Introduction

The SEAS PC-Watchdog is the ultimate application to monitor the proper operation of the SEAS components. It is designed to keep SEAS applications running continuously.

Some benefits of adding the PC-Watchdog to SEAS:

- Reducing downtime.
- Preventing acquisition data loss as a result of application programs stops or crashes.
- Creating log file of anomalies for further debugging.
- Saving costs of dispatching a technician to remote locations to reset/reboot programs or frozen PC.

The user cans choice between software or hardware automatic reset. The hardware reset will be executed using the **External PC Serial Watchdog** device of **Berkshire Products, Inc**. (External Serial PC Watchdog Manual), just the same as if the reset button was pushed.

Standard Operating Procedures for PWRON After PWR-Fail

To set the computer to automatically start itself up when the power is restored the BIOS **Power Management Setup** has to be properly configured. The **PWRON After PWR-Fail** option has to be set **ON**.

Manual Setup

When the computer is restarting press the **Delete** key to access the BIOS set up.
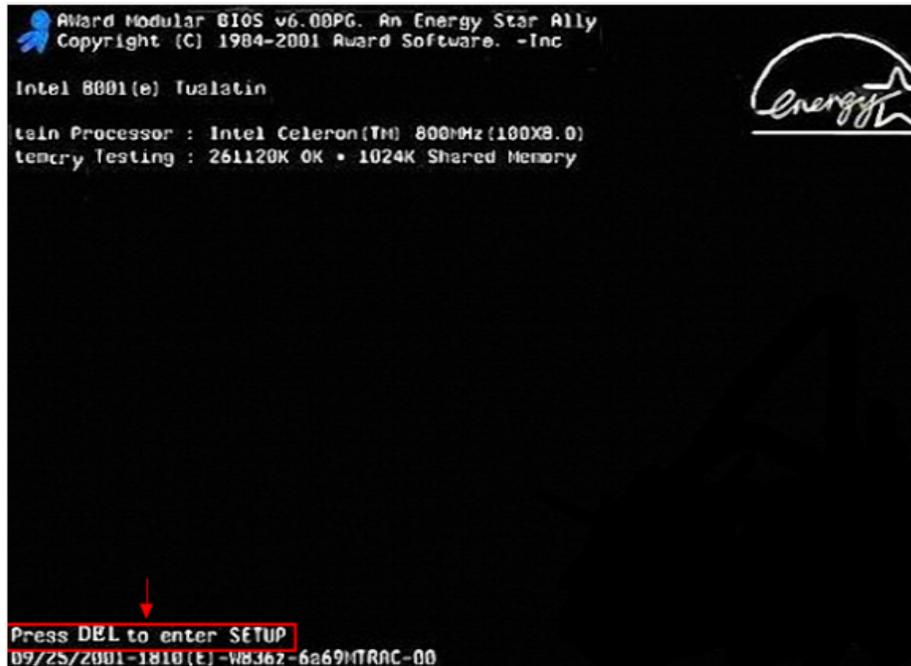
The **CMOS Main Menu** appears.

Step 1: Select "**Power Management Setup**" then hit **Enter**.
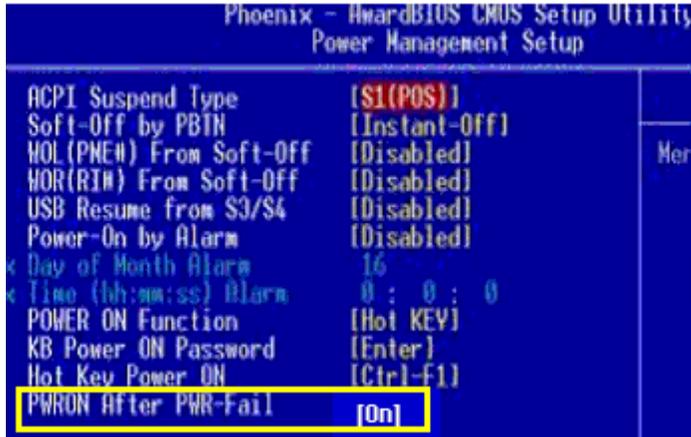
Step 2: Select "**PWRON After PWR-Fail**", and then turn it **"ON"**.

Step 3: Hit **Escape** key until back at the **CMOS Main Menu** and select "**Save and Exit Setup**" then hit **Enter**. System will reboot maintaining selected settings.

External PC Serial Watchdog

The External PC Serial Watchdog is an external device that is used to monitor a PC in order to ensure maximum system availability. It can monitor the PC's activity to determine if it has locked up. Dip switches on the board can be set to monitor specific activity. If the External PC Serial Watchdog does not detect activity for the specified period of time, it reboots the machine. The device has a serial port that was used for enhanced watchdog control and monitoring.

Dip Switch Setting

All the switches are read at power up and after each time that the External PC Serial Watchdog resets the PC. A switch that is **DOWN** is **ON** and a switch that is **UP** is **OFF**.

