LadyBug Persona Assistant

Overview

The LadyBug® Persona Assistant allows you to change the persona or manufacturer and model information reported by LadyBug® brand power sensors. Manufacturer and model information is commonly reported via the ***IDN?** query (and other SCPI queries) and this information is commonly used to select drivers and/or command sets.

Important Notes:

- PMA-12 Must be closed when the Persona Assistant is in operation.

- It is not necessary to activate Persona to use USBTMC and SCPI commands. These are native to the sensor. Persona adapts the sensors Manufacturer Name, Product Model, Serial Number and Firmware Version. It also de-activates the USB HID interface because some equipment will not accept composite USB devices.

- To assure compatibility with competitive devices, when active, Persona de-activates the USB HID driver, only the USBTMC driver is active. The result is that LadyBug software, including the Persona Assistant, PMA-12 and Interactive IO will not function. Refer to the last section on *Clearing Persona* for more information.

How to User Persona Assistant

The Persona Assistant is simple to use. To use Persona Assistant do the following (Refer to the drawing screen shot below):

1. Close all software – especially any software communicating over USB including NI ®, Agilent ® or Keysight ® IO Libraries and all LadyBug ® software.
2. Start Persona Assistant by clicking the **Windows Start button->All Programs -> LadyBug Technologies LLC->Persona Assistant** and click to start the application.
3. When the application starts you should the following window:
4. Start by selecting the sensor of interest from the list of sensors:
   a. Click the down arrow
   b. Select the sensor
5. When a sensor is selected, the factory persona for the selected sensor should immediately appear in the green area and the reported persona should appear in the reddish area. If the persona has not been set or has been cleared the reddish and green areas will contain the same data.

6. To ensure you have selected the correct sensor, you may click the **ID** button. Clicking this button causes the LED of the selected sensor to blink.

7. Enter the new persona in the reddish area. For instance you could enter the following:
   a. Agilent Technologies
   b. U2000A
   c. MY50000235
   d. A1.04.00

8. When you are satisfied with your entries click the **Set** button. Some notices will appear. Wait for the process to complete. You may see the Windows identity a new device. Please be patient.
9. When the process is complete the form will be blank. If you examine the sensor list the newly identified sensor should be present.
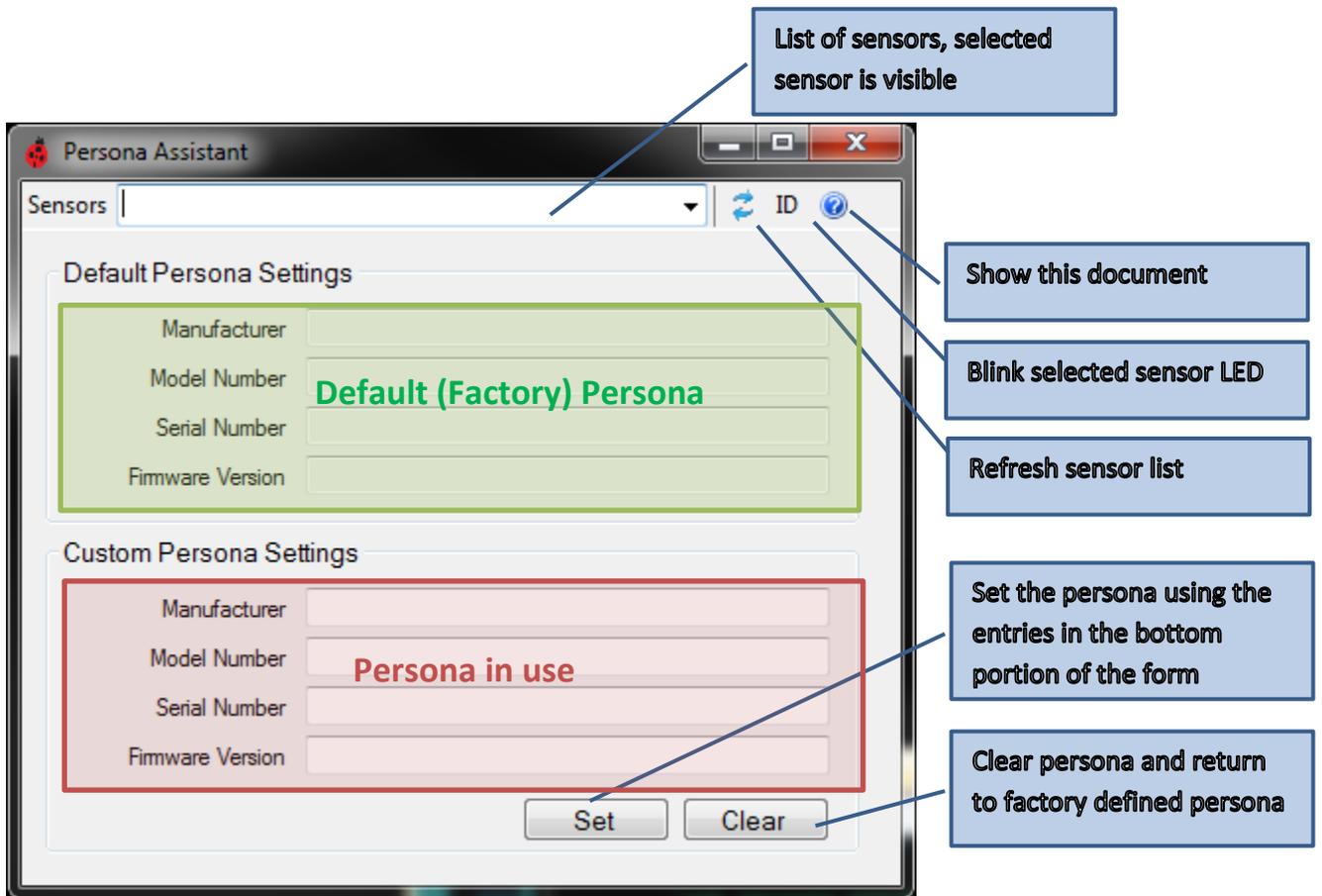
10. Select the sensor. Both the factory and new persona should appear.
11. To return the sensor to the factory default persona, shown in green, click the **Clear** button. Refer to the *Clearing Persona* section for additional information.
12. Again some notices will appear. Wait for the process to complete. When the process is complete the form will be blank. You sensor should be in in the list with its new identity.

