Faro Arms

This Quick-start guide applies to the setup of the Faro Platinum, Quantum and Edge.

Hardware Setup:

Faro Arm is a USB connected device. Install the drivers before connecting the USB cable. Once installation is complete connect the cable and ensure that the power switch located on the arm is turned on.

Software Setup:

Download and install the appropriate 32 or 64 bit version of 'FaroArmUSBdriver' from the Driver Downloads section of the NRK FTP site at:

http://www.kinematics.com/ftp/SA/Install/Driver%20Downloads/PCMM%20Arms/FARO/USB%20Arms/

The driver from our webpage is a 3rd party driver and is the last version fully tested in SA.

Faro Driver version 6.6.0.15 or later does not include all the common files SA uses to switch between probing and scanning. If you are in a version prior to 2020.12.01 and use a newer Faro driver you will also want to download the common files here:

ftp://ftp.kinematics.com/pub/SA/Install/Driver%20Downloads/PCMM%20Arms/Faro/

Unzip the files and copy the dll files to `C:\Program Files (x86)\ Common Files\FARO Shared\Devices.`

Connection Setup:

Most arm models can connect in either of 3 ways. Using USB, bluetooth, or wireless connections. *To use the default USB connection no additional set up is necessary.*

Bluetooth Connections:

1. *Open the front panel of the arm, go to connections and then enable bluetooth.*

2. *Go to the bluetooth connection on the computer and add a device.*

3. *Once the device is found (the name of which should match the arm serial number) click on it and select Pair device. The pairing code is "faro".*

4. *Once connected to windows go to hardware and find the com port used for the connection.*

5. *Open the Faro Bluetooth Connection Utility in the start menu and enter the Com Port set from the bluetooth connection*
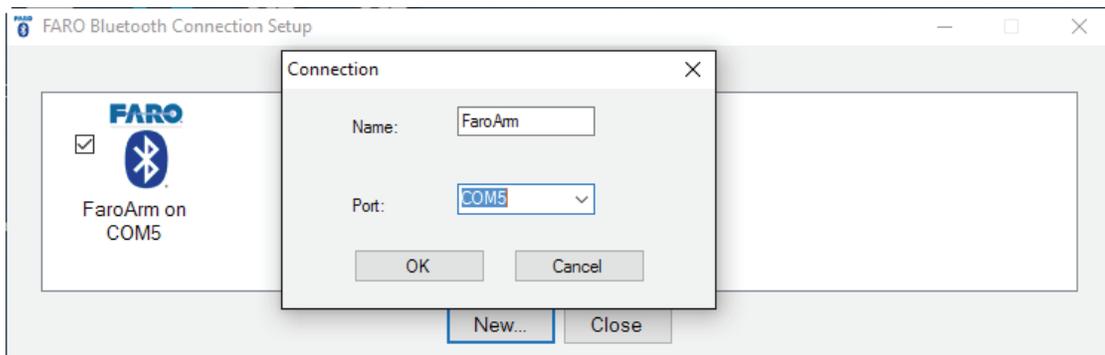
6. *Once connected close the connection dialog. You should get a windows prompt telling you that there is a connection.*

An example video can be found here:

> *https://www.youtube.com/watch?v=hUoUKYKSCvk*

Wireless Connection

1. *Open the front panel of the arm, go to Settings>Connection and select WiFi*

2. *Select WiFi to PC/Laptop (to connect to an existing network use Wifi to network, connect to that network)*

3. *Once enabled. open the computers wifi connections and connect to the Faro Wifi signal (named according to the arms serial number).*

4. *Open the Faro Ethernet Setup utility from the start menu and select the wifi card for the host adapter. The arm connection should appear after you press "refresh".*

5. *Choose this connection by checking the check box and press OK.*

An example video can be found here:

https://www.youtube.com/watch?v=3gh2cJE7Pf0

Running the Instrument in SA:

1. Add an instrument using the menu item Instrument>Add Instrument and select the appropriate FaroArm from the list.
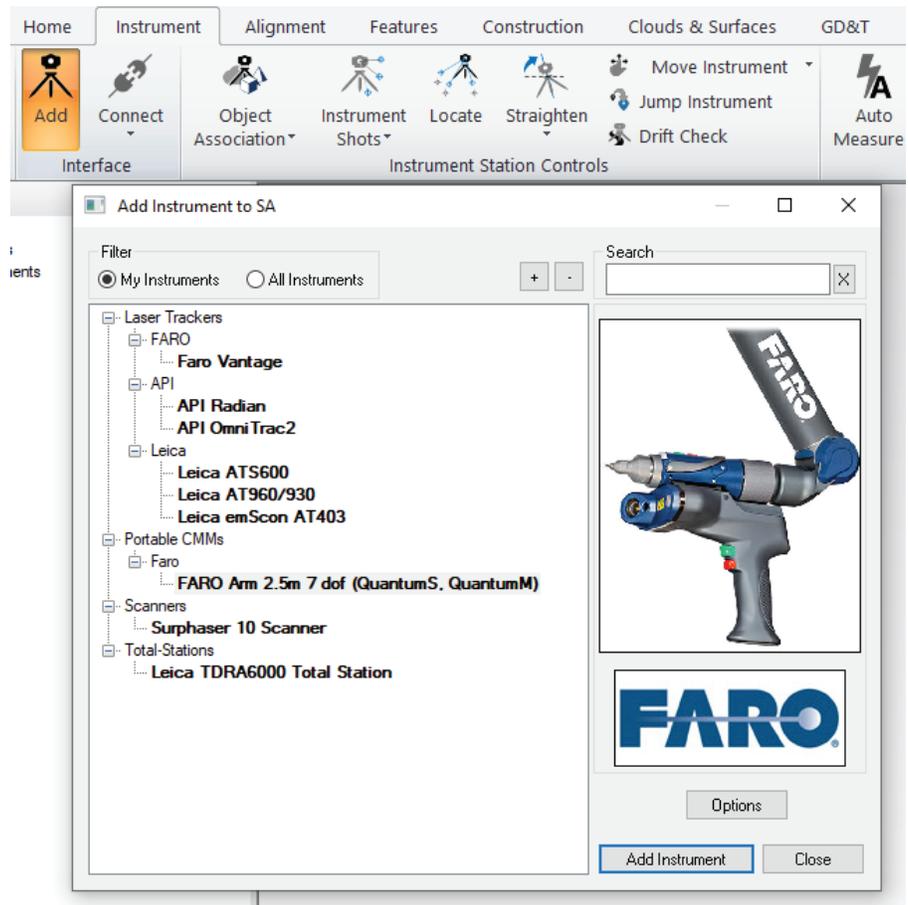
Figure 4-75. Adding a Faro Arm to SA

2. With the new instrument added run the arm interface module. Simply press the Connect icon or go to Instrument>Run Interface Module and Connect. SA should automatically detect the arm and start the Instrument Interface.

Instrument Graphics

The first time you connect to a new arm in SA the arm graphics may not be correct and the arm graphics and the measured points may not line up. This is because SA doesn't know the default starting encoder locations. This not a problem because the graphics are fit to the

measurements, not the other way around. It will not affect the measurements and can easily be corrected as follows (see Figure 4-76).
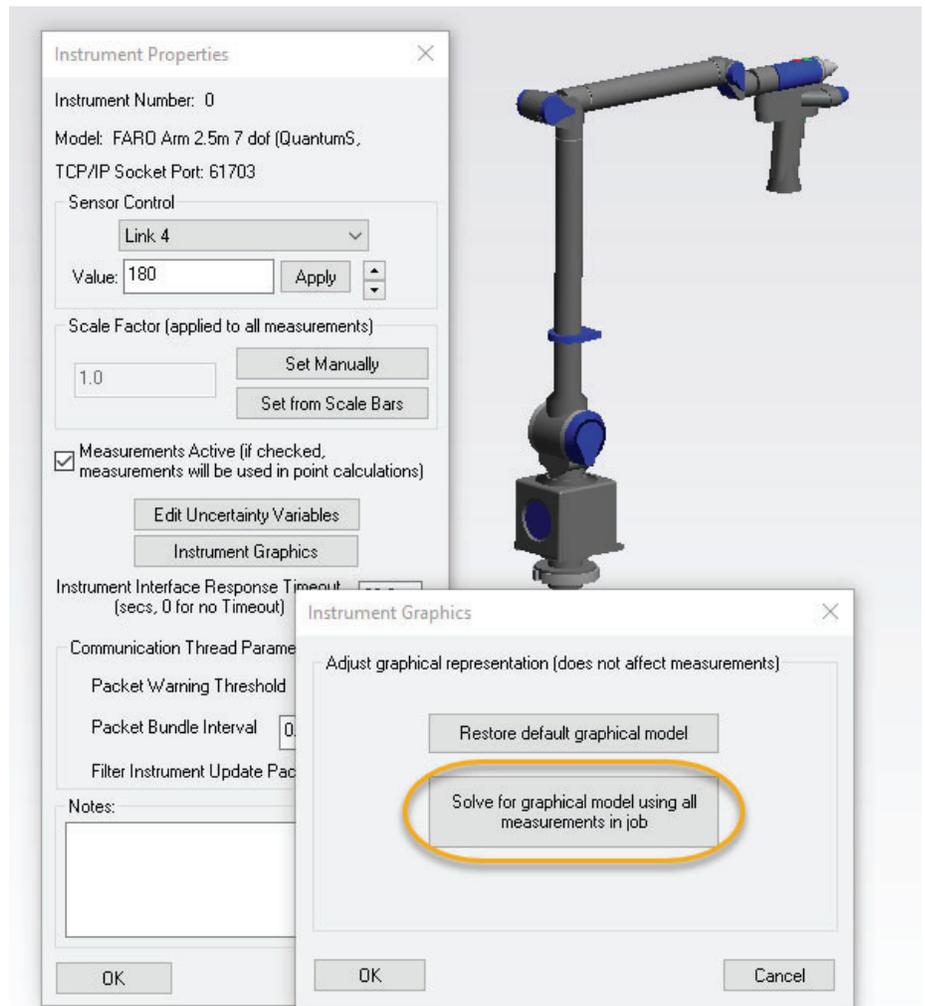
To correct the arm model graphics follow these steps:

