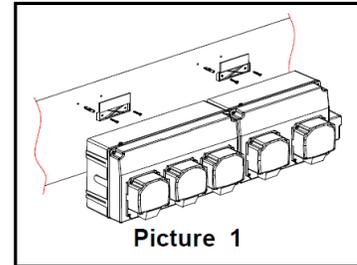


LavoWash OPL Quick Start Guide

This is a quick start guide. This is not a full manual.

Mounting The Dispenser

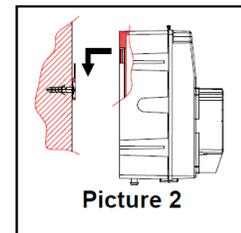
1. Using a level and the mounting template provided, mark the location to mount the dispenser.
2. Use a power drill with a 3/8" drill bit to punch holes in the wall.
3. Insert the anchors into the holes.
4. Mount the brackets with the 1/4" anchors provided.
5. If using the older style flush manifold (210-LAU-FM4 or -FM6), make sure the blue solenoid cover and valve are securely mounted to the right side of the dispenser BEFORE hanging the unit on the wall.
6. Hang the dispenser as shown in **Picture 1 and 2** to the right.



Picture 1

Flush Manifold

1. When mounting the flush flute, use one bracket and mount it where you would like. Use the flute as a guide to mark the hole for the second mounting bracket.
2. Make sure to use a level before punching holes in the wall.
3. Use a 3/8" drill bit and drill to put holes in the wall.
4. Insert the anchors provided in the kit.
5. Push the manifold into the brackets and secure the clips.

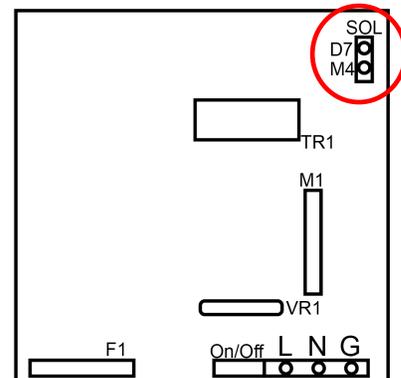


Picture 2

Wiring The Unit (Disconnect all electrical power before starting)

Solenoid

1. Use the wire from the solenoid valve. Run the leads through the strain relief on the left side of the LavoWash OPL.
2. Locate the SOL terminals on the top right of the first circuit board—see picture to the left.
3. If using older style flush manifold (210-LAU-FM4 or -FM6), connect blue wire to (D7) and the brown wire to (M4). If using newer style interface (210-FM4 or -FM6), connect the red wire to (D7) and the black wire to (M4).



Signal Interface Box

1. Locate the supply lines from the washer.
2. Use the label provided on the signal interface box to match the wire color with the pump. There is 2 of every color—one is the LINE and one is the common. The common is noted with COM typed on the common wire.
3. If the WASHER has ONE common, use a wire nut to tie together all of the commons on the signal interface box for the pumps you will be using.

Plumbing The Unit (helpful tips)

Chemical tubing:

1. From the chemical bucket to the barb is 3/8" ID.
2. From the output of the pump to the flush manifold is 3/8" ID.
3. If you are not using a flush, the output barb is 3/8" ID
4. If you are using a flush manifold, the output barb is 3/8" ID.

Solenoid valve:

1. The inlet water connection is 3/4" GHT.
2. The flush water line to the washer is 3/8" barb connection.

Time Mode Programming

Step 1: Program with time or calibration

- Enter access code; default is 000
- The **Pump Time** LED should be flashing. If the delay time LED is flashing, press **MODE** to switch it back to **Pump Time**.
- Using the **PUMP SELECT** button choose the pump.

Then do one of the following:

Programming based on time:

- If you know the time to achieve your desired dosage, simply use the “+” or “-” set the timing.
- You can also use the guide on page 10 to determine the time to enter.
- Press **ENTER** to save the times programmed.

Programming based on calibrating:

- Use a measuring cup to capture the pump output. Press “CAL” to start and stop the pump. Press **ENTER** to set the time after each pump is calibrated.

Priming with nothing programmed	Priming with formula programmed
<ul style="list-style-type: none">• Enter the access code;• The Pump Time LED will flash. If not, press the mode key so that the pump time LED is flashing.• Use the Pump Select key to choose the desired pump.• Press the CAL key to start and stop the pump.	<ul style="list-style-type: none">• Enter the access code;• The Pump Time LED will flash. If not, press the mode key so that the pump time LED is flashing.• Use the Pump Select key to choose the desired pump.• Press the Prime key to start priming the pump. The pump will run for the amount of time programmed.

Time Mode Programming

Step 2: Program flush time Not using a flush?

