

# DAB+ radio

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Using quantitative research data to estimate the UK household penetration and usage of DAB+

**Report**

Published 29 September 2023



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# Overview

**This report outlines the findings from market research conducted to estimate DAB+ device penetration and usage in the UK.**

DAB+ is the latest technology for digital audio broadcasting. It is more efficient than standard DAB, allowing more services to be broadcast on the same multiplex with equivalent audio quality. DAB+ is backwards compatible with DAB, meaning that all DAB+ capable devices can receive standard DAB broadcasts, but DAB-only radios are unable to receive services broadcast using DAB+.

The research took the form of a nationally representative face-to-face survey of 4,055 UK adults and was conducted in October/November 2022. More information on the survey can be found in the Technical Appendix.

## What we have found – in brief

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### DAB+ penetration

- 10.1m UK households (36%) had a DAB+ set, either at home or in at least one car, totalling an estimated 14.8m DAB+ sets
- 4.2m UK households (15%) had a DAB+ set at home, with an estimated 4.8m in-home DAB+ sets
- Two-thirds (66%) of in-home DAB owners had a DAB+ set
- More than a third (37%) of households with a car had an in-car DAB+ set

### DAB+ usage

- A quarter of in-home DAB listeners had listened to a DAB+ radio station in the past month
- A fifth of in-car DAB listeners had listened to a DAB+ radio station in the past month

### Awareness of DAB+

- People who listened to DAB radio were significantly more likely to be aware of DAB+ than the rest of the population (31% versus 18%)
- However, over half of DAB listeners (58%) said they had not heard of DAB+

## Background to this report

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The [Digital Radio and Audio Review](#) (The Review) was launched by the Government in February 2020 with the objective of assessing likely trends in listening to make recommendations on ways of strengthening the future of UK radio and audio. The [full report](#) was published on 21st October 2021 and included an outline of the role of DAB+ in the UK. The findings from the Review noted that spectrum used by DAB platforms is now mostly allocated, and that all the national DAB multiplexes, and most local multiplexes serving major metropolitan markets, are ‘full’. This is primarily due to:

- recent investment by broadcasters to launch new digital-only stations, particularly at a national commercial level;
- policy interventions to enhance DAB transmission network coverage; and

- the ubiquity of DAB receivers, particularly in vehicles.

Ofcom has noted that almost all of these multiplexes only carry services that operate using the longstanding DAB standard, rather than the more efficient DAB+. <sup>1</sup> Chapter six of The Review also notes this in its discussion of future radio distribution and coverage: “Analysis shows that moving all the existing DAB services to DAB+ could potentially free up sufficient space for 24 additional national radio stations (or up to 37 if technical innovation leads to improvements in performance). At a local multiplex level, moving all existing DAB services to DAB+ would mean that no local multiplex would be more than 50% full.” <sup>2</sup> In its [response to the Review](#), the Government agreed that “...it may be appropriate, subject to developments in the radio market and in listening habits over the coming years, for action to be taken to support a faster migration of stations from DAB to DAB+ in order to allow more stations to broadcast on the DAB platform.”

However, a key issue for broadcasters in moving stations to DAB+ is that not all DAB radio sets are DAB+ enabled. As a consequence, the potential addressable audience for a DAB+ station is smaller than for DAB, though precisely how much smaller is not clear given the lack of available data. While the general consensus is that DAB+ set penetration is higher in cars than homes, no firm data is available on this.

Accurately measuring DAB+ penetration and usage is challenging for two reasons:

1. **Few radio stations currently broadcast on DAB+ and coverage of services varies across the UK.** Some stations are only broadcast on DAB+ in certain areas and some DAB+ stations are not yet available on RAJAR <sup>3</sup>, the official body for measuring radio audiences in the UK. This means that analysis based purely on listening figures would not provide robust data on the number of DAB sets capable of receiving DAB+.
2. **User awareness of DAB+ is low compared to more established technologies** e.g. AM/FM, DAB, online listening. In Q1 2022, RAJAR included a question about ownership of a DAB+ enabled device. The latest figures indicate that 51% of those with a DAB set say it can receive DAB+ but that 24% don't know. <sup>4</sup> Therefore, as our new research confirmed, simply asking respondents to confirm whether they have a DAB+ radio, without providing additional context or in-person help to retune their set, would likely not provide accurate figures.

As a result of these challenges, standard tools and trackers do not currently have figures specific to DAB+. RAJAR measures listening that takes place on analogue (AM/FM), DAB, DTV, smart speakers and other online platforms, but does not split out DAB listening by DAB and DAB+. Similarly, Ofcom's Technology Tracker, which provides data on what devices people have in home and in car, does not provide this granular split of DAB and DAB+ for radio ownership. To address the informational deficit regarding DAB+ penetration and usage in the UK, Ofcom commissioned bespoke research, the findings of which are presented in this report.

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<sup>1</sup> DAB+ uses more modern audio encoding than DAB. This means that, for an equivalent sound quality, a DAB+ multiplex can carry more services than a DAB-only multiplex, making more efficient use of multiplex capacity.

<sup>2</sup> [Digital and Audio Review](#), Para 6.49

<sup>3</sup> Radio Joint Audience Research

<sup>4</sup> RAJAR Q1 2023. Q: Do you have a DAB digital radio that can receive DAB+ stations. 'Don't know' includes 'not stated'.

# The DAB landscape

The first DAB digital radio stations were launched in 1995 by the BBC, followed by the first commercial DAB stations four years later in 1999. Since then, the total number of DAB services across national and local DAB multiplexes has continued to increase. As of March 2023, there were 57 DAB services broadcasting across the BBC and commercial national multiplexes, and 654 services available on local multiplexes.

**Figure 1: Number of DAB services as of March 2023**

	BBC UK-wide	UK Commercial – Digital One	UK Commercial – Sound Digital	Local commercial services
Number of multiplexes	1	1	1	58
Number of services	11	24	22	654

Source: Ofcom, BBC

## Coverage

### DAB coverage remained steady in 2023

We provide data on DAB coverage in our annual [Media Nations](#) report. This year we noted that coverage of national and local DAB multiplexes was unchanged in March 2023 from the previous year, with around nine in ten UK homes covered by a BBC, commercial and/or local DAB multiplex. Meanwhile, small-scale DAB (SSDAB) multiplexes reached 14% of UK households – a figure which is expected to rise as the licensing and build-out of SSDAB continues.

**Figure 2: DAB multiplex coverage as of March 2023**

		Commercial				Small-scale
		BBC	Digital One	Sound Digital	Local DAB	
UK	Homes	97.4%	91.7%	82.6%	92.0%	13.8%
	Major roads	87.4%	80.2%	72.6%	76.8%	NM
England	Homes	98.4%	94.8%	86.7%	93.4%	12.8%
	Major roads	94.5%	93.9%	89.8%	87.4%	NM
Scotland	Homes	95.3%	81.7%	69.0%	85.4%	24.9%
	Major roads	69.1%	45.5%	33.6%	45.6%	NM
Wales	Homes	92.2%	67.5%	56.9%	82.6%	15.5%
	Major roads	78.1%	53.3%	37.7%	60.9%	NM

Northern Ireland	Homes	87.3%	85.4%	56.8%	87.5%	5.6%
	Major roads	79.3%	86.9%	55.0%	87.8%	NM

Source: Arqiva, BBC, Ofcom. Note: Coverage of SSDAB is measured on a 'homes' basis only. 'NM' denotes levels are not measured.

