

# On Target Spray Systems Small Controller

## Controller

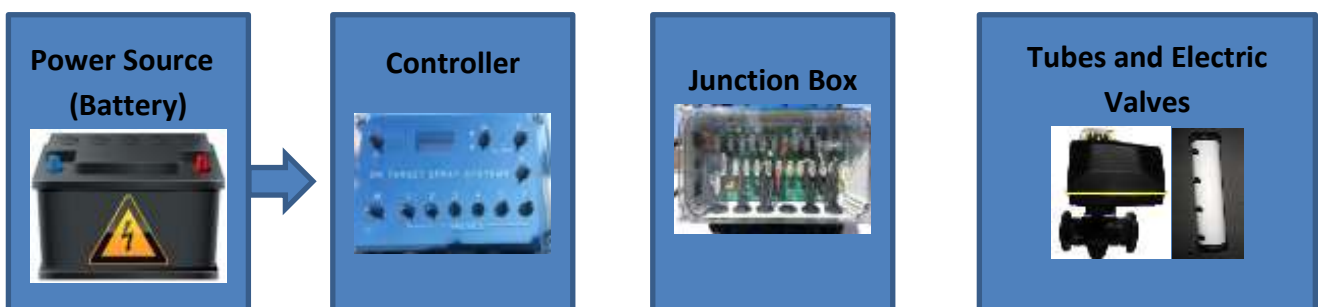


Figure 1: Controller Face

<b>Number:</b>	<b>Name</b>	<b>Function</b>
1	Master Power	I = On O= Off
2	Pressure Reading	Read out of Boom Pressure
3	Pressure Control	Up = increase in boom pressure Down = decrease in boom pressure
4	Alarm	Flashing when Electrostatic switch is Off, or if Electrostatic isn't working see Alarm Troubleshooting
5	Electrostatic Control	Up = On Down= Off
6	Rinse Valve (if applicable)	Up=Pulling from the Rinse Tank Down= Pulling from the Chemical Tank
7	Master Valve	Up= All valves powered Down = All valves not powered
8	Individual Valve	Up = Valve is on Down = Valve is off

Table 1: Controller Face's names and functions

### Power Flow



## Junction Box



Figure 2: Junction Box

Lights inside the Junction Box signal the operator real time information.

**PSENSE:** When the light is on the Pressure Sensor is functioning normally. When it's off then either the unit does not have a Pressure Sensor installed or it is not functioning.

**PRES:** The two lights indicate whether the boom pressure is being raised or lowered. The top light will light up when the operator is turning the boom pressure up from the controller, and the bottom light will do the same when pressure is being lowered.

**RINSE:** When the light is on the sprayer is actively pulling from the Rinse Tank and spraying clean water through the booms. Not all Sprayers have a Rinse Tank and function.

**V#:** The lights for a Valve indicate when a Valve is open.

**T#:** The lights for a Tube indicate when a Tube is charged with electricity. When the electrostatic is off the Tube lights will be off. If the electrostatic is on and a Tube's light is off then this indicates that the tube is not being charged.

