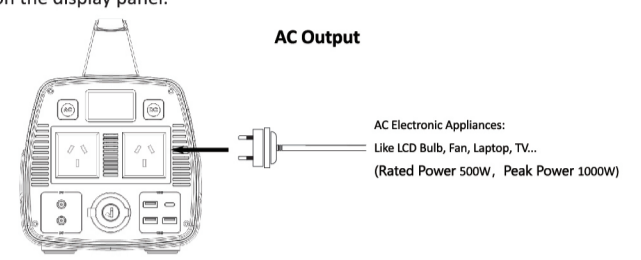


To be able to recharge such devices, long press the "DC button" for 3 seconds. This will turn the "DC Lock On" to keep the USB port output and DC power running. Please press the "DC button" to turn off "DC Lock On" when the USB device is fully charged to save power. When the "DC Lock On" mode is on, the "DC Output" and "USB Output" icons on the LCD display panel will keep blinking. When "DC Lock On" is turned off, the two icons will stop blinking and become solid. DC outputs and USB outputs will turn off.

[V] AC OUTPUT
Fitted with 2x AC Output (240V/50Hz, rated power: 500W, peak power: 1000W). To use, connect the power cable plug of the electric appliance to the AC outlet. Switch on the "AC button", the AC indicator on the LCD display panel will light up, and the ITECH500 will start providing power to your devices.

★ **NOTE:** When the AC switch is turned on, the real-time power will be shown on the display panel.



Protection Modes:
1. Low-Voltage Protection: To protect the battery from over-discharge. When the battery is running out of power, the AC output will automatically turn off.
2. Over-Voltage Protection: To protect the electric appliances from damage.

-08-

When the battery voltage is detected as too high, the AC output will automatically turn off.

- Over-Power Protection: When the power of the electric appliance exceeds the maximum allowable power, the AC output will automatically turn off. Please check carefully that the power of your electric appliance is within the power range of the ITECH500.
- Short-Circuit Protection: When the AC output is short-circuited, the AC output will automatically turn off. Please resolve the problem and restart the ITECH500.
- Over-Temperature Protection: During the use of AC output, the ITECH500 will generate heat. If the temperature becomes too high, the inbuilt fan will automatically start to dissipate heat. This is normal.
- Fan speed switching: When the load power is less than 200W, the fan runs at low speed; when the load power is greater than 200W, the fan runs at high speed.

Notice:
1. This ITECH500 has a "3 second" delay from pressing the AC button to AC voltage output. This is a soft start delay design. This is normal.
2. In the event of over-current protection or short-circuit protection occurring, the ITECH500 will try to restart three times in order to override the protection caused by a starting current that is too high. After restarting, the AC output will be turned off and will show on LCD Display panel.
3. Please turn off the AC output after using it.
4. If the ambient temperature is high and the power consumption is large, even if the inbuilt fan is on, the product temperature may reach the overheat protection value. If this happens turn off the AC output to protect the inside components from over temperature damage. You can use the ITECH500 again after the temperature drops, or reduce the power load.
5. In the event of the battery capacity is very low, the low-voltage protection of AC output will be turned on before that of the DC output protection. The DC output

-09-

can be used while AC output cannot, this is normal.

- The power displayed is only approximate. The actual power is related to the characteristics, efficiency, power and other factors of the electrical device.
- When the AC is running with no load, a basic power value will be shown on the display panel due to the inverter itself using power at standby, this is normal.

Warning:
1. Before using the AC output, you must confirm that the AC output voltage and frequency of this ITECH500 is matched with that of the electric device you are wanting to use.
2. The power of AC electric devices you use must be less than the allowable maximum power (500W) of the ITECH500. Some devices can be rated at a lower wattage but on startup can consume up to 10 times that. Such as water pumps, compressors, fridges, drills, drop saws and A/C units to mention a few. For example a device rated at 250w can on startup consume 1200w for just a fraction of a second. In this case the ITECH500 will go into overload protection.
3. When the AC port is not in use, turn it off to conserve power.

[VI] RECHARGING
Connect the charger output plug to the DC Input of the ITECH500 to charge it. The power indicators will blink, and the fan will run at a low speed to indicate that the ITECH500 is charging. Once fully charged, all power indicators will stop blinking and remain solid. After it's fully charged, remove the charger plug. The ITECH500 has a variety of charging protection functions, supports multiple charging methods, and supports charging and discharging at the same time, handy when running a DC portable fridge while charging.

