Global Energy Innovations IBMS™

Intelligent Battery Management System™ – EC1000™ & EC2000™ Analyzer Companion Software

Getting Started / Quick Start Guide

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Accessories as defined above.	**One (1) year** from the date of purchase by the first consumer purchaser of the product.
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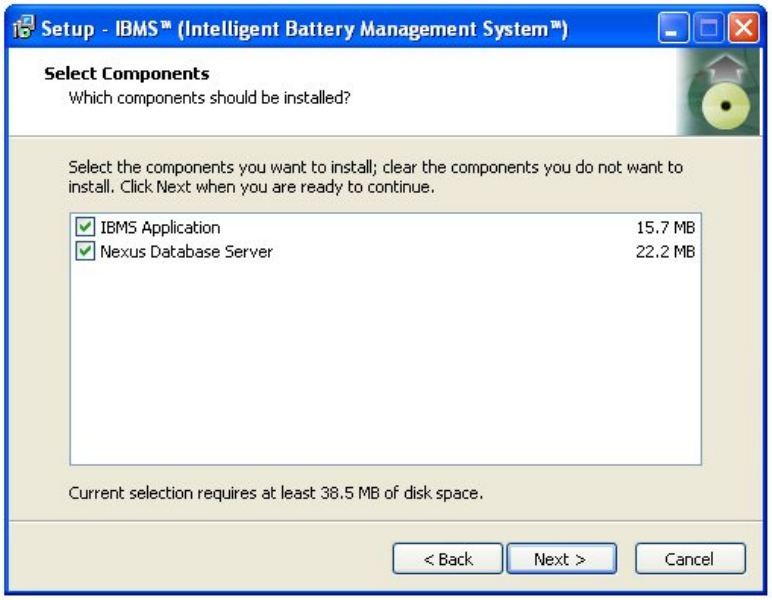
SETTING STARTED / QUICK START GUIDE

IBMS™ (Intelligent Battery Management System™) Software is the companion standard and enterprise software used with the EC1000™ and EC2000™ Handheld Battery Analyzers by Global Energy Innovations. This Getting Started / Quick Start Guide is used to get a rapid understanding of how to use the basic features of IBMS™. For a complete guide to IBMS™, please refer to the IBMS™ Users Manual. You can find the complete IBMS™ Users Manual on the Global Energy Innovations Website.

IBMS™ INSTALLATION

- Download the latest version of IBMS™ from the Global Energy Innovations Website. You can also download the latest Installation Files, Release Notes and User Manuals and Guides at http://support.globalei.com.
- Install IBMS™ on your computer using the following steps:

1. Double-Click on the Installation Icon.
2. Follow the installation instructions.
3. At the Setup screen, make sure that both IBMS Application and Nexus Database Server are selected.



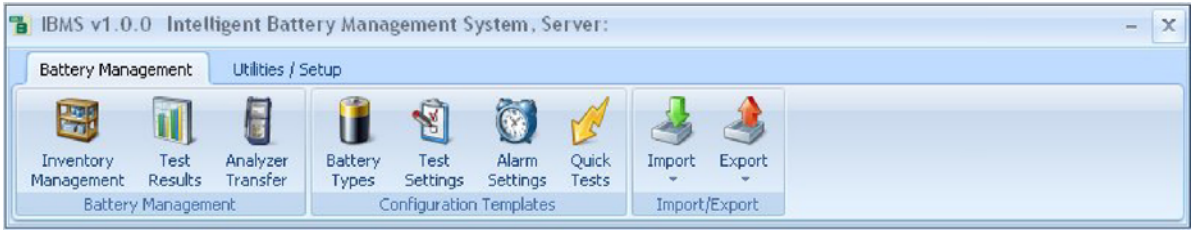
4. After installation is complete, IBMS™ will direct you to select the server.
5. After server selection, IBMS™ will launch. If it does not launch, go to your programs and launch IBMS™ or use the quick launch IBMS™ icon on your desktop.

6. After launch is complete, you will see the IBMS™ program navigation banner at the top of your computer screen as shown below. A brief description of each section (Battery Management and Utilities / Setup) is described in the table below.

