NEWBIE GUIDE TO HAM RADIO

This is a LONG post and is aimed purely at novices to help them get off to a decent start.

FOUNDATION/TECHNICIAN COURSE
(What they don't tell you)

When you're going to take your Foundation/Technician exam, you prepare for it by studying whatever is listed in the syllabus of the relevant governing body. Doing so will provide you with enough knowledge to pass your exam with flying colours (hopefully). ***What it won't do, is provide you with much practical knowledge!***

Needless to say, having a Foundation Licence is like having a set of **Learner-Plates** and you can now begin learning in earnest. So what I was hoping to do in this post (which may end up being quite long) is fill you in with all the ***everyday practical*** stuff which ***I*** had to learn in the months following my pass. It seems crazy to me that the Entry-Level licensee is free to operate with such limited 'real world' knowledge.

For example, I had to demonstrate the use and understanding of Morse Code (which included receiving and sending messages (albeit at super slow speed)) and yet I didn't need to know how to solder a PL-259 to the end of my coax-lead!

So let's get on with it. Below is a list of the subjects that I wish I'd had some guidance on as part of the training course. I'll try to cover each one of these by either writing about it myself or by linking you to websites, blogs and videos that I found to be really useful.

- **Choosing a radio**
- **Power Supplies**
- **Code Of Conduct**
- **How to solder**
- **Fitting PL-259 connectors**
- **Taking SWR readings**
- **Installing an RF Ground**
- **Choosing suitable antennas**
- **Installing an Antenna Switch**
- **Installing an ATU**
- **Keeping a Log**
- **QSL Cards /eQSL**
- **Using Digital Data Modes (eg. FT8)**
- **Using Digital Voice Modes (eg. DSTAR)**
- **Using Dongles/HotSpots**
- **Useful Software**

- **Programming Repeaters**

NOW BEAR IN MIND that these are just my own personal ramblings and nothing more. I'm an M7 Operator and other people might know much more than me - I acknowledge that. But that doesn't mean that everyone with a higher grade licence automatically knows better than me (or you). All we can do is share our own individual experiences and then (perhaps) someone else can benefit from them. If anyone reads any part of this and thinks "that's incorrect", then please, let me know why you think that and how it can be corrected.

I am aware that not all countries permit novice license holders to work on all bands, but here in the UK we can use most bands.

CHOOSING A RADIO

This is ***very*** subjective and all I can talk about is my point of view. Luckily, for you, I have had quite a lot of experience buying different radios, so you can benefit from that and maybe avoid the same mistakes I made. I don't regret buying any of my radios and selling them doesn't mean they were inferior to what replaced them - it just means that I wanted something different.

Here's a list of the radio equipment that **I either own or have owned**. If you have any specific questions or queries about any of them, post a comment and I'll respond....

For some people, HAM RADIO is just a bit of a hobby - maybe one of many hobbies and not really something that they'll be getting too obsessed over. For others, it's a **dream hobby** that they've always fancied being involved in but just never had the time to do until now. Personally, I've been a **S**hort**W**ave **L**istener for many, many years and becoming a licensed HAM is a big deal to me. So depending on which category you fall into (and depending on your disposable income), you have to choose which radio equipment is best for you.

Many will be happy with a cheap little 2/70 Baofeng handie and may never proceed further than that. Some will be outdoor-types and want a compact HF system and some will want it all - a **shack-in-a-box!**

Although some people frown at '*shack-in-a-box*' radios, it's usually those operators who have been in the hobby for years and have 'refined' their listening choices (*and got the money for multiple rigs*). For ***newbies***, they are a fabulous way to have a dabble on all bands, in all modes.

If you're looking at **secondhand radios,** there's all sorts out there to choose from like the FT-817/818, FT-847, FT-857D, FT-897D, IC-706, TS-2000, ***etc, etc,*** but on the **new** market there are about four really good models worth considering as a novice...

1) YAESU FT-818ND
2) ICOM IC-7100
3) YAESU FT-991A
4) ICOM IC-705

The FT-818 is a super compact radio which you can take with you **anywhere** and operate on batteries, on all bands and all modes at 6W. You can also use it back home in the shack (with an amplifier if you upgrade your licence later). ***Bear in mind***

though, that this is now a Discontinued Product - Jan 2023.

The IC-7100 is a compact mobile radio, very suitable for use in the car or at home. The separate head unit is an absolute joy to use. Again, all bands, all modes and 100W and DSTAR. It has remote-operation capability. I think it's the only 100W Dstar, HF, 6,4,2 70cm mobile radio in the world **<<< Unique!!!**

The FT-991A is similar to the 7100 with 100W output, but has C4FM instead of DSTAR. It also has the advantage of a built-in ATU and full colour touch-screen. But it has limited Wires-X connectivity compared to its younger siblings. Probably due for an update.

The IC-705 is a compact, high-tech, full SDR QRP radio with a full colour touchscreen, panadapter and waterfall. It's all band, all mode and includes DSTAR. It's 5W on battery power and 10W when powered with a PSU. **A *magnificent* all-rounder! Currently the best!**

The FTX-F1 is a the very latest shack-in-a-box to hit the market and some would say (including me), 4 years late! The 705 has been leading the way and Yaesu have finally pulled their finger out and replaced their ancient FT-818. Includes 4M band but is quite expensive because of its newness.

*** On a super tight budget?** Look at the **(tr)uSDX** HF transceiver and add a Baofeng UV-5R handheld, until you can afford an upgrade. The (tr)uSDX is just astonishing for the price - it covers five bands, has built-in speaker, microphone, PTT, CQ Decoder, etc, etc.

There are also some Chinese **HF-Only** radios worth considering, such as the **brilliant FX-4CR** or a **Xiegu G90**.

DON'T RUSH INTO ANYTHING and don't take the advice of any *one* individual. Talk to a group of people. Spend time trying to figure out what sort of radio(s) will suit you. Join a radio-club (or two) and have a play with their shack radios. Get multiple opinions and try to identify those advisors who wear **blinkers** (eg. those who strongly dislike digital or those who are staunch advocates of one particular brand).

If money isn't an issue, then **you might prefer to go for two radios** to keep your HF interests separate from your VHF/UHF such as an IC-7300 & IC-9700. There's all sorts of options open to you and I only encourage newbies to get a *shack-in-a-box* because it gives you everything you need in one neat package and let's you get on with building your operating skills

It's worth remembering that buying a radio small enough to easily take outdoors with you will massively improve your enjoyment of the hobby. Don't restrict yourself to the shack if you can help it.

Everyone has an opinion and they're entitled to it - you can read my opinion about the best "First Radio" by clicking **HERE**.

Just remember to leave enough money in your budget to buy the **very best antenna** that you can afford (and are able to install at your home QTH). More on this later.

POWER SUPPLY

When you've chosen a radio, you'll need to also buy a Power Supply (PSU) if you want to use the radio from the mains supply at home. The vast majority of radios expect a 13.8V feed.

PSU's are usually categorised into two main groups - linear or switched and then by subgroups (current 3A, 5A, 7A, 12A, 25A, etc, etc). First of all, don't worry too much about whether to buy switched or linear - all the old boys will tell you to buy a linear supply, but the truth is, switched-amps perform ***much*** better than they did years ago and the vast majority of affordable PSU's on the market **are** switched!

With regard to current, you might only need a low current PSU with your Foundation licence limitation, but it really does make sense to buy a much beefier supply so that it's future-proof. If you buy a 30A peak PSU, you can connect your radio to it along with a host of other shack components without worrying about overloading it.

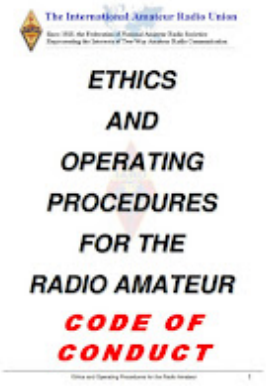
And **just in case** you've not started your course yet and don't know the very basics, ***NO*** your little 10W radio won't be damaged by connecting it to a 30 Amp power-supply! Your radio will only draw whatever current it needs to operate.

There's a couple of PSU reviews on this blog. Look in the menu on the right. The Alinco DM-330FX shown below has been highlighted for a very good reason. It's one of the few PSUs which has **variable voltage.** This can be incredibly useful when you find yourself with a piece of equipment that is limited to 12V or even lower. I have built a few radio-kits and some have needed a 9V supply - with my DM330FX I can accommodate that!

Tom McQuiggan

Tom McQuiggan

CODE OF CONDUCT



It's an absolute **fact** that you don't have to be an Advanced Licence holder to be considered a great radio operator! All you have to do is follow the Code Of Conduct - standard operating procedures. Some 'hams' get a little jaded the longer they've been operating and disregard the rules of etiquette. Some just don't give a damn and behave quite rudely! I've heard some ***terrible*** Advanced operators, but thankfully, the ***vast majority*** work very professionally and cause no problems to anyone.

If you don't want to plough through all the information in the CODE OF CONDUCT guide, the very basic rules which you should stick to include **LISTENING** before transmitting. Don't assume that a frequency is clear just because it seems silent when you first tune to it. It could be that two people are in a QSO and one of them is **way** outside your range and you cannot hear him talking to a guy that is quite close to you. Of course after listening for a while, you should then ask if the frequency is in use a couple of times before occupying it.

