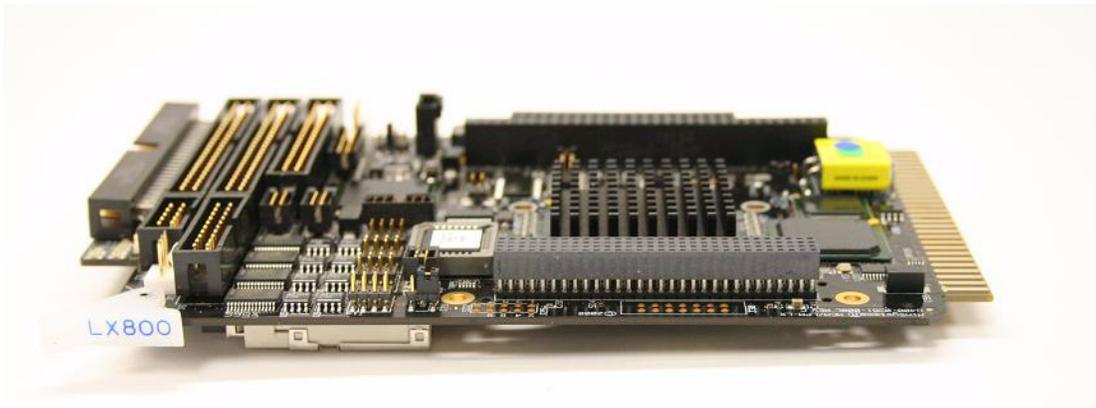


Upgrade to a 32-bit LX-800 CPU board



The LX-800 CPU assembly has been designed to include all digital I/O and COM1 through COM4 serial ports.

In addition, the Unified Baseline Operating System (UniBOS) is now resident on a 128 MB CompactFlash card instead of the slower 16 MB DiskOnChip module. The CompactFlash card provides additional memory for archiving data.

The UniBOS file on the CompactFlash card can be upgraded in the field with MON2000.

Optional boards can be plugged directly into the PC104 bus (64-pin connector J29 and 40-pin connector J27) on the CPU board assembly.

An optional COM4A board provides four additional serial ports: COM5 through COM8.

A modem card can be plugged directly into the PC104 bus for additional communications capabilities.

Note: If you plan to install a CSA-approved Radicom modem and two or more PC104 boards, the modem must be installed on top of the PC104 stack because the modem has only one PC104 connector.

Finally, Ethernet capability is available on the CPU board; a separate board is not required.

Retrofitting kits

The following retrofitting kits are available for upgrading a GC to the 32-bit LX-800 board:

GC Model	Retrofit Kit Part #	Intructions
500/2350A	2-3-2350-155	"Replacing the 16-bit 6117 CPU board with the 32-bit LX-800 CPU board in a Model 500/2350A GC" on page 2.
700	2-3-0700-755	"Replacing the Model 700's 16-bit 6117 CPU board with the 32-bit LX-800 CPU board" on page 14.

16-bit LX-800 CPU boards

It is possible to convert a 16-bit LX-800 to a 32-bit board. See "Upgrade the 16-bit LX-800 CPU board to a 32-bit LX-800 CPU board" on page 18 for details.

Replacing the 16-bit 6117 CPU board with the 32-bit LX-800 CPU board in a Model 500/2350A GC

Replacing the 16-bit 6117 CPU board with the 32-bit LX-800 CPU board is a two-step process: first you must convert the GC's 16-bit application to its 32-bit equivalent, and then secondly you must remove the 6117 board from the GC and replace it with the LX-800 board.

Save current data

1. Use MON2000 to connect to the GC and halt the analysis.

- a. Select **Halt...** from the **Control** menu. The *Halt analysis?* screen displays.
- b. Click **Yes** to halt the GC.

Note: This will take the GC offline for several hours.

2. As a safety precaution, upload and save archive data.
 - a. Select **Reports** → **Archive Data** → **Export Data....** The *Date Range Selection* window displays.
 - b. Select a date range for the archive download.
 - c. Click **OK**.
 - d. Select the records to be archived.

Note: Shift-click will select a group, Ctrl-click will allow you to select multiple individual records.

Note: Saving a large amount of archive data will take a significant amount of time.

- e. Click **OK**.
3. Upload and save the existing application and parameter files from the GC to a PC.

- a. Select **File** → **Offline Edit** → **Upload Application....** The *Save Uploaded GC Application File* dialog displays.

Note: The file will be saved to the **C:\GC\APP** folder by default.

- b. Click **Save**. A progress bar displays, allowing you to monitor the status of the upload. When the process is complete, the *Save Parameter File* dialog displays.
- c. Assign a name to the parameter file and click **Save**.

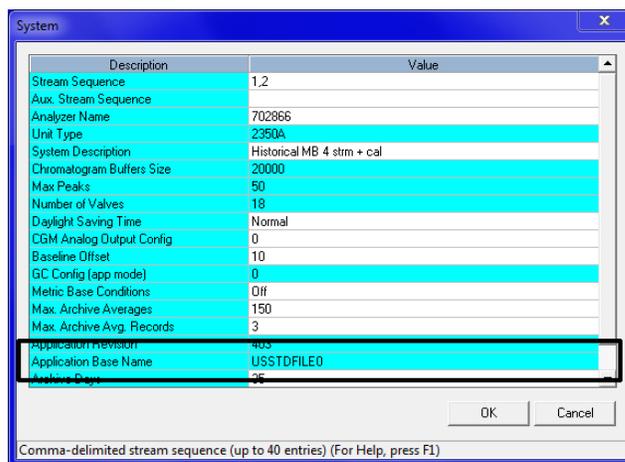
Upgrade the 16-bit application to its 32-bit equivalent

Before replacing a 6117 CPU board with the LX-800 CPU board, you must first upgrade the GC's 16-bit application to the application's 32-bit equivalent.

