

WHITE PAPER

On the sense and nonsense of the FM radio switch-off in Switzerland

Public broadcasting for radio and television, in Switzerland is the monopoly of the SRG/SSR. The SRG/SSR was one of the first radio providers to become enthusiastic about DAB as early as the late 1990s. The radio listeners were not interested in this at first, just like in the other European countries. In order to make DAB more attractive to listeners, DAB+ was also broadcast in 2006. However, DAB+ was not backwards compatible, and in Switzerland there were already almost 500,000 DAB receivers sold. The SRG/SSR then broadcast with both systems, DAB and DAB+, during a relatively long transitional period between 2006 and 2013. In the meantime, however, radio streaming via the Internet has developed. The SRG/SSR also chose this distribution vector and ended up with three: FM, DAB+ and IP streaming. Of course, this diversity costs a lot of money, and consequently, as early as 2014, the desire arose to save around 15 million francs per year on the costs of FM radio broadcasting of the three to five main SRG/SSR radio programmes per language region, and in the future to broadcast radio only via DAB+ and IP streaming, but all this without any assessment listener preferences regarding these services.

In order to achieve this goal, SRG/SSR needed the support of the regulatory authority OFCOM, the Federal Office of Communications, because the radio broadcasting of the SRG/SSR programmes was legally fixed on FM until 2020, and this could only be changed with the help of OFCOM.

In 2014, on the initiative of the SRG/SSR, OFCOM set up a group of experts called DigiMig, which means "digital migration", consisting of representatives of the SRG/SSR, the associations of private radio providers and OFCOM itself. The goal of the DigiMig Group¹ was and still is the general switch-off of FM with the help of OFCOM.

OFCOM has the say on the use of the media reception tax, which is incidentally the highest in the world, now 335 francs per household per year and much higher in the past. This adds up to more than 1.37 billion francs per year, with the majority (94%) of course benefiting the SRG/SSR, but not all of it. The private broadcasters of radio and television also receive about 6%. SRG/SSR's total budget (2023) is CHF 1.543 billion, and less than 1% corresponds to the CHF 15 million per year required to operate the FM network. This is how claims and expectations of the private radio stations arose in the DigiMig Group, because they had neither the money nor the necessary know-how to build the DAB+ radio infrastructure for themselves. Until then, the SRG/SSR was only alone on DAB+, and the creation of this new infrastructure with the help of Swisscom Broadcast AG had already cost the SRG/SSR around 100 million francs, an impossible order of magnitude for the private radio stations.

¹ Von UKW zu DAB+, Schlussbericht der Arbeitsgruppe Digitale Migration, veröffentlicht vom BAKOM (From FM to DAB+, Final report of the Digital Migration Working Group, published by BAKOM/OFCOM, unavailable in English).

It was therefore clear that OFCOM had to and could provide assistance here, and so it happened. By 2020, OFCOM had pumped a total of CHF 175 million (CHF 170 million for subsidies and 5 million for the media campaign "Radio is moving") into this initiative, which was led by the DigiMig Group, thus helping private radio providers to achieve DAB+.

Compared to FM, the variety of programmes has been increased with up to 70 radio programmes per language region, 12 of them by SRG/SSR, and where all private radio providers will then be subsidised for the time being in the transitional period until the end of 2026, from the public funds of the media reception tax.

On 25 October 2023, the Federal Council decided to extend the FM licences, which expire in 2024, for a further two years, as this would give radio programme providers more flexibility for a successful migration from FM to DAB+. However, radio stations can also decide to discontinue analogue FM broadcasting until then.

Originally, the DigiMig Group had planned to stop broadcasting FM by the end of 2024 at the latest, but the SRG/SSR even wanted to take this step as early as 2022, however preferred to wait a bit.

On 27 June 2024, the SRG/SSR then decided to cease operations on FM as from the end of 2024.

