

WorldDAB Automotive 2016

Drive to Digital – Europe

Wednesday 11 May 2016
Brussels, Belgium

#worlddabauto

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DIGITAL RADIO
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ON YOUR
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SMARTDAB



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FM VIA FM MODULATOR

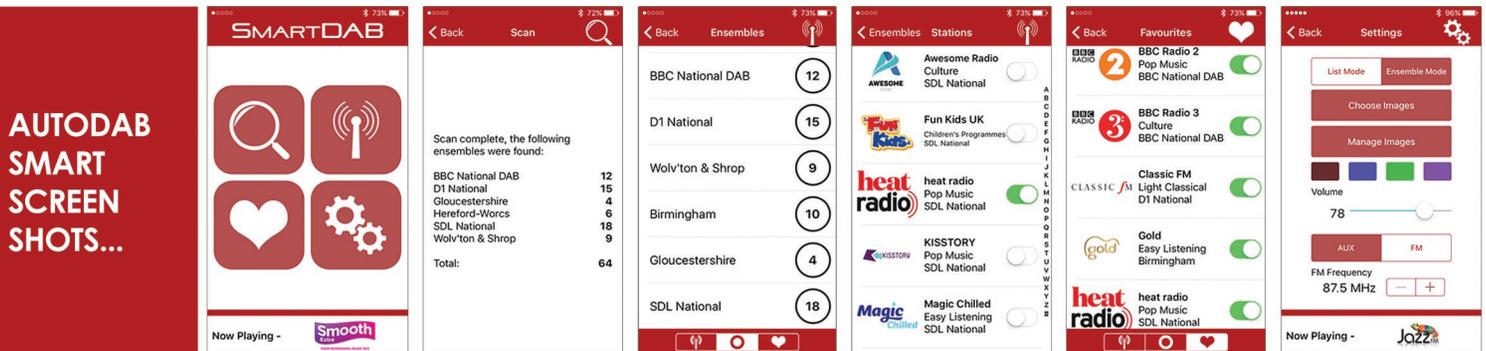
RF WITH RF REMOTE

BT VIA A2DP BLUETOOTH

The AutoDAB Smart connects to your smartphone to give Digital Radio in any car. It is a plug and play solution that you can fit yourself in minutes. The station logo, name, song and artist information is displayed on your phone. Digital music is played through your car stereo system via the 3.5 mm jack, FM or Bluetooth. Slide-show images are also displayed if transmitted by the radio station.

Wireless in-car DAB adapter with dedicated app...

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- Easy to install, plug and play digital radio solution
- USB port for device charging



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Welcome to WorldDAB Automotive 2016

Dear colleagues,

Welcome to WorldDAB's Automotive Event 2016: Drive to Digital – Europe.

For the second year in a row, we have chosen Brussels as our venue to highlight the importance of digital radio at a European level. I am delighted that this year's event has been produced in association with The Netherlands EU Presidency 2016 – many thanks to our Dutch colleagues, who have made this possible.

Our focus this year is on bringing together three key stakeholder groups: policymakers, broadcasters and the automotive industry. I am delighted to welcome keynote speakers from all three groups.

First, for the policymakers, we have senior officials from Ministries in three leading digital radio markets: Frank Krüger from the BMVI in Germany, Ian O'Neill from the DCMS in the UK, and Jos de Groot from the Dutch Ministry of Economic Affairs – plus François-Xavier Bergot of the French regulator, the CSA. These speakers will demonstrate the political commitment driving the progress of digital radio in Europe.

Second, for the broadcasters, I am delighted to welcome Helen Boaden, Director of Radio at the BBC – on this occasion speaking in her role as President of the European Digital Radio Alliance (a new grouping of public and private broadcasters promoting digital radio across Europe). Helen will explain the vision and commitment of these broadcasters – and the benefits of DAB for consumers.

Third, for the automotive sector, we will hear from Mike Hawes, Chief Executive of the UK's SMMT. Mike will describe how the UK's vehicle manufacturers have embraced DAB digital radio – outlining the benefits of DAB from the car makers' perspective and the factors which have led the UK sector to fit DAB as standard in 80% of new cars.

Finally, I am pleased to welcome to this year's event representatives of the European Commission. They will hear first-hand about the commitment being brought to digital radio by a growing number of European governments and broadcasters.

Over the last year, WorldDAB has been engaging with the European Commission and other EU stakeholders. Our aim is to secure recognition that DAB digital radio can help deliver the goals of the Digital Single Market Strategy. We also seek to build support for the idea that all radio receivers in Europe (automotive and consumer) should offer both FM and DAB capability.

The European dimension is especially relevant for the automotive sector – not least because drivers regularly cross international borders. With Norway the first country in the world to switch off analogue signals (in 2017), the importance of European cars having DAB as standard becomes increasingly clear.

In the UK, Norway and Switzerland, the majority of new cars now come with DAB/DAB+ as standard. Our aim, with the support of all stakeholders, is to replicate this performance across Europe. Today's event should act as a call to action to help us achieve this goal.

I hope you enjoy the day.

Best Regards,

Patrick Hannon
WorldDAB President

Agenda

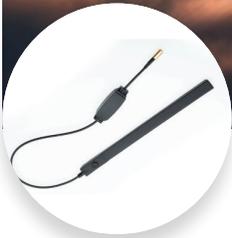
08:30	09:15	<p>Registration</p> <p>Guest moderator for the day: Alain Gerlache, Journalist, RTBF</p>
09:15	10:45	<p>SESSION 1 Digital radio in the single European market</p> <p>Digital radio (DAB/DAB+) is extending across Europe. In this session, key stakeholders outline their vision and highlight the need for collaboration between national governments, broadcasters, car makers and European institutions to make the transition to digital as smooth as possible.</p>
09:15	09:30	<p>Opening: 2020 vision for digital radio in Europe Patrick Hannon, President, WorldDAB and VP Corporate Development, Frontier Silicon</p>
09:30	10:30	<p>Government support from across major European markets</p> <ul style="list-style-type: none"> • Jos de Groot, Director Telecommunications Market, Ministry of Economic Affairs, The Netherlands • Ian O'Neill, OBE, Head of Radio and Television Policy, Department for Culture, Media & Sport (DCMS), United Kingdom • Frank Krüger, Director, Federal Ministry of Transport and Digital Infrastructure (BMVI), Germany • François-Xavier Bergot, Deputy Head of Radio Directorate, Conseil Supérieur de l'Audiovisuel (CSA), France
10:30	10:45	Q&A
10:45	11:15	COFFEE
11:15	12:30	<p>SESSION 2 Driving across Europe</p>
11:15	11:30	<p>Keynote: Automotive Association Mike Hawes, Chief Executive, Society of Motor Manufacturers & Traders Ltd</p>
11:30	11:45	<p>Keynote: European Digital Radio Alliance Helen Boaden, Director BBC Radio & BBC England & President, European Digital Radio Alliance</p>
		<p>In 2016 the digital radio landscape is changing, with the first markets moving towards Digital Switchover (DSO). This session provides an overview of coverage, take-up and content on-air for drivers in key European markets.</p> <p>Moderator: Patrick Hannon, President, WorldDAB and VP Corporate Development, Frontier Silicon</p>
11:45	12:25	<p>UK – Ford Ennals, Chief Executive, Digital Radio UK Germany – Helwin Lesch, Head of Distribution and Controlling, Bayerischer Rundfunk Norway – Jarle Ruud, Marketing, Digitalradio Norway Switzerland – Mathias Coinchon, Senior Project Manager, Media Technology & Innovation, European Broadcasting Union (EBU) Italy – Eugenio La Teana, Head of Research & Development, RTL 102.5 Hit Radio Belgium – Nicolas Bresou, Digital Radio Manager, RTBF Denmark – Lars Kierkegaard, Head of Strategy and Business Development, Teracom Netherlands – Jacqueline Bierhorst, Project Director, Digital Radio Netherlands</p>
12:25	12:30	Q&A
12:30	13:15	LUNCH
13:15	14:35	<p>SESSION 3 Digital radio's future in cars</p> <p>Automotive manufacturers are beginning to embrace digital radio as part of their infotainment system. This session looks at manufacturers' plans now and in the future. It also provides a clear view of trends and how the automotive industry can work with broadcasters.</p> <p>Moderator: Douglas A. Bolduc, Managing Editor, Automotive News Europe</p>
13:15	13:35	<p>Keynote: Digital radio and Audi Holger Hees, Head of Development Broadcast Radio, TV & Optical Media Drivers, Audi AG</p>
13:35	13:50	<p>Updates from the automotive sector on current trends and experiences of radio Arjen Bongard, Editor-in-chief, automotivET International</p>



