

## = Digital radio in the United Kingdom =

In the United Kingdom , the roll @-@ out of digital radio is proceeding since engineering test transmissions were started by the BBC in 1990 followed by a public launch in September 1995 . The UK currently has the world 's biggest digital radio network , with 103 transmitters , two national DAB ensembles and 48 local and regional DAB ensembles broadcasting over 250 commercial and 34 BBC radio stations across the UK . In the capital , London there are already more than 64 different digital stations available . In addition to DAB , radio stations are also broadcast on digital television platform as well as internet radio in the UK . Between April 2007 and April 2008 the BBC trialled Digital Radio Mondiale on mediumwave and shortwave frequencies . Digital radio ensemble operators and stations need a broadcasting licence from the UK 's media regulator Ofcom to broadcast .

Digital radio in the United Kingdom is being promoted by radio stations and the broadcasting industry on the premise that it provides superior quality sound and a wider choice of radio stations , is easier to use , and is resistant to the interference which other broadcast media are susceptible to . Notwithstanding one basic flaw which is not mentioned ; the fact that many sets are inferior mono ones , there is the fact that the price paid for the extra number of stations is that the audio quality on DAB is lower than on FM . Also some areas of the country are not presently covered by DAB ; the BBC says that it may not provide coverage to the final 10 % of the population , and may use Digital Radio Mondiale instead . In 2011 , Ofcom published a consultation with the intent to push DAB coverage across the United Kingdom up to the same level as enjoyed by FM broadcasting in the United Kingdom . The United Kingdom Government intends to migrate the vast majority of AM and FM analogue services to digital between 2015 and 2019 , subject to targets being met for coverage , listening figures for digital radio and agreements in relation to funding and other decisions related to switchover being made under a Memorandum of Understanding between the Department for Culture , Media and Sport , broadcasters and ensemble operators .

In the UK , 39 @. @ 9 % of all radio listening hours by the second quarter of 2015 were through digital platforms , with DAB making up for the majority of digital radio listening ( 67 % ) , and twenty six million households claim to have access to a DAB radio set .

## = = Digital Audio Broadcasting = =

Experimental transmissions of the DAB Eureka 147 standard from the Crystal Palace transmitting station by the BBC started in 1990 with permanent transmissions covering London in September 1995 . With the expansion of its single @-@ frequency network in the spring of 1998 , the BBC national ensemble was available to 65 % of the UK population by 2001 and to 85 % by 2004 .

The Broadcasting Act of 1996 allowed the introduction of national , regional and local commercial ensembles in the United Kingdom .

The first national ensemble licence for DAB from the Radio Authority was advertised in 1998 and one applicant applied for the licence . The licence was awarded to the GWR Group and NTL Broadcast , who since the launch were renamed Arqiva . The two companies formed the Digital One ensemble , which began broadcasting on 15 November 1999 . The Digital One ensemble has grown and is currently available to over 90 % of the UK population although an Ofcom report into Digital Radio in 2013 puts robust household coverage at 89 @. @ 5 % of the UK .

## = = = Growth and benefits of DAB in the UK = = =

In the United Kingdom , the uptake of DAB has increased since the launch of the BBC national DAB ensemble in 1995 . Lower prices , new radio stations and marketing have increased the uptake of DAB radio in the UK . Digital radios were first sold as car radios in 1997 , priced around £ 800 , with hi @-@ fi tuners costing up to £ 2 @, @ 000 being released two years later . In 2001 , Digital One invested in Frontier Silicon to produce a new processing chip which would allow cheaper portable radios to be produced . Roberts Radio , Goodmans and in 2002 , Pure Digital 's award winning

Evolve series of radios broke the £ 100 price barrier , and DAB take up has increased since . As the result of the increase of uptake of DAB , electrical retailer Dixons announced in 2006 that it would discontinue selling analogue radios , though Dixons still continues to stock and sell analogue radios , and has given no indication of a timetable , as of August 2011 .

