

Digital Multimeter

GDM-8200A Series

QUICK USER GUIDE

GW INSTEK PART NO. 82DM-8255AMA1



ISO-9001 CERTIFIED MANUFACTURER

GW INSTEK

July 2011

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Good Will Instrument Co., Ltd.

No. 7-1, Jhongsing Rd., Tucheng Dist., New Taipei City 236, Taiwan.

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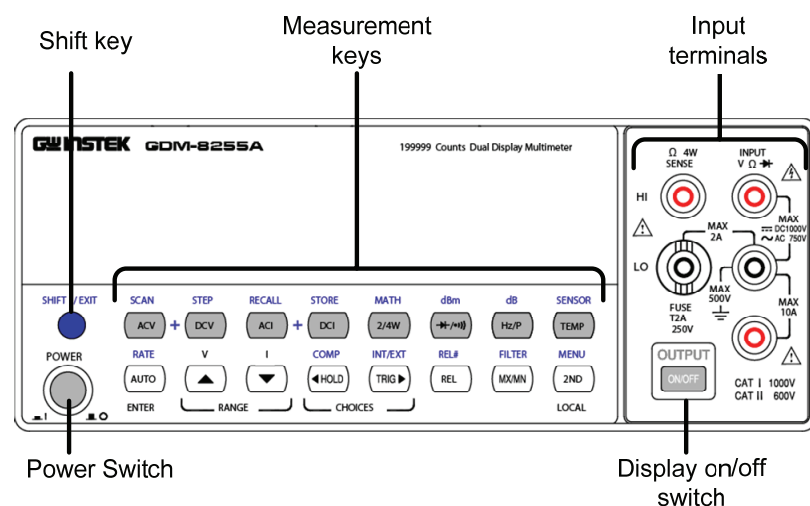
INTRODUCTION

The GDM-8200A series quick start guide is intended for users who are not familiar with the instrument and need a tutorial for quickly accessing its major functionalities. For more details such as parameters, remote control commands, optional scanner, digital I/O, and specifications, refer to the user manual.

This manual consists of the following chapters. Power up the instrument according to the “Powering up” chapter, and then pick up the relevant chapter according to your needs.

- Powering up
- Basic (measurement)
 - Voltage/Current
 - Resistance
 - Diode/Continuity/Frequency/Period/Temperature
- Advanced (measurement)
 - dBm/dB/Max/Min/Relative/Dual display
 - Measurement combinations

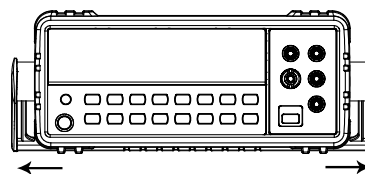
Front panel overview



POWERING UP

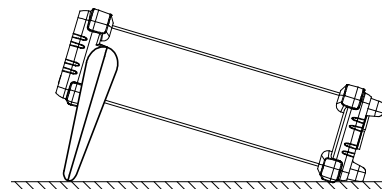
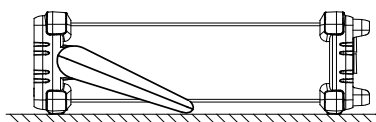
1. Tilt stand

Pull out the handle sideways and rotate it.



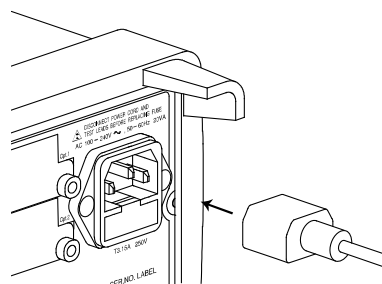
Horizontal position

Tilt position



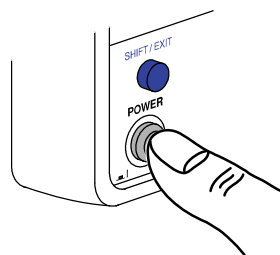
2. Connect the power cord

Connect the power cord to the AC Voltage input.



3. Press the power switch

Push the main power switch on the front panel to turn the instrument on.



