



Ultium Insole

Quick Start Guide

Welcome from Noraxon

Congratulations on acquiring your new Ultium Insole System!

This guide will provide you with step by step instructions on how to install your new hardware and software, adjust device settings, and record your first data set.

Let's begin by walking through how to install your new hardware.

Note: This is not meant to be a complete manual, but a guide to help you get started with your system. For more detailed instructions on operating the Ultium system and its features please refer to the complete **Ultium EMG User Manual**, also included with your system.

1 System Unboxing

The Ultium Insole system is packed within a reinforced padded box for storage and protection during transport. Upon arrival, carefully remove all contents and verify the following components are present. *Contents will vary depending on the purchased package.*

		
<p>Figure 1 - Ultium Receiver (part #880)</p>	<p>Figure 2 - EMG Sensor Docking Station (part #883)</p>	<p>Figure 3 - EMG Sensor (part #810)</p>
		
<p>Figure 4 - Ultium Insole Smart Lead (part #826)</p>	<p>Figure 5 - A to B USB Cable (part #CBL2)</p>	<p>Figure 6 - EMG Sensor Charger Power Source (part #PSU1)</p>
	<p>Your system may differ depending on the number of sensors included with your shipment, quantities of EMG sensors, EMG SmartLeads Sensor Docking Stations, and Docking Station Cables.</p> <p>Additional items that may be included with your Ultium System include:</p> <ul style="list-style-type: none"> • Double side tape samples (part #842C) • Sample electrodes (typically dual electrodes (part #272) • Ultium User Manual (part #P-8808) 	
<p>Figure 8 - Sensor Docking Station to Ultium Receiver cable (part #CBL34)</p>		

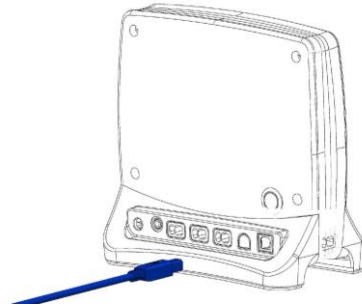
2 Hardware Installation

2.1 Hardware Setup Instructions

Step 1

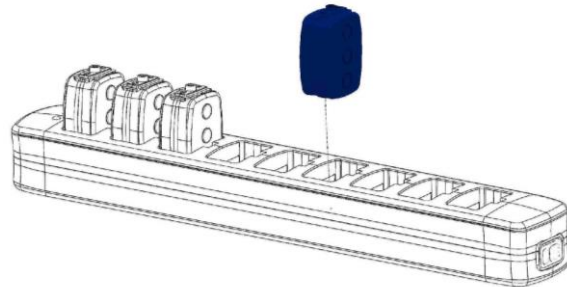
Insert the USB-B (smaller) end of the USB cable (CBL2) into the USB connector on the rear of the Ultium Receiver (880).

Insert the opposite end of the USB cable into an available USB port on the computer.



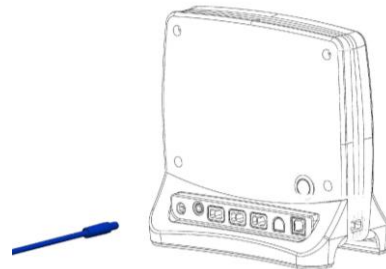
Step 2

Insert the EMG probes into the Sensor Docking Station (883).



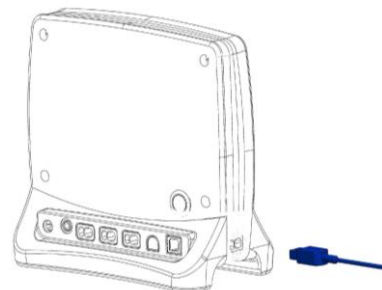
Step 3

Insert the power supply (PSU1) barrel connector into the jack of the Ultium Receiver.



Step 4

Connect the Receiver to the Sensor Docking Station (883). This will charge the sensors.



Step 5

Connect the Insole SmartLead (826) to the Ultium Sensor (810).

