

INTRODUCTION

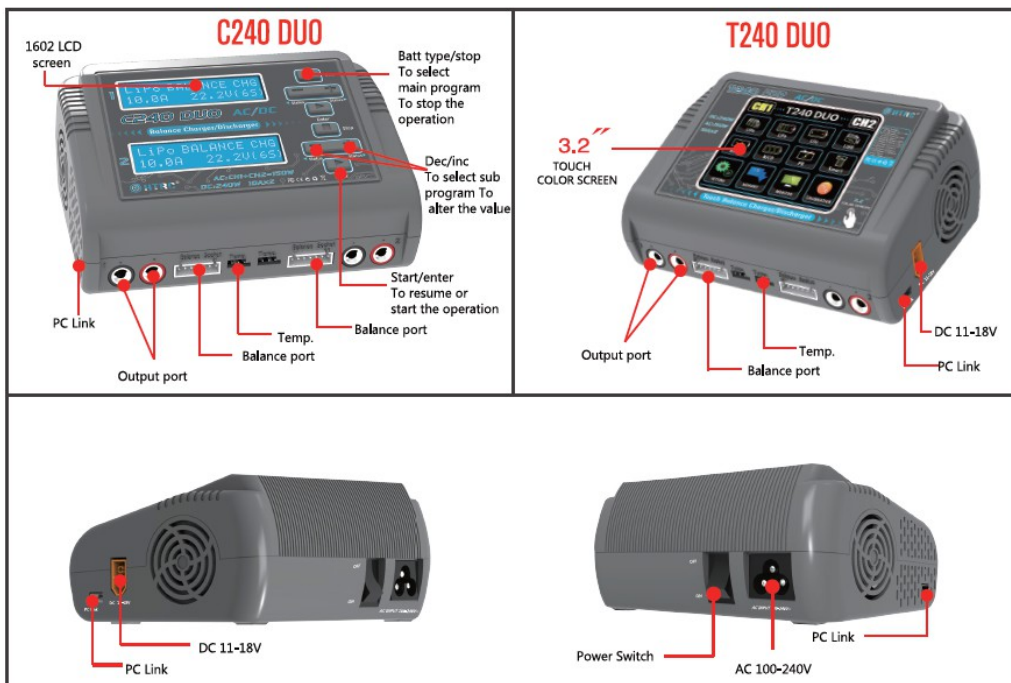
Thank You for purchasing the **HTRC®** charger. Designed for both rookies and pro-fessionals, this system is extremely versatile. For the safety and the best use of your system, please read this manual carefully.

SPECIFICATIONS:

Product Model:	C150	C240 DUO Power Distribution	T150	T240 DUO Power Distribution
AC Input Voltage	100-240V	100-240V	100-240V	100-240V
DC Input Voltage	11-18V	11-18V	11-18V	11-18V
Charge power	AC INPUT 150W DC INPUT 150W	AC INPUT (CH1+CH2=150W) DC INPUT (120W*2)	AC INPUT 150W DC INPUT 150W	AC INPUT (CH1+CH2=150W) DC INPUT (120W*2)
Charge current	0.1-10A	0.1-10A*2	0.1-10A	0.1-10A*2
Discharge current	0.1-2A	0.1-2A*2	0.1-2A	0.1-2A*2
Lipo/Lilo/LiFe/LiHV	1-6cells	1-6cells*2	1-6cells	1-6cells*2
NiCd/NiMH	1-15cells	1-15cells*2	1-15cells	1-15cells*2
PB	2-20V	2-20V*2	2-20V	2-20V*2
Smart Battery	I/II/III	I/II/III*2	I/II/III	I/II/III*2
Net weight	0.70Kg	0.75Kg	0.70Kg	0.75Kg
Dimension	145x105x64mm	145x105x64mm	145x105x64mm	145x105x64mm

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ACCESSORIES

C150	C240 DUO	T150	T240 DUO
 Adapter Board1SET	 Adapter Board 2 SET	 Adapter Board1SET	 Adapter Board 2 SET
 Extra Cable x1pcs	 Extra Cable x2pcs	 Extra Cable x1pcs	 Extra Cable x2pcs
 Extra Cable x1pcs	 Extra Cable x1pcs	 Extra Cable x1pcs	 Extra Cable x1pcs
 AC Cord x1pcs	 AC Cord x1pcs	 AC Cord x1pcs	 AC Cord x1pcs

