



The DuraTrax® Onyx™ 220 charger is great for a wide variety of applications! The 0.1 to 5.0 amp adjustable current range plus 4 to 8 cell NiCd and NiMH compatibility makes this charger an excellent choice for applications as small as 1/32 scale micros to 1/8 scale electrics – even nitro receiver packs and transmitter packs. The advanced, reversed LCD with backlight, and simple menus and controls are very easy to use anytime. The tiny built-in switching AC power supply makes for super-simple transportation, yet can still deliver the power for race quality packs. A unique jack is built-in which is handy for charging 4 to 5 cell nitro Rx batteries or even transmitter packs. A quick reference flowchart is included for easy understanding of all menus.



It is strongly recommended to completely read this manual before use! Damage resulting from misuse or modification will void your warranty.

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SPECIFICATIONS

AC input:	110V AC 60Hz
DC input:	11 to 15V DC, built-in lead with alligator clips
Battery types:	4 to 8 NiCd or NiMH (4.8 to 9.6V)
Battery capacity range:	50 to 9900mAh
Fast charge current:	0.1 to 5.0A linear, adjustable (40W max.)
Fast charge termination:	peak detection
Fast charge safety timer:	off – 300 minutes
Peak sensitivity:	3 to 20mV adjustable
Trickle charge current:	auto (1/20 fast chg setting), or manual adjust (0 to 250mA)
Controls:	4 push buttons
Battery memories:	5
Display type:	2 x 8 reversed LCD with backlight
Audible indicators:	indicates start, stop, errors
*Output connections:	built-in lead with standard connector, built-in jack for charging 4 or 5 cell Rx packs or Tx packs
Protective devices:	solid-state reverse polarity and current overload
Case size:	5.7" x 5.1" x 1.8" [145 x 130 x 45mm]
Weight:	20.4 oz. [578g]
* Adapter - Standard to Deans® Ultra® male available separately (GPMM3131)	
* Adapter - Standard to Vendetta, MiniQuake, RS4 Battery available separately (DTXC2210)	

SPECIAL FEATURES

- A tiny built-in switching AC power supply is great for portability and cramped pit areas, yet can still deliver up to 5 amps charge current!
- Fully adjustable charge currents and NiCd and NiMH flexibility for a wide range of applications.
- Includes a custom reversed LCD with backlight – previously only available in expensive racing chargers! Great for easy viewing in any condition. Shows input and output voltages, peak voltage, charge current, charge capacity and time, and more!
- A unique jack is built-in for charging 4 or 5 cell NiCd or NiMH receiver batteries for nitro models, and even 8-cell transmitter batteries.
- Push button controls and audible tones make for easy setup and control.
- A peak detection system with automatic trickle charge fills packs completely, for optimum battery voltage and run-time. 3 to 20mV adjustable peak detection helps to customize charger-to-battery performance.
- A DC power lead with alligator clips easily connects to many 12V DC power sources.
- Solid-state reverse polarity and current overload safety devices ensure trouble-free operation and long duration.

IMPORTANT PRECAUTIONS



Disconnect the battery and remove input power from the charger immediately if the charger becomes hot!!

- Do not attempt to charge incompatible types of rechargeable batteries as permanent damage to the battery and charger could result.
- Do not use automotive type battery chargers to power the charger.
- Do not allow water, moisture or foreign objects into the charger.
- Do not block the air intake holes, which could cause the charger to overheat.
- Do not attempt to use batteries with more cells or total voltage than listed in the specifications.
- Do not overcharge batteries as permanent damage could result. Do not use a charge current that exceeds the safe level of the battery.
- Do not leave the charger unattended while in use.
- Do not place the charger or battery on flammable surfaces or near combustible materials while in use, such as carpets, a cluttered workbench, paper, plastic, vinyl, leather, and wood, inside an R/C model or full sized automobile!
- Do not connect the charger to AC and DC input power at the same time.
- Allow the charger or battery to cool down before reconnecting.
- Always disconnect from power source when not in use.

GLOSSARY OF TERMS

Amps (A): The unit of measure for charge current.

Milli-amps (mA): A unit of measure for current, being amps (A) multiplied by 1000 and listed as “mA”. So 2.5A is the same as 2500mA (2.5 x 1000). Or, to convert mA to amps, divide the mA number by 1000. So 25mA is the same as 0.025A (25 divided by 1000).

