

ENDURA

Single Unit Rapid Charger
FOR RECHARGEABLE TWO-WAY RADIO BATTERIES



Model: TWC1

Introduction

Thank you for purchasing an ENDURA™ TWC1, Single Unit Rapid Charger. This high quality product is designed for charging two-way radio batteries. With the appropriate charging pod installed, it can charge these types of batteries: lithium ion (Li-Ion), lithium polymer (LiPo), nickel-metal hydride (NiMH), or nickel cadmium (NiCd).

For a complete list of charging pods available for this charger, contact your Power Products dealer or call customer service at **800-529-1618**.

Important

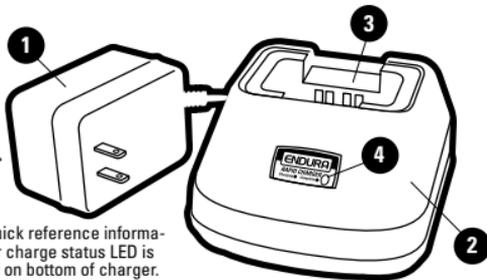
1. Read all Caution statements below and this User Manual before attempting to charge a battery.
2. Check to make sure a charging pod compatible with your battery is properly installed on charger before placing battery in pod.
3. Position charger away from TVs, radios, or other receivers to prevent the charger from interfering with these types of products.
4. Always charge new batteries completely before initial use. Recycle batteries when they can no longer be used. Do not discard unwanted batteries in the trash or incinerate. Batteries exposed to fire or excessive heat may explode.
5. For best battery performance, charge NiCd and NiMH batteries when they are fully discharged.

Caution

1. Never charge alkaline or dry cell batteries with this charger. They may burst and cause damage or personal injury.
2. Do not charge Li-Ion, LiPo, NiMH, or NiCd batteries unless they are designed with overcharge protection.
3. Use charger indoors only. Do not expose the charger to rain, any liquids, or excessive moisture.
4. Do not attempt to charge a battery without first installing the appropriate charging pod. Use only charging pods designed for the ENDURA™ TWC1 charger. Disconnect charger from power supply before installing, adjusting, or removing the charging pod.
5. Make sure contacts in charging pod and battery are clean. Do not allow wire or metal objects to touch contacts in charging pod or any internal part of the charger.
6. Do not remove the charger's housing or make any modification to the charger.
7. Use only the power supply provided with the ENDURA™ TWC1 charger. If a replacement power supply is required, order part number TWC1-PS. Use of other power supplies may damage the charger or batteries you may be attempting to charge.

ENDURA™ TWC1 Features

1. Power supply
2. TWC1 – single unit rapid charger.
3. Removable charging pod
4. Charge status LED



Note: Quick reference information for charge status LED is located on bottom of charger.

Replacing A Charging Pod

The charging pod is made from quality materials and designed to provide years of service when properly used. In most cases, the charging pod will only be replaced when you want to use the charger with a different battery.

Follow these steps to change the charging pod:

1. Obtain a charging pod made specifically for the TWC1. Confirm that the charging pod is compatible with the battery you want to charge.
2. Unplug the power supply from the TWC1.
3. Turn the locking screw on the bottom of the charging pod counter-clockwise several rotations. Lift the charging pod from the charging base.
4. Insert the replacement charging pod into the charging base and secure with the locking screw. Do not over tighten the screw.
5. Inspect the charging contacts to ensure they are clean and unobstructed.
6. Connect the power supply to the TWC1. You are now ready to charge a battery compatible with the charging pod.

Charging A Battery

1. Confirm that the charging pod and battery are compatible.
2. Connect the small end of the power supply cable to the plug on the back of the charger, then connect the AC adaptor to a wall outlet.
3. Place battery to be charged in the charging pod. The battery may be charged while attached to the radio.
4. When a battery is placed in the charging pod, the charge status LED will illuminate ORANGE for a short period while the charger performs a battery diagnostic. If the LED does not illuminate, check to make sure the wall outlet is receiving power. The charge status LED will change from ORANGE to RED once the battery diagnostic is complete.
5. While a battery is charging, the charge status LED will illuminate RED with no flashing. If the charge status LED is red and flashes, a fault has been detected. The flash pattern represents a specific fault condition. See section **Fault Conditions** for details.
6. When the battery is charged to 80% of capacity, the charge status LED will change to GREEN and begin to flash. It is recommended that the battery be charged to at least 80% capacity before use.
7. The charge status LED will illuminate GREEN with no flashing when the battery is fully charged.
8. After removing a fully charged battery, the charge status LED may remain illuminated for a few seconds. Allow the charge status LED to go off before placing another battery in the charging pod.
9. The TWC1 is designed to operate at room temperatures between 15°C and 30°C (59° F – 86° F). Charging batteries at temperatures outside this range may result in under charging of batteries.

Fault Conditions

When the charge status LED flashes RED, a fault condition exists. There are three different flash patterns, each indicating a specific type of fault. The flash patterns and fault conditions are as follows:

Flash Pattern	Fault Type
Flashes 1 Time	Indicates charging complete, but battery is under charged. Battery voltage is below minimum level required. This warning is provided after the rapid charging stage is complete.
Flashes 2 Times	Indicates battery contact is "open" and current is not passing through the (+) and (-) contacts on the battery. This warning is provided after the initial diagnostic stage is complete. Check charging pod to confirm compatibility with battery.
Flashes 3 Times	Indicates over-current condition caused by battery short circuit. Have the battery checked by a qualified technician. Do not attempt charging the battery if a short circuit exists.

Warranty And Service During Warranty

The ENDURA™ TWC1 is made from high quality materials and designed to provide years of reliable service. The following warranty applies:

Power Products Unlimited, Inc. (PPU) warrants this product to be free from defects in workmanship and materials for one-year from date of purchase by the end user. This warranty applies to the original purchaser and is void if the product has been altered, misused, damaged, neglected, or if repair is required because of normal wear and tear. This is the only warranty made by PPU. In no event will PPU, its affiliates, subsidiaries, related entities, or their respective directors, officers, or employees, be liable for any damages beyond repair or replacement as described above, including without limitation, indirect, incidental, or consequential damages. For service under warranty, return the product along with dated proof of purchase to the retailer where purchased or to Power Products. If returning directly to Power Products, follow these instructions:

1. Send to Power Products – Warranty Service Department, 2170 Brandon Trail, Alpharetta, GA 30004. For your protection, we recommend you obtain proof of delivery for your shipment.
2. Include with your product, dated proof of purchase, your name and daytime telephone number, and return address (street address only; return shipments cannot be made to a P.O. Box).
3. All items sent become the property of Power Products and will not be returned.

ENDURA™ TWC1 Specifications

Dimensions	115 x 136 x 66 mm / 4.5 x 5.4 x 2.6 inches
Weight (Charger Only)	275 g / .6 lbs.
Compatible Chemistries	NiCd / NiMH / Li-Ion / LiPo
Operating Temperature	15° C – 30° C / 59° F – 86° F
Storage Temperature	0° C – 65° C / 32° F – 149° C
Power Supply Input	100V – 240V AC / 50 Hz – 60 Hz / 0.5A
Power Supply Output	15V DC 1.0A
Charge Rate	700 mA (10.6V-13.5V)

Specifications subject to change without notice.



ENDURA Chargers By Power Products
Smart • Adaptable • Reliable™

2170 Brandon Trail • Alpharetta, GA 30004
www.powerproducts.com