GPL Odorizers

Software Release Notes

For GPL750 (XL7) Version 20

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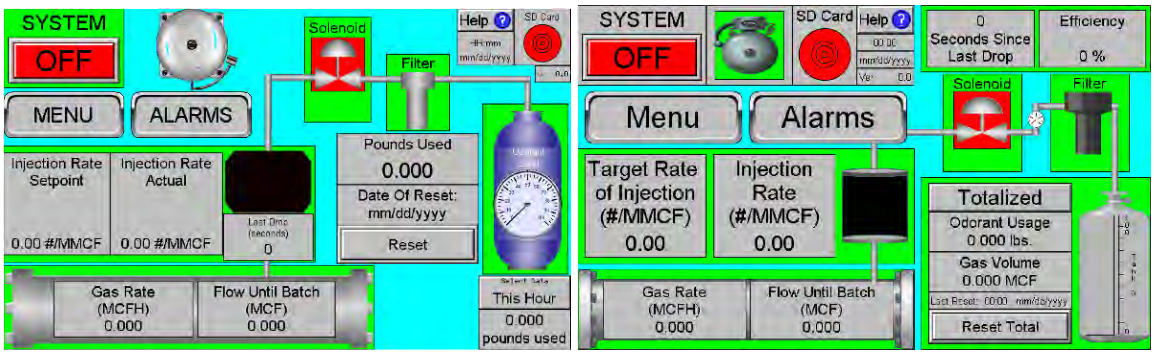
Version 20.0

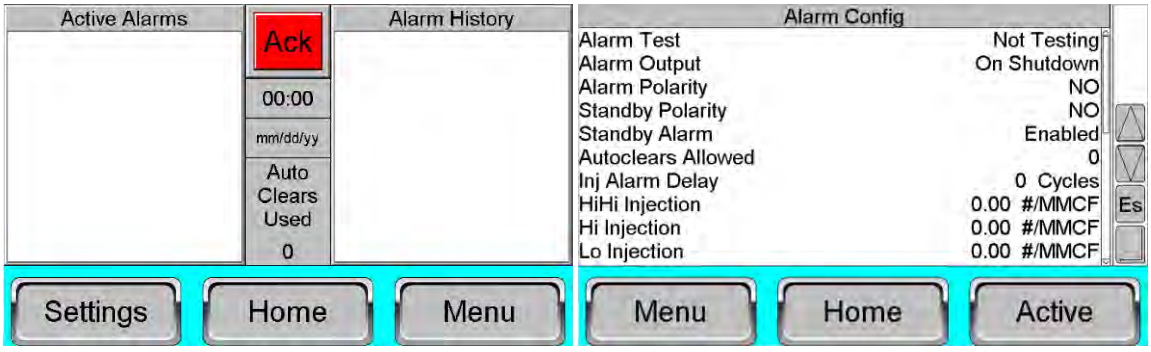
New:

- **Home Screen:** Redesigned to accommodate improved usage readout.
    - The usage readout includes the gas volume, and the pounds of odorant used for the current and previous time periods, including hour, day, week, month, year, and total. The period displayed is selected at the top of the readout.



Figures 1 & 2: Home Screen Before and After

- **Alarms Page:** Alarm History has been relocated to sit alongside Active Alarms for easier monitoring. Alarm Configuration now resides on a dedicated page for improved clarity and organization.



Figures 3 & 4: Alarms and Alarm Config

- **Usage Page:** Enhanced on-screen usage tracking to show more comprehensive data.
    - **Daily Usage:** Introduced a new section for tracking daily usage over the past week, complete with date stamps. See Figure 5 on Page 2.
    - **Monthly Usage:** Added a year indicator for clarity.

