



Technical Update Bulletin

iX104

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Document ID: IX104TU082304_v1

Operating System: Microsoft Windows 2000, XP Pro and XP Tablet Edition

Category: iX104 Batteries 41wh, 55wh

Distribution:

Application Models: iX104R, iX104RD, iX104T, iX104TD, iX104C2

Classification: External

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Item 1 – iX104 Li-Manganese Batteries

Li-Manganese Batteries

Li-Manganese batteries are the newest technology batteries and offer several advantages over NiMH and NiCd batteries. Li-Manganese batteries are preferred for their lighter weight and higher performance. Lithium-ion batteries are typically 20-35% lighter and will provide 10-20% better performance than a NiMH battery of equivalent mAh rating. Lithium-ion batteries are also unique in that they are not susceptible to the "memory effect".

A new Li-Manganese battery will benefit from an initial "conditioning" of the battery. For the first 3 charge cycles, fully charge the battery overnight and allow it to fully discharge before recharging. Once conditioned, Li-Manganese batteries will perform best when charged at a rate somewhere between a conventional slow charge and a rapid charge. When rapid charging, Li-Manganese batteries require a charger designed to charge Lithium batteries. To achieve a true full charge when rapid charging, the battery needs to be slow charged the last 10-15% of its charge cycle. Most "intelligent" desktop and Lithium-battery rapid chargers provide this capability. A Li-Manganese battery may be damaged by extensive overcharging (continuously on a charger for more than 24 hours).

Item 2 – Bios Update

Please ensure that you have the latest Xplore Bios on your iX104 before you deploy our newest Batteries.

If you do not you can go to www.xplorettech.com and under the Customer Support tab you will find downloads and the latest Bios. If you need assistance contact Xplore Customer Support.

Sample Bios download:

iX104 Bios A2I for DOS  Download

Release Title: BIOS: iX104 System BIOS, English, A2I
Release Date: 7/15/2004
Category: FlashBIOS Updates

DA2IZip.exe Size: 1001 KB Estimated download time: 119 sec Format: Zip

Format Description:

This file contains a compressed (or zipped) set of files. Download the file to a folder on your hard drive, and then run (double-click) it to unzip the set of files. Follow the instructions in the "Floppy Disk Upgrade Procedure" document to successfully update your system.

This is a self-extracting file that contains the A2I System BIOS for the iX104 tablet computer. For BIOS release notes please see the Fixes and Enhancements section below.

Ensure the system's main battery and AC Adapter is connected prior to flashing the BIOS. This download can be used with any iX104 and all versions of BIOS.

WARNING

Failure to follow the procedures can result in an iX104 which is no longer operable. Please read through all directions in "Floppy Disk Upgrade Procedure" before beginning the procedure.

Fixes and Enhancements:

Reactive LCD Display when re-entering normal operating temperatures when unit on.

Adjust Battery Charge when battery is being charged outside recommend temperature range. Note: When Battery is being charged outside recommended temp range Windows Battery Gauge will display that charger is plugged in and battery is not charging. This will change back when battery in back in correct temperature range.

Item 3 – iX104 Dual Bay Battery Charger

1. Introduction:

This document shall assist you with the basic understanding and use of the iX104 Dual Bay Battery Charger for charging and reconditioning iX104 series battery packs.

2. Description:

The iX104 Dual Bay Battery Charger provides charging and reconditioning functions of up to Two (2) of the iX104 Lithium- Manganese Battery Packs.

3. Features:

3.1 **Two Bays for Battery Charging:**

The Charger provides two charging bays that will charge ***sequentially***. Charging is limited to 3000mA per bay. The first battery inserted will get charged first.

3.2 **One Bay of Battery Reconditioning:**

3.2.1 Only the left bay of the Charger provides battery reconditioning by a push-button (the center Blue Arrow button) activation.

