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# TOTAL REMOTE

radio - digital audio

2020

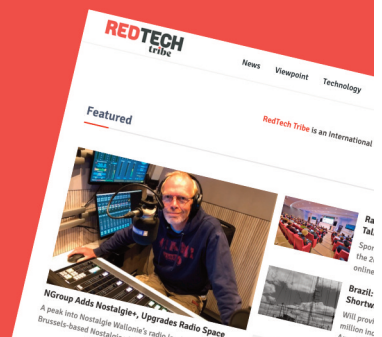


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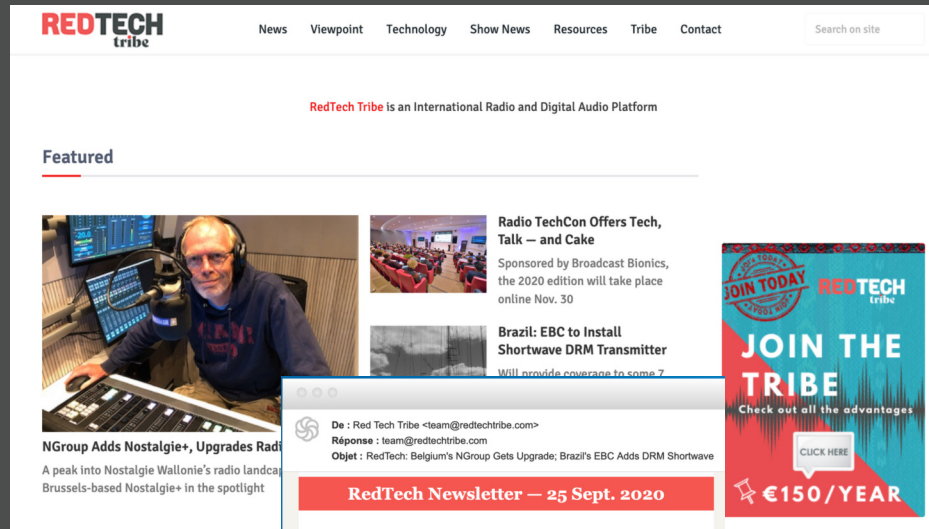


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# RED TECH

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Editorial



# THE PULL OF OUTSIDE BROADCASTING

By Brulhatour @Brulhatour

*To be heard, you have to be seen! Beyond the simple shopfront of your studios, leading out onto what is inevitably a very busy thoroughfare, today's radio, and even more so that of tomorrow, has everything to gain from showing its face and jostling for place in the world outside. The tools now available allow you to do so with ever greater ease, and ever more effectively*

Any opportunity to step outside the studio is worth taking, and the more visible you make yourself, the closer the relationship between your station and its listeners grows. Break free of confinement to premises as often as possible to strengthen this vital connection. There are many opportunities at all times: a journalist on a motor scooter making a regular traffic report, on-location reporting from a sports or cultural event, or perhaps even thinking about creating a temporary studio in an extraordinary location. Every conceivable method of getting out there to meet your listeners is now technically possible, with or without face mask. The days of travelling about with heavy consoles, unrolling endless lengths of cable or having to

set up a power supply are over... The lockdown introduced in Spring proved that radio still had further reserves to draw on. It demonstrated its ability to react very rapidly without needing to heft about a lot of heavy technical equipment. Thanks to the expertise of the constructors, you can now broadcast from (almost) anywhere. Radio has become particularly nimble compared to the behemoths of the web that you will only very rarely find out on a street corner. This is the strength of radio – a strength multiplied tenfold when it's a matter of responding to a crisis: radio show hosts, commentators, journalists, technical staff – everyone rose to the challenge of maintaining the continuity of programmes.

Lessons need to be learnt from this difficult and unexpected period. We should applaud the manufacturers, the integrators, the suppliers of goods and services, who have formed the foundation stones of this response: teleworking. Many radio professionals are continuing to maintain the continuity of programmes from their home and you might even say that this period has proved to be quite inspiring to many of us. This is also the goal of this "Total Remote" special edition, which aims to highlight and collect together the tools for ensuring that radio, whether broadcast from home or on location, will always be seen as a responsive and trustworthy section of the media. •

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Advertorial

# PROGRAMMING TRICKS

## THE WINMEDIA SUITE



By Emmanuelle Pautler  @EmmanuellePautl



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The Fréquence K studio,  
with WinMedia suite  
© Fréquence K

**Fréquence K, the Côte d'Azur-based local community radio founded in the 1980s by Father Jean Blondin, its current station manager and editor-in-chief, has met with an enthusiastic reception from the region's youth audience since the beginning. Fréquence K's adoption of the WinMedia automated broadcast system, in 2018, has proved to be one of its great assets.**

"It's completely changed the way we work", says José Garcia, the volunteer head of music programming, entertainment and airtime. "There are two of us keeping the radio running seven days a week, assisted by a small team. I cover the morning show from Monday to Friday and Father Blondin covers it during the weekend. Thanks to broadcast automation using the WinMedia software suite, the coronavirus lockdown period didn't restrict our operation at all, because we were already carrying out programming and voice tracking from home, without listeners even being aware of it. This allowed me to do live testing from home by remote control: the WinMedia system helped me to insert my remarks and contributions live, while the playlist was based at the studio, and all with imperceptible latency. I didn't go into the studio for a month, while remaining linked to the equipment."

### INTUITIVENESS AND RECORDING DIRECTLY ON WINMEDIA

"We wanted to be able to do remote voice tracking, but keep the feel of live radio: to respond to remarks broadcast during a show or a news bulletin, to speak over an intro and so on. With this very intuitive system we can achieve a more than satisfactory result with just a small mixing console, a PC and a mic at my home, linked to our usual studio setup. I listen to the end of the scheduled audio segment and the beginning of the next one, and I record my

voice onto it – all from home, in high-quality sound and with zero latency", adds José Garcia. For a Category A station with few resources, like Fréquence K, WinMedia offers great potential for working remotely: "On an everyday basis, voice tracks are recorded remotely directly onto the studio's WinMedia programming system, without going through an FTP server. It's really just as if we were in the studio. To achieve this, we paired WinMedia with tools that are accessible for a community radio, such as VoiceMeeter virtual sound cards, Cleanfeed, a user-friendly IP codec, to which we connect just using a browser, and, of course, a remote office solution such as Teamviewer or Anydesk."

"Featuring quality broadcasting for our listeners, a bank of programmes and WinMedia, all of this speaks to our commitment to professionalism and our frame of mind, with music programming incorporating different genres - groove, soul, electro - and quirky, humorous branding. We have a loyal audience and many listeners identify with what we're doing and message us on social media", says José Garcia.

### 24-HOUR AIRTIME WITH NO BROADCAST TIME LAG

An additional advantage for Fréquence K is that "WinMedia is a system that we don't have to be constantly adjusting: the top of the hour news bulletins from the A2PRL news agency,

with which we have a contract, can vary in length by a few seconds; WinMedia adjusts the broadcast speed in real time so that our programme times really do come to 60 minutes, with split-second accuracy."

According to José Garcia, a resident of Nice - with the radio station located inland, in the village of Carros - WinMedia's Total Remote suite, helps him to save time and improve efficiency: "I'm doing nearly everything from home, I record my daily programme at home using the planning tool, [the broadcast runs true to plan] and you know down to the last second what time the segment you have just planned will be broadcast. I also appreciate the live-assist tools during programmes that I host live from the studio, with precise information displayed on-screen on the time remaining for the track that's currently broadcasting, other related information, the option for instant access to a stored sound segment and to the cartstack that we use with a touchscreen. This all helps free us from technical constraints so that we can focus on the creativity of our programmes and offer our listeners a seamless schedule that is as precise as possible, with a constant commitment to a professional service."



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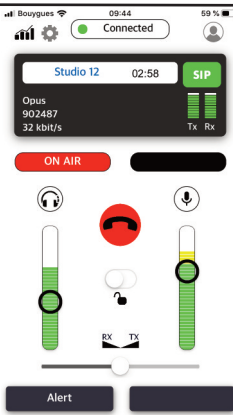
[winmedia.org](http://winmedia.org)

YouTube  LIVE



Advertorial

# CREATING ROVING RADIO THAT'S STUDIO QUALITY



By Sébastien Chauveau @SChauveau44



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The eScoopfone is a mobile app for radio outside broadcasting /Photo AETA

**"The really difficult part is guaranteeing the quality of connections, rather than implementing solutions."**

**Yann Vonarburg**

*Has mobile broadcasting conquered the world of radio? Demand has never been so high, if we're to believe the manufacturers of dedicated equipment and solutions. Here we review the prospects in the sphere of remote working.*

Never before have we heard so much about remote working, or teleworking. The period we have just gone through has without a doubt overturned old habits. Lockdown has compelled businesses to rethink their working practices. Radio is no exception. Studios too have "relocated" to people's homes. Who would have thought it? Today we can create roving radio in the same way as in the studio – or almost. All of the big radio stations have set about doing it. Companies like AETA have been able to overcome the technical constraints to be able to give audiences a good listening experience. For a long time the Scoopy codecs were the go-to tool for reporters and commentators, but AETA has developed other products and solutions making it possible to deliver radio content from outside the studio. The Scoopy product range now includes ScoopFone HD, ScoopFone 4G and ScoopTeam. There is a tool for every occasion, whether there is just one person at the mic or several.

