

Kistler with MyoForce *System Setup Guide*

Kistler Force Plate System Setup Guide

Welcome from Noraxon

Congratulations on acquiring your new force plate 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.

1 System Unboxing

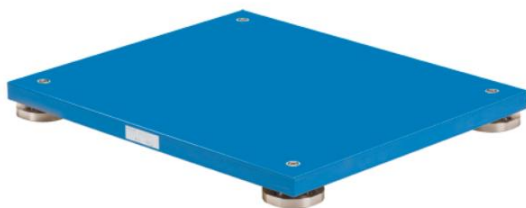


Figure 1: Kistler force plate



Figure 2: Analog Input System (Part# 222B)



Figure 3: AIS to Kistler Interface Box (Part# 222J)



Figure 4: USB A to B Cable (Part# CBL2)



Figure 5: AIS to Kistler Interface Power Supply (Part# PSU3)

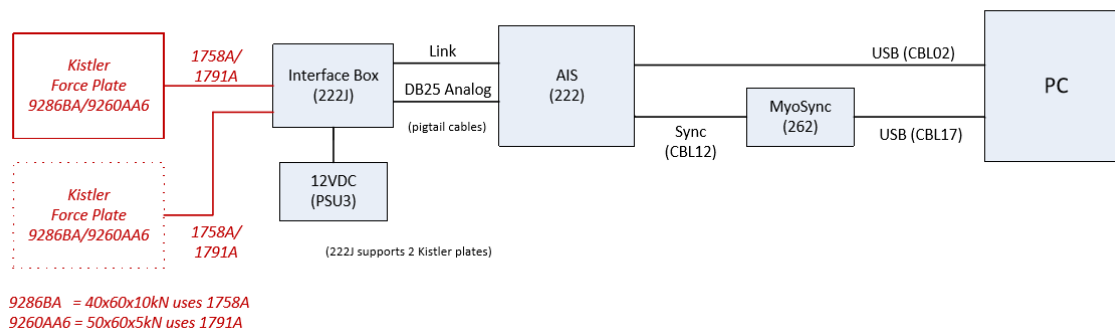


Figure 6: Kistler connection cables (Part#1758A or 1791A)

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2 Installing the Hardware

Please reference the diagram below to ensure proper connections. The Kistler plates can only be connected to a PC via an analog to digital board, which is accomplished with the AIS and AIS-Kistler Interface setup.



Step 1 –

Connect the AIS to the Interface Box (222J) using the DB25 Analog cable. Connect the Link cable on the Interface Box to the AIS



Step 2 –

Connect the Kistler plate(s) to the Interface box using the 1758A or 1791A cables. Plug the PSU3 power supply into the Interface Box.



Step 3 –

Connect the AIS to the computer with the USB A to B cable.

Step 4 (optional) –

Connect the sync port on the AIS to any sync out port on your MyoSync Master Station.

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Note: The sync cable and the Noraxon MyoSync Station are not required for normal function. If you are synchronizing the force plates with other hardware within your software, you will need the MyoSync Station.

Other hardware that may be included (if you are synchronizing with other hardware in MR3):

- Noraxon MyoSync Master Station
- USB A to B Cable (Part #CBL17)
- 3.5 mm stereo cable (Part #CBL12)

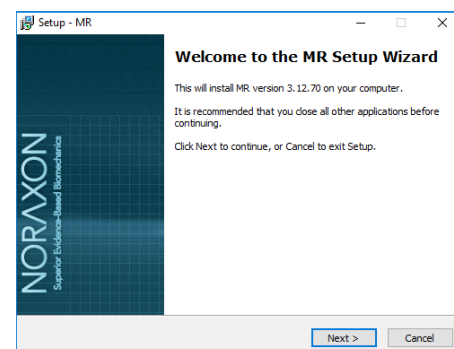
3 Installing the Companion Software - myoResearch™ 3

To utilize the full functionality of the Bertec force plate system, ensure the system has updated drivers, Noraxon's *myoResearch 3* needs to be installed on the computer.

