GPL Odorizers

Software Release Notes

For GPL5000 (XL7) Version 8

Harrison Baer
6-4-2025
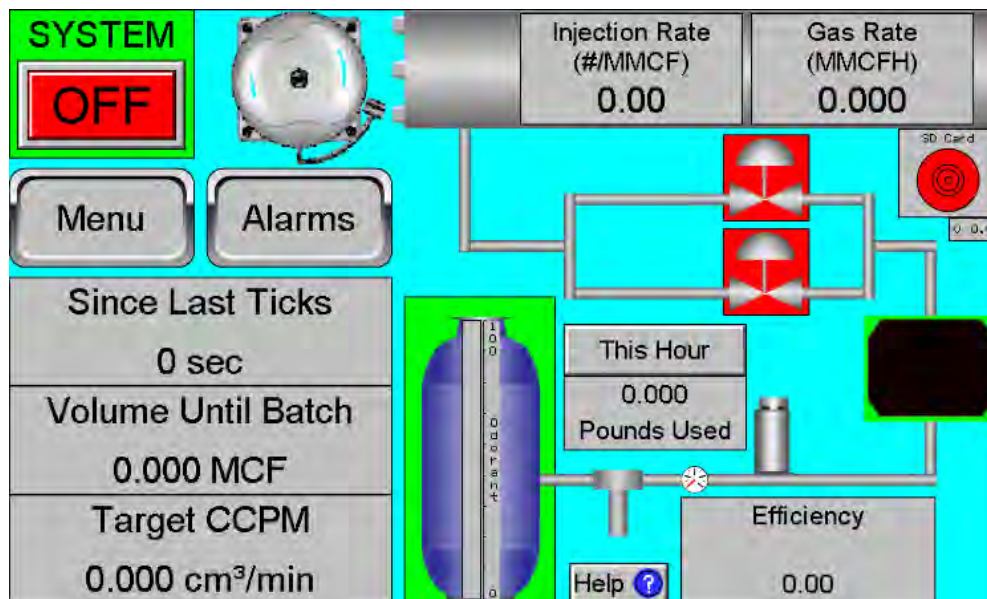
Version 8.0

New:

- **Flow Page:** Updated to support the new flow type and flow source

  o The Gas Page has been renamed to the Flow Page to accommodate liquid-on-liquid injection.

  o Added a toggle to switch between gas and liquid modes, accessible only with Admin-level permissions.

  o Introduced a units toggle that allows users to switch between:

    ▪ **Gas mode:** MCFH or MMCFH

    ▪ **Liquid mode:** Gallons or 10^3gallons

  o **Pulses Flow Source** added to count pulses from a flow meter rather than receiving a 4-20 mA signal.
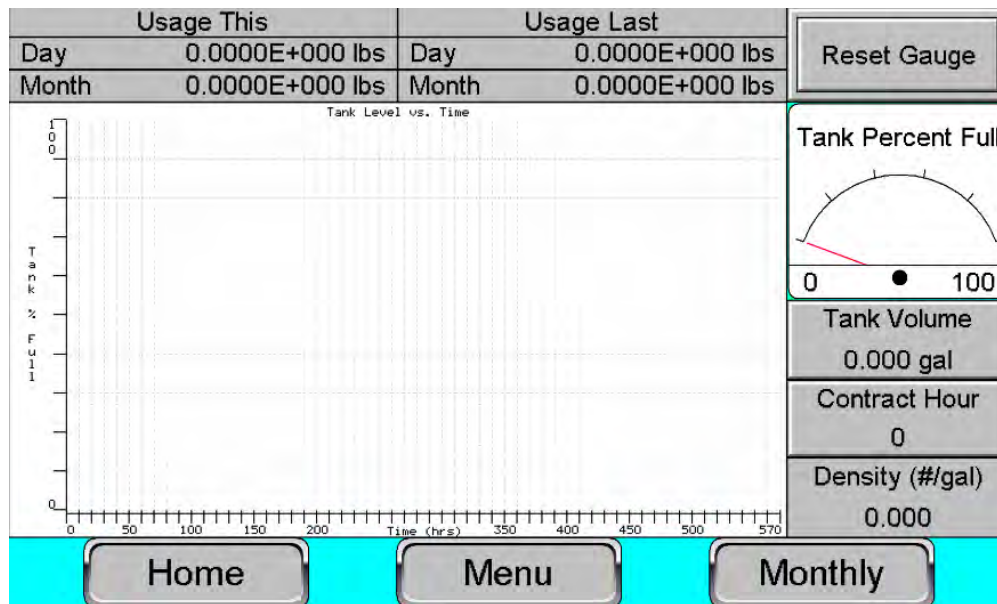

Figure 1: Flow Page

- **Isolation Alarm** added to detect solenoid failure. If excessive ticks are measured while the solenoids are supposed to be closed, the alarm will trigger.

