# Guidelines for Installing HI 1756-WS/2WS Faceplates
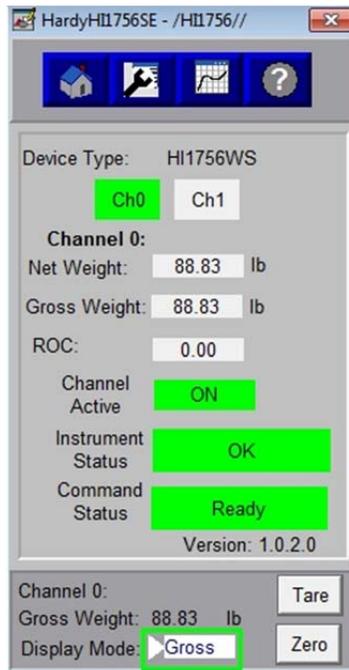
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For further technical support installing, using, or modifying Faceplates, contact your nearest Rockwell Automation Technical Support Center.

SE Edition Instructions: Page 2
ME Edition Instructions: Page 10

SE Edition of the Faceplate

Importing Add On Instructions (AOI) into RSLogix® 5000

- Set up a new project in RSLogix
- Import the HI1756WS_AOI. See Figure 1
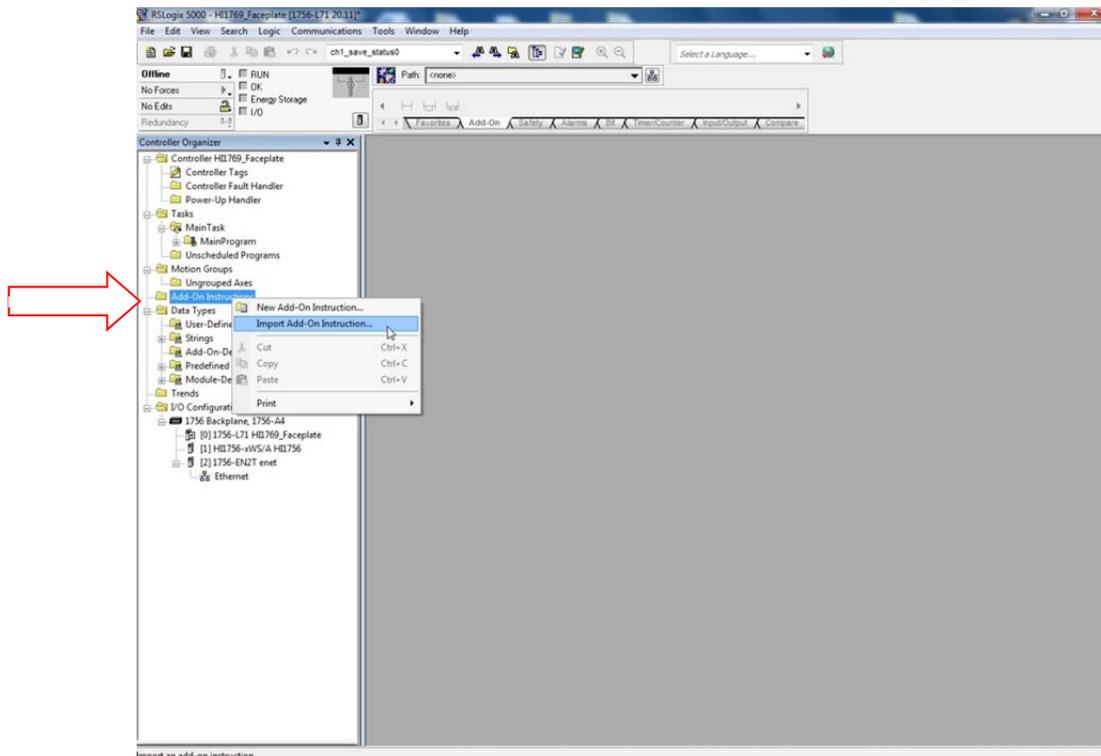
Figure 1

- Add the HI 1756-WS/2WS Plug-In Weight Module (PIM) to the I/O configuration structure. See Figure 2, note 1.
  Each module added should have a unique name.
- Add the AOI onto the main routine. See Figure 2, note 2.
  - Give the HI1756_Faceplate_AOI a name and create the tag. This will be an "HI1756WS_ AOI" data type. Any name created with alpha-numeric characters is valid. See Figure 2, note 3.
  - Inp_HI1756: Associate this label with the Input table for the HI 1756-WS/2WS PIM. Click and drop down the list to find the input tables for each device. Choose the one for the HI 1756-WS/2WS PIM by its name in the controller tags. See Figure 2, note 3.
  - Out_HI1756: Associate this label with the Output table for the HI 1756-WS/2WS module. Click and drop down the list to find the output tables for each device. Choose the one for the HI 1756-WS/2WS PIM by its name in the controller tags. See Figure 2, note 3.

Figure 2

- o READ_PARAMETERS: user created tag of type "PARAMETERS". This is the same tag that is used for the Destination Element in the 'MSG_READ_PARAM' instruction.
- o GENERIC_CMD: user created tag of type "HardySimpleMSG". This is the same tag used for the Source Element in the 'MSG_READ_PARAM' instruction.
- o WRITE_PARAMETERS: user created tag of type "PARAMETERS". This is the same tag that is used for the Source Element in the 'MSG_WRITE_PARAM' instruction.
- o RETURN_STATUS: user created tag for type "HardySimpleMSG". This is the same tag that is used as the Destination Element in the 'MSG_WRITE_PARAM' instruction.
- o MSG_WRITE_PARAM: create a Message instruction tag for this parameter and configure as:
  - Message Type: CIP Generic
  - Service Code: 4C
  - Class: 4
  - Instance: 254
  - Attribute: 0
  - Source Element: user created tag for 'WRITE_PARAMETERS' parameter.
  - Source Length: 84 bytes
  - Destination Element: user created tag for 'RETURN_STATUS' parameter.
  - Set path to the module under the Communication tab.
- o MSG_READ_PARAM: create a Message instruction tag for this parameter and configure as:
  - Message Type: CIP Generic
  - Service Code: 4C
  - Class: 4
  - Instance: 254

- Attribute: 0
- Source Element: user created tag for 'GENERIC_CMD' parameter.
- Source Length: 8 bytes
- Destination Element: user created tag for 'READ_PARAMETERS' parameter.
- Set path to the module under the Communication tab.
- Add additional AOIs into the main routine for each of the HI 1756-WS/2WS units.
  - Give each AOI its own unique name and create the tag.
  - Associate the Inp_HI1756 and Out_HI1756 to the I/O tables for each device.
  - Create all other tags required for the AOI instruction.
- After completing the steps above, download the AOI(s) into the PLC and make a check for faults.

