

If your son or daughter has expressed an interest in amateur radio, you may be keen to find out just what you (and they) are letting yourselves in for. Amateur radio is a hobby that lets radio enthusiasts talk to each other locally, and around the world. Radio amateurs complete a short training course and exam, and then get a licence to transmit on special radio frequencies. Radio amateurs learn about radios, frequencies, aerials, the legal aspects of transmitting and some of the technical basics that help with general understand of things like voltage and how to be safe. It's an ideal hobby for the technically-minded, and is suitable for all ages from around 6 to 106!

## How to Get Started

Radio amateurs start at "Foundation" and can move up to higher levels later if they wish. "Foundation" involves taking a short multiple-choice exam and completing some basic practical exercises. Most people study for the exam by taking a short course at a local amateur radio club, or at home using a Foundation book or online distance-learning course. There is a fee for taking the exam (£27.50 in 2016), and clubs typically charge a fee for training.

## First Steps

Once your youngster passes their exam, they'll get a special licence and 'callsign' that allows them to start talking to other amateurs around the world. They will also need a radio and an antenna. They will learn about this on the course, but in summary, there are two common types of amateur radio frequencies that amateurs use:

<p><b>VHF / UHF</b></p> 	<p>Depending on the height of the aerial, distances of up to 50 miles are possible. Many get started with a battery-powered <b>handheld radio</b> (£25+). These come with a short antenna that can be used over a fairly short range (a few miles), and are typically used outdoors. They can be connected to better antennas for better range. If your youngster wants to transmit from indoors, they can use their handheld connected to a better antenna, but will ideally want a "<b>base station</b>". These start from around £75, and require a power supply unit (£40+).</p> <p><b>Antennas:</b> The best results will come from a rooftop antenna (about a metre long, £30+). This will be connected to the "base station" via co-ax cable. If you can't get an antenna on the roof, an antenna placed high in your loft is an option. In some cases, an antenna close to a window, or hung securely out of the window will work too.</p>	
<p><b>HF</b></p>	<p>Radios for HF are more expensive (£400+) and allow users to talk around the world. HF radios require a power supply unit (£40+) and often need an antenna tuning unit (£100+). HF frequencies require larger antennas, which can be as simple as a long length of wire (between 5 and 40 metres). Antennas are ideally set up in the garden, but loft antennas can be effective too.</p>	
<p><b>Digital Voice</b></p>	<p>If you can't set up an HF station at home, you can consider Digital Voice – these are fairly new and mostly use UHF. Radios are usually handheld, and so need antennas like those mentioned under "VHF/UHF". The two main systems are 'DMR' and 'D-Star'. Radios connect to local "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. Repeaters are only available in some parts of the country.</p>	

## Is Amateur Radio Safe?

Yes, however there are some precautions you should observe. Courses cover the safety issues, and you may wish to review the safety section yourself. Also, just as allowing your youngster to talk to strangers on the Internet has risks, so to a lesser extent does amateur radio. You may want to supervise (or keep an ear) on what's being said.

**Next steps:** We recommend you contact a local amateur radio club to find out more. Find your nearest here: [thersgb.org/services/clubfinder](http://thersgb.org/services/clubfinder) - You can find our online course at [www.hamtrain.co.uk](http://www.hamtrain.co.uk)

**More help, plus videos, guides and more information here:** [www.essexham.co.uk/getstarted](http://www.essexham.co.uk/getstarted)