

DAB GLOBAL STATUS



420,000,000

People now able to receive DAB services



2,178

DAB services now on air around the world



59,000,000

DAB receivers sold to June 2017, including automotive



38

Countries with DAB services on-air



16,800,000

Automotive DAB receivers sold to June 2017, including after-market and factory-fit



98

Members of WorldDAB, covering the full radio and broadcast ecosystem

Industry headlines

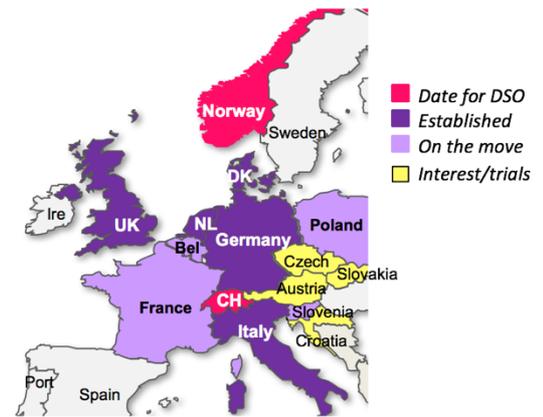
- EU governments are working together to accelerate rollout of DAB in Europe, building cross-border links to develop a European consensus about radio's digital future
- Norway has commenced the DSO process, complete end 2017; and Switzerland will implement DSO between 2020-24
- All major car manufacturers are fitting DAB in their vehicles
- DAB receivers are now available from €15 with prices continuing to drop
- In Asia Pacific, Australia leads the way with 3.6 million DAB+ listeners, Indonesia launched trial DAB+ services in Jakarta in April 2016 and Thailand plans to start digital radio trials in 2017.

Automotive

- All major car manufacturers are fitting DAB in their vehicles
- In Norway 98% the UK 87%, and Switzerland 66% of new cars come with DAB/DAB+ as standard
- WorldDAB has established an Automotive Working Group (AWG), collaborating with car manufacturers on installation of digital radio as standard across Europe and beyond, with a task force working on optimising the in-car DAB user experience
- Territories with national DAB coverage account for 60% of all new car sales in Europe, and car makers are planning accordingly

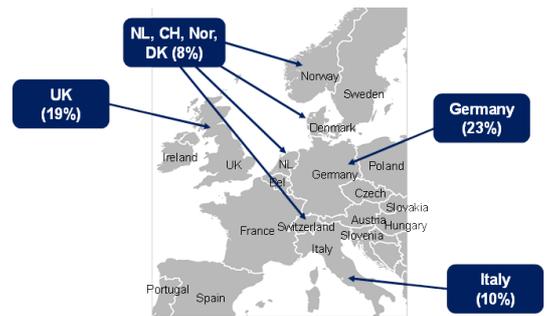
Receivers

- Over 59 million DAB receivers have now been sold, with prices starting at €15 and continuing to drop
- Receivers with colour screens now retail for less than €65
- There is ongoing work to create consistent receiver specifications in different countries, building on work already undertaken in the UK and Germany
- In Germany, the Federal Minister of Economics and Energy, presented a draft amendment to the Telecommunications Act, which seeks to forbid FM-only radio receivers. The amendment would stipulate that "high-quality audio receivers" may only be sold if they can receive digital (DAB+ and internet) signals as well as analogue FM.
- The Dutch Government has made a similar submission to the European Commission and in Italy, regulator AGCOM is arguing for its introduction.
- France already has a law which requires receivers to have digital capability once digital radio coverage exceeds 20% of the population – likely to be achieved in 2017.



European collaboration

- **EU governments** are working together to accelerate rollout of DAB in Europe, building cross-border links to develop a European consensus about radio's digital future
- A **European Digital Radio Alliance** was established in 2016 to make digital radio the standard and the preferred choice of listeners across Europe. Its strategy is to promote a hybrid DAB/FM solution that will support all broadcasters and consumers in Europe and allow individual countries to go digital at their own speed. 12 founding members represent over 300 public service and commercial radio stations
- The **European Broadcast Union** has called for the adoption of digital broadcast radio across Europe and for the inclusion of digital capability in all new radio receivers¹
- WorldDAB is engaging with **The European Commission** about the potential inclusion of digital terrestrial radio in the Digital Single Market Strategy, to ensure the allocation of Band III spectrum to digital radio, and to propose EU regulation that all new radio receivers (consumer and automotive) be capable of receiving FM and digital services



