

# Product Support & Contact Information

Snap-Fans are high efficiency ventilation fans designed to be used in ventilation applications. Using this equipment for any other purpose or in a manner not consistent with the operating recommendations within this manual will void the warranty and may cause personal injury.

## Solar National Air Propulsion



Fogco  
600 S 56th St, Ste 9  
Chandler, AZ 85226  
480-507-6478

For claims, please contact your retailer directly  
or email us at: [info@fogco.com](mailto:info@fogco.com)  
Visit [fogco.com](http://fogco.com) for replacement parts

### RETAIL RETURN POLICY Only applicable if you ordered directly from Fogco.

The goal of Fogco is that its customers be completely satisfied with their purchase. If you are not completely satisfied, you have 30 days from the date of purchase to return the unused, undamaged product. Please first contact Fogco to obtain authorization for the return and RGA # and then return the product to Fogco. All returns are subject to a 25% restocking fee. Upon receipt, the purchase price, less any restocking fee, will be refunded so long as the product and its packaging is in merchantable condition. No returns will be accepted for products that are not in a merchantable condition. No returns will be accepted without prior authorization and all shipping costs are the sole responsibility of the purchaser. No returns will be accepted for products purchased from somewhere other than directly from Fogco – any such returns should be made to that location and made in conformance with that location's own return policy, (if any). Finally, no returns will be accepted for custom made or special order items. If you have any questions about this policy, please contact us. LIMITED WARRANTY

**WARRANTY AND DISCLAIMER:** Fogco extends this limited warranty to the original purchaser (the "Purchaser") and warrants that fans supplied by Fogco shall be free from original defects in workmanship and materials for five years from date of shipment, and warrants that electronics and fan accessories be free from original defects in workmanship and materials for one year from date of shipment provided those products have been properly handled, stored, installed, serviced, maintained and operated. This warranty shall not apply to products which have been improperly installed, altered or repaired without Fogco's express authorization, or altered or repaired in any way so as, in Fogco's judgment, to affect its performance or reliability or subjected to misuse, negligence, or accident, or incorrectly used in combination with other products. Improper installation specifically includes, but is not limited to: (1) the use of the Product in an environment where it is exposed to nominal voltage in excess of 24 volts DC, or in the case of an AC Product, in excess of the voltage specified on the Product ("overvoltage"); (2) use or storage in a setting where the product is exposed to inclement weather. Any damage that Fogco determines, in its sole discretion, as resulting from misuse shall not be covered by any warranty.

**LIMITATION OF REMEDY AND DAMAGES:** All claims under this warranty must be first made by telephone to Fogco at 480-507-5478, within 15 days after discovery of the defect and prior to the expiration of five years from the date of shipment by the Company of the product claimed defective, and Purchaser shall be barred from any remedy if Purchaser fails to make such claim within such period.

Within 30 days after receipt of a timely claim, Fogco will authorize the Purchaser to return the product to Fogco at Purchaser's sole expense for inspection by Fogco. Following such inspection, Fogco will replace, or at its option repair, free of charge, any product it determines to be defective, and it shall ship the repaired or replacement product to Purchaser F.O.B. point of shipment; provided, however, if circumstances are

such that as in Fogco's sole judgment repair or replacement is impractical or that the repair or replacement would result in further warranty work due to the particular use of the Product, the Purchaser's sole and exclusive remedy shall be a refund to the Purchaser of any part of the

invoice price paid to Fogco for the defective Product or part.

Under no circumstances shall Fogco be responsible for the cost of removal of the defective Product or part, damages due to removal, or any expenses incurred in shipping the Product or part to or from Fogco, or the installation of the repaired or replaced Product or part. The warranties set forth above do not apply to any components, accessories, parts or attachments manufactured by other manufacturers; such being subject to that manufacturer's warranty, if any. To the extent not prohibited by that manufacturer's warranty, Fogco shall pass through to Purchaser such manufacturer's warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXPRESSLY DISCLAIMED AND WAIVED. THIS WARRANTY CONSTITUTES SNAP-FAN'S SOLE AND EXCLUSIVE WARRANTY FOR DEFECTIVE GOODS AND PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR DEFECTIVE PRODUCTS.

No employee, agent, dealer, or other person is authorized to give any warranties on behalf of Fogco or to assume for Fogco any other liability in connection with any of its products except in writing and signed by an officer of Fogco.

**TECHNICAL ADVICE AND RECOMMENDATIONS, DISCLAIMER:** Notwithstanding any past practice or dealings or any custom of the trade, sales shall not include the furnishing of technical advice or assistance or system design. Any such assistance shall be at Fogco's sole option and may be subject to additional charge.

Fogco assumes no obligation or liability on account of any recommendations, opinions or advice as to the choice, installation or use of products. Any such recommendations, opinions or advice are given and shall be accepted at Purchaser's sole risk and shall not constitute any

warranty or guarantee of such Products, their performance, or their suitability for any particular purpose.

**LIMITATION OF LIABILITY:** The cumulative liability of Fogco to the Purchaser and any other persons for all claims in any way relating to or arising out of the Products, including, but not limited to, any cause of action sounding in contract, tort, or strict liability, shall not exceed the total amount of the purchase price paid for those Products which are the subject of any such claim. This limitation of liability is intended to apply without regard to whether other provisions of this agreement have been breached or have proven ineffective even if Fogco has been advised of the possibility of such claims or demands. In no event shall Fogco be liable to the Purchaser or any other person for any loss of profits or any incidental, special, exemplary, or consequential damages for any claims or demands brought by the Purchaser or such other persons.

