

# Solar<sup>®</sup> 8000M Patient Monitor

## Software Installation Instructions

Software Version 1

2000701-033

Revision A



**marquette**

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*A GE Medical Systems Company*

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**For your notes**

# Introduction

These instructions describe how to update the software for the Solar 8000M patient monitor and the UnityView remote viewing center, using either a PC or a network. Both software upgrades (updating from an older software version to a newer software version) and software downgrades (updating from a newer software version to an older software version) can be performed by following these instructions.

Complete the “Prepare for Update” section first.

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**WARNING**

**INCORRECT MONITOR OPERATION** — If you intend to downgrade the version of *MAIN* software in the monitor (for example, going from version 1B to version 1A), you **MUST** initialize the monitor defaults after completing the download. Failure to initialize the defaults may cause unanticipated alarm settings and monitor configuration. Be sure to write down or print out the monitor defaults as described in the “Write Down Defaults” section.

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## Definition of Terms

For the purposes of this document, the term *BOOT LOADER* is used to refer to the *BOOT CODE* software.

For the purposes of this document, the term *MAIN CODE* is equivalent to the term *MAIN SOFTWARE*.

## Prepare for Update

1. Note all internal software revisions of the monitors. Write down or print out all software code part numbers for each monitor in the system. To accomplish this, execute the following menu sequence starting from the Main Menu:

*MORE MENUS*

*MONITOR SETUP*

*SOFTWARE REVISION*

Press the **Graph Go/Stop** button.

2. If network downloading, study the topology of all monitors connected to the GE Marquette Unity Network, if applicable. Note which monitors are included in each care unit.
3. Determine if any Tram modules require updating, and if so, perform the update after updating the monitor. Follow the instructions included with the Tram software.
  - ◆ The Tram modules must have Tram V9B software or later.
4. Determine if any Solar compatible modules require updating. Each of the following modules requires its own software diskette, but they are downloaded in the same manner as any other monitor component software, similar to the RAC DAS or RAC COMM software.
  - ◆ SAM module with V3 software or later
  - ◆ Solar ECG module V1 software or later
  - ◆ Solar SpO<sub>2</sub> module V1 software or later
  - ◆ CO<sub>2</sub> module V1 software or later
5. GE Marquette software is tested for backward compatibility. To find out if new software is available or if compatibility issues exist, call GE Marquette technical support at 1-800-558-7044.

## Maintain Patient Monitoring

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### CAUTION

There may be temporary losses of monitoring functions throughout parts of the system until the update is finished. Prepare the staff to cover these periods of lost monitoring.

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Make sure a responsible member of your customer staff knows that the GE Marquette Unity Network equipment is to be updated.

If a spare Solar monitor and Tram-rac chassis are available, disconnect the patient from the equipment to be updated and connect the patient to the spare equipment. Remember to configure the equipment to the network when necessary. Consult the appropriate operator's manual.

If a spare Solar monitor and Tram-rac chassis are not available, disconnect the patient from the equipment to be updated and connect the patient to a Smart-pac display. Consult the appropriate operator's manual.

## Write Down Defaults

1. Go to the *MONITOR DEFAULTS* menu by selecting, in order:

*MORE MENUS*

*MONITOR SETUP*

*MONITOR DEFAULTS*

2. Write down or print out the defaults for the following sections:

*SETUP DEFAULT ARRHYTHMIA ALARM LEVELS*

*SETUP DEFAULT PARAMETER ALARM LEVELS*

*SETUP DEFAULT LIMITS*

*SETUP DEFAULT DISPLAY*

*SETUP DEFAULT PARAMETER PRIORITY*

Write down or print out the defaults for each of the named defaults (e.g., *ADULT 0*, *ADULT 1*, *OR 0*, *OR 1*, *NEO 0*, *NEO 1*, etc.). These defaults may have been renamed at your site. If so, write those names down as well so they can be restored in a later step.

**NOTE:** The Solar 8000M Patient Monitor Operator's Manual contains a Monitor Defaults Worksheet that may be useful for this step.

3. Select other monitor defaults using the following menu sequence:

*MORE MENUS*

*MONITOR SETUP*

*MONITOR DEFAULTS*

*RECALL DEFAULT*

4. Select the desired default from the list in the NRT (non-real time) box.

5. Record the *UNIT NAME*, *BED NUMBER*, *IP ADDRESS*, the setting for the *MONITOR DEFAULTS PASSWD*, the *ADMIT MENU* type (e.g., *ROVER COMBO*), and the *SOFTWARE LEVEL*.