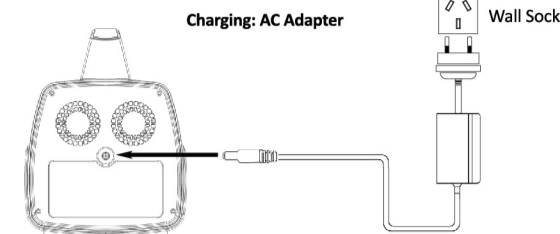
Protection Modes:
1. Charge Over-Current Protection: The ITECH500 has a maximum charge current

-10-

limitation, to prevent excessive charge current from damaging it.

- Charge Over-Voltage Protection: The ITECH500 has a maximum charge voltage limitation, to prevent excessive charge voltage from damaging it.
- Trickle Charge: If the battery is extremely low, it will use a very low current to charge. The ITECH500 supports 3 ways of recharging (see below). You can use the DC output when it's charging.

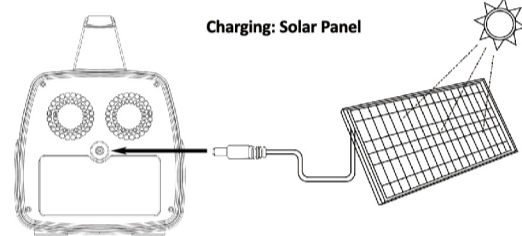
1. Charging through AC adapter
Using the included AC adapter (19V/5A), plug the ITECH500 into any wall outlet to charge it. From flat to fully charged will take about 7-8 hours. Please remove the AC adapter after the ITECH500 is fully charged, to ensure the product safety and to extend its life.



2. Charging from your car with the 12V car charger
Using the included car charger, plug the ITECH500 into the 12V cigarette lighter port in your car. To protect your car battery from going flat, please charge the ITECH500 while your car engine is running. Please remove the power cable after it is fully charged.

-11-

3. Charging from a Solar Panel
This ITECH500 is optimized for improving solar charging efficiency, with a MPPT (Maximum Power Point Tracking) built in charge controller. This supports a 18V-24V charging voltage and a maximum charging current of 5A, to ensure the maximum charging in limited sunlight. You don't require a solar regulator because the ITECH500 has one built in.



Notice:
1. The actual charging from solar energy is related to local effective sunlight, wattage of your panel, angle to the sun, climate, environment and other factors. Please use solar panels according your situation.
2. Place the solar panel in the best position in direct sunlight and avoid shadows blocking the solar panel.
3. Once fully charged, please disconnect the solar panels from the ITECH500.

-12-

[VII] PRODUCT NOTES
1. The ITECH500 has built-in lithium batteries that do not suffer from memory effect. Therefore there is no need to activate the batteries by charging and discharging.
2. In order to extend the life of the lithium battery inside, please charge it regularly and avoid deep discharge.
3. In a low-temperature environment, the battery activity is reduced, and discharge capacity is reduced, please use the ITECH500 in an appropriate environment. Charging and discharging can increase the temperature of the ITECH500 so keep out of direct sunlight.
4. Use the ITECH500 in the temperature range of +5°C ~ +30°C, to obtain the optimal charging capacity.
5. Solar panels that are compatible have a 18V-24V voltage, and to achieve ideal charging efficiency, we recommend you use 20V-22V solar panels.
6. The life-cycle of battery charging and discharging is greater than 500 times. After 500 times, the capacity will be reduced, and like all batteries will wear out eventually.

[VIII] Display Error Instructions and Solutions
Error Display Description:
E1/E2: DC Output Over-Current
E3: DC Output Short-Circuit
E5: AC Inverter Disconnected
E6: AC Output Over-load Protection
E7: AC Output Short-Circuit Protection
E8/E9: AC Inverter Over-Temperature
E10: AC Inverter Input Voltage Too Low
E11: AC Inverter Input Voltage Too High
E12: AC Output Voltage Too High
E13: AC Inverter Error

-13-

Solutions When Errors Occur:
E1/E2: The total current of the using appliances exceeds the allowed maximum current, please remove some of the appliances to restart.
E3: DC output is short circuit, please restart the output after troubleshooting.
E5: When this error message appears, please contact Itechworld for support.
E6: The total wattage of the appliances your trying to use exceeds the maximum available power of the ITECH500, please use appliances within the allowed power range.
E7: AC output is short-circuited, please restart AC output after troubleshooting.
E8/E9: Please wait for the temperature to drop or reduce the use of load power.
E10: Please charge the ITECH500 to avoid over-discharging of the internal battery.
E11: Detected battery voltage is too high, please contact Itechworld for support.
E12: Detected AC output voltage is too high, please contact Itechworld for support.
E13: When this error appears, please contact Itechworld for support.

