

Wireless for sound

Budget Best Buys, the lowdown on internet radio – and a first look at the latest model from Pure



Internet radios are nothing new, but they've always been a pricey option – and there were only models from smaller manufacturers to choose from. Now, internet radio is hitting the mainstream. Established radio manufacturers such as Roberts and Pure are launching internet radios, making the worldwide web of internet radio open to a whole new audience.

Access to thousands of radio stations is the most obvious advantage of internet radio, but there's more to these devices than streaming broadcasts for homesick expats. As an internet radio connects to your home computer via Wi-Fi (or in some cases an ethernet connection), you can also play digital music files stored on your computer through the radio.

However, different radios play different file types, and some models can't play tracks with DRM protection (such as those downloaded from iTunes), so check this before deciding which model to buy.

Quality control

The sound quality of internet radio varies dramatically depending on who

is broadcasting, and what is being broadcast. In general, stations broadcasting at 128kbps will have good sound quality. Most BBC broadcasts and many commercial British radio stations use this bitrate or higher. However, if you listen to broadcasts from overseas or from niche stations, the bitrate is likely to be a lot lower and the quality will suffer.

Build standard and the quality of a radio speakers have an impact. The internet radios we tested delivered satisfactory sound, and were similar to the majority of DAB radios in this test.

Long-distance listening

As well as being able to listen to a huge number of radio stations in the UK, you can tune into a wide range of international broadcasts (see 'Internet radio explained', p52). And all of the internet radios we tested give you access to listen again services from the BBC.

We've looked at both internet radios, and DAB radios in this test and, though none of the latest digital radios we tested were worthy of a Best Buy, we've rounded up some Best Buy bargains from our previous tests for you (see 'Which should you choose' p53).



ONLINE

Want other ways to listen to music on the internet? Check out our guide to using Last.fm

See www.which.co.uk/lastfm

How we test



Making sure radios will be music to your ears

Listen up

Sound quality is the most important factor when buying a radio, which is why we spend so much time testing it. We broadcast a wide range of music, from U2 to Chopin, as well as speech tracks, to test the radios. An independent panel listens to each radio in a special listening room, scoring them for each different type of music. These scores are then statistically analysed so they can be shown as star ratings.

Put to work

There's no point having a radio that sounds brilliant if you have to open the instruction booklet every time you want to change stations. Two lab experts assess the radios for initial set up, the clarity and size of the screen, how easy it is to record to the internal memory or to pause live radio, and even how suitable the radio is for use at night.



Jargon buster

We help you tune into digital radio tech talk

■ **BITRATE** Measured in kilobits per second (kbps), this is the amount of information transmitted in each second of recording. The higher the bitrate, the more detailed the sound quality. Most DAB stations broadcast at 128 kbps. Classical music stations broadcast at a higher bitrate, while talk stations often have a lower bitrate.

■ **DAB** A technology that carries radio broadcasts as a digital signal. The signal is compressed, so you can fit more stations in the same amount of bandwidth using a DAB signal than traditional FM broadcasts.

■ **ETHERNET** A common method for creating wired networks.



■ **INTERNET RADIO PORTAL** A website that provides access to a wide range of internet radio stations and podcasts. Internet radios come preconfigured to access a specific portal.

■ **MP3** An audio file format that is widely compatible with different types of media player software and portable music players.

■ **PODCAST** A digital media file distributed over the internet that people can transfer or download to their digital media player, such as an iPod.

■ **WI-FI** Short for 'wireless fidelity'. This technology allows data to be transmitted wirelessly via radio frequencies rather than cables.



INTERNET RADIO EXPLAINED

Which? answers some common questions about using the net to listen to radio

Q How can I listen to internet radio?

A If you're connected to the net, you can listen to online radio stations while sitting at your computer. But most of us like to tune in while we're doing other things, so an internet radio, like the ones we've tested, could be the answer. They connect to your home broadband using Wi-Fi and allow you to listen to a wide range of stations being broadcast all over the world.

Q What sort of stations can I expect to find?

A There is something for everyone, from the usual BBC stations right through to the downright bizarre, such as BUFO Paranormal and UFO Radio. And for those who want to learn a foreign language, there are thousands of



broadcasts from other countries that you can listen to.

Q Can I listen to every radio station that's broadcast on the internet?

A No. Your internet radio will connect you to a massive choice of stations via an internet radio portal. The radios we tested all used a portal called Reciva that currently has 13,265 stations listed – if you listened to a different one each day it would still take you more than 36 years to get through them all.

Q How do I find stations?

A Either use the controls on the radio itself to scroll through the menus, or go to the website of whichever portal your radio uses, and select the stations online to add to your favourites.

Q Will it increase my broadband bill?

A It could, because while you're listening you're actually downloading data. If you intend to listen to a lot of internet radio (several hours a day), consider upgrading to a package with 'no download limit' to prevent big bills.

Q What else do I need?

A You'll need to be connected to broadband, ideally using Wi-Fi.

FIRST LOOK

Pure dives into internet radio with the Evoke Flow

Pure has unveiled its first entry into the emerging internet radio market. Released in September for £149.99, the Evoke Flow combines traditional FM radio with DAB digital radio and Wi-Fi technology. As Pure helped popularise DAB radios, it could well do the same with internet radio. We got our hands on one of the first models available, and first impressions are encouraging.

The set-up process was a little difficult, but once logged on, we could access more than 1,500 internet stations and a similar number of podcasts.

Radio quality over DAB and FM lived up to Pure's usual high standards, and the internet radio was good.

You can also download enhanced search tools and software to enable audio stored on your computer



to play through the radio over the Wi-Fi network.

