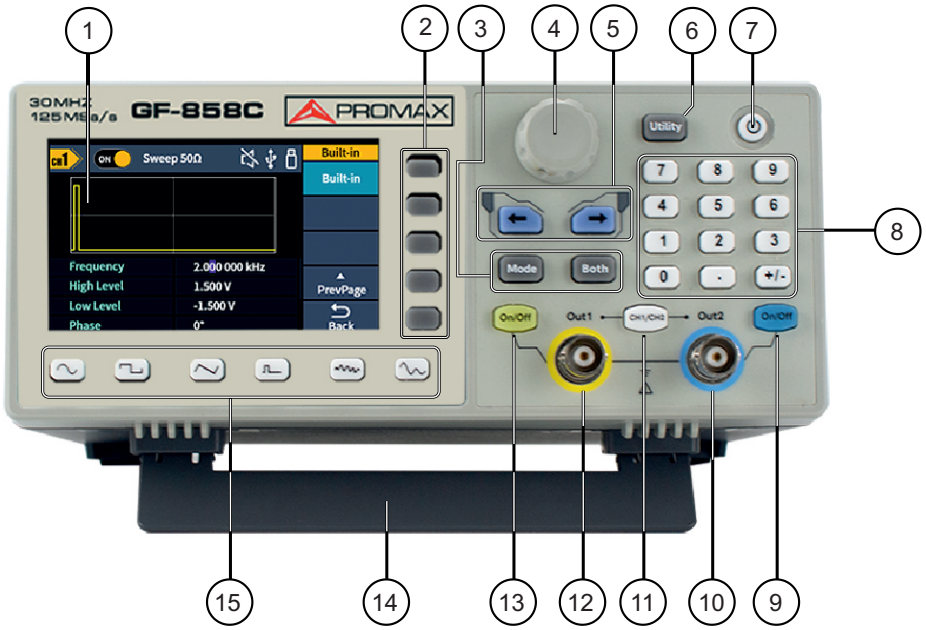
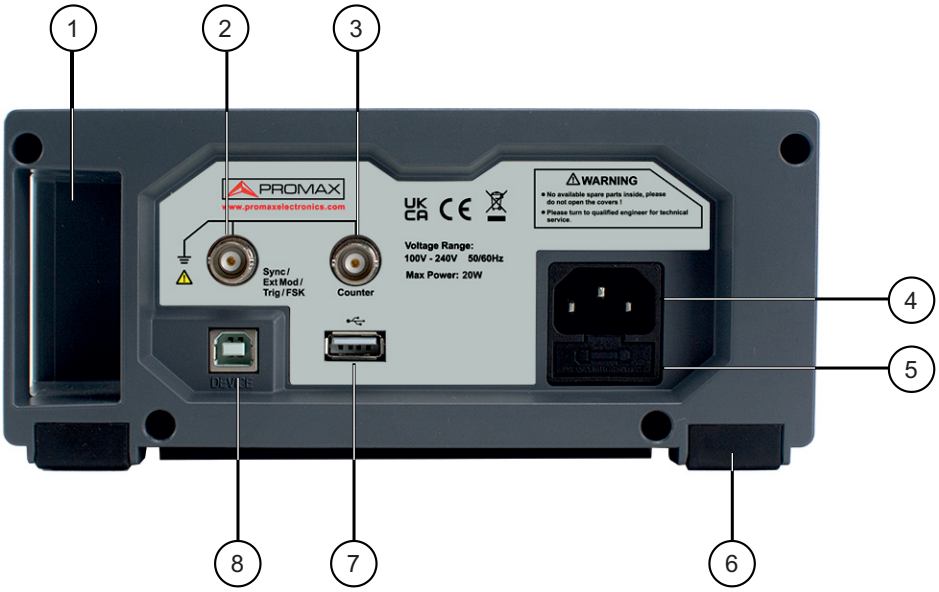
FRONT VIEW



