50 MS/s Synthesized Multichannel Arbitrary Waveform Generators

- Up to 4 Independent Channels (1 standard)
- 10 Standard Functions (sine to 20 Mhz, Square to 25 MHz)
- Up to 50 MS/s Sampling with 12-Bit Vertical Resolution
- Versatile Inter-channel Triggering, Summing and Phase Control
- Frequency Sweep
- Amplitude and Suppressed Carrier Modulation
- Graphical User Interface
- Front Panel Waveform Creation/Editing Tools
- Floppy Disk Drive
- GPIB and RS-232 Interfaces
- Compatible with Waveform DSP2
- SCPI Compatible

It's Easy to Create Any Waveform

* Waveforms can be created, copied, edited, downloaded, and sequenced, all with a few clicks of the mouse

- * Modifying waveforms is a snap with tools such as Vertical Resize and Vertical Move
- * An internal memory of 60 kB is provided for storing the waveforms you create
 - You can create waveforms with mathematical precision by entering math expressions using the numerical keys on the front panel.
 - Waveforms with straight lines, as in pulse or digital applications, Line Draw allows you to use the mouse to draw the lines on an oscilloscope
 - Freehand Draw gives the flexibility of using the mouse to draw a waveform on the oscilloscope in much the same way as with a pencil on paper
 - Sum multiple channels to create complex waveforms
 - Create long, complex waveforms with linked sequence operation up to 4 waveforms can be linked together

Specifications

- Standard Waveforms: Sine, square, triangle, pseudo-random noise, positive ramp, negative ramp, positive haversine, negative haversine, sin x/x and DC
- Frequency Range
 - * Sine: 1 mHz to 20 MHz
 - * Square: 1 mHz to 25 MHz
 - * Haversines: 1 mHz to 20 MHz
 - * All Others: (25 pt. waveform) 1 mHz to 2 MHz
- Waveform Quality
 - * Square Transition Time: For ≤ 10 Vp-p: <9.0 ns; For > 10 Vp-p: <9.5 ns
 - * Square Aberrations: < 5%
 - * Sine Distortion: (Elliptic filter selected)
 - <100 kHz, $\leq 15 \text{ Vp-p}$: No harmonic > -55 dBc
 - $<100 \text{ kHz}, \leq 10 \text{ Vp-p: No harmonic} > -60 \text{ dBc}$
 - <5 MHz, ≤ 10 Vp-p: No harmonic > -45 dBc
 - <5 MHz, > 10 Vp-p: No harmonic > -40 dBc
 - <20 MHz, ≤ 10 Vp-p: No harmonic > -35 dBc
 - <20 MHz, > 10 Vp-p: No harmonic > -28 dBc
- Arbitrary Waveforms: Max. number of user defined waveforms: 450
 * Resolution: Horizontal: 32k points standard (128k/512k points optional), minimum waveform size 5 points; Vertical: 12 bits (4096 points)
- Sampling Frequency
 - * Range: 0.2 S/s to 50 MS/s
 - * Resolution: 5 digits or 0.1 mHz
- Clock Output (Each channel) Range: 0.2 Hz to 100 MHz

- Amplitude Range: 0 to 15 Vp-p into 50 ohms; 0 to 30 Vp-p into > 10 kohm
- Offset Range: ± 7.5 Vdc into 50 ohm, ± 15 Vdc into > 10 kohm
- Filters (user selectable): 20 MHz 4 pole Bessel; 20 Mhz 7 pole, 6 zero Elliptic
- Operation Modes: Continuous; Triggered; Gated; Frequency Sweep; Trigger (Burst) Count
- Sequence Operation
 - * Number of Waveform Segments (per channel): 2 to 4
 - * Segment Loop Count: 0 to 1,048,576
- Frequency Sweep
 - * Sweep Time: 30 ms to 1000 sec (12 frequency points at 30 ms)
 - * Sweep Modes: Continuous up or down, Continuous up/down, Triggered up or down, Triggered up/down,
 - Triggered Sweep & Hold and Triggered Sweep & Hold with Reverse
 - * Sweep Spacing: Linear or Log
 - * Sweep Count: 1 to 1,000,000
- Multichannel Phase Relationships
 - Phase Resolution:
 - * User Waveforms: 360 degrees/Waveform points
 - * Standard Waveforms: 0.1 degrees
- Front Panel Waveform Creation
 - * Modes: Freehand, line draw, line list and insert math expressions
 - * Math Functions: Line, sine, triangle, pulse, tangent, logarithmic, random and block
 - * Editing Tools: Copy and insert, vertical offset, vertical re-size, delete, mirror and zoom