1. Measure a bunch of points in the graphics around the arm in different joint orientations.

2. Open the arm's properties by right-clicking on it and select Instrument Graphics then select *Solve for graphical model using all measurements in the job.*

When you do this SA will compute the encoder angles necessary to fit the measurements and correct the arm graphics for you. This will be saved in the persistence file for the instrument and will need to be done performed once.

Instrument Controls

Most users will be happy using the instrument toolbar. It offers basic controls over the measurement naming, measure acquisition modes. The wrench and screwdriver icon provides direct access to the arm

configuration as well
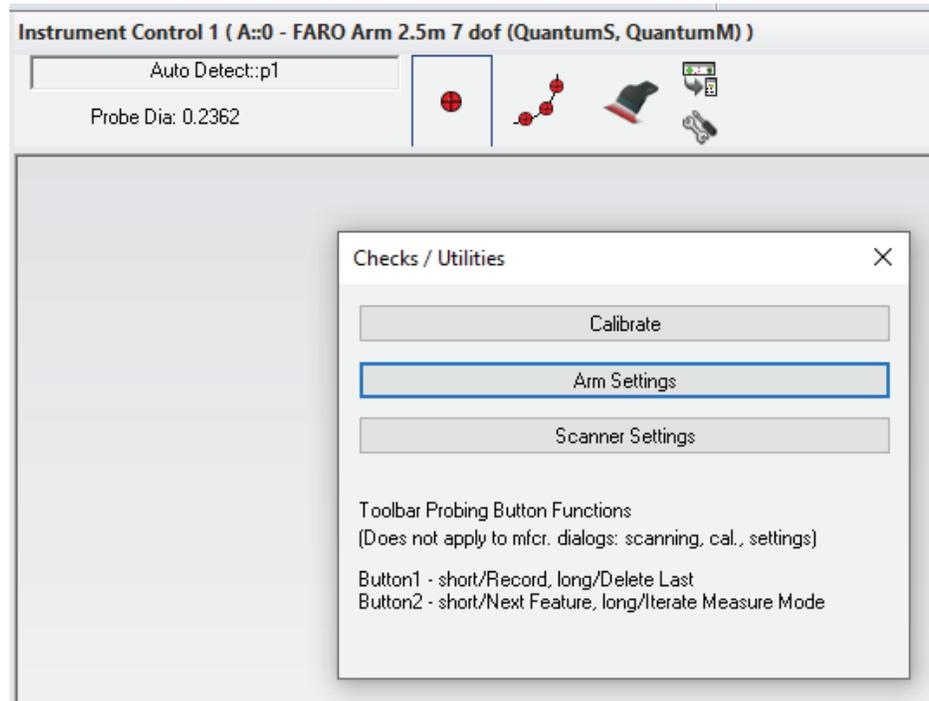
More detains on the full interface can be found at the beginning of
the chapter. You might want to see the fill set of arm settings available
here (see "Edit Arm Settings" on page 155).