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CAUTION and NOTES

- ⚠ - This charger is ONLY suitable for charge rechargeable LiPo, LiIo, LiFe, LiHv, NiCd, NiMH, Smart and Pb batteries. Do not attempt to charge dry cells. Charge other types of batteries may cause fire or explosion.
- ⚠ - Set up the Input Power Limit/Low Input VOLT Cutoff correctly in the USER SETTING to the DC power supply.
- ⚠ - Pay attention to the charger during use. Do not leave the charger unattended.
- ⚠ - Never charge the dead or damaged batteries.
- ⚠ - Do not attempt to charge a battery pack containing different types of batteries.
- ⚠ - Do not use a too long or damaged cables.
- ⚠ - Do not use the charger close by a flammable object. Use only in well-ventilated areas.
- ⚠ - Only charge the rechargeable batteries that meet the product specifications of this charger.
- ⚠ - Do not allow water, moisture or foreign objects into the charger.
- ⚠ - Do not use in humid locations. Do not operate with wet hands.
- ⚠ - Do not attempt to disassemble the charger.
- ⚠ - Do not use the charger on fleecy materials, such as carpets, blankets, beds and cushions.
- ⚠ - Do not block the cooling fan and the air inlet.
- ⚠ - Strongly recommend balancing Lithium packs. An unbalanced pack may damage during discharging.
- ⚠ - General default charging current is 1C. Read the manual of the battery and setup the suitable current to charge the battery. Higher charge/discharge current will damage the battery, even cause a fire.

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BATTERIES INFO and MAX CHARGE CURRENT

Battery Type	No.o f Cells	Rated Voltzge(V)	Charger Current(A)
LiHV	1	3.8	0.1-10.0A
	2	7.6	0.1-10.0A
	3	11.4	0.1-10.0A
	4	15.2	0.1-10.0A
	5	19.0	0.1-10.0A
	6	22.8	0.1-10.0A
Lipo	1	3.7	0.1-10.0A
	2	7.4	0.1-10.0A
	3	11.1	0.1-10.0A
	4	14.8	0.1-10.0A
	5	18.5	0.1-10.0A
	6	22.2	0.1-10.0A
LiIo	1	3.6	0.1-10.0A
	2	7.2	0.1-10.0A
	3	10.8	0.1-10.0A
	4	14.4	0.1-10.0A
	5	18	0.1-10.0A
	6	21.6	0.1-10.0A
LiFe	1	3.3	0.1-10.0A
	2	6.6	0.1-10.0A
	3	9.9	0.1-10.0A
	4	13.2	0.1-10.0A
	5	16.5	0.1-10.0A
	6	19.8	0.1-10.0A
NiMH /NiCd	1	1.2	0.1-10.0A
	2	2.4	0.1-10.0A
	3	3.6	0.1-10.0A
	4	4.8	0.1-10.0A
	5	6	0.1-10.0A
	6	7.2	0.1-10.0A
	7	8.4	0.1-10.0A
	8	9.6	0.1-10.0A

Battery Type	No.o f Cells	Rated Voltzge(V)	Charger Current(A)
NiMH /NiCd	9	10.8	0.1-10.0A
	10	12	0.1-10.0A
	11	13.2	0.1-10.0A
	12	14.4	0.1-10.0A
	13	15.6	0.1-10.0A
	14	16.8	0.1-10.0A
Pb	15	18	0.1-10.0A
	1	2	0.1-10.0A
	2	4	0.1-10.0A
	3	6	0.1-10.0A
	4	8	0.1-10.0A
	5	10	0.1-10.0A
	6	12	0.1-10.0A
	7	14	0.1-10.0A
	8	16	0.1-10.0A
	9	18	0.1-10.0A
	10	20	0.1-10.0A
	11	22.0	0.1-10.0A
12	24.0	0.1-10.0A	

Lipo	Voltage Level: 3.7V/cell Max Charge Voltage: 4.2V/Cell Discharge Voltage Cut off Level: 3.0V/cell or Higher
LiIo	Voltage Level: 3.6V/cell Max Charge Voltage: 4.1V/Cell Discharge Voltage Cut off Level: 3.0V/cell or Higher
LiFe	Voltage Level: 3.3V/cell Max Charge Voltage: 3.8V/Cell Discharge Voltage Cut off Level: 2.0V/cell or Higher
LiHV	Voltage Level: 3.8V/cell Max Charge Voltage: 4.35V/Cell Discharge Voltage Cut off Level: 3.2V/cell or Higher
NiMH /NiCd	Voltage Level: 1.2V/cell Max Charge Voltage: 1.6V/Cell Discharge Voltage Cut off Level: 0.80V/cell or Higher
Pb	Voltage Level: 2.0V/cell Max Charge Voltage: 2.45V/Cell Discharge Voltage Cut off Level: 1.50V/cell or Higher