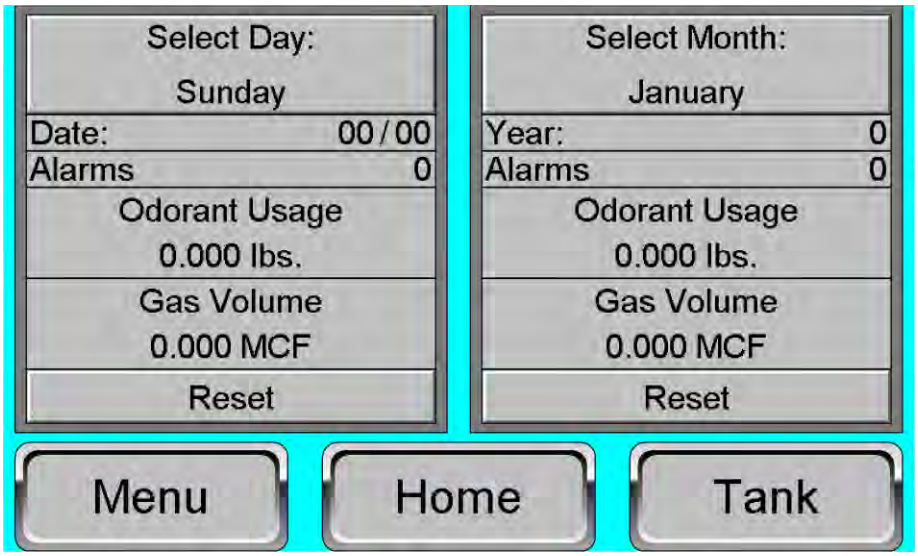


Figure 5: Usage Page

- **Tank Page:** Accessible via the tank icon on the Home Screen or through the navigation button on the Usage Page.
    - Replaced “This/Last” Day and Month indicators with total tank usage in pounds and gallons. Tank usage updates hourly along with the trend graph.
    - Introduced a new "Start" indicator to mark the reset date for tracking.
    - Added “Start Level” to allow users to set a custom starting percentage for their tank.

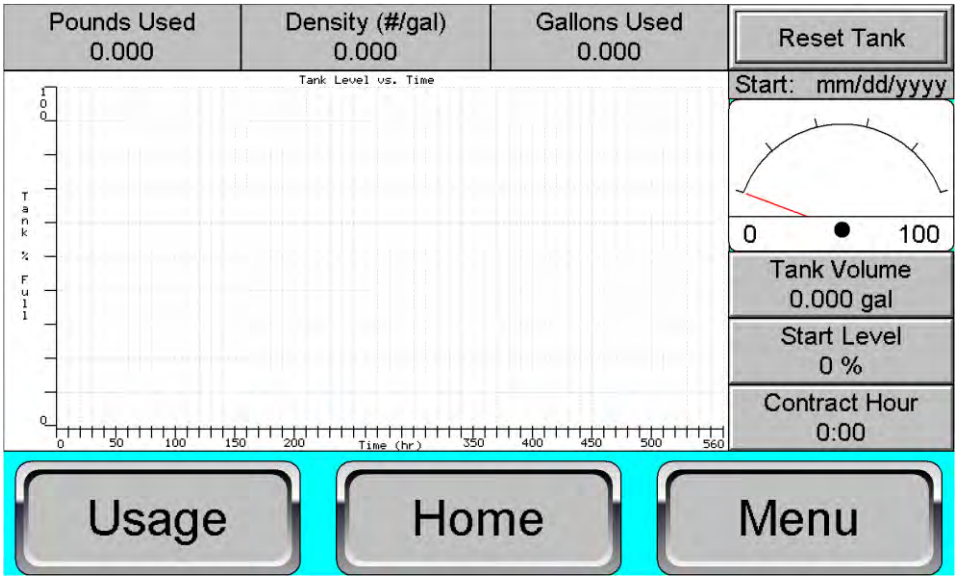


Figure 6: Tank Page and Trend Graph

- **Config Page:** Added a new Config page accessible from the Main Menu.
    - Enables users to save the odorizer's settings to a CSV file on the SD card for easy backup and restoration.
    - Introduced save files for maintenance data, on-screen usage trackers, and I/O assignments.

