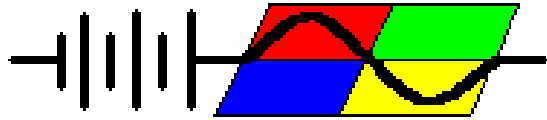


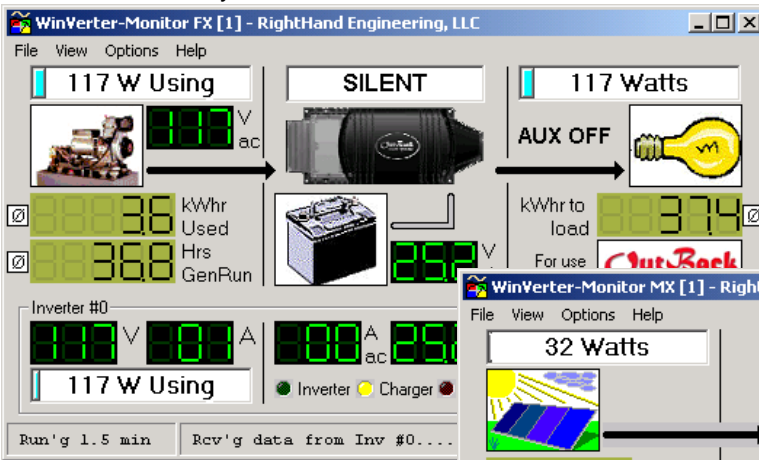
RightHand Engineering, LLC

WinVerter™-Monitor FX-MX

WinVerter™-Monitor FX-MX is Windows®-based PC software that works with the OutBack Power Systems FX inverters, MX charge controllers and the Mate remote control panel to continually monitor and display the device status while providing the user with data logging and control over the system.

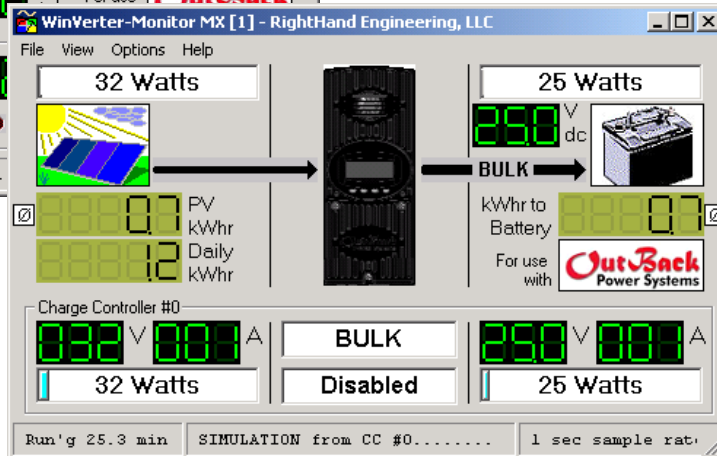


Designed for
OutBack Power
Systems products



**FX Inverter
Display Window**

**MX Charge Controller
Display Window**



Feature	Benefit
<ul style="list-style-type: none"> Displays all readings on a single screen. Graphical images indicate power routing. 	<ul style="list-style-type: none"> You see the present condition of your system at a glance.
<ul style="list-style-type: none"> Calculates watts, generator run time and Kilowatt-hours. 	<ul style="list-style-type: none"> You see information that is not readily obtained from the system itself.
<ul style="list-style-type: none"> Keeps a history of system events such as errors, warnings and mode changes. 	<ul style="list-style-type: none"> You can see events that occurred while unattended.
<ul style="list-style-type: none"> Outputs to file the accumulated hourly readings every day. 	<ul style="list-style-type: none"> You can see & compare past system performance using a spread-sheet.
<ul style="list-style-type: none"> Provides controls for your inverter. 	<ul style="list-style-type: none"> You can control the major modes of the inverter from your PC.
<ul style="list-style-type: none"> Password protected lock option 	<ul style="list-style-type: none"> Prevents unauthorized users from changing program settings or exiting.
<ul style="list-style-type: none"> Simultaneously monitors up to 8 OutBack devices connected to the same Hub. 	<ul style="list-style-type: none"> You see how well each device is pulling its load.
<ul style="list-style-type: none"> Supports running two copies. 	<ul style="list-style-type: none"> You can see the status of two systems on a single PC.
<ul style="list-style-type: none"> Evaluation mode 	<ul style="list-style-type: none"> Lets you try the software before purchasing
<ul style="list-style-type: none"> Simulation mode 	<ul style="list-style-type: none"> Evaluate or demonstrate the software without being connected to a live system.

