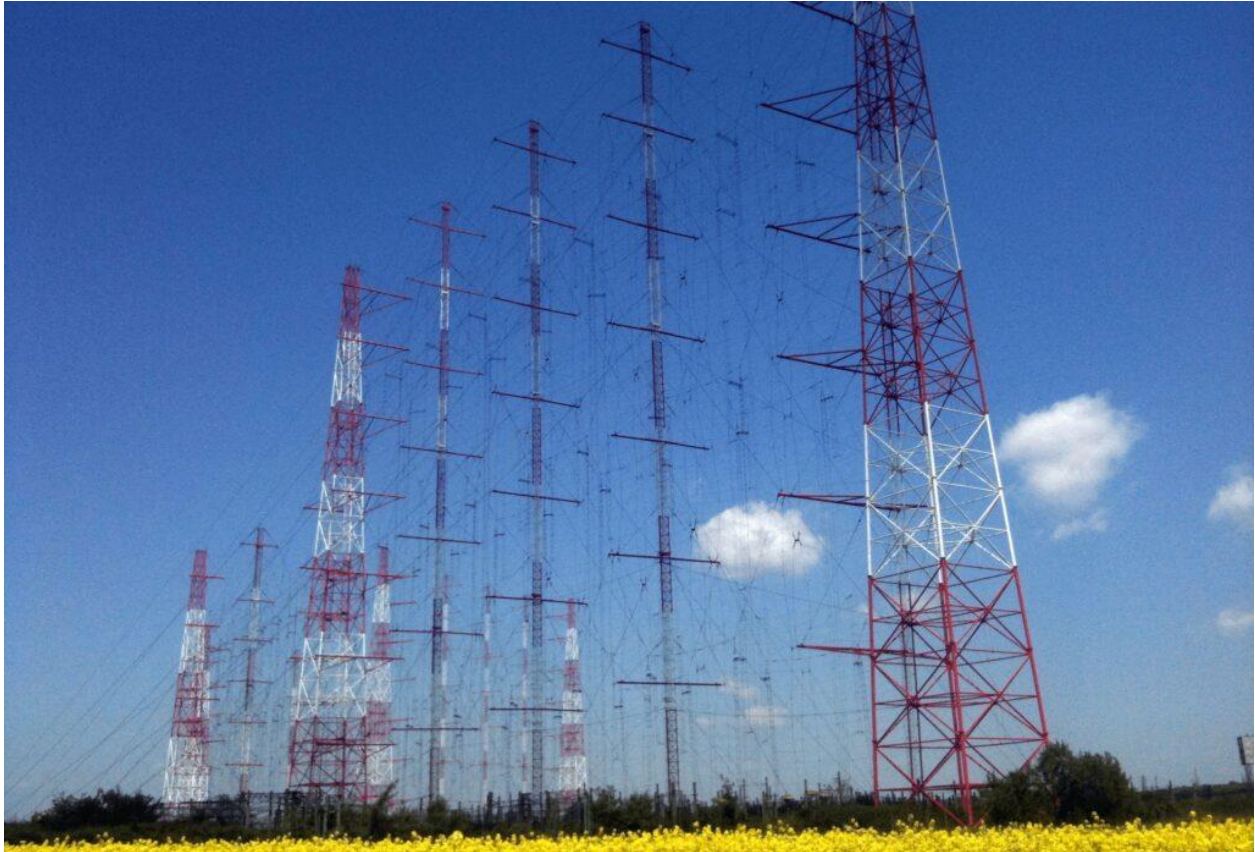


Jock's Op Ed: Why shortwave? And an idea for the future.

[24 Replies](#)



By Jock Elliott, KB2GOM

The internet, I think, is darn near magic. A few keystrokes and you can find almost anything. And people use it all the time for all kinds of things. Hold that thought for a moment.

At the same time, I am very nearly a free speech absolutist . . . you (or anyone) should be allowed to say anything you please so long as it is not illegal. Period.

(An important aside: this post is **NOT** about left vs. right, up vs. down, etc. It's about principles, speech, and access to media. If the comments descend into political vituperation, I will ask Thomas (our Maximum Leader) to take the whole post down, comments and all.)

