

# Installation and Maintenance Manual

# **GPL Z9000**

Natural Gas Odorization System





# **GPL** Odorizers

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(303) 927-7683 info@gasodorizer.com GPL Odorizers LLC 11919 W. I-70 Frontage Rd. North Unit #119 Wheat Ridge, Colorado 80033

Thank you for your purchase of the GPL Z9000 Natural Gas Odorization System. In the pages to follow you will find the Installation and Maintenance manual for this product.

Please understand that failing to adhere to these instructions may result in the void of warranty, destruction of property, injury or even death. If you are interested in learning more about our GPL Odorizers Maintenance Program to ensure that your unit remains functioning correctly, please call us today at (303) 927-7683. Our service contracts are a convenient and cost-effective way to protect your warranty coverage as well as your property.

Thank you for your trust in our products.

Brian Cox
General Manager
GPL Odorizers LLC



Do not install, maintain, or operate this equipment without reading, understanding and following the proper GPL Odorizers instructions. Otherwise, injury or damage or both may result.

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When calling for service, please be prepared to provide the configuration number of your equipment:

Α	В	С	D	Е	F	G	Н
Z9 -	0	1	1	L	M	C	24H

A	Family	D	Servomotor		
	Z9 = GPL Z9000		0 = Brushless	G	Flow Meter
В	Enclosure Type 0 = Single enclosure	Ε	1 = Brushed  Modem		C = Optical Comparator
	with integrated mechanics and electronics		X = None L = Land Line W = Wireless	Н	<b>Voltage</b> 5V = 5 Volts
C	Metering Valve	F	Controller		24V = 24
	1 = MV1 2 = MV2		M = ControlWave Micro		

# Limit of Liability

GPL Odorizers, its employees, agents, and the authors and contributors to this document specifically disclaim all liabilities and warranties, express or implied (including warranties of merchantability and fitness for a particular purpose), for the accuracy, currency, completeness, and/or reliability of the information contained herein and/or for the fitness for any particular use and/or for the performance of any material and/or equipment selected in whole or part with the user of/or in reliance on information contained herein. The selection of materials and equipment is at the sole risk of the user of this publication.

### Note

The information contained in this document is subject to change without notice.

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## Safety Information

Please read the entire manual before attempting to unpack, set up or operate this product. Pay careful attention to all *Warnings, Cautions*, and *Notes*. Failure to do so could result in serious personal injury and equipment damage.

#### **Use of Hazard Information**

If multiple hazards exist, the signal word corresponding to the greatest hazard shall be used.

### **Definitions**



DANGER indicates a hazardous situation which, if not avoided, may result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE is used to address practices not related to personal injury, but that could lead to property damage.

**NOTE**: Information that requires special emphasis.

**SHALL**: This word is understood to be mandatory.

**SHOULD**: This word is understood to be advisory.

### **General Safety Precautions**

### Selection, Installation, and Use



Improper selection, installation, or use can cause personal injury or property damage. It is solely the responsibility of the user, through its own analysis and testing, to select products suitable for their specific application requirements, ensure they are properly maintained, and limit their use to their intended purpose.

Follow proper local, state and federal regulations for proper installation and operational requirements.

### **Potential Equipment Hazards**



**Hot surfaces!** This equipment may have very hot surfaces. If an operator contacts a hot surface, injury may occur. Use protective clothing to prevent injury. If other equipment comes in contact with a hot surface, damage to the equipment may occur. Ensure the area around this equipment is kept clear to prevent damage from occurring.

**High pressures!** This equipment may contain fluids at very high pressures. Prior to installing, removing or maintaining this equipment, ensure that the equipment is isolated from all connecting piping, the equipment is depressurized, the contents have been drained, and the equipment is cool.



When changing any electrical or electronic parts, the power must be turned off, or the warranty is null and void.

