



USB A/D Converter

User Manual

Noraxon U.S.A., Inc.
13430 North Scottsdale Road, Ste. 104
Scottsdale, Arizona 85254
Toll Free: (800) 364-8985
Phone: (480) 443-3413
Fax: (480) 443-4327
Email: info@noraxon.com
Website: www.noraxon.com

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E-mail: info@noraxon.com
Support E-mail: support@noraxon.com
Web Site: www.noraxon.com

USB A/D Converter Setup

Step #1 - Unpack all items and check inventory



USB A/D Converter
Part # 220



Ribbon Cable
Part # CBL1



USB Cable
Part # CBL2

Step #2 - Install the USB A/D Converter

The instructions that follow use the MyoSystem 1200 to illustrate the steps required to install the USB A/D Converter. However, these steps are the same for the MyoSystem 2000 and TeleMyo 900.



MyoSystem 1200



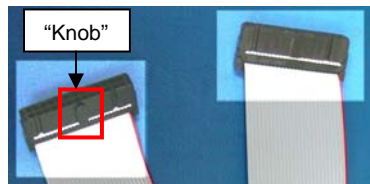
MyoSystem 2000



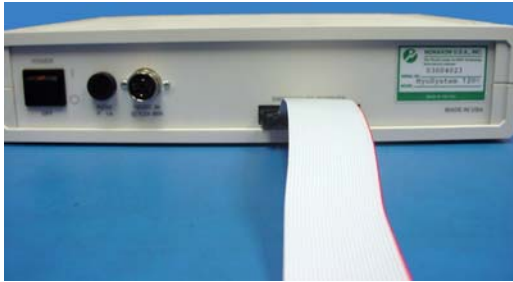
TeleMyo 900



1. On the back side of the Noraxon EMG System, there is a connector labeled “EMG Analog Outputs”



2. Locate the Ribbon Cable and notice that the connector is not the same on both sides – There is a “knob” on one side of the connector. Line up this “knob” with the “cutout” on the Noraxon EMG Instrument and USB A/D Converter connector when inserting the ribbon



3. Insert the ribbon cable into the connector on the Noraxon EMG Instrument. You should hear a click and the locking tabs should enclose the ribbon cable.



4. Insert the ribbon cable into the connector on the USB A/D Converter. You should hear a click and the locking tabs should enclose the ribbon cable.



5. Insert the USB cable into the "USB" connector on the USB A/D Converter.



6. Connect the power supply to the Noraxon EMG Instrument and plug it into a wall outlet. (You can operate the TeleMyo 900 Receiver using the "Battery Mode".)
7. Turn the Noraxon EMG Instrument on.

Step #3 - Install the USB Driver

1. Turn your computer **ON** and wait for Windows to start.
2. At this point, your Noraxon EMG Instrument and computer should be **ON**. Your USB cable should **NOT** be connected.
3. When Windows has finished loading, plug the USB cable into an available USB port on your computer.
4. The "Add New Hardware Wizard" screen should appear automatically if the USB cable is connected properly.
5. The first screen informs you that Windows is going to search for new drivers. Click the "Next" button to continue.
6. Windows will then prompt you for information on where it should look for new drivers. Check the box which says to "Specify a Location:". Do not press the "Next" button yet.
7. Insert the MyoResearch XP software CD or the Drivers CD, which was sent along with the USB A/D Converter, into your CD-ROM drive. The driver may also be downloaded from our website: <http://www.noraxon.com/downloads/drivers.php3> (For the MyoSystem 2000, select the MyoSystem 1200 icon.)
8. Click "Browse" and locate the CD drive. Then locate the folder "Drivers" then "USB-G2-Vista", e.g. D:\Drivers\USB-G2-Vista. If you downloaded the driver from our website, browse to the proper location on your computer. When you have located the driver, then press the "Next" button.
9. After you have selected the Driver successfully, a Windows message will inform you that it has found a driver file for your USB A/D Converter. Click the "Next" button.
10. Finally Windows will inform you that it has finished installing the software for your USB A/D Converter. Click the "Finish" button to end the "Add New Hardware Wizard".
11. The USB driver has now been installed successfully on your computer.

Step #4 - Configure the Software for the USB A/D Converter**Instructions for MyoResearch XP (MRXP):**

1. Start MyoResearch XP by clicking on the MyoResearch XP Icon.
2. Follow the "Setup the Hardware in MyoResearch XP" instructions, which were sent with the software CD or can be downloaded from our website: (password = surfacesw) http://www.noraxon.com/downloads/software_manuals.php3.
3. In the "Hardware Setup" window, select your hardware (MyoSystem 1200, MyoSystem 2000 or TeleMyo 900).
4. In the "Hardware Setup" window in the "A/D Input" box, select "Noraxon USB device" from the pull down menu.
5. Click OK to the "Hardware Setup" window to accept changes and return to the "Measurement Setup" screen.

6. The configuration of the EMG channels in MyoResearch XP is :
 - Channels 1-8 are the Raw EMG channels in MRXP for channels 1-8 on the Noraxon EMG Instrument.
 - Channels 9-16 are the Integrated EMG channels in MRXP for channels 1-8 on the Noraxon EMG Instrument.

Instructions for MyoResearch (2.02, 2.10, 2.11)

1. Start MyoResearch by clicking on the MyoResearch Icon.
2. From the database screen, go to Setup, then A/D setup.
3. Here the “A/D driver” must be changed to “USB sampling device”.
4. Click OK to accept the changes.
5. Now, regular measurements can be taken. However, if you were using a PCMCIA card, e.g. Keithley, the channel configuration is now different in MyoResearch.
 - Channels 1-8 in MyoResearch represent the Raw ‘e’ channels 1-8 of the Noraxon EMG Instrument.
 - Channels 9-16 in MyoResearch represent the Integrated ‘E’ channels 1-8 of the Noraxon EMG Instrument.

Example: Channel 1 in MyoResearch is the raw channel 1 of the Noraxon EMG Instrument.
Channel 9 in MyoResearch is the integrated channel 1 of the Noraxon EMG Instrument.

NOTE: When the A/D driver is set to “USB sampling device”, the software created 2 new buttons in the Measurement Menu screen of MyoResearch. These buttons are “Impedance Test” and “Control Panel”. These 2 buttons do not work with the USB A/D card. They are intended only for use with the MyoSystem **1400**. Furthermore, in the Measurement screen, an additional button is present in the top menu bar to the far right. This is called a Cal. Test button. Again, this does apply to the USB A/D card. It is intended only for use with the MyoSystem **1400**.

Technical Specifications

Data Acquisition:

- 12 bit resolution for 16 channels
- Selectable per channel signal gain of 1, 2, 4, 10.
- Selectable sample rate of 1000, 2000 or 3000 samples/sec/channel
- USB update to the PC every millisecond.

Dimensions:

- Inches - L: 5.8" x W: 3.38" x H: 0.85"
- Millimeters - L: 145.1 mm x W: 85.5 mm x H: 21.4 mm
- Weight: 5.4 oz (153.1 g)