Now, I know what you are thinking: what about mis-information, dis-information, hate speech, offensive speech, and so forth?

Who gets to decide? And other issues.

Well, three things:

1. Who gets to decide? I don't know about you, but I don't want "the rules" of free speech to be decided by individuals, companies, or governments that have reason to suppress or hide information. The road to the past is positively paved with examples of constricting speech
2. How – if you decide to suppress speech for whatever reason – do you know that you are absoflippinlutely correct in your assessment? It wasn't that long ago that "the experts" were positively certain that continents did not move, and people were pilloried for suggesting that they did. And yet now continental drift is an accepted theory with a great deal of physical evidence to support it. Or how about this: in 2005, the Nobel Prize for Medicine was awarded to two Australian physicians who discovered ulcers are caused by a bacterium. For decades, medical journals would not publish their experimental results because the "consensus" said stress caused ulcers. How many people died because of this suppression? Or how about this zinger from Einstein: "No amount of experimentation can ever prove me right; a single experiment can prove me wrong." Got it? Today's foolishness can be tomorrow's truth . . . and vice versa.
3. When it comes to offensive speech (and there is certainly enough out there), I've discovered these amazing, state-of-the-art, high-tech tools: the OFF switch and the tuning knob. Use them; it's a liberating experience.

Okay, bear that in mind for a moment.

But what does that have to do with shortwave? I'll tell you in a second, but first, one teeny-weeny observation about the internet. Ready? Here it is: it can be switched off in an instant, and then your wonderful world of information simply *isn't there*.

Shortwave, however, is much harder (although not impossible) to switch off. It can get through often when nothing else can. It crosses borders, by passes those who control the switches, and even can be discerned many times when powers that be are trying to jam it.

My Wish

I would like to see lots more shortwave stations, including privately owned shortwave stations, broadcasting a wide variety programming from lots of different perspectives. And because it is over the international airwaves, it would be a lot more difficult to suppress than the internet (or social media).

Wouldn't it be neat if it was relatively easy, especially in terms of government regulations to get low-power shortwave stations on the air? Imagine a plethora of viewpoints delivered through a medium that would be relatively difficult to curtail. I think that would be a good idea. What do you think?

Spread the radio love

This entry was posted in [News](#) on [September 5, 2022](#) by [Jock Elliott](#).

Post navigation

[← A photo tour of the 2022 Shelby Hamfest Video: Tour of AM Stereo Station KYET →](#)

24 thoughts on “Jock’s Op Ed: Why shortwave? And an idea for the future.”

1.  [Mario](#) [September 21, 2022 at 7:13 am](#)

Jock I agree wholeheartedly with you that low powered shortwave stations requiring minimal licensing is a good idea. I’d go a step further, with no licensing requirements for stations under a certain (e.g. 1 watt) power. For example, in the US, in the 1600 – 1710 kHz region of the spectrum anyone can transmit without a license on AM or FM. However the antenna length and power output are minimal to prevent interference with commercial b’casters. This could work on the HF bands too. With the loss of so many SW broadcasters over the past several decades there is plenty of empty space for small low power stations to fill the void and achieve worldwide transmitting distances.

[Reply](#) ↓

1.  [Jock Elliott](#) [October 5, 2022 at 9:28 am](#)

Mario,

I like the way you think!

Cheers, Jock

[Reply](#) ↓

2.  [DavidP](#) [September 7, 2022 at 2:15 pm](#)

I’m probably not as old as others who are “veterans” of DXing (early 40s), but I’ve been at it for over 30 years. I WANT shortwave to have a life, even if it isn’t what it was even 20 years ago.

That said, there are a few ways to cater to new listeners. I do think petitioning for experimental licenses to study DRM/Digital formats would be at good start. Yes, 500 watts is small and yes noise is an issue. However, even in my QRM-heavy neighborhood I can pop up a YouLoop on a SDR or standard receiver and cut through the crap pretty fast.