Importing Hardy Faceplates into FactoryTalk™ View SE

- Open FactoryTalk Studio
- Under application type select View Site Edition
- Create a new application: give it a name and hit create
- Add communication in FactoryTalk to create a link between FactoryTalk and RSLogix5000
  - Right click on the project name in the explorer navigation bar, found under Local (computer name). See Figure 3, note 1.
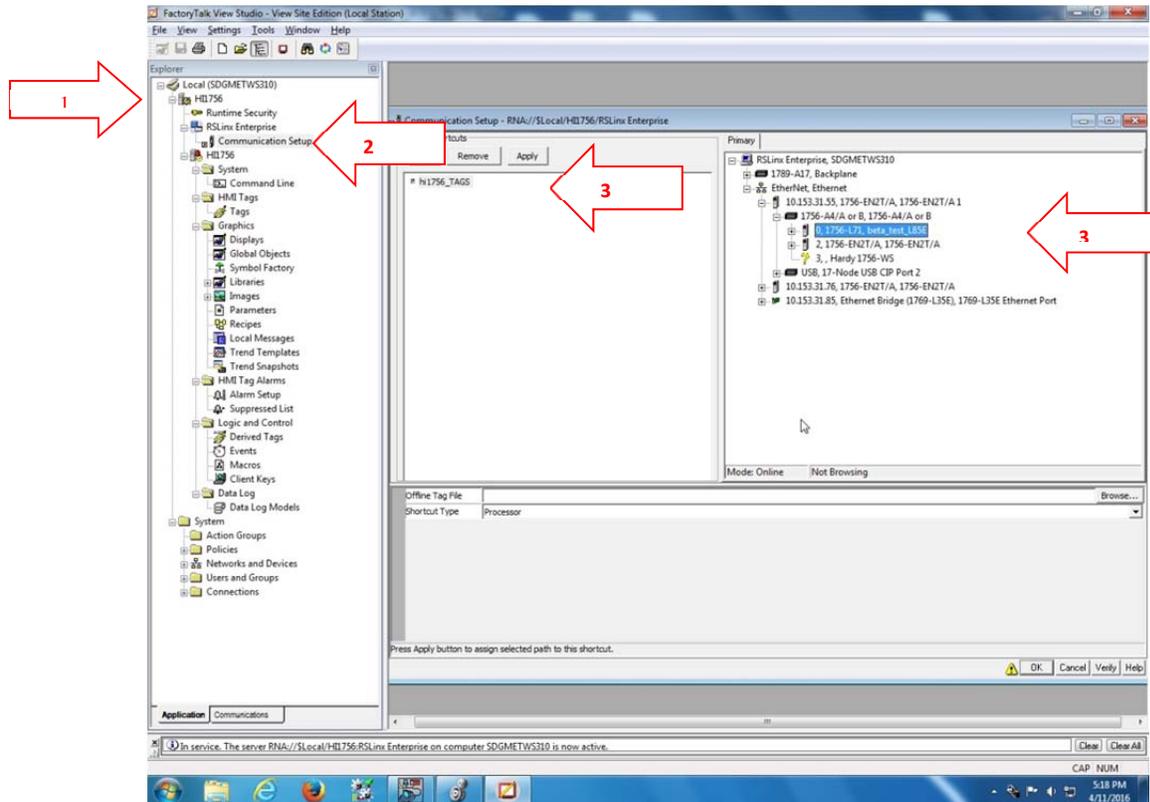

Figure 3

- First, add a New Server. Select Rockwell Automation Device Server (RSLinx Enterprise); the name can be left alone is if it is the only server in the project. Otherwise you will need to specify a different name. RSLinx Enterprise will appear in the explorer project tree; expand and double-click on "communication setup". See Figure 3, note 2.

- o Under device shortcuts, add a new shortcut: Name this shortcut to associate it with the Hardy HI 1756-WS/2WS module
- o In the PRIMARY window expand the driver being used to connect with the PLC processor and highlight the processor. With both the processor and the shortcut tag names now highlighted; click OK then YES to apply changes. See Figure 3, note 3.
- o When complete, this process will link the tags from the AOI in RSlogix to the tags in FactoryTalk.