As mentioned above, some DAB stations are only broadcast on DAB+ in certain areas. You can find out which stations are available on DAB+ in your area using [Digital Radio UK's postcode checker](#) tool.

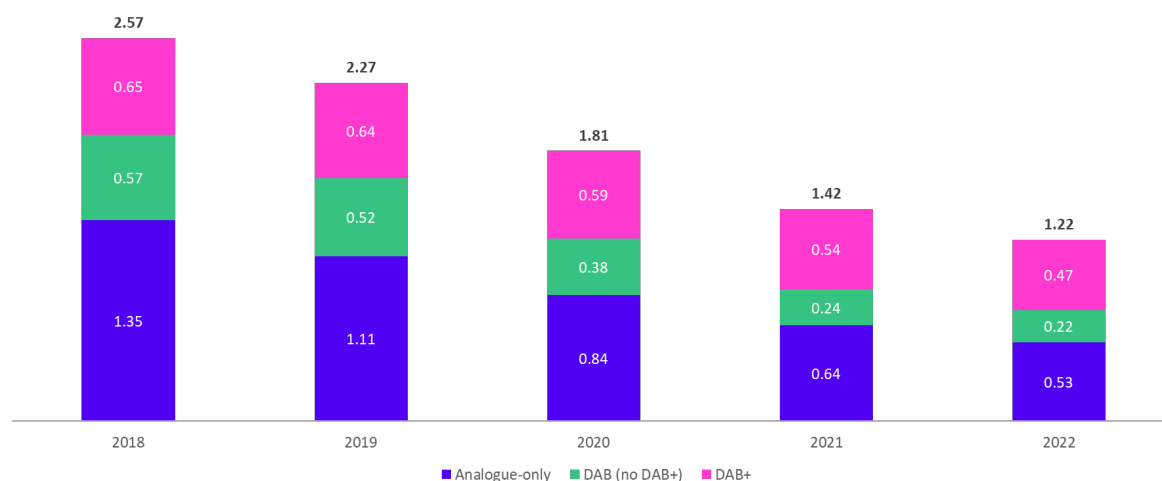
## Devices

### DAB+ radios account for an increasing proportion of DAB radios sold, though the absolute number of devices sold is in decline

The first UK DAB+ stations launched on the Sound Digital national multiplex in 2016. Since then, the number of services using this more efficient standard has increased and includes services on the Digital One and some local multiplexes. All services on small-scale multiplexes are broadcast using the DAB+ standard. DAB+ is backwards compatible with DAB, meaning that all DAB+ capable devices can receive standard DAB broadcasts, but DAB radios without DAB+ functionality are unable to receive services broadcast using DAB+.

By 2022, 68% of DAB radios sold in the UK were compatible with DAB+, up from 53% in 2018. However, overall DAB+ device<sup>5</sup> sales declined in absolute terms during this period and fell by 12% between 2021 and 2022 alone.<sup>6</sup> Due to the number of analogue-only radios continuing to be sold, sales of DAB+ compatible sets accounted for only 39% total radio sales in 2022.

Figure 3: Radio device sales (million units)



Source: GfK Panelmarket. Includes Audio Home Systems, Radio Devices, Receivers and Tuners.

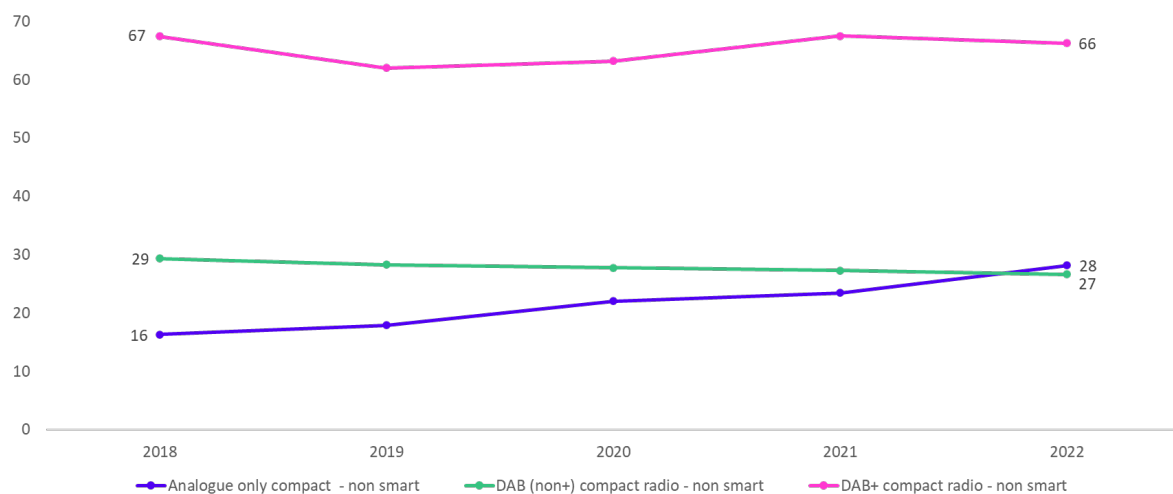
<sup>5</sup> The majority (57%) of these DAB+ devices were compact radios presumably bought with radio listening as their primary function, while the remainder were clock radios, connected and traditional AHS receivers, tuners and other devices.

<sup>6</sup> Source: GfK Panelmarket. Includes Audio Home Systems, Radio Devices, Receivers and Tuners.

## DAB+ devices have a higher average sales price than non-DAB+ devices

The average selling price of DAB+ radios continues to be higher than that of non-DAB+ ones. This is likely due to a combination of factors, including higher overall product specifications for DAB+ compared to analogue or standard DAB devices and the [audio encoder license fee](#) for DAB+ products.<sup>7</sup>

Figure 4: Average sales price (£GBP) of a compact radio



Source: GfK Panelmarket

## DAB listening

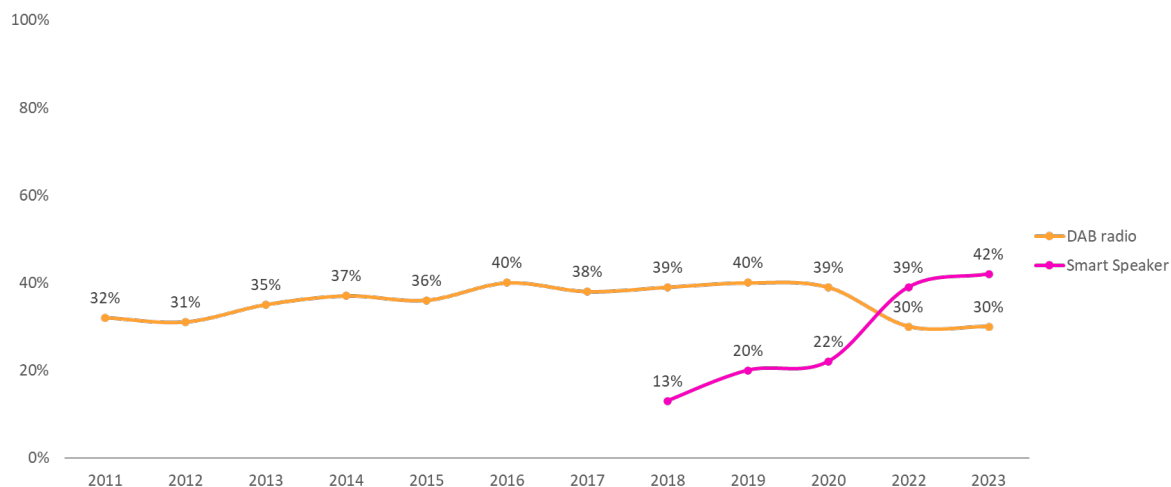
### People have more ways of listening to radio than ever before