Why? Don't forget the Raspberry PI hobbyists. You add a small USB receiver to a Pi, add a small loop antenna like a youLoop, and you've got a project for Pi fans to try out! Run something worth listening to that's unique and fun (NO CRAZIES!!) and people are more apt to figure out how to get into a hobby for under \$100.

Make unique, worthwhile radio a killer app and you're not just giving old hobbyists something to listen to, you're inviting people in other hobby circles to a new challenge. They may love that chance.

[Reply](#) ↓



1. **Jock Elliott** [September 8, 2022 at 6:10 am](#)

DavidP,

Very interesting ideas! Thanks for your comments.

Cheers, Jock

[Reply](#) ↓



3. **Dino** [September 7, 2022 at 2:22 am](#)

I work in Emergency Communications, and in all regional and national training exercises, we operate as though all communications services are down, which included AM/FM radio, internet, cell and landlines, as well as the power grid. We do that for a reason. The internet is highly unreliable, easily prone to disruption and easily turned off, for a variety of reasons. Thus, all comms is via radio on V/UHF, Microwave and HF frequencies.

We learned long ago to steer clear of vertical antennas. All man made noise is vertically polarized, so sticking to horizontal polarization is a necessity especially in urban environments. I've seen noise levels of well 'over' S9 on a vertical drop to near zero using a horizontally polarized outdoor antenna. The little telescoping whip antennas on most portable radios are virtually useless, especially on shortwave, unless one goes out into the woods, well away from the 'pollution' of the spectrum caused by all of our 'devices.'

I'm very much a news hound. I realize that what we see/hear on our national news is heavily filtered, so I seek information from a variety of sources. One of these sources is shortwave. I do hear more stations popping up as the world descends into what can best be described as another semi cold war mentality. ... That being said, I do see massive censorship happening. Just simply 'thinking' and voicing one's thoughts can bring trouble, but that has always been the case, Long before radio.

We all have a brain, and with that brain we are supposed to separate the wheat from the chaff. We do not need a government to do our thinking for us. We are all aware when we are hearing propaganda. And if we do not like what we are hearing, there is always the tuning knob and the proverbial On/Off switch to relieve those who are a bit too sensitive in hearing views that don't jibe with their own. ... Life is a two way street, and the free flow of information is an absolute necessity in my book.

For those wishing even more information, try an FTA satellite dish. Hundreds of high quality video stations from all over the world are there at your fingertips, plus some radio stations too. ... But, shortwave's not going to die, will always be there. I can't say that for the internet though.

Lastly, again, go horizontal on HF with a good outside antenna. If living in an area where outdoor antennas are not allowed, an antenna can be placed under the eaves of the house (#18 wire), fed with small coax. Got gutters? Run a small wire out to the gutters. The seamless ones work great, and no one will ever know it's being used as an antenna. Seek a good ground though, a simple 4 foot ground rod into most soils will work.

I am noticing a shortage of 'good' shortwave receivers on the market. If anyone frequents hamfests, look for radios such as the Icom IC- R8500 and Icom IC-R75. Kenwood and Yaesu made many back in the day. The good ones will be capable of ECSSB (Exalted Carrier SSB Reception), where an AM station can be tuned in zero beat (In Upper or Lower Sideband) if there is interference coming from either the Upper side, or the Lower side of the listening frequency. ECSSB also eliminates the nuisance of 'Selective Fading' that's a common characteristic of AM reception.

[Reply](#) ↓

1.  **Jock Elliott** [September 7, 2022 at 6:56 am](#)

Dino,

Thanks for your comments and your many useful suggestions!

I've found that an indoor horizontal loop antenna can work as well (of course, performance will depend on your situation). Also, the "auxiliary antenna" that comes with some portables can produce a noticeable improvement.

Cheers, Jock

[Reply](#) ↓

4.  **James Tedford** [September 6, 2022 at 5:03 pm](#)

Jock,

I so appreciate your posts to this forum. But I think at your core, you're a romantic old fool about shortwave radio. I get it; I'm the same.

I'm realistic enough to know that shortwave is done as a mass communication medium. It's being replaced by digital streaming media. Even In the developing world, Africa specifically, smartphone technology is proliferating. A growing majority have phones, and use them to communicate, make and receive payments, and live their lives. Don't know if they use their phones to listen to world radio, but I expect some do. Nobody is using shortwave.