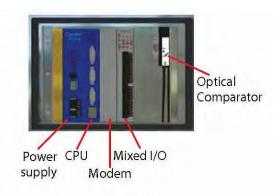
# Warning Labels

Location	Content			
Power Strip	Before connecting power			
	1. 6A use			
	2. Wire Sized for 24VDC@6A			
	3. Isolated from Pipeline			
	4. Proper power protection			
	5. Conduit per Class I Division 2 Standards			
Maple Display	WARNING			
	-Explosion Hazard-			
	Do not connect or disconnect while circuit is live unless area is known to			
	be non-hazardous.			
Servo	Important Note:			
	Do not over-tighten mounting bolts.			
	Please tighten these mounting bolts to a "snug" fit. (You will feel some			
	play in the Servo housing as this is normal)			
Servo	Per Class I Div 2 standards and GPL Odorizers manufacturer warranty,			
	please remove power source prior to connection.			
Storage Tank	(This tank has been pressure tested at the factory)			
	Important procedure to follow before filling the tank with odorant:			
	Evacuate air and pressure test prior to filling the tank with odorant.			

### 1. Overview

The GPL Z9000 Natural Gas Odorization System is a feature- rich, complete odorization package that avoids the operational and functional complexities associated with other odorizers or the odorization process. Every action is intuitive and predictable. The GPL Z9000 is a proven system, working reliably in some of the most sensitive areas imaginable, including major cities that experience blizzard conditions year after year. Because of the communication features, remote locations are also accommodated. With only two moving parts exposed to the odorant, virtually everything can be taken care of remotely.

### 1.1 GPL Z9000 System Components





### 1.2 Isolation Valve

The isolation valve on the GPL Z9000 is a diaphragm valve with a pneumatically controlled actuator. It is a normally closed valve initiated by a 3-way solenoid valve.

When the solenoid is electrically charged, it allows actuation gas to flow through to the actuator. The actuation gas lifts the piston in the actuator, and the isolation valve opens. Odorant then flows through the open isolation valve to the metering valve. When the

Note:

The solenoid needs at least 75 psi of regulated and filtered actuation gas (e.g., instrument air, pipeline gas, or nitrogen) for operation. The actuation gas should not exceed

actuation gas is released, the piston is forced back down by a spring, and the isolation valve closes, cutting off the flow of the odorant.

### 1.3 Metering Assembly

The metering assembly is comprised of the metering valve assembly and the servo assembly.



### 1.3.1 Metering Valve

Odorant flows from the open isolation valve to the metering valve. During normal operations, the metering valve is controlled by the servo. It opens and closes as necessary to maintain the desired drop rate.

The metering valve is a 20-turn valve. Each turn translates to opening or closing five percent.

To close the valve, turn clockwise; to open, turn counter- clockwise.



#### 1.3.2 Servo

During normal operations, the servo controls the position of the metering valve. It opens and closes the valve as necessary to maintain the desired drop rate.



### 1.4 Optical Comparator

The optical comparator and arrays use fiber optics to count drops as they fall through the drip chamber and into the line. It is the reliable counting of drops that is at the core of having such an accurate injection system even with tiny doses.

The optical array on one side of the drip chamber transmits a beam that is picked up by the array on the opposite side. When the beam intensity suddenly changes, the comparator registers a drop. When the comparator "sees" a drop, it transmits a signal to the MIO board.

### On the comparator:

- Green Light— Comparator is powered (always on)
- Red Light—The arrays are locked onto each other (always on)
- Yellow Light—A drop has fallen. If there is more or less than one flash per drop, the comparator needs to be calibrated.

### NOTE:

A pair of fiber optic lines run from the bottom of the optical comparator to the arrays, one on each side of the drip chamber. Do not damage or interfere with these wires in any way.



### 1.5 Control Boards



### 1.6 Principles of Operation

The GPL Z9000 automatically calculates and dispenses measured doses of odorant into natural gas pipelines proportional to the gas flow rate.

- 1. An odorant storage vessel is pressurized to about 15 psi above pipeline pressure. An upstream regulator or nitrogen source is commonly used.
- 2. Odorant moves from the vessel probe through the filter to the isolation valve.
- 3. When the controller opens the isolation valve, odorant flows to the metering valve.
- 4. As the controller opens the metering valve, drops fall past the optical sensors into the gas stream.
- 5. As they fall past the optical sensors, information is communicated to the controller.

6. The system controller interfaces with the metering valve servo, optical system, gas flow information, the local interface, and remote interface to maintain a constant odorant injection proportional to the gas flow rate.

### 1.7 Drip Mode

Drip mode provides a continual dripping of odorant into the stream in appropriate proportions. Drip mode is typically used for gas flow rates higher than 10 MSCFH. However, this can vary based on conditions and customer desires.

