

EMH500 Series Electronic Register



User Guide

Version 2.0 (Draft 1.2)

Other Manuals in the Series:

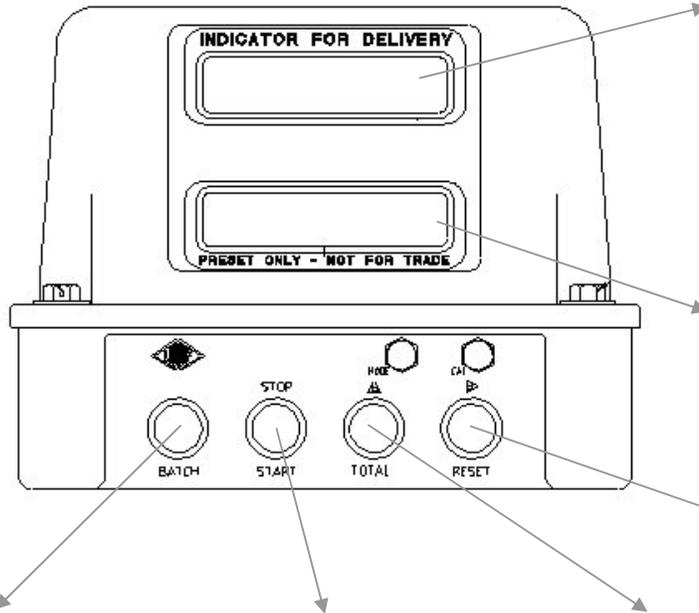
Hardware Reference Manual
Installation Manual
Software Settings Reference Manual
Developer Interface Manual

TouchStar Solutions, L.L.C.
5147 South Garnett Road, Suite D
Tulsa, OK, 74146
USA
Ph: +1(918)307-7100
Fx: +1(918)307-7190
Email: support@touchpc.com

Contents

1. The Front Panel	3
2. Delivery	4
2.1 Simple Delivery.....	4
2.2 Batch Delivery.....	4
3. Print From Front Panel	5
3.1 Management Print-out.....	5
3.2 Setup Configuration Print-out.....	5
4. Additional Features	5
4.1 Temperature Reading.....	5
4.2 Meter Number.....	5
5. Fuse Details	5
6. Displayed Messages	6
7. General Troubleshooting	7

1. The Front Panel



At Power On
Displays Version (eg 01.01.16)

During Delivery
Displays Volume delivered
Displays Flow Rate
Displays Meter Accumulated Total

Before Delivery
Displays Preset volume

During Delivery
Displays Preset volume remaining

If no Batch Volume set
Company Name is displayed

Batch	Stop/Start	↑/Total	⇌/Reset
<p><i>Sets the Preset delivery volume. (Only if batching is set in calibration). Opens control valve if fitted.</i></p> <p>Press Batch See Bottom Display</p> <p>⇌/Reset moves cursor right</p> <p>↑/Total increases cursor value allowing preset to be entered.</p> <p>Batch saves value</p>	<p><i>Allows start/stop of delivery if solenoids are fitted.</i></p> <p>Press Stop/Start to begin delivery at low flow rate before ramping up to high flow rate.</p> <p>Press Stop/Start to stop the delivery temporarily</p>	<p>Shows the Meter Accumulated Total (the total product measured through the meter since installation) on Top Display.</p> <p>Press ↑/Total to see Meter Totaliser displayed</p> <p>During delivery press ↑/Total to see current Meter Accumulated Total displayed.</p>	<p>Shows flow rate during delivery. Signals completion of delivery and prints ticket.</p> <p>During delivery press ⇌/Reset to display the Flow Rate Reading on the Top Display for 5 seconds.</p> <p>After delivery completed and product no longer moving press ⇌/Reset to end the delivery, print the ticket and return to zero on Top Display.</p>

2. Delivery

2.1 Simple Delivery

1. Turn on power to Register either from Isolator Switch, if fitted, or ignition. The Register will briefly display the version number eg. 01.01.16.
2. Check that the Top Display is showing zero, to indicate the Register is ready for delivery.
3. Deliver product by nozzle control (and press Stop/Start with Canadian EMH501) Press ⇨/Reset during delivery to show flow rate on the Top Display.
4. Press ⇨/Reset when the delivery is complete to print ticket. Top Display will show PRINT DT then clear to zero ready for the next delivery.
5. If the Register is connected to a TouchPC and remote reset is enabled, the register can be reset by the TouchPC.