13:50	14:05	Radio's place in the car Ronny Van Gerwen, Country Manager Belgium, JATO
14:05	14:20	Why OEMs are driving a digital future Robbert Van Den Heuvel, Communications Manager, Fiat Chrysler Netherlands B.V.
14:20	14:35	Panel: Digital radio in the car today Holger Hees, Head of Development Broadcast Radio, TV & Optical Media Drivers, Audi AG Arjen Bongard, Editor-in-chief, automotivET International Ronny Van Gerwen, Country Manager Belgium, JATO Robbert Van Den Heuvel, Communications Manager, Fiat Chrysler Netherlands B.V.
14:35	14:55	COFFEE
14:55	16:10	SESSION 4 Driving digital radio in cars
		The radio industry is working to improve the digital radio experience for drivers. This session looks at the latest work on keeping the user interface simple, providing more information to the car, using the smartphone to get digital radio, and how digital radio is the future of traffic and travel information.
14:55	15:10	WorldDAB announces Automotive User Interface Group Laurence Harrison, Technology and Market Development Director, Digital Radio UK
15:10	15:25	Digital radio in car: the future possibilities Marco Carbone, Director Radio Products, STMicroelectronics
15:25	15:40	Project Logo: RadioDNS providing more information into the car Mathias Coinchon, Chairman, RadioDNS/Senior Project Manager, Media Technology & Innovation, European Broadcasting Union (EBU)
15:40	15:55	Using your mobile to upgrade your car radio Michael Hill, Managing Director, Radioplayer UK
15:55	16:10	Traffic and travel information: user experiences of traffic & travel Thomas Kusche, Senior Editor, Westdeutscher Rundfunk/President of TISA
16:10	16:45	SESSION 5 Working with the consumer aftermarket
		One area which is key to the success of digital radio is the aftermarket which supplies devices to ensure cars on the road today can receive digital radio. This session explores the steps being taken by manufacturers to ensure drivers can receive radio in the future. Moderator: Jarle Ruud, Marketing, Digitalradio Norway
16:10	16:40	Selling to the aftermarket in preparation for switchover Jarle Ruud, Marketing, Digitalradio Norway
		Announcement: Commercial product presentation Graham Johnson, Business Development Manager AutoDAB range of products, Connects2
		Panel: Selling aftermarket products for consumers <ul style="list-style-type: none"> • Tom Vedvik, Marketing Manager, TT Micro • Jasper Wybrants, Senior Business Development Manager, Pure • Damien Brion, Senior Engineer & Project Manager, Clarion • Dave Volkaerts, Sales Manager SND, JVCKENWOOD • Andrea Pasqualotto, Market Development, FIAMM Antennas
16:40	16:45	Closing remarks Patrick Hannon, President, WorldDAB and VP Corporate Development, Frontier Silicon
16:45	18:00	Networking drinks

DIGITAL RADIO

DABgrade your car! The antenna does make a difference!



DAB+ glass mount antenna, for internal adhesive mounting, with inconspicuous receiving element. This kind of antenna is quick and easy to install and no holes are needed.



DAB+ roof mount antenna, for backside installation, with 40cm rod. Available in various versions with different combinations of functions. It can be installed in place of an existing antenna, making use of the existing hole or drilling a new one.



DAB+ shark-fin antenna. A stylish solution available in various versions with different combinations of functions. It can be installed in place of an existing antenna, making use of the existing hole or drilling a new one. It offers indeed a very attractive solution for Your car roof!



Active splitter to be connected to the original AM/FM radio antenna. It splits and amplifies the antenna's signal. It allows to preserve the original antenna, only if it's a passive one, usually mounted on the front roof.



DAB&PLAY, embedded smart antenna solutions that offer outstanding reception of the Digital Radio thru the car's original glass antennas. For now this solution is only available for VW/Skoda and Seat vehicles.

Antenna solutions for the digital radio DAB+ reception.



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Connects2 is Europe's largest supplier of retrofit DAB black box solutions to all the major European vehicle manufacturers. Connects2's SmartDAB and AutoDAB offer a full range of aftermarket solutions to integrate digital radio into any car. Connects2 Ltd is the market leader in Europe for the supply of car audio interfaces, providing electronic boxes that allow aftermarket radios and other audio devices to be fitted seamlessly into most vehicles. The Connects2 brand has become firmly associated with quality and has achieved a position where major vehicle manufacturers and car audio manufacturers regularly commission us to design and develop specific interface solutions for them. To see the full range of DAB solutions visit www.autodab.com

Brochure Sponsor



Clarion Co. Ltd, a Hitachi group company, was founded in 1947 in Tokyo. Today, it is ranked among the top 100 Global OEM suppliers by *Automotive News*. Clarion, an international leader in car audio and electronics, is positioned as a major independent car audio manufacturer. The company conducts research, development, engineering, design, manufacturing, and sales and marketing of entertainment, communications and navigation products for the automotive environment. Clarion has over 9000 employees worldwide.

Lanyard Sponsor



Dension is specialised in the development and production of consumer electronics and IT integration products for the automotive and professional digital signage industry. Our product portfolio consists of in-car multimedia, hands free solutions, DAB radio receivers, Plug&Play devices and professional Linux based audio players and content management system options.

Exhibitors



Antennentechnik Bad Blankenburg GmbH develops and manufactures antenna systems according to the highest technological and qualitative requirements and standards of the automotive industry, public authorities, distributive trades and specialised industrial operators. The company is well established and highly respected within the antenna industry. Antennentechnik was the first antenna manufacturer to get involved with DAB, attending discussions and conferences in the UK, following the progress and listening to the requests as well as the concerns of both aftermarket installers and automotive manufacturers, enabling us to develop the best solutions for car manufacturers that have started already fitting DAB as a standard option, but also intelligent converter solutions for retrofitting older car models.



AVT provides complete solutions for DAB+ head-ends. The MAGIC DAB multiplexer based on the FhG ContentServer technology works smoothly together with the MAGIC AE1 DAB+ audio encoders which are available in different versions. The product portfolio is completed by the ETI/EDI monitoring decoder as well as the MAGIC SDC switches for redundant applications and EDI/ETI converters. The latest DAB product is the MAGIC TBR system, a cost-efficient and compact solution for the DAB tunnel provisioning. The outstanding feature is the break-in possibility – locally and remotely via VoIP – in case of emergencies or also for information announcements.

DAB Aerials What fits your car?



