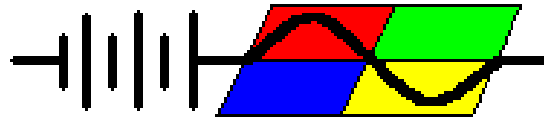


RightHand Engineering, LLC

New V3.0 works with FLEXnet DC

WinVerter-Monitor OB

WinVerter™-Monitor OB (formerly WinVerter-Monitor FX-MX) is Windows®-based PC software that works with the OutBack Power Systems inverters, charge controllers, and battery monitors 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



**Inverter
Display Module**

**Charge Controller
Display Module**

**Battery Monitor
Display Module**

Buy What You Need

WinVerter-Monitor OB is a single software program capable of running on even low performance PCs. It contains up to three separate display modules, or windows; one for inverters (including the FX, VFX, GTX and GVFX series), one for solar charge controllers (including the MX60 and FLEXmax 80), and one for the FLEXnet DC battery monitor. Each display module can be purchased separately, when you need it, allowing you to pay only for what you need.

You may download a free evaluation version from our web site, try it out, and if you like it purchase on-line. We then email you the unlock codes for each module purchased which turns the evaluation software into fully functional software.

Standard Vs. Professional Features

WinVerter-Monitor OB is available in both a Standard and Professional version.

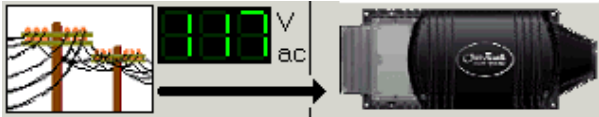
Feature	Std	Pro
Graphical Displays	Yes	Yes
Password Protection	Yes	Yes
Inverter Control Panel	Yes	Yes
Monitor Multiple Devices	Yes	Yes
Monitor 1 or 2 Systems	Yes	Yes
Simulation/Demo Mode	Yes	Yes
Time-based Accumulators	Yes	Yes
Event History	Yes	Yes
Data Logging Resolution	Course	Fine
Event Emails	No	Yes

Super Simple Installation



Because *WinVerter-Monitor OB* uses the meters built into the OutBack equipment, it does not require external metering devices or special skills or labor to install. Simply plug it into the OutBack Mate, and enable the communications port. *WinVerter* continually reads the mode, voltage and amperage meters of each connected device.

Graphical Display



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

Evaluation Mode

WinVerter-Monitor OB 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

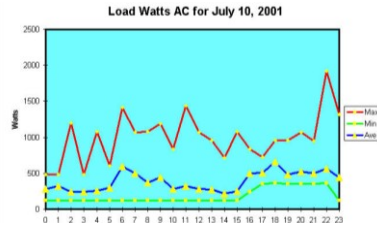
The program allows you to simulate operation just as if it were connected to one or more devices. You are able to simulate mode and meter reading changes by clicking on particular screen elements. This allows for even more detailed evaluation and greatly assists in demonstrations.

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 OB* 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.



The Professional version of the software provides user adjustable log periods as frequent as once every 10 seconds.

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).



INTERNET FEATURES

If the host PC has internet connectivity, the following features are particularly useful for monitoring the power at seasonal homes or telecom sites.

NOTE:

Configuring internet access requires IP networking and advanced PC skills.

Remote Internet Monitoring

Both the standard and professional versions of *WinVerter* can be provisioned to periodically post a copy of the display windows to the internet for viewing on the world wide web. To see a sample of this live monitoring, visit <http://www.righthandeng.com/live.htm>.

Email Notifications (Professional version only)

The Professional version of *WinVerter* can send emails upon user selectable events, which include equipment warnings and errors, program startup and shutdown, password tampering, communications errors, and equipment mode changes (such as grid loss/restoration, generator start/stop, full or low battery). Plus *WinVerter* can be configured to provide a once-per-day status email allowing you to confirm that all is well with the equipment.

This feature requires a POP3 email account

System Requirements

Inverter Requirements:

- OutBack Power Systems FX or VFX series inverters with firmware revision 41 or later, or GTFX or GVFX series inverters with firmware revision 75 or later.
- OutBack Power Systems Mate with firmware revision 1.6 or later for FX or VFX, 3.3 or later for GTFX or GVFX.
- If monitoring multiple units or devices the OutBack HUB4 or HUB10 is required.

Charge Controller Requirements:

- OutBack Power Systems MX-60 series with firmware revision 7.2.3, serial number 1000 or later (the MX revision numbering is based on Month.Day.Year).
- OutBack Power Systems FLEXmax 80 with firmware revision 001.009.000 or later.
- OutBack Power Systems Mate with firmware revision 2.3 or later (4.0 or later for the FLEXmax 80).
- If monitoring multiple units or devices the OutBack HUB4 or HUB10 is required.

Battery Monitor Requirements:

- OutBack Power Systems FLEXnet DC with firmware revision 000.001.070 or later.
- OutBack Power Systems Mate with firmware revision 4.0 or later
- OutBack Power Systems HUB4 or HUB10 is required (one FLEXnet DC per HUB max).

PC Requirements:

- Intel Pentium (or equivalent) or better processor
- 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.
- 633 MHz or better for Professional version.
- Microsoft Windows® 98 SE or later operating system
- 128 MB RAM or as required by the operating system, whichever is higher
- 10 MB of free hard disk space plus 1 MB per month for standard daily logs, or 10 MB
- Multi-read CDROM drive recommended
- 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 2 windows,
 - 1280 x 1024 for 8 devices or 3 windows.Color recommended.
- Pointing device, such as mouse or track-ball
- One or more 9 or 25 pin RS-232 serial ports (one per running instance of *WinVerter*, up to 2 instances max.)

NOTE:

Serial-to-USB PC adapters are NOT recommended for connection to the OutBack Mate. Consult us for options if the host PC does not have a native RS-232 serial port.

- Monitoring PC must be within 100 feet wire distance of the Mate unless special extending devices are used.
- For remote connections a data path capable of sustaining 19.2K baud or higher
- For continuous, unattended operation the following is recommended:
 - No additional software should be installed other than Internet Explorer, Microsoft Office products, and the latest version of pcAnywhere or VNC.
 - Meet the minimum requirement for the other software installed on the PC.
 - Latest drivers compatible with the OS for the installed hardware.
 - The particular model of PC should be listed on the Microsoft Hardware Compatibility List (HCL) for the installed OS.

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