- Import the Faceplate file into FactoryTalk as a Global Object
  - o Right click on Global Objects and click on 'Add Component into Application', look for the two faceplate files (HardyHI1756SE and Default Selection) to add them under global objects. See Figure 4.
    If multiple HI 1756-WS/2WS PIMs are used, make copies of the HardyHI1756SE files and assign different names for each module.
  - o Global objects can be modified allowing customization of the Faceplate to meet specific user requirements; for example if only a weight reading is required, a user can grab the object and move it to another custom display that has already been created.
  - o Save changes of any modifications before exiting the program.
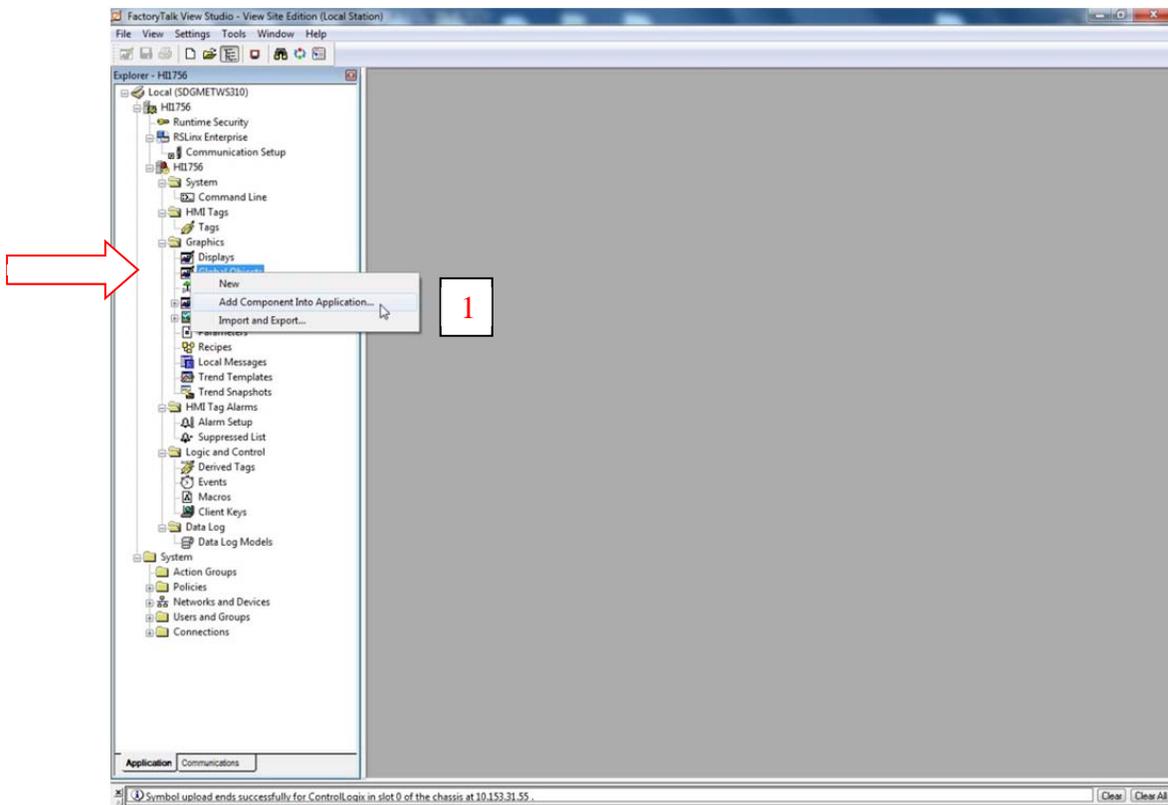

Figure 4

- To add faceplates to a display, right click on Displays, and then click on 'Add Component Into Application'.

- o If no changes were made to the Global Object files, add the same two files into the Display section. If changes were made to Global Object files, save before adding it to the Display section. Add the changed/saved file from directory where program is saved, normally c:/users/public/Public Documents/RSView Enterprise/SE/HMI Projects/<project name>/Global Objects.
- o If using the Default Selection display file, changes should be made to the button properties to ensure they point to the proper units. (figure below)
  - ▪ Open the Default Selection display file under the Global Objects.
  - ▪ Right click on the button to set up, click on properties. Under the "Action" tab, under the text box "press action", delete the contents.
  - ▪ Click on the … to the right of the "press action" box. (arrow 1)
  - ▪ Go to the 'All Commands and Macros', scroll down to "Display". Double click on Display. Select the file name of your HI 1756 faceplate. (arrow 2)
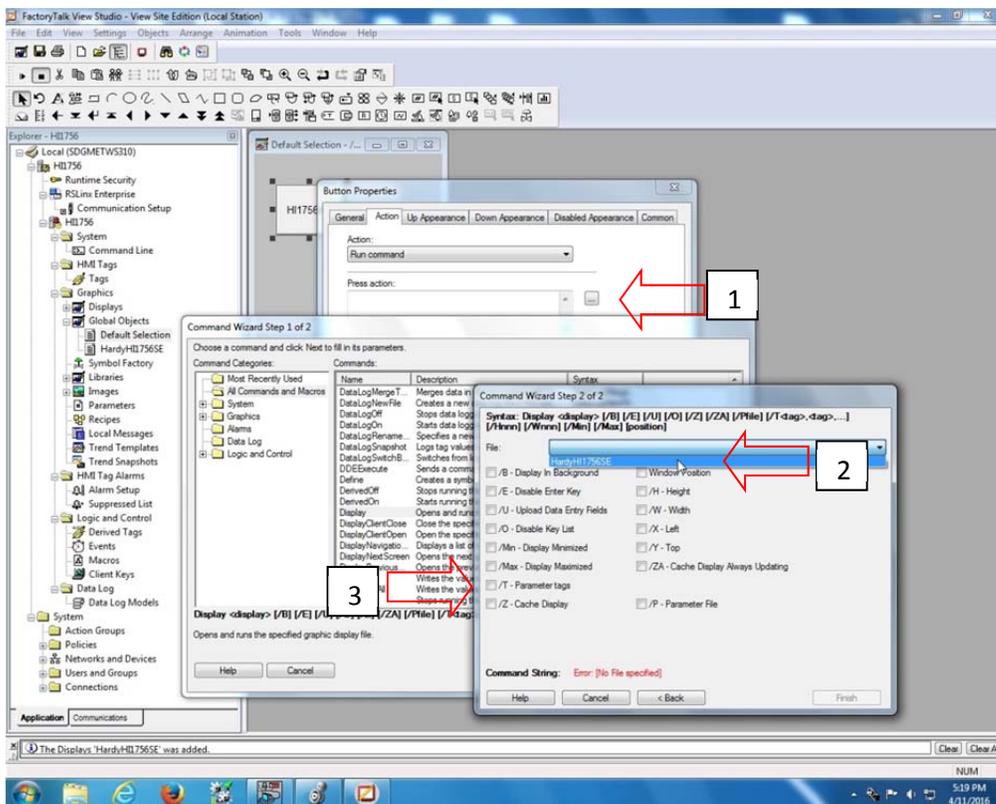
- ▪ Check the /T Parameters tags check box, Click on the … to the right. (arrow 3).
- ▪ Select the tags from the correct AOI under the "select Tags>Folder" list (below). (Folders may need to be refreshed). Click OK and Finish to close the windows.
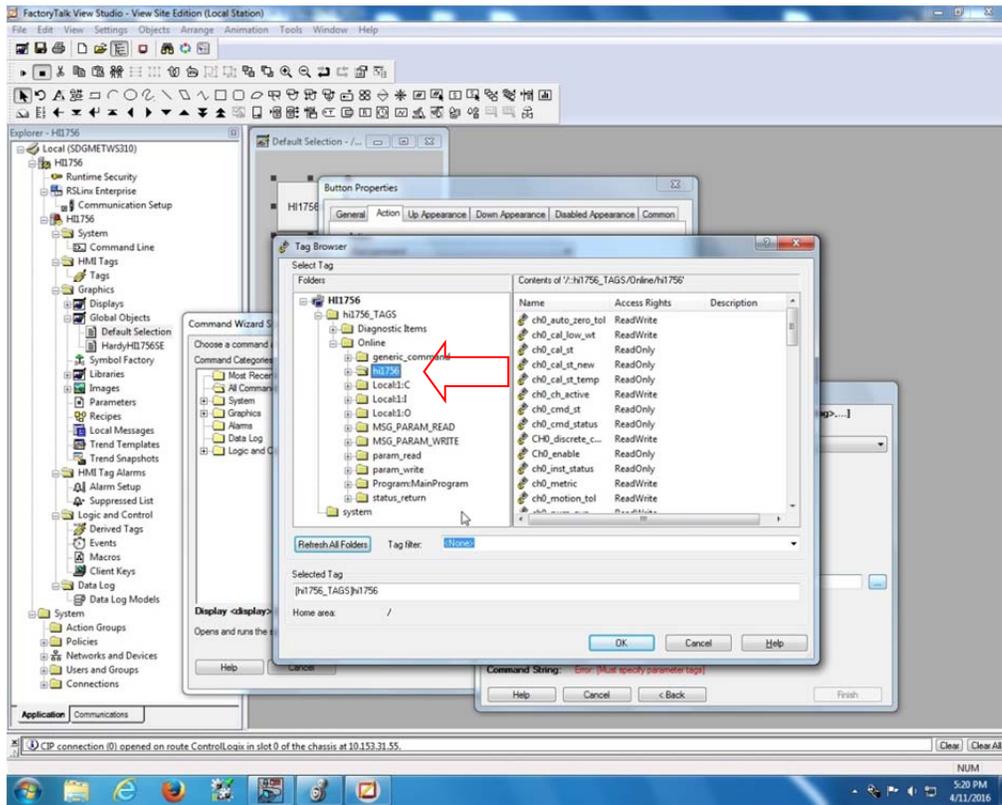
- Save the File.
- Delete the 'Default Selection' file under the Display section and add the saved 'Default Selection' file found under the c:/users/public/Public Documents/RSView Enterprise/SE/HMI Projects/<project name>/Global Objects directory.
  o Create a Factory Talk View Site Edition
    - Open Factory Talk View Site Edition Client application
    - Create a new project.
    - Select Local Station.
    - Under Name of Application, you want to connect to select the application you created in the previous section.
    - Select the Initial Display to be "Default Selection" and click next.
    - Click next, next, then finish.
    - Project should start up and the faceplate should come up in a test environment.

