



How realistic is the FM radio switch-off plan from Switzerland?

■ FM radio switch-off plans:

- Switzerland is the only country in Europe to switch-off FM

| | |
|--------------------|--------------------|
| Austria | none |
| Germany | none |
| Switzerland | end of 2024 |
| France | none |
| Italy | none |

■ Is this really true? What about Norway ?

- See the next page for more detail
- **Switzerland unilaterally puts an end to widely used FM radio listening in Europe**
 - Broadcasters should be able to choose the infrastructure that suits their offer and target group
 - FM radio continues to be used worldwide and this technology is not outdated yet

2021-10-14: Norway To Retain FM Radio For Another Ten Years

Good news for local radio but not for the DAB lobby



- Today the government led by the conservative *Erna Solberg* was replaced by a coalition of the Social Democrats and the Center Party (Sp). The new government declaration clarifies that the focus is on local radio being able to continue broadcasting on FM until 2031.

- **Spain Portugal**
March 2019 the government decision: **No DAB Radio**
 - Spain wants to keep analogue FM radio and will not introduce terrestrial digital radio DAB+ mainly due to lack of consumer interest and the rise of 5G might kill DAB
 - Portugal also put an end to trail DAB broadcasting 2011
- **BBC** About 2 years ago the director radio made the statement: The majority of radio listening was still on FM, next streaming and DAB as a poor third.
He foresaw that eventually streaming would overtake FM, because just as many people stream TV rather than watch live so that will become the norm with radio and DAB would never be the choice of the majority
- **Today:** There are only five countries in Europe with a DAB/DAB+ listening on a weekly basis of 10% or more: UK, Norway, Denmark, Germany and Switzerland
- **Other European countries switched off DAB or do not want it any longer**
 - Like: Ireland, Sweden, Finland and Hungary

- **The public broadcaster SRF/RTS was an early adopter of DAB in the nineties**
 - Since over 25 years their radio programmes are simulcast on FM and DAB
 - There may be a need to introduce savings even on the cost of the Swiss population that finances this with the compulsory annual radio / tv fee
 - Why? Since 2018 this annual fee has been significantly reduced
 - Thus there is less money available now
 - Over the first 20 years DAB was not a big success on the Swiss radio market
 - Then Switzerland changed from DAB to DAB+ and 2016 over 300 000 DAB radios became obsolete
 - Then the Swiss authorities started a marketing campaign spending 10.3 million francs that resulted in almost all portable radio receivers to have also DAB+
 - Cars continued to be sold with an expensive DAB option for the FM Infotainment system
 - The DAB+ receiving option was at least 500 franc plus (a very profitable option for the car industry)
 - An EU decision of 2018 changed this as from 12/2020: New cars have now DAB+, compulsory in the EU and thus de facto also in Switzerland
 - NOTE: Swiss authorities never regulated that cars sold in Switzerland must also have a DAB+ receiver

- **At the Swiss Radio Day Zurich, August 2021**
 - **new FM switch-off dates were suddenly announced:**
 - The public radio SRF/RTS radio programmes
 - Will now all be switched-off on FM at the end of 2024
 - and no longer in August 2022, as was announced in November 2020
 - The private/commercial radio programmes
 - Will now all be switched-off on FM at the end of 2024
 - and not at the end of 2023, as announced in November 2020
 - A mystery remains why as from 2025 there will be no FM broadcasts any longer in Switzerland
 - NOTE: The whole world will continue to broadcast on FM
 - FM is the most popular broadcast technology worldwide
 - Main reason: FM receivers are very inexpensive, even with RDS !
 - The demodulation technique used today for analogue FM radio is 100% digital
 - What will then be done with the vacated FM band in Switzerland ?
 - Nobody seems to know this / Swiss authorities keep silent on this issue

Who will win?

Who will lose?

- **The SRF/RTS/RSI wants to save on FM radio transmission cost 15 million francs per year !**
- **The listeners will pay all this indirectly**
 - More than 10 million* **perfectly working FM receivers** ** will become obsolete (environment unfriendly...)
 - Their value is estimated at over 1 billion Swiss francs
 - Many existing navigational devices will no longer be updated with RDS-TMC messages and their adaptation to DAB+ with TPEG is technically not possible (and all these devices will become obsolete and will need to be replaced)
- **What does the Swiss Automobile Club TCS say to all this?**
 - There is concern since July 2021 that millions of cars will no longer receive traffic and travel info (TTI)

* This figure is estimated and represents only the order of magnitude: With 3.8 million households and 4.7 million registered cars this figure can be more than twice as high !

** That FM car radios produce a noisy audio signal is simply “faked news”, spread around by the SRF/RTS/RSI on 2021-06-04 in its tv news

The SRF/RTS/RSI was happily using FM for over 60 years !



