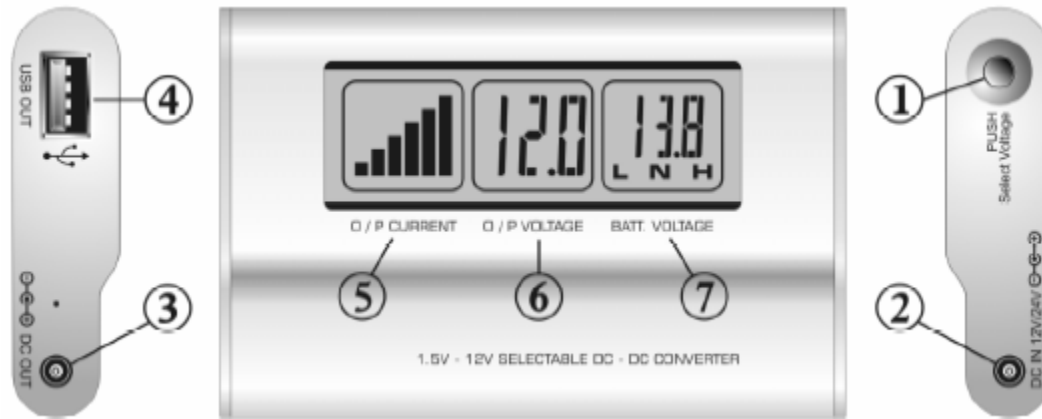


**VC-3**  
**3A Digital Car Power Adaptor**  
**User Manual**

**Introduction**

This digital adapter uses a Micro-Processor Control to protect your Car Battery from over-discharging. The 3Amp DC output voltage is digitally selected and displayed to avoid second guessing. The 5V standard USB power output can be used at the same time with the 3A DC output. The LCD shows the car battery voltage, selected output voltage and load current. It is suitable for trucks & cars in use with all Portables, such as PSP, DVD players, I-Pods, MP3 players, mobile phones and more.

**Controls and Indications**



**1. Preset Button**

To preset the voltage of the DC output which looks like this ⌚ and the backlight of LCD

**2. DC Input Socket**

This is for connection to the car cigarette socket with accessory A.

**3. DC Output Socket**

3 Amp output with selectable: 1.5 / 3 / 4.5 / 5 / 6 / 7.5 / 9 / 12V\*

\*12V output selection can only be used for 24V systems as in Trucks. (See B7 Notes)

**4. USB Output Socket**

Standard USB DC power 5V. 450 to 500mA. To charge or to power portable devices and mobile phones.

**5. “O/P CURRENT” LCD**

Shows current level used by plugged in devices at the out put that looks like this ⌚

Each bar represents 0.5Amps, at full load there are 6 bars at 3 Amps.

**6. “O/P VOLTAGE” LCD**

This shows the selected voltage of the DC output of ⌚

**7. “BATT. VOLTAGE” LCD**

## Indications of LCD

The battery voltage display shows car battery voltage levels



L= Low  
N=Normal  
H=High

**12V system**  
less than 11.5V  
11.5 ~ 13.0V  
greater than 13.0V

**24V system**  
less than 23.0V  
23.0 ~ 26.0V  
greater than 26.0V



This middle LCD window shows selected output voltage



This left LCD window shows current level used by plugged in devices at ③. Each bar is 0.5Amp so full load output current is 3Amp with 6 bars.

## Operation Procedures

### A. Powering up the Adapter

1. Insert the accessory (A) connector cable to the DC in (2) and to your car cigarette socket when your vehicle is on.
2. The LCD should light up if it does not, check that the connections at both the cigarette plug and the adapter are secured and your vehicles power has been turned on.

### B. Presetting the 3 Amp DC OUT ⌚ Voltage

1. Press and hold the Preset Button ⌚ for about 3 seconds, then release it.
2. The value of the O/P VOLTAGE ⌚ flashes in the middle window, and is now ready for selection.
3. One short press (click) of the button will move the display to the next preset voltage. The order of voltage is 1.5V-> 3V->4.5V->5V->6V->7.5V->9V->12V.
4. Stop pressing at the desired setting & wait for about 5 seconds until the flashing stops.
5. The preset output voltage will be confirmed when flashing stops and voltage is shown in the middle window display.
6. This preset voltage is then fixed even after the adapter is turned off.

### Remarks:

**7. The 12V Output selection is only for 24V battery systems, it does not work in 12V battery systems. When the 12V output preset is selected in a 12V battery system, the middle window of the LCD will keep on flashing and there will be no output voltage at 3A connector socket.**

### WARNING!!!

**Ensure you connect the “DC OUT” with the correct polarity**

### C. Preparation for plugging in your portable devices.

1. Finding out whether you're portable device is center POSITIVE or center NEGATIVE. Most portable devices have the following markings on or near the Input Socket showing the voltage and polarity.



When the center is linked to a + sign, it is then center POSITIVE  
When the center is linked to a - sign, it is then center NEGATIVE

2. Setting the chosen polarity for the output plug.

- There is only one engraved marking on the cable socket and that is **TIP**
- But each of the supplied output plugs have two engraved markings, they are a + and - sign just above the pins.

