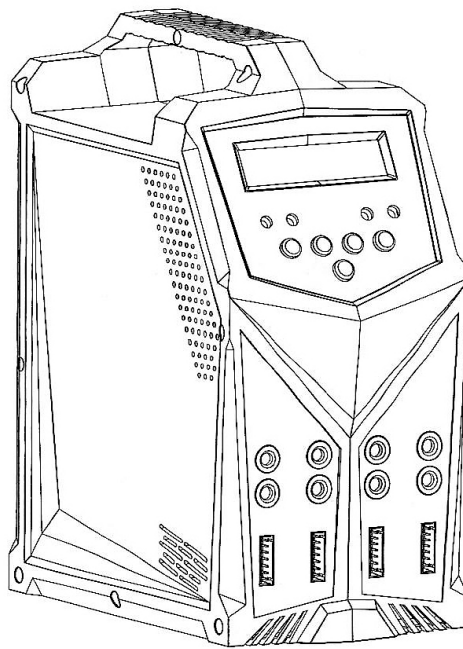


GT Power Pro Quad mains/battery charger



Very strange perspective on this drawing

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The top line shows battery type, charging rate and battery voltage.
The bottom line shows charge type (balanced here), charge time and mAh added.

Charging a NiMH pack

Check that the D.Peak (delta-V) is set as you want it (see below)

You won't use the balance board of course.

Move to PROGRAM SELECT →

Move down to NiMH BATT using STOP

Press ENTER

The default 1.0 A will be safe for most receiver packs.

Hold down ENTER to check battery.

Press ENTER to start charging.

Charging will stop automatically when the voltage drops by a few mV.

Setting delta-V for NiMH charging

Move to PROGRAM SELECT →

Press ENTER

Move to the third option - NiMH Sensitivity - with two presses of +INC.

Check that the charging is set to detect the deltaV voltage drop.

It must read D.Peak.

Default should be fine (7 mV drop) though you might want to change it to 10 mV.

The default 1.0 A charge rate should be safe for all 4.8 or 6 V receiver packs.

Discharging to storage voltage

Setting lots of batteries to storage is a real pain, as each takes a long time. This charger allows you to discharge four at the same time. Carry out the steps for charging a Lipo but select STORAGE instead of BALANCE.

The discharge current cannot be changed from 1 A. When a channel has been working for two hours the charger switches it off and displays TIME. Very large batteries might take longer than this to discharge. There are two solutions. Either switch off the safety timer or increase the time as follows:

Press STOP to go to PROGRAM SELECT

Press STOP until you reach USER SET PROGRAM

Press ENTER

Use + or - to scroll to Safety timer which defaults to ON and 240min

Press ENTER

Either:

Use + or - to set it to OFF or ...

Press ENTER again and ...

Use + or - to change time e.g. to 360

Note that the changed time does not get stored so you must do it each time.

Press ENTER

To leave press STOP

Other PROGRAM SELECT options

Are there are other options you might want to use in PROGRAM SELECT?

Test LiXX Internal Resistance

This only works with lithium batteries

Internal resistance (IR) is a good test of a battery's condition and quality. High quality new batteries should have an IR of no more than 5 mΩ. I like to record the initial values of all new batteries. As a battery gets older this value will rise causing extra heating during periods of high throttle and current. There is no rule about when to discard a battery. Maybe when it reaches 10 mΩ you might relegate it to models that use lower currents. Once it reaches 20 mΩ it is probably swelling, indicating its impending trip to the great recycler. I have yellow and red circular stickers to put on suspect and no-no batteries.

Key beep and Buzzer

The sounds the charger makes are quite loud. However you want to be alerted when a battery is fully charged. As its unwise to be far away when charging, a good compromise is Beep OFF and Buzzer ON.

SAVE DATA and LOAD DATA options

On the face of it these should be useful, allowing us to store and recall the parameters for the batteries we use most often. However I found it clumsy and just about useless.

Practical hints

Confusion

With all eight leads plugged in it is easy to confuse them. For example you might connect a battery to the charging lead from channel one and the balance board from channel two. It does no harm but is a nuisance. I have written the channel numbers on each lead and balance board using a fine permanent ink pen.

Overload

Each channel is rated at 100 W. This is adequate if you use modestly sized batteries. My most used sizes are 3S 2.2 Ah and 4S 5.0 Ah. Charging at the usual rate, which is the capacity number in amps:

The first takes $2.2 \times 12.6 = 27 \text{ W}$

The second takes $5.0 \times 16.8 = 84 \text{ W}$

The second is getting close to the limit for the channel.

I also have a 6S 8.0 Ah for a large twin engined scale model. The calculation for that is:
 $8.0 \times 25.2 = 201.6 \text{ W}$

This beast would overload the channel and must therefore be charged at the lower rate of no more than about 3.8 A. It will take a little longer but your charger will live to charge another day.