DURATRAX® THE LEADER IN AWESOME R/C!™

IntelliPeak™

TWIN PULSE CHARGER

Congratulations on your purchase of the IntelliPeak Twin Pulse Charger by DuraTrax! A breed apart from other chargers, it offers the ability to peak charge TWO battery packs at once. The Twin Pulse Charger is the ultimate in convenience for models which operate from two batteries simultaneously, or modelers who use multiple packs on a regular basis.

SPECIAL FEATURES

- Advanced *fuzzy logic* peak detector with automatic cut-off circuit featuring high efficiency P-Channel MOSFET drive transistors
- NiMH NiCd Pulsed current to peak charge NiCd and NiMH batteries to 100% without overheating
- Built-in *Artificial Intelligence* to eliminate false peaks
- AC or DC input
- Peak Charger 1 offers two fixed charge rates selectable by switch: a minimum 3.5A peak charge current for 6 cell (7.2V) or 7 cell (8.4V) sub-C size battery packs, and a 1A peak charge for 8 cell (9.6V) transmitter batteries
- Peak Charger 2 offers a minimum 3.5A peak charge current for 6 cell (7.2V) or 7 cell (8.4V) sub-C size battery packs
- 100mA trickle charge rates for 6 and 7 cell packs, 50mA trickle for 8 cell Tx packs
- Two multi-function, high intensity LEDs for easy set-up
- Fused overload, thermal, and reverse polarity protection

IMPORTANT PRECAUTIONS

- Charge only nickel-cadmium or nickel-metal hydride rechargeable batteries. Damage may occur from other types of batteries.
- Do not use automotive type battery chargers to power the charger.
- Do not allow water, moisture or foreign objects into the charger.
- Do not cover the air intake holes on the charger. This will cause the charger to overheat.
- Do not charge batteries containing fewer than 6 cells.
- Do not leave the charger unattended while charging. **Disconnect the battery and remove input power from charger immediately if the charger becomes hot.** Allow the charger or battery to cool down before reconnecting.
- Keep out of reach of children.

NiMH NiCd™

The IntelliPeak Twin Pulse Charger is capable of charging **both** nickel-cadmium (NiCd) and nickel-metal hydride (NiMH) battery chemistries, as identified by this symbol. Look exclusively for battery chargers with this symbol to handle both NiCd and NiMH charging needs.

IMPORTANT CARE AND HANDLING INSTRUCTIONS FOR NIMH BATTERIES

While similar in appearance to sub-C NiCd batteries, NiMH batteries have a different internal chemistry and require a different charging method. It is important **not to allow NiMH batteries to overheat while being charged**. Heat can adversely affect the performance of NiMH batteries. If overheating is observed, disconnect the battery from the charger immediately. **Do not** deep cycle NiMH batteries. Permanent damage could result. Store NiMH packs with some voltage remaining on the cells. Use a NiMH battery pack no more than three cycles per day, with a two to three hour break in-between for cooling. More frequent use is likely to overheat the pack.

INPUT POWER

To use a 12V DC battery for input power, attach the red alligator clip to the positive (+) terminal on the battery, and the black alligator clip to the negative (-) terminal. It's best to use a clean DC power source whose output is filtered to remove unwanted electrical noise. To achieve the maximum potential of the Twin charger, the source battery must be capable of delivering at least 7 amps of current while maintaining 12V DC.

If using 110V AC for input power, connect the black AC plug to a regular 110V wall outlet. **Do not** connect the DC input leads to any power source simultaneously with AC input, as permanent damage to your charger may result.

POWER ON INDICATORS

Anytime AC or DC power is applied to the input and no load battery is present on either output, both LEDs will flash at a slow rate. This is simply to confirm that supply power is present on the input. It is not recommended to leave the IntelliPeak Twin connected to any input power for an indefinite period when loads are not present on the output. This will unnecessarily shorten the lifespan of the charger.

COOLING FAN

The IntelliPeak Twin charger incorporates a miniature fan to help keep all internal components cool during operation. This will help extend the service life of the charger, as well as allow the charger to function more efficiently. The fan will turn on anytime a load is present on the charger's output.

FUSE PROTECTION

The IntelliPeak Twin Pulse Charger is fuse protected from current overload. Replace the glass fuse only with one of the same rating (250V/3A) and size (5x20mm). **CAUTION:** Disconnect the charger from the AC power source and the load battery from the charger **before** replacing the fuse.

OUTPUT LEADS AND FUTABA TX ADAPTER

The built-in output leads have standard connectors on the end. This is for direct connection to common 6 and 7 cell R/C sub-C battery packs. An adapter cord is included for charging Futaba® transmitter batteries with the Twin charger. This adapter is designed to connect directly to Futaba transmitter charge jacks and ONLY the output of Peak Charger 1 on the LEFT side of the charger.

PEAK CHARGING

The Twin has TWO independent high-rate peak charge circuits, to recharge two battery packs, and automatically terminate fast charge when peak charge is reached. The charge circuits are totally independent of each other. This means, if desired, only one pack can be charged at any given time. Or, two batteries can begin fast charge simultaneously. Or, one battery can begin fast charge, and a second battery can be connected and charged at any given time. The Twin delivers **pulsed current** on its outputs instead of linear charge currents. This allows batteries to achieve peak charge without excessive overheating, while keeping the charger itself cooler to achieve higher charge efficiency and extended lifetime.

