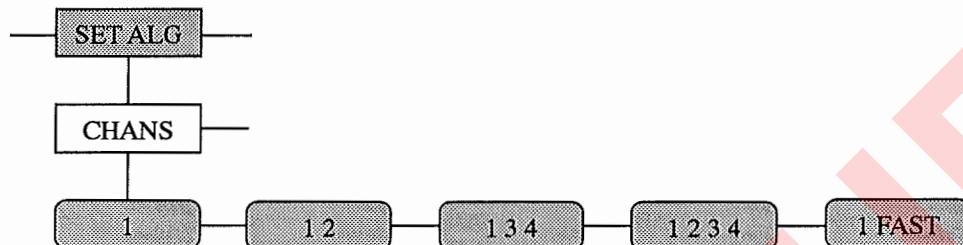


MULTIPLE SCALE INPUTS

The standard IQ plus 800/810 has a single analog input channel. The 800 can be expanded to two channels. The 810 can be expanded to three or four. This feature is represented by the CHANS submenu, under the SET ANALOG menu. The parameter settings (or channel selections enabling multiple channel inputs) are accessible from the CHANS submenu shown below.

**SCALE #**

The channels can be selected and processed individually or as a total by toggling with the **SCALE #** key. The red annunciators for the appropriate scales will light to indicate the active source channels.

- Scale 1
- Scale 2
- Scale 3
- Scale 4

Each channel has its own individual setup parameter for graduations, display divisions, decimal point location, and units. A separate option allows channel 1 to be selected as a high-speed channel, weighing at 100 updates per second.

The indicator's power supply will support up to 32-700 Ω load cells or 16-350 Ω load cells, all on one channel or split up amongst multiple channels.

Notice that *only* the channels specified are operational with the various multichannel setups. For example, channel 2 is not operational with the 1, 3, 4 channel setup.

The most common use of multiple channel weight indicators is in axle weighing truck scales. In this application two, three, or four truck scales are placed end to end. In a three-scale system, the front scale weighs the front axle of the truck. The second scale weighs the drive axles of the truck, and the third weighs the trailer axles. The IQ plus 810 indicator could display each axle weight individually or display the sum of all scales.

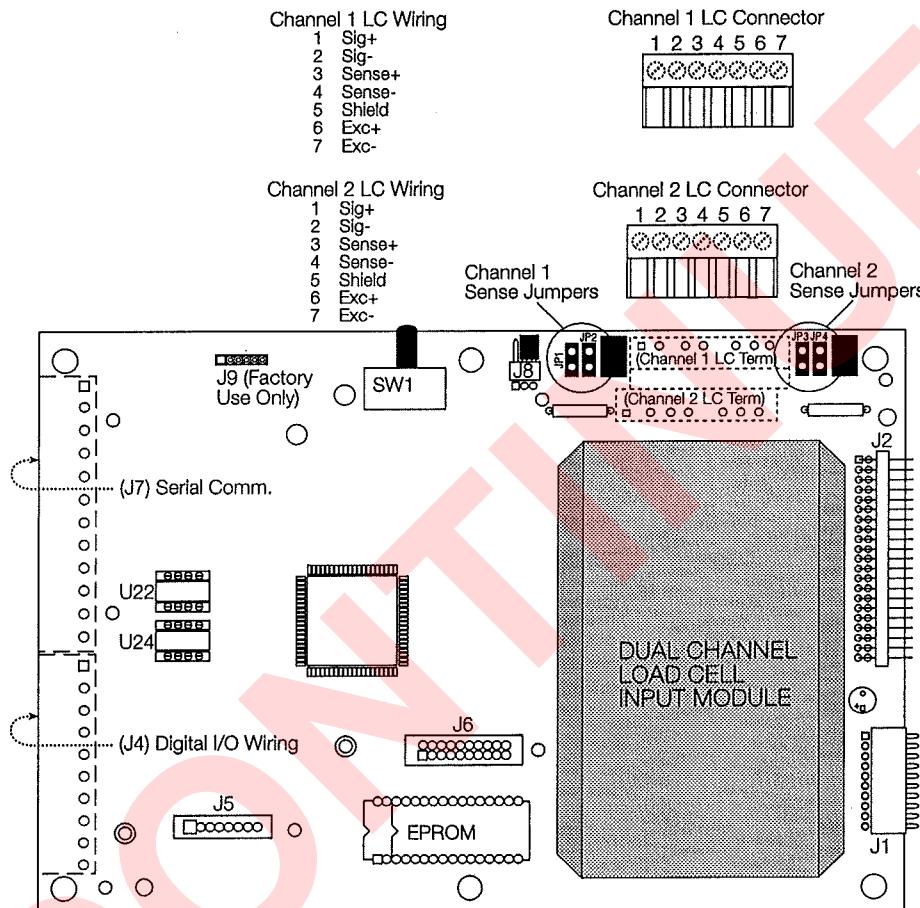
It is also possible to do multiple "loss in weight" steps or filling applications using one indicator. There are 20 setpoints available on the IQ plus 800/810. Each set point step can be assigned to any one of the load cell input channels. The only restrictions are that the application not require high-speed display updates and that the weights in each tank not be simultaneously displayed. It is possible, however, to monitor two tanks at once — one channel can be watched on the bar graph, while monitoring the other channel on the digital display.