- Navigating the Faceplate
  o Under Display Mode be sure to select Gross or Net otherwise an error on the bottom of the Faceplate will appear. See Figures 5-10.
  o Navigate to the Faceplate using the mouse and keyboard to enter values.

Figures 5-15: Easy to Use Menus with Help Text

HardyHI1756SE - /HI1756//

Configuration Menu:

[**Ch0**] [Ch1]

Channel 0:

Motion Tolerance:	5.00
Zero Tolerance:	10.00
Zero Track Enable:	▶ Not Enable
AutoZero Tolerance:	10.00
ROC Time Base:	10

Save Cmd: [ ]

[Refresh] [Save Parameters]

[Back]

Channel 0:
Gross Weight: 88.88   lb   [Tare]
Display Mode: ▶ Gross   [Zero]

HardyHI1756SE - /HI56WS_face_t...

[**Back**]

Configuration Help Menu...

Zero Track Enable Parameter
Enables Auto-Zero when the scale is within the AutoZero Tolerance setting.

ROC Time Base Parameter
Length of time(in seconds), over which the module will calculate what the rate of change of weight on the scale.

Zero Tolerance Parameter
The value you enter for Zero Toleracne sets the weight unit limit from zero the instrument will accept as gross zero.

AutoZero Tolerance Parameter
This is how much autozero can adjust at one time, subject to the cumulative limit of the zero tolerance parameter

Motion Tolerance Parameter
Sets the amount of deviation to allow for your process. 3 times the grad size.

ME Edition of the Faceplate

Importing Add On Instructions (AOI) into RSLogix® 5000

- Set up a new project in RSLogix
- Import the HI 1756WS_AOI. See Figure 1.
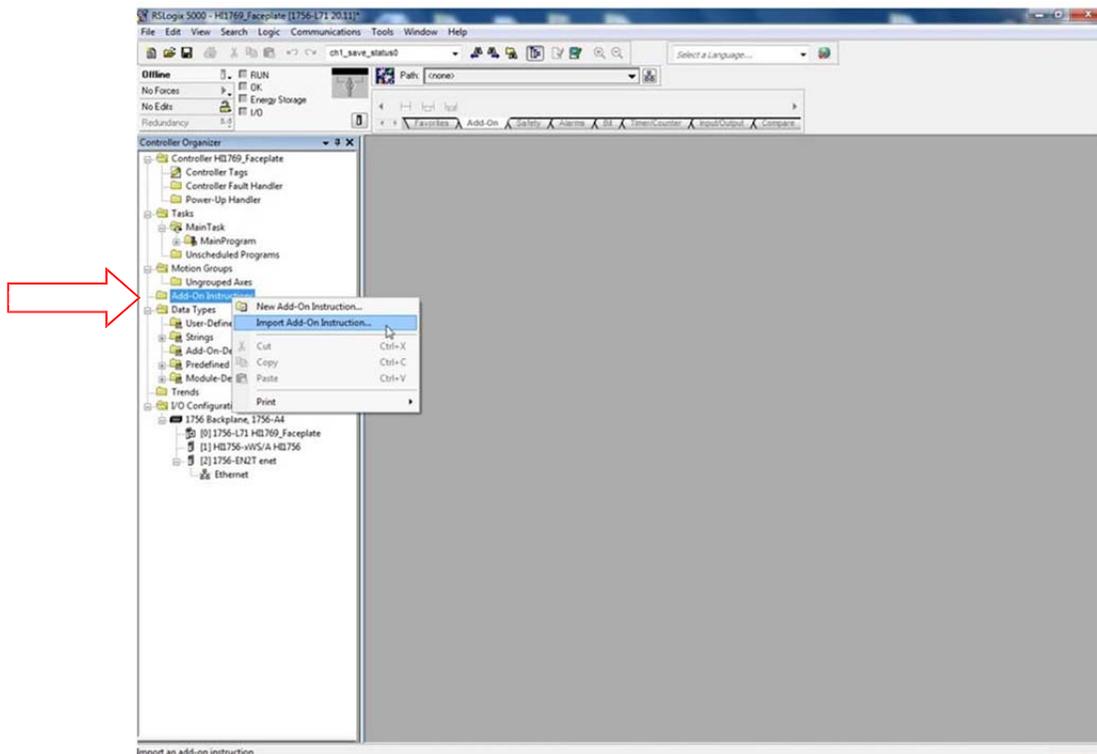
Figure 1

