

# 240 to 12 Volt Model

## Section "A" Vortex Insect Trap Assembly

### 1. Assembly of Drum, Pump and Filter Bag

1. Remove packaging from Drum and Lid.
2. Remove all components from inside the Drum.
3. Check all components are there as per the checklist supplied in "annexure 1"

### 2. Fitting the Pump

Remove blue base from the Pump.

1. Using the 2 screws supplied, screw the pump base to the support bracket inside the drum (Photo 1.1) Don't exert excessive downward force on the pump bracket.



Photo 1.1

2. Fit the pump to the base unit once it is screwed to the support Bracket, with the pump hose and wiring facing as per (photo 1.2).



Photo 1.2

3. Thread the electrical wires attached to the pump through the overflow hole in the side of the drum, located approximately 100mm below the rim of the drum (Photo 1.3).



Photo 1.3

### 3. Fitting the water injection tube

1. Screw water injection tube into position above the pump using the 2 predrilled 4mm holes. (Photo 1.4)



Photo 1.4

2. Make sure the 6mm plastic spacer supplied is between the mounting plate and the drum. Tighten the two screws supplied into place.

3. Pump hose is preassembled to pump and water injection tube, make sure it is fitted as per photo 1.3.

## Section "A" Vortex Insect Trap Assembly Continued

### 4. Fitting the Mesh filter bag

1. Place mesh filter bag into the drum and over the rim as per (photo 1.5).



Photo 1.5

2. The filter bag has a pre-cut hole on one side, this needs to be placed over the water injection tube (Photo 1.4) as per (photo 1.6)



Photo 1.6

### 5. Fitting of Lid

1. Place the Insect Trap Lid on the drum making sure that the pre-drilled 20mm hole is on the underside of the lid as per (photo 1.7)
2. Align the hole with the Water Injection Tube and push firmly down until the lid is level with the top of the Drum.



Photo 1.7

### 6. Fitting the Light Assembly

1. Unwrap light assembly and legs from packaging and check all components are supplied as per the checklist supplied "annexure 1".  
***(Special Note – Please handle light assembly with care as housing is glass)***
2. Position legs on lid making sure the leg with the wiring is over the overflow hole as per (photo 1.8)
3. Using the three screws supplied, screw the legs into position and make sure not to over tighten the screws.



Photo 1.8

## Section "B" Vortex Stand Assembly

### 1. Parts of the Vortex Stand.

1. Remove packaging from stand components.
2. Check all components are there as per the checklist supplied in "annexure 2"

### 2. Assembling The Stand



Fig. 2.2



Fig. 2.4



Fig. 2.6



Fig. 2.8

1. Place the stand base and Bottom Ring upside down on the floor. (Fig. 2.1)
2. Guide the four legs into the leg guides on the side of the base (Fig.2.2).
3. Once all four legs are in place, turn the base on the side and carefully push the legs through the guides to the alignment marks on the legs (approximately 150mm from the bottom of the legs) (Fig. 2.3).
4. Carefully turn the stand onto its feet (Fig 2.4)
5. Chose any one of the legs and slide the Solar Panel Mount down the square leg and so that it is facing away from the other legs. (applicable for solar model only) (Fig. 2.5.)
6. Slide the Solar Panel Mount about half way down the Leg shaft and lock it into place by tightening the Locking Bolt (Fig. 2.6)
7. On the leg to the left of the Solar Panel Mount, slide the Solar Panel Brace. Ensuring the Brace connects to the leg of the Stand and the Solar Panel Mount (Fig. 2.7.).
8. Once the Solar Panel Mount and Brace are in place, slide the top gimbals rings onto the top of the four legs (Fig. 2.8). Gently tap the top rings down onto the legs until the top of the stand is level.
9. Place the two 6v batteries carefully onto the battery rack on the bottom ring of the stand. Placing the two batteries neg-pos-neg-pos on the rack, now connect the battery connector as shown in picture 3.9. Important: Connect Pos (+) Battery 1 to Neg (-) Battery 2 only (Fig. 2.10).
10. You are now able to lower your vortex bin and light assembly into the gimbals (with no water in the bin). Make sure the three rings are all level before lowering the bin into the stand; turn the bin until the electronic cables (the lights and pump) are closest to the solar panel mount (Fig. 2.11). (Make sure that fingers and hands do not get caught between the bin and the gimbals when lowering the bin into position.)
11. Place the Vortex Insect Trap in the operating location and fill with water until it begins to come out of the overflow on the side of the Insect Trap.



