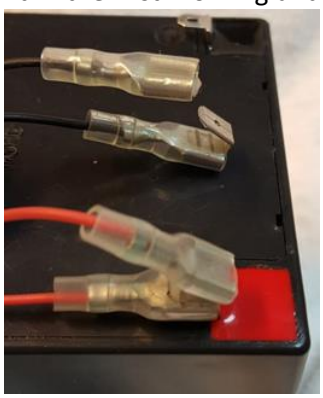
Pullet-Shut Automatic Chicken Door

Quick Installation (see Installation Video at chickendoors.com)

1. **DO NOT PRY THE DOOR OPEN.** 1) Hook up the door to a 12 volt battery to make the door open. 2) Disconnect the battery. 3) Use the door to mark opening size, cut the opening, drill ¼" holes, and install 4 mounting bolts (provided). The black box must be on top and the door must open outward.
2. Purchased Power Options: Place the battery on a shelf and remove the plastic protectors on the terminals. Solar Panel: Put the panel on the roof (mount on a block of wood if you have a metal roof or shingles). Plug the solar panel onto battery, with red-to-red and black-to-black. Trickle Charger: Plug charger onto battery, with red-to-red and black-to-black. Plug the trickle charger into the wall outlet.
3. Plug door power cable on top of the piggyback connectors from the solar panel or trickle charger at the battery.
4. (Skip this step if you have the photo sensor option) Program the opening time and amount in the first morning and closing time that evening.
5. If you have the photo sensor option, it will go right into photo mode. Mount the photo sensor with plastic clips provided.
6. Helpful Hints: If you get freezing rain, we recommend making an awning over the door to prevent it from freezing shut. If you have large animals, like goats or cattle, we recommend adding a vertical stop wall to prevent the animals from pushing on the door. Store magnet away from the control box.



Programming Open and Close Times (see Programming Video at chickendoors.com)

1. Apply power to door and wait several seconds for it to power-on reset.
2. With photo sensor: it will automatically open in 5 seconds in daylight (or stays closed in darkness). You are done!
3. Without photo sensor: When you want the door to open, hold the magnet against the red circle on control box. Keep holding it there until the door opens as widely as you want, then take the magnet away. You just programmed the time to open and how far to open.
4. That evening hold the magnet against the red circle until the door starts to close. You just programmed the closing time. It knows how far to close.
5. If you want to set the evening closing time first, reset the door (see **Power-on Reset and Magnet Reset**) in the evening when you want it to close. Then program the morning opening time the next day. Do nothing else and it will close when it was reset. But if you close the door using the magnet before the time of day when it was reset, then that will be used. Example: reset door at 8pm (do not open). Program opening at 7am. If you close with magnet at 6pm, it will open at 7am and close at 6pm. Otherwise it will open at 7am and close at 8pm.
6. After the first day of programming opening and closing times, you can open or close the door at any time without changing the timings. Simply hold the magnet against the red circle until it starts moving then take it away. You can do this as many times as you like, at the next morning/evening time, it will return to its normal routine.

Power-on Reset and Magnet Reset (see Programming Video at chickendoors.com)

When the door first is powered on it does a power-on reset. It will erase any opening or closing time settings. The door will open a few inches, stop, and then close. It will default to photo sensor mode if present and open in 5 seconds if daylight or stay closed if dark.

To magnet reset the door, hold the red magnet against the red circle. Keep holding it there, the door will open or close. Keep holding it. Then after 15 more seconds the door will open a few inches. Take away the magnet. It will now do the power-on reset and also disable the photo sensor so that it will be in timer mode (to re-enable photo, remove power for 10 seconds). Note that the door will also reset if the door loses power for over 3 seconds.

Solar Panel and Battery Installation

1. Generously apply caulk to the back of the panels (side with wires) and place on a sunny south-facing roof. When mounting on a metal or shingle roof use an insulating barrier (ex: piece of wood) between the solar panel and the roof.
2. Remove white protective plastic tabs from battery terminals, and place battery inside where the chickens cannot knock it down. Connect the solar panel first to the battery, red wire to red terminal and black wire to the black terminal. Plug its connectors so the male tab is upward so the door can plug into it (see picture).

- Do not connect other devices to the battery, the configuration is not designed to run multiple devices. And definitely do not share a battery with an electric fence.
- The solar panel requires an average of at least 2 hours of full sun per day to keep the battery charged.
- The solar panel is only designed to keep the battery charged, not to charge the battery once the battery runs down below 10.5 volts or 10% of its charge.
- If the battery drains, it can be charged. A fully charged battery without sun or charging will last about 4 weeks.
- Check your battery every so often to make sure it is charging. See Battery Status Lights section on page 8.

Trickle Charger and Battery Installation

Important: Plug the trickle charger into the battery before plugging the trickle charger into the wall outlet to prevent shorting out the trickle charger through the battery terminals.

1. Remove white protective plastic tabs from battery terminals, and place battery inside where the chickens cannot knock it down.
2. Plug the red and black terminals of the trickle charger onto the battery first. Plug its connectors so the male tab is upward so the door can plug into it (see picture). Then plug the door terminals next.
3. Plug the trickle charger into the wall. On the trickle charger, a green light means it is idle, red means it is actively charging the battery.

- The trickle charger must remain plugged in at all times. It will drain the battery if left connected to the battery but not plugged in.
- The trickle charger requires 110 volt (house current) to keep the battery charged.
- If the battery runs down, it can be charged overnight.

