

USER GUIDE

CONTROLHUB/25/40

PREMIUM CONTROL HUB



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OVERVIEW

The iTechworld Control Hub is the ultimate solution to 12V system management. Our expert engineers have specifically tailored the hub for versatility, utilising only the highest-quality inputs.

Five illuminated rocker switches allow you to see what you’re doing, day or night. Each switch also features a replaceable fuse to protect your battery. Thick copper wiring fortifies the pre-fused connections and increases their longevity, making your iTechworld Control Hub the ideal power management solution.

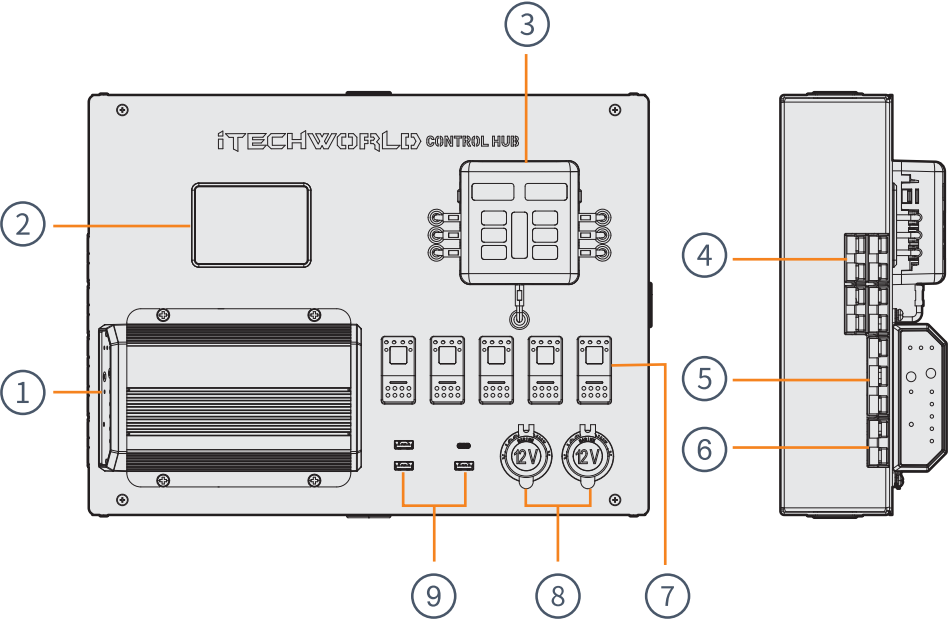
KEY FEATURES

- Advanced battery monitor with 500A shunt
- 2 x 12V 15A cigarette lighter outputs
- 3 x USB-A outputs
- 30W USB-C output
- 4 x In/Out 50A Anderson plugs
- Various output fuses
- Tough aluminium casing
- 5 X 20A Backlit Rocker Switches