Capacity and milli-amp hours (mAh): The amount of energy a battery can store is called its **capacity**, which is defined as how much current a battery can supply constantly over one hour of time. Most hobby batteries are rated for capacity in “**mAh**” or **milli-amp hours**. A 650mAh battery can deliver 650mA of current for one hour (650mA x 1hr = 650mAh). A 3200mAh battery can deliver 3200mA (3.2A) of current for one hour (3200mA x 1hr = 3200mAh), etc.

“C” rating: Capacity is also referred to as the “C” rating. Some battery suppliers recommend charge currents based on the battery’s “C” rating. A battery’s “1C” current is the same number as the battery’s rated capacity number, but noted in mA or amps. A 600mAh battery has a 1C current value of 600mA, and a 3C current value of (3 x 600mA) 1800mA or 1.8A. The 1C current value for a 3200mAh battery would be 3200mA (3.2A), etc.

INPUT POWER

AC Input: For indoor use, this charger includes a built-in switching AC power supply that delivers power by connecting the AC power cord to a common 110V AC outlet.

DC Input: This charger can be powered by a portable 12V DC power source for use at the track. On the left side of the charger, connect the DC power cord's alligator clips directly to the output terminals on the 12V DC power source. Always match polarities (red lead to red "+" terminal, black lead to black "-" terminal). To utilize the charger's **absolute maximum** power capabilities the DC power source must be capable of delivering at least 4 amps while maintaining 12 volts DC.

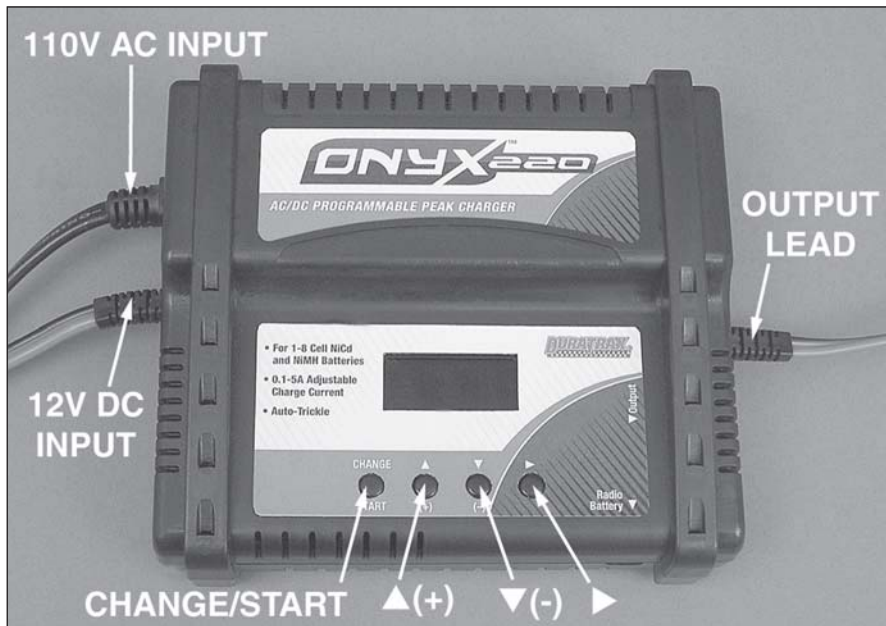


WARNING! Never accidentally short together the positive (+) and negative (-) input connections when connected to 12V DC power. Failure to do so could result in permanent damage to the power source and the charger.

This charger is rated for a maximum output power of 40 watts. Depending on certain conditions (e.g. if charge current is set to maximum, the maximum number of cells are connected to the output, and input voltage is low), the actual current delivered to the battery might be slightly less than the setting. This is normal.

The charger will be on at all times when connected to input power. Disconnect the charger from input power when not in use.

CONTROLS & CONNECTIONS



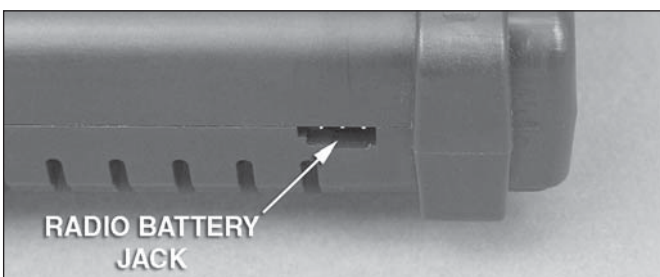
OUTPUT LEAD: The standard connector is compatible with most R/C car batteries. See the SPECIFICATIONS chart on page 1 for a list of additional adapters for charging battery types with different connectors.

CHANGE / START: For starting a charge, or to change settings.

▲ (+): For moving up through menus, or increasing the values of settings on-screen.