### 1.8 Batch Mode

Batch mode periodically provides a batch of drips, then shuts until a sufficient volume of gas has flowed to justify another batch to achieve desired injection rates. Batch mode is typically used for gas flow rates lower than 10 MSCFH. However, this can vary based on conditions and customer desires.

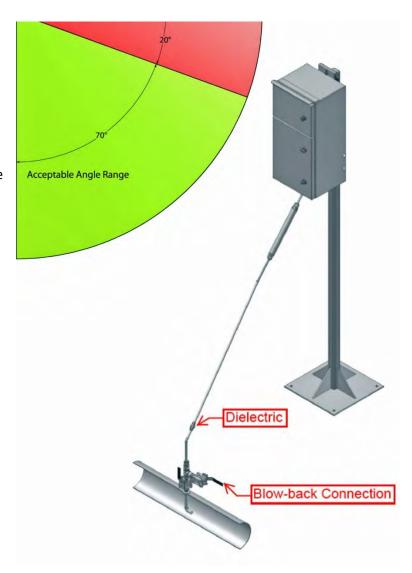
### 2. Installation

### 2.1 Site Requirements

#### 2.1.1 Unit Location

The GPL Z9000 must be mounted high enough to run 1/2" stainless steel tubing from the outlet on the bottom of the unit to the injection point on the pipeline. Allow room for the sonic muffler (P/N 6-05081A, shipped loose). The tubing exiting the bottom of the GPL Z9000 shall be no less than 20 degrees from the horizontal, and there should be no horizontal portions of tubing between the unit and the injection point. This allows the drops to fall by gravity into the pipeline.

Mounting methods include wall, pole, stand, skid, or custom package. The unit comes with a standard bracket that accommodates all methods.



### 2.1.2 Actuation Gas

Actuation gas is used to pressurize the solenoid and control the isolation valve.

- 75-80 psig of clean, dry, filtered gas is required
- Pipeline gas, nitrogen, or instrument air

### 2.1.3 Blanket Gas

Blanket pressure on the odorant tank provides the differential pressure necessary to drive odorant into the line.

- Pipeline pressure +15 psi
- Nitrogen or pipeline gas

### 2.1.4 Electrical Power

- 24 VDC
- 6 Amp

### 2.2 Equipment and Tools

Tools needed for installation of the GPL Z9000 include:

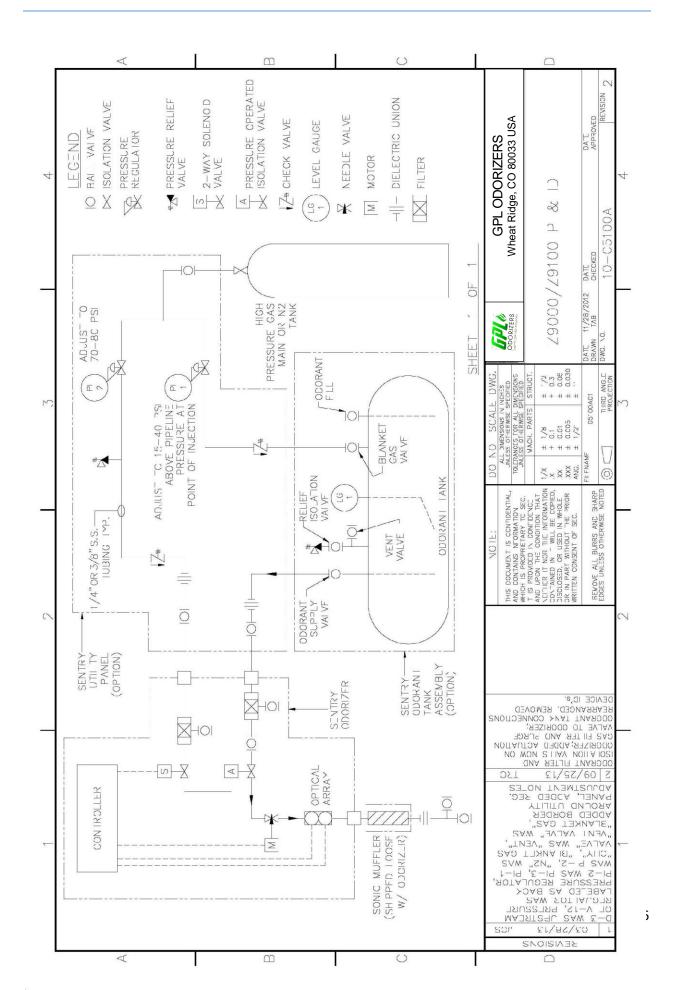
- Allen wrenches
- Open end wrenches
- Precision flat-head (jeweler's) screwdriver

### 2.3 Tubing

Once an appropriate location has been determined for the GPL Z9000 and the unit has been properly mounted, use the drawing on the following page to install the tubing per your company's procedures and applicable code.