However, this decision does not really make sense, especially not so shortly before a possible referendum on a further reduction in the media reception tax, the so-called "200 francs initiative". Either the SRG/SSR is completely misjudging the situation and believes that with this step and the announced 70 layoffs-off, with 334 new hires in the last two years, it is intimidating the people, or, if the outcry is big enough, it can demand more money for the renewal of the FM network, which is now probably already ailing, since because of the planned FM switch-off, little or nothing has been invested in these stations for over the last ten years.

What the SRG/SSR is probably not considering if, as expected, the listener numbers of private radio stations, in contrast to those of the SRG/SSR, will increase in 2025, the private radio stations could argue that if not everyone goes along, they will also get out of the deal. DAB+ is so great, competitive and profitable, especially if no one is allowed to broadcast on FM and the state distributes hefty subsidies according to the watering can principle.

As the SRG/SSR admits, it was the DigiMig and the actors represented in it who did not only want to enforce the switch-off, but a ban on FM in Switzerland. There was no representation from the public, which finances the whole thing through the media tax, because apparently the citizens are only good enough to pay.

The graphic² of the VSP/DigiMig, which predicted the forced shutdown of FM for 2024, clearly shows that the DigiMig & Co are not visionaries, but that the facts have been manipulated in order not to have to admit the failure down the line, not to mention the enormous costs that this undertaking has generated.

² "Perspektiven 2035", Association of Swiss Private Radios (VSP), 2024, Figure 37 on page 137, can be downloaded from here

<https://www.vsp-asrp.ch/%C3%B6ffentlichkeit/studie-perspektiven-2035/>

Are there any measurements on the part of the Confederation/OFCOM that substantiate the SRG/SSR's claims with regard to DAB+ territorial coverage compared to FM? In the case of FM networks, there were clear instructions³ from OFCOM and corresponding measurements.

The following should be noted here with regard to the other vague arguments of the SRG/SSR:

- Digital migration of radio is declared as a step forward in Switzerland towards the future and reduced energy consumption. This is something that should be looked at a little more critically from a technical point of view. FM has also been completely digital for the last 20 years at least, with the exception of the transmitter component for the stereo sound, in the entire chain from the studio to the receiver. Analogue is also nothing that is totally outdated. We all only hear analogue sounds with our ears and of course no digital ones. In terms of total energy consumption, FM radio is still far superior to today's DAB+ implementation in Switzerland. All Swiss DAB+ networks together consume 50% more energy compared to all FM stations combined⁴, and that's not exactly very "green".
- The sound quality is typically worse with DAB+ and even IP streaming than with FM, and the audio-savvy audience hears this. For the SRG/SSR decision-makers, there are audio measuring devices that can be used to measure the entire transmission and reception chain, from the microphone/mixing console to the audio amplifier at home.
- What is generally not known at all is the fact that the SRG/SSR has been gradually removing some of its FM stations from the transmitter network since 2020, which will then make mobile FM reception of SRG/SSR radio programmes in the car much more susceptible to interference. This apparently serves to prove that nowadays DAB+ can be received in the car with much better quality compared to FM.
- According to the Mediapulse survey, the much-advertised large selection of programmes has not brought in a single additional listener, and the number of them is also declining because younger listeners are much less interested in listening to the radio, not even via IP streaming. Thus, an offer with such a large variety of radio programmes, as it was created on DAB+, for which there is no need at all. Scarce and expensive resources are wasted. This is then also massively financed with public money.
- There are no figures for cost efficiency, as the SRG/SSR does not disclose them, but there is an indication of total energy consumption, which can be calculated with the help of the OFCOM station lists for both FM and DAB+. Here, too, the SRG/SSR and OFCOM have so far refused to disclose the figures, despite parliamentary inquiry.
- FM is old, but not outdated and provided with many data service options via RDS and RDS2 and these being very recently standardized worldwide, between 2018 and 2023. In Germany, around 1000 FM transmitters with SmartFM technology have already been⁵ put into operation, achieving electrical efficiencies of 77% to 98%, while DAB+ transmitters can only dream of this. The last generation of DAB+ transmitters only manages 40% electrical efficiency, but whether and where they will be installed in Switzerland is still uncertain, as the current devices must first be depreciated.

