

Congratulations on the purchase of your **CONDROL X1 Plus**. The safety instructions can be found in the back of the booklet. The safety instructions and the user manual should be read through carefully before you use the product for the first time.

WARRANTY
The warranty is 36 months from the date of sale.

COMPLETE SET
Laser distance meter - 1
User manual - 1

START-UP
INSERTING/REPLACING BATTERY

1. Remove the battery compartment lid and attach handstrap.
2. Insert the battery, observing correct polarity
3. Close the battery cover. Replace the battery when the symbol flashes permanently in the display.
Remove the battery before any long period of non-use to avoid the danger of corrosion.



Note:
- Replace the battery when the indicator shows absence of a charge .
- If the indicator of the battery charge shows one division, you can make approximately 100 measurements .
- The power indicator blinks when the battery is low .

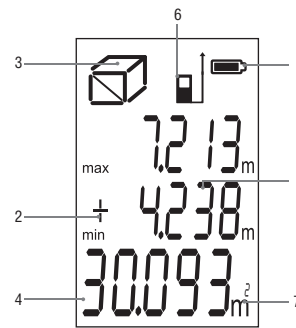
USE OF THE INSTRUMENT
- Measurements of linear distances.
- Carrying out of indirect measurements (Pythagorean method).
- Calculation of the area and volume.
- Minimum/maximum measurements.

OPERATION



- 1 Belt holder
2 LCD Display
3 ON/ Measuring button
4 Plus (+) /minus (-) button
6 Indirect measurement button
8 OFF/Clear button

Display



- 1 Minimal measurement
2 Single / continuous measurement
3 Area/ volume/Indirect measurement
4 Main line
5 Battery status
6 Measuring reference
7 Measuring units

TECHNICAL DATA

| | |
|--------------------------------------|---|
| Laser type | 650 nm / Class II / < 1 mW |
| Range | 0,05 m -40 m * (0.17 ft – 132 ft)* |
| Measuring accuracy Typically | ± 3 mm ** |
| Smallest unit displayed 1 mm | (1/16 in) |
| Autom. switch off Laser: Instrument: | 45 sec 180 sec |
| Storage temperature range | -25 °C ...+70 °C (-13 °F ... +158 °F) |
| Operation temperature range | 0 °C ...+40 °C (+32 °F ... +104 °F) |
| Dimensions | 110 mm x 43 mm x 26 mm (4.33 in x 1.69 in x 1.02 in) |
| Weight | 70 g |

* Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties
** in favourable conditions (good target surface properties, room temperature) up to 10 m (33 ft). In unfavourable conditions, such as intense sunshine, poorly reflecting target surface or high temperature variations, the deviation over distances above 10 m (33 ft) can increase by ± 0.35 mm/m

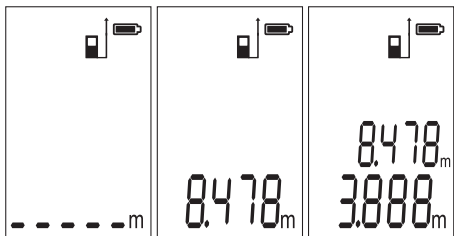
MENU FUNCTIONS

Single distance measuring mode

READ press once. Activate the product and all symbol display for checking. The display standby mode. When the meter switching on pause should be as short as possible. Measuring time in single mode should be < 0.5sec to 90% Kodak grey card at distance <15m. Lighting condition <2000 LUX. Indoors.

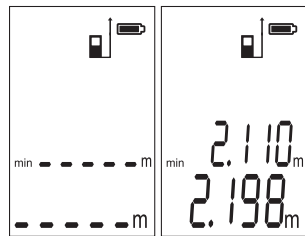
Press **READ** button for turn on the laser beam to aim at object which you want to measure.

| | | |
|---|------------------------------|--|
| 1 | Press READ | Result appears in lower (big) string. Laser switched off. |
| 2 | Press READ once again | Laser switch on for targeting. Previous result moves to second string. |
| 3 | Press READ | New measured result appears in "big" lower string. Laser switched off. |



Continuous distance measuring mode

Press and hold **READ** button to switch into continuous measuring mode, the laser beam will be also activated. The data will be display simultaneity. Minimum in top string. Current value in lower big string. Press any of buttons **READ** or **C OFF** to stop continuous laser. Catch the final length display on the screen. Measuring time in continuous mode should be < 0.3sec to 90% Kodak grey card at distance <15m. Lighting condition <2000 LUX. Indoors.

