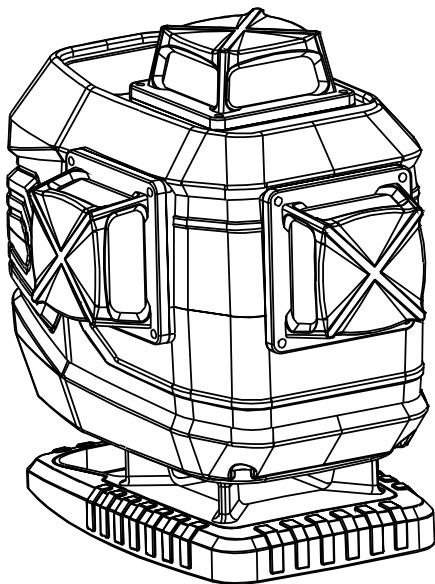


# USER MANUAL

034.4DE MULTICROSS 4D ELECTRONIC



EN ENGLISH

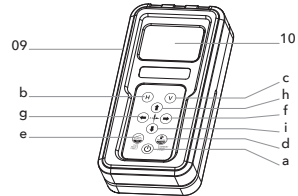
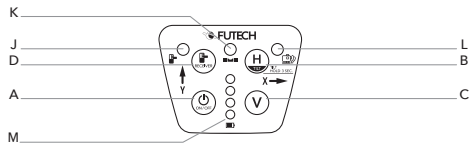
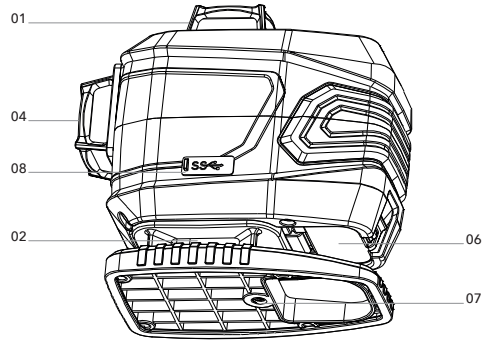
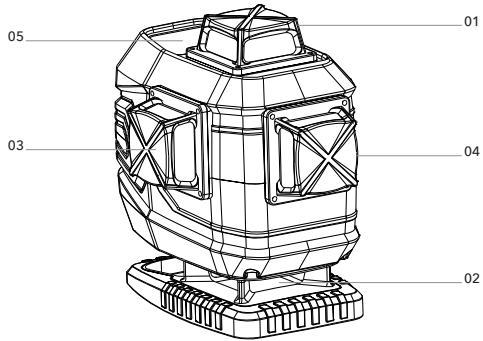
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## OVERVIEW



## HOUSING

- 01 Upper horizontal laser line (H1)
- 02 Bottom horizontal laser line (H2)
- 03 Side vertical laser line (V1)
- 04 Front vertical laser line (V2)
- 05 Keypad
- 06 Battery cover
- 07 1/4" Tripod thread
- 08 USB-C Power connector
- 09 Remote control
- 10 Graphical display

## KEYPAD

- A Power button
- B H-button for horizontal lines / Tilt-security button
- C V-button for vertical lines
- D Receiver button
- J Receiver indicator
- K Levelling indicator
- L Tilt indicator
- M Battery indicator

## REMOTE CONTROL

- a Power button
- b H-button for horizontal lines
- c V-button for vertical lines
- d Receiver / Standby button
- e Slope / Tilt-security button
- f (arrow right)  
X-axis UP button
- g (arrow left)  
X-axis DOWN button
- h (arrow up)  
Y-axis UP button
- i (arrow down)  
Y-axis DOWN button



