C4 evo

6 CHANNELS

USER GUIDE



ISDT

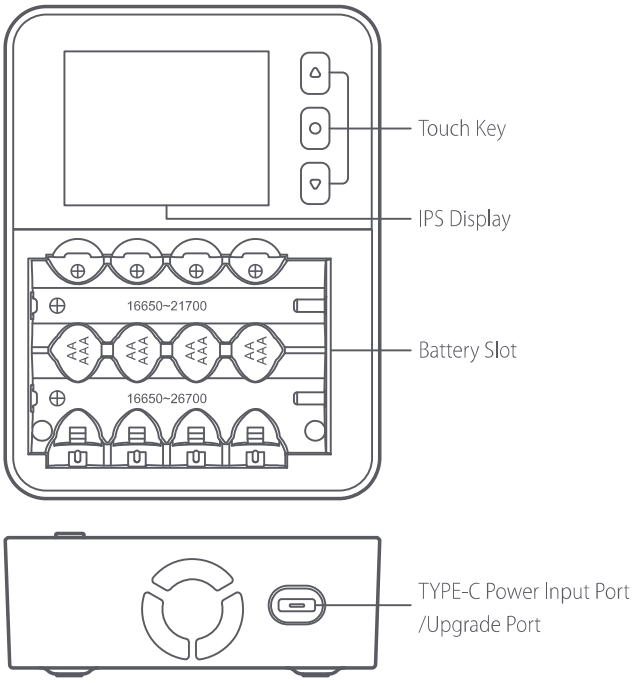
Thank you for purchasing the ISDT C4 EVO Smart Charger.

The C4 EVO Smart Charger offers excellent all-round performance and supports most popular rechargeable battery types including NiMH, NiZn, LiIon, LiFe, LiHv. The high contrast full colour IPS display features a wide viewing angle which clearly displays detailed option parameters and real-time task progress. Different batteries can be placed into different slots and operate independently of each other, and the charger will automatically identify battery types and choose the appropriate charge settings.

Please read this user manual in detail and follow the instructions carefully before using your new charger.

- Do not charge a non-rechargeable battery or a battery with damaged surface insulation.
- Keep the charger away from humidity and high temperature while charging. Ensure the cooling fan is ventilating properly.
- Make sure the charge and discharge settings are correct. Incorrect settings may cause dangerous accidents.
- Do not let the children operate the charger.

Port / Key



Specification

Model:	C4 EVO
Max. Input Power:	36W
Support Battery Count:	1~4 Cylindrical batteries
Support Battery Size:	AAA, AA, 10440, 10500, 12500, 13500, 14500, 14650, 16650, 17650, 17670, 18650, 18700, 20650, 20700, 21700, 22650, 26650, 26700
Support Battery Type:	NiMH, NiZn, LiIon, LiFe, LiHv
Operating Voltage Range:	5~12V (Supports QC, PD protocol)
Charging Current Range:	0.1~3.0A (Horizontal), 0.1~1.5A (Vertical)
Discharging Current Range:	0.1~1.5A (Horizontal), 0.1~1.0A (Vertical)
Operation Modes:	Charge, Discharge, Storage, Destroy, Cycle, Activate, Analyse
Display:	320×240 IPS LCD
Beep Sound:	Multi-tone
Temperature Sensors:	6
Operating Temperature:	0~40℃
Reverse Polarity Protection:	Vertical physical anti-reverse polarity connection and horizontal anti-reverse polarity connection hardware
Overheating Protection:	Supported
Overcapacity Protection:	Supported
Dimensions:	120×92×34mm
Weight:	About 195g

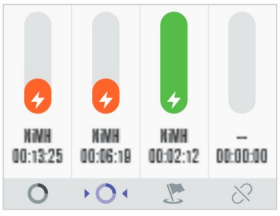
** The maximum lateral length of the batteries is 70mm*

Task Setting

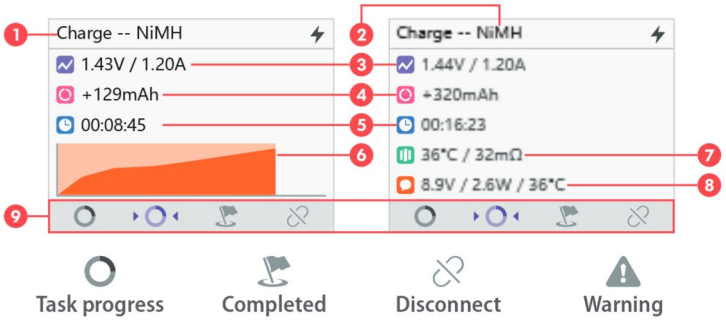
Using this charger, either four AA or AAA batteries or one 16650~21700 and one 16650~26700 battery can be charged, discharged, storaged, cycled, analyzed, activated and destroyed in a variety of combinations.