*MORE MENUS*

*MONITOR SETUP*

*SERVICE MODE*

Password (Enter day and month from the monitor screen, including leading zeros, e.g. July 4=0407.)

*MONITOR SETTINGS*

*SET UNIT NAME* (Write down unit name.)

*SET BED NUMBER* (Write down bed number.)

*SET INTERNET ADDRESS* (Write down internet address.)

*PREVIOUS MENU*

*MENU SETUP* (Write down the *MONITOR DEFAULTS PASSWD* and software feature level.)

*ADMIT MENU* (write down the type, e.g. *STANDARD*)

*SOFTWARE LEVEL*

6. Record all graph locations:

*MORE MENUS*

*MONITOR SETUP*

*GRAPH SETUP*

*GRAPH LOCATION*

*MANUAL GRAPH LOCATION*

*ALARM GRAPH LOCATION*

*PRINT WINDOW LOCATION*

*12 LEAD PRINT LOCATION*



## Pre-Configure the Monitor

Switch to the first default. This is *ADULT 0*, *OR 0*, or *NEO 0* (unless it is named differently at your site).

1. From the Main Menu, follow this sequence:

*MORE MENUS*

*MONITOR SETUP*

*MONITOR DEFAULTS*

*RECALL DEFAULT*

2. Select *ADULT 0*, *OR 0*, or *NEO 0* from the NRT (non-real time) box.

## Choose Update Method

Decide whether you are going to update with a laptop PC or across the network. Go to “PC/PC Laptop Download Procedure” on page 8, or “Network Download Procedure” on page 14.

## PC/PC Laptop Download Procedure

This procedure describes how to download software into a Solar 8000M patient monitor using a laptop personal computer or terminal with programmed software diskettes.

### Materials Required

- PC or PC laptop to download the software with the following minimum requirements:
  - ◆ MS-DOS compatible
  - ◆ 1.44M, 3.5-inch diskette drive
  - ◆ RS232 serial port
  - ◆ Cable, pn 405159-001
  - ◆ 8 MB of hard disk space
- Manufacturer software update diskettes.

### Interconnection

Connect the PC to the Solar monitor following these steps:

1. Connect the PC cable assembly to the 9-pin D-type connector labeled **RS-232 1** at the rear of the monitor.
2. Connect the other end of the PC cable assembly to the D-type connector labeled **COMMS** or **COM1** at the back of the PC.
3. Before proceeding, eject all modules in the Tram-rac housing.
4. Disconnect the monitor from the GE Marquette Unity Network.

### Special Instructions for Windows 95/98 Users

Due to problems using the serial ports on a Windows 95/98 computer, the computer must be running in the COMMAND PROMPT mode.

For Windows 95, follow these steps:

1. Shut down the computer normally (select "Shutdown," not "Restart").
2. Power on the computer. After the message "Starting Windows 95" appears, press and hold the **F8** key on the keyboard.

After a few seconds, a startup menu appears.

3. Select the COMMAND PROMPT option and press the **ENTER** key.

The computer will continue booting in MS-DOS mode.

For Windows 98, shut down the computer, but select "Restart in MS-DOS mode" instead of "Shut down."

## PC Software Diskettes

The monitor update diskette kit consists of either eight or ten diskettes:

- If your kit contains eight diskettes, the diskettes labeled 5 through 8 contain the PC update software files used in this procedure.
- If your kit contains ten diskettes, the diskettes labeled 6 through 10 contain the PC update software files used in this procedure.
- The other diskettes in the kit (labeled either 1 through 4 or 1 through 5) contain the network update software files that are used to update the monitor from the Clinical Information Center (CIC) or Centralscope central station. Refer to the “Network Download Procedure” section presented later in this document.

## PC Setup

1. Apply power to the PC and wait for the **C:\>** prompt.

**NOTE:** If the PC is running Windows 95/98, refer to the “Special Instructions for Windows 95/98 Users” on the previous page.

