

Blue Gizmo AC Clamp Meter, BG63E

Thank you for choosing this instrument from Blue Gizmo.

- Please be sure to read the instruction manual carefully and understand it before operating the device to prevent the damage to the device and loss of your statutory rights arising from defects due to incorrect use.
- We shall not be liable for any damage occurring as a result of not following these instructions. Likewise, we take no responsibility for any incorrect readings for any consequences which may result from them.
- Please take particular note of the safety advice!
- Please keep this instruction manual for future use.

SAFETY

International Safety Symbols



This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.



This symbol, adjacent to a terminal, indicates that, under normal use, hazardous voltages may be present



Double insulation

Safety Notes

- Do not exceed the maximum allowable input range of any function.
- Do not apply voltage to meter when resistance function is selected.
- Set the function switch OFF when the meter is not in use.

Warnings

- Set function switch to the appropriate position before measuring.
- Do not switch to current or resistance modes when measuring volts.
- Always disconnect the test leads from the circuit under test when changing the range using the selector switch.
- Do not exceed the maximum rated input limits.

Cautions

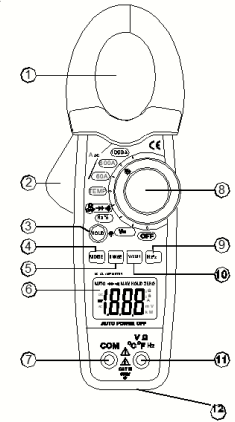
Improper use of this meter can cause damage, shock, injury or death. Read and understand the manual before operating the meter

- Always remove the test leads before replacing the battery.
- Remove the battery if the meter is to be stored for a long period.
- Inspect the condition of the test leads and meter for any damage before use.
- Use with care when measuring a voltage which is greater than 25VAC rms or 35VDC. This voltage is considered a shock hazard.
- Always discharge the capacitors and remove the power from the device under test before performing Diode, Resistance or Continuity tests.

- Voltage checks on electrical outlets can be difficult and misleading because of the uncertainty of the connection to the recessed electrical contacts. Other means should be used to ensure that the terminals are not “live”.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

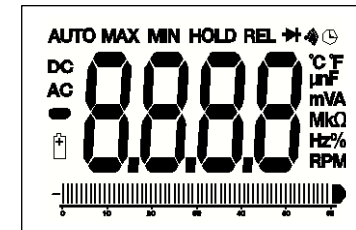
METER DESCRIPTION

1. Current clamp
2. Clamp trigger
3. Data hold and backlight button
4. MODE button
5. RANGE button
6. LCD display
7. COM input jack
8. Rotary function switch (ON/OFF switch)
9. Hz%
10. MIN/MAX button
11. V / Ω / CAP / TEMP / Hz jack
12. Battery cover



DISPLAY DESCRIPTION

1. AC – Alternating current
2. DC – Direct current
3. — – Minus sign
4. AUTO – Auto range mode
5. ZERO – Zero mode
6. —|— – Diode test mode
7. •))) – Audible continuity
8. HOLD – Data hold mode



Input Limits	
Function	Maximum Input
A AC	1000A
V DC, V AC	1000V DC, 750AC
Frequency, Resistance, Diode, Continuity, Capacitance Test	250V DC/AC
Temperature (°C/°F)	60V DC/24V AC

OPERATION

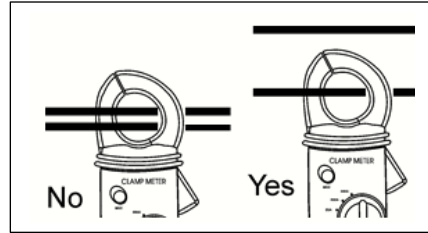
NOTICES: Read and understand all warning and precaution statements listed in the safety section of this operation manual prior to using this meter. Set the function select switch to the OFF position when the meter is not in use.

AC Current Measurements

Warning: Ensure the test leads are disconnected from the meter before making current clamp measurement.

1. Set the function switch to the **1000 or 600A or 60A** range. If the range of the measured is not known, select the higher range first then move to the lower range if necessary.
2. Press the trigger to open the jaw. Fully enclosed One. Connector to be measured.