Another important rule is to **WAIT YOUR TURN** when trying to contact a DX station who is calling CQ. Don't keep shouting your CallSign over the top of others, over and over. It's rude and you will soon end up with a telling-off and a dose of embarrassment. Similarly, don't try to hoodwink people into thinking you are a DX station by only giving part of your callsign. Again, it's rude and annoying.

And it’s not just when people are call CQ that you use your callsign - you do it in any other situation. Break into **any** QSO with your CALLSIGN and not by shouting “Break”. That’s an old CB term which seems to be creeping back into amateur radio.

When calling CQ on a dedicated ***Calling Frequency*** such as 145.500MHz, keep your call brief and to the point. There's one operator local to me who annoys the hell out of everyone with his **ridiculously looooong** CQ call. He occupies the calling frequency with his monotonous drone for so long, repeating the same thing over and over, that no one will talk to him! **Don't be him!**

Calling CQ on a random HF frequency is a different thing altogether. You can transmit a prolonged CQ Call there with no fear of annoying anyone and it will increase your chances of being heard or being seen on someone's waterfall display.

Always remember to give your CallSign at the start and end of a QSO and whenever it's appropriate in-between. Some people give their CallSign on every over, but there's really no need to. If I'm in a long chinwag, I mention my CallSign maybe every ten minutes or so and definitely if someone else joins the QSO.

Always use the International Phonetic Alphabet. One thing which sometimes throws me is when stations use their own brand of phonetics like ***Apple, Boston, California*** instead of ***Alpha Bravo Charlie***. It's worse still when there's a pileup and everything is already frantic.

Because you are a QRP operator (by default), you would do well to learn which frequencies are designated as the SSB "Centre Of Activity" for QRP and try to use them for calling CQ.

160M - 1910 kHz
80M - 3690 kHz
40M - 7090 kHz
20M - 14285 kHz
17M - 18130 kHz
15M - 21285 kHz
12M - 24950 kHz
10M - 28365 kHz
6M - 50185 kHz
2M - 144285 kHz

Sadly, you will sometimes find European QRO operators occupying the QRP frequencies which is annoying when you can see that adjacent frequencies are empty 😡

I strongly suggest that you download and read this >>> **DOCUMENT** <<< and stick to the guidelines - even when others around you aren't. I recommend that you print the document and have a good read through it when you've got some 'quiet time'.

And if you hear someone on-air who's purposely acting like an idiot, repeatedly keying-up or swearing, etc, etc, ***please please please*** totally ignore them!!! The second that you respond is the second that they have got the attention that they're seeking.

Be proud to call yourself a "Good Operator" 😊

HOW TO SOLDER

It seems odd to me that someone can be licensed to be a HAM RADIO OPERATOR and not be shown how to solder. In the Foundation Course Practicals you spend time learning how to send and receive Morse Code painfully slowly (*which you may or may not ever use again*), but you're not shown how to fit a PL-259 plug!

Anyway, you definitely need to learn how to do it and please make sure that you get someone who **really knows** how to solder to give you a tutorial. There are many people out there who think they can solder who really do a bad job.

Buy a soldering iron but don't think you need a great big 100W model 😀 you don't! A 25W iron is more than sufficient for most jobs in a shack environment - even less will usually suffice. My own soldering iron (shown in the photo above) cost me £7 at a Rally. When choosing one, look for a **smallish** tip (and maybe get one pointed and one chisel-edge tip).

DO NOT try to save money on cheap solder from the £SHOP. And don't buy thick solder - **you're not a plumber!** I strongly recommend the stuff shown below. It's about £14 on Amazon UK but it'll last you months!

Multicore M7 Ersin 5 Core Solder 60/40 0.7mm diameter

And while you're at it, order one of these wire solder-tip cleaning balls and some flux.

If you can't find someone to teach you how to solder, watch a few videos on YouTube - there's loads of them - but make sure you watch professionals and not some vlogger who **thinks** he can solder. Here's some to get you going...

BASIC SOLDERING GUIDE

DETAILED SOLDERING GUIDE

Okay, so when you've learned to solder sufficiently, there will come a point when you have let the tip of your soldering iron get dirty and it will no longer want to transfer heat - it'll seem useless!

So you now need to learn how to clean up the tip and re-tin it so that it looks all nice and shiny again. If you clean your tip and re-tin it at the end of each soldering session, it's an extremely easy and quick job, but if you let your tip get in real bad shape, you'll either have to replace it or spend time cleaning as shown in the following video.

I would urge you to get into the habit of tip-cleaning as part of each soldering session and not let your tip get into a state.

CLEANING & RESTORING A TIP

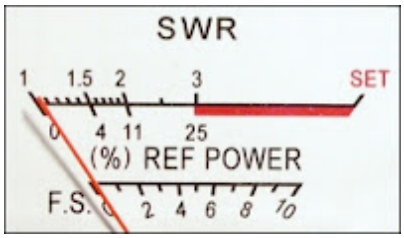
FITTING PL-259 CONNECTORS

As you build up your shack, you will probably solder connectors over and over, so to avoid poor connections and troublesome fault-finding, make sure that you spend time doing it properly and always, always, always test your connections with a multi-meter before pushing your radios back into place.

There are two types of PL-259 plugs : regular soldered connectors and the compression-type. The **compression plugs are about the best** but they're not always readily available at your local store, so you need to order them online, making sure that they are the right size for the cable you're using them with.

As usual, it's better to ask someone at your local radio club to give you a tutorial on PL-259 fitting, but if that's not possible, take a look at the many YouTube videos on the subject. Here's some to get you started...

TAKING SWR READINGS



It's very important to understand that your shiny new radio can very easily be turned into a useless paperweight by transmitting into a non-resonant antenna. And contrary to popular belief, you don't need to be transmitting at high-power to cause damage - many QRP operators have blown the finals on their low-power radios.

Most radios (but not all) have an SWR Meter built into them and in the main, they can be depended upon for giving a reasonably accurate reading. If you suspect that the meter is not wholly accurate or if it's difficult to read, then you might want to invest in an external meter.

External meters tend to do more than just indicate the VSWR - they also include Power Out and even the amount of power that is being **reflected back** into your radio!

Transmitting into a perfectly resonant antenna will obviously mean you're working at maximum efficiency and with an SWR reading of 1.0:1 all your transmitted power is going out, with virtually nothing reflected. No losses, no potential harm, maximum efficiency.

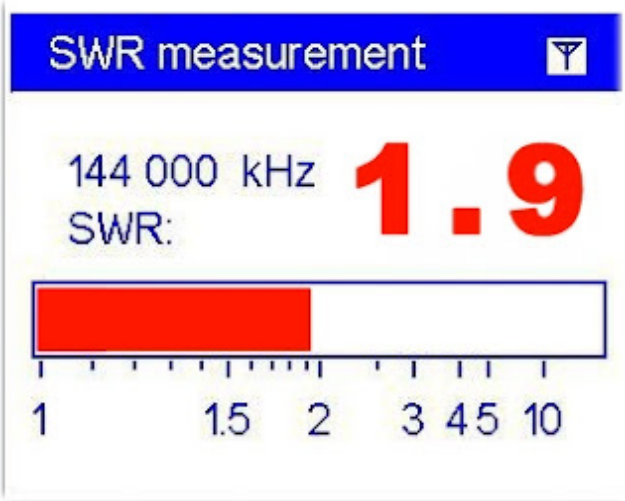
Although a 1:1 ratio is the ideal, it's often not possible to achieve that and in the main, anything up to **1.5**:1 is fine, but as you start to get over that figure, you'll notice that the amount **reflected back to your radio** increases, which means you may damage your radio's PA transistors and efficiency is greatly reduced.

Being a QRP operator means that you can ill afford to lose a few watts. So rather than accepting a **1.5**:1 VSWR reading as being workable, change your antenna to something which offers better efficiency.

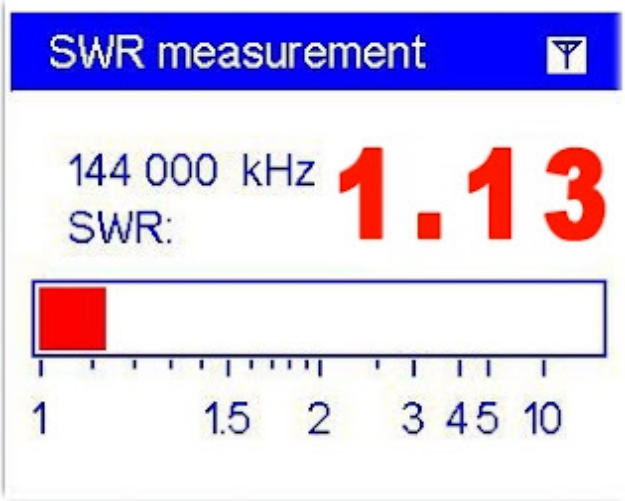
If your "mate" tells you not to worry about your SWR figure if it's under 3:1 at QRP levels then he's not very clued up! ***Aim to operate an efficient station right from the get-go*** and it will serve you well as you upgrade your licence and use more power.

