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Data Sheet

August 1, 2026

INSTEK

Instek Model FG-8016G Function Generator

GW Instek GFG-8016G (FG-8016G) Function Generator The GW Instek GFG-8016G, also listed as Instek FG-8016G / GFG8016G, is a 0.2 Hz to 2 MHz benchtop function generator with a built-in 6-digit frequency counter. It combines function generation, pulse/TTL-CMOS outputs, and INT/EXT frequency counting in one instrument. Outputs include sine, triangle, square, TTL pulse, and CMOS levels with variable DC offset and output overload protection. General electronics lab stimulus, digital timing with TTL/CMOS outputs, audio and low-RF function generation, and basic frequency measurement of external signals up to 10 MHz on the counter input. The GW Instek GFG-8016G, also listed as Instek FG-8016G / GFG8016G, is a 0.2 Hz to 2 MHz benchtop function generator with a built-in 6-digit frequency counter. It combines function generation, pulse/TTL-CMOS outputs, and INT/EXT frequency counting in one instrument. Outputs include sine, triangle, square, TTL pulse, and CMOS levels with variable DC offset and output overload protection. General electronics lab stimulus, digital timing with TTL/CMOS outputs, audio and low-RF function generation, and basic frequency measurement of external signals up to 10 MHz on the counter input.



MODEL

Instek FG-8016G

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

FG-8016G

LISTING

<https://aumictechlabs.com/products/fg-8016g-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Instek FG-8016G is a multi-function signal source integrating a function generator, pulse generator, and frequency counter into a single benchtop instrument. It generates stable, precise waveforms across a 0.2 Hz to 2 MHz frequency range with 1000:1 tuning capability, making it suitable for educational laboratories, research facilities, and industrial testing environments.

Technical Specifications

Frequency Generation Frequency range: 0.2 Hz to 2 MHz
Tuning range: 1000:1
Waveform outputs: Sine, Triangle, Square, Pulse (TTL and CMOS)
CMOS output: 5–15 Vpp (adjustable)
Variable DC offset control
Output overload protection
Integrated Frequency Counter 6-digit display
Internal (INT) and External (EXT) input modes
Input sensitivity: 30 mVrms
Maximum input voltage (EXT): 30 VAC
Control and Interface
Main frequency adjustment control knob
Intuitive user interface for rapid setup
VCF (Voltage Controlled Frequency) input on select models
Maximum VCF input: 15 VDC
Power and Environmental
Standard AC power input
Operating temperature: Not to exceed 40 °C
Durable construction for lab and industrial use

Key Features Single-unit integration eliminates need for separate function generator and counter instruments
TTL and CMOS pulse outputs for direct logic circuit interfacing
DC offset adjustment for bias-level signal generation
Voltage-controlled frequency input for modulation and sweep applications
Built-in overload protection on main output

Typical Applications Educational demonstrations and student lab work
Analog and digital circuit development
Signal source for oscilloscope calibration
Frequency measurement and verification
Pulse train generation for embedded systems testing

Compatibility & Integration The FG-8016G accepts standard AC power. External signal inputs (VCF, frequency counter) operate within specified voltage limits (15 VDC maximum for VCF; 30 VAC maximum for counter input). Select models support AM/FM modulation and sweep functions with external control inputs rated to 10 Vpp maximum.

Features & description

From manufacturer datasheet

Features

- Frequency range 0.2 Hz to 2 MHz (7 ranges) • Three instruments in one: function generator, pulse generator, frequency counter • Waveforms: sine, triangle, square, TTL pulse, CMOS • Built-in 6-digit counter with INT/EXT function • 1000:1 tuning range • Variable DC offset • Output overload protection

FG8016G Characteristics / Specifications

PARAMETER	VALUE
Model	GFG-8016G (listed as FG-8016G / GFG8016G)
Manufacturer	GW Instek
Instrument Type	Function generator with frequency counter
Frequency Range	0.2 Hz to 2 MHz, 7 ranges
Frequency Control	Coarse/fine tuning; VCG input for about 1000:1 frequency ratio
Waveforms	Sine, triangle, square, TTL pulse, CMOS output
Amplitude	Greater than 20 Vp-p open circuit; greater than 10 Vp-p into 50 ohm
Output Impedance	50 ohm +/-10%
Attenuator	-20 dB +/-1.0 dB at 1 kHz
DC Offset	Less than -10 V to greater than +10 V open (about +/-5 V into 50 ohm)
Duty Control	1:1 to 10:1 continuously
Sine Distortion	Less than 1% from 0.2 Hz to 200 kHz (GFG-8016G)
Frequency Response	Less than 0.1 dB 0.2 Hz-100 kHz; less than 0.5 dB 100 kHz-2 MHz
Square Rise/Fall	Less than 120 ns class
Display	6-digit LED Frequency Counter
Mode	INT/EXT switchable
Range	0.2 Hz (5 Hz EXT) to 10 MHz (GFG-8016G)
Accuracy	Time-base accuracy +/-1 count
Time Base	10 MHz; temperature stability about 10 ppm (23 C +/-5 C)
Resolution	0.1 Hz, 1 Hz, 10 Hz, 100 Hz
Sensitivity	About 25 mVrms (EXT) Operational Notes Terminate in 50 ohm for specified amplitude and edges. Use EXT counter mode for measuring external signals. Observe overload protection limits when driving reactive or shorted loads.
Three instruments in one	function generator, pulse generator, frequency counter
1000	1 tuning range

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Resolution	0.1 Hz, 1 Hz, 10 Hz, 100 Hz
Sensitivity	About 25 mVrms (EXT)

Operational Notes

Terminate in 50 ohm for specified amplitude and edges. Use EXT counter mode for measuring external signals. Observe overload protection limits when driving reactive or shorted loads.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.