UNIVERSAL MIC + TONE INTERFACE, that is, when utility meets simplicity

When using any antenna tuner that is not dedicated to the transceiver, there is an obligation to switch the transmission mode from SSB to one that has an output signal independent of the operator's modulation, such as AM, FM, or CW Keydown etc.

To overcome this burden and simplify the antenna tuning operation, I thought of integrating into the interface that I commonly use to have my hands free and take advantage of a PC headset with microphone, even a small BF oscillator which, in my case, I recovered from the upgrade of the Kenwood TS-711e that I have been using for years (Pic.1)



The oscillator is easily replicable and is not critical. It is sufficient that it works with + 5V and has a sufficient signal for driving. The one I use uses a NE555. The circuit is known, since it was used by Kenwood in his fixed VHF and UHF equipment of the 80s. Nothing prevents you from creating one, perhaps with SMD components to miniaturize the circuit. Find the schematic and component layout below. (Pic.2)

TONE UNIT (X52-1290-60) Component side view (TS-711 T,W TS-811 T,W)



Pic.2

It is easier to do it than to explain it.



It is about having two buttons on the interface, the classic one for PTT, and a new one to operate PTT and Tone. I have thought of different buttons to avoid errors in the excited use of the Contests.

Also, while we're at it, I took PTT and MIC for any auxiliary applications, such as PTT pedal or automatic call circuits.

The microphone connector that goes to the RTX is that of the specific device, in my case Yaesu FT-817 and therefore an RJ45, such as those of the network cables.

Recent devices, such as FT-817, obviously have the ability to emit the 1750Hz tone for opening repeaters, but it can only be activated in FM, rightly so.

Operation is very simple. Just activate the "TUNE" function on the tuner and then press the "Tone" button on the interface. Your RTX will transmit a modulated signal with the chosen power and the tuner will do its job.

Enjoy

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PC MICRO / HEADPHONE INTERFACE FUNCTIONAL DIAGRAM AND 1750Hz TONE





