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Oscilloscopes - Handheld - continued

Scopemeter 190 Series - continued

Model	Fluke 199B / Fluke 199C	Fluke 196B / Fluke 196C	Fluke 192B
Glitch capture	Up to 3ns pulse width triggering; 50nSpeak detect @ 5ms/di to 1 min/div		
Cursor and zoom	yes		
Scope measurement	7 Cursor, 24 Automatic		
Last 100 screen capture	Automatic with replay capability		
Dual-input TrendPlot	Yes with Cursors and zoom		
Memory for screen/setups	10 screen and set ups		
Memory for recordings	Two, each can store 100 scopes screens, a ScopeRecord, or a TrendPlot		
True RMS multimeter	5000 count, Volts, Amps, Ohms, Continuity, Diode, Temperature		
Input power	Adapter/battery-charger included		
Battery power	4 hour NiMH		
Size	256 x 169 x 64 mm		
Weight & Line	2 kg		
Safety certified (EN601010-1)	1000V Cat II and 600V CAT III (instrument & included accessories)		
PC and printer interface	Using optional optically isolated RS-232 adapter/cable		

242752

	Mftrs. List No.	Order Code	1+	Price Each +	+
	FLUKE 199C/004	**385-7610**	☎	☎	☎
	FLUKE 196C/004	**385-7580**	☎	☎	☎
Black/White 200MHz	FLUKE 199B	**421-5436**	☎	☎	☎
Black/White 100MHz	FLUKE 196B	**421-5424**	☎	☎	☎
Black/White 60MHz	FLUKE 192B	**421-5412**	☎	☎	☎
Hard Carry Case	C190	**312-3352**	☎	☎	☎
Soft Carry Case	C195	**312-3364**	☎	☎	☎
Red Probes	VPS200-R	**312-3376**	☎	☎	☎
Grey Probes	VPS200-G	**312-3388**	☎	☎	☎
Accessory Kit	SCC 190	**308-4292**	☎	☎	☎

Function Generator

20MHz Function Generator

TG120

The TG120 is a low-cost dial-set function generator which uses a new highly integrated design to achieve an upper frequency of 20MHz.

- Low cost 20MHz function generator
- 0.2Hz to 20MHz frequency range
- 10mV to 20V peak-to-peak from 50W
- Separate TTL/CMOS output
- DC offset control with zero detent
- Variable symmetry control
- External sweep input

FREQUENCY

Frequency range:	0.2Hz to 20MHz in 8 overlapping decade ranges with fine adjustment by a vernier
Vernier Range:	>10:1 on each range
Vernier Accuracy:	Typically ±5% of full range

SWEEP MODE (EXTERNAL)

Sweep Range:	Typically 20:1
Input Sensitivity	Typically 0 to 2V for 10:1 sweep

WAVEFORM PERFORMANCE

Sine Distortion	Typically 2% on 200, 2k and 20k ranges
Amplitude Flatness:	±0.2dB to 200kHz; ±2dB to 20MHz
Triangle Linearity:	Typically 99% on kHz ranges
Square Wave Rise/Fall	<22ns
Symmetry Range:	Typically variable from 1:6 to 6:1 up to 500kHz

OUTPUTS

50Ω	26dB vernier control within each range
3 ranges	
0dB Range:	1V to 20V peak-to-peak (0.5V to 10V into 50Ω)
-20dB Range:	100mV to 2V peak-to-peak (50mV to 1V into 50Ω)
-40dB Range:	10mV to 0.2V peak-to-peak (5mV to 0.1V into 50Ω)
DC Offset Range:	±10V from 50Ω
TTL/CMOS Output:	Capable of driving 4 standard TTL loads

GENERAL

Power:	230V or 115V ±14%, 30VA max. Installation Category II
Safety and EMC:	Complies with **EN61010-1, EN55011** and **EN50082-1**

222581

Mftrs. List No.	Order Code	1+	Price Each +	+
TG120	**316-8487**	18,137.00	– –	– –
Standard Calibration		**S** C17	☎	

2MHz Frequency Generator

GFG-8015G

GW INSTEK

A low cost frequency generator with many features found on more expensive units. The units have an integral bench stand and carry handle and are ideal for many applications including education. Supplied with BNC to 2x crocodile clip lead.