3.1 Software Installation

Within the package the myoMOTION System was shipped in, there is a USB flash drive containing the latest *myoResearch 3* software.

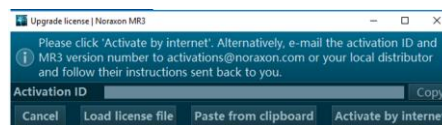
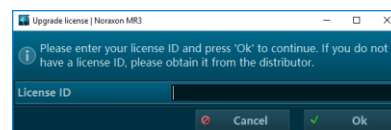
1. Insert the MR3 USB flash drive into the PC
2. A menu will automatically pop up
3. Click on the Noraxon installation file and follow the Wizard's instructions



3.2 Activating the Software

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"
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.



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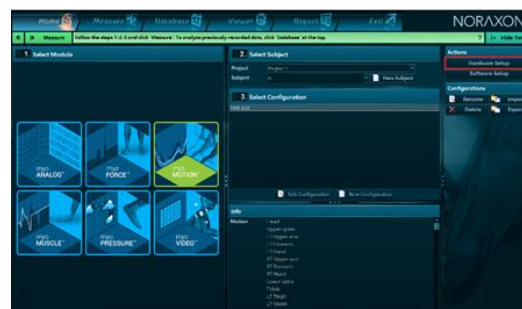
4 Configuring the Hardware

Before the Kistler system can be used, the device software settings must be configured to recognize the different components that make up the system. Follow the below instructions to update the receiver firmware, sensor firmware, and populate sensors to prepare for a data collection.

Step 1

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

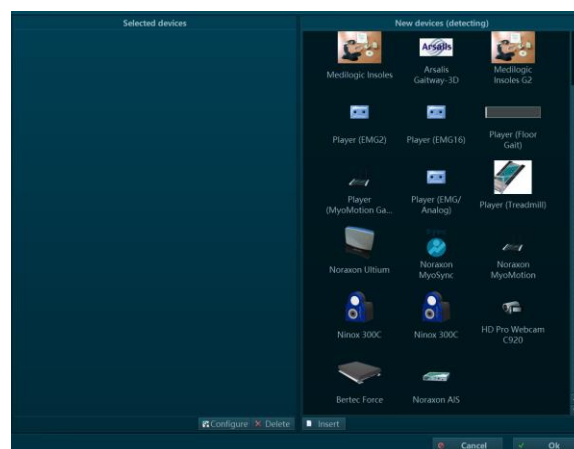
Click on the **Hardware Setup** button in the upper right-hand corner.



Step 2

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

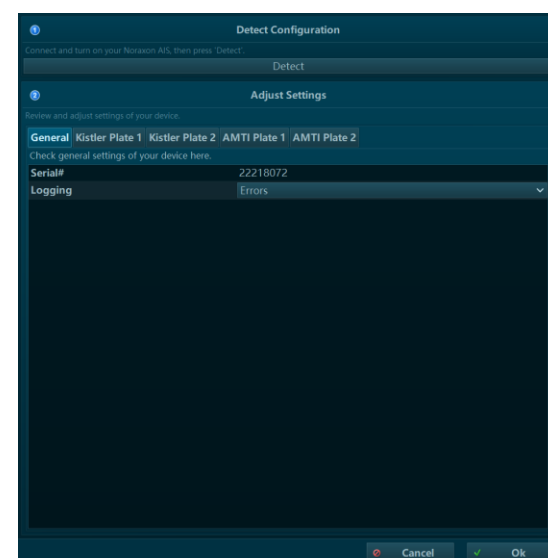
Note: Make sure the Interface box is powered by the PSU3



Step 3

The AIS settings dialog will be shown. Choose **Detect** to detect the connected force plate(s).

If you would like to synchronize with other devices, check the box that said "Use Noraxon MyoSync."

