

# GENHAWK™ Vector Signal Generator

## GH-60

The **RF** Experts

### Field Ready. Lab Accurate.

Use precision RF test signals wherever you go with GenHawk! Our vector signal generator keeps up with a durable form factor made popular in Bird's SiteHawk and SignalHawk families of Cable & Antenna Analyzers and Spectrum Analyzers. Field engineers, technicians, product designers, and compliance engineers will find use in the GH-60's 5 hour battery life, touch-screen interface, 145 dBm dynamic range, and many supported digital modulation formats.

The GH-60 is a versatile tool for testing in applications like Distributed Antenna Systems (DAS)/Indoor Coverage, field interference, noise immunity, EMC susceptibility, receiver sensitivity, and more. With a base frequency range up to 6 GHz and 20 MHz modulation bandwidth (optionally up to 100 MHz), the GH-60 supports emulating the most common wireless standards from 5G to WCDMA. Custom digital modulation options allow easy generation of QPSK, FSK, and QAM signals while an arbitrary mode allows generation of near any possible RF signal.

#### PRODUCT FEATURES

- **High portability & long life battery:** With a form factor that can easily slip into a bag, the GenHawk still offers up to 5 hours of usage and can be charged without interrupting the RF output
- **Versatile operating system:** Based on Android, GenHawk allows users to install other applications as needed, allowing a wider variety of field testing on a single device.
- **Rich functionality for general digital modulation:** Digital modulation is an important signal modulation method for modern telecommunications. It has better anti-interference ability and safety that allows an output of a variety of digital modulated signals as used in standards like Wi-Fi, DVB or ATSC, IEC 60601 and more.



Truly portable signal generation that mirrors the real world - backed by over 80 years of RF expertise.

# HANDHELD VECTOR SIGNAL GENERATOR

## GH-60

## Specifications

### RF OUTPUT

<b>Frequency Range</b>	10 MHz to 6 GHz (upgradable to 300 kHz to 6.5 GHz with MTX-S020)
<b>Frequency Accuracy</b>	+/- 0.5 ppm
<b>Frequency Resolution</b>	0.1 Hz
<b>Output Settling Time</b>	<1.5 ms (CW)
<b>Power Range</b>	-110 dBm to +10 dBm when $f < 2$ MHz -130 dBm to +15 dBm when $f \geq 2$ MHz
<b>Power Resolution</b>	0.1 dB
<b>Power Accuracy</b>	$\pm 0.75$ dB @ $\geq -80$ dBm $\pm 1.5$ dB @ -110 dBm to -80 dBm $\pm 2.5$ dB @ $< -110$ dBm
<b>VSWR</b>	<2.0 (typ.)
<b>Max Reverse Power</b>	0.01 W
<b>Harmonic</b> CW, $\leq +10$ dBm	$\leq -22$ dBc @ $300 \text{ kHz} \leq f < 2 \text{ MHz}$ $\leq -30$ dBc @ $2 \text{ MHz} \leq f \leq 6.5 \text{ GHz}$
<b>Nonharmonic</b> CW, $\leq +10$ dBm	$\leq -25$ dBc @ $300 \text{ kHz} \leq f < 10 \text{ MHz}$ $\leq -35$ dBc @ $10 \text{ MHz} \leq f < 500 \text{ MHz}$ $\leq -50$ dBc @ $500 \text{ MHz} \leq f < 6.5 \text{ GHz}$
<b>Phase Noise</b>	$\leq -119$ dBc/Hz (typ.) @ 1 GHz $\leq -110$ dBc/Hz (typ.) @ 3 GHz $\leq -104$ dBc/Hz (typ.) @ 6.5 GHz
<b>Temperature Stability</b>	$\pm 1$ ppm @ 0 °C to 50 °C
<b>Error Vector Magnitude (EVM)</b>	$\leq 2\%$ (typ.)
<b>Wave Quality p</b>	$> 0.9999$

### MODULATION

<b>Modulation Bandwidth</b>	20 MHz (upgradeable to 100 MHz with MTX-S019)
<b>Pulse Modulation</b> (with MTX-S010)	Pulse Period: 10 $\mu$ s to 40 s Pulse Width: 100 ns to 40 s Width Resolution: 10 ns
<b>Analog Modulation Types</b> (optional)	Analog Modulation: AM   FM   PM Multi-Tone: MSB   USB   LSB
<b>Mobile Communication Standards</b> (optional)	GSM   WCDMA   TDD-LTE   FDD-LTE   NB-IoT   LoRa   5G NR
<b>Digital Modulation Types</b> (with MTX-S008)	BPSK   QPSK   OQPSK   8PSK   MSK   FSK   ASK 16QAM   32QAM   64QAM   128QAM   256QAM
<b>LTE Channels</b> (with MTX-S003, MTX-S004)	PSS   SSS   CSRS   PBCH   PCFICH   PHICH PDCCH   PDSCH   PUSCH   PUCCH   PRACH   SRS

### CONNECTIONS

<b>Connections</b>	RF Output: Type N, female, 50 $\Omega$ USB (for communication): USB type-C Power: DC 12V barrel
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### ENVIRONMENTAL

<b>Operating Temperature</b>	0 °C to 50 °C
<b>Storage Temperature</b>	-20 °C to +70 °C

### System

<b>Power Supply</b>	AC Input: 110 to 240 V, 1.5 A, 50 to 60 Hz DC Output: 12V, 3A
<b>Recommended Calibration Interval</b>	1 Year
<b>Warranty</b>	3 Years

### PHYSICAL

<b>Size</b>	7.8 in (h) x 3.7 in (w) x 2.4 in (d) 197 mm (h) x 93 mm (w) x 61 mm (d)
<b>Weight</b>	2 lbs. / 0.9 kg

### STANDARD ACCESSORIES

<b>Hard Carrying Case</b>	7002A218-2
<b>Soft Carrying Case</b>	7002A219-1
<b>AC Adapter (12 VDC)</b>	SK05T-1200300Z
<b>Touch Pen (stylus)</b>	SK-TP-112
<b>USB Adapter (USB-C to USB-A)</b>	SK-CONN-OTG-2
<b>USB Drive</b>	5A2745-1
<b>Lithium Ion Battery</b>	SK-BTY-7468

### OPTIONAL ACCESSORIES

<b>RF Cable</b>	
50 Ohm N-N cable	T5-RFCAB-NmNm-90101
50 Ohm N-SMA cable	T5-RFCAB-NmSMAm-90102

# HANDHELD VECTOR SIGNAL GENERATOR

## GH-60

## Configurations, Options & Ordering

### MODEL NUMBER

GH-60

Handheld Vector Signal Generator

### SOFTWARE OPTIONS

MTX-S001	GSM Modulation License
MTX-S002	WCDMA Modulation License
MTX-S003	TDD-LTE Modulation License
MTX-S004	FDD-LTE Modulation License
MTX-S005	NB-IoT Modulation License
MTX-S006	LoRa Modulation License
MTX-S008	Digital Modulation License
MTX-S009	ARB License
MTX-S010	Pulse Modulation License
MTX-S011	Analog Modulation License
MTX-S012	Sweep Mode License
MTX-S013	Multi-Tone License
MTX-S014	5G NR License
MTX-S016	Linear Frequency Modulation License
MTX-S018	Additive Noise Generator
MTX-S019	100 MHz Modulation Bandwidth
MTX-S020	300 kHz to 6.5 GHz Frequency expansion

## Contact Us

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