

Nighttime Deactivation Usage

The optional nighttime deactivation feature disables the Mode 14-1 sound cannon from sundown to sunup. This capability may be desirable to preserve fuel if nighttime operation is not necessary or to comply with local noise ordinances.

The sensor is calibrated to activate the cannon when its solar panel is exposed to ambient light levels exceeding those found immediately after sunrise and before sunset (in most cases). The nighttime deactivation function can be enabled / disabled via an included toggle switch according to the following procedure:

1. Power down cannon and disconnect the propane tank. Allow cannon to sit for 30min to discharge any remaining gas.
2. Remove the cannon's top shroud and disconnect the negative battery terminal.
3. Gently lift the black electronics bay dust cover by first pushing it in at the bottom.
4. Rotate the spark plug electrode boot 90 degrees clockwise until vertical (Fig. 1, red arrow 1)
5. Locate the nighttime deactivation enable / disable toggle switch on top of the solar charge controller and immediately to the right of the ignition coil (Fig. 1, green arrow 2)

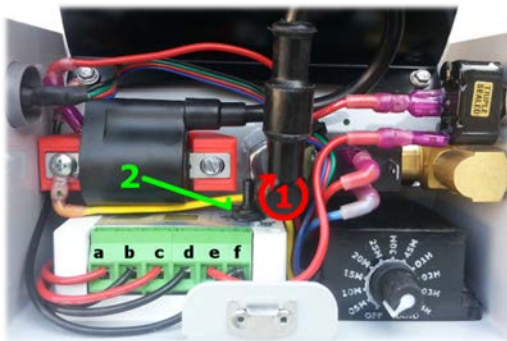


Figure 1



Figure 2

6. Select the desired mode by toggling the switch outward for daytime operation, and inward for 24 hour continuous operation (Fig. 2).
7. Close and secure the dust cover, re-connect the battery terminal, and replace the top shroud.
8. Reconnect the propane tank and power on cannon to resume operation.

Nighttime Deactivation Installation

If your Model 14-1 sound cannon was not factory equipped with nighttime deactivation, it can be added by purchasing a replacement Solar Charge Controller from Sonic Sentinel that is thusly equipped. Installation of the replacement Solar Charge Controller requires access to basic hand tools, and should be conducted according to the following procedure:

1. Power down cannon and remove the propane tank. Allow cannon to sit for 30min to discharge any remaining gas.
2. Remove the cannon's top shroud, disconnect both positive and negative battery terminals, and remove the 8Ah SLA battery.
3. Gently lift the black electronics bay dust cover by first pushing it in at the bottom. Removal of dust cover is preferable but not necessary, and can be accomplished by removing the two ¼" hex-head screws securing it to the cannon's barrel (take care to retain both washers).
4. Disconnect the spark plug electrode boot and remove the ignition coil:
 - a. Remove the two ¼" hex-head screws securing the coil to the red coil retaining bracket.
 - b. Remove the coil's power connector (red wire), and remove coil from retaining bracket.
5. Loosen the 6 wire screw terminals on top of the existing Solar Charge Controller (Fig. 2) and remove all 7 wires (record the location of each wire for reference during reassembly).
6. On the underside of the cannon, remove the two flat-head Phillips drive screws securing the Solar Charge Controller to the cannon's lower shroud.
7. The old Solar Charge Controller can now be removed from the cannon by maneuvering it around the lower shroud latch tab.
8. Install the replacement Solar Charge Controller with nighttime deactivation following the above steps in reverse. **Note:** If the black electronics bay dust cover was removed in step 3, be sure to reconnect the chassis ground terminal (left side) when reinstalling.
9. When reconnecting the wires to the new Solar Charge Controller, they *must* be connected in the following order as viewed from left to right (Fig. 1):
 - a. Solar panel positive – Red wire connected to solar panel through ¼" male disconnect
 - b. Solar panel negative – Black wire connected to solar panel through ¼" female disconnect
 - c. Battery positive – Red wire with 3/16" female connector
 - d. Battery negative – Black wire with 3/16" female connector
 - e. Load positive – Red wire with 1/4" female connector to power switch
 - f. Load negative – Black wire with ring terminal to chassis ground and Black wire to Ignition Control Module