3.2.2 The recondition algorithm is a full charge + full discharge + final full charge.

Note: Recondition does not affect the battery chemistry, but resynchronizes the SMBus fuel gauge chip with the state of charge of the physical cells.

4. Status Indicators:

One Tri-Color LED will provide status indication for each charging or charge/ recondition bay. The color codes are as follows:

<u>LED Color:</u>	<u>Description:</u>
<i>Off</i>	<i>No battery detected</i>
<i>Flashing Green</i>	<i>Charging</i>
<i>Solid Green</i>	<i>Fully charged</i>
<i>Flashing Yellow</i>	<i>Recalibrating</i>
<i>Yellow/Green</i>	<i>Recalibrated</i>
<i>Solid Yellow</i>	<i>Standby (waiting for other bay to complete)</i>
<i>Flashing Red</i>	<i>Error</i>

5. Charging Instructions:

5.1 **Charging:**

5.1.1 Simply insert one (1) iX104 battery pack into one of the slots. If desired, you may place another battery pack into the other slot (*see note #1*).

5.1.2 The first battery inserted will start to charge immediately, but it takes about 10-15 seconds for the fan to turn-on, and the charging sequence to begin.

5.1.3 The second battery will remain waiting until the first battery has completed its charge cycle.

Note #1: The slots are keyed, so you can only place the batteries into them in the correct orientations.

5.2 **Reconditioning:** (*see note #2*)

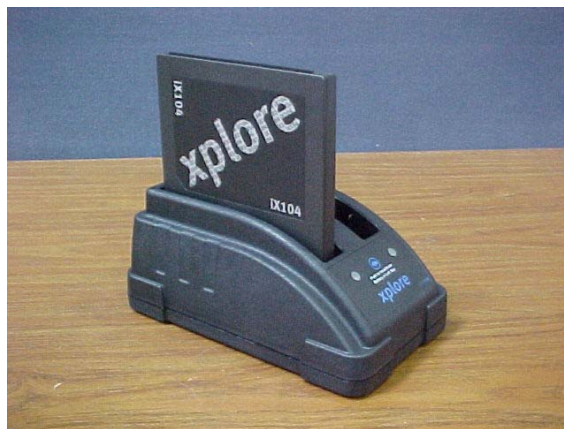
Insert one (1) battery pack into the left bay, then press and hold the Reconditioning Button until the Flashing Yellow LED is on.

Note #2: Xplore Technologies, Inc. recommends reconditioning the battery pack once every three (3) months, or when the run time is significantly reduced.

<u>Conditions:</u>	<u>Battery Pack:</u>	<u>Charge/Recalibrate Time:</u>
Charging	6.4V / 4500mAH Li-Polymer	≈ 1.5 hour
	6.4V / 9000mAH Li-Polymer	≈ 3.0 hours
	7.4V / 5700mAH Lithium-Ion (41wh)	≈ 1.9 - 2.0 hours
	7.4V / 7600mAH Lithium-Ion (55wh)	≈ 3.5 hours
Reconditioning	6.4V / 4500mAH Li-Polymer	≈ 10.0 hours
	6.4V / 9000mAH Li-Polymer	≈ 20.00 hours
	7.4V / 5700mAH Lithium-Ion (41wh)	≈ 11.5 - 11.7 hours
	7.4V / 7600mAH Lithium-Ion (55wh)	≈ TBD

6. Battery Testing:

- 6.1** On the back side of the battery pack - locate the battery fuel gauge at the bottom of the battery.
- 6.2** Press the furthest button on the right:
- The fully charged Li-Polymer battery should show five (5) green bars.
 - The fully charged Li-Manganese battery should show one (1) yellow bar + four (4) green bars.



Other Information

If there are any further questions or issues, please contact Xplore Technologies customer support department at customersupport@xploretech.com or you may call our toll free hotline, 1-866-296-8541 ext. 222. For International support intsupport@xploretech.com or you may call +358 9 2510 7290. You may also visit us at www.xploretech.com