Use stainless steel tubing for proper strength, support, and leak prevention.



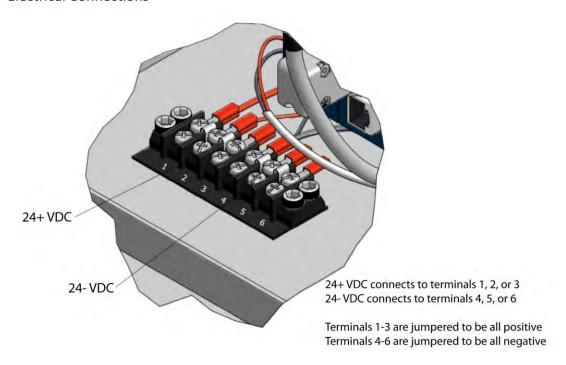
### 2.4 Wiring

# **<u></u>MARNING**

### Always disconnect power before servicing connections.

Use the guidelines below to wire any necessary connections. Please note that not every connection described in this section is used for every site. If you have any questions, please contact GPL Odorizers Equipment Corp.

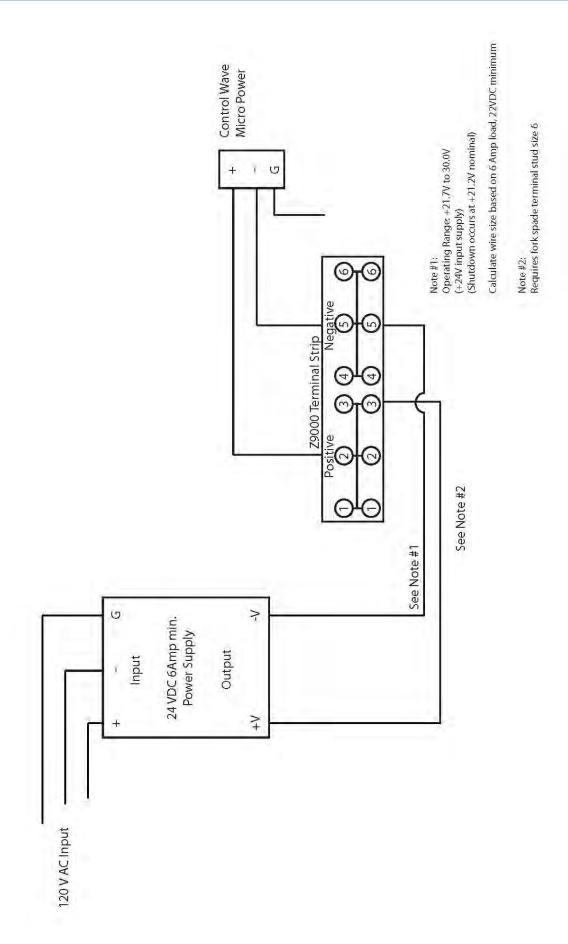
### 2.4.1 Electrical Connections



- 1. With power off, remove safety cover.
- 2. Connect 24 to one of the terminals with black jumpers.
- 3. Connect 24 + to one of the terminals with red jumpers.
- 4. Replace safety cover.
- 5. Connect conduit per applicable code. The terminal strip is located on the floor of the enclosure.

### Note:

If 24 VDC is not available, use a
120 VAC power supply (available
from factory) as noted in the
drawing on the following page.



### 2.4.2 Optically Isolated Relay

The optically isolated relay is the physical attachment point for discrete IO.

Relays from left to right:

- 1. Standby Input
- 2. Alarm Output
- 3. Pulse Output
- 4. High-Speed Counter Input

### **Standby Input**

Used for remote kill switch. By activating this relay, the unit is locked out. Until the switch is deactivated, no one can start the unit.

