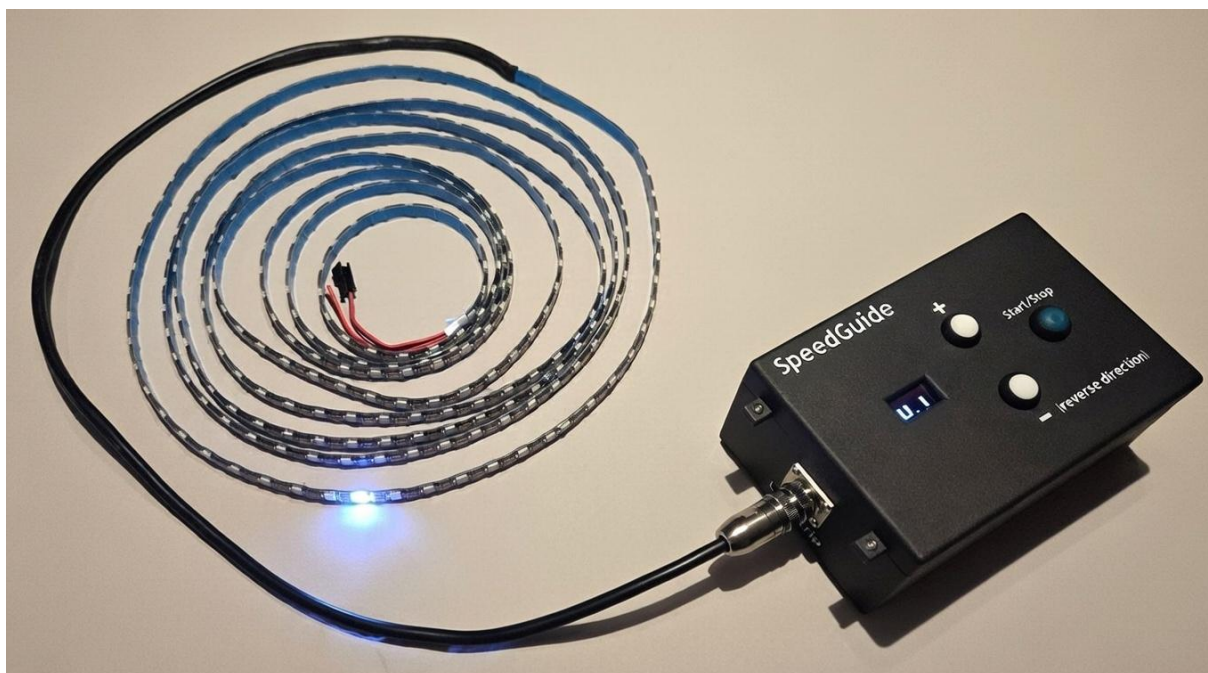


Manual for SpeedGuide



Version 1.0 (2026-01-26)

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Introduction

Welcome to SpeedGuide – an innovative and portable device for precision movement guidance.

SpeedGuide is a test tool that uses an addressable LED strip to create a moving light point with **constant and adjustable speed**. By visually following the light point, the user can ensure accurate speed throughout the test distance, without the variations that occur with traditional methods.

Purpose and Use

SpeedGuide is designed to simplify and improve tests where constant speed is critical, e.g. stability over thresholds, obstacles or inclines. It is particularly useful in lab and certification environments for medical devices, and rehabilitation aid. With a range of 4.97 meters and speeds from 0.1 to 1.4 m/s.

SpeedGuide could also be used directly in rehabilitation settings for patient gait training at constant speeds, offering a motivating and precise visual pacing aid.

Advantages over Traditional Methods

Traditional techniques such as stopwatch with tape measure or photocells at start/stop only measure **average speed**, which can hide variations (acceleration/deceleration) that affect the test result. SpeedGuide guarantees **constant speed in real time** through visual guidance – this reduces the number of repeated tests, increases precision and reduces the risk of incorrect certification results. The product is portable, battery or USB powered and requires no fixed installation, making it ideal for both lab and field use.

Compatible Standards and Applications

SpeedGuide supports testing according to several international standards, including:

- **IEC 60601-1** (clause 9.4.2.4.3) – stability for medical carts over threshold at 0.8 m/s.
- **EN 1888** – stability for prams over kerbs (1.4 m/s).

