



DPC-4000, DPC-6000 & DPC-8000

INSTALLATION AND OPERATION INSTRUCTIONS

**WARNING: READ ALL INSTRUCTIONS BEFORE INSTALLATION AND USE.
ALWAYS CONSULT A LICENSED ELECTRICIAN FOR INSTALLATION**



OVERVIEW:

Congratulations on your purchase of a genuine Powerbox® lighting controller! The Powerbox DPC-4000, DPC-6000 and DPC-8000 series are high-quality lighting controllers that let you time and control from four to eight H.I.D. lights from a single source. Each model connects to a 240-volt main connection and provides timer-controlled 240-volt power through NEMA type 6-15 240-volt outlets.

The **DPC-4000** connects to a NEMA 14-30R (4-prong main plug version), or a NEMA 10-30R (3-prong main plug version) to supply the unit with power. There are a total of FOUR (4) NEMA type 6-15 240-volt outlets that are timer-controlled, for plugging in your H.I.D. lights. The timer simultaneously controls all of the lights as a group.

The **DPC-6000** connects to a NEMA 14-30R (4-prong main plug version), or a NEMA 10-30R (3-prong main plug version) to supply the unit with power. There are a total of SIX (6) NEMA type 6-15 240-volt outlets that are timer-controlled, for plugging in your H.I.D. lights. The timer simultaneously controls all of the lights as a group.

The **DPC-8000** connects to a NEMA 14-50R (4-prong main plug version), or a NEMA 10-50R (3-prong main plug version) to supply the unit with power. There are a total of EIGHT (8) NEMA type 6-15 240-volt outlets that are timer-controlled, for plugging in your H.I.D. lights. The timer simultaneously controls all of the lights as a group.

These Powerbox controllers are perfect for smaller gardens, and are also great when you need to quickly deploy multiple units in convenient locations around larger gardens. Just install standard 240V range or dryer-type outlets at the desired locations in your space and quickly plug in as many Powerbox controllers as you need. The modular design makes them easy to move around so you can reconfigure your space easily. They are easy to mount to wall studs with keyhole tabs, or set on a flat surface and non-skid rubber feet prevent the unit from moving around. Constructed from heavy-gauge steel, the enclosure is built to withstand harsh environments. The baked-on power coated finish resists scratches and is easy to wipe clean.

FEATURES:

- Heavy-duty construction with industrial-grade components.
- Programmable digital timer to control light cycles.
- Battery backup to store programs during power outages.
- NEMA type 6-15 240-volt outlet receptacles.
- All outlets are directly wired to lighting relay, no daisy-chaining.
- Plug & play into 3 or 4-prong dryer or range-type outlets, or hardwire directly to panel.
- Three foot main power cord made from finely stranded pure copper wire.
- Durable powder coated seamless steel enclosure with no holes or visible screws.
- Keyhole tabs for easy mounting.
- Input: 240VAC, rated for up to 30A at 240V (DPC-4000 and DPC-6000). Rated for up to 50A at 240VAC (DPC-8000).
- Must be installed with a properly rated main circuit breaker.
- Hand-built in California.
- Five-year warranty – Legendary Powerbox® quality.

240-VOLT AC POWER IS EXTREMELY DANGEROUS. OBSERVE ALL CAUTIONS. MISUSE OF THIS DEVICE MAY SUBJECT YOU TO POTENTIALLY FATAL ELECTRIC SHOCK. CONSULT A PROFESSIONAL ELECTRICIAN FOR INSTALLATION. DO NOT PLUG INTO ANY POWER OUTLET OTHER THAN THE INTENDED TYPE. THIS POWERBOX REQUIRES A MAIN CIRCUIT BREAKER UPSTREAM FROM THE DEVICE. PLUG ONLY INTO A PROPERLY GROUNDED AND EARTHED OUTLET.

