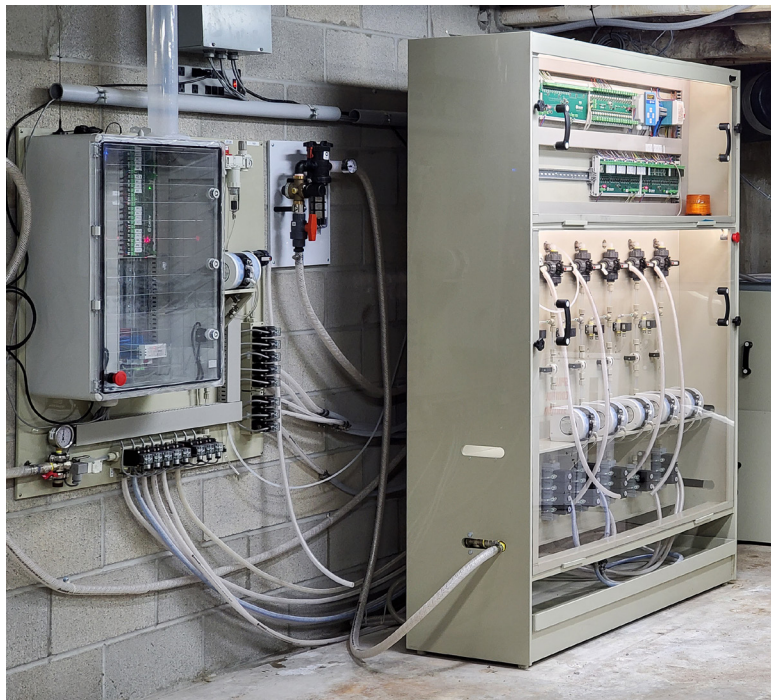
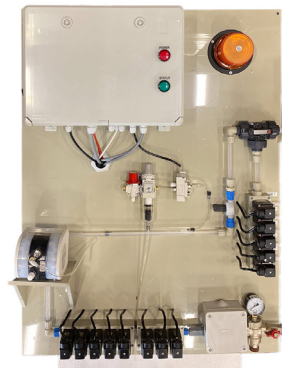


# Multi-System Panels and CTDS Systems

*Note: This is for Multi-system panels designated by the S/N beginning with 'S', 'W' or 'Z',  
and CTDS systems designated by the S/N beginning with 'T'*



*Note: This is for Multi-system panels designated by the S/N beginning with 'S', 'W' or 'Z', and CTDS systems designated by the S/N beginning with 'T'*

Program Interrupted by Signal	
Possible Cause	Remedy
The signals from the machine do not match what the dispenser is registering from the washer. Signals are either missing, or multiple signals are occurring simultaneously.	Go to View Device page, and then duplicate that browser tab (you will have 2 tabs with the same View Device page)
	In tab #1, go to Programs -> the formula you expect to run
	In tab #2, go to Actions -> Input signals log (the system will take a few seconds to pull all records in the dispenser)
	Check the signals you expect (what's in the formula) vs. the signals being recorded in the Input signals log
	Take note that a signal is only registered when it turns OFF, which is how it records the duration of a signal
	If a signal is stuck ON, it will not register until power to the washer is removed/restored. This can also be determined by viewing the status LEDs behind the cover.
The User stopped the washer before the formula was complete	Check to see if that formula has completed successfully in the past. If so, it's most likely a User stopping the formula.
Bad signal connection	Check that all signal wires are securely connected in the Washer and SIB

Signal Module Connection Problems	
Possible Cause	Remedy
Bad power wiring, intermittent power connection	Check power connections on both ends <b>NOTE:</b> It is recommended to power the SIB from the washer, from L1 to E.G. assuming L1 input voltage is lower than 300 VAC
	Check that power connection is to constant, and not a switched power source
	If the washer power connection is unreliable, the SIB can also be powered from a wall outlet by installing an extension cord
Bad/improper communication wiring	Check the communication (daisy-chain) wiring <b>NOTE:</b> Shielded cable is recommend. Shielded cable will have a foil wrapped around all wires, along with a bare wire. Use the bare wire for the SHLD connection.
Improper load resistor settings	Check the load resistors (orange switches) are set appropriately (ON in the panel and ON for the last SIB, OFF for all SIBs in between)
	Troubleshoot by starting with the first SIB, and all others disconnected (simply pull out 4 position connector in SIB #1 that goes to SIB #2)
	Set/Reset load resistors accordingly as each additional SIB is added to the network

SIB not receiving Washer signals	
Possible Cause	Remedy
No Voltage from Washer relays	Check that the relay common is correct, and verify Voltage when signals should be ON
Suitcase jumpers installed	Remove suitcase jumpers when signals are < 50 V