[IX] MAINTENANCE AND SECURITY
1. Use the ITECH500 properly to avoid electric shock.
2. Do not charge the ITECH500 with a charger that doesn't match this product.
3. Keep the ITECH500 away from high temperature, high humidity, high salinity and corrosive environments.
4. Do not expose the ITECH500 to direct sunlight, or dispose of it in fire.
5. Do not place or store the ITECH500 with metal objects.
6. Do not disassemble or reassemble the ITECH500.
7. Do not intentionally knock, impact, pierce or drop the ITECH500.
8. Do not store the ITECH500 for over 3 months without recharging.
9. When in use, do not cover the ITECH500 with towels, clothing or any other items, that could slow heat loss.
10. Do not connect the ITECH500 with a charger for extended periods of time.
11. Children should be supervised to ensure that they do not play with the ITECH500.
12. Please scrap and recycle the ITECH500 in accordance with local regulations.
13. This ITECH500 is designed for temporary outdoor and emergency use only. It cannot replace normal A/C power supplies.
14. The ITECH500 provides a pure sine wave output, compatible with all appliances that draw less than 500W.

-14-

[X] STORAGE AND TRANSPORTATION
1. The storage and transportation temperature of the ITECH500 is -20°C ~ +50°C, to ensure safety, please keep it in a dry and cool environment.
2. If the ITECH500 is being used for a long period of time, please disconnect it from all cables and store safely.
3. If the ITECH500 is to be stored for an extended period, you need to charge it every 3 months.
4. When storing and transporting, please ensure it's kept upright.
5. Please take care when transporting the ITECH500. Do not drop it and do not press it heavily. Ensure that it's securely restrained in any moving vehicle.

[XI] RECYCLING
The ITECH500 is made of materials, that will not degrade naturally. To protect the environment and reuse natural resources, please take your used electronic products, batteries and packaging materials to dedicated recycle centers.

[LEGAL STUFF]
Itechworld is the only manufacturer of this product and user manual and partner companies have applied for various patents. Without the permission of Itechworld, no individual or entity may imitate, reproduce or extract without written authorisation. Violators will be held to account for corresponding legal liability. This user manual will be updated from time to time based on the product version upgrade, unless otherwise stated. Please refer to our website for any updated versions. Please use this ITECH500 strictly in accordance with this user manual. If any accidents are caused by violating indication requirements, users bear the consequences.



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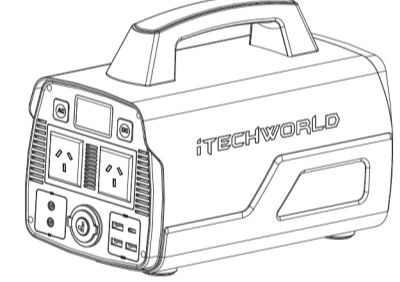
Itechworld
281 Great Eastern HWY
Burswood WA 6100

-15-



-01-

ITECH500 POWER STATION
User Manual



Thank you for purchasing the ITECH500 lithium power station. This ITECH500 will provide portable power with a range of AC, DC and USB outputs, to keep your smart phones, tablets, lights, fans, TV, portable fridges and other electrical devices charged & operating.

ATTENTION:
Before using this ITECH500, please read the user manual carefully and retain it for future reference.
This product provides a range of AC voltage outputs: 240V/50Hz. Keep out of reach of children when in use. Use and store safely, away from water, damp environments, and or dust to avoid damage or the risk of electric shock.