Copy the contents of the PC update diskettes onto the PC hard drive as follows:

2. Insert the first PC update diskette from the update kit.
3. Type the following with “^” representing a space: **xcopy A:\^C:\^/S**.
4. Press the **ENTER** key.
5. When prompted, “*Overwrite files?*”, answer **ALL** for each diskette.  
You should see the *UPDATE.DAT* and *UPDATE.EXE* files copied and the files located in the **\files** directory.
6. When copying is finished, change to the next diskette.
7. Type: **xcopy A:\ C:\ /S**
8. Press the **ENTER** key.
9. Repeat steps 6 through 8 until the contents of all the PC update diskettes (either four or five) have been copied onto the PC.
10. Remove the final PC update diskette (labeled 8 or 10).
11. Type **UPDATE** and press the **ENTER** key on the PC to list the *UPDATE UTILITIES* menu.
12. Press the **F2** key on the PC to select the *UPDATE BEDSIDE* menu.

## Download BOOT LOADER Code

At the monitor, activate the *BOOT LOADER* program as follows:

1. Hold down the **NBP Go/Stop** and **Zero All** keys on the keypad or remote control.
2. While holding the **NBP Go/Stop** and **Zero All** keys, press and release the **Trim Knob** control.
3. Continue holding the **NBP Go/Stop** and **Zero All** keys until the *BOOT LOADER* menu appears on the display.

(It takes at least 30 seconds to activate the *BOOT LOADER*.)

If the monitor is connected to the network with file servers, dial the number indicating *SERVICE MENU* from the *FILE SERVER SELECTION* menu and press the **Trim Knob** control.

4. Dial the number indicating *SERIAL DOWNLOAD BOOT* and press the **Trim Knob** control.
5. Return to the PC and use the arrow keys (↑ and ↓) to select the *BOOT LOADER* file **20021320.xx1**. (.xx = the boot code version).
6. Press the **ENTER** key.
7. Select *YES* each time it appears at the monitor.

**NOTE:** Do NOT reboot or power down the monitor while downloading the *BOOT LOADER*. This renders the monitor useless.

If the file name from the PC does not match the file name residing in the monitor, the monitor displays an error message and cannot proceed. Press the **ESC** key to abort and select the correct file at the PC. Select *YES* at the monitor to continue.

If you see the following message at the monitor after loading the *BOOT LOADER*,

file:20021320.xx2 status:Initializing...

you are being asked to download the second boot code file. Continue with "Second Boot Code File" below.

### Second Boot Code File

1. Return to the PC and use the arrow keys (↑ and ↓) to select the 20021320.xx2 file.
2. Press the **ENTER** key.

Wait until the download is complete. Messages at the display show how the update is going. Watch the *RECEIVED* bytes advance. When the *BOOT LOADER* is updated, the monitor returns to the *BOOT LOADER* program and *SERVICE MENU*.

## Activate New BOOT LOADER

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### CAUTION

Wait until the download is complete. Otherwise, the following step will render the monitor useless.

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1. Hold down the **NBP Go/Stop** and **Zero All** keys on the keypad or remote control.
2. Press and release the **Trim Knob** control.
3. Continue holding the **NBP Go/Stop** and **Zero All** keys until the *BOOT LOADER* menu appears on the display.

## Download MAIN Code

### Download part 1 of the *MAIN* processor code as follows:

1. Hold down the **NBP Go/Stop** and **Zero All** keys on the keypad or remote control.
2. Press and release the **Trim Knob** control.
3. Continue holding the **NBP Go/Stop** and **Zero All** keys until the *BOOT LOADER* menu appears on the display.

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### WARNING

INCORRECT MONITOR OPERATION — If you are downgrading your *MAIN* software, i.e. going back to an earlier version (for example, v1B to v1A), then you **MUST** complete step 4 to clear the configuration memory. You must repeat step 4 if you reboot the monitor before downloading the *MAIN* software.

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If the unit does not display the *SERVICE MENU*, find and select *SERVICE MENU OPTION*.

4. If you are downgrading your *MAIN* software, select *CLEAR MONITOR MEMORY* from the *BOOT LOADER SERVICE MENU*. Otherwise, go to the next step.
5. From the *BOOT LOADER SERVICE MENU*, dial the number indicating *SERIAL DOWNLOAD MAIN* and press the **Trim Knob** control.
6. Return to the PC and use the arrow keys (↑ and ↓) to select file number **20021310.xx1** (.xx = main code).
7. Press the **ENTER** key.

8. Select *YES* at the monitor.

If the monitor displays a warning because the file name from the PC does not match the file name residing in the monitor, press the **Esc** key to abort, then select the correct file. Select *YES* when prompted.