The decline of radio set sales is not surprising given that people have more devices and ways to listen to the radio than ever before, notably smart speakers. Ofcom's Technology Tracker shows that household penetration of DAB radio sets has remained fairly flat over the past decade, declining from 35% in 2013 to just under a third (30%) of households in 2023, while the percentage of households with a smart speaker has more than tripled from 13% to 42% in the last five years alone. These figures, while lower than the RAJAR equivalent, align with results from our DAB+ research, with 27% of respondents reporting they have DAB radio and 47% saying they have a smart speaker in their home.<sup>8</sup>

<sup>7</sup> "A licence fee is applicable for the AAC audio decoder used in DAB+, payable to Via Licensing: <https://www.via-corp.com/licensing/aac/>. The DAB+ royalty that is specifically for HE-AACv2 (paid to VIA Licensing) needs to be paid once per product (i.e. per product unit sold)." Source: [World DAB](#), accessed 12 September 2023.

<sup>8</sup> Ofcom DAB+ research. QB1) Which, if any, of the following devices that allow you to listen to radio do you have in your home? Base: all respondents (4,055)

**Figure 5: Household ownership of smart speakers and in-home DAB radio sets**

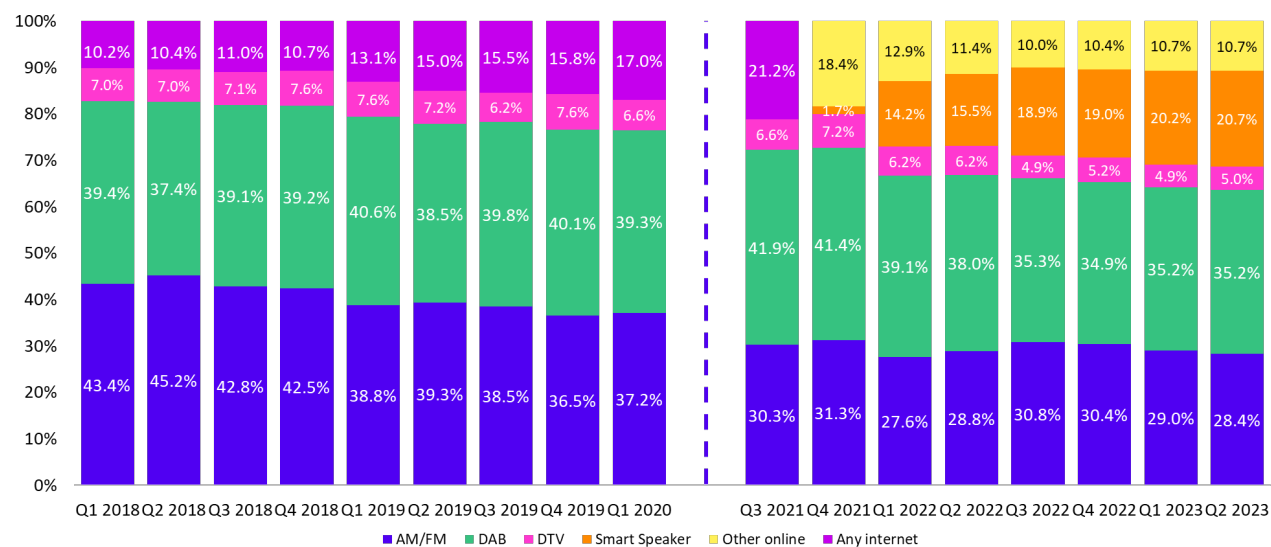


Source: Ofcom Technology Tracker. QD1. Which of the following do you, or does anyone in your household, have in your home at the moment? QR2. How many of these radios are DAB radio sets?

## Online listening in homes is growing, while DAB remains strong in cars

Increased ownership of smart speakers and other online devices (smart phones, laptops etc.) has resulted in a shift towards online radio listening in the home. DAB’s share of in-home radio listening increased steadily in the last decade, but eventually slowed and started declining from Q4 2021. While DAB still retains a greater share of in-home listening than AM/FM (35.2% v 28.4%), smart speakers’ share increased by 46% (6.5 percentage points) in the same period to account for a fifth (20.7%) of in-home radio listening.

**Figure 5: Share of radio listening at home by platform: 2018-2023**

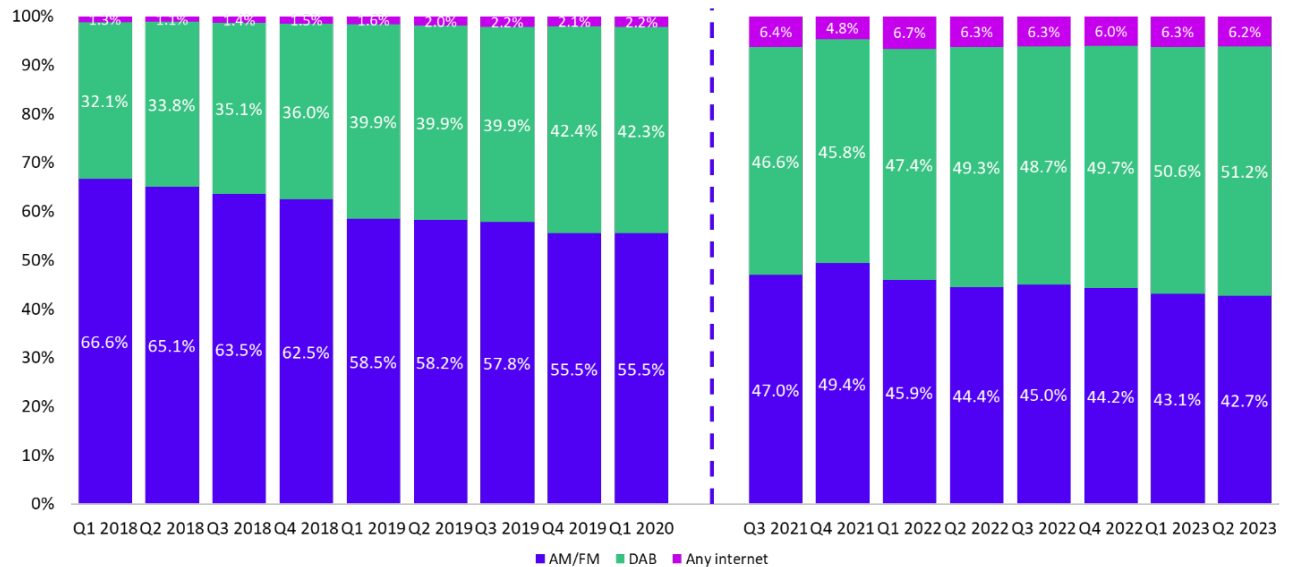


Source: RAJAR. Note: dotted line indicates a suspension of fieldwork due to Covid-19 and a subsequent [change in methodology](#). Comparison with previous quarters should be made with caution. ‘Other online’ includes listening via laptops, smartphones and internet-enabled devices other than smart speakers.