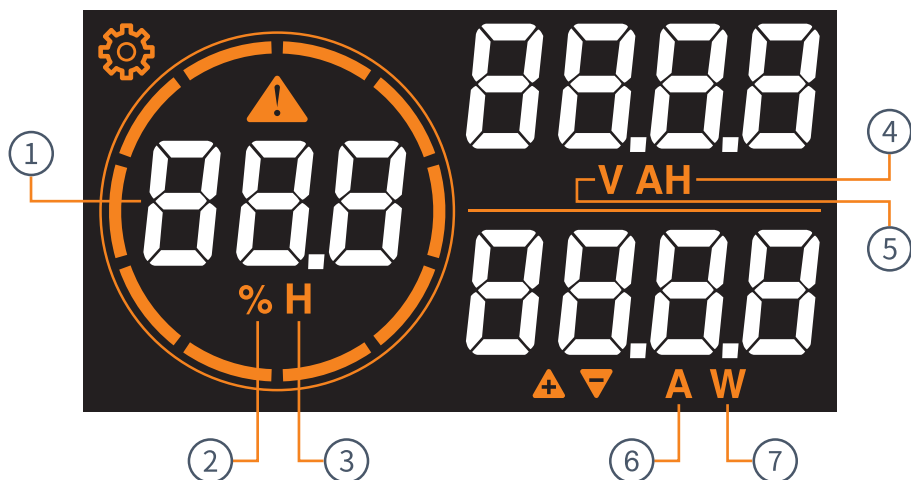
Package Contents

					
1x Control Hub	User Guide	Allen Key and Bolts	Labels	Terminals	Fuses

UNIT DIAGRAM



- ① OPTIONAL DCDC CHARGER
 - ② ADVANCED BATTERY MONITOR
 - ③ FUSE BOX
 - ④ IN/OUT 50A ANDERSONS
 - ⑤ DCDC ALTERNATOR INPUT
 - ⑥ DCDC SOLAR INPUT
 - ⑦ 5 x BACKLIT ROCKER SWITCHES
 - ⑧ CIGARETTE LIGHTER OUTPUTS
 - ⑨ USB/USB-C OUTPUTS
- DCDC MODELS ONLY



① STATE OF CHARGE

② PERCENTAGE

③ TIME REMAINING

④ Ah REMAINING

⑤ VOLTAGE

⑥ AMPERAGE

⑦ WATTAGE



DCDC Install Kit



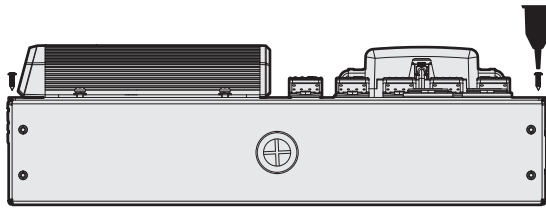
Control Hub 12V Installation Cable

OPERATION

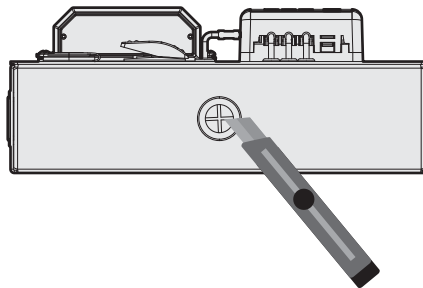
WIRING IN SWITCHES:

Note: Ensure the unit is disconnected from the battery prior to attempting any wiring.

1. Remove the 4 screws and open the Control Hub.

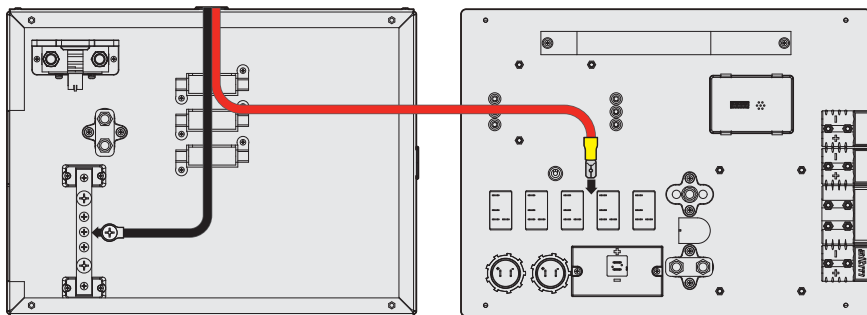


2. For wiring in switches, select the appropriate sized spade and ring terminal for your accessories wiring.
3. Using a knife, cut the grommets on the side or bottom of the unit that your accessory wires will run through.

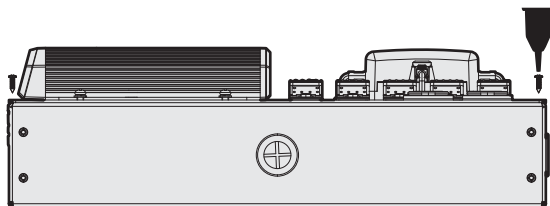


4. Strip around 1cm of insulation from each cable select and crimp the appropriate sized spade terminal to your positive wire and the ring terminal to the negative wire.

