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**ENDURA**™

# *TWC6M - Six Unit Rapid Charger*

*FOR RECHARGEABLE TWO-WAY RADIO BATTERIES*



Model: TWC6M

# *User Manual*

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## Introduction

Thank you for purchasing the ENDURA™ TWC6M, six unit rapid charger. This high quality product is designed for use with up to six rechargeable two-way radio batteries. With the appropriate charging pod installed, the TWC6M can charge batteries with these cell types: nickel cadmium (NiCd), nickel-metal hydride (NiMH), lithium ion (Li-Ion), or lithium polymer (LiPo).

For a complete list of charging pods and accessories available, contact your Power Products dealer or call customer service at **800-529-1619**.

## ⚠ Important Safety Information

1. Read and follow these instructions. Heed all warnings. Keep this user manual for future reference.
2. Do not operate this charger near water or where moisture is present. Do not operate this charger where it could be exposed to dripping, splashing, or spray from water or other liquids. Do not place containers with liquids, such as soft drinks or flower vases, on or near the charger. Clean with a dry cloth.
3. Follow all installation guidelines. Do not block any ventilation openings on the charger. Do not place near any heat sources such as radiators, heat registers, stoves, amplifiers, or other devices that produce heat.
4. Only use the power supply provided with this charger. For safety reasons, do not modify the grounding type plug on the power cord. The grounding type plug has two blades and a third grounding prong. If this plug does not fit into your outlet, consult a qualified electrician for replacement of the outlet.
5. Protect the power supply and cords from being walked on. Do not allow the power cord to be pinched or bent at a sharp angle, particularly near the wall outlet or where it connects to the charger.
6. Only use attachments / accessories supplied with this charger or specified by Power Products.
7. Unplug this charger during lightning storms or when not used for an extended period of time.
8. Refer all repairs for servicing to qualified service personnel. Servicing is required when the charger has been damaged in any way. This includes dropping the charger, spilling liquids on the charger, causing objects to fall into the charger, excessive wear to the power cord or plug, exposing the charger to rain or moisture, or when the charger fails to operate in a normal manner.

## ⚠ Caution

1. Never charge alkaline or dry cell batteries with this charger. The battery may burst and cause personal injury.
2. Do not charge NiCd, NiMH, Li-Ion, or LiPo batteries unless they are designed with overcharge protection.
3. Do not attempt to charge a battery without first confirming that the appropriate charging pod is installed.
4. Disconnect charger from the power supply before installing, adjusting, removing, or cleaning the charging pod.
5. Use only charging pods and the power supply designed for the TWC6M charger. Using similar parts available from other manufacturers may damage the charger or batteries.
6. Make sure the contacts in the charging pod and on the battery are clean, otherwise the battery may not fully charge.
7. Do not allow wire or metal objects to touch contacts in the charging pod or any internal part of the charger.
8. Do not remove the charger's housing or make any modification to the charger.
9. Turn charger off when not in use. The power on / off switch is located on the right side of the charger.
10. Position the charger away from TVs, radios, or other receivers to prevent the charger from interfering with these types of products.
11. Always charge new batteries completely before initial use. Do not charge batteries that have been exposed to excessive heat.
12. 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.



The lightning flash and arrowhead within the triangle is a warning sign alerting you of 'dangerous voltage' inside the product.



