



GE Medical Systems

Technical Publications

**Direction 2271343
Revision 4**

CV Applications for AW3.1, AW4.0 & AW4.1 Software Installation

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Operating Documentation

DAMAGE IN TRANSPORTATION

All packages should be closely examined at time of delivery. If damage is apparent, have notation "**damage in shipment**" written on **all** copies of the freight or express bill **before** delivery is accepted or "signed for" by a General Electric representative or a hospital receiving agent. Whether noted or concealed, damage **MUST** be reported to the carrier **immediately** upon discovery, or in any event, within **14** days after receipt, and the contents and containers held for inspection by the carrier. A transportation company will not pay a claim for damage if an inspection is not requested within this **14** day period.

Immediately complete a "Damage Loss Claim Form", available via MS Exchange Mail, after the damage is found.

MS Exchange Path:

Outlook/Public Folder/All Public Folders/Medical Systems/!Global Initiatives/Information Management/Forms/Common Forms/DAMAGE LOSS CLAIM FORM.

Send the completed form to the email address listed in the form.

For more information about the Transportation Claim Procedure, access the GE Medical Systems Intranet and enter the following URL address (case sensitive):

<ftp://3.87.40.2/globepro/qualsys/Docs/190016MF.PDF>

Rev. 11/15/2000

Direction 2128126 - Language Policy For Service Documentation, Rev 0

WARNING

- THIS SERVICE MANUAL IS AVAILABLE IN ENGLISH ONLY.
- IF A CUSTOMER'S SERVICE PROVIDER REQUIRES A LANGUAGE OTHER THAN ENGLISH, IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE TRANSLATION SERVICES.
- DO NOT ATTEMPT TO SERVICE THE EQUIPMENT UNLESS THIS SERVICE MANUAL HAS BEEN CONSULTED AND IS UNDERSTOOD.
- FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO THE SERVICE PROVIDER, OPERATOR OR PATIENT FROM ELECTRIC SHOCK, MECHANICAL OR OTHER HAZARDS.

AVERTISSEMENT

- CE MANUEL DE MAINTENANCE N'EST DISPONIBLE QU'EN ANGLAIS.
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- NE PAS TENTER D'INTERVENTION SUR LES EQUIPEMENTS TANT QUE LE MANUEL SERVICE N'A PAS ETE CONSULTE ET COMPRIS.
- LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAINER CHEZ LE TECHNICIEN, L'OPERATEUR OU LE PATIENT DES BLESSURES DUES A DES DANGERS ELECTRIQUES, MECANIQUES OU AUTRES.

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- VERSUCHEN SIE NICHT, DAS GERÄT ZU REPARIEREN, BEVOR DIESES KUNDENDIENST-HANDBUCH NICHT ZU RATE GEZOGEN UND VERSTANDEN WURDE.
- WIRD DIESE WARNUNG NICHT BEACHTET, SO KANN ES ZU VERLETZUNGEN DES KUNDENDIENSTTECHNIKERS, DES BEDIENERS ODER DES PATIENTEN DURCH ELEKTRISCHE SCHLÄGE, MECHANISCHE ODER SONSTIGE GEFAHREN KOMMEN.

AVISO

- ESTE MANUAL DE SERVICIO SOLO EXISTE EN INGLES
- SI ALGÚN PROVEEDOR DE SERVICIOS AJENO A GEMS SOLICITA UN IDIOMA QUE NO SEA EL INGLÉS, ES RESPONSABILIDAD DEL CLIENTE OFRECER UN SERVICIO DE TRADUCCIÓN.
- NO SE DEBERÁ DAR SERVICIO TÉCNICO AL EQUIPO, SIN HABER CONSULTADO Y COMPRENDIDO ESTE MANUAL DE SERVICIO.
- LA NO OBSERVANCIA DEL PRESENTE AVISO PUEDE DAR LUGAR A QUE EL PROVEEDOR DE SERVICIOS, EL OPERADOR O EL PACIENTE SUFRAN LESIONES PROVOCADAS POR CAUSAS ELÉCTRICAS, MECÁNICAS O DE OTRA NATURALEZA.