An AM/FM/DAB antenna with a short 23 cm mast and shallow mounting depth. Can be used to replace an existing whip antenna. This active antenna gives outstanding reception, delivering a clear crisp sound.



A high performance sleek active AM/FM/DAB sharkfin antenna with fully optimised digital radio reception. A series of separate seal adapters are available for use with new Mercedes and VW/Audi vehicles. *NEW version 3785.01 has just been released with added GPS receiver.



Our classic "matchbox" 15 dB DAB gain amplifier/splitter for use with passive antenna. This unit needs a separate 12volt supply, the output side of the amplifier will supply this voltage to the cable centre core.



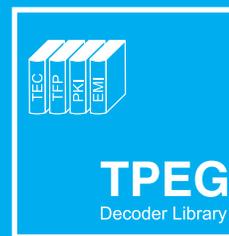
Active radio splitter designed for use with existing rod antenna. A simple and cost effective splitter for legacy vehicles upgrading to digital radio. For simple installation the splitter is available with a range of connectors.



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Bmt is the competence centre for the fulfilment of projects in the field of digital broadcast. The main focus is the development of applications and data services. For years the bmt has been active in the specification and implementation of Transport Protocol Expert Group (TPEG) services. This includes both consulting services and products like TPEG ON AIR, TPEG Analyser, TPEG Editor and TPEG Library. www.WEcanTPEG.com



Calearo Group, established in 1957, is a global leader in engineering and production of antennas for the automotive and wireless communication fields. Calearo is the preferred partner for OEMs as well as aftermarket approach, through various sales channels, whenever advanced telecommunications skills are required, from consulting and research projects to mass manufacturing.



DIGIDIA has emerged as one of the leading companies for digital radio transmission equipment with DAB and DRM equipment deployed all over the world. DIGIDIA can provide the complete end-to-end DAB and DRM transmission and receiving chain for broadcast and test applications. Leading companies in the automotive industry already use DIGIDIA's test products which include multiplexers, content servers, EDI/ETI IP gateways, RF monitoring equipment, professional receivers and tunnel break-in products. DIGIDIA leads the way with straightforward design for innovative, compact and flexible products.



Since 1997, Factum and Radioscape have been delivering innovative, reliable and cost-effective products for digital radio broadcasting. Factum-Radioscape products cover the full digital radio broadcast signal chain from audio encoding, data insertion, multiplexing, distribution and multiplex management to supervision, monitoring and analysis, as well as an innovative voice break-in system for road tunnels.



Since 1997, the Innovationszentrum für Telekommunikationstechnik GmbH IZT has provided equipment for signal generation, receivers for signal monitoring and recording, transmitters for digital broadcast, digital radio systems and channel simulators. The DAB-specific product portfolio includes the IZT DAB ContentServer – a highly reliable professional broadcast system for DAB. It combines audio encoding, data service management and ensemble/service multiplex generation in one device. Its reliability has permanently been proven in numerous DAB head-end installations. In addition, the IZT's signal generators and RF monitoring receivers are powerful laboratory tools, for example for DAB signal analysis or for the development DAB receivers.



A market-leading and innovative British company, established in 2002 and a pioneer of digital radio. Pure has shipped over 5 million digital radios globally and created the world's best-selling DAB radio range with their One range. Pure has firmly established itself as a leading global audio brand. See www.pure.com

Speakers

François-Xavier Bergot, Deputy Head of Radio Directorate,
Conseil Supérieur de l'Audiovisuel (CSA)
France



François-Xavier Bergot is one of the two Deputy Heads of Radio Directorate since May 2015 at the Conseil Supérieur de l'Audiovisuel (CSA), the French media regulator. The Radio Directorate is in charge of other teams at the CSA and works in close collaboration with them in the regulation of radio operators. It provides management and technical planning of frequencies for the transmission of analogue and digital radio. Between July 2008 and May 2015, Mr Bergot was a policy officer at the CSA (in the Directorate for Studies and Forward Thinking). From 2000 to 2007, he worked for the French Department of Defence. In 1996 he received a degree in electrical engineering from the Ecole Nationale Supérieure des Télécommunications (ENST, now known as Telecom ParisTech) and then a PhD in joint source and channel coding from ENST in 2000.

Jacqueline Bierhorst, Project Director, Digital Radio Netherlands
The Netherlands



Jacqueline Bierhorst has been a pioneer in commercial radio since 1987, specialising in distribution, marketing and content. She has a strong track record in launching and leading successful commercial television and radio channels in the Netherlands and Belgium. Since 2011, she has been Project Leader on the roll-out of the DAB+ network in the Netherlands for all commercial broadcasters, which was launched on 1 September 2013. Since January 2015, she has been Project Director for Digital Radio NL, which represents both public as well as commercial broadcasters and coordinates the joint roll-out and marketing of Digital Radio/DAB+ in the Netherlands.

Helen Boaden, Director, BBC Radio & BBC England
United Kingdom



Helen has overall responsibility for BBC Radios 1, 2, 3, 4 and the digital-only stations 6 Music, 1Xtra, Radio 4 Extra and the Asian Network. She also oversees the five BBC orchestras in England, the BBC Singers and the BBC Proms. Helen took up the role of Director, Radio in April 2013. Since September 2015 Helen has taken on the additional responsibilities of BBC England – leading creativity, collaboration and local partnerships focusing on BBC North, BBC Birmingham and BBC Bristol. Her increased remit also includes the BBC Academy – the corporation's training body. Previously she was Director, BBC News, from September 2004 until April 2011 when she became the Director of BBC News Group, taking on additional responsibility for the Global News division, and joined the BBC's Executive Board.

Douglas A. Bolduc, Managing Editor, Automotive News Europe
Germany

Automotive News Europe



Douglas A. Bolduc is Managing Editor of Automotive News Europe's print and online products as well as a regular contributor to *Automotive News*. *Automotive News Europe* and *Automotive News* are considered the world's leading trade publications for the auto industry. Bolduc started his professional journalism career in 1986. He has been covering the European automotive industry since 2003. Bolduc has a bachelor's degree in broadcast journalism from Syracuse University. During his career has worked as a journalist in Europe, the United States and Asia.



Arjen Bongard, Editor-in-chief, automotiveIT International
The Netherlands



Arjen Bongard is Editor-in-chief of *automotiveIT International*. He is a seasoned business journalist with more than 30 years' experience covering news stories across all industries and markets. Arjen edits the *automotiveIT International* magazine and is in charge of the *automotiveIT.com* website. The automotiveIT publications cover the fast-changing world of information technology in the automotive industry. Arjen regularly talks to key automotive and IT executives and writes about the latest industry trends. Previously, Arjen was Editor-in-chief of *Automotive News Europe* and held a number of senior management positions at Dow Jones & Company, publisher of *The Wall Street Journal*. A citizen of the Netherlands, Arjen has a master's degree in journalism from the University of Michigan. He did undergraduate study at the University of Amsterdam.

Nicolas Bresou, Digital Radio Manager, RTBF
Belgium



After touring Sub-Saharan Africa for more than 10 years for a telecommunications company who provided internet by satellite and radio in very remote places, Nicolas joined RTBF in 2015. RTBF is the public broadcasting organisation of the French Community of Belgium. Nicolas now oversees all projects in digital radio broadcasting.

Damien Brion, Senior Engineer & Project Manager, Clarion
France



Damien is currently a senior engineer & project manager at Clarion. Damien joined Clarion group in 1984 and initially joined as a production manager, before moving to process engineering and then to product development engineering. He became a project manager in 2000 and currently heads up the OEM division, where he is responsible for radio developments. Prior to working at Clarion Damien worked for a number of years on offshore and onshore oil rigs focusing on exploration and development.