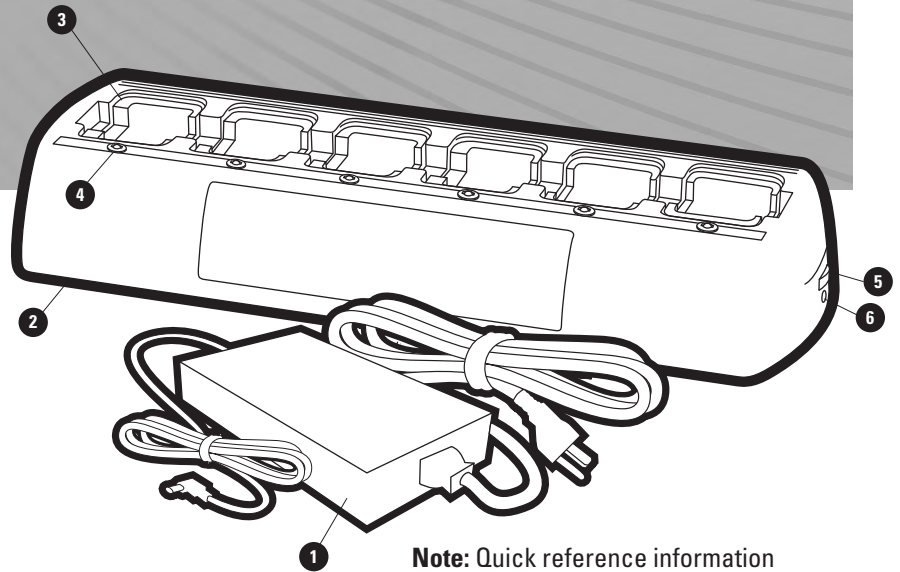
CAUTION: TO REDUCE THE RISK OF THE ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS ARE INSIDE. REFER ANY SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within the triangle is a warning sign alerting you of important instructions accompanying the product.

## TWC6M Features

1. Power supply (TWC6M-PS).
2. TWC6M – six unit rapid charger.
3. Removable charging pod (shown for first position only).
4. Charge status LED (shown for first position only).
5. Power on / off switch.
6. Connection point for power.



**Note:** Quick reference information for charge status LED is located on front 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 TWC6M. Confirm that the charging pod is compatible with the battery you want to charge.
2. If connected, unplug the power supply from TWC6M.
3. Turn the locking screw on the bottom of the charging pod counter-clockwise several rotations. Lift the charging pod and the screw from the charging base.
4. Before placing the replacement pod in the charger, make sure the contacts on the bottom of the pod are aligned with the contacts in the charger. After the replacement pod is inserted into the charger base, secure with the locking screw. Do not over tighten the screw.
5. Inspect the charging contacts in the pod to ensure they are clean and unobstructed.
6. Connect the small end of the power supply cable to TWC6M and plug the other end into a wall outlet. 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 TWC6M and plug the other end into a wall outlet.
3. Place battery to be charged in the charging pod. The battery may be charged while attached to the radio. Note: If the battery is attached to the radio, charging time will be reduced if the radio is powered off.
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. Once completed, the charge status LED will change to RED. This indicates the battery is charging.
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 on 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. When a fully charged battery is removed, the 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 TWC6M 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.

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## 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:

LED 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.

## Specifications For TWC6M

Dimensions	510 x 172 x 80 mm / 20.1 x 6.8 x 3.1 inches
Weight (Charger Only)	2.5 kg / 4.9 lbs.
Power Supply Weight	0.6 kg / 1.3 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° F
Power Input	100V – 240V AC / 50 – 60Hz / 2.0A
Charger Input	12V – 24V / 4.8A minimum
Charge Rate	700 mA (10.6V-13.5V)
Product Approval	FCC

Specifications subject to change without notice.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Important: Any changes or modifications to this device by the user not expressly approved by Power Products could void the user's authority to operate this device.



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## Accessories For TWC6M

For availability and pricing of TWC6M accessories, please contact your Power Products dealer or call customer service at 800-529-1618.

Part Number	Description
TWC6M-MB	Metal mounting bracket for office, shop, or in-vehicle installations.
TWC6M-PS	Power supply (included with TWC6M).
TWC6M-VPA	Vehicle power adapter for in-vehicle use. Supplies power to TWC6M from a 12V or 24V outlet in vehicle.
TWC6M-HW	Hard wire kit for in-vehicle installations. Supplies power to TWC6M from a vehicle battery or other 12V / 24V power source.

## Warranty And Service During Warranty

The ENDURA™ TWC6M 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.