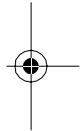
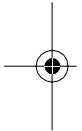


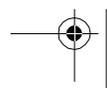
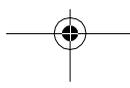
Cat. No. 23-410
OWNER'S MANUAL

Please read before using this equipment.

Ni-Cd and Nickel Metal Hydride Rechargeable Battery Pulse Charger



RadioShack®



FEATURES

Your RadioShack Ni-Cd and Nickel Metal Hydride Rechargeable Battery Pulse Charger lets you quickly charge five different sizes of standard nickel-cadmium (Ni-Cd) or nickel-metal hydride (Ni-MH) batteries.

The charger's four battery chambers let you charge up to four batteries of the same size and type — AAA, AA, C, or D — at the same time, while the connector inside the charger lets you also charge one 9V battery.

Your charger has these features:

Intelligent Discharge System (IDS) — automatically discharges and conditions cells to a suitable level before recharging, to ensure maximum charging capacity.

Microprocessor Controlled Charging — automatically detects the battery type and monitors the charging process to ensure the right amount of current is supplied.

Soft-Start Charging — gradually increases charging current when batteries start charging to avoid heat build-up that can reduce battery life.

Fuzzy Logic Intelligent Charging Current Control — automatically senses when a battery is fully charged and switches first to top-off, then trickle-charge, to prevent overcharging.

Red LED Indicator — shows 9V battery charging status.

Liquid Crystal Display — shows AAA, AA, C, or D-size battery charging status.

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

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



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



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

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SAFETY INSTRUCTIONS



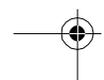
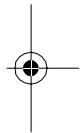
SAVE THESE INSTRUCTIONS

This manual contains important safety and operating instructions for your charger.

Before you use the battery charger, read all instructions and cautionary markings on the charger, the batteries to be charged, and the products that use the batteries.

Warnings:

- To reduce the risk of injury, charge only nickel-cadmium or nickel-metal hydride batteries with this charger. Other types of batteries might burst, causing personal injury and damage to the charger.
- To prevent damage to your charger and risk of electric shock, always unplug the AC adapter from the AC outlet before you plug it into or unplug it from the charger.
- Do not expose the charger to rain or excessive moisture.
- Use of any attachments not intended for use with this battery charger can result in a risk of fire, electric shock, or personal injury.
- Never operate the charger if it has received a sharp blow or been dropped or damaged in any way. Have it repaired by qualified service personnel.
- Do not disassemble the charger. Have it serviced or repaired by qualified service personnel only. Incorrect assembly can result in a risk of electric shock or fire.
- To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
- To reduce the risk of damage to the AC adapter, disconnect the charger by pulling the plug rather than the cord.
- Do not use an extension cord. Its use could result in fire or electric shock.
- Do not operate the charger if the AC adapter is damaged. Have the charger repaired by qualified service personnel.
- Never alter the provided AC adapter. If it does not fit in the AC outlet, have a qualified technician install the proper outlet. Improper connection can result in an electric shock.
- Never use the charger as a DC power source for any electrical equipment.



OPERATION

CHARGING HINTS

To see what is happening while your charger is charging AAA, AA, C, or D-size batteries, watch for these symbols to appear on the charger's display.

 Load	Reminds you to load batteries.
 Numeric	Digits show battery voltage.
 Bad Battery	If a battery is bad or should not be charged, both  and  appear.
 Power	Appears during trickle charging when batteries are almost fully charged.
 Intelligent Discharge System (IDS)	During battery discharge,  appears steadily with  blinking.
 Soft-Start	During soft-start,  appears steadily and  blinks.
 Fast Charge	During fast charging,  appears steadily and FAST blinks.
 Top-off/Trickle	During top-off or trickle charging,  appears steadily with  and  alternately blinking.

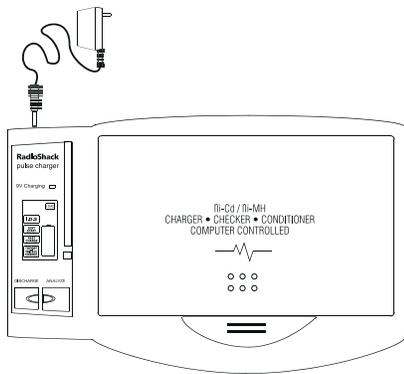
 Amount of Charge	The  bars illustrate the charging process and scan inside the amount-of-charge symbol (except during top-off/trickle charging). The more bars that appear while a battery is being analyzed, the more charge there is in the battery.
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Cautions:

- Remove all batteries from the charger at least 3 seconds before connecting the charger to AC power. Failure to do so might cause the charger to lock up during the power up cycle. If this happens, disconnect power, remove the batteries, then reconnect power.
- All batteries loaded into the charger's chambers must be of the same size and type.
- Do not try to charge a battery of a size other than those listed in this manual. Doing so could damage the batteries and charger.
- Before unplugging the adapter from the AC outlet, remove the batteries to prevent leakage that will damage the charger.

