AQUAworx
by INFILTRATOR

IPC™ Panels
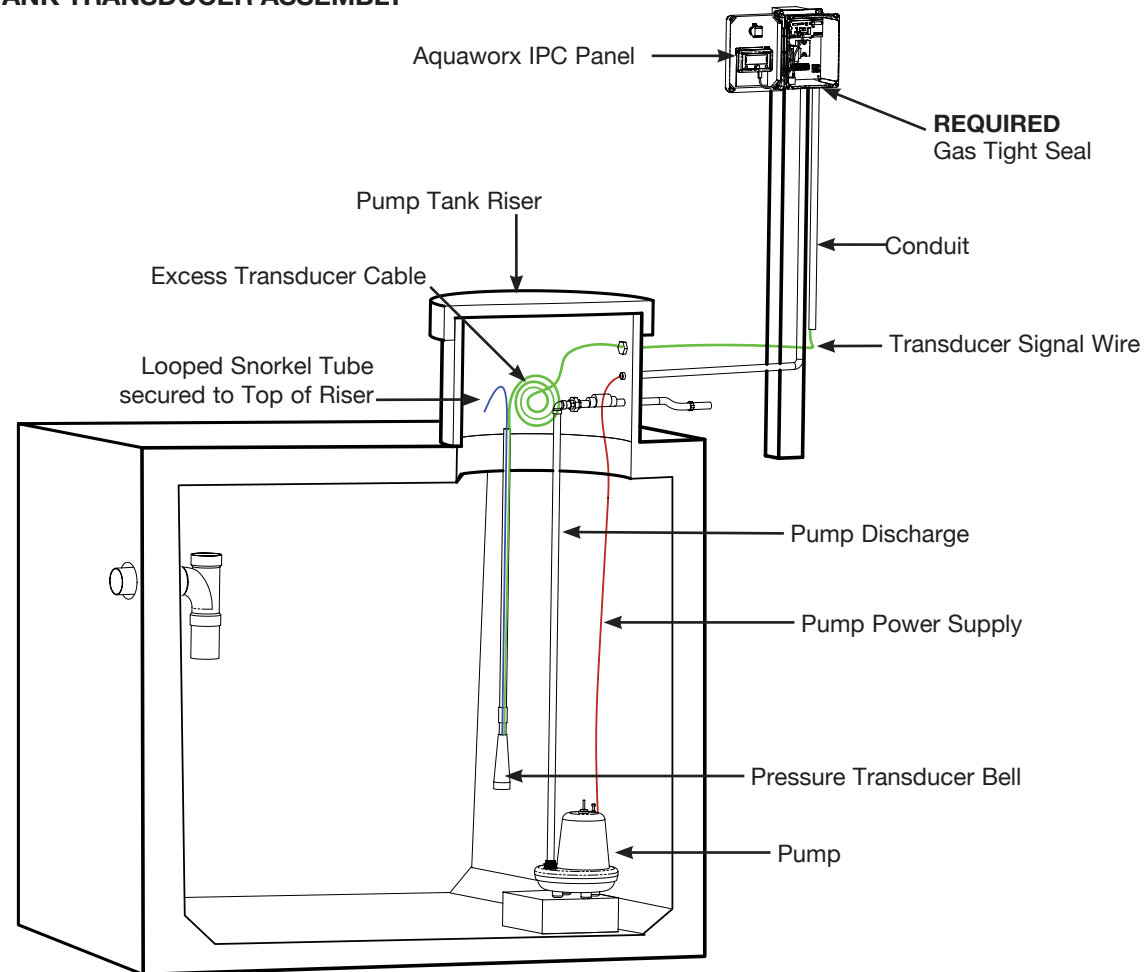# Installation Manual

MAR-04

To download
the complete manual
visit
www.aquaworx.com

The Aquaworx IPC (Intelligent Pump Control) Panel provides an innovative approach to pump control. Designed specifically for the onsite industry, the IPC Panel leverages simple pressure transducer technology for the enhancement of pump system performance, and ease of installation. Relying on an embedded microprocessor in the pump controller and a floatless pressure transducer in the pump chamber, the IPC Panel monitors liquid levels, controls pumping time intervals, and logs events in real time. Using the Mountable and Removable Controller (MARC) as the user interface, the IPC Panel offers a cost-effective solution with expanded capability.