## MULTINETWORKS THAT ARE STILL HIGHLY CONNECTED

"These are devices similar to dedicated broadcast phones", AETA managing director Yann Vonarburg explains. "Depending on the model, they are equipped with one or several

inputs (for headphones, XLR mics and line inputs) and more advanced or simpler mixing features", he notes. Whether the model is the ScoopFone, Scoopy or ScoopTeam, most can be connected to the ISDN network. With the exception of the ScoopFone HD, the other models can be connected to the 4G network, Wifi and via a box to the ADSL network. That's the hardware. In terms of software, companies like AETA have developed apps that allow you both to broadcast radio content from a remote location - as with the eScoopFone – and to work with equipment to hand, as with the Remote Access app. A technician can control the mic levels remotely, as well as sound quality and transmission quality.

## SECURE LINE PRIORITY

"The real issue is guaranteeing the reliability and quality of the connections rather than implementing solutions", the AETA managing director explains, particularly where IP connections are concerned. "That's why we are putting in place, amongst other measures, double streaming, bonding and packet replication, to ensure that the connections are stable. This allows for high quality audio contributions up to 20 kHz bandwidth, with artifact-free audio, compared to 7 kHz for voice alone, using the telephone lines." Despite all the technical accomplishments, roving radio

still lacks the immediacy of the studio shows. Some latency issues still persist, even though they are increasingly being fixed with the latest algorithms, like those developed by OPUS. These are some of the issues that can hamper the use of radio remote working. We can hope that the cost of solutions has become more accessible. A company such as AETA offers a range of broad solutions – from the eScoopFone, at an annual cost of 35 euros, to the ScoopFone HD, at 700 euros net of tax, to the ScoopTeam, at around 4,000 euros before tax. Roving radio is becoming ever less the preserve of the big broadcasters.

## FOOTNOTE

The eScoopFone app works on Android and iOS. Depending on the type of connection - 4G or Wifi – it makes it possible to transmit audio quality up to 20 kHz bandwidth. Like any mobile phone app, the eScoopFone is limited by characteristics inherent to each smartphone. This is how roving radio works: once the feed has been established it is sent to the studio. It is then processed in the same way as if it were produced on the spot, with a constant focus on the stability of the connection and reducing latency.



Broadcasting

# JEAN RESSÉGUIÉ : ALL-ROUND FOOTBALL COMMENTATOR



By Olivier Malcurat [@oliviermalcurat](https://twitter.com/oliviermalcurat)



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Jean Ressayguie, now 57, has been RMC's "Mr Football" since 1987  
© D.R.

*Jano Ressayguie has football in his blood. From the Coupe de France to international competitions on the other side of the world, the RMC commentator has already notched up more than 1,600 broadcasts and has seen a constant process of technical changes and developments, although some of them appear to be completely obsolete now!*

## We sometimes find ourselves in unlikely situations, but that's the magic of radio!

The hallmark of the sports commentator is roaming from stadium to stadium. Sometimes it all goes well, but as not everything always works out right, the job also deals out some surprises. When he was starting out, in Monaco, in 1987, Jean Ressayguie went on air with his Nagra reel-to-reel recorder! "We connected up using four leads", he recalls. "It was a small box that was linked up to France Telecom's repeater. Two leads were used to send the signal and the other two to receive the return signal. The Nagra, headphones and a microphone were linked up to it. At the time we had a technician who handled all that." This method, which might seem to belong to another era, proved itself once again during the 2002 World Cup. "We were in the remotest depths of Japan, where the French team were preparing themselves. We managed to send the sound by detaching the microphone from the telephone handset to connect up the two leads."

In the stadiums, the four leads were later replaced by the Eela Audio Reportophone, which was plugged into a standard phone socket. This made it possible to call in by entering a number on a keypad.

### THE DIGITAL ERA

The mid 1990s saw the arrival of France Telecom's Numéris ISDN line, which was to update transmissions. "Digital technology delivered very good 7-kb sound quality, but it took away a little bit of the magic element of radio with that nasal quality," notes Ressayguie, who

was working with former professional footballer turned sports journalist Jean-Michel Larqué for ten years. "The first device we used was the Acamas Repac codec. RMC's technical department had the use of ISDN lines in all the stadiums and we connected up using an RJ45 ethernet jack. Since that time, the principle of connection hasn't altered; it's the equipment that has changed." In the late '90s, Nagra launched its first digital device. "We went from scissors and Sellotape to editing controls]", muses Ressayguie, contemplating the old equipment he has kept at his home, like a sportsman admiring his trophies. "We moved on from the Repac to the Scoopy codec (AETA Audio Systems). With the blue Scoopy we could broadcast via ISDN or using an RJ11 jack plugged into a standard telephone socket. We now had 15-Kb sound quality. Then came the black Scoopy, featuring a 3G or 4G chip, giving us complete freedom to report live on air."

### THE IP REVOLUTION

"Today, our use of ISDN is increasingly giving way to IP," notes Jean Ressayguie. "During the World Cup in Brazil in 2014, we couldn't use anything but IP, as the ISDN wasn't very good. We have 4G routers, which we use to connect the Scoopy to the IP network. This saved the day for me in Nancy, when nothing was working during the Saint-Étienne/Épinal match. During lockdown too: my Scoopy was plugged in in my booth, with no need for an ISDN line, like before." The IP era is nevertheless a source of anxiety for sports

commentators. "It's not a cause for concern in France or in Europe generally, but we were recently in Bulgaria, Azerbaijan, Moldavia, Armenia and Belorussia with the French team, and there you need to secure a reliable connection! There's this fear that it's not going to function correctly." In addition to such technical issues, sports commentators must also spend time on editorial and statistical preparation for their retransmissions, because unlike the players on the field, their work doesn't end after the final whistle is blown. •

### HIS WORST MEMORY

With 33 years in the job under his belt, Jano Ressayguie has encountered some funny situations. He remembers a particular match in Poland, at a brand-new stadium in Warsaw. "The ISDN never worked, nor the IP. We were starting work for TV. The outside broadcast unit manager set us up with a satellite link. We needed to use a cable that we didn't have, which we had to borrow from somewhere, and the satellite dish was attached using sticky tape... The whole thing was a complete nightmare, but it worked. With radio, you can get on air from just about anywhere. In the future, we'll have just a little box with a dish to connect to the satellite. That kind of thing already exists, but it will become widespread." •



Action

# THE POSITIVES OF REMOTE WORKING



By Brulhatour  @Brulhatour

*Teleworking has friends and detractors. However, it seems to be gradually taking hold even in the world of radio, as here with Isabelle Millet from Europe 1 during the french lockdown.*

**"You don't have to live like a hermit, cut off from civilisation, just because you're a remote worker."**

*Are you ready to take the great leap? Whether it's just for the time being, or for the long term, remote working seems to be gaining acceptance. The health crisis has shown that radio professionals have managed to adapt rapidly – as long as they have the right tools and, above all, the right frame of mind.*

### The thinking

Left alone, with just yourself for company, remote working always means solitude. There can be no constructive competition: everything rests on your own expertise and your own motivation. To paraphrase French novelist Michel Déon, it might easily be argued that remote working is not an easy option. It demands commitment, isolation, focus, curiosity, a particular mindset. What can be achieved in a fraction of a second with the support of colleagues often takes longer when you are alone in front of your screen...

### The location

Almost always at home – and this is another of the problems of remote working: maintaining the boundaries between professional life and family life. It's difficult to partition these two areas over the short term. For those who are unable to do this, coworking spaces may provide a solution. It is, however, an absolute must to have an office outside your home, often in the garden, so that you can recreate a demarcated work space there.

