

Audio Speech Compressor for the FT-817 (and other rigs)

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This audio speech compressor is designed around the Analog Devices SSM2165 device. This IC gives a 40 dB compression range and interfaces nicely with typical electret microphone elements. I decided to build this up because the FT-817 doesn't have any type of speech processing built-in, and any extra "oomph" helps when you are QRP.

The circuit is small enough that it can be built into the microphone. However, I decided to go external until my FT-817 is out of warranty. I've built up a unit using the SMD version of the SSM2165 for this.

I purchased the SSM2165 from Newark Electronics (\$4.25). You'll need a pc-mount RJ45 jack and some perf-board. For the cable to connect to your radio, I just bought an RJ45 cable and cut off one end and wired it to the board. The connectors, cable, and other parts were purchased from All Electronics and Hosfelt Electronics. When everything was finished, I covered the entire assembly with heat-shrink tubing to make it a little more rugged.

So how does it work? According to my Diamond SX-1000 peak/average power meter, the peaks stay the same (as they should), but the average power increases about 6 dB. On the air reports are that the compressor makes my signal sound louder, and I should "leave it in all the time".

While I built this compressor for my FT-817, it should work fine with any rig using an electret microphone element. With the component values shown, the unit has unity gain along with 40 dB compression.