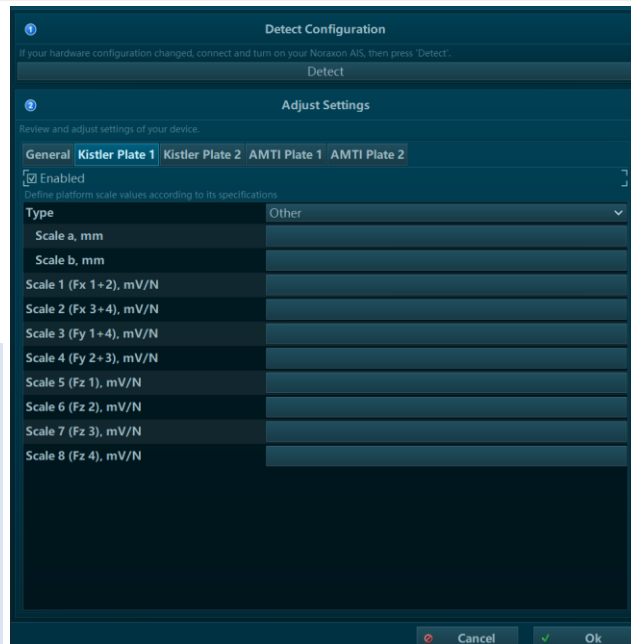


Choose the first tab for **Kistler Plate 1**. Click the Check box that says “**Enabled**”.

Select the plate type, then enter the calibration matrix values for the Kistler plate. This information can be found on your **Kistler Calibration Certificate**, which should have arrived with your force plates. The values are on the documents under “Results of Measurement.”

Note: You will need to choose the calibrated range which works best for your applications. The Fz vertical force range associated with your chosen range is designated here:

Bereich Range	Kalibrierter Bereich Calibrated Range	Empfindlichkeit Sensitivity								
	Fx / Fy	Fz	1 ³⁾ X1+2 ⁽⁴⁾	2 ³⁾ X3+4 ⁽⁴⁾	3 ³⁾ Y1+4 ⁽⁴⁾	4 ³⁾ Y2+3 ⁽⁴⁾	5 ³⁾ Z1 ⁽⁴⁾	6 ³⁾ Z2 ⁽⁴⁾	7 ³⁾ Z3 ⁽⁴⁾	8 ³⁾ Z4 ⁽⁴⁾
	kN	kN	mV/N	mV/N	mV/N	mV/N	mV/N	mV/N	mV/N	mV/N
4 ²⁾	0 ... 5	0 ... 20	1.978	1.968	1.978	1.988	0.952	0.951	0.960	0.959
3 ²⁾	0 ... 2.5	0 ... 10	3.955	3.936	3.956	3.975	1.905	1.903	1.919	1.918
2 ¹⁾	0 ... 1.25	0 ... 5	7.911	7.871	7.912	7.950	3.809	3.805	3.839	3.835
1 ¹⁾	0 ... 0.25	0 ... 1	39.457	39.244	39.485	39.675	18.934	18.907	19.067	19.052



Repeat Step 4 with your second force plate (if applicable). Select **Ok** to exit the Hardware Setup Dialog.

Adjust the switches on the Kistler Interface Box according to the range you selected from you Kistler Calibration Certificate



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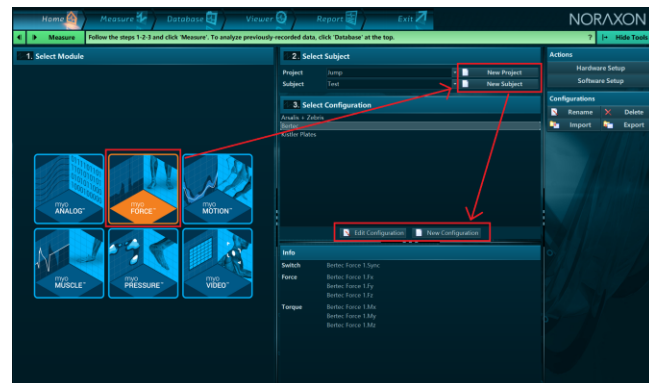
5 Recording a Measurement

Step 1

Within the **Home** screen click the myoFORCE module icon.

Create a **New Subject**.

Select **New Configuration**.

