



OWNERS MANUAL



MODEL NO.: CB-081/M

Input: 120 Volts, AC, 60Hz, 1.5 Amp
 Max. Output: 12 Volts, AC (108 Watts)
 Provides Manual On/Off, Dusk to Dawn,
 Quartz Timer or Motion Detector Control of
 Low Voltage Lighting Fixtures.

CAUTION:

- Transformer is not for use with submersible lighting fixtures.
- Do not use an extension cord with transformer. Outdoor power unit is to be connected to a covered GFCI receptacle marked "Wet Location".

NOTE:
16 Gauge Cable with a maximum length of 100ft. is recommended for use with this transformer.

INSTALLING YOUR TRANSFORMER

- The recommended transformer mounting location is a minimum of 1 ft. above the ground and where its power cord is within reach of a standard 120 volts household power outlet.

The transformer is equipped with a photosensor which will automatically turn the landscape lights "on" at dusk and "off" at dawn. To accurately do this, the photosensor must be mounted (using screws provided) in a area where it will be exposed to the natural light of the rising and setting sun. Avoid heavily shaded areas or areas where artificial light may shine on the photosensor. Light from automobiles, street lights, porch lights etc. may cause your landscape lights to turn off prematurely.

Note: The photosensor (Fig. 1) may be mounted horizontally or vertically. If you choose to mount the transformer indoors, the photosensor must be placed in a window or its cable may be cut and routed through an access hole in outside wall. If additional cable length is necessary, 22 gauge loudspeaker wire is recommended and connections are to be made using appropriate wirenuts. Photosensor cable has a black wire and a white wire. Make sure that if cable is extended, the polarity is maintained. (connect black to black and white to white)

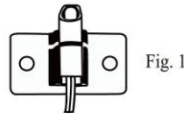


Fig. 1

- You may hang the transformer indoors or outdoors on a wall, fence, post etc. by using the screws provided. The screw locations are to be 1-7/8" center to center so they will slide into the slots on the rear of the transformer. (Fig. 2)

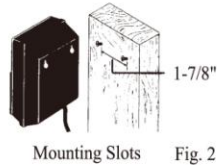


Fig. 2

LOW VOLTAGE CABLE LAYOUT

- Remove access door from front of transformer by lifting where indicated on the door and once door releases, pull door towards you. This will expose the transformer control panel. (Fig. 3)



Fig. 3

Note: Two ring terminals are supplied with this transformer. (Fig. 4) They are to be crimped on to the 12 gauge cable which is recommended for using with this transformer (If cable is not already supplied w/ring terminals). To fasten ring terminals, strip 1/4" of insulation off of both wires at one end of the cable. Then insert one of the stripped wires into the barrel of a ring terminal and crimp barrel to wire using a crimping tool or pliers. Make sure connection is tight. The wire may also be soldered to the terminal. Repeat this procedure for the second wire. The low voltage cable may now be attached to the transformer by placing one of the ring terminals under each of the screws in the terminal block at the bottom of the transformer and tightening the screws securely.

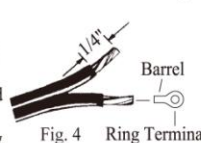


Fig. 4

Caution: Failure to use ring terminals provided may cause a poor electrical connection to the transformer. This can cause excessive heat and damage to the transformer and property.

OPERATING THE TRANSFORMER

There are four methods of controlling your lights provided by the transformer:

- ON/OFF Operation
- Dusk to Dawn Operation
- Timer/Motion Detector Operation
- Motion Detector Only

Each method of operation is explained below.

1. ON/OFF operation:

Turn control knob to "ON" position, the lights will remain on until you turn control knob to "OFF" position. (Fig. 5)

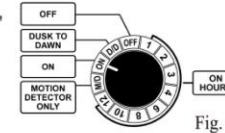


Fig. 5

2. Dusk to Dawn operation:

Turn control knob to "DUSK TO DAWN" position. This will automatically switch lights "ON" at dusk and "OFF" at dawn. (Fig. 6)

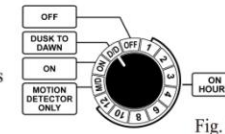


Fig. 6

3. Timer/motion detector operation:

Turn control knob to the "ON HOURS" desired from 1 hour to 12 hours duration. The lights will now turn "ON" at dusk and "OFF" at the completion of the "ON HOURS" you have selected. (Fig. 7)

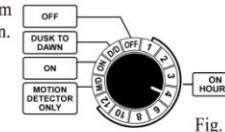


Fig. 7

For Example: If you wanted your lights to switch "ON" at dusk and "OFF" four hours later: Set control knob to "4" position on dial as shown in (Fig. 8) Lights will now automatically switch "ON" each evening at dusk and go "OFF" four hours later. Assuming that dusk occurs at 6:00 P.M., this would mean the lights would go "OFF" at 10:00 P.M. However, if the light sensor of the transformer is ever subjected to artificial light, such as from the headlights of an automobile, the lights may go "OFF" prematurely. The system would then reset itself and come back "ON" when the artificial light is removed and go "OFF" four hours later. It is therefore essential that you locate the transformer light sensor where it will not be subjected to artificial light. Once the lights turn "off" for the evening, the transformer automatically switches into its security mode. The motion detector takes over control of the lighting and will activate it if someone approaches its coverage area.

4. Motion detector only:

Turn control knob to the "MOTION DETECTOR ONLY" position. (Fig. 8) The lights will only turn "on" when the motion detector senses moving objects.

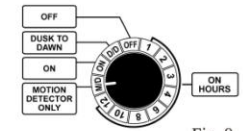


Fig. 8

Note: After you have set the transformer control in the mode desired, be sure to replace the access door.

Motion Detector (SOLD SEPARATELY)

This transformer can operate in combination with a motion detector. This detector automatically turn "ON" your landscape lighting if someone approaches your home. To accurately do this, the detector must be properly located and adjusted.

TROUBLE SHOOTING AND USER HINTS

1. SYMPTOM - LIGHTS WILL NOT SWITCH ON AT DUSK

CAUSE	REMEDY
No Power to transformer	Ensure transformer is plugged in and power is on (Is the power outlet working?)
Low voltage cable has not been connected to the transformer	Ensure the low voltage cable is connected to the transformer. (Is the connection firm?)
Artificial light affecting light sensor (i.e. street lights, car lights, porch lights etc.)	To check light sensor, place sensor between hands (ensuring that no light gets in). The lights should switch on after a few seconds. If the lights turn on, the light sensor may simply require mounting in a position where artificial light cannot affect its operation.

2. SYMPTOM - LIGHTS WILL NOT SWITCH ON AT DUSK WHEN USING EITHER THE "DUSK TO DAWN" OR "TIMER" MODE.

Artificial light affecting light sensor (i.e. street lights, car lights, porch lights etc.)	Change location of light sensor to an area where artificial lights will not affect its operation.
Defective Light Sensor	To check light sensor, place sensor between hands (ensuring that no light gets in). The lights should switch on after a few seconds. If the lights turn on, the light sensor may simply require mounting in a position where artificial light cannot affect its operation.

3. SYMPTOM - LIGHTS STAY ON FOR A LONGER PERIOD THAN FOR WHEN THE TIMER IS SET.

If the light sensor detects a light source such as porch lights, car headlights, street lights, etc. during the time in which the landscape lights are on, the transformer will turn the lights off and then restart the pre-programmed time again once the artificial light has been removed.	Change location of light sensor to an area where artificial lights will not affect its operation.
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