While we are seeing a shift towards online listening in the home, the picture in cars is more balanced between analogue and digital. As noted by The Review, DAB holds a much stronger position in cars and vehicles, now accounting for just over half of listening.

**Figure 6: Share of radio listening in cars by platform: 2018-2023**



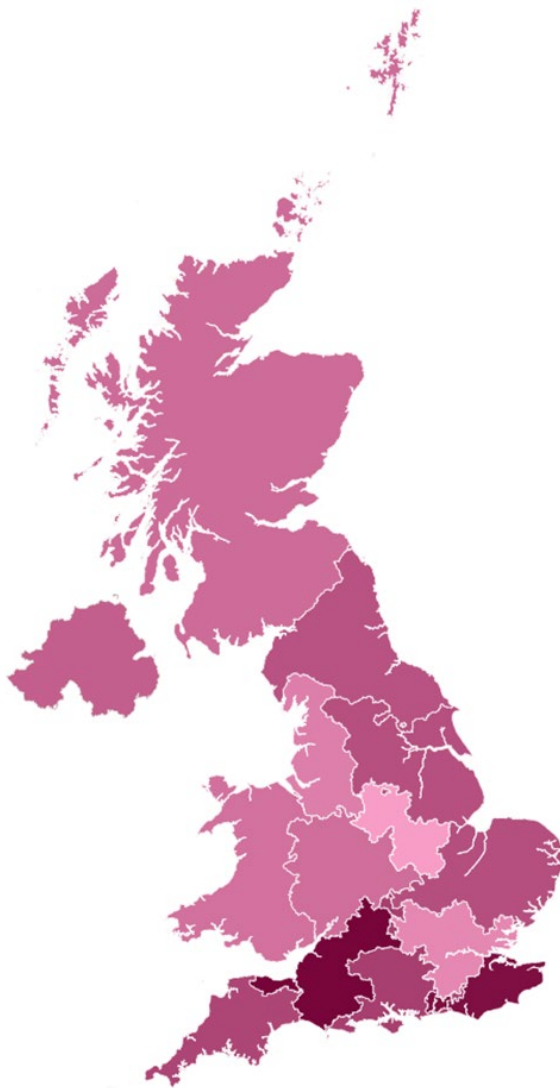
Source: RAJAR. Note: dotted line indicates suspension of fieldwork due to Covid-19 and subsequent change in methodology. Comparison with previous quarters should be made with caution. Figures relate to radio listening in cars, vans and lorries.

## Over half of adults listen to DAB radio each week

Despite the increase in online listening and choice of audio content, including music streaming, podcasts and audiobooks, DAB radio continues to be a mainstream medium with widespread reach. The majority (59%) of adults in each of the nations and regions of the UK tune in to a DAB radio station each week, ranging from just over half of those in the East Midlands (52%) to around seven in ten (69%) in the West of England, and accounting for 40% of all listening hours.<sup>9</sup>

<sup>9</sup> RAJAR Q2 2023

Figure 7: Weekly reach of DAB radio



Region / nation	DAB reach (% adults)
West	69%
South-East	68%
South	63%
South-West	62%
East	61%
Yorkshire and Lincolnshire	61%
North-East Cumbria	60%
Northern Ireland	59%
<b>UK average</b>	<b>59%</b>
Scotland	58%
West Midlands	57%
Wales	57%
North-West	55%
London	54%
East Midlands	52%

Source: RAJAR Q2 2023

Note: darker colour signifies higher than average UK reach

# Research findings

## In-home DAB+

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Due to the lack of certainty among DAB set owners if their devices are DAB+-enabled, we used a combination of prompts to help us estimate the penetration and usage of in-home DAB+ radio:

- the audio devices they owned;
- their radio listening habits;
- the number and location of radio sets in the household;
- their awareness of DAB+; and
- whether they could tune into any DAB+ stations.

The first three questions were designed to ensure people were thinking specifically about DAB radios, as opposed to other devices like smart speakers, and the radio sets they use (i.e. excluding disused ones in attics and lofts). As such, we believe our figures are as representative as possible of in-home DAB+ sets that are in **active use**.

## Most people have multiple devices they can use to listen to the radio

In total, over nine in ten respondents (95%) said they had at least one device that would allow them to listen to the radio. Interestingly, despite nine in ten adults owning a smartphone (92%)<sup>10</sup>, only six in ten (61%) considered this a device for radio listening. Four in ten people had an AM/FM radio (44%) or smart speaker (41%), both of which were higher than the number of people with a DAB radio. The smart speaker figure tallies with other Ofcom research which reported that 39% of households had a smart speaker in 2022.<sup>11</sup>

Twenty-seven per cent of respondents said they had a DAB set in home, which again aligns with the 30% figure reported in Ofcom's Technology Tracker for 2022<sup>12</sup>. Both these figures are much lower than the DAB ownership figure from RAJAR of 65%<sup>13</sup>, which also includes DAB radios in cars, vans and lorries. Reach for **at home** DAB listening in Q4 2022, when this research was conducted, was 31% of adults<sup>14</sup>, which we consider a reasonable proxy for ownership based on how often people told us they use their set (see section below).

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<sup>10</sup> Source: [Ofcom Technology Tracker](#)

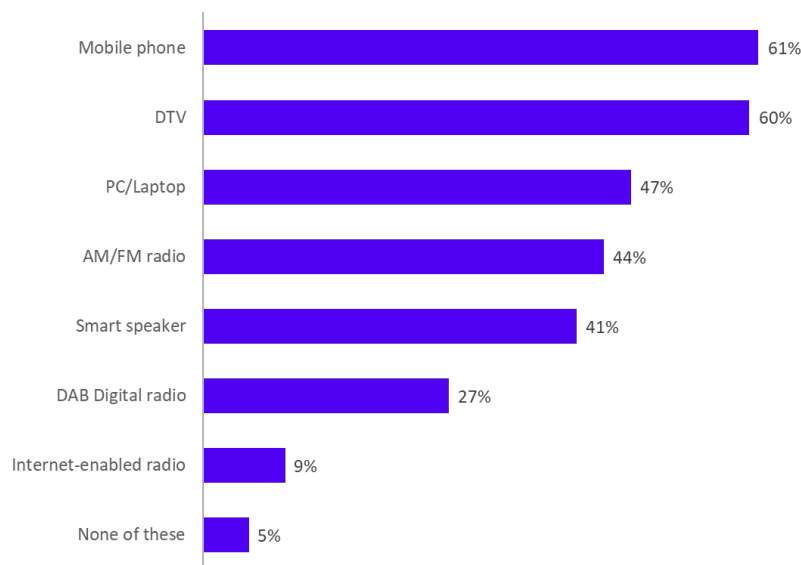
<sup>11</sup> Source: [Ofcom Technology Tracker](#)

<sup>12</sup> Source: [Ofcom Technology Tracker](#)

<sup>13</sup> RAJAR Q4 2022

<sup>14</sup> RAJAR Q4 2022

**Figure 8: Claimed ownership of devices that can be used to listen to the radio**



Source: Ofcom DAB+ research. QB1) Which, if any, of the following devices that allow you to listen to radio do you have in your home? Base: all respondents (4,055)

### The vast majority of people who own a DAB radio use it regularly

Of the 27% who had a DAB radio at home, just under three quarters (74%) had used it in the last week, increasing to 84% in the last month. Of those who had listened in the last month, the most popular stations were BBC Radio 2 and Heart, followed by Capital, BBC Radio 1 and BBC Radio 4.