Terminal 8: +, 10-32 VDC Terminal 9: -, 10-32 VDC



Sends a pulse to the RTU to notify regarding an alarm state.

Terminal 6: +, 5-24 VDC Terminal 7: –, 5-24 VDC

### **Pulse Output**

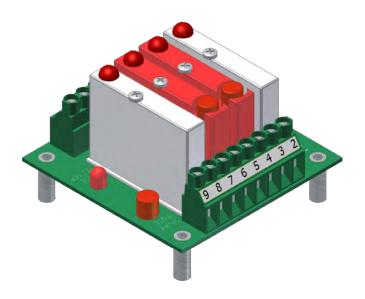
Used to monitor odorant usage by sending pulses to an RTU/external counter after a set volume has passed.

Terminal 4: +, 5-24 VDC Terminal 5: -, 5-24 VDC

# **High-Speed Counter Input**

Used for pulsed flow signal. Requires a wetted circuit (see schematic on the following page). Use of an external power source is preferred.

Terminal 2: +, 10-32 VDC Terminal 3: -, 10-32 VDC

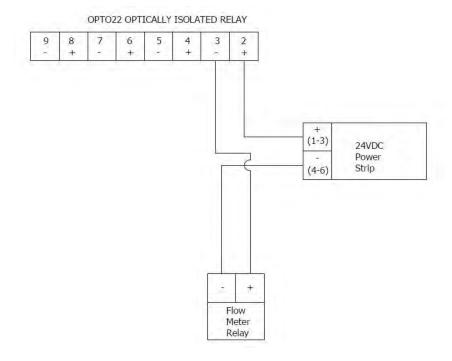


#### Note:

Wiring the High Speed

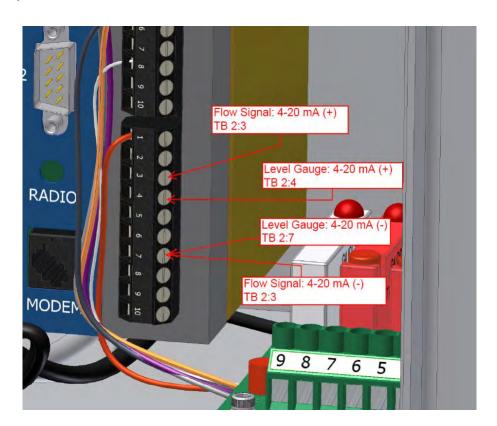
Counter Input to the GPL

Z9000 power strip is not recommended as this increases the potential for signal interference



### 2.4.3 Flow Signal and Level Gauge Signal

If you are using a 4-20 mA flow signal, or level gauge signal, or both, wire the connections on the mixed I/O control board as shown in the illustration below.



### 2.5 Leak Testing

After installing the tubing and wiring, all the tubing and fittings connected to the system need to be leak tested. During leak testing, pipeline pressure is slowly brought back to the bulk tank.

- Close all of the valves between the odorant tank and the pipeline and the actuation gas pressure line.
- 2. Open the root valve at the injection point, allowing the pipeline pressure up to the (closed) isolation valve inside the odorizer enclosure. Check for leaks using a soapy water solution or Snoop®, starting at the injection point and moving up to the isolation valve inside the
- 3. Detach the solenoid valve and allow it to hang freely.

odorizer enclosure.

- a. Loosen the 1/4" nut on the left side of the solenoid valve to detach the 1/4" tube between the solenoid valve and the isolation valve actuator.
- b. Remove the solenoid from the bulkhead connection by loosening the nut at the bulkhead.
- 4. Attach the tube from the isolation valve actuator (detached from the solenoid valve in step 3) to the bulkhead connection.
- 5. Open the valve on the actuation gas line, allowing 70–80 psi to open the isolation valve. Check for leaks using a soapy water solution or Snoop®, starting at the isolation assembly and moving back to the valve prior to the odorant filter.
- 6. Open the valves between the isolation valve and the odorant filter and check for leaks.



Do not open the odorant supply valve.

