

The Pro Series Power Consoles are listed for indoor and outdoor use and are equipped with a unique multi-tap voltage terminal board. This feature allows you to select the voltage output most advantageous for the system you are installing. You may utilize one, two, or all three of the voltage taps at once.

This instruction sheet covers the installation of the following power consoles: TC344-15, TSS344-15, TC644-15, TSS644-15, TC944-15 & TSS944-15. Read these instructions carefully before installing this unit. Save instructions for future reference.

**MOUNTING**

1. Remove the power console from the box.
2. Mount the power console to a solid surface, utilizing the keyhole slots in the mounting bracket.  
**THE POWER CONSOLE MUST BE MOUNTED AT LEAST ONE FOOT ABOVE GROUND LEVEL WITH THE WIRE TERMINALS FACING DOWN.**
3. Strip approximately 3/8" to 1/2" of the insulation off of each wire on the low voltage cable.
4. Push the bare wires under the terminal screws on the terminal block and tighten the screws securely.  
(See Fig.1 and the following instructions to select desired voltage output.)
5. Plug power supply cord into standard 115/120 volt electrical outlet. NOTE: It is recommended that the power supply cord be plugged into a weather tight electrical outlet equipped with a Ground Fault Interrupter (GFI) receptical. When it is, per 1999 NEC 680-6(b)(4), the fixtures can be installed between 5 & 10 feet (1.52 - and 3.05 meters) horizontally from the inside wall of a pool.
6. Underground Low Voltage Cable SCW100-12, SCW500-12, or SCW500-10 may be used with the Power Consoles. NOTE: Any secondary wire not marked. "Suitable for direct burial" should be less than 6" in the ground.

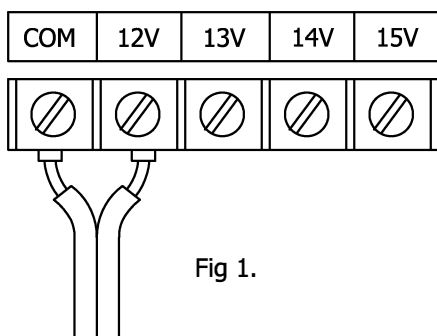


Fig 1.

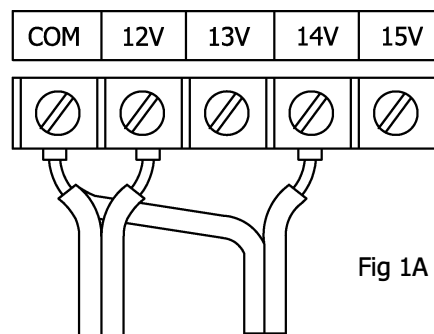


Fig 1A

**INSTRUCTIONS FOR MULTI-TAP VOLTAGE TERMINALS**

1. 12 VOLT position - Use COM and 12V terminal block positions.
  - A) When the fixture lamp wattage load is less than 40% of transformer rating.
  - B) When less than 40 feet of cable is used.
  - C) For extended bulb life for 12V incandescent lamps.
2. 13 VOLT position - Use COM and 13V terminal block positions.
  - A) When the fixture lamp wattage load is between 40% - 60% of transformer rating.
  - B) When 40 - 60 feet of cable is used.
3. 14 VOLT position - Use COM and 14V terminal block positions.
  - A) When the fixture lamp wattage load is between 60% - 80% of transformer rating.
  - B) When 60 - 100 feet of cable is used.
4. 15 VOLT position - Use COM and 15V terminal block positions.
  - A) When the fixture lamp wattage load is between 80% -100% of transformer rating.
  - B) When 100 - 150 feet of cable is used.

NOTE: Different voltages can be used at the same time. (See Fig.1A) The total lamp wattage cannot exceed the rated wattage of the Power Console. One wire of each cable must be connected to the Common Terminal.

**THERMAL PROTECTION**

This unit is thermally protected and will automatically shutdown when overheated. If the total lamp wattage on the circuit exceeds the rated wattage of the Power Console, reduce the wattage by using lower wattage lamps in the fixtures, or reduce the number of fixtures on each circuit. EXAMPLE: If you have a 300VA power console and 27-1/2 watt lamps in the fixtures, do not exceed 10 fixtures per transformer. If the unit continues to cycle on and off, have it inspected by a qualified electrician.

**LOW VOLTAGE CIRCUIT BREAKERS** (One for each 300VA circuit. RESETTABLE SWITCH TYPE.)

1. The circuit breakers will trip if there is a short circuit, or if the total lamp wattage exceeds the rated wattage per circuit.
2. To reset breaker, push the toggle to the "on" position. If breaker trips again, check for an overload or a short circuit.

## POWER CONSOLE DESIGN CHART

Our Multi-tap transformers are equipped with secondary circuit breakers that are connected to the COM. Each circuit can be loaded up to a maximum of 300 watts.