Aquaworx offers three models of the IPC Panel; Simplex, Duplex and Sand Filter, to meet a variety of system design requirements. The Simplex Panel has the ability to time control a single pump, while the Duplex Panel can control two pumps in an alternating design with independent timing. The Sand Filter Panel has the ability to time control two individual pumps having independent level sensors, allowing for a design which can time-dose a treatment system and drainfield.

I. General

Unpack the Aquaworx IPC Panel and check for any visible damage both external and internal. Also verify that there are no cracks or damage to the pressure transducer bell. Note: You will need to identify the number on the pressure transducer bell as it is needed during the MARC setup. Notify Aquaworx immediately at 1-877-278-2979 if any damage has occurred.

ALL INSTALLATIONS MUST BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE.

FIGURE 1: PUMP TANK TRANSDUCER ASSEMBLY

- Aquaworx IPC Panel
- **REQUIRED** Gas Tight Seal
- Pump Tank Riser
- Conduit
- Excess Transducer Cable
- Transducer Signal Wire
- Looped Snorkel Tube secured to Top of Riser
- Pump Discharge
- Pump Power Supply
- Pressure Transducer Bell
- Pump

II. Installing the IPC Panel

NOTE: A qualified electrician must perform all wiring. Complete wiring diagram available at www.aquaworx.com

The following components and tools may be required for installation:

- Screwdriver (sm and med size flat head)
- Pipe cutter and tape measure
- Fish tape
- Wire strippers/cutters
- Electrical tester
- Drill
- 3⁄4" to 1" screws
- 1" PVC coupler
- Step bit
- Hole saw
- Electrical conduit
- Electrical tape
- Splice box for pump connection
- Waterproof wire connectors
- 1" PVC (for transducer handle, amount determined by tank depth (6' length typical)
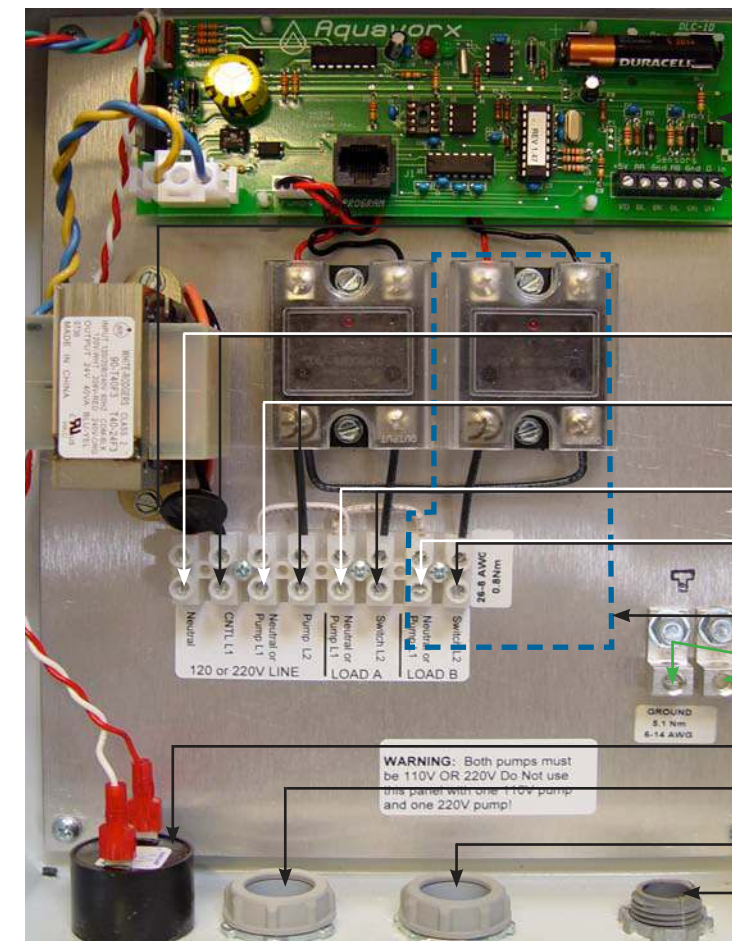