Sure, a finger can switch off the internet. Same finger can switch off the shortwave broadcaster. So, we're left with the ham radio operator, or the low- power clandestine station. In a worldwide emergency, we'll see how well those sources work.

[Reply](#) ↓

1.  **Jock Elliott** [September 6, 2022 at 6:26 pm](#)

James,

" I think at your core, you're a romantic old fool about shortwave radio" . . . okay, you've discovered my secret; guilty as charged.

Nevertheless, as always, thanks for the kind words and the comments.

Cheers, Jock

[Reply](#) ↓

2.  **alive** [September 7, 2022 at 12:26 pm](#)

Why shortwave now?

Shortwave got Tonga though the volcanic eruption when other comms failed.
Good job.

Also need uncensored news because our PM (NZ) declares she has the truth and we are only to listen to her government! WWW is getting dangerous to express alternative views, even to postulate. So looking for other channels now.

[Reply](#) ↓



1. **Jock Elliott** [September 8, 2022 at 6:20 am](#)

alive,

Exactly!

I know a journalist who was in Russia when the Chernobyl nuclear event happened. News of it was suppressed in Russia. The journalist found out about it through a small shortwave radio he had brought with him and made plans to leave as quickly as possible.

Thanks for your comments.

Cheers, Jock

[Reply](#) ↓



5. **Jake Brodsky, AB3A** [September 6, 2022 at 10:48 am](#)

Being old enough to remember the chaos on the shortwave bands when the cold war was raging, I'm not so sure I want to see it return. The audio chaos that I remember was terrible. Even the new digital audio modes on shortwave won't save us from that.

There are several problems that need to be addressed: First, the background noise floor for the typical shortwave listener has gone up steadily since the 1970s. Many countries have mandated that one MUST use switching mode power supplies. So vendors have the cheapest ones built that they can find. The result? Noise. It used to be that we only had to worry about light dimmers, touch lamps, and the like. Now the house is filled with little noise-making power supplies for this and that, all of which are plugged in somewhere.

But wait, that's not all. In addition to the noise from electric cars, Variable Frequency Drives are now found in many household appliances, including washing machines, HVAC fans and the like. The RF noise these things make is impressive as well.

And then there are issues with housing: The middle class suburban lot with a single family house is out of reach for many people. It isn't even a practical form of housing for them either. Many more people are living in dense urban environments, where there is no

getting away from the RF noise, and you're lucky if you have a balcony from where you can use a small loop.

Put all this together and what does this mean? It means the shortwave spectrum is becoming an RF wasteland full of industrial noises. Even if it didn't have all this noise, most people have restrictions of one sort or another for erecting an outside radio antenna. This means the chance that you'll ever hear a regular 100 Watt shortwave broadcast reliably is pretty low.

I have portable shortwave radios that I take with me when I travel. If I sit on a park bench and listen, I can hear a lot. But it's a park bench. I can't afford to sit there for more than an hour or two at a time. As soon as I go indoors, I have all sorts of problems hearing anything.

The technical reality is that most people listen to music and podcasts through their own playlists on their phones. If you travel in to the wilderness, well, a radio might be a good thing. But how much is there to listen to any more? The audience in wilderness areas where there is no cell coverage is actually quite small. That leaves radio enthusiasts like us. We'd be there with our fancy receiving rigs regardless of the problems. But we are a very small minority.

Yet another factor is that radio overall is losing audience these days. That's a hard reality. I'm all in favor of hobby radio listening. I do listen a lot to domestic shortwave radio and I have even supported a few of the programs I like. But this medium is not growing and it isn't likely to grow either. It's too damn easy to talk to your Alexa/Google/Whatever device and ask it to play some program you like.

Most people under the age of 40 don't care to listen to AM, even to hear interesting programs while riding between cities late at night. They have their favorite podcasts and they play them through their phones regardless of what infrastructure it uses. Advertisers are already leaving mainstream radio stations and are chasing that market on the internet.