Marco Carbone, STMicroelectronics, Director, Radio Products
Italy



Marco Carbone received his master's degree in electronic engineering from Politecnico di Milano, Italy. He spent the first phase of his professional life in Siemens Telecom working on the design of telecommunications radio systems. Marco joined STMicroelectronics in 1996 to start the development of a product family specifically dedicated to terrestrial and satellite broadcast radio solutions. Over the years he has covered different positions in STMicroelectronics, with wider technical and business responsibilities. He is now responsible for the Radio Product line within the Automotive and Discrete Group based in Agrate Brianza, Italy.

Mathias Coinchon, Senior Project Manager, Media Technology & Innovation,
European Broadcasting Union (EBU) / Chairman, RadioDNS
Switzerland



Mathias activities concentrate on hybrid and digital radio, open source in broadcasting, and audio/video over IP. Mathias is also Vice-Chairman of the WorldDAB Technical Committee and Chairman of RadioDNS. He has an MSc degree in Communication Systems Engineering from EPFL, Switzerland, and the Eurecom Institute in France. He developed his diploma thesis at BBC R&D on Digital Radio Mondiale. Before joining the EBU, Mathias worked for the Swiss Broadcasting Corporation (SRG-SSR/RSR) on networks and the relaunch of digital radio in Switzerland. As a side activity, Mathias is President of the non-profit organisation <http://www.opendigitalradio.org/> maintaining an open source solution for small scale DAB+ broadcasting used in the UK and Switzerland.

Jos De Groot, Director Telecommunications Market, Ministry of Economic Affairs
The Netherlands



Jos De Groot studied macroeconomics in Groningen. From 1984 to 2002 he worked in various roles for the Ministry of Finance. During that period, he was a financial counsellor at the Dutch Embassy in Paris and was responsible for a number of Dutch privatisations at the turn of the century. In 2002, Jos was appointed Director Energy Markets at the Ministry of Economic Affairs and held this role until 2014 and was involved in the further liberalisation of the European energy market. He currently holds the position of Director Telecommunications Market within the Ministry of Economic Affairs and is working on a range of policy issues concerning the digital economy.

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RF Recording and Signal Generation

- High-performance RF receivers
- Recording and data analysis
- Replay of RF signals
- Multi-channel signal generation
- Powerful impairments



Digital Radio Multiplexer Systems



- Integrated audio encoding and data service management
- Reliable and efficient operation of DAB head-ends
- Developer Edition for receiver testing

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Innovationszentrum
Telekommunikationstechnik



Ford Ennals, Chief Executive, Digital Radio UK
United Kingdom



Ford Ennals is Chief Executive of Digital Radio UK (DRUK) which is responsible for leading the market and consumer transition to digital radio in the UK. DRUK represents the major commercial broadcast groups and the BBC, and is responsible for digital radio communication campaigns, and working with the vehicle industry to ensure digital radio is fitted in cars. DRUK works with the UK Government and media regulator Ofcom to plan a future digital radio switchover and achieve consumer listening and coverage criteria. Previously Ford was CEO of Digital UK and Managing Director at Universal Music Group.

Alain Gerlache, Journalist, RTBF
Belgium



Alain Gerlache joined RTBF in 1988 as a radio journalist. He later moved to the television news desk as a political correspondent. In that position, he launched several new political programmes. In 2003, he was appointed General Manager of the TV department. From 2007 to 2016 he was the Secretary General of the Federation of Francophone Public Television Services (France, Belgium, Canada, Switzerland). For over a decade, Alain has presented a variety of radio and TV programmes about the impact of the digital revolution on the media industry and society as a whole. Alain is also a lecturer at the University of Louvain, where he teaches Online Communications and Media.

Patrick Hannon, President, WorldDAB and Vice President Corporate Development, Frontier Silicon
United Kingdom



Patrick Hannon is Vice President Corporate Development at Frontier Silicon, the leading provider of technology solutions for digital radio. He was elected President of WorldDAB in November 2013. His role is to work with policymakers, regulators and industry players (including public and private broadcasters, network operators, device manufacturers, retailers and automotive manufacturers) to ensure that digital radio is successfully rolled out in as many territories as possible. Before joining Frontier Silicon, Patrick was a strategy consultant focused on broadcast and digital media. Previously, he held senior strategy and commercial roles at the BBC and BBC Worldwide.

Laurence Harrison, Technology and Market Development Director, Digital Radio UK
United Kingdom



Laurence Harrison is Technology and Market Development Director at Digital Radio UK (DRUK). His main responsibilities include working with the vehicle industry to ensure line-fit of digital radio and development of aftermarket equipment, managing the UK digital radio tick mark and minimum receiver specifications and working with manufacturers and retailers to help grow the market for digital radio. Laurence also manages the coordination of Digital Radio UK's public affairs activities and works on building partnerships with similar European national organisations. Prior to joining DRUK Laurence worked for the trade organisation techUK, representing radio manufacturers. Laurence was also a Director on the Board of Digital UK, the organisation that ran the digital TV switchover in the UK.



Michael Hawes, Chief Executive, Society of Motor Manufacturers and Traders Ltd
United Kingdom



Mike Hawes became SMMT Chief Executive on 2 September 2013. He has more than 20 years' experience in policy and public affairs, the majority of which has been spent in the motor industry. He joined SMMT from Bentley Motors where he held a number of PR, corporate and public affairs roles. Prior to that, he also worked for both Toyota and, more recently, Bentley's parent company, Volkswagen AG, where he developed the European and global knowledge needed for this challenging role.

Holger Hees, Head of Development Broadcast Radio, TV & Optical Media Drivers, Audi
Germany



Holger Hees received his diploma in electrical engineering from the Gesamthochschule Siegen in Germany. He started his career at Audi AG in 1998. He has held a number of different positions within the Infotainment department at Audi AG since 2001. In 2014 he was appointed to his current role as Head of Development Broadcast Radio, TV & Optical Media Drivers. He and his are team working on innovative solutions that enhance the driver experience in the area of radio, TV and media in the car.

Michael Hill, Managing Director, Radioplayer UK
United Kingdom



Michael Hill is Founder and Managing Director of UK Radioplayer Ltd, the non-profit joint venture created by the BBC and commercial radio to help develop simpler ways of listening to the radio. As well as a world-leading web Radioplayer, they have launched apps for mobiles and tablets which continue to innovate the radio experience. They now integrate with wearables, car systems and home audio products. Their latest projects are in the 'hybrid' space, combining broadcast radio with internet connectivity, on smartphones and in cars. The Radioplayer technology is licensed in six European countries, with more to come. In past lives, Michael has worked at Channel 4, managed BBC Radio 5live, led a strategic review of the BBC Asian Network, and produced Newsbeat on BBC Radio 1.

