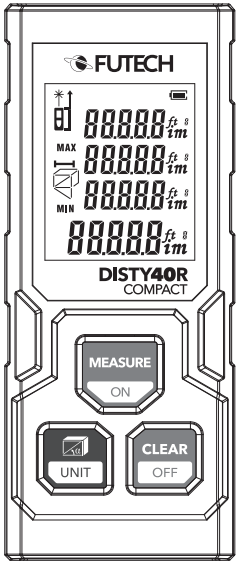
USER MANUAL

210.40R DISTY 40R



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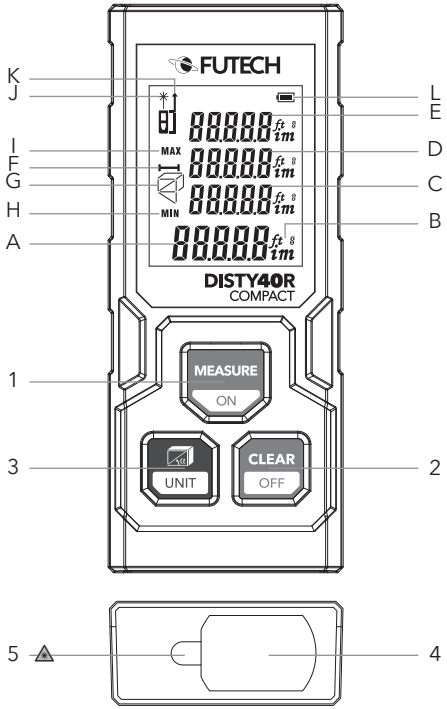
OVERVIEW



▪ DEVICE

1 Measure / ON-button
2 Clear / OFF-button
3 Function / Unit button
4 Receiving objective
5 Laser

▪ SCREEN

A Main data line
B Unit
C Lower data line
D Middle data line
E Upper data line
F Single measurement symbol
G Function symbol
H Minimum symbol
I Maximum symbol
J Laser -ON symbol
K Reference point
L Battery indicator

SAFETY

Please read the complete safety instructions in the booklet delivered with this device.

Use extreme caution when the laser beam is turned on.

Do not let the beam enter your eyes, another person's eyes or the eyes of an animal. Be careful that reflections of the beam (on a reflective surface) do not strike your eyes.

LASER RADIATION
Class 2, Do not stare into beam

Do not aim the laser beam at any gas that may explode.

BATTERY

Open the battery compartment on the back of the device and insert two 1.5V AAA batteries, making sure to observe the correct polarity. Then close the battery compartment securely.

This device operates on 2 × 1.5V AAA batteries.

NOTE
If the device will not be used for an extended period, please remove the batteries to prevent corrosion and damage to the device.

FIRST USE AND SETTINGS

Remove all protective films where applied.

▪ TURNING THE DEVICE ON/OFF

› ON

· To switch on the device, press the Measure / ON-button **[1]**. The device and the Laser **[5]** will activate simultaneously, and the device will enter measurement mode.

› OFF

· To turn off the device manually, long press the Clear / OFF-button **[2]** for 3 seconds.

The device will also power off automatically if no operation is performed within 150 seconds.

▪ UNIT SETTING

To change the measurement unit:

· Make sure the device is switched on, and the Laser **[5]** is turned off.

· Long press the Function / Unit button **[3]** until the unit changes.

Mode	Length	Area	Volume
1	0.000 m	0.000 m²	0.000 m³
2	0.0 in	0.00 ft²	0.00 ft³
3	0.00 ft	0.00 ft²	0.00 ft³

■ CHANGING THE REFERENCE POINT

You can switch between front and rear reference depending on your measurement needs.

To change the measurement reference point:

- Ensure the device is switched on and the Laser [5] is active.
- Long press the Function / Unit button [3] to toggle the reference point.

The active reference point is indicated on the display via the Reference point symbol [K].

■ BACKLIGHT ON/OFF

The backlight operates automatically to save power.

- It turns on for 15 seconds whenever a button is pressed.
- If no further operation is detected within 15 seconds, the backlight will switch off automatically.