And remember, adding an ATU may bring your SWR down, but it doesn't alter the fact that your antenna isn't resonant - a bad antenna will always be a bad antenna, no matter what.

To test your SWR, select a clear frequency close to where you wish to operate, reduce your power to 5W and ask if the frequency is clear. Ask again. If nothing is heard, switch to CW or AM or RTTY mode and briefly transmit while looking at your SWR meter.



If your reading is higher than you would like, make adjustments to the length of your antenna or radials (where this is possible) and then re-test.



Once you've achieved the best possible reading, you can go back to your chosen working mode and increase your power to the desired setting. Remember though, that this reading is relevant only around the frequency you tested it on. If you move from one end of a band to the other, it is **very likely** that the SWR will change, so you'll have to repeat the procedure.

I suggest that you check SWR readings across the whole band so you are familiar with your antennas resonant areas. If you are using a multiband antenna such as an EFHW, then do tests right across the range.

WATCH THIS VIDEO

You would be well advised to invest in an Antenna Analyser if you can afford to do so. If you Google "NanoVNA", you'll see a range of small and cheap analysers that will not only show your VSWR, but much more including impedance. These are excellent bits of kit, especially if you intend to try some DIY antenna building!

Personally, I opted for the NanoVNA "**F**" model because it comes in a tough case and has a larger screen. You can read more about analysers by clicking **HERE** and **HERE**.

INSTALLING AN RF GROUND

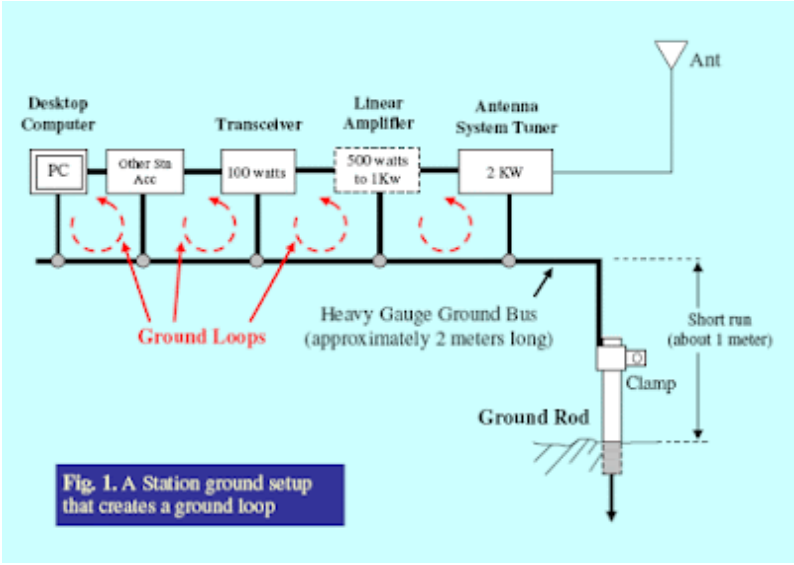
It's very easy to ignore the fact that your radio needs an RF Ground, so start off right at the very beginning by thinking about how you are going to provide one in your shack.

The first consideration should be about making the route to ground **as short as possible!** Luckily, I live in a bungalow and I hammered a ground-rod deep into the soil just on the other side of the external wall, so it's about **4ft** away from my radio.

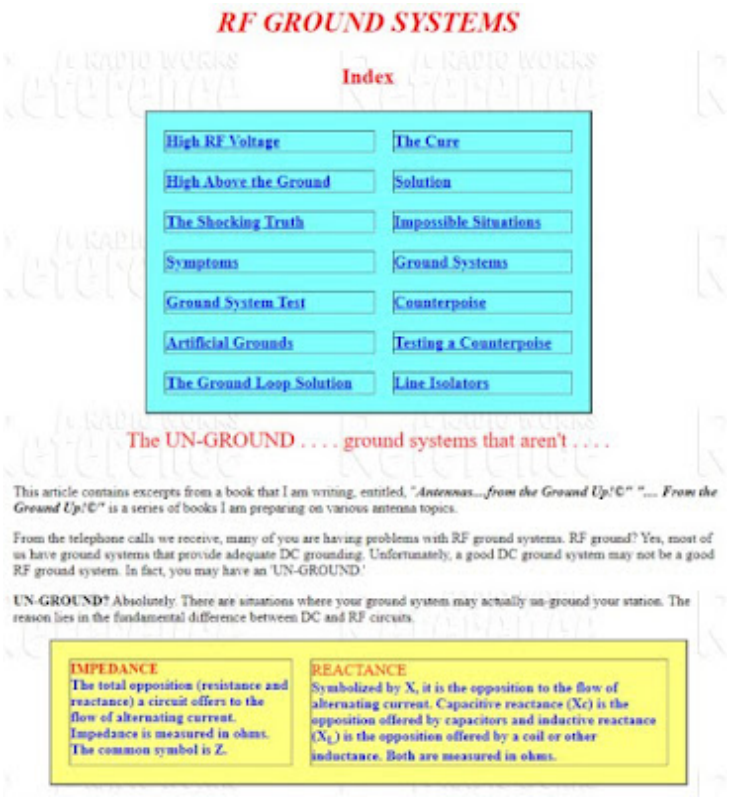
In theory, you should solder/braze your connecting wire to the ground-rod but in practise, that's quite difficult, so I opted for one with a fastener already in place (as can be seen in the photo above).

The wire that comes in through the outside wall is terminated to a large nut & bolt, to which I run individual wires to each piece of radio equipment (including ATU's etc). If at all possible, use the very widest cables you can to connect your equipment to your ground. Consider those wide braided battery leads.

It's important not to create "Ground Loops" when installing an RF Ground. Don't connect them in a bus-bar configuration like the one shown below. Instead, run a wire from each individual piece of equipment directly back to the ground connector coming through the wall.



If you're having serious issues with grounding and RFI problems in general, it would be worthwhile reading this article which covers a heck of a lot of issues...



RF GROUND SYSTEMS

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The UN-GROUND . . . . ground systems that aren't . . . .

This article contains excerpts from a book that I am writing, entitled, *"Antennas...from the Ground Up!©" "... From the Ground Up!©"* is a series of books I am preparing on various antenna topics.

From the telephone calls we receive, many of you are having problems with RF ground systems. RF ground? Yes, most of us have ground systems that provide adequate DC grounding. Unfortunately, a good DC ground system may not be a good RF ground system. In fact, you may have an 'UN-GROUND.'

UN-GROUND? Absolutely. There are situations where your ground system may actually un-ground your station. The reason lies in the fundamental difference between DC and RF circuits.

IMPEDANCE
The total opposition (resistance and reactance) a circuit offers to the flow of alternating current. Impedance is measured in ohms. The common symbol is Z.

REACTANCE
Symbolized by X, it is the opposition to the flow of alternating current. Capacitive reactance (X_C) is the opposition offered by capacitors and inductive reactance (X_L) is the opposition offered by a coil or other inductance. Both are measured in ohms.

>>> CLICK PHOTO <<<

CHOOSING SUITABLE ANTENNAS

If you're very lucky, you'll live on top of a hill with no neighbours and you can have an antenna farm going on, with huge, triple-stacks. Meanwhile, back on planet Earth, you'll probably live in a low valley urban area with whinging neighbours on all sides and a tiny garden.

Life sometimes serves you lemons though and you just have to make the best of your situation. Yes, we all want a huge tower with a rotating beam, but maybe an end-fed wire will have to do - or short vertical.

For me, I live in a row of bungalows and most of the occupants are old aged pensioners who spend their day twitching their curtains looking for something to moan about. So erecting large antennas is out of the question for me.

I started off by installing a VHF/UHF colinear - a Diamond X300. Unsurprisingly, this resulted in a letter from the Town Planning Department, citing a complaint from a neighbour and asking me to **remove it immediately.**

Well I responded to the Planning Department with an email and they backed down and rejected my neighbour's complaint. If you want a copy of that letter, here it is....

ERECTION OF ANTENNA

Hi XXXXX, thanks for writing to inform me of a potential problem with the antenna that is currently erected at my property.

I wasn't aware of any issues with neighbours - certainly no one has enquired or complained to me about antennas being erected and dismantled.

Perhaps I should begin by pointing out first of all that I am a ***Licensed Radio Amateur.*** I was awarded a government licence after a great deal of study and sitting an examination. My **OFCOM** Licensed Number is **AM000nnnn.** I am also a member of the Radio Society Of Great Britain (**RSnnnnnn**) who may be called upon to help their members with issues relating to planning queries.

My license is for the purpose of self-training in radio communications, including conducting technical investigations. I may also be called upon by any government body in the event of an emergency to aid in communications. A good example of that would be the recent Moorland Fires just behind my property on Winter Hill. RayNet were heavily involved in the communication logistics. RAYNET is regarded as a professional support organisation by both the statutory and volunteer emergency service organisations.

My main area of interest is in the experimentation of antennas and propagation. Radio propagation is the behavior of radio waves as they travel, or are propagated, from one point to another, or into various parts of the atmosphere. Line-of-sight propagation means radio waves which travel in a straight line from the transmitting antenna to the receiving antenna.

Basically, this involves me putting an antenna together, erecting it **temporarily** (but SAFELY & SECURELY) and carrying out radio tests in multiple modes including analogue and digital for the purpose of self-education and development.