The Ultium Sensor will blink purple after the SmartLead is detected.



Step 6

Connect the Insole Sensor (826x) to the Insole SmartLead (826).



3 Installing the Companion Software - myoResearch™ 3

To utilize the full functionality of the Ultium Insole system, and ensure the system has updated drivers, Noraxon's myoResearch 3 (MR3) needs to be installed on the computer.

3.1 Software Installation

Within the package the Ultium Insole system was shipped in, there is a USB flash drive containing the latest myoResearch 3 software.

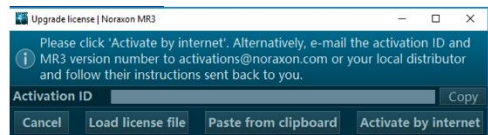
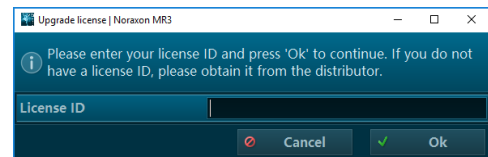
1.

1. Insert the MR3 USB flash drive into the PC
2. A menu will automatically pop up
3. Click on the Noraxon installation file and follow the Wizard's instructions
4. After installation, an icon will be created on the desktop

3.2 Companion Software Activation

The installed companion software must be *activated* before unrestricted use is possible.

1. Open MR3
2. A dialog box will indicate how many more times MR3 can be opened
3. Click on "Activate"
4. Enter the License ID provided on your USB flash drive and press "OK"
- Continued on next page -
5. If you have an internet connection, click Activate by Internet for immediate activation
6. Alternatively, email the provided activation ID to activation@Noraxon.com Noraxon Support will email or respond by phone with the Activation Code. Enter the provided Activation Code to remove any restrictions on use.

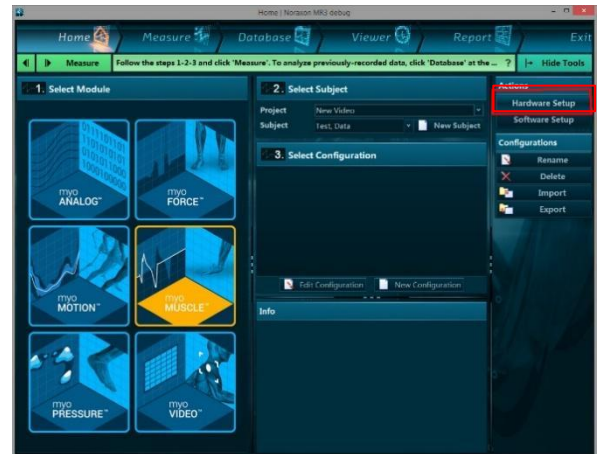


4 Configuring the Hardware

Step 1

Open MR3, typically listed under *Noraxon* -> *MR3*

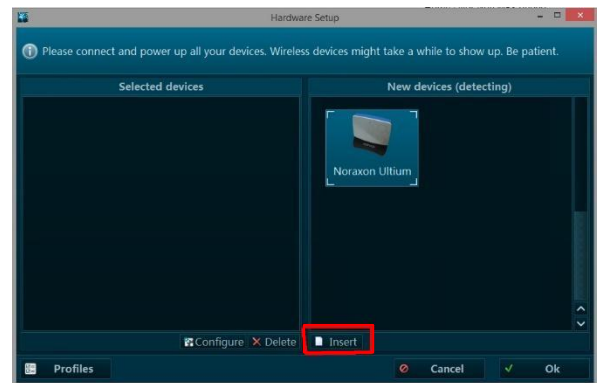
Click on the **Hardware Setup** button in the upper right-hand corner.



Step 2

Select the Ultium icon, within the 'New Device' column, and click on the **Insert** button.

Note: Make sure the Receiver is connected to the USB port of the computer via USB Cable (CBL2).