3. Double check for the polarity and voltage of your portable device and adapter setting.

### ***INCORRECT OUTPUT VOLTAGE & POLARITY MAY DAMAGE YOUR PORTABLE DEVICE!***

- 1. DO NOT use this connector if you are not sure of the polarity or voltage of your portable device.*
- 2. DO NOT use this adapter for portable devices that consume more than 3000mA.*
- 3. DO NOT use this adapter while starting the vehicle.*
- 4. DO NOT cover this adapter or put it near any heat sources.*

### D. Connecting the Portables

Before connecting to your portable device double check the following:

1. Check that the output voltage that is displayed in the middle window of the LCD matches your portable's voltage.
2. Make sure that the polarity is correct.
3. Any miss-match of the above 2 important points will or may damage your portable.

### E. Using the USB power output ☺

The USB output is made to the USB power standards of 5VDC and 0.6A.  
You can power up or charge your portables such as I-Pods & MP3 players which have USB power connectors for PC (Personal Computer).

To charge your mobile phone, simply select the corresponding plug from accessory (C).

### REMARKS:

**NOT ALL MOBILE PHONES CAN BE CHARGED BY THE USB.  
NEW MODELS REQUIRE A HIGHER VOLTAGE THAN THE 5V USB.**

## **F. Changing the Backlight Color of LCD**

1. First disconnect power to the adapter by removing either the cigarette plug or DC- IN ⌚
  2. Press & hold the preset button ⌚ and at the same time reconnect power to the adapter.
  3. When the LCD has lit up again, release the preset button ⌚
  4. Then each short press of the preset button will change the backlight colour.
  5. When the desired color is found, disconnect the power to the adapter as in step 1.
- The last appeared color will be the newly selected backlight color.

## **Included Accessories:**

- (A) DC input cable (1.5M) with cigarette plug.
- (B) DC output cable (1.5M) with 7 pieces of common plugs (polarity reversible)
- (C) USB cable with 5 sets of adapter plugs for popular mobile phones. (optional)
- (D) One set of dual lock sticker tapes for holding/positioning the Adapter.
- (E) One spare 5Amp fuse for the cigarette plug.

## **Safeguarding your battery**

This unique function protects your car battery from over-discharging occurring from current draining devices.

You will not be left stranded with a flat battery.

The Micro-Processor keeps on checking the battery voltage and the charge state of your car (12V system) or your truck (24V system).

When it detects that your battery has dropped to a critically low level, the LCD backlight first flashes red and a warning buzzer then sounds and all outputs (3A DC output and USB) are cut off.

## **Protections**

### **A. Short circuit & overload protection.**

When the DC output or the USB is shorted circuited or draws more than the maximum current, the current limiting protection will be activated to limit the output current of the adapter.

### **B. Over voltage (output) Protection and Buzzer Warning**

This is to protect expensive voltage sensitive portables from high DC output voltages.

When the actual output voltage is about 1 volt higher than the preset value for DC output ⌚ the LCD backlight will turn Red and the buzzer alarm will sound followed by a cut off of both main output and USB output.

### **C. Thermal fuse protection**

There is a 5Amp thermal fuse in the cigarette plug for excessive current at the input.

## **Trouble Shooting.**

### **1. LCD is not ON**

#### **POSSIBLE CAUSES:**

A) No DC power from the Cigarette Lighter socket. Check the cigarette lighter if it works.

B) Cigarette lighter socket may be loose.

C) Metal strips are not in contact with the socket.

Check spring action of metal strip and turn plug slowly until LCD turns on.

D) Cigarette plug fuse is burnt out, replace the 5Amp fuse.

Hold the top metal sleeve and turn the plastic body anti-clockwise to get to the fuse.

### **2. LCD is On, but connected portable is not working.**

#### **POSSIBLE CAUSES:**

A) Check portable has been turned on.

B) Check voltage and polarity settings.

C) Check that the connection to the portable is secure.

### **3. Selected 12V has no output and middle LCD window keeps on flashing.**

This output setting of 12V cannot be used for 12V battery.

## **Specifications:**

Input DC voltage range: 11 to 32V

Output regulated DC voltage selection: 1.5/ 3 /4.5/5/ 6/ 7.5/9/ 12V\* DC

\*12V output can only be used for 24V battery systems; it will not work in 12V battery systems.

Micro-processor control for battery protection, digital selection and monitoring of output voltage, and load current.

LCD with selectable back light, continuous monitoring and displaying of selected output voltages, battery voltage and load current.

Dual outputs:

Continuous maximum DC output current: 3000 mA

Continuous maximum current from USB port: 500 mA.

Both the DC output and USB port can operate at the same time, giving a total current of 3500mA.

## **Applications**

DVD players, I Pods, SONY PSP, all portable devices with USB link cable for charging or power, all Portable multimedia players with 3A max load, GPS, handheld telecoms with max 3Amp load.