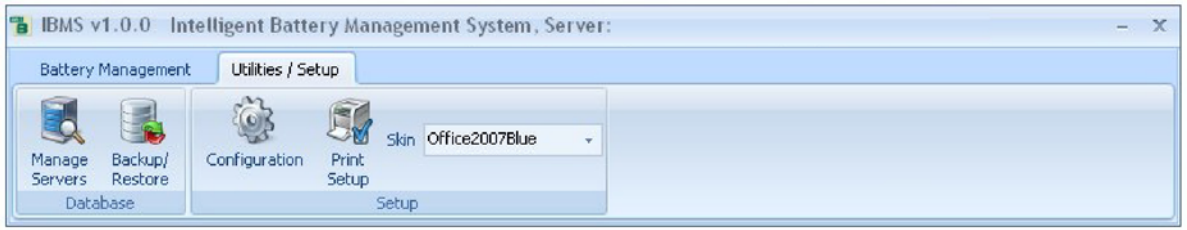
USING IBMS™

This section covers the basic setup and use of IBMS™. Not all sections are covered in this Getting Started / Quick Start Guide. For a complete description of IBMS™, please refer to the IBMS™ Users Manual.

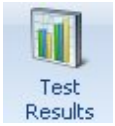
Below is a brief description of the various icons that you see on the IBMS™ program navigation banners. There are two banners (tabs) that you can use (1 - Battery Management and 2 - Utilities / Setup).



IBMS™ program navigation banner – **Battery Management**.



IBMS™ program navigation banner – **Utilities / Setup**.

CATEGORY SUBCATEGORY	ICON NAME	BRIEF DESCRIPTION OF FUNTION
BATTERY MANAGEMENT		
Battery Management		
	Inventory Management	Used to manage your entire battery / infrastructure inventory. You can create new Companies, Regions, Sites and Strings. After creating a String, you are able to set all of the string configurations in this section.
	Test Results	View all of your test results from the Analyzer. You can double-click into any of the colored test results for a full view of battery and cell test details. Data trending, alarm adjustment and much more can be done in this section.
	Analyzer Transfer	Connect your Analyzer to IBMS™ using this screen. Once you are on this IBMS™ screen, navigate to "Connect to PC" on your Analyzer. Once you are connected, you can transfer data back and forth between IBMS™ and the Analyzer. ***Note: You must have the USB Cable connected between your PC and Analyzer.***
Configuration Templates		
	Battery Types	Create and save different Battery Type templates that are used in String and other configurations.
	Test Settings	Create and save different Test Setting templates that are used in String and other configurations. Features such as Noise Filtering, Polarity Correction, Battery Test Start Settings and Strap Test Start Settings may be set in this section.
	Alarm Settings	Create and save different Battery and Cell Alarm templates that are used in String and other configurations. Alarms include Strap, Battery (Impedance, Voltage, Sulfation and Dryout).

	Quick Tests	Create and save different Quick Test templates that are used in String and other configurations. Select testing parameters such as Impedance, Voltage, Sulfation, Dryout, Noise Filtering and Auto Test Start Options.
Import / Exports		
	Import / Export	Used for importing and exporting data in XML format. Also coming soon is the ability to import World Energy Labs Interrogator 4210B data as well as export of data into .txt, Microsoft Excel and PDF formats.
UTILITIES / SETUP		
Database		
	Manage Servers	Manage where your Nexus Database is located. You can also switch between various Nexus Database installations. IBMS™ can work with any number of Databases.
	Backup / Restore	Backup and Restore you Nexus Database using this feature.
Setup		
	Configuration	General configurations for IBMS™. This includes setting up your naming convention for the Location Hierarchy. You can also set various software Options such as Date and Temperature Format, Test Results View as well as Chart Displays.
	Print Setup	Setup your printer for printing reports.

The remainder of this Guide is focused on several of the critical functions required for using IBMS™ and your Analyzer.

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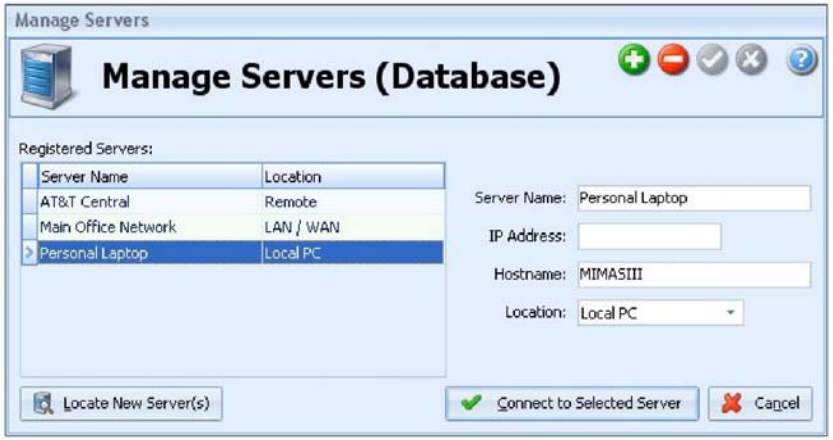
INITIAL SETUP

After launching IBMS™ for the first time, go to the Configuration screen in Utilities / Setup. Here you should select your preferred Data and Temperature Format. You should also select your Test Results View. It is recommended that you select Advanced View to start. For Alarm Handling, it is recommended that you use the default option of "Use String Configuration alarm values for all test results (datasets) in a series".