The clamp meter LCD will display the reading.



DC/AC Voltage Measurements

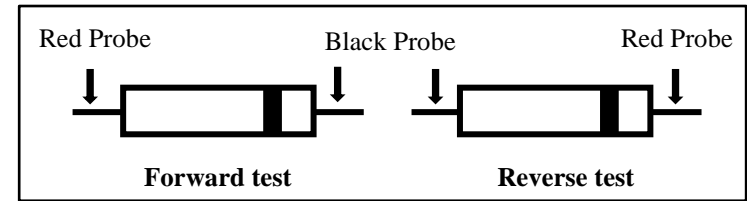
1. Insert the black test lead in to the negative **COM** terminal and the red test lead into the positive **V** terminal.
2. Set the function switch to the **V** position.
3. Select AC or DC with the **MODE** button.
4. Connect the test leads in parallel to the circuit under test.
5. Read the voltage measurement on the LCD display.

Resistance and Continuity Measurements

1. Insert the black test lead into the negative **COM** terminal and the red test lead into the positive terminal.
2. Set the function switch to the Ω position.
3. Use the multifunction **MODE** button to select resistance.
4. Touch the test probe tips across the circuit or component under test. It is best to disconnect one side of the device under test so the rest of the circuit will not interfere with the resistance reading.
5. For Resistance tests, read the resistance on the LCD display.
6. For Continuity tests, if the resistance is $< 100 \Omega$, a tone will sound.

Diode Measurements

1. Insert the black test lead banana plug into the negative **COM** jack and the red test lead banana plug into the positive diode jack.
2. Turn the rotary switch to the $\rightarrow| \bullet$ position.
3. Press the **MODE** button until $\rightarrow| \bullet$ appears in the display.
4. Touch the test probes to the diode under test. Forward voltage will indicate 0.4V to 0.7V. Reverse voltage will indicate "OL". Shorted devices will indicate near 0mV and an open device will indicate "OL" in both polarities.



Capacitance Measurements

Warning: To avoid electric shock, disconnect the power to the unit under test and discharge all capacitors before taking any capacitance measurements. Remove the batteries and unplug the line cords.

1. Set the rotary function switch to the cap position.
2. Insert the black test lead banana plug into the negative (COM) jack.
3. Insert the red test lead banana plug into the positive (V) jack.
4. Touch the test leads to the capacitors to be tested.
5. Read the capacitance value in the display.

Frequency / Duty Cycle Measurements (electronic)

1. Set the rotary function switch to the green "Hz %" position.
2. Press the **Hz/%** button to indicate "Hz" in the display.
3. Insert the black lead banana plug into the negative **COM** jack and the red test lead banana plug into the positive **Hz** jack
4. Touch the test probe tips to the circuit under test.
5. Read the frequency on the display.
6. Press the **Hz/%** button again to indicate "%" on the display.
7. Read the % of duty cycle on the display.

Temperature Measurements

Warning: To avoid electric shock, disconnect both test probes from any source of voltage before making a temperature measurement.

1. Set the function switch to TEMP.
2. Insert the temperature probe into the negative (COM) and the V jacks, making sure to observe the correct polarity.
3. Select °C or °F with the **MODE** button.
4. Touch the temperature probe head to the part whose temperature you wish to measure. Keep the probe touching the part under test until the reading stabilizes (about 30 seconds).
5. Read the temperature in the display. The digital reading will indicate the proper decimal point and value.

Warning: To avoid electric shock, be sure the thermocouple has been removed before changing to another measurement function.



Mode Button

To select DC/ACV, OHM/Diode/Continuity/CAP, °C / °F.

MIN & MAX Recording Button

Press MIN/MAX to enter MIN, MAX. Recording mode (manual range only). Select the proper range before selecting MIN or MAX to ensure that the MIN/MAX reading will not exceed the testing range. Press once to select MIN. Press again to select MAX and press again to release MIN/MAX recording function.