PROGRAM OF Lipo/Lilo/LiFe/LiHV(C150/C240 DUO)

Press +/- to shift the work modes between the battery and the charger. Press ENTER to select
Press STOP to quit

```
LiPo BALANCE CHG
10.0A AUTO
```

BALANCE CHARGE: With this mode, the charger will charge the battery to the termination voltage and balance each cell of the battery pack. Balance port of the battery must be connected.

```
LiPo CHARGE
10.0A 22.2V(6S)
```

CHARGE: With this mode, the charger will charge the battery to the termination voltage by CC-CV mode, and stop at 1/10 of setting current.

```
LiPo FAST CHARGE
10.0A 22.2V(6S)
```

FAST CHARGE: With this mode, the charger will charge the battery to the termination voltage by CC-CV mode, and stop at 1/5 of setting current.

```
LiPo STORAGE
2.0A 2.2V(6S)
```

STORAGE: With this mode, the charger will charge or discharge the battery to the storage voltage.
(LiPo: 3.85V/S Lilo: 3.75V/S LiFe: 3.45V/S LiHV: 4.35V/S)

```
LiPo DISCHARGE
2.0A 22.2V(6S)
```

DISCHARGE: With this mode, the charger will discharge the battery to the termination voltage.

Select Battery Type/Current/Cell Count after work mode selection.

Press +/- button to shift or increase/decrease

Press ENTER to select

Press STOP to quit

Battery Type: LiPo/Lilo/LiFe

Work Mode(selected)

Current

```
LiPo CHARGE
10.0A 22.2V(6S)
```

Cell Count

The character will blinking during being select

Press ENTER for 2 seconds, the charger will check the battery then enter confirm interface. Press STOP to cancel, press ENTER to start working.

Charger detected Cell Count

```
R: 6SER S: 6SER
CONFIRM(ENTER)
```

User set Cell Count

CANCEL(STOP)

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WORKING INTERFACE (C150/C240 DUO)

General

Battery type and cell count

Current Battery Voltage

Alternate Show

Work Mode(short form)

BAL Balance Charge

CHG Charge

FAS Fast Charge

STO Storage

DSC Discharge

```
LiPo 5.0A 22.20V
CHG 038:38 2998
```

Timer Capacity

Press ENTER to return

```
LiPo 5.0A 22.20V
CHG 038:38 2998
```

Press

Status

Press STATUS

← STATUS

Data

```
Capacity Cut-off
ON 8000mAh
```

```
Safety Timer
ON 240Min
```

```
Ext.Temp Cut-off
80°C
```

```
Ext.Temp
30°C
```

```
Input Voltage
12.10V
```

```
End Voltage
25.20V(6S)
```

STATUS ▶
Cell Voltage

Cell1	Cell2	Cell3
3700	3700	3700 mV
3700	3700	3700 mV
Cell4	Cell5	Cell6

Work Finished

Show alternated between battery type/cell count with FULL(END)

```
Li6S 0.5A 25.20V
CHG 088:38 4968
```

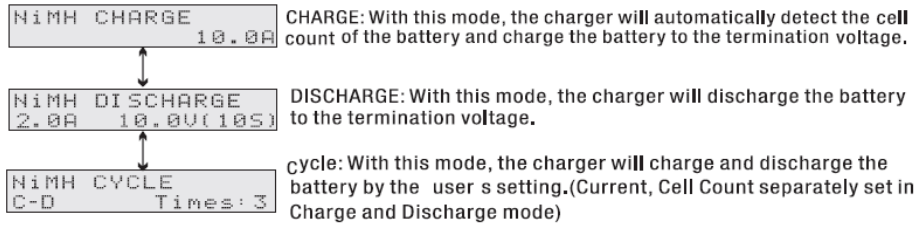
Press STATUS

```
4200 4198 4202 mV
4198 4202 4200 mV
```