Verify Application Base Name of the 16-bit application file

You will need to know the 16-bit application's Application Base Name in order to upgrade it.

1. Select **System...** from the **Application** menu. The *System* screen displays.



2. The *Application Base Name* is located at the bottom of the window. Make note of it because it will be used in the next step.
3. Click **OK** to close the window.

Verify Application Template File Name of the 32-bit application file

Consult the table below to learn the name of the template file that will be used to upgrade the 16-bit application file to its 32-bit application equivalent.

Table 1: Model 500

Application Base Name	32-bit Application Template File Name
USASTD1A	Energy Measurement C6+ 4 min (2350A_Mode0_v4XX).APP
USADUAL1	Energy Measurement C9+ 5 min (2350A_Mode1_v4XX).APP
ISOSNGLSTD1	ISO Energy Measurement C6+ 4 min (2350A_2350ISO1_v4XX).APP
ISODULSTD1	ISO Energy Measurement C9+ 5 min (2350A_2360ISO1_v4XX).APP
USADUALM2	Energy Measurement C9+ 5 min (2350A_Mode2_v4XX).App
2360Dew2US	See note
2350ADewUS	See note
USSTDFILE01	Energy Measurement C6+ 4 min (2350A_2350EXMB_v4XX).APP

Note: "Dew" applications require a Hydrocarbon Dew Point software license and therefore the applications are not distributed as part of MON2000's software updates. **To obtain the appropriate 32-bit "Dew" application file, please contact your factory representative.**

Upgrade the 16-bit application

1. Select **File** → **Offline Edit** → **Upgrade Application...**
2. Locate and select the template file.

Note: The latest versions of these application template files were installed with MON2000 and are typically located at **C:\GC\APP**.

Note: If the application template file selected is not newer than the currently installed application, or if it is not the same type of application, MON2000 displays the following error message:

The selected application is not a compatible upgrade

3. Click **Open**. The *Save upgraded application as...* dialog displays.

4. Type a new name for the upgraded application into the **File name** field.

Note: It is recommended that you give the 32-bit application a name similar to the name of the 16-bit application it will replace.

Note: It is recommended that you do not give the 32-bit application the same name as the application template file on which it is based. Doing so will overwrite the application template file.

5. Click **Save**. MON2000 will create a 32-bit version of the 16-bit application. When the process completes, the *Application upgrade complete* message displays.
6. Click **OK**.

Remove the 16-bit CPU board

To remove the old CPU card, do the following:

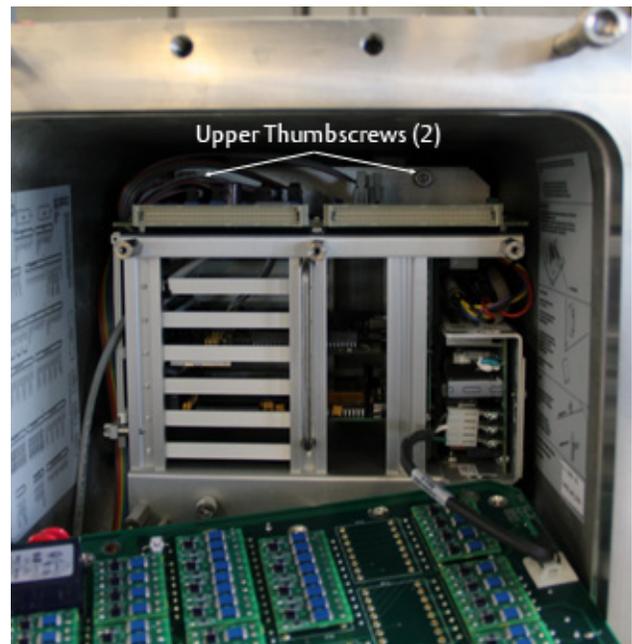
1. Remove power from the GC.
2. Remove the card cage.

For explosion-proof controllers only:

- a. Open the front panel by removing the sixteen screws that hold it in place.
- b. Loosen the six thumb screws that secure the field termination board to the card cage and remove the field termination board.

- c. Loosen the four thumb screws that secure the card cage to the housing.

Note: The two upper thumbscrews are located at the back of the explosion-proof container and require a long screwdriver to remove.



For rack mounted controllers only:
Loosen the four thumb screws that secure the card cage to the housing.

