AC/DC CHARGER

**#611**

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Input</th>
<th>120VAC or 12VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>4-8 cell (4.8V-9.6V)</td>
</tr>
<tr>
<td>Battery capacity</td>
<td>50maH-6000maH</td>
</tr>
<tr>
<td>Charging rate</td>
<td>0.1amp-6.5amp</td>
</tr>
<tr>
<td>Threshold</td>
<td>Adjustable 3mV-20mV NiCD, 3mV-15mV NiMH</td>
</tr>
<tr>
<td>Size</td>
<td>6.50&quot; x 6.75&quot; x 2.25&quot;</td>
</tr>
</tbody>
</table>

The Quasar is a versatile charger, which will charge both Ni-CD and Ni-MH battery packs.

- The charge rate is adjustable from 0.1 amp to 6.5 amp, allowing it to be used for charging packs with capacities ranging from 50mah to 6000mah.
- Quasar also has the option of either 120VAC input power or 12VDC input power.
- The Quasar charger may be used to charge 4-8 cell battery packs.
- The Quasar has adjustable discharge of .1amp-20amps.
- Programmable for up to three cycles for testing or breaking in packs.
- Cooling fans cycle on and off automatically as required.

### QUICK-START INSTRUCTIONS

1. Plug the power cord into the charger.
2. Plug the power cord into the power source.
3. Select the charge rate.
4. Connect the battery pack to the charger.
5. Select battery type and mode with up/down buttons.
6. Push Enter button to start.
7. Charge will emit several beeps when done.

Includes:
- Charger system.
- Power cord for 120V AC.
- Large alligator clips for 12V DC.
POWERING THE CHARGER

WARNING! To avoid overheating, never place charger and/or battery pack in direct sunlight while charging.

DETERMINE THE TYPE OF INPUT POWER YOU WILL BE USING

- If using 120VAC then read the two steps of the 120VAC section following.
- If 12VDC then read the two steps of the 12VDC section below.

IF USING 120VAC

1. Plug the power cord into the charger
   • Plug the AC cord into the input socket located on the right side of the charger.
   WARNING! The male plug on the cord should not be plugged into the AC source while connecting to the charger.

Go to step 2 at right.

2. Hook up the unit to your charging source
   • Plug the male plug on the AC cord into the AC source.
   Go to step 3 below.

IF USING 12VDC

1. Plug the power cord into the charger
   • Insert the DC adapter cord’s female plug into the male DC input plug exiting the rear of the charger.
   WARNING! When using a lead acid battery, such as a car or motorcycle battery, as a power source, care must be taken as it may generate explosive gases during charging operation. To prevent this danger always unplug the DC adapter cord from the charger before disconnecting the alligator clips from the battery.

Go to step 2 at right.

2. Hook up the unit to your charging source
   • The power source must be a minimum of 12VDC and a maximum of 13.8VDC. If a power supply is used, a minimum of 7 amps output is required. The red wire alligator clip should be connected to the positive (+) on the 12VDC source and the black wire alligator clip connected to the (-) negative side.

For 12VDC operation, connect the DC adapter cord’s plug to the plug connected to the rear of the charger.

Go to step 3.
The Quasar Pro charger has program options built in that allow you to custom design the functions of the charger to your needs.

The Quasar Pro charger has three programmable operational modes: Charge mode, Discharge mode, and Cycle mode. The Cycle mode is not normally seen in a charger and is a useful tool in cycling up (breaking in) new cells and testing used packs to keep a record of their condition.

### CHARGING MODE
**Programmable settings**
- Number of cells.
- Charge rate (adjustable from 0.10 amp to 6.5 amp).
- Type of battery.
- mAH rating.
- Over peak voltage cutoff protection (adjustable 3mV/cell to 20mV/cell, 15mV).

### DISCHARGING MODE
**Programmable settings**
- Discharge rate (adjustable 0.10amp to 20.0amp). Maximum discharge rates are: 4-6 cells = 20 amps, 7-8 cells = 15 amps.

### CYCLE MODE
**Programmable settings**
- Number of cycles.
- Delay time after charge.
- Delay time after discharge.

The first time you use the charger you must set the values for these setups. To help you select the proper settings, see recommended settings at right. Once set, these values become the default settings and will automatically recall them each time you turn the charger on.

The default settings may be changed at any time by entering the program mode, scrolling to the appropriate screen and using the up and down buttons to make the changes. These new settings will automatically become the new default settings.

