Using the Multi-channel Display Feature of the Hardy 6000 Series

The multichannel display feature available with the HI 6310, HI 6500 and HI 6510 weight processors enable you to setup four instruments to share one display as a common resource. Using a single display to view and control up to 4 instruments saves you the cost of three displays, as well as valuable cabinet space.

Instruments operate independently from each other – each requiring their own power source, sensor input and communication to a control system such as a PLC, DCS or computer system. You can display weight and control up to four instruments from a single common display.

To set up a Multi-channel display system you will need the following:

Qty 1:	HI6110 (display)	
Qty: 2 - 4	HI6310, HI6500 or HI6510 (instruments)	
Qty 1:	Wire Harness	
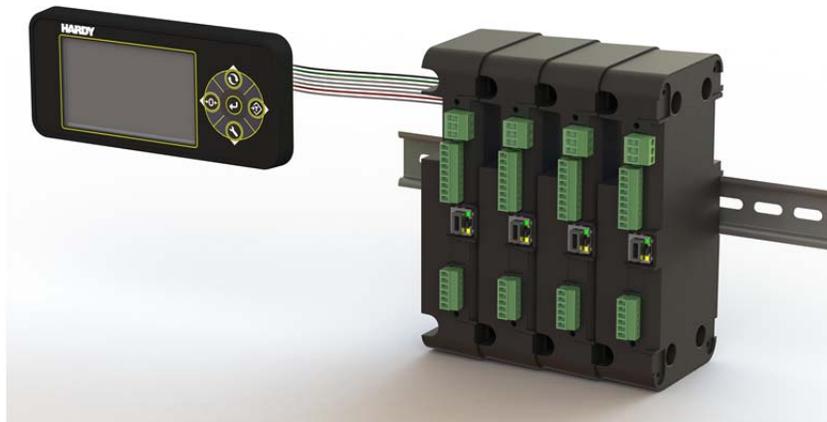
Note – If you want to make your own wiring harness, you may do so with the included connectors

Wiring the Multi-channel Display

Detailed information on wiring can be found in the HI6300 series and HI6500 series manuals under Spit Screen Mode, These manuals are available on the Hardy website http://www.hardysolutions.com by navigating to products>weighing instruments>weight processors> HI 6500 Series *or* HI 6300 Series.

The wiring shown in the diagram below provides a serial network for up to four instruments and a display, and provides power to the display from the first instrument **(1)** on the network.
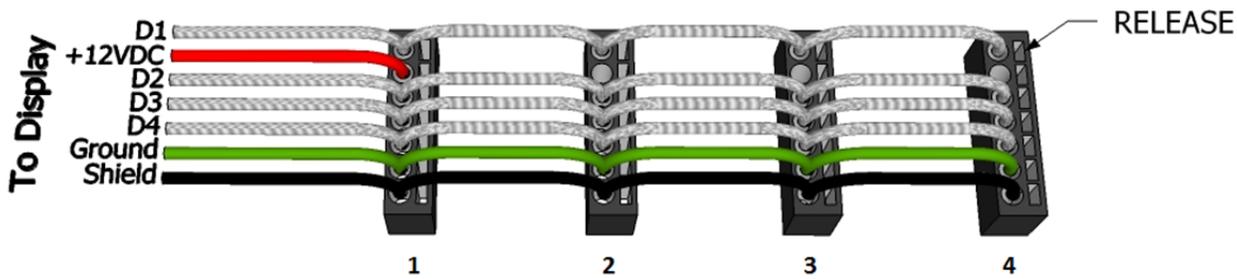
You can purchase a pre-made wiring harness or you may elect to create your own with the supplied connectors. The pre-made wiring harness provides a 6 ft. lead between the first instrument **(1)** on the display network and the display. The pre-made wiring harness may be altered to accommodate a variety of installation requirements by using the connector's release slot and replacing the wires with appropriate lengths. We recommend 24 AWG solid wire (100 ft. max) if you create your own wiring harness or modify the pre-made harness available from Hardy. When assembling your own harness or modifying the pre-made harness, it is also recommended to twist and tin wire ends together before inserting into the connector, to insure both wires are securely captured by the spring-cage connector.

Caution: **Do not wire in such a manner that the display is powered from more than one instrument at a time!**

You can connect instruments in any order to the display network and rearrange then later using the set-up process as described below.

Setting up the Multi-channel Display

First verify that all instruments are powered by checking that the amber LED on the Ethernet port is illuminated. The display will temporarily show the HARDY PROCESS SOLUTIONS logo upon power-up.