▼ (-): For moving down through menus, or decreasing the values of settings on-screen.

▶ : For moving to the right in the menus.



RADIO BATTERY JACK: A unique jack is located on the front edge of the charger for charging of NiCd or NiMH 4 or 5 cell receiver batteries for nitro vehicles, or even 8 cell transmitter batteries! This jack is universal – compatible with Futaba-J, Airtronics-Z, Hitec, JR, and Spektrum receiver battery connectors, and BEC type connectors.

For some transmitters, opening the battery compartment and disconnecting the battery's lead will reveal if the battery's own plug can be connected directly to this jack on the charger. Or, if you wish to connect the charger to a transmitter's built-in charge jack, check with your local retailer for the appropriate charge adapter listed below:

Part number	Description
GPMM3100	BEC to Futaba® Tx Charge Jack Adapter
GPMM3101	BEC to Hitec® / Airtronics® Tx Charge Jack Adapter
GPMM3102	BEC to JR® / Spektrum® Tx Charge Jack Adapter



WARNING! Do NOT attempt to charge one battery through the main output lead, and another through the jack on the front edge of the charger at the same time!! Failure to do so might permanently damage the charger.

DETERMINING BATTERY TYPE & SPECIFICATIONS

Always read your battery's label and/or instruction sheet or consult your battery supplier and determine:

1. **TYPE:** Is the battery a nickel-metal hydride (NiMH) or nickel-cadmium (NiCd)?
2. **RATED CAPACITY:** What is the battery's rated capacity, in "mAh" ("milli-amp hours")?
3. **RATED VOLTAGE:** If not printed on the battery's label, consult your battery supplier or determine the proper pack voltage as shown at right.

Battery Voltage Chart	
Number of cells	Rated Nominal Voltage
4 cells	4.8V
5 cells	6.0V
6 cells	7.2V
7 cells	8.4V
8 cells	9.6V

GETTING STARTED

1. Connect the charger to input power.
2. The "**START**" screen will show after power is applied. The top line of the LCD will show which of the five available memories is active (0, 1, 2, 3, or 4). All settings for this memory will scroll across the bottom line of the screen. If these settings match your battery and needs, skip to the STARTING CHARGE section.

3. If the settings in the displayed memory do not match your battery or needs, refer to the chart at right for the factory default settings for all five memories. To select one of these memories, while in the **START** screen briefly press the CHANGE button. The memory number will flash. Press + or - to select a different memory number. Press CHANGE to activate this memory. Skip to the STARTING CHARGE section.

MEMORY CHART

MEMORY NUMBER	0	1	2	3	4
Battery type	NiCd	NiMH	NiMH	NiCd	NiMH
Capacity (mAh)	1800	2500	4200	1500	1200
Current	4.0A	4.0A	5A	3.5A	2.5A
Safety time (minutes)	32	45	60	31	35
Δ Peak (mV/C)	10	8	8	10	8
Trickle current (mA)	200	200	250	175	125

4. If none of the memories have settings which meet your needs, proceed to the ADJUSTABLE SETTINGS section below to change settings manually.

ADJUSTABLE SETTINGS

1. Select the memory (0-4) that you wish to modify as explained above.
2. Press ► to find the "BATT SETUP" screen.
3. Press ▼ to move down to the BAT.TYPE screen. Press CHANGE to cause the setting to flash, then press (+) or (-) to find the desired battery type (NiCd or NiMH). Press CHANGE to confirm the new setting.
4. Press ▼ to find the CAPACITY screen. If the charger fails to detect peak charge, this function can stop the charge process after a certain amount of energy (mAh) has been delivered to the battery. This protects the battery from accidental overcharge.

Setting this screen to 110-130% of the NiCd or NiMH battery's rated "mAh" value is recommended. As shown in the quick reference chart on page 5, locate the rated capacity of your battery in the left column, then find your battery's 110% or 130% capacity value to the right. Enter the desired capacity value into this screen.

Press CHANGE to cause the setting to flash, then press (+) or (-) to find the proper capacity value (as close as possible). Press CHANGE to confirm the new setting.

5. Press ▼ to find the peak charge CURRENT setting. Press CHANGE to cause the setting to flash. Press (+) or (-) to adjust the value. Press CHANGE again to confirm the setting. Do not exceed the maximum rated charge current for the battery! Refer to the chart here for recommendations for slow, medium, and quick charges. **Note:** If applying a slow charge to the battery, it will be necessary to set the S_TIMER screen to “off” (see below).