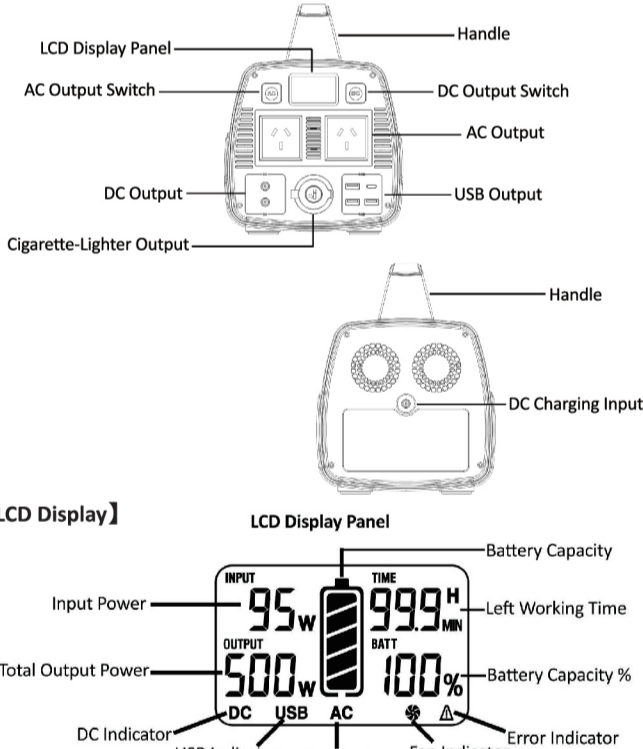
-01-

[I] INTRODUCTION
[Product Parameters]

Battery	Lithium Ion
Battery Capacity	518WH/ 50 Ah
Dimensions (Length*Width*Height)	310*170*213 MM
Weight	Approx. 6.6 KG
Input Recharging	AC Adapter: DC 19V/5A Car Charger: 19V/2.5A Solar Panel: MPPT, 18V ~ 24V/5A (Max)
Recharge time from flat	Adapter: DC19V/5A: 7 ~ 8 hours
DC Output	2 x DC5521: 12 ~ 16.8V/10A (14.5A Max)
USB Output	2 x USB-A: 5V/2.4A 1 x USB-A: QC3.0, 5 ~ 12V/18W 1 x TYPE-C: 5 ~ 20V, 3A/ PD 60W
AC Output	Pure Sine Wave Output: Rated Power: 500W (Peak Power: 1000W) AC Voltage: 240V Output Frequency: 50Hz
Cigarette Lighter Output	1 x Cigarette Lighter Output: 12 ~ 16.8V/10A (14.5A Max)
Power Indicator	LCD Display
Operating Temperature	-10°C ~ +40°C
Package Contents	1 x Portable Power Supply 1 x AC Wall Adapter 1 x Car Charger 1 x User Manual

-02-

[Product Description]



[LCD Display]
LCD Display Panel
Battery Capacity
Left Working Time
Battery Capacity %
Error Indicator

INPUT 95W
OUTPUT 500W
DC USB AC
99.9%
100%

DC Indicator USB Indicator AC Indicator Fan Indicator

-03-

[II] TRANSPORTATION MODE
1. To prevent power drainage during transportation, the ITECH500 will be in Transportation Mode once you have unpacked it. To Unlock, press the AC button and DC button for 3 seconds at the same time, then "OPE" will be shown on the display panel. The ITECH500 is now unlocked and all functions can be used.
2. **Transportation Mode:** Press the AC button and the DC button for 3 seconds at the same time, the display panel shows "LOC". The ITECH500 enters Transportation Mode, and all the buttons will be locked and not useable.

ATTENTION:
1. To prevent accidental operation, keep the ITECH500 in Transportation Mode when not in use.
2. If the ITECH500 is not being used for an extended period of time, it is recommended to put it into Transportation Mode to prevent accidental operation.

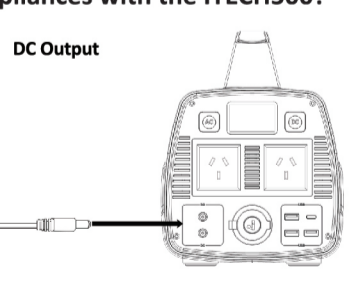
[III] DC OUTPUT
This ITECH500 has 2x DC5521 outputs (voltage range: DC12V-16.8V and rated current is 10A (14.5A Max)). To use, connect the power cable plug of the DC electric appliance to the DC outlet of the ITECH500 (as below). Switch on the "DC button". The DC indicator on the LCD display panel will light up, and the ITECH500 will start providing power to your DC appliance. In addition, you can charge car accessories by connecting the Cigarette Lighter Output of the ITECH500 (as below). Switch on the "DC button", the DC indicator will light up, and start charging DC car accessories. Once you turn on the DC function, the output power value will be shown on the LCD display panel.

★ **NOTE:** When all DC and USB appliances are removed, the DC output will automatically switch off after 30 seconds, and the ITECH500 will enter a low power state.