The antennas which I erect and dismantle as part of my radio propagation experiments are >>**temporary**<< Sometimes an antenna might only be erected for a couple of hours!

I consider myself a very caring and considerate neighbour and am disappointed to think that I've upset someone living close to me. **I do everything possible not to be visible in my activities** - even going to the trouble of dismantling/erecting very early in the morning **just** to keep a low profile and to avoid being a distraction to people.

I would very much appreciate a meeting with you at my home so that you can explain to me what it is that I'm doing wrong and why I need Planning Permission for the temporary erection of an antenna. I have invested a great deal of money, time and effort to become a Licensed Amateur Radio Operator and I wish to stay within the rules of the local Council whilst also avoiding unnecessary restrictions.

Please feel free to ring me on **07976 --- ---** at your convenience.

With kind regards,

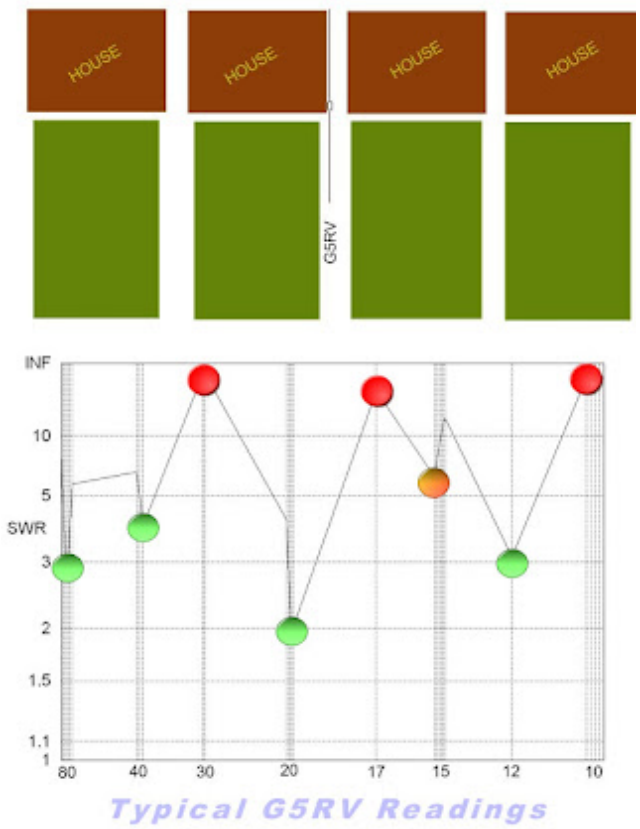
Tom McQuiggan.

Anyway, once I'd dealt with the complainants, I changed my X300 colinear for a Diamond V2000 tribander. This amazingly good antenna covers 2M, 6M and 70cm. On 2M and 70cm, there is virtually no movement of the SWR needle! On 6M it reads 1.3:1 which is pretty damned good and can be matched perfectly well by my tuner.

I cannot recommend that antenna highly enough. Even if your current radio doesn't cover all three bands, it's still worth buying so that you're future-proofed. It's also very compact!!

For HF I originally installed a half-size G5RV which everyone will tell you is a poor performer. Well as usual, that's not quite correct. Every antenna works differently at different locations, different configurations and different heights.

To avoid winding up more neighbours, I had to do a bit of a stealth installation. I was using the G5RV in a straight dipole formation with one leg of the dipole sitting directly under the soffits at the side of the house, while the other leg was in free space. It was **far** from ideal but I thought I'd give it a go.



Luckily, it worked very well and I used it for several months, working all over the world. It worked pretty good on 12M, 20M, 40M and 80M but struggled on all other bands even with a good ATU.

I recently added a multi-band **End-Fed-Half-Wave** from **WireAntennasUK** and I have to say it's just fabulous!! It's 66ft long and I ran it from the top of my chimney to the far corner of my rear garden. It supposedly doesn't need an ATU but that's plain nonsense. Even a resonant monoband antenna can benefit from an ATU at the far extremes of the band.

Half-Wave antennas seem to work **really** well for me and I would definitely recommend them.

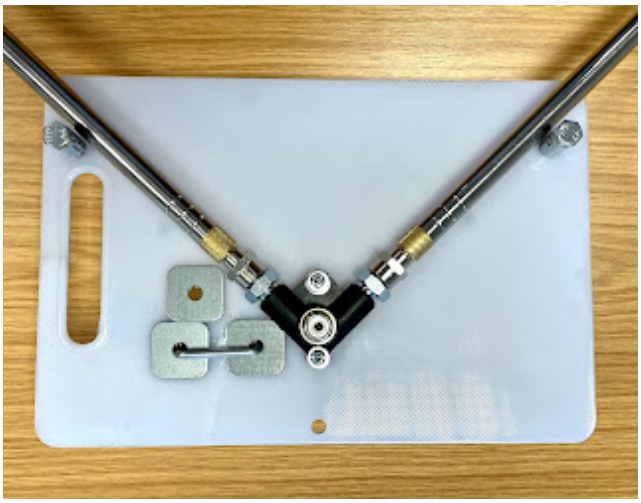
If you want to learn more about
Half-Waves watch this video…

I had been thinking of getting a multiband vertical but the thing that stopped me was the fact that despite the manufacturer's claims, they really do need long radials fitted (at ground level or below) in order to be efficient - or so I thought!! I recently purchased a **Sigma HF-X80** vertical for my holiday home and was **amazed** at how well it performed. Click on the link for more info.

EXTENDING MAST

In the summer months, it's easy to ***temporarily*** erect an extra antenna in the back garden using a fibreglass extending mast (like a fishing pole). I sometimes use one of my SOTABEAMS 20/40M dipoles in an inverted-v configuration and they work **superbly well**.

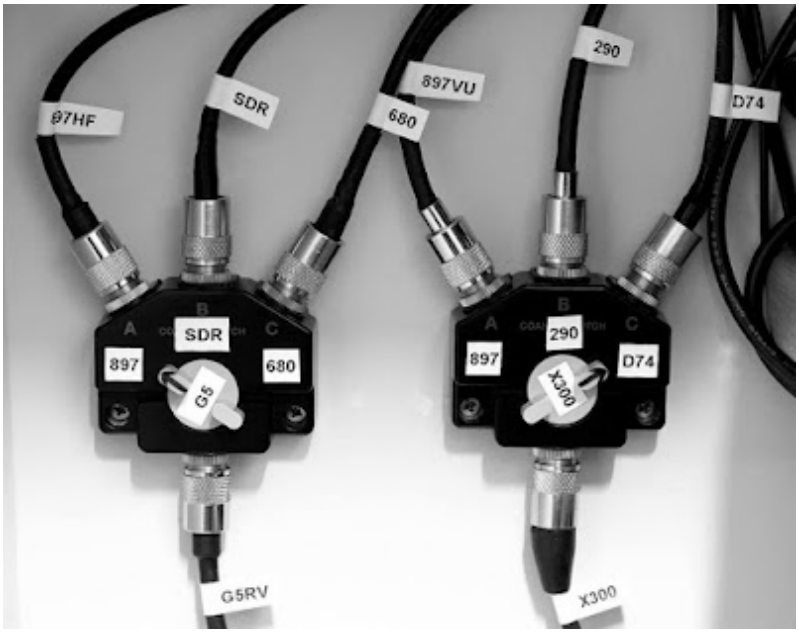
I also enjoy experimenting with DIY 1/4 waves as can be seen below. The internet is ***brimming*** with designs for this sort of stuff and it's a lot of fun just '*having a go*'...



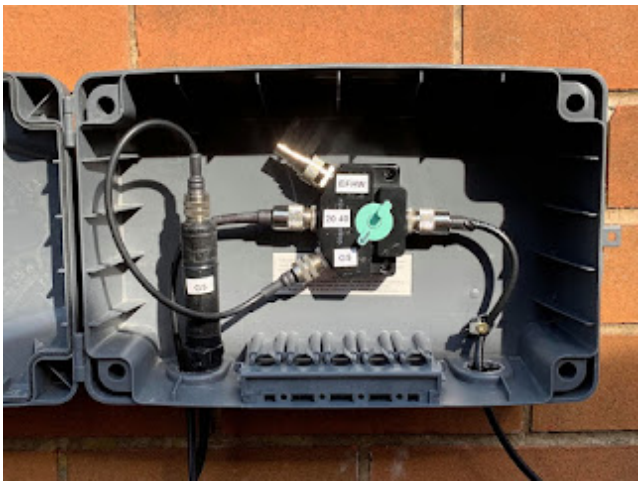
Fun In The Garden!

With multiple antennas installed, it's easy to flick between them using some RF Switches such as these shown in the photo below.

You can see in the image that I've got the G5 coax and the X300 coax going to a switch each and then I have the option of sending the signals to whichever radio I wanted to use. To be honest, I have since routed the large RG213 Cable from the VHF/UHF antenna directly to my IC-7100 to avoid any signal loss due to the switches.



You can also have a switch outdoors too, so that you can easily pipe the signals from a temporary or experimental outdoor antenna into the shack....



