

# Test Equipment

## *NEW! 5Mhz Function Generator with Frequency Counter*

### Model 4005

Engineers, Technicians, Electricians, Maintenance, Manufacturing, Quality Control & Educators can all use the 4005 in confidence with its exceptional quality, rugged design & housed in high impact case with convent multiple-position handle.



#### Features:

- 4 product in one low cost package
- Function generator, multiple waveforms
- Sweep generator, wide sweep range
- Pulse generator, great accuracy
- Frequency counter, 2Hz to 50MHz with auto range
- 6 digit seven segment, eye pleasing green LED display
- Display indicates, gate time, MHz, KHz, Hz, mHz

The 4005 is designed to be used, not only as a function generator, but also as a sweep generator, pulse generator and a frequency counter.

The VCF (voltage controlled frequency) produces precision sine, square and triangle waves over the 0.05Hz to 5MHz for sub-audible, audio, ultrasonic and RF applications. A continuously variable DC offset allows the output to be injected directly into circuits at the correct bias level. Variable symmetry of the output waveforms converts the instrument to a pulse generator capable of generating rectangular waves or pulses, ramp or sawtooth waves and skewed sine waves of variable duty cycle.

The sweep generator offers linear sweep with variable sweep rate and sweep width up to 100:1 frequency change. The frequency response of any active or passive device up to 5 MHz can be determined.

The new Model 4005 is a great product for use in a wide range of applications in both analog and digital electronics such as engineering, manufacturing, servicing, maintenance, education and hobbyist



*Innovative Training Solutions*

[www.globalspecialties.com](http://www.globalspecialties.com)



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## *NEW! 5Mhz Function Generator with Frequency Counter*

### Specifications

Model 4005	
OUTPUT CHARACTERISTICS	
Waveforms	Sine, Square, Triangle, Skewed Sine, Pulse, Ramp Sawtooth, TTL/CMOS Leveled Square, DC
Frequency Range	0.05Hz to 5MHz in 7 Ranges (5, 50, 500, 5k, 50k, 500k, 5M)
Frequency Accuracy	$\pm 2\%$ (5, 50, 500, 5K, 50K, 500K, 5MHz Range, Full Scale)
Output Level: Sine & Triangle wave	20 Vpp in open circuit, 10 Vpp into 50 Load
Square Wave	19 Vpp in open circuit, 9.5 Vpp into 50 Load
Output Impedance	50 $\pm 5\%$
Attenuator	-20 dB fixed and continuously variable (more than -20dB)
WAVEFORM CHARACTERISTICS	
Sine wave -Flatness	$\pm 3\text{dB}$ to 5 MHz (more than 14Vpp)
Distortion	Less than 1% at 10 Hz to 100 KHz
Square wave -Rise and Fall Time	Less than 25 nS (at 5MHz)
Triangle wave -Linearity	More than 99% at 0.5 Hz to 100 KHz
TTL Output -Rise and Fall Time	Less than 30 nS (at 1MHz)
Output Level	TTL Level (H $>/_2.4\text{V}$ , L $</_0.4\text{V}$ )
CMOS Output -Rise and Fall Time	Less than 180 nS (at 1MHz)
Output Level	4V to 15V $\pm 2\text{V}$ , Variable
DUTY RATIO	1:1 to 10:1
SWEEP FUNCTION CHARACTERISTICS	
Mode	Linear
Width	Variable from 1:1 to 100:1
Rate	0.5 Hz to 50 Hz (20 mS to 2 S)
External VCF Input	Input Voltage: 0 to 10 V
Input Impedance	Approx. 1 K





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FREQUENCY COUNTER CHARACTERISTICS	
Display	6 Digit Seven Segment – Green LED, Gate time, MHz, KHz, Hz and mHz
Frequency Range	2Hz to 50 MHz with Auto Range
Accuracy	±Time base Error ± 1 count
Time base	10 MHz Crystal Oscillator, ±20ppm
Input Sensitivity	200 mVrms (2Hz ~100Hz), 100mV rms (100Hz~50MHz)
Input Impedance	50
Max. Input Voltage	250 Vpp
PHYSICAL CHARACTERISICS	
Dimensions WHD	3.4 x 3.5 x 10.6” (240 x 90 x 270mm)
Weight	Approx. 5.5 lb (2.5 k)
Equipment Ratings	
Plug and Socket	3 wire AC power plug and 3 wire outlet
Power & Fuse Ratings	<u>Input Voltage:</u> <u>Fuse</u> <u>Power Max</u>
	103 126V AC                      F 0.5A / 250V                      15 W
	(50/60Hz)
	206 252V AC (50/60Hz)                      F 0.2A / 250V
Operating Environment	
Temperature	0 °C to + 40 °C (Accuracy Specified at 23°C ± 5 °C)
Humidity	up to 85% to 40°C without temperature extremes which may cause condensation within the instrument.
Storage Environment	
Temperature	-20°C to +70°C
Humidity	below 85% RH
Overvoltage Category	CAT II
Insulation Category II	Portable equipment
Pollution Degree	2
Protection to IEC 529	Ordinary

Note: Specifications are subject to change without notice. Please visit [www.globalspecialties.com](http://www.globalspecialties.com) for the most current product information

#### Supplied Accessories

- User's Manual ----- 1
- BNC Cable ----- 1
- Power Cord ----- 1
- Spare Fuse ----- 1





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