## QUICK START GUIDE

KEYPAD	REMOTE CONTROL	NAME	FUNCTION	
A	-	Power button	Press	Switch the device ON/OFF
	a	Power button	Press	Switch the remote control ON/OFF
B	b	H-button	Press	Switch between horizontal lines (H2 → H1 → OFF → H2 → ...)
			Hold 3 sec.	(De-)activate TILT-security (ONLY ON DEVICE)
C	c	V-button	Press	Switch between vertical lines (OFF → V2 → V1+V2 → OFF → ...)
D	d	Receiver button	Press	(De-)activate the receiver mode (Pulse)
			Hold 3 sec.	Sets the device in standby mode (ONLY ON REMOTE CONTROL)
-	e	Slope / Tilt button	Press	(De-)activate the slope function
			Hold 3 sec.	(De-)activate TILT-security
-	f	(arrow right) X-axis UP button	Press (or hold)	X-axis rises on the side pointed by the arrow of the x-axis.
-	g	(arrow left) X-axis DOWN button	Press (or hold)	X-axis descends on the side pointed by the arrow of the x-axis
-	h	(arrow up) Y-axis UP button	Press (or hold)	Y-axis rises on the side pointed by the arrow of the y-axis.
-	i	(arrow down) Y-axis DOWN button	Press (or hold)	Y-axis descends on the side pointed by the arrow of the y-axis
J	/	LED Receiver indicator	No	Receiver mode OFF
			Green, continuous	Receiver mode ON
			Green, flash slow	Laser in standby
K	/	LED Slope indicator	Green, flash	Self levelling
			Green, continuous	Levelled
			Red, continuous	Slope modus ON



KEYPAD	REMOTE CONTROL	NAME	FUNCTION	
L	/	LED Tilt indicator	No	Tilt security OFF
			Green, flashing	Preparing TILT security
			Green, continuous	TILT security active
J+K+L		All 3 LED indicators	Green, flashing	TILT alarm
M	/	LED Battery indicator	4x green	>75% battery charge
			3x green	>50% battery charge
			2x green	>25% battery charge
			1x green	<25% battery charge



## **SAFETY**

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Please read the safety instructions provided as separate booklet with the device.

**LASER RADIATION** – Class 2 Laser product. – Do not stare into beam

## **FIRST TIME USAGE**

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Remove all protection foils.

Place the provided LI-ION battery in the device by opening the battery cover [06]. Make sure the batteries are fully charged. The four LEDs of the battery indicator light up green.

Place 2x 1.5V AAA Alkaline batteries in the remote control.

## **BATTERY AND CHARGER**

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Laser:

This laser works with a 7.3V - 2600mAh LI-ION battery. To charge this battery, you can use the provided 5V - 2A charger for charging.

Remote control:

The remote control works with 2x 1.5V AAA Alkaline batteries.

## **AUTOMATIC FUNCTIONS**

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### **■ AUTO-LEVELLING**

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This 4D laser first levels itself automatically after turning on the device. The laser can level itself within an operating angle of approx. 5°. The auto-levelling system performs the necessary fine adjustments, with the help of electronic measuring sensors, one for each axis.

### **■ TILT SECURITY**

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The tilt-security avoids measuring errors. By default, the laser will be active with the tilt-security activated. After turning on the laser or after activating the tilt-security, the tilt-security is prepared during 60 seconds. During this time you can install the laser in the Correct position. 60 seconds after you hit the last button, the tilt-security is active.

When the tilt-security sensors detect a small shock (e.g. a vibration, a gust of wind, ...) the tilt alarm activates. This give you the opportunity to check if the laser is still in the correct position after the shock. You must exit the tilt function, place the laser in position and restart the laser to continue. A new preparation process of 60 seconds will start before the Tilt-security is active.



Tilt-security is the best choice if accuracy is the most important.

## USE

Press the power button **[A]** to activate the device. Press the power button **[a]** of the remote control to activate the remote control.

The battery indicators **[M]** and the bottom horizontal laser line (H2) **[02]** will light.

Self levelling and tilt-security countdown will start. (see further in this manual).

### NOTE

When both laser device and remote control communicate with each other, the symbols of a laser and remote control including the battery indication of both will be visible in the upper right corner of the graphical display **[10]** of the remote control **[09]**. When there is no connection between laser and remote control, the symbol of the laser will flash on the graphical display **[10]**.