- Enter access code;
- Dispense an ounce of chemical into the manifold.
- Choose **Pump F** and the **Formula Number** with the Pump and Formula select buttons.
- The pump time LED should be flashing. If not press MODE to choose pump time.
- Press CAL. The flush solenoid will open and the 3-digit display will start counting the flush time.
- Once the product is cleared from the line, press CAL again to stop the flush. The display will stop counting and the display will indicate the time needed to flush the line.
- Press ENTER and the display will flash and the flush time is set.
- Repeat for each formula.

OR

- You can manually program the flush time by selecting **Pump F** and the desired formula. Set the flush time with the “+” or “-” buttons. Press **Enter** to save. Repeat for each formula.

Step 3: Setting the Load Count Pump

The load count pump of the LavoWash OPL performs a number of important functions.

- Counts total loads for each formula.
 - Terminates programmed lockout times.
 - Activates the system reset timer
 - Resets “levels” on pumps 1 – 6.
- NOTE: The pump used for load counts accepts only 1 wash level.

- Enter access code.
- Press and hold ENTER until the pump time and delay time LED's will be off. The current load count pump will be briefly displayed in the pump window.
- Use PUMP SELECT key for selecting the load count pump **number**. The display flashes during selection of the desired load count pump.
- When the pump time LED returns (in 3 seconds) the pump number was accepted

The FINAL pump is the same for all formulas.

DRAIN MODE: The final pump is 2 by default.

Time Mode Programming

Step 4: Programming Delay Time (Optional)

- Enter access code;
- Ensure that the delay time LED is flashing. If not, press **MODE** to select delay time.
- The 3-digit display shows 0 0 0 if delay units are seconds or - 0 0 if delay units are minutes;
- Use the **SELECT** buttons to choose desired pump and formula.
- Use to set the delay time;
- Press **ENTER** to confirm.
- Press **RESET**

Displaying The Load Count

- Press **ENTER**; The load count will be shown on the 3 digit window for the formula displayed;
- To see the statistic for each formula and pump, perform the following procedure:
- Formula: Press **FORMULA SELECT** to select the formula.
 - Press **PUMP SELECT** to select the pump.
 - If you set **Formula 0**, the 3-digit display reveals the total loads count for all formulas.
 - Clear load counts by pressing while the count is displayed until the 3-digit display shows 000.

Programming options continued on next page.

Relay Mode Programming

Step 1: Adjust the formula

- Enter the access code.
- Select **Pump "R"**
- Press **ENTER** and then **RESET**.

Step 2: Program Flush

- Enter access code.
- Select **pump F** and the formula;
- Use the "+" or "-" to choose the time the flush will remain ON.
- Do this for each formula.
- Press **ENTER** and then **RESET**.

Displaying The Load Count

- Press **ENTER**; The load count will be shown on the 3 digit window for the formula displayed;
- To see the statistic for each formula and pump, perform the following procedure:
- Formula: Press **FORMULA SELECT** to select the formula.
 - Press **PUMP SELECT** to select the pump.
 - If you set **Formula 0**, the 3-digit display reveals the total loads count for all formulas.
 - Clear load counts by pressing while the count is displayed until the 3-digit display shows 000.

Programming options continued on next page.

Auto Formula Select Programming

Step 1: Enable AFS

IMPORTANT: AFS mode is only available on LavoWash OPL PLUS Controller models.

- Enter the access code.
- Select Pump "A" and Formula "A"
- Use "+" or "-" to decide on which mode to operate. Use the table below as a reference.

Option	Signal Used	Description
Off	None	AFS Mode is off.
t 2	1	AFS Time Mode (time base is 2 seconds)
t 3	1	AFS Time Mode (time base is 3 seconds)
t 4	1	AFS Time Mode (time base is 4 seconds)
t 5	1	AFS Time Mode (time base is 5 seconds)
B 5	1-2-3-4-5	AFS Binary Mode (signal accepted at 5 seconds)
B10	1-2-3-4-5	AFS Binary Mode (signal accepted at 10 seconds)
B30	1-2-3-4-5	AFS Binary Mode (signal accepted at 30 seconds)

Important Note:

- During AFS operation, the 3 digit window at the top will show AFS.
- The pump window will show nothing
- The formula window will show "-"
- When the formula is activated the formula window will indicate the formula that was selected based on your programming, and the system will wait for the next signal to begin dosing.