Source: ACEA

Figure 1 % share of European new car sales 2014 – markets with DAB / DAB+

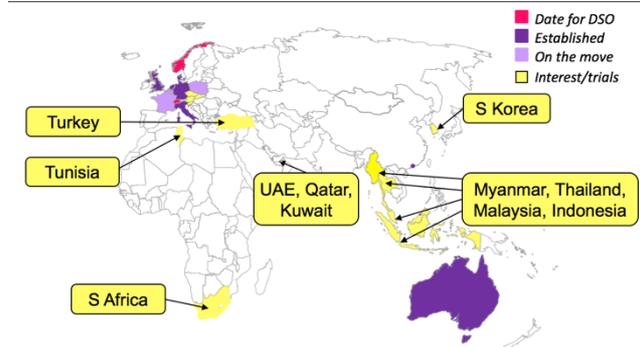
¹ Recommendation R138 <https://tech.ebu.ch/docs/r/r138.pdf>

Digital switchover

- Several European markets are considering their long term plans for broadcast radio, including potential digital switchover scenarios
- Norway is the first country to start DSO and Switzerland is planning for DSO in 2020-24
- WorldDAB has a Working Group focused on DSO, to coordinate activities and share best practice, attended by Belgium, Czech Republic, Denmark, Germany, The Netherlands, Norway, Poland, Sweden, Switzerland and the United Kingdom

Asia Pacific and Rest of World

- Australia successfully launched DAB+ in 2009
- Indonesia started a DAB+ trial in Jakarta in April 2016
- A DAB+ trial is soon to take place in Myanmar
- Thailand is launching a trial in 2017 and aiming to launch services in 2018
- Malaysia and Vietnam are investigating digital radio options. WorldDAB has organised workshops in each of these countries
- The Broadcast Regulator the Independent Communications Authority of South Africa (ICASA) has issued a new South African DAB+ trial license for 8 months from the 1 March 2017 to 30 October 2017
- Kuwait launched permanent DAB+ services in 2014, Turkey and Tunisia are trialling DAB+ and the UAE is working towards a commercial launch of DAB+ in 2018.



Europe: regular services

- **Belgium:** A federal launch of DAB+ planned for 2018, with 99% population DAB+ coverage anticipated by end 2017/early 2018. In Wallonia, government, public and private broadcasters supportive of EU receiver regulation. In Flanders, the government is preparing legislation for the renewal of FM licensing with a timeline for implementation of DAB+ by 2018.
- **Czech Republic:** From 1 June 2017 the multiplex used by the public broadcaster Czech Radio has entered full service. Transmitter Prague - Žižkov is using the channel 12C with 20 kW and covering Prague as well as an important part of the Central Bohemia region.
- **Denmark:** Issued a clear roadmap for digital radio, with a transition to DAB+ by 1st October 2017, a new national multiplex on air in 2017 and a decision on DSO when 50% of listening is digital (currently 36%). A campaign launched in August to promote the switch from DAB to DAB+ which happens by 1 October 2017.
- **France:** The CSA is studying a change to the timetable for faster deployment in the 30 largest population areas and consultation on the coverage of the main roads. The next metropolitan areas of France to be covered include Lille, Lyon, Strasbourg, Nantes, Rouen, Toulouse and Bordeaux, Besançon, Orléans and Clermont-Ferrand. Radio France and France Media Monde (both public services) have preempted DAB+ frequencies in Strasbourg, Lille and Lyon (for Mouv', FIP and RFI).
- **Germany:** The BMVI has published its digital radio action plan, passed by a majority of the board, and there will now be a series of discussions with the individual states (Länder), led by Rhineland-Palatinate and BMVI. Antenne Deutschland has been announced as the new platform provider for the second nationwide DAB+ multiplex in Germany. Behind the consortium are Media Broadcast and Absolut Digital. The multiplex will more than double the range of digital radio channels broadcast nationwide.