Out and about in the hillsides, I almost exclusively use antennas from SotaBeams. They are cheap, light, strong and **effective!** They come in a small carry-bag and include brilliant winders to make it simple unwinding and rewinding the wire. SotaBeams have a wide range of portable antennas including dipoles and end-feds. All perfect for QRP (and beyond).

My portable setup in a rucksack.

I recently purchased a compact 1/4 Wave Multiband vertical by **Super Antennas**. It's called the MP1 and you can read all about it **HERE**. There are others like it, so shop around.

USING AN ATU (TUNER)

If I could have a dozen or so antennas, each one dedicated to a single band, there'd be no need for a tuner and life would be wonderful. It would also be wonderful if I won the lottery. Hmmm, that's never gonna happen either!

So let's get back to reality and accept the fact that most people can only have one HF antenna. That being the case, it's going to be a multiband - maybe a 20/40M or maybe even an 80-10M. The manufacturer will probably claim resonance on all bands, but we know that's usually nonsense unless you're happy with a hot SWR figure in parts of the bands. Bear in mind too, that when a manufacturer produces SWR figures, he does it with his antenna in the most favourable location/configuration. It's a bit different when you've got the wire dangling from your veranda 😂

So, you install a tuner, because ATU's can magically TUNE any antenna can't they? Well actually no, a tuner ***DOES NOT*** tune an antenna per se.

When you plug your coax into your radio's antenna socket, it expects to see an impedance of 50 ohms and if it's much higher, then you're potentially going to have problems. The **S**tanding **W**ave **R**atio will climb, transmitted power will be reduced, power reflected back into your radio will be increased and basically, no one will hear you and you'll risk damaging your radio.

Inserting an ATU in circuit will do nothing other than find an **impedance match** between the antenna and radio **by sprinkling magic dust** over the end of the coax and presenting 50ohms to your radio so that it doesn't blow up the finals.

Your antenna's performance at that "tuned" frequency won't be any better than it was before. It simply means that your ATU has permitted you to transmit there by introducing the appropriate levels of capacitance or inductance on the feedline.

"ATU is absorbing the reflected power and dissipating it safely as heat instead of it going back into the radio's output-transistor" - **or so I was told by an M0 operator,** but then I spotted a discussion on a FaceBook Group where people were saying that the tuner **RE**-REFLECTS the reflected power back to the antenna! 😲

Honestly, there's so many "experts" out there that it's **very** easy to convince yourself of something only to find that you are completely wrong, because you've read and trusted someone else's comments (even from people with the Full Licence). This hobby is all about experimenting and learning.

So don't let anyone tell you that an ATU can make your antenna resonant. It can't - it can only make it possible to TX safely on the antenna without blowing your transceiver's finals by finding an acceptable impedance match.

Apart from improving your chances of transmitting on a non-resonant antenna, ATU's can also make the RX better! You only have to listen (or look on a radio's waterfall) to see the difference before and after the ATU's done its stuff.

So which ATU should you invest in?? Well first of all, I would strongly recommend that a novice stay clear of a manual tuner - it's just not worth the hassle for a complete newbie! Buy an automatic model instead - it means you just push a button once and the tuner does all the work for you. And maybe stay away from OEM tuners such as Yaesu's or Icom's. Having said that, the Kenwood TS-590SG's built-in ATU is amazingly good 😮

The superb LDG Z-100Plus

LDG are one of my favourite manufacturers of ATUs. They are always good value for money and **easily** outperform OEM stuff. For example, on some radios, the matching OEM tuner occupies the radio's CAT socket, so you are unable to make use of that socket while the tuner's connected. The same tuner by LDG has a through-socket so that you can use the CAT socket for something else at the same time.

Another popular manufacturer of tuners is **MFJ**. Some people have reservations about MFJ's build quality and I know what they mean, but I can certainly vouch for their **993B** model - although it's a very pricey unit!

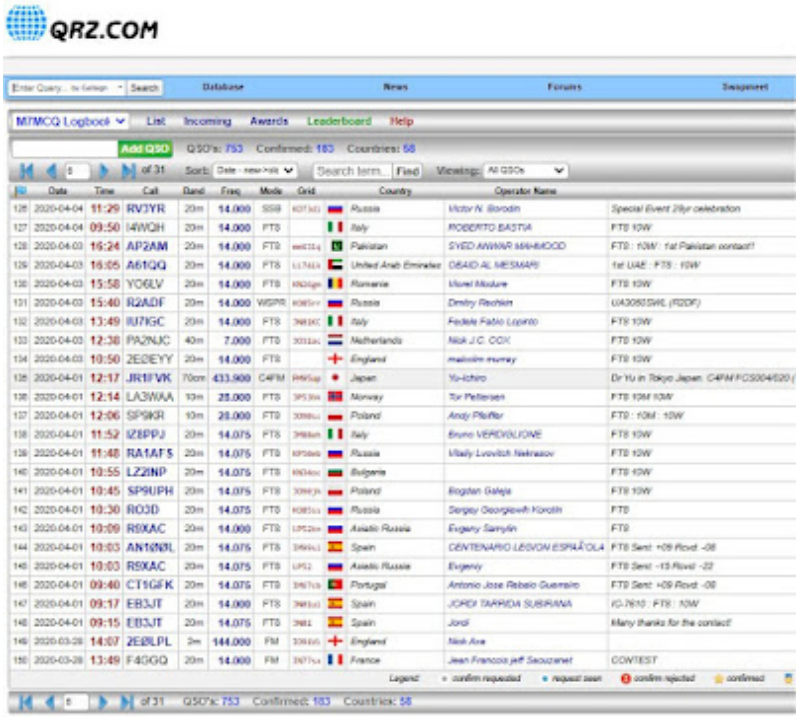
For QRP work, LDG have a nice range of "*zero-power*" units which work from AA batteries that last over a year! I use a **Z-817** or a **100PLUS** model with my Yaesu FT-818. They're incredibly compact and light.

I recently purchased a MAT ATU and was a little nervous about it due to some early failings in their product line, but their mAT-K100 seems to be a very well built and efficient unit!

MAT mAT-K100 for Kenwood

KEEPING A LOG

You should already know that keeping a log is no longer compulsory. But most people still do. And everyone has a favourite logging program - mine is **QRZ.com**



Why? Because the first thing that you do when you hear a callsign on the radio, is look them up on QRZ.com to find out who they are. I have it open on my computer all the time I'm in the shack, so it makes sense not only to use it as a reference, but also as a log.

QRZ.com's logbook is fast and reliable, available on any platform (Windows, IOS, Android, etc) and there are around **SIXTY MILLION** records on it so far, so it's obviously very, very popular! Once you've recorded a QSO in your logbook, you can ask the other station to ***CONFIRM*** your QSO and that confirmed contact will go toward any rewards later on.

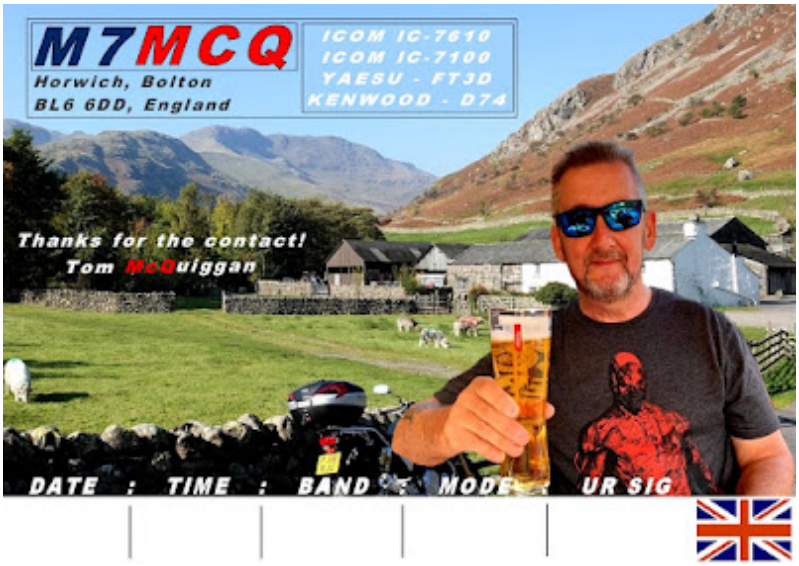
Now bear in mind that not everyone uses QRZ - they may use LOTW or NN1M or HRD or a million other logs. They may choose to do this because they control their radio with software which helps log QSO's semi-automatically. We all have different needs and likes. Even if you choose to use logging software such as LOG4OM or NN1M, you can still configure it to sync your logbook with your QRZ.com log.

The good thing about QRZ is that it's stored in the cloud, so it's accessible from anywhere, at any time - on your PC, your tablet or your phone.

But even if you don't keep a log, **please do** create a QRZ.com account and do a profile page so that anyone who looks you up can learn more about you - it just makes for a nicer contact when you can see a face and maybe discover that someone has something in common with you such as a hobby, etc.

QSL CARDS / eQSL

It took me a **full year** to discover that we have our own QSL MANAGER! I've been spending a small fortune sending out QSL cards to people all over the world, when all I needed to do was send a batch to my QSL Manager's address and he'd do the rest! ***No one told me!*** 😂



If you're a member of the RSGB, then you have a QSL Manager assigned to you. Once you've looked up who he is on the RSGB website, send him your first batch of outgoing QSL Cards with the outer wrapper off your RADCOM magazine and he will make sure that they go through the BUREAU and land safely at the intended recipient - at no cost to you.