Data Hold Button

To freeze the LCD meter reading, press the data hold button. The data hold button is located on the left side of the meter (top button). While data hold is active, the **HOLD** display icon appears on the LCD. Press the data hold button again to return to normal operation.

Note: The HOLD feature will active when the Backlight is turn on. Press the HOLD key again to exit HOLD.

Range Button

When the meter is first turned on, it automatically goes into Auto Ranging. This automatically selects the best range for the measurements being made and is generally the best mode for most measurements. For measurement situations requiring that a range be manually selected, perform the following:

1. Press the RANGE button. The “Auto Range” display indicator will turn off. The “Manual Range” display indicator will turn on.
2. Press the RANGE button to step through the available ranges until you select the range you want.
3. Press and hold the RANGE button for 2 seconds to exit the Manual Ranging mode and return to Auto Ranging mode.

Backlight Button

The backlight function illuminates the display and is used when the ambient light is too low to permit viewing of the displayed readings. Press the button for two seconds to turn the backlight on and press the button a second time to turn the backlight off.

Clamp size	Opening 1.2" (30mm) approx.
Diode test typical.	Test current of 0.3mA typical; Open circuit voltage 1.5V DC
Continuity check	Threshold <100Ω ; Test current < 1mA
Measurement rate	2 per second, nominal
Input impedance	7.8 MΩ (VDC & VAC)
Display	6000 counts LCD
AC Current	50/60Hz (AAC)
AC Voltage bandwidth	50/60Hz (VAC)
Operating temperature	-10 to 50°C (14 to 122°F)
Storage temperature	-30 to 60°C (-14 to 140°F)
Relative humidity	90% (0 to 30 °C); 75% (30 to 40 °C); 45% (40 to 50 °C)
Altitude	Operating: 3000m; Storage 10,000m
Over voltage	Category III 600V
Battery	9V Battery x 1 pc
Auto OFF	Approx. 30 minutes
Dimension	204 x 80 x 43 mm
Weight	200g

Specifications

Function	Range & Resolution		Accuracy (% of reading)
AC Current	60.00 AAC		± (2.5% + 10 digits)
	600.0 AAC		± (2.0 % + 5 digits)
	1000 AAC		
DC Voltage	600.0 mVDC		± (0.8% + 3 digits)
	6.000 VDC		± (1.5% + 3 digits)
	60.00 VDC		
	600.0 VDC		
	1000 VDC		± (2.0% + 3 digits)
AC Voltage	6.000 VAC		± (1.5% + 5 digits)
	60.00 VAC		± (2.0% + 5 digits)
	600.0 VAC		
	750 VAC		± (2.0% + 5 digits)
Resistance	600.0 Ω		± (1.0% + 4 digits)
	6.000K Ω		± (1.5% + 2 digits)
	60.00K Ω		
	600.0K Ω		
	6.000M Ω		± (2.5% + 3 digits)
60.00M Ω		± (3.5% + 5 digits)	
Capacitance	40.00nF		±(3.0% reading + 50 digits)
	400.0nF		±(3.5% reading + 10 digits)
	4.000 μ F		
	40.00 μ F		
	400.0 μ F		±(5.0% reading + 5 digits)
	4000 μ F		
Frequency	9.999Hz		±(1.5% reading + 5 digits)
	99.99Hz		±(1.2% reading + 2 digits)
	999.9Hz		Sensitivity: 9~1000kHz:10Vrms min. 1000kHz~10MHz:20Vrms min. @ 20% to 80% duty cycle
	9.999kHz		
	99.99kHz		
	999.9kHz		
	10MHz		
Temp (type-K) (probe accuracy not included)	-50.0 to 400.0°C	-50.0 to -20. 0°C	± 7°C
	400 to 1300 °C	-20.0 to 400.0°C	±(3.0% reading + 3 °C)
		400 to 1000°C	±(3.0% reading + 5°C)
	-58.0 to 752.0°F	-50.0 to 0°F	± 14°F
		0 to 752.0°F	±(3.0% reading + 7°F)
	752 to 2372 °F	752 to 1832°F	±(3.0% reading + 10°F)
		1832 to 2372°F	