# ΩHMRANGER-LCV

MODEL: OR-01: LOW COMPLIANCE VOLTAGE OHMMETER.
QUICK START GUIDE (Rev 1.0 dated 10 MAR 22)

ALTONOVUS LTD. 37 OAST HOUSE CRESCENT, FARNHAM, SURREY,

## DEVICE USE AND CARE

Do Not immerse in, or expose to liquid.

IP54 rated.

Avoid extremes of temperature. Max accuracy in 20-25 degree Celsius range.

Do Not drop, expose to shock, or place heavy objects on unit.
Do Not apply pressure to display.

No User-serviceable components. Do Not open unit, as it voids warranty and calibration.

Only use a clean, dry cloth to clean unit.

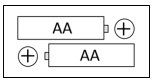
Minimum stimulus applied is 206mV. Do not expose unit to currents over 800mA.




A - **Positive** Terminal
B - **Negative** Terminal
C - Display Screen
D - **On / Off** Button
E - **Menu** Navigation
F - **Select** Button
G - Isolated USB Interface
H - Battery Compartment

## BEFORE USE






INSERT 2 x AA BATTERIES

2 x AA alkaline batteries will give in excess of 150 hours of continuous operation. Treat all batteries in accordance with the manufacturer's instructions.

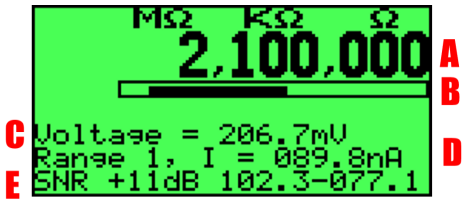
1. Remove battery compartment cover (**H**) applying gentle pressure to finger pad.
2. Ensure clean contacts on batteries.
3. Insert new batteries, observing polarity instructions in battery compartment.
4. Replace battery compartment cover.



If desired, remove the protective film from the front of the ΩhmRanger-LCV®. Peel carefully from below the **Positive** and **Negative** terminals.

ΩhmRanger-LCV® will still function normally if the film is left in place.

## SCREEN GUIDE




**A** - The Resistance reading, displayed in MΩ, KΩ and Ω. In the example above, 2.1MΩ.

**B** - A small, oscillating Range Bar shows which range is currently in use. An upper, longer Range Coverage Bar shows any movement across the ranges during the reading (in this case, none). The box surrounding shows the operating range.

**C** - The Voltage being applied by ΩhmRanger-LCV® at the **Positive** terminal, in this case 206.7mV, to measure the resistance.

**D** - The active Range and the measured Current.

**E** - The Signal to Noise Ratio (SNR). The SNR indicates how much noise, variation, and AC components are in the signal, followed by Maximum and Minimum Current samples during the reading. Higher resistances (lower currents) are more susceptible to noise.

## GETTING STARTED - TAKE A READING



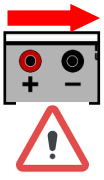
WARNING. Use ΩhmRanger-LCV® with cables less than 3 metres.

### STEP 1: POWER ON



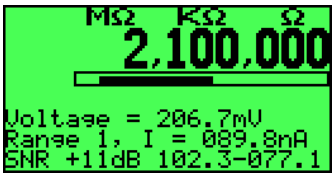

After inserting batteries as shown, press the **POWER** button to start ΩhmRanger-LCV®.

### STEP 2: CONNECT LEADS

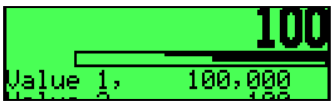


Connect the Resistance to be measured between the **Positive** (RED) and **Negative** (BLACK) terminals of the ΩhmRanger-LCV®. Leads (not supplied) should be industry standard, uninsulated, 4mm banana plug. Leads of shorter length will help minimise any noise.

### STEP 3: TAKE MEASUREMENTS




Sampling at a high rate to eliminate mains noise, Ωhm-Ranger-LCV® takes about 2.5 readings per second. It displays the current in **MΩ**, **KΩ** and **Ω**. In this example, **2.1MΩ**.




A Range Bar below the digits shows which ranges are, and have been in use. The Range Bar oscillates after each reading to show how quickly readings are occurring and to show that the device is functioning correctly.