The BBC and other DAB broadcasters have been encouraging DAB take up by promoting a number of features which are either new or improve upon former technology in their sales literature . The benefit of DAB is that due to the use of multiplexing technology and encoding technology , broadcasters including the BBC and EMAP have been able to launch exclusive digital radio stations alongside their existing analogue radio stations . Broadcasters also state that DAB offers better reception , without the problems of interference that are more noticeable through analogue radio . DAB radios also come with features such as station lists , so listeners do not need to retune their receivers , as well as scrolling text , providing information such as breaking news , travel information or the latest track information .

DAB has also been marketed as having two major advantages over analogue radio broadcasting in that using MPEG @-@ 1 Audio Layer II lossy audio compression technology , parts of the audio spectrum that cannot be heard by humans are discarded , meaning less data needs to be sent over the air . This , as well as multiplexing technology , allows a number of channels to be broadcast together on one frequency as opposed to one channel for analogue radio broadcasts .

National , local and regional DAB ensembles use the same frequency for the area they cover . Using a single @-@ frequency network , an ensemble broadcasting a number of stations can cover the same area as a number of FM frequencies which would be required to cover the same area for one station . The BBC carried out successful tests of a single @-@ frequency network in London before launching its national DAB ensemble .

= = = Criticisms of DAB in the UK = = =

DAB technically provides low audio quality in the UK due to 98 % of stereo stations using a bit rate level of 128 kbit / s. with the MP2 audio codec , which provides poorer sound quality than FM @-@ quality ( assuming good reception on both DAB and FM ) . A bit rate of 256 kbit / s has been judged to provide a high quality stereo broadcast signal . Also , a large and growing number of music stations are only transmitting in mono . Indeed , the bit rates used by the radio stations on other digital platforms , such as cable , terrestrial and satellite are usually higher than on DAB , so the audio quality is also higher . For example , all of the BBC stations use higher bit rates on the digital TV platforms than on DAB apart from the BBC World Service on Freeview . On the other hand , an Ofcom survey , which was undertaken due to many consultation responses citing poor DAB quality , found that 94 % of DAB listeners thought DAB was at least as good as FM .

Ofcom estimates that even after extra spectrum has been allocated to DAB , around 90 local radio stations will be unable to transmit on DAB , either because there is no space for them on a local DAB multiplex , or because they cannot afford the high transmission costs of DAB that the multiplex operators are charging . Ofcom announced in 2005 that it regarded Digital Radio Mondiale ( DRM ) as an option for local stations unable to secure carriage or unable to pay the high transmission costs of DAB . One of the drawbacks of DAB has not been addressed . In simple terms the frequency of a broadcast is the carrier frequency ( i.e. a sine wave ) In order to carry any information the carrier frequency must be modulated . The signal at the receiver ( radio ) is then demodulated and the information is retrieved . The demodulators for FM signals are almost instantaneous so that one can have radios in different areas and move between those areas to hear the broadcast continuously . In contrast the demodulators for digital signals take a finite time and each digital radio takes a different time to demodulate the broadcast signal , so that if you move between different radios that are spatially apart you are likely to hear the same part of the broadcast twice or miss parts of it depending on the time to demodulate the signal of the individual radios . The other drawback with DAB is that it is all or nothing . If there is any interference or loss due to moving out of the footprint of the broadcast signal you will receive no signal , whereas in the case of FM you can hear something even if it is crackly .

On 30 January 2008 , a report in the Daily Mail claimed that there were not enough DAB radios being sold to support the service for the future and that people were favouring their traditional analogue radios over DAB . It also reported that unless sales started to rise , DAB in the UK could follow the same fate as Betamax Video Cassettes did in the 1980s . In January 2009 , the Digital Radio Development Bureau announced that fewer DAB radio sets were sold in Christmas 2008 than in the previous year , although the group states that customer confidence in DAB remains high .