- **Gibraltar:** DAB+ has been on air since 2012 with four services covering 90% of the population.
- **Holy See (Vatican City State):** One regular regional multiplex is on air with 7 simulcast DAB+ services.
- **Ireland:** National public broadcaster RTÉ operates a full-service multiplex across a five transmitter network covering 52% of the population.
- **Italy:** 85% of the population will be covered by a DAB+ signal by end 2017 (up from 75%). Heavyweight industry funded marketing campaigns aired to 23 million listeners daily via four flights in 2017.
- **Malta:** Two regular national multiplexes with 41 simulcast services covering 100% of the population.
- **Monaco:** Two regular national multiplexes cover 100% of the population with 7 exclusive and 11 simulcast DAB+ stations.
- **The Netherlands:** The country has seen the fastest growth for DAB+ (launched 2013). Digital Radio NL has six advertising flights in total over the year 2016 focused on the automotive market. Population coverage is now 95%.
- **Norway:** National FM will be switched off by end 2017, the first FM transmitters were switched off on 11 January 2017.
- **Poland:** The official rollout of digital radio started in October 2013, as public broadcaster Polskie Radio launched the first DAB+ multiplexes. 56% of the Polish population is within reach of a DAB service.
- **Slovenia:** The official rollout of digital radio started in September 2016, as public broadcaster RTV Slovenija launched the first digital radio network. Currently 12 DAB+ services cover 73% of the population.
- **Spain:** DAB services are on air in Madrid and Barcelona including their metropolitan areas, covering 20% of the population.
- **Sweden:** There is one regular national DAB multiplex and one trial regional DAB+ multiplex on air covering 35% of the population. All major Swedish radio broadcasters are united behind the desire for digitisation and officials are awaiting developments in other territories. Swedish commercial radio stations were licensed to send 21 national channels on DAB+ but the private radio sector asked for permission to delay the launch.
- **Switzerland:** A major consumer communications campaign is ongoing in preparation of DSO which will take place between 2020 and 2024, 53% of listening is now digital
- **UK:** Digital listening has edged closer to 50% (the threshold for a DSO discussion with Government) and reached a new record share of Digital listening is now 48.7%, up from 45.3% in Q2 2016 (RAJAR Q2 2017)

Europe: trials and/or regulation

- **Austria:** DAB+ trial on air in Vienna and call for tenders for national, local and regional DAB+ launched in January 2017 and closed June 2017. Regulator RTR is providing up to four million euros for the launch of DAB+ services.
- **Bulgaria:** In May 2017 ET DIP TREIDING was awarded a license to transmit DAB+ in Sofia. The Council for Electronic Media (CEM) together with the Communications Regulation Commission (CRC) held consultations with representatives of the Bulgarian National Radio (BNR), the Association of Bulgarian Broadcasters (ABRO) and FOCUS Radio in March 2017.
- **Estonia:** A trial is being planned in Tallinn, expected to start in 2018.
- **Hungary:** Chose DAB+ for its digital radio standard and there is currently one trial national DAB+ multiplex
- **Latvia:** Public broadcaster LVRTC operates one trial national DAB+ multiplex. Services started in December 2016 and currently 11 stations covering 60% of the population, up from 35% at the start of 2017, are on air.
- **Slovakia:** A DAB+ trial started in December 2015 in Bratislava. In June 2016, the licence for the trial was extended and licenses were awarded for DAB+ trial multiplexes in Košice, Banská Bystrica, Levice and Nitra. All trial multiplexes are on air and together cover 24.4% of the population.

- **Ukraine:** Following a meeting on Dec. 22, the Ukraine National Council has announced that it plans to make spectrum available for DAB+ on its 174–230 MHz radio frequency band. A trial is expected to start soon with two transmitters in Kiev.

Europe: potential markets

- **Armenia:** There are ongoing consultations within the radio industry in Armenia about possible future deployment of DAB+.
- **Croatia:** There are ongoing consultations within the radio industry in Croatia about possible future deployment of DAB+.
- **Lithuania:** There are ongoing consultations within the radio industry about a potential future deployment of DAB+.
- **Romania:** January 2016 saw the National Authority for Management and Regulation in Communications launched a public consultation on the allocation of digital terrestrial broadcasting multiplexes T-DAB. One trial regional multiplex with six DAB services is on air and covers 10.4% of the population.

Asia Pacific: regular services

- **Australia:** Continues to lead the way in Asia Pacific – with DAB+ household penetration rising to 23.6%. The latest quarterly GfK Report shows the number of people listening to radio via a DAB+ device has grown to 3.5 million in the five capital cities with new services in Canberra, Darwin and Hobart due in 2017
- **Hong Kong:** Radio Television Hong Kong formally launched its five DAB channels in 2012. The Government of the Hong Kong Special Administrative Region is currently reviewing the future of DAB services.
- **South Korea:** Assessing DAB+ for broadcast radio..