SECTION 1. MAIN CONNECTION

Depending on which model you have, your Powerbox is designed to plug directly into a 3 or 4-prong dryer-type outlet for its main power connection (or alternatively to be hard-wired directly to a circuit at the panel.) **Before plugging your Powerbox into an existing main power outlet, make sure that the circuit breaker for the circuit in question is switched to the OFF position and that no power is flowing to the outlet.** Make sure the plug on your Powerbox matches the outlet receptacle you have.

1.1 CONNECTING TO AN EXISTING CIRCUIT

If you already have an existing 240-volt outlet to plug your Powerbox into, it is important to understand the true capacity of that circuit. Most dryer-type outlets have a 30 Amp, double-pole circuit breaker at the main panel to prevent overloads. Since residential circuit breakers are designed to handle only 80% of their rated capacity when running on a continuous basis, the true amount of current you can receive from a 30 Amp breaker is only 24 Amps continuous. For more information, see **SECTION 2, INSTALLING A NEW CIRCUIT.**

1.2 TEST CIRCUIT BEFORE CONNECTING POWERBOX

In our experience, we have found that very often, 240-volt outlets are not wired correctly in residential and commercial structures. For this reason, it is highly recommended that you test the voltage at the outlet with an electrical tester before plugging in your Powerbox. Plugging the Powerbox into an outlet that is improperly wired will cause the unit to not function properly and may cause damage to the unit and/or could subject you to dangerous voltages.

3-Wire Connection:

- 1st Wire: 120-Volt Phase 1
- 2nd Wire: 120-Volt Phase 2
- 3rd Wire: Neutral

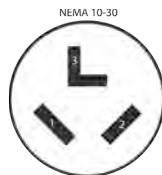


FIGURE 2

4-Wire Connection:

- 1st Wire: 120-Volt Phase 1
- 2nd Wire: 120-Volt Phase 2
- 3rd Wire: Neutral
- 4th Wire: Ground

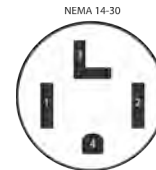


FIGURE 3

With a simple electrical tester, use the two probes to perform the following tests on the circuit to determine if it is wired properly:



3-Wire Connection:

TEST	PROPER RESULT
1+3	120 Volts AC
2+3	120 Volts AC
1+2	240 Volts AC

4-Wire Connection:

TEST	PROPER RESULT
1+3	120 Volts AC
2+3	120 Volts AC
1+2	240 Volts AC
1+4	120 Volts AC
2+4	120 Volts AC

If ALL of the tests on your circuit produce the proper result, turn the breaker off and it is safe to plug your Powerbox into the outlet. If ANY of the test combinations do not produce the expected result, the circuit is wired incorrectly. Do not plug in the Powerbox. Have the circuit checked by an electrician. Also, it is very important to keep in mind that a proper 3-wire outlet connection consists of two hot wires, and a NEUTRAL wire – NOT A GROUND. If your 3-wire outlet or connection contains a ground instead of a neutral, it must be re-wired so that the 3rd wire is a true neutral, otherwise the Powerbox will not function properly.

1.3 CONNECTING THE POWERBOX

Before plugging your Powerbox into the main outlet, make sure the circuit breaker feeding the circuit is switched to OFF and that no live power is flowing to the outlet. Align the prongs of the Powerbox plug with the openings of the receptacle and press firmly until the prongs seat themselves all the way into the outlet. Mount the Powerbox to the wall or set on a flat surface out of the way of potential hazards such as water. Do not plug any appliances into the Powerbox yet. Switch the circuit breaker feeding the circuit to ON. Proceed to **SECTION 3, TIMER PROGRAMMING.**

SECTION 2. INSTALLING A NEW CIRCUIT

If you are installing a new dedicated circuit for your Powerbox, you should be installing a 4-wire 240-volt circuit, which consists of two hot wires, a neutral and a ground wire. You have the choice of 1.) Installing a NEMA 14-30R outlet (for a 30A capacity box), or a NEMA 14-50R outlet (for a 50A capacity box) for your main Powerbox cord to plug directly into (See **SECTION 2.3A**), or 2.) For a hardwire version, installing a junction box that will be used to join the wires from the Powerbox to the incoming wires from the breaker panel (hardwire installation – See **SECTION 2.3B**.) Due to the portable nature of a plug & play installation, it is highly recommended to chose a plug & play Powerbox and install the NEMA 14-30R or 14-50R outlet. Either way, the materials needed will be the same, up to the point where the circuit terminates to either an outlet or a junction box.