**Figure 9: Top DAB radio stations listened to at home among radio listeners**

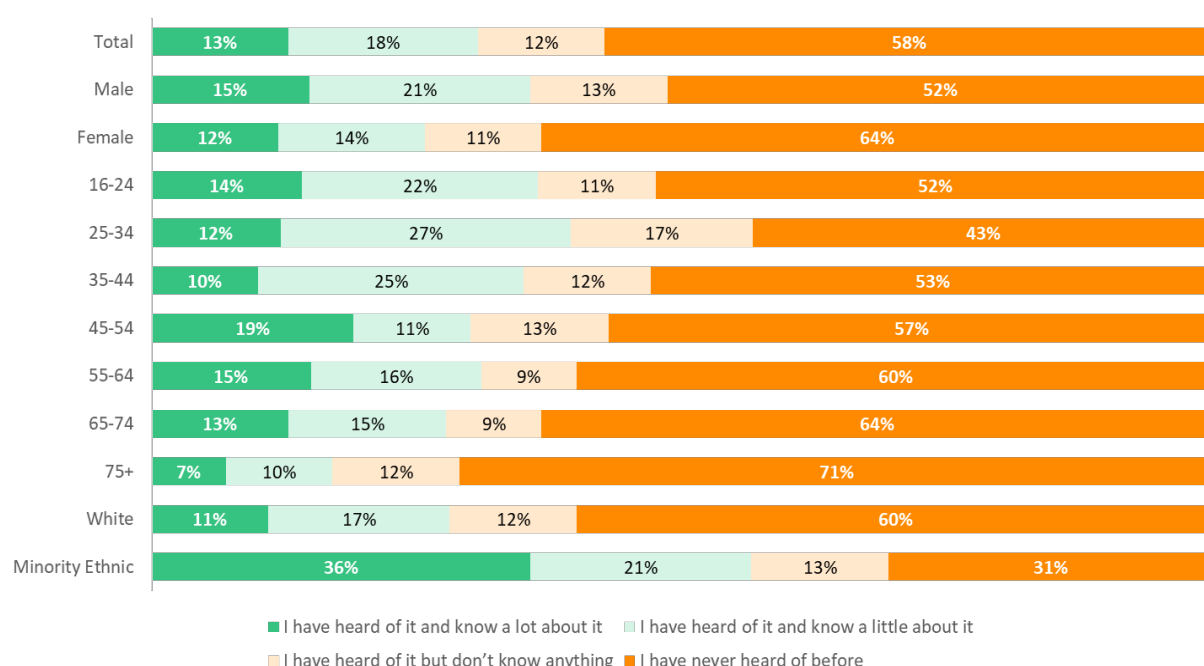
At home DAB listening		
BBC Radio 2	25%	
Heart	25%	
Capital	19%	
BBC Radio 1	19%	
BBC Radio 4	19%	
Classic FM	15%	
BBC Local radio	13%	
Smooth Radio	13%	
Heart 80s	12%	DAB+ only
Heart 90s	12%	DAB+ only
KISS	11%	

Source: Ofcom DAB+ research 2022 QB3: Which radio stations have you listened to in last month? Base: 926, BBC Radio 2 (234), Heart (231), Capital (176), BBC Radio 1 (175), BBC Radio 4 (173), Classic FM (137), BBC Local radio (116), Smooth Radio (116), Heart 80s (106), Heart 90s (106), KISS (98). Note: stations shown are those listened to by over 10% of respondents. 'DAB+ only' indicates station only available on DAB+.

## Awareness of DAB+ was higher among DAB listeners, but the majority had never heard of it

People who listened to DAB radio were significantly more likely to know about DAB+ than the rest of the population (31% versus 18%). However, overall 58% of DAB listeners said they had never heard of DAB+. Among DAB listeners there were some variations by age and gender: men were more likely to say that they had heard of DAB+ and knew a little about it compared to women (36% v 26%), while people aged 25-34 were more likely to have heard of it than those over 65. People from minority ethnic groups were also much more likely to be aware of DAB+ than people identifying as white.

**Figure 10: Claimed awareness of DAB+ amongst DAB listeners**



Source: Ofcom DAB+ research 2022 QB9: There is a newer form of DAB radio called DAB+. DAB+ radio sets are able to receive many more radio stations than DAB radio sets – up to 60 additional stations depending on where you live. Before today, how much did you know about DAB+? Base: DAB listeners Total (926), Men (478), Women (446), 16-24 (63), 25-34 (125), 35-44 (129), 45-54 (166), 55-64 (184), 65-74 (150), 75+ (108), White (832), minority ethnic (87)

## A quarter of regular DAB listeners listened to a DAB+ radio station at home in the last month

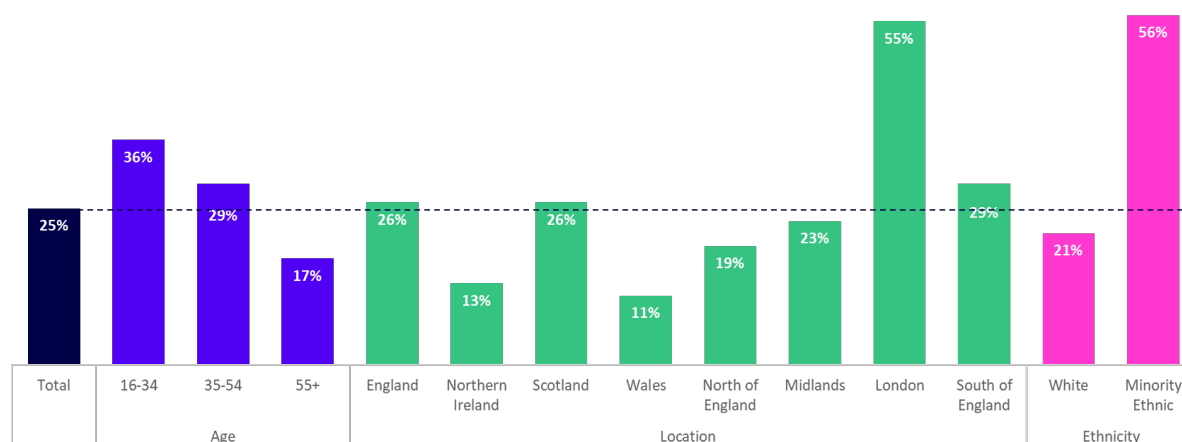
When asked what radio stations they had listened to in the last month, 25% of in-home DAB listeners had listened to a station that broadcasts on DAB+. <sup>15</sup> Younger DAB listeners were more likely to have listened to a DAB+ station than older listeners (36% for 16-34s and 29% for 35-44s, compared to 17% of those aged 55 and over). There were no statistically significant differences by

<sup>15</sup> It is worth noting that some stations only broadcast on DAB+ in specific regions. This means that the figures here may be slightly understated, as stations were categorised as DAB+ if they broadcast at national level but not if they offered DAB+ in specific regions.

socio-economic group, but DAB listeners from minority ethnic backgrounds were more than twice as likely to have listened to a DAB+ station in the last month than those who identified as white (56% v 21%).