Next, go to the Manage Servers screen in Utilities / Setup. In this section you will select the Nexus Server (Database) that you want to use for saving your data. You can install and use many databases (repositories) for your data. By default, a Nexus Database is installed on the machine that you initially installed IBMS™ on.

You can use the Locate New Server(s) to search your personal computer and local area network (LAN) for Nexus Database installations. Any computer that has had IBMS™ installed on it and is searchable an on the LAN will show up when Locate New Server(s) is used.

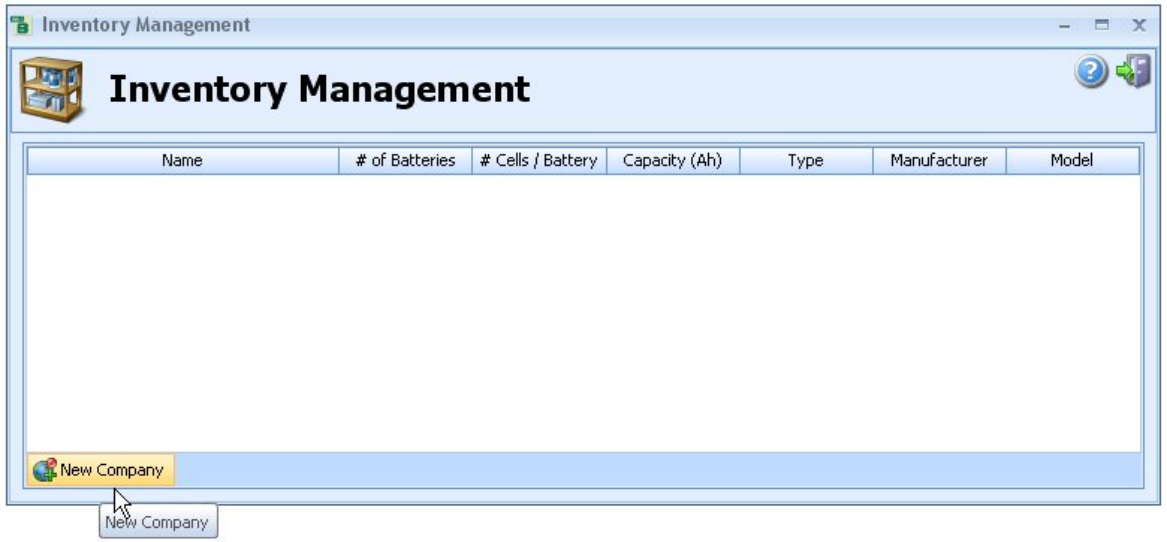
You can modify the name and Location by typing in details for the Server Name and selecting from a drop-down list for Location.

If you choose to locate a Nexus Server that is not part of your LAN and is at a remote location, you can enter an IP Address and select Connect to Selected Server. Often when connecting to a remote server, the fetch time for data can be long depending on your network connection speed.

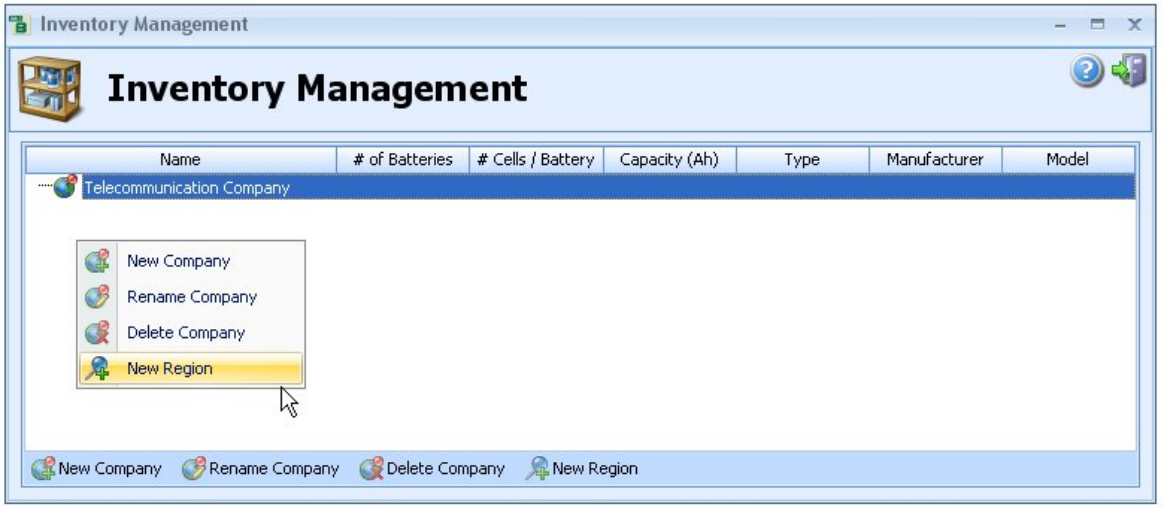
If you have a number of users all accessing IBMS™ from a LAN, you can install IBMS™ on your server and launch the program from the server (put a shortcut to IBMS™ on individual users desktop). In this case, the Nexus Database will be on the server and everyone can access it at fast rates from their IBMS™. IBMS™ may also be individually installed on any computer on the network and may access the server-installed Nexus Database. IBMS™ is free and there is no restriction on the number of installations or users accessing a central database.