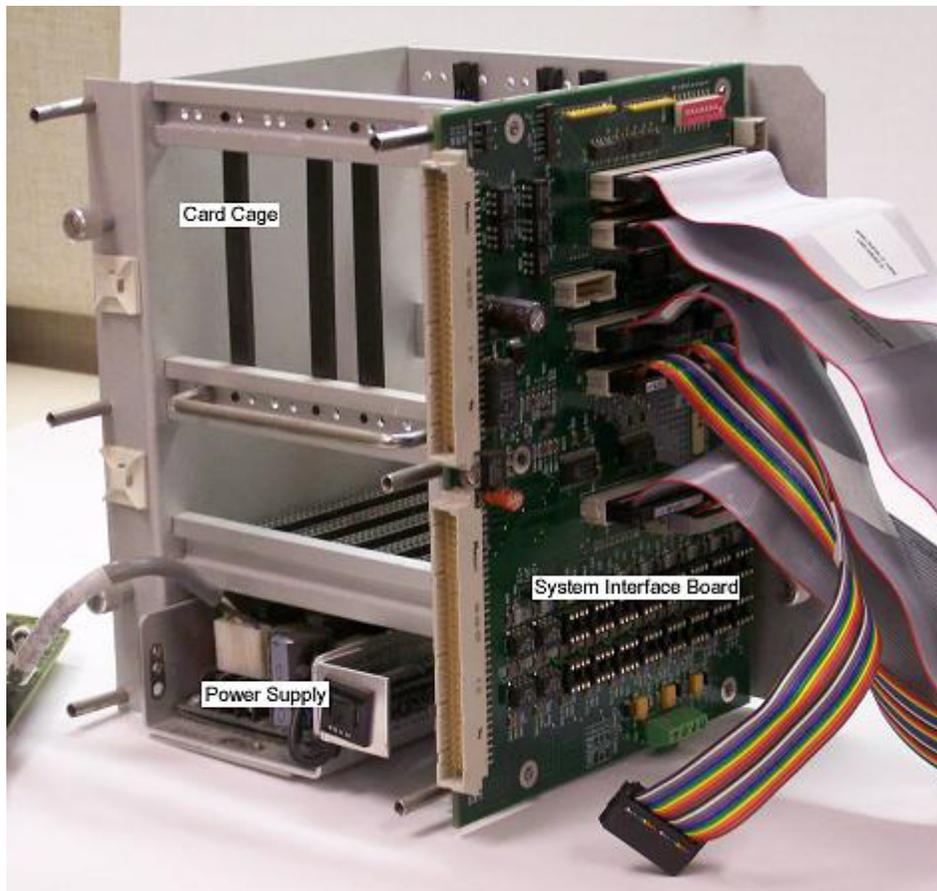
3. Replace the inline fuse. It is housed in a black case that is located next to the power supply.



Note: A replacement fuse was provided with the retrofit kit.

Note: To open the black case, push the two ends inward and then twist them in opposite directions.

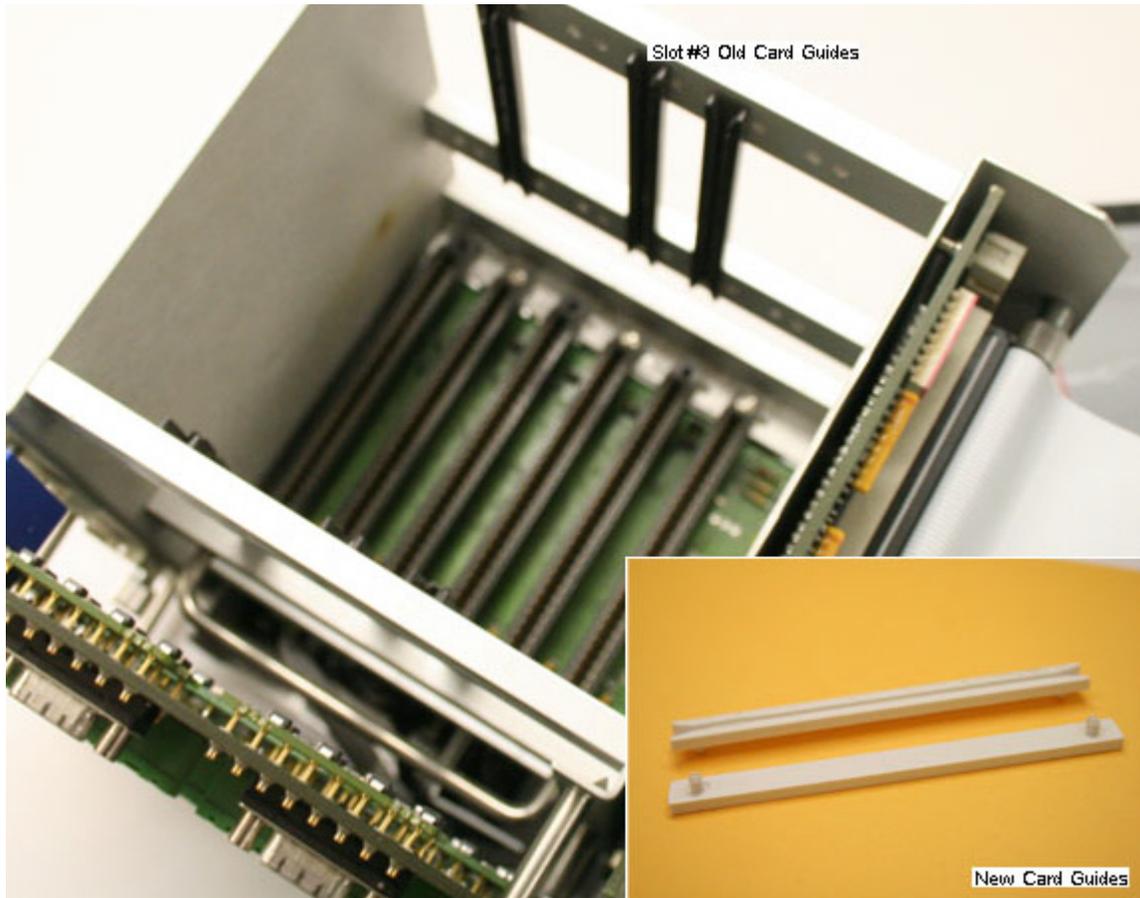
4. For easy access to all the cables and boards in the card cage, set the card cage assembly down on a flat surface in the upright position with the power supply end down and the system interface board to the right.