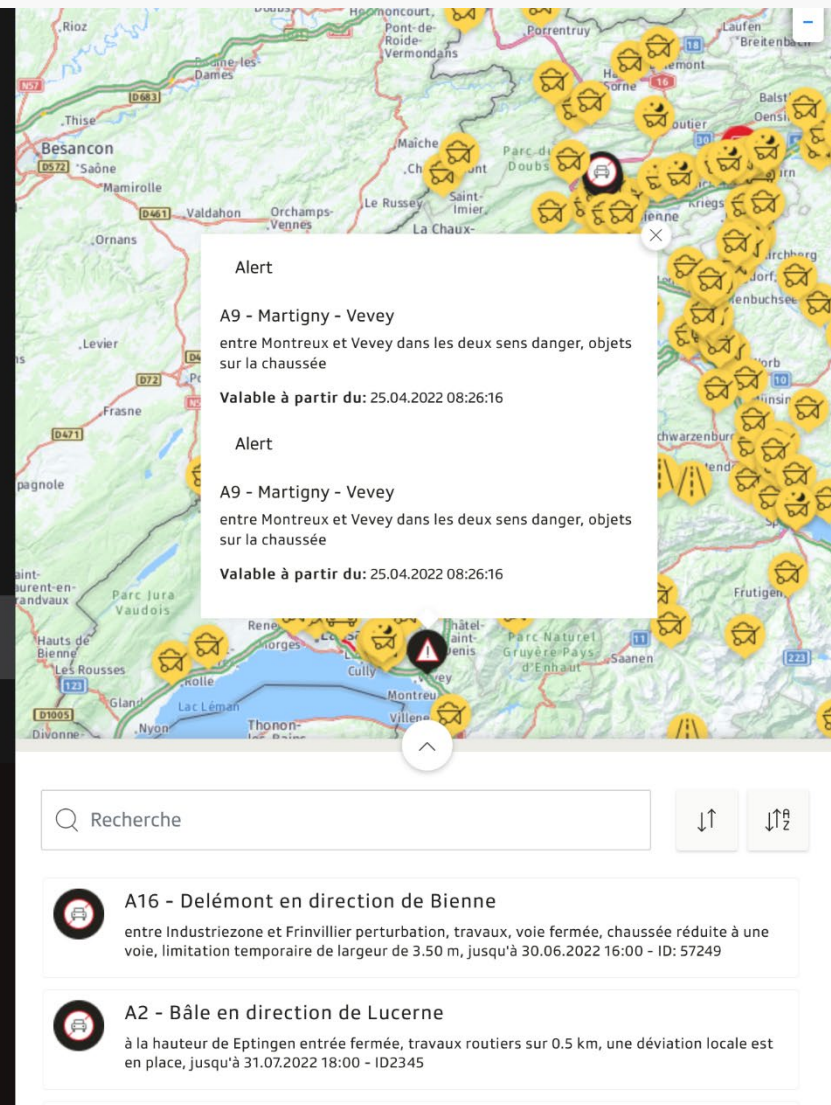
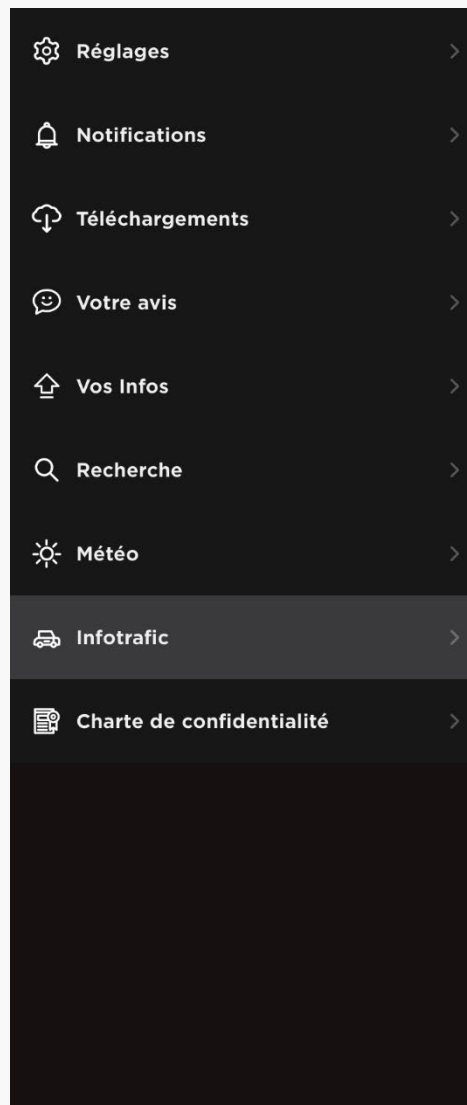
- Only since 2021 all new cars in Switzerland **may have** a DAB tuner onboard
 - 300 000 new cars are being sold each year
 - **Thus, only as from 2030 almost all cars are likely to have DAB in their Infotainment system**
- **Swiss authorities pretend that**
 - Old cars can use DAB adapters that cost only 50 Swiss Francs
 - This is simply misinformation caused by technical incompetence
- **Car makers install Infotainment systems that contribute to road safety**
 - It is not correct to encourage users to modify such systems
 - FM and DAB radio functionalities for traffic and travel information to be automatically received are internationally standardized and totally equivalent
 - **All car radios have a TI/TA key to activate this functionality**
 - **TI: Traffic Information – TA: Traffic Announcement**
 - Car radios can be used to play own recorded or IP streamed music
 - FM and DAB radios interrupt such music players with traffic announcements when TI is activated
 - The loudness level of traffic announcements is normally higher than the one used for other content

