

Use this guide in conjunction with the Model 599 Instruction Manual that comes with each machine. The pictures and part number identifications in the manual will be used here.

When calling Laurel for help we will need the machine serial #, model # and manufacture date which is on a decal inside the vender, on the left side at the bottom. Also, the white label of the big microchip of the circuit board has a code (ex. CT5 R7.1) that we will ask for.

Normal Operation:

The red LED display has two different styles of display.

1 - If all the selections are programmed for the same price the LED display will alternate between *PAY* and *1.00* (if you have all 5 buttons programmed for \$1.00 price setting).

2 - If you have different prices for your selections then the LED display will alternate between *Coin* and *In* . The vend price of any selection can be viewed by simply pressing the selection button on the switch pad (#899-20) at any time, the price will appear on the LED display for a short time. Both the 3-column and the 5-column Car-Freshner vender work this way even though the 3-column door hides 2 buttons when closed.

A quarter inserted in the coin slot will have the circuit board emit a “beep” and register *.25* on the LED display. Additional quarters will add upwards on the LED display. Accepted coins pass through the coin acceptor and drop into the coin cup (#899-B19). They will stay in the cup waiting for the successful operation of the vend motor (#599-C24) which drops the shelf. When the amount inserted equals the vend price you press the selection button on the switch pad and 4 fast beeps emit from the circuit board as the vend motor runs to drop a shelf. When the vend motor finishes dropping a shelf the coin cup motor runs to drop the coins into the coin box below. After the coin cup runs the LED display will return to its normal display.

See page 4 and 5 in the manual for more explanation of coin values, settings and acceptor programming.

Underpay & Overpay:

This machine is designed for exact pay and does not make change which enables much simpler design and functionality. For example, if 1 quarter is inserted and the selection button is pressed for a \$1.00 item the inserted quarter will be returned to the customer by the coin cup motor since it is an ‘underpay’. The LED display will flash the \$1.00 price when the selection button is pressed indicating the proper amount needed for this product selection.

For an overpay situation - if more money is inserted than the highest price set (of any of the selections) the coin cup motor will run automatically and return all the coins inserted to the customer, not allowing an overpayment. For example, if all 5 selections are set at \$1.00 and 4 quarters have been accepted and credited, if you enter a 5th quarter then immediately the coin cup motor will run and return all 5 quarters to you.

Problem:

The red LED display is not visible.

First step:

Verify that there is 24 volt AC power at the connection point on the circuit board, which is the small terminal block on the lower left corner of the circuit board. After verifying power supply, switch off power for at least 5 seconds, then switch power on. If the LED display does not turn on press the **UP** and **DOWN** buttons simultaneously to reset. Pressing the **UP** and **DOWN** buttons on the circuit board to reset is the most common way to reset the circuit board and also is the method to clear out any error messages. You can try this reset at any time – there is nothing that can be harmed by trying it.

Second step:

If the LED display is still blank, switch the power off to the vender and disconnect the power wires, the ribbon cable and the 2 wire harnesses that are plugged into the back of the circuit board, at the top. You can leave the wire harness for the coin acceptor plugged in (this harness has 6 wires) since the coin acceptor is not likely to cause a problem. Now first reconnect the power wires to the circuit board and turn power back on. If the LED display is still blank then try resetting by pressing the **UP** and **DOWN** buttons of the circuit board simultaneously.

If the LED display is still blank contact Laurel at 888-528-7358 for 3 options on replacing the circuit board. We have a 'swap' program where we immediately send you a refurbished circuit board and you return the defective board back to us for a reduced fee. This 'swap' program is the least expensive option. Other options are purchasing a new board, or purchasing a refurbished board – and you do not need to send us the defective board with either of these 2 options.

If the LED display comes back on after the steps above then plug the ribbon cable and wire harnesses back in one at a time, watching the LED display to see if it goes out and noting which plug caused this. The selection switch pad is most likely to be a problem due to it being subject to use and abuse by customers, so you should watch the LED display before and after you plug in the ribbon cable (which connects the switch pad to the circuit board). If you notice that the LED display stops alternating and instead stays on a specific price when you plug the ribbon cable back in then you have a short in one of the buttons on the switch pad. Replacing the switch pad (#899-20) will be necessary.

Problem:

When you press a selection button *E..1* appears on the LED display.

