Assembly Solutions
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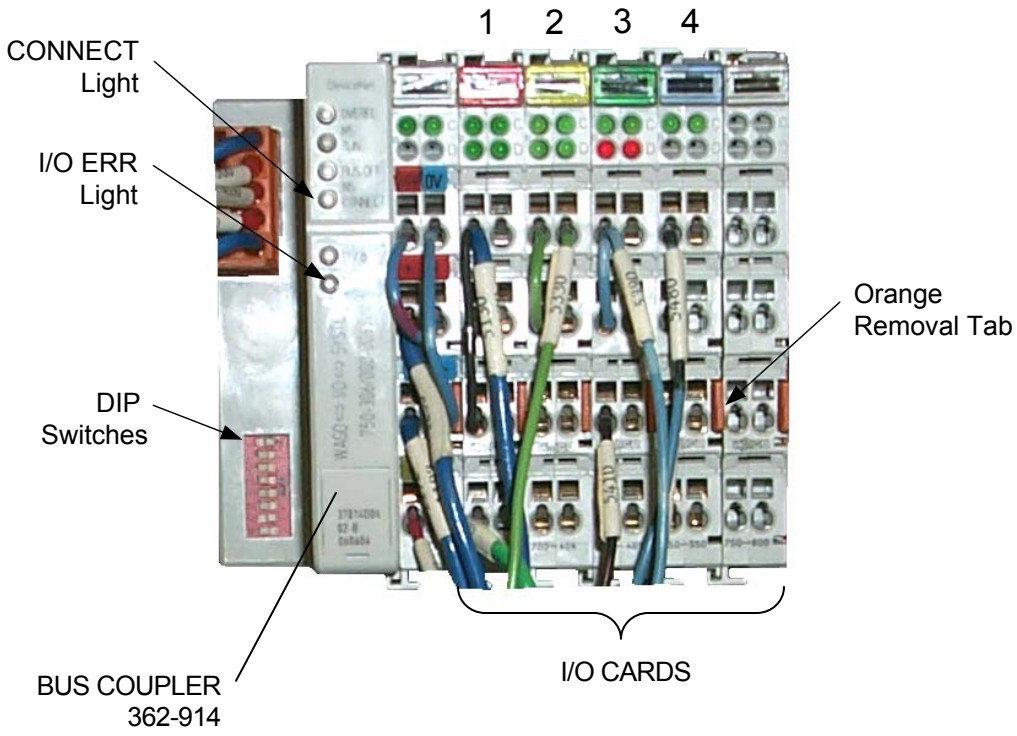
Technical Bulletin No. 082903 JM

Simple DeviceNet Troubleshooting For AutoStream (Software ver 1&2)

All Johnstone systems have at least two (2) DeviceNet I/O blocks. One is inside the main panel and it controls the Temperature Conditioner, the other is at the robot and it controls the Dispense Head.

A second dispenser or pump monitoring station will also have a DeviceNet I/O block. Example: A dual system with pump monitoring will have five (5) blocks, one at the Temperature conditioner, one for each Dispense Head, and one for each Pump Station.



Problem:

A) The system can not see one of the I/O blocks. When you look at the I/O block, the "CONNECT" light is flashing, but lights are green.

Root Cause:

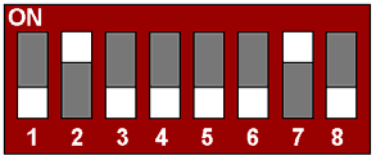
The block is powered up correctly, but it is not talking to the controller.

#1 The settings could be wrong.

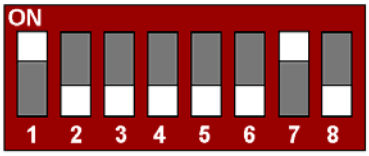
#2 The electrical connection could be broken.

Solution #1:
Check the DIP Switches on the I/O blocks to make sure they are set correctly:

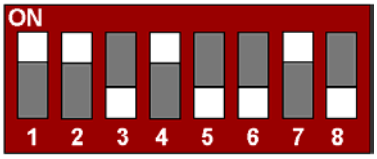
Temperature Conditioner (Main Panel)



