Listening Online

Amateur radio operators are able to communicate with each other by transmitting radio waves which travel around the world. You can hear some of their conversations by tuning into receivers connected to the internet using a WebSDR.

Connecting to a WebSDR

1. Connect to *http://rx.linkfanel.net* and wait for the map to download
2. Note the daylight and darkness sections on the map of the world
3. Choose an area. Countries just after dark are best
4. Expand and move the map to your chosen location
5. Click on a bubble and then the name of the station
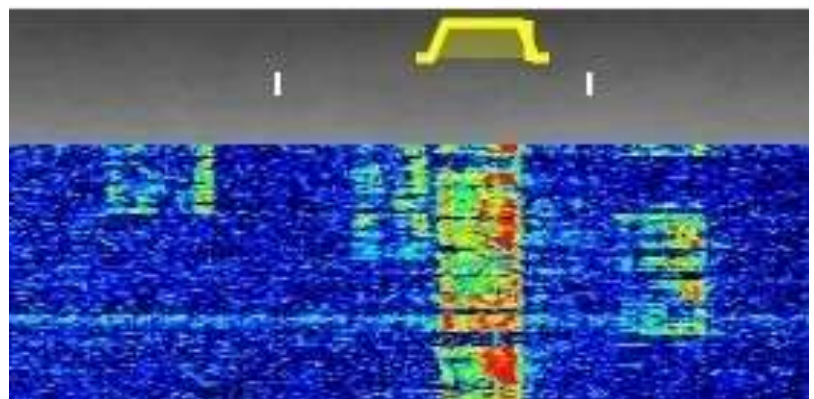6. Wait for the radio screen to download

Finding a station

1. Type 7120 in the top left window of the grey box and then click Enter. This enters the frequency in kHz.

2. Click on LSB (Lower Side Band)

3. Click on ⊕ 6 to 8 times to expand the scale

4. Find a signal which appears as a spotted coloured stripe like this

5. Click in the middle of the coloured stripe so that the yellow "hat" just sits above it. You should hear speech which may sound garbled

Tuning in the station

1. Make the speech understandable by adjusting the frequency. Click slightly to the side, using keyboard arrows or the ⊕ or ⊖ buttons
2. If the speech sounds too high pitched click to the left side of the stripe or use the ⊖ buttons
3. If the speech sounds too low pitched click to the right side of the stripe or use the ⊕ buttons
4. This may need repeating several times to receive clear speech
5. Listen to the station and try to identify the callsign used

More signals

1. Find more signals by looking for coloured stripes nearby and clicking on them
2. The screen can be moved sideways left or right with the mouse or ⊘ or ⊗ buttons
3. Try typing in different frequencies into the left hand corner window of the control box
4. Other amateur radio bands can be found by using the drop down menu in the "select band" window and scrolling down to the bottom of the list
5. Keep a list of the stations heard using the logbook grid
6. Note the local time at the receiving station and UTC which is shown in the top right corner of the screen

Other transmissions

1. Most public and commercial broadcasting stations use AM so click on the AM button to hear these clearly
2. Amateur radio stations above a frequency of 10 MHz us Upper Sideband so click on USB for these
3. There are many different types of signals to look for such as Morse code, time signals, coastal weather reports and many weird sounding noises
4. If you get confused at any stage return to the main "bubble map" page and start again
5. More instructions are available in the purple box in the bottom left corner

Log Book Design

TIME UTC	FREQUENCY kHz	STATION CALLSIGN	STATION NAME	STATION LOCATION	NOTES/COMMENTS

Keep a log of your listening, recording the time and frequency of the stations that you hear.

Amateur Radio Contacts

When an amateur radio station wishes to make contact with another station they will call CQ ("seek you") followed by their station callsign . Before calling they will listen carefully on the frequency and ask if the frequency is in use so that that they will not cause interference to other stations that they may not be able to hear.
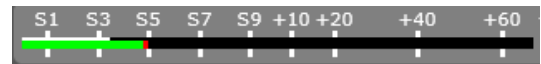
When contact is made with another station signal reports relating to how well the radio signals are being received are swapped and a general conversation then follows. The signal report consists of two numbers for readability and signal strength.

READABILITY	
1	Unreadable
2	Barely readable, occasional words distinguishable
3	Readable with considerable difficulty
4	Readable with practically no difficulty
5	Perfectly readable

SIGNAL STRENGTH	
1	Faint signals, barely perceptible
2	Very weak signals
3	Weak signals
4	Fair signals
5	Fairly good signals
6	Good signals
7	Moderately strong signals
8	Strong signals
9	Extremely strong signals

1.   Select a WebSDR receiver as above and try to find some amateur radio stations.
Listen for their signal reports given to each other.
What signal reports would you give them?

2.   Identify the following controls on the WebSDR screen and try them out.
Audio (Volume & Squelch).
Mode (AM, LSB, USB, CW).
Watch how the S Meter varies for different received signals.
Compare their operation to the controls on an actual radio or CB handheld radio which are listed below.

RECEIVER CONTROL	FUNCTION	RECEIVER CONTROL	FUNCTION
AF Gain	Adjusts the loudness of the station	RIT (Clarifier)	Makes small adjustments to the received frequency
Squelch (Mute)	Silences the background noise when no signal is present	S Meter	Shows the strength of the received signal
RF Gain	Controls the sensitivity of the receiver	Mode Switch	Selects the modulation type
VFO	Changes the frequency	Band Switch	Changes between bands

Other WebSDR receivers that you can try can be found at:

http://websdr.org

https://rx-tx.info/table-sdr-points

Connect to https://eshail.batc.org.uk/nb/ to hear stations using a satellite repeater.