Auto Formula Select Programming

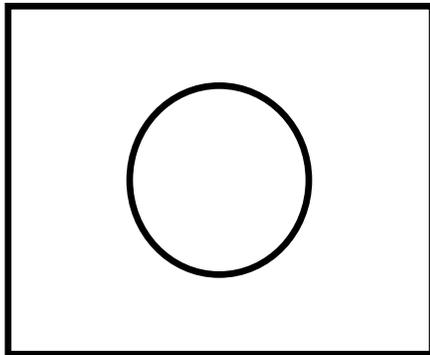
Step 2: AFS Time Mode

- In time mode, you only need to connect **INPUT SIGNAL #1**.
- The formula is determined by the signal “ON” time divided by the Time Mode selected on the previous step.
- Use the chart below as a reference

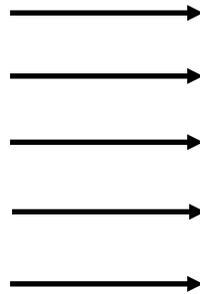
Signal On (in seconds)	Time Mode Selection	Description
2	t 2	Formula 1 is selected. Signal is on for 2 seconds divided by time mode selection equals 1. (i.e. $2 / 2 = 1$)
4	t 2	Formula 2 is selected. Signal is on for 4 seconds divided by time mode selection equals 2. (i.e. $4 / 2 = 2$)
6	t 2	Formula 3 is selected. Signal is on for 6 seconds divided by time mode selection of 2. (i.e. $6 / 2 = 3$)
3	t 3	Formula 1 is selected. Signal is on for 6 seconds divided by time mode selection of 2. (i.e. $3 / 3 = 1$)
6	t 3	Formula 2 is selected. Signal is on for 6 seconds divided by time mode selection of 2. (i.e. $6 / 2 = 3$)
9	t 3	Formula 3 is selected. Signal is on for 6 seconds divided by time mode selection of 2. (i.e. $9 / 3 = 3$)

Auto Formula Select Programming

Step 2: AFS Binary Mode



Laundry Machine



= Value 1

= Value 2

= Value 4

= Value 8

= Value 16

The sum of these will determine the formula selected.

LavoWash OPL CPU

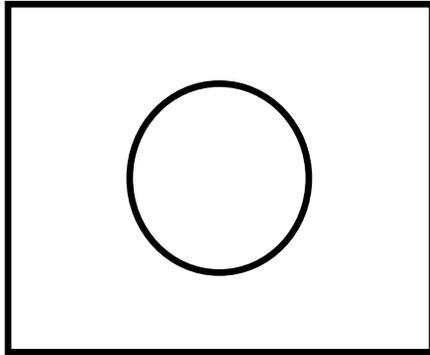
- The chart below shows the different combination of signals

Signal Input 1 (Value 1)	Signal Input 2 (Value 2)	Signal Input 3 (Value 4)	Signal Input 4 (Value 8)	Signal Input 5 (Value 16)	Sum of the value	Formula Selected
ON	-	-	-	-	1	1
-	ON	-	-	-	2	2
ON	ON	-	-	-	(1+2)=3	3
-	-	ON	-	-	4	4
ON	-	ON	-	-	(1+4)=5	5
-	ON	ON	-	-	(2+4)=6	6
ON	ON	ON	-	-	(1+2+4)=7	7
-	-	-	ON	-	8	8
ON	-	-	ON	-	(1+8)=9	9
-	ON	-	ON	-	(2+8)=10	10

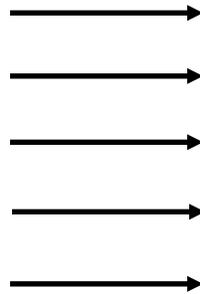
Chart continued on the next page.

Auto Formula Select Programming

Step 2: AFS Binary Mode



Laundry Machine



= Value 1
 = Value 2
 = Value 4
 = Value 8
 = Value 16

LavoWash OPL CPU

The sum of these will determine the formula selected.

- The chart below shows the different combination of signals

Signal Input 1 (Value 1)	Signal Input 2 (Value 2)	Signal Input 3 (Value 4)	Signal Input 4 (Value 8)	Signal Input 5 (Value 16)	Sum of the value	Formula Selected
ON	ON	-	ON	-	$(1+2+8)=11$	11
-	-	ON	ON	-	$(4+8)=12$	12
ON	-	ON	ON	-	$(1+4+8)=13$	13
-	ON	ON	ON	-	$(2+4+8)=14$	14
ON	ON	ON	ON	-	$(1+2+4+8)=15$	15
-	-	-	-	ON	16	16
ON	-	-	-	ON	$(1+16)=17$	17
-	ON	-	-	ON	$(2+16)=18$	18
ON	ON	-	-	ON	$(1+2+16)=19$	19
-	-	ON	-	ON	$(4+20)=20$	20

NOTE: The formula will be activated after the filter time has been achieved.

- AFS binary selection of “b 10”
- Formula 6 will be activated when signals 2 and 3 are ON for 10 seconds.
- As soon as all signals are OFF, the remote control will show you the formula select (6), and the LavoWash OPL will dispense based on the times programmed in formula select.