### The ergonomics

It's impossible to work on a corner of the kitchen table or slumped on your sofa. A dedicated room is the minimum requirement, a room hermetically sealed to keep out noise pollution from outside. You would also want to prioritise the comfort of your new space: the seating; the work surface; storage and

filing capacity close to hand. It's an inexpensive but essential investment, particularly if teleworking is to continue for a long period of time. In other words, it should be a well-thought-out space for remote working.

### The tools

A PC that is solely and exclusively dedicated to recordings. This is the rule. The computer runs only one type of software: the one that allows you to record and edit your contributions. You can rapidly set up a studio with an SM7, a swivel arm, a DBX and a sound card. Then, in addition to this, you can invest in a second PC dedicated solely to the sending and receiving of your files, and your internet research. Prioritise backup of your files, and with an internet connection or 4G dongle it's now possible to work remotely, even from the most isolated rural areas...

### The relationship perspective

You don't have to live like a hermit, cut off from civilisation, just because you're a teleworker. Remote working offers an opportunity to save time and so restore your work-life balance. Give yourself one day a week for keeping in contact with your clients and your company, to feel out current trends and ascertain people's frame of mind – because nothing can replace a handshake or a face-to-face conversation.

### Freedom

If possible, you can ask your employer if you can work remotely one or several days a week, assuming you can be provided with the necessary tools. If you take the decision to leave the protected world of the employee behind, you will gain in freedom, but lose a degree of efficiency. Whether it's a permanent or a temporary move, it will mean constantly looking your responsibilities and your choices right in the face. •

**WITH SEVERAL,  
IT'S EVEN BETTER**

There are many tools for collaborative working that are now easily accessible. Google Drive and Trello, for monitoring ongoing projects, Dropbox for storage, Zoom or Teams for videoconferencing and iMessage or Whatsapp for chat. If possible, do think about buying these tools rather than just going for a free single-use option, which often turns out to be very limited in scope. And so that you don't needlessly waste time, always keep a non-digital file/paper version of all your access codes and passwords handy. A good teleworker is first and foremost a well organised worker! •



## Programming

# VOICE TRACKERS : REMOTE WORKING HOLDS NO FEAR FOR THEM!



By Olivier Malcurat [@oliviermalcurat](https://twitter.com/oliviermalcurat)

**"What we deliver must be just as if not better than what the radios use."**  
**Jihem**

Julie Keukelaere et Jean-Marc Meis They don't know each other but they host shows on the same radio stations. © D.R.

**They even chose it of their own free will: after putting in their time in radio station studios, they now have their own, at home. Every day they work as programme hosts for several radio stations, with joint interviews by Julie Keukelaere, operating from France's Nord department and Jean-Marc Meis, aka Jihem, working in exile in Quebec.**

## LLP - How do you become a voice track host?

**Jean-Marc Meis** - Firstly, by being a radio presenter. It would be difficult to do this work without being able to tick the live studio host box. In fact, working as a voice tracker you always have to convey the impression that you are "really" there and that would seem to me to be impossible without having experienced it from the inside. I have also served as a station manager, working with studio hosts and voice track hosts. Having experienced life on the other side of the fence, this gives me a clear insight into what a station manager might be expecting in terms of adaptability and quality of the finished product.

**Julie Keukelaere** - I started out in radio at 15 and attended Studec (French Studio School) at 17, but the period that followed was very difficult: "too young", "not experienced enough", they said. I continued with my studies in marketing and communication. In 2011, my father was dying. I was asked to be voice track host for a daily show on Tropik FM, on St Barts. That's how I started out, with very little equipment, recording even on the day of my father's funeral, because I didn't want to let this opportunity slip through my fingers. I loved voice tracking right from the start, as I was shy. I felt much more at ease than in the studio, surrounded by people, where I tended to become flustered.

## LLP - What are the restrictions, demands, advantages, etc of remote working on a daily basis?

**JK** - You have to be thorough and accurately assess your workload, because some days everything will go well and on others the recording time will take much longer. You have

to operate in live broadcast conditions and really adapt your method of presenting to match the radios you're working with. You have to keep well informed, seek out news that sparkles and really forge a relationship with listeners. Voice tracking is magic too, because you have complete control over your work hours! And you can be much more effective.

**JMM** - Teleworking demands great organisational discipline to ensure that you don't overextend yourself and that you remain effective. It also means spending more time keeping yourself informed about what's happening in France. The great advantage of teleworking is being able to organise yourself as you wish and, for example, to devote more time to your family. With zero commuting time, this means a time saving of many hours every year.

## LLP - How does your typical day look?

**JMM** - I wake up at 5am. I'm still a morning person! There is news gathering and capturing audio sound to illustrate the news, Then recordings, "live" reports, such as traffic news, and audience participation in game shows. I work until early or mid-afternoon. I prefer to begin early and finish early. This allows me to be more in tune with my clients' hours (with a six-hour time difference).

**JK** - I don't necessarily have a typical day, apart from Thursday, when I spend at least 8 hours in the studio. A voice track career has allowed me to benefit from flexible working hours and to be able to incorporate other work activities, I can work early in the morning or late at night. Every week will be different and that's very important for me.

## LLP - Do you have to be self-disciplined?

**JMM** - Yes, of course, because working for several radio stations, you put yourself in the position of having to manage a number of deadlines. You also need to be disciplined in researching topics if you don't want to be going round in circles and you should always have relevant contributions to make in terms of each radio station's goals.

**JK** - There's a risk of ending up on a work conveyor belt. You have to listen regularly to how things turn out on the radio to see if it really feels as though you're going out live. You always need to keep well informed, keep smiling and be aware that people are listening to you... And above all, have a blast!

## LLP - What is the voice tracker's toolkit?

**JK** - Good internet sites for little snippets of news, a smile in any situation, a calm approach and good equipment, to create good vibes.

## LLP - What equipment do you use?

**JK** - I have a converted soundproof room. A Shure SM7b super cardioid mic, boosted by a professional DBX 286S preamp. A Behringer console with 24-bit multi-FX processor. A computer with recording software and two 24" screens.

**JMM** - My studio is in a WhisperRoom double-wall sound-isolation booth. I use two mics, depending on requirements – a Neumann BCM104 and an Audio-Technica BP40. They are boosted by a preamp, with digital sound processing from Symetrix. The whole thing is connected to an Allen & Heath XB14 console and a Focusrite Scarlett 8i6 sound card. A computer with recording cartridges and software, and two 24" screens. •

# THE SMARTPHONE, NOT QUITE A STUDIO IN YOUR POCKET - YET



By Sébastien Chauveau  @SChauveau44

**"they don't have good preamps, good audio converters, or good lenses..." nicolas dubois**

*There comes a point when mobile phones are no longer for making phone calls. They have become smartphones – so smart that they can "do almost anything". Has phoning with these devices almost become anecdotal?*

Every corporation has its apps and the world of broadcasting is no exception. You can now go off filming and leave your laptop, your shoulder-mounted or handheld camera and your Nagra at home. The smartphone will do the job by itself. "Up to a certain point," warns Nicolas Dubois, sound designer and editor of the Sound-fishing.net internet site.

There are a multitude of apps for capturing images and sound, for editing and mixing, using either iOS or Android. All of these apps, which might be described as "work-oriented apps", generally do what they're asked to do - as long as additional equipment is used with them, such as filters, lighting, lenses, mics, etc. Then you can claim to do a decent job with them.



Nicolas Dubois/Photo SFB

*"The problem is that smartphones – whichever ones you use - are neither professional recording equipment nor professional quality cameras", Nicolas Dubois notes. "This means that they don't have good preamps, good audio converters or good lenses. This is the biggest obstacle to producing high quality content with these tools." Duly noted! "The fact that you can't connect phantom powered mics to*

*smartphones unless you attach external equipment to them, is a further constraint", he adds, "but good mics are often powered this way".*

## BENCHMARK BRANDS

There are apps that are faring well, such as Filmic Pro, Luma fusion, Open Camera, Kinemaster and Adobe Rush, which are benchmark brands in capturing images and video editing by mobile phone. "Although this doesn't mean that they aren't often still lacking in sharpness and generating digital noise", our sound designer emphasises. "If you ever want to broadcast on a big screen in HD sound, you have to forget about smartphones", Nicolas Dubois argues. "There are short films and web series that are filmed and edited using these apps. Even TV stations are doing it. It's not unusual to come across reporters covering events using their smartphone. "For this type of filming it works out fine, but if you ever want to broadcast on a big screen with HD sound, you have to forget about smartphones," Nicolas Dubois believes.