- Add the HI 1756-WS/2WS PIM to the I/O configuration structure. See Figure 2, note 1. Each module added should have a unique name.
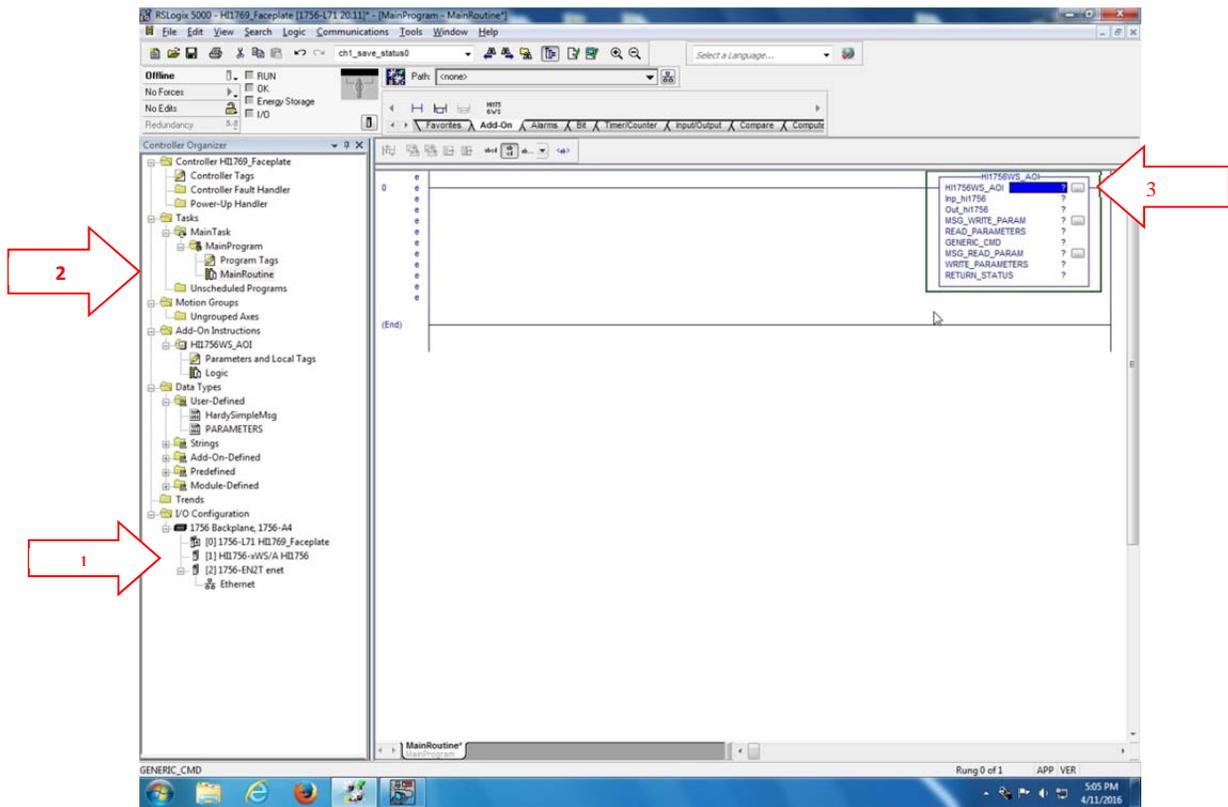
Figure 2

- Add the AOI onto the main routine See Figure 2, note 2.
  - o Give the HI1756_Faceplate_AOI a name and create the tag. This will be a "HI1756WS_AOI" data type. Any name with alpha-numeric characters is valid.
  - o Inp_HI1756: Associate this label with the Input table for the HI 1756-WS/2WS PIM. Click and drop down the list to find the input tables for each device. Choose the one for the HI 1756-WS/2WS module by its name in the controller tags. See Figure 2, note 3.
  - o Out_HI1756: Associate this label with the Output table for the HI 1756-WS/2WS module. Click and drop down the list to find the output tables for each device. Choose the one for the HI 1756-WS/2WS module by its name in the controller tags. See Figure 2, note 3.
  - o READ_PARAMETERS: user created tag of type "PARAMETERS". This is the same tag that is used for the Destination Element in the 'MSG_READ_PARAM' instruction.
  - o GENERIC_CMD: user created tag of type "HardySimpleMSG". This is the same tag used for the Source Element in the 'MSG_READ_PARAM' instruction.
  - o WRITE_PARAMETERS: user created tag of type "PARAMETERS". This is the same tag that is used for the Source Element in the 'MSG_WRITE_PARAM' instruction.
  - o RETURN_STATUS: user created tag for type "HardySimpleMSG". This is the same tag that is used as the Destination Element in the 'MSG_WRITE_PARAM' instruction.
  - o MSG_WRITE_PARAM: create a Message instruction tag for this parameter and configure as:
    - ▪ Message Type: CIP Generic
    - ▪ Service Code: 4C
    - ▪ Class: 4
    - ▪ Instance: 254
    - ▪ Attribute: 0
    - ▪ Source Element: user created tag for 'WRITE_PARAMETERS' parameter.

- Source Length: 84 bytes
- Destination Element: user created tag for 'RETURN_STATUS' parameter.
- Set path to the module under the Communication tab.
  - o MSG_READ_PARAM: create a Message instruction tag for this parameter and configure as:
    - Message Type: CIP Generic
    - Service Code: 4C
    - Class: 4
    - Instance: 254
    - Attribute: 0
    - Source Element: user created tag for 'GENERIC_CMD' parameter.
    - Source Length: 8 bytes
    - Destination Element: user created tag for 'READ_PARAMETERS' parameter.
    - Set path to the module under the Communication tab.