Washer not selecting formula in AFS mode	
Possible Cause	Remedy
Improper device settings	Washer must be Enabled in the software, SIB must be ON and connected to the daisy-chain network
	Settings -> Washer Settings -> New Program Detection Input is set as your AFS signal
	Settings -> Washer Settings -> Autostart hand selected program should be UNCHECKED
Improper formula settings	Verify washer formula (program)
	Formula set to 'Automatic Start', and signal duration doesn't overlap with another formula (see Programs -> Options -> Autostart details)
	Autostart signal combination has your AFS signal highlighted GREEN
	All washers are enabled (GREEN) for the formula
Improper washer formula/settings	Check Input signals log and verify that another signal isn't coming on with the AFS signal
	Check SIB status LEDs and ensure that another signal isn't stuck ON

Electric Pump not operating	
Possible Cause	Remedy
Pump turned off	Check power switch on the bottom-left of pump, set to ON (up position)
	Check that speed dial is set to max (100)
Pump not receiving power	Check pump power connector by unscrewing cable fitting and unplugging power connector (recommend turning system off while checking this in case of high voltage)
	Check pump relay on the control board...swap with an unused relay if available to test
	Check external relay in the bottom of the cabinet. Unplug and plug in relay to re-establish contacts
	Check wiring from control relay to external relay
Internal pump failure (sometimes indicated with a RED error LED)	Replace pump

Pneumatic Pump not operating (single port, controlled with 1 airline)	
Possible Cause	Remedy
Improper or no air pressure	Check that the system has air pressure and that the pressure regulator for the pump is set between green indicators on the pressure gauge
Pump is dead-heading	Check that the 3-way valve used for calibration is set appropriately (normal operation has red arrows pointing left, up and down; calibration has red arrows pointing left, right and up)
	Check that the discharge line is free of clogs all the way to the machine
	Check that the machine injection port is drilled out
Pump is air-locked (single port pump only)	For single port pump (using a single airline for operation), press reset button on the front of the pump and retry
Air control valve not working	Check that air is being supplied to the pump by removing air tubing from the pump during pump activation
	Check air control solenoid valve for correct operation. Valve is equipped with a RED LED to indicate operation.
	Check relay used for valve control
	Check electric air solenoid valve connections, should get 24 VDC during activation on each channel

Pneumatic Pump not operating (dual port, controlled with 2 airlines)	
Possible Cause	Remedy
Improper or no air pressure	Check that system has air pressure and that the pressure regulator for the pump is set between green indicators on the pressure gauge

## Troubleshooting Guide • Multi-System Panels & CTDS Systems

Pump is dead-heading	Check that the 3-way valve used for calibration is set appropriately (normal operation has red arrows pointing left, up and down; calibration has red arrows pointing left, right and up)
	Check that the discharge line is free of clogs all the way to the machine
	Check that the machine injection port is drilled out
Improper pump settings	For dual port pump, make sure the settings are Shared Pump Mode is set to "Frequency" Settings -> Dosing Group Settings -> Shared pump type -> Frequency controlled -> 3 Hz
	Check that air is being supplied to both channels by removing the air tubing from the pump during pump activation. Air channels should alternate back and forth at the frequency set above
Bad air control valve	Check electric air solenoid valve connections, should get 24 VDC during activation on each channel, alternatively
Bad driver board	Check output driver boards to ensure signal is not stuck ON (24 VDC) or OFF (0 VDC) <b>NOTE:</b> These are not relays, but small circuit boards in place of the relay

Low Flow Rate (for a single product)	
Possible Cause	Remedy
Out of product	Check for empty product container
Improper Settings	Check low flow rate setting in Pump Settings, recommend 5-10 oz/min for electric pump, 20-40 oz/min for pneumatic <b>NOTE:</b> Systems with an Electric Solenoid Pump requires a Pump Switch ON Delay to be set at 3 seconds. This setting can be found under Dosing Group Settings.
Pump not pulling product	Check product solenoid valve for correct operation, including manually activating valve via pushbutton
	Check tubing from product container to panel for kinks and/or air leaks (worm gear clamps are recommended for all barbed fittings)
	Check drum wand (check valve)
	Check for any cracks on the manifold bottom, where the barbed fitting threads in
	Remove product valve via (4) bolts and inspect seal, and ensure no clog on the inlet of the manifold
	Remove barb fitting to access insert. Using a 1/4" wide flathead screwdriver, remove insert and inspect/replace o-ring

Low Flow Rate (for all products)	
Possible Cause	Remedy
Pump is not working	Check pump for proper operation

High Flow Rate (products)	
Possible Cause	Remedy
Device settings are not correct	Check high flow rate setting in Pump Settings, recommend setting value to 50% greater than calibration value
Water solenoid is not shutting off	Turn 3-way calibration port to "calibration" while system is not running and determine if water continues to flow without activating solenoid
	Check water valve for debris