On 24 January 2009 , Ofcom allowed electrical retailers to be granted a licence to rebroadcast DAB signals within their stores to demonstrate DAB radio sets within their stores . The United Kingdom consumer charity , Which ? warned that consumers who could not get an adequate DAB signal could be misled by the in @-@ store sets . The Digital Radio Development Bureau replied to the Which ? report stating that stores contain a steel structure which produce a faraday cage effect where DAB signals are blocked out . The DRDB recommended that consumers should check DAB coverage online with their postcode before purchasing a DAB radio to avoid disappointment .

On 24 November 2010 , a number of commercial radio operators refused to run an advertisement promoting DAB , one operator stating that it would be " fundamentally immoral and dishonest " until DAB coverage matches that of FM . Commercial radio executives have argued that the BBC should pick up the majority of the cost of expanding the DAB network across the United Kingdom .

= = = = Company pullouts of DAB = = = =

= = = = = GCap = = = = =

On 11 February 2008 GCap Media chief executive Fru Hazlitt presented a new strategy for GCap to fend off a takeover bid from Global Radio . The strategy for DAB included the closure of national DAB stations Planet Rock and theJazz on 31 March 2008 as well as the disposal of Digital One to Arqiva for £ 1 . Hazlitt also said that the DAB platform in the UK was not economically viable and that growth in digital radio would come from FM and Internet Radio , announcing a deal with Apple to stream GCap stations on the iPod touch and iPhone on the same day .

The takeover of GCap by Global Radio has led to them keeping Digital One and looking to take a stake in Channel 4 's second national commercial multiplex .

The Digital Radio Development Bureau and the 4 Digital Group defended DAB by stating that DAB was showing signs of growth and would become more attractive to consumers and broadcasters . The BBC and 4 Digital Group issued a joint statement on 12 February 2008 stating their commitment to DAB .

= = = = = 4 Digital Group = = = = =

On 10 October 2008 , Channel 4 announced that it would pull out of the 4 Digital Group consortium , that it would not launch services on the second national multiplex , and that it would axe its three digital radio services , E4 Radio , Channel 4 Radio and Pure 4 . Channel 4 chief executive Andy Duncan admitted that ending Channel 4 's foray into digital radio could cost the corporation £ 9 million .

= = = DAB frequency plan = = =

DAB radio stations in the United Kingdom are broadcast on a number of frequency blocks on VHF Band III . The original plan devised in Wiesbaden for the framework of DAB in Europe was to allocate frequency blocks 11B to 12D for UK DAB broadcasting . However , as part of its Review of Radio , Ofcom has expanded the frequency allocations for DAB and has advertised local and a national ensemble licence on blocks outside the original Wiesbaden plan on 10B to 10D and 11A . Block 5A has also been reserved for the launch of local ensembles . In 2015 , additional blocks were opened up for small scale DAB trials for nine months .

Under a Maastricht plan in 2002 , the UK also has L band allocations for local terrestrial DAB , though there are no plans to broadcast any digital radio stations on L band . Ofcom auctioned spectrum in L band in 2008 for a number of uses , including terrestrial digital radio . On 16 May 2008 , Ofcom declared that Qualcomm UK Spectrum Ltd had won the auction of L band frequencies in the UK .

===== BBC National DAB =====

The BBC 's national DAB ensemble broadcasts on frequency block 12B ( 225 @. @ 648 MHz ) across the United Kingdom , with coverage currently at 94 @. @ 4 % . The multiplex is owned and operated by the BBC and is transmitted from a number of transmitter sites across the country . The BBC 's national multiplex carries only BBC national radio stations . Local BBC radio stations are carried on the relevant local DAB ensemble where commercial DAB licences are operating .