**INDEMNITY:** Fogco's maximum liability to Purchaser and to any other user is as set forth above. Fogco makes no warranty to anyone for any products not manufactured by it and shall have no liability for any use or installation of any Products (whether manufactured by Fogco or other manufacturers) not specifically authorized by this sale. Purchaser acknowledges various warnings by Fogco regarding the products and its installation and use and acknowledges that the Product should only be installed by a competently trained and licensed electrician or contractor. If Fogco incurs any claims, lawsuits, settlements, or expenses (including attorney fees) for any loss, injury, death or property damage including, but not limited to, claims arising out of the Purchaser's or any end user's installation or use of the products, the Purchaser

shall indemnify and hold Fogco harmless unless such injury, death, or property damage unless such was the result of Fogco's sole negligence or willful misconduct..



# SNAP-FAN SOLAR FAN KITS BRUSHLESS FAN INSTALLATION INSTRUCTIONS



Only a qualified and licensed electrician or contractor shall install or service Solar Panel and Snap-Fan products.



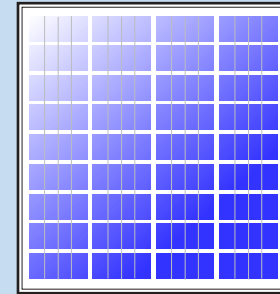
All applicable electrical safety precautions and building codes must be adhered to and followed when installing this product.



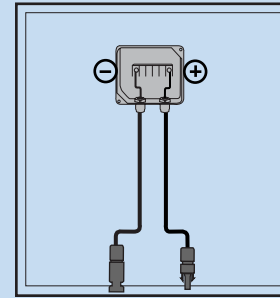
Refer to installation and operation manuals before installing, servicing or operating this unit.

## Kit Components:

### Solar Panel



Front

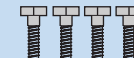


Back

### Solar Panel Mounting Hardware



(4) Z-brackets



(4) Bolts

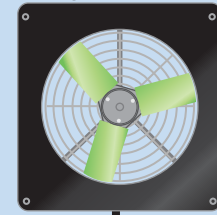


(4) Lock Nuts



(8) Washers

### Snap-Fan



(12", 16" or 20")  
with intake guard



Fuse

### PV Cable - 10 ft.



### MC Spanner Wrench



## MC Connectors

These connectors are located at the end of the cables on the solar panel as well as at the end of the provided cords. When connecting, be sure to match male and female connectors of the same color. Once connected, you will need a MC spanner wrench to disconnect.

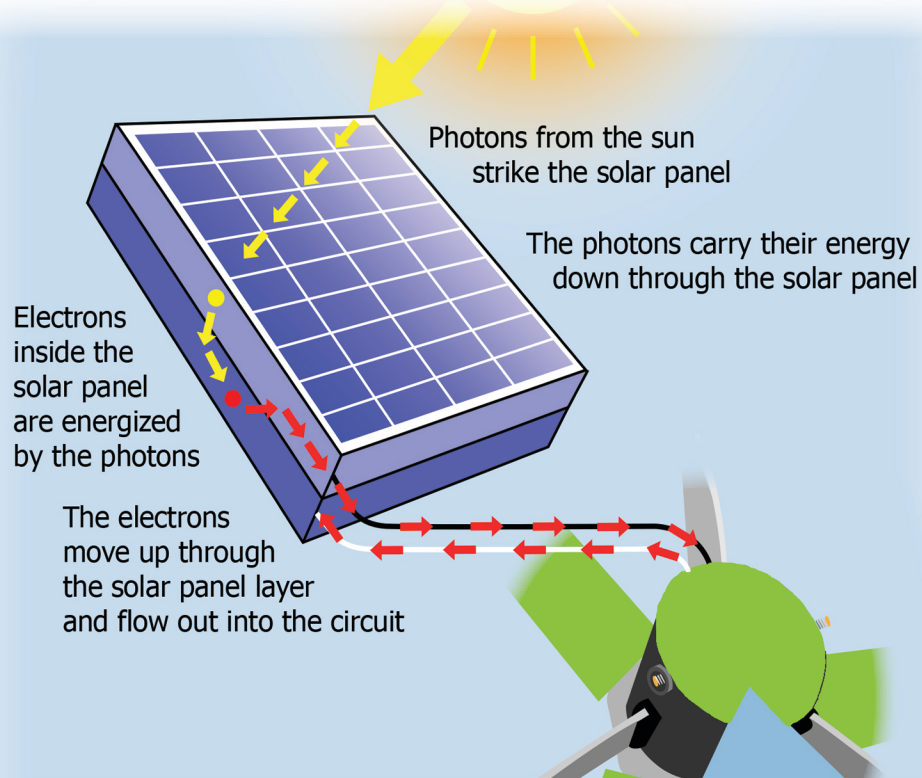
MALE

FEMALE



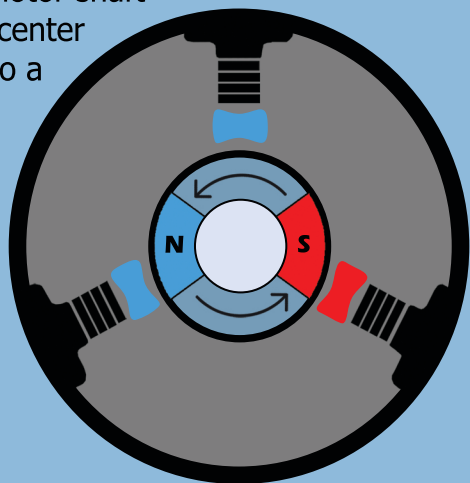
MC Spanner Wrench  
provided in kits  
to disconnect these  
MC connectors.

