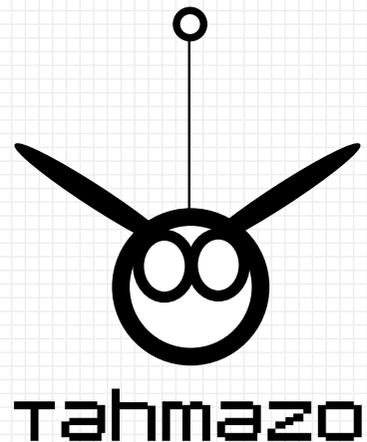


T12 COMPACT CHARGER

I N S T R U C T I O N M A N U A L



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Thank you for purchasing this Tahmazo T12 Compact charger.

With Tahmazo T12 Compact, you can carry this compact charger anywhere to charge your battery pack. This digital charger will charge different types of battery (NiCd, NiMh, LiPo, Lilon, LiFe), using either DC 11-15V or AC 100-240V power supply.



T12 INPUT



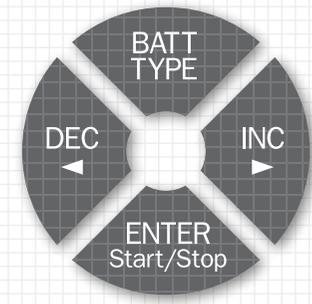
T12 OUTPUT



T12 FEATURES

- Built-in lightweight switching AC power supply provides a more constant power to the charger.
- A compact all-in-one charger with integrated balancer for lithium (Li-Po/Li-Ion/LiFePO4) up to 4-cells at the same time.
- Durable membrane touchpad input controls and easy to navigate menu.
- Dual input voltage of DC 11-15V or AC 100-240V/50-60Hz
- Capable of charging:
 - 1-12 cells NiCd/NiMh
 - 1-4 cells Lilo/LiPo/LiFe
- Adjustable charge current (0.1-4.0A) up to 40W.
- Automatically trickle charges your NiCd and NiMh when charge terminates.
- “Constant Current/Constant Voltage” charge method for lithium batteries.
- Real-time monitoring of capacity, input and output voltage, charge current, pack voltage, individual cell voltage (for lithium batteries).
- Built in audible sound to notify user as the changes to setting and program are being made.
- Safety features include current overload and reverse polarity protection.

T12 CHARGER CONTROLS



BATT TYPE button

To change battery type and view the data screens.

INC button

To increase the value and move up the menu.

DEC button

To decrease the value and move down the menu.

ENTER/START button

To start and stop the operation or to confirm the settings of the value.



T12 SPECIFICATIONS

	Description
Input Voltage	DC 11-15V
	AC 100-240V/50-60Hz
Battery Type	1-12 Nickel-Cadmium cells (Ni/Cd)
	1-12 Nickel-Metal Hydride cells (Ni/MH)
	1-4 Lithium-Ion cells (LiIo)
	1-4 Lithium-Polymer cells (LiPo)
	1-4 Lithium Iron Phosphate cells (LiFe)
Charge Current	0.1-4.0A per 100mA steps
	(Auto limited to a maximum of 40W)
Trickle Charge Current	0-100mA
Max Balancing Current	120mA
Charge Termination	NiCd/NiMH- Delta Peak
	Lithium- Constant current/constant voltage
Display Type	2-line 8 character
Dimension	145x142x40mm
Weight	496g

T12 SAFETY PRECAUTIONS

- Do not attempt to charge incompatible types of rechargeable batteries. This charger is designed to only charge and discharge Nickel-Cadmium, Nickel-Metal Hydride, Lithium-Ion, Lithium-Polymer and Lithium Iron Phosphate.
- Make sure the charger is placed on a firm, level surface for charging.
- Do not attempt to charge batteries at excessive charge currents. Check with the battery manufacturer for the maximum charge rate applicable.
- Do not leave the charger unattended while charging. Monitoring the batteries during charging is very important. Disconnect the battery and remove input power from the charger immediately if the charger becomes hot. Allow the charger or battery to cool down before reconnecting.
- Do not allow water, moisture or foreign objects into the charger.
- Do not place the battery or charger on or near a flammable object while in use. Keep away from carpets, cluttered workbenches, etc.
- Do not cover the air intake holes on the charger as this could cause the charger to overheat.