- 7. Open the valve(s) between the odorant filter and the odorant supply valve on the tank and check for leaks.
- 8. Resolve any leaks discovered in previous steps before continuing.
- 9. Slowly advance the blanket gas to the tank by adjusting the regulator to establish the required blanket pressure (usually 15–25 psig over pipeline pressure).
- 10. Slowly open the blanket gas valve on the tank and allow the pressure to equalize. Check the tank valves for leaks.
- 11. Double check the entire system for leaks.
- 12. Reattach the solenoid to the bulkhead and the 1/4" plastic tubing to the solenoid.
- 13. Leave the odorant line valve closed until the system is ready for operation. When the system is ready, open the odorant supply line valve and purge the odorant line (see section 2.6).

### 2.6 Purging the Odorant Line

- 1. Place the unit in manual gas mode.
  - a. On the HMI unit, press the blue Settings button.
  - b. Press 4 for GAS.

### Note:

Before beginning leak/ pressure testing, make sure that all connections in the odorant line from the tank through the odorizer enclosure and to the pipeline are tight. Do not remove the servo

- c. Press 8 to switch from Auto to Manual mode.
- d. Press 5 to move the cursor down to Man Gas.
- 2. Set Man Gas flow rate to .10000 (100.00 MSCFH)
  - a. With the cursor on the Man Gas setting, press the Clear button.
  - b. Enter "1-0-0-0" (start with the "1" as the numbers scroll from left to right)
  - c. Press Enter.
  - d. Return to the Home screen by pressing the blue Settings button and then pressing the page down button twice.
- 3. Set the Floor at .90 and the Ceiling at .95.
  - a. From the Home screen, press the page down button until you get to the Floor/Ceiling screen.
  - b. With the cursor under the Floor setting, press Clear, then enter "9-0."
  - c. Press Enter.
  - d. Press the cursor down button (5) to position the cursor under the Ceiling setting; press Clear, and then enter "9-5."
  - e. Press Enter
- 4. Press the On/Off button to turn the unit on.
- 5. Look inside the drip chamber. When drops fall at a constant rate, this indicates that the odorant line has been purged.
- 6. Press the On/Off button to turn the unit off.
- 7. Set the Floor to .05 and the Ceiling to .75 (see Step 3).
- 8. Place the unit in Auto mode (see Step 1).
- 9. Set Man Gas flow rate to 0.0 (see Step 2).

### 2.7 Unit Configuration

There are two (2) different options available for configuring the GPL Odorizers Z9000: configuration using TechView (remotely via a modem or locally via laptop) or configuration using the local display.

If you plan to connect to the unit remotely via modem, you need to make sure the modem has cell coverage.

### 2.7.1 Setting up the modem

- 1. Install the modem and power it on.
- 2. Contact your cellular provider and tell them you need to set up a new LS300 wireless modem with a static IP address.
- 3. They need the ESN number to assign the IP address. This information is found on the sticker on the modem.
- 4. Once the IP address is assigned, your provider should verify that the modem is on the network.
- 5. Visually verify that the modem has proper cell coverage by checking the following status lights:
  - activity light flashes green
  - signal light is solid green
  - network light is solid green

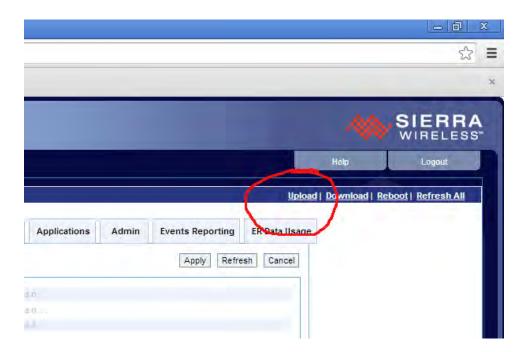
Once the wireless modem has cell coverage, use ACEmanager to configure the modem so that it can communicate with the odorizer.

- 1. Connect to the modem locally with an Ethernet cable, or remotely over the Internet.
- 2. Open a web browser and enter the IP address: http://192.168.13.31:9191. The ACEmanager login screen appears.
- 3. Enter your username and password. The administrator username is user, and the password



is 12345. The ACEmanager homepage appears.

4. Insert the installation CD provided with this manual. On the ACEmanager homepage, click the Upload link in the upper right-hand corner, and then select "LS300 Template. XML" from the installation CD.