2.2 Batch Delivery

Setting batch value through front panel

Press the BATCH button on the register to enter the batch configuration mode. B00000.0 will be displayed on the bottom screen with a flashing cursor on the first number. Use the RESET button to step through the numbers to the one you wish to change. To change the value of the selected number, use the TOTAL button. Pressing BATCH once more will save the entered value and the current batch value will be displayed on the bottom screen of the register.

If, when BATCH is pressed and no value appears on the lower screen your register has not been set up for batching.

1. Turn on power to Register either from Isolator Switch, if fitted, or ignition. The Register will briefly display the version number eg. 01.01.16.
2. Check that the Top Display is showing zero, to indicate the Register is ready for delivery.
3. Press **BATCH** to set the preset limit or to open control valve.
4. Deliver product by nozzle control or by **Stop/Start** Button. Meter will start slowly and ramp up after about 20 litres to maximum delivery flow rate (if high and low flow valves fitted). Press ⇨/Reset to check flow rate on Top Display.
5. Near end of delivery the delivery flow rate will ramp down decreasing to a gentle rate (if high and low flow valves fitted).
6. The meter will stop delivery when preset reaches zero (Bottom Display) or **Stop/Start** button is pressed.
7. Press **Batch** if you wish to deliver more product on preset.
8. Press ⇨/Reset when complete to print ticket (Top Display will show PRINT DT) and clear display to zero ready for the next delivery.
9. If the Register is connected to a TouchPC and remote reset is enabled, the register can be reset by the TouchPC.

3. Print From Front Panel

3.1 Management Print-out

Pressing TOTAL immediately followed by reset while in standby mode will print a management ticket. This will reset the power interrupts and the delivery number to zero, but will not reset the register to zero.

3.2 Setup Configuration Print-out

Press the TOTAL button 5 times in 5 seconds to enter the Front Panel Menu. Using the BATCH button step through the settings until you reach the Report?N. Press the TOTAL button to change the 'N' to a 'Y' and press START/STOP to save the changes.

The configuration docket will print to whichever com port has been set up for the printer be it a Thermal Blaster Printer or a Epsom Ticket Printer

4. Additional Features

4.1 Temperature Reading

Press the TOTAL button 5 times in 5 seconds to view the current temperature probe reading. If a temperature probe is not fitted "no probe" will be displayed.

4.2 Meter Number

Press the TOTAL button 5 times in 5 seconds, then press BATCH once to display the Register meter number.

5. Fuse Details

1. Fuse in Vehicle Cabin – (inline fuse holder near fuse compartment)
3Amp 3AG glass fuse
2. Fuses inside the EJB101 Power Junction Box
F101 - 800mAmp antisurge glass 20x5mm (Power)
F201 - 2Amp antisurge glass 20x5mm (Solenoid)
F202 - 2Amp antisurge glass 20x5mm (Solenoid)
3. Fuse inside the EMH500/501 Register (**not user serviceable**)
F101 - 1Amp antisurge wire ended axial Littelfuse (soldered to PCB)