5. If present, remove the analog cables from the **J5** and **J6** connectors on the system interface board.
6. Remove all other cables that connect the system interface board to the CPU board.
7. Remove the CPU board and if present, the analog board, from the card cage.
8. Discard the old ribbon cable connected to **J6** on the analog board and replace it with the longer ribbon cable that is supplied in the retrofitting kit.
9. Remove the existing card cage guides in slot 3 by snapping them out from the back side of the card cage and replace them with the two new card guides provided in the retrofitting kit.

The new CPU board requires these low-shoulder, smooth-faced card guides to prevent the possibility of damaging

components installed near the edge of the CPU board.



Note: Slot 3 is the third slot back from the system interface board.

Install the 32-bit CPU board

To install the new CPU board, do the following:

1. Remove the new CPU board (P/N #2-3-2350-232) from its anti-static bag.

Caution: Discharge any static build up by touching the grounded case of the controller before removing the new CPU card from its protective envelope.

2. If applicable, transfer all existing PC104 boards and all mounting hardware to the new CPU board—except for the Ethernet card.

Note: The LX-800 CPU board has on-board Ethernet.

Note: If you plan to install a CSA-approved Radicom modem and two or more PC104 boards, the modem must be installed on top of the PC104 stack because the modem has only one PC104 connector.

3. If a COM 4A serial port expansion board is used, locate **J10** on the COM4A board and remove the jumper from pins 9 and 10 and re-set it at pins 23 and 24.
4. Place the new CPU board into the card cage's slot 3 where the smooth-faced card guides were installed.

To allow the CPU board to move freely up and down in the card cage as the cables are plugged into the headers on the CPU, do not plug the CPU board fully into the connector on the back plane board at this time.

5. Plug the cables into the CPU board in the following sequence:
 - a. Plug the end of the digital I/O cable labeled **INTF J2** into the system interface board's **J2** connector; plug the other end of the digital I/O cable into the CPU board's **J7** connector.

- b. Plug the end of the digital I/O cable labeled **INTF J3** into the system interface board's **J3** connector; plug the other end of the digital I/O cable into the CPU board's **J4** connector.
 - c. Plug the printer/COM1/COM2 cable into the CPU board's **J2** connector, which is located at the top of the CPU board.
 - d. Plug the 26-pin printer connector labeled **INTF J4** into the System Interface Board's **J4** connector.
 - e. Plug the 10-pin COM2 connector labeled **INTFJ11** into the System Interface Board's **J11** connector.
 - f. Plug the 10-pin COM1 connector labeled **INTFJ9** into the System Interface Board's **J9** connector.
6. If installing a keypad, consider the following:
 - If a COM4A board was installed, go to "Install a keypad and display with COM4A board".
 - If a COM4A board was not installed, go to "Install a keypad and display without COM4A board" on page H-9.
 - If a COM4A board was not installed and you do not want to install a keypad and display, then proceed to the next step.

7. To access serial ports 3 and 4, which are on the field termination board, do the following:
 - For access to serial port 3, plug the end labeled **INTF J8** into the header on the System Interface Board labeled **J8**.
 - For access to serial port 4, plug the end of the ribbon cable labeled **CPU J6** into the CPU header labeled **J6** and plug the end of the ribbon cable labeled **INTF J10** into the header on the System Interface Board labeled **J10**.

The CPU board installation is complete. If you plan to install a new analog board, go to “Replace the analog board”; otherwise, go to “Reassemble the 2350A.”

Install a keyboard and display without a COM4A board

To connect a keypad and display to a CPU assembly that does not contain a COM4A board, do the following:

1. Connect the 20-pin ribbon cable to the **J6** connector on the CPU board.
2. Plug the 10-pin connector labeled **INTF J12** into the header labeled **J12** on the System Interface Board for the serial port interface to the keypad and display.

3. Plug the 10-pin connector labeled **INTF J8** into header labeled **J8** on the System Interface Board for the interface to serial port 3.

This will provide access to the COM3 port on the field termination board. COM4 is now dedicated for use as the serial port interface to the keypad and display.

4. Start MON2000 and do the following:
 - a. Select **Serial Ports...** from the **Application** menu.
 - b. Set the *Usage* for serial port 4 to **Front Panel**.
 - c. Click **OK**.

Note: The mode (RS-232, RS-422 or RS-485) for all four ports can be set through MON2000.

The CPU board installation is complete. If you plan to install a new analog board, go to “Replace the analog board”; otherwise, go to “Reassemble the 2350A.”

Install a keypad and display with COM4A board

To connect a keypad and display to a CPU assembly with a COM4A board, do the following:

1. To access serial ports 3 and 4, which are on the field termination board, do the following:

- For access to serial port 3, plug the end labeled **INTF J8** into the header on the System Interface Board labeled **J8**.
 - For access to serial port 4, plug the end of the ribbon cable labeled **CPU J6** into the CPU header labeled **J6** and plug the end of the ribbon cable labeled **INTF J10** into the header on the System Interface Board labeled **J10**.
2. Plug the 10-pin connector labeled **INTF J12** from the COM4A board's ribbon cable to the header labeled **J12** on the System Interface Board.

This dedicates serial port 8 to the keyboard and display interface.

