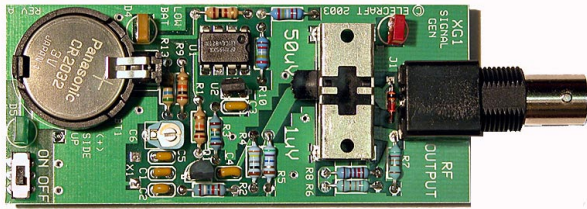


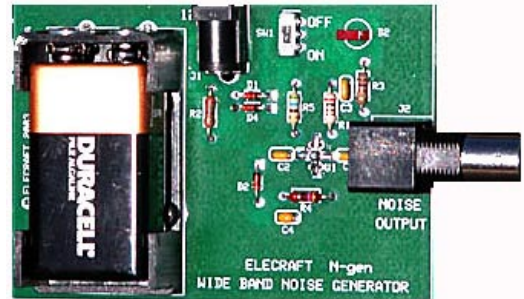


# ELECRAFT® Mini-Module Kits

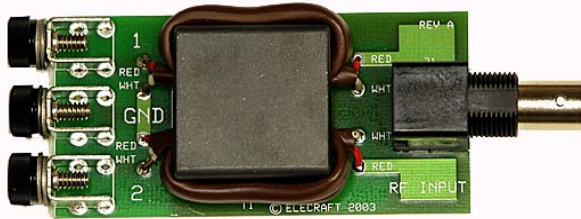
## Easy to Build Test Tools and Rig Accessories



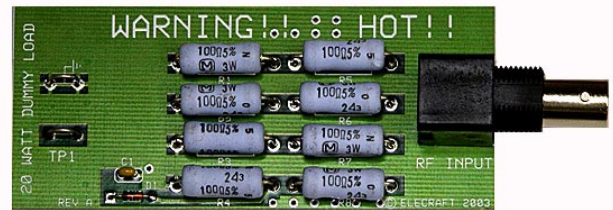
**XG1& XG2 Receiver Test Oscillators / S-Meter Calibrator**



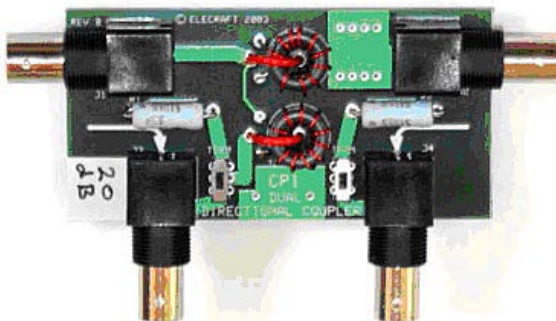
**N-gen Wideband Noise Generator (100 kHz - 500 MHz)**



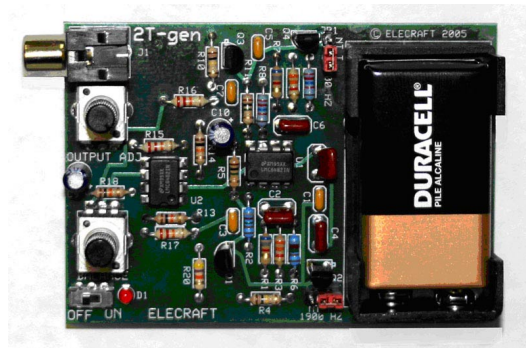
**BL1 & BL2 Wideband 1:1 & 4:1 150/250 W Baluns**



**DL1 Wideband 20W Dummy Load**



**CP1 Dual Directional Coupler (1-30 MHz)**



**2T-Gen Two Tone Test Oscillator**

### High Performance for the Shack and Lab

Our Mini-modules are inexpensive, ideal for first-time builders, and will serve many useful functions in your shack and at your electronics workbench. They can be built in a single evening, and include complete, illustrated assembly manuals with complete test and debug sections.

The mini-modules include HF receiver test oscillators (XG1, XG2), a wideband noise generator (N-gen), 20-watt dummy load (DL1), Directional Coupler (CP1) and 150 W / 250W baluns (BL1, BL2). All are small, PC-board-only modules that can be used as is--with the supplied rubber feet--or installed in an enclosure of your choice. Each module includes a PC board-mount BNC connector to facilitate connection to station equipment.

### Easy to Build, Understand and Use

All of our Mini-Modules kits are straightforward, one night projects. The kits are easy to assemble, featuring our "no-wires" construction. They are also a great way to get back into the swing of building and to improve your building skills.

### Strong Customer Support

Our technical support via telephone and the Internet will get your kit up and running quickly. On-line downloadable manuals, frequently asked questions (FAQ), and our very active user group on the Elecrafft email list make building the Mini-Modules a great experience.

### XG1 & XG2 Receiver Test Osc. / S-Meter Calibrators

Specifications and Pricing subject to change without notice

Ever wonder how well an HF receiver is really working--or how one receiver compares to another? One of the most important performance measurements is sensitivity. But measuring sensitivity (MDS or signal-to-noise ratio) usually requires an expensive, lab-grade signal generator.

