QUICK START **INSTALLATION**
Noninvasive BP Amplifier and Acq*Knowledge*

Congratulations on your NIBP100E/NIBP100E-HD purchase.

*Follow this Quick Start Guide to set up the NIBP100E module and integrate with Acq*Knowledge—*plus access HD license if enabled.*

NIBP SYSTEM COMPONENTS

- NIBP100E module with AC150 power supply
- License: **NIBP100E** KEY20 flash drive *or*
  NIBP100E -HD KEY22 flash drive
- Double-finger cuffs: small, medium, and large (RXNIBPEFINGER-S, -M, -L)
- Arm cuffs: small, medium. large, extra-large (RXNIBPDCUF12-19, 17-25, 23-33, 31-40)
- CNAP Controller with Holder (RXNIBPECONTROL)
- NBP Cuff Hose Extension
- TFC Forearm Controller Strap
- TFC Cable
- USB Cable (CBLUSB)

Compatibility

- *Requires computer running Windows (macOS not supported)*
- *The NIBP100E module is used in both the standard and -HD systems*
- *The NIBP100E-HD requires a separate license to access hemodynamic calculations*
- *These instructions reference the MP160 data acquisition and analysis system; the NIBP100E module works with both the MP160 and the older MP150*
- *Requires Acq*Knowledge *5.0.7 or later*

MODULE QUICK SETUP INSTRUCTIONS

1. Connect MP160 device to the computer.
2. Attach the NIBP100E module to the MP160 data acquisition system.
3. Connect the NIBP100E USB cable to the USB connector on the back of the module and a USB port on the Windows computer.
4. Connect the AC150A power cord to the back of the module and plug it into a properly grounded AC Mains socket.
5. Select the correct double-cuff sensor size by using the sizing graph on the finger cuff controller. If a participant's finger size is between two cuff sizes, choose the larger cuff.
6. Assemble the finger cuff hardware by connecting the double-cuff finger sensor, the cuff controller, and finger sensor cable.
7. Connect the finger sensor cable to the outlet labeled "Finger Cuff" on the front of the NIBP100E module.

NIBP100E rear panel

Sizing graph on finger cuff controller

8. Select an upper arm blood pressure cuff that is the proper fit for the participant (i.e., Child, Small Adult, Adult, or Large Adult). The cuff part number indicates each cuff's circumference.

9. Connect the blood pressure arm cuff to the outlet labeled "BP Cuff" on the front of the NIBP100E.

10. Power on the MP160 device.

11. Power on the NIBP100E module by pressing the power button on the rear of the device. The power and USB lights should be illuminated when the device is ready.

PARTICIPANT SETUP

Applying Double-Cuff Finger Sensors

1. Equip the participant with the double-cuff finger sensor and cuff controller by placing the double-cuff finger sensor on the proximal joints of the index and middle fingers. Ensure that the cuff cables run along the outside of the participant's arm.

2. Place the cuff controller into the slide and fasten it to the participant's forearm with the Velcro strap. Make sure that no additional force (tension or pressure) is exerted on the double-cuff finger sensors via the cable connection.

Applying Arm Cuff

1. Use only BP arm cuffs authorized by BIOPAC.

2. Place the blood pressure cuff on the participant's upper arm, preferably contra-laterally, at heart level. The marker arrow on the NBP cuff should be directly above the brachial artery.

Properly positioned finger cuff controller and sensor

RECORDING BP DATA

Setting up equipment for the first time or creating a new experiment:

1. Open Acq*Knowledge* and select "Create/Record a new experiment" and "Create Empty Graph," then click **OK**.

2. Open the Data Acquisition Setup window by selecting "MP160>Set Up Data Acquisition" (Note: Select "MP150" if this is the model of data acquisition device used).