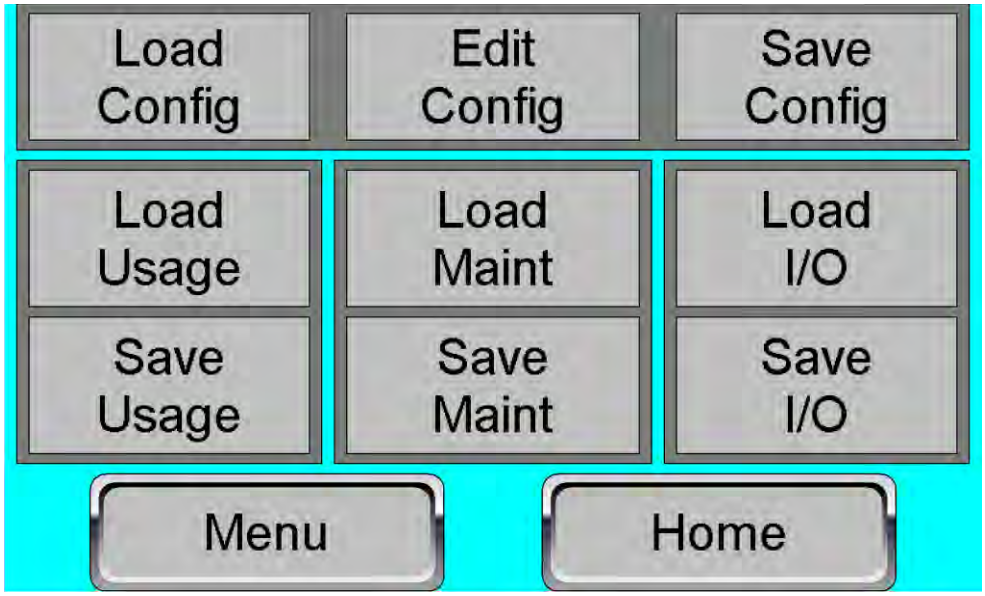


Figure 7: Config Page

- **SD Storage Features:**
    - Added weekly and annual logs automatically saved to the SD card.
    - Added a total log saved to the SD card when the user resets the totalizer on the home screen.
    - Implemented an SD Low Storage alarm (noncritical) triggered when storage exceeds 80% capacity.
- **I/O Page:** Redesigned the I/O page to accommodate new signals (Figure 8).
    - Added a Pulse Width setting for the Usage Pulse output (Figure 10).
    - Users can also adjust the mass per pulse directly next to the pulse counter (Figure 10).

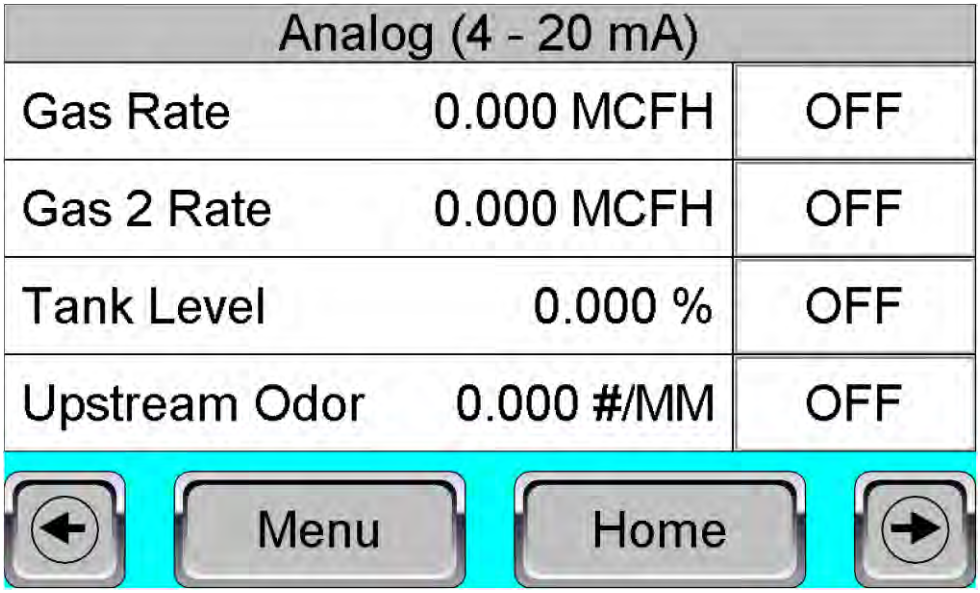
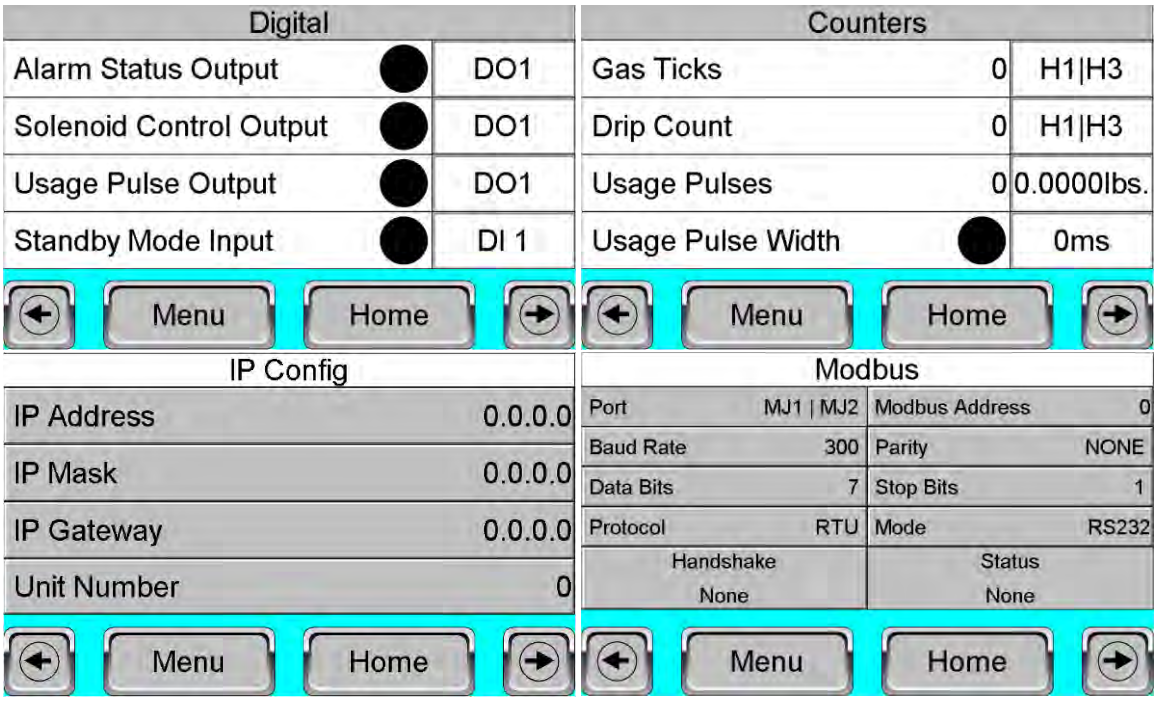