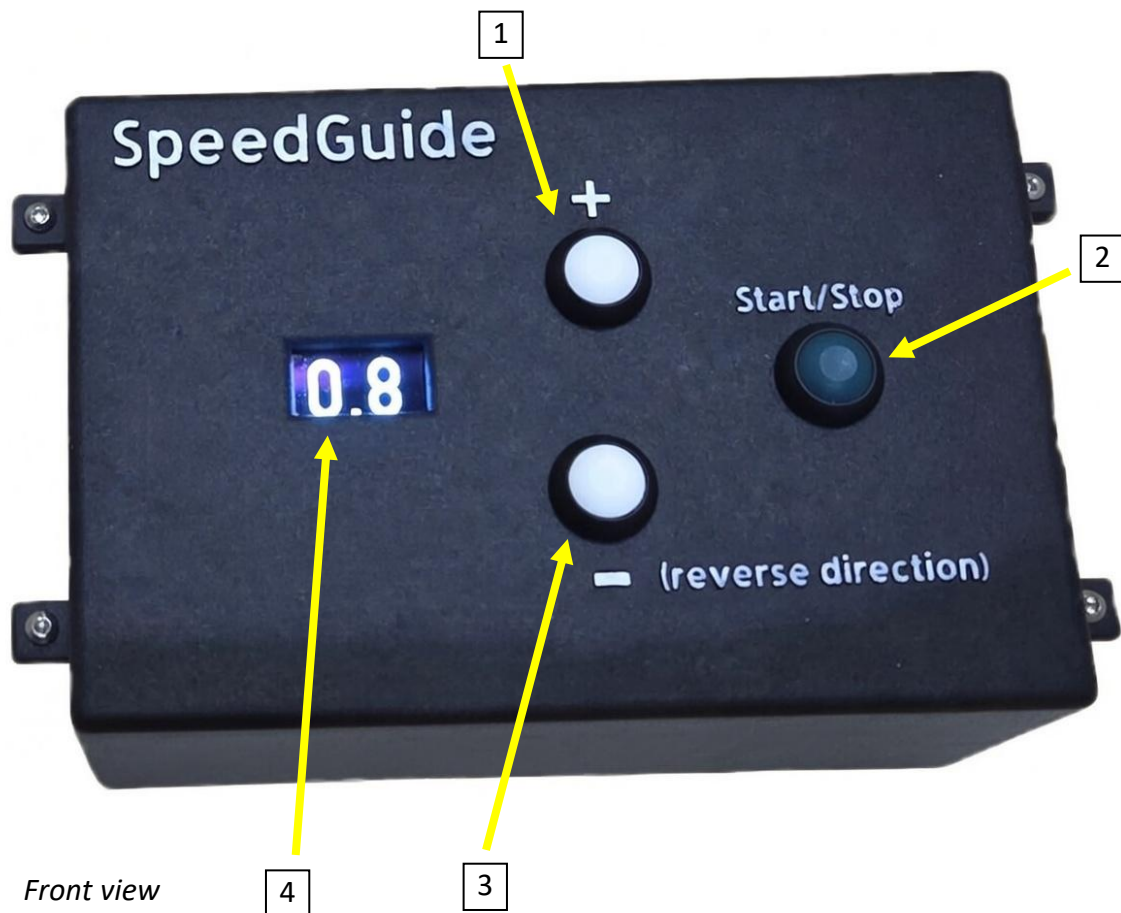
It is suitable for certification labs, manufacturers and research institutions in medical technology, mobility and rehabilitation.

SpeedGuide is easy to use: Adjust speed with buttons, start the movement and follow the light point. The OLED display shows current speed in m/s.

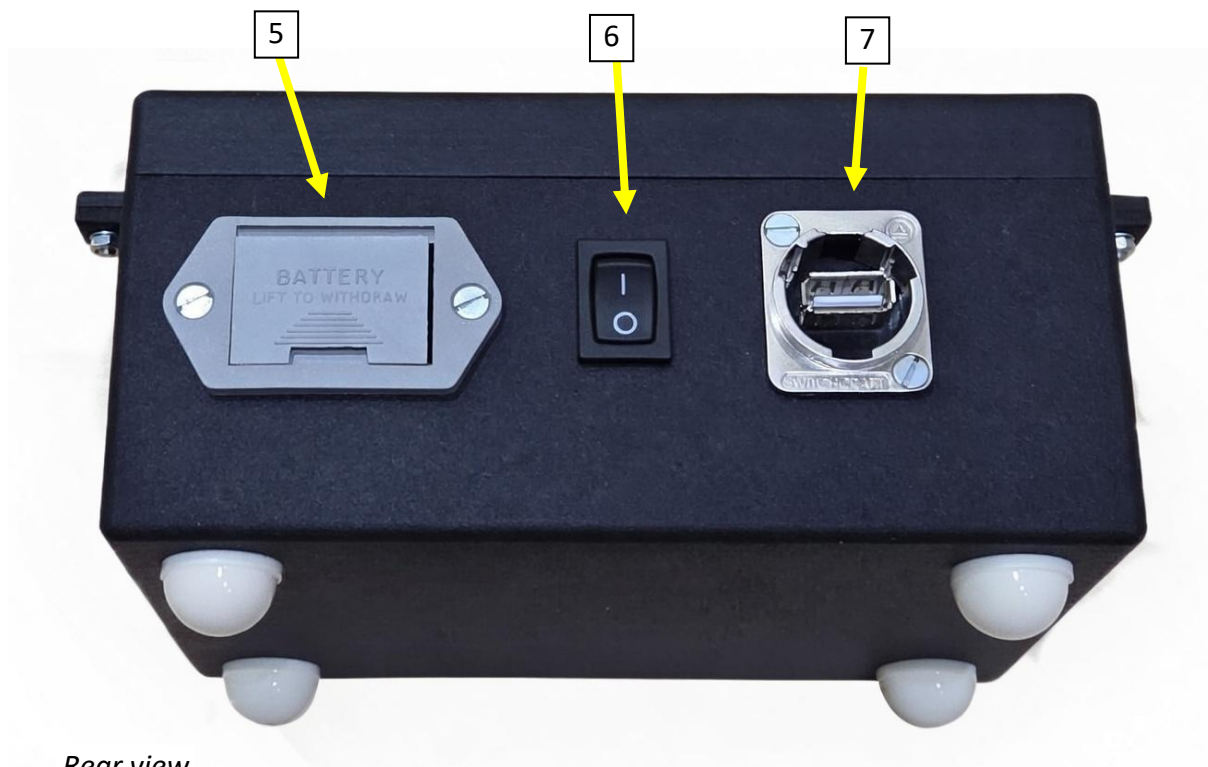
Thank you for choosing SpeedGuide – a tool that makes your tests safer, faster and more reliable.

