

ARB RIDER AWG-2000 ARBITRARY WAVEFORM GENERATOR

2 and 4 Channel Arbitrary Waveform Generator – 16 bit resolution



The ARB Rider AWG-2000 is the cost-effective and powerful 2 or 4 channel Arbitrary Function Generator (AFG) and 2 or 4 channel Arbitrary Waveform Generator (AWG) with advanced sequencer

functionality.

180MHz bandwidth, up to 12Vpp output range and up to 256 Msample memory depth; the AWG-2000 is the ideal Arbitrary Waveform Generator choice for automotive, IoT, and medical applications.

The 8 channel digital option combined with 2 or 4 analog channels make the AWG-2000 a full featured mix signal generator. It's now possible generate 2 or 4 analog signals fully synchronized with 8 digital lines (LVTTTL or LVDS standards)

MODEL	ANALOG CH	DIGITAL CH	SAMPLE RATE	RECORD LENGTH	VERTICAL RES.	MAX FREQ.	MAXIMUM OUTPUT VOLTAGE	OUTPUT VOLTAGE WINDOW
AWG2182	2	8 (opt.)	600 Ms/s – 1.2 Gs/s (interleaved)	2 to 256 Mpts	16 bits	180 MHZ	6Vpp – 12Vpp (Opt.)	6Vpp – 12Vpp (Opt.)
AWG2184	4	8 (opt.)	600 Ms/s – 1.2 Gs/s (interleaved)	2 to 256 Mpts	16 bits	180 MHZ	6Vpp – 12Vpp (Opt.)	6Vpp – 12Vpp (Opt.)



3-IN-1 Instrument

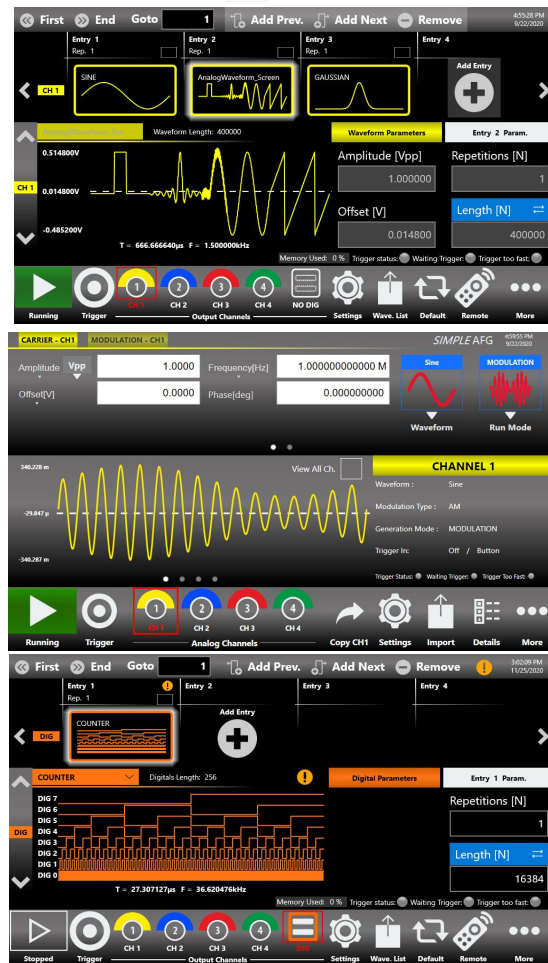
The AWG-2000 Series instruments are multifunctional signal generators that combine three functions in one instrument, including Function Generator, Arbitrary Waveform Generator and Digital Pattern Generator.

These three-different features expand the capabilities of the HW adopting two different technologies: Improved DDS in AFG mode and variable clock, true-arbitrary technology in AWG mode. The AFG mode allows the user to change glitch free on-the-fly all the parameters preserving the waveform shape and to create/generate the waveform in a glance.

The AWG mode lets the user create complex waveform scenarios of analog and digital patterns, insert them in a sequence, apply loops, jumps and conditional branches.

Highlights

- Up to 256 Mpoints of waveform memory on each channel
- 16384 sequencer entries
- Analog and Digital signals fully synchronized
- Cost-effective price per channel
- Extremely Easy To Use and versatile functionality



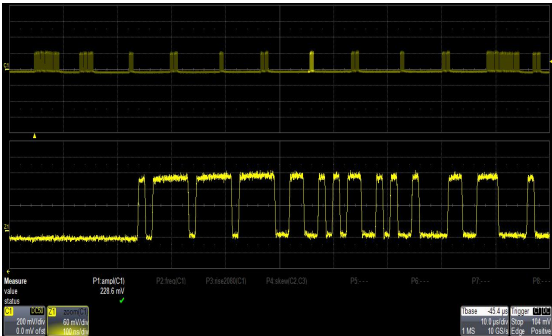


Automotive

Today's cars are including lots of highly sophisticated electronic control units (ECU) with very sensitive electronic components. The 16-bits vertical resolution combined with the 600 MS/s Real Time (1.2 GS/s 2x interpolated) fast sampling rate and 12Vpp output amplitude range, make the AWG-2000 Series instruments indispensable tools for successfully and efficiency addressing the new testing challenges in automotive.

