



# Tuning into digital radio

Digital radio is coming out of the kitchen, bedroom and lounge – and now it's easier than ever to listen to digital audio broadcast (DAB) radio in your car or outside

Digital radio is almost everywhere. With nearly 90 per cent of the population now covered by BBC or commercial transmitters, and the lure of more stations (between about 30 and 50, depending on where you live), it's hardly surprising that around 6.5 million digital audio broadcast (DAB) radios have been sold so far in the UK.

DAB isn't without its problems, though. Sceptics will point to the superior DAB+ system used abroad as a reason why DAB will ultimately disappear from the UK. They argue that the fact that some DAB stations in the UK broadcast relatively low-quality signals leads to a less-than-stellar listening experience. And the recent closure of popular music station The Jazz may be a further sign that DAB is not the future of radio.

Our advice is to ignore these minor setbacks as DAB still has a lot to offer. If the idea of a wide variety of digital stations is tempting, choose a digital radio that fits your lifestyle from the extensive range available.

Most new models are still table-top styles, designed to sit on a worktop, bedside table or shelf. We've tested nine of the latest models, and found two new Best Buys.

Increasingly, manufacturers are adding DAB functions to other devices, such as MP3 players, or combining DAB with internet radio. There are also more personal models – some that connect to your iPod, and one that can be easily fitted in your car. See p75 for our round-up of more DAB listening options.

## How we test



Our expert listening panel assess each radio using the same music and speech by broadcasting our own DAB station using an encoder and transmitter. Radio Which? might not get huge audiences, but its blend of classical, jazz, pop and speech is designed to test all aspects of each radio's sound quality. As the quality of broadcast DAB stations varies, we test at both 192kbps and 128kbps.

We check how easy each radio's buttons, screen and menus are to use, and measure how long the radios keep going on one set of batteries. One Best Buy managed more than three days of continuous listening.

## Facts & scores

### Polished performers

The Pure (2) boasts cherry or maple veneer, while the Vita Audio R2 (4) comes in walnut veneer or gloss white. Roberts models generally have two colour choices – for the RD21 (1) and RD45 (8) it's black or silver, and for the RD55 (3) it's black or white. The Intempo (9) comes in five colours.

### Push my button

The Vita Audio R2 (4) has a handy remote control so you can adjust its settings from a distance.

## WHICH? ONLINE

See [www.which.co.uk](http://www.which.co.uk) for reviews of more than 65 DAB radios including ten Best Buys, plus a guide to what you should look for when buying.

## What you should look for

### ■ PORTABILITY

Weight and balance will make the difference between leaving the radio inside or carrying it outside. Batteries can add significantly to the weight – especially as many radios use six larger 'C' cells. A comfortable, sturdy, well-balanced handle will make carrying easier.



### ■ PAUSE AND REPLAY

If you're often interrupted, a simple pause-and-replay function ensures you won't miss what's happening. The amount of replay time varies, depending on the quality (bit rate) of the station. This function tends to use more battery power, as it's constantly recording the signal.

### ■ CLEAR DISPLAY

Check whether the display is located on the top or the front of the radio, how large it is, and whether it's backlit. Some have dark text on a light LCD background, others the reverse, while the newest use OLEDs, which are brighter, clearer and use less power. Displays are usually coloured amber, green or blue.





which?  
**BEST BUY**

## 66% Roberts Gemini RD21 £80

Its sleek, black plastic casing gives this Roberts a distinctive style, and our tests found that the sound was crisp. It's intuitive to use, with logically laid-out controls and a large, bright display. When fitted with six 'D' batteries, it weighs a hefty 2.8kg, though the retractable handle is comfortable. It's more suited to the kitchen than the bedroom, as it lacks both clock radio and alarm.

**WE FOUND** On batteries, it ran for 81 hours of DAB listening, and 61 hours of FM.

**Available** Argos, Comet, John Lewis  
**Colour options** Black plastic, silver plastic  
**Presets (DAB/FM/total)** 10/10/20 **Line input** No  
**Audio output sockets** Stereo line out



which?  
**BEST BUY**

## 60% Pure Evoke 1S £100

The Evoke 1S delivers a warm sound, but is a little muddy in the mid and lower frequencies. You'll need the optional ChargePak (£25) to operate it away from the mains, which gave 19 hours of DAB listening in our tests. Features include a kitchen timer, a variable daily on/off timer, and 'intellitext' – information such as sports results that is broadcast by some stations and appears on the display. It's cheapest at Argos and Comet.

