

Thank you for purchasing the Phenomena Battery Power Supply (BPS). With the Phenomena Phono Preamp we are certain that you will have years of listening pleasure. The Phenomena Battery Power Supply allows a user to completely disconnect from household "wall power" during listening sessions. Like the Phenomena Phono Preamp, the Battery Power Supply was designed to present all the musical information along with excellent engineering design.

The Staff at Musical Surroundings

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1.0 Introduction

The Phenomena BPS contains two 8-cell battery packs. Each battery pack handles one of the two power supply rails, one for the negative supply and the other for the positive supply. The battery cells use the NiMH chemistry. This chemistry offers large energy storage, and a low impedance source as well as convenient features such as "no memory" operation.

When the BPS is switched to "Battery Mode", the batteries (and Phenomena) disconnect from the Wall Power via a relay. After the listening session, the BPS should be placed into "Fast Charge Mode." If one forgets to do this, the BPS will eventually sense the batteries reaching a discharged state and enter Fast Charge automatically.

The older method of charging a battery to a fixed voltage was not good for NiMH batteries since the proper fixed voltage was temperature and time dependent. This led to either very long charging times or very short battery life. The BPS contains a modern charging circuit that monitors the voltage curve characteristic of NiMH. In this way, the BPS will charge quickly, for a one hour charge – the unit will play for about four hours. Also we can expect good life out of the battery.

2.0 Installation

The installation of the BPS is as follows:

- Place the Phenomena Battery Power Supply in a convenient location keeping aware of the power cable length.
- Plug in 24VDC wall mount transformer which was included with the BPS.
- Plug in 24VDC jack from the wall mount transformer into the rear of the BPS.
- Connect power cord to from the BPS to the Phenomena. The BPS replaces the Phenomena wall mount transformer.
- Charge until fast charge terminates.
- You are now ready to operate the Phenomena "Off Line".

3.0 Use

The Phomomena BPS is simple to use, there is one switch for operation. The switch changes the mode from a Charge Mode to Battery Mode. The battery does not need to be fully charged to switch to Battery Mode.

There are 3 LED's: Green which indicates Battery Mode, Blue which indicates Wall Power is present, Amber which indicates Fast Charge Mode. The Phomomena Phono Preamp will function in any of these modes, the best sound will be in Battery Mode.

3.1 Fast Charge

Fast Charge is entered by pressing the Mode Switch while in Battery Mode. Fast Charge will terminate in a time consistent with the battery state when Fast Charge was entered.

3.2 Trickle Charge

After Fast Charge terminates, a very small charging current flows into the batteries. The trickle rate is $C/30$ that will allow the batteries a long life. This trickle rate is much lower than many chargers that can run as high as $C/7$. The only way to enter Trickle Charge Mode is to terminate out of Fast Charge Mode.

3.3 Battery Mode

Pressing the Mode Switch while in Trickle or Fast Charge Modes will get the unit into Battery Mode. A relay will then disconnect the Battery Pack from the charging circuitry.

To end Battery Mode, simply press the Mode Switch again. There may be a slight transient when Battery Mode ends, you may want to reduce the volume control or mute the system.

A battery status circuit will monitor the state of the battery and terminate Battery Mode automatically if the battery gets too low. The Battery Status circuit is optically coupled to the charging circuit so no electrical continuity exists between the Battery and Charging circuits during Battery Mode. The Blue and Amber LED's are operated off of the Wall Mount Transformer side of the BPS during Battery Mode. This reduces the load to the Battery and extends its life.

4.0 Cautions

- There may be a slight transient when Battery Mode ends, you may want to reduce the volume control or mute the system.
- The Phenomena will operate from the BPS without the Wall Mount Transformer, but this is not recommended. There will be a large transient if the Batteries run low and have no source to charge from.
- The BPS was designed for use with the Phenomena only. Do not attempt to use it with any other component.

5.0 Warranty Information

Fill out the warranty card enclosed and return it to us within 30 days with a copy of your sales receipt. The unit is full warranted against failure for three years after purchase. The battery is warranted for 3 hours of Battery Mode use for 2 years after purchase. Damage due to improper use, modifications, or acts of nature are not covered under this warranty. This warranty covers parts and labor only. We will not assume any liability for any damage to any other component in the system due to a failure in the Phenomena Battery Power Supply or Phenomena Phono Preamp.

If you believe your Phenomena Battery Power Supply is malfunctioning , please contact the dealer where you purchased the unit or:

Musical Surroundings
telephone 510 420-0379
fax 510 420-0329
email service@musicalsurrondings.com

If the unit must be returned for repair, Musical Surroundings will issue you a Return Authorization (RA) number. You must then send the unit packed in its original box via UPS, Fedex or US Mail, and insured for \$600, to:

Musical Surroundings
5856 College Ave., PMB 146
Oakland, CA 94618

Please include a description of the problem, your RA number and a return address and phone number. The repaired unit will be shipped freight prepaid to your specified address.