5. Connect the spade terminal to the bottom blank tab on your switch and using a phillips head screwdriver, connect the negative ring terminal to one of the spare screw positions on the negative bus bar.

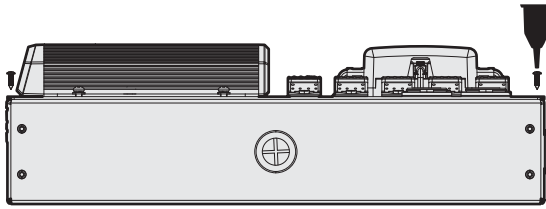


6. Tuck cables in under the Control Hub lid, lowering the lid carefully onto the Control Hub, ensuring the lid is oriented correctly. Fasten the 4 provided screws, being sure not to over-tighten.

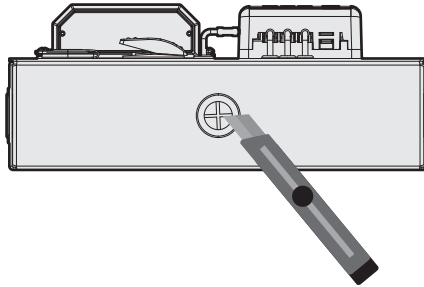


BATTERY INSTALLATION

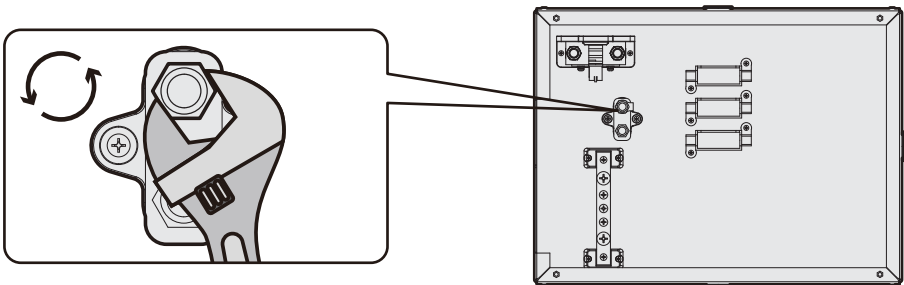
1. Remove the 4 screws and open the Control Hub.



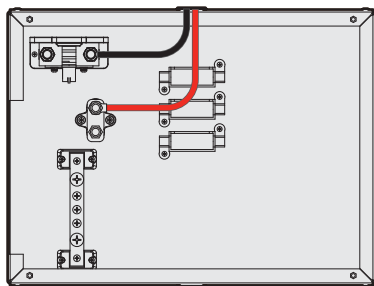
2. Using a knife, cut the grommets on the side or bottom of the unit that your battery wires will run through.



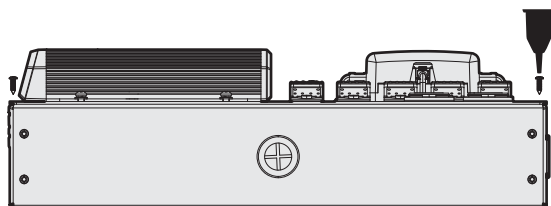
3. Remove the bolt and washer off both the positive and negative terminal posts on the rear of the control hub.



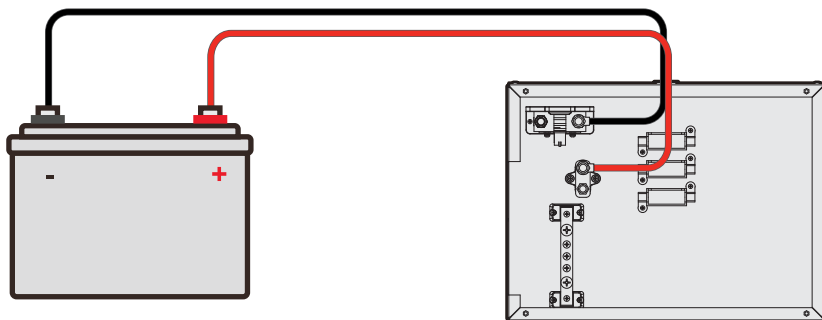
4. Attach the negative cable to the B side of the shunt, then attach the positive cable to the positive terminal as shown below. Fasten the 2 bolts after the washer has been fitted, being sure not to over-tighten.