T12 SAFETY PRECAUTIONS

- Connect the input leads to a power supply first, and then connect the battery.
- Do not attempt to charge non-rechargeable batteries.
- Do not disassemble the charger.
- Do not connect the charger to both DC 11-15V and AC power supply at the same time.
- This charger is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the charger safely.
- The battery must be placed in a well ventilated area.
- Do not charge the batteries at rates higher than the standard charge current unless they are expressly stated to be capable of quick charge. The maximum allowable charge current varies between the battery type and they can be found in the information provided by the battery manufacturer.
- Do not deep-discharge lithium batteries over a long period as this will damage the lithium batteries.

T12 CONNECT THE CHARGER TO A POWER SUPPLY

T12 Compact can be operated from either a 12V lead acid battery, DC 11-15V power supply or AC 100-240V wall outlet.

T12 DC POWER SUPPLY

Connect the charger's DC power cord into the charger.

Connect the red clip of the DC power cord to the positive (+) terminal on the power source, and the black clip to the negative (-) terminal.

The charger will display "Input Voltage" error message if the input is below 11V, or above 15V.

If this happens, please check the input power supply to make sure there is adequate power.

(If using a DC power supply, please ensure that the rating of the power supply is at least 2A regulated.)



T12 AC POWER SUPPLY

Connect the AC Power Cord to the charger and then connect the AC Plug to a regular AC 100-240V wall outlet.

If AC Power is being used for input power, DO NOT connect the 12V DC Power!

T12 CONNECT THE BATTERY PACK TO THE CHARGER

Two (2) 4mm sockets RED and BLACK are located on the right side of the charger.

Connect the battery charging leads to these sockets with the positive (+) lead connected to the red socket and the negative (-) lead to the black socket.

For your lithium battery pack, connect the balancing connector of your battery pack to the balancing board. Then connect the balancing board to the balancing port located on the right side of the charger.

T12 SELECT THE TYPE OF BATTERY TO CHARGE

Press the **BATT TYPE** button to select the battery type: NiCd, NiMH, Li-Po, Li-Ion, LiFe.

Press the **ENTER** button to change the charging current and number of cells (only applicable for lithium batteries).

Press the **DEC(◀)** or **INC(▶)** button to set the charging current and the number of lithium cells.

Once the charging setting is made, press and hold the **ENTER** button to start the charging process.

The charger will beep when the charging process is completed or interrupted by an error during the charging process (refer to *Error Messages on page 10*).

Note

In order to balance lithium batteries during charging, ensure that both battery output leads and balancing connector on the battery pack are connected to both 4mm socket and the balancing port (using the balancing board) on the charger.

T12 VIEW DATA

During charging/After charging

To view the battery information, press and hold the **BATT TYPE** button. Press the **DEC(◀)** or **INC(▶)** button to display the various data.

I=12.04V
O=12.4V

Shows the Input and Output voltage.

ChgPEAK
12.60V

Shows the peak charging voltage of the battery pack.

MAX4.20V
MIN4.19V

Shows the Maximum and Minimum voltage of the individual lithium cell that is connected to the balancing adaptor board.

ChgCAPA
882mAh

Shows the capacity of the battery pack.

LCB-[01]
4.197V

Shows the voltage of the individual cell connected to the LCB (Lithium Cell adaptor Board). Press the **ENTER** button and press **INC(▶)** or **DEC(◀)** to view the other cell voltage in the pack.