6. Displayed Messages

Display	Description	Notes
00000000 XX.YY.ZZ	Boot up sequence, software version.	See section 2.2 For a description of the software version control.
Print dt	Printing delivery ticket	
Print mt	Printing management ticket	
Print st	Printing software settings report	
<input type="checkbox"/> <i>steady</i>	Temperature probe connected.	
Error	Calculation or data input error	Please re-enter correctly
correctn	Non-linearity correction flow rates have not been setup in the correct order.	The register has re-arranged the values automatically.
<input type="checkbox"/> <i>flashing</i>	Temperature probe disconnected when temperature is set in calibration.	Check temperature probe connections
'Wrng dir'	Wrong Direction of rotation	Check calibration settings
'F 0'	Reset pressed while still in flow rate mode	Flow rate mode finishes 5 seconds after flow stops.
Opto off	Opto PCB disconnected	Check connections. Permanently on.
Opto fty	Opto PCB faulty	Contact manufacturer
Memory cleared	RAM cleared and default values loaded	Check calibration settings
data error	Some data in memory has been corrupted and replaced with default values.	Check calibration settings
'Port <i>n</i> no paper'	Paper out signal received on port <i>n</i> where <i>n</i> = 1 or 2	Check paper for Epson printer.
'Port <i>n</i> prnt err'	No response from receiver on port <i>n</i> where <i>n</i> = 1 or 2	Check comms cabling or TouchStar Thermal printer.
'Port <i>n</i> Comm err'	No response from receiver on port <i>n</i> where <i>n</i> = 1 or 2	Check comms cabling, Touch PC or Epson printer.
'no probe'	While displaying temperature a problem has occurred with the temperature probe.	Check temperature of product. Check wiring between register and temperature probe. Check functionality of temperature probe.

7. General Troubleshooting

	Problem	Possible Cause	Corrective Action
1	Display does not light up or cuts out.	<ol style="list-style-type: none"> No power to register. No power to display. 	<ol style="list-style-type: none"> Power not on. Fuse blown - Check fuses. Register not connected to power box. D-connector not connected to PCB correctly. <ol style="list-style-type: none"> Display not connected to main PCB Faulty display.
2	Display does not change	<ol style="list-style-type: none"> Drive Shaft not connected Problem with OPTO board 	<ol style="list-style-type: none"> Check drive shaft Notify TouchStar
3	Display shows incorrect volume	<ol style="list-style-type: none"> Incorrect K factor Drive shaft incorrectly connected Faulty Register 	<ol style="list-style-type: none"> Re-calibrate to correct K factor Check drive shaft Notify TouchStar
4	Display lights up but there are no digits shown.	<ol style="list-style-type: none"> Faulty display. 	<ol style="list-style-type: none"> Notify TouchStar
5	Com Port error is displayed when register is Reset	<ol style="list-style-type: none"> Acknowledgment is not being received from printer Acknowledgment no being received from TouchPC Acknowledgment set to yes incorrectly in calibration settings of Register 	<ol style="list-style-type: none"> Check Printer is powered up Check printer is not out of paper Check wiring of serial cable to printer Check comms settings of register matches printer (baud rate and printer type) Check correct power connection and voltage (usually 24V) to printer <ol style="list-style-type: none"> Check TouchPC cradle is powered up Check TouchPC application is ready to accept data Check wiring of serial cable to cradle Check comms settings of Register (Baud rate and TouchPC) <ol style="list-style-type: none"> Change ACK? Y to ACK? N under Comms settings in Register.
6	Ticket printer or Touch PC does not receiver data and register resets to zero	<ol style="list-style-type: none"> Incorrect settings for the communication port. Incorrect power settings. Printer not set correctly. 	<ol style="list-style-type: none"> Select the correct device attached to the port. Check the baud rate matches the settings on the printer. Set ACK to Y. ACK checks the status of the device before sending data. <ol style="list-style-type: none"> Check power connections are correct to printer(24V). <ol style="list-style-type: none"> Ensure DIP switch settings are correct. (some models). Check that the ribbon has been correctly installed. (some models).
7	Button not working when display is on.	<ol style="list-style-type: none"> No power to button. Button faulty. 	<ol style="list-style-type: none"> Re-connect Button. Notify TouchStar
8	Register shows small volume at start of delivery	<ol style="list-style-type: none"> Meter Creep 	<ol style="list-style-type: none"> Check meter for wear or leaking differential valve