-04-

1. How to charge DC12V appliances with the ITECH500?

DC Output

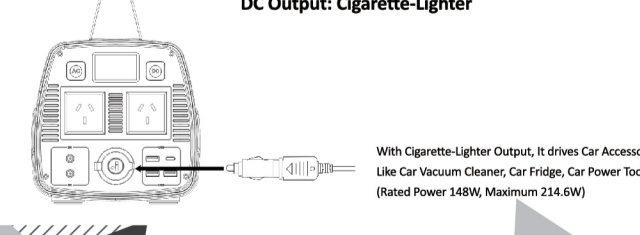


DC12V Appliances: like DC Fan, DC LCD Light... (Rated Power 148W, Maximum 214.6W)

2. How to charge car accessories via the DC Cigarette Lighter socket?
The ITECH500 has a 12V-16.8V cigarette lighter port with a rated output of 10A and a maximum of 14.5A, which can power equipment, such as car vacuum cleaners, car refrigerators, and car power tools. Press the DC button, once the DC indicator is on, it can supply power to car electrical devices.

Notice:
1. The cigarette lighter port must be protected from foreign objects to prevent damage.
2. Cigarette lighter port damage needs to be handled by a professional, users do not disassemble.

DC Output: Cigarette-Lighter



-05-

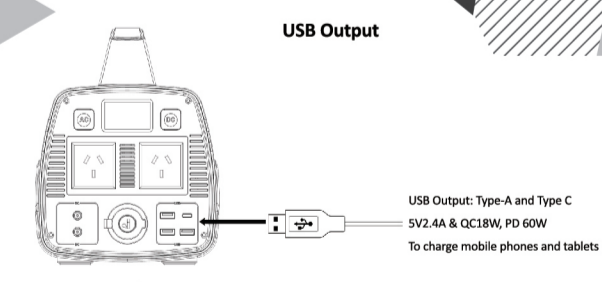
Protection Modes:
The ITECH500 features a range of inbuilt safety features to help protect both the ITECH500, and devices connected to it. These protection features include the following.
1. Low-Voltage Protection: To protect the battery from over-discharge. When the battery is running out of power, the DC output will automatically turn off.
2. Over-Voltage Protection: To protect electric appliances from damage. When the battery voltage is detected as too high, the DC output will automatically turn off.
3. DC Over-Current Protection: When the total current of DC electric appliances exceeds the maximum allowable current, the DC output will automatically turn off. Please remove some of electric appliances and restart the ITECH500.
4. DC Short-Circuit Protection: When the DC output is short-circuited or overpowered, the DC output will automatically turn off. Please resolve the problem and then restart the ITECH500.

[IV] USB OUTPUT
This ITECH500 has 2x USB-A (5V/2.4A) outputs, 1x USB-A QC3.0 Quick Charge output, and 1x TYPE C PD 60W output.
Connect the USB cable of the electric appliance to the USB outlet of the ITECH500 (as below). Switch on the "DC button", the USB indicator on the LCD display panel will light up, and the ITECH500 will start charging your 5V appliances such as smart phones, tablets, Bluetooth speakers, etc.

★ **NOTE:** When all DC and USB appliances are removed, the DC output will automatically switch off after 30 seconds, and the ITECH500 will enter a low power state.

-06-

USB Output



USB Output: Type-A and Type-C
5V/2.4A & QC3.0W, PD 60W
To charge mobile phones and tablets

Protection Modes:
1. Low Voltage Protection: To protect the battery from over discharge. When the battery is running out of power, the USB output will automatically turn off.
2. Over-Voltage Protection: To protect electric appliances from damage. When the battery voltage is detected as too high, the USB output will automatically turn off.
3. USB Over-Current Protection: When the USB current exceeds the maximum allowable current, the USB output will automatically turn off. Please remove the electric appliances, and it will reset automatically.
4. USB Short-Circuit Protection: When the USB output is short-circuited, the USB output will automatically turn off. It will automatically reset after the load is removed.
5. Over-Temperature Protection: During the use of USB output, when the output voltage is large and temperature becomes high, the USB output will automatically turn off. After the temperature drops, USB output will reset automatically.

Lock Mode: (For portable fridge's and low power draw devices)
Some smart devices like Bluetooth headphones and smart watches, require very small input current to charge, which could be less than current detection limitation of the ITECH500. Any such smart devices will not be able to be charged by the standard USB charging function of this ITECH500. Portable fridges, cycle power and turn on and off every 15min or so.

-07-