CREATING A BATTERY STING & TRANSFERING TO ANALYZER

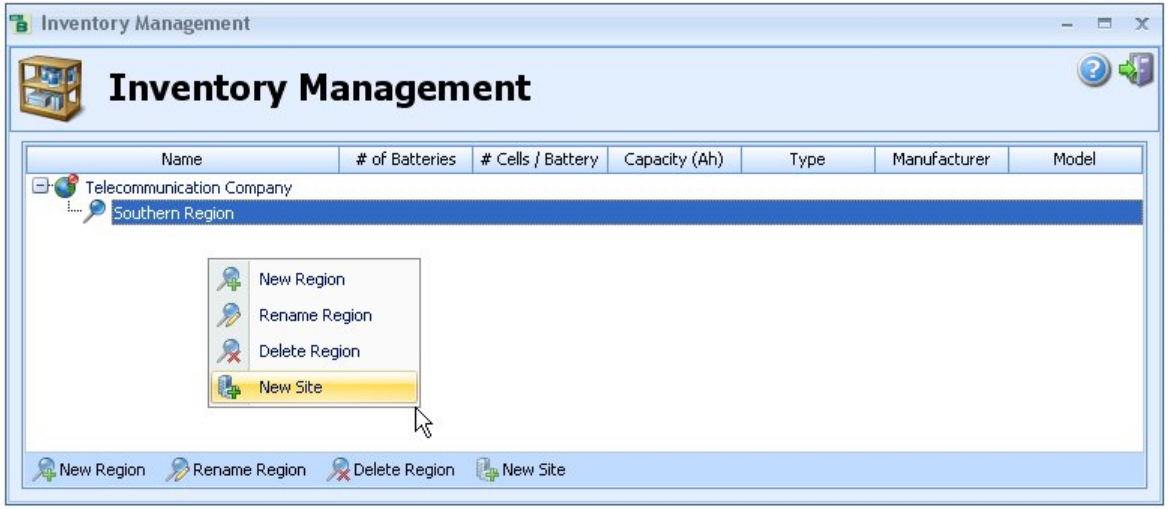
In the Inventory Management Screen, select the “New Company” button at the bottom of the screen. You will be prompted to name the Company.



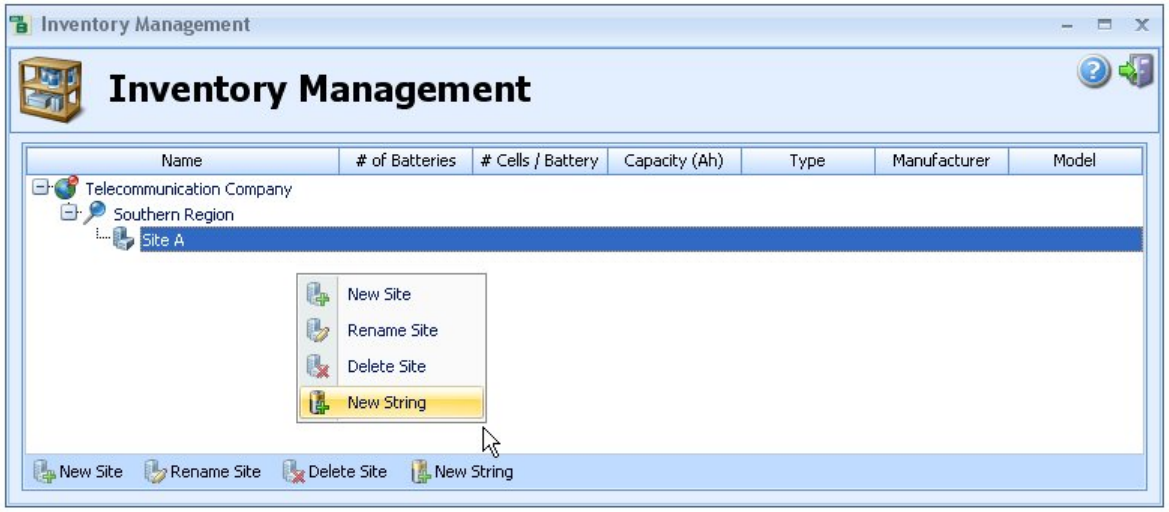
Next you will select a “New Region” in a similar fashion or right-click on the newly created Company and follow the instructions.