The XG1 and XG2 Receiver Test Oscillators are inexpensive alternatives. The XG1 (7.040 MHz) and XG2 (3.579.5, 7.040 and 14.060 MHz; Switch Selectable) signal sources have highly-accurate 1 microvolt and 50 microvolt output levels. Thanks to their precision, low-level crystal oscillator, they achieve absolute output accuracy of better than  $\pm 2$  dB, and an extremely small unit-to-unit variation of typically  $\pm 1$  dB. This ensures that measurements made with different XG1/XG2s can be compared, which can be helpful when evaluating used equipment.

The 1-microvolt level can be used to determine a receiver's MDS (minimum discernable signal), and its receive gain. 50 microvolts is widely used as the standard "S9" reference for S-meter calibration. Step-by-step procedures are included for receiver performance measurement and S-meter alignment.

#### Specifications

- ❑ RF Output Level: 1  $\mu$ V and 50  $\mu$ V into 50 ohms
- ❑ Output Accuracy: Typically Better than  $\pm 2$  dB at 25 C
- ❑ Frequency: (XG1) 7040.0 kHz; (XG2) 3.579.5, 7.040 and 14.060 MHz, Switch Selectable
- ❑ Reverse Protection: 5 W for 4 seconds, 10 W for 2 seconds (typical; not guaranteed)
- ❑ Current Drain: 2.5 mA (XG1), 250  $\mu$ A (XG2) from on-board 3-V, 220 mA-hr battery
- ❑ Dimensions: 1.5"W by 3.5"L

### N-gen Wideband Noise Generator (100 kHz-500 MHz)

The Elecraft N-gen is a wideband noise source that is useful for a variety of receiver alignment tasks. It can be used in conjunction with a software program such as Spectrogram to align IF filters in the K2 or in other receivers. It can also be used to align the RF stages in Elecraft XV Transverters or other HF, VHF, and UHF equipment. *Note: The N-gen does not generate pulse noise, so it cannot be used to test pulse-type I.F. noise blankers such as the Elecraft KNB1/KNB2.*

The N-gen can be powered either from its internal 9-Volt battery, or from an external source. A red LED is provided to indicate that the unit is operating.

#### Specifications

- ❑ Power: 9V battery or external 12 to 15 VDC
- ❑ Current Consumption: approximately 25 mA
- ❑ Excess noise output: approximately 35 dB
- ❑ Bandwidth: Within 3 dB from 100 kHz to 500 MHz

### DL1 Wideband 20W Dummy Load

This dummy load can handle a full 20 watts (continuous). Its SWR is less than 1.3:1 through 225 MHz. It includes an integral RF detector for use with a voltmeter, allowing you to accurately measure transmit power.

#### Specifications

- ❑ Power Handling: 20 W (continuous)
- ❑ SWR is less than 1.3:1 through 225 MHz
- ❑ Dimensions: 1.5"W by 3.5"L

### BL1 & BL2 Wideband 1:1 / 4:1 Baluns

Our efficient baluns can handle up to 250 watts, yet are small and lightweight, making them an excellent choice for home and field use. They use a special winding technique to reduce losses, resulting in an SWR of less than 1.2:1 from 500 kHz to 55 MHz.

#### Specifications

- ❑ Power Rating: 150 W max (BL1); 250 W Max (BL2)
- ❑ Bandwidth: Input VSWR less than 1.2 when connected to a 200-ohm resistive load, 500 kHz to 55 MHz
- ❑ Dimensions: 1.5"W by 3.5"L

### CP1 Dual Directional Coupler

The CP1 can be internally or externally terminated and can be built with a coupling loss of either 20 dB or 30 dB. It samples a transmitter's forward and reflected power. It is an ideal companion to the 2T-Gen 2 Tone test generator and can also be used with a spectrum analyzer and tracking generator to sweep the return loss (SWR) of an antenna or other devices.

#### Specifications

- ❑ Frequency Range: 1 MHz to 30 MHz
- ❑ Coupling Loss: 20 dB or 30 dB (29.8)  $\pm$  0.25 dB
- ❑ Directivity: 30 dB
- ❑ Power: 30 dB coupler, 250 W; 20 dB coupler, 25 W


### 2T-Gen Two Tone Test Oscillator

The 2T-Gen is a 2-tone test oscillator that provides a standard 2-tone (700 and 1900 Hz) audio source for testing of SSB transceivers and linear amplifiers for linearity. (Linearity impacts both SSB fidelity and the amount of SSB splatter that causes adjacent frequency interference.)

#### Specifications

- ❑ AF Output Level: 200 mV max, adjustable, female RCA
- ❑ Frequency: 700 Hz and 1900 Hz
- ❑ Harmonic Distortion: -55 dB typical
- ❑ Current Drain: About 3ma. from on-board 9-V battery

Please see our Price List or website for current pricing.

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