ATENÇÃO

- ESTE MANUAL DE ASSISTÊNCIA TÉCNICA SÓ SE ENCONTRA DISPONÍVEL EM INGLÊS.
- SE QUALQUER OUTRO SERVIÇO DE ASSISTÊNCIA TÉCNICA, QUE NÃO A GEMS, SOLICITAR ESTES MANUAIS NOUTRO IDIOMA, É DA RESPONSABILIDADE DO CLIENTE FORNECER OS SERVIÇOS DE TRADUÇÃO.
- NÃO TENHA TENTADO REPARAR O EQUIPAMENTO SEM TER CONSULTADO E COMPREENDIDO ESTE MANUAL DE ASSISTÊNCIA TÉCNICA.
- O NÃO CUMPRIMENTO DESTA AVISO PODE POR EM PERIGO A SEGURANÇA DO TÉCNICO, OPERADOR OU PACIENTE DEVIDO A CHOQUES ELÉTRICOS, MECÂNICOS OU OUTROS.

AVVERTENZA

- IL PRESENTE MANUALE DI MANUTENZIONE È DISPONIBILE SOLTANTO IN INGLESE.
- SE UN ADDETTO ALLA MANUTENZIONE ESTERNO ALLA GEMS RICHIEDE IL MANUALE IN UNA LINGUA DIVERSA, IL CLIENTE È TENUTO A PROVVEDERE DIRETTAMENTE ALLA TRADUZIONE.
- SI PROCEDA ALLA MANUTENZIONE DELL'APPARECCHIATURA SOLO DOPO AVER CONSULTATO IL PRESENTE MANUALE ED AVERNE COMPRESO IL CONTENUTO.
- NON TENERE CONTO DELLA PRESENTE AVVERTENZA POTREBBE FAR COMPIERE OPERAZIONI DA CUI DERIVINO LESIONI ALL'ADDETTO ALLA MANUTENZIONE, ALL'UTILIZZATORE ED AL PAZIENTE PER FOLGORAZIONE ELETTRICA, PER URTI MECCANICI OD ALTRI RISCHI.

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- 忽略本注意事项会对维修员，操作员或病人造成触电，机械伤害或其他伤害。

REVISION HISTORY

<u>REV</u>	<u>DATE</u>	<u>PRIMARY REASON FOR CHANGE</u>
0.....	May 12, 2000	Initial version for Release 8.4 M3 pre-production sites.
1.....	Oct 10, 2000	Updated for Release 8.4 M4 production sites. Procedure now covers both AW3.1 and AW 4.0 software install. Also included printer setup procedure for printing the CV applications on an AW.
2.....	Mar 28, 2001	Added Section 1-3, Compatibility and Known Install Issues. Added Section 2-2 notes to always install from CD.
3.....	Sept 5, 2002	Added note indicating that the existing Flow Analysis option should be removed
4.....	Jan 30, 2003	Added changes for new software release of AW 4.1.

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* This revision/letter corresponds to the indicated document's revision control system.

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1- OVERVIEW

New MR Cardiac applications have been developed to run on an AW (Advantage Workstation) with 3.1_08 (or later) software. New orders will have CV application software options pre-loaded on the AW. For existing AWs, you must load the CV applications software and option key(s) on the AW using the supplied CV Applications CD and AW Configuration Floppy. The current release of AW software is version 4.1.

1-1 Available CV Options

- M1090SR – MASS Analysis
- M1090SW – MASS Analysis Pro
- M1090SS – MASS Viewer
- M1090ST – CV Flow
- M1090SA – MASS Analysis to MASS Analysis Plus Upgrade
- M1090WR – Multi Tools

1-2 Supplied Parts

- CV Applications For AW3.1, 4.0 CD-ROM or 4.1 CD-ROM (2271291-x) – Contains software for cardiac options listed above.
- Advantage Workstation Configuration Floppy.
- AW option paper (config.txt paper lists option key numbers for purchased options).

1-3 Compatibility and Known Install Issues

The 2271291 version CD (shipped with 8.4 M3 pre-production systems):

- Works only with AW3.1 software on Ultra 60 and AW3.1 software on Ultra 2. If your Ultra 60 has AW4.0 software, you must use the -2 version CV Apps CD.
- Keys must be manually entered (installation from Floppy disk doesn't work).

The 2271291-2 version CD (shipped with 8.4 M4 production systems and Release 8.4 FMI's):

- Works only with AW4.0 software on Ultra 60 and AW3.1 software on Ultra 2.
- Keys must be installed from Floppy disk (manual entry doesn't work).
- Prevents other AW applications from being installed from hard disk when using "Easy Install" (other AW applications must be installed using the AW "Manual Procedure" (IST 005, Section 7)).