# HOW YOUR SNAP-FAN WORKS



The blade is attached to the motor shaft (rotor) that goes through the center of the motor and is attached to a circular permanent magnet inside the motor.


As magnetic fields either attract or repel each other this can be harnessed to make motion.



The amount of current available (amps) and the speed at which it flows (volts) determines the rotational speed of the fan.

# THERMOSTAT KIT

## INSTALLATION and WIRING INSTRUCTIONS:

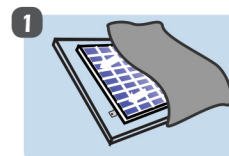
 Only a qualified and licensed electrician or contractor shall install or service Solar Panel and Snap-Fan products. All applicable electrical safety precautions and building codes must be adhered to and followed when installing this product.

See instructions included in thermostat packaging for complete install information.

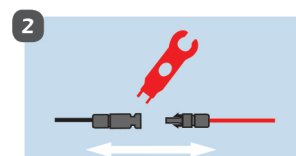
### EXISTING SYSTEM ADDITION

If you are adding to an existing solar fan system, some MC connectors will have to be disconnected using provided tool. Be sure to use caution: The solar panel produces electricity when exposed to light.

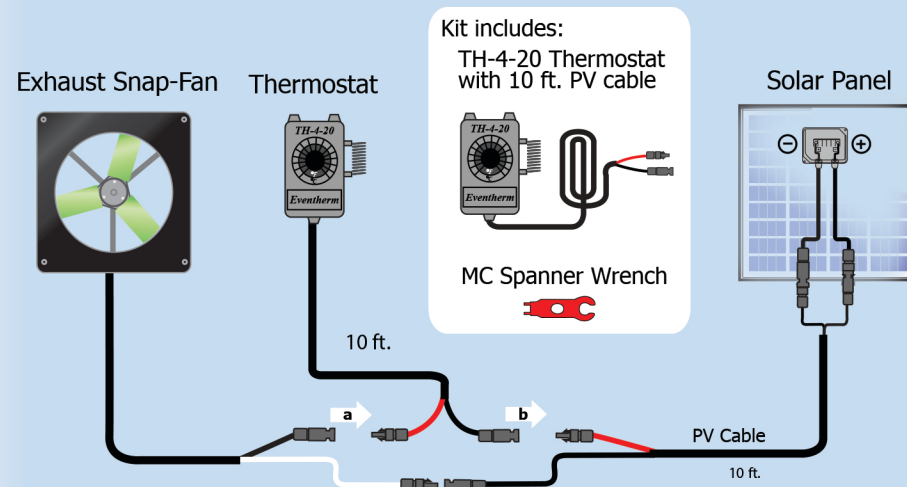
**DO NOT DISCONNECT UNDER LOAD.**



1 Cover solar panel with blanket or black plastic. The solar panel produces electricity when exposed to light.



2 Disconnect MC Connector with MC Spanner Wrench



1

Mount thermostat in a location where you would like the air to be sampled from.

2

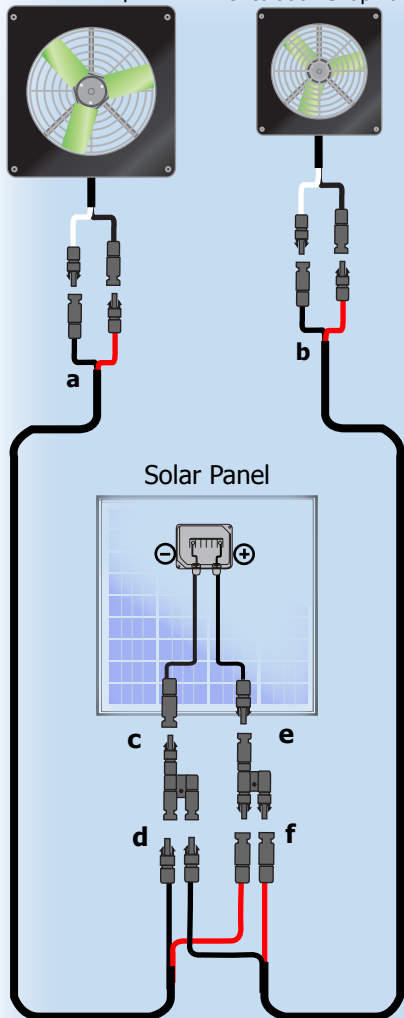
Add in thermostat by:

**a.** Connect female connector on black wire of thermostat with the male connector on Red wire of PV cable.

**b.** Connect male connector on red wire of thermostat with the female end of fuse connector on Black wire of fan.

Exhaust Snap-Fan

Circulation Snap-Fan



2

Connect two separate PV Cables to Snap-Fans as illustrated in the diagram at left.