5. When the template is uploaded, click "apply"; this saves the template to the device.

- 6. Make sure that the provided cross over cable is connected from the ethernet port on the modem to the Ethernet port (E1) on the odorizer CPU.
- 7. Install the Zecksystems3 software located on the installation CD provided with this manual.
- 8. Open the TechView file,C:\ZeckSystems3\Techview\Z9V4.tvs.
- 9. Click the **Cancel** button on the sign in box.
- 10. On the menu bar, click Configure, and then click Session Parameters. In the Specify Local Address box, enter the IP address assigned to your modem by your cellular provider.
- 11. Click Next through the rest of the setup screens, then click Finish.
- 12. Press the green restart triangle to sign on to the RTU. The default username is MVZ and password is 122654. The unit should connect.



### 2.7.2 Configure Using TechView

Please see the Z9000 User's Manual for instructions on configuring the odorizer using TechView.2.7.3 Configure Using Local Display

### 2.7.3 Configure Using local Display

Please see the Z9000 User's Manual for instructions on configuring the odorizer using the local display.

### 2.8 Calibrating the Optical Comparator

The optical comparator is calibrated at the factory. If it is not operating as programmed, follow the calibration procedure below.





- 1. Watch the odorant drops through the sight glass below the metering valve.
- 2. As each drop falls, observe the yellow light on the optical comparator. If the yellow light
  - Does not blink, turn the gain clockwise until it does.
  - Blinks once (solid), it is calibrated correctly.
  - Blinks multiple times (flickers), turn the gain counterclockwise until it stops blinking, then turn clockwise twice.
- 3. Continue observing and adjusting the gain on the optical comparator until the yellow light blinks once per drop.

### 3. Accessories Included

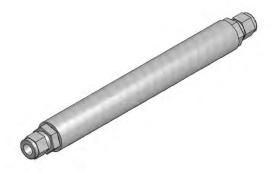
### **Support Bracket**

Standard bracket accommodates all mounting methods.



### **Sonic Muffler**

The sonic muffler reduces noise from the pipeline, so the vibrations do not interfere with the operation of the optical comparator.

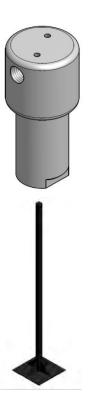


# Odorant & Actuation Gas Filters (mounted)

The filter prevents foreign objects that might be in the odorant supply from clogging or damaging the isolation valve or metering valve.

### **Z9 Stand**

The black painted carbon steel stand provides a mounting option when no other suitable surface is readily available.



### 4. Tanks

Tanks are pressure-tested at the factory.

Important procedure to follow before filling the tank with odorant: **Evacuate air and pressure test prior to filling the tank with odorant.** 

# 5. Standard Warranty

GPL Odorizers ("Seller") warrants products manufactured by it and supplied hereunder to be free from defects in workmanship and, to the extent materials are selected by Seller, to be free from defects in materials, in each case for a period as defined in the table below:

Product Line	Warranty Period
GPL Odorizers	Eighteen months from date of shipment

If within such period any such products shall be proved to Seller's satisfaction to be defective, such products shall be repaired or replaced at Seller's option. Seller's sole obligation and Buyer's exclusive remedy hereunder shall be such repair and replacement and shall be conditioned upon Seller's receiving written notice of any alleged defect within 10 days after its discovery and, at Seller's option, return of

such product to Seller, FOB GPL Odorizers' factory or provision of evidence (e.g., photographs) of such defect satisfactory to Seller.

### **Warranty Conditions & Limitations**

This Warranty shall not apply to any GPL Odorizers entry product which, in the opinion of GPL Odorizers, has been (a) altered or repaired in a manner affecting the efficiency or performance of the unit or (b) incorrectly installed or operated or (c) damaged in shipment or (d) damaged by flood or fire or (e) if the serial number is missing, altered or defaced.

Any materials required to be used by Seller as provided in customer specifications or instructions are excluded from the foregoing warranty and customer assumes sole responsibility for the selection of such materials. Customer further acknowledges and agrees that, to the extent Customer requests that GPL Odorizers make any recommendations with respect to materials to be used in connection with products, Seller may rely on published reference literature, that any references based on third-party studies may not correlate directly with the end user's intended usage or process (i.e., chemical composition, concentrations, temperatures, etc.), and that Customer is solely responsible for the final determination with respect to which materials are to be used in connection with the products.