Looking at how this varies by location, London had the highest percentage of DAB+ listeners across the regions in England, with over half (55%) of DAB listeners in London listening to at least one DAB+ station in the last month. At a national level, DAB listeners in England and Scotland were more likely to listen to DAB+ than those in Northern Ireland and Wales (both 26% compared to 13% in Northern Ireland and 11% in Wales).

**Figure 11: Percentage of respondents who listened to at least one DAB+ station at home in the last month**



Source: Ofcom DAB+ research 2022 QB3: Which radio stations have you listened to in the last month on a DAB digital radio set at home? Base: all that listened to DAB radio at home in the last month Total (926), 16-34 (188), 35-54 (296), 55+ (442), England (780), Northern Ireland (26), Scotland (79), Wales (41), North of England (119), Midlands (259), London (128), South of England (402), White (833), Minority Ethnic (86)

## Two-thirds of in-home DAB owners could access DAB+ stations on their current DAB radio

The most popular place people had their DAB set was the kitchen, with just over half of sets located here (51%). The next most common rooms were the lounge (28%) and main bedroom (24%). Across all sets and rooms, 27% of all DAB listeners said they had at least one set in the household that could receive DAB+. Of those, 36% said that they had bought a set specifically because it was DAB+ capable. However, 48% of DAB listeners had no idea whether at least one set was DAB+ enabled or not. This is where the tuning in verification was essential to assess DAB+ compatibility.

All DAB owners were asked to confirm whether they could tune into one of two stations which are only available in DAB+ (Heart 90s and Capital Dance) on their three newest DAB sets. Of the 1101 DAB owners, 668 were willing to take part in this part of the research and of this 668, 440 could tune their radio to a DAB+ channels.

Using this data, and assuming that those who were not willing to take part had the same distribution, we estimate that 66% of in-home DAB owners could access DAB+. This equates to 15% of the overall population.

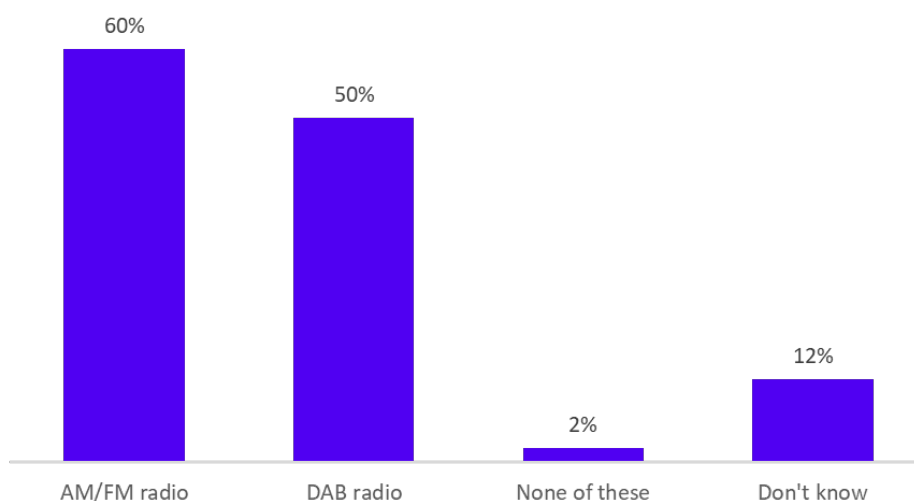
## In-car DAB+

In-home listening is only part of the picture. To help assess how many in-car DAB radios were capable of receiving DAB+, Ofcom obtained third-party data on the percentage of new cars with DAB+ radios installed by year of manufacture. We also asked survey respondents who had cars and vans the year of registration for their vehicle and combined the datasets to estimate the likelihood that a given car would have a DAB+ radio.

### Most households had at least one vehicle, of which half had an in-car DAB radio

Of our sample of 4055 people, 71% had at least one vehicle and half of these had a DAB set.

Figure 12: Split of in-car radio devices



Source: Ofcom DAB+ research 2022 QD4) Which of the following devices that allow you to listen to radio do you have in-built in your [MAKE / MODEL / YEAR OF CAR]? Base: all respondents with a car (2,863) Note: in-car radio devices may be both AM/FM and DAB capable, resulting in percentages summing to more than 100%.

### In-car DAB listening was similar to in-home, with the vast majority of people using their set regularly

The pattern of DAB radio usage in cars was similar to in-home listening, with most people using their car radio set regularly (84% within the last week and 94% in the last month). People also listened to similar stations, although commercial music stations appeared more popular in cars than speech radio stations.

**Figure 13: Top DAB radio stations listened to in cars among radio listeners**

In-car DAB listening	
Heart	26%
BBC Radio 2	21%
Capital	18%
BBC Radio 1	18%
Smooth Radio	14%
BBC Radio 4	10%
KISS	10%

Source: Ofcom DAB+ research 2022 QB3: Which radio stations have you listened to in last month? Base: 1281, Heart (337), BBC Radio 2 (265), Capital (226), BBC Radio 1 (231), Smooth Radio (176), BBC Radio 4 (133), KISS (126), Classic FM (119), Heart 90s (117), BBC Local radio (107), Heart 80s (102)

Note: stations shown are those listened to by over 10% of respondents.

## One in five in-car DAB listeners listened to a DAB+ radio station in the last month

When asked what radio stations they had listened to in the car the last month, 20% of DAB listeners had listened to a station that broadcasts on DAB+. <sup>16</sup> DAB listeners under the age of 55 were more than twice as likely to have listened to a DAB+ station in the car than those aged 55 and over (23% for 16-34s and 27% for 35-44s compared to 11% for the over 55s). ABC1 households were also more like than C2DE households to listen to DAB+ stations while in the car (23% compared to 16%). <sup>17</sup>

Taking a closer look at differences by nation, people in England were more likely to have listened to a DAB+ radio station in the car than those in Northern Ireland and Wales (21% compared to 13% and 14% respectively). There were no statistically significant differences in in-car DAB+ listening in Scotland (19%) compared to the other UK nations. However, there was variation by region within England: just under half of people in London (47%) listened to a DAB+ station in the car in the last month, which was more than double the equivalent proportion in the North of England (18%) and the Midlands (20%).