It is important to note that channels are processing information, whether or not those channels are displayed to the operator. For instance, setpoint functions in Net mode on channel 2 can be automatically running even though the display may be showing Gross weight on channel 1.

NOTE:

If the indicator is displaying the **TOTAL** of all channels, and any active scale on any channel goes into an underrange or overrange condition, the display will blank out.

The hardware choices necessary to add multiple channels allow several possible combinations of multiple channels. Either a single or a dual-channel input module can be mounted on the main board and a dual-channel module can be mounted on the expansion board. Both modules plug into female connectors already installed on the boards. The only external difference between the single-channel and dual-channel module is the activation of the second J-10 terminal strip for wiring the second scale. The second-channel sense jumpers (JP3, JP4) only appear on the dual-channel modules.



NOTE:

When installing dual-channel modules, be sure to enter the VZERO, VVAL, and VSPAN values listed on Volts Calibration label (on module). Go to the Calibrate-Volts submenu on the IQ plus 800/810 to enter these values. (Refer to the *IQplus 800/810 Installation Manual*, Section 4, Calibration, for more information).

The software choices under the SET ALG main menu allow the following combinations:

- Single-channel module on main board (CHANS = 1)
- Dual-channel module on main board (CHANS = 1, 2)
- Single-channel module on main board, and dual-channel module on expansion board (CHANS = 1, 3, 4)

NOTE: Channel 2 is not operational with this setup.

- Dual-channel on both main and expansion boards (CHANS = 1, 2, 3, 4)

Installing Dual-Channel Modules



Caution

To avoid loss of data, record the weight calibration and volt calibration data of existing modules *before* removing them.

The ribbon cables connecting the main CPU board to the Display/Power board provide battery-backed power to the indicator's memory. When the cables are removed *all configuration information, setpoint information, and special print ticket formats are lost*. Be sure to record all this data before disconnecting the ribbon cables. The Hotline PC program provides an easy way to do this. **Use Hotline Version 1.0 with IQplus 800/810 Version 2.3 software, and Hotline Version 2.0 with IQplus 800/810 Version 3.0.** Otherwise, make a hard copy of the data as follows: attach a printer to the IQplus 800/810's print destination port, switch to SETUP mode, and press PRINT.

Installation

1. Remove the load cell cable from the existing analog input module. Be careful to note the wire orientation.
2. Remove existing analog module. If the module is still functional, record voltage calibration data and store with the module for use later.
3. Install new analog input module. Wire load cell cables into the 7-position pluggable connectors provided. Make sure to follow wiring diagram for proper wiring.
4. Remove sense jumpers JP1-4 for six-wire remote sensing applications. Leave JP1-4 installed for four-wire installation.
5. When properly wired, change the programmed EPROM to version 2.3 or higher. (See accompanying EPROM installation instructions.) Power-up the indicator.
6. Enter new voltage calibration data into IQplus 800/810 configuration via the front panel keypad under the volts submenu for the channels involved.
7. Restore the configuration information, the setpoint information, and any custom print formats to the indicator using the front panel or Hotline program.
8. Recalibrate, and reseal if necessary. For more information, refer to the calibration menu description in section 4 of the installation manual.