## PLUSIEURS FEATURES VARIOUS

On the audio side, you can rely on apps such as Just Press Record, You Record Pro, MetaRecorder or Hindenburg. There are also plenty of others. These apps, intended for broadcasting, generally include recording, editing and mixing functions. "Speaking for

*myself, I don't ever record or edit sound using these tools. It seems to me to be hard to do high calibre work in this way – only troubleshooting or delivery that doesn't require uncompressed sound,"* notes the sound designer.

As with video apps, audio apps enable you to send contributions via different channels - social media, FTP, email, Dropbox - but unlike these methods of transfer, they are on the whole still not user-friendly. The fact that that you come across more roving video makers than broadcasters evidence of this. "Efforts focused on image by smartphones is much greater than their focus on sound," says Nicolas Dubois with regret.

So the studio in your pocket is not a concept for the immediate future. For the time being it's more like making do with a Swiss army knife. •

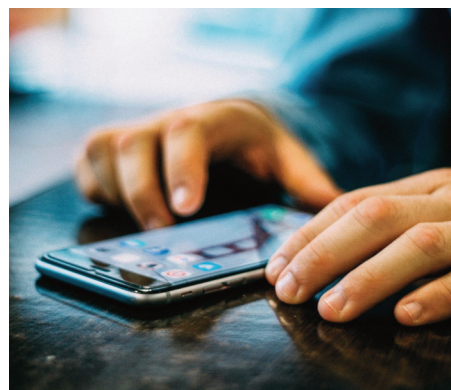
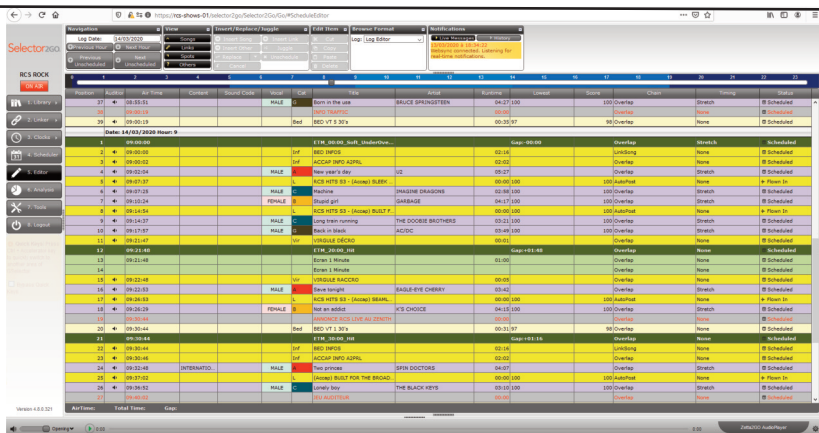


Photo © Nicolas Chauveau  
You find more professional apps for iOS than for Android



Advertorial

# RCS EUROPE : IDEAL REMOTE CONTROL SOLUTIONS



By Brulhatour @Brulhatour

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Tél. : 01 78 14 27 37

[www.rcseurope.fr](http://www.rcseurope.fr)



The technological direction taken by publisher RCS - the world's biggest provider of music scheduling and broadcast software for radio - has been fully validated during lockdown. From its RCS2GO software suite, to its Revma streaming service, to Zetta Cloud broadcasting, RCS offers radio stations a large number of options for continuing to design their schedule on a daily basis while working from home. and to be able to put out their programmes using broadcast automation.

**"Zetta2GO allows me to record my segments in live-show conditions. You can't tell the difference any more between a voice track recorded by Zetta2GO and a live VT" – voice tracker Romuald**

Each RCS software suite product has its own RCS2GO mobile-friendly web companion version, in the form of secure web pages offering the same options as in the studio. While the GSelector music scheduler now has its go-anywhere version, with Selector2GO, the amazing Zetta2GO payout system means that studios equipped with Zetta are freed from confinement to premises.

Zetta2GO, which is already a standard tool for voice trackers, makes it possible, amongst other things, to record whole sections of a programme from anywhere. "Zetta2GO allows me to record my segments in live-show conditions. You can't tell the difference any more between a voice track recorded using Zetta2GO and a live VT", says Romuald, a radio show host working at Maxi L'air. Its user friendliness and its intuitive interface are benefits highlighted by its users.

managers have extensively shared their varied experiences of lockdown via social media, using RCS2GO – from their kitchen, their living room, their bedroom, their garden and, in some cases, their swimming pool!

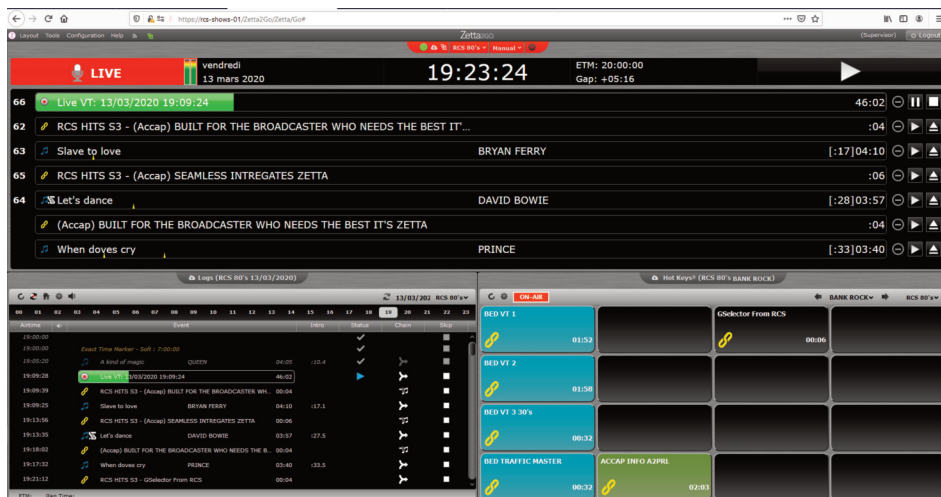
### ZETTA CLOUD : COMPLETELY CLOUD-BASED BROADCASTING

Finally, RCS is currently focussing all its efforts on the Cloud and is counting on winning general approval for its fully-remote broadcast

automation in the near future. At this time, RCS is the only software publisher offering a robust service hosted by Amazon Web Services, with a completely re-written. service-independent media player. "The Zetta Cloud service offers two options: Disaster Recovery - complete replication of the station's data, enabling all data to be fully secured and allowing broadcasting to resume in the event of issues such as accident, virus attack, hardware failure and technical maintenance. Then there is Zetta Payout, allowing radios to broadcast 24/7, without investing in the hardware", RCS Europe head of commercial development David Chevalier explains. •

### WITH RCS2GO, THE FUTURE IS NOW

RCS also drew on its Revma streaming service to offer radios a clever new tool making it possible to produce talk shows of the "everyone-joins-in-from-home" type. Zetta2Go allows you to control the mics for this "conference-call show", whilst also handling the broadcast automation for you. Radio community



# TIELINE SOLUTIONS FOR BROADCASTING AT HOME

Tieline has delivered remote broadcast solutions for decades and offers a large range of flexible and rock-solid IP streaming solutions featuring redundancy and remote control capability.

With the ViA stream live audio, record interviews, view and manage recordings, create playlists of files, and even FTP podcast files directly from the unit. ViA supports mono, stereo, dual mono, triple mono as well as stereo plus mono connections. This provides great flexibility and the ability to incorporate guests into live remotes using Tieline's Report-IT app or other IP codecs. Up to 3 redundant streams can be configured for super reliable connections.

Another simple and affordable way to scale up working from home capability is with the Report-IT Enterprise app. Report-IT is free for users to download and turns any smartphone into a pocket-sized IP codec that is extremely simple to use.



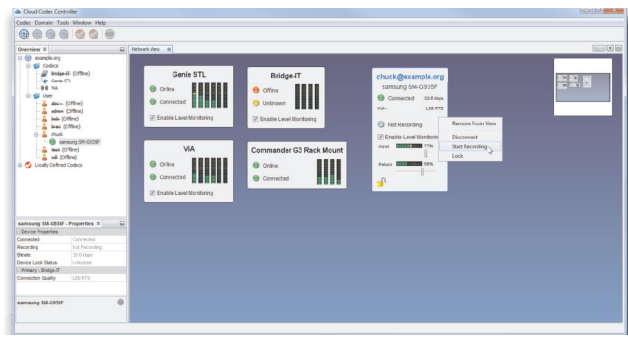
Watch the video to learn more  
about the ViA remote codec



## REMOTE CONTROL YOUR CODECS FROM ANYWHERE, ANYTIME...

The Cloud Codec Controller lets engineers manage an entire fleet of Tieline codecs and Report-IT Enterprise app users from the studio, at home, or anywhere with an internet connection. It delivers secure, real-time monitoring and remote control of all ViA, Merlin, Genie and Bridge-IT codecs, as well as smartphones using Report-IT Enterprise. As soon as a device connects to the internet, it delivers:

- Real-time online/offline status of codecs and Report-IT Enterprise users.
- Monitoring of connection status, link quality and audio levels.
- Remote adjustment of audio levels.
- The ability to dial and hang-up remote codec connections from anywhere, anytime.