The 2271291-3 version CD (shipped starting April 2001):

- Works only with AW4.0 software on Ultra 60 and AW3.1 software on Ultra 2.
- Keys must be manually entered.
- "Easy Install" now works with other AW applications.

The 2271291-4 version CD (shipped starting February 2003):

- Works only with AW4.1 software on Ultra 60 and AW3.1 software on Ultra 2.
- Keys must be manually entered.
- "Easy Install" now works with other AW applications.

The existing Flow Analysis Option must be manually removed prior to completing the software load, to enable the new Flow Analysis Option.

2- OPTION INSTALLATION

2-1 New AW

New AW's have the purchased CV Application software options pre-loaded on the AW. No action is required for installing the options. However, if the customer wants the CV Applications to print on printers that are connected to the Advantage Workstation, perform Section 3, Printer Setup for Printing CV Applications on the AW.

2-2 Existing AW

If new CV Application software options are purchased for an existing AW, they must be installed using the CV Applications CD-ROM and the supplied AW Configuration Floppy. Refer to the following AW procedure:

AW4.1. Follow the process listed below:

1. From an AW browser, select **Admin** then **Install Package**. This will open "Easy Install".
2. Place AW 4.1 CD into the CD ROM driver. Wait a few seconds for driver to recognize CD.
3. Change **Driver** from Hard Disk to CD-ROM
4. Select **Contents**
5. Select **Install**
6. Enter the license keys for each application when prompted. There is a sheet of paper that came with the FDO which listed the different license keys.
7. The software will then install. Load time should take less than 1 minute.
8. Select **Quit**. The CD ROM will automatically eject.
9. On the Browser, from System Menu, select **restart software**.

AW4.0. Refer to 2261307-100, Advantage Workstation 4.0 Ultra60 Service Manual, Job Card IST 005, Section 7.11, Installing OTHER application package (using EASY-INSTALL).

Note

On the "Easy install" screen, for the "Driver" choice, always select **CDROM** (the CV applications will not install from the hard disk).

Note

All cardiac applications are located on the CV Applications CD-ROM.

Note

The CV Application keys can not be installed using the 2271291-2 version CD. This problem is fixed beginning with the -3 version CD.

Refer to Table 2-1 for the corresponding "key" name for each application. When the system requests a key for a non-purchased application, continue without entering a password. (If data is entered for a non-purchased option, nothing happens since it will not be a recognized key.)

TABLE 2-1
AW CARDIAC APPLICATION KEYING NAMES

Application Name (at M3)	Application Name (at M4)	Keying Name on Paper
CV Analysis	MASS Analysis	MASS
CV Analysis Pro	MASS Analysis Plus	MASS_PLUS
CV Viewer	MASS Viewer	MASS_VIEW
CV Flow	CV Flow	FLOW
	CV Mass Mtools	MASS_MTOOLS

Note

For AW 4.0 and 4.1 the Configuration Floppy is not required.

2-3 AW Configuration Floppy

The AW Configuration Floppy's purpose is 2-fold: 1) For new applications, it contains a text file (config.txt) that includes the keys for the purchased AW applications. 2) When the AW "Configuration" -> "Floppy" option (AW3.1 software) or [Services] -> [Save Configuration] option (AW4.0 software) is run, it provides a location to save all AW site configuration information. (If the Configuration floppy is missing from shipment, any blank floppy will do).

A hardcopy printout of the config.txt option file is also provided with the package in case the floppy is broken. When options are saved to a configuration floppy, a .tar file on the floppy is created; the .tar file contains all option and site information. When the Configuration floppy is used for software reinstallation, the AW will look for the .tar file first. If it sees the .tar file, then the .txt file is bypassed.

3- PRINTER SETUP FOR PRINTING CV APPLICATIONS ON THE AW

This section describes how to configure CV applications to print on printers that are connected to the Advantage Workstation. There are two kinds of outputs generated from the applications: text output and color graphs. The customer can print the color graph to a color printer (Codonics) and the text output to a gray scale printer.

1. Open a command tool. At the prompt, type the following command: **lpstat -p <Return>**
The following output will be displayed.

```
printer rmt9796 is idle. enabled since Thu Jan 20 10:30:51 CST 2000. available.  
printer mr-lex9 is idle. enabled since Fri Jan 21 14:58:10 CST 2000. available.
```

In the above example, **rmt9796** and **mr-lex9** are the names of printers which are attached to the Advantage Workstation. Note that these names will be specific to the customer site.