If you also send your QSL Manager a number of Stamped Addressed Envelopes, he will post any incoming QSL Cards to your home address. **Be sure** to check the dimensions of your QSL Cards or they will be rejected by your QSL Manager.

To find out more about how this works, click on the image below...

Click for more info

In addition to sending traditional paper QSL Cards, there's an option to send electronic versions which many people prefer as a more **green** option. These are generally referred to as eCARDS and the best portal for sending them is eqsl.cc

Once you've created an account, you can use their editor to create an electronic QSL card for sending around the world. Alternatively, you can design your own and upload it to their website so that your card is much more unique and personal. It is of **much more interest** when you get a card that you've never seen before instead of "yet another" template design that's been seen a million times already. Click the image below for more details...

OPERATING FT8

If you join a radio-club, you can bet your bottom dollar that a percentage of members will firmly reject the idea of working digital modes - especially FT8!! It's often seen as the devil and the demise of RF operations. **More enlightened members** will embrace digital modes as just another means of playing radio.

To play FT8, you need to have a piece of software called **WSJT-X** and a radio which can connect to a PC via a USB port. If your radio has a built-in soundcard (modern radios tend to) then you're set to go. If not, you'll have to use the computer's soundcard or a device such as the SignaLink USB.

FT8 is a weak-signal mode of operation, so it's perfect for us QRP operators! Your 10W can reach many thousands of miles away to countries that you might never otherwise reach. Contrary to what some people think, FT8 is **not** a fully automated, robotic mode. ***YOU*** very much have to be involved and sometimes work quite hard to get those ***rare callsigns*** in your logbook.

I'm not going to provide a tutorial here - that would be too involved for me - instead I'll point you in the right direction to get going. You should watch a few videos to get the gist of operating on FT8 ***with your particular radio***! There's also an official **Guide Book** (free) which I strongly recommend you read through.

There's every chance that the FT8 software (WSJT-X) will not work properly until you made quite a few menu-setting changes on your radio, so make sure you Google something like "***IC-7300 Menu settings for FT8***" or "***TS-590 Menu settings for FT8***" or "***DX3000 Menu settings for FT8***" before anything else!

And bear in mind that getting FT8 settings sorted out on your radio may well have an effect on your normal SSB settings, so you should store your normal settings as "SSB" or "NORM" and then save your FT8 settings as "FT8" if your radio permits such a thing.

Please note that **TIME IS CRITICAL** when it comes to FT8 and by that, I mean that the time on your PC must be **absolutely accurate**! There is **software** available to take care of this.

You may think that FT8 sounds like a load of hard work, but don't worry, it's not. Just watch some of the many videos on YouTube and you'll soon be on-air enjoying another interesting facet of HAM Radio.

FT8 Intro for beginners

Please bear in mind that many videos on YouTube were recorded using older versions of the software, so they may look slightly different to the WSJT-X you just downloaded.

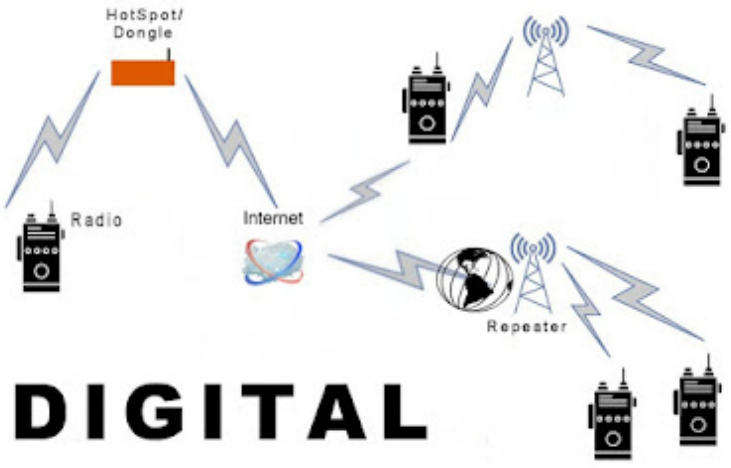
DSTAR & C4FM

Even though you may have only just passed your Foundation/Technician exam, you're probably aware of DSTAR and C4FM (the latter also known as System Fusion). Both are popular across the world and both are Digital modes of operation.

With either mode, you can speak directly to another person using the same system using a Digital Voice mode or you can use a repeater, reflector or gateway to reach someone on the other side of the world.

If you have a local repeater which has DSTAR or FUSION capability, then you will be transmitting directly to that repeater using RF, but if you have no local digital repeaters then you will have to use another method to make contact with others.

The most reliable method of using C4FM is probably though **Wires-X** software on your PC. **READ THIS ARTICLE** to learn all about it. Another common method is to use a "dongle" or "hotspot". That's a small device which receives your radio's transmission, converts it to data and sends it through the internet and on to a repeater (for example) across the world where it can be received on someone else's radio as RF.



Which system should you go for? I guess that depends on whether or not you have a compatible local repeater for one and not the other. And it may depend on how many of your regular chat-mates are using one system or another.

If you are going to use a hotspot such as the **OpenSpot**, then you can actually use both **DSTAR** and **C4FM** with the same device (even **DMR**). They are very simple to setup and they work reliably. These devices output around 20mW and your radio only needs to transmit about the same amount of power back to it, so your handheld battery will last all day long! The **latest version** of the OpenSpot can actually CrossMode between the different modes and thanks to its onboard transcoding hardware, it doesn't even need a radio to be present if you have a PC/Laptop!

Obviously, you need to be in range of the hotspot - you can't use it from down the road, but it will work perfectly well anywhere in your house and more than likely from your garden too.

Like FT8, many people frown upon these digital modes, but if you're a rag-chewer, then you'll enjoy the huge variety of people that you can reach using these platforms. Instead of talking to John Bull in Wigan, try a chat with Miyamoto Musashi

in Tokyo 😃

Another way of breaking into the digital world is to consider the **DVMEGA CAST** which is an IP Radio. There's no RF involved - it works through the internet and can encode/decode C4FM, DSTAR and DMR easily and reliably. It's an amazing device and is especially good for those who live in HOA's with antenna bans.

Here's a video-clip of a QSO I had with an American operator using my DVMEGA CAST...

https://youtu.be/4vdg1iTW6DQ

SOFTWARE / APPS

It's surprising how long you can be in the hobby and still not be aware of some popular software that others have been using for years! Some of it you will consider essential once you've started using it and others will just fall into the '*handy now and then*' category, but if you know about the software, then you can at least decide which you like using and which can be uninstalled after a trial.

RADIO CONTROL SOFTWARE is something you love or loathe. For many operators, connecting their radio to a PC and controlling it from there is a big bonus, while others would see this as a negative.

I'm one of those who likes to try anything once! So my personal recommendation is to try it and then decide. Most software developers have 'trial-versions' of their software, so there's no excuse not to have a go.

IF YOU DO want to use any radio-control software, you will very likely need to install **OmniRig** and its associated "ini" files. ***Do that now...***

HAM RADIO DELUXE

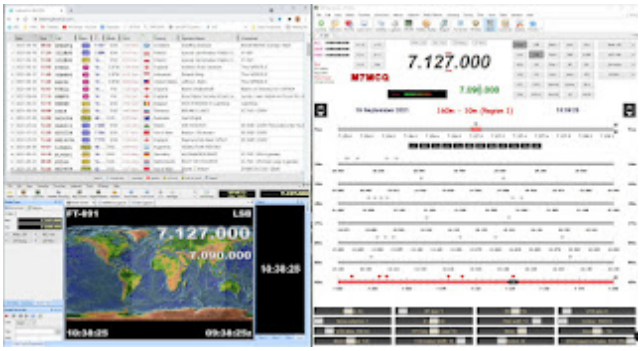
This bit of software has been going for many years and is regarded by many as the holy grail of radio-control-software. It not only provides full control of your radio (multiple radios) but it's also a logbook which can integrate with QRZ, LOTW, etc. There's a mode for working digital and there's also modules for satellite work and even rotator control. The software has many configuration options to allow users to tailor the program to suit them. The cost starts at $99 for an electronic download. **Download the trial!**

WIN4 ICOM/YAESU

WIN4ICOMSUITE and WIN4YAESUSUITE is a piece of software for controlling Icom and Yaesu radios. The Yaesu version will control the FT-991's and all the FT-DX range from the 1200 to the 9000. The Icom version controls most Icoms from the IC-7100 to the IC-9700 with more to follow.

The software is simple and straightforward. It includes support for the built in Spectrum Scopes of the Icom radios as well as the SDRPlay RSP devices. Win4IcomSuite has 6 virtual radios built in that can interface to any third party software programs including HRDLogbook, DM780, DXLab Suite, N1MM+, Log4OM and many more. Download the trial! **ICOM** - **YAESU**

I'll be honest - I purchased Ham Radio Deluxe and hardly use it anymore. I guess it attracted me initially with all its bells and whistles but ultimately, I found myself preferring the touch and feel of the radio itself. No doubt this will change if ever I start to get seriously into contesting, where the HRD facilities might be more helpful. The only thing I tend to use it for these days is when I am using the Yaesu FT-891 in the shack which has a tiny screen.

