



UNIVERSAL EXTERNAL BATTERY

OVERVIEW

You can use the universal rechargeable battery to power any portable device. Connect MP3450 to your laptop computer, portable DVD player, digital camera, digital camcorder, portable CD player, PDA, mobile phone, MP4, GPS, or other portable devices to extend their working time. As an added bonus, MP3450 will supply power to the device while also charge the internal battery that battery requires less than 80W (output 19V/4A) power. Thus, take care of these matters.

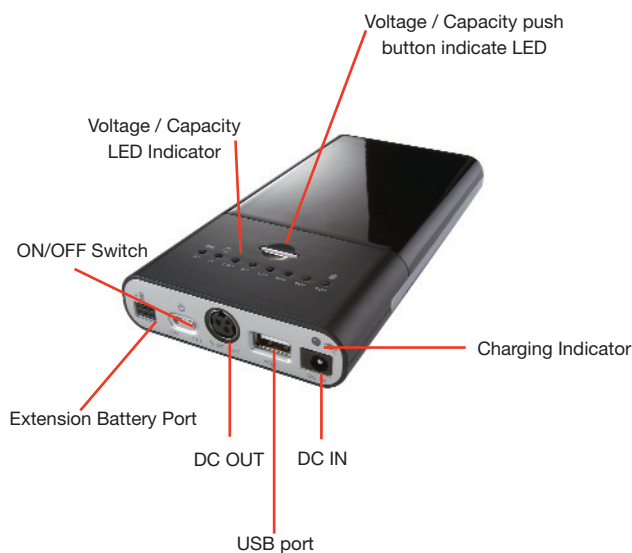
Verify whether the current consumption of the portable device (especially the laptop PC) is over 4 Amp. If the device consumes more than 4A that the maximum provided by MP3450, it will shut down when turn it on and damage the battery bank. But there are two kinds of methods to help the user as below:

- A. Take off the electronic device's internal battery; the MP3450 can supply power to the electronic device directly. The operating method is the same as indoors & outdoors operation.
- B. Don't take off the electronic device's internal battery. Adjust the output voltage of MP3450 lower than the input voltage of electronic device. For example : Your electronic device's input voltage is 18.5V; please adjust the output voltage of MP3450 to 14V or 16V scale. It's just only offer power to your electronic device working and doesn't charge device's internal battery, as MP3450's output power is not enough. It also can avoid MP3450 shutting down when charge the internal battery and offer power to the device at the same time.

UNPACKING MP3450

Your MP3450 package includes the following items:

1. Rechargeable battery
2. Leather case(MP3450 is Leather cover)
3. AC power adapter (AC Input 100~240V, DC output 20V/3A)
4. Power output cord
5. Output Adapter tips (8 pcs) with punching bag
6. User guide (not shown)



FUNCTION DESCRIPTION

- A. Power ON/OFF switch :
 1. Power ON (Slide switch to left position)
The DC OUT port and USB port will output voltage
 2. Power OFF (Slide switch to right position)
The DC OUT port and USB port will disable output
- B. DC OUT port : output 5 ~ 19 V by the voltage/capacity push button to setting when connected With power output cord.
- C. USB port : output 5.25 ~ 5.4V /2A when charging or power turn ON for MP3450D
- D. DC IN jack : Charging input port connected with DC output plug of AC power adapter. The input voltage from 9V to 20V.
- E. Capacity extended port : connected with MP3460 for extended the capacity to double.
- F. Voltage/capacity push button & indicated LED (Blue color) :
 1. The voltage/capacity push button will be Voltage scale select function when below state :
 - a. Power ON/OFF switch turn ON and DC OUT port connected with power output cord; but disconnected with loading device. The indicated LED no light . To press push button can adjust output voltage scales from 5V. To 19V while this state.

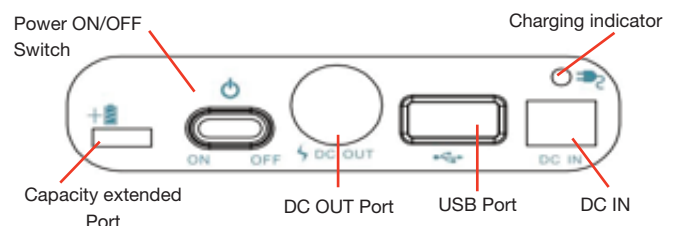
2. The voltage/capacity push button will be Capacity display function when below state. And the push button's indicator LED will light blue color while on the b/c/d operating condition as below:
 - a. When ON/OFF switch slide to "OFF" position (indicator LED will no light in this state).
 - b. The ON/OF switch slide to "ON" position and The DC OUT port connected with loading by power output cord and the loading current more than 80mA (Auto lock).
 - c. The ON/OF switch slide to "ON" position and The DC OUT port without connected power output cord.
 - d. When the charging voltage plug in the DC IN port and the DC OUT port without connected the power output cord.

