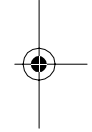
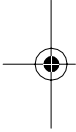


Cat. No. 23-416  
**OWNER'S MANUAL**

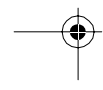
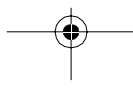
Please read before using this equipment.

# AC Charger

for Ni-Cd/Ni-MH  
RC Battery Packs



**RadioShack®**





## FEATURES

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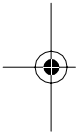


Your RadioShack AC Charger is perfect for charging remote-controlled racing car batteries. It can fully charge a 4.8-volt, 6.0-volt, 7.2-volt, or 9.6-volt nickel-cadmium or nickel-metal hydride battery pack in as little as one hour! (High-capacity 7.2-volt, 2000 mAh Ni-Cd and 9.6-volt, 1250 mAh Ni-MH battery packs require 1½–2 hours to fully charge.)

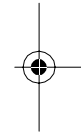
Your Universal Charger's features include:

**Automatic Battery Type Selection** — automatically selects the battery type when you snap the battery into the charger's battery compartment, for foolproof charging.

**Charge Indicator** — lights when the battery pack is charging, automatically turns off when the battery pack finishes charging, and flashes if battery pack fails to charge, indicating a problem with the battery (the battery is not properly connected, needs to be replaced, or there is a short, for example).



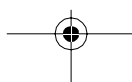
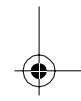
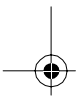
**Short Circuit Protection** — prevents damage if the charging jack is accidentally shorted.



**Safety Guard Protection Timer** — prevents overcharging that can damage the battery pack.



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**WARNING:** To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture.

	<b>CAUTION</b>	
RISK OF ELECTRIC SHOCK. DO NOT OPEN.		
<p><b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.</p>		

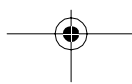


This symbol is intended to alert you to the presence of un-insulated dangerous voltage within the charger's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the charger's case.



This symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this charger.

*Not recommended for outdoor use.*





## IMPORTANT SAFETY INSTRUCTIONS

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### SAVE THESE INSTRUCTIONS!

**DANGER:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS.

This manual contains important safety and operating instructions for this battery charger. Before you use the battery charger, read all the instructions and cautionary markings in this manual and on the battery charger, the battery, and the product that uses the battery.

**Warning:** To reduce the risk of injury:

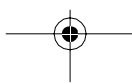
- Charge only nickel-cadmium and nickel-metal hydride rechargeable batteries. Other types of batteries could burst, causing personal injury and damage.
- Unplug the charger from the outlet before attempting any maintenance or cleaning.
- Do not disassemble the charger; take it to a qualified service technician when service or repair is required. Improper reassembly may result in a risk of electric shock or fire.
- Do not use an attachment not recommended or sold by RadioShack as this could result in a risk of fire, electric shock, or injury to persons.

**Caution:** To reduce the risk of damage:

- Do not expose the charger to rain or excessive moisture.
- Do not operate the charger if it has been dropped or damaged in any way. Take it to a qualified service technician for repair.
- Do not operate the charger with a damaged cord or plug — replace them immediately. To reduce the risk of damage to the electric plug and cord:

—Make sure the cord is not located where it will be stepped on, tripped over, or otherwise subjected to damage or stress.

—Disconnect the charger by pulling the cord's plug rather than the cord.





## **OPERATION**

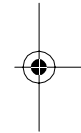
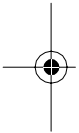
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Always use a battery pack until it can no longer provide the necessary power, then recharge it.

### **Cautions:**

- This charger works only with 4.8-volt, 6.0-volt, 7.2-volt and 9.6-volt nickel-cadmium/nickel-metal hydride cord-connected or cartridge battery packs. Charging another type of battery pack could damage the battery pack or the charger.
- Avoid charging fully-charged battery packs. Doing so can damage the battery pack or cause it to lose some of its storage capacity.
- Use the charger only in an area that is at room temperature (65–80°F). Charging battery packs in hot areas can permanently reduce the battery pack's power capacity.
- To protect battery packs, allow them to cool for 20 minutes before recharging them.
- Charge only one battery pack at a time.

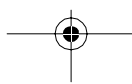


## **CHARGING A CORD-CONNECTED BATTERY PACK**

**Warning:** Connect or disconnect the battery connector only when the charger's AC cord is disconnected. Otherwise, the battery connector might arc and burn.