- **The Swiss test magazine “Bon à Savoir”, issue 3/2022 informs consumers**
 - To get DAB+ in a car with an FM Infotainment system will cost between 400 and 1500 Swiss franc and 800 on average
 - One case of 3500 francs for the change to a car radio with DAB+ is quoted
 - Not just 50 franc as BAKOM/OFCOM makes the public believe (do-it-yourself)
- **The Swiss automobile club TCS member magazine, issue 2/2022 gives more details, not easy to understand for technical laymen**
 - They tested four cars built between 2006 and 2017 to be re-equipped for DAB+
 - The DAB+ installation was charged at 741.- (VW), 1272.- (Nissan), 721.- (Audi), 276.- (Seat) – **the professional installers where they from the car companies ?**
 - Defects observed after the re-installation done by “professionals”:
 - Case VW: Traffic info works only on FM; DAB stations cannot be memorized: Denon USB DAB+U
 - Case Nissan: Perfect with Kenwood DMX 5020DABS
 - Case Audi: Traffic info works only on FM; FM reception got worse : Blaupunkt Bremen SQR 46
 - Case Seat: Adapter Pure 400 sold by TCS used; ok, but is this not a kind of “bricolage” ?
 - **Hello TCS: If traffic info does not work on the new DAB radio, why change to DAB?**

- **Viasuisse is the national traffic information TTI provider from SRF/RTS/RSI, TCS and SBB/CFF jointly created in 2001**
- <https://viasuisse.ch>
 - They provide the free traffic info that the SRF/RTS/RSI broadcasts daily on FM and DAB+
 - All messages are on the Internet web sites SRF Info / RTS Info / RSI Info as Infotrafic available for free
 - **Announced on FM and DAB+ are only very few alert messages**
 - For the user of a car receiver the functionalities to receive the traffic announcements are the same on FM and DAB+
 - Activation by the user with a TI/TA key on the car radio is required and standard since 1984
 - When activated, the announcements interrupt the radio programme or own recorded audio listening; a higher loudness level is common
 - For navis the TTI is broadcast in addition using TMC on FM and TPEG on DAB+



■ Infotrafic on the Internet as RTS Info:



- **The most important traffic messages concern:**
 - **Persons driving by error on the motorway lanes in the opposite direction ,
Lost loads, Animals on the motorway**
 - **Extreme weather conditions: heavy rain, snowfall and black ice, etc.**
 - **Closed roads and railway problems caused by floods, landslides and
avalanches as well as ongoing road and railway line maintenance works**
 - **Tunnel problems caused by road works and accidents**
 - **Traffic jams and resulting travel delays**
 - **Recommendations for alternative routes**
 - **Railway cancellations and alternative transport services made available**

- **Millions of cars without a DAB+ car radio on board will not get these important messages any longer**
 - This will not concern only Swiss cars but also the many foreign cars on visit or on transit
 - All of them have to pay for the Vignette and will be deprived of the important traffic information warning messages
 - The “experts” that wanted help the SRF/RTS/RSI to save 15 million CHF/year for the distribution of their three main programmes on FM seem to have committed a serious error
 - The Swiss authorities are invited to re-evaluate all this before it is too late
 - It is somewhat irresponsible of the Swiss public authorities to maintain the FM switch-off date for 2024 being well aware that only as from 2021 all new cars have also a DAB+ reception option on board as standard equipment
 - **Considering all this it is rather obvious that FM cannot be switched-off before 2030 or even 2035 at least**
- **This is something that the Swiss authorities will need to reconsider**

- **This safety issue remained up to now totally ignored by Swiss authorities:**
- **It will have a strong impact on traffic and on road/tunnel safety**
 - **As from 2025 millions of cars on Swiss roads without DAB+ radios will then no longer receive traffic announcements and dynamic coded traffic information on navigation systems using RDS-TMC**
 - Swiss citizens will not buy new cars nor change radios in existing cars just because of an FM radio switch-off being imposed by Swiss authorities
 - In large parts of Switzerland perfect FM reception from the neighbouring countries continues, but these do not give the traffic info needed inside Switzerland
 - **Changing the car radio is not easily possible and is a very controversial issue, even with legal repercussions if something goes wrong. For more detail to clarify this see slide no.9**
 - **Foreign tourists and cars transiting Switzerland will encounter as from 2025 a black FM hole, unique in Europe and even the world, as FM radio continues to remain the most popular radio system everywhere !**
 - **There is no technical reason to switch-off FM**
 - **Swiss broadcasters say that simulcasting FM and DAB+ is too expensive and therefore needs to be stopped**
 - **The public Swiss broadcaster SRF/RTS/RSI is wrong in this respect as it is funded by the public**
- **Traffic info is part of its public service mission and the information service offered so far by SRF/RTS/RSI with Viasuisse has been very good !**

- **The society as a whole will suffer:**
 - the social global costs (accidents, repair costs, medical care etc.) for the whole country will rise
 - Thus TTI-services are of much more added value than just all unspecified information paid via the radio/tv-fee
 - For the Swiss authorities to take the right decision a much broader consideration than just BAKOM / OFCOM involvement is required

■ To FM switch-off plans and resulting problems for the public

Jeder zweite Autofahrer zahlt für Funkstille in Tunnels

Rund 33 Millionen Franken gaben Bund und Kantone bisher für den DAB+ -Empfang in Tunnels aus. Zur Kasse gebeten werden alle Autofahrer – obwohl die Mehrheit Digitalradio nicht empfangen kann.

