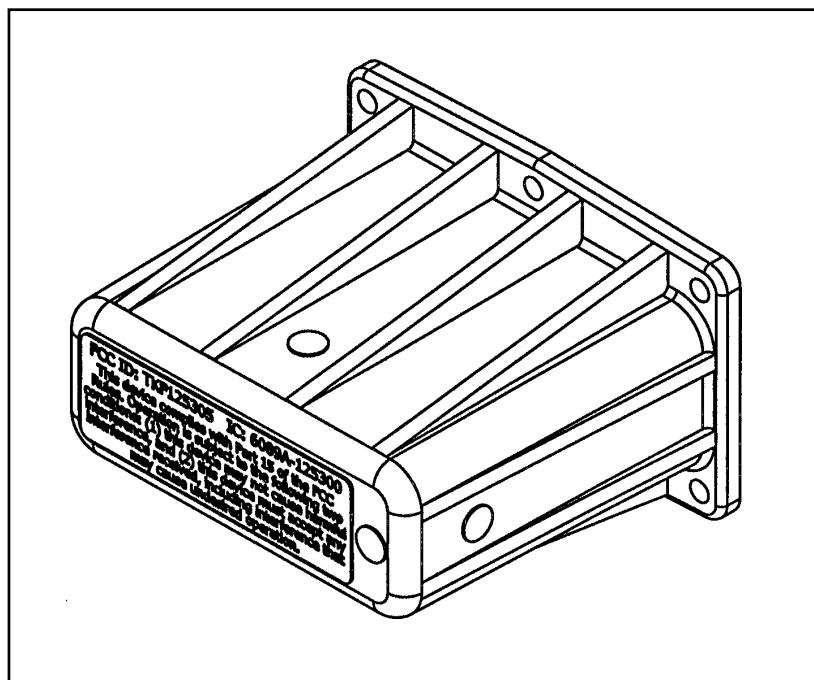


GPI Wireless Transmitter

Owner's Manual



AND INDUSTRY
CANADA APPROVAL

GPI
5252 East 36th Street North
Wichita, KS USA 67220-3205
TEL: 316-686-7361
FAX: 316-686-6746

GREAT PLAINS INDUSTRIES, INC.
"A Great Plains Ventures Subsidiary"
www.gpi.net
1-888-996-3837

To the owner . .

Congratulations on receiving your GPI Wireless Transmitter. We are pleased to provide you with a product designed to give you maximum reliability and efficiency.

Our business is the design, manufacture, and marketing of liquid handling, agricultural, and recreational products. We succeed because we provide customers with innovative, reliable, safe, timely, and competitively-priced products. We pride ourselves in conducting our business with integrity and professionalism.

We are proud to provide you with a quality product and the support you need to obtain years of safe, dependable service.



President
Great Plains Industries, Inc.

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GENERAL INFORMATION

The GPI Wireless Transmitter is part of the Wireless system that includes both the Transmitter and Receiver. The GPI Wireless system works with the GPI G2 Series Turbine Meters with Display.

The GPI Wireless Transmitter is designed to monitor flowrate. Do not use this system for TOTALIZATION applications.

“Operation is subject to the following conditions: (1) this device may not cause interference; and (2) this device must accept any interference, including interference that may cause undesired operation of the device.”

CAUTION: This Module is not FM Approved. Therefore, use of this module with an approved metering system, voids FM Approval.

SAFETY INSTRUCTIONS

- When measuring flammable liquids, observe precautions against fire or explosion.
- When working in hazardous environments, always exercise appropriate safety precautions.
- Be sure O-rings and seals are kept in good repair.