3

Connect PV Cable **a** (exhaust fan) and **b** (circulation fan) to COVERED solar panel by using provided branch connectors:

**c.** Connect female MC connector from solar panel to branch connector with single male MC connector end.

**d.** Match up BLACK WIRES/male MC connectors of PV Cables **a** and **b** to double female ends of branch connector.

**e.** Connect male MC connector from solar panel to branch connector with single female MC connector end.

**f.** Match up RED WIRES/female MC connectors of PV Cables **a** and **b** to double male ends of branch connector.

4



Remove cover from solar panel  
If solar panel is in direct sunlight,  
fan should begin running.

If fan does not begin running: re-cover solar panel  
and check all connections are correct and secure.  
If fan is still not running, contact Snap-Fan.

**Thank you for purchasing a Snap-Fan Hobby Greenhouse Solar Fan Kit!**

Page 4 **Installing Snap-Fan:** Mount Snap-Fan first, before installing other kit components or additions. Review proper placement to ensure optimal location for air intake or exhaust.

Page 7 **Dimensions:** Fan dimensions for 12" (small), 16" (medium) and 20" (large) Snap-Fan. Mounting Box dimensions. Shutter dimensions for small, medium and large.

Page 10 **Installing Solar Panel:** mounting solar panel with provided mounting brackets. If you purchased a POLE MOUNT, please see instructions included within your pole mount packaging.

Page 11 **Wiring Instructions:** wiring your Snap-Fan to your solar panel. If you are installing any additions including circulation fan or thermostat, please read addition instructions before you begin.


Page 13 **Circulation Fan Kit Instructions:** placement, mounting and wiring. Please read full manual before you begin installation.

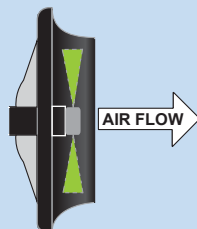
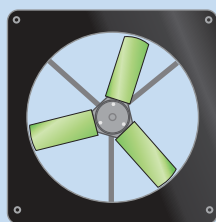
Page 15 **Thermostat Kit:** placement and wiring. Please read full manual before you begin installation.

Page 16 **Return Policy and Warranty**

We recommend one circulation fan with one exhaust fan per solar panel.  
For larger greenhouses or multiple fan systems please contact Fogco:  
info@fogco.com

# SNAP-FAN INSTALLATION

 Only a qualified and licensed electrician or contractor should install or service Snap-Fan products. If someone other than a licensed electrician installs a Snap-Fan, disclaims all warranties for the product, and specifically disclaims any warranty for consequential damages.

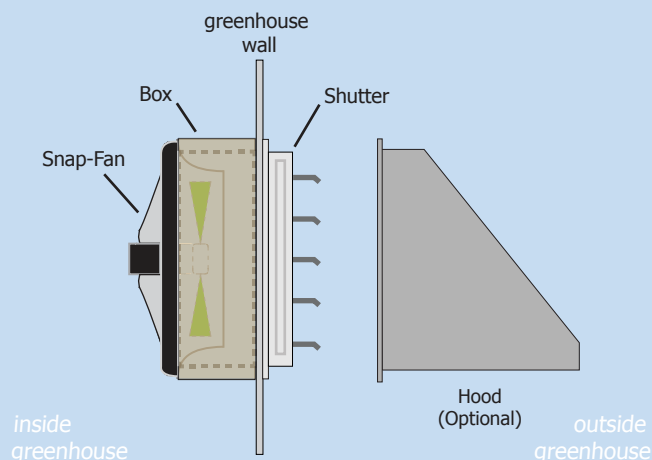


Small Hobby Kit  
12" Snap-Fan

Medium Hobby Kit  
16" Snap-Fan

Large Hobby Kit  
20" Snap-Fan





Completed  
installation  
side view



## The Elements


Shelter your Snap-Fan from inclement weather and natural hazards such as, not limited to; wind, water, rain, hail, dust, ice, snow and nesting birds. If you do not plan on using your Snap-Fan during wet winter months please remove it and store in a dry location, as long periods of moisture shortens the life span of the motor. Snap-Fan must not be placed in harsh fertilizer environments.

## Safety Information

-  All applicable electrical safety precautions and building codes must be adhered to and followed when installing this product.
-  Occupational Safety and Health Administration (OSHA) requires finger guards at locations under eight feet from the floor.
-  Refer to installation and operation manuals before installing, servicing or operating this unit.
-  DO NOT CUT AWAY ANY FRAMING FROM THE ORIGINAL STRUCTURE, AS IT MAY EFFECT LOAD BEARING CAPACITY.

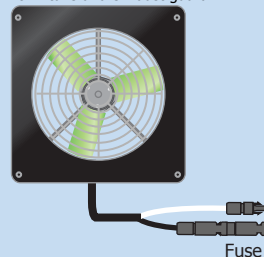
# CIRCULATION FAN KIT



## INSTALLATION and WIRING INSTRUCTIONS:



 Only a qualified and licensed electrician or contractor shall install or service Solar Panel and Snap-Fan products. All applicable electrical safety precautions and building codes must be adhered to and followed when installing this product. Refer to installation and operation manuals before installing, servicing or operating this unit.