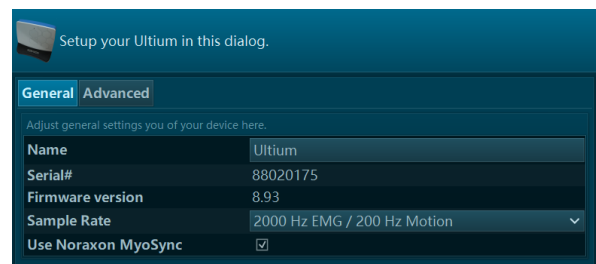


Step 3

The Ultium Settings dialog will appear as shown.

Within the '**General Tab**', select the desired collection Sampling Rate.

If using MyoSync, check the Use Noraxon MyoSync checkbox (see the Ultium EMG User Manual for more information).



Note: Firmware updates for the Receiver will be indicated here, if required.

Step 4

Place all Ultium Sensors into the chargers and attach the chargers to the Ultium Receiver. Attach the Insole Smart Leads to the Ultium sensor.

Click Detect Sensors in Charger to load all serial numbers into the MR3 software. As long as Ultium Insoles SmartLeads are attached to sensors, they will be detected as **'pressure distribution insoles.'**

Note: Sensor serial numbers appear in the order that they are placed in the charging doc, starting at the end with the LEDs (opposite of the charging port).

Step 5

After detection is complete, click Yes to replace all existing sensor serial numbers associated with this device.

Step 6

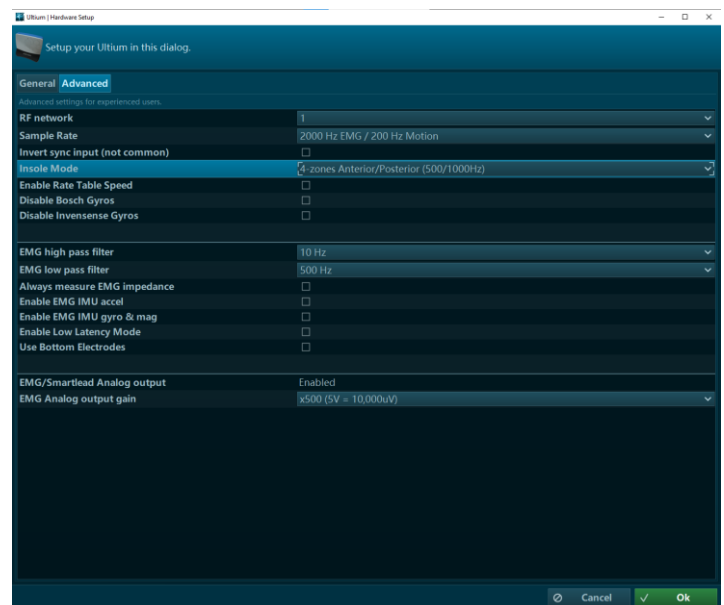
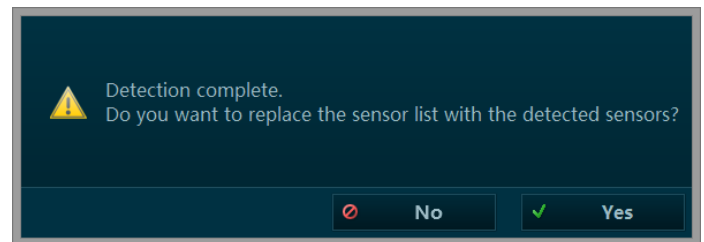
Click on the **'Advanced Tab'**.

Select a RF Network from the RF Network list. In most cases the default "1" will work. However, if using multiple Ultium systems they must be placed on separate networks.

Select the Insole Mode

Click on OK (in the bottom of the dialog box) when done.

#	Serial	Label	Type	Scale
1	20191	EMG 1	EMG	
2	20172	EMG 3	EMG	
3	2154e	EMG 4	EMG	
4	e0001	Insole LT	Insole	
5	e0002	Insole RT	Insole	
6			New sensor	



4 Zone Anterior/Posterior

Each zone shown by the red outline is an average of the sub-zones.

