

K2

AC/DC DUAL CHANNEL SMART CHARGER

USER GUIDE

Thanks for purchasing the ISDT K2 Smart Charger.

Please visit: www.isdt.co for more details on the functions of this smart charger, as well as purchase various accessories. Functions of products will be kept on upgrading, the manual in your hand may be different from the actual operation, please refer to the actual functions.

Warnings and Safety Tips

For your safety and a better user experience, please read this manual and follow the instruction before using the new charger.

- Never use the charger without supervision, please stop using the charger and refer to the manual for reasons if any functional abnormality.
- Keep the charger away from dust, humidity, rain and high temperature, as well as avoid direct exposure to the sunlight and intense vibration.
- Place the charger on a heat-resisting, non-flammable and insulating surface. Do not use it on the car's seats, carpet or other similar places. Keep inflammable and explosive objects away from operation areas of the charger.
- Read the instruction manual carefully to be familiar with the features of the charger, and set proper charging parameters before operating. Setting the parameters incorrectly will result in damage to the product, personal property and cause serious injury as well.

NEVER USE CHARGER UNSUPERVISED

- Never attempt to charge primary (non-rechargeable) batteries.
- Batteries pose a severe risk of fire if not properly handled.
- Read entire operation manual before using charger.
- This unit may emit heat during use.
- Only operate this device in a cool ventilated area away from flammable objects.
- Failure to observe safety procedures may cause damages to property or injury.



Specifications

Model No.: K2

Input voltage: AC 100-240V / DC 10-30V

Max. input current: DC 35A

Output voltage: DC 1-30V

Charging current: 0.2-20A x2

Discharging current: 0.2-1.5A x2

Balance current: 1.5A/Cell Max

Max. charging power: AC 200W / DC 500W x2

Max. discharging power: 15W x2

Supported battery types and cell count: LiFe, Lilon, LiPo, LiHv 1-6S; Pb 1-12S; NiMH/Cd 1-16S

Parallel charging power/current: 800W/35A

Parallel discharging power/current: 30W/3A

Abnormal voltage alarm: Support

Incorrect cell count setting alarm: Support

Support Working temperature: 0-40°C

Storage temperature: -20-60°C

Dimension: 142x135x64mm

Weight: About 700g

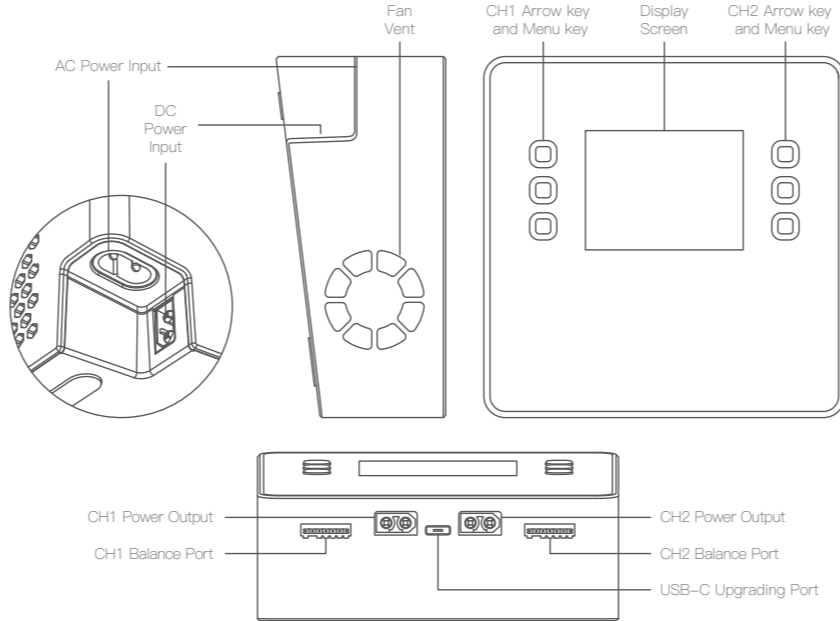
Key operation instructions (under standby interface)

CH1 Menu key: Short press to enter the CH1 detailed parameter interface, long press to enter the CH1 task setting menu.

CH2 Menu key: Short press to enter the CH2 detailed parameter interface, long press to enter the CH2 task setting menu.

Long press the CH1 and CH2 Menu keys at the same time: Enter the advanced settings menu.

