



P/N:	600-AC005-10-0
Model:	TI-3450 Universal External Battery
Brand:	Mr. Battery
Voltage:	DC5V, 6V, 7.5V, 9V, 12V, 14V, 16V, 19V, USB DC5V
Current:	Max. 3.5A
Input Spec.:	19V/3.16A AC adapter
Color:	Black
Weight:	approx. 450g
Dimension:	174*84*23mm
Warranty:	1 Year

**Product Description:**

**A. Specifications**

1. Cell Type: Li-polymer
2. Capacity: 2500mAh (Approx. 50Wh)
3. Output Voltage & Current:

Output Voltage	Output Current (Continuous)	Max. Current Tolerance
5V	1.5A	3.5A
6V	1.5A	3.5A
7.5V	1.5A	3.5A
9V	1.5A	3.5A
12V	2A	3.5A
14V	2A	3.5A
16V	3A	3.5A
19V	3A	3.5A
USB 5V Port	1A	1.5A

\*For each Output Voltage setting, please make sure the required current is within the maximum Current Tolerance listed above, to avoid damaging TI-3450

4. Remaining Capacity Display: 8 LED Indicators
5. Operating Time: References based on average usage.  
(Operating time may differ, depending on the products)

3C Products	Operating (Time)
Digital Camera	3000 (or 8 hours)
DVD player	2 Discs (4~5 hours)
MP3 player	30 hours
Digital Video Cam	Over 8 hours
PDA	Over 10 hours
CD player	Over 60 hours
Mobile / Cellular	50 hours talking time
Notebook	2~3 hours

6. Charging Time: approx. 4~5 hours (after fully-discharged.)
7. Output Connector: 8 DC plugs, compatible with most 3C products (Optional plugs available. Please see appendix for detail)
8. Compatible products: Portable 3C products
  - 5V: Digital Camera, PDA, CD player, MP3, Portable Hard-Drive, Mobile phones...etc.
  - 6V: Digital Camera, PDA, digital Video Camcorder...etc.
  - 7.5V: Digital Camera, Digital Video Camcorder, DVD player...etc.
  - 9V: Digital Video Camcorder, DVD player...etc.
  - 12V: DVD Player, Notebook...etc.
  - 14V, 16V, 19V: Notebooks, and other products that require 14~19V input

**Features**

1. Highcapacity, increase your portable product's operating time dramatically.
2. Slim & light-weight design (only 450g), easy to carry around.
3. Multiple output voltage selection, compatible with many portable 3C products, can be used as charger or external battery.

4. The included plug set (8 pieces) are compatible with 80% of the 3C products in the market today.
5. Long running time. (Actual operating hour may differ, depending on the environment & power consumptions.)
6. 8 LED lights allow user to see the remaining power status of TI-3450 at a simple push of a button.
7. 4~5 hours charging time.
8. Built-in multiple protective circuitry and intelligent Power management modules, protecting the 3C products from damaging.
9. TI-3450 is capable for capacity expansion. When combined with TI-3460 (Optional), the capacity & usage time can be doubled.

