# Instruction for the power inverter

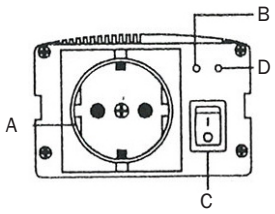
**ANV013**

EN

## Genius Power, Inverter

### Components of the Inverter

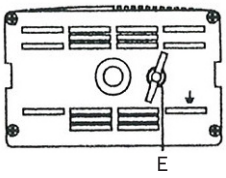
Front:



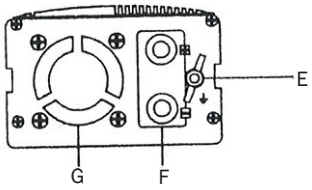

A Output 230 V
B Inverter switched on
C On — Off switch
D Error indicator for overloading, low battery voltage or overheating

Back:

Version for connection to the car's cigarette lighter socket (150W)




Version for direct connection to the battery



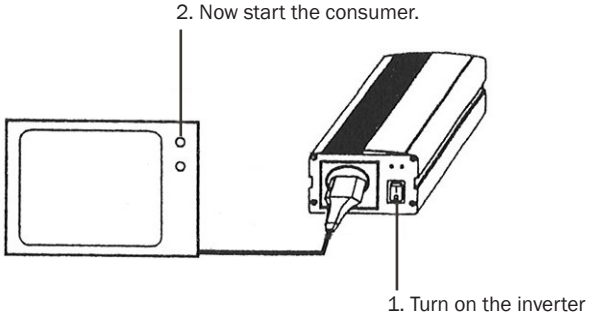

E Terminal for earthing the inverter
F Connection of direct current from the battery via the cigarette lighter socket
G Cooling fan

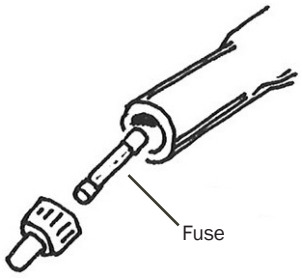
### Connection of the power supply from the battery

Make sure that your inverter is designed for the right supply voltage. 12 V inverter may only be connected to a 12 V battery and the 24 V-inverter may only be connected to a 24 V battery.
The smallest inverter of 150 W is fed from the cigarette lighter socket while the larger inverters are connected to the battery or batteries directly via the supplied cable kit.
Connect the red cable to the red + input on the inverter and the black cable to the black – input. Now connect the inverter's power cables to the power source with the battery voltage that the inverter is designed for. Red cable to + and black cable to –.
If your inverter has a supplied cable kit with cigarette lighter plug you should connect this to the vehicle's cigarette lighter socket. In the latter instances, you do not need to take the polarity into consideration as the cigarette lighter plug automatically provides the right connection.

### Connection of power consuming devices, lighting, etc.

When you need to drive a power consumer with the inverter it is important to first turn on the inverter followed by the power consumer. If the inverter's buzzer begins to sound this means that the supply voltage is either too low or too high. The warning buzzer indicates that the inverter will be turned off within a few minutes. If the inverter is disconnected due to an overvoltage on the supply voltage, restart it until supply voltage drops to an acceptable level.




### Fuses

The cigarette lighter plug has an integrated fuse that can be changed by unscrewing the plug's centre pole. If the plug's red LED does not light when connected to the cigarette lighter plug this may be due to the fuse being blown.
The cable harness with crocodile clips has a fuse socket for a plug-in fuse.

### Overload

If the power socket for the consuming device is too large and thus exceeds the Wattage that the inverter is designed for it will automatically switch off to avoid damage to the electronics. The same occurs if the inverter for any reason becomes too hot = exceeds 55 °C.

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**General usage guide**

- Disconnect the inverter from the input power when not in use.
- Disconnect the inverter from the input power when the car's/vehicle's engine starts.
- If the inverter's buzzer sounds, switch off the consumer device and disconnect the inverter from the input power and restart the car's/vehicle's engine.
- The buzzer indicates a low input voltage and will switch off within a few minutes.
- The inverter switches off when the battery voltage drops below 10.5 V (21 V on 24 V-systems). This is to protect against a total discharge of the battery.
- Make sure that the input voltage does not exceed 15 V (30 V on 24 V-systems). If this happens, switch off the inverter to protect the electronics.
- In order to avoid battery discharge it is advisable to start up the vehicle's engine every other or every third hour so that the battery charges and recovers.
- Exercise care to connect the correct polarity. Should the terminals be confused the inverter is protected through the fuses blowing and then must be replaced.
- Do not use the inverter together with a battery charger. This can destroy the inverter and will not be covered by the warranty.
- Do not use long feeder cables than those supplied with the package. Too long cables (max. 2 m) result in a voltage drop and can jeopardise the function of the inverter.

**Earthing**

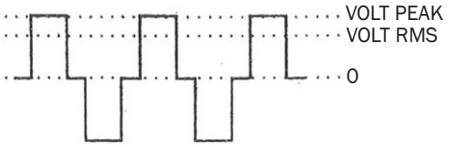
WARNING! The inverter must be earthed during all use as per the following instructions:

At the rear of the inverter is a wing nut. The terminal connects to the outer casing of the inverter as well as the 230 V socket's earth strip. Depending on how the inverter is used, the earth cable should be routed from this terminal as follows:

- For a land based permanent installation, the earth cable must be connected to a metal earth spike. The spike should be knocked down over a metre into the ground to give the right contact and function. Even the feeder current's terminal must be connected to the earth spike.
- If the inverter is used in a vehicle the earth cable should be connected to the vehicle's chassis. The feeder current's (battery's) terminal must be connected to the same chassis.
- In a boat, the earth must be connected to the negative side of the boat's cable harness.

**Measuring the outgoing alternating voltage**

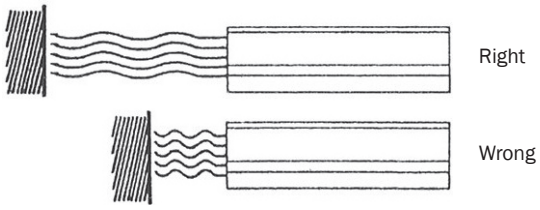
Outgoing alternating voltage has a so-called modified sine curve. If you intend to measure the outgoing alternating voltage you need to do this using an authentic RMS voltmeter. If you use another type of meter this can give a 20-30 V lower voltage than the true reading.




**Ventilation**

It is important, when using the inverter, that it stands free and has good air circulation around it to avoid operating problems due to overheating. The larger inverters have an integrated cooling fan that is thermostat controlled and starts and stops automatically as the inverter temperature changes.

Ensure good ventilation around the inverter

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