Radioempfang via UKW soll laut den Plänen des Bundes spätestens Ende 2024 nicht mehr möglich sein. Der Widerstand gegen die Abschaltung wächst. Ende April lancierte Radiopionier Roger Schawinski die Petition «Retter UKW». Bis heute unterschrieben mehr als 50000 Personen. Sogar die frühere Bundesrätin Doris Leuthard änderte ihre Meinung. Sie erachtet es nicht mehr als sinnvoll, mit der UKW-Abschaltung unzählige funktionierende Radiogeräte unbrauchbar zu machen. Dabei war es Leuthard, die sich 2016 mit den Radiosendern darauf einigte, UKW abzuschalten. Ständessen sollen die Hörer auf das Digitalradio DAB+ (Digital Audio Broadcasting) umstellen, für das man andere Empfangsgeräte braucht.

Bisher bekannt ist: Um DAB+ zum Durchbruch zu verhelfen, gibt das Bundesamt für Kommunikation insgesamt 85 Millionen Franken aus, darunter Seralfe-Gebühren («K-Tipp» 10/2021). Doch der geplante Umstieg auf DAB+ verursacht noch weitere Kosten, wie Saldo-Recherchen zeigen: Das Bundesamt für Strassen rüstete in den vergangenen Jahren alle rund 200 Tunnels auf den Schweizer Nationalstrassen mit DAB+-Empfang nach. Das kostete gemäss Angaben des Bundesamts rund 30 Millionen Franken.

Doch auch die Kantone müssen ihre Tunnels modernisieren, saldo fragte bei den 26 Kantonen nach, wie viel Steuer Geld sie bisher für die Umstel-



DAB+ Bund rüstet Tunnels mit Geldern aus dem Nationalstrassenfonds um

lung auf DAB+ ausgeben. Total fielen bei den 26 Kantonen bisher 3,3 Millionen Franken an Kosten an. Die Kantone geben aber davon aus, dass noch mindestens eine halbe Million Franken dazukommen. Neuenburg zeigt sich in Sachen Tunnelnachrüstungen vom UKW-Abschalters mit unbeeindruckt: «Wir machen uns keinen Druck, den Termin um jeden Preis einzuhalten.»

«Der Bundesrat wird beauftragt, UKW vorerst abzuschalten, wenn DAB+ und/oder der Internet-Radioempfang einen Marktanteil von etwa 90 Prozent erreicht haben. Es ist wichtig, dass möglichst alle Autofahrer erreicht werden können.»

Ruedi Noerz, Ständerat (ZH, FDP), parlamentarischer Vorstoss, 7. Juni 2021

sondieren etwa der Erlös aus dem Verkauf von Autobahnnetzen und Steuern auf Benzin und Diesel. Das Bundesamt für Strassen begründete 2016 die Ausgaben für die Tunnelausrüstung mit der Sicherheit. Bei einem Notfall kann die Polizei die Radioprogramme für Durchgänger unterbrechen. «Dies ist ein wichtiges Element der Tunnelsicherheit», schrieb das Bundesamt für Strassen damals. Heute spielt das Sicherheitsargument offenbar keine Rolle mehr. Denn das Bundesamt will UKW auch in den Tunnels abschalten, wenn Bundesrat und Radiostationen am Abschalttermin festhalten – obwohl viele Autofahrer dann keine Sicherheits- und Verkehrsmeldungen der Polizei mehr empfangen würden. Das Bundesamt schreibt saldo: «Die Tunnelicherheit steht und fällt nicht mit der UKW-Abschaltung.» Jimmy Sauter

DAB+ Aktuell

La fin prématurée des ondes FM met en péril la sécurité routière

TEXTE REDACTION TOURING

En Suisse, les automobilistes sont habitués à écouter des informations routières sur les radios publiques et privées depuis des décennies. Grâce à ces brefs messages, les dangers imminents sont rapidement et efficacement signalés aux auditeurs, tout comme les annonces de surcharge de trafic ou d'événements itinéraires alternatifs. Or ces annonces radiophoniques pourraient bientôt ne plus être entendues par une majorité d'automobilistes avec le passage au DAB+. Ce qui inquiète Peter Schilliger, conseiller national PLR lucernois et président du Comité politique du TCS. Interview.



Numerisation Une majorité d'automobilistes ne peut pas encore écouler pour la réception DAB+.

Vous interpellez le Conseil fédéral pour un changement de système de diffusion radiophonique.

N'est-ce pas exagéré? Pas du tout, il en va de la sécurité routière. Près de 2600 annonces urgentes sont émises par Via suisse sur nos ondes chaque année. Il s'agit de dangers importants, comme par exemple des congestions, des piétons ou des cyclistes égarés sur l'autoroute. Des vies sont en jeu et on ne doit pas transiger avec la sécurité.