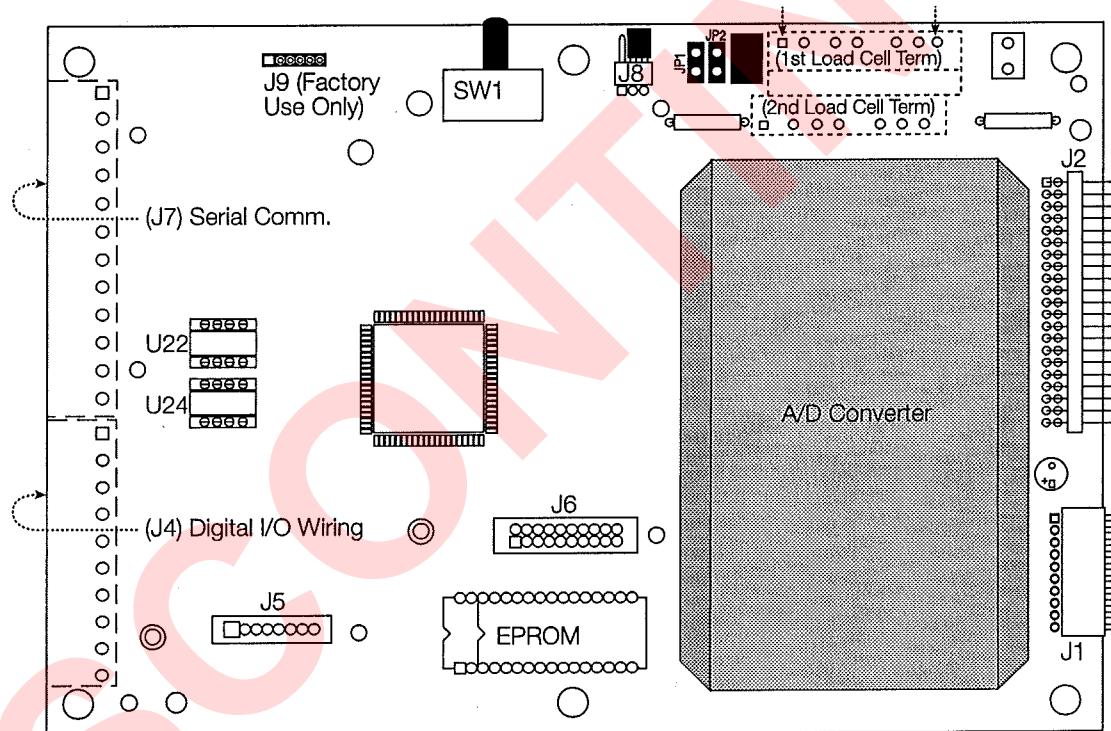
Installing EPROMs

To avoid damage from static electricity, *always use static discharge control equipment*, such as wrist straps and grounded table mats. The electronic components used in this equipment are extremely sensitive to static electricity.

1. Power-up the IQplus 800/810 and record in a safe place all setup information, setpoint configuration, calibration information and any special print formats prior to changing the programmed EPROM.

When the new software is installed, *configuration information, setpoint information, and special print ticket formats could be lost*. The unit may re-initialize itself to its factory default settings. Use the Hotline PC program to record / restore the memory contents. Or, use the indicator's print configuration parameters function to make a hard copy of the data as follows: Attach a printer to the IQplus 800/810's Print Destination Port, switch to SETUP mode, and press **PRINT**.

- With power removed from the IQplus 800/810 indicator, locate the EPROM on the Main CPU board. It is located near the lower left-hand corner of the A/D converter.



Use an IC extraction tool or small screwdriver to gently remove the old EPROM from its socket. Note the orientation of chip's notched end with respect to the main board. Carefully place the old EPROM aside, and remove the new EPROM from the antistatic bag and foam cushion. Align it in the socket the same way as the old EPROM. Be sure that all the legs of the chip are properly aligned in the socket and firmly press it into the socket while supporting the CPU board from the bottom.

- With a load cell or simulator attached, power-up the IQplus 800/810. Enter CONFIG mode and follow the instructions for Setup and Configuration found in the ***IQplus 800/810 Installation Manual*** to reenter all scale parameters, calibration information, setpoint configuration, and any custom print formats.

Use of the Hotline program allows downloading all information with a single command, rather than individually entering each parameter as above.