EXCEPT FOR THE LIMITED WARRANTIES SET FORTH HEREIN, SELLER HEREBY DISCLAIMS ANY AND ALL WARRANTIES AND REPRESENTATIONS (EXPRESS OR IMPLIED, ORAL OR WRITTEN), INCLUDING ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE WHETHER OR NOT SELLER KNOWS, OR HAS REASON TO KNOW, HAS BEEN ADVISED, OR IS OTHERWISE IN FACT AWARE OF ANY SUCH PURPOSE, WHETHER ALLEGED TO ARISE BY LAW, BY REASON OF CUSTOM OR USAGE IN THE TRADE, OR BY COURSE OF DEALING OR PERFORMANCE. Without limiting the generality of the foregoing, Seller makes no warranty regarding ability of products sold hereunder to withstand erosion or corrosion, or regarding material compatibility of elastomers in specific services, and no warranty made hereunder shall apply to products which have been subjected to adverse storage.

The owner shall be responsible for maintenance of his equipment. Wear or damage caused by lack of normal maintenance or misuse of equipment shall not be considered as defective workmanship and material.

If a part requires replacement during the warranty period, the part must be returned to GPL Odorizers for credit or the customer will be responsible for paying for the replacement part(s).

GPL Odorizers and its subsidiaries reserve the right to make product design changes or improvements without notice and without imposing any obligation upon itself to install these changes or improvements on its products previously manufactured.

This warranty is for the sole benefit of the original purchaser and is not transferable unless agreed to in writing by GPL Odorizers.

**Receiving Shipments** (including loss or damage by transportation)

It is the customer's responsibility to check for missing cartons and/or sign of damage to cartons. If found, the customer should note missing and/or damaged boxes on the delivery receipt and have a delivery receipt signed by the representative of the transportation company. If unpacking discloses concealed damage from rough handling, the customer should request a concealed damage inspection from the transportation company.

The GPL Odorizers Customer Service Department will aid your organization in any claim proceeding for shortages or damages in shipment, but it is the receiver's responsibility to file a claim with the carrier for damage or loss.

### **Liability Limitation**

IN NO EVENT, WHETHER FOR BREACH OF WARRANTY OR OTHER CONTRACT BREACH, NEGLIGENCE OR OTHER TORT, OR ON ANY STRICT LIABILITY THEORY, SHALL GPL ODORIZERS., ITS SUBSIDIARIES OR ITS SUPPLIERS BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION, LOSS OF INFORMATION, OR OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE PRODUCTS, EVEN IF GPL ODORIZERS. OR ANY OF ITS SUBSIDIARIES, HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

### **Customer Actions for Claims on Products during the Warranty Period**

- 1. Contact the Customer Service Department, GPL Odorizers, Wheat Ridge, CO, Telephone: 303-927-7683, to obtain a Return Material Authorization (RMA) number.
- 2. You will be sent an "RMA" and a "Decontamination Statement" that is required to be filled out and returned with the equipment.
- 3. The following information must appear on the outside of the package:
  - RMA number is marked on the outside of the box.
  - Decontamination Statement filled out and attached to the outside of the box.
- 4. Return defective equipment FREIGHT PREPAID. Collect shipments will be refused.
- 5. The factory will not process warranty claims until the customer has properly accomplished the above items.
- 6. The GPL Odorizers factory may accept the entire claim, a part of the claim or none of the claim if our inspection of returned parts proves the failure was for reasons other than defective material or factory workmanship.

### **Important Notes:**

- 1. GPL Odorizers will not be responsible for damage incurred during the return shipment.
- 2. All returns subject to inspection and a minimum \$100.00 evaluation fee for any products found not to be defective.
- 3. This RMA is not authorization for credit. Credits and/or replacements will be issued upon evaluation of returned goods.
- 4. RMA is valid for thirty (30) days from issue date.

# 6. Factory Assistance

GPL Odorizers manufactures environmentally-friendly odorant injection systems for natural gas and other gases.

Please do not return any equipment before discussing your application problem with a GPL Odorizers representative and obtaining a Return Authorization.

GPL Odorizers has a dedicated staff of trained Service Department associates to assist customers with any problems. Please call GPL Odorizers at 303.927.7683 and request a service representative.

For other sampling applications, your GPL Odorizers representative is eager to help you. Please feel free to call your representative or contact GPL Odorizers to discuss your application.

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