



COMPACT SWITCHING POWER SUPPLY



Congratulations on your purchase of the DuraTrax® Compact Switching Power Supply! The smallest, most lightweight power supply available, it generates an immense amount of DC output power. Additional features such as a fuse-protected terminal block adapter with extension cord and built-in cooling fan make the Compact Switching Power Supply the most convenient, efficient, high-tech source for power.

SPECIAL FEATURES

- Very efficient 22kHz high frequency switching operation – no big, heavy transformer allows for a very compact, lightweight design
- Output: 7 amps continuous at 11–14V DC
- Incredibly small at only 3.9" x 2.75" x 2.5", and lightweight at only 7.2 oz.
- Built-in miniature cooling fan, increases efficiency and lifespan
- Built-in thermal protection with auto-reset and overload protection
- Terminal block adapter with 4 foot long extension cord for remote DC power access. Includes pre-installed connectors, large color-coded terminal posts for easy connection of external devices, replaceable overload fuse, and pre-fabricated pads for hard-wiring devices directly to the p.c. board

IMPORTANT PRECAUTIONS

- Do not allow water, moisture or foreign objects into the power supply
- Do not cover the air intake and exhaust holes. This will cause the power supply to overheat.
- Do not exceed 125V AC input
- Do not leave the power supply connected to AC when unused. The internal fan functions at all times when AC input is present.
- Do not open or attempt to repair the power supply at any time. Contact Hobby Services for any and all repair needs.
- Keep out of reach of children.

AC INPUT POWER

The Compact Switching Power Supply accepts power from a 110V AC source. Its small size and weight make it easy to plug directly into a wall outlet or powerstrip. A "switching" power supply as opposed to a linear power supply, this unit employs a high frequency, 22kHz (22,000Hz) switch-mode design to convert 110V AC input to a

12V DC output. This state-of-the-art technology allows the Compact Switching Power Supply to operate entirely without a big, heavy internal transformer and results in a very small, compact, and lightweight device that can deliver a tremendous amount of power. This technology also generates highly efficient and clean DC output. This is especially valuable today as many R/C battery chargers utilize peak detection designs which are very sensitive and demand the cleanest power sources possible in order to maintain error-free operation.

DC OUTPUT POWER

The Compact Switching Power Supply is rated to provide 12V DC output at an amazing 7 amps! Unlike many power supplies, this unit is designed to prevent a decrease in output current even as the load approaches the maximum specified levels. This helps to ensure battery chargers have the power necessary to fully charge batteries to the very end. Output voltage can vary between 11–14V, due to the fact that AC input voltage in the U.S. has a line tolerance of +/-10%, which can result variance in the DC output.

TERMINAL BLOCK ADAPTER & EXTENSION CORD

A terminal block adapter and 4 foot extension cord are included for convenient connection of external devices to the power supply. This also allows the adapter to be located up to 4 feet away from where the power supply itself must access AC input. This can be very convenient in crowded work spaces.

Two large, metal terminals or "posts" are mounted in the adapter. Each are clearly marked for polarity; one terminal in red for positive (+) DC polarity, the other terminal in black for negative (-) DC polarity. Pre-fabricated pads are also located directly on the adapter's p.c. board, and are

clearly marked as (+) for positive polarity, and (-) for negative polarity. External devices can be hard-wired directly to these pads for a permanent connection. The adapter also includes a built-in fuse for overload protection in the event of a short circuit condition or current overload.

CONNECTING EXTERNAL DEVICES

Connect the white plug on one end of the extension cord into the receptacle on the rear of the power supply. Plug the white plug on the opposite end of the extension cord into the white receptacle on the side of the terminal block adapter. As soon as 110V AC is supplied, 12V DC will be available at the terminals on the adapter.

WARNING: Do not allow wires or other metal objects to accidentally make contact simultaneously with both terminals, as a short circuit condition will exist. This will likely blow the fuse on the adapter's p.c. board, and could possibly damage devices which are connected directly to the adapter. Note proper polarities at all times when using the terminals and pre-fabricated pads on the p.c. board. Do not attempt to connect batteries directly to the output of the power supply.

Terminal posts are intended for connecting external devices which have alligator clips (or similar) on their input power leads. Simply connect the black, negative (-) input clip on the external device onto the respective terminal on the adapter, and the red, (+) input clip to the opposite terminal. Make sure a solid physical connection is made, to avoid intermittent power delivery to the external device.

Pre-fabricated pads on the p.c. board are intended for hard-wiring external devices directly to the adapter. Trim approximately 1/8" of insulation off of the end of both input wires of the external device. For

each bare wire, twist the strands to make a single, tight wire. "Tin" each bare wire with a small amount of electrical solder. Insert each wire end into the respective pad on the p.c. board. Apply a small amount of solder to each connection and briefly apply heat to flow the solder and make permanent electrical connections. **CAUTION: This feature is recommended for users who are experienced in making electrical connections with a soldering iron. Sloppy or poor solder connections can cause erratic operation, or possibly permanent damage to the external device and/or the adapter.**

WARNING: Do not connect external DC devices in reverse polarity, as permanent damage to the external devices could occur.