**B. Package Contents:**

TI-3450 Main Unit & Leather Case

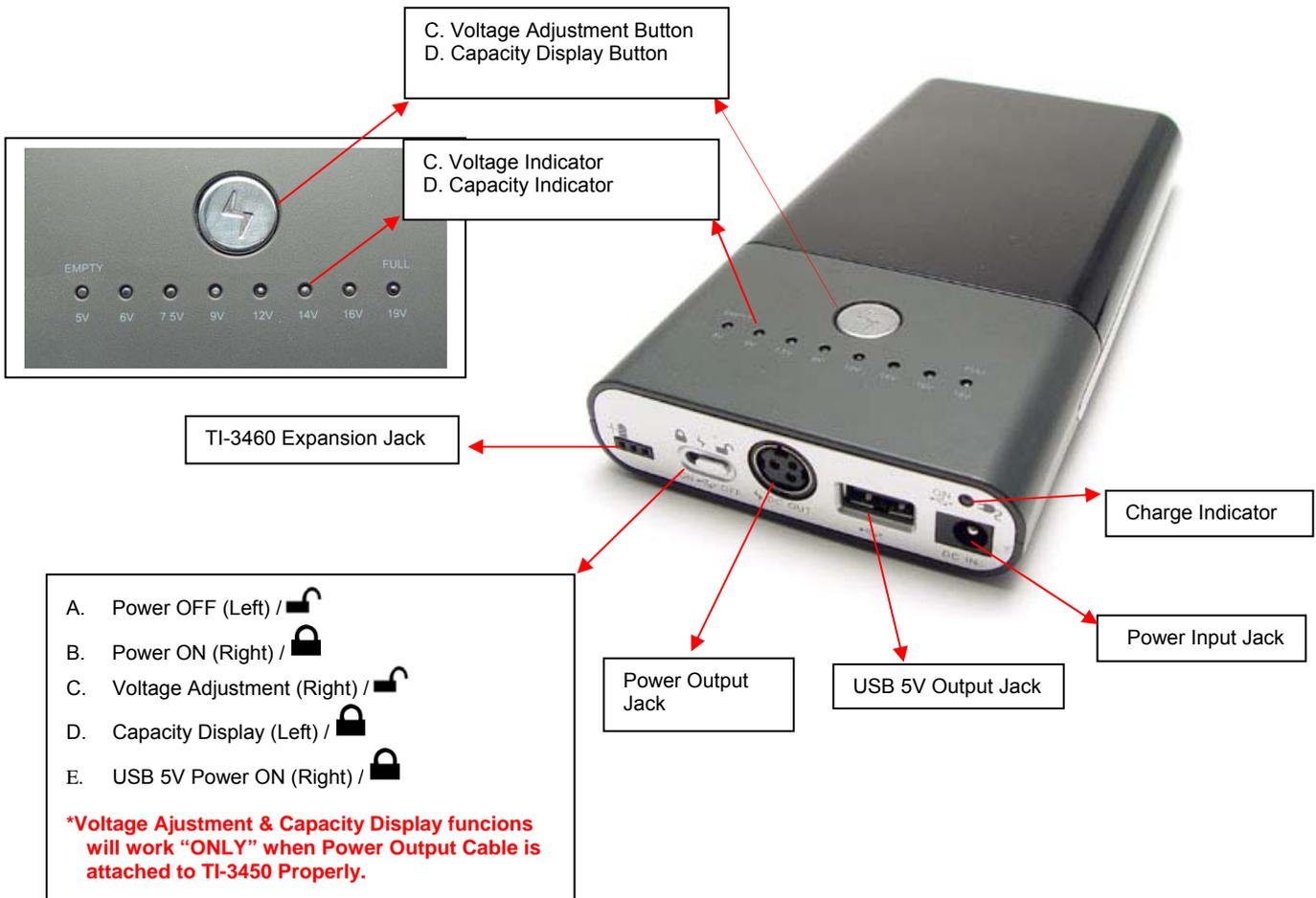
AC adapter

Power Output Cable

DC Plugs  
8 pcs



**C. TI-3450 Switch Functions**





- A. Voltage Adjustment Mode  
 5V, 6V, 7.5V, 9V, 12V, 14V, 16V, 19V
- B. Capacity Display Mode  
 5V (Empty) ≈ 12.5% (Low Cap, Red)  
 6V ≈ 25% remaining  
 7.5V ≈ 37.5% remaining  
 9V ≈ 50% remaining  
 12V ≈ 62.5% remaining  
 14V ≈ 75% remaining  
 16V ≈ 87.5% remaining  
 19V (Full) ≈ 100%

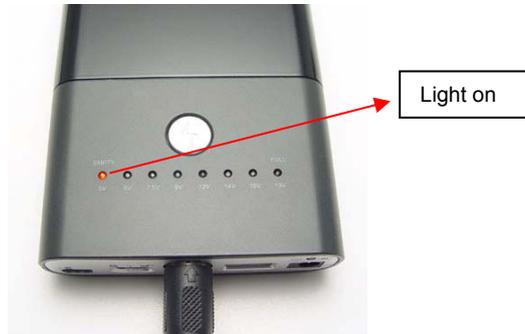
**\* Proceed with re-charging when approximately 3-4 indicator lights remaining**