The display contents appear and you are ready to make measurements.

DC AUTO
1348 16. V

1 1'

Powering up the instrument is completed

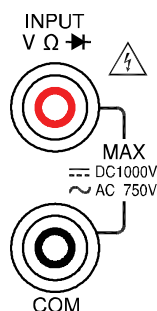
BASIC MEASUREMENT

Voltage/Current

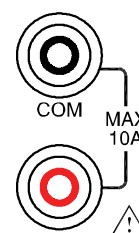
Measurement item: DCV, ACV, (DC+AC)V, DCI, ACI, (DC+AC)I

1. Connect the test leads

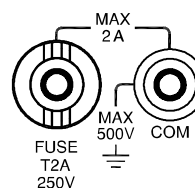
Voltage measurement



Current measurement (>2A)



Current measurement ($\leq 2A$)



2. Press the measurement key

Press the measurement keys on the front panel (For (DC+AC)V or (DC+AC)I, press both keys together). The measurement result will appear on the display.

DCV ACV (DC+AC)V DCI ACI (DC+AC)I

+

 +

AC, DC, or AC+DC Automatic ranging Refresh rate Unit Selected range

ACDC AUTO s

048.095 mV

100 mV

Manual ranging

To select the measurement range manually, press the Up/Down keys.

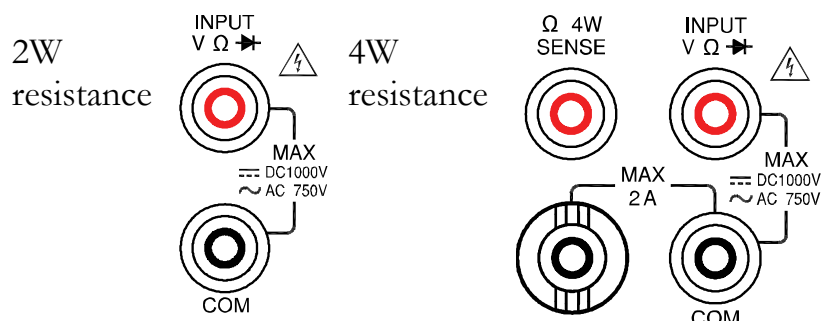


For further details, see the Voltage or Current section, Basic Measurement chapter in the user manual

Resistance

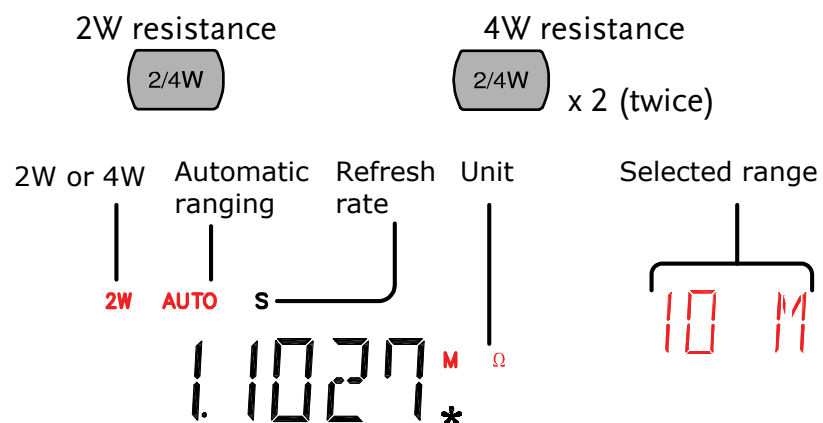
Measurement item: 2W resistance, 4W resistance

1. Connect the test leads



2. Press the measurement key

Press the measurement keys on the front panel. The measurement result will appear on the display.



Manual ranging

To select the measurement range manually, press the Up/Down keys.



For further details, see the Resistance section, Basic Measurement chapter in the user manual

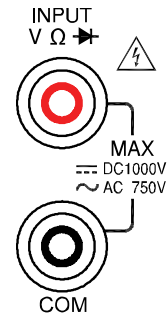
Diode/Continuity/Hz/Period/Temp

Measurement item: Diode test, Continuity test, Frequency, Period, Temperature

1. Connect the test leads

All items share the same terminal.