FIGURE 2: IPC PANEL WIRING SETUP AND TRANSDUCER 3-WIRE CONNECTION

- Circuit board
- Transducer signal wire terminal strip
- Varistor surge suppressor
- Dedicated alarm from supply (#1) (120 volt, 20 amp source)
- Dedicated pump circuit from supply (#2) (120 or 220 volt, 20 amp source; up to a 2 HP pump)
- Power from panel to pump (pump A for duplex)
- Power from panel to pump B (duplex only)
- This section required for a duplex system only
- Ground terminals
- Audible alarm unit
- Power in
- Power out
- Transducer signal wire

1. Mount the IPC Panel to the wall or post. Position the IPC Panel so that the power supply enters the IPC Panel through the bottom approximately 1" to the right of the audible alarm unit.

2. On Simplex Panels drill two holes (3 holes for duplex) in the bottom of the enclosure spaced approximately 2" apart and in line with the audible alarm unit. When facing the panel, the order of conduit connections from left to right is shown below, as well as illustrated in Figure 2:

Power in: 2 dedicated 20 amp circuits from house to power the panel, 120V (1) and pump, 120V or 220V(2)

Power out: Power supply from panel to pump

Transducer signal wire: Signal transmission from panel to pump

NEMA 4X fittings must be installed in each field-drilled hole to retain the integrity of the enclosure's 4X rating.
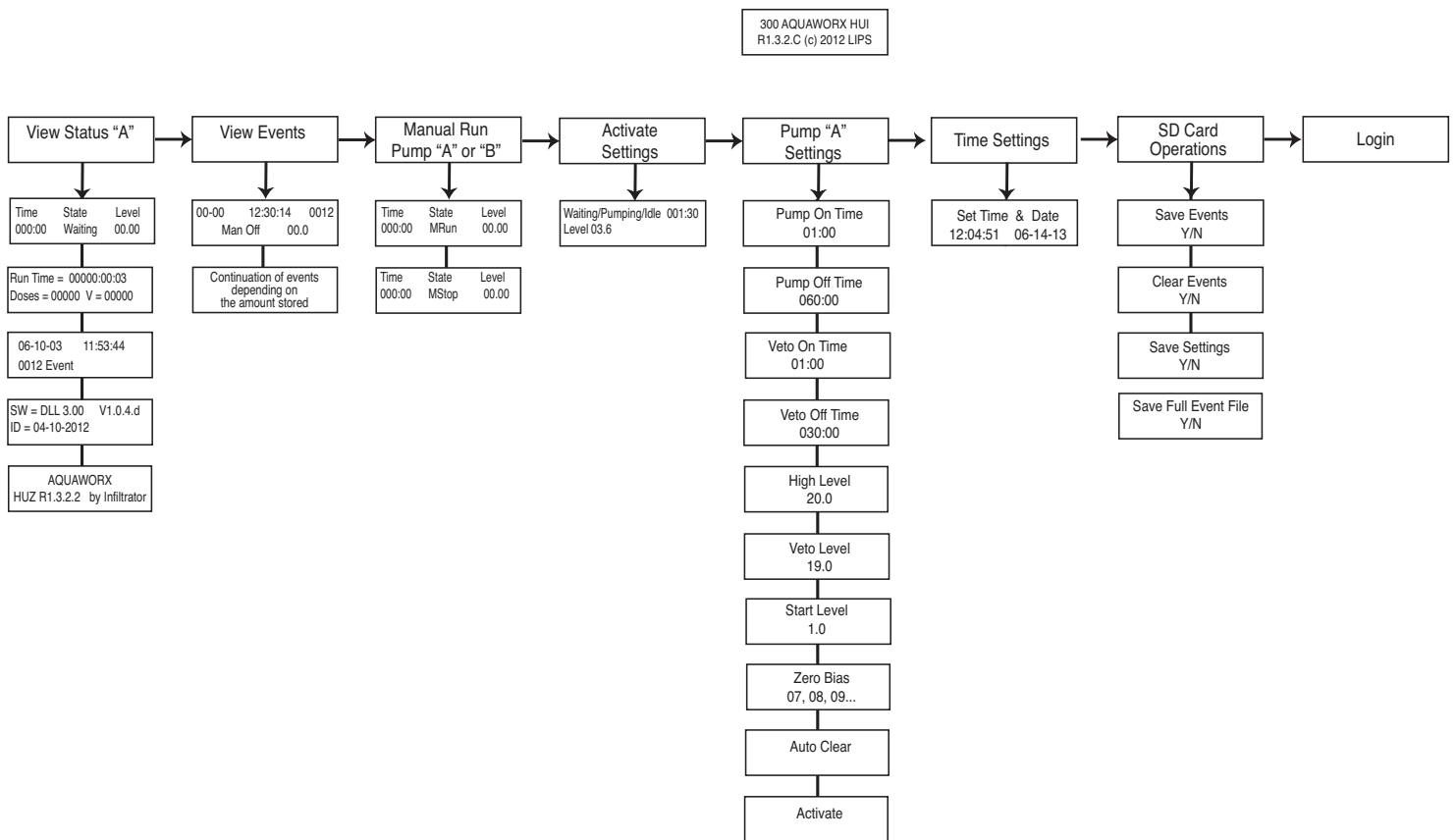
III. MARC CONTROLLER SETUP