3. Start MON2000 and do the following:
 - a. Select **Serial Ports...** from the **Application** menu.
 - b. Set the *Usage* for serial port 8 to **Front Panel**.
 - c. Click **OK**.

Note: The mode (RS-232, RS-422 or RS-485) for the first four serial ports (COM1 - COM4) can also be set through MON2000; the remaining ports (COM5 - COM8) must be set manually. See the "COM4A RS-232/ RS-422/RS-485 Configuration" section of the Model 500 user manual for more information about configuring the COM5 - COM8 ports.

The CPU board installation is complete. If you plan to install a new analog board, go to "Replace the analog board"; otherwise, go to "Reassemble the 2350A."

Replace the analog board

Model 2350 controllers shipped before late 1997 may have been installed with 12-bit analog boards that are not compatible with the 32-bit CPU boards sold as spares and in the 2350A upgrade kits. These CPU boards require a 16-bit analog board for proper operation.

Identify the analog board

To determine whether your Model 2350 controller currently has a 12-bit or 16-bit analog board, compare its appearance to the following pictures.



12-bit analog board



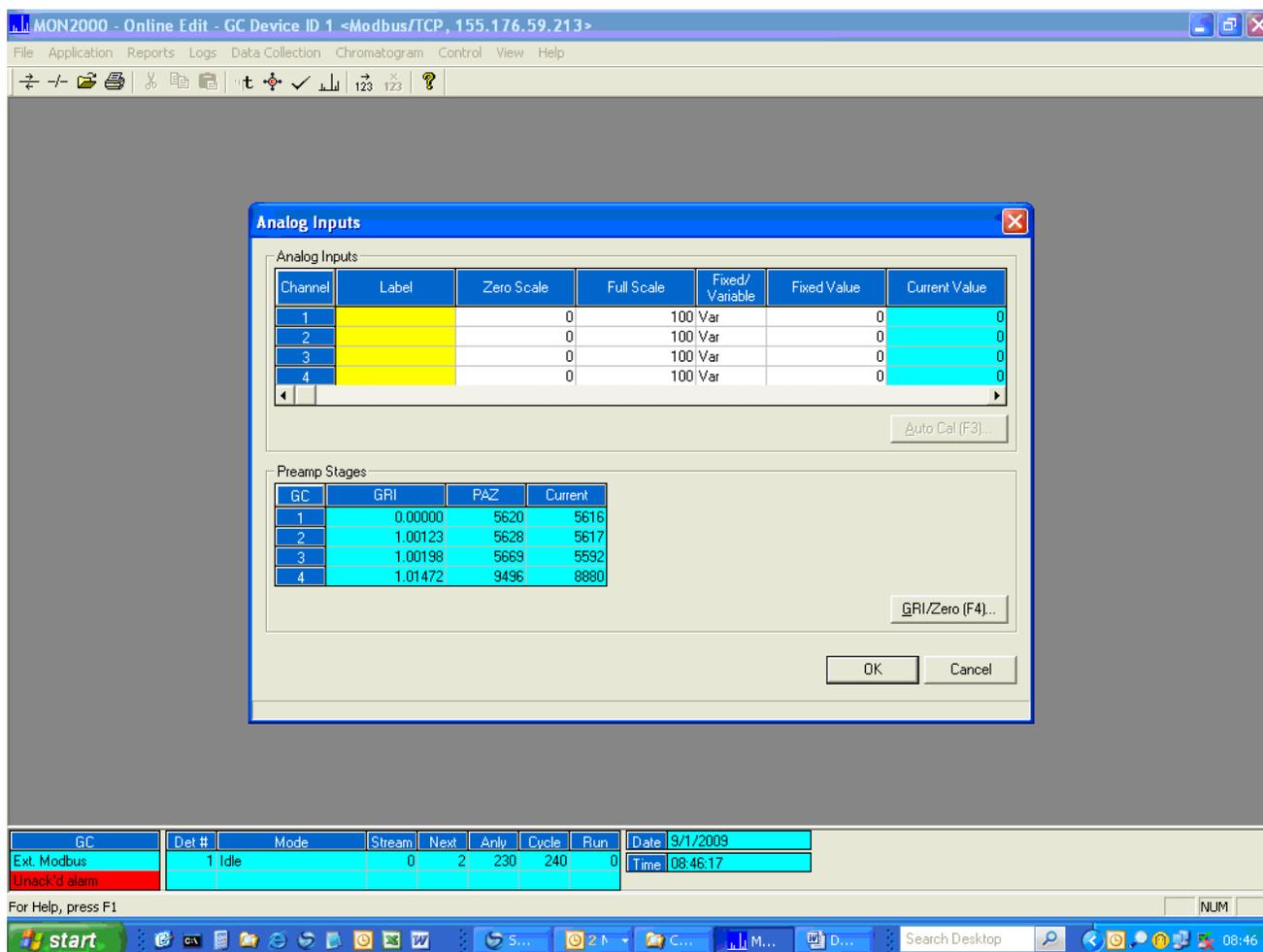
16-bit analog board

If a visual inspection is difficult to do, you can use MON2000 to determine which analog board is currently installed on the GC. To do so, do the following:

1. Start MON2000 and connect to the appropriate GC.

2. Select **Analog Inputs...** from the **Application** men.
3. Compare the values listed on the Analog Inputs window to the typical values listed in the table below.