- Diode/Continuity
- Frequency/Period
- Temperature



2. Press the measurement key

Press the measurement keys on the front panel (For Continuity, Period, and Fahrenheit temp, press the same key twice). The measurement result will appear on the display.

Diode



Continuity



x2 (twice)

Frequency



Period



x2 (twice)

Temp(Celsius)



Temp(Fahrenheit)



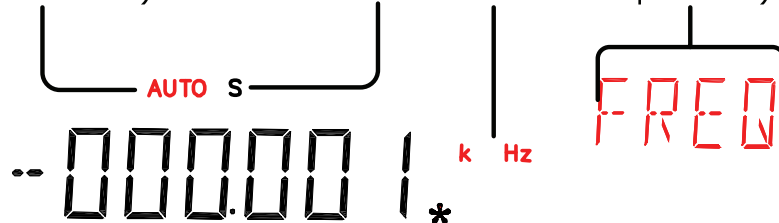
x2 (twice)

Automatic Ranging (only for Frequency and Period)

Refresh rate

Unit

Item (sensor type in Temperature)



For further details, see the Diode/Continuity/Frequency/Period/Temperature section, Basic Measurement chapter in the user manual

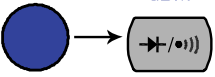
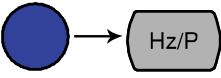





A

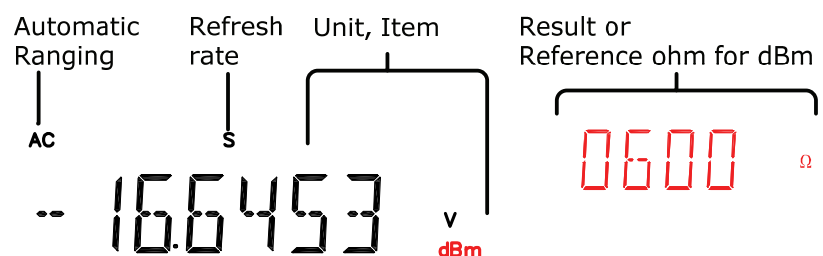
ADVANCED MEASUREMENT

Measurement item: dBm, dB, Max, Min, Relative, Dual display

1. Make a basic measurement
Follow the procedures in the Basic measurement chapter, page6. For measurement combinations (basic + advanced, dual display), see page10.

2. Press the measurement key
Press the measurement keys on the front panel. The measurement result will appear on the display.

Item	Keys	Descriptions
dBm		Shows $10 \cdot \log_{10}(1000 \cdot V_{rdg}^2 / R_{ref})$
dB		Shows (dBm – dBmref)
Max		Shows the maximum reading
Min	 x 2	Shows the minimum reading
Relative		Shows the relative value compared with the reference
Dual display	 → 	Shows the result of another measurement item (example: AC Voltage as the 2 nd item)



For further details including other measurement items (Hold, Compare, and Math), see the Advanced Measurement chapter in the user manual.

Measurement Combinations

Basic + Advanced measurement combinations

Advanced Measurement	Basic Measurement					
	AC/DCV	AC/DCI	2/4W	Hz/P	TEMP	→/(•))
dB	●	—	—	—	—	—
dBm	●	—	—	—	—	—
Max/Min	●	●	●	●	●	—
Relative	●	●	●	●	●	—
Hold (*)	●	●	●	●	●	—
Compare (*)	●	●	●	●	●	—
Math (*)	●	●	●	●	●	—
Dual Display	●	●	●	●	—	—

(*): For Hold, Compare and Math function details, see the Advanced Measurement chapter in the user manual.

Dual display combinations

Combinations	Any of the following items can be combined together for dual display measurements (for example ACV + Hz, DCV + DCI)	
	<ul style="list-style-type: none"> • ACV • DCV • ACI 	<ul style="list-style-type: none"> • DCI • Hz/P

Note Selecting other functions (such as 2W resistance) is possible but may not be useful, and their accuracies are not guaranteed.