The device uses the first three dip switches to configure its operation. To SEAS they are configured in order to require that the PC send commands to the External PC Serial Watchdog to make it reset the timeout counter. The last three dip switches set the delay time until the External PC Serial Watchdog resets the PC, to SEAS the delay time is 10 minutes (ON-OFF-OFF).
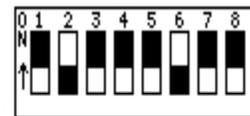
User Interface

The SEAS PC-Watchdog has plain **G**raphic **U**ser **I**nterface (GUI), easy to operation for every one.
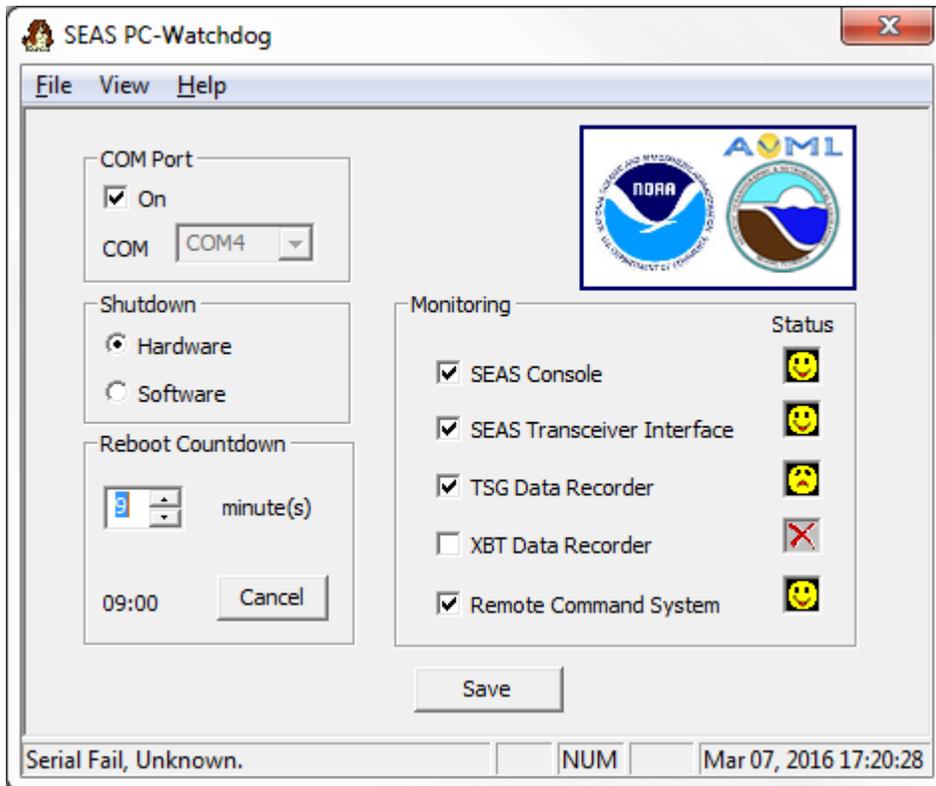
The general idea is monitoring the memory locations that SEAS PC-Watchdog and the other SEAS application share to communicate the good operation of them. Periodically SEAS PC-Watchdog writes into these locations "**FALSE**", and the SEAS applications write, "**TRUE** ".

The SEAS PC-Watchdog reads the shared memory locations every 30 seconds. It only reads locations that the user has selected. If it finds "**FALSE**" then it starts the monitoring process.

After finding "**FALSE**" continually in 5 minutes period then SEAS application would be considered failed and a reboot countdown would start; an alarm will also be sounded during this time. The user can set the reboot countdown time in minutes.

If the "**FALSE**" is changed to "**TRUE** " anytime during the reboot countdown then this will be stopped. Other way to stop the reboot countdown process is that the user presses the button "**CANCEL**".

If the reboot countdown process is not stopped the program shuts down with the user selected shutdown method (either **Hardware** or **Software**).

To makes active the new application configuration, and saves any configuration the user has to press the button "**Save**".

The **Status bar** provides status information from serial port communication, and application.

SEAS PC-Watchdog icon in the System Tray

The notification area -commonly referred as the system tray for Microsoft- is the portion of the taskbar usually at the bottom right corner that displays icons for easy access to system functions such as printer, modem, sound volume, battery status, and more. It is used to launch and monitor running applications.

A single right click on the tray icon will bring up a menu while a double click will perform the default action (**Minimize** or **Maximize** the SEAS PC-Watchdog application window).
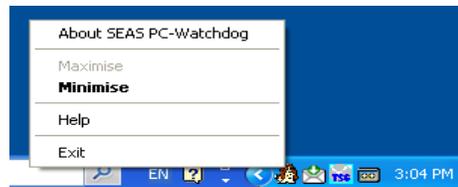
The **About SEAS PC-Watchdog** option will display a window with the version information.