HI 6600 Quick Reference

Detailed Manual:
http://www.hardysolutions.com/tenants/hardy/documents/HI6600UserGuide%200717.pdf

Online Unit
http://hi6600.hardysolutions.com/index.cgi

Default IP Address:
192.168.0.100
NOTE: Units have an internal webpage to use.

Indicator Lights Summary

Weight Processing Module			
	Green LED	Red LED	Definition
1	off	off	No Power, or ARM not programmed
2	off	solid	HardyNet network failure
3	off	slow blinking	Built-in self-test failure
4	off	fast blinking	Low Power indication
5	solid	off	Normal operation
6	slow blinking	off	Unit identification
7	fast blinking	off	Unit being programmed
8	slow blinking	slow blinking	Load cell current issue
9	fast blinking	fast blinking	Measurement errors

Hardy Gateway Module			
Green LED		Red LED	Definition
1	off	off	No Power, or ARM not programmed
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5	solid	off	Normal operation
6	slow blinking	off	Unit identification
7	fast blinking	slow blinking	Unit being programmed
8	slow blinking	fast blinking	Network error (no comms)
9	fast blinking	fast blinking	DSP error

Error Message Definitions:

- A/D Convert Error! - Load Cells input out of range.
- Motion Error! - Check Motion Tolerance Settings and Retry
- Too Lo Error! - Verify that the load cell signal level is 0-25 mV. Verify that there is enough weight on the scale.
- Too Hi Error! - Verify that the load cell signal level is 0-25mV. Verify that there is too much weight on the scale.
- No C2 Sensor! - Instrument did not detect a C2 Load Sensor
- CAL Failed! - Too few counts between Zero and Span.
- C2 Caps Unequal! - Different load cell capacities (For example 50 lbs capacity load cell and 100 lbs capacity load cell on one system. Make the load cells equal by removing the odd load cell and replacing it with a load cell that is equal to the other's capacity.
- HI/LO Too Close! - Zero and Span are not more than 1,000 counts from each other or there is no change or negative change. Reset either so the counts are more than 1,000 counts of each other.
- Not Allowed! - Value entered is outside the range allowed. Try another value.
- Need Cal with ITJBOX - IT summing card is not installed. Install an IT summing card then do a Calibration with the card installed to access the IT information.

Tips:

-Gross and Net weights can be found in the ***input*** table of the PLC controller tags.

HI_6600:I.M1_Net_Weight	22.955	Float	REAL
HI_6600:I.M1_Gross_Weight	22.955	Float	REAL

-The system must be powered down prior to adding or removing any WP module.

-The default IP address for the Hardy Gateway Module is 192.168.0.100

-The "Identify" feature in the browser under Gateway Home > HardyNet is helpful for channel verification.

-The "Discover" feature discovers modules in the order in which they respond.

-HARDY begins channel numbers at "1" on the web server. PLCs commonly begin at "0".

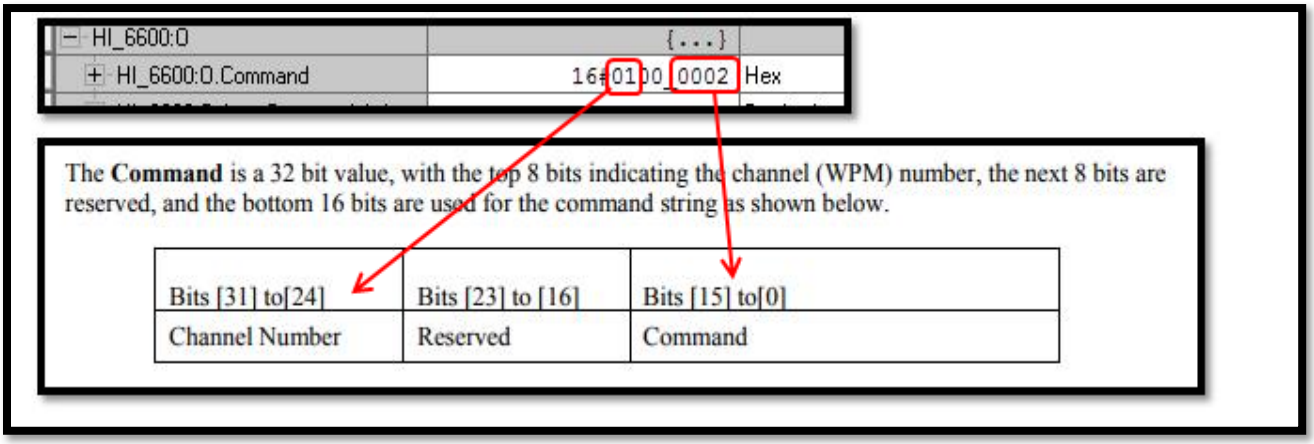
-Hexadecimal commands are commonly used. "0x" and "16#" are used to signify a Hex value.

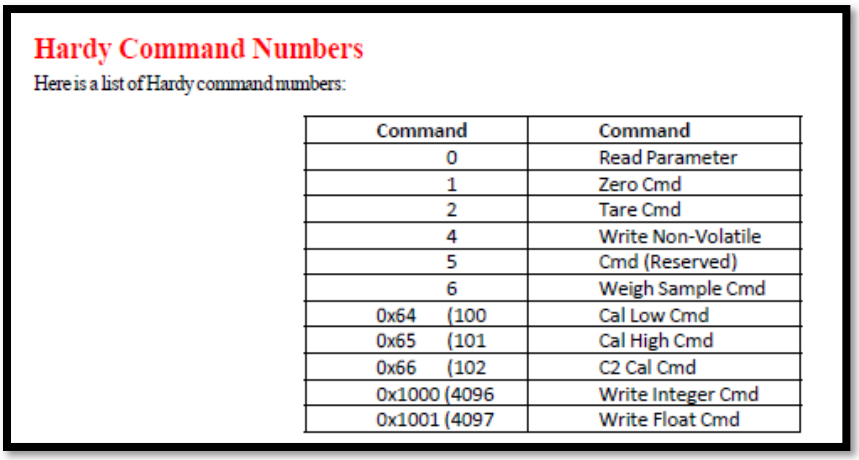
Example: A C2 Calibrate command of "0x66" would be entered as "16#0000_00**66**" in the ***output*** table.

