



OWNER'S MANUAL

BATTERY POWER SUPPLY

VOLCANO III

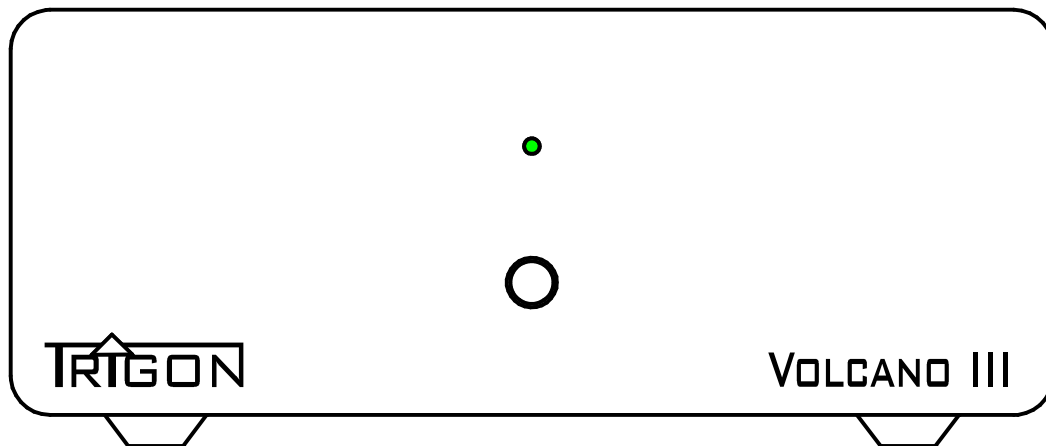


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0 - Preface

Since music lovers want to enjoy the best possible sound quality at home, audio equipment manufacturers constantly strive to improve the sonic qualities of their products.

All electronic audio devices are dependent on electricity, which usually comes from the domestic AC mains socket. This electricity is converted to a form (i.e. voltage) that is usable by a given device by the power supply circuit often located inside that audio device. All audio components need various DC voltages for their electronic circuitry, which are produced by their respective power supplies. Depending on complexity and quality of these circuits, the resulting voltages can be more or less “pure”. The generated DC voltages unfortunately often contain sizeable amounts of disruptions originating from the utility grid, due to a number of domestic appliances (refrigerators, halogen lighting, dimmers etc.) also connected to that grid. These distortions substantially affect the performance of very sensitive audio devices, especially phono preamplifiers, because of their relatively high gain and low input signals. Therefore, the obvious solution is to supply sensitive audio devices with voltages from a inherently disturbance- and trouble-free source.

A conventional alkaline battery represents such a “clean” voltage supply. Unfortunately, this type of batteries has the disadvantage that their chemically stored energy is limited and can’t be easily regenerated once it's used up. Rechargeable batteries, also called accumulators, don't have this disadvantage, because they can be recharged time and again with the adequate treatment. That’s why accumulators, especially lead-gel batteries, are well suited to supply sensitive audio devices with power, especially when they don’t high require large amounts of electric current – like the phono preamplifier **VANGUARD II**.

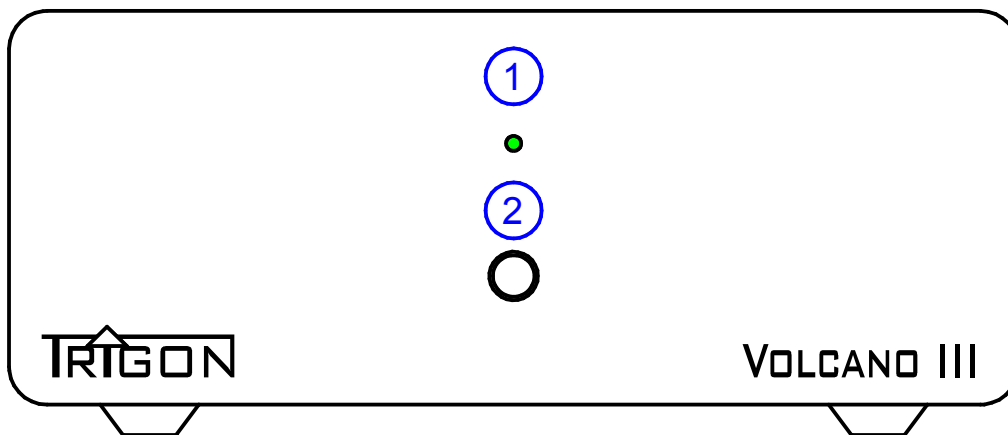
1 – General Technical Considerations

The **VOLCANO III** is a micro-processor controlled battery power supply for the **TRIGON VANGUARD II** phono preamplifier.