### CHARGING MODES

#### PROGRAMMING THE CHARGER

1. To start programming, hook up the charger to your power source according to steps 1-2 earlier in these instructions. Screen will read 

2. Push SETUP button. Screen will read Use Up and Down buttons to select NiCD or NiMH battery.

### RECOMMENDED SETTINGS

<table>
<thead>
<tr>
<th>CHARGE RATES</th>
<th>DISCHARGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 500mAH</td>
<td>0.5 amp</td>
</tr>
<tr>
<td>500mAH - 1100mAH</td>
<td>1.0 amp</td>
</tr>
<tr>
<td>1200mAH – 1600mAH</td>
<td>3.0 amp</td>
</tr>
<tr>
<td>1700mAH – 4000mAH</td>
<td>4.0 amp</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OVER PEAK VOLTAGE CUTTOFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100mAH or less</td>
</tr>
<tr>
<td>1200-2400mAH NiCD</td>
</tr>
<tr>
<td>3000mAH NiMH</td>
</tr>
</tbody>
</table>

- Delay time after charging 2 min.
- Delay time after discharging 30 min.
- Discharge cutoff is preset to .9volt per cell.

### QUASAR PRO VERSION 1.0

CHARGER MODE

XXXX XXXX XXXX

BATTERY TYPE IS
NiMH
<table>
<thead>
<tr>
<th>Step</th>
<th>Instruction</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select number of cells.</td>
<td>CELL NUMBER X CELL</td>
</tr>
<tr>
<td>4</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select mAh rating.</td>
<td>BATTERY CAPACITY XXXXX mAh</td>
</tr>
<tr>
<td>5</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select Charger Current.</td>
<td>CHARGER CURRENT X.XA</td>
</tr>
<tr>
<td>6</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select Discharge Current.</td>
<td>DISCHAR. CURRENT XX.XA</td>
</tr>
<tr>
<td>8</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select Trickle Current.</td>
<td>TRICKLE CURRENT X.XXXA</td>
</tr>
<tr>
<td>9</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select to select the mV/cell over peak cutoff. Charger will automatically adjust to number of cells.</td>
<td>ΔPEAK AD. NiMH XmV/C. XXmV/P.</td>
</tr>
<tr>
<td>10</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select Number of Cycles (max. three).</td>
<td>CYCLE NUMBER XTIME</td>
</tr>
<tr>
<td>11</td>
<td>Push ENTER to store in memory. Screen will read. Use Up and Down buttons to select Delay Time After Charge.</td>
<td>DELAY TIME AFTER CHARGE XXMIN</td>
</tr>
<tr>
<td>12</td>
<td>Push ENTER to store in memory. Screen will read. Use Up or Down buttons to select Delay Time After Discharge. Reedy recommends at least thirty minutes. Push ENTER to store in memory.</td>
<td>DELAY TIME AFTER DISCHARGE XXMIN</td>
</tr>
</tbody>
</table>

This concludes the programming procedure. All settings will be stored in default memory and will automatically be recalled when charger is turned on (charger automatically comes on when the power source is hooked up). Any setting may be changed by entering the program mode with the SETUP button and scrolling through the screens until you reach the value you want to change and making your adjustments using the Up and Down buttons.

You may now proceed into operational mode.
The Quasar Pro charger is a competition charger and is supplied with alligator clip leads for the output harness. The red alligator clip connects to the positive (+) connection on the battery. The black connects to the negative (-).

1 Connect the battery pack to be charged to the alligator clips protruding from the front of the charger.

**WARNING!** Plugging in/hooking up backward may severely damage the charger and battery.

**WARNING!** The early versions of Ni-MH batteries tend to false peak during the first ten minutes of the charging cycle. If you are charging this type of battery pack, it is recommended you monitor the charge during the first ten minutes. If the charger shuts off during that period and the pack is at room temperature, push the ENTER button to resume charging.

**OPERATIONAL MODES**

When turning the charger on, if you are not going to change any of the programmed settings, you may go directly into one of the operational modes. You can then select desired mode by procedure listed below.

2 Turn on the charger and connect the battery to the charger. One of the following screens will read:

| CYCLE MODE XTIME | CHARGER MODE | DISCHARGE MODE |

Use Up or Down buttons to select desired operating mode. Screen will display selected mode and start command.

Push ENTER button. Charger will automatically start in the selected mode.

The charger may be stopped at any time in any of the operational modes by pushing the BACK/SETUP button.
Two screens can be displayed for each mode while the cells are charging by selecting the Up and Down buttons.