## Junction Box and Cord Controller Connections



Figure 3: Junction Box

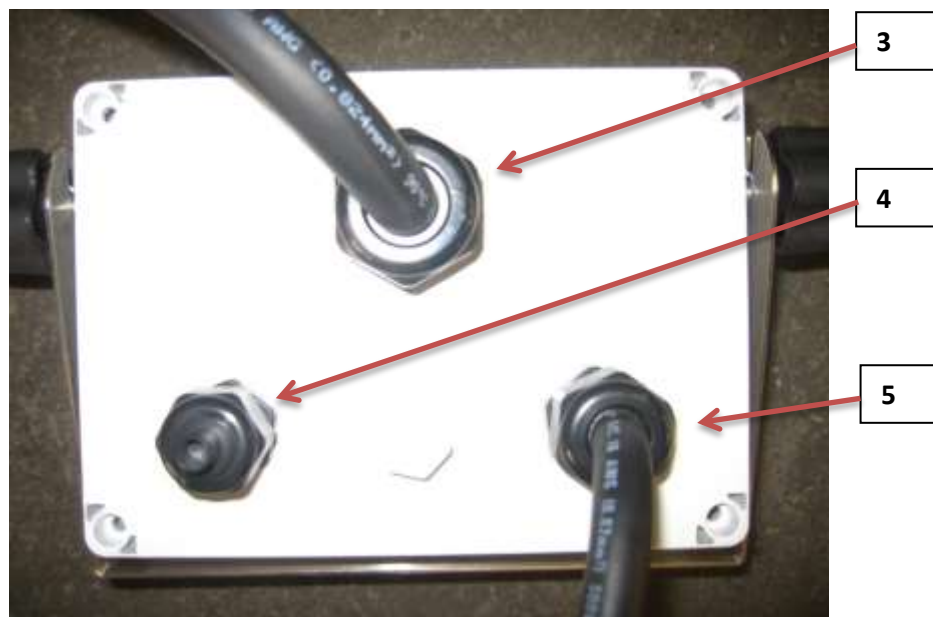


Figure 4: Backside of Controller

<b>Number</b>	<b>Name</b>	<b>Connects To</b>	<b>Connects to Number</b>
1	Junction Box Cord 1	Cord Controller Cord 1	3
2	Pressure Sensor Cord	Pressure Sensor	None
3	Cord Controller Cord 1	Junction Box Cord 1	1
4	Cap	None	None
5	Controller Power Cord	Power Source (Battery) Cord	None

Table 2: Junction Box and Controller connections

## Cord Connections



Figure 5: Cord Controller Cord 1 to Junction Box Cord 1  
White tape on the same side.



Figure 6: Controller's Power Cord to Power Source Cord (Battery).  
Single way connections.

## Power Source (Battery) Connection



Figure 7: Power Source Cord to Battery.

*Red connects to positive (+) and Black connects to negative (-)*

## Alarm Troubleshooting

The Alarm could be flashing for a number of different reasons. The first step is to determine if there is any simple reason that is causing the Alarm to flash.

1. Verify that the jumper wire in the Junction Box is installed and securely connected.



*Jumper Wire*



*Large Junction Box Right-Side*



*Small Junction Box Left-Side*

If the jumper wire is securely installed then determine which Spray Tube is causing the Alarm to flash. The lights in the Junction Box light up when a component is in use, switch the Electrostatic Switch to On, and then identify which Tube light is not lighting.



*Illustration of Small Junction Box with all Tube lights on*



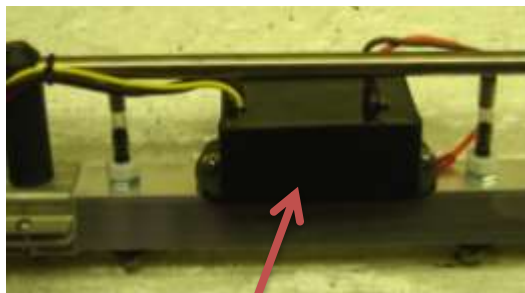
After Determining the Tube causing the Alarm, follow these steps:

1. Check voltage of that Tube to determine if fault is correct; see 'Electrostatic Voltage Check'
2. If voltage is below spec (minimum 400v) then remove the End Cap and check wiring connections, this is the main cause of this fault, double check connections. Tighten if found loose and re-check Alarm.



*Wiring connection inside of Tube*

3. If connection are secure, check for moisture inside of tube, if moisture is found dry out inside of tube. Possible causes of liquid in Tube are:
  - A. Tube is not sealed
  - B. Liquid valves opened, but air was not flowing.
  - C. Improper operation of sprayer, by not allowing liquid to be purged from tube.
4. If no moisture is found, disassemble Tube and replace Power Supply.



*Power Supply*