Graham Johnson, Business Development Manager, AutoDAB range of products, Connects2
United Kingdom



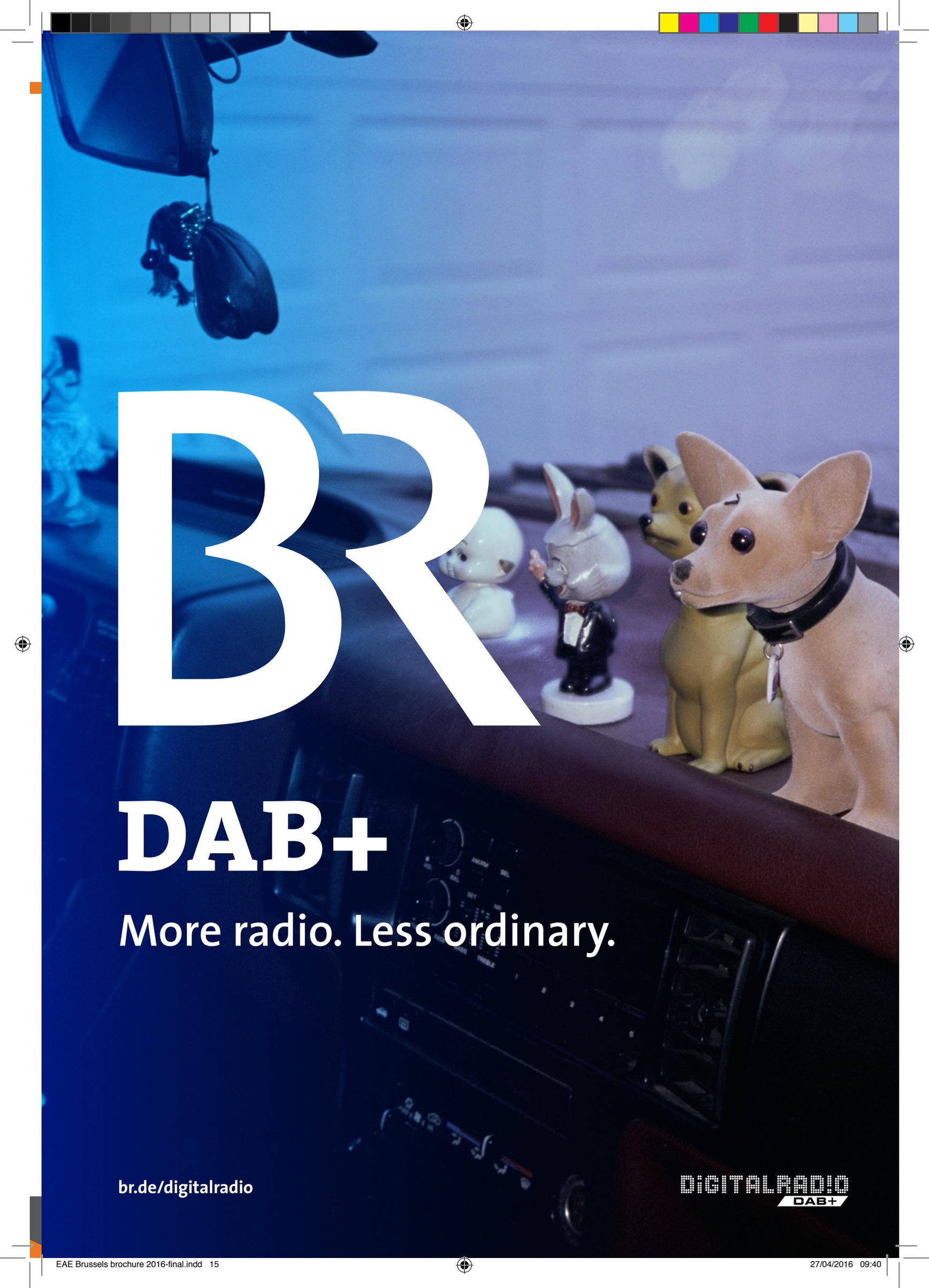
For the last 30 years, Graham's background has been in automotive audio starting in Alpine Electronics of the UK for their Japanese parent company in 1986 and was responsible for bringing one of the original DAB tuners to the UK market. Working closely with the Society of Motor Manufacturers and Traders (SMMT), Graham chaired first the Car Audio Committee, which became the Car Multi Media Committee and is now Chairman of the current Digital Radio Committee. This group advised the Carter report and then looked after the automotive work streams identified under the Digital Radio Action Plan (DRAP).

Lars Kierkegaard, Head of Strategy and Business Development, Teracom
Denmark



Lars has over 17 years' experience from working at companies such as Ericsson, Terma and Anritsu within the broadcast, telecommunications and public-safety industries. Today, Lars is head of the business innovation department in Teracom and is responsible for driving new growth initiatives including digital radio. He is also a board member of the Danish Consumer Electronics Association, advisory board member of CMI at Aalborg University and a board member of IEEE Danish Chapter. Finally, Lars is also external censor at the technical universities in Denmark. He holds a Master of Science degree in civil engineering from the Technical University of Denmark, a master's degree in mobile internet communication and a Graduate Certificate in Business Administration from Copenhagen Business School.





BR

DAB+

More radio. Less ordinary.

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DIGITALRADIO
DAB+



Frank Krüger, Director, Federal Ministry of Transport and Digital Infrastructure (BMVI)
Germany



Frank Krüger is head of the Directorate for Digital Society and Infrastructure at BMVI. After studying economics he worked as press desk officer at both the Federal Ministry of Post and Telecommunications, and from 1998 with the Federal Ministry of Economics. Since 1999, he has worked in the field of telecommunications, focusing on broadband policy from 2008. From 2005 to 2008, Mr Krüger represented Germany in Brussels in the fields of telecommunications and audio-visual media. He was appointed Head of Division for Broadband Policy in 2011 and in early 2014 he started working at BMVI.

Thomas Kusche, Senior Editor, Westdeutscher Rundfunk/ President of TISA
Germany



Thomas Kusche works as Senior Editor at Westdeutscher Rundfunk (WDR) in Cologne, Germany, where he is responsible for strategy and planning of traffic telematics. He also coordinates traffic telematics activities within ARD. Kusche represents public service broadcasters, e.g. within the German ITS Advisory Group. Furthermore, he is President of the Traveller Information and Services Association (TISA). He is member of the ITS Advisory Group of the European Commission. Kusche is also involved in the national DAB+ launch. His major interest is the success of TPEG services worldwide to guarantee an interoperable and multimodal standard for quality driven services.

Eugenio La Teana, Head of Research & Development, RTL 102.5 Hit Radio
Italy



Eugenio has dedicated his career to driving innovation in radio focusing on the deconstruction of the traditional ways of listening to radio. He played an active part in the creation of RTL 102.5 Hit Radio, which is recognised worldwide as the perfect way to bring the medium of radio to TV, without spoiling its essence. It also develops forms of interaction involving the audience in real time, often known as social radio. Eugenio is an expert in data services related to radio broadcast and is responsible for management of TMC on the analogue network and data services, including TPEG over the digital network. In addition to his role at 102.5 Hit Radio Eugenio is a member of the Italian taskforce "digitalradio.it" which is concerned with the promotion of digital radio in Italy. He has spoken at many international conferences, where he has shared his own experience and his personal vision of the future of radio.

