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GEJ-7488A

GE Industrial Systems

SPEEDTRONIC™



Mark VI Portable Trainer

Product Guide

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Overview



The SPEEDTRONIC™ Mark VI Portable Trainer includes a control processor with application software and a second processor operating a turbine simulation and operator interface.

The Trainer is designed to provide training and demonstration of the Mark VI Turbine Control by using the GE Control System Toolbox and CIMPLICITY® HMI software running on a Windows NT® platform.

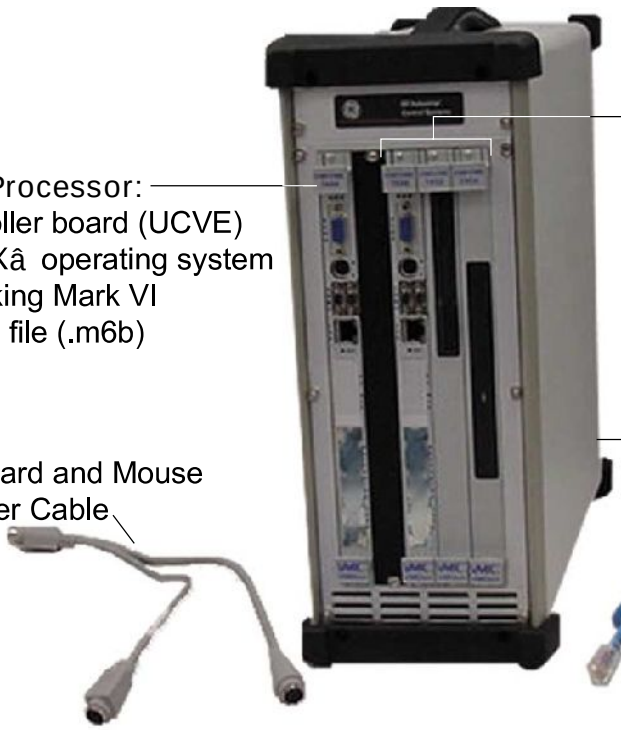
By using an actual Mark VI controller board communicating with another computer running a low-level turbine simulation, you can experiment with many of the features of the control system.

Features

- Designed as an operator training tool to interface with Mark VI operator screens without interrupting the actual control processes.
- Operator interface menus and display screens mirror the turbine control interface to simulate control operation.
- Initiates fault conditions that emulate alarm states. This promotes and maintains a knowledge base and troubleshooting techniques.
- Includes all control software and display tools.
- New auxiliary control loops and operator interface displays can be developed and refined before use on active equipment.

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Contains



Turbine Simulator and Windows-operating Processor:
UCVE
(Hard drive, floppy, and CD-ROM drive) with Windows NT, CIMPLICITY HMI, Control System Toolbox, and an executable simplified (low fidelity) turbine model

Controller Processor:
Unit controller board (UCVE) with a QNXâ operating system and a working Mark VI application file (.m6b)

Carrying case with a VME backplane and power supply for the boards

Keyboard and Mouse Adapter Cable

Ethernet Crossover Cable

Requirements

- SVGA color monitor (recommend a minimum 17-inch display) capable of 1024 X 768 resolution
- PS/2®-style keyboard and mouse
- Power Input 85 –230 V ac, 50/60 Hz 5 A

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Limitations

The Trainer is a simulator and **is not** intended to control and protect an actual turbine. A significant amount of simulation programming is provided to make this unit perform like an actual turbine. For this reason, care must be taken when making changes. The simulation could mask anticipated results and responses that may be important on an actual turbine control. Just because an action works on this Trainer **does not** mean it will work on the actual turbine controller.

Although many CIMPLICITY HMI screens are included with the Trainer, only a few have configured data. Some screens, such as Steam Turbine and Balance of Plant, are available for viewing, yet the data for these screens are not simulated.

Inputs and outputs (I/O) are simulated in the controller and the simulation program. The application code and simulation program signal mapping is factory-installed, and then compiled into executable programs.