6. Press ▼ to find the S_TIMER screen. This is a backup safety timer designed to automatically stop fast charge if the battery has not reached peak in a reasonable amount of time. The charger will automatically calculate and set this time in minutes based on the value entered in the capacity screen above.

To manually adjust this value, press CHANGE to cause the setting to flash. Press (+) or (-) to adjust the value. Press CHANGE again to confirm the setting. Do not increase this value so far that the charger no longer offers overcharge protection.

7. Press ▼ to find the Δ PEAK V screen. This “peak sensitivity” function determines how well the peak detection circuit will fill the battery. Settings of 8-10mV for NiCd batteries, and 3-7mV for NiMH batteries are recommended. Lower values usually result in more precise peak detection, but unstable input power sources could cause the charger to errantly stop peak charge too early. Larger values could cause the battery to generate a little extra heat during charge, and result in slightly less accurate peak charges.

8. Press ▼ to find the TRICKLE charge current screen. This is the amount of trickle charge current that will be applied to the battery after peak charge has ended. The charger will automatically set this value based on the fast charge current setting divided by 20. This setting can be manually changed if desired. A setting of “0mA” will effectively turn this feature off. For “AAA”, “AA” or “A” size radio batteries, it is not recommended to set the trickle current to larger than 50mA.

Once you’ve customized a memory, the charger will memorize these settings until changed again manually. For easy reference, record your settings for each memory in the blank chart below.

After settings have been adjusted, press ▲ repeatedly to find the BATT SETUP screen, or press ► to find the START screen.

If you wish to reset all charger settings back to the factory defaults, disconnect the charger from input power. Press and hold the ► button, then connect the charger to input power again. **Do NOT perform this reset if you do not wish to clear all settings in the memories!**

NiCd and MiMH Only Max. Charge Capacity Chart		
Battery's Rated capacity (mAh)	110% Setting	130% Setting
700	800	900
1000	1100	1300
1100	1250	1450
1200	1350	1550
1500	1650	1950
1600	1750	2100
1700	1900	2200
1800	2000	2350
1900	2100	2450
2000	2200	2600
2100	2350	2750
2500	2750	3250
3000	3300	3900
3300	3650	4300
3600	3950	4700
3800	4200	4950
4200	4650	5450
4600	5050	6000
5000	5500	6500

NiCd and NiMH Battery Charge Current Chart				
Battery's rated (mAh)	Slow charge		1hr. charge current	Quick charge current
	current	charge time		
700	0.1A	9-10 hours	0.7A	1.0A
1000	0.1A	13-15 hours	1.0A	1.2A
1100	0.1A	14-16 hours	1.1A	1.3A
1200	0.1A	16-18 hours	1.2A	1.4A
1500	0.2A	9-11 hours	1.5A	3.0A
1600	0.2A	10-12 hours	1.6A	3.2A
1700	0.2A	11-13 hours	1.7A	3.4A
1800	0.2A	12-13 hours	1.8A	3.6A
1900	0.2A	12-14 hours	1.9A	3.8A
2000	0.2A	13-15 hours	2.0A	4.0A
2100	0.2A	14-16 hours	2.1A	4.2A
2500	0.3A	11-12 hours	2.5A	4.5A
3000	0.3A	13-15 hours	3.0A	5.0A
3300	0.3A	14-16 hours	3.3A	5.0A
3600	0.4A	11-13 hours	3.6A	5.0A
3800	0.4A	12-14 hours	3.8A	5.0A
4200	0.4A	14-16 hours	4.2A	5.0A
4600	0.4A	15-17 hours	4.6A	5.0A
5000	0.5A	13-15 hours	5.0A	5.0A

Note: Turn S_TIMER “off” for slow charges

BLANK MEMORY CHART

MEMORY NUMBER	0	1	2	3	4
Battery type					
Capacity (mAh)					
Current					
Safety time (minutes)					
Δ Peak (mV/C)					
Trickle current (mA)					

USER SETUP SCREENS

As shown in the programming flowchart, while in the START screen press ► twice to find the USER SETUP screen. Adjusting the charger's audible tones and melodies is done here.

1. Press ▼ to find the MELODY screen. To change, press CHANGE, and then (+) or (-) to select from 5 different tones, or turn this function off. Press CHANGE again to confirm.
2. Press ▼ to find the BEEP screen. To turn on or off the beeper, press CHANGE, then (+) or (-). When turned on, the beeper will sound anytime a button is pressed. Press CHANGE again to confirm.

