

Five Test Equipment Bargains from Heath

— the 5280 series features plenty of measuring power per dollar

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At last someone has recognized that there are a lot of electronic hobbyists who do not really want to buy big fancy pieces of test equipment for the few times they might use them. Heath has the answer with its line called the 5280 series, at an affordable price and just the ticket for those of us who are part-time test equipment users. And, best of all, no longer will it be necessary to either hunt down a friend to borrow from or visit or pay through the nose a high hourly rate for a professional to do the job for you. Each piece is just \$37.95, and there are five of them in the series plus a power supply for those who prefer not to use battery power. So far, I've built the signal generator (Heath calls it an rf oscillator) model IG-5280 and the RCL bridge model IB-5281. They work just great and are extremely easy to build and to use. They also have available an audio frequency generator, a great-looking volt/ohm/mil multimeter and excellent

ranges, and a signal injector.

The rf generator is very impressive to use for its low price. While not exactly precision calibrated, its inaccuracies can be very easily accommodated during use once you know what they are. The unit covers the spectrum from 310 kHz to 110 MHz on fundamentals, and it goes beyond that with harmonic output to 220 MHz. All that in five bands with adjustable output up to 100 mVrms. The unit also has its own audio oscillator with a pleasant 1000-Hz tone that can be switched to modulate the rf oscillator (a great help for identification in a band full of signals) or can be used as an audio signal generator. It, too, has a variable output of up to 2 volts rms.

The RCL bridge is something I should have had many years ago as I recall the many resistors, capacitors, and inductors that were discarded because they were unmarked. In these days of low-priced kits of assorted parts, many of them unmarked, comes a reasonably priced kit from Heath making it possible for you to know as much about the parts as

the guy who made them and forgot (?) to put the size mark on them. To determine the value of an unknown resistor, capacitor, or inductor with this unit, one simply sets the selector switch for the type of item to be identified—there are several ranges for each of the categories. The item is attached to the test clips, the meter is adjusted, and the dial is slowly rotated until the needle on the meter reaches its lowest reading (null). The dial pointer will indicate the value of the formerly unknown item. The unit has three ranges for each of the three categories, i.e., 10 Ohms to 10M Ohms, 10 pF to 10 uF, and 10 uH to 10 Henries. It may also be used for exact matching of any two or more items.

Power for these kits is provided by a power supply (\$24.95) or each of the units may be powered by two nine-volt "transistor-radio-type" batteries. I chose the latter and regretted it the second time I wanted to use the RCL bridge. The batteries were dead; I had neglected to turn the thing off! This prompted me to devise a very simple "power on" indicator by adding a small

red LED to the front panel just above the "Power ON/OFF" switch. I drilled a hole just large enough to accommodate the LED and wired it from ground to the "ON" side of the power switch with a small current-limiting resistor in series with the positive lead. That red glow is a sure reminder, costs only a few pennies and a few moments of time, and consumes little energy.

In these days of small-sized equipment, I am not impressed with the large cabinet for these kits. They all use the same type case, but it does have a lot of convenient storage space. Don't overlook the great advantage of portability of these units when battery powered. Field days, emergencies, vacations, or work time on the mobile rig finds these units perfect, rugged, and portable. The kits build easily; the instructions are about the most extensive I have seen from Heath, or anyone else for that matter. They include many illustrations, circuit drawings (some greatly enlarged), and a very explicit discussion of exactly how the circuit works and what it does when testing parts. ■