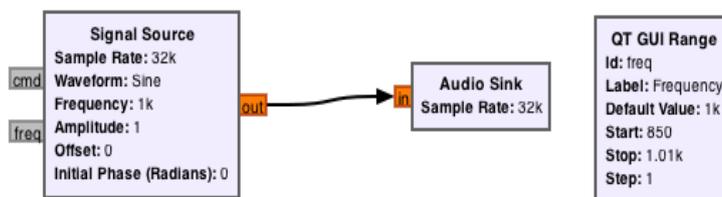


# GNU Radio

According to the GNU Radio website, GNU Radio is a free and open-source software development toolkit that provides signal processing blocks to implement software radios. The software can help students and hams to understand the principles of radio communication and digital signal processing.

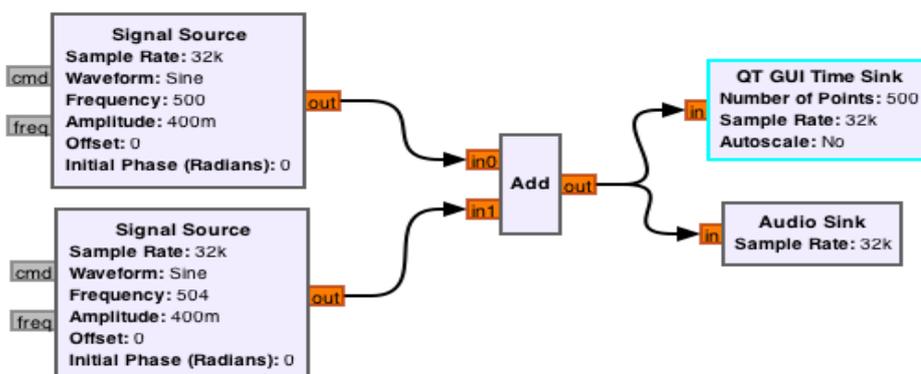
## Instructions

1. Download the software for GNU Radio. Their website is very helpful and caters for most operating systems: <https://www.gnuradio.org/>
2. The tutorials are excellent at: <https://wiki.gnuradio.org/index.php/>

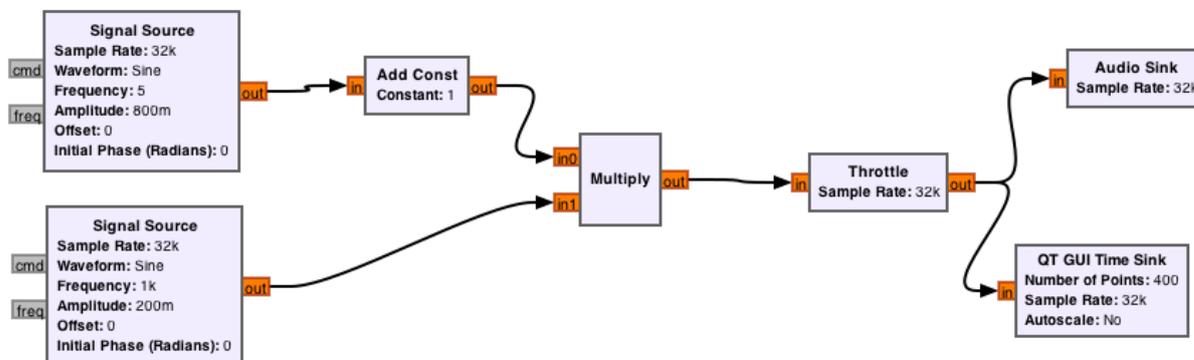


Try generating a single note.

3. Generate beats by using two sources, with only a small difference of frequency between them.



4. For Amplitude Modulation you need a carrier wave and a signal. You can see the result either on a time graph or a frequency spectrum.



### Find out more

We hope that this has given you a taste of a software-designed radio. As you can see from the tutorials, there is much to discover about signal processing.

There is a dedicated wiki page for GNU Radio and amateur radio:

<https://wiki.gnuradio.org/index.php?title=HamRadio>

There is an active chat server with a dedicated amateur radio room, which would be very helpful to people getting started. Here are a pair of links to join the chat either via Matrix or Discord.

<https://app.element.io/#/room/#HamRadio:gnuradio.org>

<https://discord.gg/5YKZeMT7>

There are many videos on the GNU Radio project YouTube channel and the monthly conference on 5 -9 September will be livestreamed there.

<https://youtube.com/gnuradioproject>

<https://www.youtube.com/@GNURadioProject/search?query=Amateur%20Radio>