**D. Instructions**

1. Take out the Power Output Cable, and plug it into TI-3450, with the arrow icon facing upwards



2. Select a suitable DB plug and connect it to the Power Output Cable. At this point, the 5V LED indicator should light up, indicating normal output operation



3. Slide the Switch to the right , and press the Voltage Adjustment Button repeatedly until the required Voltage indicator lights up.  
 (In this example, the Voltage is adjusted to 19V for ASUS W1N Notebook, using DC plug C)



Switch to the right  position for Voltage adjustment

**Caution:** Please refer to the original adapter label or instruction manual for the correct Voltage setting, and adjust accordingly.

**Caution:** Voltage/Capacity indicator will light up only when both DC plug & Power Output Cable are installed/Attached properly.

**Caution:** The intelligent output module in TI-3450 resets the output to 5V automatically when either output Power Cable or DC plug is removed / Unplugged. Therefore, please check & adjust the voltage to avoid damaging the 3C products.

4. After the required Voltage has been selected, please slide the switch to the left 



Switch to the left  position

5. Plug the DC plug tip into the Power Input Jack of the Notebook, and everything is ready.



**Caution:**  
1. TI-3450, 16V, 19V output is designed for Notebook use only. Most of the notebooks in the markets operate within 15~20V. e.g. All IBM models requires 16V, Acer / Asus / HP / Compaq models are using either 18.5V or 19V. (Set TI-3450 to 19V for both cases) If you are uncertain the voltage setting, please refer to the label on the notebook or the original adapter for reference.  
2. Other electronic devices like PDA, Camera, Camcorder, DVD player, MP3...etc, please also refer to the original adapter's label for reference.

6. While using TI-3450, you may press the Capacity button at anytime to find out the remaining capacity.



Press the capacity button to see the remaining capacity.

**Caution**  
After TI-3450 is attached to 3C products, you must make sure the switch is at the left  position before you check the capacity.

7. Connect the adapter to TI-3450 to initiate charging, if the capacity is low..



Charging Status Indicator  
Orange: Charging  
Green: Fully Charged

**Caution:**  
1. While being charged, TI-3450 can still be connected to 3C devices and function normally. At this point, the power source is the adapter, not TI-3450  
2. Under such condition, it will take longer time to fully charge TI-3450

8. TI-3450 can also be applied to other electronic devices, following the same steps above.  
PDA / Mobile phone charging(5V) Vosonic VP8860 charging (5V)



9. When TI-3450 is not in use, please slide the switch to the right  position, and unplug the Power Output cable. All the light indicators will go off.



## Caution:

1. Choose a suitable DC plug for your 3C devices, and connect the DC plug & Power Output Cable properly. TI-3450/TI-3460 will not function if this step is not completed.  
(Warning: This product is only suitable for devices with specific Polarity setting  $\oplus$ — $\ominus$ . Please confirm the polarity of your device before using TI-3450 to avoid damaging & possible hazards.)
2. The 5V LED indicator should light up when the Power Output Cable is attached to TI-3450. If the indicator has not light up, please check the connection again. Please note, when Power Cable or DC plug has been unplugged, the Voltage will be reset to 5V automatically for safety precautions. Repeat the voltage setting procedures and select desire Voltage.
3. Always confirm the desired Voltage of your electronic device before setting the TI-3450 Voltage. Generally, AC Power Adapters for electronic devices, come with labels indicating the [Output Voltages](#). It is also possible to refer to the devices' instruction manual for proper Voltage input.



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If your AC Power Adapter's output current is [greater than 3.5A](#), please avoid using TI-3450.

4. When the proper voltage is selected, please slide the switch to the "Left"  position to lock the setting. This will prevent the voltage from changing by human errors, which might cause damages to your electronic devices.
5. After Voltage setting, and properly connected TI-3450 to your device, please do not change the Voltage again. When Voltage adjustment is necessary, always detach TI-3450 from your device first, to avoid possible damagings to your electronic devices.