³ <https://www.bakom.admin.ch/bakom/de/home/das-bakom/organisation/rechtliche-grundlagen/vollzugspraxis/radio-und-fernsehen/weisungen-fuer-die-ukw-sendernetzplanung.html>

⁴ The BAKOM/OFCOM frequency lists for 2022 were used for the calculation. However, these only indicate the ERP values, which were then converted into transmitter powers, with simplifying assumptions for FM (antenna gain 6 dB, transmitter efficiency 66 %) and for DAB+ (antenna gain 6 dB, transmitter efficiency 50 %).

⁵ <https://www.worldcastsystems.com/en/c165p109/software/smartfm>.

- The SRG/SSR wants to save 15 million/year by switching off FM. Did they also think about the dismantling costs of the FM transmission towers, then no longer in use? With DigiMig and Co there is no mention of this for the time being, because the unpleasant surprise will come later, and after the FM stations have been switched off.
- From today's perspective, IP streaming is also the future of radio, and many listeners in Switzerland already use it with their smartphones and Bluetooth, even in the car.

What surprises us most is the isolated solution for Switzerland that the Federal Council is striving for, which is otherwise completely atypical for Switzerland, because normally Switzerland coordinates with its neighbours on decisions that have international implications, and of course there are already a lot of them here, namely as far as road traffic and its safety are concerned. In this respect, Switzerland in the heart of Europe is not only a tourist country, but also a very important transit country in the north/south direction. In 2022 alone, 3.2 million motorway vignettes were sold to foreign motorists, and in 2023, more than half, i.e. more than 2 million, of all Swiss cars (a total of 4.3 million vehicles are registered) still did not have a DAB+ radio on board, and the proportion for foreign cars is even higher.

In Switzerland, there are about 200 road tunnels over 300 m long. According to the European Tunnel Directive, these must all be equipped with radio for safety reasons. Until now, FM radio programmes that could be received outside these tunnels were transmitted via leaky cables inside the tunnels. From 2019, they will all also have DAB+, which of course makes a lot of sense, but also cost another 30 million francs.

From a European perspective, however, DAB+ is not used in all European countries (Finland, Ireland, Portugal, Sweden, Spain, Hungary). The radio system common to all is always only FM and all cars, whether old or new, have an FM radio on board, and for the most part with RDS. In Switzerland, the ASTRA (Federal Roads Office) is responsible for radio in tunnels. However, because FM radio in Switzerland is to be discontinued soon, ASTRA also wants to dismantle FM radio programme broadcasting in the tunnels soon, unfortunately without regard for the many foreign cars. The Gubrist (3.2 km) and Lötschberg (14.6 km) tunnels are already FM radio black holes.

And what about the traffic information from the SRG/SSR? A few years ago, they were among the best in all of Europe, but in the meantime they have been minimized and only come very rarely during rush hour, because they are no longer as necessary as they used to be, because modern navigation devices can also constantly inform according to the traffic and road conditions, but all this still has some catches. In the past, it was all for free and the SRG/SSR did it with RDS-TMC over FM. This then became TPEG2 for DAB+, but in the meantime there are two things, namely a system to be paid for by the car industry, permanently installed in new cars especially manufactured in Germany, and a free system with TPEG2 from the SRG/SSR, for which there are no longer any permanently installed receivers, but only a personal navigation device (PND) model with DAB+/TPEG2 from Garmin, which normally almost no one knows. This type of PND devices are also updated today via the Internet about the traffic conditions on the roads, for a fee or not for a certain time, depending on the manufacturer such as Garmin, TomTom etc.