Automatic Mode

1. Connect a Type-C to the C4 EVO power input port.
2. After inserting the battery into the slot correctly, the charger detects the battery, and the display will change from the standby page to the task setting interface. The buzzer will sound once every 1.5 seconds. If the user does not respond within 5 seconds and perform an operation, the charger will automatically start charging.
   The display will show the following charging status, as shown below:



At this time, short press the middle button to change display information as shown below:



Interface

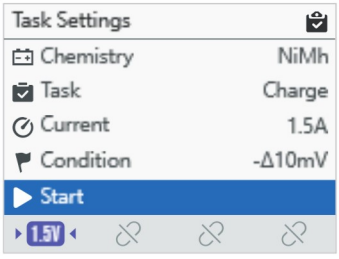
1. Task Status
2. Battery Type
3. Output Voltage and Current
4. Charged/Discharged Capacity
5. Task Operation Time
6. Voltage Curve
7. Resistance and Temperature
8. Charger Status
9. Task Status Preview Bar



** The taskbar shows the status of each task visually, You can switch between the detailed task pages by using the up and down arrow buttons.*

Manual Mode

Place a battery into a suitable charging slot and the charger will start charging automatically after three beeps.
You can short press the up and down buttons to remain on the task page and change each parameter manually.
The options are as follows:



Battery Type	NiMH, NiZn, Lilon, LiFe, LiHv
Task	Charge, Discharge, Storage, Destroy, Cycle, Activate, Analyse
Current Setting	0.1~3.0A (Horizontal), 0.1~1.5A (Vertical)

** The task will automatically begin ten seconds after manual modification is completed.*

Confirming Battery Types

Usually, the battery chemistry type and the rated voltage are marked on the battery sleeve. The charger will attempt to automatically identify the battery type based on the built-in detection algorithm, but please select the battery types manually if the charger chooses incorrectly.

** NiZn and LiHv batteries need to be selected manually.*

Default battery types and task parameters

	NiMH	NiZn	LiIon	LiHv	LiFe
Rated Voltage	1.20V	1.50V	3.70V	3.80V	3.30V
Full Charge Voltage	1.65V	1.90V	4.20V	4.35V	3.65V
Storage Voltage	✕	✕	3.70V	3.80V	3.20V
Discharge Voltage	0.90V	1.30V	3.10V	3.30V	2.90V

Determining Charging Current

Always follow your battery manufacturer's charging instructions, as it is important to know the maximum charging current of the battery. Applying excessive charge current may reduce the lifespan of a battery and/or cause damage.
In addition, excessive currents can cause heating and/or explosion of the battery during the charging process. The charging and discharging capacity of a Lithium battery is often marked with a C value. Multiplying the charging C value and the battery capacity generally determines the maximum charging current supported by the battery. For example, for a 1000mAh battery with a charging capacity of 0.5C, the maximum charging current is 1000×0.5 = 500mA; therefore, the maximum charging current is 0.5A. For a lithium battery, if it is not possible to confirm the supported charging C value, please set the charging current below 1C for safety and to protect your battery. Charge time will be directly proportional to charging current and due to differences in battery conversion efficiency, the time taken to complete charging might be extended for different battery types and capacities.

Storage Function

Use the storage function if a battery will not be used for a long period.
When selecting storage functions, automatic charging will be initiated if the battery voltage is lower than the preset storage voltage; likewise, automatic discharging will be initiated if the battery voltage is higher than the preset storage voltage.

Cycle Function

In this mode the battery will start a cycle of charging and discharging which can be configured up to 30 cycles.

Analysis Function

The analysis function can be applied to a battery that is under-performing or if you would like to examine performance in general. This function can also be used to identify and match the working capacities of batteries.

Activation Function

Occasionally a NiCd or NiMH battery may become so discharged that it can no longer be recharged under normal conditions, especially if the voltage is extremely low. Battery activation uses a low current to perform an activation cycle which will charge, discharge, then charge the battery. The battery will be activated during this process but will sometimes require up to three cycles. If the battery still cannot be activated, then do not continue and dispose of the battery.

Internal Resistance Measurement Function

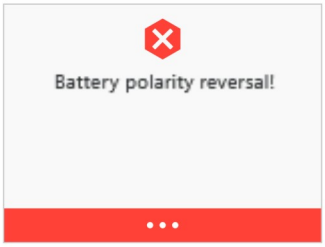
The charger is equipped with a function for measuring the internal resistance of individual cells. The internal resistance is measured and calculated after the charging task has been initiated for 10 seconds.
When the charger measures the internal resistance of the battery, it will instantly adjust the charging current, so it is normal for sudden changes to occur in the current during the charging process.
Due to the way the device measures internal resistance, the size of the charging current can impact the accuracy of the internal resistance measurement.
A battery with large capacity and low internal resistance requires a larger charging current to accurately measure the internal resistance.

Charging Completion

After beginning a task, progress will be displayed in the task quick preview bar. " " will be displayed when the task is completed. It is normal for voltage decline to occur once charging completes. As the number of charge cycles increases, the performance of a battery decreases, and voltage decline becomes more obvious. Charging a battery with a larger current will also cause a greater decline in voltage after the charging is complete.

Battery short circuit and reverse polarity protection

When a battery has been inserted with the wrong polarity the corresponding slots status will be displayed as below:

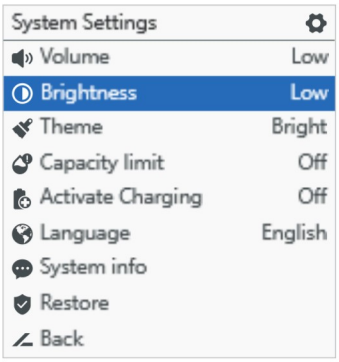


System Settings

To enter the System Settings screen, remove all batteries from the charger and then long press the middle button.

Volume

There are four options for volume setting: high, medium, low and off.
When set to "Off", the operation prompt sound will be turned off, but the error prompt sound will not be turned off.



Theme

Set the background color to bright/dark.

Capacity limit

Set the maximum battery capacity.

Activate Charging

If this option is turned on when the user selects the task type as Charging, the charger will automatically discharge the battery before charging. This is to eliminate the memory effect of the battery and restore the storage capacity of the battery.

Scan the code for more information

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