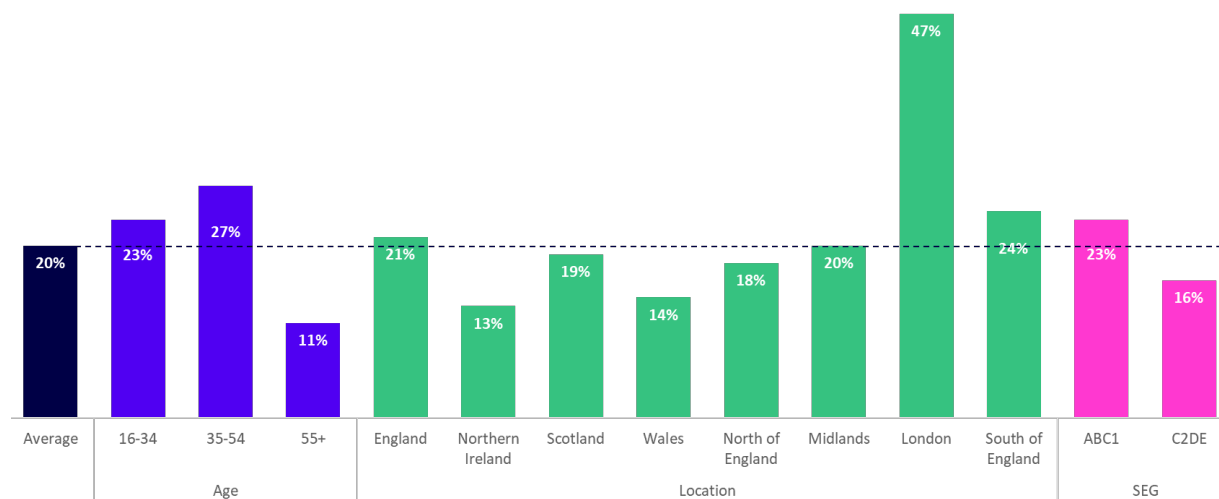
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<sup>16</sup> Some stations broadcast on DAB+ but only in specific regions. Stations were categorised as DAB+ if they broadcast only on DAB+, meaning that these figures may be slightly understated. In-car DAB+ listening will also be affected by cars passing through different multiplex areas.

<sup>17</sup> A, B, C1, C2, D and E grades are a way of classifying households based on occupational code and employment status. ABC1 groups typically, but not exclusively, have higher incomes compared to the other groups.



**Figure 14: Percentage of respondents who listened to at least one DAB+ station in the car in the last month**

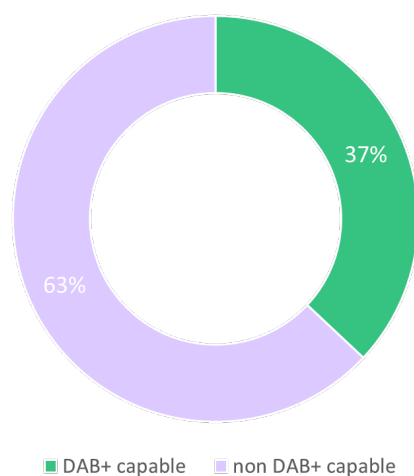


Source: Ofcom DAB+ research 2022 QD6: Which radio stations or channels have you listened to in the last month, on the DAB radio in any of the cars your household owns or leases? Base: All that have a DAB digital radio built into the car and have listened in the last month Total (1281), 16-34 (368), 35-54 (470), 55+ (443), England (1070), Northern Ireland (43), Scotland (104), Wales (64), North of England (294), Midlands (363), London (105), South of England (413), ABC1 (789), C2DE (492).

## Over a third of households with a car had an in-car DAB+ radio

Combining our survey data with data from CAP and The Society of Motor Manufacturers and Traders on the percentage of new cars with DAB+ radios installed by year of manufacture, we estimate that 37% of households with a car had an in-car DAB+ set.

**Figure 15: Percentage of households with an in-car DAB+ radio**



Source: Ofcom DAB+ research 2022 / CAP / SMMT data

## Conclusion

Our research found that the vast majority (84%) of people who have a DAB radio at home use it at least once a month, and a quarter of these had used it to listen to a DAB+ radio station. While awareness of DAB+ was higher among people who listened to DAB radio, the majority had never heard of it. Based on the data from in-person testing (i.e. asking respondents to try tuning into a DAB+ only station), and accounting for the small number of sets which indicated somewhere that they were DAB+ capable, we estimate that 66% of in-home DAB owners could access DAB+ on their current radio set.

Most households in our research had at least one vehicle, of which half had an in-car DAB radio. Nearly all in-car DAB sets were used at least monthly (94%), with one in five in-car DAB listeners listening to a DAB+ station in the last month. Combining our survey data with data from CAP and SMMT on the percentage of new cars with DAB+ radios installed by year of manufacture, we estimate that 37% of households with a car had an in-car DAB+ set.

Overall we estimate that 36% of UK households have a DAB+ radio, either at home or in the car. The table below shows a more granular breakdown of DAB+ penetration across each of the four nations and the UK as a whole. More information on the survey and how we derived these estimates is available in the Technical Appendix.

**Figure 16: Household penetration of DAB+ in each nation**

DAB+ penetration		In-home <u>and</u> in-car	In-home only	In-car only	None	Any DAB+
UK	% of households	5%	10%	21%	64%	36%
	No. of households	1.5m	2.7m	5.9m	18m	10.1m
	No. of devices		4.8m	10.1m		14.8m
England	% of households	5%	10%	21%	64%	36%
	No. of households	1.2m	2.4m	4.9m	15m	8.4m
	No. of devices		4.4m	8.4m		12.7m
Scotland	% of households	8%	8%	20%	64%	36%
	No. of households	192k	213k	516k	1.6m	920k
	No. of devices		417k	815k		1.3m
Wales	% of households	5%	7%	24%	65%	35%
	No. of households	67k	90k	318k	873k	475k
	No. of devices		190k	489k		679k
Northern Ireland	% of households	6%	6%	25%	63%	37%
	No. of households	44k	49k	190k	485k	284k
	No. of devices		106k	327k		433k

Source: Ofcom DAB+ research 2022.

# Policy conclusions

Informed by our research, in this section we offer some initial reflections on what measures might be the most effective to take, at the present time, to further support a transition from DAB to DAB+.

Our research indicates that the primary obstacle to a faster transition to DAB+ appears to be a lack of awareness of DAB+ amongst listeners, which translates into low levels of usage. Over half of DAB listeners (58%) have never heard of DAB+ and, even among those who own a DAB+ compatible device, usage is low (25% of DAB listeners have listened to station that broadcasts on DAB+). Based on these figures, regulatory steps to accelerate the transition in radio distribution technology to DAB+ would appear disproportionate at this stage and could risk leading to sub-optimal and potentially negative outcomes for some audiences.

When considering the transition to DAB+, looking to relevant international examples could potentially be helpful. However, the UK's early and widespread adoption of DAB makes comparisons difficult. Most other countries where national regulatory authorities have played a role in facilitating a transition to DAB+ have generally done so directly from predominantly FM broadcasting.<sup>18</sup>

Without regulatory intervention, some broadcasters are already migrating their services from DAB to DAB+. For example, Classic FM, owned by Global, will be upgrading from DAB to DAB+ across the UK from January 2024 and Absolute Radio Country and Absolute Classic Rock, owned by Bauer, will be launched on DAB+ this Autumn.<sup>19</sup> We consider that a focus on industry-led initiatives such as these would likely deliver most benefit in the near term, with businesses taking decisions on how to develop their services in the interests of their listeners and potential listeners.

The potential for collaborative schemes such as an enhanced version of Digital Radio UK's Radio Tick Mark scheme to increase awareness and take-up was noted in the Digital Radio and Audio Review. The Review also highlighted that such a scheme would require greater industry led coordination between broadcasters and device manufacturers than had been seen with its initial iteration. A future scheme could benefit from Ofcom's research to tailor its message and to better reach certain demographics and audiences, given the lack of reliable figures on DAB+ penetration, awareness, and usage up to this point.