## Problem Solving:

If in any case, TI-3450 is not able to provide power to electronic devices, please do the following:

Check the required Current level, and see if it is greater than 3.5A. TI-3450 will not be able to power devices with current demands greater than its maximum current output

- 1 · It is strongly recommended to use TI-3450 only with devices which has less than 65W power consumptions.
- 2 · Check remaining capacity, and recharge TI-3450 if it is below 25%
- 3 · Check the connections, and change the DC plug if it is not appropriate.
- 4 · Check the Voltage setting, and reset the Voltage if necessary, following the proper procedures.
- 5 · Check if the devices come with internal battery. Some devices will not function when internal batteries are not installed.

## Storage:

Under normal circumstances, batteries will self-discharge at small & steady rate, and the capacity will decrease gradually. On top of that, battery has limited charge & discharge cycles. When you realize that no matter how long you charge it, the capacity & performance just never be the same anymore. Then it is about time to replace with a new battery.

Battery is best kept in dry environment, with temperature ranging between 10~30°C. The higher the temperature, the faster the battery will discharge, and decrease the life cycle. Also, avoid leaving the battery in moist environment such as bathroom, which also increases the discharge rate. In general, if the temperature is way below the standard range, the internal chemicals might deteriorate; if the temperature is much higher than the standard range, then there is a potential explosion possibility waiting to happen.

## How to extend Battery life cycle:

Follow the instructions below will help you to extend the battery life

- Store batteries in dry and cool place (10~30°C). Higher environment temperature will fasten the discharge rate, and shorten the battery life cycle.
- Room Temperature (20~30°C) is most suitable for batteries. Higher or lower temperature will have influences on the battery operating time.
- Discarded battery must be properly disposed and recycled. Please contact local authorities for proper recycling procedures & locations.
- Keep the battery away from fire and high temperature to avoid possible explosions.
- Never attempt to disassemble or reassemble the battery pack.
- Do not short circuit the battery by directly connecting the positive (+) and negative (-) terminals.
- The self-discharge may cause the battery to over-discharge and cause internal damages. Please recharge the battery once every 3 months.
- The best way to extend the battery usage hours & life cycle is to avoid plugging & unplugging the AC Power Adapter frequently.
- Under normal circumstances, the battery have a minimum of 300 charge & discharge cycles. Over-charge & Over-discharge will decrease the battery life.

## Warranty

Vosonic offers limited warranty for a period of 1 year from the date of purchase. If defects are found, please exchange with the dealer within 7 days from the purchasing date. When returning the product, please make sure the original packaging materials and accessories are present. (AC adapter, leather case, instruction manual, DC plugs...etc.) Under the following circumstances, no return or refund will be accepted:

1. Mis-use, improper storage, and human caused damages such as scratches, dirt, dents.
2. Missing packaging materials / Accessories / invoices
3. Missing Warranty stickers and Warranty cards
4. Serial numbers on the product units being removed or unrecognizable.

If the product become defective after 7 days from the purchasing date, but still within the warranty coverage period (1 year), please contact local dealers for free repairs. But, under the following circumstances, no repair services will be provided:

1. Damages / Defects due to improper usage or unauthorized dis-assembly.
2. Dents, negligence, abnormal testing, self-repair/modifying of the components and cases.
3. Damages caused by using non-standard AC power Adapter.
4. Unless specifically stated, accessories and gifts are not included in the warranty coverage.

## TI-3450 Universal External Battery Output Plugs / Tips Model List:

### 1. TI-3450 Standard Plugs / Tips

# MP-3450 External Battery Pack Tips

Tips A  
202-XX020-10-0  
4.75\*1.7\*9.5mm



Tips B  
202-XX021-10-0  
5.5\*2.1\*10.5mm



Tips C  
202-XX022-10-0  
5.5\*2.5\*10.5mm



Tips D  
202-XX023-10-0  
6.3\*3.0\*10mm



Tips E  
202-XX024-10-0  
6.5\*4.5\*1.35pin\*10.5mm



Tips V  
202-XX039-10-0  
4.0\*1.8\*11mm



Tips Z  
202-XX047-10-0  
3.45\*1.4\*10mm



Tips 03  
202-XX048-10-0  
2.4\*0.5\*10mm



Remark: 1. Tips A, B, C, D, E for Notebook Computer  
2. Tips V, Z, 03 for other electronic equipments