- **Data Logs** now track solenoid cycles to monitor the frequency of Solenoid 2 usage.

- **Modbus:** Added hourly usage and gas volume to the register block.

- **Home Screen:** Version number now displayed.

Figure 2: Home Screen

- **Usage Page:** Users can now set the Contract Hour (0 to 23) to determine the time of day the usage data rolls over.

Figure 3: Usage Page
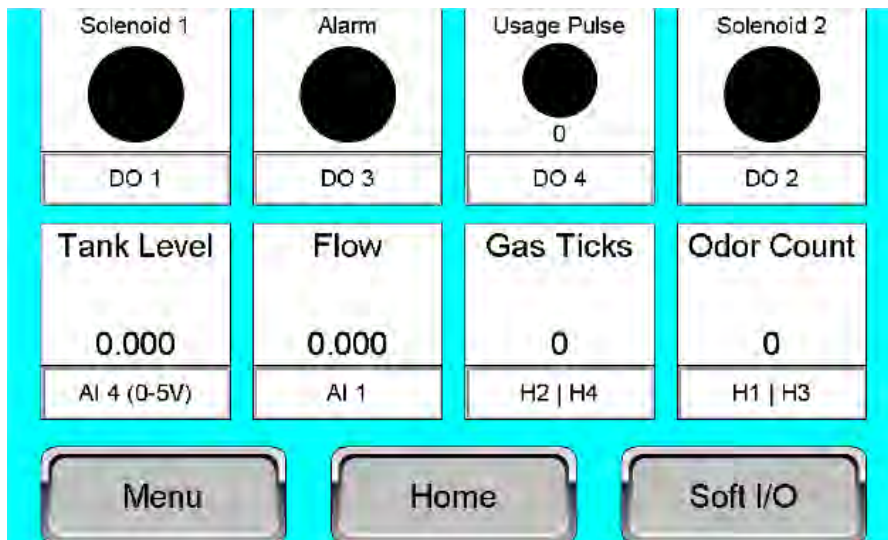
- **WebMI** enables remote control of the system for users with modems.

Figure 4: WebMI Remote Access

Changes:

- **Analog Input 4 (AI 4):** Converted from a 4-20mA input to a 0-5V input for Tank Level monitoring.

- **User Interface Improvements:**

  o **I/O Page Consolidation:** Combined Counters, Analog I/O, and Digital I/O into a single, streamlined page.

Figure 5: I/O Page

▪ The Soft I/O subpage includes the IP configuration and Modbus settings.

Figure 6: Soft I/O Sub-page

o **Maintenance Page:** Redesigned for improved usability.