MENA: regular services

- **Kuwait:** Regular DAB+ radio was launched in the state of Kuwait in 2014. 15 DAB+ services are on air and cover 90% of the population. Two more DAB+ stations will join the existing SFN network in October 2017 to extend coverage to 100%.

Asia Pacific, Africa, MENA: trials and/or regulation

- **Bahrain:** A low-power DAB+ trial started in December 2016 and was scheduled to complete in February 2017. Four simulcast DAB+ services were broadcast with approximately 40% geographic coverage.
- **Brunei Darussalam:** A trial national DAB multiplex is on air with 2 simulcast DAB services covering the capital Bandar Seri Begawan.
- **China:** Four regular local multiplexes with a total of 17 DAB services are on air in Beijing.
- **Chinese Taipei:** A DAB single frequency network (SFN) trial has been on air since 2012 and is operated by SuperFM (the commercial broadcaster) and covers major cities including Taipei and New Taipei.
- **Indonesia:** Public broadcaster Radio Republik Indonesia (RRI) launched trial DAB+ digital radio services in Jakarta in 2016 covering 2 million people.
- **Malaysia:** A trial local DAB+ multiplex is on air in Kuala Lumpur and is shared by both public and commercial broadcasters. 12 simulcast DAB+ services are on air covering 10% of the population of Malaysia.
- **Myanmar:** A DAB+ trial is expected on air in 2017 in Yangon, after a public tender took place in 2016.
- **New Zealand:** A trial local DAB+ multiplex has been on air in Auckland and Wellington since 2006.
- **Sri Lanka:** Stakeholders are working with the regulator, equipment and receiver manufacturers in preparation for an imminent DAB+ trial.
- **South Africa:** New DAB+ trial licence issued for 8 months from 1 March 2017 with 20 radio channels.

- **Thailand:** Thailand's National Broadcasting and Telecommunications Commission (NBTC) plans to launch digital radio in 2018 and are in the process of a public consultation as the NBTC's frequency plan for digital radio has been developed.
- **UAE:** Following a trial, the TRA (Telecoms Regulation Authority) is working towards a commercial launch of DAB+ in 2018 and has initiated industry consultation on DAB+ receiver specifications.
- **Tunisia:** One trial DAB+ multiplex is on air with 12 simulcast DAB+ services.
- **Turkey:** TRT, the Turkish Broadcasting Corporation, launched DAB+ test transmissions in Band III with four transmitters in Istanbul, Ankara, Bursa and Kocaeli in May 2017.

Asia Pacific Africa, MENA: interest

- **Jordan:** A DAB+ workshop and trial took place in Amman in August 2017 organised by WorldDAB and Arab States Broadcasting Union, and hosted by Jordan Radio TV (JRTV) and the Telecommunication Regulatory Commission.
- **Vietnam:** Voice of Vietnam trialed DAB+ in Jul 2013. The roadmap for digital broadcasting radio and TV 2020 was granted by the Prime Minister in 2009.

About WorldDAB

WorldDAB is the global industry forum responsible for defining and promoting DAB digital radio. By bringing together radio industry professionals, WorldDAB provides knowledge and expertise that helps countries successfully adopt and implement broadcast digital radio.

WorldDAB's 98 member organisations cover 27 countries across the globe and include public and commercial broadcasters, regulators, network providers and manufacturers of receivers, chips, professional equipment and automobiles.

WorldDAB is shaping the future of radio, delivering advice and tailored solutions on all aspects of the switch from analogue to digital.

About DAB+ digital radio

There is growing momentum towards the rollout of DAB/DAB+ digital radio across Europe, Asia Pacific, Arab States and South Africa. Over 55 million domestic and automotive DAB/DAB+ receivers have now been sold – with annual sales almost doubling in the last four years. Digital radio has reached a tipping point in Europe with well over almost 100% network coverage now available in the UK, Switzerland, Norway, Denmark, the Netherlands and Germany, and 75% in Italy. The first countries have confirmed digital switchover dates and political commitment towards digital radio is building in many other markets. DAB+ digital radio offers significant benefits to broadcasters and listeners. The technology is tried and tested. Now is the time to embrace the opportunity.