

# USER GUIDE

# iTECHDCDC10

## INTELLIGENT BATTERY CHARGER



**iTECHWORLD**  
THE POWER EXPERT



# QUICK START GUIDE

## Step 1.

Connect the auxiliary battery to the iTECHDCDC10 output via the black Anderson.

## Step 2

Adjust the charge profile by pressing and holding the MODE button for 1.5 seconds. The battery type indicator will move one LED to the right.

## Step 3.

Connect the DCDC10 cigarette plug input to a cigarette socket.

## Step 4.

Turn the cigarette socket on and verify that the iTECHDCDC10 is outputting power.

You will know the iTECHDCDC10 is outputting power when the battery type LED is solid and the alternator/charging LED is flashing.

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# OVERVIEW




The iTECHDCDC10 charger is suitable for charging all common types of automotive or recreational 12V batteries, such as standard lead acid, gel, AGM, calcium or lithium LiFePO4 chemistry 12v lithium batteries. A cigarette plug input allows charging from various sources, from vehicles to battery boxes!

Designed with high efficiency in mind, the iTECHDCDC10 charger is compact and suitable for installations with limited space. Additionally, it is engineered to isolate the auxiliary battery from the input battery, preventing over-discharge of the input battery.

## KEY FEATURES

- Cigarette plug input
- Suitable for charging common types of automotive or recreational 12V batteries.
- Charging efficiency of up to 95%.
- Excellent performance in harsh environments.
- Inbuilt low-voltage, over-voltage, over-temperature protection.
- Isolates the input battery from the auxiliary battery.
- Automatically brings iTechworld lithium batteries out of safe mode.

## Package Contents

 <p>1 x iTECHDCDC10</p>	 <p>50A Anderson to Cigarette Plug</p>	 <p>User Guide</p>
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## DISPLAY PANEL



## BATTERY CHARGING PROFILE

To modify the battery charging profile, disconnect the black (auxiliary) Anderson plug and press the MODE button for 1.5 seconds. The battery type indicator will move one LED to the right.

Please be aware that following any changes, there might be a delay of up to 2 minutes before the charger starts the charging process.

## LED CHARGE INDICATOR

Alternator LED	Charging LED	Battery Type LED	Charging Stage
Solid GREEN	Short Flash GREEN	Solid GREEN	Bulk or Absorbtion
Solid GREEN	Long Flash GREEN	Solid GREEN	Float

## UNIT OPERATION

When the iTECHDCDC10 is connected, all LED indicators will light up; this is normal operation. The charger is initialising and will take up to 2 minutes to start charging.

The iTECHDCDC10 will go into standby mode if the input voltages are below the turn-off voltage (please note the iTECHDCDC10 will continue to charge the auxiliary battery for up to 2 minutes before going into standby). This is indicated by the charge input and battery type indicator LEDs blinking momentarily at the same time; once charging voltages have risen above the cut in voltage, it will take up to 2 minutes for the charger to “wake up” and begin to charge.

iTECHDCDC10 Operation		
Input	Turn On	Turn Off
12V Standard Alternator	>13.1V	<12.6V

## FAULT RESOLUTION

Alternator LED	Charging LED	Battery Type LED	Fault LED	Explanation	Resolution
Flashing GREEN	-	Flashing GREEN	-	Low voltage detected at alternator input	Check alternator input voltage
Flashing GREEN	-	-	Flashing RED	High voltage detected at alternator input	Check alternator input voltage
-	-	Flashing GREEN	Flashing RED	High voltage detected at output	Check output battery voltage
-	-	Solid GREEN	Flashing RED	Output short circuit	Check output battery voltage
-	-	-	Flashing RED	Over temperature	Let the unit cool down, relocate the charger to somewhere with better ventilation.