1. Insert the battery connector of the battery pack you want to charge into **CHARGING JACK**.

*illus of CHARGING  
JACK location with  
battery pack connector*





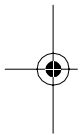
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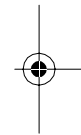
**Notes:**

- If the connector does not fit, turn it over and try again. Do not force it.
- To charge a 4.8-volt cord-connected battery pack, plug the small end of the supplied adapter cord fully into the battery pack's connector. Then plug the adapter cord's large end fully into the **CHARGING JACK**.

***illus of 4.8 volt  
battery pack connection***



2. Insert the battery pack into the charger's large compartment. Make sure that the battery pack makes contact with the voltage selector sensor and the two latches at the bottom of the compartment.



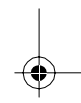
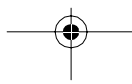
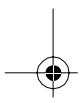
***illus of battery pack  
insertion***

**Note:** Do not insert a cartridge battery pack while charging a cord-connected battery pack, otherwise, the cord-connected battery pack will not charge.

3. Plug the charger's cord into a standard AC outlet. After a few seconds, the charger automatically selects the appropriate charging current and charging begins.

**Notes:**

- The **CHARGE** indicator lights when the battery pack is charging and automatically turns off when the battery pack finishes charging, and flashes if the battery pack

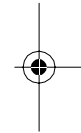
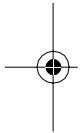




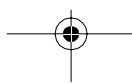
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fails to charge.

***illus of CHARGE indicator location***



- If the battery pack you want to charge is a new one or has not been used for more than 3 months, leave it in the charger for 24 hours, even if the **CHARGE** indicator turns off.
  - If the **CHARGE** indicator flashes, check the battery connection. If it still flashes, the battery pack might need to be replaced or there might be a short in the **CHARGING JACK**. Try charging a different battery pack. If the charger still does not work, disconnect it from power and take it to your local RadioShack for assistance.
  - The **CHARGE** indicator lights flash after five minutes if a short to the **CHARGING JACK** is detected.
4. When the **CHARGE** indicator turns off, unplug the charger's AC cord from the outlet, then disconnect the battery pack.



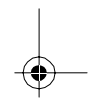
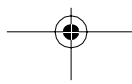
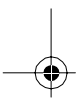
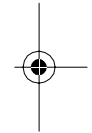
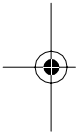


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## CHARGING A STANDARD CARTRIDGE BATTERY PACK

To charge a standard cartridge battery pack, simply insert the battery pack in the **CARTRIDGE** compartment, then press it down firmly to ensure the battery pack makes contact with the metal pins at the bottom of the compartment.

**Caution:** Do not force the battery pack. If the cartridge does not fit, turn it over and try again.







# **SPECIFICATIONS**



Input Voltage ..... AC 120 V  $\pm$ 10%, 60 Hz

### Charging Current for Battery Packs

Cord-Connected 7.2V ..... DC 1.5 A  $\pm$ 10%

Cord-Connected 4.8V/9.6V ..... DC 0.8 A  $\pm$ 10%

Cartridge 4.8V/6.0V/7.2V/9.6V ..... DC 0.8 A  $\pm$ 10%

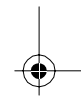
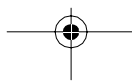
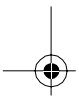
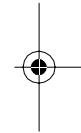
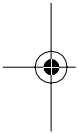
### Constant Trickle Charge Current

(All Battery Types) ..... 30 mA  $\pm$ 7 mA

Safety Guard Protection Timer ..... 130 minutes  $\pm$ 10 minutes

Rated Power ..... 60W

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.





## CARE AND MAINTENANCE



Your RadioShack AC Universal Charger is an example of superior design and craftsmanship. The following suggestions will help you care for your charger so you can enjoy it for years.



Keep the charger dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.



Use and store the charger only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, and distort or melt plastic parts.



Keep the charger away from dust and dirt, which can cause premature wear of parts.

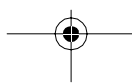


Handle the charger gently and carefully. Dropping it can damage circuit boards and cases and can cause the charger to work improperly.



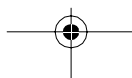
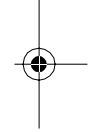
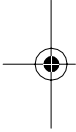
Wipe the charger with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the charger.

Modifying or tampering with the charger's internal components can cause a malfunction and might invalidate its warranty. If your charger is not performing as it should, take it to your local RadioShack store for assistance.





# NOTES



### Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, Dept. W, 100 Throckmorton St., Suite 600, Fort Worth, TX 76102

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3/97

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**Fort Worth, Texas 76102**

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