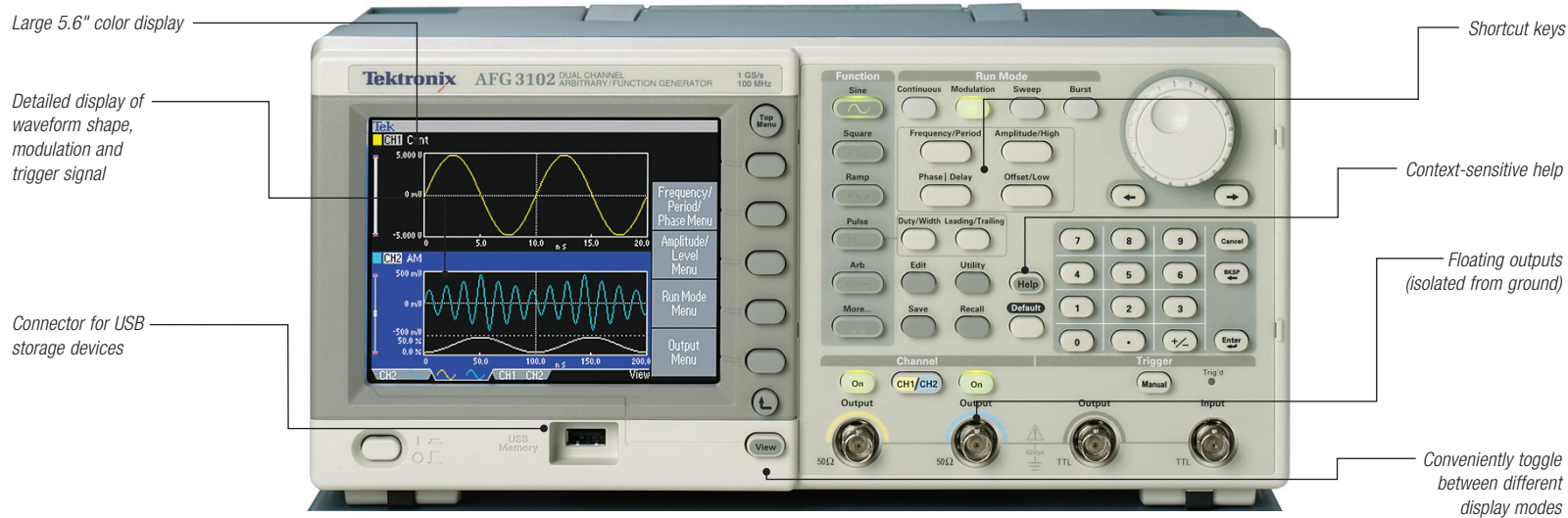


# AFG3000 Series Arbitrary/Function Generators

► 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
- 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.



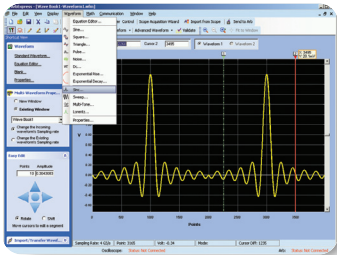
**Compact**  
13" wide (330 mm)  
6.2" high (156 mm)  
6.6" deep (168 mm).

**Dist-Tron, Inc.**

1-800-347-8766

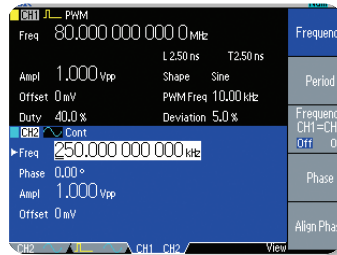
www.dist-tron.com

**Tektronix**  
Enabling Innovation



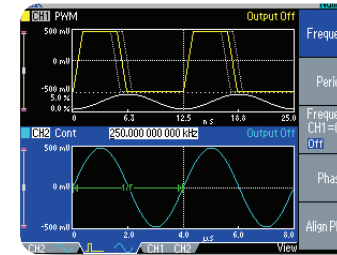
**ArbExpress™ Software**

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).

► **Ordering Information**

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

Standard Accessories: quick start user manual, calibration certificate, CD-ROM with reference user 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.
- 012-1256-00 - 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.

► **Key Product Specifications**

| Product                           | AFG3021B   | AFG3022B | AFG3101                                     | AFG3102 | AFG3251   | AFG3252 |
|-----------------------------------|--|----------|---|---------|---|---------|
| Channels                          | 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 25 MHz  |          | 1 μHz to 100 MHz                            |         | 1 μHz to 240 MHz  |         |
| Square                            | 1 μHz to 12.5 MHz  |          | 1 μHz to 50 MHz                             |         | 1 μHz to 120 MHz  |         |
| Pulse/Arb                         | 1 mHz to 12.5 MHz  |          | 1 mHz to 50 MHz                             |         | 1 mHz to 120 MHz  |         |
| Other waveforms                   | 1 μHz to 250 kHz   |          | 1 μHz to 1 MHz                              |         | 1 μHz to 2.4 MHz  |         |
| Noise bandwidth                   | 25 MHz   |          | 100 MHz                                     |         | 240 MHz   |         |
| Arb sample rate (waveform length) | 250 MS/s   |          | 1 GS/s (≤16K)<br>250 MS/s (>16K)            |         | 2 GS/s (≤16 K)<br>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               | 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       | 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                             | \$1,900  | \$2,850  | \$3,600                                     | \$4,800 | \$6,400   | \$8,500 |

<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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