Helwin Lesch, Head of Distribution and Controlling, Bayerischer Rundfunk
Germany



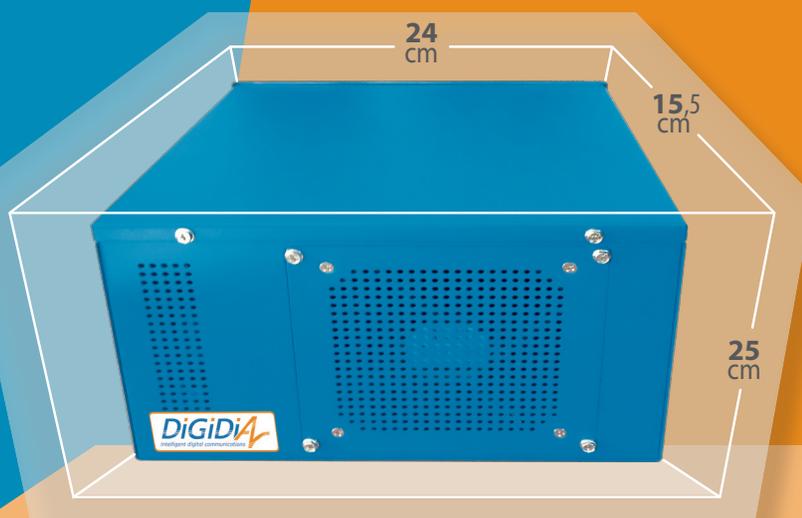
Helwin Lesch has more than 20 years' expertise in DAB+. Previous roles he has held at Bayerischer Rundfunk include Head of Planning (2012–2015), and Head of Programme Distribution (2002–2012). Prior to that he was Managing Director of Bayern Digital Radio (1998–2002), and Managing Director of Bayerische Medien Technik (bmt) Ltd (1994–2002). He is also currently a member of the special advisory councils for Bayerische Medien Technik (bmt) Ltd and for Bayern Digital Radio (BDR) Ltd.



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Save complete live DAB
ensembles into ETI or IQ files!

And also: Audio decoding (DAB, DAB+,DMB),
ETI Metrics, RF Metrics in Band III with display
of MER, CIR, spectrum, PAPR(Crest Factor)
and constellations, optional: SFN Monitoring
(CIR&TII with GPS temporal position)

Common Features:

SNMP (MIB V2), Web Server, NTP Server (optional) with GPS HW module

/// ABOUT DIGIDIA

DIGIDIA has emerged as one of the leading companies for digital radio transmission equipment with more than 300 digital radio equipments deployed all over the world in three technologies: Synchronous FM, DAB/DAB+/DMB (Eureka147) and DRM30/DRM+, all covered with with a broad and complete product line including multiplexers, content servers, modulators, IP gateways, monitoring equipment, professional receivers, encoders, decoders and

tunnel break-in products.

DIGIDIA leads the way with its straight forward design for innovative, compact and flexible products. All products are IP based and contain the latest COFDM and Software Defined Radio technology on state of the art PC and FPGA/DSP platforms. Recent projects include major digital radio deployments in France, India and South Africa.

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www.digidia.fr



Ian O'Neill, OBE, Head of Radio; Head of Television, Department for Culture, Media & Sport (DCMS)
United Kingdom



Ian O'Neill is currently Head of Radio and Television Policy at the Department for Culture, Media & Sport (DCMS). He was born in London and joined the UK Civil Service in 1992. Ian was a member of the UK Digital TV Switchover project in early 2003, leading on the socio-economic aspects of television switchover and later on the BBC's digital purposes for BBC's current Royal Charter. In 2008, Ian moved to the Government Olympic Executive (GOE) successfully delivering a number of unique projects for the 2012 Games and was awarded an OBE in December 2012 in recognition of his service. Ian rejoined the DCMS Media Team in February 2013, as Head of Radio and Television Policy and responsible for the UK's Digital Radio programme.

Andrea Pasqualotto, Market Development, FIAMM Antennas
Italy



Andrea Pasqualotto is in charge of the market development of DAB products for the Horns and Antennas division at FIAMM, a company working in the automotive industry since 1942. He also works as account manager for OE car makers and area manager aftermarket for horns. He has a master's degree in economics from the University of Verona.

Jarle Ruud, Marketing, Digitalradio Norway
Norway



Jarle Ruud has a background in consumer electronics, managing various product areas, including audio, small appliances, white goods and TV. Jarle worked with Norwegian retailers and subsequently, from Stockholm, he was responsible for the TV category for Panasonic covering all Nordic countries. Since 2008, Jarle has been responsible for marketing at Digitalradio Norway, setting up marketing activities with relevant partners in retail and the car sales industry.

Ronny Van Gerwen, Country Manager Belgium, JATO
Belgium



Ronny Van Gerwen is a senior sales manager with more than 20 years' automotive experience. He started in the auto leasing business (KBC Autolease & ALD Automotive) and moved via Fleet Insurance and Accident Management to the data business of the Car & Leasing industry at JATO. JATO was founded in 1984 and provides the world's most timely, accurate and up-to-date information on vehicle specifications and pricing, sales and registrations, news and incentives. The company has representation in over 40 countries, providing unique local market expertise. The JATO client base includes all of the world's volume vehicle manufacturers, leasing companies, DMS providers, web portals, etc.

Robbert Van Den Heuvel, Communications Manager, Fiat Chrysler Netherlands B.V.
The Netherlands



Robbert van den Heuvel has experience in both the automotive and radio sectors. As Communications Manager he is always searching for the optimal experience in all communication, in which radio has a very special position. Recently he won the award of "best radio commercial of 2015" for the Netherlands. This year he is also one of the judges for the nominations. Besides his job at Fiat Chrysler Automobiles, Robbert is active as a presenter of sport programmes for Omroep West & Den Haag FM.





Dave Volkaerts, Sales Manager SND, JVCKENWOOD
Belgium



Dave Volkaerts is currently in charge of the export sales for Southern and Northern Europe at JVCKENWOOD. He has previously held a number different functions in sales at Cisco, Belkin and ALSO. He is extremely passionate about everything digital and connected. The Internet of Things, Smart Cities and Connected Cars are more than just concepts for Dave. He loves to think about and discuss how technological innovations will change the way we live in the future. In his daily job, the focus is always on the added value or solution a product or technology can offer the end-customer.

Tom Vedvik, Marketing Manager, TT Micro
Norway



Tom started working for TT Micro in 2001. The company started out as a distributor of niche electronics and Tom has always had a passion for radio and the quality of the entertainment provided by the medium. In 2007, Tom created a radio module that could broadcast on FM-DAB and internet and created TT Micro's first radio product, Pinell Supersound, which was one of the bestselling radios in Norway for many years. TT Micro has sold more than 500,000 DAB radios in Norway. TT Micro now has five models on sale and are working on new models due to come out next year.

Jasper Wybrants, Senior Business Development Manager, Pure
United Kingdom



Jasper Wybrants is a highly motivated and committed individual with over 15 years' successful management of retail channels both in the UK and overseas. With a passion for automotive, Jasper has spent the last 5 years building Pure's market share within the industry, originally with the introduction of the Highway 300di in-car digital radio adapter in 2011. He has also been instrumental in building Pure's presence in the Nordics. Prior to this Jasper spent 5 years with Navteq, a major provider of GIS data and electronic navigation maps.

DAB/DAB+ DIGITAL RADIO AUTOMOTIVE | EUROPE AND ASIA PACIFIC

(year end 2015)

Across Europe, radio is moving to digital - auto manufacturers should provide digital radio as standard on all models in countries committing to a digital radio future.



Digital Switchover

Norway switches off FM in 2017; Switzerland in 2020-24. Denmark and Germany have started discussions on the future of FM, and the UK is planning for a digital future.

90%+ network coverage

in UK, Switzerland, Norway, Denmark, Germany and the Netherlands; coverage in Italy 70%.

80% New cars

sold in the UK have DAB as standard. 65% Switzerland, 63% Norway and 13% of drivers in Germany choose DAB - and rising.