- Add additional AOI instructions into the main routine for each of the HI 1756-WS/2WS units.
  - o Give each AIO instruction its own unique name and create the tag.
  - o Associate the Inp_HI1756 and Out_HI1756 to the I/O tables for each device.
  - o Create all other tags required for the AOI instruction
- After completing the steps above, download it to the PLC and make check for faults.

Importing Hardy Faceplates into FactoryTalk™ View ME

- Open FactoryTalk Studio

- Under application type select Machine Edition

- Create a new application: give it a name and hit create

- Add communication in FactoryTalk to create a link between FactoryTalk and RSLogix5000

  - o RSLinx Enterprise appears in the explorer project tree; expand and double-click on "communication setup". See Figure 3, note 2.

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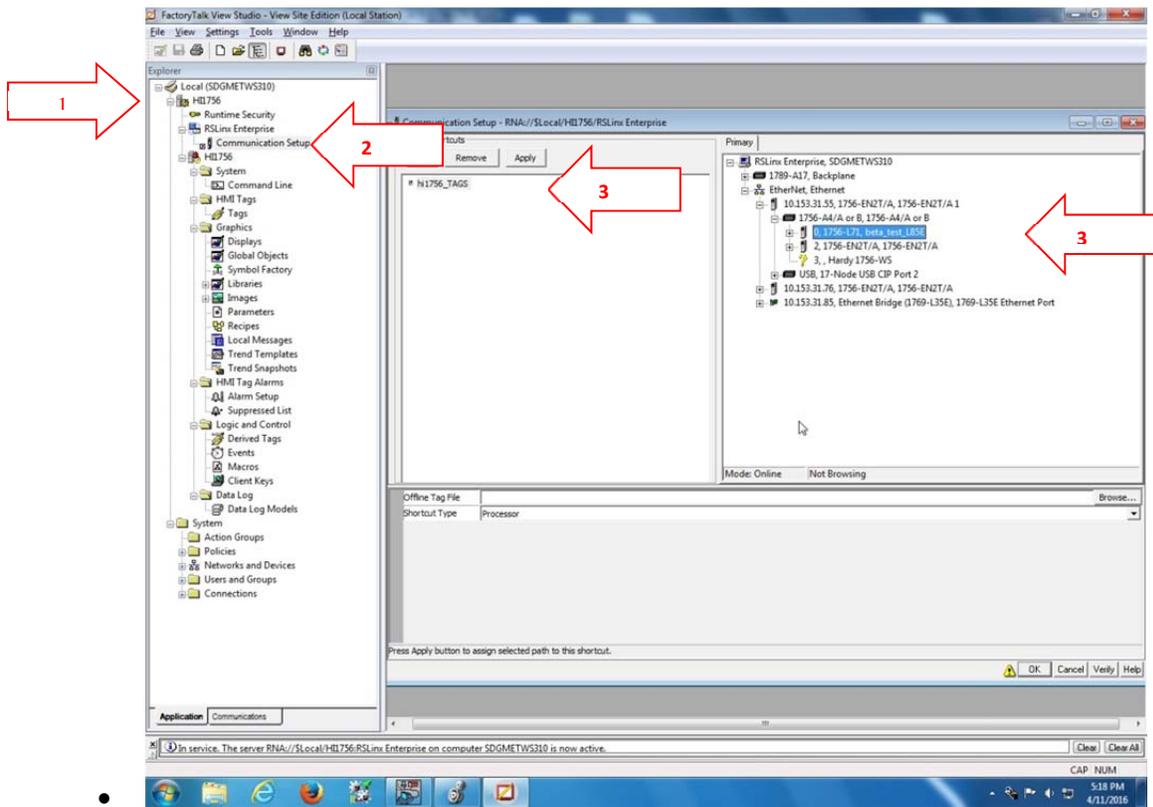
- Figure 3

- o Under device shortcuts, add a new shortcut: Name this shortcut to associate it with the Hardy instrument
- o In the PRIMARY window expand the driver being used to connect with the PLC processor and highlight the processor. With both the processor and the shortcut tag names now highlighted; click ok then yes to apply changes. See Figure 3, note 3.
- o When complete, this process will link the tags from the AOI in RSlogix to the tags in FactoryTalk.
- Import the Faceplate file into FactoryTalk as a Global Object
  - o Right click on Global Objects and click on 'Add Component into Application', look for the faceplate files (HardyHI1756ME) to add under global objects. See Figure 4.
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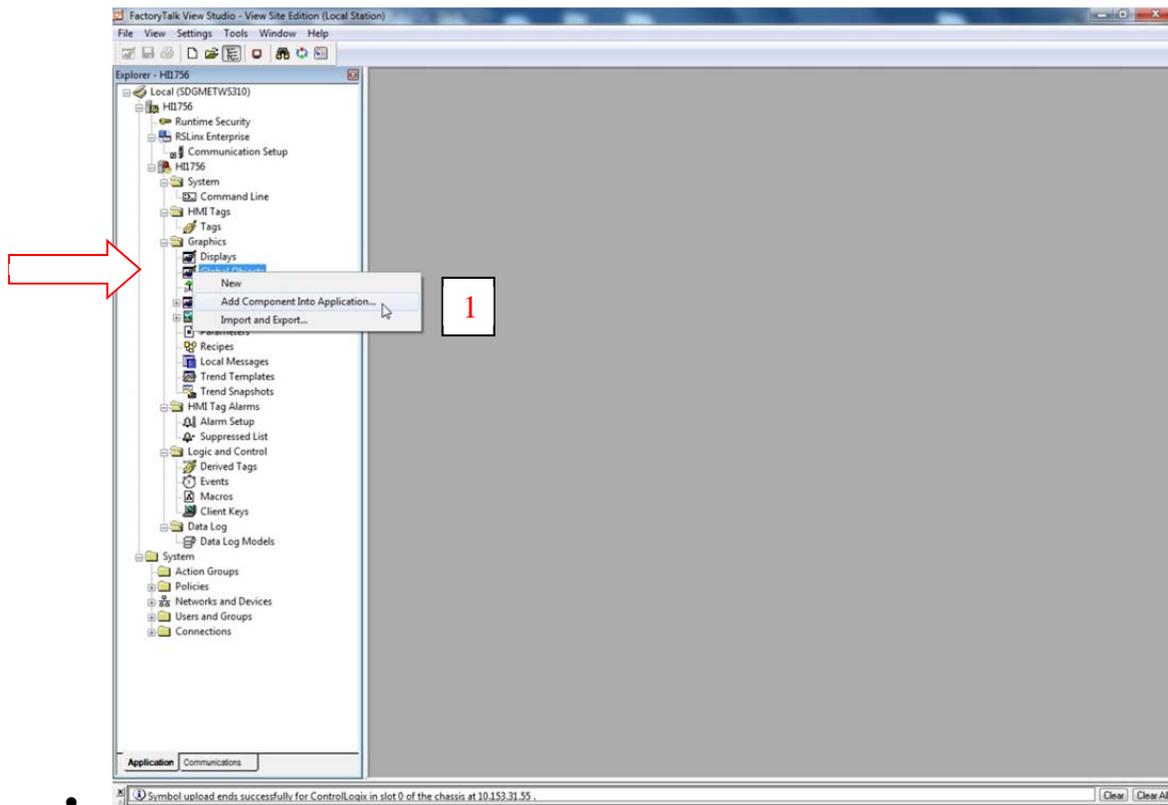
• Figure 4