G. Voltage/capacity LED indicator : according to the voltage/capacity push button function to display output voltage scale or battery capacity status.

H. Charging indicator : when orange : on charging / green : 80~90% fully charged.

CHARGING MP3450

1. Before using MP3450 for the first time, you must charge the device for 3/4 hours. Use the AC power adapter to charge MP3450.
 2. Put the output plug of AC power adapter into the DC IN jack of MP3450.
 3. Put the power adapter into a wall socket. MP3450 can be fully charged in 3/4 hours when completely empty. The orange CHARGE LED will turn on green indicate the battery is fully charged.
 4. When the battery capacity indicates FULL, unplug the power adapter.
 5. Start to use battery.
- NOTE: MP3450 will automatically stop charging when it is fully charged, so you don't worry about charging it over night.

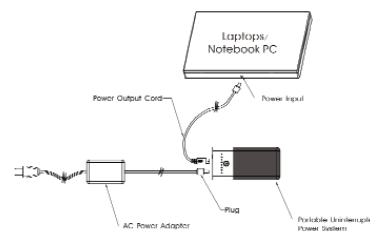


USING MP3450

There are two connection ways for your operation.

A. Indoors (The Pass through charging connection):

The AC power adapter connected to MP3450D's DC IN jack and the DC OUT port of MP3450 connected to Laptop's DC IN jack by the power output cord. The AC power adapter will offer power to laptops working and charged laptop's internal battery firstly. It will follow charged MP3450D after laptop's internal battery has charged fully. The MP3450D also will be charged fully at finally. It will total charged fully after 7~8h by connected as this diagram if empty of all battery (MP3450D&Laptop's internal battery).It doesn't matter the laptop is operated or not . It will auto stop charging MP3450D battery while offer to Laptop's loading current higher than 2±0.2A ; it will start charging MP3450D if Laptop's loading current less than 2±0.2A. The Laptop's demand power always priority one of support from AC Power adapter .



Steps:

1. Select the adapter tip that fits securely into the DC in jack of your portable device. And connect the adapter tip with the power output cord (but not the device). These batteries only support a centerpositive of DC in jack of device only, which with the polarity symbol as Please check polarity of your portable device to avoid possible damages.
2. Power turn ON by ON/OFF switch firstly. The 5V LED will turn on. plug the large end of the power output cord into the DC OUT port of MP3450D. If you had selected a voltage previously, the voltage output will auto reset to the initial voltage (5V) when you exchange adapter tips or disconnected power output cord from the DC OUT port of MP3450D. You should set voltage again. Due to the auto reset function.
3. Check the voltage specification of your portable device before setting MP3450 output voltage. (Please check the laptop's original AC Power Adapter output current which is on the label.)It's setting the output voltage by press voltage selector button.
4. The MP3450D will into Voltage scale AUTO lock state when the power output cord connected with loading device. This will prevent you from accidentally selecting a different voltage while your device is connected. The push button's indicated LED will light blue when AUTO lock .
5. Connect the output tip into the power jack of the portable device after voltage scale has setting already. If need to change the voltage, please disconnected the power output cord with loading device firstly. Then select a new voltage scale by press voltage/capacity push button.

B. Outdoors:

This connection only hopes to be back-up power for your devices and not to charge internal battery of your devices to avoid energy waste. The connection sketch is as below:

The details for setting the output voltage of MP3450.

You can optimize the use of MP3450 with your laptop or portable DVD player by setting the voltage on MP3450 less than the required voltage shown on the power adapter of laptops to avoid charging internal battery. It can extend the working time of your laptop. Therefore, it is recommended that you set the MP3450 output voltage to 14V first, and then test to see if it powers your laptops. If not, increase MP3450 output voltage to 16V, and retest it. Repeat this process until you reach the MP3450 voltage that will only offer the power to your laptops but not charge internal battery.

NOTE: If your portable device displays a low voltage/low capacity or double-beep warning while MP3450 is connected, Please adjust the voltage setting to a higher level.

Please refer to the table when you set the voltage.

PORTABLE DEVICES	OUTPUT VOLTAGE OF AC POWER ADAPTER	SUGGESTION SETTING VOLTAGE OF MP3450
LAPTOPS	14V	12V
	16V	12V
	19V	14~16V
	24V	19V/24V for Apple
PORTABLE DVD PLAYER	9V	7.5V
	12V	9V
DIGITAL CAMERA	5V	5V
CD PLAYER	4.5V	5V
PDA	5V	5V
MOBILE PHONE	3.7V~6V	5V
DIGITAL VIDEO CAMERA	9V	7.5V~9V
	12V	9V~12V
MP3 - MP4	5V	5V

Optimize the perfect use of MP3450 with your Laptops to save power. View the power source by three symbols on the screen of your laptops when working at the Microsoft window system:

- Battery symbol: stand for the power from internal battery.
- AC Plug symbol : stand for the power from external AC power.
- AC Plug and flash symbol: stand for the external AC power not only offer the power to laptops but also charge its internal battery.