Next you will select a "New Site" in a similar fashion. Again, right-clicking newly created Region will show you the various selection options.



Next you will select a "New String" in a similar fashion. Again, right-clicking on the newly created site will show you the various selection options. When "New String" is selected, you will be prompted to set up the string details.



The screen shot below shows the string setup section. There are three tabs under string setup. These are String Configuration, Test Settings and Battery Details. String Configuration and Test Settings have required entry information, while Battery Details is optional. Below is a brief description of the various required inputs for String Configuration and Test Settings.

STRING CONFIGURATION – TAB

Name: Enter the String Name here.

Number of Batteries: Enter the number of batteries in the string.

Use Battery Type Template: If you have a preconfigured template you may select it now and the entire screen will be populated.

Manufacturer: Use the down arrow to select from a drop-down list of preconfigured Manufacturers or select the three dots (…) to go into the Manufacturer section and add a new Manufacturer.

Model: Use the down arrow to select from a drop-down list of preconfigured Models or select the three dots (…) to go into the Model section and add a new Model.

Cell Type: Select from a drop down list the type of battery you are testing. For a complete description of testing battery types other than Lead Acid, please refer to the Users Manual.

Capacity: Enter the C/8 capacity of the battery you are testing.

 # Cells per Battery: Enter the number of cells in the battery you are testing. For example, a 12 Volt Automotive battery will have 6 Cells per Battery

Test Level: Select from a drop-down menu if you are testing at the battery or cell level.

# of Straps per Battery: If you want to test straps in addition to batteries, enter a number other than zero (0) here.

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Voltage Reference Value: Enter the voltage reference value for the cell or battery you are testing. If you enter a value for the cell, the battery voltage reference will be automatically calculated based on values entered in **# Cells per Battery** and **Test Level**.

Finally you can select if you want to use the automatic baseline calculator. It is recommended that "Yes" is selected here unless you are an advanced user and have your own baseline values from previous testing.

TEST SETTINGS – TAB

Test Parameters: Select the Test Parameters you want to have displayed while testing on the Analyzer. If you are using an EC1000™ Analyzer you will only be able to test the Electrical Properties (Impedance and Voltage) of the battery. If you are using an EC2000™ Analyzer, you will be able to test both the Electrical and Chemical (Sulfation and Dryout) properties of the battery.

When testing a flooded, lead acid battery, only Sulfation is enabled, because Dryout can only be tested on Valve Regulated Lead Acid (VRLA) batteries.

Test Settings: You can manually enter your Test Settings, or use a preconfigured template.

Alarm Settings: You can manually enter your Alarm Settings, or use a preconfigured template. Default values are automatically populated for Alarm Settings.

After completing your entries, you may enter values in the Battery Details Tab, however, these are optional entries. Once you have completed all entries, click on the Save Changes. You have now configured a string and are ready to transfer your configuration to your Analyzer and begin testing.

QUICK TEST SETUP

You can configure Quick Tests by selecting the Quick Test Icon in the Battery Management Tab. Setup is very similar to setting up a string, however, has less details. There are also three preconfigured Quick Tests (Listed in Red) that cannot be deleted from IBMS™ and are intended to be used for rapid testing with the Analyzer.

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TRANSFERING TEST RESULTS FROM THE ANALYZER TO IBMS™ and INSTALLING NEW FIRMWARE

DATA TRANSFER

With your Analyzer connected to your computer via the USB cable, select the Analyzer Transfer Icon in the Battery Management Tab. Your Analyzer must be on the "Connect to PC" selection in the Main Menu. You will see a Red warning screen on the Analyzer when you are connected to IBMS™.

The Summary screen will appear first when you connect as shown in the screen shot below.

Select the "Transfer to Analyzer" tab and select the string or various configurations you want to have transferred from IBMS™ to the Analyzer. You will then select the Transfer button. The words "Created" will show once the transfers are complete. After this you may press the "Safely Disconnect Analyzer" button in the far left bottom of the screen, after which your Analyzer will disconnect from IBMS™ and be ready to use.