### CHARGE MODE SCREENS

<table>
<thead>
<tr>
<th>charge mAh</th>
<th>charge time</th>
<th>input voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 2745mAh</td>
<td>0:28:05</td>
<td>INPUT 13.41V</td>
</tr>
<tr>
<td>8.65V</td>
<td>4.00A MH</td>
<td>PEAK 9.258V</td>
</tr>
</tbody>
</table>

### DISCHARGE MODE SCREENS

<table>
<thead>
<tr>
<th>discharge mAh</th>
<th>discharge time</th>
<th>input voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>D 1246mAh</td>
<td>0:03:10</td>
<td>INPUT 13.50V</td>
</tr>
<tr>
<td>6.276V</td>
<td>20.0A MH</td>
<td>AVERAGE 6.80V</td>
</tr>
</tbody>
</table>

### CYCLE MODE SCREENS

<table>
<thead>
<tr>
<th>discharge delay</th>
<th>remaining delay time</th>
<th>charge delay</th>
<th>remaining delay time</th>
</tr>
</thead>
<tbody>
<tr>
<td>D DL XXmAH</td>
<td>3:48</td>
<td>C DL 7.38V</td>
<td>2.48 NiMH</td>
</tr>
<tr>
<td>7.41V</td>
<td>NIMH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When done cycling, the screen will read following information.

### FINAL SCREEN INFORMATION

<table>
<thead>
<tr>
<th>final</th>
<th>charge mAh</th>
<th>discharge mAH</th>
<th>input voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>F C2790</td>
<td>D2932mAH</td>
<td>0:08:12</td>
<td>INPUT 13.90</td>
</tr>
<tr>
<td>6.89V</td>
<td></td>
<td></td>
<td>9.221Vp AV6.772</td>
</tr>
</tbody>
</table>
WARNING

ASSOCIATED ELECTRICS, INC. AND REEDY MODIFIEDS HAVE NO CONTROL OVER THE USE AND APPLICATION OF THIS PRODUCT AND SHALL NOT BE LIABLE FOR ANY PROPERTY DAMAGE OR PERSONAL INJURY RESULTING FROM THE FAILURE TO FOLLOW THESE INSTRUCTIONS OR IMPROPER USE OF THE PRODUCT.

DO NOT PLACE ANYTHING NEXT TO THE CHARGER THAT WILL BLOCK THE FREE FLOW OF AIR TO THE COOLING FAN AND AIR FLOW SLOTS.

NOT MEANT FOR USE BY ANYONE WITHOUT ADULT SUPERVISION.

AFTER USE, ALWAYS LET BATTERY COOL TO ROOM TEMPERATURE BEFORE RECHARGING. ATTEMPTING TO CHARGE A WARM BATTERY WILL CAUSE PERMANENT DAMAGE TO BATTERY.

THIS CHARGER WILL CHARGE Ni-CD OR Ni-MH BATTERIES ONLY. DO NOT ATTEMPT TO CHARGE ANY OTHER TYPE OF BATTERY, SUCH AS ALKALINE, LITHIUM, ETC.

USE ONLY WITH BATTERIES THAT ARE NO MORE THAN TWO YEARS OLD AND IN GOOD CONDITION.

LIMITED WARRANTY

ASSOCIATED ELECTRICS, INC. AND REEDY MODIFIEDS WARRANTS THIS CHARGER TO BE FREE OF ANY DEFECTS IN MATERIAL OR RESULTING FROM WORKSMANSHIP FOR A PERIOD OF NINETY DAYS FROM DATE OF PURCHASE.

WARRANTY DOES NOT COVER:

• DAMAGE DONE BY INCORRECT CONNECTING OF INPUT OR OUTPUT POWER CORDS.
• DAMAGE CAUSED BY EXCEEDING RECOMMENDED INPUT VOLTAGE.
• DAMAGE CAUSED BY EXCESSIVE OR ABUSIVE USE.
• DAMAGE CAUSED BY CHARGING MORE THAN RECOMMENDED NUMBER OF CELLS.
• DAMAGE CAUSED BY ANY MODIFICATIONS TO INPUT OR OUTPUT POWER CABLES.
• DAMAGE CAUSED BY ANY LIQUID OR FOREIGN MATERIAL ENTERING INTERIOR OF CHARGER.

REPAIRS

All warranty work must be accompanied by a dated, itemized sales receipt.

Shipping charges are not covered by warranty and will be charged by COD on returned product. (Credit card preferred to eliminate COD charges—we do not ship by US Mail.)

Repair fee after 90 day warranty period will be $90.00. Payment must accompany item returned for repair.

Include a short summary of problem and include a daytime phone number and e-mail address.

Units under warranty, found to be faulty, will be fixed free of charge. Owners of units under warranty found to be free of any faults will be charged a fee of $20.00 to cover handling, shipping, and testing.

Mail all warranty and repair work to:
Associated Electrics
Customer Service
3585 Cadillac Ave.
Costa Mesa, CA. 92626
USA
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