GC	GRI	PAZ (12-bit analog card)	PAZ (16-bit analog card)
1	0.0 to 0.0	0 to 4095	-32767 to 32767
2	0.8 to 1.1	0 to 4095	-32767 to 32767
3	0.8 to 1.1	0 to 4095	-32767 to 32767
4	0.8 to 1.1	0 to 4095	-32767 to 32767
5	0.8 to 1.1	0 to 4095	-32767 to 32767



In the example above, the PAZ values are all found within the ranges expected of a 16-bit analog board. As such, the CPU board can be upgraded without upgrading the analog board.

For more information or questions about purchasing the appropriate 16-bit analog board, contact the Customer Service at GC.CSC@emerson.com or (713) 827-6380.

Install an analog board

To install the analog board, do the following:

1. Place the analog board into slot 5 of the card cage.
2. Locate the analog cable that is supplied with the analog board. Plug the end of the cable that is labeled **ANLG J6** into the header labeled **J6** on the analog board.
3. Plug the end of the cable that is labeled **INTF J6** into the system interface board header labeled **J6**.
4. If applicable, install the second analog cable. Plug the end of the cable labeled **ANLG J5** into the header **J5** on the analog board. Plug the other end of the analog cable labeled **INTF J5** into the header labeled **J5** on the system interface board.
5. Press down firmly on both the analog board and the CPU board to insure they are completely seated into the connectors on the backplane.

Reassemble the 2350A

To reassemble the 2350A, do the following:

1. Reinstall the card cage in the rack mount or explosion proof housing by screwing in the card cage's thumb screws.

2. If a COM4A board is installed, mount the DB9 connectors for serial ports COM5 (P22), COM6 (P23), and COM7 (P24) into their designated slots at the top right side of the field termination board.

Replacing the Model 700's 16-bit 6117 CPU board with the 32-bit LX-800 CPU board

Replacing the 16-bit 6117 CPU board with the 32-bit LX-800 CPU board is a two-step process: first you must convert the GC's 16-bit application to its 32-bit equivalent, and then secondly you must remove the 6117 board from the GC and replace it with the LX-800 board.

Save current data

1. Use MON2000 to connect to the GC and halt the analysis.
 - a. Select **Halt...** from the **Control** menu. The *Halt analysis?* screen displays.
 - b. Click **Yes** to halt the GC.

Note: This will take the GC offline for several hours.

2. As a safety precaution, upload and save archive data.
 - a. Select **Reports** → **Archive Data** → **Export Data...** The *Date Range Selection* window displays.

- b. Select a date range for the archive download.
- c. Click **OK**.
- d. Select the records to be archived.

Note: Shift-click will select a group, Ctrl-click will allow you to select multiple individual records.

Note: Saving a large amount of archive data will take a significant amount of time.

- e. Click **OK**.
3. Upload and save the existing application and parameter files from the GC to a PC.

- a. Select **File** → **Offline Edit** → **Upload Application...**. The *Save Uploaded GC Application File* dialog displays.

Note: The file will be saved to the **C:\GCIAPP** folder by default.

- b. Click **Save**. A progress bar displays, allowing you to monitor the status of the upload. When the process is complete, the *Save Parameter File* dialog displays.
- c. Assign a name to the parameter file and click **Save**.

Upgrade the 16-bit application to its 32-bit equivalent

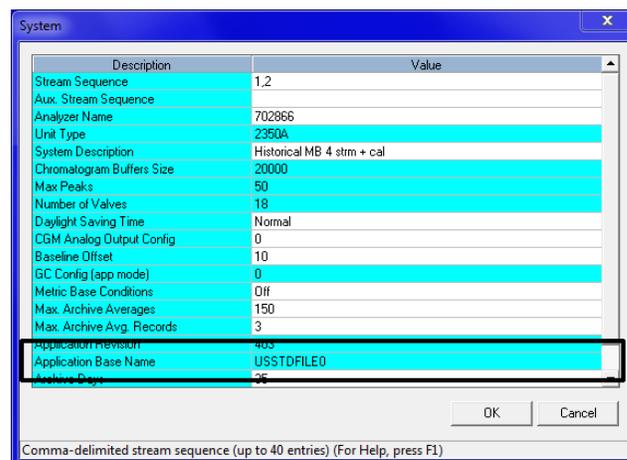
Before replacing a 6117 CPU board with the LX-800 CPU board, you must first upgrade

the GC's 16-bit application to the application's 32-bit equivalent.

Verify Application Base Name of the 16-bit application file

You will need to know the 16-bit application's Application Base Name in order to upgrade it.

1. Select **System...** from the **Application** menu. The *System* screen displays.



2. The *Application Base Name* is located at the bottom of the window. Make note of it because it will be used in the next step.
3. Click **OK** to close the window.

Verify Application Template File Name of the 32-bit application file

Consult the table below to learn the name of the template file that will be used to upgrade

the 16-bit application file to its 32-bit application equivalent.