We're currently subjecting it to a full lab test, so look out for the results online at www.which.co.uk/digitalradios.

Which? online LPs to MP3s

Do you have a huge collection of LPs gathering dust in the back of a cupboard? Drag your records into the 21st century by converting their music into MP3 files. To find out how, go to www.which.co.uk/lptomp3 and view our video guide.



Contacts

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Revo 01555 666161; www.revo.co.uk
Roberts 01709 571722
www.robertsradio.co.uk
Sony 0870 511 1999; www.sony.co.uk
Technika 0845 600 4411; www.tesco.com

Which should you choose?

Budget Best Buys from our previous tests

PORTABLE 70% ROBERTS RD-46 £70

The Roberts RD46 is a top model with good sound quality. Our testers thought it might suit those who are partially sighted, because the display is larger than most, and the controls are well-placed and in learnable locations. However, it's on the heavy side for a portable model, and we found the handle a little uncomfortable to use.

PORTABLE 64% PURE ONE £50

The Pure One proves that cheap doesn't have to mean nasty. Our listening panel thought that sound quality was good and described it as 'detailed' with 'good clarity'. Initially, it was a little tricky to use, with lots of separate menus controlled by a central dial. Gardeners and DIY enthusiasts will appreciate the small dimensions and light weight that makes it easy to carry.

FULL SIZE 64% PURE EVOKE-1S £79

The table-top Evoke-1S produces reasonable sound, is easy to use and has a good range of features. It receives both DAB and FM, and has a total of 30 shared presets between both bands. Usefully, it sports a kitchen timer and an on/off timer that can be set at different times throughout the week. It also features 'intellitext', which shows extra information, such as football and cricket results.

which?
BEST BUY

which?
BEST BUY

which?
EXCEPTIONAL VALUE

which?
BEST BUY

USING THE TABLE

The more stars the better.

Specification

Price For Best Buys we give the cheapest widely available high-street price. Prices for other models are a guide.

Weight Includes batteries.

Features

Total presets How many DAB, FM or internet stations the memory can store. **Pause/rewind** Whether the radio can pause or rewind broadcasts. **Number of alarms** Number of different times you can set alarm for in a given period.

Batteries

Running time Supplied batteries.

Score

Ignores price and is based on:
Sound quality **40%**
Ease of Use **30%**
Battery Life **15%**
Features **15%**

Don't Buy

Bad reception for Roberts

The Roberts Gemini 59 (6) is compact, portable and easy to use, but sound quality was disappointing so we can't recommend it.

Four AA batteries can be used to power it – you'll get about 17 hours of DAB listening and 15 hours of FM listening from these. There are some useful features including 10 DAB and 10 FM presets, and a socket for a set of headphones. It's available in black or white, but there's little to recommend it when it comes to looks.

Those looking for a second radio may be willing to accept a compromise in sound quality for big gains in portability. However, in this instance, we think there are better-sounding products on the market for a similar price, and of a similar size, such as the Pure One.



| MODEL | SPECIFICATION | | | | | | | | BATTERIES | | W? TEST PERFORMANCE | | SCORE % |
|----------------------------|---------------|-------------|--------------------------|----|-------------------------|----------------------|---------------|---------------------|-------------|------------------------------|---------------------|------------------|------------------|
| | PRICE (£) | WEIGHT (kg) | SIZE (cm) (h x w x d) | FM | CONNECT VIA ETHERNET | CONNECT VIA WI-FI | TOTAL PRESETS | NUMBER OF ALARMS | TYPE | RUNNING TIME DAB/FM (HRS) | EASE OF USE | SOUND QUALITY | |
| DAB RADIOS | | | | | | | | | | | | | |
| 1 ROBERTS RD-41 | 140 | 2.4 | 17x30x11 | ✓ | | | 12 | 12 | 6 x D Type | 30/30 | ★★★★★ | ★★★★ | 62 |
| 2 TECHNIKA DAB-407 | 50 | 1.9 | 14x25x14 | ✓ | | | 20 | 1 | | | ★★ | ★★★★★ | 60 |
| 3 TECHNIKA DAB-307 | 45 | 1.1 | 14x27x13 | ✓ | | | 20 | 1 | 6 x C Type | 17/17 | ★★★★★ | ★★★★ | 57 |
| 4 MAGICBOX Touch DAB Radio | 40 | 1.3 | 15x28x7 | ✓ | | | 20 | | 6 x C Type | 10.5/10.5 | ★★★★★ | ★★★★ | 54 |
| 5 SONY XDR-S55DAB | 50 | 0.5 | 10x19x4 | ✓ | | | 20 | | 4 x AA Type | 8/6.5 | ★★★★ | ★★★★ | 47 |
| 6 ROBERTS Gemini 59 | 40 | 0.5 | 11x16x4 | ✓ | | | 10 | | 4 x AA Type | 17/15 | ★★★★★ | ★ | 34 |
| INTERNET RADIOS | | | | | | | | | | | | | |
| 7 ROBERTS WM-201 | 100 | 2.7 | 12x30x22 | | ✓ | ✓ | 12 | 4 | | | ★★★★ | ★★★★ | 56 |
| 8 INTEMPO GX-01 | 50 | 2.1 | 14x24x16 | | ✓ | ✓ | 3 | 1 | | | ★★★★ | ★★★★ | 52 |
| 9 REVO Mondo Wi-Fi | 180 | 0.4 | 5x13x11 | | | ✓ | 5 | 1 | | | ★★ | n/a ^a | n/a ^a |

^a This model is designed to work with your hi-fi, and has no built-in speakers, so we can't give it a total test score or sound-quality rating.