VIEW DATA SCREENS

While in the START screen press ► three times to find the VIEW DATA screens. The charger can display several types of input, output, and battery data in these screens, as follows:

1. Press ▼ to find the INPUT V screen. This is the DC voltage measured on the charger's input. Even if connected to an AC input, that voltage is converted to a DC voltage inside the charger and will be displayed in this screen.
2. The OUTPUT V screen shows the DC voltage measured on the charger's output.
3. The PEAK V screen shows the highest measured battery voltage during the last charge.
4. The CAPACITY screen shows how much charge energy was delivered to the battery during the last charge.
5. The CHG TIME screen shows how many minutes the charger delivered a charge to the battery. This does not include any time that a trickle charge was delivered.
6. Press ► to return to the START screen.

STARTING CHARGE

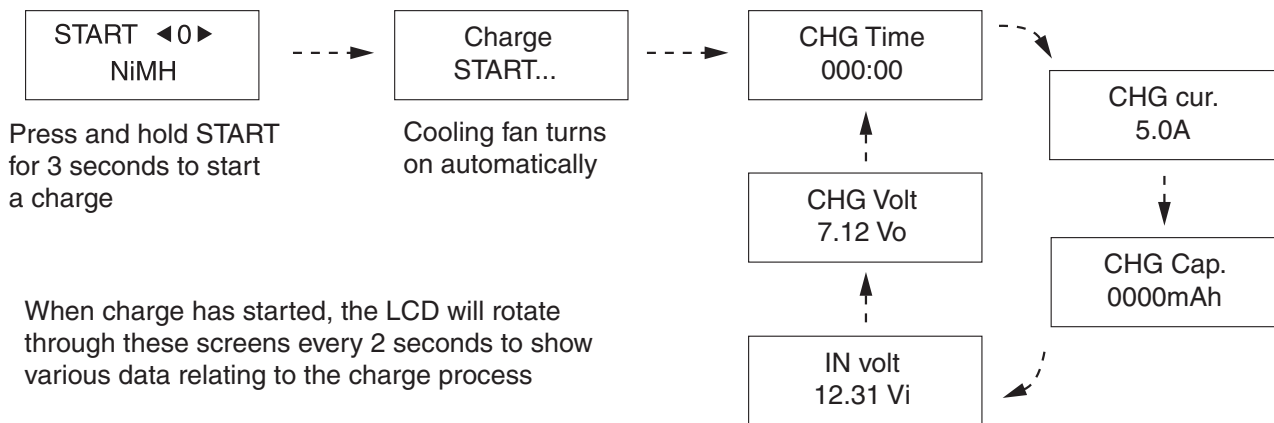
Linear current will be supplied to NiCd and NiMH batteries during charge. The peak detection method will be used to find the highest battery voltage during charge. Once peak voltage is detected, the charger will automatically stop fast charge and start trickle charge.

1. **For 6 or 7 cell power batteries**, connect the battery to the charger's output lead. Make sure the polarities of the battery and charger's leads match (red charger wire to red battery wire, black charger wire to black battery wire). Skip to step 3.
2. **For 4 or 5 cell receiver batteries or 8 cell transmitter packs**, insert the battery's plug in the RADIO BATTERY jack on the front edge of the charger, or use the proper adapter to do so (see page 3). Make sure the battery's black or brown wire is on the right side when inserting into the jack.

Caution: Make sure the charge current setting is safe for your battery to prevent overheating of the cells. "AAA", "AA", "A", and "2/3A" size batteries generate heat more quickly than large sub-C batteries. Most radio batteries should NOT be charged at currents greater than 1.5A. Failure to follow this recommendation could permanently damage your battery!

3. Press ► until the START screen is showing. This screen must be showing in order to start a charge.

4. To **START CHARGE**, press and hold the START button for 3 seconds. The LCD will then rotate through several screens showing different information during the charge process like shown below:

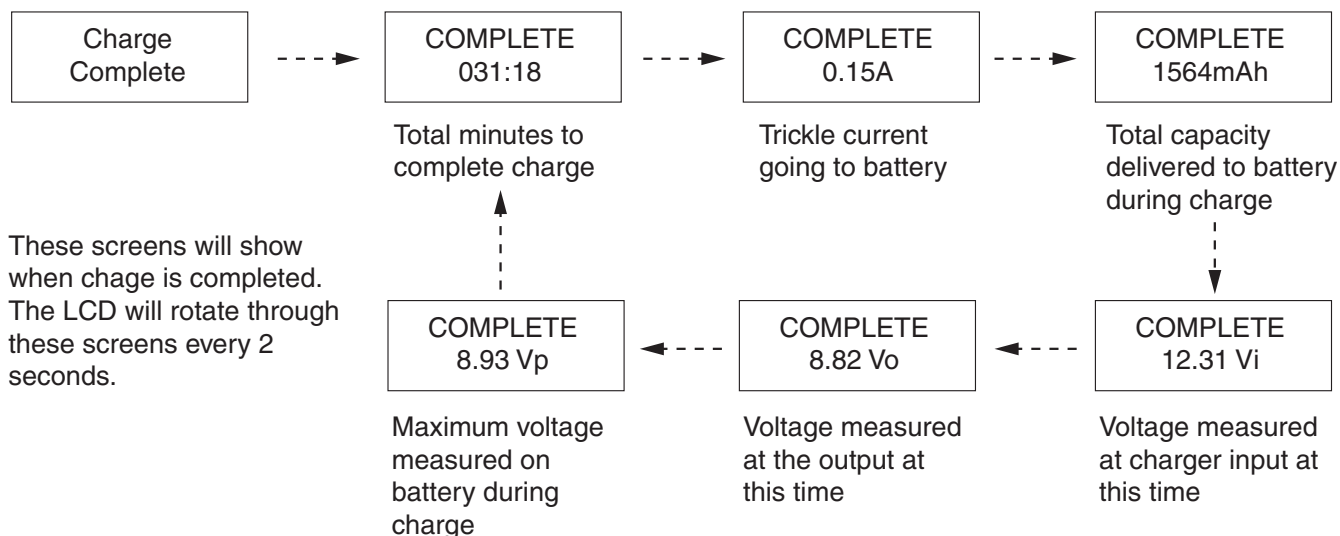


When the “CHG Volt” screen shows, the charger’s loading effect will likely skew the voltage reading of the battery, which is normal. A higher current will skew the reading more than a smaller current. Voltage readings taken when charge is finished will more accurately show the true voltage of the battery.

If you want to manually stop a charge process, either disconnect the battery from the charger, or press START.

CHARGE COMPLETE – TRICKLE CHARGE

When peak charge has been detected, the charger will automatically stop fast charge. Audible tones will sound for about 10 seconds, and a new set of screens will show final results of the charge process like below:



The charger will automatically change to trickle charge mode at this time. The trickle charge current is set automatically by the charger, to approximately be the fast charge current divided by 20. Trickle current will be shown in amps “A”. The charger will remain in trickle charge mode until the battery is disconnected, or the START button is pressed.

If the backup safety timer expires before peak charge is reached, the display will show “TIMEOUT”. If this occurs, you might want to attempt to re-peak the battery by starting another charge. Refer to the TROUBLESHOOTING GUIDE for more details.

To exit the CHARGE COMPLETE screens, press ► to find the START screen. Then, pressing ► until the VIEW DATA screen is found will show all data relating to the last charge that was performed.

CARE & HANDLING OF NiMH BATTERIES

- Do not to allow NiMH batteries to overheat! Disconnect overheated batteries from the charger immediately and allow to cool.
- Store NiMH packs with some voltage remaining on the cells (refer to battery supplier).
- It is important to recharge NiMH batteries immediately prior to use, as they have a high self-discharge rate.
- “AAA”, “AA” and “A” size radio batteries can safely be peak charged at currents up to 1.5C to 2C (battery capacity x 1.5 or 2.0). High charge currents can overheat batteries and thus reduce service life, especially for smaller size cells.

BATTERY STORAGE

NiCd and NiMH cell manufacturers recommend applying a 40% full charge to the batteries before being put in storage. To achieve this, setting the CAPACITY screen to a reduced level before charge will cause the charger to deliver only a partial charge to the battery.

Multiply your battery’s rated capacity by 0.4 to find the proper value. Enter this value (or the closest available value) into this screen. For example: The 40% full charge capacity of a battery rated at 3200mAh would be (3200 x 0.4) 1280mAh. The closest possible setting for this would be 1300mAh. The 40% full charge capacity of a battery rated at 1600mAh would be (1600 x 0.4) 640mAh. The closest possible setting for this would be 650mAh.

Once this value is set, proceed to charge the battery. When charge ends, you should notice that only about 40% of the battery’s rated capacity was delivered during charge by looking at the “COMPLETE” screen as explained above.