Port / Buttons



Preset Battery Type of Charger and Task Parameters

	Rated Voltage	Full Charge Voltage	Storage Voltage	Discharge Voltage	Balance Charge	Unbalanced Charge	Supported Cell Count	Max. Charging Current
NiCd/MH	1.20V	1.40V	✗	0.90V	✗	✓	1-16S	20.0A
Pb	2.00V	2.40V	✗	1.90V	✗	✓	1-12S	20.0A
LiFe	3.20V	3.65V	3.30V	2.90V	✓	✓	1-6S	20.0A
Lilon	3.60V	4.10V	3.70V	3.20V	✓	✓	1-6S	20.0A
LiPo	3.70V	4.20V	3.80V	3.30V	✓	✓	1-6S	20.0A
LiHv	3.80V	4.35V	3.85V	3.40V	✓	✓	1-6S	20.0A

How to Confirm Charging Current

Make sure to know the maximum charging current of the battery before charging, never use excessive current to charge to damage your battery, which will result in over heat even explosion during the charging process. The charging and discharging capacity of battery is usually marked with C value. Multiplying the charging C value and battery capacity equals to the maximum charging current supported by the battery. For example, for a 1000mAh battery with a charging capacity of 5C, the maximum charging current would be 1000*5=5000mA; therefore, the maximum charging current is 5A. For a lithium battery, if it is impossible to confirm the supported charging C value, please set the charging current below 1C, for the sake of its (lithium battery) safety. The reference relation between C value and charging time: charging time >=60 minutes/ charging C value (e.g. it needs around 60-70 minutes to complete charging with 1C). Due to differences in battery conversion efficiency, the time to complete the charging might be extended.

Operating the Charger

Power on K2 smart charger, connect the battery, and short press the menu button to enter the task setting menu as follows:

Task	Charge, Discharge, Destroy, Storage
Battery	LiHv, LiPo, Lilon, LiFe, Pb, NiMH/Cd
Battery and cell count	LiFe,Lilon,LiPo,LiHv (1-6S) ; Pb (1-12S) ; NiMH/Cd (1-16S)
Current	0.2-20.0A

Charge

Balancing port is strongly recommended when charging lipo battery, which can make sure to monitor voltage on each cell battery and balance it when charging. Warning beeper will yell before start charging lipo if in non-balance mode (no connecting with balance port). Current setting range: 0.2-20.0A

The battery type, cell count and charging current are auto set accordingly when connecting with BattGo battery.

Discharge

Current setting range: 0.2-1.5A

The battery type, cell count and discharging current are auto set accordingly when connecting with BattGo battery.

Destroy

Connect the battery to be scrapped, and select the scrap function in task options, which capable to discharge the battery to 0V.

Current setting range: 0.2-1.5A; The battery type and cell count are auto set accordingly when connecting with BattGo battery.

Storage

Current setting range: 0.2-20.0A

The battery type, cell count and storage current are auto set accordingly when connecting with BattGo battery.

Advanced Settings

Under the standby interface, long press the CH1 and CH2 button at the same time to enter the advanced setting menu.

Dual task

Select this setting, the charger will charge/discharge/store to the two channel batteries with the same parameters at the same time.

Connect the charger with the power supply and power on, select this setting on the advanced setting menu to set the task parameters.

Paralled task

Select this setting, it could output Max Power to one battery. Find a power splitter or 1/2 power cord, one end connect with the battery, and the other two ends connect with the battery output port. The battery balance port could connect with any of the charger's balance port. Connect the charger with the power supply and power on, and connect your battery as required, select this setting on the advanced setting menu to set the task parameters.

DC power (CH1)

The charger CH1 is equivalent to a DC power supply when selecting this function, with output voltage adjustable from 2 to 30V, and current adjustable from 1.0 to 5.0A.

System Setting Menu

Under the advanced setting menu, select the system setting into the system setting menu as follows:

Min. input voltage protection: 10-31V

All tasks in operation will be stopped at once and hint warning of low voltage, when the input voltage is lower than the input voltage as set up. It will protect the battery from being discharged when using battery pack as power supply.

Max. input power setting: 100-1100W

If the input power is smaller than the max working power(1000W), please set up the parameter as the actual output power as max input, to protect the input power and enable the charger to work stable.

USB Charge

When this item is set to "Off", and TYPE-C is the upgrade port.

When this item is set to "On", TYPE-C acts as a USB charging port and outputs 5V/2A power.

Split screen

There are 3 options of 60 seconds, 30 seconds and OFF for automatic split screen setting. You can choose to switch the display of the main interface from the single-channel parameter interface to Dual channel (split screen) parameter interface.

You can also select "Off" to turn off the automatic split screen function.

BattGo

When the corresponding channel (CH1 output, CH2 output, Power input) connect to a BattGo battery, you could read this and modify the related parameters of Battgo battery.

Keep trickle

After charging is complete, choose whether to continue trickle charging.

The trickle charge function is enabled to maintain the lithium battery voltage in a fully charged state, this function is enabled by default.

Calibration:

The input voltage, output voltage and balance voltage of the charger can be calibrated with this task.