This device supplies electrical current to the attached amplifier with one of two switchable options of either pure mains operation or combined battery-mains operation. In the combined battery-mains operation the integrated power pack is switched parallel to the battery, i.e. the attached amplifier is also connected to the mains supply. To effectively eliminate disturbances from the grid, the **VOLCANO III** can (and should) be switched to combined battery-mains operation during music listening. In this operating mode the power supply is assisted by the on-board batteries.

The **VOLCANO III** is equipped with two 12V lead gel batteries. The charge state of these batteries is constantly monitored by microprocessor control, which substantially increases the life of the batteries and contributes to the ease of operation of the **VOLCANO III**. A light emitting diode on the front of the device indicates the respective operating mode.

2 - Operation and Hook-up



[1] Operating mode switch

With the button (2) the VOLCANO III can be switched on and/or off, but it can also be switched between the two operating modes – mains operation or combined battery-mains operation.

A short depressing switches the VOLCANO III on. Each further short depressing of the key switches between the operating modes. To switch off the VOLCANO III the key has to be kept pressed for approx. 3 seconds. During this process the status LED is flashing. (1).

[2] Status LED

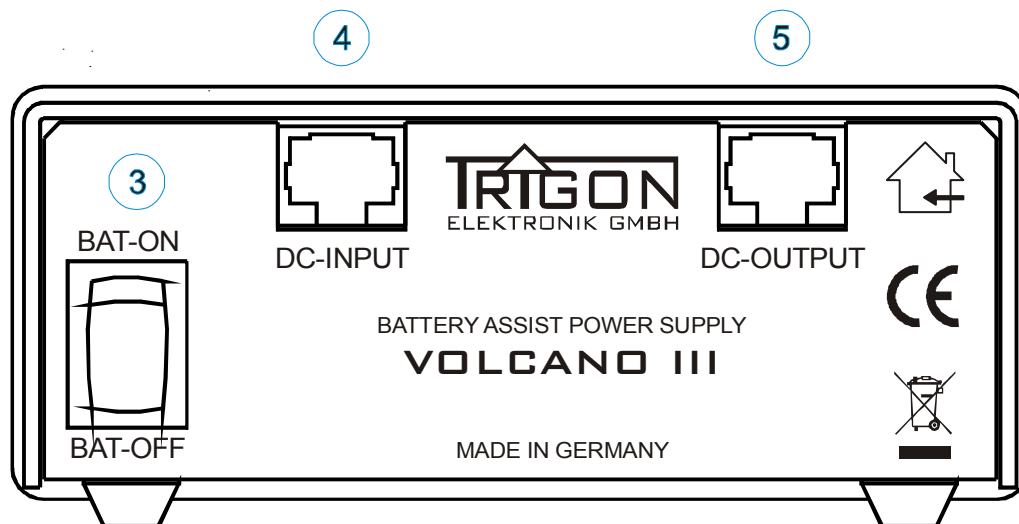
The operating conditions are indicated in each case by the light emitting diode (1) above the key (2). Thereby the LED signals the following conditions:

LED off – The device is switched off. Only the unit's micro-processor is supplied with current to ensure that the current consumption remains below the limit for standby as specified by the EU.

LED lit red – The device is switched on. The connected VANGUARD II can be turned on now.

LED lit green – The device switched to combined battery-mains operation. The Status LED of the connected VANGUARD II is lit green, too.

Please note: While VOLCANO III is switched on, each keystroke causes the LED of the VANGUARD II to be switched, too. The LED's of both devices always show the same colour. When the VOLCANO III is switched off, the VANGUARD II will also be switched off completely and needs to be turned on again manually when the VOLCANO III is switched on.