ERROR MESSAGES & TROUBLESHOOTING GUIDE

Several safety features are included in this charger to protect itself and the battery against certain unwanted conditions, as follows:

LCD MESSAGE	PROBLEM AND SOLUTION
“Input V Error“	The DC input voltage is below 11.0V or exceeds 15V DC. Make sure the input voltage is within this range.
“No Battery”	A battery is not connected to the output. Make sure a good connection exists between the battery and charger and re-try.
“Wrong Polarity”	The battery is connected backwards to the charger’s output. Re-connect the battery to the charger’s output with the proper polarity.
“Open Circuit”	The battery has become disconnected during charge. Re-establish a good physical connection between the battery and charger, and re-start charge.
“Circuit Error”	Some type of electronic interruption or malfunction occurred. If you believe that some external force might have caused the charger to err, and that a true circuit malfunction has not occurred, you might attempt to re-start charge. Otherwise, if you believe the charger is not functioning properly, disconnect the battery from the charger, and the charger from input power, and contact Hobby Services for further details.
“Bat.Volt Error”	Shows if the charger measures the voltage of the battery to be lower – or higher – than the number of cells set in the charger for the respective battery. Re-confirm the number of cells in your battery, and make sure the charger is set to the proper battery type. If the charger is set to the proper setting, it’s possible that the battery might have been discharged to too low of a voltage and may no longer be suitable for use. Contact Hobby Services for further details.

Other possible problems:

PROBLEM - LCD does not work when unit is connected to input power: Check power supply for improper power. Check input connections for solid contact. DC input power might be connected backwards...reverse input connection. Contact Hobby Services for further details.

PROBLEM - Battery voltage low after charge (below 1.2V per cell): The capacity setting, charge current setting, and/or backup safety timer settings are too low. NiCd/MH peak sensitivity setting might be too low or too high...re-adjust setting. Perhaps poor quality charge leads...replace with new.

5-YEAR LIMITED WARRANTY – *U.S.A. & CANADA ONLY

DuraTrax warrants this product to be free from defects in materials and workmanship for a period of five (5) years from the date of purchase. During that period, DuraTrax will, at its option, repair or replace without service charge any product deemed defective due to those causes. You will be required to provide proof of purchase (invoice or receipt). This warranty does not cover damage caused by abuse, misuse, alteration or accident. If there is damage stemming from these causes within the stated warranty period, DuraTrax will, at its option, repair or replace it for a service charge not greater than 50% of its then current retail list price. Be sure to include your daytime telephone number in case we need to contact you about your repair. This warranty gives you specific rights. You may also have other rights, which vary from state to state.

For service on your DuraTrax product, warranty or non-warranty, send it post-paid and insured to:

HOBBY SERVICES
3002 N. Apollo Drive Suite 1
Champaign, IL 61822
(217) 398-0007
www.hobbyservices@hobbico.com

*For warranty and service information if purchased outside the USA or Canada, see the additional warranty information insert (if applicable) or ask your retailer for more information.



OTHER ITEMS AVAILABLE FROM DURATRAX



DuraTrax Pit Tech™ Deluxe Car Stand

This convenient workstation for R/C cars and trucks features a rotating top plate for easy access from all sides and a dropped center section that provides a stable work platform for models with uneven chassis bottoms. Includes an extra-large parts tray and built-in holes to keep shocks handy when rebuilding. **DTXC2370**



DuraTrax Ultimate Tool Set w/Pouch

DuraTrax Ultimate tools have hardened steel tips plus a blue-anodized aluminum handle that's knurled for a no-slip grip. This set has 'em all – 4 each of metric and SAE hex drivers, 3 each of slotted and Phillips screwdrivers – plus an Ultimate Body Reamer. And to keep them handy and organized, DuraTrax includes a 15-pocket, book-style tool pouch with zipper. **DTXR0400**



DuraTrax Ball End Tool

Simplify car ball end adjustments! Machined from anodized aluminum, this ball end tool has a slotted end that fits most open-style ball ends. The enlarged, knurled handle makes installation and adjustments seem almost effortless. **DTXR1125**



DuraTrax Deluxe Car Wrench

Shaped for extra turning torque, the chromed, cast metal Deluxe Car Wrench has threaded holes for storing up to 4 glow plugs, plus 6 socket head sizes: 7mm, 8mm, 10mm, 10mm pilot shaft wrench, 12mm and 17mm. **DTXR1170**



DuraTrax Kwik Trak™ 7" Racing Cones

Make tracks anywhere! Turn any driveway or parking lot into an R/C race track with these durable cones. At 7" tall and molded in bright orange, they offer maximum visibility – without taking up too much room or obscuring your view of the action. Sold in sets of six. **DTXC2377**