Fig. 2.1



Fig. 2.3



Fig. 2.5



Fig. 2.7



Fig. 2.11

## Section "C" Using 240 Volt Power Supply

1. Connect Power supply 12 Volt outlet cord to the 12 Volt extension cord.  
*(note: The extension cord is an optional extra as required)*
2. Connect Extension Cord to the trap light and pump using the "y" Connector supplied with the trap.
3. Connect 240 Volt cord to the power supply.
4. Set the Timer (supplied) to start and stop. Times required: Vortex recommends dusk to dawn
5. Connect the timer to 240 Volt power supply making sure the mains power is switched off.
6. Switch on Power
7. Switch on the timer using the timer override switch
8. The water in the Vortex trap lid must flow concentrically around and down the centre hole. The drum must be made level for best results. A sloshing affect may occur until the pump seals are worn in.
9. Once the trap tests OK return the timer override switch to the off position.  
Set the timer time and check the start & stop times.

### **SAFETY**

***The timer - 240 volt power supply and 240 volt lead must be kept in a sheltered position from the weather and moisture or electrical shock or failure of parts may occur.***

## Section "D" Service & Maintenance

### 1. Cleaning the Mesh Filter

The filter bag should be cleaned out approximately every 3 days. This is dependant on insect densities. Always check the water level every time you change the filter bag and always use rubber gloves when handling filter net or Insect Trap water.

#### Electrics

1. Make sure any the electronics are disconnected or turned off.

#### Lid Removal

2. Remove the lid by placing your fingers under the inner rim & gently lift the lid off the Insect Trap, being careful of the light assembly rest the lid gently on the ground.

#### Filter Removal

3. Lift the mesh filter from the drum; turn the filter upside down, holding the handle on the bottom of the mesh filter, shake any insects out of the bag.
4. If some insects are alive (such as beetles) then dispose of such as feed for birds or bury them in a deep hole.
5. Alternately exchange the mesh filter for a clean replacement net and rotate as required ***(extra mesh filter bags are available from your local Vortex dealer).***

#### Replacing Filter

6. Place mesh filter bag into the drum and over the rim making sure the hole in the bag rim is over the water injection tube (Photo 1.4)

#### Insect Trap Checks

7. While the lid is removed check the water level. If the water is low, top up the water until it is up to the water overflow outlet on the side of the drum (the water level should never fall more than 200mm below the overflow outlet.
8. If the water has a bad odour, then add 200ml of Lactobacillus Bacteria Microbial conditioner and ¼ kg of sugar to water to reduce the odour. This should only be necessary when changing the water.

#### Replacing Lid

9. Once the filter has been changed and the water level checked, replace the lid making sure that the 20mm hole on the underside of the lid (Photo 1.5) is placed firmly over the water injection tube.

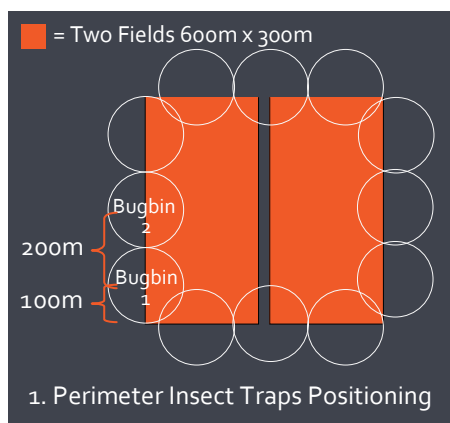
#### Reconnecting Electronics

10. After servicing the trap, refitting the lid, topping up the water, be sure to reconnect any wiring disconnected during service. Test run the trap and set it ready for service.

