



## Wyatt Technical Services - EMC Consulting & Seminars

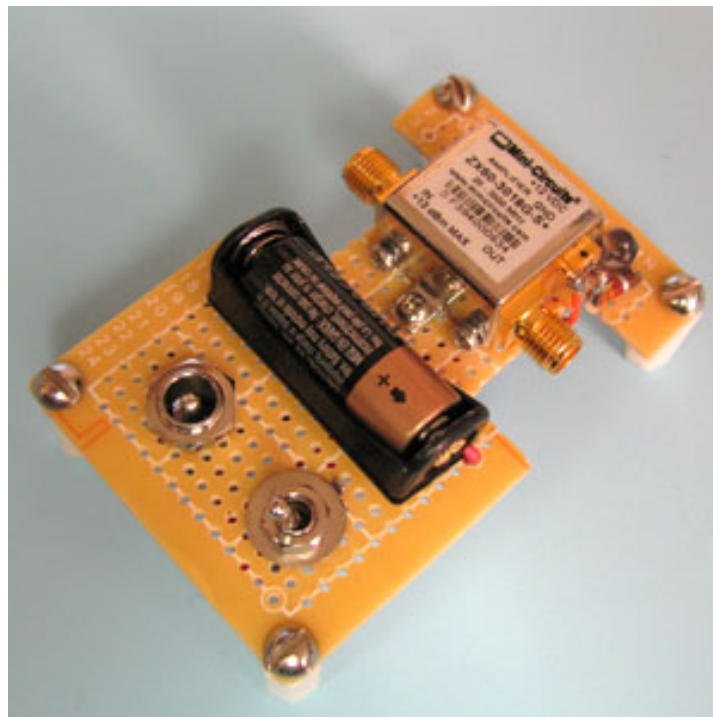
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### LOW-COST WIDE-BAND PREAMPLIFIER

There are many cases where a wide-bandwidth preamplifier is useful for boosting low-level signals, such as required for EMC measurements. I've been using a small Mini-Circuits ZX60-3018G-S+ preamplifier module for cases where I need to increase the output from e- or h-field probes. These probes are normally used for troubleshooting radiated or conducted emissions from electronic products.

This \$50 module covers 20 to 3000 MHz, has a gain of 18 to 23 dB, noise figure of 2.7 dB and can handle up to +10 dBm power input. It runs off 12V DC. Shown below is the breadboard-mounted preamp I use for general troubleshooting. I added a DC input jack so I can plug in an external power supply, if required. The indicator LED alerts me when the power is turned on.



The amplifier module may be ordered directly from their Web site: [www.minicircuits.com](http://www.minicircuits.com). The module data may be examined here: [http://www.minicircuits.com/cgi-bin/modelsearch?search\\_type=info&model=ZX60-3018G-S%2B](http://www.minicircuits.com/cgi-bin/modelsearch?search_type=info&model=ZX60-3018G-S%2B).