2.1 INSTALL CIRCUIT PROTECTION DEVICE

The DPC-7500 requires the installation of a main circuit interruption device (circuit breaker) upstream from the unit, at your main electrical panel, or sub-panel. It is important to know that most circuit breakers are designated to function at 80% of their rated capacity when running continuous loads. Therefore, it is recommended that you install a 40 Amp, double-pole circuit breaker, if you intend to run the Powerbox at or near its full rated capacity. A 40 Amp breaker will provide 32 Amps of continuously available power. Determine the brand or type of circuit breaker you will need by inspecting your electrical panel. Take a picture of the panel, or remove an old breaker, to have with you when shopping for the circuit breaker. For added safety and enhanced protection, a GFCI circuit breaker is recommended.

2.2 INSTALL PROPERLY GAUGED WIRE

Selecting the appropriate wire gauge is critical for maintaining a safe and reliable installation. Do not use aluminum wire. The gauge of wire selected will depend on the capacity of your Powerbox, and the distance the wire must travel. Consult a qualified electrician for help in selecting the appropriate gauge of wire required for your installation. Failure to select the proper wire gauge can result in dangerous conditions and may cause malfunction of equipment. Use the same gauge wire for each of the four conductors. Plan a safe and efficient route from your breaker panel to your Powerbox installation that is as short as practically possible and install the appropriate conduit to house and protect the wire.