## WHAT IF MY (NEW) REMOTE CONTROL DOES NOT COMMUNICATE WITH MY DEVICE?

In normal circumstances, the supplied remote control is paired with the device. In exceptional cases, or when you need to replace the remote control, you can pair it as follows:

1. Power On the laser device and the remote control
2. Hold the power button **[a]** of the remote control for 3 seconds. The small image of the remote control in the upper right corner of the graphical display **[10]** starts blinking.
3. Hold the V-button **[C]** of the device for 3 seconds.
4. When paired, battery indicators **[M]** starts flashing.
5. Shut down and re-activate both the device and the remote control pressing there-power buttons **[A, a]** twice.

## NOTE

The choice of the tripod defines in a large way the user-friendliness of the device.

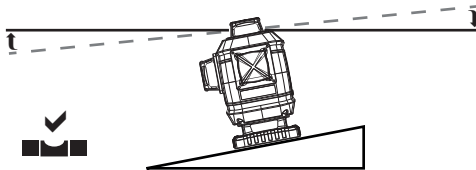
If the workplace has a high light intensity, for example when working outside in a sunny area, you will need a laser receiver to detect the laser beam. (see further)

### ■ SELF LEVELLING

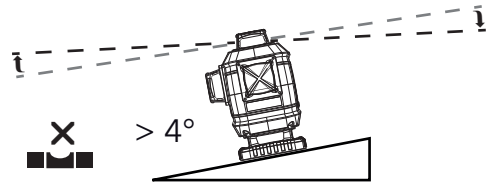
After turning on the device or when you turn off the slope mode, self levelling will start to place the laserlines 100% levelled.

While levelling, the levelling indicator [K] flashes green and the graphical display [10] shows "LEVELLING" at the bottom of the screen.

When levelling is finished, and the laser lines are 100% levelled, the levelling indicator [K] is continuously green and the graphical display [10] shows "LEVELLED".



The laser can level itself in a range of approx. 4° in every direction. This means the laser can show 100% horizontal or vertical lines when placed on a sloped surface of approx. 4° maximum.



In case the laser is placed on a surface that exceeds the 4°, showing a levelled horizontal or vertical laser line is no longer possible.

The slope levelling indicator [K] will continue to blink, "LEVELLING" remains on the screen of the remote control and to warn you that the laser is out of levelling range, the laser lines will start flashing.

Place the laser device on a flatter surface, within the levelling range of 4°. The laser will start self levelling automatically when placed in his levelling range.

### ■ SWITCHING ON/OFF LASER LINES

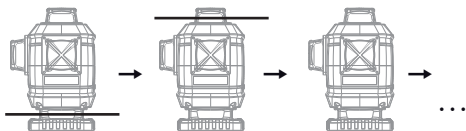
When switching on the device, the bottom horizontal laser line (H2) [02] will light up.





## \_\_ HORIZONTAL LASER LINES

To change the projected horizontal laser lines, you can press the H-button for horizontal lines [B, b]. The graphical display [10] shows which laser lines are active.



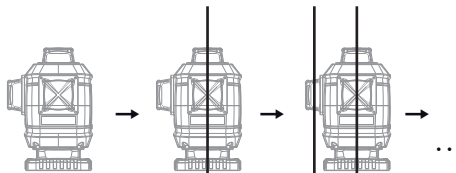
- Press the H-button [B, b] a first time to switch the bottom horizontal laser line (H2) [02] off and activate the upper horizontal laser line (H1) [01].
- Press the H-button [B, b] a second time to switch off both horizontal laser lines [01][02].
- Press the H-button [B, b] a third time to switch on the bottom horizontal laser line (H2) [02].
- ... (these three previous steps will repeat)

### NOTE

It is not possible to activate both horizontal laser lines [01][02] together. By that, we avoid measuring errors.

## \_\_ VERTICAL LASER LINES

To change the projected vertical laser lines, you can press the V-button for vertical lines [C, c]. The graphical display [10] shows which laser lines are active.