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Advertorial

# IQOYA CONNECT, AN IP AUDIO SOLUTION THAT'S EASIER THAN EVER



By Sébastien Chauveau  @SChauveau44



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*IQOYA CONNECT is invisible to the user. Photo Digigram*

*There is no shortage of options for delivering radio content from a remote location, but sometimes you need to be technologically skilled to master the equipment and the apps available to the journalist and the roving presenter. With the IQOYA CONNECT solution transmitting audio has never been so easy. Digigram's Sales Director explains.*

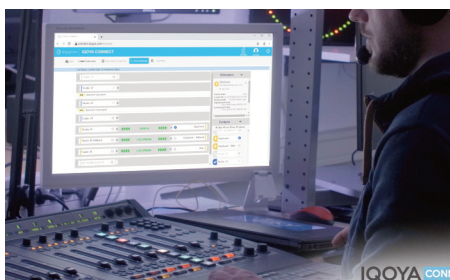
## "Preferences are preset" - xavier allanic

There are several methods of broadcasting and delivering radio content from a remote location. You can make use of specialised communication apps, but this may be complicated and may require the presence of a technician. You can also opt for a reliable, secure, real-time remote-controlled communication service which eliminates the need to send technicians to the spot, as well as being clear to use for journalists and presenters. This is what Digigram offers with its IQOYA CONNECT service.

### ALL IN THE CLOUD

The idea is to make life easier for journalists, presenters and technical staff with the aid of a web platform located entirely in the Cloud. This is what Digigram offers with its new IP-based connection service, IQOYA CONNECT. It makes it possible to establish high quality audio connections between the remote location and the studio, but also to prepare for trips reporting on-location and to monitor operations and work remotely during transmissions. All the journalist needs to do is log on for the first time to record his or her audio preferences for future broadcasts. "These preferences are then pre-set by a delivery service which automatically loads the configurations into the codec at the time each connection is made", Digigram's Sales Director Xavier Allanic explains. "All journalists or presenters will immediately find their personal audio settings each time they go on air, even if they are using a portable codec shared with several colleagues." This makes it easier than ever to prepare for and broadcast programmes.

### ALL CONNECTIONS



*Photo Digigram. With IQOYA CONNECT a technician can control a codec..*

IQOYA CONNECT facilitates all types of connections: 3G and 4G, Wifi and ADSL. The connection is made automatically through the available network, with a constant focus on making the user experience easier. IQOYA CONNECT is a solution which is suited to radios both big and small, and also TV stations. At the two extremes we find: Radio Méga, a community radio located in France's Drôme department, which has created a roving radio studio by setting up an IQOYA TALK on an electric tricycle; and a major producer of sporting events for German television, which uses IQOYA CONNECT to rebroadcast authoritative comments on Bundesliga match evenings. For the Grenoble-based company, which specialises in audio and international broadcasts, the investment in development has been focussed on transmission quality. "We use well-known coding algorithms, such as those by OPUS, AAC and MPEG", Xavier Allanic reveals.

We stabilise connections using error-correction strategies and feed duplication, which prevents the loss of data packages, along with network load balancing strategies. The IQOYA CONNECT solution therefore adapts to all types of coding. "We preserve sound quality from start to finish, even with a poor-quality connection," the sales director emphasises.

### GOOD TO KNOW...

IQOYA CONNECT is free for up to two links, with one link equalling one connection. After these two connections, the solution is billed from 5 euros net, per month, per link, with package deals available. To make best use of all the IQOYA CONNECT features, Digigram recommends using its portable codec, IQOYA TALK.



*Photo Digigram. IQOYA TALK allows for up to four users at a time,*



# IQOYA TALK & CONNECT

Remote broadcast made easier than ever

## IQOYA CONNECT

A WEB PLATFORM AND A CONNECTION SERVICE



### Where technicians can:

- ✓ Provision field codec configurations for journalists
- ✓ Manage and Monitor codec fleet and communication in real time
- ✓ Remotely control on-field codec's audio and configuration settings
- ✓ View network metrics of ongoing and past communications



### Where journalists can:



- ✓ Request for remote assistance from his technician in the studio
- ✓ Set their personal audio preferences
- ✓ Retrieve and configure their audio preferences to any Digigram codec with ease
- ✓ Settings follow the journalist not the product



**IQOYA CONNECT: The remote broadcasting web platform for broadcasters**

[iqoya-connect.digigram.com](http://iqoya-connect.digigram.com)

[sales@digigram.com](mailto:sales@digigram.com)



Effective



# RECORDERS STILL HAVE A FOLLOWING

By Sébastien Chauveau @SChauveau44

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Zoom is the leader in sales of mobile recorders  
Photo DR.

*Mobile recorders - small, but no less high performance - have made great strides. Some have become veritable mobile studios, offering a recording quality every bit as good as that of more substantial equipment.*

## Marc Mauboussin : "People generally, and videographers in particular, are starting to become more aware of the importance of the sound component for their recordings."

You might be inclined to think that smartphones would be edging out recorders. Far from it. Recorders are still popular with both musicians and journalists, sound recordists and videographers.



### VERITABLE MOBILE STUDIOS

Many brands are moving away from mobile recorders, but there are some who still make them. Some specialise in lightweight

equipment, such as Zoom, which offers a wide variety of recorders – notably in its H range – and complementary options, which turn these devices into veritable mobile studios.

Others only feature one mini-sized product among all their shoulder-mounted recorders. Take Nagra, for example, with its Nagra SD. There are others, too, that offer a number of light recorders that are making a name for themselves, including the Tascam DR-05X and DR-40X.

### THE SAME QUALITY

You could claim the same kind of recording quality for mobile equipment as for other types, such as shoulder-mounted, at least when it comes to capturing sound for everyday use. Great efforts have been invested in giving



smartphones good picture quality, but sound is still the poor relation where these all-purpose tools are concerned. On the other hand, one advantage smartphones have over recorders is that data can be transferred easily,

whereas, in the vast majority of cases, the recorded sound has to be sent to your computer, before being emailed or shared on social media, when using a mobile recorder.

To compensate for the poor sound quality of smartphones, "we sell either microphones adapted to use with them, which then provide them with good sound quality – such as lavalier or shotgun microphones from Audio-Technica or Rode – or mobile recorders which can be attached to a stand or a camera, to which microphones can also be added", explains Marc Mauboussin, a seller of musical instruments and equipment at Michenaud.com, a store located in Nantes (western France) which has been in business for several decades now.

Marc Mauboussin notes that "people generally, and videographers in particular, are starting to become more aware of the importance of the sound component for their recordings". This, he says, is why "they are moving away from using a smartphone when they want to capture good quality sound and are increasingly opting to use mobile recorders". This is all the more true since the advent of the podcast. Many recorders, however small they are, have provision for

plugging in several mics and capturing high-definition sound in 96kHz/24 bits, indeed more. It's said that binaural sound on smartphones could be on the way. Should we see this as a change in manufacturers' approach to sound or just an added feature? •

### A COUPLE OF QUESTIONS FOR MARC MAUBOUSSIN

**LLPR - What is the best mobile recorder brand, in your opinion?**

**MM -** Zoom – without a doubt. They are the best-selling recorders, and not just because they are available in a wide range of prices (you can find them from under €100 to more than €500), but because they have become really excellent recorders – the H6 and the F6, for example.

**LLPR - What is the target market for mobile recorders?**

**MM -** To begin with, they were intended primarily for musicians. That was ten years ago. Today, conference speakers, journalists, lawyers, etc – everyone who wants to capture high-quality sound, to keep it or to make use of it – is turning to these devices, which, needless to say, in addition to being high performance are also easy to use. This is not always the case when it comes to recording sound with a smartphone. •

Sound

# WHAT KIND OF MIC TO USE, TO RECORD WHO AND WHAT?



Fernand Deroussen, compositeur audio-Naturalist, opening his ears to the natural world / Photo DR.