INSTRUCTION TO THE USER

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment

generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

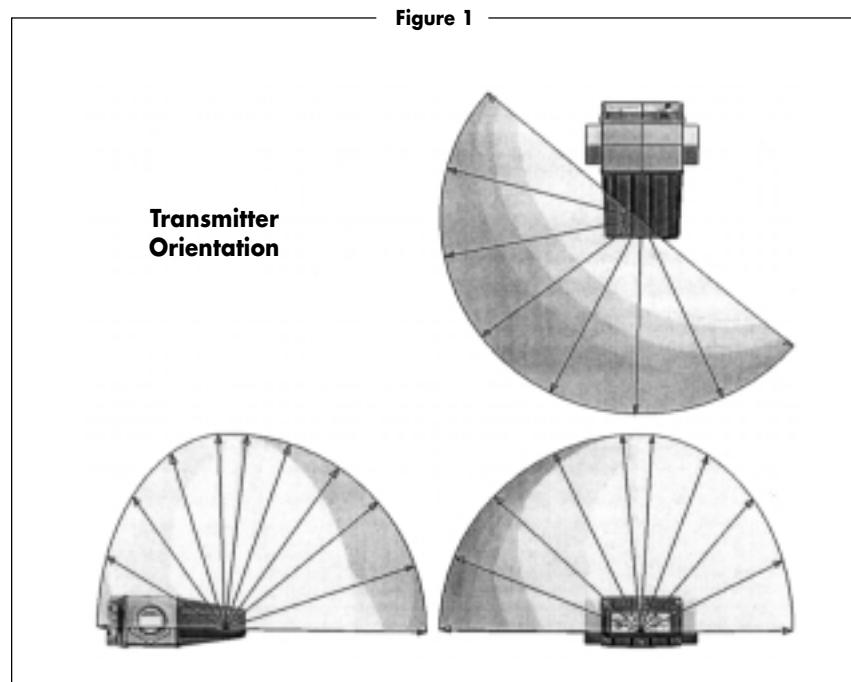
In order to maintain compliance with FCC regulations, shielded cables must be used

with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

Transmitter Orientation

Successful operation is dependent on careful placement of the transmitter and receiver. Plan ahead for this by temporarily placing the receiver and transmitter in the location desired. Complete the final installation after verifying the signal transmits and is received from this location. Refer to Figure 1.

Red and green "dots" on the equipment provide a visual guide to help position the transmitter and receiver. The installer should be able to see as many green "dots" as possible once the equipment is in place. Green "dots" indicate the best path for reception from the transmitter to the receiver.



Selecting Transmission Time Interval

Determine the transmission time interval prior to installation. Transmission time interval describes the elapsed time between signals being transmitted. Transmission time interval depends on the critical nature of your application, balanced with your expected battery usage. The table below shows the projected battery life depending on the time interval you select. See Figure 2.

Channel Selection

Determine transmitter's channel before installing equipment. Select a channel not currently in use. The receiver's channel will need to match the channel for the transmitter. Up to eight channels are available. Set the channel according to the second table in Figure 2 below.

Setting DIP Switches

Use the DIP switches to select both the time interval and channel desired. Five DIP

switches are provided. Use Switch 1 and Switch 2 to set the Transmission Time Interval. Switches 3, 4 and 5 control the Channel Selection. See Figure 3

Figure 3

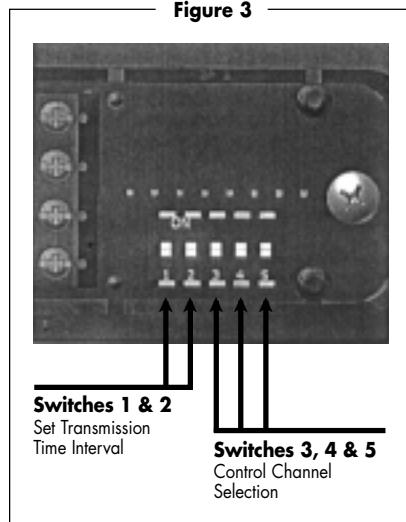


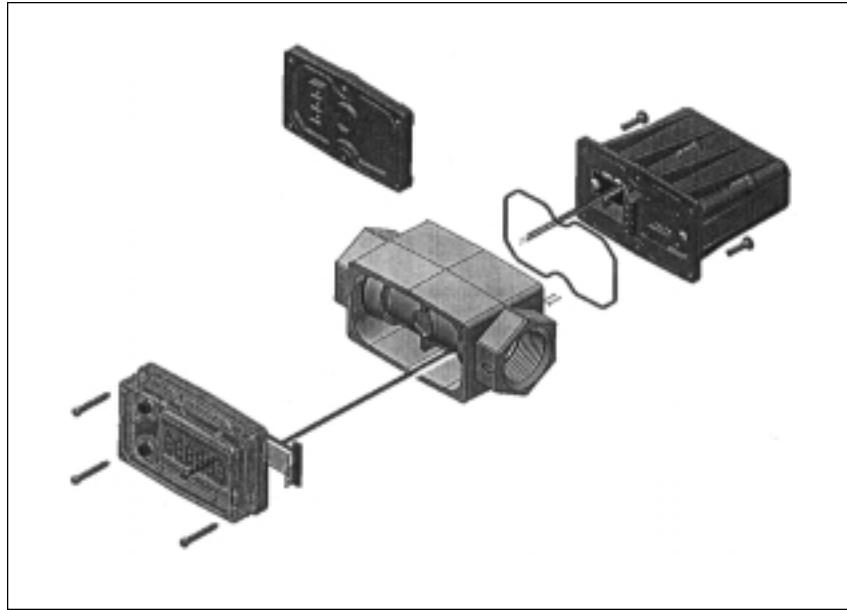
Figure 2

Time Interval Selection Switches (First two positions of 5-switch DIP on Transmitter Module)