CONNECTING POWER

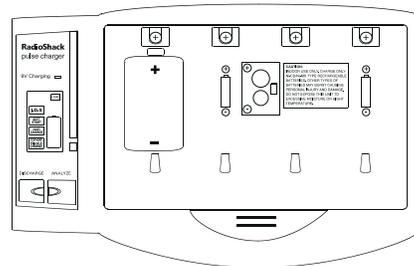
Before connecting power, remove all batteries from the charger. Insert the supplied adapter's barrel plug into the **DC 12V 500 mA** jack on the back of the charger. Then plug the other end of the adapter into a standard AC outlet. **00** appears and **▶▶** flashes on the display.



CHECKING 1.2V BATTERIES

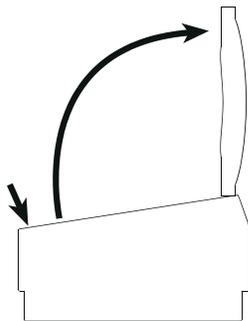
You can use this charger to check the charge in a 1.2V Ni-Cd/Ni-MH battery. (You cannot use this function to check the voltage of a 9V battery.)

1. With the charger connected to AC power, place a single battery into any chamber. Do not close the cover yet (this starts the charging process).



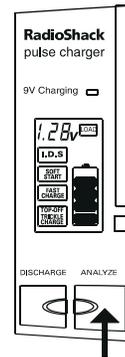
OPENING THE COVER

To open the cover, press the tab below the cover and lift up the cover.



2. Press **ANALYZE**.

The charger displays the estimated charge level, with the amount-of-charge symbol and the numeric characters showing the voltage.



Notes:

- The amount-of-charge shown is based on the normal discharging curve of a fully charged battery. It might be inaccurate if the battery being checked was not fully charged before it was last used.

- If the battery is unsuitable for charging,  appears on the display. Do not attempt to charge a bad battery. At the end of a nickel-cadmium or nickel-metal hydride battery's useful life, it must be recycled or disposed of properly. Contact your local, county, or state hazardous waste management authorities for information on recycling or disposal programs in your area. Some options that might be available are: municipal curbside collection, drop-off boxes at retailers such as your local RadioShack store (nickel-cadmium only), recycling collection centers, and mail-back programs.
 - The checking process drains current from batteries. Therefore, repeatedly checking the same batteries decreases their voltage.
3. To check another battery, repeat Steps 1 and 2. To charge the battery, see "Charging AA/AAA/C/D Batteries."

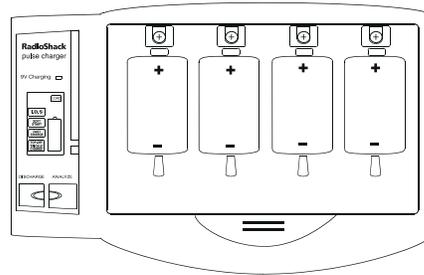
Insert Charging Time Graph

Note: Charging times are typical; actual charging times might vary. The built-in Fuzzy Logic Control automatically determines the optimal charging current, which in turn determines the charging time.

1. After connecting power to the charger, open the cover and place up to four AAA, AA, C, or D batteries in the charger, one battery per chamber, as indicated by the polarity symbols (+ and -) marked inside the chambers.

CHARGING AA/AAA/C/D BATTERIES

This graph shows the estimated typical fast-charging time for different sizes of batteries. Note that charging times increase when more than one battery is charged.

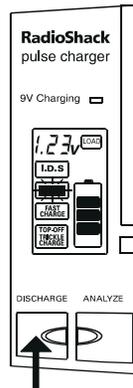


Caution: All batteries loaded into the charger's chambers must be of the same size and type.

2. Close the cover. **»»** disappears.

First, the charger checks the batteries' condition. Then, if the batteries are more than 60% discharged, the charger's Intelligent Discharge System (IDS) automatically and completely discharges them. The numeric symbol shows the batteries' voltage, the bars in the amount-of-charge symbol scan down, and the black triangle in the IDS icon flashes to indicate that the charger is discharging the batteries.

Note: To stop the discharging cycle, you can press **DISCHARGE**. The charger begins soft-start charging. However, repeatedly doing this can reduce the batteries' maximum capacity.



If the batteries are less than 60% discharged, the charger starts soft-start charging, gradually increasing the charging current to the batteries. The bars in the amount-of-charge symbol scan inward and the black bar in the soft-start symbol icon flashes.