1. **LCD**: Display the user interface.
2. **Menu selection keys**: Includes 5 keys to activate the corresponding menu.
3. **Operation keys**:
   Mode: Output the modulated waveform.
   Both: Display the editable parameters of both channels.
4. **Knob:** Change the currently selected value, also used to select the arbitrary waveform types and arbitrary data file name. When in the sweep or burst manual modes, press this knob to trigger manually.
5. **Direction key**: Move the cursor of the selected parameter.
6. **Operation key(Utility)**: Set the utility function.
7. **Power button**: Turn on/off the waveform generator.
8. **Number keypad**: Input the parameter.
9. **On/Off button**: Turns the output of the CH2 channel on or off. When the output is turned on, the backlight of the button lights up.
10. **Output 2**: Output CH2 signal.
11. **CH1/CH2**: Switch channel displayed on the screen between CH1 and CH2.
12. **Output 1**: Output CH1 signal.
13. **On / Off button**: Turns the output of the CH1 channel on or off. When the output is turned on, the backlight of the button lights up.
14. **Foot Stool**: Tilt the signal generator for easy operation.
15. **Waveform Selection area**. Includes: Sine, Square, Ramp (Tilt), Pulse, Noise y Arbitrary Wave.

REAR VIEW



1 **Handle**: To carry the device.

2 **Signal connector**: Used to connect the input or output of a functional signal.

3 **Counter input**: Used to receive the frequency meter input signal.

4 **AC input connector**: AC input connector.

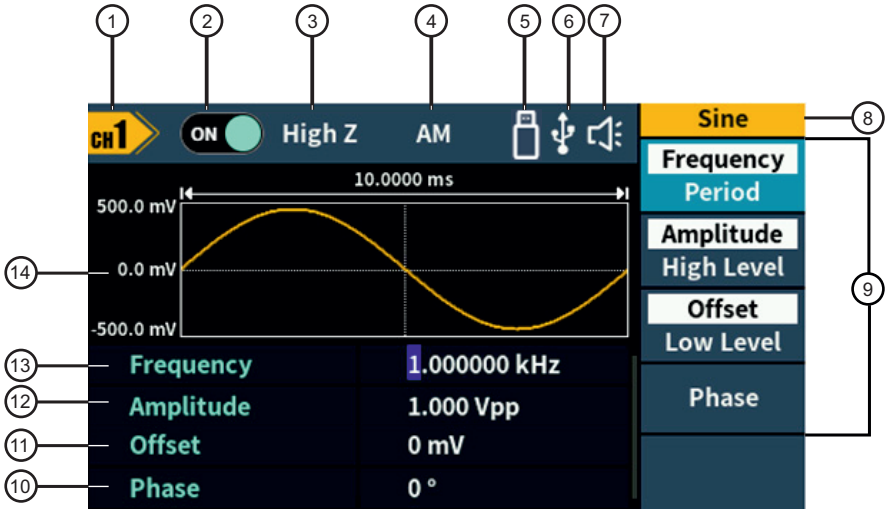
5 **Fuse Container**: The place to install the fuse.

6 **Foot Stool**: Tilt the signal generator for easy operation.

7 **USB interface**: Connect with external USB devices, e.g. USB stick.

8 **USB Device interface**: Used to connect a USB type B controller. Can be connected with PC, the signal generator can be controlled by the host computer software.

USER INTERFACE



1. Display channel name.
2. Display channel switch status.
3. Display load.
4. Current modulation mode.
5. When the instrument detects the USB flash drive, it lights up the indicator.
6. Lights up the indicator when connected to the USB Host via the USB DEVICE interface.
7. Buzzer.
8. Menu title.
9. Current waveform or mode setting menu.
10. Start phase.
11. Offset / Low level, depending on the right highlighted menu item.
12. Amplitude / High level,depending on the right highlighted menu item.
13. Frequency / Period, depending on the highlighted menu item on the right.
14. Display current waveform.