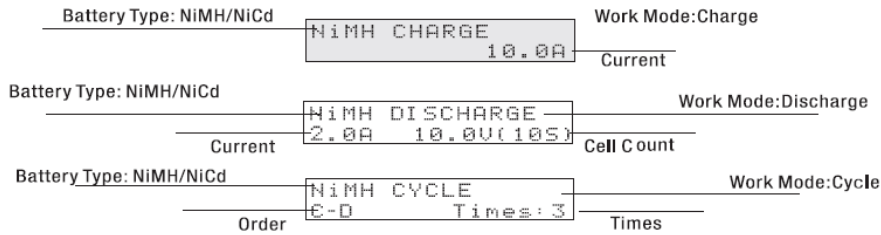
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PROGRAM OF NiMH/NiCd(C150/C240 DUO)

Press +/- to shift the work modes between the battery and the charger.
 Press ENTER to select
 Press STOP to quit



Select Battery Type/Current/Cell Count after work mode selection.
 Press +/- button to shift or increase/decrease
 Press ENTER to select
 Press STOP to quit



The character will be blinking during being selected

Press ENTER for 2 seconds, the charger will start working.



WORKING INTERFACE (C150/C240 DUO)

General

Battery type and cell count
 Alternate Show

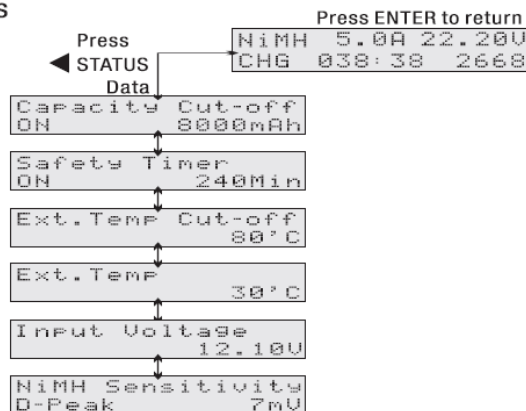
Work Mode (short form)
 CHG Charge
 DSC Discharge
 C-D/D-C Cycle

Work Finished

Show alternated between battery type/cell count with FULL(END).

FULL
NiMH 0.4A 16.00V
CHG 058:38 4968

Status



PROGRAM OF PB(Lead-Acid)(C150/C240 DUO)

Press +/- to shift the work modes between the battery and the charger.
 Press ENTER to select
 Press STOP to quit

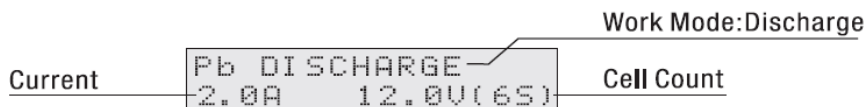
```
Pb CHARGE
10.0A 12.0V(6S)
```

CHARGE: With this mode, the charger will charge the battery to the termination voltage.

```
Pb DISCHARGE
2.0A 12.0V(6S)
```

DISCHARGE: With this mode, the charger will discharge the battery to the termination voltage.

Select Current/Cell Count after work mode selection.
 Press +/- button to shift or increase/decrease
 Press ENTER to select
 Press STOP to quit



The character will be blinking during being selected.
 Press ENTER for 2 seconds, the charger will start working.



WORKING INTERFACE (C150/C240 DUO)

General

Battery type and cell count
 Alternate Show

Work Mode(short form)
 CHG Charge
 DSC Discharge

Status

Press STATUS
 Data

```
Capacity Cut-off
ON 8000mAh
```

```
Safety Timer
ON 240Min
```

```
Ext.Temp Cut-off
80°C
```

```
Ext.Temp
30°C
```

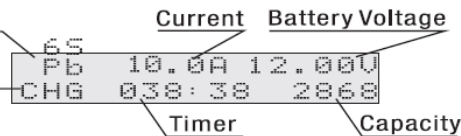
```
Input Voltage
12.10V
```

```
End Voltage
14.70V(6S)
```

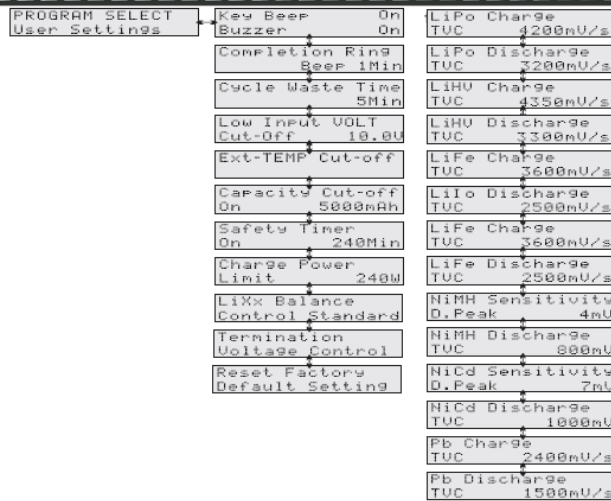
Work Finished

Show alternated between battery type/cell count with FULL(END).

```
FULL Pb 0.5A 14.70V
CHG 058:38 4988
```