So against that backdrop you think it would be cool to have more shortwave stations. Well, it's a nice thought. But I see the whole broadcast industry losing to the internet. Even now, we have inexpensive internet satellite service emerging almost everywhere on the planet (except for the few countries who don't like it).

The part about reaching countries that are currently filtering or blocking internet access – they don't represent a market that anyone can sell to. So without advertisers, who is left that can pay for the massive radio stations that are required to reach across the globe to get to those audiences? Governments, Religious groups (usually on the fringe of society), and maybe a few wealthy hobbyists.

And that's pretty much what you hear now. I would love to see something new, different, relevant, and all that. But I don't see it happening.

[Reply](#) ↓



1. **Jock Elliott** [September 6, 2022 at 3:06 pm](#)

Jay,

Thanks for your comments. I take your points, I really do.

Perhaps my location is an anomaly, but reception here is OK on portables and whip antenna.

Cheers, Jock

[Reply](#) ↓



6. **Rob W4ZNG** [September 6, 2022 at 9:17 am](#)

(1) It's hard and costly to shut down internet services, because businesses and government have become so reliant on them. True though, it is possible to selectively cancel specific news sources by de-platforming on youtube, twitter, etc. and by having popular search engines ignore them. Work-arounds abound and more are in development. Moreover, when some voice gets canceled, the Streisand Effect kicks in and paradoxically makes MORE people want to tune in.

(2) Via the internet, podcasting is going strong. A guy with a smartphone and a free podcast hosting account can have a broadcast with global reach by sometime later this afternoon. After that, the question is just one of building an audience (and not getting canceled).

(3) HF micro-broadcasting can be set up by anyone with a General (or equivalent) ham license and the proverbial 100 watts and a wire. It's just got to be staged as a two-way conversation. "Gosh Bob, I hadn't heard that news. Would you mind reading the entire article to me? and back to you Bob." "Sure Hal, let me ID and take a swig of my coffee and, oh, here it is, 'Moldovan tanks rolling down Jersey Turnpike...'" Do it in AM mode for a wider audience. How many people will be listening? I don't know. How many people even have a shortwave radio? I suspect that if weird and unfortunate stuff starts happening, they'll be about as popular as toilet paper was in April of 2020, so have a few spares (don't we all) to hand out to friends.

I've got to agree with your wish Jocko, I too would like to see many more, especially private, SW stations broadcasting a variety of perspectives. How to get these going? It could be an interesting problem in finance, advertising revenue streams, and regulatory jujitsu. Or maybe some dot-com billionaire with a passion for SW opts to take one less

space flight and instead uses the spare cash to build a station. Whatever it is, I'll be tuning in.

[Reply](#) ↓

1.  **Jock Elliott** [September 6, 2022 at 3:18 pm](#)

Rob,

Thanks you made me smile!

I love this: “HF micro-broadcasting can be set up by anyone with a General (or equivalent) ham license and the proverbial 100 watts and a wire. It’s just got to be staged as a two-way conversation. “Gosh Bob, I hadn’t heard that news. Would you mind reading the entire article to me? and back to you Bob.” “Sure Hal, let me ID and take a swig of my coffee and, oh, here it is, ‘Moldovan tanks rolling down Jersey Turnpike...’””

And thanks (I think) for putting ideas in my head.

Cheers, Jock

[Reply](#) ↓

1.  **Rob W4ZNG** [September 9, 2022 at 12:02 am](#)

>>>And thanks (I think) for putting ideas in my head.

Always happy to be a bad (if strictly & scrupulously legal) influence,
Jock!

[Reply](#) ↓

2.  **mangosman** [September 6, 2022 at 9:40 pm](#)

Rob,

Internet enters a country via fibre optic cables. At the country who dislikes foreign interference, the end of the cable there is a photo diode and photo transistor, which are powered locally. Remember fibre optic cables carry data, they don’t care what is the source data type. It is possible to send data through networks which is not carried through the internet service providers, but by the telcos themselves. They can detect their own data blocks from the identifying data

inserted into every block. This is one method embassies communicate. I assume this is also how the banking industry transfer money, but with data encryption.