Kit includes:

12" Snap-Fan  
with intake and exhaust guard



Chains for hanging fan 3ft  3ft 

Branch Connectors  

PV Cable - 10 ft. 

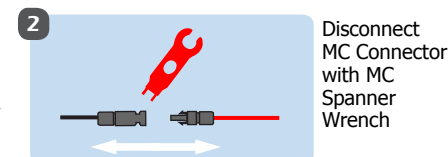
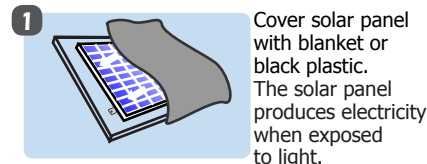
MC Spanner Wrench 

See instructions included in circulation fan packaging for complete install information.

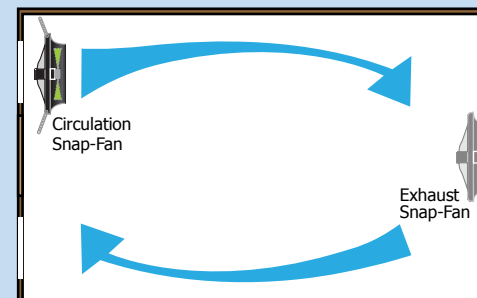
## EXISTING SYSTEM ADDITION

If you are adding to an existing solar fan system, some MC connectors will have to be disconnected using provided tool. Be sure to use caution: The solar panel produces electricity when exposed to light.

**DO NOT DISCONNECT UNDER LOAD.**



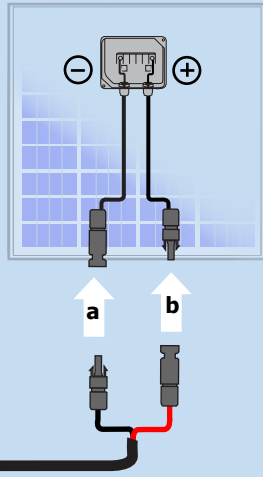
**1** Location:  
Mount circulation fan in one corner of your greenhouse to create an airflow that will circulate throughout the entire greenhouse. Use provided chains to hang fan from ceiling of greenhouse.





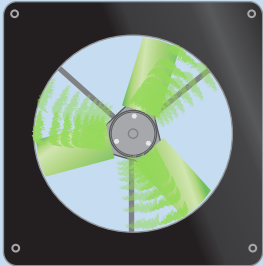
3

Connect PV Cable to solar panel



- a.** Connect the male connector on positive wire from solar panel with the female connector on Red wire of PV Cable
- b.** Connect the female connector on negative wire from solar panel with the male connector on Black wire of PV Cable.

4

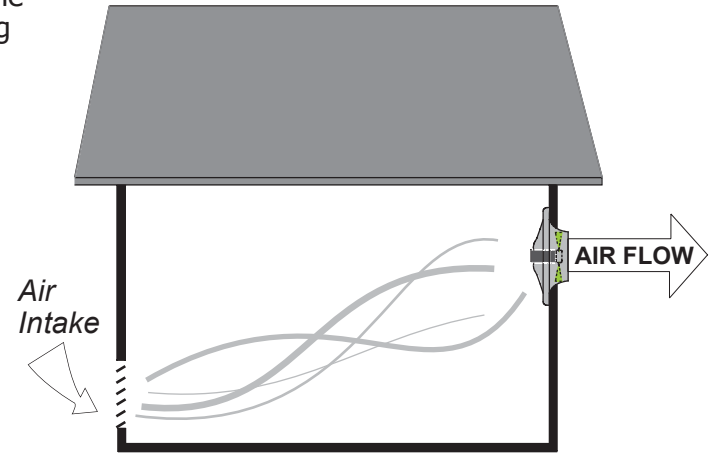


- Remove cover from solar panel  
If solar panel is in direct sunlight, fan should begin running.
- If fan does not begin running:  
re-cover solar panel and check all connections are correct and secure.
- If fan is still not running, contact Snap-Fan for additional assistance.

In winter months, if fan is not needed disconnect fan from receiving power will prolong fan life. We recommend shielding fan from winter elements by either covering or storing in dry location when not in use. Shutters and rain hoods are available for purchase.

## Proper Placement

Be sure to place the fan in a suitable location to maximize air movement. Typically Snap-Fans are installed close to room's ceiling to both exchange and circulate warm interior air with cool air from outside. The air intake opening should be placed at a low spot on the opposite end of the structure, bringing cool air across it.



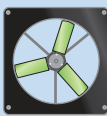

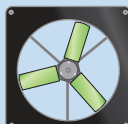
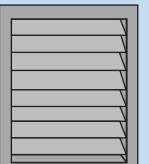


## Air Intake

We recommended the surface area of your air intake be 1.5 times the surface area of the exhaust air (size of opening of fan). See chart for the square inches of each recommended air intake.