Good luck with your tests!

Description of SpeedGuide and functions

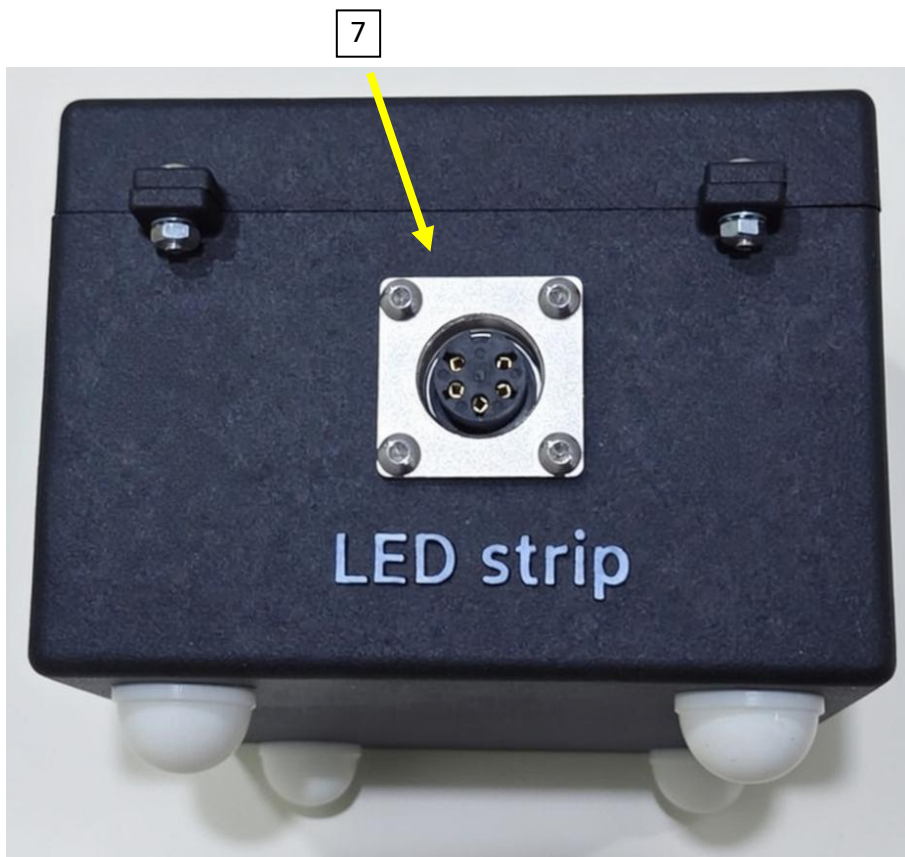


	Name	Description
1	+	Increase speed setting when LED is stopped.
2	Start/Stop	Starts or stops the moving LED point.
3	- (reverse direction)	Decrease speed setting when LED is stopped. This button also changes the direction when the LED point is moving.
4	Display	Shows speed in m/s. When the 9V battery voltage is low the message "Low battery" is shown.



Rear view

	Namn	Beskrivning
5	9V battery holder	Compartment for 9V battery. If On/Off switch is On and battery voltage falls below 6.5V message "LOW BATTERY!" will be shown in display.
6	On/Off switch	Starts the SpeedGuide when powered by battery. When it is powered through the USB port it starts automatically. Recommended to have the switch off when powered through USB port.
7	USB port	Power the SpeedGuide through the USB port with a charger with at least 5V, 1A capability. The SpeedGuide can then be used without battery. USB port is also used for programming the internal microcontroller.



Side view

	Namn	Beskrivning
8	LED strip	LED strip connector.

Technical data

Input USB	5V, (minimum 1A)
Battery	9V
	5 hours continuous operation
Physical data	
Dimensions	Width 11.0 cm Height 9.5 cm Length 16.5 cm
Weight	450 g
LED strip length	4.97 m (300 LEDs)
Speed	
Settings	0.1 – 1.4 m/s
Accuracy	± 0.01 m/s