The Compact Switching Power Supply is directly compatible with the IntelliPeak brand chargers from DuraTrax (see below). Simply connect the input cord on any of the IntelliPeak chargers directly into the connector on the rear of the Compact Switching Power Supply.

DTXP4110: MINI PULSE CHARGER
 DTXP4120: DELUXE PULSE CHARGER
 DTXP4130: DIGITAL PULSE CHARGER

SAFETY FEATURES

Two other important safety features are incorporated into the design of the Compact Switching Power Supply:

A built-in THERMAL CUT-OFF circuit terminates operation in the event of excess heat build-up inside the power supply. Also, if a short circuit or overload at the output occurs, the unit will shut down automatically. If any of these conditions occur, disconnect the supply from the AC input, wait 15 seconds while the cut-off device automatically resets itself, and then re-connect to the AC input.

A built-in MINIATURE COOLING FAN provides a constant flow of air through the power supply at all times to keep components cool. Electronic components deteriorate more rapidly and perform less efficiently when under extreme heat and stress. Keeping components cool helps to maintain optimum efficiency, and extend the operational lifetime of the power supply. Do not block the air vents on the power supply. Make sure there is ample room for air to enter and leave the power supply to dissipate heat.

SPECIFICATIONS

Input Voltage: 110V AC, 60Hz, 1.5A
 Output: 12V DC, 7A
 Switching Freq. 22kHz
 Case Size: 5.38" x 2.25" x 4.0"
 Weight: 7.2 oz. (10.3 oz. including cord and adapter)
 Part Number: DTXP4300

WARRANTY

DuraTrax warrants this product to be free from defects in materials and workmanship for a period of 1 year from the date of purchase. During that period, we will repair or replace, at our option, any product that does not meet these standards. You will be required to provide proof of purchase date (receipt or invoice).

If during the 1 year period, your DuraTrax product shows defects caused by abuse, misuse, or accident, it will be repaired or replaced at our option, at a service charge not greater than 50% of the current retail price. Be sure to include your daytime telephone number in case we need to contact you about your repair.

This warranty does not cover components worn by use, application of reverse voltage, cross connections, poor installation, subjection of components to foreign materials, any alterations to wires, or tampering. In no case shall our liability exceed the original cost of the product.

Your warranty is voided if...

- A. You allow any external wires to become frayed which could cause a short
- B. You tamper with any of the electronic components.
- C. You exceed maximum load specifications of the power supply.
- D. You allow water, moisture, or any foreign material to enter the power supply.
- E. You apply reverse voltage by connecting devices backwards.

Under no circumstances will the purchaser be entitled to consequential or incidental damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If you attempt to disassemble or repair this unit yourself it may void the warranty.

For service to your DuraTrax product, either in or out of warranty, send it post paid and insured to:

Hobby Services
 1610 Interstate Drive
 Champaign, IL 61822
 (217) 398-0007
 e-mail: hobbyservices@hobbico.com
 Internet Address: www.duratrax.com

OTHER ITEMS AVAILABLE FROM DURATRAX

DuraTrax IntelliPeak™ Chargers

The smart choice in value-packed peak chargers is IntelliPeak. They give modelers high-tech features and versatility – without the high-tech price tag. All four IntelliPeak models include:

- Ability to charge NiCd and NiMH packs
- Adjustable pulsed current
- Cycling functions (single cycle: periodic conditioning of regularly used batteries, and auto-repeat cycle: for deep conditioning of new or unused batteries).
- Four multi-function LEDs and audible tones to ease setup
- CPU driven
- Able to charge transmitter batteries, too



Pulse Charger – DTXP4100

- AC/DC input
- 1 amp discharge rate
- Great for racers and sport modelers alike



Mini Pulse Charger – DTXP4110

- Builds on the Pulse Charger's features with DC input, with detachable AC power supply...charger itself is very small, great for portability
- 2 amp discharge rate
- 1 built-in cooling fan



Deluxe Pulse Charger – DTXP4120

- Adds to the Mini Pulse Charger's features with DC input, detachable AC power supply.
- 2 and 10 amp discharge rate (faster discharge ability).
- Negative DeltaV (for NiCds) and Zero DeltaV (for NiMHs) peak technologies, auto-selects
- High rate charging for high-capacity NiMH packs.
- 2 built-in cooling fans



Digital Pulse Charger – DTXP4130

- Includes all of the Deluxe model's features, plus LCD readout that shows battery voltage, charge current, and charge and discharge capacity in mAh.