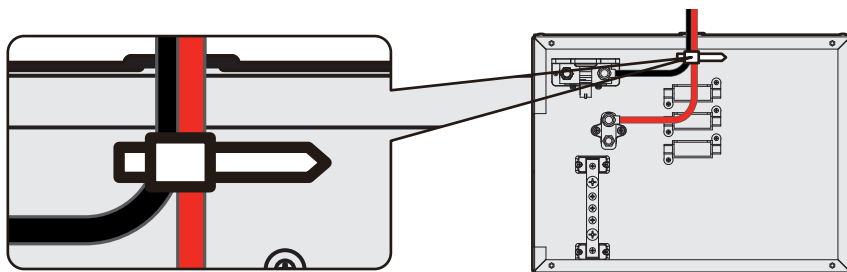
5. Tuck cables in under the Control Hub lid, lowering the lid carefully onto the Control Hub, ensuring the lid is oriented correctly. Fasten the 4 provided screws, being sure not to over-tighten.



6. Connect the other end of the cables to the battery, start with the positive, then do the negative.



7. Ensure the cables between the Control Hub and battery are not rubbing, and that they are adequately supported. You may need to use cable ties to fix them in place.



BATTERY MONITOR & SETUP

1. Enter the settings screen by pressing and holding the SET button.
2. Enter the SET1 interface to set the overvoltage value and adjust through the up and down arrows. This value should be 0.5V above the battery's stated maximum voltage to allow for a higher float charge voltage.
3. After setting the overvoltage value, short press the SET button to enter the SET2 interface for the undervoltage settings. As before, adjust the values with the up and down arrows. This value represents the voltage at 0% capacity. Please be aware that this number will vary depending on battery type. Recommended settings for lithium batteries are as follows:
 - Lithium: 10.5V
4. After setting the undervoltage value, short press the SET button to enter the SET3 interface for overcurrent settings. You must match this value with the battery's rated maximum current.
5. After setting the overcurrent value, short press the SET button to enter the SET4 interface for capacity settings. Set this value according to the actual capacity of the connected battery.
6. After setting the capacity, short press the SET button to enter the SET5 interface for percentage settings. Set the current battery percentage to 100%.

Note: We recommend charging your lithium battery to 13.5V before setting your battery monitor to 100%.

7. After setting the percentage value, short press the SET button to enter the SET6 interface for backlight brightness settings. Set this value to your preferred brightness.
8. After setting the backlight brightness, short or long press the SET button to exit the setting interface and return to the home screen.

CONNECTING CHARGERS

The Contol Hub is able to be recharged through various ports:

- Connecting an AC charger to any of the in/out Anderson plugs.
- Connecting a solar panel with a regulator to any of the in/out Anderson plugs.
- Connecting alternator power to the DCDC charger alternator input Anderson using our Plug & Play DCDC Wiring Kit*.
- Connecting an unregulated solar panel to the DCDC charger solar input Anderson.

If you're using a model with an integrated DCDC charger, you can charge from a vehicle alternator (wiring kit sold separately) or unregulated solar.