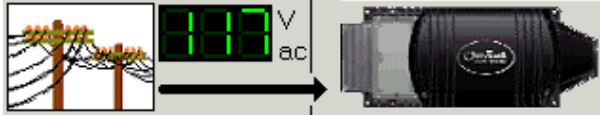
Communications



Using the OutBack Mate, *WinVerter-Monitor FX-MX* continually reads each connected inverter and charge controller voltage and amperage meters.

The program receives meter data once a second providing up-to-date information continuously.

Graphical Display



WinVerter-Monitor FX-MX displays a graphic image of each power port. Thus at a glance you can see when you are powering loads, charging batteries, inverting, running your generator, using grid power or selling.

Calculated Values

The program also interprets other useful information from the meter readings. From volt and amp readings it calculates watts. From elapsed time it calculates kilowatt-hours and generator run time..

NOTE: Because the meters built into the equipment has coarse resolution and show only the real portion of the current, the data displayed and logged by *WinVerter-Monitor* is only approximate.

Evaluation Mode

WinVerter-Monitor FX-MX can be run in an evaluation mode allowing you to try the software before purchasing. The evaluation software can be turned into fully functional software by on-line payment and an emailed Upgrade ID (see web site at bottom of page for details). Evaluation mode allows basic monitoring features for a single device, as well as full featured simulation.

Simulation Mode

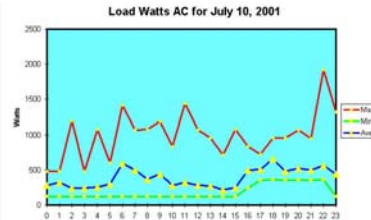
The program allows you to simulate operation just as if it were connected to one or more devices. You are able to simulate mode and meter reading changes by clicking on particular screen elements. This allows for even more detailed evaluation and greatly assists in demonstrations.

Error Causes

The program provides an easy way to view all error and warning causes at a glance. When an inverter error occurs it can produce an audible and visual alarm and gets logged along with time and date.

Data Logging

As long as *WinVerter-Monitor FX-MX* is running it is able to accumulate and record readings from the system. The program writes a log file every day at midnight. This contains the minimum, maximum and average data of every hour for every value displayed by the program.



Instructions included in the program's help text (on-line user's manual) give you detailed step-by-step instructions on how to import these data files into Microsoft's Excel spreadsheet program.

Control Panel (Inverter only)

When desired you may bring up the control panel screen. From the control panel you can control the inverter mode (on, off, search, charge), the AC mode (use, drop) and the auxiliary output state (on, off).

PC System Requirements

- Processor: Pentium or equivalent minimum.
- Processor Speed:
166 MHz or better for up to 2 devices,
233 MHz or better for up to 4 devices,
400 MHz or better for up to 8 devices.
- Operating System: Windows® 98 SE or later.
- Pointing Device: required.
- Video Display (to view all info simultaneously):
640 x 480 for up to 3 of the same device,
1024 x 768 for up to 6 devices or mixed FX/MX,
1280 x 1024 for 8 devices or mixed FX/MX.
Color recommended.
- RAM Memory: 128 MB or more.
- Removable Disk: Multi-read CD-ROM drive.
- Fixed Disk Memory: 10 MB of free space minimum plus 1 MB per month for daily logs.
- Serial Ports: One free RS-232 port (9-pin recommended) per running copy, or a USB port with a RS-232-to-USB converter.

Equipment Requirements ("+" = "or later")

- FX/VFX firmware rev 41+, GTFX/GVFX rev 75+.
- MX firmware rev 7.2.3 (date) or later
- Mate firmware rev 1.6 FX, 2.3+ MX, 3.3+ GTFX.
- Models supported:
All domestic and export FX, VFX, GTFX, GVFX, and MX inverters and charge controllers.

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