We recommend AC Plug symbol on the screen of your laptops that MP3450 only offer the power to your laptops without charging internal battery. If the AC plug and flash symbol appears, please adjust the voltage to a lower level to extend MP3450 working time. But some laptops' working voltage and charging voltage are the same. That only one way is removing internal battery from your laptops to avoid charging.

VIEW MP3450D BATTERY CAPACITY

The capacity of MP3450D will decrease as the battery power and/or charge your device. The remaining capacity is shown on the LED indicators. Press the voltage/capacity push button and view the remaining capacity by the LED indicators. When

a. Power turn OFF

or

b. Power turn ON and connected with loading device and loading's current over than 80mA.

or

c. The output of AC power adapter plug in the DC IN port and the DC OUT port without connected the power output Cord

or

d. Power turn ON and the DC OUT port without connected the power output Cord

The push button's indicated LED will light blue color while above b/c/d operation state.

The capacity indicated LED will turn off in sequence from right to left as the capacity decreases. That only the left EMPTY LED light on when the MP3450D battery capacity is low. You should recharge MP3450D immediately. There are all LED indicators will be light off when MP3450D is completely empty.

OBTAINING ADAPTERS

Eight adapter tips that fit most DC adapter jacks on a variety of portable devices are included with MP3450. For some mobile phone such as Nokia, Motorola V3, this battery can power/charge them with original DC adapter or cable. If none of these tips fits snugly into your portable device power jack, please contact the distributor or shop to determine which optional adapter tip you need for your device.

Adapter tips specification (BPCS)



TROUBLESHOOTING

If MP3450/3500 does not power the portable device battery, take these steps:

1. If all LED turn off on charging, it indicates the battery bank is malfunction.
2. Verify that the device does not require more than 80 watts (19V/4A). If the device requires more, MP3450/3500 will not be able to charge the device. However, in most but not all cases, MP3450/3500 will be able to power the device.
3. View the remaining battery capacity. If it is below 25%, recharge MP3450/3500.
4. Check that the output cord is connected to both MP3450/3500 and the portable device, (if connected well, the 5V LED indicators will be on.) and that the adapter tip fits snugly into the power jack of your portable device. If not, select another suitable one.

5. Check that the output voltage for your portable device matches or is just below the output voltage set on MP3450/3500. If the output voltage is not correct, unlock the voltage lock (if in the locked position), and change the voltage as required.

6. Verify that a battery is installed in the portable device, as some devices will not function without a battery installed.

STORAGE BATTERY

A battery has a finite life. It is slowly degrading all the time, even if it is not used. It is due to a chemical reaction that gradually causes the internal impedance of the cells increase and reduces the ability of the battery to deliver its charge. All chemical reactions are affected by extreme heat/cold and excessive moisture. For these reasons, it is very important to keep your battery as cool, dry, clean as possible at all times. Once you find battery can't be fully charged by any way, maybe this battery reaches the end of its life. You should change a new one.

BATTERY DO'S AND DON'TS

Here is a quick list of Do's and Don'ts for your batteries to maximize performance.

Battery Dos: Fully charge/discharge battery up to 4 cycles before achieving full capacity of a new battery. Remove it from the device and store it in a cool, dry, clean place if the battery will not be in use for a month or longer. Recharge the battery after a long period. Must be recycled or properly disposed of used battery.

BATTERY DON'TS

Never attempt to disassemble, reassemble.

Do not short-circuit. A short-circuit may cause severe damage to the battery.

Do not drop, hit or otherwise abuse the battery as this may result in the exposure of the cell contents, which are corrosive.

Keep battery away from fire or other sources of extreme heat. Do not incinerate. Exposure of battery to extreme heat may result in an explosion.

This battery provides 300 discharge/charge cycles. Avoid frequent tip/unplug the AC adapter.

LIMITED WARRANTY

The product enclosed herein is warranted to be free of operational defects for one year from the date of purchase. In the event of a defect in operation during the warranty period we will replace the defective product when the owner returns all products contents. The limited warranty will be considered void if the unit is tampered with or subject to misuse, negligence or accidental damage, has been improperly serviced, or if the security seal is removed. This warranty is limited to replacement only and shall not cover any other damages. Any product returned to us with no fault found will be returned to the owner at the owner's expense.

To obtain warranty, please complete and submit the enclosed registration card.

DISCLAIMER OF WARRANTIES

Any user of this product does so at the user's own risk. To the maximum extent permitted by applicable law, manufacturer and its suppliers provide the hardware and any support services related thereto "as is" and with all faults; and hereby disclaim all warranties and conditions, whether it is expressed, implied or statutory, including but not limited to implied warranties of merchantability, fitness for a particular purpose, non-infringement, lack of negligence or correspondence to description, except for those warranties specifically and expressly provided in the limited warranty.

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