I only know of one commercial radio station which transmits in AM in both the medium and high frequency bands carrying advertising. This is a simulcast. Others may have other examples. The USA's FCC has had a ban on HF broadcasting for domestic audiences. They do have government and religious high frequency broadcasting for audiences outside of the USA. The vast majority of HF broadcasters are government owned or religious broadcasters. Program content varies from propaganda to serious broadcasting.

[Reply](#) ↓

7.  **Frank** [September 6, 2022 at 6:20 am](#)

Good points, Jock.

I think in Denmark, Netherlands, Germany, Finland etc there has been quite a rise of the (still quite low) numbers of low-powered legal shortwave stations, whose airpower you can rent all the time for a very low fee. I think this is very nice, because, speaking for myself, I have rarely listened through long daily hours of [insert country]'s international broadcasting programs back in the days – but I keep running the programs of the low-power guys for hours most weekends in the hobby shack because of the variety in it. Most are music of all kinds, but some are also speech only. I may not care for ALL of them but it's the variety I welcome. I wish this becomes an actual trend: states licensing (more than before) 0.5-10kw small SW broadcasters which pick up the bigger public broadcasters' niches they had left (regarding sea wather reports, specialists music). The 49 meter band (and 75) have become pretty interesting in the past years (check out the TwenteUni webSDR).

[Reply](#) ↓

1.  **Jock Elliott** [September 6, 2022 at 6:58 am](#)

Frank,

Thanks for your comments. That's precisely the kind of thing I was thinking about: low-power shortwave broadcasters, and, more than anything, a variety of content and viewpoints.

I will check out those bands.

Cheers, Jock

[Reply](#) ↓

8.  **mangosman** [September 6, 2022 at 4:32 am](#)

Jason,

The internet can be maintained in the country but disconnected to other countries. This is why the BBC and others are broadcasting using HF radio into Ukraine.

Mobile broadband in particular has been taken down to prevent protests. This was done in Egypt.

China filters the internet particularly traffic to/from foreign countries.

As for DAB+ radios in Australia, 75 % of new cars contain factory fitted DAB+ radios, which is fine for 60 % of the population who live in capital cities. There is no digital or high frequency radio coverage outside of those areas. Just AM and FM.

In India most new cars are fitted with DRM radios at no extra cost. There are now 5 million of them and rapidly rising. There are 35 high powered MF DRM transmitters covering most of the country with powers of up to 1 million Watts. They have 4 high power HF DRM transmitters as well for external broadcasting. Radio New Zealand Pacific is buying a new 100 kW DRM transmitter as is Brazil.

Norway has had DAB+ for all main government and commercial broadcasters since 2017. There is no FM or AM except for small community FM stations. Switzerland will be switching off all but DAB+ in 2024.

[Reply](#) ↓

1.  **Jason** [September 6, 2022 at 9:54 pm](#)

I'm all for radio moving to digital, what I see in Australia though is that analogue is still critically important, especially for following live sport. It's what most people still listen to in cars. Sure those with new cars will use Bluetooth to their phone or DAB, until they are out of range of both then analogue AM is their only option. People have been moving to digital in the car and at home via smartphones and smart speakers.

DAB+ is not suitable for the regions, and unfortunately what's happening with FM is that high power AM transmitters are being shut down and replaced with FM transmitters that only just cover the town. Broadcast Australia are a for profit company that only do the bare minimum required.

We need government funded, high power DRM transmitters in Australia for public broadcasting and public safety. Instead the average citizen is DX'ing 50,000 watt analogue transmitters just to get a useable signal.

Across much of the Eyre Peninsula in SA, you get a far more reliable signal from 891 in Adelaide than you do from the Port Lincoln transmitter on 1485, as an example. With some carefully selected locations for DRM transmitters, broadcast

with at least 500,000 watts you could cover the whole of Australia with AM if they didn't want to get into DAB again, have one in each state. You could consider a SFN (same frequency network) but that might limit the opportunity for localised content.

Encourage a commercial AM or two from each state to get on board with their own transmitter which could be shared in a JV.

Anyway DAB+ is fine in cities, however it still doesn't get the range analogue FM does. In regional areas you need something at much lower frequencies to be effective.