- Press the V-button [C, c] a first time to switch on the front vertical laser line (V2) [04].
- Press the V-button [C, c] a second time to also switch on the side vertical laser line (V1)[03]. Both vertical laser lines are now switched on.
- Press the V-button [C, c] a third time to switch off the vertical laser lines.
- ... (these three previous steps will repeat)

### NOTE

When both vertical laser lines [03][04] are switched on, you can measure exact angles of 90° or show a plumb line (imaginary line between the cross on the floor and the cross on the ceiling)

## ■ USING A LASER RECEIVER

When you work over longer distances or the workplace has a high light intensity, laser lines will be less visible for the human eye. In that case, you can use a laser receiver to detect the laser lines.

- Press the receiver button [D, d] to activate the receiver mode. The receiver indicator [J] on the device will light green and the graphical display [10] show a symbol of a remote control in the upper left corner.
- When switched on, you can position the laser line with a receiver.
- Press the receiver button [D, d] again to deactivate the receiver mode.

### NOTE

When the receiver mode is switched on, the laser line will start pulsing very fast. It appears to the human eye that the intensity of the laser line(s) decreases slightly.

The Multicross 4D Electronic will pulse with a frequency of 10KHz. That means your laser receiver must support a frequency of 10KHz. Refer to your laser receiver manual for this.

## ■ SLOPE FUNCTION

When switching on the device, automatically the self levelling mode is active. In case you need to project sloped lines, you can switch off the automatic levelling by activating the slope mode.

- After the laser is levelled (levelling indicator [K] is continuously green and "LEVELLED" is visible on the graphical display [10]) press the slope button [e] of the remote control to activate the slope mode. The levelling indicator [K] switches from green to red and slope X is shown on the graphical display [10].

### NOTE

After switching on the slope mode, the device's keypad [05], except the power button [A], can not be used until the slope mode is switched off. Operation is now only possible via remote control.

The laser lines will blink every 10 seconds to remind you that the lines are not levelled.

- Change back to automatic levelling (turn off slope mode) by pressing the slope button [e] again.

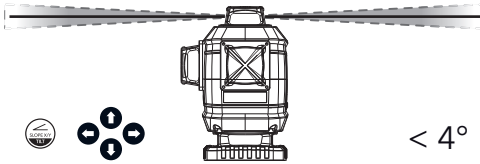


## — ELECTRONIC SLOPE

The Multicross 4D Electronic has a built in slope function. This can be used for slopes within the 4° levelling range.

### NOTE

We recommend you to use a laser receiver in combination with a rod to set slopes. This will make it easier for you to find the desired point.



Install your laser device so that the x- and y-axes of the devices are parallel to the x- and y-axes of the desired slope. You can use the front vertical laser line (V2) [04] to align the x-axes of the slope. You can use the vertical laser line (V1) [03] to align the y-axes of the slope.

- Turn on slope mode as described above.

We first set the slope over the x-axis.

- Position the receiver on a rod in line with the x-axis with the zero level of the receiver at the desired height.

- Use the X-axis UP button [f] and/or the X-axis DOWN button [g] to search the zero level of the receiver.

Now we set the slope over the y-axis.

- Position the receiver on a rod in line with the y-axis with the zero level of the receiver at the desired height.
- Use the X-axis UP button [f] and/or the X-axis DOWN button [g] to search the zero level of the receiver.

Your laser is set with the desired slope.

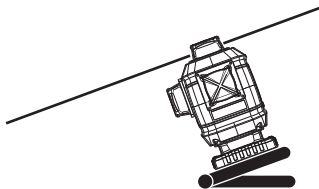
## — MANUAL SLOPE

If you need a slope of more than 4°, you can manually set the multicross 4D to the desired slope.

### NOTE

We recommend using the optional slope adaptor for the manual slope. On this slope adaptor you can manually set the desired degrees of slope.





> 4°

- Turn on slope mode as described above.
- Tilt the device (using the slope adapter) until the desired slope is reached.

#### ■ TILT SECURITY

The tilt security avoids measuring errors.

By default, the tilt security will be prepared after switching on the device. The tilt indicator [L] flashes and start the 60 sec. countdown. After 60 sec. The tilt security is active and the tilt indicator [L] lights green continuously.