Visit [snap-fan.com](http://snap-fan.com) for intake louver options for each Solar Fan Kit size:



12" Snap-Fan EXHAUST			288 in <sup>2</sup> INTAKE
16" Snap-Fan EXHAUST			648 in <sup>2</sup> INTAKE
20" Snap-Fan EXHAUST			1,296 in <sup>2</sup> INTAKE

**Tip:**  
Cover intake and exhaust openings with "Rabbit Wire" (1/4" mesh) if rodents are a potential problem.

**These instructions are representational and may require alterations to adapt to your individual greenhouse design.**

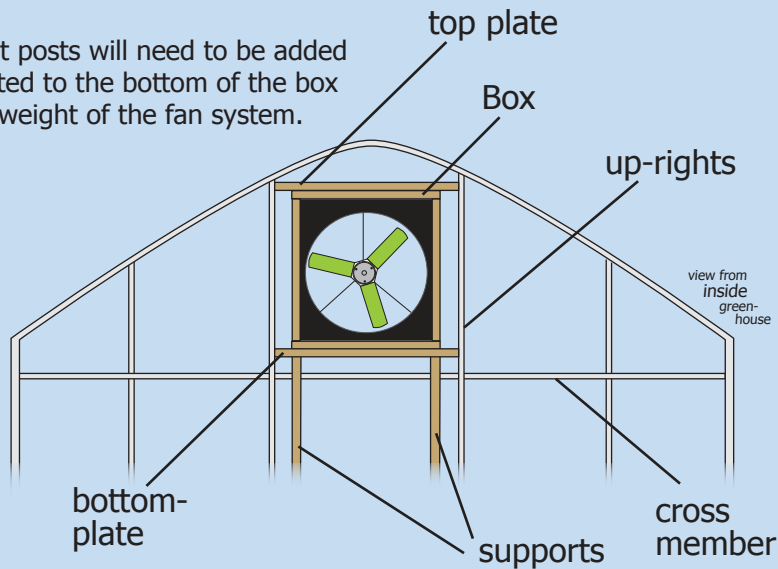
**1**

Choose a location to install your Snap-Fan and air intake.

Exhausting hot air from the highest point possible is recommended. See "proper placement" and "air intake" on previous page.

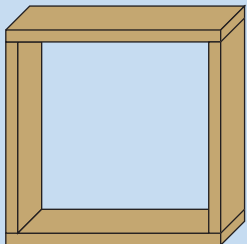
Measure the distance between the two up-rights on the end wall of the greenhouse, or locate a cross member at a suitable height to act as a shelf to mount your box onto.

Side support posts will need to be added and connected to the bottom of the box to hold the weight of the fan system.



**2**

Build a square box for fan to be mounted in.



This will help frame in your fan.  
See next page for box dimensions.

## WIRING INSTRUCTIONS:

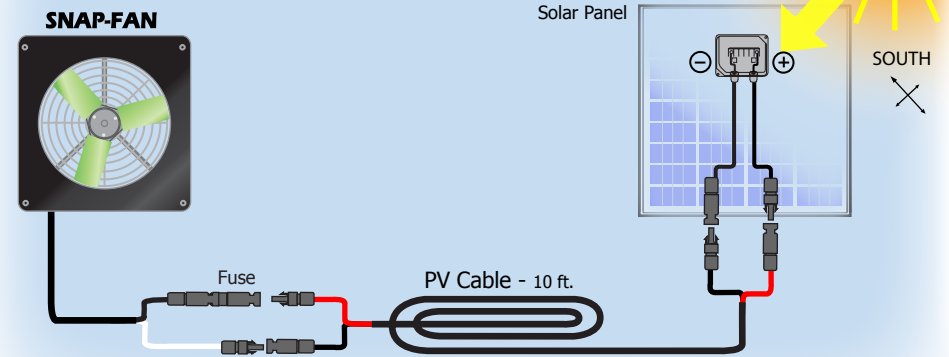


Be aware of dangerously high DC voltages when connecting and disconnecting the Snap-Fan from the solar panel.

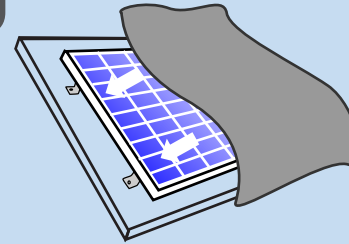


The solar panel produces electricity when exposed to light. We recommend covering solar panel with a blanket to block sun light until all installation and connections are completed.

### BASIC SOLAR FAN SYSTEM CONFIGURATION



**1**

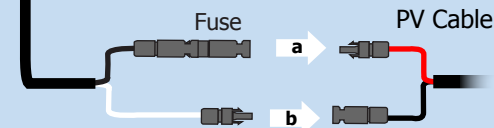


Cover solar panel with blanket or black plastic.

The solar panel produces electricity when exposed to light.

**2**

Connect Fan to PV Cable



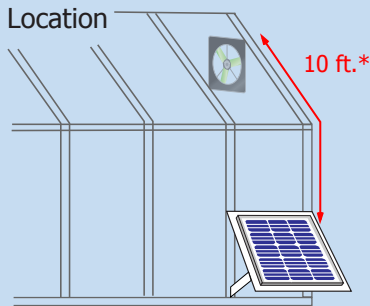
**a.** Connect the male connector on Red wire of PV cable with female end of fuse connector on Black wire of the fan.