Peter Schilliger, conseiller national PLR et président du Comité politique du TCS

La technologie DAB+ est pourtant prometteuse et les professionnels nous af-

firmant que l'information sera de meilleure qualité. N'êtes-vous pas en train de mener un combat d'arrière-garde? Je ne nie pas la qualité de cette technologie, mais plutôt la transition abrupte qui est prévue. Dès août 2022, les radios publiques de la SSR seront de diffuser sur les ondes FM et les radios privées auront une année plus tard. Selon nos chiffres, 58% des automobiles n'étaient pas équipés en DAB+ en 2019 et capraient uniquement les ondes FM. Il ne faut donc pas aller plus vite que la musique, mais attendre qu'une large majorité d'automobilistes soient équipés avant de bas-

culer sur le DAB+, cela me semble logique. Tous les véhicules neufs sont équipés en DAB+ depuis plusieurs années et cette transition a été annoncée de longue date. Où est le problème? Force est de constater qu'une majorité d'automobilistes ne sont pas encore équipés de récepteurs DAB+ et qu'ils ne pourront plus être avertis qu'une voiture arrive en sens inverse sur l'autoroute, par exemple. Il faut tout simplement rester pragmatique et reconnaître que cette transition arrive trop vite, même si tous les nouveaux véhicules vendus sont équipés. J'ai donc demandé au Conseil fédéral une estimation précise du nombre d'automobilistes qui n'auront toujours pas de DAB+ en août 2022 et en août 2023.

Si le Conseil fédéral reconnaît qu'un grand nombre de personnes seront exclues des informations

LA FIN PROGRAMMÉE DES GRESILLEMENTS

La SSR va devoir couper ses émetteurs FM en août 2022, et les radios privées feront de même au plus tard en août 2023. À partir de ces dates, les programmes radio ne seront plus diffusés qu'en numérique, via le DAB+. Cette mise en œuvre a fait l'objet d'un accord entre la SSR et 80% des radios privées, approuvé par le Conseil fédéral. La qualité de la transmission s'améliorera donc, sensiblement. Au profit ou au détriment de la sécurité routière?

routières, que demanderez-vous? Je demanderai simplement le report de la date de transition jusqu'à ce qu'une large majorité d'automobilistes soient équipés de récepteurs DAB+. J'imagine que le Conseil fédéral y sera d'ailleurs favorable: en 2017, il avait déjà précisé qu'il pourrait repousser la fin des ondes FM.

MOBILITÉ

NZZ

Schweiz

Doris Leuthard schlägt sich im Streit um die UKW-Abschaltung auf Schawinskis Seite

Medienunternehmer Roger Schawinski erhält in seinem Kampf gegen die Einstellung der UKW-Radios Support von der ehemaligen Medienministerin. Der Bundesrat solle seinen Entscheid noch einmal überdenken, findet sie.

David Vonplon 02.06.2021, 20.00 Uhr



«Man ist seinerzeit davon ausgegangen, dass UKW ein Auslaufmodell ist»: alt Bundesrätin Doris Leuthard.

Britta Gut

Radiopionier Roger Schawinski will es noch einmal wissen. Auf allen Kanälen schiesst der bald 76-Jährige gegen die für 2023 geplante Einstellung aller UKW-Sender in der Schweiz. In der

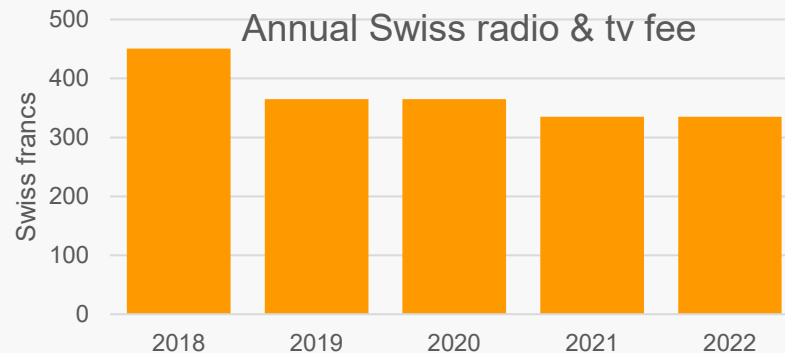
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- **Millions of cars without a DAB+ car radio on board will not get these important TI messages any longer**
 - This will concern not only Swiss cars but also the many foreign cars on visit or on transit
 - All of them have to pay for the Vignette and will be deprived of the important traffic information warning messages
 - The “experts” that wanted help the SRF/RTS/RSI to save 15 million CHF/year for the distribution of their three main programmes on FM seem to have committed a serious error
 - The Swiss authorities are invited to re-evaluate all this before it is too late
 - It is irresponsible of the Swiss public authorities to maintain the FM switch-off date for 2024 being well aware that only as from 2021 all new cars might have also a DAB+ reception option on board as standard equipment
 - **Considering all this it is rather obvious that FM cannot be switched-off before 2030 at least**
- **This needs a serious reconsideration by the Swiss authorities**

More background information

....