If multiple HI 1756-WS/2WS module are used, make copies of the HardyHI1756ME file and assign different names for each module.
- o Global objects can be modified allowing customization of the Faceplate to meet specific user requirements; for example if only a weight reading is required, a user can grab the object and move it to another custom display that has already been created.
- o Save changes of any modifications before exiting the program.

- To add faceplates to a display, right click on Displays, and then click on 'Add Component Into Application'.
    - o If no changes were made to the Global Object files, add the same files into the Display section. If changes were made to Global Object files, save before adding to the Display section. Changed files to add to the Display section should be found in the directory where saved (typically c:/users/public/Public Documents/RSView Enterprise/ME/HMI Projects/<project name>/Global Objects.
    - o User will need to add a button to open the faceplate. Under the Display section, double click on MAIN. Add a "GOTO Display button" (arrow 1).
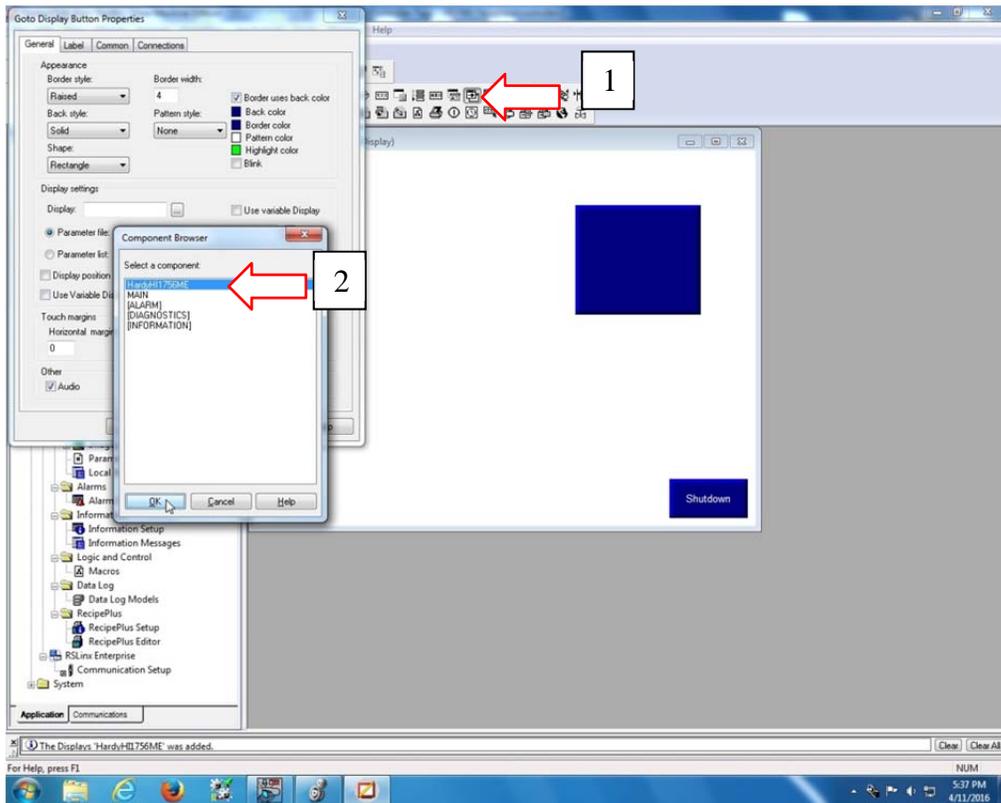
- o In the properties box for the button, set:
  - Display field to the file for the Hardy unit. (arrow 2)
  - Set the Parameter list to the tag created for the AOI in RS Logix. (arrow 1 below figure)
  - Add a button for each Hardy unit you have.
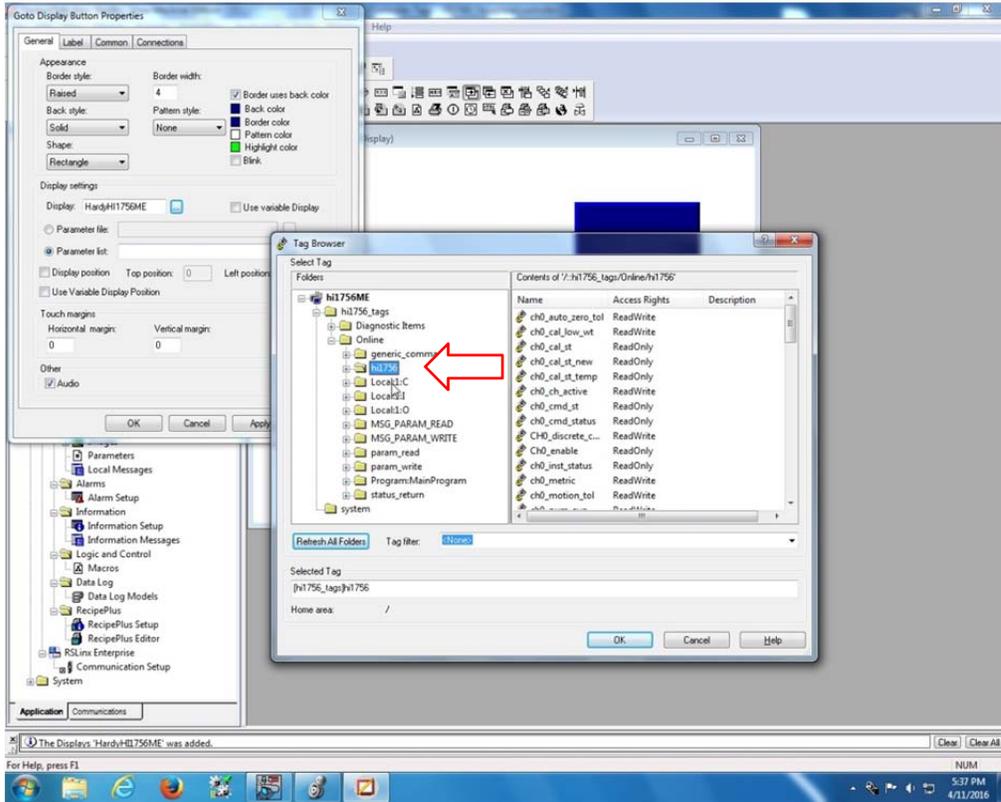
- Navigating the Faceplate
  - Under Display Mode be sure to select Gross or Net otherwise an error on the bottom of the Faceplate will appear.
  - Navigate the Faceplate using the mouse and key board to enter values.