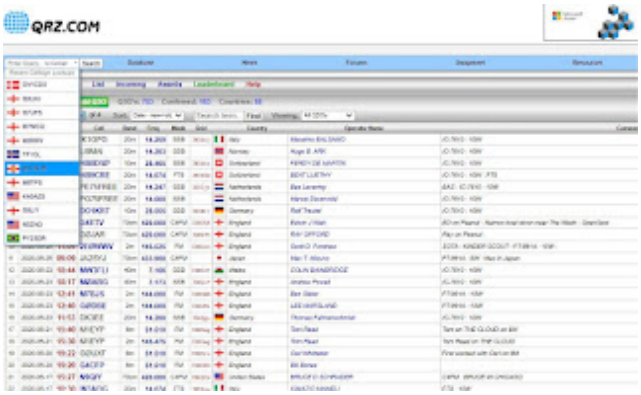


If you have a modern ICOM radio, then you'd be well advised to have a look at the amazing **SDR-CONTROL** software which is worth every penny! There's a section about it on my **Icom IC-7610** review.

LOGGING SOFTWARE : We already discussed my personal preference for logging - I use QRZ religiously and I upload my logs to eQSL. But for many, that's not enough - they want more automation and more integration with other software that they use, so I'm going to list some of the most popular logging programs and then you can try them out before purchasing one to keep.

QRZ.com

There are 60,000,000 records on QRZ, so it's easy to see that it's **hugely** popular, reliable and free. Apart from providing a supremely accessible logbook, it is also the default place to go to find out about an operator who's callsign you've heard on the radio (including special event stations). You can have multiple logbooks and they can be exported to other software easily and quickly. Becoming a paid-for subscriber gets you extra benefits.

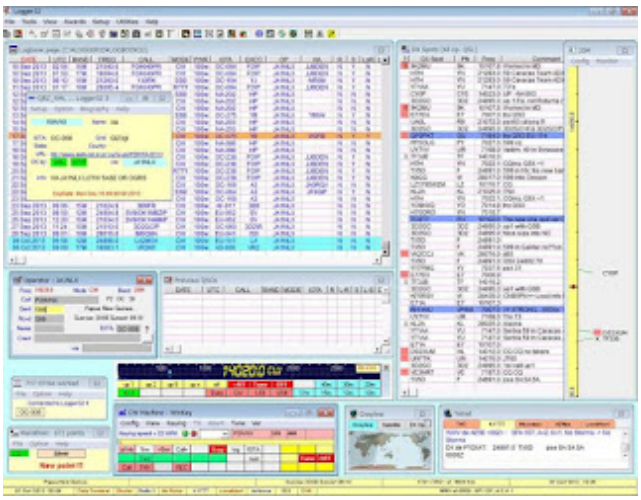


LOG4OM

LOG FOR OLD MEN as it's affectionately known, is one of the most popular logging programs out there - and it's free. Donations are very welcome though, to ensure continuous updates and development.

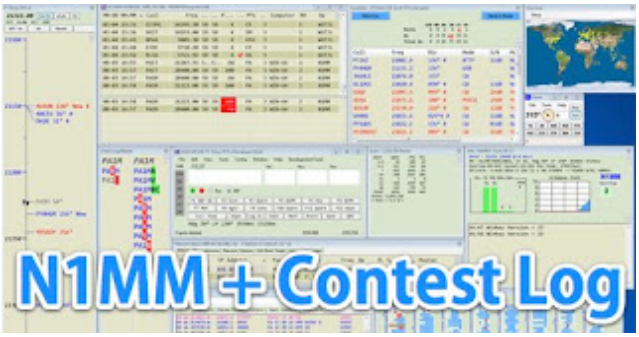
LOGGER-32

LOGGER32 is another piece of free software. I've not tried it out yet but I must admit it looks quite interesting. Think I might give it a go.



N1MM

Again, this a popular and free logging program. There's a + version which I believe is a favourite of contesters. Worth a look if you think that contesting may be something you might do in the future.



MORE

If you want to learn about more logging programs, you can find a list of them on DXZONE by clicking >>>**HERE**<<<

APPS

There's loads of Apps to play with on your phone/tablet (IOS/ANDROID) and it's well worth browsing through your app-store to find them. I'll list some that I use on my mobile devices...

QRZ Call Search - a great little app to let you search for callsigns (and more). Not only can you access the QRZ database to read Bio's, you can also access your log from here too, which is handy.

REPEATER BOOK - A list of all repeaters including locations, frequencies, offsets, tones, status, etc, etc. It's the most comprehensive, worldwide, FREE repeater directory

SOTA FINDER - Complete list of SOTA Summits. No internet required. Displays location, WAB, OS Grid Reference, etc, etc.

ECHOLINK - a great way to allow hams to speak to each other over the internet when propogation prevents you from getting a QSO.

MOONRAKER WAP - Moonraker's Worked All Postcodes app. This is an award scheme created by Moonraker and is proving to be very popular in the UK.

MAIDENHEAD - Shows you the latitude, longtitude and Maidenhead Locator on a movable, zoomable map of the world.

COMPASS 55 - Another great compass app for when you're out and about and want to know which way to point your beam. Includes a 3D map!!

MY APRS - Free APRS app for hams. All APRS data in your pocket!

HAMRS - Free mobile logbook app for hams. Templates included.

WIRES-X NODES - A super app for finding WIRES-X Nodes in your area (or wherever you happen to be).

CODEMAN - A great Morse Code tutor.

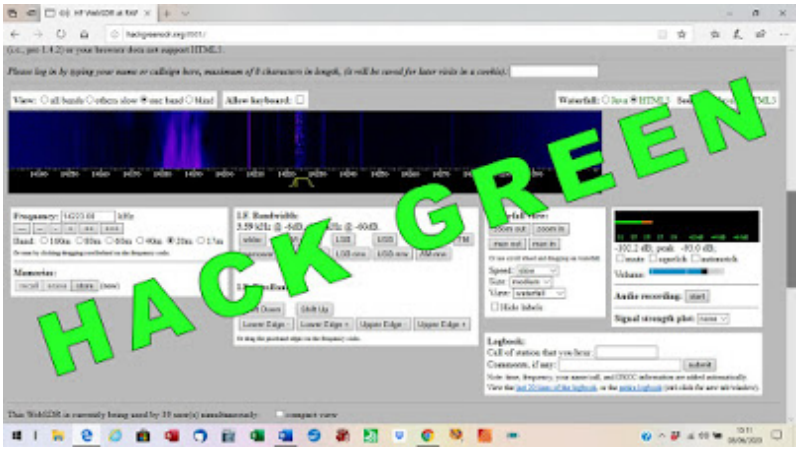
iDX 2020 - (IOS only) - A superb DX Cluster database.

REVERSE BEACON - This app will show you how many times you've been *spotted* and where. If you've never tried Reverse Beacon, visit **this link** and give it a go. You'll be amazed at how far your signal is travelling.

In addition to these, there are ***LOTS*** more including exam preparation apps, antenna calculators, web-sdr receivers, all sorts!! Have a look around your app store and try things out. You might end up deleting quite a few, but I guarantee you will find some gems!

HACK GREEN

JUST IN CASE you've never heard of Hack Green, I thought I'd include it here. When you start to think that the bands are dead, just have a listen through Hack Green.



Basically, it's a WebSDR which is setup inside an old Nuclear Bunker at RAF HACK GREEN near Nantwich in Cheshire. The station has some fabulous antennas and these pick up the signals that you're perhaps not hearing *(leading you to think the bands are dead)*.

You can listen to HF or VHF/UHF by visiting two different webpages. It's a fantastic site **BUT PLEASE BE AWARE** that you may have to use **Microsoft Edge** browser because Chrome updates keep buggering up the sound.

There are ***plenty*** of WebSDR's around, so do a Google search.

HF available @ ***HERE***

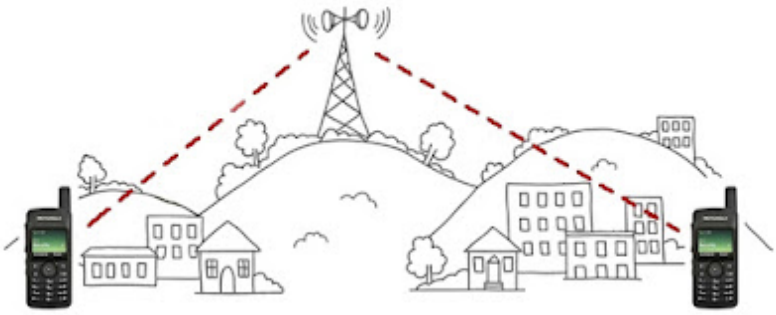
VHF/UHF available @ **HERE**

OTHER WEB-SDR's ARE AVAILABLE WORLDWIDE

BASIC UNDERSTANDING OF VHF/UHF REPEATERS

If you're totally new to all this and have never used a Repeater before, this post may help you a little. Just bear in mind that I'm an M7 licensee and know next to nothing about anything, but I think I understand the basics, so here goes...