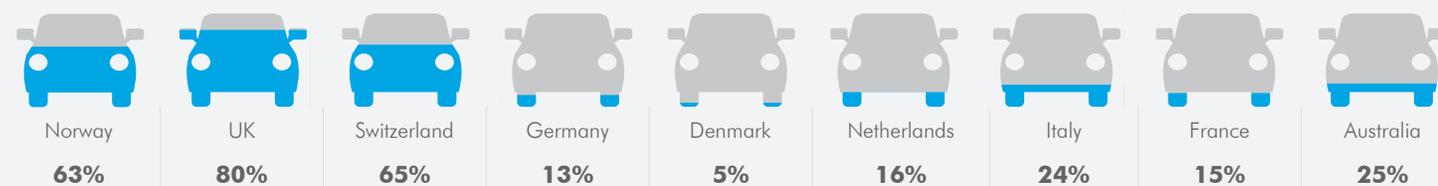
Developing markets

networks extended in France, Italy, Netherlands and Poland; DAB+ started in Flanders in 2015; trials started in Austria, Czech Republic, Turkey and Slovakia; a license for the first national DAB+ multiplex awarded in Slovenia in 2015.

Government policy support

Norway - DSO confirmed 2017 | United Kingdom - Government commitment to digital radio | Switzerland - DSO 2020-2024 | Denmark - DSO when 50% listening is digital, transition to DAB+ by end 2016 | Germany - committed to DAB+ | Netherlands - Fastest DAB+ growth with Gov. support | Italy - regulator frequencies planned for local DAB+ in 39 specific areas | France - 3 cities on air, a timetable announced for deployment of DAB+ across France (40 licences and local licences) | Australia - DAB+ in 5 metropolitan areas 65% pop. Regional planning started.

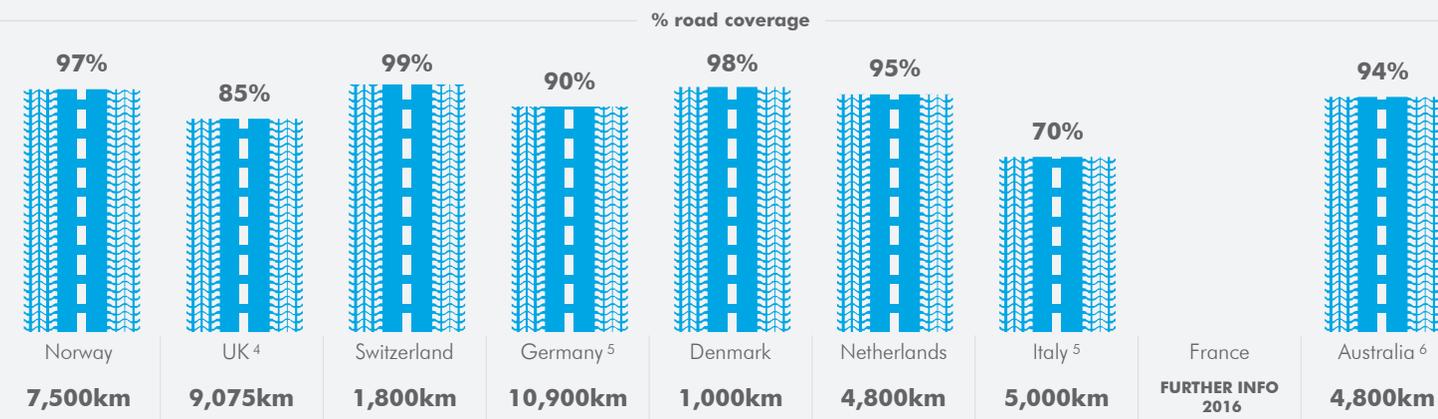
% NEW CARS WITH DAB/DAB+¹



¹ All figures standard fit except Germany and Italy which also includes cars with DAB+ taken as an option.

Sources: JATO Dynamics 2015 (Norway, Denmark, Netherlands, France), SMMT/CAP automotive Q4 2015 (UK), MCDT (Switzerland), DAT/VDA (Germany, data from interviews with new car buyers Apr - Jun 2015) (Germany), digitalradio.it estimate (Italy), Glass's Automotive Business Intelligence Sep 2015, Commercial Radio Australia (Australia)

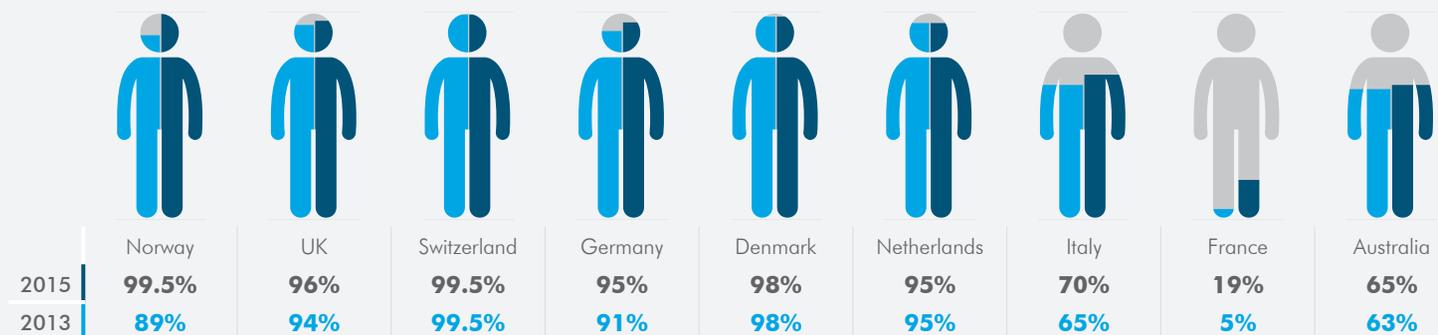
DAB/DAB+ 1st LEVEL ROAD COVERAGE *



Sources: Digitalradio Norge (Norway), Digital Radio UK (UK), MCDT (Switzerland), Media Broadcast (Germany), Teracom (Denmark), Digital Radio NL (Netherlands), WorldDAB (France), digitalradio.it (Italy), Commercial Radio Australia (Australia)

*KM 1st level road coverage (motorways, autobahns, autostrade, autostradas, autoroutes). However most countries also have equivalent coverage on 2nd level routes. ⁴ BBC National | ⁵ National mux only, regional muxes provide further coverage. | ⁶ Road coverage of DAB+ area covered in five metropolitan capital cities

TOTAL DAB/DAB+ NETWORK COVERAGE (% OF POPULATION) 2013 VS 2015



Sources: Digitalradio Norge (Norway), Digital Radio UK (UK), MCDT (Switzerland), WDR (Germany), Media Broadcast (Germany), Teracom (Denmark), Digital Radio NL (Netherlands), digitalradio.it (Italy), TDF (France), Commercial Radio Australia (Australia)

DIGITAL RADIO MARKETING BODIES

Norway - radio.no | United Kingdom - getdigitalradio.com | Switzerland - digitalradio.ch | Denmark - digitalradio.dk | Germany - digitalradio.de | Italy - digitalradio.it | Netherlands - digitalradio.nl | France - Alliance for Digital Radio | Australia - digitalradioplus.com.au

DAB-XPlorer - DABRF

DAB test receiver with integrated modulator

- ▶ Test receiver and modulator rolled into one
- ▶ RF recording with 1.6 MHz bandwidth
- ▶ Can be combined with software components of the DAB-XPlorer family
- ▶ COFDM modulator for simultaneous generation of up to four DAB blocks
- ▶ GPS receiver integrated
- ▶ GByte Ethernet interface



MAGIC TBR - DAB Tunnel Break-in Rebroadcast System

- ▶ Receiver/Demodulator
- ▶ Modulator output
- ▶ Replacement of all subchannels in case of emergencies
- ▶ DLS, Slideshow and prepared announcements
- ▶ Optional break-in via VoIP