First step:

This error message is indicating that the specific shelf motor for the column did not finish its rotation in the normal time frame. First clear the error message by simultaneously pressing the **UP** and **DOWN** buttons of the circuit board. *Clr* should appear on the display indicating that the error message is cleared. Now insert quarters and test this selection – the vend motor for the column should run first to drop the shelf and then the coin cup motor should run to deposit the quarters into the coin box.

If *E..1* again appears on the LED display this would indicate that the shelf motor (#599-C24) is not working properly and may need replacing. Contact Laurel at 888-528-7358 for any questions or more detailed information on this issue.

Problem:

Esc appears on the LED display.

First step:

This error message is indicating that the coin cup motor (or the 'Escrow motor') did not finish its rotation in the normal time frame. First, you should inspect the coin cup motor for jammed quarters, etc. that may have stopped the coin cup motor from running freely. To see the coin cup motor you loosen the 2 mounting screws on the front of the coin mechanism and lift the coin mechanism off the screws to see the coin cup motor, which is mounted to the side of the right upright. Remove any foreign objects from around the coin cup motor, or possibly any power wires that may have wrapped around it. Now clear the error message by simultaneously pressing the **UP** and **DOWN** buttons of the circuit board. *Clr* should appear on the LED display and the opening of the cup should be facing upwards.

If *Esc* appears again after testing then the coin cup motor (#899-B19) may need replacing.

Problem:

Sold Out appears on the LED display.

First step:

The most likely cause is that the main wire harness is not fully plugged into the back of the circuit board. The main wire harness is the biggest of the 3 wire harnesses and it plugs into the back of the circuit board, at the top (next to the small 4-wire harness). The most common problem is when this harness is plugged into the circuit board it has a tendency to move the circuit board forward (towards you) off of its mounting posts and not get fully plugged in. Lift up the shiny black instruction sheet that is in front of the circuit board and use your fingers to hold the circuit board firmly in position while you plug in the main wire harness.

Second step:

If all the column empty switches are tripped then the LED display should have *Sold Out* displayed, this is normal. For either the 3-column or the 5-column venders, the top shelf in each of the columns controls the empty switch for that particular column so you need to have at least one of the columns with the top shelf up to have the LED display work normally and not have *Sold Out* displayed.

Problem:

Vender exhibits normal operation but shelf does not drop.

First step:

Check to see if the *E..1* error message appears when you push the selection button for the column in question. If it does then clear the error message by simultaneously pressing the **UP** and **DOWN** buttons of the circuit board. *Clr* should momentarily appear in the LED display. Now insert coins and test vend this column. If the shelf still does not drop then clear the error message again and go to the second step.

Second step:

Using your index finger, manually drop a few shelves at the bottom of the column by pushing out the wire on the underside of the shelf. Even if only ½ the shelves are up in the column still drop the next 2 or 3 shelves. Now insert coins and test vend this column. If the *E..1* error message appears when you push the selection button then the shelf motor (#599-C24) needs to be replaced. The *E..1* error message indicates that the shelf motor did not finish its rotation in the allotted time.

Problem:

Inserted coins are rejected.

First step:

The LED display has to be alternating for coins to be accepted, so check this first. If the LED display is alternating then;

Slugbuster – try replacing the sample coin in the acceptor and testing. Next, refer to the [Slugbuster Instructions](#) for instructions on adjusting the Selectivity setting.

MA800 – there is a small LED visible through a round hole on the cover that should be green. If it is flashing green/red or is just red then there is a problem with the MA800. Refer to the [MA800 Instructions](#) for more information on its operation. If the LED is green then it may need to have coins reprogrammed into it, refer to the ‘Coin Learn Procedure’ section in the instructions for this information.

Microcoin QL – there is a small LED that should be green. Refer to the [Microcoin QL Instructions](#) for more information on its operation.

Coin acceptor tips:

Try swapping the acceptor into another working Laurel electronic vender to see if it accepts. The acceptors are interchangeable in the 1, 3 and 5 column electronic venders. All acceptors for Laurel venders have a 6 wire Molex plug. Make sure the acceptor is fully plugged into the circuit board. Remember that the LED must be alternating for the coin acceptor to accept coins.

Common parts in the 3-column and 5-column venders:

#899-20 Switch Pad

#899-34 Circuit Board

#599-15 Ribbon Cable

#81-B80 Coin Box

#899-B19 Escrow Motor

All coin acceptors (Slugbuster, MA800, Microcoin QL)