- Switzerland has the highest radio & tv reception fee in the world
 - It was greatly reduced recently after a vote of the population in 2018 in favour (72%) to keep it as a means to finance the public radio & tv services:
 - 2018: 451 CHF per year > 2019: 365 CHF per year > 2021: 335 CHF per year



- 2023: BAKOM will again adapt the radio & tv reception fee on criteria totally unknown to the public
- More details are here: [Abgabe für Radio und Fernsehen \(admin.ch\)](https://www.admin.ch/gov/de/section/04613/index.html)

- The consequences may well be that the public broadcaster SRF/RTS/RSI has to make big savings: 80 million Swiss francs in two years
- To stop simulcasting FM radio with full national DAB+ coverage already achieved makes therefore some sense
- The savings for the SRF/RTS/RSI from an FM switch-off thus achieved are estimated to be 15 million francs per year
 - The precise figure is however kept confidential by the network operator Swisscom

- **If the SRF/RTS would leave FM, then private/commercial radio stations would accept to do the same**
 - How could this be achieved?
 - Private/commercial radio stations should volunteer to do so !
 - But why should they?
 - The state (BAKOM/OFCOM) has offered them some “benefits” !
 - In 2013 Swiss broadcasters created with the regulator the
 - **Working group: Digital Migration** (for more programme diversity)
 - By the end of Nov 2020 the agreement was achieved
 - Switch-off date was however changed in August 2021 already
 - to generally take place at the end of 2024
 - **Is there any technical reason to switch-off FM ? No ! Only economical.**
 - **BUT - something of interest for the general public should retain priority**

This is really “Swiss” media policy – questions over questions ?

■ Who decided all this?

- The Federal Government (Council of Ministers) supports what broadcasters agreed with BAKOM/OFCOM in Nov. 2020
 - As it was a majority support from the broadcasters concerned (they cooperated with the regulator BAKOM/OFCOM in their joint WG “Digital Migration” (Note: Safety on the roads was an issue not considered))
- Reduction of the annual Radio & TV reception fee ?
 - The Federal Government with the help of BAKOM/OFCOM
 - 2018: former Federal Councillor Doris Leuthard had this idea to go down from 451 to 365 Swiss francs (only one franc per day) to help winning the public voting over keeping a fee or not : 72% YES!
 - Today, what does she say in short about the upcoming FM switch-off ?

Probably too early and not coordinated with the neighbouring countries. The current Federal Government and also the respective parliamentary commission should and may well reconsider this decision (NZZ – 2021-06-03)

- **In 2021 the Radio & TV reception fee is reduced again**
 - From 365 francs now down by 10% to 335 francs !
 - Why?
 - How is this reception fee shared now ? Between:
 - The only public broadcaster SRF/RTS/RSI (a kind of state monopoly)
 - 1.2 billion Swiss francs per year
 - Some local radio and tv broadcasters of public interest
 - 6%: 81 million per year shared between all qualified
 - How does the total amount collected now compare with the one collected before the popular voting in 2018?
 - BAKOM regulates this to be a constant sum. Checked every 2 years, now.
 - Note: All rules about who has to pay were changed since 2015 and differ from what was valid until 2018. Some details are published on the BAKOM web site, but the whole process to be applied is not transparent to the Swiss public

- The DigiMig WG members found (with “benefits for their own business” obtained) that
 - Radio listening is increasingly “digital” in Switzerland
 - Yes, but up to now less than 50% of all cars have DAB+
 - Switzerland has 4.7 million registered cars of which 2.3 million do not yet have DAB+
 - Now, in 2022, all new cars might have DAB+ and 300 000 new cars per year are being sold
 - No problem say those BAKOM experts: **Cars still without DAB+ can use DAB+ adapters**
 - But these are **unsafe to be used as in-vehicle receivers** (see next slide)
 - BAKOM/OFCOM’s technical competence is thus doubtful
- **What were really those “benefits” obtained?**
 - The Swiss state subsidised the migration to digital radio DAB+ with about 85 million francs (source: NZZ of 2021-06-16)
 - This included simulcasting subsidized up to 80% from the radio/tv reception fee
 - This included the “radio is moving” publicity campaign in the Swiss media with 10.3 million francs and
 - In addition, tunnels were equipped for DAB+ with an additional cost of 30 million francs (ASTRA)



Why are DAB+ adapters unsafe ?



- Compared to car-radios these adapters are inferior
 - They have a much-reduced rf signal input sensitivity
 - So, with such an adapter signal drop-outs will occur much earlier and more often
 - They support Traffic Information (TI) only in the radio reception mode
 - They isolate the user from TI when used with a smart phone
 - This makes their use on the road very unsafe for the user
- ETSI receiver minimum requirements list them in the category **‘domestic receivers’**; in that case most DAB+ data features do not need to be available (ETSI TS 103 461 V1.2.2 (2020-10))



Switzerland is a tourist and a transit country

- **Safety on the roads** has been the SRF/RTS/RSI's public service mission for over 50 years:
 - **Provision of traffic information to everyone and for free** (paid-for services that exist as well are used by the automotive industry)
 - Spoken and machine-readable (coded language independent) messages on FM and DAB+
 - TMC on FM to support navigational devices *
 - TPEG on DAB+ to support navigational devices *



* Swiss authorities have not at all investigated how many of these devices are now used in Switzerland and how many of them use TMC or TPEG2 instead

- **Foreign visitors who pay for the Swiss vignette expect as usual**
 - to receive up-to-date safety and traffic info
- Those vehicles coming from other European countries have even fewer DAB+ radios on board
 - 20% perhaps (an optimistic 2021 estimation for the neighbours of Switzerland, all being much less pro DAB+)

- How is it possible that Switzerland acts alone and not coordinated with its neighbours ?
 - This is not normal and DAB+ is not a pan-European system
 - Many do not understand this and wonder who decided all this