===== Commercial DAB multiplexes =====

There are a number of commercial DAB multiplexes operators in the UK who run 48 local and regional DAB multiplexes across the United Kingdom. operators include the two national operators , Digital One and Sound Digital as well as local multiplex operators including NOW Digital , Bauer Media Group , UTV , Switch Digital and MuxCo . Local and regional ensembles cover 71 @. @ 7 % of the UK .

== DAB + ==

The United Kingdom Government has ruled out any transition from DAB to DAB + for the foreseeable future , a decision backed by the radio industry and the Department for Culture , Media and Sport . The chief executive of the DRDB , Tony Moretta , mirrored the calls by the radio industry and experts to not adopt DAB + in the UK . In an interview with the TechRadar website in 2009 , he stated that DAB + was a " red herring " and may not be introduced in the UK for the foreseeable future due to the growing number of digital radio sets currently being sold and used in the future which cannot decode HE @- @ AAC and therefore access DAB + stations . Moretta also cited greater expense for broadcasters and overall satisfaction with the current audio quality of DAB stations of which a move to DAB + would only benefit a small number of audiophiles as other reasons . Independent radio analyst Grant Goddard also stated that there was an economic decision not to adopt DAB + for both the industry and consumers .

The 4Digital Group , led by Channel 4 , who were originally awarded the licence to operate the new national DAB multiplex , had planned to launch a podcast service using the DAB + format .

Despite opposition aired to the Government regarding the introduction of DAB + in the United Kingdom by the industry and experts , Ofcom began testing DAB + on the Brighton Experimental ensemble in January 2013 for a period of one month . The Department of Culture , Media and Sport published minimum specifications for digital radio receivers in the UK in February 2013 which states that a receiver sold in the UK must be capable of decoding a DAB + stream of up to 144 capacity units .

In March 2014 , the BBC announced that it would undertake a trial of DAB + in the UK later in the year .

On September 1 , 2014 , Folder Media began a four @- @ month trial of DAB + on the North East Wales and West Cheshire ensemble .

In early 2016 , two new stations launched DAB + services on the Portsmouth trial multiplex . The operators of the second national multiplex , Sound Digital launched three full @- @ time broadcasting DAB + services on 29 February 2016 . As of May 2016 , there are now eight DAB + stations in Portsmouth ( on the trial multiplex ) ; three in Manchester ( on the trial multiplex ) ; and Chris Country on the North Wales , Cheshire and Liverpool local multiplex , plus the three the on the sound digital network .

## = = Digital terrestrial television = =

Digital radio on the digital terrestrial platform started on 30 October 2002 with the launch of the BBC's digital only radio services , BBC 1Xtra , BBC Five Live Sports Extra , BBC 6 Music , BBC 7 and the BBC Asian Network as well as existing stations BBC Radio Five Live and the BBC World Service . All the stations broadcast on the BBC 's multiplex B.

On the same day EMAP Radio ( now owned by Bauer Radio ) launched three radio stations , Smash Hits , Kerrang ! and Kiss . Two other commercial radio stations also launched , oneworld and 102 .@ 2 Jazz FM .

The BBC later launched BBC Radio 1 , Radio 2 , Radio 3 and Radio 4 FM on multiplex A on 14 February 2003 . These channels later moved to Multiplex 1 on 3 October 2007 .

Currently , the digital terrestrial platform has twenty seven radio stations broadcasting from broadcasters including the BBC , Bauer Radio , GMG Radio and Absolute Radio .

## = = Digital satellite radio = =

Unlike North America , the UK does not have a commercial satellite radio service . The North American service is provided by a company called SiriusXM .

There are radio stations broadcasting via Satellite to the United Kingdom , however these are aimed at home users for playback through their televisions since these same satellites are also used for television broadcast and usually use SES ' Astra series of satellites at 28 .@ 2 ° east or the Eutelsat 28A satellite at 28 .@ 5 ° east . Radio stations broadcast free @-@ to @-@ air via the Sky Digital , Freesat from Sky platforms and any DVB @-@ S compliant set @-@ top box . The Freesat platform has all the BBC 's national and regional digital radio stations as well as BBC London 94 @-@ 9 from the launch on 6 May 2008 on the EPG .

