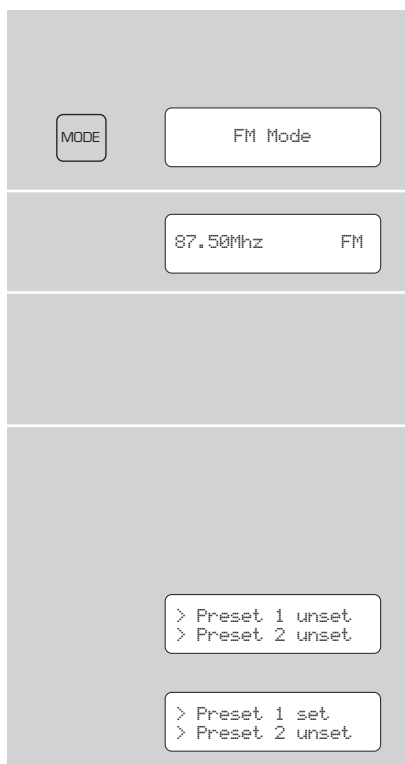
FM Mode

FM Operation

- Extend the telescopic antenna found on the rear of Pico.
- Enter FM Mode by pressing the **MODE** key and switching between DAB Mode and FM Mode. Alternatively, FM Mode can be accessed via the Main Menu.
- If this is the first time Pico has been in FM mode, it will start at the beginning of the FM frequency range. Otherwise, the last FM station you were listening to will be selected.
- To scan through the FM frequency range turn the scroll wheel.
- To 'SEEK' the next active station, press the scroll wheel.

Favourite Station Presets

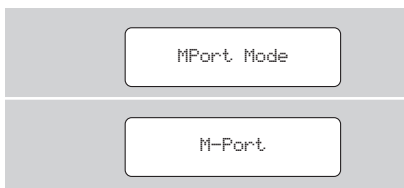
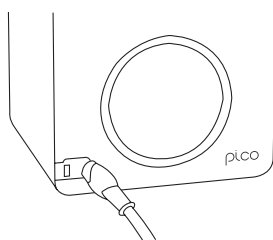
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- To save the station you are currently listening to as a preset, simply press the **PRESET** button then use the scroll wheel to find an unused location. Now press the scroll wheel to store.
- To listen to a stored station press the **PRESET** button then use the scroll wheel to locate your desired preset, then press to select.



MPort Mode

Using MPort

- Revo's MPort connector allows for quick and easy connection of an iPod®, similar MP3 player or sound source.
- Using the connection lead supplied, Pico is transformed into a high quality digital audio speaker system.
- Connect one end of the supplied audio lead to the headphone (or auxiliary out) socket of your source device, then connect the other end to the MPort on the front of Pico.
- Now press the **MODE** key and cycle through the options until 'MPort Mode' is displayed.
- Pico's LCD screen will now display the word 'MPort' on its screen.
- You should adjust the output volume level on both the source device and on Pico itself to gain optimal volume levels and sound performance.



System Setup

Internet Setup

- Advanced users can find and edit their Wi-Fi settings in this section, these include MAC address, DHCP status, PC Settings, SSID, IP Settings etc.

Factory Reset

- In the unlikely event that Pico RS should 'crash', 'freeze' or start behaving in a strange way, it is possible to perform a full software reset. This operation will completely reset Pico's memory, clearing all WEP/WPA codes and user settings. This will effectively return Pico to its default factory settings.

Software Update

- It is possible to remotely update Pico RS's software via your Wi-Fi internet connection, to ensure that you have all the latest features, or to fix known bugs in the software. To check whether there are any updates available, simply go to the 'System Setup' option on the 'Main Menu' and select 'Software Update'. Pico will search to see if a software update is necessary, then report back. If an update is available and necessary, Pico will start the download process and install its new software automatically.

Info

Software Version and Radio ID

- You may be asked for one or both of these pieces of information when dealing with a technical support issue.
- Both can be found under the 'Info' heading, located in the 'Main Menu'.

SW version
ir.dabp-mm1.rvo.ve

Radio ID
0013E0A11025

Troubleshooting

Wi-Fi Internet Radio

If you are experiencing any problems with your Pico RS please read the following 'troubleshooting' guide. Alternatively you can visit the support section of the Revo website (www.revo.co.uk) or call our technical support staff on 01555 666161.

If you have trouble connecting Pico RS to your wireless network, these steps may help to resolve the problem:

1. Confirm that a Wi-Fi connected PC can access the Internet (i.e. can browse the web) using the same network.
2. Check that a DHCP server is available, or that you have configured a static IP address on the radio.
3. Check that your network's firewall is not blocking any outgoing ports.

As a minimum, Pico RS needs access to UDP and TCP ports 80, 554, 1755, 5000 and 7070.

4. Check your access point does not restrict connections to particular MAC addresses. You can view the radio's MAC address under the 'Internet Setup' section, accessed via the 'System Setup' option on Pico's main menu.
5. If you have an encrypted network, check that you have entered the correct key or pass phrase into the radio. Remember that text-format keys are case sensitive. If, when attempting to connect to an encrypted network, your radio displays: 'Wireless error' followed by a 5-digit number, then please ensure that you enter the correct pass phrase for the network. If the problem persists, then you may need to consult your network configuration.

If Pico RS can connect to the network successfully, but is unable to play particular stations, it may be due to one of the following causes:

1. The station is not broadcasting at this time of the day (remember it may be located in a different time zone).
2. The station has reached the maximum allowed number of simultaneous listeners.
3. The station is not broadcasting anymore.
4. The link on the radio is out of date.
5. The Internet connection between the server (often located in a different country) and you is slow.

DAB Digital Radio

- Q.** I hear a 'burbling' noise on some stations.
A. If the signal strength is too low, a break-up in reception can occur. This sound is the result. Make sure that Pico's antenna is fully extended and in an upright position. If no DAB signal is found, it may be necessary for you to relocate your radio.
- Q.** I get a 'No stations available' message?
A. Make sure that your antenna is fully extended and vertical and check whether DAB coverage is available in your area.

REVO

Pico | RS

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support@revo.co.uk

www.revo.co.uk/support