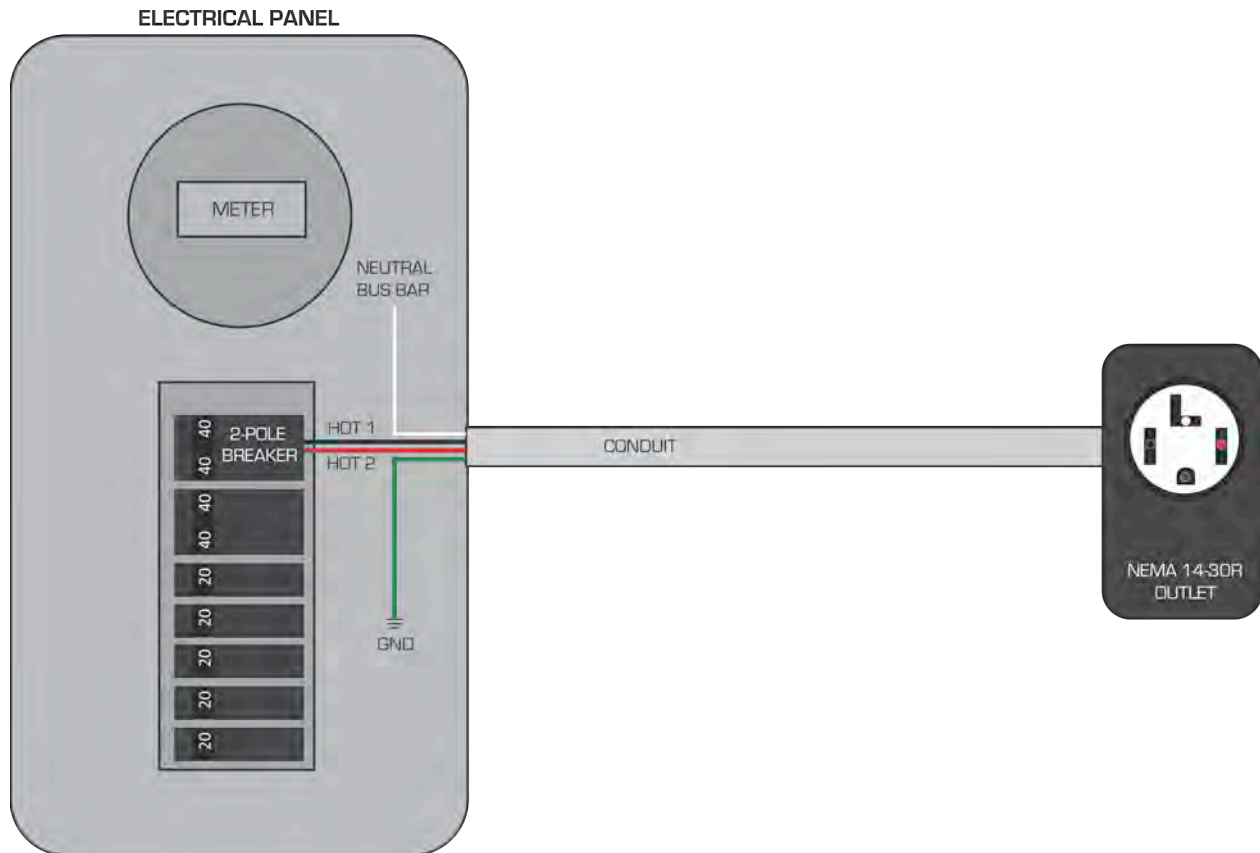
2.3A INSTALL OUTLET RECEPTACLE

Install a NEMA 14-30R outlet receptacle by mounting the receptacle in the desired location and terminating conduit from the main panel to the outlet. Connect wires to outlet terminals as pictured in FIGURE 3, and as per the instructions that come with the outlet. Be sure to tightly connect the wires to the appropriate locations on the rear terminals of the outlet, as specified. Once complete, refer back to **SECTION 1.2, TEST THE CIRCUIT BEFORE CONNECTING POWERBOX.**

2.3B INSTALL JUNCTION BOX

If installing a Powerbox hardware model, select a standard metal junction box of sufficient size (roughly 5"x5") where the incoming conduit will terminate and the panel wires will join with the wires from the Powerbox. Mount the junction box securely to the wall. Use Split-Bolt Connectors to join wires together, and once joined, wrap each connection with four turns of self-fusing amalgamating tape, followed by four turns of black electrical tape. When connections are complete, secure the junction box with a cover plate.

BASIC CONNECTION FROM PANEL



SOME OF THE ITEMS YOU MAY NEED:



40 Amp double pole GFCI circuit breaker.



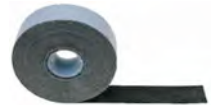
NEMA 14-30R wall-mount receptacle for plug & play installation.



Standard metal junction box for hardwire installation.



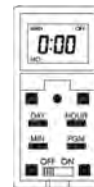
Split-bolt connector used for joining wires in hardwire installation.



Self-Amalgamating Tape used to wrap and insulate connections made with Split-bolts.

SECTION 2.4 TURN ON THE POWERBOX

1. Once you have completed making the Main Connection, with the circuit breaker at the panel still in the OFF position, flip open the lid to the timer and make sure the recessed switch at the bottom is switched to the "OFF" position.
2. Turn the circuit breaker at the panel to the ON position.
3. Turn the recessed switch at the bottom of the timer to the "ON" position.
4. Proceed to SECTION 3, TIMER PROGRAMMING.



OFF

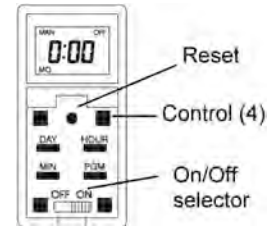
SECTION 3. TIMER PROGRAMMING

The built-in programmable digital timer is flexible and easy to setup. You can program up to 7 ON/OFF cycles for any individual day, or for every day of the week. For instance, it would take one program to set the Powerbox to go on and off once per day, every day of the week.

1. Pop open the door of the Digital Timer with a small screw driver.
2. Ensure the ON/OFF switch at the bottom of the Digital Timer is set to the ON position.
3. Reset the Digital Timer by using a small paperclip to depress the recessed RESET button (small round hole).