2. If the customer has the MASS Analysis option, perform the following steps:

- a. In the same command tool, type the following commands:

```
cd /export/home/sdc/mass <Return>  
textedit mass.INI <Return>
```

- b. A textedit window will be displayed as shown in Illustration 3-1. In the textedit window comment out the following line (add a semi colon):

```
;text_print_command=lpr -Plaserjet $FILE <- Add semi-colon.
```

In the textedit window, make changes to the following lines:

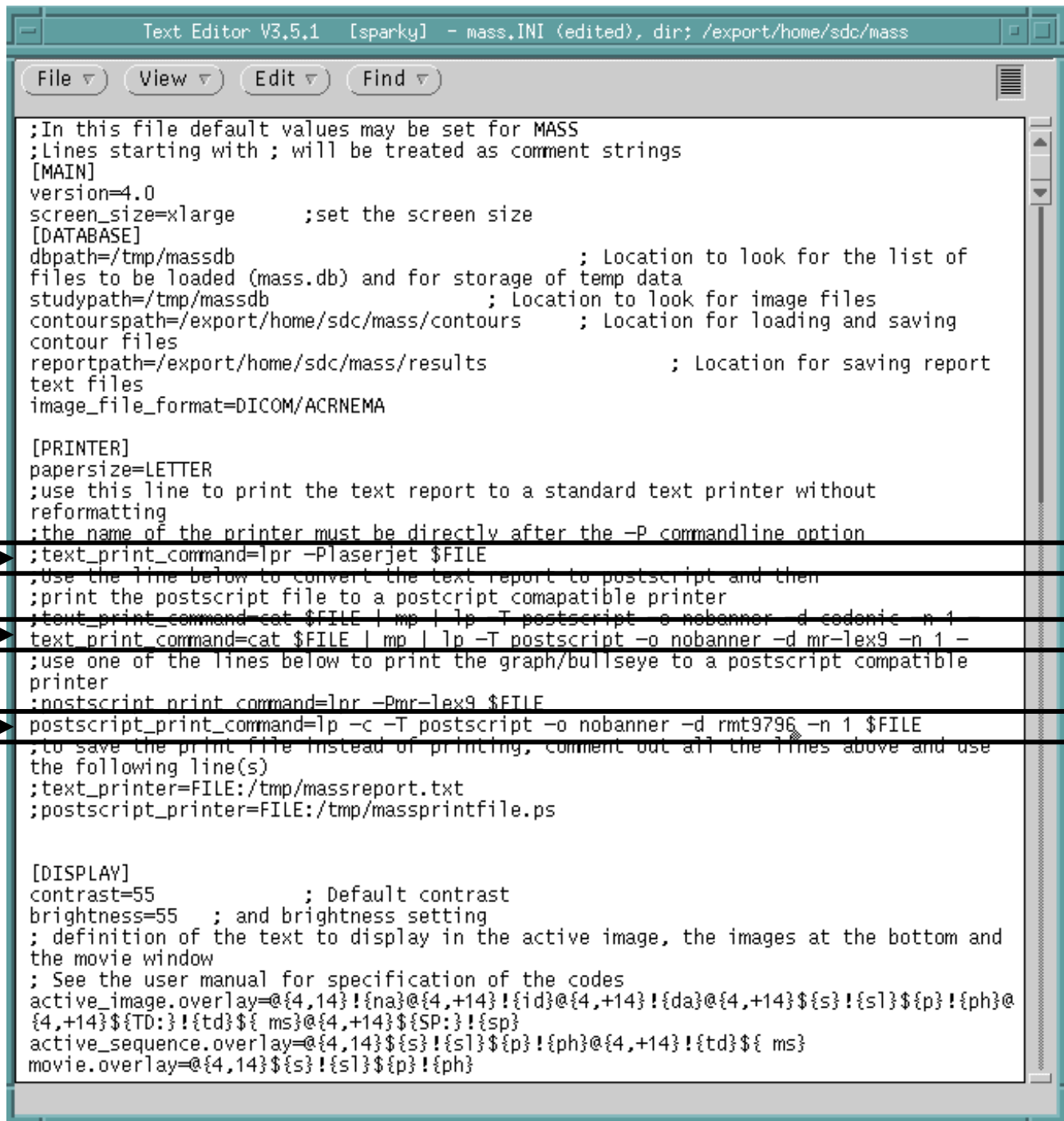
```
text_print_command=cat $FILE | mp | lp -T postscript -o nobanner  
-d mr-lex9 -n 1 -
```