The Digital Radio and Audio Review noted that migrating all DAB services to DAB+ would free up significant additional space on multiplexes that are currently operating at capacity thus potentially allowing for a wider variety of radio stations to be made available and greater levels of competition.<sup>20</sup> However, the Review also noted some potential downsides of a migration. One of these – the fact that not all digital radio receivers are DAB+ capable – is the subject of our research. Other implications noted in the Review were the impacts on multiplex operators, both in terms of the cost of upgrading their DAB+ capable multiplexes so that services can be carried in DAB+ but also the potential impact on their businesses in terms of how digital capacity is priced and allocated.

In terms of ongoing engagement with industry we note the issues with capacity unit pricing raised in the Review<sup>21</sup> and are open to hearing views on this matter from relevant stakeholders. Additionally, we welcome further engagement from stakeholders who have evidence to share that may prompt further consideration of the other policy issues covered in this document. Government has also

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<sup>18</sup> Examples we have considered include France, Norway and the Netherlands.

<sup>19</sup> [Classic FM announcement](#) and [Absolute Radio announcement](#)

<sup>20</sup> Paragraphs 6.47-6.50

<sup>21</sup> Paragraph 6.55

signposted its next review of the digital radio and audio industry is likely to take place in 2026, by which time evolving industry trends and listener habits and preferences may prompt additional consideration of the future of DAB+.

# Technical Appendix

## Preface

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To address the informational deficit regarding DAB+ penetration and usage in the UK, Ofcom commissioned this bespoke research quantitative research.

In total, the face-to-face survey achieved 4,055 interviews, with Scotland, Wales and Northern Ireland over-represented during fieldwork. This data has been weighted to correct for this over-representation, with weights being applied by age, gender and socio-economic group (SEG) within nation, to provide a representative view of all UK adults.

The interviews were conducted from Monday 26th September to Monday 28th November 2022.

Details of the face-to-face sample design and weighting procedures are outlined in the following pages, as well as a note on statistical reliability.

## Sample Design

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### Face-to-face interviewing

Jigsaw Research adopted a random location interviewing (RLI) approach to ensure that the sample was representative of UK adults. Sample frames were developed separately for each of the four nations (England, Scotland, Wales, Northern Ireland) covering the following key subgroups - age (16-24/25-39/40-54/55-74/75+), gender and socio-economic group (AB/C1/C2/DE).

The random location interviews (RLI) were conducted using a stratified sample, to ensure an adequate representation of all groups of interest. UK Geographics generated the sampling points as follows:

- Based on the Census Output Areas (OAs), the smallest level at which the Census data is collected, containing approximately 125 addresses in England, Wales and Northern Ireland and approximately 50 addresses in Scotland.
- Prior to selection, the OAs were sorted within nation/region by the UK Geographics urbanity indicator.
- The sample was allocated proportionately across the English regions, based on the population aged 16+. Sample for Northern Ireland, Scotland and Wales was structured to ensure at least 500 interviews per nation.

Once the locations were drawn up, each interviewer was asked to secure their allocation of interviews. To avoid under-representing those in full time employment, shifts operated from 2pm-8pm.

The frame of sampling points had 100% coverage of all residential areas and households, including the Isle of Man and the Channel Islands.

The following quotas were set to represent the population of each sampling point, which meant the overall quotas closely matched the population within each nation/region.

- Age (16-24/25-39/40-54/55-74/75+)
- Gender (Man/Woman)
- Socio-economic group (AB/C1/C2/DE)

## Weighting

Weighting has been used to correct for over-representation of respondents in Northern Ireland, Scotland and Wales and align demographics to the known UK profile.

### Demographic weights

The data was first weighted by nation and within each nation by gender, age and socio-economic group (SEG). Rim weights were applied using targets from Nomis, April 2020 (nation, gender and age) and the 2011 Census (SEG).

The initial unweighted sample and the weighted sample profiles are illustrated below:

Weighting Category	Sub-group	Unweighted	Demographic weight
Nation	England	62%	84%
	Scotland	13%	8%
	Wales	13%	5%
	Northern Ireland	12%	3%
Gender	Man	48%	49%
	Woman	52%	51%
Age	16-24	9%	13%
	25-34	20%	18%
	35-44	16%	16%
	45-54	16%	17%
	55-64	15%	15%
	65-74	13%	12%
	75+	11%	10%
SEG	AB	22%	22%
	C1	31%	30%
	C2	21%	22%
	DE	26%	26%

### Effective sample size

This section details the variation between the sample results and the “true” values, or the findings that would have been obtained with a census approach. The confidence with which we can make this prediction is chosen to be 95%: that is, the chances are 95 in 100 that the “true” values will fall within a specified range. However, as the sample is weighted, we need to use the effective sample size (ESS) rather than actual sample size to judge the accuracy of results.

The following table compares ESS and actual samples for some of the main analysis groups:

Weighting Category	Sub-group	Actual interviews achieved	Effective sample size (ESS)
<b>Nation</b>	England	2,528	2,440
	Scotland	507	488
	Wales	520	499
	Northern Ireland	500	477
<b>Gender</b>	Man	1,938	1,539
	Woman	2,113	1,694
<b>Age</b>	16-24	354	281
	25-34	820	684
	35-44	660	546
	45-54	656	543
	55-64	626	511
	65-74	511	419
	75+	428	349
<b>SEG</b>	AB	875	738
	C1	1,251	982
	C2	866	703
	DE	1,063	811

## Confidence interval

The table below illustrates the required ranges for different sample sizes and percentage results at the 95% confidence interval:

Effective sample size	10% or 90% ±	20% or 80% ±	30% or 70% ±	40% or 60% ±	50% ±
<b>3,243</b> (Total)	1.03%	1.38%	1.58%	1.69%	1.72%
<b>1,539</b> (Man)	1.50%	2.00%	2.29%	2.45%	2.50%
<b>982</b> (C1)	1.88%	2.50%	2.87%	3.06%	3.13%
<b>684</b> (25-34)	2.25%	3.00%	3.43%	3.67%	3.75%
<b>477</b> (NI)	2.69%	3.59%	4.11%	4.40%	4.49%

For example, if 30% or 70% of a sample of 3,243 gives a particular answer, the chances are 95 in 100 that the “true” value will fall within the range of +/- 1.58 percentage points from the sample results.

## Significant differences

When results are compared between separate groups within a sample, different results may be obtained. The difference may be “real”, or it may occur by chance (because not everyone has been interviewed). To test if the difference is a real one – i.e. if it is “statistically significant” – we again have to know the size of the samples, the percentages giving a certain answer and the degree of confidence chosen. If we assume 95% confidence interval, the difference between two sample results must be greater than the values given in the table below to be significant:

<b>Sample sizes being compared</b>	<b>10% or 90% ±</b>	<b>20% or 80% ±</b>	<b>30% or 70% ±</b>	<b>40% or 60% ±</b>	<b>50% ±</b>
<b>1,539 vs 1,694</b> Man vs woman	2.18%	2.84%	3.22%	3.41%	3.45%
<b>982 vs 703</b> C1 vs C2	3.07%	3.99%	4.52%	4.78%	4.84%

For example, comparing a score of 11% for Men and 14% for Women, the scores will need to be at least 2.18% different (using the table) to indicate a significant difference.