

P20 DUAL CHANNEL SMART CHARGER

USER GUIDE



Thanks for purchasing the ISDT P20 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.

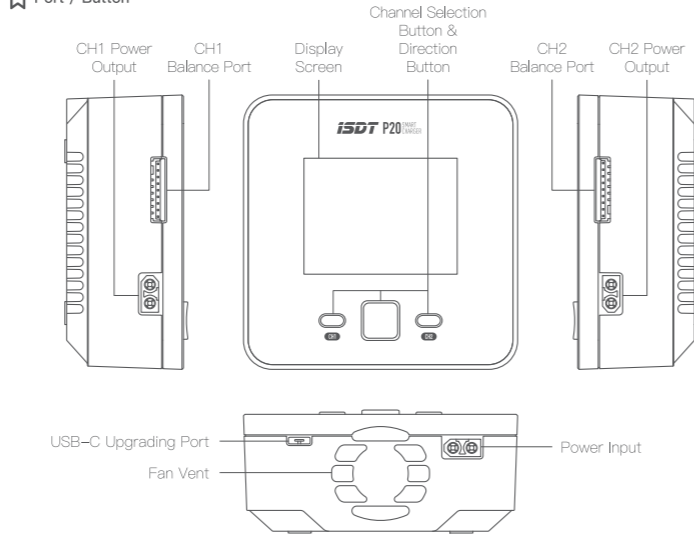
- Never use the charger without supervision, please stop using the charger and refer to the manual for reasons if any functional abnormality.
- Keep the charger away from dust, humidity, rain and high temperature, as well as avoid direct exposure to the sunlight and intense vibration.
- Place the charger 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.

Specifications

Model No: P20
Input voltage: DC 10-34V
Output voltage: DC 1~34V
Max. input current: 35A
Charging current: 0.2~20A x2
Discharging current: 0.2~1.5A x2
Balance current: 1.5A/Cell Max
Max. discharging power: 15W x2
Max. charging power: 500W x2
DC power supply: 2~30V/1~5A
Supported battery types and cell count: LiFe,LiIon,LiPo 1~8S; LiHv 1~7S; Pb 1~12S; NiMH/Cd 1~16S

Parallel charging power/current: 800W/35A
Parallel discharging power/current: 30W/3A
Working temperature: 0~40°C
Storage temperature: -20~60°C
Abnormal voltage alarm: Support
Incorrect cell count setting alarm: Support
Dimension: 105x105x47mm
Weight: About 350g

Port / Button



Key operation instructions (under standby interface)

- CH1 Channel selection button: Short press to enter the CH1 detailed parameter interface, Long press to enter the CH1 task setting menu.
- CH2 Channel selection button: Short press to enter the CH2 detailed parameter interface, Long press to enter the CH2 task setting menu.
- Long press the CH1 and CH2 button at the same time: Enter the advanced settings menu.

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 1000 mAh 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.

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	✗	1.10V	✗	✓	1~16S	20.0A
Pb	2.00V	2.40V	✗	1.90V	✗	✓	1~12S	20.0A
LiFe	3.20V	3.65V	3.30V	2.90V	✓	✓	1~8S	20.0A
Lilon	3.60V	4.10V	3.70V	3.20V	✓	✓	1~8S	20.0A
LiPo	3.70V	4.20V	3.80V	3.30V	✓	✓	1~8S	20.0A
LiHv	3.80V	4.35V	3.85V	3.40V	✓	✓	1~7S	20.0A

Operating the Charger

Power on smart charger, connect the battery, and long press the corresponding channel selection button to enter the task setting menu as follows:

Task	Charge, Discharge, Destroy, DC power supply, Storage
Battery	LiHv, LiPo, Lilon, LiFe, Pb, NiMH/Cd
Battery and cell count	LiFe,LiIon,LiPo (1~8S) ; LiHv (1~7S) ; Pb (1~12S) ; NiMH/Cd (1~16S)
Current	0.2~20A

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: 0.2~20A. 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.

Storage

Current setting range: 0.2~20A. The battery type, cell count and storage 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.

Charging Screen

Press the direction button to shift the charging information, as cell voltage, cell internal resistance, BattGo information, working parameter. The cell voltage and internal resistance are only on display in balancing charging mode. The BattGo information will be displayed only when connected to the BattGo battery, and the cell voltage is able to be displayed without connected to the balance port.

Advanced Settings

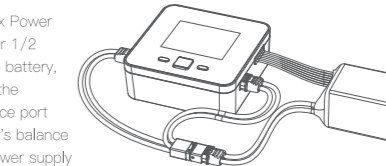
Under the standby interface, long press the CH1 and CH2 button at the same time to enter the advanced setting menu.

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(800W), 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.

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.

Volume

There are 4 options of High Mid Low and Off for volume setting. When the setting is OFF, it will turn off the operation sound, but not the warning error beep.

Theme

Select this option to set the background color to bright/dark.

Continuous 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.

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.

Self-test

When all batteries on CH1 and CH2 port are not connected, please select this option to self-test task manually.

Calibration:

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

*All product photos, statements and literature are for reference only.
For up-to-date information, please visit our official web www.isdt.co
SHENZHEN ISD TECHNOLOGY CO. LTD reserves the right of final explanation and revision for the terms.