- Add up your fixture's wattage. Divide your load into 300W max. per wire run. **DO NOT EXCEED 300W PER RUN!!**
- Measure the approx. distance from the transformer to the first fixture on each run. Refer to chart to pick the correct tap for each run. You may use one, two, three or all taps at once.

WATT	TAP 1 12V		TAP 2 13V		TAP 3 14V		TAP 4 15V	
	AWG 12	AWG 10	AWG 12	AWG 10	AWG 12	AWG 10	AWG 12	AWG 10
100-149	38	60	76	120	113	180	151	240
150-199	25	40	50	80	76	120	101	160
200-249	19	30	38	60	57	90	76	120
250-300	N/A	24	N/A	48	N/A	72	N/A	96

Above chart suggests cable length for Power Console utilizing 12V, 13V, 14V, or 15V settings. Please refer to Landscape Lighting Installation Guide (HIG600-50) for designing cable runs.

## INSTALLATION OF 24 HOUR TIME CLOCK (OPTIONAL)

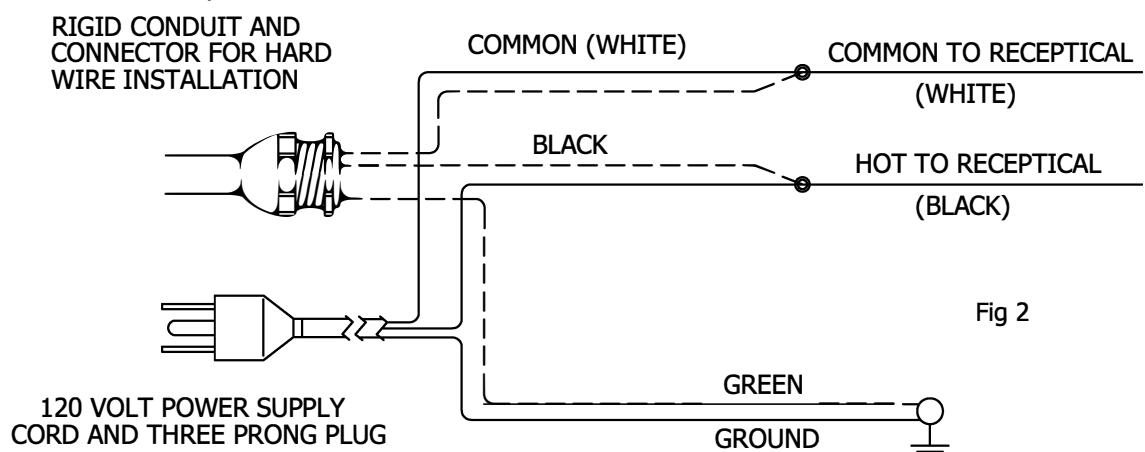
\* Recommend using optional Timer Model #T5 or #T6.

Other plug-in timers with minimum load rating of at least 900 watts can be used provided they physically fit in the area provided.

- Open the front hinged door of the Power Console.
- Unplug the cord from the receptical.
- Plug the cord into the 24 hour time clock.
- Plug the 24 hour time clock into the Power Console receptical.
- Set the time on the 24 hour time clock per the instructions provided with the time clock.

## HARD WIRE INSTALLATION (OPTIONAL)

- Make sure power is off and power console is not plugged into an electrical outlet.
- For transformers with a steel cover, loosen two screws on the sides, slide cover down and tilt forward.
- Disconnect the power supply cord (solid lines from receptical) and reconnect the wires from the conduit (dotted lines from conduit) as shown in Fig.2. Conduit is to be attached through one of the 7/8" knockouts located on either side of the console. Seal connection with waterproof sealant or silicone. **CAUTION: WIRING MUST COMPLY WITH THE NATIONAL ELECTRICAL AND LOCAL CODES.**
- Close front cover and replace screw. Set time clock per instructions above.
- Replace lid and secure. Turn power on.



## PHOTO CONTROL INSTALLATION (OPTIONAL)

- Make sure power is OFF and power console is NOT plugged into an electrical outlet. (NOTE: no splice is required, power console is equipped with jumper connector.)
- Open front hinged door of power console and locate and disconnect the white jumper connector inside the housing. \*\*\* Save the jumper connector with these instructions for possible future use.\*\*\*
- Remove the inner 7/8" diameter knockout from the side of the power console and push the photo-control's white connector thru the knockout hole. Inside the housing, slide the spacer and the star nut over the white connector, thread it onto the photo control and tighten.
- Plug the photo control's white connector into the housing connector. Ensure that the slide latch locks the connectors.
- Locate power console and position photo control so that no artificial light will shine on the photocell, as this will cause the photo-control to cycle on and off.  
\*\*\* In the unlikely event that the photo control should fail, the light fixtures will remain on, even during the daytime. If this should happen, follow these instructions and remove the defective photo control and place the jumper connector in its place.\*\*\*
- Close front hinged door. Turn on power.  
\*\*\* CAUTION \*\*\* If the photo control wire is run thru a wall, the wire must be protected by running it thru conduit that has at least 1" inside diameter.