WorldSpace was planning a subscription based digital radio satellite service on the upper frequencies of the L band , however , Qualcomm beat WorldSpace in 2008 , securing the L band frequencies in the Ofcom auction process .

## = = Digital cable television = =

A number of digital radio stations also broadcast through digital cable platforms , including Virgin Media and WightFibre .

## = = Internet radio = =

In the United Kingdom , over 350 of the UK 's radio stations also stream their stations online , not including Restricted Service Licenced radio stations , Hospital radio stations and stations who solely broadcast online . RAJAR figures taken between April and May in 2008 showed that 14 .@ 5 million people have listened to radio online with 9 @-@ 4 million people listening every week . As well as listening through a media player on a computer , a number of British firms , including BT Group , Reciva , Pure Digital , Roberts Radio , Dixons and Acoustic Energy have brought out Internet radio devices which use the Wi @-@ Fi signal from a router to stream Internet radio stations within range of a Wi @-@ Fi router . Apple and GCap Media made a deal in February 2008 for GCap stations to be broadcast through iPhone and iPod touch devices . Recently , dedicated smartphone and tablet computer applications published by radio stations and third party companies as well as smart TV applications also allow UK radio stations to be listened to .

In 2006 , the Phonographic Performance Limited ( PPL ) announced that it would charge additional royalty fees on UK Internet radio stations if they broadcast outside the UK . Radio stations which stream online including GCap Media and GMG Radio , have implemented IP blocking to prevent listeners outside the UK from listening to their radio stations and therefore avoided the increased fees .

In March 2007 , a BBC News article reported that the PPL were re @-@ negotiating royalty fees paid by UK Internet radio stations , and the result of the negotiations would be that fees would increase .

In 2011 , the BBC and commercial radio operators through the industry body , RadioCentre , launched a unified front end player for UK radio station Internet streams on personal computers and laptops named Radioplayer . The player replaced the various listen now windows on radio station websites and also added listen again capabilities for individual shows if the station supported it .

= = Digital Radio Mondiale = =

Digital Radio Mondiale ( DRM - not to be confused with Digital Rights Management ) is being considered by Ofcom for introduction in Britain in 2012 , on the present AM medium wave band .

In 2005 , tests of DRM on shortwave radio from European transmitters broadcasting into the United Kingdom were performed by Virgin Radio , Classic Gold , Premier Christian Radio , Virgin Radio Classic Rock , Asian Sound and CVC .

The British Broadcasting Corporation started broadcasting the BBC World Service on shortwave and mediumwave radio for a few hours a day across Europe from Orford Ness in Suffolk and Kvitsøy in Norway , the latter being receivable across England , Wales and Southern Scotland .

The BBC undertook a trial of the digital radio mondiale ( DRM ) technology , which allowed them to explore digital radio using medium @-@ wave frequencies . The trial broadcast BBC Radio Devon using the new technology in the Plymouth area from April 2007 and closed down on 31 October 2008 . In May 2009 , the BBC released a report on the trial in Devon . The report gave a number of conclusions about DRM from the trial :

The sound quality from the trial was better than AM quality , but not as good as average DAB quality ;

The daytime coverage of the DRM trial extended further than the discontinued AM service . However , the night @-@ time service , as expected to be smaller than daytime coverage due to the characteristics of medium wave broadcasting , did cause problems with interference to the DRM trial . The BBC stated this interference can be avoided , but only with a redesign of the transmission network ;

A single frequency network is possible and would be significantly robust .

= = Digital Multimedia Broadcasting = =

In 2006 , National Grid Wireless carried out a technical trial of T @-@ DMB and DAB @-@ IP on the Stoke & Stafford ( formerly UTV @-@ EMAP / Bauer Stoke ) ensemble . The trial assessed the reception qualities of both technologies in urban and rural areas as well as the mobile television and radio services which could be delivered .