DuraTrax Pit Tech™ Tire Glue

Pit Tech Tire glue is specially formulated to create a lasting bond between your wheels and rubber tires. Choose from two formulas: quick-drying Thin and slower-curing Medium. Car and truck drivers shouldn't leave the pits without it!
DTXR2000 – Thin, DTXR2002 – Medium

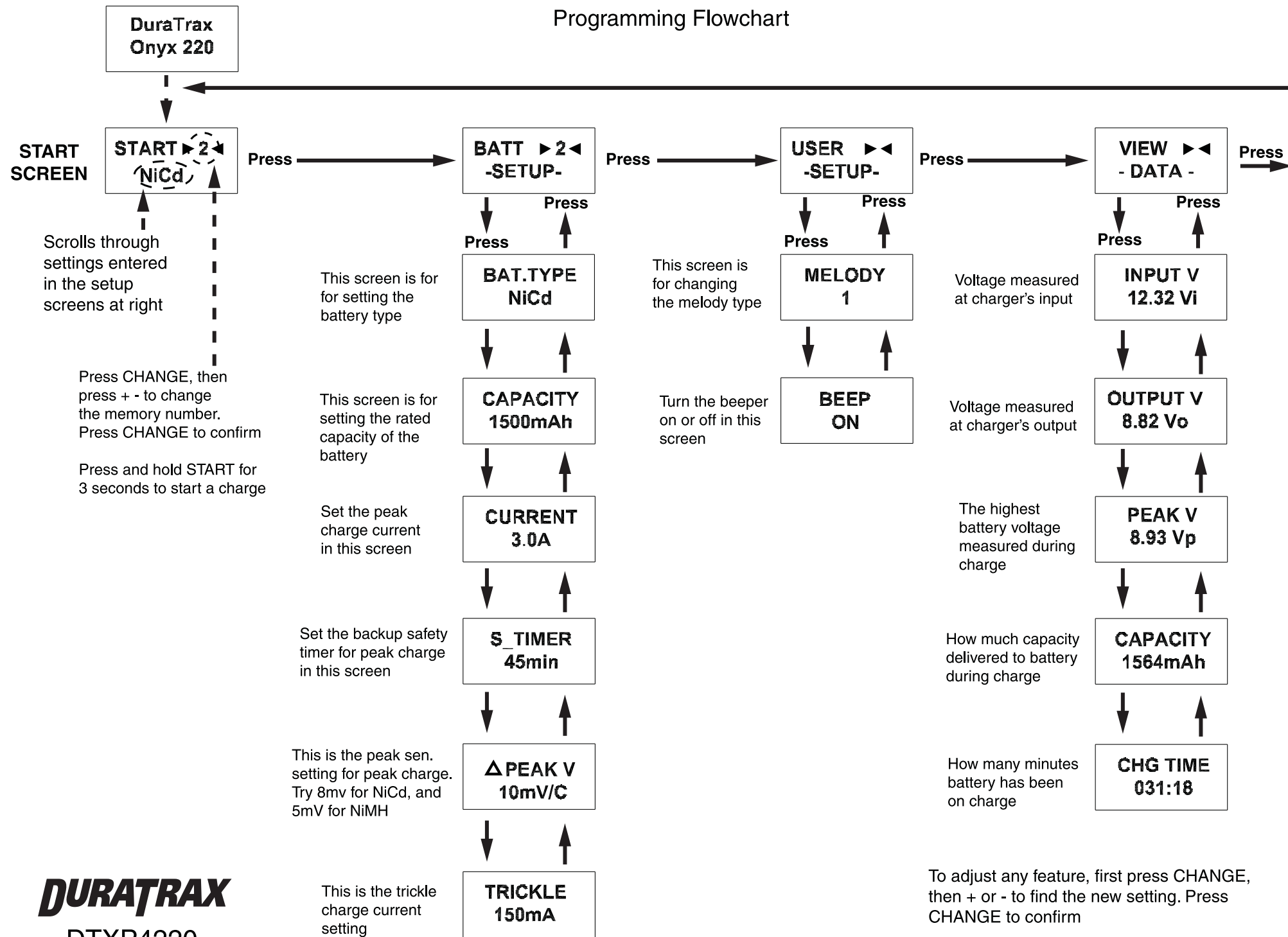


DuraTrax Shoe Goo™ II Adhesive & Sealant

Clear, non-flammable Shoe Goo II applies like putty and dries strong but flexible. It's great for a wide variety of purposes, such as assembling battery packs; repairing Lexan® bodies; waterproofing boat hulls; and mounting servos, speed controls or receivers. Comes in a 3.7 oz [105g] tube. **DTXC2460**



Programming Flowchart



DURATRAX
 DTXP4220