PROGRAM OF USER SETTINGS(C150/C240 DUO)



Key Beep	On
Buzzer UOL	LOW
Completion Ring	Beep 1Min
Cycle Waste Time	5Min
Low Input UOLT	Cut-Off 10.0V
Ext-TEMP Cut-off	ON 80°C
Capacity Cut-off	ON 5000mAh

In this menu, you can turn on/off of the key sound and set the volume of the buzzer. Keep Beep default: On , Buzzer default: Low
In this menu, you can set the completion ring, 1-5 minutes/off/always optional, Default: 1Min

In this menu, you can set the waste time between charge and discharge in NiMH/NiCd cycle mode
Range from 1-60Min, Default: 5Min

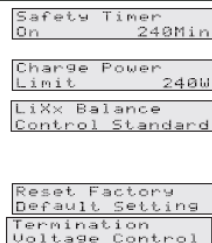
In this menu, you can set the cutoff input voltage of the power supply of the charger to protect your power supply. The charger will cutoff working when input voltage lower than the setting value.
Range from 10.0-18.0V, Default: 10.0V

In this menu, you can set the cutoff external temperature to protect your battery.
The charger will cutoff working when the external temperature is higher than the setting value (a external temperature sensor is needed). On/Off optional, range from 30-90°C, Default: 80 °C

In this menu, you can set the cutoff capacity to protect your battery.
The charger will cutoff working when the capacity is more than the setting value.
On/Off optional range from 100-6000mAh Default: 8000mAh



PROGRAM OF USER SETTINGS(C150/C240 DUO)



Termination voltage control per cell of all the batteries this charger support. You can set the value according to your request.

In this menu, you can set a safety time to protect your charger and battery.
The charger will cutoff working when the safety time is up to the setting value.
On/Off optional, range from 10-720 minutes, Default: 240 minutes

In this menu, you can set the charge power limit to meet your power supply.
The charge will work under the setting value. Range from 10-250 watt, Default: 250 watt

Balance control of LiPo/LiIo/LiFe, you can set the balance control to meet your demand.
Standard/Fast/Accurate optional.
Default: Standard

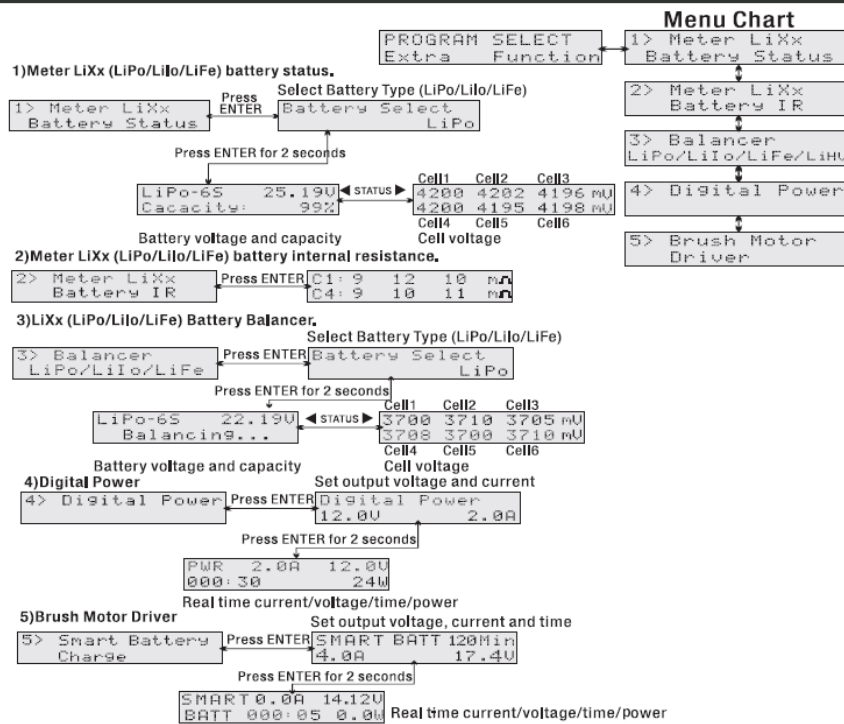
*Fast: Balance speed fastest, less accurate.
*Accurate: Balance speed lowest, more accurate.
*Standard: balance speed and accurateness between Fast and Accurate

Reset factory default setting.