3. Select "Channels" and click the **Analog** tab. Click on the **Add New Module** button, and when prompted by the pop-up menu "What type of modules should be added," select "NIBP100E" from the module list. Typing "N" will jump the selection directly to "NIPB100E" in the module list.
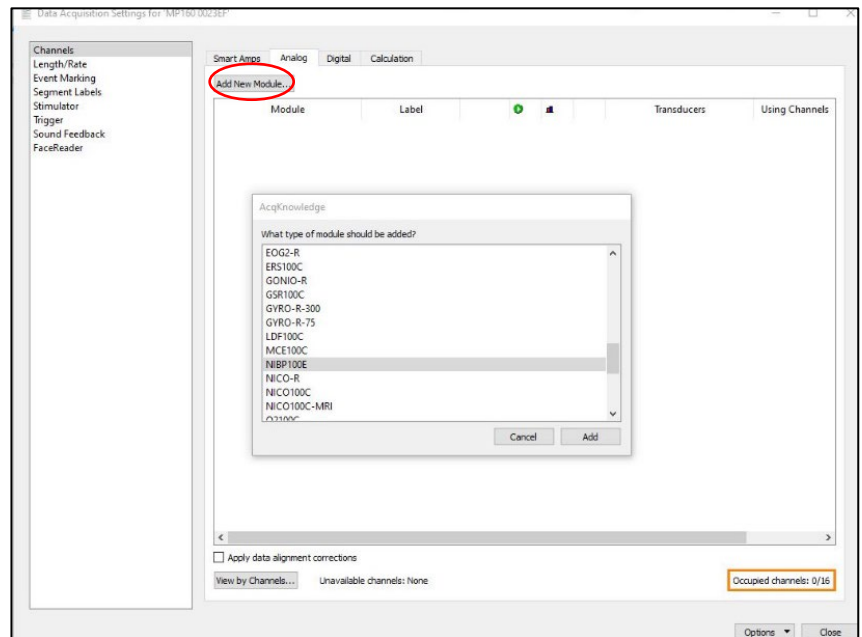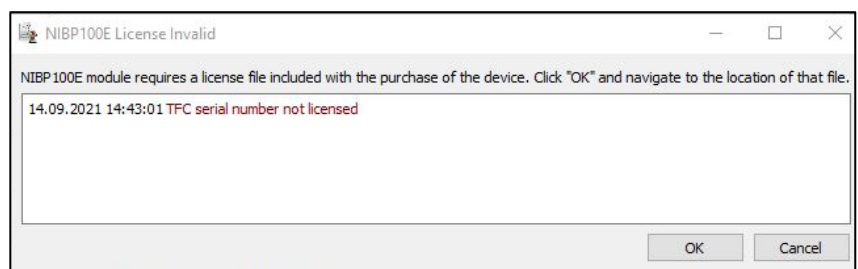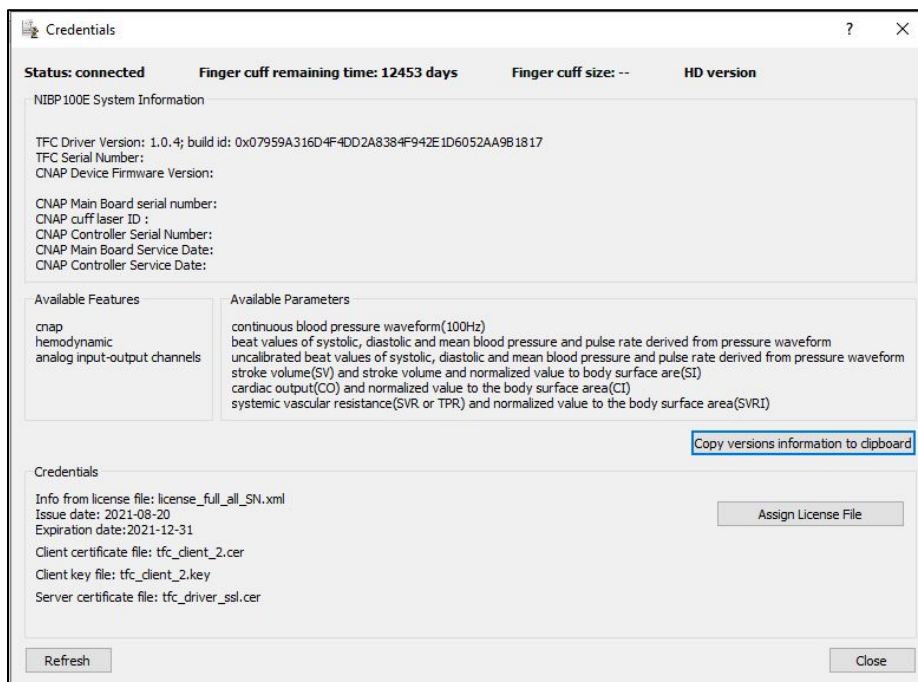

