CW apf (Audio Peaking Filter)

This function is the compliment to most filtering that tries to reduce audio levels. In contrast, the apf provides gain defined by a Gaussian curve centered on the CW pitch, that is, the gain rolls off smoothly from the peak. For weak signals this can pop up the signal to make it easier to copy.
It is invoked by the command **\apf gain width**
where the gain is in db and the width parameter controls how slowly the gain falls from the peak. Both values are floats. Too high a gain or too narrow a width will induce unpleasant artifacts. I suggest gains from 3 to 9 and a width of about 100. Try it out to find what's bet for you.
To disable the function enter  **\apf** with no arguments.

Here is a plot of a gain function with gain 6 and width 100. You can see that this curve is around the center at 680 Hz.
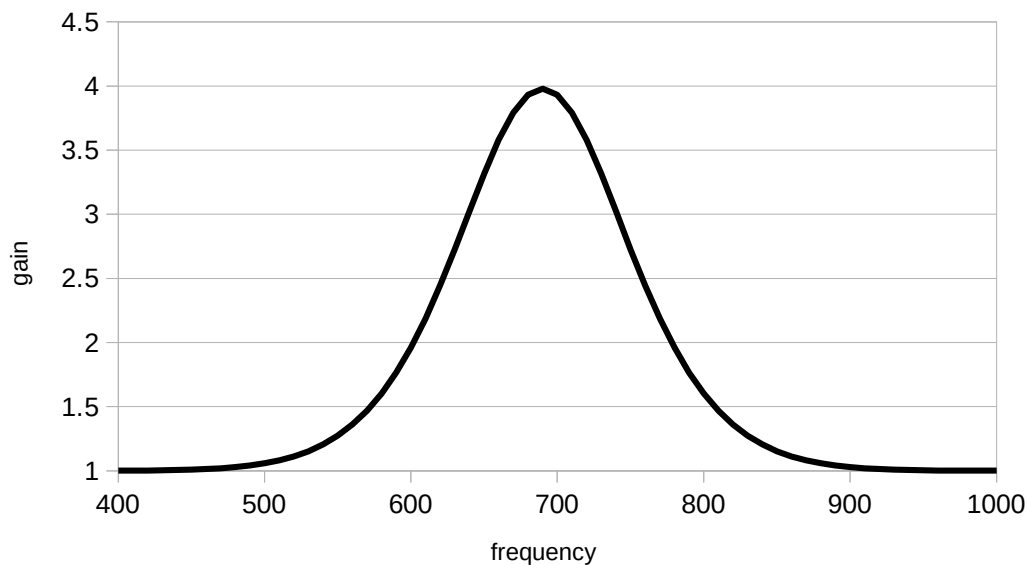


The sBitx operates in the frequency domain with bins of frequencies that are about 47 Hz wide. This graph how the sBitx function works. Gains are evaluated at bin centers and applied to a bin. The present sBitx function uses 9 bins, a center and 4 on each side, and has a gain floor of 1.0.