Time Interval	Switch 1 Position	Switch 2 Position	Projected Battery Life
1 Second	Off	Off	About 2-1/2 Months
2 Seconds	Off	On	About 7 Months
5 Seconds	On	Off	About 11 Months
10 Seconds	On	On	About 17 Months

Transmitter Channel Selection Switches (Last three positions of 5-switch DIP on Transmitter Module)

Channel Number	Switch 3 Position	Switch 4 Position	Switch 5 Position	Frequency
0	On	On	On	903.37 MHz
1	On	On	Off	906.27 MHz
2	On	Off	On	907.87 MHz
3	On	Off	Off	909.37 MHz
4	Off	On	On	912.37 MHz
5	Off	On	Off	915.37 MHz
6	Off	Off	On	919.87 MHz
7	Off	Off	Off	921.37 MHz



Installing the Transmitter

The following items are required to connect the Transmitter to the turbine meter:

- Transmitter
- Interface Circuit
- Small and regular sized Phillips screw-drivers.

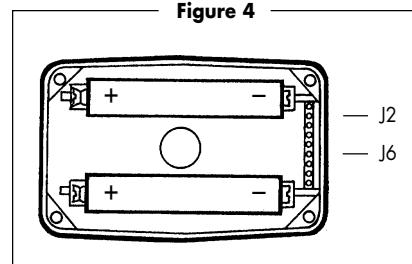
To install this transmitter, follow these instructions:

1. Remove the back coverplate from the turbine housing.
2. Remove the display electronics from the front of the turbine.

NOTE: If you are installing more than one module at a time, take care to keep the proper electronics paired with its original turbine.

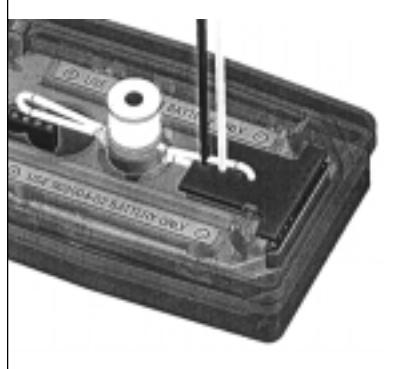
3. The Transmitter connects to a 10-pin connector located on the back side of the computer electronics next to the negative battery connectors. The 10-pin connector is sealed with a clear plastic sealant that must be carefully pried out with a small sharp tool inserted gently at the edges.

4. Remove the backing from the double-sided tape on the module's circuit assembly.
5. Carefully align the top pin on the circuit assembly with the J2 position on the 10-pin connector and gently press the module's circuit assembly into position between the batteries. The bottom pin will align with the J6 position. See Figure 4.



6. Guide the loose ends of the wires from the circuit assembly through the housing's cavity to the back side of the turbine. See Figure 5

Figure 5



Before proceeding with installation, verify the following steps.

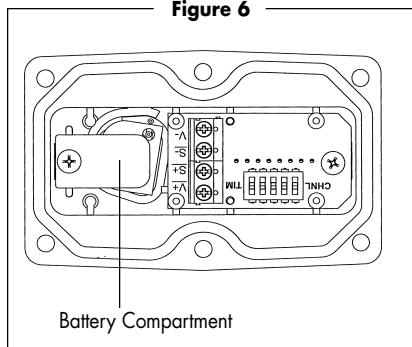
- ✓ **SET the Transmission Time Interval.**
- ✓ **SET the Channel desired.**
- ✓ **TEST the transmitter and receiver are working then proceed with permanent installation.**

7. Install the display electronics to the front side of the turbine and tighten the four screws snugly.

WIRING

Use the wiring diagram below (Figure 6) to wire the G2 Turbine Meter to the Wireless Transmitter. Wires are defined as follows:

- Red wire from the battery goes to V+.
- Black wire from the battery goes to V-.
- White wire from the display goes to S+.
- Black wire from the display goes to S-.



NOTE: Make sure the O-ring is fully seated and no wires are pinched. After wiring, secure the transmitter module onto the housing by snugly tightening the six screws.

MAINTENANCE

The GPI Wireless Transmitter includes two 1/2 AA Lithium batteries. See Illustrated Parts List for replacement batteries available from GPI. These batteries are located in the battery compartment below the wiring. Change the batteries according to the steps below. See Figures 7 and 8 below.