Table 2: Model 700

Application Base Name	32-bit Application Template File Name
USASTD1A	Energy Measurement C6+ 4 min (700_Mode0_v4XX).APP
USADUAL1	Energy Measurement C9+ 5 min (700_Mode1_4XX).APP
ISOSNGLSTD1	ISO Energy Measurement C6+ 4 min (700_2350ISO1_v4XX).APP
ISODULSTD1	ISO Energy Measurement C9+ 5 min (700_2360ISO1_v4XX).APP
USADUALM2	Energy Measurement C9+ 5 min (700_Mode2_v4XX).App
700Dew2US	See note.
700DewUS	See note.
USSTDFILE01	Energy Measurement C6+ 4 min (700_2350EXMB_v4XX).APP
700EXMBHCD	Energy Measurement C9+ 5 min (700_EXMBHCDP_v4XX).APP
USASTD1A15	Energy Measurement C6+ 4 min (700_Mode0_15s_v4XX).App

Note: "Dew" applications require a Hydrocarbon Dew Point software license and therefore the applications are not distributed as part of MON2000's software updates. **To obtain the appropriate 32-bit "Dew" application file, please contact your factory representative.**

Note: If the application template file selected is not newer than the currently installed application, or if it is not the same type of application, MON2000 displays the following error message:

The selected application is not a compatible upgrade

Upgrade the 16-bit application

1. Select **File** → **Offline Edit** → **Upgrade Application....**
2. Locate and select the template file.

Note: The latest versions of these application template files were installed with MON2000 and are typically located at **C:\GC\APP**.

3. Click **Open**. The *Save upgraded application as...* dialog displays.
4. Type a new name for the upgraded application into the **File name** field.

Note: It is recommended that you give the 32-bit application a name similar to the name of the 16-bit application it will replace.

Note: It is recommended that you do not give the 32-bit application the same name as the application template file on which it is based. Doing so will overwrite the application template file.

5. Click **Save**. MON2000 will create a 32-bit version of the 16-bit application. When the process completes, the *Application upgrade complete* message displays.
6. Click **OK**.

Remove the old cards

1. Turn off the GC.
2. Disconnect all serial and Ethernet cables from the GC.
3. Access the GC's card cage.
 - a. If an LOI is installed, remove the LOI connection cables from the CPU board and the video card.
 - b. Remove the board retention bracket.
4. Disconnect the following cables from the CPU board:
 - Remove the backplane cable at **J1**.
 - Remove Ethernet cable, if installed.
 - Remove the analog board cable at **J6**.
5. Remove cable from analog board at **J6**.
6. Remove the following boards from the card cage:

- The 6117 CPU board.
- The analog board.

7. Remove any daughter boards from the 6117 CPU board.

Note: Be careful not to bend the pins on the daughter boards when removing them.

Install the new analog board

1. Connect the old analog cable at **J6** on the new, "low profile" analog board.
2. Install the new analog board from the upgrade kit into slot 2, counting from the bottom of the card cage.

Install the LX-800 CPU board

1. Connect the new Ethernet cable at **J18** on the LX-800 CPU board.
2. Install the daughter boards that were removed from the 6117 CPU board—except for the Ethernet card—onto the LX-800 CPU board.

Note: The LX-800 CPU board has on-board Ethernet.
3. If the GC has an LOI, connect the new video cable from the upgrade kit to the **Panel Out** connector of the video board.

4. Slide the LX-800 CPU board into slot 3, counting from the bottom, of the card cage. Ensure the card is fully seated into the connector at the back of the card cage. There should be an audible click.
5. Connect the following cables to the CPU board:
 - a. Connect the analog board cable to **J6**.
 - b. Connect the backplane cable to **J1**.
 - c. Connect the LOI cable to **J4**.
 - d. Connect the video board cable to the **J7**.
6. Install the card retention bracket on to the card cage.

Verify the installation

1. Turn on the GC.
 2. Connect to the GC with MON2000.
 3. Download the 32-bit application file from the computer to the GC.
 - a. Select **Download...** from the **File** menu. The *Select GC Application File to Download* dialog displays.
 - b. Locate and select the newly created 32-bit application. The application will be installed on to the GC.
 - c. Set the GC's date and time.
 4. Confirm that the GC is functioning normally.
5. Reconnect the serial and Ethernet cables to the GC.

Upgrade the 16-bit LX-800 CPU board to a 32-bit LX-800 CPU board

Upgrading the 16-bit LX-800 CPU board to a 32-bit LX-800 CPU board is a two- step process: first you must convert the GC's 16-bit application to its 32-bit equivalent, and then secondly you must upgrade the base operating system.

Save current data

1. Use MON2000 to connect to the GC and halt the analysis.
 - a. Select **Halt...** from the **Control** menu. The *Halt analysis?* screen displays.
 - b. Click **Yes** to halt the GC.

Note: This will take the GC offline for several hours.
2. As a safety precaution, upload and save archive data.
 - a. Select **Reports** → **Archive Data** → **Export Data....** The *Date Range Selection* window displays.
 - b. Select a date range for the archive download.
 - c. Click **OK**.
 - d. Select the records to be archived.

Note: Shift-click will select a group, Ctrl-click will allow you to select multiple individual records.

Note: Saving a large amount of archive data will take a significant amount of time.

- e. Click **OK**.
3. Upload and save the existing application and parameter files from the GC to a PC.
 - a. Select **File** → **Offline Edit** → **Upload Application....** The *Save Uploaded GC Application File* dialog displays.

Note: The file will be saved to the **C:\GC\APP** folder by default.

- b. Click **Save**. A progress bar displays, allowing you to monitor the status of the upload. When the process is complete, the *Save Parameter File* dialog displays.
- c. Assign a name to the parameter file and click **Save**.

