

3. LIGHTS STAY ON FOR LONGER PERIOD THAN THE TIMER SUGGESTS.

If the light sensor detects a light source (porch light, car headlight etc.) during the time in which the garden lights are on, the transformer will switch the garden lights off and then re-start the preprogrammed time again when the light has passed.

Mount light sensor in a position where artificial light cannot affect its operation.

TRANSFORMER WARRANTY

Limited 5 Year Warranty

To the original household purchaser, Smart Electric Works co., Ltd. warrants this transformer against defects in material or workmanship for 5 years from the date of purchase. This warranty does not cover transit damage, initial installation costs, removal costs or re-installation costs.

This warranty does not apply to:

- Damage caused by accident, abuse, mishandling, dropping.
- Transformers which have been subject to unauthorized repair, opened, taken apart.
- Transformers used not in accordance with the directions provided.
- Damages exceeding the cost of the product.
- Damage caused by acts of God, such as lightening, flooding etc.


No employee, agent, dealer or other person is authorized to give any written or oral warranties on behalf of Smart Electric Works co., Ltd.

Warranty service is available by either:

- Returning the product to the dealer from whom the product was purchased.
- Calling the Smart Electric Service Center at 1-800-558-8945. If returning the product is necessary, Smart will assign a return authorization number which must be placed on the product when it is returned. The product is to be safely wrapped and returned, freight prepaid by the customer, to the address below. A PROOF OF PURCHASE MUST ACCOMPANY THE PRODUCT. Smart will repair or replace the product at our option, at no charge to you, and the return freight back to you will be paid by Smart Electric. It is agreed that such repairs or replacements are the exclusive remedies available from Smart Electric and that Smart Electric is NOT RESPONSIBLE FOR DAMAGES OF ANY KIND, INCLUDING INCIDENTAL AND CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



Smart Electric Works co., Ltd.



**OWNERS
MANUAL**

**MODEL NO.
CB-081**

**CAUTION:
Read Directions
For Assembly
and Installation
Carefully**



ELECTRICAL SPECIFICATIONS

- POWER INPUT: 120V, 60Hz. A.C., 1.5 AMP MAX.
- POWER OUTPUT: 12V, A.C. / 108 WATTS
- CONTROL: PHOTO SENSOR WITH 12 HOUR TIMER

IF YOU HAVE ANY PROBLEMS OR QUESTIONS, CALL TOLL FREE
1-800-558-8945
SAVE YOUR SALES RECEIPT. IT IS NECESSARY FOR ALL SERVICE.

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

1. 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 light 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)

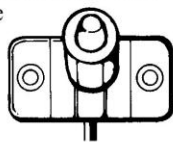


Fig. 1

2. 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)

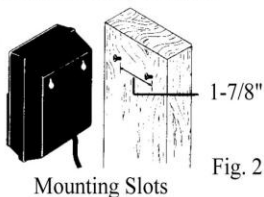


Fig. 2

LOW VOLTAGE CABLE LAYOUT

1. 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)

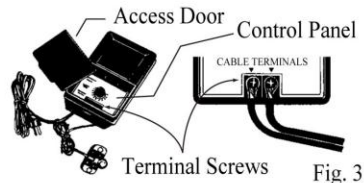


Fig. 3

2. Strip 1/2" of insulation off of both wires at one end of the low voltage cable (Fig. 4) Loosen the two terminal screws of the transformer and wrap one of the stripped wires around each terminal screw in a clockwise direction. Tighten screws securely, making sure all stranded wires are captured under the screw heads. (Fig. 3)
3. Unwind cable to its full length and lay the cable along the line where you wish to locate your lights.
4. For assembly and installation of light fixtures, refer to installation instructions provided with lighting.

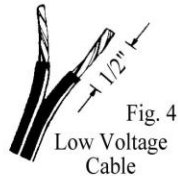


Fig. 4

OPERATING THE TRANSFORMER

There are three methods of controlling your lights provided by the transformer.

1. Manual ON/OFF Operation
2. Dusk to Dawn Operation
3. Timer Operation

Each method of operation is explained below.

1. Manual operation:
Turn control knob to "MANUAL ON" position, the lights will remain on until you turn control knob to "MANUAL OFF" position. (Fig. 10)

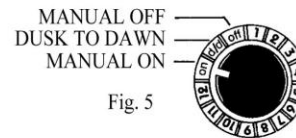


Fig. 5

HOURS OF "ON" TIME

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

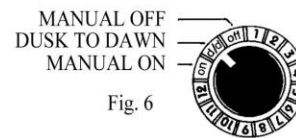


Fig. 6

HOURS OF "ON" TIME

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

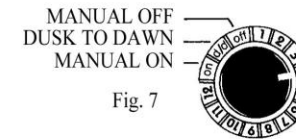


Fig. 7

HOURS OF "ON" TIME

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

Example:
If you wanted your lights to switch "on" at dusk and "off" four hours later, set control knob to "4" hour position on dial as shown in (Fig. 7) Lights will now automatically switch "on" each evening at dusk and go "off" four hours later. Assuming that dusk occurs at 7:00 p.m., this would mean the lights would then go "off" at 11:00 p.m. However, if the light sensor of the transformer is ever subjected to artificial light, such as from the headlights from an automobile or porch lights, the landscape lights may go "off" prematurely. The transformer 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 light sensor of the transformer where it will not be subjected to artificial light.

TROUBLE SHOOTING AND USER HINTS

1. LIGHTS WILL NOT SWITCH ON IN ANY MODE.

CAUSE	REMEDY
No power	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?)
Transformer overloaded.	Check to see if overload protector indicator light is "ON". If so, reset protector by pushing red button at bottom of transformer.

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

Artificial light affecting sensor (I.e. street lights, car lights, etc.)	Mount light sensor in a position where artificial lights do not affect its operation.
Light sensor	To check light sensor, ensure transformer is in either "DUSK TO DAWN" or "TIMER" mode. Place sensor between hands (ensuring that no light gets in). The lights should switch on after a few seconds. If the lights have now switched on, the light sensor may simply require mounting in a position where artificial light cannot affect its operation.