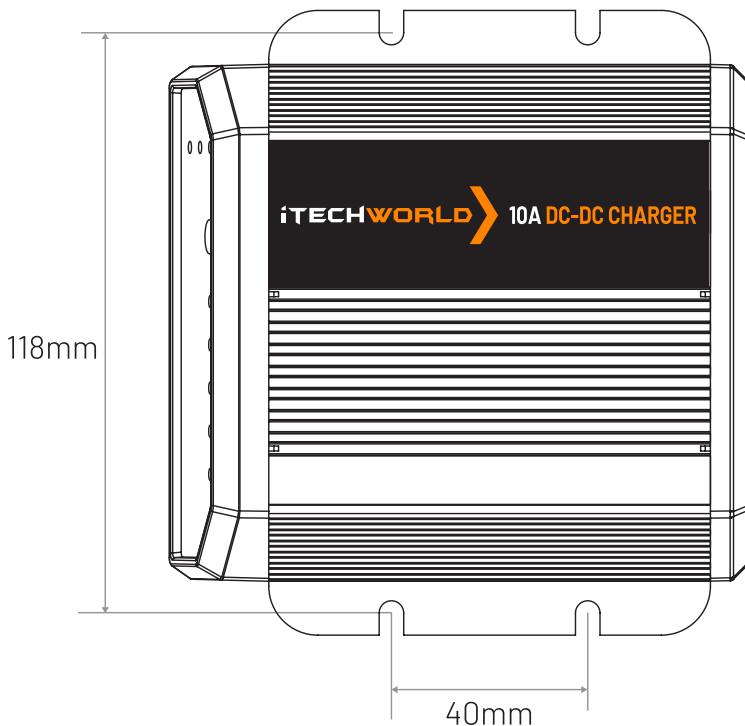
# OPERATION

## INSTALL LOCATION

The iTECHDCDC10 charger has been designed for installation in various locations.

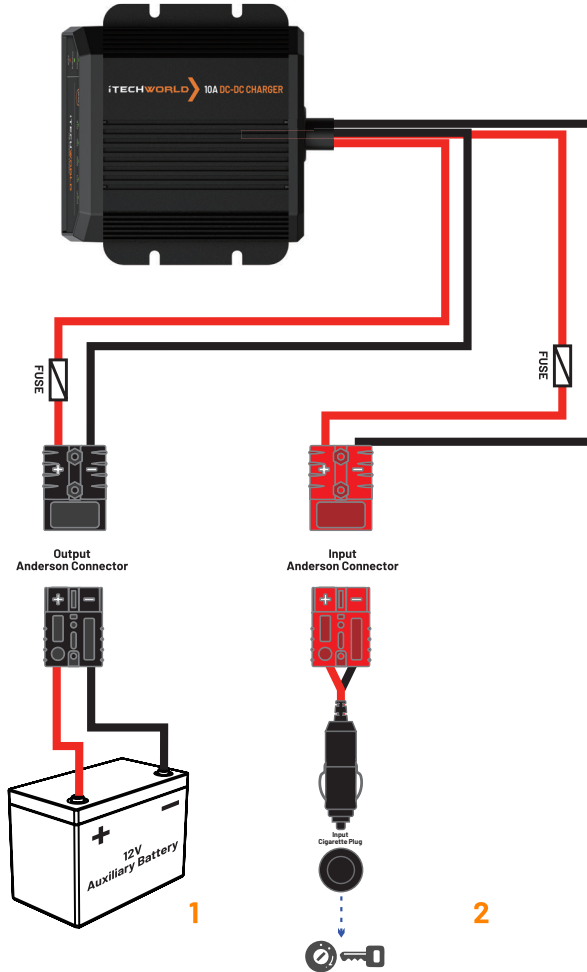
If the charger is to be installed in the vehicle cabin, please ensure there is adequate ventilation around the charger, and that it is not installed in an enclosed space where airflow is restricted.

The iTECHDCDC10 charger should be installed as close as possible to the auxiliary battery, this allows for more efficient charging of your auxiliary battery. The iTECHDCDC10 can be mounted with 4 screws (not included), there are mounting brackets where the screws can be affixed.