Messages at the display show you how the update is going. Watch the *RECEIVED* bytes advance and the PC status window of bytes *SENT*. Part 1 of the *MAIN* code takes approximately ten minutes.

When part 1 of the *MAIN* code is updated, the bytes *RECEIVED* stops and part 2 of the *MAIN* code file name appears at the monitor with the statement: *INITIALIZING...* The PC status window should read 100% for bytes *SENT*.

**Download part 2 of the *MAIN* processor code as follows:**

1. Return to the PC and use the arrow keys (↑ and ↓) to select file number **20021310.xx2**.
2. Press the **ENTER** key.

If the file name from the PC does not match the file name residing in the monitor, the monitor displays an error message and cannot proceed. Press the **ESC** key to abort and select the correct file at the PC. Select *YES* at the monitor to continue.

Messages at the display show you how the update is going. Watch the *RECEIVED* bytes advance.

**Download part 3 of the *MAIN* processor code as follows:**

1. Return to the PC and use the arrow keys (↑ and ↓) to select file number **20021310.xx3**.
2. Press the **ENTER** key.

If the file name from the PC does not match the file name residing in the monitor, the monitor displays an error message and cannot proceed. Press the **ESC** key to abort and select the correct file at the PC. Select *YES* at the monitor to continue.

Messages at the display show you how the update is going. Watch the *RECEIVED* bytes advance. When the *MAIN* code is updated, the screen flashes and the monitor reboots into monitoring mode.

**Download part 4 of the *MAIN* processor code as follows:**

1. Return to the PC and use the arrow keys (↑ and ↓) to select file number **20021310.xx4**.
2. Press the **ENTER** key.

If the file name from the PC does not match the file name residing in the monitor, the monitor displays an error message and cannot proceed. Press the **ESC** key to abort and select the correct file at the PC. Select *YES* at the monitor to continue.

Messages at the display show you how the update is going. Watch the *RECEIVED* bytes advance. When the *MAIN* code is updated, the screen flashes and the monitor reboots into monitoring mode.

If your monitor is configured for OR mode, perform a *NEW CASE* to clear the *DISCHARGED* message:

*MORE MENUS*

*NEW CASE SETUP*

*NEW CASE*

3. Cycle power using the switch on the back of the monitor.
4. Go to “Download Component Files” on page 19 to complete software conversion.

## Network Download Procedure

This procedure describes how to download new software into a monitor from a Centralscope central station or Clinical Information Center (CIC) across the GE Marquette Unity Network with programmed software diskettes.

**NOTE:** Use this method for updating monitors that are connected to a patient monitoring network. If the monitor requiring update is not connected to the network or is connected to a network without central stations, do not use this procedure. Refer to “PC/PC Laptop Download Procedure” for an alternate procedure.

### Network Update Diskettes

The monitor update diskette kit consists of either eight or ten diskettes:

- If your kit contains eight diskettes, the diskettes labeled 1 through 4 contain the network update software files used in this procedure.
- If your kit contains ten diskettes, the diskettes labeled 1 through 5 contain the network update software files used in this procedure.
- The other diskettes in the kit (labeled either 5 through 8 or 6 through 10) contain the PC update software files that are used to update the monitor from a PC or PC laptop. Refer to the “PC/PC Laptop Download Procedure” section presented earlier in this document.

### Copy Files

The Centralscope central station or CIC system acts as a file server for downloading (copying) update files from the network update diskettes to the monitor over the patient monitoring network.

1. Write down the Centralscope central station or CIC care unit name and central number of that particular central station for use later in this procedure.
2. Insert diskette 1 from the update kit into the Centralscope central station or CIC floppy disk drive.
3. If you have a Centralscope central station, continue with the next section, “Centralscope Central Station.” If you have a Clinical Information Center (CIC), go to “Clinical Information Center (CIC)” on page 16.



## Centralscope Central Station

1. At the Centralscope central station, execute the following menu sequence.

Press the **MAIN MENU** hardkey.

*CENTRAL SETUP*

*SERVICE*

Type the *PASSWORD (MEI CS 123)* at the system keyboard, then press **ENTER**.

*LOAD SOFTWARE* (Wait 10 seconds)

*FLOPPY* (use the **Trim Knob** to scroll through the choices)

A status message in the upper left hand corner of the central station displays the following messages:

*LOADING FROM...FLOPPY*

*LOADING SV DISK 01 OF XX*

**NOTE:** *SV* represents the software version you are installing on the monitor, and *XX* represents the number of network update diskettes in the diskette kit (either four or five).