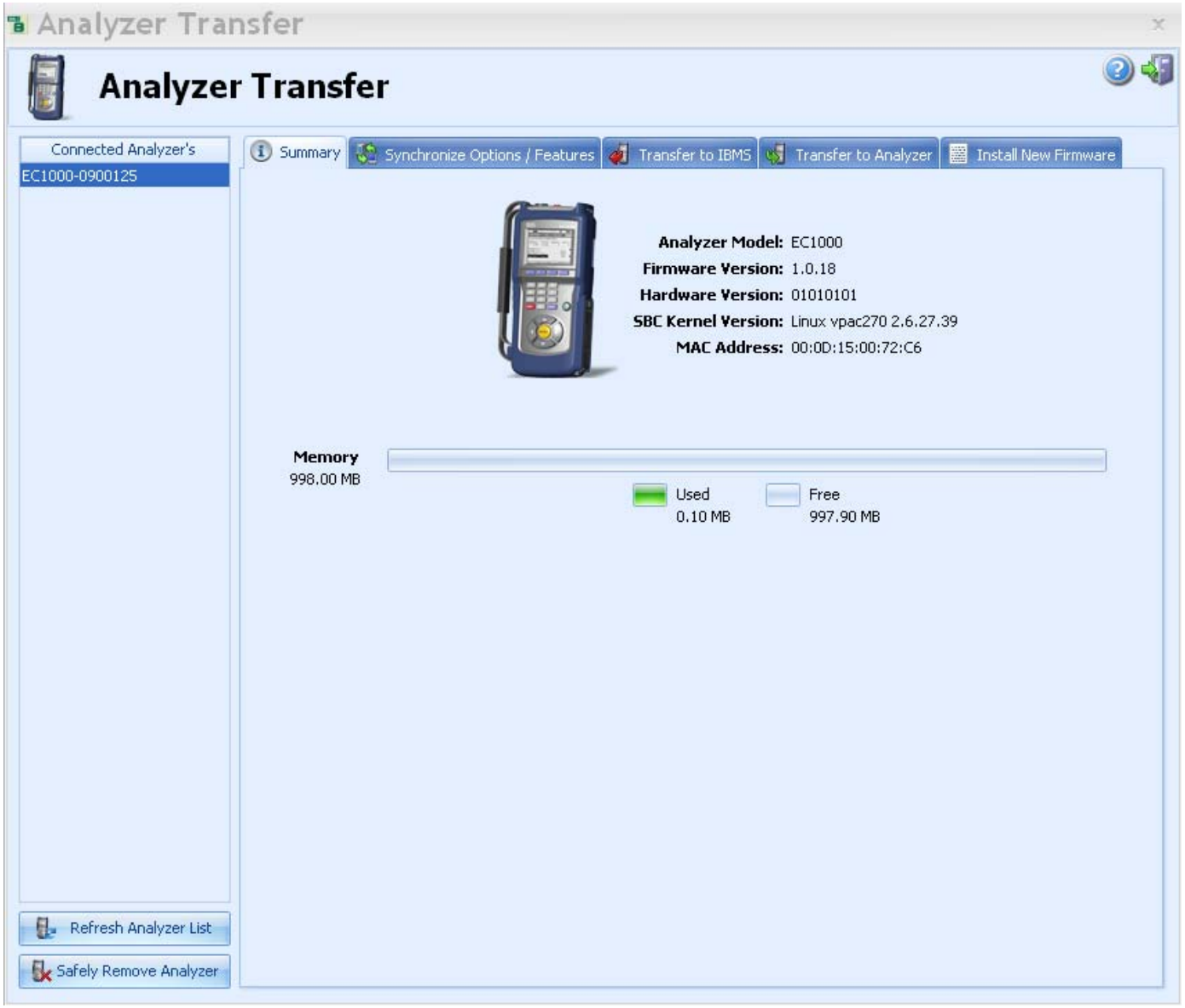
At this point, you may want to reference your Getting Started / Quick Start Guide to the EC1000™ and EC2000™ Analyzer for performing battery and cell testing.

INSTALLING FIRMWARE

With your Analyzer connected to your computer via the USB cable, select the Analyzer Transfer Icon in the Battery Management Tab. Your Analyzer must be on the "Connect to PC" selection in the Main Menu. You will see a Red warning screen on the Analyzer when you are connected to IBMS™.

The Summary screen will appear first when you connect as shown in the screen shot below.

Select the "Install New Firmware" tab and follow Steps 1 and 2. You can find the latest version of the Analyzer Firmware on the Global Energy Innovations' Support Site (http://support.globalei.com).