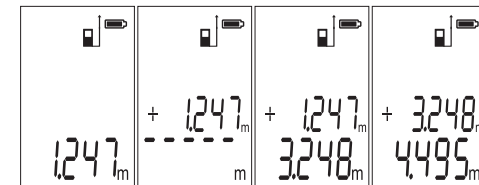


Addition / Subtraction

Laser switching on for targeting by pressing

| | | |
|---|--|--|
| 1 | Press READ once again to measure | Result appears in lower (big) string |
| 2 | Press + - button one or two times to choose appropriate action | Sign + or - appears. Previous result moves to upper string. |
| 3 | Press READ | Laser switch on for targeting. |
| 4 | Press READ | Measured result appears in upper string. Calculated value appears in lower (big) string. |

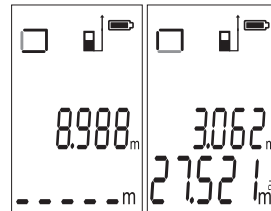
C OFF The last step is cancelled.



Area

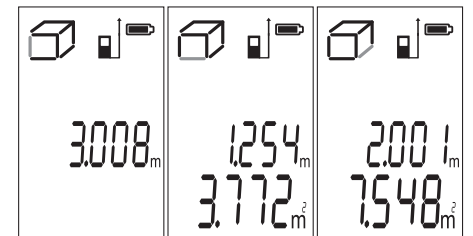
| | | |
|---|---|--|
| 1 | Press button once | The symbol appears in the display. |
| 2 | READ Press this button to take the first length measurement (height) | Measured result appears in upper string. |
| 3 | READ Press this button to take the second length measurement (width) | Measured result appears in upper string. Calculated area appears in lower (big) string in square meters. |

Press **C OFF** button once to cancel last step.
To cancel this mode press **C OFF** twice.



Volume

| | | |
|---|---|--|
| 1 | Press button twice. | The symbol appears in the display |
| 2 | READ Press this button to take the first length measurement (height) | Measured result appears in upper string |
| 3 | READ Press this button to take the second length measurement (width) | Measured result appears in upper string. |
| 4 | READ Press this button to take the third length measurement (length) | Current measurement (length) appears in upper string. In lower (big) string appears calculated result in cubic meters. |

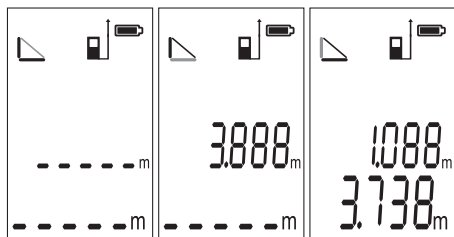


Press **C OFF** button once to cancel last step.
To cancel this mode press **C OFF** twice.

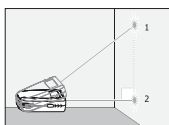
Simple Pythagoras

Use Pythagorean Theorem (a²+b²=C²) to measure height indirectly.

| | | |
|---|--|--|
| 1 | Press button once to switch to simple Pythagoras function | The symbol appears in the display |
| 2 | READ Press this button to measure the first (long) side of the triangle | Measured result (Hypotenuse) appears in upper string |
| 3 | READ Press this button to measure the second (short) side of the triangle | Previously measured result disappear, current value (Cathetus) appears in upper string. Calculated CATHETUS appears in lower (big) string. |



Press **C OFF** button once to cancel last step.
To cancel this mode press **C OFF** twice.



MESSAGE CODES

The following errors can be corrected:

| Code | Cause | Renedy |
|------|---------------------------------------|--------------------------------|
| 301 | Distance is out of range | Keep in correct measure range |
| 302 | Reflected signal is too weak | Measure on a better surface |
| 303 | Out of display range | Reset zero by press Power-Key |
| 304 | Pythagorean theorem calculation error | Check value is correct |
| 305 | Low battery | Change new battery |
| 306 | Temperature too low | Warm up instrument |
| 307 | Temperature too high | Cool down instrument |
| 308 | Ambient light is too strong | Measure in a darker background |

MEASURING CONDITIONS

Measuring range

The range is limited to 30 m.
At night or dusk and if the target is in shadow the measuring range without target plate is increased. Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties.

Target surfaces

Measuring errors can occur when measuring toward colorless liquids (e.g. water) or dust free glass, Styrofoam or similar semi-permeable surfaces. Aiming at high gloss surfaces may deflect the laser beam and lead to measurement errors. Against non-reflective and dark surfaces the measuring time may increase.

Care

Do not immerse the instrument in water. Wipe off dirt with a damp, soft cloth.
Do not use aggressive cleaning agents or solutions. Handle the instrument as you would a telescope or camera.

Warranty

The Condrol X1 comes with a one year warranty from CONDROL Ltd.

SAFETY INSTRUCTIONS

The User Manual can be found in the first part of the booklet, forms a part of the Safety Instructions. Carefully read the Safety Instructions and the User Manual before using this product. The person responsible for the instrument must ensure that all users understand these directions and adhere to them.

Symbols used

The symbols used in the Safety Instructions have the following meanings:

- WARNING:

Indicates a potentially hazardous situation or an unintended use which, if not avoided, will result in death or serious injury.

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