SPECIFICATIONS

SPECIFICATIONS	GF-856C / GF-858C
OUTPUT	
Channels	**1 (GF-856C) / 2 (GF-858C)**
Bandwidth	30 MHz
Sampling rate	125 MS/s
Vertical resolution	14 bits
Standard waveforms	Sine, Square, Ramp, Pulse, Noise
Custom waveforms	More than 160, including Sinc, Exponential rise and decline, Electrocardiogram, Gaussian, Lorentz Semi-positive, Dual audio, DC voltage
OUTPUT FREQUENCY (1 µHz resolution)	
Sine wave	1 µHz ~ 30 MHz
Square / Pulse wave	1 µHz ~ 15 MHz
Ramp	1 µHz ~ 1 MHz
Noise (-3 dB)	20 MHz BW (AWGN)
Custom waveform	1 µHz - 10 MHz
Resolution	1 µHz or 7 digits
Stability	±30 ppm (at ±40°C)
AMPLITUDE	
Output amplitude	2 mVPP ~ 20 VPP (≤ 10 MHz) High Z 2 mVPP ~ 10 VPP (≤ 30 MHz) High Z 1 mVPP ~ 10 VPP (≤ 10 MHz) 50 Ω 1 mVPP ~ 5 VPP (≤ 30 MHz) 50 Ω
Accuracy	±(1% reading + 1 mVPP) (typ. sine 1 kHz, offset 0 V)
Resolution	1 mVPP or 4 digits
Output impedance	50 Ω typ
WAVEFORMS	
Sine	
Flatness	±0.3 dB (≤10 MHz) / ±0.5 dB (≤30 MHz)
Armonic distortion	0 dBm (typ.), < -65 dBc (DC@1 MHz) < -60 dBc (1 MHz to 30 MHz)
Noise phase	0 dBm, 10 kHz offset (typ) -110 dBc/Hz (10 MHz)
Square	
Rise/fall time	<20 ns
Jitter (rms)	200 ps + 30 ppm (typ., 1 VPP, 50 Ω)
Overshoot	<5 %
Ramp	
Linearity	<1 % of peak output (typ. 1 kHz, 1 VPP, symmetry 50%)
Symmetry	From 0% to 100%
Pulse	
Period	67 ns to 1 Ms
Pulse width	≥24 ns
Rise/fall time	≥15 ns
Overshoot	<5 %
Jitter (rms)	200 ps + 30 ppm (typ., 1VPP, 50 Ω)
Ruido	
Types	Gaussian noise and White noise
Bandwidth	20 M (-3 dB)
Custom waveform	
Bandwidth	10M
Waveform length	From 2 to 100 Kpoints
Sampling rate	125 Ma/s
Amplitude accuracy	14 bits

MODULATIONS	AM, DSB-AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, 3FSK, 4FSK, OSK, PWM, SUM
SWEEP	
Carrier	Sine wave, Square, Ramp, Custom (except DC)
Start frequency	From 1 µHz to max freq. carrier
End frequency	From 1 µHz to max freq. carrier
Types	Linear, Logarithmic
Sweep time	1 ms to 500 s ±0.1%
Trigger source	Internal, External or Manual
BURST	
Waveforms	Sine wave, Square, Ramp, Pulse, Custom (except DC)
Types	N-cycle, Gated
N-cycle trigger source	Internal, External, Manual
Carrier frequency	1 µHz ≤ *Offset* ≤ carrier max frequency/2
N-cycle trigger source	67 ns ~ 1 Ms (Min = Cycles * Period)
Periodicity	1 ~ 60000 (max.= Burst period / period) / infinite
Gated source	External Trigger
FREQUENCY COUNTER	
Measurements	Frequency, Period
Frequency margin	Single channel: 100 mHz - 200 MHz
Frequency resolution	6 digits
Input impedance	1 MΩ
INPUTS AND OUTPUTS	
Communication interfaces	USB Host, USB Device Supports remote control from PC LabVIEW support via USB
External modulation input	
Frequency margin	DC - 20 kHz
Level rage	± 1V full scale
Impedance (typ)	10 kΩ
External trigger input	
Level	TTL compatible
Slope	Rising or Falling (selectable)
Pulse width	>100 ns
Sync output	
Level	TTL compatible
Max frequency	1 MHz
GENERAL SPECIFICATIONS	
Screen	16-bit color TFT-LCD 3.6" (480x272 pixels)
Supply	100-240 VAC, 50/60 Hz CAT II (<20 W)
Fuse protection	250 V, tipo F1AL
Calibration	Annual calibration is recommended
OPERATING ENVIRONMENTAL CONDITIONS	
Operation temperature	From 0 to 40 °C
Storage temperature	From -20 to 60 °C
Relative humidity	≤90 % (<25 °C), ≤60% (35 to 40 °C)
Operation altitude	3000 m
Storage altitude	12000 m
MECHANICAL FEATURES	
Dimensions	200 (W.) × 92 (H.) × 145 (D.) mm
Weight	800 gr (aprox.)

v1.1 *20-03-2025 (0 DG0434)*

GF-856C / 858C PROMAX

Find the user's manual on the download area at:
www.promaxelectronics.com

USER MANUAL DOWNLOAD