**WE LIKE** The display is especially bright and clear.

**Available** Argos, Comet, Currys, John Lewis  
**Colour options** Maple veneer, cherry veneer  
**Presets (DAB/FM/total)** 30/30/30 **Line input** Yes  
**Audio output sockets** Stereo line out

**Intellitext displays broadcast information such as football scores on the display**

## Don't Buy

**INTEMPO TRS-01 £40**

The TRS01 is a clear Don't Buy due to its poor performance in our tests. The sound quality is terrible, producing distortion that is scratchy and harsh across all frequencies, and tinny at the higher end. Strangely for such a small, light radio, the minimum volume is too loud and may not be suitable for quiet background listening. It's let down further by a poor display that is particularly difficult to read in sunlight, and a very poor battery life.

which?  
**DON'T BUY**



MODEL	PRICE (£)	SIZE (mm) (hwxwxd)	SIZE OF DISPLAY (mm) (wxh)	WEIGHT (kg)	MONO/STEREO SPEAKER(S)	DAB PRESETS	PAUSE/REPLAY (mins)	NUMBER OF ALARMS	TYPE	RUNNING TIME DAB/FM (hours)	SOUND QUALITY	EASE OF USE	SCORE %
1 <b>ROBERTS</b> Gemini RD21	80	175x300x125	97x22	2.8	S	10	n/a	0	6xD	81/61	★★★★	★★★★★	66
2 <b>PURE</b> Evoke 1S	100	176x213x135	62x15	1.3	M	30	n/a	1	ChargePak <sup>a</sup>	19/18	★★★★	★★★★★	60
3 <b>ROBERTS</b> Gemini RD55	100	140x294x70	79x21	1.4	S	5	5-20	0	6xC	36/29	★★★★	★★★★★	56
4 <b>VITA AUDIO</b> R2	220	133x339x200	64x15	3.1	S	5	n/a	1	n/a		★★★★	★★★★	54
5 <b>SONY</b> XDRS10DABM	90	143x271x125	60x12	1.7	S	10	n/a	0	n/a		★★★★	★★★★	52
6 <b>PHILIPS</b> AE5000/05	50	155x228x121	49x14	1.4	M	5	n/a	0	6xC	19/20	★★★★	★★★★★	51
7 <b>PANASONIC</b> RF-D5EB-K	60	160x272x119	63x17	1.7	M	10	n/a	0	6xC	27/49	★★★★	★★★★	49
8 <b>ROBERTS</b> Gemini RD45	50	147x239x102	63x13	1.2	M	4	n/a	0	6xC	20/13	★★	★★★★	41
9 <b>INTEMPO</b> TRS-01	40	108x232x43	62x14	0.5	M	10	n/a	0	4xAA	9/8	★	★★★★	27

<sup>a</sup> Rechargeable ChargePak E1 is optional accessory. Pure Evoke 1S cannot use standard batteries

### USING THE TABLE

The more stars the better.

### Specification

**Price** Full pricing information is on p41.

**Size of display** The overall size of the digital display.

**Weight** Including batteries for models that take them.

### Features

**Mono/stereo speakers** Whether a radio has mono (M) or stereo (S) speakers.  
**DAB presets** How many

DAB stations can be stored. **Pause/replay** The range of time in minutes that the radio can store on its built-in memory.

### Batteries

**Type** The number and type

of batteries (conventional or rechargeable) that can be fitted. **Running time** The number of hours that each model would run tuned to DAB or FM, starting with fully charged batteries.

### Score

Ignores price and is based on:

Sound quality	40%
Ease of use	30%
Battery life	15%
Features	15%



## TAKE TO THE HIGHWAY

**Alan Kerr** 28, transport planner

At home in Chesham, Alan and his wife are keen listeners to digital radio. So when they bought a new car, they wanted to liven up journeys with a wider choice of stations than FM can offer. Factory-fitted DAB radios can be expensive, so Alan was eager to see how the Pure Highway (see opposite) performed.

Installation was easy (see our guide, right) and took less than five minutes – this is the Highway's major selling point. Alan found it easy and intuitive to use, and the scroll wheel is similar to that on the Pure One he has at home, which he loves.

As the screen is small, it's safer for a passenger to operate than the driver. The wires were the biggest problem – the cigarette lighter power lead and the aerial cable snaking across the dashboard weren't ideal.

Alan was happy with the sound, although as it sends the signal to the in-car stereo by FM he found that, on some journeys, interference from local radio station broadcasts made retuning a regular necessity. DAB reception was also variable – some weaker stations were patchy on the road to Suffolk, but around London there were no problems.

When fitted, the Highway takes up a fair amount of windscreen space, so you might have to choose between the Highway or a satnav in smaller cars.

Overall, while the price is tempting, there are more drawbacks than the Kerrs anticipated, so they'll be leaving DAB at home for now.

### OUR RESEARCH

When choosing digital radios to test, we consult manufacturers, market intelligence reports and industry experts, then check high-street and online availability. We include top sellers and new releases from the most popular brands, those with innovative features, and interesting models from lesser-known brands.

## Contacts

**Cowon** [www.cowonglobal.com](http://www.cowonglobal.com)

**Intempo** 0161 828 5219; [www.intempo-digital.co.uk](http://www.intempo-digital.co.uk)

**Panasonic** 0844 844 3852; [www.panasonic.co.uk](http://www.panasonic.co.uk)

**Philips** 0870 900 9070; [www.philips.co.uk](http://www.philips.co.uk)

**Pure** 01923 277488; [www.pure.com](http://www.pure.com)

**Revo** 01555 666161; [www.revo.co.uk](http://www.revo.co.uk)

**Roberts** 01709 571722; [www.robertsradio.co.uk](http://www.robertsradio.co.uk)

**Sony** 0870 511 1999; [www.sony.co.uk](http://www.sony.co.uk)

**Vita Audio** 01702 601410; [www.vitaaudio.com](http://www.vitaaudio.com)

## Step by step

Add DAB to your in-car radio using the Pure Highway in five easy steps

1



Attach aerial, and clip cable to car trim.