■ SELF-CALIBRADION – SOUND ON/OFF

SELF CALIBRATION

This function is provided to ensure the precision of the device.

Make sure the device is switched off.

- While holding the Clear / OFF-button [2], press the Measure / ON-button [1] to start the device.

The display will show "CAL" and a flashing calibration value (e.g., 0.000). The device has now entered self-calibration mode.

Adjust the calibration value:

- Press the Function / Unit button [3] to increase the value.
- Press the Clear / OFF-button [2] to decrease the value.

The adjustment range is from -9 mm to +9 mm.

- Once the value is adjusted, long press the Measure / ON-button [1] to save the setting and enter sound settings.

EXAMPLE:

If the actual distance is 3.780 m and the measured value is:

- 3.778 m (2 mm too short)
  Increase the calibration value by 2 mm using the Function / Unit button [3].
- 3.783 m (3 mm too long)
  decrease the calibration value by 3 mm using the Clear / OFF-button [2].

SOUND ON/OFF

After saving the calibration result, the screen will display the blinking word "Sound".

- Press the Function / Unit button [3] or Clear /

OFF-button [2] to toggle the sound setting.

"ON": Sound is enabled.

"OFF": Sound is disabled.

· Finally, press the Measure / ON-button [1] to exit the setting.

USE

When the device is powered on, it automatically starts in Single Measurement mode.

To select a different measurement function:

· Press the Function / Unit button [3] repeatedly to cycle through the available functions in the following order:

  › Single Measurement

  › Area Measurement

  › Volume Measurement

  › Pythagorean – Second leg calculation

  › Pythagorean – Hypotenuse calculation

The currently selected function is indicated on the display by either the Single measurement symbol [F] or the Function symbol [G].

▪ SINGLE MEASUREMENT

· In test mode:

· Press the Measure / ON-button [1] once. The instrument emits a laser and locks the measuring point.

· Press the Measure / ON-button [1] again to perform a single distance measurement.

· The result will be shown in the Main data line [A] on the display.

Repeat these steps to perform multiple consecutive measurements. The latest result always appears in the Main data line [A].

Older results are automatically shifted upward as follows:

– The previous main value moves to the Lower data line [C].
– The value from the lower line moves to the Middle data line [D].
– The value from the middle line moves to the Upper data line [E].

CONTINUOUS MEASUREMENT (MIN/MAX)

Continuous mode is useful for finding the shortest or longest distance to a target (e.g., aligning to a wall or edge).

· Long press the Measure / ON-button [1] to activate Continuous Measurement Mode.

During this mode:

· The current measurement value is shown in the Main data line [A].

· The minimum and maximum values recorded are displayed in the Middle data line [D] and Upper data line [E], respectively.

To exit this mode, short press the Measure / ON-button [1] or the Clear / OFF-button [2].

▪ AREA MEASUREMENT

· Press the Function / Unit button [3] repeatedly until the Function symbol [G] for area measurement appears on the display.

A rectangle icon will appear, with one side blinking. This indicates which dimension needs to be measured first.

· Press the Measure / ON-button [1] to measure the length.

The result will appear in the Upper data line [E].

· Press the Measure / ON-button [1] again to measure the width.

The result will appear in the Middle data line [D]

The device will then automatically calculate and display the area in the Main data line [A].

To clear the current result, press the Clear / OFF-button [2] once and repeat the measurements if needed.

Press the Clear / OFF-button [2] again to exit the volume measurement mode.

▪ VOLUME MEASUREMENT

Press the Function / Unit button [3] twice to enter Volume Measurement mode.

· Press the Measure / ON-button [1] to measure the length.

The result will appear in the Upper data line [E].

· Press the Measure / ON-button [1] again to measure the width.

The result will appear in the Middle data line [D].

· Press the Measure / ON-button [1] a third time to measure the height.

The result will appear in the Lower data line [C].

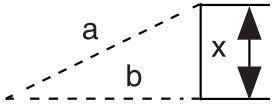
The device will then automatically calculate the volume, and display the result in the Main data line [A].

To clear the current result, press the Clear / OFF-button [2] once and repeat the measurements if needed.