Peak Charger 1: The controls for this charger are on the LEFT side of the charger. This port is capable of charging 6 cell (7.2V) and 7 cell (8.4V) sub-C size battery packs at a minimum 3.5 amp rate, or 8 cell (9.6V) transmitter battery packs at a fixed 1 amp rate.

1. For 6 and 7 cell sub-C packs:
- **a)** Set the CHARGE AMPS switch to the 3.5A position.
- **b)** Connect the 6 cell (7.2V) or 7 cell (8.4V) pack to the output connector on the left. Peak charge will begin automatically, indicated by illumination of the red LED.
- **c)** When peak charge has been reached, the Twin will automatically terminate fast charge and go to 100mA trickle charge, indicated by the flashing red LED.
- **d)** Six and seven cell sub-C size packs can remain in trickle charge state for an indefinite period.

2. For 8-cell (9.6V) transmitter packs: **NOTE:** The Twin is designed to automatically start peak charge when battery voltage is detected on the charger's output lead. Some transmitters may have a diode in their charge circuit which might prevent the Twin from initiating peak charge. Extra design considerations have been added to overcome this common problem, and the Twin should still begin the peak charge process on such a radio. If for some reason, however, the Twin will not begin peak charge, it might be necessary to charge the battery directly when removed from the transmitter. Or, contact your radio manufacturer for possible removal of this diode.
- **a)** Charging 8-cell batteries is best accomplished when using 110V AC input power, or DC input power of greater than 12V but less than 15V. If using a 12V automotive battery for input power, starting the car's engine will increase the input voltage to approximately 13.8V. If necessary, starting the engine should allow the Twin to peak charge an 8-cell transmitter battery completely.
- **b)** Set the CHARGE AMPS switch to the 1A position.

WARNING: Never attempt to charge transmitter batteries at the 3.5 amp peak charge rate! Failure to obey this warning will likely result in permanent damage to the Tx and the battery. Transmitter charging should ONLY be achieved by using the 1 amp charge rate on the Peak Charger 1 output on the left side of the charger.

- **c)** For Futaba transmitters, attach the included Futaba transmitter adapter to the output connector on the left. Adapters for other radio types can be purchased separately (see list at the end of this manual).
- **d)** Connect the output of the adapter to the charge jack of the transmitter. Make sure the radio's power switch is in the OFF position. Peak charge will begin automatically, indicated by illumination of the red LED.
- **e)** When peak charge has been reached, the Twin will automatically terminate fast charge and go to 50mA trickle charge state, indicated by the flashing red LED. Transmitter batteries can remain in the trickle charge state indefinitely.

Peak Charger 2:

1. The LED and output connector for this charge circuit are on the RIGHT side of the charger.
2. This port is capable of charging 6 cell (7.2V) and 7 cell (8.4V) sub-C size battery packs at a minimum 3.5 amp rate.
3. Peak charge will begin automatically after the battery is attached to the output connector on the right, indicated by illumination of the yellow LED.
4. When peak charge has been reached, the Twin will automatically terminate fast charge and go to 100mA trickle charge state, indicated by the flashing yellow LED. Sub-C size 6 and 7 cell packs can remain in trickle charge state indefinitely.

WARNINGS: Never attempt to charge transmitter batteries on Peak Charger 2 (right side), as the 3.5A charge rate will damage the transmitter and its batteries. Never leave the charger unattended during fast charge. If the battery or charger become hot at any time, disconnect the battery and remove input power from the charger immediately! Failure to do so may cause permanent damage to the charger and battery, and may cause bodily harm.

SPECIFICATIONS

Input voltage:	110V AC or 11-15V DC
Battery types:	Nickel-cadmium (NiCd) and nickel-metal hydride (NiMH)
Peak Charger 1:	
Output:	6, 7, and *8 cell battery packs
Peak charge rates:	3.5 amps minimum, and *1 amp fixed for 8 cell Tx batteries
Trickle charge rates:	100mA for 6-7 cell packs, *50mA for 8 cell Tx batteries
Peak Charger 2:	
Output:	6 and 7 cell battery packs
Peak charge rate:	3.5 amps minimum
Case size:	3.7 x 3.2 x 5.1" (95 x 80 x 130mm)
Weight:	4.6lb (2069g)

OPTIONAL TRANSMITTER CHARGE ADAPTERS

Adapters are available to charge transmitter batteries with the IntelliPeak Twin Pulse Charger. One Futaba transmitter charge adapter is included with the Twin Pulse Charger. Other Tx charge adapters are available separately.

DTXP4151	IntelliPeak Twin Futaba Tx Charge Adapter
DTXP4152	IntelliPeak Twin Airtronics/Hitec Tx Charge Adapter
DTXP4153	IntelliPeak Twin JR Tx Charge Adapter

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 or 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 wires to become frayed which could cause a short
B. You tamper with any of the electronic components.
C. You exceed minimum or maximum cell specifications for the battery pack.
D. You allow water, moisture, or any foreign material to enter the charger case.
E. You apply reverse voltage by connecting the battery pack 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:

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