SETTING THE CLOCK

4. The Digital Timer displays the time in 24-hour format by default following a reset. To change to 12-hour format, press the MIN and HOUR buttons simultaneously and briefly (0:00 display = 24-hour format, 12:00 display = 12-hour format).
5. Set the time using the HOUR and MIN buttons. If you have selected the 12-hour format, ensure that PM appears on the screen when an afternoon time is displayed.
6. Set the day by using the DAY button.
7. Press one of the control buttons or close the Digital Timer door to return to normal operation.



PROGRAMMING THE DIGITAL TIMER

8. You can set up to 7 different programs with the digital timer. However, for a standard routine where the unit comes on and off at the same time every day, you only need to set one program, and select all days of the week. To set a program, you need to enter its start time (ON) and its end time (OFF).
 - a. Pry the Digital Timer door open using a small screwdriver.
 - b. Press the PGM button once, and program number 1 (P1) and its On time (ON) will appear. -- will appear instead of the time if the program is not set (inactive).
 - c. Press the DAY button to select the day to which you want to apply the program. If you want to apply the program to every day of the week, press DAY until all the days are displayed. This will count as only 1 program.
 - d. Press the HOUR and MIN buttons to set the ON time (time when you want devices to turn ON). If you have selected the 12-hour format, ensure that PM appears on the screen when an afternoon time is displayed.
 - e. After you have programmed the ON time, press the PGM button briefly to display the OFF time (time when you want the devices to turn OFF).
 - f. By default, the same DAY(s) you selected for the ON time will be displayed for the OFF time.
 - g. Press the HOUR and MIN buttons to set the OFF time (time when you want devices to turn OFF). If you have selected the 12-hour format, ensure that PM appears on the screen when an afternoon time is displayed.
 - h. To set another program, repeat steps (b) through (f). Programs that are not set will remain inactive.
 - i. Press one of the control buttons or close the switch door to return to normal operation.

SELECTING THE OPERATING MODE

9. The Digital Timer has 2 operating modes: manual (MAN) and automatic (AUTO). To switch modes, press and hold the switch door in for 3 seconds.
 - a. Manual Mode. The Digital Timer operates as a regular switch. Briefly press the switch door in to turn devices On or Off. The mode (MAN) and state (ON or OFF) are displayed.
 - b. Automatic Mode. The Digital Timer follows the programmed schedule. The mode (AUTO), state (ON or OFF) and current program number are displayed. To temporarily override the programmed schedule, briefly press the switch door. The new state (ON or OFF) will flash to show that this state is temporary. The override remains in effect until you press the switch door again or until the beginning of the next program.

TROUBLE SHOOTING GUIDE

BLANK OR FAINT TIMER DISPLAY: 1. Verify there is power to the unit. 2. Ensure the ON/OFF selector switch on the Digital Timer is set to ON. 3. Reset the Digital Timer using a small paperclip. **IF THE TIMER DISPLAY IS STILL HARD TO READ OR APPEARS FADED OUT:** Verify that the neutral wire is properly connected at the main panel and at the point where it connects to the Powerbox. This Powerbox requires a true neutral connection to function properly. If you have verified that the neutral wire is properly connected, and the timer display still appears faint, the internal backup battery needs recharging. **RESET THE TIMER** by pressing the RESET button with a paperclip. Now, leave the unit connected to the main power and leave the unit on for 90 minutes to give the battery time to fully charge. Check the display again and it should appear normal.

PROGRAMS DO NOT RUN AS EXPECTED: Make sure the Digital Timer is properly programmed. Note that -- indicates an inactive program, 00:00 indicates midnight. If the Timer has been configured for 12-hour format, check that PM appears on the left side of the screen when an afternoon time is displayed. Make sure the timer is in AUTO mode.

CANNOT SWITCH BETWEEN 24-HOUR and 12-HOUR FORMAT: First, press one of the control buttons so that MAN or AUTO appears on the display.

TIMED OUTLETS DON'T WORK / WON'T TURN ON: Check that the main circuit breaker is turned on. Check that the recessed switch under the timer front panel is switched ON. Check that the timer display reads ON. Check the main connection and ensure that all wires are connected properly.