By Sébastien Chauveau  @SChauveau44

naturOPHONIA

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**"In the natural world, you don't position the subject  
it's up to you to adapt to your subject" Fernand Deroussen**

**Sound is everywhere. Everyone wants to capture it – but for it to be useable, it has to be of high quality and therefore recorded with the right kind of mics.**

At a time when sound is becoming ever-present, with the advent of the podcast, in particular, you might be tempted to whip out your recorder and mics at every possible opportunity to capture any kind of ambient sound. The first link in the process for a recording is undoubtedly the mic through which the sounds pass. "I use my mics as photographers use their lenses," says Fernand Deroussen, renowned sound recordist and naturalist, and editor of the [Naturophonia.jimdo.com](http://Naturophonia.jimdo.com) website. You can have the very best recording equipment but if the mic is not a good one, then the sound won't be good.

The choice of mic depends on what you want to capture – but more than anything you need "tough, reliable equipment that can cope with the weather conditions", says the man who specialises in recording the sounds of wild animals, landscapes and natural elements. If it's an interview, you can opt for a dynamic cardioid or super-cardioid microphone. Reliable choices include Shure's SM58 and Beta 58A, although there are obviously others too.

If you want to capture the soundscape and voices at a reporting location, you can employ an omnidirectional dynamic mic to capture voices in the foreground and ambient sound in the background. Radio has its forerunner – the LEM DO 21B. All the good stations are equipped with it. The Sennheiser MD 21 also has the same standing.

## CAPTURING CONCERT SOUND MORE EFFECTIVELY...

If stereo sound recording is what you need, several different set-up options are available – from the most cumbersome, but highest quality, to those that are lightest and most rapidly set up. Fernand Deroussen notes that "In the natural world, you don't position the subject, it's up to you to adapt to your subject." If you have enough space, a stand and coupler and a pair of microphones - such as the Rode NT55 or the Neumann KM184 – in AB or ORTF configuration - is worthwhile for recording both concerts and the sounds of the natural world. This type of configuration reproduces the sound quality well.

## IN THE SOUND RECORDIST'S TOOLKIT...

When out reporting, it's better to choose an XY or MS mic. This type of microphone is fast and simple to use – for example the BP4025, from Audio-Technica, or the Rode NT4. For birds, insects or amphibians, it's preferable – as Fernand Deroussen does – to opt for "a

parabolic dish and a shotgun microphone".

Some mics are heavy, others aren't. There are mics that are sensitive to wind and handling noise, while others are not. The sound recordist's bag of tricks should always contain: a shock mount to avoid handling noise, acoustic foam windscreens to reduce the noise from interviewees' breath; fur windscreens – with or without Baby Ball Gag –, to restrict or reduce the effect of gusts of wind on microphone capsules when used outside.

## POSITIONING MICS CORRECTLY

Producing a successful sound recording depends on the choice of mic used, of course, but also its positioning. "The placement of mics is linked to well-balanced reception of the sound source and not a technique predetermined in advance," explains the expert who provides the sounds of nature for many wildlife productions. "It's my judgement, based on listening, that determines the positioning of my mics." You have to understand from the remarks by our leading light in the field of sound recording that sound needs to be listened to, and it's not a technical question, but the ear that decides the matter. •



Communication

# THE TOUR DE FRANCE FROM EUROPE 1'S MOTORBIKE



The motorbike, wearing the colours of Europe 1, is also a tool of communication on the Tour de France. © D.R.

By Olivier Malcurat  @oliviermalcurat



## CONTACT

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[www.europe1.fr](http://www.europe1.fr)

Historically, the radio stations have always been present at the Tour de France. As time has gone by, cars have been replaced by motorbikes. Bearing the logo of their stations, they are part of the scenery. They place reporters at the heart of the peloton, to be able to report in real time on the skills of the race cyclists.

**"when you're reporting from the bike, the connection is not always good – but that's the charm of the Tour!"**

With a cycle race such as the Tour de France, it's a well-oiled machine. Every morning the Europe 1 bike is there for the start. It is driven by a technician from the station and carries a reporter who, prior to the start, will have covered several topics which will be broadcast by the station in line with the needs of the various news bulletins, and will sample the atmosphere of the day. "The driver has to be a technician, but above all, a biker! When you're heading up a mountain pass at 30 kmph, you mustn't stall, and on the other hand, on the descent, at 70 or 80 kmph, you mustn't get in the way of the race", explains Axel May, a journalist in Europe 1's sports department, who is preparing to cover his 6th Tour de France, from 29 August to 20 September next. Shortly before the race cyclists set off, the bike is already on the road. When the peloton catches up with it, it lets the cyclists overtake so that it can follow them. "The first 'bike roundup' on air comes at around 1400 hours," Axel May continues. "You position yourself behind the breakaway group. If there is no breakaway group, you follow the peloton and you report on air every hour or every half hour."

## AUTONOMOUS MOBILE EQUIPMENT

Europe 1's BMW 1200 RT packs into its storage compartments a Nagra Seven, a Scoopy codec and a back-up satellite link. Axel May is equipped with a headset to be able to

communicate with the bike driver, the studios in Paris and the other reporter, in position at the finish line, as coverage of the Tour is a two-person operation. It's the second journalist who provides the live race commentary and the "bike roundups" on air. "The bike is completely autonomous during the race. Being dependent on the standard telephone network, it is not free from white zones, particularly up in the mountains. Sometimes you can get ahead a little to find a viewpoint looking out over the race, where it's covered by the phone network," May notes. "During the final 50 kilometres the bike heads for the finish line to support the other journalist providing the race commentary. The driver can then make the trip back to Paris with the Europe 1 adviser who is present at the Tour."

## 7 500 KM IN ALL WEATHERS

"Covering the Tour de France involves a lot of running about: you have to be everywhere. The reporters are at work from 7 am till 11pm, 7 days a week. The technicians have one day off. The bike covers around 7,500 km. It's very pleasant when it's good weather, but when it rains, hails or snows, like last year, you appreciate the heated seat!" the journalist jokes. "This September, the weather is likely not to be as good as it is in July. If there are storms, that could complicate things and have an impact on the quality of communications." In any case, the Tour de France 2020 on Europe 1 will not

be on the same scale as previous races normally scheduled for the beginning of summer. "This year the number of reports on the Tour will be reduced to avoid disrupting radio programming for the return from summer holidays," notes Axel May. "We'll only have two journalists, a technician and a bike driver. It will be the Tour de France, commando version!" •

## MEMORIES OF THE TOUR

An event like the Tour de France, which takes place over the course of three weeks, naturally creates a wealth of emotions, reminiscences and anecdotes. When you ask him about his last Tour, Axel May obviously recalls 26 July 2019, when the 19th leg, between Saint-Jean-de-Maurienne et Tignes was halted due to a hailstorm. "Another time, a phone fell out of my pocket. The bike stopped 500 metres further on and I ran to retrieve it. We lost quite a lot of time, but we were operational just in time. You tell yourself straight away that you really can't afford to hang about!" •

Écology

# RADIO MÉGA : CREATING RADIO... BY PEDALLING

By Loïc Couatarmanach [@lcouat](#)

30 000 listeners follow  
Radio Méga's scooter.  
© Radio Méga

*In the Drôme department, at the heart of the Rhône corridor, a small local community radio station knows how to get people talking about it. Here, the small team of staff mix with volunteers, and goal of the team is to get the people talking, those who don't have a voice in the mass media. Radio Méga is a community radio based in Valence, which has 30,000 listeners. This radio takes an interest in the neighbourhoods that are often neglected. The radio travels about its broadcast zone looking to meet residents, using an original mean of transport, a tricycle. At Radio Méga they create radio... by pedalling.*

## "This mobile studio is the star of the town." Raphaël Terribile

Broadcasting programmes while travelling about in an ecologically responsible way. What could be better in a region where it's good to spend time outdoors? Radio Méga regularly sets out to seeking to meet the real characters from the deprived neighbourhoods. It's often forgotten that news happens in these places. "A lot happens in these communities though", explains Raphaël Terribile, one of the station managers. "Before, when we organised programmes in fixed locations, not a lot of the public turned up." So, if the public won't come, then you have to go to them. The radio station had to find a solution to be able to offer programmes that provide optimal visibility, to familiarise people with the town, its districts and its suburbs. The small community radio took advantage of the opportunity to strengthen its closeness to the inhabitants.