First of all, let's just very quickly explain why we might need to use a repeater in the first place. When you are trying to make a simplex contact with someone who's line of sight is interrupted by high terrain or even tall buildings, you might choose to use a repeater to overcome the obstacles. Most repeaters are located on high ground or in a location which has good line of sight between multiple towns/cities.



When you transmit to a Repeater which is within your reach, your signal goes into the repeater on one frequency and is instantaneously re-transmitted on a different frequency. Because of the Repeater's height and location advantage, your re-transmitted signal can now hopefully be heard by your friend on the other side of that hill which was getting in your way.

And it's not just about buildings and terrain blocking your simplex signals - it might just be that your friend cannot hear you simply because you're too far away. Having a Repeater half way between the two of you will often mean that you can successfully make contact.

Each Repeater has a CallSign just like you. They also have an **Input (RX)** frequency and an **Output (TX)** frequency. Some Repeaters operate on simple FM Analogue, some on Digital, some Fusion, some

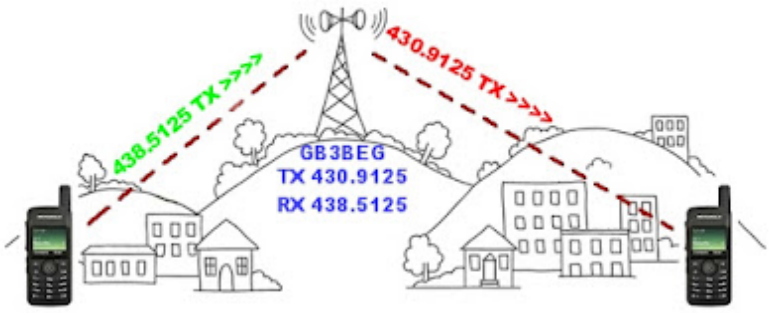
DMR and some DSTAR. For now, let's just consider simple FM.

==========

Let's look at GB3BEG in Wigan, UK. It's a UHF Repeater located in IO83QN. It has an Output (TX) frequency of **430.9125** and an Input (RX) frequency of **438.5125**. So it **receives** on 438.5125 and re-**transmits** on 430.9125.

So if you wanted to use GB3BEG, **you** would **LISTEN** to the repeater transmissions on 430.9125 and **you** would **TRANSMIT** to the repeater's receiver on 438.5125.

Just pause and make sure you understand that. This diagram may help...



So from your point of view, you are using two frequencies and it would be a pain in the backside if you had to keep quickly switching between the two during a conversation. Well your radio is capable of operating in SHIFT mode, where you tune into a particular frequency and the radio SHIFTS the frequency by a certain amount while you're pressing the PTT button. Repeaters tend to use common shifts and the one in the example above uses a shift of ***minus 7.6MHz***.

Repeaters are best stored into your radio's memory bank. So with this particular repeater, you would choose FM MODE, tune into 438.5125 and store the frequency in a Memory slot with an alpha-tag of GB3BEG (or maybe Wigan) and a ***Minus 7.6MHz*** shift.

There's one more thing to do before you save that Memory though!

If you simply transmit to a repeater's input frequency, nothing will happen, because repeaters require you to send them a "***TONE***" in order to open up their squech and give you access. All modern radios have these tones stored as a list, so it's just a case of telling your radio which tone to use for this particular repeater.

GB3BEG uses a tone of **82.5** so add that setting to the Memory Slot and then Save.

When you go to that memory slot in your radio, it will know to listen on 430.9125 and before transmitting on 438.5125 it will send the correct tone to open up the repeater's squelch.

If you finish programming your radio and the repeater does not respond at all when you key up, just double-check to make sure you didn't get the repeater's TX/RX frequencies the wrong way around in your memory slot.

And bear in mind that even though a repeater is closeby, it doesn't necessarily mean that you can open it**.** From my own QTH I am unable to open a local repeater 4 miles away and yet I can open one 40 miles away! It all depends on what's between you and the repeater.

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So there you have it - a simple analogue FM repeater. How about a Fusion repeater?? Well they're just the same! In fact they're often easier because you don't have to enter a CTCSS tone - you just store the RX/TX frequencies, MODE and the correct SHIFT into a Memory slot.

Some repeaters are MultiMode, meaning that they can handle Analogue, DSTAR, DMR, C4FM, etc. If you had a radio which includes FM and DSTAR you would need to program that multi-mode repeater into your radio's memories twice - one slot for working analogue FM and another for working digital DSTAR.

To test your memory programming, you should see if you are able to 'open' each repeater. When you transmit to a repeater, it should reply with a short beep or a string of morse-code and stay transmitting for a couple of seconds (or someone listening may reply to you).

Repeaters have TIMERS and will automatically shut down after a certain amount of TX time has passed - typically 3 minutes. When in a QSO with someone, it's important between overs to leave a good 3 second gap to give the repeater time to stop transmitting - otherwise ***your*** TX-time will be considered as a continuation of your friend's time and will therefore be cut short. If you wait for the repeater to fully stop transmitting before you start, you will get your full 3 minutes to chat.

Before moving onto other aspects of repeaters, it's worth noting that (as with all other Ham Radio operations), a ***Repeater Etiquette*** exists.

The basic rules are....

- ALWAYS LISTEN before transmitting!
- Call a particular contact "***G4CFP, M7MCQ***".
- Don't call CQ!
- You can solicit a call with "***M7MCQ listening on GB3BEG***"
- Use Phonetics.
- Try not to interrupt an existing conversation unless you think you have something useful to add. You may ***ask*** if it's okay to join in.
- Try not to hog the repeater if activity/demand seems high.
- Do not test repeaters by using a short PTT pulse. Instead, say "***M7MCQ Testing***".
- Leave 3 second pauses between transmissions so that the repeater doesn't time out and so that other people have the chance to 'break in'.
- If you have gone into 'ramble mode' and think you are going to time-out on the repeater, you can say that you're going to take a quick break and stop transmitting for 3 seconds to reset the repeater's timer and give you longer to finish what you were saying.
- BEAR IN MIND that ANYONE could be listening to the repeater output, so don't treat it as some sort of private network! Watch your P's and Q's.
- ALWAYS welcome newcomers and those who sound nervous.
- Be kind and courteous.

WHERE ARE MY REPEATERS??

To find your local repeaters (in the UK) you simply need to visit the **RSGB REPEATER LIST** and do some sorting...

First thing to do is to enter your 6-figure LOCATOR reference and click on Calculate. Now you need to ***sort*** the list by clicking on the ***km*** column (or ***mi*** column if you've changed to miles).

You will be presented with a list of repeaters in your general locality and beyond. Everything that you need to know in order to program your radio is shown on that screen including the CallSign of the Repeater, its distance from you, the TX/RX frequencies, the Tone and the modes of operation.

I recommend that you program in quite a few - you'll be surprised at how many can be opened from your QTH even though you may think they're too far away. As I said previously, I can open one 40 miles away very easily on 10W. On the other hand, there's some much closer that I can't reach.

Obviously, don't bother putting in repeaters which will **only** function on modes which you don't have (such as DMR if you don't have a DMR radio).

SIMPLEX GATEWAYS

In addition to Repeaters, you will also be surrounded (to one extent or another) by Simplex Gateways. In order to see a list of them, just **CLICK HERE** and enter your 6-digit locator and do a sort again.

These are usually Nodes operated by individuals with a special licence. The one closest to my QTH (***MB6HW***) is operated by my friend Bill (G4CFP) and he usually has his ***Fusion*** gateway connected to the North West Fusion Group room, so when I listen to his simplex frequency of 144.8625MHz, I hear whoever is operating in that room.

If I wish to, I can (through my radio's Wires-X system) change rooms, eg: move from NWFG to CQUK, but before I leave the gateway it is good etiquette to move the gateway back how you found it.

Simplex Gateways are still something that I'm learning about, so I'll leave it there for now until I feel confident to write more about it. Just bear in mind that it costs nothing to tune in to your local Gateways and have a listen around and ask questions. And always leave a 3 or 4 second pause between overs on a Simplex Gateway!

Your local radio club should be your first port of call for learning about these things, so do ask around at the club for further guidance.

LOSING THE NERVES!

When you first start out on-air, it can be very daunting for many people and they find themselves getting tongue-tied and running out of things to say. It might help you to grow more comfortable by joining in some competitions, where all you have to do is give a signal-report and a serial number in most cases.

So an example would be "59, 004" where 59 is the signal-report you're giving and 004 is the 4th contact you've made so far in the competition. Needless to say, they will give you the same back (but their serial number may be much higher because they've been working the competition for hours).

To find out which competitions are on, visit the RSGB COMPETITION NEWS page...

https://rsgb.org/main/blog/category/news/gb2rs/contest-news/

Okay, you've reached the end of this post (at last). I do hope it's been of some use to you. If you have any questions or something to say, leave a comment below.

I want to say something I've said before - ***this is one of many hobbies*** for me, so I have a limited amount of time and effort that I can (or want) to put into it. Some of you guys will only have this single hobby and will want to pour everything into it and go much further than me - I wish you well and hope you succeed!

If you have any write-ups or ham-tips which you think may be of interest to visitors, by all means contact me with them via email - m7mcqio83ro@gmail.com

LEAVE A COMMENT BELOW :-)

73, Tom, M7MCQ

www.m7mcq.com