

# Thunder Power 1010C Charger with Version 2.3a Software Quick Reference and Setup Guide

Quick reference and setup guide for the [Thunder Power TP-1010C charger](#) with the V2.3a software update. Note: if you do not currently have V2.3a software installed in your TP 1010C charger, you can do so by downloading it from [Thunder Power's Downloads Page](#). Complete instructions are listed on that page. To program your TP-1010C charger you'll need to purchase a [1010C USB programming cable](#).



## Thunder Power 1010C Specifications:

**The TP1010C is capable of charging/discharging:**

- 1 to 10 Lithium Polymer cells
- 1 to 30 NiCd or NiMH cells
- 6V, 12V or 24V lead acid batteries
- 1 to 10 A123 Lithium Ion cells
- Maximum charging current: 10A
- Maximum discharging current: 2A

**Note:**

- The Thunder Power TP1010C is capable of 220 watts output which limits the max current a pack can be charged at, e.g. a 5S Lipo pack could be charged at 10 amps whereas a 10S pack could only be charged at 5 amps.
- The Thunder Power TP1010C is capable of dissipating up to 2 amps max current with a power limit of 22 watts, e.g. a 3S Lipo pack could be discharged at a maximum of 2 amps whereas a 5S pack could only be discharged at 1 amp.

## Navigating the V2.3a Thunder Power 1010C Software:

There are two basic sets of information that will be displayed on the Thunder Power TP1010C screen:

- operational screen data, e.g. data that pertains to charging/discharging and
- setup screen data for the various kinds of charging/discharging that can be done with the unit.

## Thunder Power 1010C Front Panel Button Functions

There are 4 buttons on the front panel of the Thunder Power TP-1010C. The buttons can be used in two ways, short presses (less than 1 second) and long presses (greater than 2 seconds). Generally, long presses are used to enter/exit setup menus and to commence charge/discharge. Short presses are used to change menu selections within the setup menus, change cell counts and currents and also to stop charging/discharging on the operational screen.

## Thunder Power 1010C Startup Screen

When first powered on, the TP-1010 charger will immediately display its manufacturer (Thunder Power), model number (TP-1010C) and software revision (V2.3a). Following that it will display the operational screen it was last used for.



*Thunder Power 1010C Startup Screen with Software Version 2.3a*

## Selecting the Battery Type on your Thunder Power 1010C



The Thunder Power 1010C with V2.3a Can Charge your NiMh Battery Packs

1. Select, using short presses, either charge or discharge using the "SEL/MOD" button
2. Then use the "CHARGE/ENT" button to select the cell count (displayed as "XsPACK") or current (displayed as "C or D =X.XXA")
3. From here the "-/DEC" and "+/INC" buttons are used to alter the numerical value (the X's) of these two parameters
4. To enter the Thunder Power 1010C setup menus, long press the SEL/MOD button
5. The TP-1010C display will show "Battery type" and a chemistry, most likely "LiPo"
6. To change the type of battery, push either the "-/DEC" or "+/INC" buttons to scroll through the 5 available chemistries
7. Once the proper type has been chosen, short pressing the "SEL/MOD" button will take you through the various parameters that can be changed for that type of battery
8. The following tables show these parameters along with a description of each and a range of adjustment.
9. Once you have dialed in all the specifics for the battery you want to charge or discharge, long press the "SEL/MOD" button again and you will be taken back to the operational screen.

## Programming the Thunder Power 1010C for NiCd and NiMH Cells

Function	Purpose	Adjustment Range
Delta -V setting	Sets the -V trip point at which the charger stops charging	5-20mV (NiCd) 2-10mV (NiMH)
Cooling fan mode	Lets you turn off the fan if not needed	Always on or auto
Key tone option	Lets you turn off the beeping when buttons are pressed	On/Off
Input PWR option LVC	Sets the threshold for minimum input voltage (Keeps you from having to ask your buddy for a jump start)	10-12V
System timeout max time	Sets the maximum time for a charge cycle	2 to 10 hours
Cycle data Cy#:1-9	Shows the charge and discharge capacities for up to 9 cycles.	Can view any of 9 previously run cycles

## Programming Thunder Power 1010C for Pb Cells (Lead Acid)

Function	Purpose	Adjustment Range
PB charge topeff	Adjusts the per cell final voltage at charge termination	2.2-2.5V
Cooling fan mode	Lets you turn off the fan if not needed	Always on or auto
Key tone option	Lets you turn off the beeping when buttons are pressed	On/Off
Input PWR option	Sets the threshold for minimum input voltage (Keeps you from having to ask your buddy for a jump start)	10-12V
System timeout Max time	Sets the maximum time for a charge cycle	2 to 10 hours