 Once wiring is complete and power is applied to the system, the display will need to discover the connected instruments:

a) Using the front panel display, press the set-up key 🔧, navigate to ▪**Display**, then press the enter key ↵ to enter into the display menu. Once in the display menu, navigate to ▪**Split Screen** and press the enter key to enter into the split screen menu. While in the split screen menu select ▪**Display Mode** and press the enter key to toggle **Enable** to allow the display to operate in split screen mode, which will display weight readings from up to four instruments simultaneously.

b) Next navigate to ▪**Num Display**--press enter and set the number of instruments you want to display simultaneously (max. 4) by pressing the up/down keys and saving the number by pressing enter once more to exit out of the selection process.

c) The final step is to discover all the instruments on the display network by navigating to ▪**Discover** and pressing enter. Once enter is pressed, the display will go through the process of discovering all instruments attached. Press the left arrow key to back out to the main screen.

Toggling Split Screen Mode

When you enable split screen mode, the enter key serves the function of allowing you to view and operate just one attached instrument or show up to four instruments at the same time. To toggle between split screen mode and a single instrument, simply press the enter button.

To view or modify a specific channel shown in split-screen mode, move the outline present around one of the four quadrants (as shown below) by pressing the up/down/left/right arrow keys. Once the outline is shown around the channel, pressing enter will show the channel in full screen mode and allow the user to enter the set-up menus for that channel. Again, to toggle back into split screen mode, simply press the enter key.

Customizing Split Screen Mode

The display has several additional features that allow you to customize each channel shown in split screen mode, such as naming a channel, changing the position of a channel, and changing the background or foreground of an individual channel.

Customization simplifies the use and operation of the weighing system by making it clear which instrument you are viewing at all times.

Naming a channel:

Using the up/down/left/right arrow keys, select the channel you wish to rename by highlighting the quadrant and pressing the enter key as described above. Once the channel is selected and shown in full screen mode, press the set-up key , navigate to ▪**Setup**, navigate to ▪**Instrument ID,** then press the enter key to allow modification of the instrument ID. In the example shown below, the channel was named **KETTLE 6** to ease identification for the operator and maintenance personnel.

Press the enter key to save the customized instrument ID, then use the left arrow to back out of the set-up menu until the full screen mode is shown. As described above, toggle to split screen mode by pressing the enter key. Repeat as necessary for additional channels.

Changing position of a channel:

A channel can be moved and shown in any one of the four quadrants while operating in split screen mode to allow the user to view the weighing system in a more logical order.

To change the position of a channel in the split screen quadrant, navigate to ▪**Display Order** found in the ▪**Split Screen** menu (set-up 🔧 > ▪**Display** > ▪**Split Screen** > ▪**Display Order**).

Change the order shown by using the up/down keys and selecting the channel by pressing enter. The outline around the channel will become **BOLD** when it is selected. Move the channel position by again using the up/down keys and release the channel in its new position by pressing the enter key ⏎ .
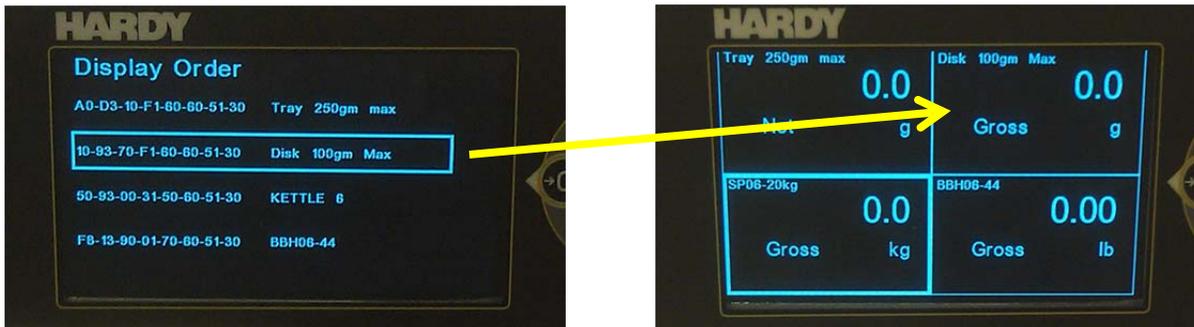
The top row is the upper-left quadrant, the second row is the upper-right quadrant, the third row is the lower-left quadrant and the last row is the lower-right quadrant.

Changing a channel foreground or background:

Changing the foreground and background of a channel can help differentiate one channel from others shown in split screen mode. In the example below, the <u>Total Batch</u> weight is shown with a black foreground and white background.

To change the foreground and background of a channel, enter set-up 🔧 , navigate into the ▪**Display** menu and select either ▪**Set Background** or ▪**Set Foreground** by pressing enter. Use the right/left arrow keys to change the white level of the selected option (foreground or background). Once the desired white level is selected, press enter to save the setting and repeat with either the foreground or background of other channels as necessary.