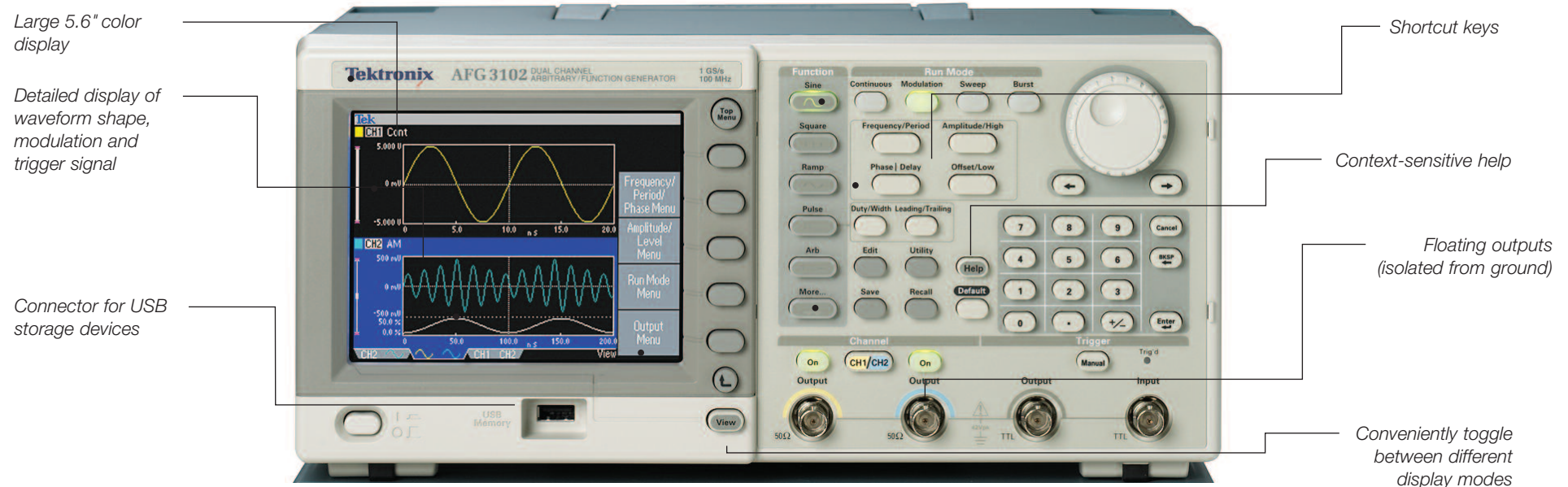


# AFG3000 Series Arbitrary/Function Generators

Fact Sheet

Intuitive GUI, Shortcut Keys, Simple Menus, 12 Standard Functions



## Features & Benefits

- Up to 240 MHz Sine Waves
- Up to 120 MHz Pulse Waves
- Up to 2 GS/s Arbitrary Waveforms
- Modulation, Sweep and Burst Modes
- Up to 20 V<sub>p-p</sub> Amplitude into 50 Ω load.
- Large Color Display shows All the relevant settings at a single glance (monochrome on AFG3021B)
- Detailed display of waveform shape, modulation and trigger signal with time and amplitude scale Gives full confidence in signal settings
- USB storage devices plug in the front panel to extend storage capacity and save waveforms and instrument settings
- Shortcut keys Provide direct access to frequently used functions and parameters which reduces set up and evaluation time
- Context-sensitive help Allows the user to learn About various features and functions

- Dual-channel models Provide two tightly synchronized or completely independent signals, saving cost and bench space
- Pulse Generator with independently variable leading and trailing edge times as Short as 2.5 ns
- Noise generator to Add variable noise in each channel
- Trigger/Sync Inputs and Outputs
- Sum-input to Add external signal to output
- Selectable User Interface Language

## Applications

- Electronic Test and Design
- Sensor Simulation
- Functional Test
- Education and Training
- Research



### Stackable

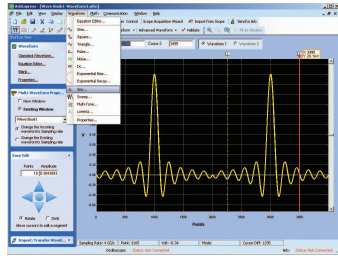
AFG3000 Series instruments stack perfectly with TDS1000/2000/3000 Oscilloscopes.



### Compact

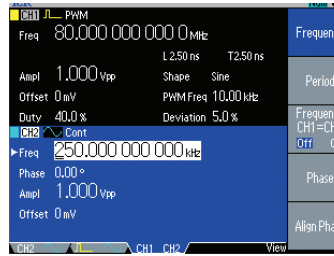
13" wide (330 mm)  
6.2" high (156 mm)  
6.6" deep (168 mm).