Press
ENTER

LCB-[01]
4.197V

Press
DEC(◀)

Press
INC(▶)

LCB-[02]
4.195V

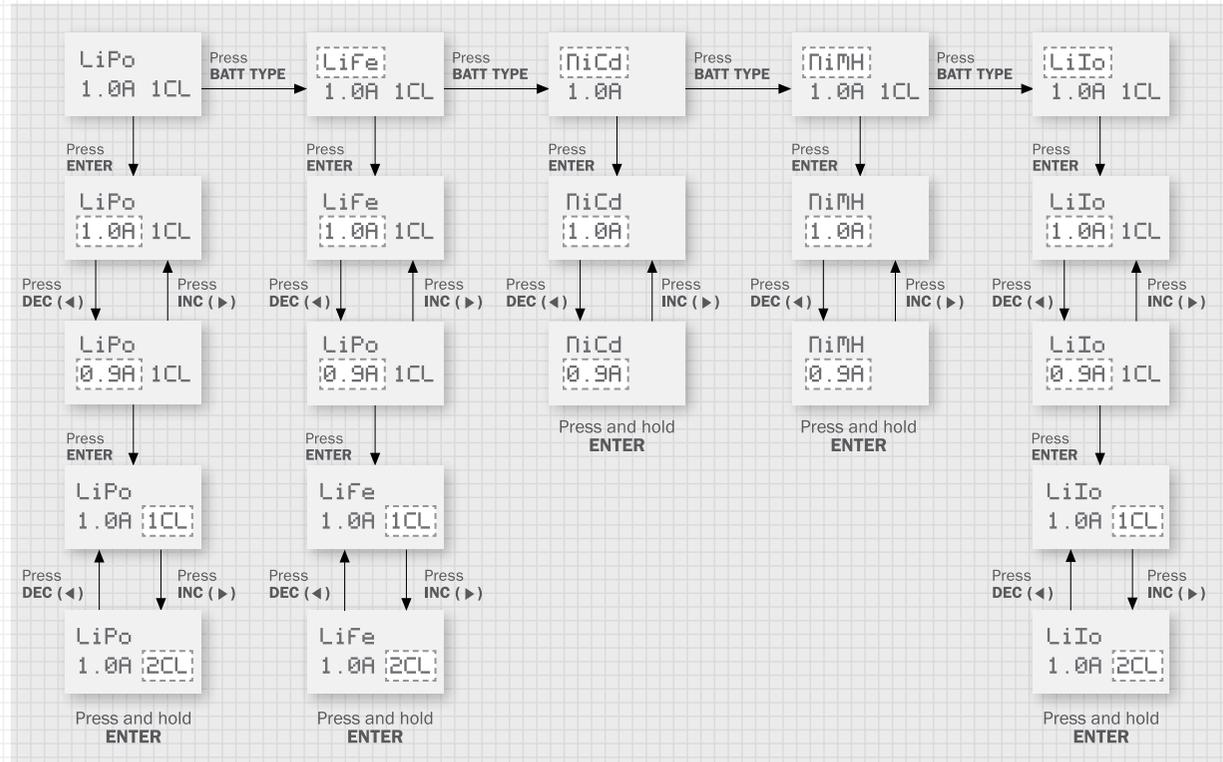


T12 ERROR MESSAGES

- INPUT VOLTAGE** When input voltage is below 11.0V or exceeds 15V.
- NO BATTERY** When a battery is not connected to the charger's output.
- REVERSE POLARITY** When a battery is connected to the output in reverse.
- CIRCUIT PROBLEM** If you encounter this problem, please return the charger to your nearest Tahmazo dealer or the shop that you have purchased this charger from.
- BAT . OPEN CIRCUIT** When a battery becomes disconnected during an operation.

- OVER BATT VOLTAGE** If wrong voltages are set while charging Lithium batteries.
- LOW BATT VOLTAGE** If wrong voltages are set, or batteries are over discharged, while charging Lithium batteries.
- HIGH BLC VOLTAGE** If voltage per cell is too high during balancing, this message should appear. Check the condition of the Lithium battery, or consult the battery manufacturer.
- LOW BLC VOLTAGE** If the battery cells are short-circuited during balancing, this message should appear.
- DONT CHG LiXX** If the charger starts charging, discharging or cycle for NiCd/NiMh batteries, while the battery is connected to the balancing port.

T12 COMPACT CHARGER PROGRAMMING FLOWCHART



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