On the remote control: During the start up of the tilt security, TILT is flashing on top of the graphical display [10]. After the tilt security is active, TILT will be visible continuously.

#### **NOTE**

The 60-second countdown to activate the tilt security will resume each time a button is pressed.

When the tilt security is active and the sensors detect a small shock (e.g. a vibration, a gust of wind, ...) the tilt alarm activates (Receiver [J], Levelling [K] and Tilt indicator [L] as well as the active laserlines flashes simultaneously. The graphical display [10] of the remote control [09] shows "TILT ALARM").

When this happens, you manually needs to check if the laser is still in the correct position. Therefore you must exit the tilt function (hold the Tilt button [B, e] for 3 seconds) or restart the laser and put the laser back in position to continue. A new preparation process of 60 seconds will start before the Tilt-security is active.

In some cases, you don't want tilt security to be activated. You can turn off the tilt security by holding the Tilt button [B, e] for 3 seconds. The Tilt indicator [L] will switch off and "TILT" will disappear from the graphical display [10].

Use the tilt button [B, e] again to reactivate the tilt security.

#### **NOTE**

Keep in mind: turning off the tilt security can lead to measuring errors!



## ■ BATTERY

### — PLACE OR REMOVE THE BATTERY

- Open the battery cover [06].
- Slide the battery inside the battery tray. The 2 metal contacts should go first inside the housing of the laser.

CLOSE THE BATTERY COVER [06].

CHARGE THE BATTERY

### — INSIDE THE INSTRUMENT

In case the power indicators [H] indicate the battery-power is low, you need to recharge the batteries.

- Connect the included charger to the USB-C power connector [8]. Plug the charger in a power plug. The power indicators [H] start flashing upward.
- When the 4power indicators light constantly, the battery is 100% loaded.

### — CHARGE THE BATTERY DIRECTLY

You can also charge the battery with USB-C connector on the battery.

- Remove the battery from the housing and connect the included charger to the USB-C power connector on the battery. Plug the charger in a power plug


## NOTE

In order to avoid all risks, only use the charger and battery that are delivered together with the laser instrument. You can charge the battery during the usage of the instrument.

Complete recharging of the battery will take between 3 and 4 hours.



## SPECIFICATIONS

	034.4DE MULTICROSS 4D ELECTRONIC
Visibility	
Precision	1 mm / 10m
Range (with receiver)	up to 2x 60m (with receiver)
Dust- and water proofness	IP54
Battery	7.4V, 2600mAh Li-ion (art.nr.: H60028)
Charger [+ USB-C cable]	5V, 2000mAh (art.nr.: H60033A) [USB-C cable: art.nr H60033B]
Levelling	Motor levelling
Self-levelling range	+/- 4°
Slope function	Manually + Electronic
Maximum settable slope	+/- 5° (X-axis/Y-axis)
Remote control	Radio frequency (with interactive display)
Built-in screw for tripod	1/4"
Laser frequency (in receiver mode)	10KHz
Laser class	Class 2 - 515nm - <1mW
Operating temperature	-10 to 40°C
Storage temperature	-15 to 50°C
Dimensions (only laser device)	152 x 98 x 145 mm
Weight (only laser device)	0,83 kg





## DECLARATION OF CONFORMITY

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

- 034.4DE, MULTICROSS 4D ELECTRONIC

is in conformity with the standards

EN IEC 61326-1:2021,  
EN 61010-1:2010 + A1:2019,  
EN 60825-1:2014 + A11:2021,

following the provisions of Directive(s)

EMC Directive 2014/30/EU.

Lier, Belgium,  
March 10, 2023  
Patrick WaÛters

## NOTES

Potential misprints are reserved. Images used are not strict. All features, functionality and other product specifications are subject to change without notice or obligation.



# USER MANUAL

other languages:



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**DE** DEUTSCH



**ES** ESPAÑOL



**ET** EESTI KEEL



**FI** SUOMEN KIELI



**FR** FRANÇAIS



**IS** ÍSLENSKA



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**NL** NEDERLANDS



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