LICENSE SETUP

1. The user will be prompted to navigate to the location of the license file. The NIBP100E or NIBP100E-HD license file ships on a flash drive included with the NIBP100E system.

   ***KEY20 for NIBP100E***
    KEY22 for NIBP100E-HD

2. Check the license version and assign the correct license by clicking the **About** button at the bottom of the Configuration window to open the Credentials window. From here the user can assign a license file or copy version information to their clipboard.

Credentials window

3. If the correct license is installed, close the About dialog box, which will return the user to the module setup window. Depending on which license has been installed, the window will display checkboxes for the four (4) non-HD cardiac channels or the four non-HD channels plus six (6) HD cardiac channels.
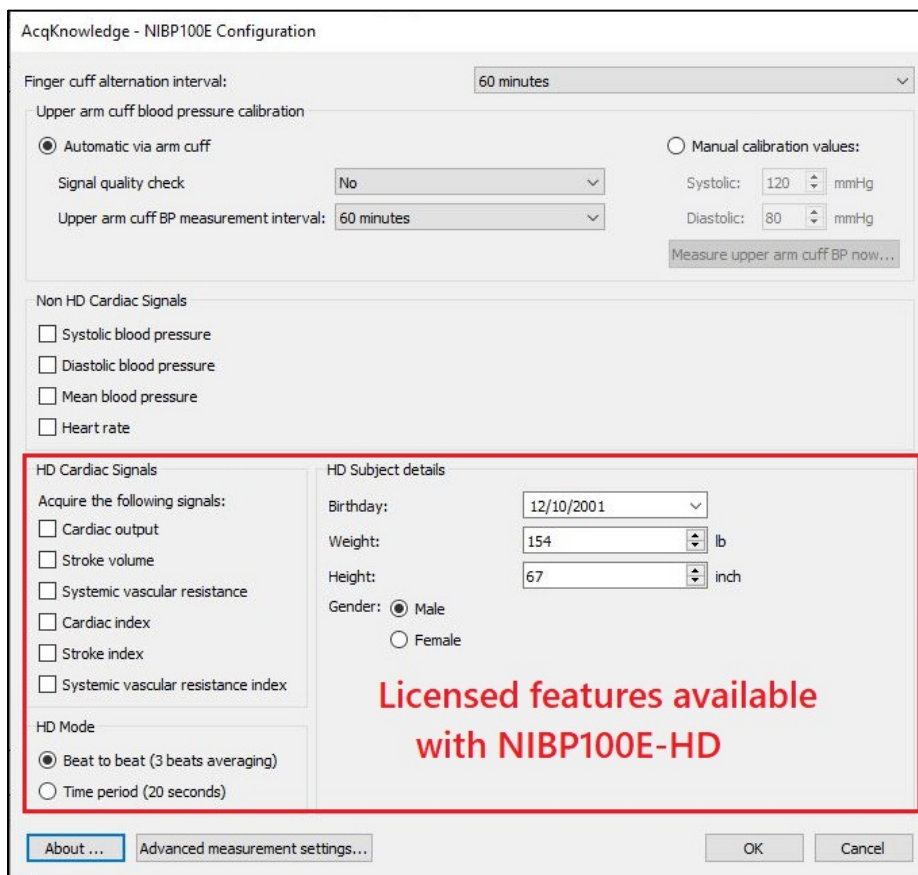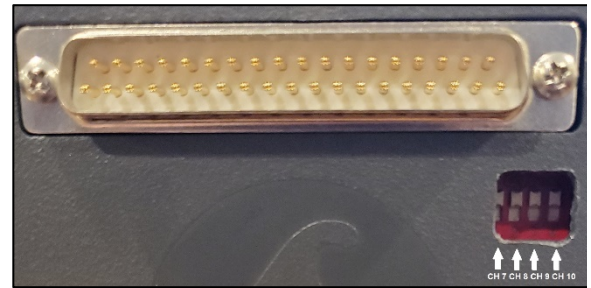