Figure 8: I/O Page (Analog Signals)



Figures 9-12: I/O Pages

- **Tank Signal:**
    - Incorporated analog input assignment for tank level within the I/O page (refer to Figure 8).
    - Added an auto-enable/disable function for the tank signal alarm.

- **Gas Signal Redundancy:**
  - Added analog input assignment for “Gas 2” (refer to Figure 8).
    - The system automatically assigns the first available analog input to "Gas 2" upon enabling gas signal redundancy.
  - Expanded the gas page to support toggling and span configuration for the redundant gas signal.

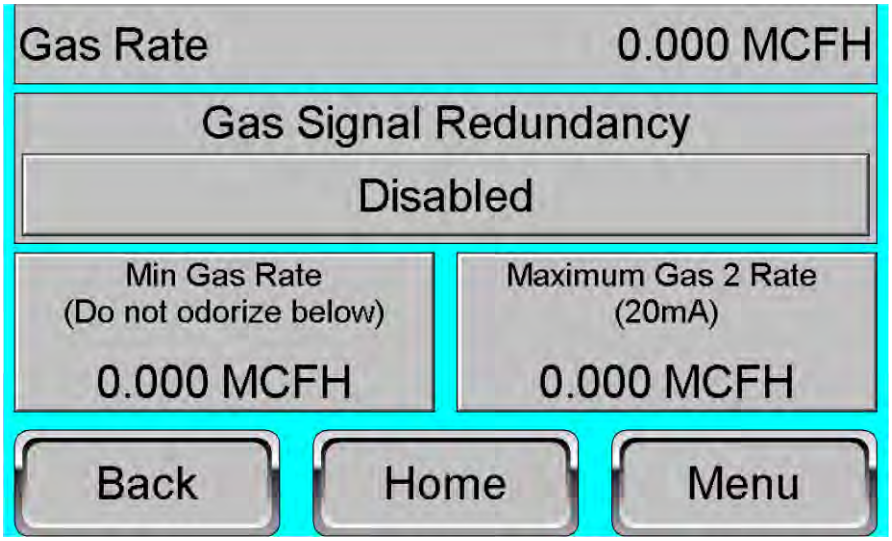


Figure 13: Gas Signal Redundancy Page (Accessed from Gas Page)

  - The redundant gas signal has its own target injection rate and span. The odor page changes to allow separate injection targets when the gas signal redundancy is enabled.

