

Assuming you've passed your amateur radio "Foundation" exam and have your callsign, your next thought may be – how do I get on air? Here's some guidance to get you started:

Getting started on VHF / UHF

This is where most new radio amateurs start. Using these frequencies, you will be able to talk locally to other amateurs. Depending on the type and height of your aerial and height, distances of up to 50 miles are possible. Ideally, you would be looking to get a radio and antenna that can use the 2 metre and 70cm frequencies, and will allow you to make contact with other radio amateurs using one of the network of nearby repeaters.

- **Handheld:** You can get started with a handheld radio for around £25. These come with a short antenna that can be used over a fairly short range (a few miles) at a power of 5 watts (you are allowed 10 watts when you get started). These work best outdoors, and for best results, you would need to connect to a better antenna (eg. Roof, loft, car). Many amateurs own at least one of these, but they do have their limitations. We have a guide dedicated to "your first handheld" which explains the limitations
- **At home:** If want to transmit from indoors, you may want to consider a "base station" (£80+). These run on 12 volts, so you will also need a mains power supply (£40+). Best results will come from a vertical antenna (£30+, just under a metre long) fixed high up on the roof. It will be connected to your station via co-ax cable. If you can't get an antenna on the roof, an antenna placed high up in your loft is an option. In some cases, an antenna close to a window, or hung from the window can be used.
- **Mobile:** "Base stations" can also be installed in cars. Typically, this is either a 5/8 wave antenna attached to a magnetic base, or a roofrack/hatchback clip. The co-ax is normally fed through a rubber door seal



Getting started on HF

HF frequencies will let you talk around the world. Radios for HF are more expensive (£400+, but second-hand ones are available). You also need a larger antenna. These can be simple long lengths of wire, or more expensive specialist antennas. These ideally are set up in the garden, but loft antennas can be effective too. HF radios require a power supply unit (£40+) and unless your aerial is cut for a specific frequency, you'll want an antenna tuning unit (£100+) to be able to work multiple bands. Auto-ATUs save a lot of hassle, but usually cost more than manual ones.

We have a series of three guides on getting started with HF, covering radios, bands and antennas.

Getting started with other modes

- **Digital Voice:** There are two main systems are 'DMR' and 'D-Star', which are relatively new and mostly use UHF. Radios are usually handheld, and so need antennas like those mentioned under "VHF/UHF". Radios connect to local digital repeaters, which are connected to the Internet. This means that from a handheld radio, it's possible to talk around the world. A basic DMR radio costs £100+. The system is fairly new and are only used by a small percentage of amateurs. Repeater are only available in some parts of the country.
- **Data Modes:** By connecting your radio to a computer, you can use data modes such as PSK31 (typed messages), JT-65 (weak signal messages) and SSTV (images). We have a separate guide on these
- **Morse / CW:** Still very popular, and gets through where other modes don't. There are several ways to learn Morse code, and you'll need a radio that allows you to connect a Morse key or paddle.

More help, plus videos, guides and more information here: www.essexham.co.uk/getstarted