

MFJ-224 FM Analyzer

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KARC needs to be able to monitor the repeater for proper operation. One of the least expensive devices on the market is the MFJ 224 2 Meter FM Analyzer. The original effort was to obtain a schematic of the 224 and modify a donated (K9VIS) rig to be able to monitor signal strength, and deviation both by meter and oscilloscope. To do this a schematic of the 224 would be needed.

An extensive search of the web produced no results. The MFJ manual was found but it did not contain a schematic. The price tag with shipping was \$200, a bit over budget. A few months later a sale of the 224 was found and the unit was purchased. There was a write-up about the 224 on the eham website. The author complained that it drifted and when he contacted MFJ they basically blew him off. When the unit arrived the meter was dislodged from its mounting and was not plugged in to the circuit board. No schematic accompanied the unit. Reverse engineering was the next step. During this process a bad solder joint was found which was shorting a diode to ground. Several weeks later the desired schematic was completed.

The next step in this project will be to build and install a crystal oscillator for 146.730 to replace the variable frequency oscillator. As indicated in the eham article, the unit does drift and is a bit hard to tune.

For questions or comments regarding the schematic please contact Mike WD9GNX at mikeh292@frontier.com or on the KARC repeater.