**NOTE:** If, after waiting at least 20 minutes the floppy has not ejected, reboot the central station and start over from step 1.

When diskette 1 is completely loaded, the central station automatically ejects the diskette and displays the message:

*INSERT DISK MONITOR SV DISK 02 OF XX*

2. Insert diskette 2. It takes approximately 5 minutes to load.
3. Continue the procedure for the remaining network update diskettes. When loading is complete, the following message displays.

*LOAD FROM FLOPPY COMPLETE*

4. Go to "Pre-Configure the Monitor" on page 7.

## Clinical Information Center (CIC)

1. At the Clinical Information Center (CIC), execute the following menu sequence:

*Setup CIC*

Select *Service Password* (tab on *Setup* window)

Type password: *mms\_com* (lowercase with underscore)

Press the **ENTER** key.

2. Type the following in the popup window with “^” representing a space. In place of *<version>*, type the version of software desired.

**A:\CINSTALL^<version>** (For example: **A:\CINSTALL^1B**)

**NOTE:** If you insert the wrong diskette, or type in the wrong version number, the screen displays an “Incorrect Disk” error message. Press **[CTRL] [C]** to restart the procedure.

The Clinical Information Center (CIC) loads and prompts you for the remaining network update diskettes.

3. The Clinical Information Center (CIC) display indicates when the download is complete with the message:

*LOAD FROM FLOPPY COMPLETE*

## Download Files to the Monitor

### Download BOOT LOADER Code

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#### **CAUTION**

Do NOT reboot or power cycle the monitor while downloading the *BOOT LOADER*. This renders the monitor useless.

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At the monitor, activate the *BOOT LOADER* program as follows:

1. Hold down the **NBP Go/Stop** and **Zero All** keys on the keypad or remote control.
2. Press and release the **Trim Knob** control.
3. Continue holding the **NBP Go/Stop** and **Zero All** keys until the *BOOT LOADER* menu appears on the display.

Execute the following at the *FILE SERVER SELECTION* menu:

4. Find the unit name of the central station where you downloaded the diskettes (written down earlier in the procedure). This central station acts as a file server to download files to the monitor over the network.

5. Dial the number indicating your menu choice and press the **Trim Knob** control.
6. Dial the number indicating */UPDATE.NET/SOLAR8M.000/* <version> in the *MOUNT PT SELECTION* or *DIRECTORY SELECTION* and press the **Trim Knob** control.
7. Dial the number that indicates *BOOT.SCR* in the *SCRIPT NAME SELECTION* and press the **Trim Knob** control.

The monitor displays the part number, version, and date of the software that you are about to install.

8. If the software selection is correct, press the **Trim Knob** control to answer *YES* to "*Load BOOT.SCR?*". Otherwise, using the **Trim Knob** control, select *NO*, then select the correct software version and press the **Trim Knob** control.

Messages at the display show you how the update is going. Watch the *RECEIVED* bytes advance. When the *BOOT LOADER* is updated, the screen flashes and the monitor reboots into monitoring mode.

9. Go to "Download MAIN Code" below.

## Download MAIN Code

1. Hold down the **NBP Go/Stop** and **Zero All** keys on the keypad or remote control.
2. Press and release the **Trim Knob** control.
3. Continue holding the **NBP Go/Stop** and **Zero All** keys until the *BOOT LOADER* menu appears on the display.

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### **WARNING**

**INCORRECT MONITOR OPERATION** — If you are downgrading your *MAIN* software, i.e. going back to an earlier version (for example, v1B to v1A), then you **MUST** complete step 4 to clear the configuration memory. You must repeat step 4 if you reboot the monitor before downloading the *MAIN* software.

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4. If you are downgrading your *MAIN* software, then select *SERVICE MENU* → *CLEAR MONITOR MEMORY* at this point. Otherwise, go to the next step.

Execute the following at the *FILE SERVER SELECTION* menu:

5. Find the unit name of the central station where you downloaded the diskettes.
6. Dial the number indicating your menu choice and press the **Trim Knob** control.
7. Dial the number indicating */UPDATE.NET/SOLAR8M.000/* <version> in the *MOUNT PT SELECTION* or *DIRECTORY SELECTION* and press the **Trim Knob** control.

