

# CALIBRATING YOUR M90

The wheels should be calibrated during the initial installation or if installing the wheels on a different chair.

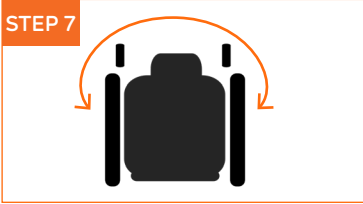
The calibration process sets the M90's slope and hill thresholds based on the wheelchair, optimizing performance for the rider.

## CALIBRATION INSTRUCTIONS

**IMPORTANT:** Do not move the chair during calibration.

1. Engage the wheelchair wheellocks, and remove the battery on the M90 wheel.
2. Press and hold either button on the wheel while re-inserting the battery.
3. When the lights turn **ORANGE** release the button.
4. Wait until the lights turn **WHITE** then **GREEN**.
5. When the lights are **GREEN**, remove and re-insert the battery. The wheel will beep.
6. Repeat steps 1 – 5 on the other wheel.
7. Remove and swap wheels to the opposite sides and **repeat steps 1 – 6**.

**NOTE** Re-calibrating the wheels is the first step for any troubleshooting with the M90.



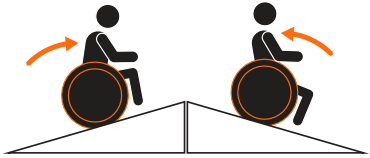
# SAFE DRIVING TIPS

**Start Slow.** We recommend **anti-tips** when operating the M90. Start in Indoor mode in a safe, open environment. Practice stopping at specific points, turning while stationary, and turning while in motion.

## HILLS

Begin on a moderate hill with a gradual slope and a safe runout, avoiding immediate turns at the bottom. The M90 provides braking and descent control.

Adjust your body position to maintain balance and prevent tipping – leaning forward to go up or backward to descend. Ensure your trunk is properly supported, if necessary.



## SCAN HERE FOR SET-UP AND USE VIDEOS

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# LET'S GO! GUIDE

This guide will help you get started enjoying your M90 for everyday adventures. Please see your owner's manual for more in-depth instructions, installation guide, or local contact information.

800.333.4000 [www.SunriseMedical.com/Empulse](http://www.SunriseMedical.com/Empulse)



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SUNRISE MEDICAL CARES ABOUT YOUR SAFETY. Please read your owner's manual for safe operating instructions and maintenance guidelines.

POWERING ON/OFF

When the batteries are installed, the wheels are powered on. The wheels will automatically search for the controller via a BTE connection.

**NOTE** Buttons on the M90 wheels are used as indicators and trouble shooting, not as an On/Off.

THE DUAL CONTROLLER

Your M90 comes with two driving options:



**SPEED CONTROLLER TOGGLE**

Speed control only  
(handrim steering)



**ALL-WAY TOGGLE**

Both steering and speed control

CONNECTING THE CONTROLLER

Press the Controller Power button once.

The Power Indicator LED (2) will flash white while connecting. (This may take up to 5 seconds.)

When connected, you will hear a beep, and the Power LED (2) will turn solid green.

With the wheels engaged, hold the toggle forward to enter drive mode. Both wheels will lock into place with a click, and the status light (3) will turn green when ready.

**1- WHEEL BATTERY INDICATOR**

- 90 – 100%
- 60 – 90%
- 30 – 60%
- 15 – 30%
- 5 – 15%
- <5%

**2- CONTROLLER POWER INDICATOR**

- CONNECTED, LOCKED  
Flashing = Awaiting Connection
- CONTROLLER ACTIVE  
Charge = >15%
- CHARGE <15%  
Flashing = Charge <5%
- LOW CHARGE  
Unable to be used
- CHARGED  
Flashing = Charging

**3- STATUS INDICATOR**

- WHEEL HUBS NOT ENGAGED
- WHEEL HUBS ENGAGED  
Flashing = Cruise Control engaged
- Thermal Protection 1 –  
Outdoor Mode Lock-Out
- Thermal Protection 2 –  
Controller Locked. Active braking  
for 5 seconds
- Thermal Protection 3 –  
System Lock-Out
- CHARGED  
Flashing = Charging

**4- PROFILE / DRIVE MODE INDICATOR**

- ALL-WAY DRIVE MODE  
Solid = Indoor Drive Profile  
Flashing = Outdoor Drive Profile
- SPEED CONTROLLER WITH  
HANDRIM STEERING DRIVE  
MODE  
Solid = Indoor Drive Profile  
Flashing = Outdoor Drive Profile



**CONTROLLER POWER**  
QUICK-PRESS TO LOCK OR UNLOCK

**LIGHT SENSOR**

**3**

**4**

**PROFILE / MODE BUTTON**  
QUICK-PRESS TO CHANGE PROFILE  
PRESS AND HOLD TO CHANGE DRIVE MODE

**2**

**HORN**

**1**

**DOCK**

**TOGGLE**

FUNCTIONS	ALL-WAY TOGGLE CONTROLLER	SPEED CONTROLLER with HANDRIM STEERING
START / STOP	Push All-Way toggle forward to start. Let go of the toggle to stop. Handrims do not affect speed.	Tap Speed Controller toggle to start. Push speed controller toggle down or use handrims to stop gradually.
SPEED CONTROL	Push All-Way toggle forward or backward to proportionately accelerate or slow down.	Tap Speed Contoller toggle to increase or decrease speed step by step, up to level 5 in both profiles.
STEERING	Move All-Way toggle in desired direction to steer.	Steer manually using the handrims.
CRUISE CONTROL	<p>Press the All-Way toggle forward until desired speed is reached, then press down to activate.</p> <p>Steer by moving the All-Way toggle right or left.</p> <p>Exit by moving the All-Way toggle forward or back, or pressing down.</p>	<p>Tap Speed Contoller toggle forward or backward to increase or decrease speed level.</p> <p>Steer manually with handrims.</p> <p>Exit by pressing Speed Contoller toggle down or by grabbing and holding the handrims.</p>
MANUAL ASSIST	N/A	A gentle boost that engages after a stop and allows you to reposition your chair using the handrims.
DRIVE PROFILE Indoor/Outdoor	Select using the M90 App or the Dual Controller	Select using the M90 App or the Dual Controller
DRIVE SETTING	Choose speed range (Base / Standard / Max) using the M90 App.	Choose speed range (Base / Standard / Max) using the M90 App.