Remove the semi-colon at the beginning of the line to uncomment it. Replace the “mr-lex9” with the name of a printer that can be used for printing text reports. This name can be obtained from the lpstat command used in step 1.

```
postscript_print_command=lp -c -T postscript -o nobanner -d  
rmt9796 -n 1 $FILE
```

Replace the “rmt9796” with the name of a printer that can be used for printing color graphs. Add the **-c** option as shown in bold. This name can be obtained from the lpstat command used in step 1.

- c. Save the mass.INI file for MASS Analysis by clicking on **File -> Save**.



3. If the customer has the CV Flow option, perform the following steps:
 - a. In the same command tool, type the following:
cd /export/home/sdc/flow <Return>
textedit flow.INI <Return>

- b. A textedit window will be displayed as shown in Illustration 3-1. In the textedit window comment out the following line (add a semi colon):

```
;text_print_command=lpr -Plaserjet $FILE <- Add semi-colon.
```

In the textedit window, make changes to the following lines:

```
text_print_command=cat $FILE | mp | lp -T postscript -o nobanner  
-d mr-lex9 -n 1 -
```

Remove the semi-colon at the beginning of the line to uncomment it. Replace the “mr-lex9” with the name of a printer which can be used for printing text reports. This name can be obtained from the lpstat command used in step 1.

```
postscript_print_command=lp -c -T postscript -o nobanner -d  
rmt9796 -n 1 $FILE
```

Replace the “rmt9796” with the name of a printer which can be used for printing color graphs. Add the **-c** option as shown. This name can be obtained from the lpstat command used in step 1.

- c. Save the flow.INI file for CV Flow by clicking on **File -> Save**.

4. If the customer has the MASS Analysis Plus option, perform the following steps:

- a. In the same command tool, type the following commands:

```
cd /export/home/sdc/mass_plus <Return>  
textedit mass.INI <Return>
```

- b. A textedit window will be displayed as shown in Illustration 3-1. In the textedit window comment out the following line (add a semi colon)

```
;text_print_command=lpr -Plaserjet $FILE <- Add semi-colon.
```

In the textedit window, make changes to the following lines:

```
text_print_command=cat $FILE | mp | lp -T postscript -o nobanner  
-d mr-lex9 -n 1 -
```

Remove the semi-colon at the beginning of the line to uncomment it. Replace the “mr-lex9” with the name of a printer which can be used for printing text reports. This name can be obtained from the lpstat command used in step 1.

```
postscript_print_command=lp -c -T postscript -o nobanner -d rmt9796 -n 1 $FILE
```

Replace the “rmt9796” with the name of a printer which can be used for printing color graphs. Add the **-c** option as shown. This name can be obtained from the lpstat command used in step 1.

- c. Save the mass.INI file for MASS Analysis Plus by clicking on **File -> Save**.
5. If the customer has the MASS Viewer option, perform the following steps:
- a. In the same command tool, type the following command:
cd /export/home/sdc/mass_view <Return>
textedit mass.INI <Return>
- b. A textedit window will be obtained as shown in the Figure 3-1. In the textedit window comment out the following line (add a semi colon)

```
;text_print_command=lpr -Plaserjet $FILE <- Add semi-colon.
```

In the textedit window, make changes to the following lines:

```
text_print_command=cat $FILE | mp | lp -T postscript -o nobanner  
-d mr-lex9 -n 1 -
```

Remove the semi-colon at the beginning of the line to uncomment it. Replace the “mr-lex9” with the name of a printer which can be used for printing text reports. This name can be obtained from the lpstat command used in step 1.

```
postscript_print_command=lp -c -T postscript -o nobanner -d  
rmt9796 -n 1 $FILE
```

Replace the rmt9796 with the name of a printer which can be used for printing color graphs. Add the -c option as shown. This name can be obtained from the lpstat command which was executed in step 1.

- c. Save the mass.INI file for MASS Viewer by clicking on **File -> Save**.

You are now ready to print from the following options the customer has: MASS Analysis, CV Flow, MASS Analysis Plus, and MASS Viewer.