There is currently an ongoing experimental DMB multiplex broadcast in London on L @-@ Band and Cambridge on VHF Band III , used for video , audio and data applications .

= = Analogue switch @-@ over = =

On 29 January 2009 the UK Government 's interim report into digital communication for the future by Lord Carter , Digital Britain , made the suggestion that DAB would be the future direction of digital radio in the United Kingdom . The report stated that only when the following conditions are met , a migration from FM to DAB would begin :

Digital radio listening figures hit at least 50 % ;

Coverage of DAB matches that of FM , of 90 % which the report stated would not be achieved until 2015 . The report mentioned that the Government would work with the BBC to meet the coverage target .

The original Interim Report of the Digital Radio Working Group published in 2008 specified that the 50 % threshold for listening figures should be based on those for DAB . This was subsequently

watered down to incorporate listening via any digital platform so as to make it easier to meet the criteria . The main driver behind the proposed move to switch off the FM transmission system is still down to the intense lobbying of the commercial radio sector so that they can save costs .

Carter also suggested in his report that manufacturers of devices which can pick up radio signals ensure it is DAB ready for the forthcoming migration . The report also indicates plans to create a Digital Radio Delivery Group ( DRDG ) , made up of the major investors of DAB , whose plan it will be to ensure a smooth transition from AM and FM to DAB for consumers . They will also advise on digital radio migration . On 22 September 2009 the DRDG and Digital Radio Development Bureau were integrated into one organisation for this purpose - Digital Radio UK .

On 16 June 2009 the final Digital Britain report concluded that a switchover of all national and local FM services which currently broadcast on DAB multiplexes would take place in 2015 and that DAB would be chosen to take the UK to and beyond switchover . The Digital Economy Act 2010 has a requirement stating that the United Kingdom must prepare for digital switchover . To aid the transition to digital radio , Digital Radio UK started a Radio Amnesty during May and June 2010 where people could trade in an old AM / FM analogue radio for a 10 @-@ 20 % discount on a new DAB digital radio from participating retailers . Analogue sets which can be reconditioned will be sent to southern Africa .

On 30 November 2010 it was reported that ministers were considering delaying the switchover to DAB until 2017 at the earliest . , however Ofcom did publish official plans for increasing DAB reception in various places around the same date .

On 2 July 2012 , the Department for Culture , Media and Sport created a Memorandum of Understanding ( MoU ) with the BBC and commercial radio broadcasters and ensemble operators as to where the future direction of digital radio should go with a three phase plan toward FM switchoff . A decision on the switchover will be made by the Government in 2013 . The MoU creates three phases toward switchover :

Three scenarios drawn up by the DCMS suggest switchover could begin between 2015 and 2019 either in one step or staged across the regions of the United Kingdom .

= = Application and licensing = =

The United Kingdom media and communications regulator Ofcom ( and before the formation of Ofcom , the Radio Authority ) advertises and provides the licenses for digital radio services in the United Kingdom , under the Broadcasting Acts of 1990 and 1996 .

= = = Application and licensing procedures = = =

Ofcom awards licenses for digital radio services differently depending on the type of service and the platform . Ofcom advertises the licences of new digital radio ensembles and are subject to an open competition to the highest bidder . Ensemble licence awards are awarded for twelve years . On digital television services , individual stations can apply for either a digital cable and satellite licence to broadcast on the aforementioned platforms , or apply for a digital terrestrial licence to broadcast on digital terrestrial television .