### AFTER THE DELIVERY MEN, HERE ARE THE ANIMATORS BY BIKE

The radio team enjoys cycling in the Drôme, so why not invest in a tricycle? "We wanted a fun idea that would attract attention." Having launched the idea, they had to find a bike that could bear the weight. The mobile studio is propelled using an Urban Arrow Tender 1500 cargo bike. "Amblard vocational college agreed to design the wooden structure of this tricycle", Raphaël explains. "We worked hand in hand with the Valence carpentry students." The radio drew up the specifications. Models had to be made for this tricycle to be built to accommodate four people seated. "A van would have been simpler

and more comfortable, but less environmentally friendly," says the station representative. The team at the radio launched an appeal to listeners to raise the money for this contraption. A fund was set up on the HelloAsso fundraising platform. Partnerships were agreed with several companies in the region for a total sum of 23,326.10 euros precisely. This amount covers the purchase of the bike and adapting it, and the broadcasting equipment. Within six months the project was underway. This idea of the tricycle provides a unique experience. It pitches about sometimes and guests take advantage of the ride. You make the most of the fresh air and sunshine. You forget about the microphone. The radio show hosts go past the Chapelle des Cordeliers and Saint-Jean-Baptiste Church. The public take pictures and shout out to the presenters. In Valence, Radio Méga's tricycle is part of the town. "It's a wonderful object of communication. Passers by film us with their mobile phone." The radio's fame has grown, and everyone wants to take up a seat on the tricycle. Radio Méga is growing a little closer to the population of its broadcast zone.

### VALUABLE HELP FROM DIGIGRAM

For the technical aspect, the Valence-based station has turned to the Digigram company, located not far away, near Grenoble. This mobile studio needed to have the IQOYATALK portable codec installed. The radio station was able to test the codec on the ground. "We gave regular feedback to Digigram regarding this beta test." It was a real-life test during which the

equipment held its own along stony routes on which things were moving in every direction. The equipment withstood all of the tests, in all weathers. For Digigram it was a bonus to be able to show that the codec was the ultimate product to take out of the studio and onto the road. In the tricycle cabin, the radio show host has the benefit of an iPad [player/audio cartridge]. "We can record or broadcast live in perfect comfort." The Radio Méga tricycle – a great idea for radio outdoors. •

### WHO IS IT? WHAT IS IT?

Radio Méga is one of those community radios in our regions that make sense. The radio station, which is a member of Ferarock (The Federation of Current Music Community Radios) can afford to promote emerging artists. It is subsidised partly by FSER (Fund for Supporting Radio Broadcasting). The small Drôme-based radio station, located in Valence, plays a role in social integration. It fights social exclusion and discrimination. On air it broadcasts a mix of news and fiction and promotes an attitude of openness. The world of education also has its place there. School pupils can attend introductory radio workshops. The radio station also offers training courses in media. Four members of staff, including two journalists, share the studios with around 80 volunteers. Radio Méga has two studios – with premises in Valence and a second location in Romans-sur-Isère. •



# THE €1000 GAME SHOW: 62 YEARS ON THE MOVE



By Olivier Malcurat  @oliviermalcurat

"Every time I record, I learn something new, I never tire of it," says Nicolas Stoufflet. © Radio France/Christophe Abramowitz.



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## "We have to stay committed to our local regions!"

**It's the oldest radio game show in France. Since its launch in 1958, its reputation has never been lost. The 1,000-euro game show has changed its name several times during the course of its history and can no doubt boast of having made a complete circuit of France several times over – one small district at a time, with great mobility.**

Benched since the beginning of the lockdown, Nicolas Stoufflet is growing restless: "I haven't budgeted for more than 3 months now and we've been rebroadcasting old shows. In theory, I spend a week on the ground and three weeks in Paris. I travel for six days in a row, from Monday to Saturday, to make six series of recordings in three neighbouring departments. You have to pack your bags again every morning." At 59, Nicolas Stoufflet has been in charge of the 1,000-euro game show for 12 years already. As the heir to Henri Kubnick, Roger Lanzac, Lucien Jeunesse and Louis Bozon, he believes he has already visited more than 1,000 local districts. "There is this direct contact with the public (300 people on average: Ed.), these accents: it is the game show of France in all its diversity – but it is not just a radio show, it's an investment. You have lunch with the mayor, you visit the local district... I represent France Inter: I try to behave properly!"

## THE 18H30 SHOW

In his bags Nicolas Stoufflet packs three other people. "It's just a very small team: there are two technicians who turn up from the Maison de la Radio [Broadcasting House] in a utility vehicle with the equipment, and Yann Paillet, our director. He's the one who plays the metallophone on stage while the participants are thinking things through. Together we go from village hall to multifunction room." Recording begins at 1830. As for the technical equipment used to produce the programme: "It's quite light, because we're not live", the

show host explains. "We don't need satellite dishes or links. On the other hand, the technical skill lies in adapting to the place where we are - whether this might be a village hall or a chateau, the technicians will do everything they can to ensure that it sounds good. It's not sanitised studio sound... I've been asked before if it wasn't annoying to have a baby crying in the hall. Actually, no. It's the atmosphere of the game show. It's a straightforward but effective recording, without the showbiz element. It's natural – we're coming to you at your place!"

## A ROVING GAME SHOW

"The €1000 game show is a portable and transportable programme. It's a roving radio concept and is adaptable to all situations. You always remember the times when things just didn't go right. One day in the Pyrenees, we were left stranded by a snowstorm. It lasted two days and we weren't able to record the following day", Nicolas Stoufflet recalls. "Another time we were in the South, in Villeneuve... but there are a whole lot of Villeneuves in France! To cut a long story short, we weren't in the right place, which was an hour and a half away. We arrived a little sweaty, but in time. We were able to record in the Bay of Toulon, with the Navy, aboard a ship. In New York too, with the French community, on the edge of Central Park. It's a game show you can stage absolutely everywhere." While he has already taken his programme to the island of Reunion, Nicolas Stoufflet is still dreaming of other exotic experiences. The

game show host dreams of going to Martinique and Guadeloupe. "I would really like to go to Saint-Pierre-et-Miquelon. I would be delighted to travel to this somewhat forgotten location in the North Atlantic, where they listen to France Inter!" •

## THUMBNAIL PROFILE

When he was studying Law, Nicolas Stoufflet was already dreaming of a career in radio. It was a youthful passion that he turned into his profession, when in 1983 he arrived at the Radio France premises in Clermont-Ferrand, his native region. Three years later he joined RMC in Monaco, then "went up" to Paris in 1989. He ran things at Nostalgie radio for a season, but dreamt of more microphone time. So, he returned, to Radio France, RFI, then Radio Bleu, the station for the over 60s, broadcasting on medium wave. From one summer cover job to another, he made a place for himself at France Inter, first by presenting the early morning show, from 1996 to 2008, then by following in the footsteps of Louis Bozon, heading up the €1000 Game Show. He enjoys this show but doesn't hide his desire to host a programme with a group of friend, based on a concept of general knowledge and a good mood. •

Mobility

# IN THE BOWELS OF AN OB VEHICLE



Radio France's outside broadcast vehicle, ready to go © Radio France/Christophe Abramowitz



The on-board control room has the same capacity as the broadcasting house studios © Radio France/Christophe Abramowitz

By Olivier Malcurat @oliviermalcurat

**It's just like a proper studio, packed into a lorry. It's hard to make things any more mobile than this! It allows you to set up almost anywhere, and in particular to go to places where setting up a more traditional control room would be a hindrance. Here is a guided tour of one of Radio France's fleet of outside broadcast vehicles.**

The lorry itself does not pass unnoticed. It is painted in the colours of the seven public service radio stations, which makes it a great advertising medium when it leaves radio's broadcasting house, but let's look beyond the packaging and open the doors of this rather special vehicle. "It is a veritable mobile studio, capable of travelling from one entertainment venue to another and from festival to festival, while maintaining Radio France's demanding levels for quality of sound recording," explains Radio France technician David Aneas. Operating in response to the needs of the different stations, Radio France's OB vehicle will enable Mouv' [youth radio under the Radio France umbrella] to cover an urban festival or to broadcast a philharmonic concert live on France Musique. "The OB vehicle makes it possible to go to places where it's too complicated to set up a temporary recording studio," David Aneas continues. "It is therefore used for recording concerts, whatever the music genre, from opera to the big summer festivals. The requirements for classical music and for pop are different, but the equipment is adapted to the different genres."