# TYPICAL SETUP & CABLE SELECTION

Input	Length		
Input Positive	0-3M	3-6M	6-9M
Output Positive			
Ground	2.5mm <sup>2</sup> (14AWG)	4mm <sup>2</sup> (12AWG)	6mm <sup>2</sup> (10AWG)



- Output (black Anderson):** connects to the battery being charged (the auxiliary battery).
- Input (cigarette plug):** connects to a cigarette socket.



# SPECIFICATIONS

General Rating					
Input Voltage	12.6V - 18V				
Max Input Current	10A				
Input Fuse Rating	20A				
Continuous Output Current	Up to 10A				
Output Fuse Rating	20A				
Maximum Output Power	125W				
Standby Current	<10mA				
Battery Type	Lithium LiFePO4, Lead Acid, Gel, AGM, and Calcium				
Operating Temperature	-20°C ~ 60°C				
IP Rating	IP20				
Weight	500g				
Dimensions	127 x 118 x 30mm				
Output Rating					
Charge Type	3-Stage				
Charging Profile	STD	Gel	AGM	Calcium	LiFePO4
Absorbtion (Maximum Output Voltage)	14.4V	14.1V	14.7V	15.3V	14.5V
Float Voltage	13.4V	13.5V	13.4V	13.6V	
Input Rating					
Input	Turn On			Turn Off	
12V Standard Alternator	>13.1V			<12.6V	

# SAFETY PRECAUTIONS

The iTECHDCDC10 Battery Charger must be installed and operated correctly for safe operation and optimal performance. Please carefully read, understand and follow all instructions and guidelines in this user guide. iTechworld recommends that a certified technician install your iTECHDCDC10 charger. Failure to follow these instructions may damage the unit or property, causing death or serious injury.

**Disclaimer:** While iTechworld has taken every precaution to ensure the accuracy of the contents of this user guide, iTechworld assumes no responsibility for any errors or omissions.

**Furthermore, all specifications and functionality may change at any time without notice.**

It is best to view our website for the most up-to date information

## **WARNING:**

Please select the correct battery charging profile applicable to the auxiliary battery. Selecting the incorrect battery charging profile may cause damage to your auxiliary battery or result in fire. If you are unsure of the correct battery charging profile to use, please consult your battery's manufacturer.

## **WARNING:**

Before connecting, clean both ends of the cigarette plug connection to avoid poor contact. Ensure the cigarette plug and the cigarette socket are in firm and stable contact. Do not touch the metal after removing the cigarette plug as it may be hot.

## **WARNING:**

Please select the correct battery charging profile applicable to the auxiliary battery. Selecting the incorrect battery charging profile may cause damage to your auxiliary battery or result in a fire. If you are unsure of the correct battery charging profile to use, please consult your battery's manufacturer.

## **WARNING:**

People with physical disabilities and visual, sensory, or mental impairments (including children) should not use this device. Children should be supervised to ensure they do not play with the device.

**WARNING:**

Please use the fuses and wires recommended in this user guide. Otherwise, the charger may be damaged, and there is a risk of electrical shock, fire, death or serious injury.

**WARNING:**

Ensure the charger's continuous output current does not exceed the battery's recommended maximum charging current. If you are unsure of the maximum charging current rate, please consult your battery's manufacturer.

**WARNING:**

When using the charger to charge a lithium battery, ensure that it contains an inbuilt Battery Management System (BMS) that features under- and over-voltage protection with cell balancing. Failure to do so may result in fire, death or serious injury.

**WARNING:**

Do not drop the charger.

**WARNING:**

Do not use your charger and its accessories to connect equipment if there is a defect.

**DANGER:**

This device is only suitable for battery types listed in the user guide. Do not use it for other purposes.

**DANGER:**

Do not disassemble or modify the charger; doing so may result in a risk of electrical shock, fire death, or serious injury.

**LIMITATIONS OF USE:**

Do not use in connection with life support systems or other medical equipment or devices.

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Whether you're an avid camper, 4WD enthusiast, freedom seeker or camper, we've got your power needs covered. Escape the grid without compromise, minimise your downtime and travel with comfort with our large range of leading products at great prices.

**iTechworld. The Power Expert.**

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