+ HI_6600:O.Command	16#0000_0066	Hex	DINT

Sending Commands:

EXAMPLE: The *second* channel (01) receiving a tare command (0002).





Hardy Command Numbers

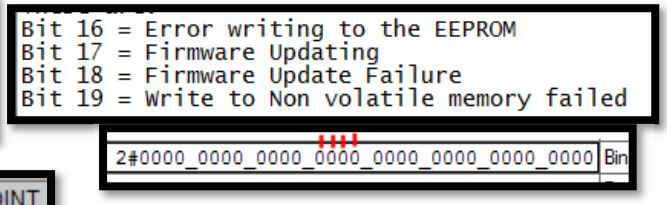
Here is a list of Hardy command numbers:

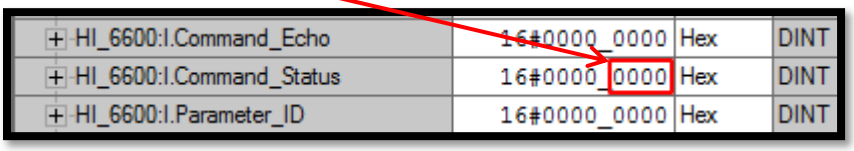
Command	Command
0	Read Parameter
1	Zero Cmd
2	Tare Cmd
4	Write Non-Volatile
5	Cmd (Reserved)
6	Weigh Sample Cmd
0x64 (100	Cal Low Cmd
0x65 (101	Cal High Cmd
0x66 (102	C2 Cal Cmd
0x1000 (4096	Write Integer Cmd
0x1001 (4097	Write Float Cmd

Command Status:

The return status for commands sent. Top 2 BITS increment. 14 bits have a few statuses.

Command Status	Definition
Bits[31:30]	2 bit Input table count
Bits[29:126]	14 bit Gateway status information
Bits[15:0]	Status of Command





Example of a Status Return When Using a "Zero" Command:

- **1: ZERO CMD**. Write a #1 to the command register to ZERO the gross weight. The status register will read 0 if this command succeeds.
  - Status Error code 1 (motion)
  - Status Error code 2 (A/D error)
  - Status Error code 3 (out of tolerance)

The complete list of all individual command statuses can be found in the User Manual.

The Default State:
Upon first startup, "16#0000_0000" is entered in to the output command field by default. It is a valid command. It is the READPARAMCMD for the ***first*** channel.

+ HI_6600:O.Command	16#0000_0000	Hex	DINT

OUTPUT TABLE

This will command the unit to read the "Parameter_ID" tag from the ***output*** table. In the default state there is no parameter number entered. Parameter IDs to enter can be found in the User Manual and an example is down below.

+ HI_6600:O.Parameter_ID	16#0000_0000	Hex	DINT

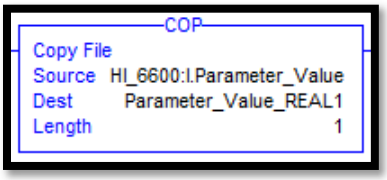
OUTPUT TABLE

Then the HI 6600 will return that parameter's value back into the "Parameter_Value" tag in the ***input*** table.

+ HI_6600:I.Parameter_Value	0	Decimal	DINT

INPUT TABLE

If the parameter value is a floating point, a COP instruction must be used to convert the incoming DINT to floating point REAL data type.



COPY COMMAND REQUIRED FOR DINT > REAL

(Refer to the manual for the complete list of parameter IDs.)

Read Parameter Example:
If a Command of **00**00_0000 and Parameter_ID of 0000_**2082** were set in the ***OUTPUT*** table to the module, then the "Parameter_Value" ***INPUT*** table tag would be the number of averages from the first channel. Changing the Command to **01**00_0000 would request the same information from the ***second*** channel and so on.

Using a USB to Save, Load or Restore Parameters
From the HI6600 webpage:

USB WEBPAGE

Inserting a USB and Saving parameters from the webpage or display creates a PARAMS.TXT file within an HI 6600 folder on the USB.

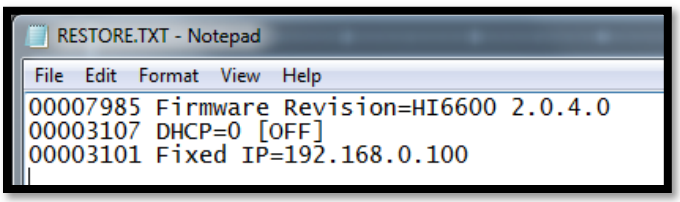
RESTORE (read) the parameters via the webpage or display will load and replace the currently running parameters with the PARAMS.TXT parameters.
E.G. HI6600/PARAMS.TXT

Placing a RESTORE.TXT file into a folder labeled HI6600 on a USB and populating the file with parameters will replace the running parameters *upon every power-up*.

NOTE: The first parameter line of a RESTORE.TXT file is ignored.

Example:
This example is a set of text that is saved as a RESTORE.TXT file in the HI6600 folder of a USB:

00007985 Firmware Revision=HI6600 2.0.4.0
00003107 DHCP=0 [OFF]
00003101 Fixed IP=192.168.0.100



In this example, the first line would be ignored, the DHCP would be turned off and the fixed IP would be set to 192.168.0.100.