Troubleshooting

Door Doesn't Work:

1. Check power. Use a voltmeter to check that the battery has at least 12.0 volts. Check the power wire if it has been damaged/chewed.
2. Cover the solar panel with a dark towel or unplug the trickle charger. Then remove the red terminal from the battery for 10 full seconds and reconnect the battery.
3. The door in the green circle on the control box should flash a green LED for a moment then open a few inches and close, then flash the green LED again. If you see a red LED on the door then the battery is low. If you do not see any color LED then the circuit may be damaged.
4. If the door does not move but you see the green LED, then the motor may be bad or the bottom pivot pin may be corroded. To clean the bottom pin, remove the #3 philip screw and lift the pin out from the frame. Be sure to keep the nylon washer under it. Use a little sandpaper to clean any corrosion on the pin, put the washer back, and put a drop of lithium grease on it before reinstalling. If it still does not work then the motor is likely bad.

5. To test if the motor or circuit is bad, unplug the motor from the circuit and put your voltmeter across the two pins on the circuit. Disconnect the power connector on the circuit for 10 seconds then reconnect. After a moment you should see 8-10 volts across the pins for only 1-2 seconds. Then a moment pause (0v) and you should see negative 8-10 volts across the pins. If you see a positive and negative 8 – 10v DC then the circuit is good and the problem is the motor.

Door behaves erratically:

1. First use a voltmeter to check that the battery is over 12.0 volts.
2. If the door opens a little & stops, then opens further & stops, the problem is a dirty bottom pin (see #4 above) or the motor is failing.
3. If you have a photo sensor and it randomly opens or closes, then it may be an interference issue. Electric fences nearby or high power lines overhead can cause this. Wind up the photo sensor cable like it came with a tie-wrap and just mount it next to the door.
4. If you have a photo sensor and it stays open or closed, first cover the solar panel with a dark towel or unplug the trickle charger. Then remove the red terminal from the battery for 10 full seconds and reconnect the battery. This will power-on reset the door and should clear any program issues.
5. If it still does not work right, does it open or close every time you use the magnet? If not, the issue may be the motor. If it does, then the photo sensor or possibly the control circuit are bad.

Door barely opens:

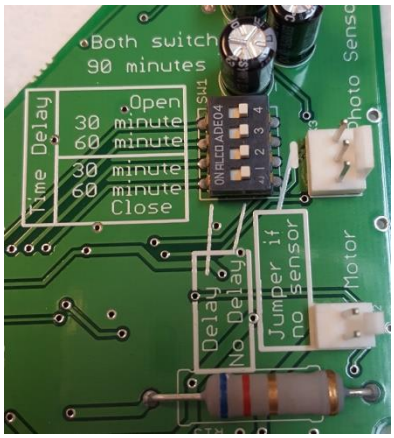
1. First use a volt meter to check the battery voltage, it should be over 12.0 volts.

On the initial program, the door opens a small amount rather than fully opens. The problem is that the magnet was not held long enough on the red circle to completely open. You must reset the door and start over. Refer to **Power-on Reset and Magnet Reset.**

Lost Magnet:

Refrigerator magnets are not normally strong enough to operate the door. Visit our website to order more.

Photo Sensor Installation



The photo sensor comes attached to the door if purchased together, but is easy to add later. Mount it with the plastic clips provided. Aim it away from street lights or motion lights. It does need to be outdoors but works fine in shade.

You can delay the opening or closing times with the photo sensor by 30, 60 or 90 minutes. Remove the 4 screws on the control box and look at the circuit inside. Unplug the power connector to the circuit first then flip any delay switches you want. The switches are labeled. One switch is 30 minutes, the other is 60 minutes, and both switches are 90 minutes of delay. Reconnect power when finished. Note that the switches are only read when the circuit first powers on.

Battery Status Lights

To determine the status of the battery, touch the magnet to the red circle on the control box to close the door as the status lights only operate upon door closing. For a few seconds after door closing, the status lights for the battery will flash. The status lights for the battery are visible through the green circle located on the control box decal. It is easier to see the status lights in the evening when darker. Do not poke or cut through the control ox decal. The decal serves as a moisture barrier for the control box.

Alternating Red/Green on power-up	A delay setting switch internally set	User setting
Alternating Red/Green when door should move	Motor drawing too much power	Motor may be dying
Alternating Red/ Green continuously:	Voltage exceeds 16 volt limit	Will not operate
Flashing Green:	Battery is charging	Operates properly
Solid Green:	Battery is full	Operates properly
Solid Red:	Battery is low	Operates erratically
Flashing Red:	Battery is very low	Will not operate

Maintenance

Twice a year apply just a touch of grease to the bottom pivot point. Check the battery voltage regularly. As needed, regularly wipe clean the solar panel and photo sensor. Clean the electrical contacts on the battery with electrical cleaner or a brass brush.

Notes

This unit is intended for automated chicken pen doors. This product is not to be used for purposes other than intended. If the product is damaged or not working properly, remove the door until it can be repaired or replaced. It is not intended for anything other than small fowl. It is water resistant, but not water proof. Normal rain or hosing will not affect its performance. This unit does not prevent other animals from entering when it is open.

Limited Warranty: This door will be free from defects in material and manufacture for a period of 1 year from date of purchase. If this door is defective, your remedy shall be the replacement of the door or part or a refund of the purchase price at NOPEC's option.

Limitation of Liability: NOPEC will not be liable for any loss or damage arising from the use of this door whether direct, indirect, special, incidental, or consequential.