System 1 Dispense Head

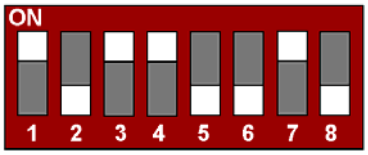


System 2 Dispense Head



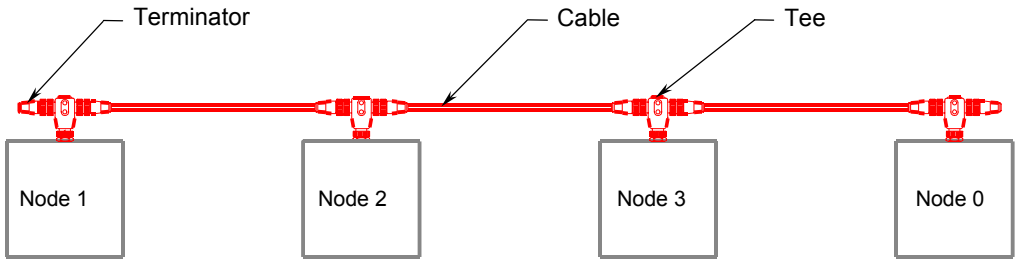
System 1 Pump Station

System 2 Pump Station

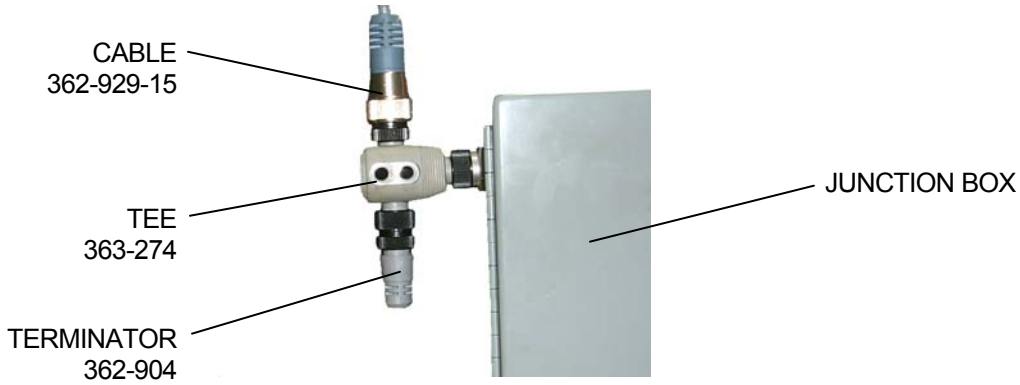


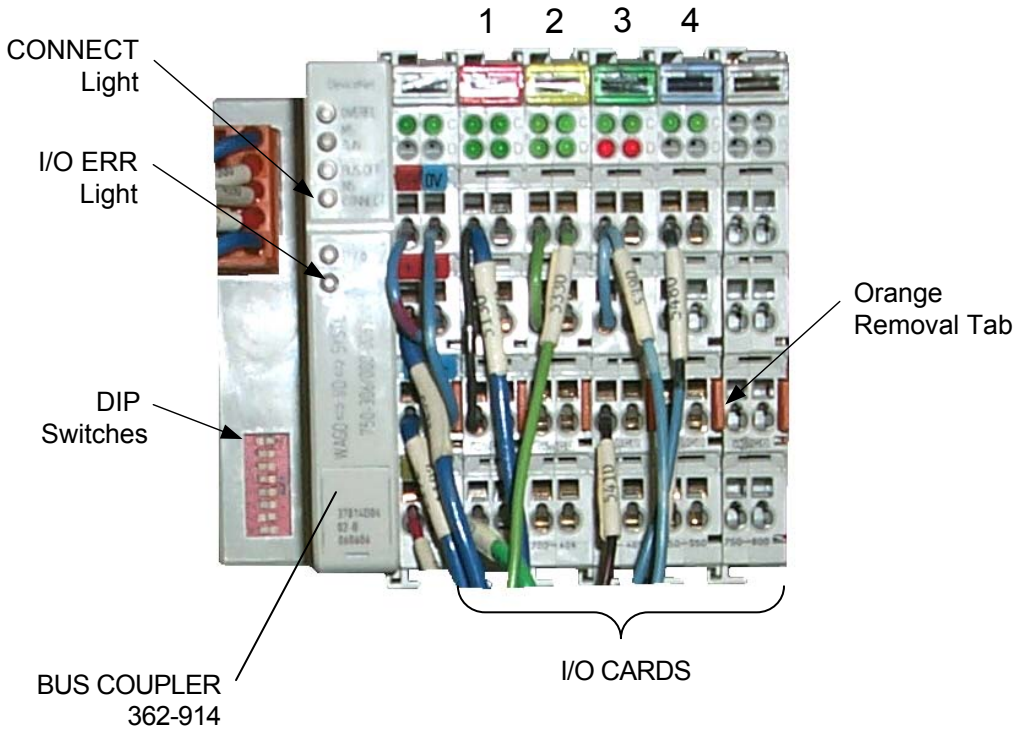
Solution #2:
Check the physical cables, tees, and terminators on the system:

Each DeviceNet network must have a cable running to each device and a Terminator at both ends of the network. The devices can be in any order.



Verify that the Cables are all attached. Replace Tees, Terminators, and Cables if necessary.





Problem:

B) The system can not communicate with one or more of the devices. When you look at the I/O block, the red “ERROR“ light is on.

Root Cause:

One of the modules is bad and must be replaced.

#1 The Bus Coupler is bad.

#2 One of the I/O Modules is bad.

Solution #1:

If the Bus Coupler is bad, the red lights will flash at the same rate or stay ON constantly. Replace the Bus Coupler

Solution #2:

If an I/O card is bad, the red light will flash very fast, then flash four times slowly, pause, then flash a number of times more. The number of times it flashes after the pause tells which is the last good I/O card.

Example:

Fast flashing
Flash – Flash – Flash – Flash
Pause
Flash – Flash – Flash

This means that I/O card number 3 is the last good one, replace I/O card number 4.