H = 95, W = 230, D = 280mm

- 0.2 Hz to 2MHz frequency range in 7 ranges
- Sine, Triangle, Square, Pulse and Ramp
- Variable and Fixed TTL output
- 1000:1 tuning range
- Two-step attenuator plus variable control
- Variable DC offset
- VCF (Voltage Controlled Frequency) input function
- Output overload protection

Main Output		Square	<2%
Amplitude	Up to 20V p-p	**Triangle Linearity**	98%
Impedance	50Ω	**TTL Output**	
Attenuator	-20dB, + 20dB	Rise/Fall time	<25ns
DC Offset	From -10V to +10V	Level	>3Vp-p
Range Accuracy	±5% + 1Hz	**VCF**	
Distortion		Input Voltage	0V to 10V
Sine Wave	<1%	Impedance	10kΩ

339499

Mftrs. List No.	Order Code	1+	Price Each +	+
GFG-8015G	C8 **491-1684**	10,527.00	– –	– –
Standard Calibration Charge	**S** C4		☎	
UKAS Calibration Charge	**N** C4		☎	

TG550 5MHz Function Generator with Sweep

External Counter and Dual Display

The TG550 can generate a variety of precision waveforms over a wide range of frequencies from mHz to MHz. Dual digital display shows frequency and level of frequency stability

- 0.005Hz to 5MHz frequency range
- Simultaneous display of frequency and amplitude
- Frequency locking for crystal controlled stability
- Precision internal linear or logarithmic sweep
- External frequency counter with a 7 digit resolution
- High waveform quality at all frequencies and levels
- 20V pK-pK from 50Ω or 600Ω, plus TTL/CMOS output
- 1000:1 frequency change by vernier or sweep voltage
- Internal or external amplitude modulation up to 100%

Waveforms	Sine, Square, Triangle
Frequency Range	0.005Hz to 5MHz
Vernier Range	1000:
Sine Distortion	<0.5% on 500, 5K and 50K ranges; <1% on 5, 50 and 500K ranges All harmonics >25dB below fundamental on 5M range
Triangle linearity	Better than 99% to 200kHz
Square wave	Rise/Fall <45ns, 1:1 ±1% to 100kHz
Symmetry control	Variable 1:9 to 9:1
Sweep rate	20ms to 20s, linear or logarithmic
AM	0 to 100%, 400Hz internal, DC to 100KHz external
DC offset	±10V unterminated
Auxiliary output	0 to 5V signal, frequency/symmetry/phase as main output
Meter accuracy	Frequency ±1 digit 0.2Hz to 5MHz, 1% of range below 0.2Hz Amplitude typically ±5%. Offset typically ±2%
Frequency Locking	<0.01% of displayed value. 0.5Hz to 5MHz
External Frequency	5Hz to 20MHz, sensitivity 50mV, accuracy 10ppm ±1 digit
Resolution	6 digits in 0.5 seconds, 7 digits in 5 seconds
General	
Input Voltage	230V or 115V nominal 50/60Hz by internal adjustment
Operating Temperature	+5°C to + 50°C, 20%-80% RH
Weight	
Safety	Complies with **EN61010-1**
ENC	Complies with **EN55081-1, EN50082-1**

222555

Mftrs. List No.	Order Code	1+	Price Each +	+
TG550	**493-272**	33,796.00	– –	– –
Standard Calibration Charge	**S** C13		☎	
UKAS Calibration Charge	**N** C13		☎	

Prices are in Thai Baht and exclude 7% VAT.
Due to the volatile nature of certain products, prices are subject to change without notice.

C = CYAN M = Magenta Y = Yellow B = Black/THAI