Analyzer Transfer
Analyzer Transfer
Connected Analyzer's
EC1000-0900125
Summary
Synchronize Options / Features
Transfer to IBMS
Transfer to Analyzer
Install New Firmware
Analyzer Model: EC1000
Firmware Version: 1.0.18
Hardware Version: 01010101
SBC Kernel Version: Linux vpac270 2.6.27.39
MAC Address: 00:0D:15:00:72:C6
Memory
998.00 MB
Used
0.10 MB
Free
997.90 MB
Refresh Analyzer List
Safely Remove Analyzer

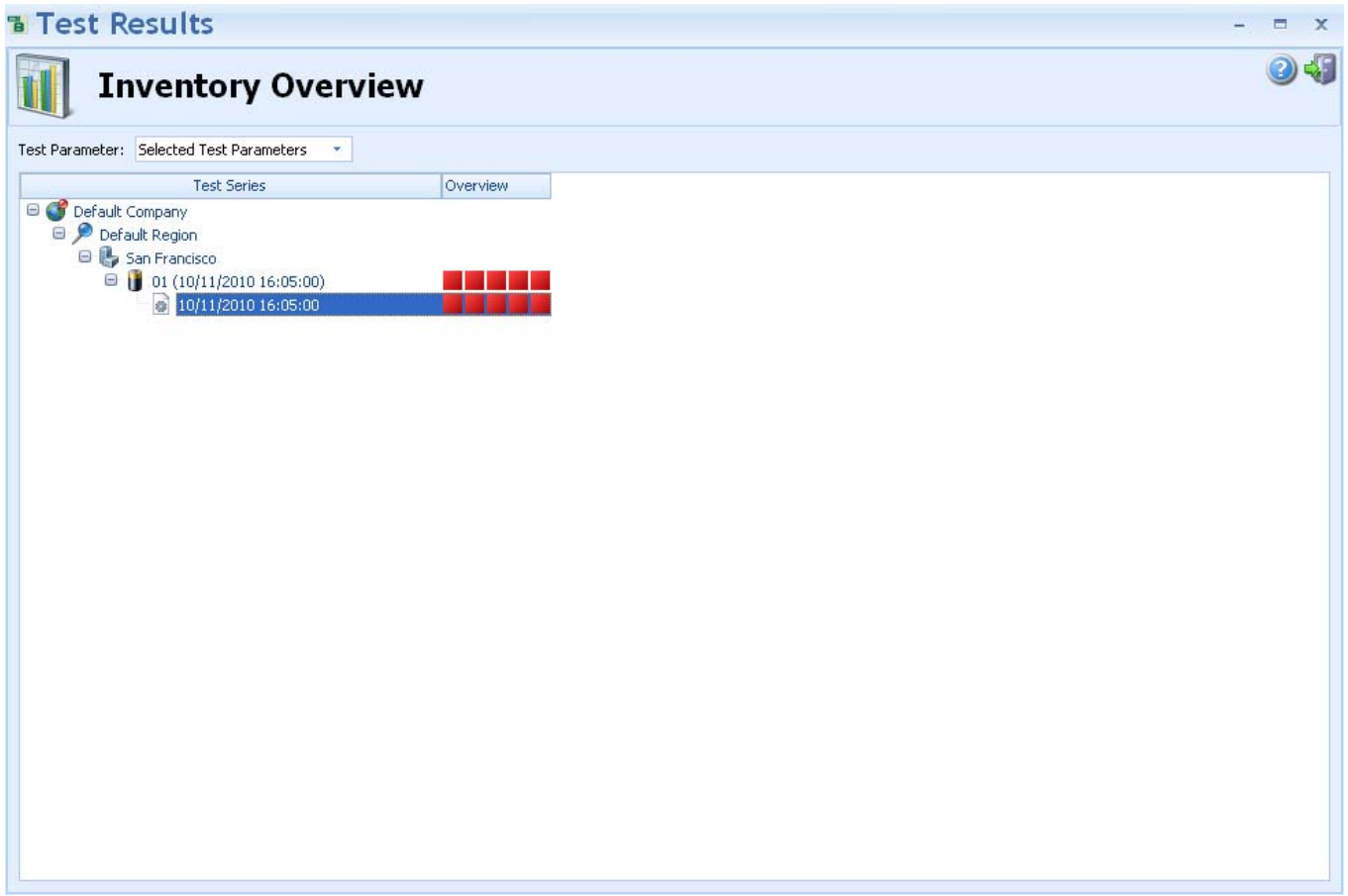
REVIEWING YOUR TEST RESULTS

After you have acquired test data using the Analyzer, you are ready to use IBMS for viewing the results. This section is a brief overview of the basic viewing features.