**b.** Connect the female connector on Black wire of PV cable with male connector on White wire of the fan.

## INSTALLING SOLAR PANEL: Platform Mount

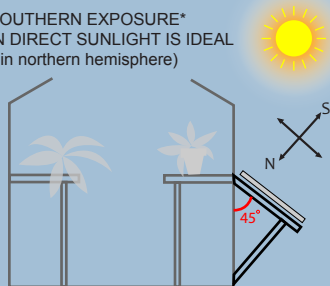
**⚠** The solar panel produces electricity when exposed to light. DO NOT DISCONNECT UNDER LOAD. Do not handle or install when wet. Follow all applicable electrical safety precautions. FRAGILE: Glass surface to be handled with care. Do not damage or scratch front or rear surface. They are non-repairable if either side is damaged.

### 1 Location



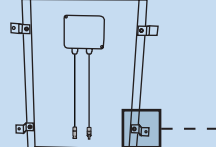
Begin by choosing a location to mount your solar panel. \*Measure distance between fan and solar panel mounting location to ensure it is within PV cable length (10ft - or purchased length). Additional length PV Cable Extensions are available. See page 17 for more information.

SOUTHERN EXPOSURE\*  
IN DIRECT SUNLIGHT IS IDEAL  
(\*in northern hemisphere)



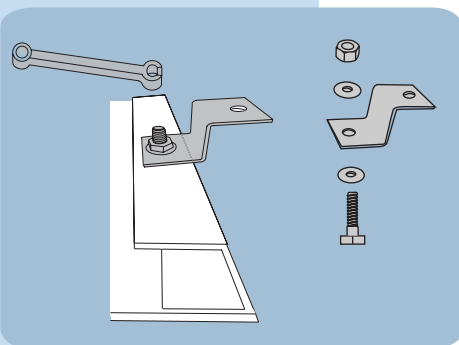
We recommend mounting solar panel on a user constructed plywood platform at a 45° angle facing south on the side wall of greenhouse.

### 2 Connect Z-brackets to solar panel racking



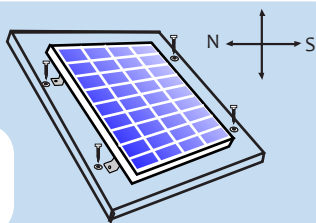
In your Kit you will find:  
(4) Z-brackets  
(4) bolts  
(8) washers  
(4) nuts

You will need:  
(2)  $\frac{7}{16}$ " wrenches



Fasten all four Z-brackets to solar panel rack with nuts, bolts and washers.

### 3



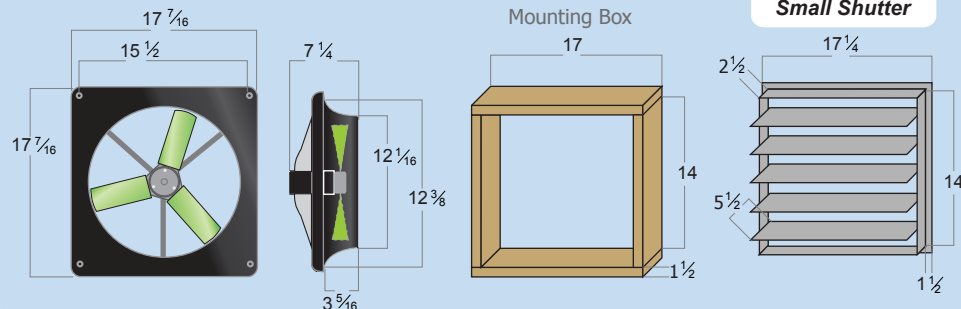
You will need:  
(4) screws  
(4) washers  
caulk

Mount solar panel to plywood platform. If mounting solar panel on a roof: Find rafters and predrill holes in roof for #5 screws. Caulk over holes. Set Z-brackets above caulk and fasten solar panel to roof with screws. Run the electrical cable across roof to the Snap-Fan.

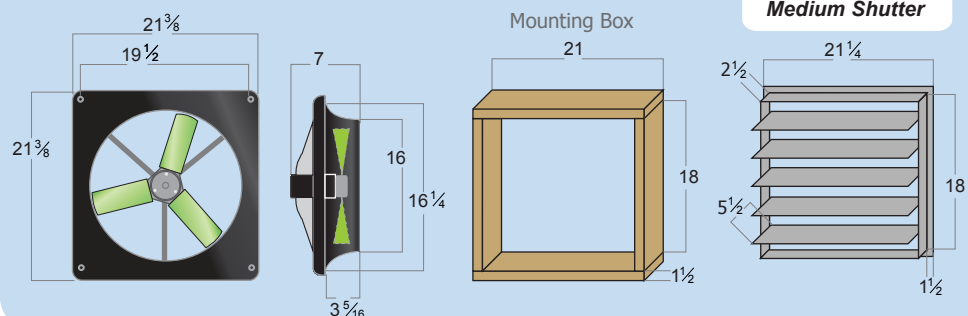
## FAN MOUNTING BOX DIMENSIONS

Use this guide to determine the dimensions of the box necessary to mount your Snap-Fan. Applications vary by system design.