Highlights

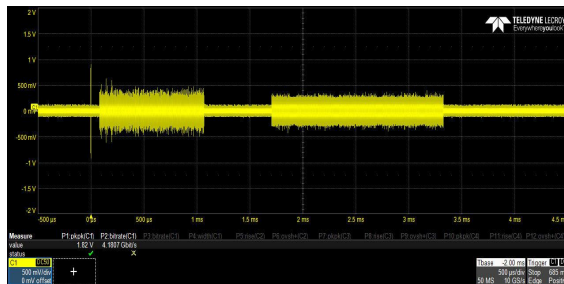
- CAN, CAN-FD, LIN, Flexray, SENT emulation and troubleshooting



- 100BASE-T1, 1000BASE-T1, BroadR-Reach emulation and immunity from interference signal and noise
- EMI debugging, troubleshooting and testing
- Electrical standards emulation up to 24 V
- Power MOSFET circuitry in automotive electronics optimization and characterization

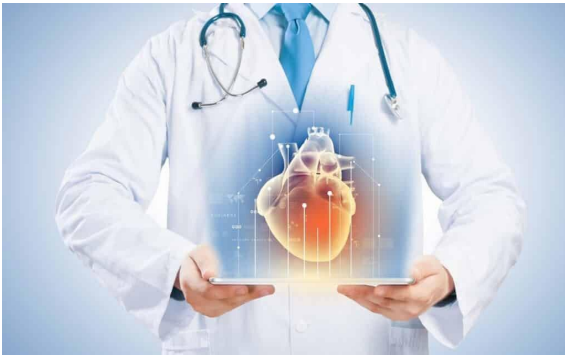
IoT, Ind. 4.0 and RF Modulator

Arb and Function Riders will be the iconic instrument for this application. The possibility to emulate complex RF I/Q modulation for simulation and Test vs wireless devices or working on Internet of things of industry 4.0 applications. Each engineer may use the possibility to import waveform to emulate devices under test, impose distortion on the waveform (such noise) to test the ability of devices to be compliant to the standards.



Highlights

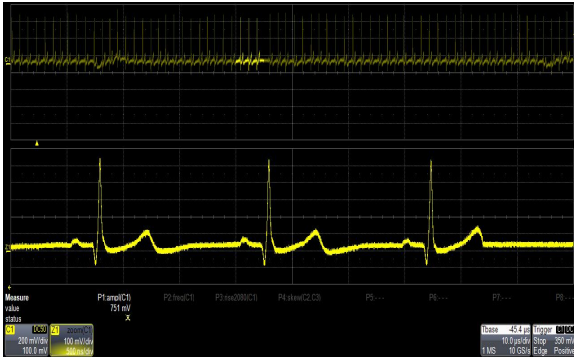
- Sensors signals generation: emulation of ideal signals or generation of real world signals after acquisition with an High Definition Oscilloscope.
- Integrated Attenuator for Low Amplitude signals generation
- MOSFET gate drive amplitude signal emulation for MOSFET characterization and optimization
- Power up sequences of IC using the low impedance feature (0Ω output impedance).



Low Noise Signals Generation : ECG signal emulation

The Active Technologies AWG-2000 Series instrument is provided with an internal 10x Attenuator that lets the user generate signals with a very low amplitude without sacrificing the DAC resolution.

Real-world cardiac signals typically are very low in amplitude — often only a couple of millivolts or even less. Active Technologies AWG-2000 Series overcome this generation challenge with the built-in internal 10x attenuator and by using an analog output stage able to provide an extremely high signal fidelity.



Highlights

- 10x Internal Attenuator
- Real-world signals generation: cardiac, EEG
- 16 Bits vertical resolution with low amplitude signals

Semiconductors and Research Applications

The AWG-2000 Series AFG user interface includes the capability of the Double Pulse function required for testing the dynamic behavior of power devices such as MOSFETs and IGBTs. Each of the two pulses can have a different amplitude, rise-time, fall-time and width.

Researchers and Scientists require to emulate pulses adding amplitude and timing variation imperfections in an accurate, detailed and repeatable controlled manner: with up to 256 Mpoints of waveform memory per channel, you can easily acquire real-world signals from the oscilloscope and playback them with the AWG-2000 Arbitrary Waveform Generator.

Highlights

- Double Pulse Mode
- Oscilloscope Record & Playback
- PRBS sequences
- Physics, electronics, chemistry, mechanics experiments