NOTE: The two international organizations for local radio *Community Media Forum Europe* and *AMARC Europe* have previously emphasized in a letter to the European Commission the importance of community radio retaining FM. The organisations are not against future digitization but rather advocate a different technology than DAB, namely DRM

- **There will be millions of cars on Swiss roads that after the FM switch-off are no longer able to receive traffic information**
 - Spoken announcements and
 - Updates for the many navis using RDS-TMC
- **This is in a way really ‘irresponsible’ and who decided this ?**
- **In 2022, Swiss cars without DAB+: 2.3 million**
 - Since 2021 all new cars have DAB+, because of an EU Directive (2018)
 - 300 000 new cars sold per year in Switzerland
- **So, it will take another 9 years until most cars on Swiss roads can receive DAB+**

**There is clearly a need to delay the FM switch-off date by
at least 8 years as from 2022**

- **Who is responsible?**
 - This remains currently also totally unclear
 - **BAKOM** says that this is no issue for them to consider and this concerns another branch of the Administration –
 - Namely the road administration **ASTRA** maintaining the road and tunnel communication infrastructure
 - Was ASTRA ever consulted on the repercussions of an FM switch-off on safety on the roads?
- **With 2.3 million Swiss cars still without DAB+**
 - The planned FM switch-off date is at least 5 years too early: Should be 2030 or later and not 2025 !
 - **Road users must continue to be warned of dangerous incidents**
 - Continued support for the **EU Tunnel Safety Directive** is required
 - Reference EU document: 2004/54/EC
 - This is a pan-European issue and not to be ignored by the Swiss authorities
 - **Who has any statistics** of the kind of receivers still used for **open safety on the roads info** broadcast by the SRF/RTS/RSI and on their first radio programme chains ?
 - How many navis still use RDS-TMC on FM only compared to TPEG2 on DAB+ only ?

- If you understand German, follow the discussion about this controversial and non-democratic decision of the Swiss authorities:
 - Use in your browser the search term “UKW Abschaltung”
 - Here is an example from 13 September 2021:
 - [NEIN zur Abschaltung des UKW-Radioempfangs \(aargauerwoche.ch\)](https://www.aargauerwoche.ch/2021/09/13/nein-zur-abschaltung-des-ukw-radioempfangs/)
- Use the online journal www.persoendlich.com and search for the term UKW – here is an example:
 - https://www.persoendlich.com/medien/radios-senden-zwei-jahre-langer-auf-ukw
- Use the web site www.rettetukw.ch/medien-echo

- If you understand German, follow the discussion about this controversial and non-democratic decision of the Swiss authorities:
 - Use in your browser the search term “UKW Abschaltung”
 - Here is an example from 13 September 2021:
 - [NEIN zur Abschaltung des UKW-Radioempfangs \(aargauerwoche.ch\)](https://www.aargauerwoche.ch/2021/09/13/nein-zur-abschaltung-des-ukw-radioempfangs/)
- Use the online journal www.persoendlich.com and search for the term UKW – here is an example:
 - https://www.persoendlich.com/medien/radios-senden-zwei-jahre-langer-auf-ukw
- Use the web site www.rettetukw.ch/medien-echo

Many citizens ask to stop this FM switch-off

RDS FORUM 2022



Argumentaire Pétition Medien-Echo Podcast  

Pétition

Nous demandons à la Conseillère fédérale en charge des médias Simonetta Sommaruga et à l'OFCOM de revenir sur la décision de débrancher tous les émetteurs FM en Suisse.

Les conséquences de cette mesure seraient dévastatrices. 58% de toutes les voitures en Suisse – soit plus de la moitié – ne disposent pas de récepteur DAB+ et continuent donc de dépendre de la FM. Aussi en ce qui concerne la réception en mode stationnaire, presque un tiers de tous les Suisses continuent d'utiliser un émetteur FM, cela depuis de nombreuses années et en dépit de campagnes publicitaires extrêmement coûteuses en faveur du DAB+.

- **No wonder there is protest already:
www.rettetukw.ch**
- **Citizens are invited to sign a petition requesting to stop the FM switch-off in Switzerland**
- **Between May and July 2021: ~ More than 60'000 have signed the petition**

- **RDS/RDS2 data analysis with RX014**

- This USB receiver stick from MacBe has existed since 2015 <http://www.rx014.com/home/buildpage.php>
- RX014 uses a standard NXP chip with a software patch to make it fully RDS2 compatible

The screenshot shows the 'R(B)DS & RDS2 monitor' application. It features several tabs: System, Logging, Statistics, Basic, (e)RT, EON, TMC, EAS, Hold, and Clear All. The 'Received groups' section contains a table with columns for frequency bands (0A-15A) and rows for signal strength (#) and percentage (%). The 'Summary' section displays statistics for Quality (100%), Blocks (19320), and Groups (4830). It also includes 'Errors details' and 'ODA's on channel' tables. The 'Group sequence' section shows a list of frequencies: 0A, 0A, 2A, 14A, 0A, 2A, 0A, 8A, 0A, 2A, 14A, 0A, 2A, 0A, 3A, 0A, 2A, 14A.