Purpose and Additional Information

To minimize design impact on your test software, the persona must be useful. To be useful the brand specific information and the SCPI command sets must highly (or completely) compatible. So that if your software uses power sensors with branding other than LadyBug but whose command set is compatible, a persona may allow you to use multiple brands and models of sensors interchangeably and _without issue_. By that I mean you may be able to use existing drivers and software without redesign.

Interactive environments can be of equal importance. Products with compatible command sets can shorten or eliminate the learning curve for engineers and technicians using devices in interactive environments. Use of interactive environments is common the initial stages of system design. This work can be frustrating and time consuming. Anything that shortens or eliminates this time (learning curve) by reusing existing knowledge is welcome.

All that is needed is for you to enter the information in Persona click the **Set** button. From that point on the LadyBug sensors will report manufacturing and model information (model number, serial number and firmware version selected and set by you. If the command sets are compatible you are on your way. And, when the time comes, you may easily reset LadyBug sensors back to their factory settings with the Persona Assistant.

Command compatibility and reducing software redesign was a key intent of some standards. With the LB59xx line of LadyBug sensors, we have tried to deliver on this intent. Specifically, the Ladybug LB59xx line of sensors were designed to be command and performance compatible with the U2000, U2001, U2002 and U2004 USB power sensors. And Persona Assistant takes it one step further.

Finally, other sensors use a very similar (if not identical) SCPI command sets. Most test systems use a fraction of the instrument's SCPI commands. So it is highly likely that LadyBug LB59xx sensors with a persona may be used in these cases also.

Clearing Persona

The sensor's USB HID interface is disabled when Persona is active. As a result Persona Assistant cannot access the sensor and therefore cannot clear the Persona. There are two ways to clear Persona.

1. Temporarily re-activate USB-HID and use the Persona Assistant's _Clear_ button as detailed in the sections above. To temporarily activate USB HID do the following:
    a. Connect the sensor and allow full enumeration until the green LED appears
    b. Unplug and reconnect the sensor's USB connection **3 times**, taking about 3 seconds total. (disconnect and reconnect as soon as green appears)
    c. Upon success, the LED will glow Red, then turn green. Do not disconnect. The Persona Assistant will now function. Click the _Clear Button_.
    d. Note: This USB HID activation is temporary, if Persona is not cleared the device will revert to the _USBTMC only mode_ after re-enumeration.

2. Use the USBTMC interface to send the following 2 commands: SYST:PERS:MAN:DEF SYST:PERS:MOD:DEF using Keysight® or NI® VISA Interactive IO programs.