### 1. Positioning the Vortex Insect Trap

All crops are vastly different in their configuration and size, this is an example of positioning for a rectangular / square field, if you have any difficulties in the placement of the Insect Traps for your field/crop, please consult your Vortex Representative for help on the number of Insect Traps you require and positioning of those Insect Traps before you set them up yourself. Other influencing factors such as buildings, tree-lines, singular trees & bushes, machinery, levee-banks (any structure or obstacle that can affect the continuity of the light array) have to be taken into consideration.

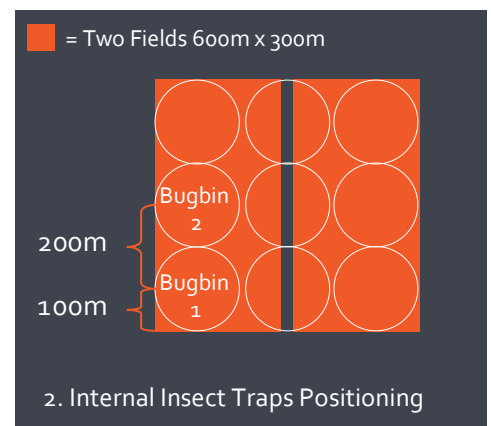
1. The Vortex Insect Trap is supplied with a self levelling stand (Section B). The self levelling stand is to compensate for fields or any areas where the Insect Trap is to be positioned that are not level. The Vortex stand has a maximum tolerance of 20 degrees off the level and can not be used on ground sloping more than 20 degrees; otherwise the Vortex Insect Trap will not work.



2. Vortex recommends to perimeter the Insect Traps around your crop. (Each Insect Trap offers optimum protection for up to a 100m radius). Only position the Insect Traps in your field if it has good internal access i.e. good drainage, firm soil and/or has well spaced crop row, this needs to be adhered to, as you need to periodically check your Insect Trap's, water level, empty bug catchment, check lights and pump. The Insect Traps can be positioned (as in diagram 2) up to 100m in from the bottom edge of your crop line and then in a line up to 200m apart down the access way.

3. For perimeter protection (Diagram 1) of your crop, start by placing the Insect Trap approximately 100m from the corner of the crop. Place the second bin 150m along the perimeter, from the first Insect Trap you positioned. Finally positioning the rest of the Insect Traps 150m apart.

4. If your crop does not break up into increments of 150m, do not increase the distance between Insect Trap, only decrease the distance between Insect Traps as this will only increase the protection for your crop, not decrease the protection.



5. The light from the Insect Trap must be seen clearly over the top of your crop (when fully mature). The Vortex Stand lifts the Insect Trap 1.3m off the ground; self levels the Insect Trap and keeps the battery and electronics off the ground.

6. If you are unable to see the Insect Trap light over your crop, a second light is recommended for crops over 1.5m, such as Corn. This light is attached to an extendable pole (up to 5m) and will ensure that the light is clearly visible over the top of the crop.

## Section "F" Troubleshooting

### 1. Troubleshooting

Symptom	Possible Cause	Action
Light not working	Blown or Broken Lamp No Power Light Fluoro Ballast Faulty	Check & Change Light Check power supply Check & tighten connections Check control settings Remove light assembly and have qualified electrician change ballast.
Pump not working	Pump water intake & pump blocked with insects No Power	Remove pump & Clean out intake. Check power supply Check & tighten connections Check control settings
Pump and light starts then stops after a short time (less than 5 minutes)	Pump requires changing and is setting off overload cut out in the regulator electrical circuit	Replace pump (Check recommended parts list)
Pump runs but does not pump water	Pump water intake blocked or discharge line is blocked Hose not connected to pump or water injection outlet	Remove pump clean out intake & discharge hose Reconnect hose & clamp
No power to Trap	Corroded wiring on Power supply No Power	Check & Clean connections Check timer is working Check power supply
Vortex of water not in the centre of the lid	Insect Trap assembly not level	Make sure Insect Trap assembly is on level surface or in self-levelling stand
No Insects	You've Killed Them All!!!!	They will be back!!!

"Zero Insect Tolerance - Vortex Really Works"