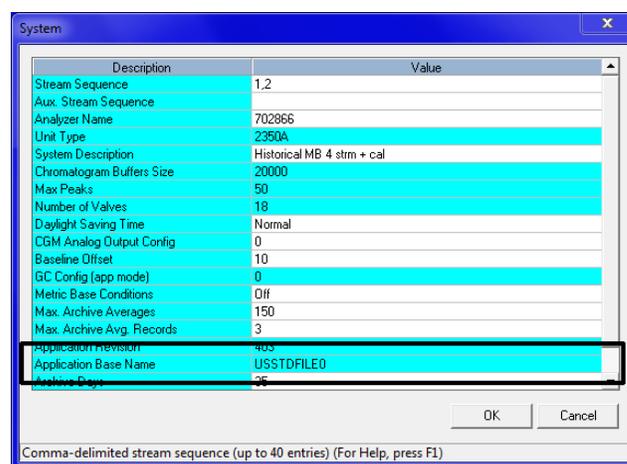
Upgrade the 16-bit application to its 32-bit equivalent

Before upgrading the 16-bit CPU board to the 32-bit CPU board, you must upgrade the GC's 16-bit application to the application's 32-bit equivalent.

Verify Application Base Name of the 16-bit application file

You will need to know the 16-bit application's Application Base Name in order to upgrade it.

1. Select **System...** from the **Application** menu. The *System* screen displays.



2. The *Application Base Name* is located at the bottom of the window. Make note of it because it will be used in the next step.
3. Click **OK** to close the window.

Verify Application Template File Name of the 32-bit application file

Consult the table below to learn the name of the template file that will be used to upgrade

the 16-bit application file to its 32-bit application equivalent.

Table 3: Model 500

Application Base Name	32-bit Application Template File Name
USASTD1A	Energy Measurement C6+ 4 min (2350A_Mode0_v4XX).APP
USADUAL1	Energy Measurement C9+ 5 min (2350A_Mode1_v4XX).APP
ISOSNGLSTD1	ISO Energy Measurement C6+ 4 min (2350A_2350ISO1_v4XX).APP
ISODULSTD1	ISO Energy Measurement C9+ 5 min (2350A_2360ISO1_v4XX).APP
USADUALM2	Energy Measurement C9+ 5 min (2350A_Mode2_v4XX).App
2360Dew2US	See note
2350ADewUS	See note
USSTDFILE01	Energy Measurement C6+ 4 min (2350A_2350EXMB_v4XX).APP

Table 4: Model 700

Application Base Name	32-bit Application Template File Name
USASTD1A	Energy Measurement C6+ 4 min (700_Mode0_v4XX).APP
USADUAL1	Energy Measurement C9+ 5 min (700_Mode1_4XX).APP
ISOSNGLSTD1	ISO Energy Measurement C6+ 4 min (700_2350ISO1_v4XX).APP
ISODULSTD1	ISO Energy Measurement C9+ 5 min (700_2360ISO1_v4XX).APP
USADUALM2	Energy Measurement C9+ 5 min (700_Mode2_v4XX).App
700Dew2US	See note.
700DewUS	See note.
USSTDFILE01	Energy Measurement C6+ 4 min (700_2350EXMB_v4XX).APP
700EXMBHCD	Energy Measurement C9+ 5 min (700_EXMBHCDP_v4XX).APP
USASTD1A15	Energy Measurement C6+ 4 min (700_Mode0_15s_v4XX).App

Note: "Dew" applications require a Hydrocarbon Dew Point software license and therefore the applications are not distributed as part of MON2000's

software updates. **To obtain the appropriate 32-bit "Dew" application file, please contact your factory representative.**

Upgrade the 16-bit application

1. Select **File** → **Offline Edit** → **Upgrade Application...**
2. Locate and select the template file.

Note: The latest versions of these application template files were installed with MON2000 and are typically located at **C:\GC\APP**.

Note: If the application template file selected is not newer than the currently installed application, or if it is not the same type of application, MON2000 displays the following error message:

The selected application is not a compatible upgrade

3. Click **Open**. The *Save upgraded application as...* dialog displays.
4. Type a new name for the upgraded application into the **File name** field.

Note: It is recommended that you give the 32-bit application a name similar to the name of the 16-bit application it will replace.

Note: It is recommended that you do not give the 32-bit application the same name as the application template file on which it is based. Doing so will overwrite the application template file.

5. Click **Save**. MON2000 will create a 32-bit version of the 16-bit application. When the process completes, the *Application upgrade complete* message displays.
6. Click **OK**.

Upgrade the GC's Base Operating System

The Base Operating System (BOS) is an embedded, real-time, multi-tasking operating system that manages the GC's resources and services.

To upgrade your GC's BOS, do the following:

1. Locate the UniBOS file on the MON2000 CD and copy it to **C:\GC\APP**.

Note: This assumes that C: is your default drive; if not, change the file path accordingly.

Note: UniBOS files are denoted with the **.BOS** extension.

2. Connect to the GC.
 - a. Select **Connect...** from the **File** menu. The *Select GC for Connect* menu displays.
 - b. Locate the GC to which you want to connect and double-click it.
3. Halt the GC.
 - a. Select **Halt...** from the **Control** menu. The *Halt analysis?* screen displays.

- b. Click **Yes** to halt the GC.
- 4. Back up all critical data, reports, and records because the files may be deleted from the GC during the upgrade process.

To learn how to save GC files, consult the MON2000 manual.

- 5. Select **Upgrade Flash...** from the **File** menu. The *Select BOS File to Download* dialog displays.
- 6. Navigate to the new BOS file and select it.
- 7. Click **Open**. A progress bar displays, allowing you to monitor the status of the BOS upgrade.

Note: If the “Unexpected internal GC controller error” message appears, do the following: disconnect from the GC; warm start the GC; re-connect to the GC; repeat step 18.

When the upgrade is complete, the GC will restart.

- 8. Connect to the GC and confirm that it is functioning normally.