On Digital Terrestrial Television and DAB , broadcasters also need to contact the ensemble or multiplex operator of a local or national DAB ensemble or digital terrestrial multiplex to broadcast within a region , subject to a fee payable to the ensemble operator . On Digital Satellite , radio stations need to secure capacity with a transponder operator and an uplink to a satellite . To broadcast on the Sky Digital platform , a broadcaster must also secure an EPG slot allowing viewers to navigate to their channel using the set @-@ top @-@ boxes provided by British Sky Broadcasting . A request for an EPG slot must be done up to nine months in advance . The same procedure applies to secure a slot on the Freesat platform , although stations need to contact Freesat UK Ltd instead of BSkyB . On Digital Cable , broadcasters need to contact a cable supplier for carriage .

All stations broadcast in the UK must legally hold a music copyright licence from the Phonographic

Performance Limited , PRS for Music and Mechanical @-@ Copyright Protection Society in order for royalties to be paid to the musicians the main bodies represent .

= = = First national ensemble = = =

On 24 March 1998 , the Radio Authority advertised for the first ( and at the time , the only one planned ) national ensemble to be broadcast on DAB . The three national commercial services on FM and mediumwave had to be included as part of the ensemble , Classic FM , talkSPORT and Virgin Radio . The licence was awarded to the sole applicant , GWR Group and NTL Broadcast to form Digital One . The original licence application included the following stations :

After the closure of PrimeTime Radio in 2006 , the original licence was amended to allow the launch of a new classic and contemporary jazz service , theJazz which was launched on 25 December 2006 , before the 31 December 2006 deadline set in the licence amendment .

In April 2009 , Global Radio , which had acquired GCap Media - part owner of Digital One , sold its 63 % stake in the ensemble to Arqiva , making them the sole owner and operator of the ensemble .

On 26 July 2013 , Digital One extended its broadcasts to Northern Ireland . Previously , only one VHF Band III frequency was allocated to Northern Ireland which was allocated to the local commercial ensemble . Block 11D became available in 2013 after digital television switchover in the United Kingdom and the Republic of Ireland .

= = = Local ensembles = = =

The Radio Authority ( and subsequently Ofcom ) continue to award regional ensemble licences to a number of radio groups with advertising of the licences starting from 1998 , and licence awards being awarded from 10 May 1999 , with the Birmingham ensemble being the first local licence being issued to CE Digital . The Birmingham ensemble licence award was followed by awards for licences in Manchester , Greater London , Glasgow and South Yorkshire , with more licences being awarded afterwards .

In October 2006 , Ofcom announced a timetable of locations which would get its own DAB ensemble , where a local ensemble does not currently offer coverage . Three blocks will be made available in VHF Band III . In May 2007 , Ofcom replaced the York and Scarborough proposed licence area for a licence which covers the whole of North Yorkshire , and the Guildford plus Reigate and Crawley licences were merged to cover Surrey .

Areas covered are as follows :

As part of the Digital Economy Act 2010 which gained Royal Assent and became law on 8 April . 2010 , some DAB ensembles will be reorganised and merged . As a result , local ensembles waited for both the act to commence on 12 June 2010 and a report on the planning of DAB coverage and frequencies across the UK , with the final publication made to Government on 1 May 2012 before going ahead with announcements on the launch of additional local ensembles .

= = = Regional ensembles = = =

The first regional licence to cover a greater area of land compared to a local ensemble was awarded on 6 October 2000 to Switch Digital for Central Scotland Other areas which were awarded and classed as regional licences include :

In March 2009 , Ofcom made a recommendation to the Government in their Radio in Digital Britain report that the regional ensembles should expand into a nationwide regionalised service to fill the gap made by the 4Digital Group pulling out of the second national ensemble . Ofcom cited that the regions for the second national ensemble would be :

The East Midlands , East Anglia , mid and southern Lincolnshire ;  
London , Southern England , the South East and the South Midlands ;  
Northern Ireland ;  
North East England and Cumbria ;



North West England ;  
Scotland ;  
The West Midlands ;  
Wales ;  
The West and South West of England ;  
Yorkshire , the North Midlands and North Lincolnshire .