Press the Clear / OFF-button [2] again to exit the volume measurement mode.

▪ PYTHAGOREAN

SECOND LEG CALCULATION



This function is useful for indirect distance measurement in environments where direct measurement is not possible.

· Press the Function / Unit button [3] three times to enter Pythagoras mode for second-leg calculation.

The corresponding function symbol will appear, and the hypotenuse indicator will blink.

· Press the Measure / ON-button [1] to measure the hypotenuse (a).

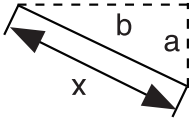
The result will appear in the Upper data line [E].

· Press the Measure / ON-button [1] again to measure the known leg (b).

The result will appear in the Lower data line [C].

The device will then automatically calculate the unknown leg (x), and display the result in the Main data line [A].

CALCULATE THE HYPOTENUSE



This function is used to calculate the hypotenuse of a right triangle by measuring the lengths of the two legs.

· Press the Function / Unit button [3] four times to enter Pythagoras mode for hypotenuse calculation.

The appropriate function symbol will appear, with one of the triangle legs blinking

· Press the Measure / ON-button [1] to measure the first leg (a).

The result will appear in the Upper data line [E].

· Press the Measure / ON-button [1] again to measure the second leg (b).

The result will appear in the Lower data line [C].

The device will then automatically calculate the hypotenuse (x) and display the result in the Main data line [A].

INSTRUMENT MAINTENANCE

To ensure long-term accuracy and reliability of the device, please follow the guidelines below:

Storage

Do not store the instrument in environments with high temperature or humidity for extended periods.

If the device is not used regularly, place it in the protective carrying bag and store it in a cool and dry location.

Cleaning:

Keep the device surface clean. Use a soft, damp cloth to wipe away dust.

Do not use corrosive cleaning agents or solvents for maintenance.

The laser window and focusing lens should be cleaned according to standard optical device maintenance procedures.

ERROR MESSAGES AND TROUBLESHOOTING

If an ERR × message appears on the screen, it means the instrument may not be able to complete the measurement correctly.

Below is a list of possible error codes and their suggested solutions:

Code	Description	Solution
Err	Out of the measurement range	Use the device within the measurement range
Err01	Signal is too weak	Choose the surface with stronger reflection. Use the reflecting plate.
Err02	Signal is too strong	Choose the surface with weaker reflection.
Err03	Low battery voltage	Replace batteries
Err04	Beyond working temperature	Use the device in the specified temperature.
Err05	Pythagoras measuring breaks the rules	Re-measure and ensure that hypotenuse is longer than legs.

TECHNICAL SPECIFICATIONS

Working range	0.05 - 40m
Precision	± (2mm + d × 1/10000) *
Display screen	LCD
Laser type & class	630-670nm, Class 2, <1mW
Area measurement	✔
Volume measurement	✔
Pythagorean measurement	✔
Continious measurement (Min/Max)	✔
Self calibration	✔
Screw for tripod	✘
Auto laser off	20s
Auto switch off	150s
Max. storage	✘
Battery	2× 1.5V AAA
Charging specifications	✘
Battery life	±4000 times (carbon-zinc battery) ±8000 times (alkaline battery)
Storage temperature	−20°C ~ +60°C
Working temperature	0°C ~ +40°C
Storage humidity	20% ~ 80% RH
Dimensions	104 × 43 × 25.5 mm
Weight	75g

* d = indicates the actual distance.

In challenging environments, the use of a reflecting plate is recommended to ensure accurate measurement results.

Conditions that may affect measurement accuracy include:

- Strong sunlight
- Excessive ambient temperature fluctuations
- Weak reflection from the target surface
- Low battery voltage.

Under these conditions, a reflecting plate helps improve signal strength and stability, reducing measurement errors significantly.

CE

DECLARATION OF CONFORMITY

Futech (Belgium) declares under its own responsibility that this device:

- 210.40R DISTY 40R COMPACT

is in conformity with the standards

EMC Directive 2014/30/EU:
- EN IEC 61000-6-1:2019
- EN IEC 61000-6-3:2021

Lier, Belgium,
April, 2025
Patrick Waûters

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