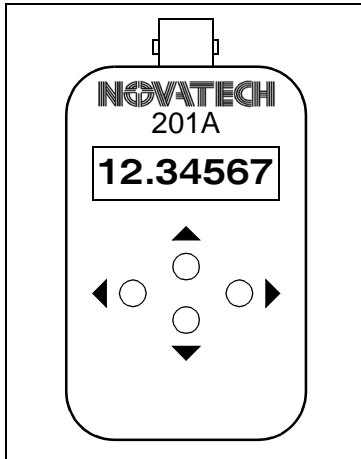


# NOVATECH INSTRUMENTS, INC.

## 12 MHz Handheld DDS Signal Generator Model 201A



The Model 201A is a hand-held portable signal generator using Direct Digital Synthesis (DDS) to produce a sine or square wave up to 12.99999 MHz. The output is programmable using four front panel cursor push buttons and an eight character liquid crystal display (LCD). The output frequency can be set to 10 Hz resolution over the complete range. The output of 1.0 V<sub>pp</sub> into 50Ω is suitable for most applications. An LVCMOS output at the same frequency as the sine wave is also available by moving a jumper. The Model 201A is powered continuously by two LR6 (AA) cells for a minimum of 10 hours. The frequency range of the Model 201A facilitates in-the-field audio and baseband RF testing, as well as acting as a digital clock source.

### Specifications:

#### OUTPUT

TYPES: Sine or LVCMOS.

IMPEDANCE: 50Ω.

RANGE: 10 Hz to 12.99999 MHz.

AMPLITUDE: Sine: approximately 1.0 V<sub>pp</sub> into 50Ω, typ. ±2dB from 1 MHz level. Audio level: typ ±0.1dB from 20 Hz to 100 kHz. LVCMOS: 2.4 V<sub>oh</sub>, 0.4 V<sub>ol</sub> O.C., series terminated, 50Ω output. t<sub>r</sub>, t<sub>f</sub> <2 ns.

#### CONTROL

Five front panel push buttons and display allow setting of output. Eight character LCD shows frequency in MHz, with 10 Hz resolution. The Save button allows the setting to be stored in EEPROM, or cleared to factory defaults.

#### SPECTRAL PURITY (50Ω load, 25 MHz span, Sine Output)

Phase Noise:<-100dBc, 10 kHz offset, 1 MHz out.

Spurious: <-50dBc below 1 MHz  
<-40dBc below 5 MHz  
<-30dBc below 12 MHz

Harmonic: <-55dBc below 1 MHz  
<-45dBc below 5 MHz  
<-35dBc below 12 MHz

#### ACCURACY AND STABILITY

Accuracy of ±0.005% at 20°C and a stability of ±0.0025% from +5 to +40°C.

#### POWER REQUIREMENTS

Two LR6 (AA) alkaline cells power the 201A for at least 10 hours of continuous operation. Batteries are accessible from a rear panel hatch.

#### SIZE

75mm H, 40mm W, 20mm T. ABS handheld case.

#### ENVIRONMENTAL

Temperature: +5°C to +50°C operating. Humidity: 80% to 31°C, decreasing linearly to 50% at 40°C.

#### CONNECTORS

BNC for output. Front accessible jumper to select Sine or LVCMOS.

9-Nov-2010