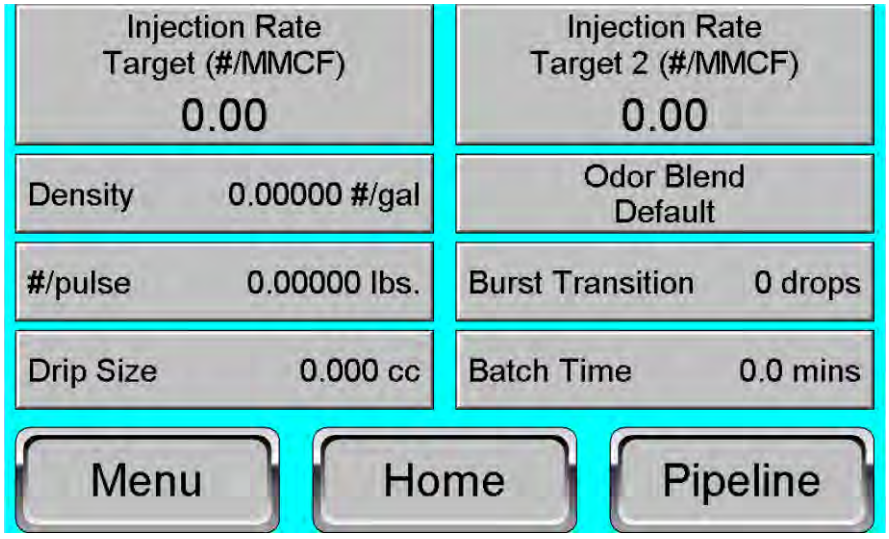


Figure 14: Odor Page with “Gas 2” Enabled

- Added indicators to the home screen to display the active gas signal when redundancy is enabled.

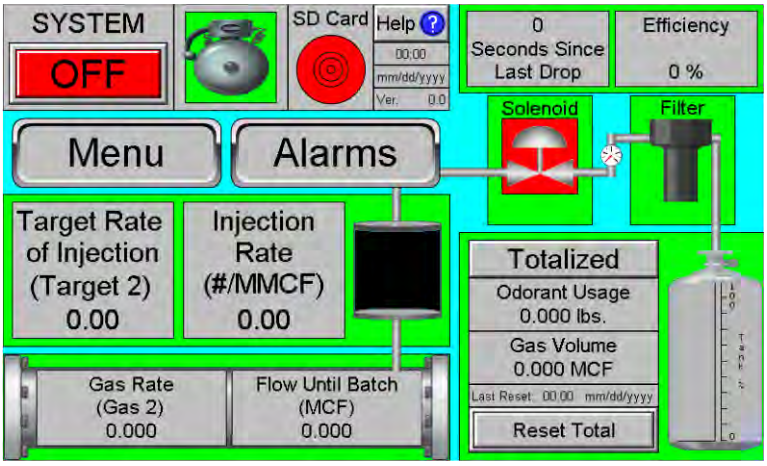


Figure 15: Home Screen with "Gas 2" Indicators

- When the redundant gas signal is enabled, the Gas Signal Shutdown is set to Disabled automatically.
  - If both gas signals are lost, the system will shut down. See the "**Gas Signal Alarm Enhancements**" section below for further details.

Changes:

- **Alarm Polarity:** The default setting is now configured to "normally closed" (NC).
- **Hi Gas Alarm Behavior:**
  - If the Hi Gas Alarm persists for three consecutive minutes, the system will shut down.
  - If the gas rate drops below the Hi Gas Setpoint, the Hi Gas Alarm will clear itself. However, the system will now track the number of Hi Gas Alarm occurrences. If three Hi Gas Alarms are triggered within a one-hour period, the system will shut down.
- **Gas Signal Alarm Enhancements:**
  - Expanded the coverage of the Gas Signal Alarm to include the Pulses gas source.
    - Added a gas pulse timeout setting to the alarm config. This setting determines:
      - The duration the system can go without receiving pulses before the Gas Signal Alarm is triggered.
      - The duration the system can go without batching before the gas rate resets to zero.

- **Alarm Configuration:** The Gas Signal Standby setting has been replaced with Gas Signal Shutdown.
  - **Enabled:** The Gas Signal Alarm will shut down the system rather than putting it in standby mode.
  - **Disabled:** the behavior varies based on the gas configuration:
    - **4-20mA or Pulses:** The system will wait for the signal to return.
    - **Dual 4-20mA Signals (Redundancy):** The System will continue operating with the redundant gas signal. If signal is lost from both, the system will shut down.
  - Regardless, the Gas Signal Alarm will activate the Alarm Out signal.

Fixes:

- Restructured system memory to address possible memory leaks and improve performance.
- Corrected an issue where usernames were not properly recorded to the SD card's login log during multi-user WebMI sessions. Logs now update accurately whenever the number of active users changes.
- Resolved an error that triggered excessive usage pulses for drops occurring before system activation post-power cycle. Drip mass is now calculated consistently, regardless of system status.
- The Hi Gas Alarm now prevents batches when using the Pulses gas source.
- The Gas Rate now resets to zero when manual gas is selected, but the override is disabled.
- Reprogrammed Metric mode to improve conversion efficiency and eliminate duplicate GUI screens.
- Updated Spanish mode to align with recent GUI changes and corrected several translation inconsistencies.
- Resolved issue where hourly drip count was not retained after a power cycle, ensuring accurate usage tracking.