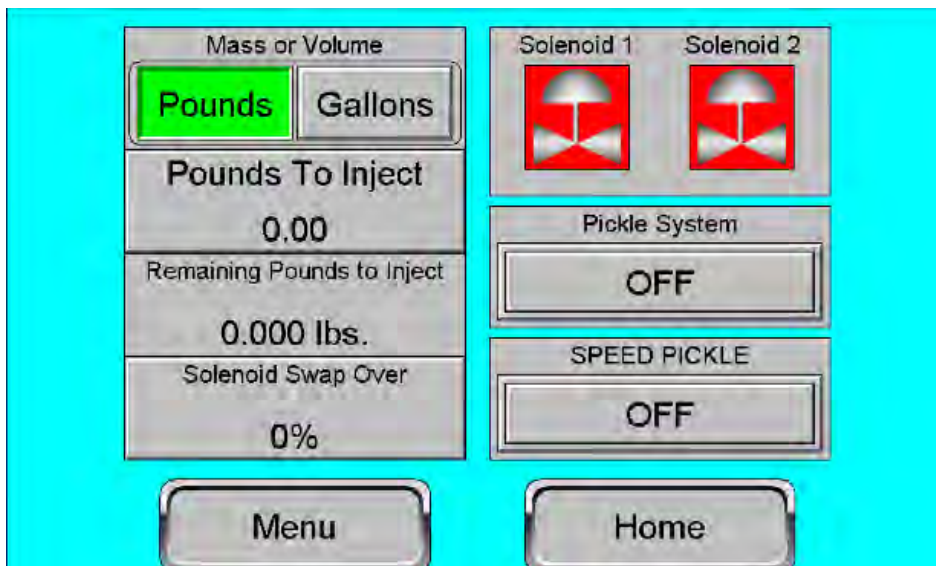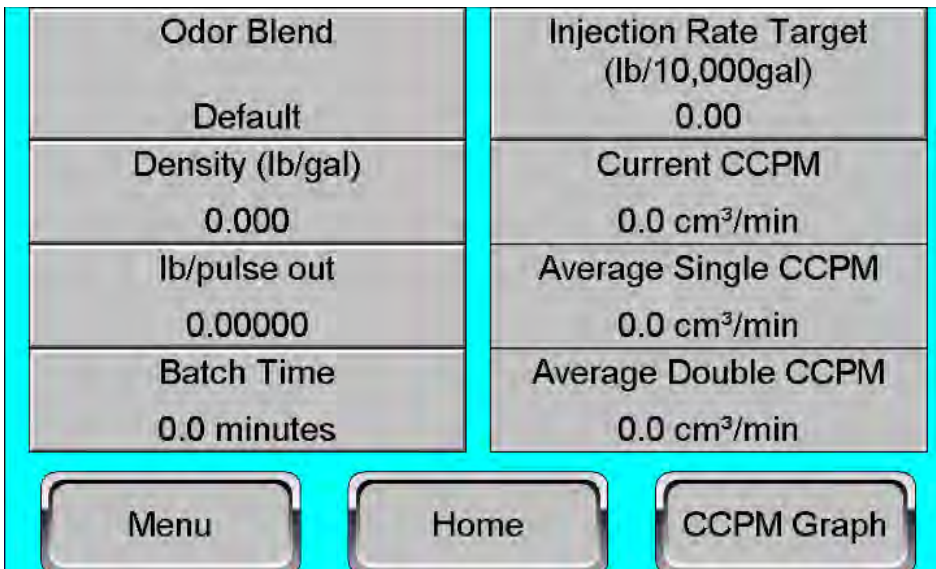**Figure 7:** Maintenance Page

o **Quick Inject Page:** Reworked for a more intuitive experience.

Figure 8: Quick Inject Page

o **Odor Page:** Reorganized for symmetry.

Figure 9: Odor Page

o Standardized reset buttons across the user interface.

o **Miscellaneous UI Enhancements:** General improvements to the Home Screen, Alarms Page, and Usage Page for a smoother user experience.

Fixes:

- **Odor Page:** Reworked CCPM readouts.

  o Current CCPM is no longer an average over ten seconds to prevent Double CCPM measurements averaged with Single CCPM measurements.

  o Single & Double CCPM indicators now reflect the average over the entire batch, improving accuracy by keeping measurements separate before averaging.

- **Alarm Improvements:**

  o **High Flow Alarm:**

    ▪ Fixed a false Lo-Lo Alarm occurring when the Hi Flow Alarm was active.

    ▪ The Hi Flow Rate setpoint in the alarm configuration now adjusts dynamically based on the units toggle.

    ▪ The Hi Flow Alarm now automatically clears when the flow rate drops below the setpoint.

  o **Flow Signal Alarm:**

    ▪ Corrected the enable/disable toggle in the alarm configuration.

    ▪ The alarm is now prevented when the 4-20mA signal is not set as the current gas source.