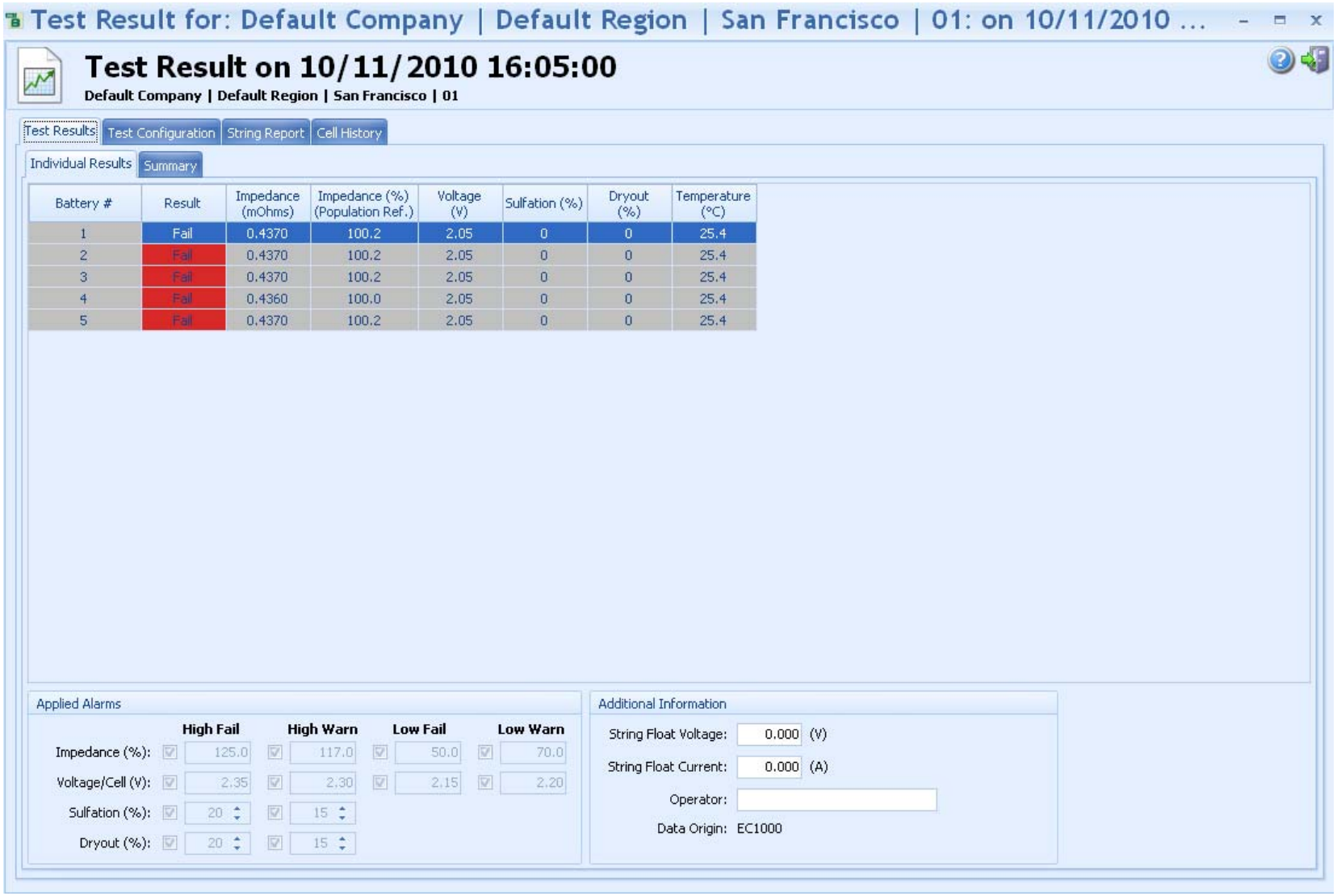
Follow the same process for connecting your Analyzer to IBMS™ as detailed in "TRANSFERING TEST RESULTS FROM THE ANALYZER TO IBMS™". Once you are connected, select the "Transfer to IBMS™" tab and select the test results you want to transfer.

After the transfer is completed, press the "Safely Disconnect Analyzer" button in the far left bottom of the screen, after which your Analyzer will disconnect from IBMS™. You can also keep your Analyzer connected if you want to do additional transfers to or from IBMS™.

You can now select the "Test Results" icon in the Battery Management tab and you will see a string overview. Red squares indicate Failed batteries, while Orange and Green indicate Warnings and Passes.



By double-clicking (drilling down) on any of the squares associated with a string test data, the details for the string will appear.



There are six tabs that you may select for viewing the various test results and setup parameters of the string. Each section is rather self explanatory. For a detailed description of each section please reference the IBMS™ Users Manual.

OTHER IBMS™ FEATUERS AND FUNCTIONS

These are the standard buttons that show up at the right top of many of the IBMS™ screens.