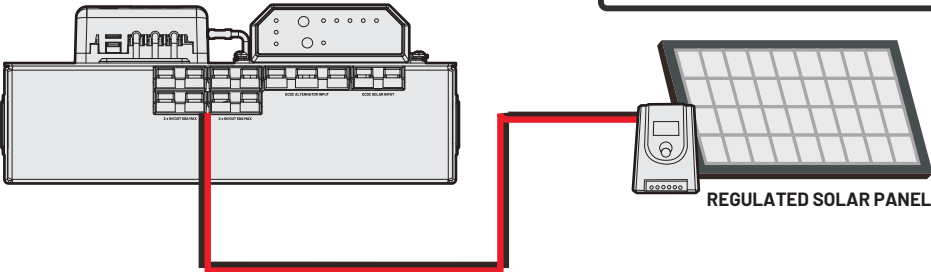
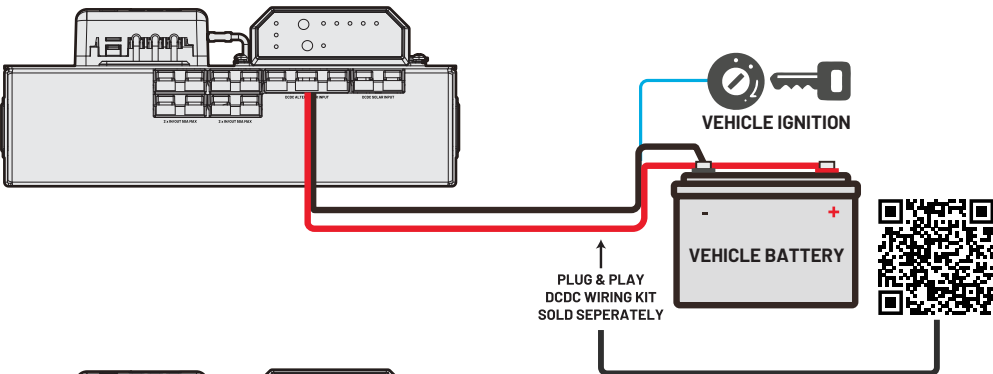
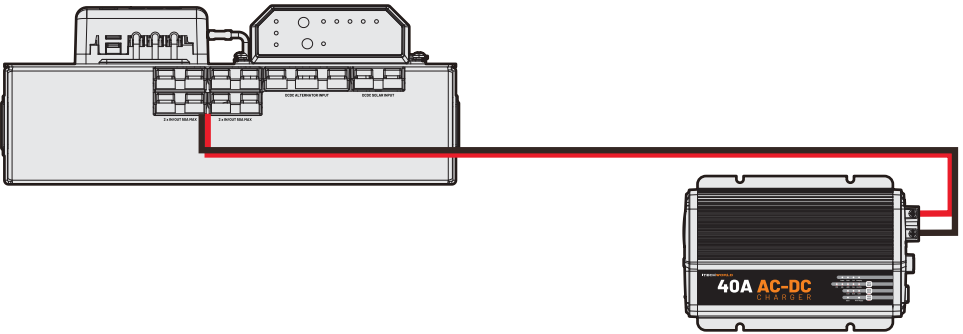
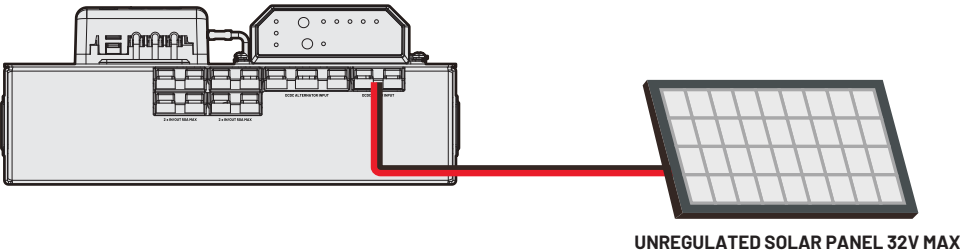
Note: *Your solar panel open circuit voltage must not exceed 32V.*

Do not connect an unregulated solar panel directly to the battery via any of the in/out Anderson plugs. If your solar panel is fitted with a built-in regulator, you can connect it using any of the in/out Anderson plugs.