8. Dial the number indicating *MAIN.SCR* in the *SCRIPT NAME SELECTION* and press the **Trim Knob** control.

The monitor displays the part number, version, and date of the software that you are about to install.

9. If the software selection is correct, select *YES*. Otherwise, select *NO* and press the **Trim Knob** control. Select the correct software version and press the **Trim Knob** control.

Messages at the display show you how the update is going. Watch the *RECEIVED* bytes advance. When the *MAIN* code is updated, the screen flashes and the monitor reboots into monitoring mode.

If your monitor is configured for OR mode, perform a *NEW CASE* to clear the *DISCHARGED* message:

*MORE MENUS*

*NEW CASE SETUP*

*NEW CASE*

10. Cycle power using the switch on the back of the monitor.
11. Continue with “Download Component Files”, “Download Using the Network” on page 20 to complete software conversion.

# Download Component Files

## Download Using the PC

If you need to update any of the following component software, use the monitor SERVICE MODE menu to download the files.

- Rac DAS software for the Tram-rac housing (6C or later) — pn 40467100.xxx
- Rac COMM software for the tram-rac housing (6C or later) — pn 40466900.xxx
- Tram-net Interface Adapter (TIA) software (1C or later) — pn 41015400.xxx
- Octanet software (2B or later) — pn 41831300.xxx

1. Use the arrow keys (↑ and ↓) on the PC to select the desired file.
2. At the monitor, execute the following menu sequence starting from the Main Menu:

*MORE MENUS*

*MONITOR SETUP*

*SERVICE MODE*

Password (Enter day and month from monitor screen with leading zeros, e.g. July 4 = 0407.)

*DOWNLOAD CODE*

3. Select the *DEVICE TO DOWNLOAD*.
4. A list of download code choices appears. Select the *DOWNLOAD* menu selection that agrees with the file you have chosen on the PC.
5. Select *YES* at the monitor.

If the file name from the PC does not match the file name residing in the monitor, the monitor displays an error message and cannot proceed. Press the **ESC** key to abort and select the correct file at the PC. Select *YES* at the monitor to continue.

The *STATUS* messages in the *FILE DOWNLOAD* and *PROGRAM STATUS* windows of the monitor display each show a *WAITING FOR DATA...* message until the download starts.

Observe in the *FILE DOWNLOAD* window of the monitor that the *PACKET NUMBER* is advances and the *PROGRAM STATUS* window indicates *PROGRAMMING*.

6. At the end of a successful download, ensure the *FILE DOWNLOAD* and *PROGRAM STATUS* windows both indicate *DONE*.
7. Select *CONTINUE* if more files require downloading. Select *WARM START* to activate software after the last file downloads.
8. Repeat steps 1 through 7 for each software file that requires updating.
9. Go to “Confirmation” on page 21.

## Download Using the Network

If any of the following component software requires updating, use the monitor *SERVICE MODE* to download the software.

- Rac DAS software for the Tram-rac housing
- Rac COMM software for the Tram-rac housing
- Tram-net Interface Adapter (TIA) software
- Octanet software

1. At the monitor, execute the following menu sequence, starting from the Main Menu:

*MORE MENUS*

*MONITOR SETUP*

*SERVICE MODE*

Password (Enter day and month from monitor screen with leading zeros, e.g. July 4 = 0407.)

*DOWNLOAD CODE*

2. A list of download code choices appears. Select the *DOWNLOAD* menu selection that agrees with the file you need.
3. Select *YES* at the monitor.

The *STATUS* messages in the *FILE DOWNLOAD* and *PROGRAM STATUS* windows of the monitor display each show a *WAITING FOR DATA...* message until the download starts.

Observe in the *FILE DOWNLOAD* window of the monitor that the *PACKET NUMBER* is advancing and the *PROGRAM STATUS* window indicates *PROGRAMMING*.

4. At the end of a successful download, ensure the *FILE DOWNLOAD* and *PROGRAM STATUS* windows both indicate *DONE*.
5. Repeat these steps for each component requiring update, then select *WARM START* to reboot the monitor.
6. Go to “Confirmation” on page 21.

# Confirmation

Confirm that the desired software is installed, by executing the following menu sequence, starting from the Main Menu:

*MORE MENUS*

*MONITOR SETUP*

*SOFTWARE REVISION*

Compare the software revision of the monitor with the intended software revision. If the software installation was unsuccessful, restart these instructions from “Pre-Configure the Monitor” on page 7.