Climate change is causing more and more problems on Swiss roads and motorways due to extreme weather conditions, with entire road sectors becoming completely impassable and in some cases even washed away. But then it is totally necessary for security reasons to warn against this with announcements on the radio, especially in the SRG/SSR programmes. Car radios with RDS over FM are excellently suited by the car industry for this purpose, even if DAB+ radio receivers are already installed in new cars as from 2021, in accordance with EU regulations. New car radios still have both, FM and DAB+. These are then so-called double tuners, which could be very excellent for traffic information with corresponding RDS identifiers on the SRG/SSR's main programme, if it were to continue to be broadcast via FM. However, car radios with only DAB+ do not yet exist, because this would make no sense at all from a European point of view. All other DAB+ radios still have FM, which is why it is so difficult to find out whether radio is listened to via FM or DAB+ and all the figures spread by DigiMig and Co are more wishful thinking than the truth. How many listeners in Switzerland actually still use FM radio? For only FM, and nothing else, a figure of 8% was officially distributed. But this is total nonsense, because almost everyone uses the Internet today and why can one no longer be counted then as an FM radio listener? In addition, DAB+ radios automatically switch to FM when reception is poor, which the user usually does not notice. We estimate that over 50% of Swiss still listen to the FM radio. This is an order of magnitude that corresponds to the corresponding figures from neighbouring countries.

Now the following question arises: Does FM really have no future any longer in Switzerland? Instead of banning FM in Switzerland in the future, note that every old and every newly sold radio still has an FM receiver. It is important for radio programme providers to know that listeners also have the appropriate receivers, and since all listeners can receive FM radio, it should be left to potential radio providers to choose what best suits their interests, FM or DAB+ or IP streaming or a combination of these.

However, the situation is different with the SRG/SSR. Its main radio programme also corresponds to national security interests and is intended to alert the population in the event of a disaster⁶. For this reason alone, continued operation via FM would have many advantages, because every radio receiver in Switzerland, except in smartphones, whether old or new and whether fixed or mobile, can be reached with it. Inside buildings, FM is much better received than DAB+. Swisscom's FM transmitter network, which SRG/SSR has been using to date, achieves total coverage of Switzerland. Achieving something like this took a lot of effort and technical know-how, and that should definitely not be dismantled now. Who ultimately pays for SRG/SSR's FM radio broadcasting? This is the people with the high media reception tax, and not the SRG/SSR or the state. The entire FM network costs SRG/SSR around 15 million francs/year, which is less than 1% of the annual budget, individual programmes would only be a fraction of that, which would be absolutely irrelevant in terms of finances. So if you were to get only one SRG/SSR main programme per language region on FM, it would cost less than one franc per year with around 4 million households and per household. Wouldn't something like this be much more sensible than what the DigiMig Group has proposed to the state? This would also eliminate this island solution, which is so very unpleasant for Switzerland.

⁶ Two federal systems are affected by the SRG/SSR FM transmitter switch-off: "POLYALERT" for switching 5000 sirens via FM and RDS, and IBBK; both conversions to DAB+ will cost many more millions of francs. (<https://www.newsd.admin.ch/newsd/message/attachments/50628.pdf>).

In the end, the question arises as to whether FM radio still has a future in Europe at all? The answer is clearly yes, and there is not even an end in sight today! FM radio is the most widely used radio system in the world today. RDS with its many digital data service options (text, images, remote switching, etc.) has also contributed to this, including the United States, where every new radio receiver, mobile or fixed, is still suitable for FM with RDS. The frequency band used for FM radio will remain exclusive to the broadcasting service for many years to come and cannot be used for other radiocommunication services. In Europe, there is an international agreement for the use of FM radio, which only allows changes to the frequencies allocated to countries with severe restrictions. All service ranges in the corresponding frequency plan are limited by interference from the same and neighbouring channel transmitters. The general switch-off of the Swiss FM transmitters thus increases the reach of the FM transmitters from neighbouring countries and will thus also significantly improve their reception in Switzerland, i.e. a total own goal by DigiMig & Co for Switzerland.

All Swiss private radio stations that will remain on FM for the time being will also achieve greater reach by the effect of switching off the SRG/SSR stations.

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