2.4-gHz Monitor Instructions

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This tool displays activity within the 2.4 gHz band. Wondering if the 2.4 band is “busy” or if your transmitter is even working? The 2.4 gHZ Monitor is a quick way to get a visual representation.

Using the 2.4 Monitor

Before using it, you will need to install a 9V battery by removing the single battery cover screw from the back side.

To use, simply turn the round power switch to ON. The screen will show a startup message and with display monitor information after that.

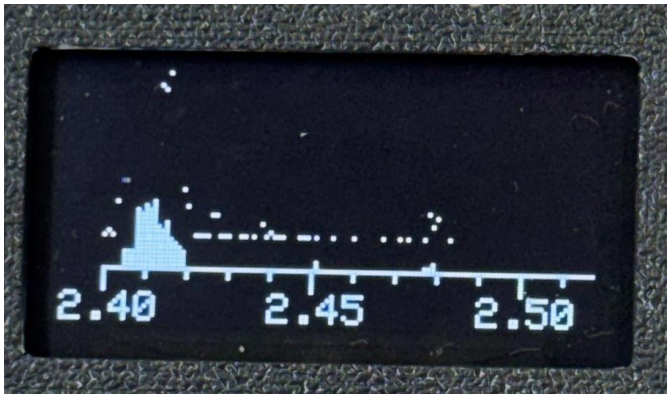
What it can tell you

In addition to being a neat tech toy, the 2.4 Monitor has numerous practical uses. The monitor can be used to observe how “busy” the spectrum is and whether interfering sources are present or not. Many times pilots will blame loss of control on that “nearby cell tower” or some other area where planes at that field tend to crash. The monitor gives you a picture of what RF is in the air around your flying area.

The Monitor can also be used to observe the signal from an RC transmitter, providing some assurance, although far from absolute, that the transmitter is working. You will see the display change if you turn on your transmitter thus giving an indication that the transmitter is outputting RF.

Technical

The 2.4-GHz Monitor scans frequencies from 2.4 to 2.517 GHz (which includes the RC 2.4-GHz band) and is commonly called the Industrial, Scientific, and Medical (ISM) band. 2.4 gHz is open to a lot of activity, for example wireless routers are typically in the 2.4 band. The monitor starts at 2.4 and steps through the band in 1-MHz steps. There are within this frequency range, displaying 118 channels or steps. If a signal is present at each step it logs it. When it reaches the upper limit, it starts again at the 2.4 end (left side of the screen). As it steps toward the right side of the screen it continues to log if a signal is present. The height of the vertical line it draws on the display is the relative number of times it finds a signal at any step.



It keeps the maximum vertical line endpoint even if the number of times it finds a signal drops. So you will see dots at toward the top of the display indicating the max use of that particular step. The display doesn't show signal strength but rather usage over time at each step.

The monitor does not measure the received signal strength or RSSI (Received Signal Strength Indicator) but instead indicates the presence of signal with the amplitude displayed being a "frequency of occurrence" of signal. Thus, this monitor is not a true spectrum analyzer which would display the amplitude of signals vs. frequency instead of the occurrence of signals vs. frequency.

In addition to displaying the occurrence of signal, the 2.4-GHz Montior records the maximum value measured of the frequency of occurrence of signal at each 1-MHz band. To reset the maximum value the power switch must be turned off and back on. This is useful to record whether signals have occurred since power-on when the user may not be observing the display.

Specifications

Power source: 9-V battery
Current consumption: approximately 28 mA