### STEP 4: POWER OFF



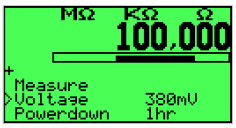

After measurements are taken, press the **POWER** button again to return ΩhmRanger-LCV® to Standby mode.

USE THIS QUICK START GUIDE IN CONJUNCTION WITH THE FULL INSTRUCTION MANUAL. DOWNLOAD AT: WWW.ALTONOVUS.COM

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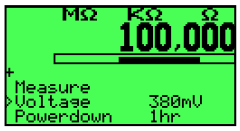
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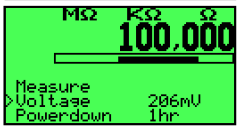
## ΩHMRANGER-LCV® - BASIC MENU FUNCTIONS




Press the **Menu** button to exit measuring and enter the **Menu** mode. This screen will appear. Use the **Navigate** and **Select** buttons to move through the **Menu**. The options are:

- Measure
- Voltage
- Powerdown
- LCD Light
- 4 Beep Read
- Details



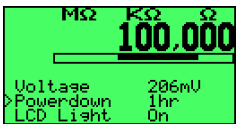




**VOLTAGE** - Use this **Menu** option to select the maximum stimulus voltage that will be applied by ΩhmRanger-LCV®.

The options are available are:

- 380 mV (the default setting), or
- 206 mV

**POWERDOWN** - Use this function to set and configure the period of inactivity after which ΩhmRanger-LCV® will power down automatically.




- Off
- 30 Minutes
- 1 Hour (the default)
- 2 Hours
- 4 Hours
- 8 Hours



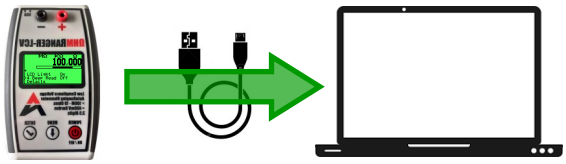

**LCD LIGHT** - Use this function to toggle the ΩhmRanger-LCV® screen backlight ON and OFF. Disabling the backlight will extend battery life.




**4 BEEP READ** - Use this function to take readings only when Resistance values are stable within selected tolerances. An audible prompt is given when this is achieved.

**DETAILS** - Will display the ΩhmRanger-LCV®'s unique serial number, calibration date and status, and software version.

## USING THE FULLY ISOLATED USB INTERFACE



ΩhmRanger-LCV®'s micro-USB interface can be used to export readings and to control the device via a PC (SCPI-format). The USB interface cannot be used to power ΩhmRanger-LCV®, as it is isolated from the main circuitry to prevent interference. For help connecting ΩhmRanger-LCV®, see the guidance in our website's ΩhmRanger-LCV® section. For SCPI instructions, please download the full **OR-01 Instruction Manual** at: www.altonovus.com

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the User is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different that to which the receiver is connected.

- Consult the dealer, or an experienced radio/TV technician for help.

### DECLARATION OF CONFORMITY

We: AltoNovus Limited
Registered Address: The Little House, 88a West Street, Farnham, Surrey, GU9 7EP

Declare under our sole responsibility that the product

Product name: ΩhmRanger-LCV Low Compliance Voltage Ohmmeter

Product number: OR-01

Conforms with the following specifications

Radiated Emissions:

FCC/CFR 47: Part 15:2018 (ANSI C63.4: 2014, Class B)
Canadian Standard ICES 003:Issue 6 (CISPR 22:2008)
EN61326-1:2013 (CISPR 11:2015 inc A1:2016)

Basic Immunity Requirements: EN61326-1:2013 Table 1

Electrostatic Discharge: EN61000-4-2:2009
Radiated RF Immunity: EN61000-4-3:2006 inc A1:2008 & A2:2010
Voltage Dips and Interruptions: EN61000-4-11:2004 inc A1:2017

The product therefore conforms with the requirements of extant UK, EU and FCC directives on Electromagnetic Compatibility (EMC) and RoHS.

Signed:
G. Dean, Managing Director (authorised signatory)

Signed:
S. Thickett, Technical Director (authorised signatory)

Farnham, United Kingdom, 10th March 2022

ALTONOVUS LTD / MADE IN THE UK

MODEL OR-01 / WWW.ALTONOVUS.COM

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