Low Flow Rate Water	
Possible Cause	Remedy
First, determine if this happens on all washers, or just a single washer  An error for a single washer indicates that either the line to the washer is clogged, the washer port isn't drilled out, or the washer solenoid valve is not operating	Check tubing from washer valve to washer for kinks
	Check that the machine injection port is drilled out
	Check product solenoid valve for correct operation, including manually activating valve via pushbutton

Second, determine if the value is always 0 oz/min, or if the value is > 0 oz/min A value greater than 0 oz/min indicates improper settings, flow restriction, or low water pressure If the building has low or inconsistent water pressure, a break tank is required!	Check low flow rate setting in Dosing Group Settings, recommend minimum of 32 oz/min for water low flow setting
	Check that water pressure regulator has been adjusted appropriately. . .best to set this with water flowing (priming), to achieve ideal range of 1-2 GPM
	Check that there are no clogs in the system itself, including the flow meter
	Check that the flow meter is working. Perform a water calibration and determine if ticks are being registered
A value of 0 oz/min indicates no water flow at all, or no ability to detect it	Check water pressure is present, and water pressure regulator has been set
	Check if water flows when priming water, out of the calibration port
Water solenoid not working	Check solenoid operation and inspect including control relay for water valve, electrical DIN connector, or debris within the water valve
Flow meter not working	Perform a water calibration to confirm if the flow meter is working (if it's not working, an error message will occur during calibration)
	Check flow meter cable and electrical connectors on both ends of the cable

<b>High Flow Rate Water</b>	
<b>Possible Cause</b>	<b>Remedy</b>
Device settings are not correct	Check high flow rate setting in Dosing Group Settings, recommend setting value to 350 oz/min
Water solenoid is not shutting off	Turn 3-way calibration port to "calibration" while system is not running and determine if water continues to flow without activating solenoid
	Check water valve for debris

<b>Unit not ON</b>	
<b>Possible Cause</b>	<b>Remedy</b>
No power to the system	Check outlet for power, and if using a GFCI outlet check for trip
Power Supply not working	Check 120 VAC input to power supply (between L and N), and confirm 24 VDC between +V and -V
Short circuit on 24 VDC	Unplug flow meter connector (3-pos green connector) to see if LEDs come on
	Check for short circuiting on all solenoid DIN connectors, including all products, washers and water solenoid

<b>Device won't Connect</b>	
<b>Possible Cause</b>	<b>Remedy</b>
Wrong S/N	Check that the S/N on the device matches the S/N in the system
Low Cell Signal	Mount the antenna directly on top of the unit (Control box). . .avoid placing antenna near large metal objects
	If in an all metal building, determine if a 33 ft. extension cable can allow for the antenna to be placed on the outside of the room/building
	Check the small cable going from the modem to the bulkhead connector for the antenna
	If the cellular signal is too weak, try using a Wi-Fi card in place of the modem

<b>Device Inactive after (X) Days</b>	
<b>Possible Cause</b>	<b>Remedy</b>
No power to the system	Check that outlet is providing power
	Check that the panel is plugged in, and switched ON
No Internet connection	Check that antenna is on top of the unit and connected
	Check the small cable going from the modem to the bulkhead connector for the antenna
	If the cellular signal is too weak, try using a Wi-Fi card in place of the modem

## Troubleshooting Guide • Multi-System Panels & CTDS Systems

Tunnel Dose Incomplete	
Possible Cause	Remedy
It's taking too long to dispense product and flush water, before the next transfer signal arrives	Check that the transfer isn't occurring prematurely
	Check that the water pressure is adequate, and the amount of water used for flushing

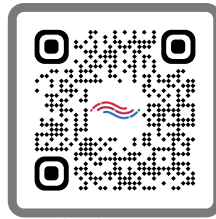
Relay Voltage Error	
Possible Cause	Remedy
A relay output is being shorted during activation	Check for a short condition on all associated solenoids and solenoid connections, alarm output

Failed to Route	
Possible Cause	Remedy
A product is not assigned to a Dosing Group or Pump, but is used in the Formulas	Check product assignments
A washer is assigned to the wrong Dosing Channel	Check washer assignments in formulas

**NOTES:**

## WARRANTY

For complete product terms and conditions scan the QR code below or enter the following URL into your browser:  
<http://cfstech.info/t-and-c>



SCAN



Lavo Solutions LLC is part of the CFS Technologies family of brands.

[lavosolutions.com](http://lavosolutions.com) | [cfstech.com](http://cfstech.com)

8504 MacArthur Dr., North Little Rock, AR 72118 USA • 501-895-2820 | 800-999-2820

General: [sales@cfstech.com](mailto:sales@cfstech.com) | Tech. Assist.: [techsupport@cfstech.com](mailto:techsupport@cfstech.com)