Figures 5-15: Easy to Use Menus with Help Text

Window 1 (top-left):

HardyHI1756SE - /HI56WS_face_t...

Ch0 Ch1 Channel 1:
Monday, March 28, 2016

100%
80%
60%
40%
20%
0%

3:04:50 PM   3:05:50 PM

25 50 75
0   100

Channel 1:
Gross Weight: 46.96 lb
Display Mode: Gross
Tare
Zero

Window 2 (top-middle):

HardyHI1756SE - /HI56WS_face_t...

Configuration Menu:
Ch0 Ch1

Channel 0:
Channel Enable: On
Units: lb
Waversaver: 7.5 Hz
NumAverages: 20
Tare Weight: 24.97
Save Cmd Status:
Refresh   Save Parameters
Back   More

Channel 0:
Gross Weight: 25.05 lb
Display Mode: Gross
Tare
Zero

Window 3 (top-right):

HardyHI1756SE - /HI1756//

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Configuration Help Menu
Channel Enable
Enable/Disable the current channel.
Tare Weight Parameter
This displays the total amount that has been "Tared" from the scale.
Units Parameter
Select lb or kg
WAVERSAVER Parameter
This reduces the effects of vibratory forces. It enables the module to distinguish between weight data and mechanical noise. Can be configured to ignore noise with frequencies as low as 0.25Hz.
NumAverages Parameter
This sets the number of weight readings used to compute a sliding average of displayed weight. It helps reduce the effects of material impact and/or vibration if the material does not enter or exit the scale evenly. For quick weight readings this setting should be set to a minimum. If unstable increase the averages.

Window 4 (middle-left):

HardyHI1756SE - /HI56WS_face_t...

C2 Menu:
Ch0 Ch1

Channel 0:
Reference Weight: 25.00
Save Cmd:
Refresh   Save Parameters
C2 Status:
Do C2 Cal
Back

Channel 0:
Gross Weight: 25.10 lb
Display Mode: Gross
Tare
Zero

Window 5 (middle, second):

HardyHI1756SE - /HI1756//

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C2 Cal Help Menu

C2 Calibration Instructions
Step 1:
Select the channel to calibrate.
Step 2:
Enter the reference weight (or live weight) that will be left on the scale during the calibration process.
Step 3:
Click Do C2 Cal

Reference Weight Parameter
Live load on the scale, normally zero during the calibration process.

Window 6 (middle, third):

HardyHI1756SE - /HI56WS_face_t...

Traditional Cal Menu:
Ch0 Ch1

Channel 0:
CalLow Weight: 25.00
Span Weight: 200.0
Save Cmd:
Refresh   Save Parameters
Cal Status:
Do Low Cal
Do High Cal
Back

Channel 0:
Gross Weight: 25.12 lb
Display Mode: Gross
Tare
Zero

Window 7 (middle-right):

HardyHI1756SE - /HI1756//

Back

Traditional Cal Help Menu

Traditional Calibration Instructions
Step 1:
Select the channel to calibration.
Step 2:
Enter the Cal Low Weigh of the Scale. If nothing is on the scale, the value is zero.
Step 3:
Enter the span weight. Once the Cal Low Weight and Span Weight is entered save the parameters to the instrument.
Step 4:
Place the Cal Low Weight (if any) onto the scale, then click Do Low Cal
Step 5:
Place the span weight onto the scale, then click Do High Cal
Span Weight
Also known as the High Calibration Point, for best results the span weight should be 80% of the total scale capacity.
Cal Low Weight
Live load on the scale, normally zero during the calibration process.

Window 8 (bottom-left):

HardyHI1756SE - /HI1756//

Configuration Menu:
Ch0 Ch1

Channel 0:
Motion Tolerance: 5.00
Zero Tolerance: 10.00
Zero Track Enable: Not Enable
AutoZero Tolerance: 10.00
ROC Time Base: 10
Save Cmd:
Refresh   Save Parameters
Back

Channel 0:
Gross Weight: 88.88 lb
Display Mode: Gross
Tare
Zero

Window 9 (bottom-right):

HardyHI1756SE - /HI56WS_face_t...

Back

Configuration Help Menu...

Zero Track Enable Parameter
Enables Auto-Zero when the scale is within the AutoZero Tolerance setting.

ROC Time Base Parameter
Length of time (in seconds), over which the module will calculate what the rate of change of weight on the scale.
Zero Tolerance Parameter
The value you enter for Zero Toleracne sets the weight unit limit from zero the instrument will accept as gross zero.

AutoZero Tolerance Parameter
This is how much autozero can adjust at one time, subject to the cumulative limit of the zero tolerance parameter

Motion Tolerance Parameter
Sets the amount of deviation to allow for your process. 3 times the grad size.