

Replacing iPack Batteries

Introduction

Lead acid batteries such as the one used in the Symphonie iPack need to be kept fully charged. Battery capacity will be reduced if the battery is allowed to discharge below 10.5 volts for an extended period of time. If your iPack battery has been completely discharged (due to PV not charging or connected improperly, for example) it may need to be replaced. This is especially true in colder environments where battery capacity is further reduced due to the low temperatures.

This application note explains how to change an iPack battery.

Opening the iPack and removing the battery

Be sure to touch the metal shell of the DB25 connector on the iPack before opening the enclosure in order to safely discharge any static electricity.

The iPack enclosure consists of two halves secured together by four recessed screws, two from each side of the enclosure. A gasket in between the two halves and 8 o-rings provide an environmental seal for the iPack protecting the internal electronics from the elements.

- Remove the four recessed screws and the iPack will separate into two halves connected by a short cable. One half contains the iPack electronics and the other half contains the rectangular battery, which is secured by Velcro. *Try not to lose any of the o-rings and be careful not to rip or tear the gasket if it should come loose.* Note that each iPack leaves the NRG factory with a small bag of spare o-rings inside the iPack.
- Pull the battery loose from the Velcro and gently unclip the battery.

Installing the new battery and closing the iPack

- Insert the (4) 2-½ inch mounting screws up through the half of the enclosure that contains the iPack electronics.
- Slide the (4) o-rings over the screws
- Set the gasket into the groove of the shell
- Clip on the new battery. Be sure the clip fully engages the locking tab.
- Install the new battery into the iPack by fixing it to the Velcro. Use a slight “rubbing” motion to make sure the Velcro sticks.
- Slide the cover (the half with the battery) over screws being careful not to pinch the battery cable.
- Make sure the gasket is not pinched and then install the screws. It is a good idea to make sure the screws fall back into the existing threads in the iPack enclosure. An easy way to do this is to gently turn the screw counter clockwise one turn –it will “fall” into the existing threads in the iPack enclosure.

Verification of battery power as checked on logger

After reinstalling the iPack to the logger, confirm that the logger internal battery voltage **[Home][2][1]** is 1.9 Volts or higher. On some models, **[Home][3][4]** will display the 12 V battery voltage.