Next, the charger begins fast charging. **FAST** flashes, and the charger charges the batteries up to 80–90%

of full capacity. The bars inside the amount-of-charge symbol scan upward.

The charger then enters the top-off charging mode to top off the remaining 10–20% of battery capacity. **▶** and **↺** and the top bar inside the amount-of-charge symbol flash.

Finally, the charger enters the trickle charging mode, providing a very low current to keep the batteries at their fullest until you open the cover. **▶** and **↺** continue to flash and **⚡** appears. All bars in the amount-of-charge symbol appear.

3. Open the cover and remove the batteries.
4. Unplug the adapter from the AC outlet.

Warning: To prevent damage to your charger and risk of electric shock, always unplug the AC adapter from the AC outlet before you plug it into or unplug it from the charger.

Cautions:

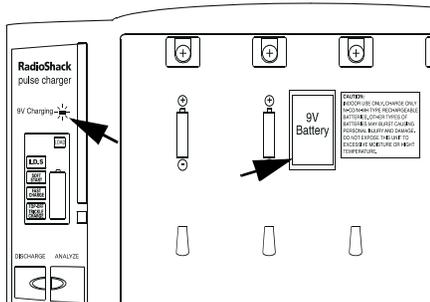
- After you unplug the adapter from the AC outlet, wait at least 3 seconds before you plug it into the AC outlet again.
- Be sure to remove all batteries before you unplug the adapter to prevent battery leakage that will damage the charger.

Note: The charger can activate or revitalize some chemically dormant batteries. If you have new batteries (or batteries that have not been used for a long time) that cannot be fully charged (charged to more than 60% of battery capacity) singly, recharge them three or four at a time, then discharge them completely through normal use. Repeat this process five times. Then, if the batteries will still not fully charge singly, this means you will always have to charge them three or four at a time.

CHARGING A 9V BATTERY

Refer to the graph on Page 6 for charging times.

1. After connecting power to the charger, simply push the terminals of the 9V battery onto the connectors inside the charger, matching the polarity symbols marked next to the connectors. The charger begins charging the battery and the 9V charging indicator flashes.



Notes:

- The cover does not need to be closed to charge the 9V battery.
 - You can charge up to 4 AA or AAA batteries, or 2 C or D batteries at the same time as you charge a 9V battery.
2. When charging is complete, the 9V charging indicator lights steadily. Remove the battery.

Note: If other batteries are still charging after the 9V battery is fully charged, the 9V charging indicator continues to flash until the other batteries are fully charged.

3. Unplug the adapter from the AC outlet.

Warning: To prevent damage to your charger and risk of electric shock, always unplug the AC adapter from the AC outlet before you unplug it from the charger.

Cautions:

- After you unplug the adapter from the AC outlet, wait at least 3 seconds before you plug it into the AC outlet again.
- Be sure to remove all batteries before you unplug the adapter to prevent battery leakage that will damage the charger.



CARE AND MAINTENANCE

Your RadioShack Ni-Cd and Nickel Metal Hydride Rechargeable Battery Pulse 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 can contain minerals that corrode electronic circuits.



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



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



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



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 your charger.

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



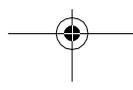
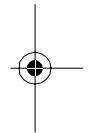
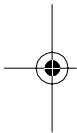


SPECIFICATIONS



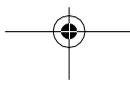
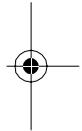
Number of Channels for 1.2V Ni-Cd/Ni-MH Batteries	4
Number of Channels for a 9V Ni-Cd/Ni-MH Battery	1
Input Power Rating	DC 12 V, 500 mA, 6.0 VA
Output Power Rating	DC 2.0 V, 2.0 A max. 4.0 VA DC 10.5 V, 25.0mA max. 0.3 VA
1.2V Ni-Cd/Ni-MH Battery Charging Current	2.0 A max.
9V Ni-Cd/Ni-MH Battery Charging Current	17.5–22.5 mA
Discharging/Negative Pulse Loading	0.5 ohm
Discharging Current Rating	2.5A max.
Battery Sizes	AAA, AA, C, D, 9 V
1.2V Ni-Cd/Ni-MH Battery Rated Capacity	180 mAh min.
9V Ni-Cd/Ni-MH Battery Rated Capacity	65 mAh min./120 mAh max.
Operating Temperature	32°F to 104°F (0°C to 40°C)
Recommended Charging Temperature for Optimum Charging Performance	68°F to 86°F (20°C to 30°C)
Storage Temperature	–4°F to 158°F (–20°C to 70°C)

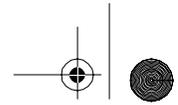
Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.





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.

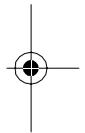
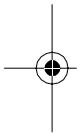
This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs 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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