LiPo Charge TUC	4200mV/s	Range from 4150-4250 mV/s Default: 4200mV/s
LiPo Discharge TUC	3200mV/s	Range from 3000-3850mV/s Default: 3200mV/s
LiHu Charge TUC	4350mV/s	Range from 4300-4400 mV/s Default: 4350mV/s
LiHu Discharge TUC	3300mV/s	Range from 3100-3950mV/s Default: 3300 mV/s
LiIo Charge TUC	4100mV/s	Range from 3750-4200mV/s Default: 4100mV/s
LiIo Discharge TUC	2500mV/s	Range from 3000-3750mV/s Default: 3100mV/s
LiFe Charge TUC	3600mV/s	Range from 3300-3800mV/s Default: 3600mV/s
LiFe Discharge TUC	2500 mV	Range from 2500-3300mV/s Default: 2500mV/s
NiMH Sensitivity Default		Range from 4-20mV
NiMH Discharge TUC	800mV	Range from 500 1000mV/s Default: 800mV/s
NiCd Sensitivity D.Peak	7mV	Range from 4-20mV Default: 7mV
NiCd Discharge TUC	1000mV	Range from 500-1000mV/s Default: 1000mV/s
Pb Charge TUC	2.4W/s	Range from 1500-2500mV/s Default: 2400mV/s
Pb Discharge TUC	1.5W/s	Range from 1000-1500mV/s Default: 1500mV/s

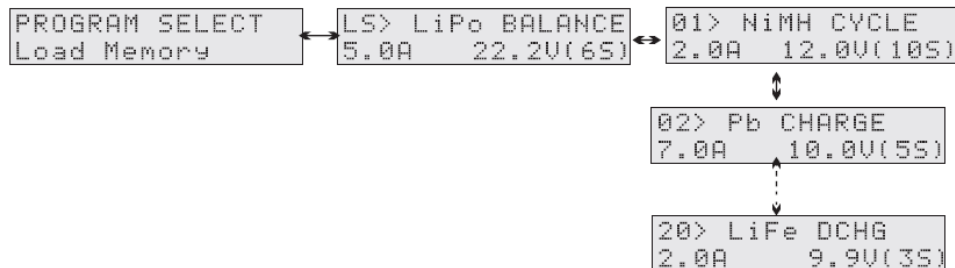


PROGRAM OF EXTRA FUNCTION(C150/C240 DU0)



PROGRAM OF LOAD MEMORY(C150/C240 DU0)

Menu Chart



There are 20 memories record the work of the charger. LS=latest record. Press +/- to shift the memories, press ENTER to revise, then press ENTER for 2 seconds to start working.



ERROR INFORMATION(C150/C240 DUO)

INPUT VOLTAGE TOO HIGH	Input voltage is higher than 18V, check the power supply, then restart the charger.
INPUT VOLTAGE TOO LOW	Input voltage is lower than the value of LOW INPUT VOLTAGE CUT-OFF, check the power supply, then restart the charger.
REVERSE POLARITY CHECK	Reverse polarity, check the connection between the charger and the battery, correct the connection, then restart the work.
BATTERY CHECK DISCONNECT	Battery disconnect, check the connection between the charger and the battery, then restart the work.
BATTERY CHECK OVER VOLTAGE	Total voltage of the battery is over the termination voltage control(TVC), check the battery and the TVC setting, then restart.
BATTERY CHECK LOWER VOLTAGE	Total voltage of the battery is lower than the termination voltage control(TVC), check the battery and the TVC setting, then restart.
BATTERY CHECK CELL COUNT ERROR	Cell count detected by the charge is different from the setting, check the battery cell count and reset the cell count of the work.
BATTERY CHECK OVER CELL VOLT	Cell voltage of the battery pack is over the termination voltage control(TVC), check the battery and the TVC setting, then restart.
BATTERY CHECK LOWER CELL VOLT	Cell voltage of the battery pack is lower the termination voltage control(TVC), check the battery and the TVC setting, then restart.
BATTERY CHECK FULL BATTERY	Full battery, no need to charge.
OVER Ext. TEMP CUTOFF	External temperature is higher than the setting value, cutoff.
OVER CAPACITY CUTOFF	Capacity is over than the setting value, cutoff.
SAFETY TIME OUT CUTOFF	Time is up to the setting value of Safety Timer, cutoff.