

## Wiring Instructions for Aqua Green Utility Inc Alarm Panel

Starting at the house two circuits' 110 volt is needed, one is for the pump power the other is for the alarm unit. The circuit for the alarm unit will use very little power and only then when it's actively alarming. The pump will require a dedicated circuit of at least 15 amps. Remember two circuits are required so if the pump trips it's circuit breaker the alarm will still work.

The alarm panel must be mounted on the outside of the home. The alarm panel allows for the power to be turned off so service can be done when no one is home. All exposed wiring must be in PVC conduit Schedule 40 is Ok if local code allows it to be used. Mount the alarm panel and conduit securely to the home or other solid structure. Bring the two circuits from the home to the panel the grounds usually but not always green or copper mount to the large connector on the subpanel. The neutrals from each circuit connect to the first two terminal blocks looking from left to right, marked **N** these are usually but not always white wires. Next connect the power wire for the pump this is the hot or usually but not always black wire. Connect this wire to the bottom of the circuit breaker in the alarm panel. Next connect the power wire for the alarm circuit this is the hot or usually but not always black wire. Connect this wire to the bottom of the fuse terminal block. This is located beside the pump circuit breaker, the top flap hinges open to expose the fuse and wire connector screws. This completes the wiring from the house to the alarm.

Now we will connect the wiring that runs from the alarm to the pump tank at the alarm end. With the kit you should have 5 wires black, white, green, orange and blue. If you have used different color wire you might mark the ends with these colors to make using these instructions easier. The wires from the alarm panel to the pump tank must be run completely in ¾ inch PVC conduit. Starting at the alarm panel connect the orange 14 AWG wire to the terminal connector to the right of the fuse connector marked **F1**. This is the wire that goes to the alarm float that mounts on the pipe above the pump in the tank. Connect the blue 14 AWG wire to the terminal connector marked **F2**. This is the wire that goes to the other connection on the float that mounts on the pipe above the pump in the tank. Connect the black 12 AWG wire to the terminal connector marked **H**. This is the power going to the pump in the tank. Connect the white 12 AWG wire to the terminal connector marked **N**. This is the neutral wire for the pump in the tank. Connect the green 12 AWG wire to the large connector on the subpanel. This is the utility or ground wire for the pump in the tank.

### At The Tank Wiring

Locate the pump tank with only one riser the connection will be made at that riser. The kit contains a grey PVC electrical box the wiring connection will be made in this box. The grey connection

box will be mounted so that the top of the grey box is at the level of the top of the riser lid so the grey box can be accessed at ground level when the tanks are covered. The 3/4 gray conduit coming from the house with 5 wires in it connects into the bottom of this box. The kit contains a 3/4 close nipple (very short pipe) this with 2 - 3/4 nuts are used to connect the grey connection box to the riser. The pump unit hangs in the tank on a EZ pull connector and its wiring goes through the 3/4 close nipple into the grey connection box. Pull the wires one at a time into the grey connection box. First pull the wire from the signal float, the one located furthest from the pump. Don't cut the extra wire leave in the tank, this allows the pump to be pulled out for maintenance. Tie a single knot in the wire about 4 inches from the end to keep it in the grey box. Connect the two wires in the signal float to the orange and blue 14 AWG wires from the alarm panel. If the signal float usually has a white & black wire either can be connected to the orange or blue wires from the alarm panel. Strip back each wire about 1/2 inch and twist together orange to black then blue to white. Use only water resistant wire nuts provided with the kit to make all connections. Then screw on the water resistant wire nut to make the connection. Next pull the wire from the pump duty switch float through the 3/4 close nipple, this float usually has a plug on the end of it that needs to be cut off at the plug. Tie a single knot in the wire about 4 inches from the end to keep it in the grey box. This float is what switches the pump on and off and is usually rated at 13 amps. Strip back the wire from the pump duty switch float and strip back each wire about 1/2 inch. Next strip the black wire coming from the alarm panel. Now connect the black wire from the alarm panel to the black wire from the pump duty switch float, twist together and screw on a water resistant wire nut. Pull the wire from the pump through the 3/4 close nipple. Tie a single knot in the wire about 4 inches from the end to keep it in the grey box. Strip back the wire from the pump and strip back each wire about 1/2 inch. Connect the black wire from the pump to the white wire from, the pump duty switch, twist together and screw on a water resistant wire nut. If the pump has 2 black wires either one can be used with no effect on pump operation. Connect the other black or white wire from the pump to the white wire coming from the alarm panel, twist together and screw on a water resistant wire nut. Connect the green wire from the pump to the green wire from the alarm panel, twist together and screw on a water resistant wire nut. Pull the extra wire from the pump, pump duty float switch & signal float back into the pump tank. Pull these three wires up from the pump so they don't interfere with the float function and tie them in a loop with a scrap wire or wire strap. Take the sealant caulk provided in the kit and squirt some into the 3/4 close nipple so that sewer gas cannot enter the gray connection box. Screw down the cover to the gray connection box. Turn the power on to the alarm panel and lift the signal float the alarm should sound and panel light come on. Make sure the switch on the panel is not on silent. Then lift the pump duty switch float to test the pump operation. Only test the pump for a moment it is not designed to run dry.