



Argus Technologies SM02 Blank LCD Display – Three Status LEDs On

Part #: 018-534-20 SM02 Supervisory Panel

Symptoms:

The SM02 has a blank LCD display and all three LED's are lit.

Cause:

The BIOS inside the SM02 needs a constant power source to ensure it retains the correct settings. A small 3 Volt Lithium battery will provide the BIOS with power in the event that there is an interruption of the system DC that powers the SM02. However, if the Lithium battery is drained and the voltage is less than 2.7 Volts, and system DC Power is cut off or the reset button is depressed, the SM02 may lose its BIOS settings.

When will this occur:

This will only occur in SM02's that were manufactured prior to December 06, 2000. Although all of the SM02 BIOS' rely on the lithium battery for backup power, the newer versions have revised default BIOS settings that ensure startup even after complete power shutdown (No rectifier DC or lithium battery).

Corrective Action:

1. Reconnect power to the SM02.
2. Reconfigure the Bios to the correct settings.
3. Replace the Lithium battery.
4. Reset the system date and time.

Tools Required:

Laptop Computer

Hyper Terminal Program (Found in most Windows Operating Systems)

Null Modem RS232 Cable (DB9 F at SM02)

Multimeter

Procedure:

Reconfiguring Bios

1. Connect a null modem cable from your PC port to the front RS 232 port of the SM02.
2. Start the Hyper Terminal program on your PC. It can be found in most Windows systems under /Programs/Accessories/Communications.
3. Connect Hyper Terminal to the SM02 using COM x. The following data transfer information must be entered:
 - Baud Rate: 38,400 Stop Bits: 1
 - Data Bits: 8 Flow Control: None
 - Parity: None
4. Press the reset button on the SM02. If the PC and the SM02 are communicating properly, information from the BIOS should be scrolling through on the Hyper Terminal screen.
5. The BIOS will initially display a memory pass up to 640K. This takes approximately a half a second. During this memory pass, press Ctrl-C on your PC to enter the System BIOS Setup. If this is done correctly the BIOS will stop scrolling and the System BIOS Setup page will be displayed on Hyper Terminal. If this does not occur, you will have to press the reset button and try again. Because the memory pass is quick, it may take several tries to get to the System BIOS Setup.
6. Once in the System BIOS Setup you must do the following:
 - <Enter> on "Basic CMOS Configuration".
 - In "Basic CMOS Configuration" you must **tab** until the cursor is on "Drive A". Change "Drive A" from "Floppy Disk" to "896K Flash Drive" by pressing the minus key (-).
 - Tab down until the cursor is on "Drive B". Change "Drive B" from "896K Flash Drive" to "Floppy Disk" by pressing the minus key (-).
 - Press <ESC>
 - Tab down to "Write to CMOS and Exit" and press the <Enter> key.
7. The SM02 will take a few minutes to reboot.

```
+-----+
|                System Bios Setup - Utility v4.2                |
|                (C) 1999 General Software, Inc. All rights reserved |
+-----+
|
|                >Basic CMOS Configuration
|                Custom Configuration
|                Shadow Configuration
|                Password Configuration
|                Start System BIOS Debugger
|                Start RS232 Manufacturing Link
|                Format Integrated Flash Disk
|                Reset CMOS to last known values
|                Reset CMOS to factory defaults
|                Write to CMOS and Exit
|                Exit without changing CMOS
|
+-----+
|                <Esc> to continue (no save)
+-----+
```

Below is the Basic CMOS configuration. Ensure you have the same settings. When done return to the main menu.

```
-----+-----+-----+-----+
|                               |                               |                               |                               |
|      System Bios Setup - Basic CMOS Configuration      |
|      (C) 1999 General Software, Inc. All rights reserved |
|-----+-----+-----+-----+
| DRIVE ASSIGNMENT ORDER:   | Date:>Oct 04, 1999 | Typematic Delay   : 250 ms |
| Drive A: 896K Flash Disk  | Time: 11 : 32 : 29 | Typematic Rate    : 30 cps |
| Drive B: Floppy Disk      | NumLock: Disabled | Seek at Boot      : Floppy |
| Drive C: (None)          | -----+-----+ | Show "Hit Del"    : Enabled |
| Drive D: (None)          | BOOT ORDER:       | Config Box        : Enabled |
| Drive E: (None)          | Boot 1st: DOS-ROM | F1 Error Wait     : Enabled |
| Drive F: (None)          | Boot 2nd: Drive B: | Parity Checking   : (Unused) |
| Drive G: (None)          | Boot 3rd: Mfg Mode | Memory Test Tick  : Enabled |
| Drive H: (None)          | Boot 4th: (None)  | Test Above 1 MB  : Enabled |
| Drive I: (None)          | Boot 5th: (None)  | Long Memory Test  : (Unused) |
| Drive J: (None)          | Boot 6th: (None)  | Hexadecimal Case : Upper   |
| Drive K: (None)          | -----+-----+ |                               |
| (Loader): (Unused)       | IDE DRIVE GEOMETRY: Sect Hds Cyls | Memory |
|-----+-----+-----+-----+
|                               |                               |                               |                               |
| FLOPPY DRIVE TYPES:      | Ide 0: (Unused)   | Base:             |
| Floppy 0: 1.44 MB, 3.5" | Ide 1: (Unused)   | 640KB             |
| Floppy 1: Not installed  | Ide 2: (Unused)   | Ext:              |
|                               | Ide 3: (Unused)   | OMB               |
|-----+-----+-----+-----+
|                               |                               |                               |                               |
|                               | ^E/^X/<Tab> to select or +/- to modify |
|                               |                               | <Esc> to return to main menu |
|-----+-----+-----+-----+
```

Replacing Lithium Battery

1. Remove rear cover from SM02.
2. While the system is live, remove the existing Lithium battery.
3. Measure the voltage across this battery. If below 2.7 Volts the battery will not support the BIOS.
4. Replace with new Lithium battery if needed.

*The Argus part number for Lithium battery is 185-003-10. The Manufacturer part number is CR2477N.

Resetting Date and Time stamp

When the power supply is interrupted to the SM02, the date and time setting will revert back to xx/xx/1980. Although there is no effect on system operation, it is recommended to reset the time and date stamp to ensure linear accuracy in the statistics file. This can be done in the software menu by going to Configuration/Time Settings and simply re-entering the correct time and date.

Thank you for choosing Argus Technologies