**Plug & Play DCDC wiring kit sold separately.*



TYPICAL SETUP



SPECIFICATIONS

Control Hub	
Dimensions (LxWxH)	403 x 304 x 116mm
Dimensions with DCDC (LxWxH)	403 x 304 x 119mm
Outputs	2 x 12V 15A cigarette lighter outputs USB-C Output 3 x fast charge USB Outputs
Inputs/Outputs	4 x 50A Anderson plugs
Inputs	1 x 3-pin 50A Anderson plug (DCDC Alternator Input) 1 x 50A Anderson plug (DCDC Solar Input)

Battery Monitor	
Model	iTECHBM500
Supply Voltage	10V-100V
Battery Capacity	10Ah-999Ah
Maximum Measured Current	500A
Power Consumption (Screen Off)	<2mA
Power Consumption (Screen Brightness @ 10%)	<20mA
Power Consumption (Screen Brightness @ 100%)	<60mA
Voltage Accuracy	±1%
Current Accuracy	±1%
Capacity Accuracy	±1%
Operating Temperature	-20°C ~ 80°C
Exterior bracket dimensions (LxWxH)	106 x 81 x 18mm
Mounting bracket points (LxW)	95 x 70mm
Monitor backing dimensions (LxWxH)	80 x 59 x 16mm
IP Rating	IP20

DCDC Chargers					
General Rating					
Model	iTECHDCDC25			iTECHDCDC40	
Vehicle Input Voltage	9V – 32V				
Solar Input Voltage	10V – 32V				
Max Input Current	25A			45A	
Input Fuse Rating	40A			60A	
Continuous Output Current	Up to 25A			Up to 40A	
Output Fuse Rating	40A			60A	
Minimum Auxiliary Battery Charge Start Voltage	4V				
Standby Current	<10mA				
Battery Type	Lithium LiFePO4, Lead Acid, Gel, AGM, and Calcium				
Operating Temperature	-20°C ~ 80°C				
IP Rating	IP67				
Weight	670g			950g	
Dimensions (LxWxH)	150 x 127 x 39mm			188 x 127 x 39mm	
Battery Capacity	50-500Ah			80-800Ah	
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	>13.2V			<12.8V	
24V Standard Alternator	>26.2V			<25.6V	
12V Smart Alternator (Ignition Cable Connected)	>12V			<11.8V	
24V Smart Alternator (Ignition Cable Connected)	>24V			<23.6V	
Solar	>16V 2A			<15.8V 1.5A	

SAFETY PRECAUTIONS

The Control Hub 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. Failure to follow these instructions may result in damage to the unit or property, 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:

The lid of the control hub must always remain closed with the screws tightened whilst charging a battery or powering a device from an outlet.

WARNING:

Do not allow any metal objects to fall into the control hub or enter one of the ports.

WARNING:

Never insert anything other than a compatible adapter into any of the ports on the control hub.

WARNING:

People with physical disabilities, 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:

Do not drop your control hub.

WARNING:

Ensure the control hub does not come into contact with water, rain or snow. Failure to do so may lead to permanent damage to the internal electronics and will void the warranty.

WARNING:

Do not use your control hub to connect equipment if there is a defect.

WARNING:

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

WARNING:

Ensure that the selected battery charging profile's charge voltage does not exceed the battery's recommended maximum charging voltage. If you are unsure of your battery's maximum charging voltage, please consult its manufacturer.

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.

DANGER:

These control hubs are only suitable for battery types listed in the user guide. Do not use them for other purposes.

DANGER:

Do not disassemble or modify the control hub 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 devices.

iTECHWORLD

THE POWER EXPERT

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When it comes to energy storage and creation at iTechworld, we take pride in being one of the biggest names in the industry. Based in Australia, we are a family-owned and operated business. With many more innovative products on the horizon we are committed to constantly raising the bar to provide bigger and better benefits to all our customers Australia-wide.

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.

LOVE YOUR CONTROL HUB? **LEAVE A REVIEW**