Once DRM is more popular you can reduce the power of AM transmitters especially in the cities to provide that instant zero latency option for watching live sport at the ground while listening to the commentary.

[Reply](#) ↓

9.  **Jason** [September 5, 2022 at 9:33 pm](#)

Although in theory the internet can be “turned off” this has never happened. It has been attempted by various governments through walled gardens, but the internet being a decentralized network sees censorship as interference and routes around it. There are tools to help people do this and you don't need to be tech savvy to route around it.

Shortwave broadcasting is much more expensive to do and the audience is a lot more limited. Therefore the niche of shortwave transmission is limited to those wanting to target people in oppressed areas, rural areas where there is no internet, or both. Shortwave broadcasting also “pops up” in emergencies and natural disasters, however, arguably these circumstances are better served by FM radio or digital in countries where that is what's most popular, in vehicles in particular.

Are there even still car radios being manufactured with SW capabilities?

The march to electric vehicles worldwide is another thing to consider. Electric vehicle manufacturers are removing AM (and that means SW too) as the interference is too great to get useable reception, and forget DX. FM, DAB+ and DRM don't suffer from those issues. It is possible DRM could be included in electric vehicles in future, but I expect that to be limited to particular markets. Or perhaps they will just include everything and sell it worldwide because that's cheaper.

Back to portable/home receivers and if people have a battery powered radio at all, where you live will depend a great deal on what you have access to buy. In Europe or the UK the average consumer is far more likely to have or buy a FM/DAB+ receiver. In Australia/NZ it's more likely to be AM/FM, as portable DAB+ units are more expensive and it's widely known these are not useful for following live sport. People aren't thinking about emergencies when they buy a radio. In the USA you are far more likely to get a AM/FM/WB radio – going to walmart.com and searching for radio brings up lots of

options under \$30 USD, only one of them supports shortwave and it's not a very appealing radio compared to the other options. In Asia/India you are more likely to get a shortwave radio, but digital upgrades (DRM is most likely in Asia) are still very expensive.

It really does depend on where you live. Unfortunately while anyone can broadcast online, radio frequencies are still tightly controlled by greed and corruption with almost all commercial radio being controlled by 1-2 players and community radio being limited by funding and resources, if it exists at all in your country.

[Reply](#) ↓

1.  **Jock Elliott** [September 6, 2022 at 6:54 am](#)

Jason,

Thanks for your comments.

Cheers, Jock

[Reply](#) ↓

10.  **mangosman** [September 5, 2022 at 8:52 pm](#)

This is what you are talking about <https://journalofethics.ama-assn.org/article/barry-marshall-md-and-robin-warren-md/2000-04> He said that to prove his theory he swallowed the bacteria, had all the signs and symptoms of a stomach ulcer then took a cheap readily available antibiotic and cured himself. Remember at the time antacid tablets etc were huge money making business for manufacturers who were trying to prevent their profits from being reduced. It took 13 years to get accepted, Marshall did get a Nobel prize in 2005.

There are also cases of foreign governments sending floods of internet messages to vulnerable people (using the algorithms of facebook and the like) to try and get them to overthrow their own government using lies.

What you have not mentioned is the difference between broadcasters and the internet. In some countries the broadcasters act as a filter to remove conspiracy theories and totally false facts like bleach will kill the covid virus. It might, but it will give you terrible burns etc. There are some very brave journalists trying to get the truth who end up in jail for their efforts. The broadcaster needs a hard won reputation of being fair and balanced in reporting of facts, which is not the case of the unfiltered internet. This type of reporting costs broadcasters money!

High frequency high powered broadcasting is difficult to jam particularly DRM because of its error correction system. So the signal strengths of the wanted and unwanted signals must be near equal, where as in AM you hear the signal in the proportion of the relative signal strengths. Another advantage of HF receiver is that they are easy to conceal particularly if the signals are strong. I note that India is covered by high powered DRM and China has high powered DRM high frequency transmitters as well.

[Reply](#) ↓



1. **Jock Elliott** [September 5, 2022 at 9:32 pm](#)

mangosman,

Thanks for your comments.

Cheers, Jock