1. Disconnect the red battery wire from Terminal Block location V+.
2. Disconnect the black battery wire from Terminal Block location V-.
3. Remove the screw, lock-washer and clip located above the battery compartment.
4. Remove the battery pack from the compartment.
5. Remove Velcro strap from the pack.
6. Remove the two batteries.
7. Replace with new 1/2 AA Lithium (3.6 VDC) batteries. Note the polarity direction provided.
8. Rewrap pack with Velcro strap. Make sure strap is tight enough to prevent slipping.
9. Insert pack into cavity.
10. Attach clip, foam pad toward pack with screw and lock-washer.
11. Connect black battery wire to Terminal Block location V-.
12. Connect red battery wire to Terminal Block location V+.

Figure 7

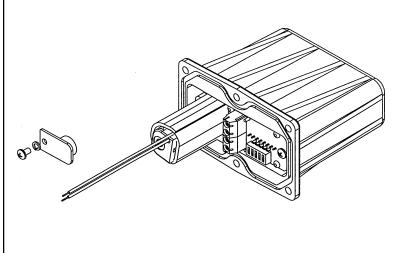
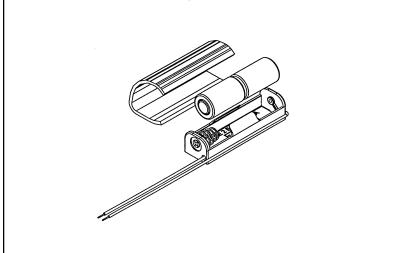


Figure 8

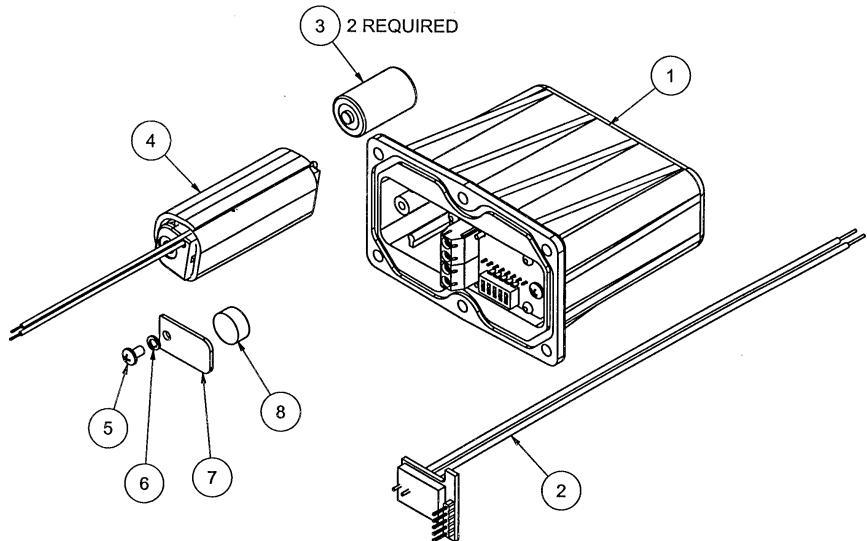


TROUBLESHOOTING

A. NO SIGNAL.

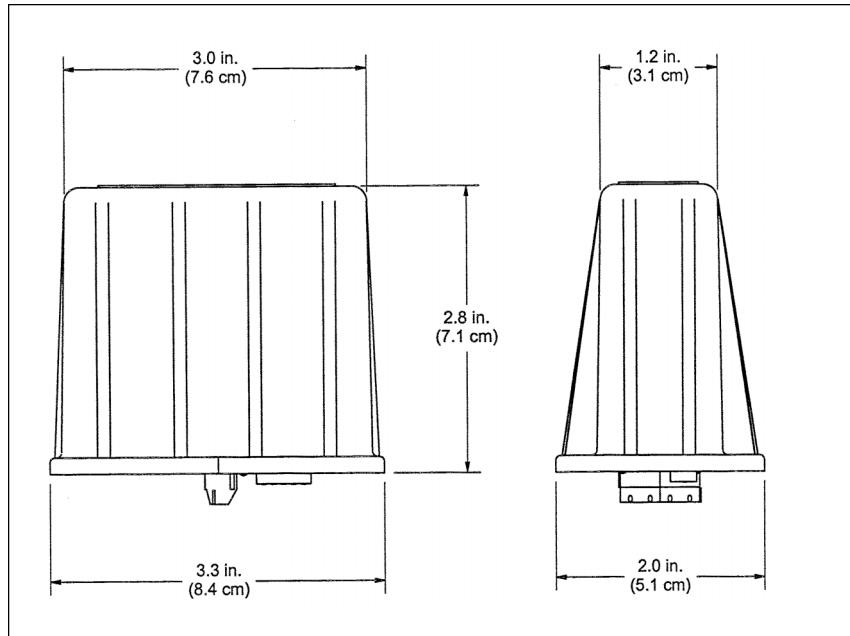
- 1. Receiver L.E.D. is not blinking. (L.E.D. is located on circuit board inside the receiver battery compartment.)**
 - Check that the receiver and transmitter are on the same channel.
 - Check power and that all connections are secure.
 - Verify the orientation of the transmitter and receiver.
 - Inspect the line of site of the transmitter and receiver.
 - Remove any obstructions or re-position the unit.
- 2. Check batteries and replace when less than 4.5 volts.**
 - Battery life is dependent on the Transmission Time Interval set for your particular application and can vary from 3 to 17 months accordingly.