Since the turbine simulation is *low fidelity*, actual turbine responses may not be accurate. The Trainer should not be used to verify specific turbine response data.

Because both processors are powered from the same source, it is not possible to cycle power on the controller (as required after downloading new/different application code) without also removing power from the Windows-operating processor. However, the processors can be reset independently.

Ø To reboot the controller processor

Use the recessed Reset button marked RST on the front of the controller processor. This allows you to try new application code in the controller without having to shut down the Windows-operating processor.

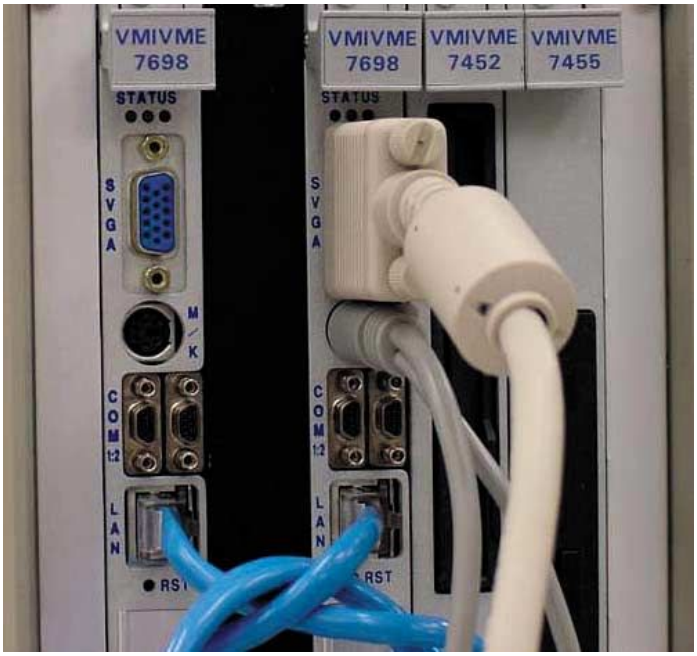


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Procedures

Ø To setup the Trainer

1. Verify that the boards are inserted properly and the power switch located at the back of the Trainer is in the OFF position.
2. Attach the supplied Ethernet crossover cable to the LAN receptacles on the controller and Windows-operating processors.
3. Attach the monitor to the SVGA receptacle on the Windows-operating processor.
4. Attach the supplied keyboard and mouse adapter cable to the M/K receptacle on the Windows-operating processor.



5. Attach the keyboard and mouse to the keyboard and mouse adapter cable.
6. Attach the power cord to the back of the Trainer.

Ø To startup and log on the Trainer

1. Press the power switch at the back of the Trainer to the ON position.
2. From the keyboard, press Ctrl + Alt + Delete. The username defaults to Administrator.
3. Enter the password. (If the password is not known, contact GE Industrial Systems. See the section, *Help*, for contact information.)
4. Click OK.

The unit automatically loads and starts the CIMPLICITY HMI, GE Control System Toolbox, and turbine simulation. This loading process takes approximately 2 minutes.

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The display settings may need to be adjusted to serve the connected monitor.

Ø To adjust the display

1. Click Windows Start button, Settings, and then Control Panel.
2. Double-click Display, and select the Chips tab.
3. Click the Display Device radio button that best suits the attached monitor.
4. Click Apply. Follow the screen prompts to apply appropriate settings.
5. Close the Control Panel window.

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Help

If you need further assistance, contact GE Customer Support:

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+ 1 540 378 3280 (International)

Fax: + 1 540 387 8606 (All)

Attend Mark VI training classes:
www.geindustrial.com/industrialsystems/services/training/index.shtml

www.geindustrial.com/industrialsystems/turbine/applicat/tcs-mvi/index.htm

Visit the GE Turbine Control Systems web site:
www.geindustrial.com/industrialsystems/turbine/catalog/tcs-ics/index.htm

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