Example

Heel = average of the Medial and Lateral heel zones

4 Zone Combined

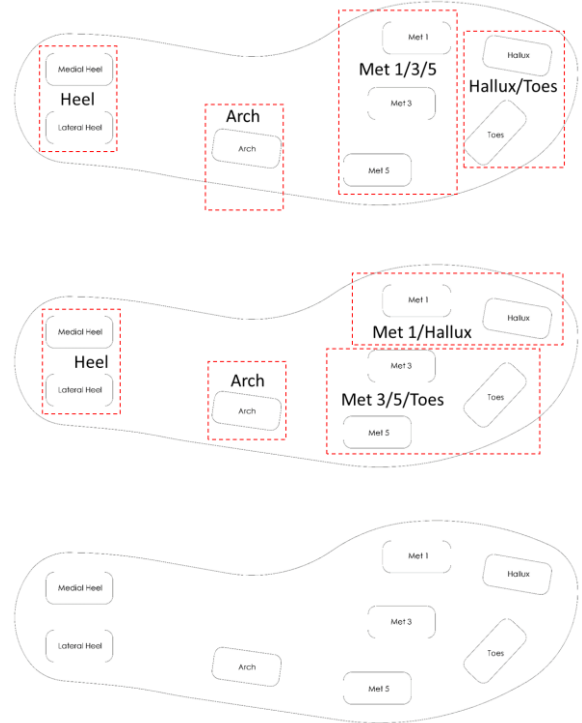
Each zone shown by the red outline is an average of the sub-zones.

Example

Heel = average of the Medial and Lateral heel zones

8 Zones

All 8 zones are captured as individual channels



5 Recording a Measurement

Step 1

Within the Home screen, click on the myoMUSCLE module icon.

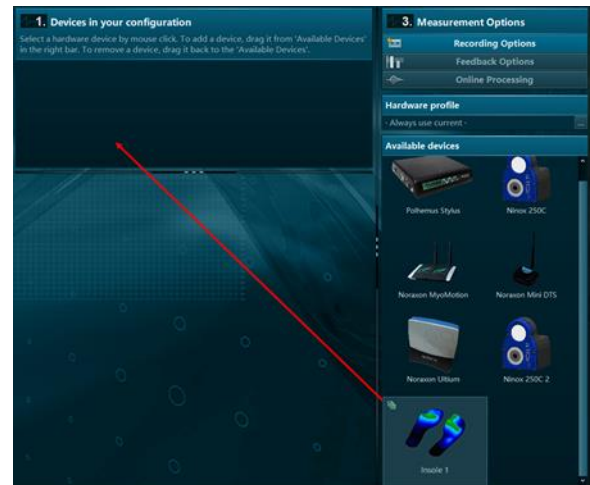
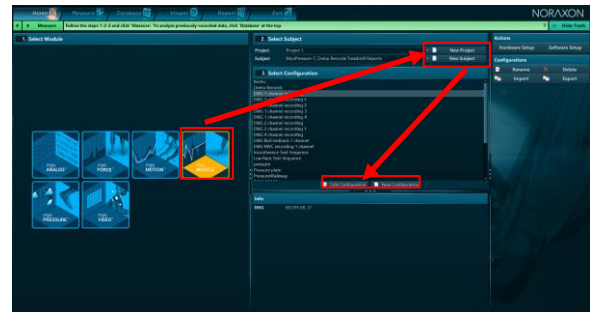
Create a New Subject

Select **New Configuration**.

Step 2

Insert the devices to be used for the measurement into the configuration by dragging a device in from the list of **Available devices**.

Continue to the next step by selecting **Measure**.

