

## **Instek GDS-122 Handheld Digital Oscilloscope**

The newly released **GDS-122** Handheld Digital Oscilloscope from Instek is a remarkably light but capable piece of test equipment. The low price tag and its impressive list of features put this unit within the budget of any Test Engineer or technician.

The unit is a full featured 20 MHz oscilloscope/multimeter combination. It sports features only available on units similar to those by Fluke or Agilent costing almost double the price of this unit. The GDS-122 comes complete with included software to allow downloading, storing, printing and viewing of the displayed waveforms on any PC via a USB or Serial Port interface. Competitive brands often charge extra for this option and usually only provide for either USB or Serial Port, not both.

A complete specification sheet is available on the Circuit Specialist web site as well as a comparison chart showing the differences and similarities between two other similar instruments. Several of the distinguishing features will be listed for to highlight the versatility of the unit.

The Horizontal time base is adjustable from 5 ns to 5 Seconds or allows the unit to be used in X-Y mode (this feature is not available on similar units). The unit contains a full color LCD display screen and features a Peak detect feature useful for capturing noise spikes and glitches that may be normally hidden using the normal acquisition (sampling) mode. Five automatic measurements are

available; frequency, period, mean voltage, peak-to-peak voltage, and true RMS, as well as the ability to measure between adjustable cursors on the LCD screen. Several Math functions are also possible;  $CH2 - CH1$ ,  $CH1 - CH2$ ,  $CH1 + CH2$ ,  $CH1 * CH2$ , and  $CH1/CH2$ .

The built in multimeter function of the units also deserves mention due to the wide range of measurements possible. It features a simulated analog display as well as the standard digital indicator. In addition to the standard measurement modes for AC and DC voltage and current, resistance, continuity and diode test, this unit provides a capacitance measurement function that is superior to most other units. The ability to measure capacitance values from 10 pf up to 100uF.

The Instek GDS-122 Handheld oscilloscope is a quality built unit that weighs about half that of comparable units yet provides additional features not found in higher priced handheld oscilloscopes. I highly recommend it to anyone that needs a portable, full featured, digital oscilloscope whose size and weight make it truly a handheld device.