ILLUSTRATED PARTS LIST



Item No.	Part No.	Description	No. Req'd.
1	12532501	Transmitter Module Kit	1
2	12506103	Circuit Assembly	1
3	90200748	Battery, Lithium (1/2AA)	3
4	12531201	Battery Assembly	1
5	904005-63	Screw, Pan HD, #4-40 x 3/16" (X-Recess)	1
6	42825204	Lock Washer, #4	1
7	12531501	Clip	1
8	113233-4	Spacer, Foam	1

DIMENSIONS



SPECIFICATIONS

Mechanical

Housing Material: Nylon 6/6
Operating Temperature: +14°F to +140°F
(-10°C to +60°C)
Storage Temperature:
-40°F to +158°F (-40°C to +70°C)

Power (Internal)

Type: Battery (2 each) 1/2 AA Lithium
(3.6V each - 7.2V total)
Input: Open Collector from G2 Series Electronics. Transmitter will accept frequencies generated only by G2 Series turbine housings. This transmitter should not be used with frequency generating devices other than G2 Series Models.

SERVICE

For warranty consideration, parts, or other service information, please contact your local distributor. If you need further assistance, contact the GPI Customer Service Department in Wichita, Kansas, Monday-Friday, 8:00 a.m. to 5:00 p.m. Central time.

Tel: 316-686-7361

Fax: 316-686-6746

Toll free: 1-888-996-3837

To obtain prompt, efficient service, always be prepared with the manufacturing date code, found on the circuit board.

For warranty work, always be prepared with your original sales slip or other evidence of purchase date.

Limited Warranty Policy

Great Plains Industries, Inc. 5252 E. 36th Street North, Wichita, KS USA 67220-3205, hereby provides a limited warranty against defects in material and workmanship on all products manufactured by Great Plains Industries, Inc. This product includes a 1 year warranty. Manufacturer's sole obligation under the foregoing warranties will be limited to either, at Manufacturer's option, replacing or repairing defective Goods (subject to limitations hereinafter provided) or refunding the purchase price for such Goods theretofore paid by the Buyer, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligations of Manufacturer. The warranty shall extend to the purchaser of this product and to any person to whom such product is transferred during the warranty period.

The warranty period shall begin on the date of manufacture or on the date of purchase with an original sales receipt. This warranty shall not apply if:

- A. the product has been altered or modified outside the warrantor's duly appointed representative;
- B. the product has been subjected to neglect, misuse, abuse or damage or has been installed or operated other than in accordance with the manufacturer's operating instructions.

To make a claim against this warranty, contact the GPI Customer Service Department at 316-686-7361 or 888-996-3837. Or by mail at:

Great Plains Industries, Inc.
5252 E. 36th St. North
Wichita, KS, USA 67220-3205

The company shall, notify the customer to either send the product, transportation prepaid, to the company at its office in Wichita, Kansas, or to a duly authorized service center. The company shall perform all obligations imposed on it by the terms of this warranty within 60 days of receipt of the defective product.

GREAT PLAINS INDUSTRIES, INC., EXCLUDES LIABILITY UNDER THIS WARRANTY FOR DIRECT, INDIRECT, INCIDENTAL AND CONSEQUENTIAL DAMAGES INCURRED IN THE USE OR LOSS OF USE OF THE PRODUCT WARRANTED HEREUNDER.

The company herewith expressly disclaims any warranty of merchantability or fitness for any particular purpose other than for which it was designed.

This warranty gives you specific rights and you may also have other rights which vary from U.S. state to U.S. state.

Note: In compliance with MAGNUSON MOSS CONSUMER WARRANTY ACT – Part 702 (governs the resale availability of the warranty terms).



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