## Programming Thunder Power 1010C For A123 Li-Ion Cells

Function	Purpose	Adjustment Range
A123 charge option	Allows adjustment of the amount of charge put into the battery	100% 95% 50% (storage) FAST charge (almost a 100% charge not as long)

A123 Dchg option cut off	Sets the per cell cutoff voltage when discharging	2.5-3.6V/cell
Li/A1 InitCharge timeout	Sets the maximum time the charger will take to initialize a charge procedure	5 to 15 minutes
Cooling fan mode	Lets you turn off the fan if not needed	Always on or auto
Key tone option	Lets you turn off the beeping when buttons are pressed	On/Off
Input PWR option LVC	Sets the threshold for minimum input voltage (Keeps you from having to ask your buddy for a jump start)	10-12V
System timeout Max time	Sets the maximum time for a charge cycle	2 to 10 hours

## Programming Thunder Power 1010C For LiPo Cells

Function	Purpose	Adjustment Range
Lipo charge option	Allows adjustment of the amount of charge put into the battery	100% 95% 50% (storage) FAST charge (almost a 100% charge not as long)
LiPo Dchg option cut off	Sets the per cell cutoff voltage when discharging	3-3.9V/cell
Li/A1 InitCharge timeout	Sets the maximum time the charger will take to initialize a charge procedure	5 to 15 minutes
Cooling fan mode	Lets you turn off the fan if not needed	Always on or auto
Key tone option	Lets you turn off the beeping when buttons are pressed	On/Off
Input PWR option LVC	Sets the threshold for minimum input voltage (Keeps you from having to ask your buddy for a jump start)	10-12V
System timeout Max time	Sets the maximum time for a charge cycle	2 to 10 hours

## Setting Up the Thunder Power 1010C To Start Charging/Discharging

1. From the operational screen, to select charging, discharging or cycling, you short press the "SEL/MOD" button.
2. To change the number of cells or charge/discharge current, you short press the "CHARGE/ENT" button which will initiate blinking of either the Pack size or charge/discharge current.
3. From here you use the "-/DEC" or "+/INC" buttons to alter the numbers.
4. Once the proper numbers have been set, long press the red "CHARGE/ENT" button to initiate charging, discharging or cycling. Note that short pressing the red "CHARGE/ENT" button also halts the current charging, discharging or cycling process.

## Understanding the Thunder Power 1010C Display

As a battery charges or discharges, information is given on the main screen.

- In the upper left of the screen you will see two letters that change every two seconds, these are the battery type and function being performed.
- Just to the right of that you will see the current voltage across the pack.
- To the right of that you will see the charge current.
- Just to the right of that you will notice that there is another character that changes back and forth, this will show either A for amps, CC for constant current or CV for constant voltage depending on what kind of charging you are doing.
- The second row of the TP-1010C display shows the amount of charge placed back into the pack in mAHrs and overall charge time.

## View Individual Cell Voltages on the Thunder Power 1010C (LiPo & A123)

If using a balancer in closed loop mode, you can at any time during a charge or discharge cycle (LiPo and A123 only) check to see any of the individual cell voltages.

1. Long press the "SEL/MOD" button until a screen with CH and CL are displayed on the far left end.
2. From here you can use the "-/DEC" and "+/INC" buttons to scroll through the cells, two per screen.
3. To the far right of these screens you will also be shown the maximum deviation voltage between cells.
4. Leaving the unit alone for about 6 seconds will return it to the charge screen.

## Using the Memory Settings on the Thunder Power 1010C

From the main charging screen, the one that you initiate charging from, there are three parameters that you can alter, the cell count, charge/discharge current and memory position.

1. At the far upper, right end of the display you see [M 1-10], this is the memory location. To access it short press the red "CHARGE/ENT" button quickly and the number in the brackets will begin to flash.
2. You can use the "-/DEC" and "+/INC" buttons to change the location. Note that each location will keep the cell count and charge current stored.
3. There are 10 memories per battery type for a total of 50 memories. Note that the memories cannot be named

## Where to Buy a Thunder Power 1010C

Draganfly Innovations Inc. is the best place to purchase a new [Thunder Power 1010C charger](#). Draganfly Innovations offers **FREE Shipping** anywhere in the world on all Thunder Power 1010C chargers. Buy online 24 hours a day at [www.rctoys.com](http://www.rctoys.com) or order by phone 1-800-979-9794 / 306-955-9907 during business hours.

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