## Initialize Monitor Defaults

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**WARNING**

**INCORRECT MONITOR OPERATION** — You **MUST** initialize the monitor defaults when you downgrade from a higher version of software to a lower version (for example, going from v1B to v1A).

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Initialize the monitor defaults when you downgrade the software version to a lower software version. If you are performing an upgrade, go to the section “Verify Bed Number, Unit Name, IP Address” on page 22.

Ensure proper monitor operation by changing the *PATIENT-MONITOR TYPE* and then, changing it back again. For example, if the monitor is currently configured to *ADULT-ICU*, change the *PATIENT-MONITOR TYPE* to *OPERATING ROOM* and back to *ADULT-ICU*.

1. Use the following menu sequence:

*MORE MENUS*

*MONITOR SETUP*

*SERVICE MODE* (Enter day and month from monitor screen with leading zeros, e.g., July 4 = 0407.)

*PATIENT-MONITOR TYPE* (Select a type that is different from the one currently used, then wait for the monitor to reboot.)

2. When the monitor restarts, change the *PATIENT-MONITOR TYPE* to your desired setting using the following menu sequence:

*MORE MENUS*

*MONITOR SETUP*

*SERVICE MODE* (Enter day and month from monitor screen with leading zeros, e.g., July 4 = 0407.)

*PATIENT-MONITOR TYPE* (Select your desired setting.)

When complete, the monitor reboots.

## Verify Bed Number, Unit Name, IP Address

Verify that the unit name, bed number, and IP address are correct. If not, make any necessary changes. Use the following menu sequence:

*MORE MENUS*

*MONITOR SETUP*

*SERVICE MODE*

Password (Enter day and month from the monitor screen, including leading zeros, e.g., July 4=0407.)

*MONITOR SETTINGS*

*SET UNIT NAME*

*SET BED NUMBER*

*SET INTERNET ADDRESS*

## Verify Defaults

1. Go to the *MONITOR DEFAULTS* menu following these steps:

*MORE MENUS*

*MONITOR SETUP*

*MONITOR DEFAULTS*

2. Compare the current monitor defaults to those you wrote down prior to downloading the software. If any defaults are different, make the necessary corrections to the monitor.

**NOTE:** There are multiple monitor defaults. Restore each default. If your site renamed these defaults, restore the default names.

## Verify Menu Setup

1. At the monitor, execute the following menu sequence starting from Main Menu:

*MORE MENUS*

*MONITOR SETUP*

*SERVICE MODE*

Password (Enter day and month from monitor screen with leading zeros, e.g. July 4=0407.)

*MENU SETUP*

2. Verify that the settings for *MONITOR DEFAULTS PASSWD*, *ADMIT MENU*, and *SOFTWARE LEVEL* are appropriate.



## Verify Graph Locations

1. Use the following menu sequence, starting from the Main Menu:  
*MORE MENUS*  
*MONITOR SETUP*  
*GRAPH SETUP*  
*GRAPH LOCATION*
2. Select *MANUAL GRAPH LOCATION* and choose the location from the list.
3. Select *ALARM GRAPH LOCATION* and choose the location from the list.
4. Select *PRINT WINDOW LOCATION* and choose the location from the list.
5. Select *12 LEAD PRINT LOCATION* and choose the print window location.
6. Admit and generate a waveform at the monitor with a simulator.
7. Press the **Graph Go/Stop** button on the keypad or remote control.
8. Observe graph output at chosen locations.

## Verify Crisis Alarm

1. Create a crisis alarm (*ASYSTOLE*) with the simulator.
2. Verify that the monitor sounds a *CRISIS* alarm and the alarm graph prints at the chosen location.

# Troubleshooting

## Download Problems

If problems arise while performing this update:

- Call your sales or service representative for update kit part numbers and compatibility issues.
- Verify that the monitor is on the network by selecting *LIST NETWORK* from the *SERVICE MONITOR* menu of the central station or *CURRENT TELEMETRY LISTINGS* from the *SERVICE MENU* of the CIC system.

# Completion

**GE Marquette Service personnel** — Transmit your billing and tracking information on your open call as you close it.

**Anyone other than GEMMS Service personnel** — Upon completion of this update, complete an Update Installation Verification Form and return it to the address on the form.

The service tracking number for these updates is as follows:

V1B Solar 8000M — use tracking number MDOC-467.

**For your notes**





**marquette**

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