Configuration window

Data Channels

Raw analog data is recorded through Analog Channel 7 on the MP160. The HD cardiac signals use channels 8, 9, and 10. Only up to three (3) HD signal calculations can be recorded during a session. Each NIBP100E unit is equipped with four dip switches on the left side panel (see image at right; the NIBP100E module must be separated from the MP system to expose the left side panel). These switches are numbered 1-4 (left to right) and control channels 7, 8, 9 and 10, respectively (i.e., 1=7, 2=8, 3=9, and 4=10).

NIBP100E-HD dip switch configuration

All units (HD and non-HD) will by default have the dip switch for channel 7 set to the "on" or up position.

HD units will also have switches for channels 8, 9 and 10 in the "on" or up position by default. The NIBP100E-HD user may choose to switch channels 8, 9, or 10 to the "off" or down position to free up those channels for other hardware.
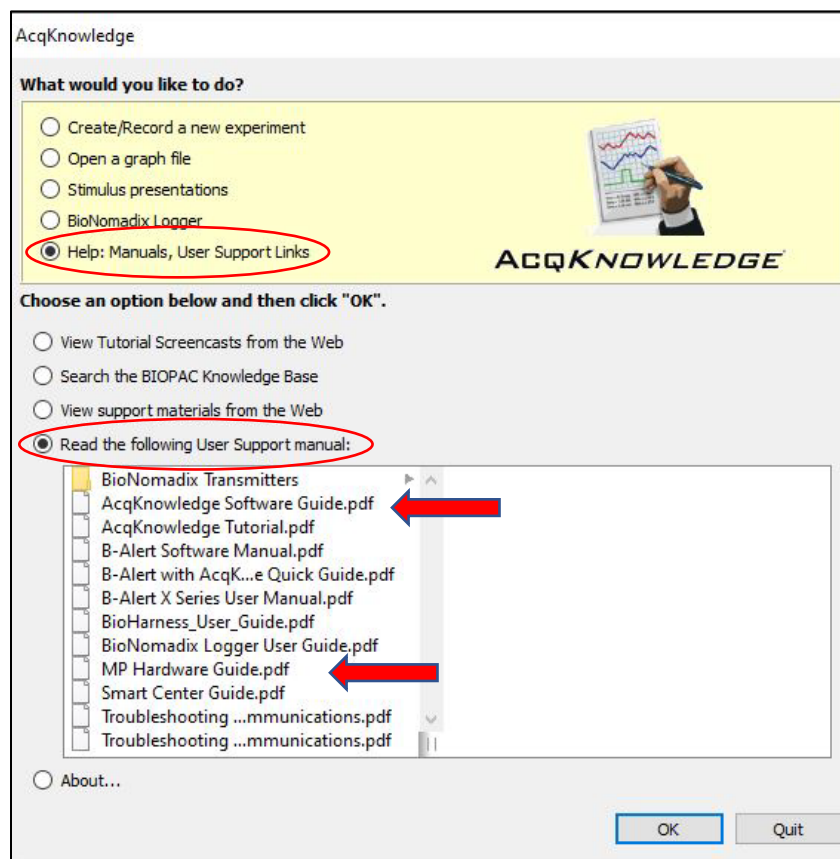
User Guides

Access additional support guides under the Acq*Knowledge* Help menu

- For detailed instructions on licenses and licensed features, setting up channels, and recording data, see the Acq*Knowledge* Software Guide **Setting Up Data Acquisition and Channels for NIBP100E/NIBP100E-HD**.

- For additional technical specifications on the NIBP100E and NIBP100E-HD hardware, see the MP Hardware Guide.

*Accessing user guides from Help Menu in Acq**Knowledge***