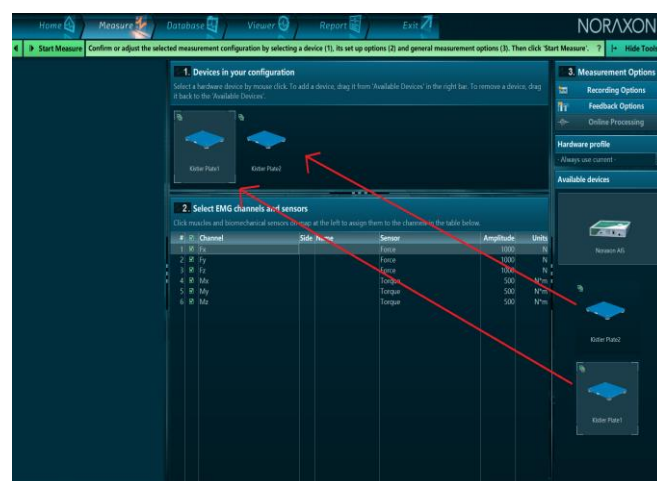


Step 2

Insert the devices to be used for the measurement into the configuration by dragging a device in the list of **Available Devices** to the **Devices in your configuration** window. You will want to drag over the **Kistler plate icons** to gain access to the 3D force and moment signals

Select the desired signals to include in the measurement configuration. 3D force and moment signals available for use.

Note: If you are using 2 force plates for force analysis, you will want to designate each force plate as RT or LT under the **Side** option.

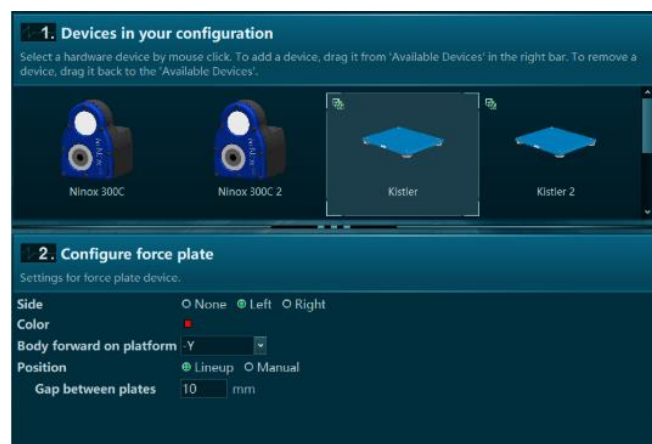


Step 2 (versions 3.16 and later)

Follow Step 2 like above. Below, instead of seeing channels to select, you will see radio buttons to designate the side of the plate and the other options to configure center of pressure tracing relative to body position.

Measure the gap between your two force plates with a ruler to estimate the most accurate "Gap between plates."

Note: For more information on how to configure these settings, please view our video tutorials on our website: <https://www.noraxon.com/video-tutorials/>



Step 3

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



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If using *MR 3.14 and older*, you should choose '**Calibrate baselines**' before recording any data to zero the force plates before use.

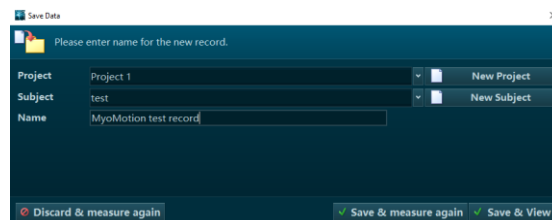
If using *MR 3.16 and newer*, the force plates are zeroed automatically when you enter the 'Measure' window. They require no further calibration.

Step 4

After checking the signals, select **Record**.

Record your signal based on predetermined protocols. After performing desired movements in the record, click **Stop** and **Save**.

Chose **Discard & measure again** or **Save** after typing your chosen record name.



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 interest to open the record.

7 Analysis and Reporting

There are several features available for force plates that require further setup. Some examples include:

- Jump Analysis
- Force Vector Overlay
- Center of Pressure tracing

For more information on how to access these features, please see the tutorials available on our website. <https://www.noraxon.com/video-tutorials/>

If you have any other questions not addressed by these resources, please contact support@noraxon.com for more information.