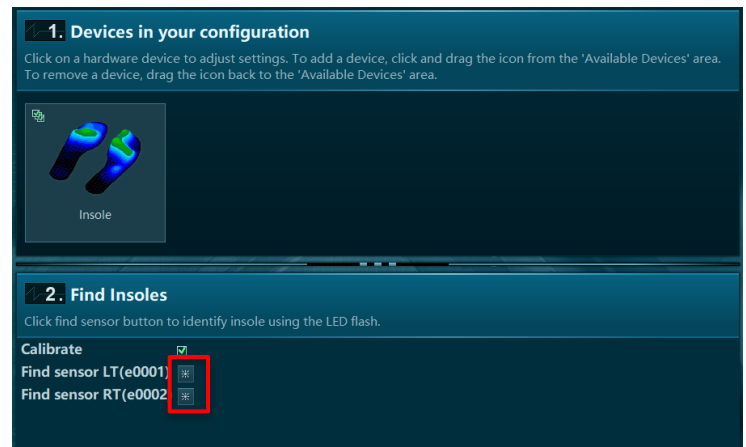


Step 3

Select to Calibrate (normalize) the insole pressure data to static standing pressure.

Continue to the next step by selecting **Measure**.

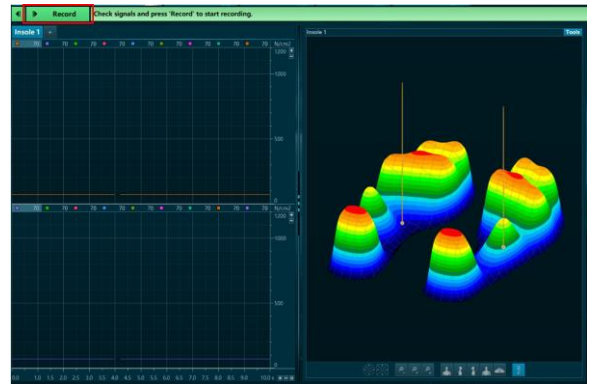
*** Find My Sensor Feature:** Allows the user to quickly locate a specified Ultium sensor while creating/editing a MR3 configuration (refer to section 7 in the Ultium Insole User Manual for guidance on how to create or edit a configuration). If one of the stars (refer to the figure to the right) is clicked, the corresponding sensor will repeatedly blink light purple in bursts of 3.



Step 4

You will be prompted to calibrate the insoles before recording. First, have the subject shift all weight to the left foot, then calibrate. Repeat for the right foot. After checking for normal signal display, you are ready to record a measurement. Select **Record** at the top left of the screen and begin your protocol.

After completing your record, select **Stop** and **Save**. Save the record as the name of your configuration, or type in a new name. After this, save your record or **Discard & measure again**.



6 Viewing a Record

To view a previously recorded record, select the **Database** tab. Records are organized by **Project** and **Subject** name. Double click on the record of interested to open the record in the **Viewer** tab.

7 Further Use Features of MR3

There are many additional features built within MR3. Such as:

- COP analysis
- Temporal gait parameters
- Customized reporting
- Exporting (and importing) of data

To learn more about the features available to you through the system(s) you have purchased, refer to the MyoResearch User Manual and the corresponding Hardware User Manual for this device. If for any reason you find our support content to be insufficient for your needs, please reach out to our support team directly by submitting a support request on our website.

8 Insole Sizing

Size Conversion

Insole Size	EU Size	US Mens	US Womens
Small	36-38		5-7.5
Medium	39-41	6-7.5	8-10.5
Large	42-44	8-10.5	11-13
X-Large	45-47	11-13	

Insole Dimensions

Insole Sensor Sizes	Length	Forefoot Width	Heel Width	Thickness	Weight
	mm	mm	mm	mm	g
Small	234	89	64	3.5	24
Medium	249	97	64	3.5	26
Large	265	97	64	3.5	30
X-Large	289	99	64	3.5	33

9 Insole Care and Cleaning

Extra care must be taken when cleaning the insoles.

- Clean with isopropyl alcohol or disinfectant wipes.
- Dampen the surfaces and do not allow solution into the vent holes.

Each insole has 5 vent holes which must remain open and free of any debris. The insoles are ambidextrous and can be placed with the vent holes facing up or down.