**Tektronix**<sup>®</sup>



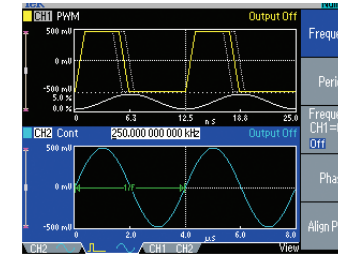
## ArbExpress™ Software

With this PC software, custom waveforms can be created and modified with ease, imported seamlessly from any Tektronix oscilloscope or defined via equation editor, free hand, point draw and waveform math.



## Waveform Parameters

View waveform parameters of channel 1 and 2 simultaneously (dual channel models).



## Waveform Graph

View waveforms of channel 1 and 2 simultaneously (dual channel models).

## Key Product Specifications

Product	AFG3011	AFG3021B	AFG3022B	AFG3101	AFG3102	AFG3251	AFG3252
Channels	1	1	2	1	2	1	2
Waveforms	Sine, Square, Pulse, Arb, Ramp, Sin(x)/x, Gaussian, Lorenz, Exponential Rise/Decay, Haversine, Noise						
Sine	1 μHz to 10 MHz	1 μHz to 25 MHz		1 μHz to 100 MHz		1 μHz to 240 MHz	
Square	1 μHz to 5 MHz	1 μHz to 12.5 MHz		1 μHz to 50 MHz		1 μHz to 120 MHz	
Pulse/Arb	1 mHz to 5 MHz	1 mHz to 12.5 MHz		1 mHz to 50 MHz		1 mHz to 120 MHz	
Other waveforms	1 μHz to 100 kHz	1 μHz to 250 kHz		1 μHz to 1 MHz		1 μHz to 2.4 MHz	
Noise bandwidth	10 MHz	25 MHz		100 MHz		240 MHz	
Arb sample rate (waveform length)	250 MS/s	250 MS/s		1 GS/s (≤16K) 250 MS/s (>16 K)		2 GS/s (≤16 K) 250 MS/s (>16 K)	
Waveform memory	4 x 2 to 128K						
Modulation	AM, FM, PM, FSK, PWM – internal or external modulation source						
Frequency resolution	1 μHz or 12 digits						
Timebase stability	± 1 ppm per year						
Vertical resolution	14 bits						
Sweep	lin, log						
Amplitude into 50 Ω	20 mV <sub>p-p</sub> to 20 V <sub>p-p</sub>	10 mV <sub>p-p</sub> to 10 V <sub>p-p</sub>		20 mV <sub>p-p</sub> to 10 V <sub>p-p</sub>		50 mV <sub>p-p</sub> to 5 V <sub>p-p</sub> <sup>1</sup>	
Amplitude into open circuit	40 mV <sub>p-p</sub> to 40 V <sub>p-p</sub>	20 mV <sub>p-p</sub> to 20 V <sub>p-p</sub>		40 mV <sub>p-p</sub> to 20 V <sub>p-p</sub>		100 mV <sub>p-p</sub> to 10 V <sub>p-p</sub> <sup>2</sup>	
Amplitude resolution	0.1 mV <sub>p-p</sub> or 4 digits						
Interface	USB, LAN, GPIB						
Price	\$3,500	\$1,900	\$2,850	\$3,760	\$4,960	\$6,590	\$8,760

<sup>1</sup> 4 V<sub>p-p</sub> for >200 MHz

<sup>2</sup> 8 V<sub>p-p</sub> for >200 MHz

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03/08 FLG/WWW 76W-18655-3

## Ordering Information

AFG3011, AFG3021B, AFG3022B, AFG3101, AFG3102, AFG3251, AFG3252.

Standard Accessories: quick start user manual, calibration certificate, CD-ROM with programmer manual, service manual and ArbExpress™ software.

Customers specify power plug and quick start manual version when ordering.

### Options

International Quick Start User Manuals

Opt. L0 – English.

Opt. L1 – French.

Opt. L2 – Italian.

Opt. L3 – German.

Opt. L4 – Spanish.

Opt. L5 – Japanese.

Opt. L7 – Simplified Chinese.

Opt. L8 – Traditional Chinese.

Opt. L9 – Korean.

Opt. L10 – Russian.

### Recommended Accessories

RM3100 – Rackmount kit.

013-0345-00 – Fuse adapter, BNC-P to BNC-R.

159-0454-00 – Fuse set, 3 pcs, 0.125A.

012-0482-00 – BNC cable shielded, 3 ft.

012-0991-00 – GPIB cable, double shielded

012-1256-00 – BNC cable shielded, 9 ft.

### Service

Opt. C3 – Calibration Service 3 years.

Opt. C5 – Calibration Service 5 years.

Opt. D1 – Calibration Data Report.

Opt. D3 – Calibration Data Report 3 years. (with Opt. C3).

Opt. D5 – Calibration Data Report 3 years. (with Opt. C5).

Opt. R5 – Repair Service 5 years.

### Warranty

Three years warranty on parts and labor.