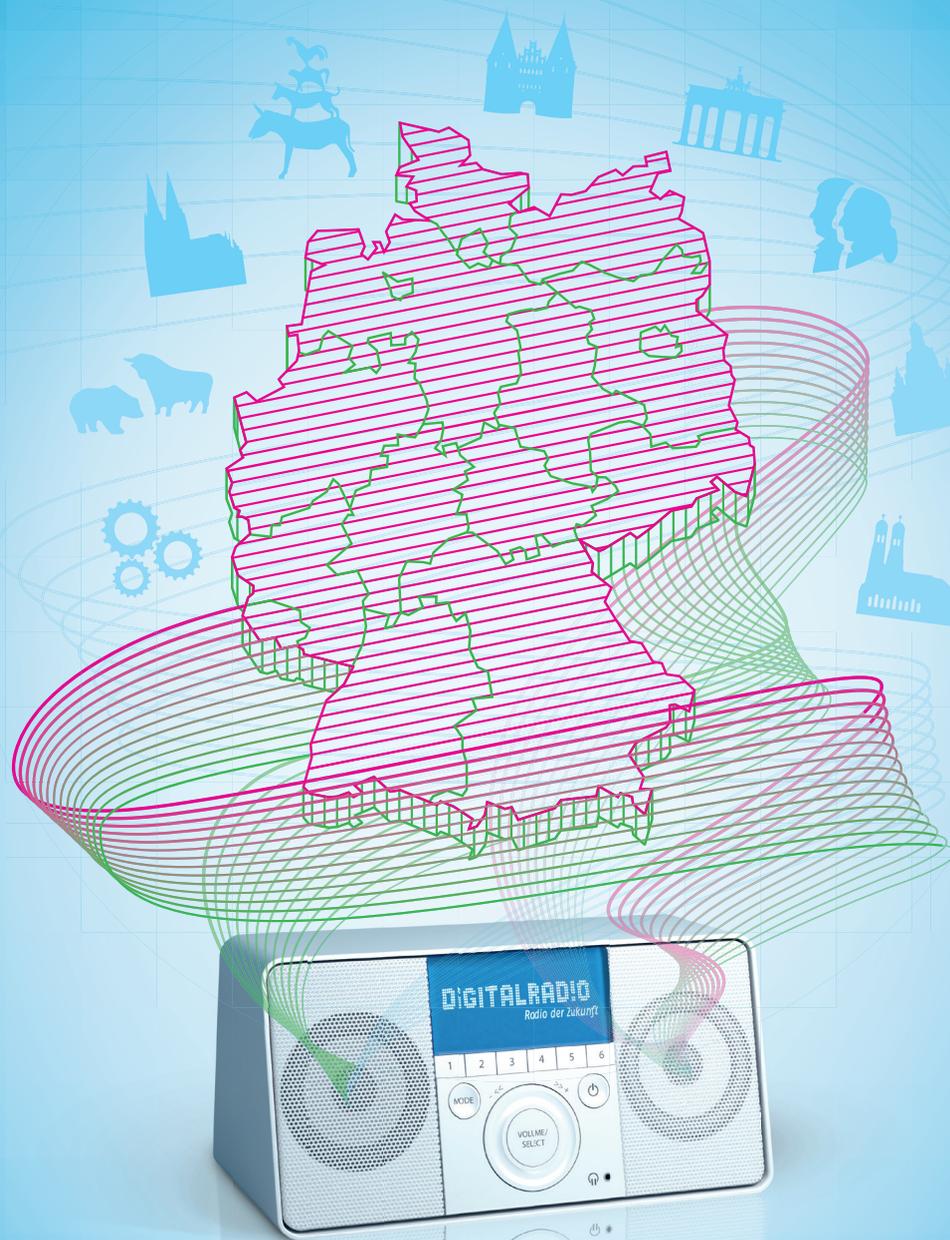


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...digital radio on the move



Seamless DAB Integration



AutoDAB interfaces allow plug and play Digital Radio integration with your OEM head unit. Digital Radio can be controlled directly from the steering wheel controls or via the RF remote control.

Features

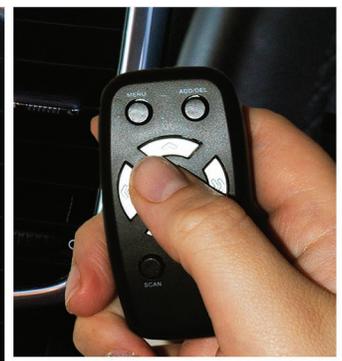
- o Plug and Play installation
- o Stores favourite stations
- o 100's of new radio stations
- o No box on view
- o No wires on view
- o Fully integrated
- o Maintains FM stations
- o Controlled from Steering wheel controls
- o Uses car's current display
- o Voice prompt menu system
- o Displays: radio text, song & artist information



DAB functions are controllable from the steering wheel control



DAB station name transmitted via RDS text



RF Remote



GO

The **AutoDAB GO** DAB receiver is a Universal Digital Radio receiver and display with integrated Bluetooth features. With compatibility across all vehicles the AutoDAB GO is the quick, easy, simple solution to get Digital Radio in your vehicle.

Features: Listen to unique stations in Digital Audio via 3.5mm Aux out, automatic tuning and selection by station name, effortlessly stream music via Bluetooth.



FM

AUTODAB FM is an in-car audio adapter which upgrades your existing FM radio system to receive DAB and DAB+ digital radio services. With its inbuilt FM-RDS micro-transmitter, the AutoDAB FM interface receives DAB wirelessly and eliminates the need for complex wiring, making installation as simple as it should be.

Available Q2 2016



SMARTDAB

The **SMARTDAB** connects to your smartphone to give Digital Radio in any car. It is a plug and play solution that you can fit yourself in minutes. The station logo, name, song and artist information is displayed on your phone. Digital music is played through your car stereo system via the 3.5 mm jack, FM or Bluetooth. Slide-show images are also displayed if transmitted by the radio station.

AutoDAB Partners



DAB DAB+

www.AUTODAB.COM
Contact sales for more information: +44 (0) 121 522 5588

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With over 90 members, including 24 of the world's leading automotive brands, WorldDAB facilitates the implementation of broadcast radio based on the DAB family of standards.

DAB+



Member benefits include:

- Access to technical best practice
- Exclusive market reports on DAB deployments
- Support on regulatory and spectrum issues
- Access to industry intelligence
- Exhibition speaking and attendance offers
- Networking opportunities
- Global contact database
- Support with testing and trials
- The chance to shape the future of the industry



t +44 (0) 20 7010 0744 e projectoffice@worlddab.org w www.worlddab.org

Registered office:
c/o EBU CH-1218 Grand-Saconnex GE Switzerland



WorldDAB is the global industry forum responsible for defining and promoting DAB and DAB+.

Bringing together radio industry professionals, WorldDAB provides knowledge and expertise to help successfully adopt and implement broadcast digital radio.



We represent the industry

Our members span 27 countries across the globe and include public and commercial broadcasters, regulators, network providers and manufacturers of receivers, chips, professional equipment and automobiles.

We define and promote DAB digital radio

Our task forces feature a global network of experts who define, maintain and augment DAB standards. WorldDAB also has a dedicated team to support with information and sharing best practice.



We share knowledge and best practice

We organise events, conferences, workshops and seminars to share the latest news and best practice – alongside networking opportunities. Our events are attended by a broad range of people and industries, from regulators, public and commercial radio and OEMs.



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Registered office:
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— NOTES —





– NOTES –



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