

# ControlMASTER

## Installation – Final Setup Instructions

The following instructions assume that the Keypad(s), I/O Units(s), Power Supply(s), Solenoid(s) and Pulse Meter(s) with Y-Strainer(s) have all been installed and wired with appropriate shielded cable. It is also assumed that the PC Interface has been installed and that the system has not been powered up.

### Initial Check

- 1) **Set Jumpers:** ControlMaster is wired in series in a CAN Bus network configuration. Starting from one end of the system identify the first component (Keypad, I/O Unit, or PC Interface, and move the jumper on the circuit board to IN. This same jumper on the last component on the other side of the system must also be set to IN. All other components must have this jumper set to OUT or the system will not function properly.
- 2) **Verify CAN Bus Wiring:** Starting at the first component, and working through the system to the last component, identify the wiring color code scheme employed and verify that each CAN Bus connector is wired with the same color wire going to the same terminal ie. CAN Hi, CAN Low, Shield.
- 3) **Verify Solenoid and Pulse Meter Wiring:** In the same logical progression, check that the Solenoids and Pulse Meters are wired properly to their corresponding I/O unit.
- 4) **Verify Power Supply Wiring:** Check the power supply wiring to each I/O unit.
- 5) **Disconnect all Power Connectors:** Disconnect the connector in each Keypad and the Power Connector in each I/O unit.
- 6) **Power Up:** Plug in the Power Supply(s).
- 7) **Verify Voltage and Polarity:** With a volt meter, start from one end of the system and check each Keypad and I/O unit for correct voltage and polarity. The polarity should be positive and the voltage should read approximately 30 +/- a few volts.
- 8) **Power Up Each Keypad and I/O Unit:** Upon checking a device, if polarity and voltage are correct, reconnect the connector. Keypads should beep and should power up. I/O units should have the Red LED in the top center flash once and the Red LED on the left side remain on.

### Keypad and I/O Unit Configuration

- 1) **Set Keypad ID #'s:** Starting at the first Keypad disconnect the wiring connector to power down. While pressing and holding the Space Key

reconnect the connector. The display should read "ID #?", Enter a unique number starting with 001 and press Enter. Perform the same procedure for each Keypad. All Keypads are shipped with the default I/O address 001.

- 2) **Set I/O Unit ID #'s:** If more than one (1) I/O unit is present each must have its own unique ID #. These ID #'s are unrelated to the Keypad ID #'s and the first is always 00 followed by 01, 02.... All I/O units are shipped with a default ID # of 00 so one unit should require no changes. Power down all I/O's except the next logical unit which will be assigned an ID # of 01. From the Keypad closest to that unit enter the Supervisor PIN of 9999, up arrow twice and Enter, then enter the Customer PIN of 1111, up arrow twice and Enter, then enter the System ID of 2222 and up arrow to the Change I/O unit ID option and change the ID to 01. When completed and the new ID is accepted power down the I/O and repeat the same procedure for all remaining I/O units giving each the next logical ID # of 02, 03.... If unable to enter a PIN try setting the jumpers on the I/O unit and the Keypad attached to it to the IN position to isolate from the system and retry.
- 3) **Be sure that ALL I/O units EXCEPT the one being addressed are powered DOWN (OFF) during this procedure.**
- 4) **This is Critical.** After all of the Addresses have been set, go to a keypad and enter the Supervisor PIN of 9999, scroll to the menu item 'Clear Transactions' and follow the prompts to complete the procedure.

### PC Setup and Configuration

- 1) **Identify PC:** Identify a PC that is up and running during all business hours. This PC should be running Windows 95 or higher, have an available Serial Port, and a CD drive. This PC is usually located in the Parts Department although any location will work.
- 2) **Connect and Power Up PC Interface:** Connect one end of an RS-232 cable to the PC Interface and the other to the available Serial Port. Connect the Power Supply to a wall outlet and to the PC Interface.
- 3) **Load Software:** Insert the MDS2000 Software CD into the CD Drive and install the software.
- 4) **Configure COM Port:** Start the MDS2000 software and from the Options pull down menu select Comm Port and choose the same port that the RS-232 cable is plugged into. If this is not known start with Com1, Com2, etc. until communication is established. If the system hangs attempting to communicate open the MDS95.INI file in C:\WINDOWS directory with Notepad and manually change the CommPort= setting to another Comm port or to 0 to start over using the software. Repeat until communication is established.
- 5) **Configure General Settings:** Click the Configuration icon on the bottom of the screen and enter the system PIN of 2222. Under the General tab defaults should be OK with the exception of System Units which should be changed to Imperial.

## PC Setup and Configuration - Continued

- 6) **Configure Users:** Under the Users tab add at least one user assigning a four (4) digit PIN using any number that does NOT start with 0.
- 7) **Configure Products and Tanks:** Under the Tanks tab add the available products and then assign them to their tanks.
- 8) **Configure Hoses:** Under the Hoses tab assign the previously entered products to the proper hoses. Hose numbers should have already been determined during initial system layout and wiring. The only setting that should require adjustment is the PPU setting which should be changed to 95.00. If any errors occur during this process exit the configuration screens (saving your work) and click on the Tank Status icon. Right click on each tank and set its Tank Size and Level. You can then go back to the Hoses tab via the Configuration icon and assign your hoses and change the PPU settings.
- 9) **Send Settings to I/O Units:** From the Send pull down menu first Send Configuration and then Send Users to the I/O units and Keypads.

## Testing

- 1) **Test System:** Starting with the first hose enter a valid User PIN as setup in #6 above, enter a job number, choose the hose, enter the quantity, and dispense to a container. The appropriate amount of product should be dispensed and the flow should then stop without releasing the trigger. If dispensing does not occur recheck wiring and software settings. Also check that pumps, reels, and control handles are functional and that no ball valves are closed. If all hoses test OK the system is ready for use.
- 2) **Enable for ControlMaster Plus Integration:** If integration with the Dealer Accounting and Repair Order Software is desired please reference the ControlMaster Plus document for instructions for implementing this function.

Congratulations on your successful installation of a ControlMaster system!

**Please contact Samson Corporation with any problems or questions having to do with the Control Master or any issues with the services provided by Samson Corporation.**

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