2



Mount the suction arm on to windscreen.

3



Connect the aerial cable and power cable.

4



The Highway attaches to the arm magnetically.

5



Scan for DAB stations and spare FM frequency.

## New ways to listen

DAB is now appearing in a bigger range of audio devices

As digital radio becomes increasingly popular and the costs of components fall, DAB is being incorporated into more devices. And, given that so much radio listening takes place in the car, it's surprising that car makers have only recently started to offer factory-fitted DAB radios, either standard or as an option. Vauxhall, Ford, BMW and Audi are among the frontrunners. There are also adaptors or standalone models you can fit yourself. The Pure Highway offers a simpler and cheaper alternative to a factory-fitted DAB car radio.

MP3 players can benefit from a DAB tuner – and many can save radio recordings on them. Most use the headphones as an aerial, however, so in areas with a low signal strength the player might not get a good reception.

For the ultimate listening choice, tune into the internet. There are more than 11,000 internet radio stations from around the globe that cover every genre, as well as podcasts and 'listen again' services from the BBC for many of its programmes. If this sounds tempting, products such as the Blik Radiostation combine internet and DAB radios in one box. You will need an internet connection – ideally broadband – to listen, though.



## Personal DAB/MP3 players

### Cowon i-Audio D2 £140

We tested this Best Buy 4GB touchscreen MP3/MP4 player in November 2007, and were impressed with its audio and video performance. As a radio, however, its DAB functions are not easy to use. It's still great for all-round portable video and audio, especially as you can record directly from the radio. If you're looking for a device that lets you listen to DAB and music, or watch videos on the move, there's little competition.

Ease of use ★★ Sound quality ★★★

**Available Online** Colour options Black, white, red **Size (hwxwd)** 57x78x17mm **Display size (hwxw)** 52x40mm **Weight** 90g **DAB presets** 10 **Compatible audio formats** MP3, WMA, Ogg, Flac, Wav **Memory** 4GB or 8GB versions, plus SD card slot **Batteries** Lithium-polymer (supplied)

### Philips Sports Gear Radio £60

This DAB radio doesn't have FM, but does have an MP3 player and dictaphone. The controls are clear, and the supplied headphones are comfortable. It has reasonable battery life, getting 14 hours of radio listening from two AAA batteries.

Ease of use ★★★★★ Sound quality ★★★

**Available Argos** **Size (hwxwd)** 95x59x18mm **Display size (hwxw)** 18x32mm **Weight** 80g **DAB presets** 30 **Compatible audio formats** MP3, WMA, Wav **Memory** 1GB **Batteries** 2xAAA

## In-car digital radio

### Pure Highway £70

In-car DAB radios don't come cheap, and an aerial upgrade and fitting fees add to the cost. It's this market that Pure is hoping to conquer. The Highway is easy to fit and use, and the sound was good in our test cars. It's powered by the cigarette lighter, and you need to stick the aerial to the inside of the windscreen. It transmits sound via FM to your car stereo, or plugs into the

line-in socket. It even offers Pure's 'ReVu' function to pause and replay DAB. As a bonus, you can take it out of the car and it works as a personal DAB radio.

Ease of use ★★★ Sound quality dependent on your in-car system

**Available Currys, John Lewis** **Size (hwxwd)** 72x124x35mm **Display size (hwxw)** 17x51mm **Weight** 200g **Speakers** n/a **DAB presets** 20 **Batteries** 2xAA

## iPod adaptor

### Roberts Robi £50

Apple's iPod may be a symbol of modern life, but it doesn't feature DAB. Step forward Roberts: its cute Robi adds a digital radio that is powered by the iPod and acts as a remote control. With large buttons and a bright display, it's easy to use, and comes with a handy belt clip. It wouldn't play for

long – in our tests it drained the battery of an iPod Mini in 4.5 hours. Until other DAB iPod accessories arrive, this is a great-value option.

Ease of use ★★★★★ Sound quality ★★★

**Available Argos** **Size (hwxwd)** 54x44x15mm **Display size (hwxw)** 8x12mm **Weight** 40g **Speakers** n/a **DAB presets** 18 **Batteries** n/a

## Internet radio

### Revo Blik Radiostation £150

The Blik Radiostation combines internet and DAB radios in one box. It's easy to set up and connect wirelessly to your Wi-Fi network. Unfortunately, using it isn't easy – pressing the top buttons while looking at the screen is a challenge, and using the small, fiddly remote control to scroll through options is slow. Sound

quality is satisfactory, but the maximum volume was still the quietest on test. Although there are four alarm settings, this is a costly yet plastically clock radio, and we can't recommend it.

Ease of use ★★ Sound quality ★★★

**Available John Lewis** **Size (hwxwd)** 71x256x160mm **Display size (hwxw)** 22x66mm **Weight** 680g **Speakers** Mono **DAB presets** 10 **Batteries** n/a