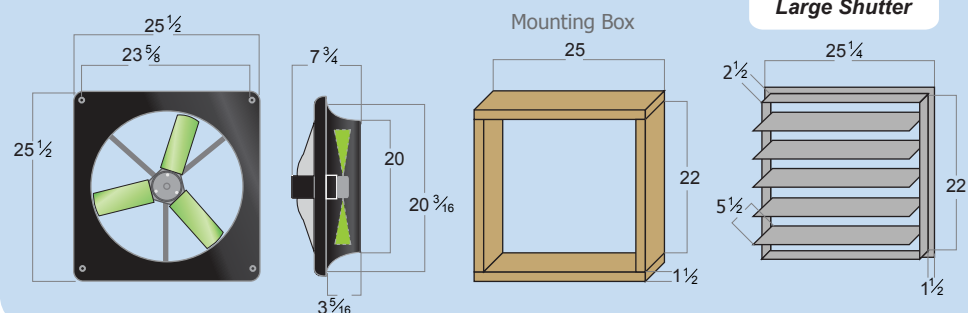
### 12" SNAP-FAN Small Hobby Kit



### 16" SNAP-FAN Medium Hobby Kit



### 20" SNAP-FAN Large Hobby Kit



3

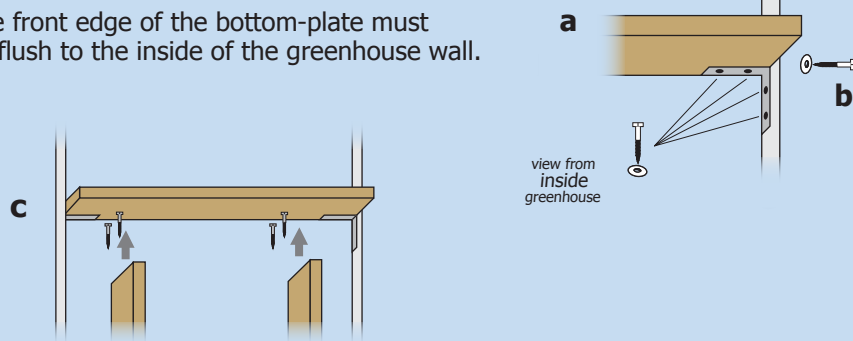
From inside, secure the bottom-plate to metal framing of the greenhouse.

**a.** Connect the bottom-plate to the up-rights using L. brackets.

OR

**b.** screw directly through metal up-right to bottom-plate.

The front edge of the bottom-plate must be flush to the inside of the greenhouse wall.



**c.** Attach the side supports to the bottom-plate directly below where box will be mounted.

**d.** If a cross member is already in place you have the option of connecting the shelf to the greenhouse frame using saddle clamps, if it can sit flush with the inside of the greenhouse wall.

**Be sure to still provide the support posts.**



4

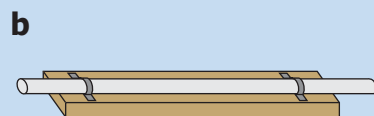
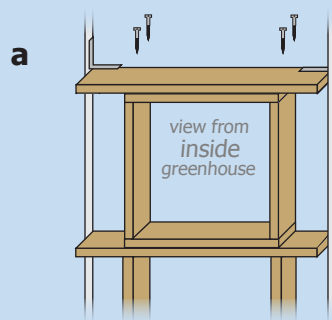
Securely attach box to the bottom-plate above supports. Once the box has been mounted, the top of the box must be secured to the greenhouse framing:

option a:

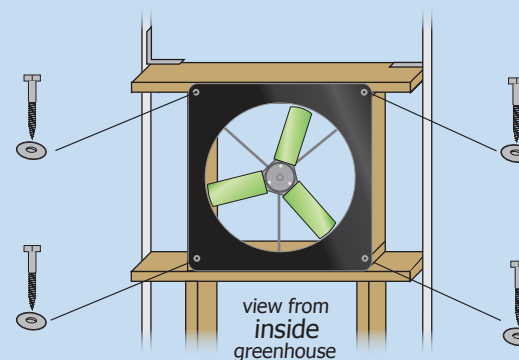
Create and attach a top-plate to finish out the framing. Connect top-plate to up-rights using L brackets.

option b:

If a cross member is already in place you have the option of connecting the top of the frame to the cross member using saddle clamps.



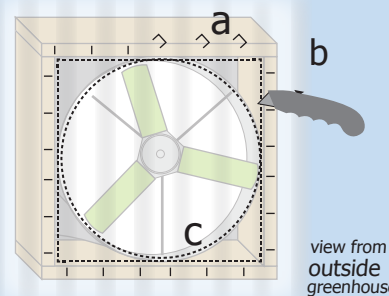
5



Mount fan onto box from the inside of the greenhouse using recommended 1/2in x 4in hex head lag screw and washer in all four corners.

6

Cut out opening in the greenhouse wall

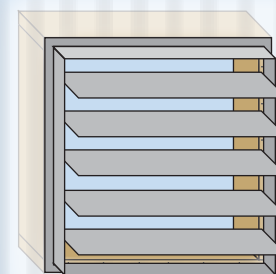


**a.** staple or finish nail the greenhouse siding to the wooden box all the way around.

**b.** Remove the greenhouse siding to allow air movement. Cut/saw just inside of the box.

**\*You have the option (c)** to cut around the end of the bell curve (opening) of the fan instead of a square. This is recommended if you are not adding a shutter and/or rain hood.

7



Install shutter to the wooden box from the outside of the greenhouse. The greenhouse siding will be sandwiched between box and shutter.

**\*SEE SHUTTER INSTALL INSTRUCTIONS**