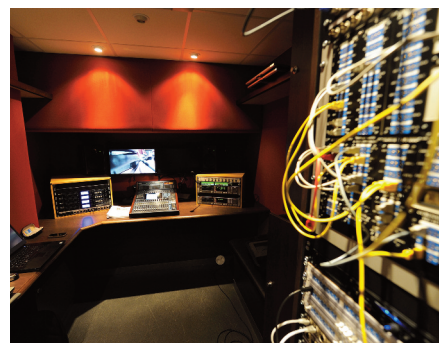
## CAPACITY IDENTICAL TO THAT OF FIXED-LOCATION STUDIOS

To capture an orchestra in concert, Radio France's OB vehicle packs around 100 mics on board. "Each mobile broadcast vehicle can interface with most of the sound-system standards and some can deliver multi-channel

sound. Some OB vehicles have two integrated cabins, which makes it possible to have an independent space to carry out live broadcasts." Because this is in fact the main strength of this facility! In addition to sound recording, it also makes it possible to cover events live using different means of transmission, adapted to suit each situation. "On board you find the same equipment as in the Radio France studios. They are the same sound recording consoles, the same sound effects, the same types of production software. In terms of the connections, these vary according to need. For a live cinema event, for example, a satellite van takes care of the links, but otherwise it is generally internet boxes with equipment specific to the transmission."

## ADVANTAGES AND INCONVÉNIENTS

This mobile broadcast vehicle, which is used in quite specific circumstances, offers many advantages, but there are also disadvantages or restrictions. According to David Aneas, "The biggest advantage is speed in setting up. Everything is already wired and installed inside the vehicle and a simple fibre optic cable serves to link it up to the stage. On the other hand, the bulkiness of the vehicle can cause problems: it doesn't allow for it to be parked just anywhere in town. The power supply also limits the locations that can accommodate it. Mobility does not mean energy self-sufficiency. It has to be plugged into a power outlet." The OB vehicle represents a substantial investment, which we try to absorb through its shared use by the different Radio France stations. •



Mobile control allows the recording of concerts, but also the retransmission of live events. © Radio France/Christophe Abramowitz

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Coverage

# 5G

# COMING SOON...



By Sébastien Chauveau  @SChauveau44



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*There will be more 5G masts, but they will be smaller than the 4G ones.  
Photo © S. C.*

***We've had 3G and 4G. To begin with, the fifth generation of mobile networks - hence the name 5G - are expected to be merely a kind of enhanced 4G. In the second phase, 5G is expected to provide new services. This means that we'll be able to transmit sound, photos and video, but also carry out live streaming at great speed, without any fear of outages.***

We've had 3G and 4G. Now 5G is on the way. We are promised that it will deliver wonders, but what will it do for us in terms of data transmission? This is the nub of the matter, as for the time being the technology is still in its infancy... To begin with, the fifth generation of mobile networks – hence the name 5G – are expected to be merely a kind of enhanced 4G. According to the Regulatory Authority on Electronic Communications, Post and Press Distribution (ARCEP), which was unable to make itself available to answer our questions, 5G should allow "higher throughput and greater capacity", it says on its internet site. With this new technology, "it should be possible to exchange a far greater quantity of data without overloading the networks", notes the Authority.

## GREAT SPEED, WITHOUT OUTAGES

During the second phase, 5G should be providing new services. For example, it should permit "control of medical equipment in hospital, telemedicine and prevention of chronic diseases", according to ARCEP. We should also expect to see 5G in management of transport and many other work-related applications. 5G is expected to evolve. Its performance should improve over time, particularly "its throughput, its responsiveness and its capacity

to handle a large number of users at the same time", ARCEP writes. This means that we will be able to transmit sound, photos and video, but also to carry out live streaming at great speed, without any fear of outages.

## CONSIDERABLE BANDWIDTH CAPACITY

None of this is for the immediate future. The initial rollout of 5G in France, which will in fact merely be an improved version of 4G, has been announced for late 2020. This will then be followed by a time for operators to launch business proposals. Some trials have been launched here and there to test the initial phase of 5G in France. Meanwhile, some of our other European neighbours, such as Spain, Italy, Germany and Switzerland, have already rolled it out. South Korea is the most advanced in this field. Before we see true 5G here in France, the technology needs to be consolidated. ARCEP will also have to allocate frequencies to operators for them to be able to offer it to their clients. At present 3G and 4G are using the 3.5 GHz frequency band, whereas for the true 5G, data will need to be moved over to the 26 GHz frequency band "which possesses intrinsically different properties from the other frequency bands", ARCEP emphasises. It is this 26 GHz frequency band that will lead to significant

bandwidth capacities, and which, amongst other things, will be able to be used to broadcast events.

## TEN TIMES FASTER THAN 4G?

So we won't be sending reports to the newsdesk at lightning speed from a smartphone just yet. There are optimists who predict that the first-phase 5G, in other words an enhanced 4G, should transmit data ten times faster than the current 4G. This has yet to be tested out. Then we'll also have to spend a few euros extra on new subscriptions and changing our smartphones, because there are many devices that are not compatible with 5G.

According to Orange CEO Stéphane Richard, who has spoken to the press about 5G a number of times: "As much as greater throughput, 5G will result in less or indeed more latency. We'll be experiencing things in real time. 5G will mark a complete break with 4G. For the media, 5G will mean a new technology in the field of capturing images. We will have transmission responsiveness and ultimately greatly enhanced image definition." •

Network

# THE LONG HISTORY OF RADIO TRANSMISSIONS



Gradually, analogue transmissions have given way to digital and IP.  
© Mike Goad/Pixabay

By Olivier Malcurat [@oliviermalcurat](https://twitter.com/oliviermalcurat)

Since the first experiments in the wireless transmission of the human voice by means of electromagnetic waves in the late 19th and early 20th centuries, the transmission of radio signals has evolved considerably. Originally reserved for the army, the technology gradually became more accessible, spread, became digitised and miniaturised. Then the internet superseded the dedicated networks.

## The remote transmitter appeared in the mid-1980s. Before that, it was on the radio station roof.

Before the Eiffel Tower – originally doomed to certain destruction – became a transmitter station in 1903, the first radio transmissions were sent over the air waves using a kind of balloon, anchored to the ground with a tether. At the time of the TSF, ORTF and the peripheral radio stations, a room several dozen metres square was required to house the transmitters. "At the beginning of the 1980s, pirate radio stations often had their transmitter on the roof," PHF COM CEO Pascal Hilaire recollects. "Outside Paris, in any case, the radio stations did not need any special link. An FM transmitter was put on the roof of a Peugeot 504 and they broadcast in FM back to the studio, on another frequency. The first remote transmitters arrived in 1984/1985. Then you used either the airways and a radio relay system or LS, a dedicated line which went through the France Telecom network."

### DIGITISATION OF THE SIGNALS

The dedicated lines which made it possible to connect one fixed point to another (studio to transmitter or studio to studio) went digital. It was the birth of Transfix, for fixed, permanent links, constructed by France Telecom, with AETA's famous Hifiscope at each end of the line, encoding and decoding the signal. Then came the ISDN (Integrated Services Digital Network) technology, marketed by France Telecom under the Numéris brand name, making it possible to

send different types of data (notably audio and pictures). "It was a relatively expensive service, used by the radios mainly for special events", notes Pascal Hilaire. "You had to plan far ahead for any kind of live event so that the line could be constructed in time."

### A SINGLE LANGUAGE: IP

The internet and IP technology arrived in the mid-1990s. "Things moved quite slowly in the beginning! We had modems with very low throughput. The two systems coexisted for years as the internet evolved." The rollout of IP took a while, because you had to have the same protocol on both sides. The transmitter sites were not the best equipped, being, inevitably, at the top of a mountain... Today the transport costs have considerably diminished. "IP subscriptions to Orange are cheaper than a Transfix link. The rate varies depending on the service provided to support it." The microwave radio links between the studio and the transmitter have also been modernised. "For around 10 years or so now, we have been using IP microwave radio links. This costs a tenth of the price of the old system, because we are using available bandwidth frequencies that are free of charge. They carry not just the audio signal but also data for the Radio Data System (RDS), for example, or for managing remote sites. Today we try to have several IP links using different methods of transmission on the same site. We even send the same signal continuously via both

fibres optic cable and microwave radio relay. If one fails, then the other takes over. It's accessible in terms of cost because the technologies are similar. The same encoder can stream the signal to both the transmitter site and the provider or to the microwave radio relay and the fibre optic network." •

### THUMBNAIL PROFILE

"The first time I spoke into a mic I was 8 or 9 years old", says Pascal Hilaire. A stalwart of the radio, he landed his first job, with Strasbourg Contact, in 1983. "I covered the 0600-0800 slot and at 8am I went to school", he recalls. In 1984 he arrived at NRJ Strasbourg, then he was host of the 1600-2000 Top Music slot from 1986 to 2000. In 1993, he founded PHF COM to market the first RDS coders manufactured by Aztec. Today his company is an FM and DAB+ broadcast provider across around 50 sites in France. "I've always said that my true career was in radio, but PHF COM has now been operating for 27 years!" Three years ago, he took over Radio Verte, a community radio in the Bas-Rhin department.. •





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