- **The RTS runs RDS-TMC on their current first and third FM programme chains (monitored in Geneva on 18 June 2021)**

FM-RDS

RDS-TMC: Still very widely used all over Europe

TMC has adopted a lot of improvements over recent years to a level that TMC services are satisfactory and sufficient to most users

The following navis use it:

- Becker
- Blaupunkt
- Falk
- Garmin
- Navigon
- TomTom

DAB+

TPEG2 instead of TMC

(TMC is since 2016 no longer supported by DAB – a wish of the car industry)

TPEG2 is less widely used for radio broadcasting in Europe

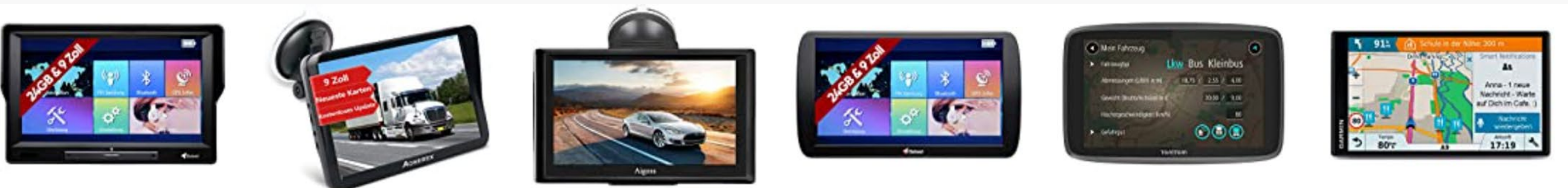
(Only Switzerland/Viasuisse and Germany/ARD offer yet a free open TPEG2 service)

Reference for Germany:

[TPEG - der Digitale Verkehrsservice der ARD - Verkehr - WDR](#)

Only few navis support this:

Garmin



- Accept that SRF/RTS needs to save 15 million francs/yr.
- **In the interest of everyone stop the FM-switch-off**
 - Oblige the SRF/RTS to simulcast on FM for the next 10 years
 - **Find the necessary funds to pay for this**
 - Example: Increase the Radio & TV reception fee by only 5 francs per year
 - With 4 million households paying this fee – 20 million francs will be there !
 - This corresponds to one cup of coffee per year in a Swiss restaurant
 - The sacrifice thus made is very reasonable
 - **This changes everything**
 - **Safety on roads** is maintained with the well-known traffic information services
 - No existing receiver nor navigational device will become garbage
 - This would be a great compromise for the environment !
 - Tourists and foreign cars on transit can continue to be informed with emergency messages by radio on safety issues, also in the many road tunnels of Switzerland (this is a European requirement formulated in the **EU Tunnel Safety Directive**)

- **Things may well be different**
 - By then most cars may have also DAB+ on board
 - The EU introduced provisions (EECC) to ensure that radio sets in new passenger cars are capable of receiving digital terrestrial radio as from 21 December 2020 onwards.
 - The future trend is: Many may receive by then the radio programmes as streaming or listen to podcasts on the fixed and mobile Internet 5G and later
 - 5G Broadcast could by then be much superior to DAB+ (better audio & data)
 - FM radio will still be there and almost everywhere in the world
 - FM radio has a longer future than many think
 - It is easier to implement and to operate than DAB+
 - With RDS/RDS2 it also supports a large range of data applications, many still to be defined
 - Car radio technology can already deliver all in one box (FM and DAB+) and whatever is needed in the countries concerned; most implementations are software-based and relatively inexpensive when mass produced

■ The Telecom Commission of the Swiss Parliament

- Made a review of the BAKOM/OFCOM agreement achieved with the broadcasters in November 2020
- **It concluded in August 2021:**
 - There is no need for further political action (a very strange conclusion – why?)
 - In November 2021, Mr. R. Noser, member of the Cantonal Council, alerted the National Council (Parliament):

The FM stations in Switzerland should only be switched off when they no longer meet a need. The unilateral funding of DAB is to be reviewed. And it must not lead to bad investments on the part of consumers.
- There is hope that the planned FM radio switch-off will not really happen at the end of 2024 as planned by the regulator BAKOM/OFCOM
- Still pending is a review to be done related to emergency warnings
 - FM radio is considered worldwide to have advantages over DAB+ radio for warning messages to be addressed to the population

- In 1974 the EBU decided in Paris to develop RDS for FM radio
- Two mobile tests took place in Switzerland in the region of Interlaken
 - 1980: The EBU expert meeting was hosted by the Swiss PTT (Ernst Schwarz). A second mobile test took place in 1982.
- The RDS Forum was founded in 1993 to maintain RDS and to develop it further
- The SRF/RTS/RSI and Swisscom were members for over 25 years
- 1999 RDS became a worldwide IEC standard
- Since then billions of FM radio IC chips with RDS were produced
 - They deliver high quality audio and data at a very low price (1 CHF per chip in quantities)
- Almost all FM radios sold in Europe and the USA use RDS
- In 2018 a new option, RDS2, was standardized by the RDS Forum and the IEC
- In 2022, Korea started the process to adopt RDS2 for FM radio nationwide



- **Thanks to our colleagues in the RDS Forum and our other professional contacts who reviewed this presentation for correctness**
- **We used a number of Swiss press publications as a reference**
 - These can be downloaded from
 - <https://www.rettetukw.ch/de/medien-echo/>
- **Contact us at the RDS FORUM**
 - rdsforum@bluewin.ch
- **Consult the RDS Forum web site**
 - www.rds.org.uk