The MARC will power up and log in when plugged into the control panel. Upon power up the MARC will recognize the panel model and Mode settings and initiate the proper software.

A system flow chart for a simplex panel is presented below. Menu categories are listed across the top of the flow chart. To move laterally press the +,- or the right/ left pointing arrows. To enter a menu category item tap the "Enter" or down pointing arrow. To exit a menu category tap the up or exit button.

Duplex systems controlling two pumps will have a similar flow pattern with the addition of View Status B, Manual Run B and Pump B Settings.

Press "Enter" or the down button to enter each menu option. Once in a menu option press the +,- or the right/ left pointing arrows to navigate the menu options. "Enter" is also used to turn pumps On & Off in the manual mode and when finished making a change to a setting or value.

FIGURE 3: MARC SIMPLEX MENU OPTIONS MAPPING

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View Status "A"
- Time 000:00 / State Waiting / Level 00.00
- Run Time = 00000:00:03 / Doses = 00000 V = 00000
- 06-10-03 11:53:44 / 0012 Event
- SW = DLL 3.00 V1.0.4.d / ID = 04-10-2012
- AQUAWORX / HUZ R1.3.2.2 by Infiltrator

View Events
- 00-00 12:30:14 0012 / Man Off 00.0
- Continuation of events depending on the amount stored

Manual Run Pump "A" or "B"
- Time 000:00 / State MRun / Level 00.00
- Time 000:00 / State MStop / Level 00.00

Activate Settings
- Waiting/Pumping/Idle 001:30 / Level 03.6

Pump "A" Settings
- Pump On Time 01:00
- Pump Off Time 060:00
- Veto On Time 01:00
- Veto Off Time 030:00
- High Level 20.0
- Veto Level 19.0
- Start Level 1.0
- Zero Bias 07, 08, 09...
- Auto Clear
- Activate

Time Settings
- Set Time & Date 12:04:51 06-14-13

SD Card Operations
- Save Events Y/N
- Clear Events Y/N
- Save Settings Y/N
- Save Full Event File Y/N

Login

Contact Infiltrator Systems' Technical Services Department for assistance at 1-800-221-4436