[3] Accumulator switch BAT-ON / BAT-OFF

With this switch it is possible to separate the accumulator electrically from the device. This function is important when the **VOLCANO III** isn't connected for a longer period to the mains supply, e.g. for transport or not being used for a while, e.g. during vacations. This avoids the negative effects of a total discharge of the accumulators.

CAUTION: Do not to keep the batteries separated from the mains for several months to avoid that the batteries are totally discharged. For optimum performance and battery life, make sure to charge the **VOLCANO III** at least every 6 months for a minimum of 2 days.

[4] DC-INPUT

The outboard AC power supply of the **VANGUARD II** is connected to this socket. **CAUTION:** When setting up and connecting the **VOLCANO III**, please make the connection between the outboard power supply and the AC mains always last, i.e. once you have connected the **VOLCANO III** with all other components. Please note: To use the **VOLCANO III** in combination with the older phono-preamplifier **VANGUARD I**, a new outboard AC power supply for **VANGUARD II** is required. In this case, please contact your local dealer.

[5] DC-OUTPUT

The phono preamplifier **VANGUARD II** is connected to this socket. The required cable for this connection is included in the packaging of the **VOLCANO III**. Please connect one end of this cable to the power input socket ("power supply") of the **VANGUARD II** and the other end to the DC-OUTPUT socket (5) of **VOLCANO III**.

To avoid damage, make sure that there's no short-circuit at the output of the **VOLCANO III**.

Note: If you would like to run the **VOLCANO III** in combination with the former

phono preamplifier **VANGUARD I** a special connecting cable is required. In this case please contact your local **TRIGON** dealer.

3 - Set-up recommendations

As with almost all electronic devices, the **VOLCANO III** shouldn't be exposed to the direct sunlight or a radiant heat source. Because the set warms up a little when it is in operation, you should pay attention to sufficient air circulation.

You can place the **VOLCANO III** close to the phono preamplifier **VANGUARD II**. Note however that phono preamplifiers are devices, which work with a high signal gain. Unfortunately such devices amplify also any spurious signals. One source for radiated spurious signals are power transformers. To avoid hum as far as possible, the power transformer of the **VOLCANO III** is located in a separate housing, to allow setting up the power transformer in some distance from the **VOLCANO III** and/or the **VANGUARD II**. Of course our efforts are in vain if the **VOLCANO III** is placed on other components with internal power transformers.

Therefore the **VOLCANO III** and the **VANGUARD II** shouldn't be placed on top of other audio components. Pay attention to keep sufficient distance (at least 50 cm or 20") from other mains transformers.

Particularly transformers of halogen light systems and power amplifiers can cast a strong humming field and should therefore be located as far away as possible.

Rule of thumb: The larger the transformers, the greater the distance to the phono stage.

Even mains cables or the network wiring inside the walls are potential emitters of hum. You'll get the best results by allowing sufficient distance to these *troublemakers*.

Since **VANGUARD II** und **VOLCANO III** don't create any interference as a result of the use of an external AC power supply it is advisable to place them as close as possible to the turntable. This way the phono cable can be kept as short as possible. With regards to the very low output especially from MC cartridges, this can be a significant advantage to maintain a short signal path for best possible sound quality from sensitive signals.

4 - Care

Never clean the set with a abrasive or aggressive cleansers. Light contamination such as dust and finger marks can be wiped off with a fog-damp cloth or sponge. Water soluble contamination (jam, fruit juices, etc.) could be eliminated with a gentle liquid household cleaner, e.g. glass cleaners or dishwashing detergent. Mineral oils as well as animal and vegetable fats are best wiped off with white spirits or Isopropyl (wood) alcohol. Always make sure that no cleaning fluid penetrates inside the unit.

The outboard AC power supply should be cleaned only with a fog-damp cloth or sponge and some liquid household cleaner. Please pull the mains plug from the wall socket before cleaning the outboard AC power supply. Make also sure that no cleaning fluid arrives in the power supply inside.

5 Specifications

Output voltage	: 27V DC 500mA max.
Battery type	: 2x 12V 0.8Ah lead gel accumulator
Dimensions (HxExD)	: 55mm x 133mm x 182mm
Weight	: 2 kg
Warranty	: 3 years (Batteries = 6 months)

Subject to change

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