On 25 September 2012 , it was announced that the MXR multiplexes will close between July and September 2013 after the shareholders Global Radio & Arqiva decided not to renew the licences . Digital Radio UK stated that the released frequencies of the closed regional multiplexes would be reused for local DAB coverage roll @-@ out .

= = = Second national ensemble = = =

= = = First licence advertisement = = =

Ofcom announced in 2005 that they would be advertising for the second national digital ensemble . As a result , GCap threatened to take Ofcom to court after being told by the Radio Authority that there would not be another national ensemble . The court action was dropped after Ofcom assured GCap that none of the stations on the second ensemble would compete with existing stations on the Digital One ensemble .

On 1 December 2006 , Ofcom advertised a licence for a second national digital ensemble to launch new digital radio and multimedia services on frequency block 11A ( 216 @. @ 928 MHz ) . Applications needed to be submitted to Ofcom by 28 March 2007 .

On 29 March 2007 , Ofcom announced that it had received two applications for the second national digital ensemble , from the 4 Digital Group and National Grid Wireless . The radio channels which made up both applications are as follows :

On 6 July 2007 Ofcom awarded the licence for the second national ensemble to the 4 Digital Group , who were required to launch its services one year after its licence award . However , on 10 October 2008 the 4 Digital Group pulled its plans for digital radio , including the launch of the second multiplex . Ofcom held talks with the other remaining shareholders of the 4 Digital Group to see if they were willing to continue with the launch . In March 2009 , Ofcom recommended to the Government that the second national ensemble should be regionalised , formed by the existing regional ensembles .

= = = Second licence advertisement = = =

On 1 July 2014 , Ofcom re @-@ advertised the second national ensemble licence on frequency 11A for interested parties to submit applications by 31 October 2014 . The deadline was extended to 15 : 00 on 29 January 2015 .

On 29 January 2015 , it was announced that two bidders had applied for the licence to run the second national ensemble . Listen2Digital , run primarily by Orion Media and Babcock International Group amongst others and Sound Digital , run by Arqiva , Bauer and UTV amongst others . On 27 March , Sound Digital was announced as the winning bidder .

The list of proposed radio stations submitted to Ofcom were as follows :

= = = Small Scale DAB Trials = = =

After experimentation on the Brighton experimental ensemble , Ofcom advertised for small scale DAB multiplexes to broadcast across the United Kingdom on ten localised multiplexes for a nine @-@ month trial period . The trials will test the viability of using free and open source software with low cost equipment to broadcast from a single transmitter , a single frequency network or channel repeaters to allow smaller radio stations to broadcast more cost effectively than is currently possible

on local multiplexes .

= = Digital Radio UK = =

Digital Radio UK is an organisation which represents the interests of the digital radio industry including the BBC , commercial radio companies and transmission network operator , Arqiva . The organisation also promotes the use and take up of DAB in the United Kingdom and ensure that the deadline for digital migration in 2015 is met . Digital Radio UK is formed from the Digital Radio Delivery Group which also absorbed the Digital Radio Development Bureau ( DRDB ) . Part of DRDB 's plans , and under Digital Radio UK still is , will be to promote DAB uptake through a website for consumers as well as print and radio advertising .

= = = Official sites = = =

Digital Radio UK

Guide to digital ( radio and TV ) channels on Astra satellites

= = = National and regional multiplex sites operators = = =

Bauer Media UK website

Digital One website

MuxCo website

NOW Digital website

Sound Digital website

= = = Small scale multiplex sites operators = = =

Niocast Digital website

= = = UK Internet radio = = =

Radiofeeds - UK Internet radio station database

= = = Other sites = = =

DAB Ensembles Worldwide ( also known as " Wohnort " , the main part of the site is a list of services currently transmitting including the UK ) , [wohnort.org](http://wohnort.org)

Radio @-@ now - UK Digital radio news and information

LocalDAB - Services on the trial DAB ensembles