  o **Isolation Alarm:** Implemented a delay to prevent false alarms on power cycle.
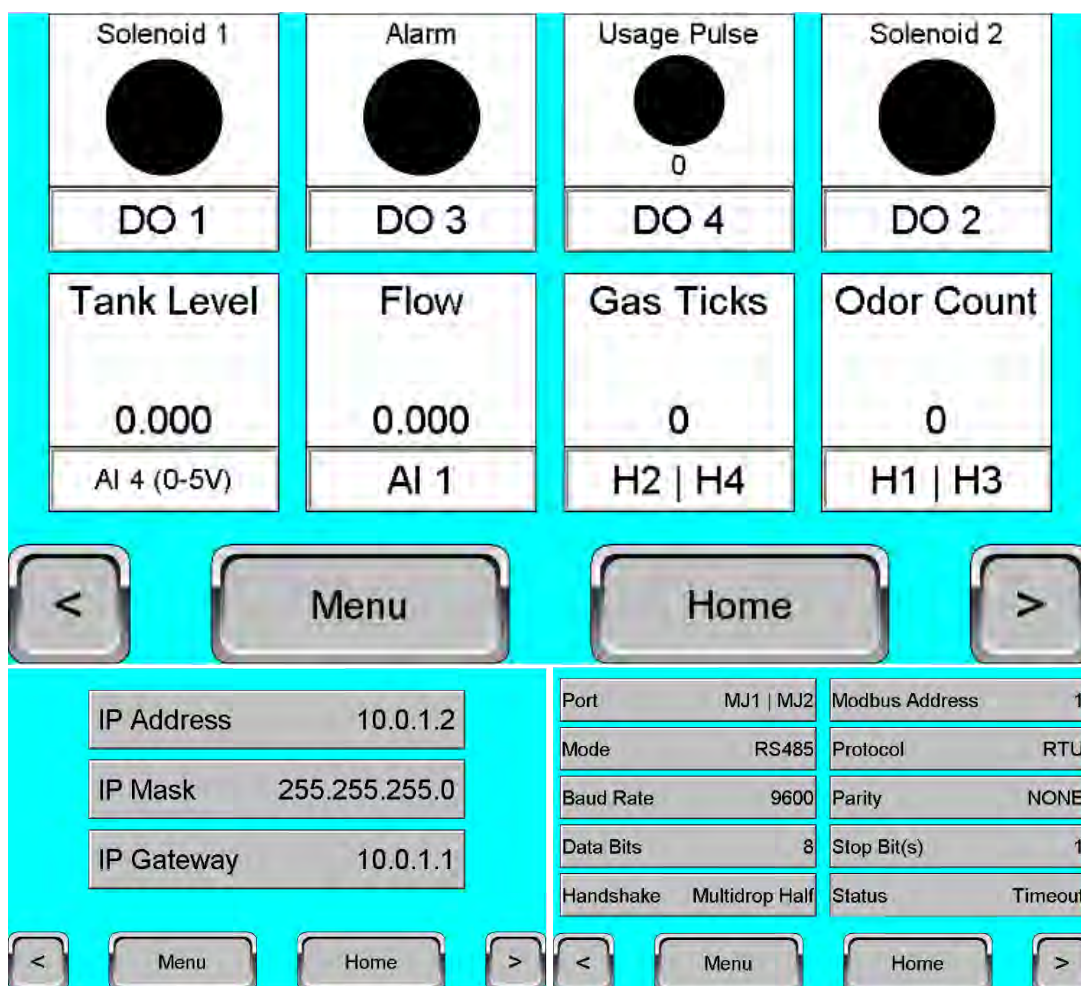
Version 8.1

New:

- **Odorant Usage Tracking:** Added daily and monthly logs to the data stored on the SD card.

- **Memory Failure Alarm:** An alarm has been added to detect instances where memory is not retained after a power cycle, helping to identify depleted memory batteries. Please note that this alarm will be triggered following a software update—this does not necessarily indicate battery depletion. Be sure to clear the alarm after updating.

Changes:

- **Manual Flow Alarm:** Introduced a delay, so the manual flow rate override must be left on for more than an hour to activate the alarm.

- **I/O Page:** Now includes arrow buttons to scroll between sections of I/O. Split Soft I/O page into dedicated Modbus and IP Configuration pages.

Figures 10-12: I/O Pages

Fixes:

- **Usage Tracking:**

  o Resolved an issue where monthly usage data could become corrupted after a power cycle.

  o Fixed a bug that excluded the last hour of the day from the total calculation.

  o Contract Hour now applies to both logs and on-screen data.

- **Date Format Correction:** Fixed formatting for usage indicators and maintenance indicators.

- **Modbus:** Expanded and corrected Modbus settings.

- **Alarm Configuration:** Added a floor to the solenoid Max Time Open setting to prevent users from setting it to zero.

Version 8.2

New:

- **Standby Mode Implementation:** Allows users to inhibit the odorizer with a digital input.

  o The standby input is assigned to digital input 1 by default.

  o Added Standby Polarity (normally open/normally closed) to the alarm configuration to control the digital input.

  o Added a standby alarm, which can be disabled in the alarm configuration. This alarm activates when the unit is in standby mode.

- **Comprehensive Data Logging:**

  o Every batch now creates an entry in the data logs stored on the SD card.

  o Implemented an SD Low Storage alarm (noncritical) triggered when storage exceeds 80% capacity.

Changes:

- **Login Log Enhancements:**

  o Now supports up to four WebMI logins simultaneously, in addition to the controller's local login.

  o A new entry is recorded each time the number of logged-in users changes.

- **Hi Gas Alarm Behavior:**

  o If triggered three times within an hour, the system will automatically shut down.

  o If the alarm remains active for three consecutive minutes, the system will shut down.

- **Max Time Open Alarm Behavior:**

  o The system now shuts down after consecutive Max Time Open alarms.

  o This alarm is triggered when the solenoid remains open too long, often because the injection target is not met.

  o A Max Time Open Limit is now configurable in the alarms settings, defaulting to four cycles before system shutdown.

Fixes:

- Fixed an error that prevented new usage pulses after a power cycle