



MAC[®] 800 Resting ECG Analysis System

Quick Reference Guide



Education Services
 Clinical Development





Notice

The materials contained in this document are intended for educational purposes only. This document does not establish specifications, operating procedures or maintenance methods for any of the products referenced. Always refer to the official written materials (labeling) provided with the product for specifications, operating procedures and maintenance requirements.

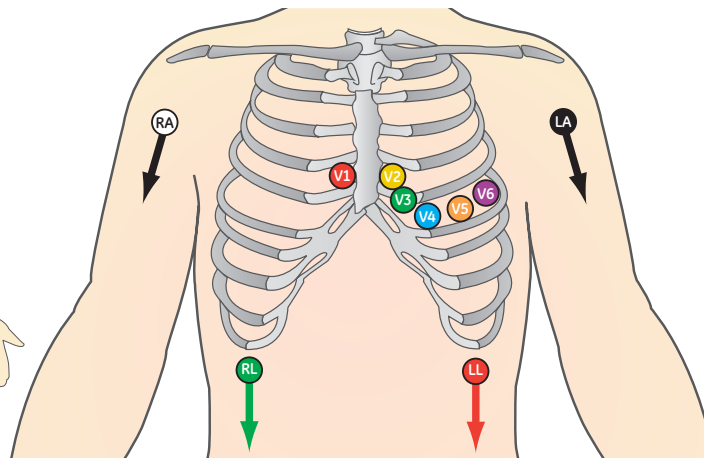
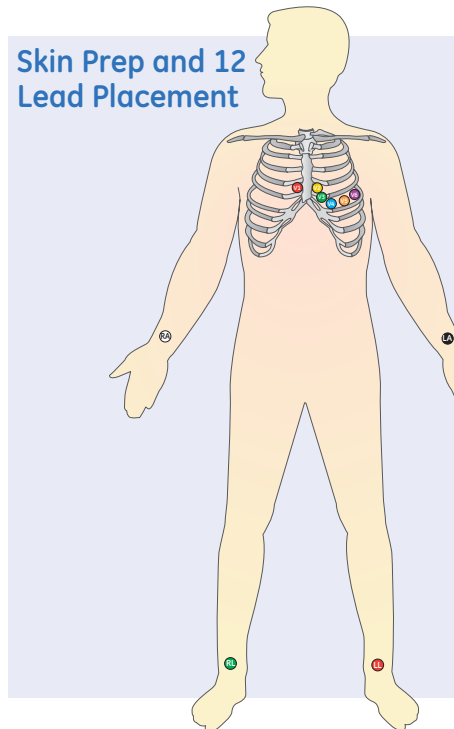
Proprietary Training Material Property of GE. Use of these materials is limited to agents and employees of GE Healthcare or other parties expressly licensed by GE. Unlicensed use is strictly prohibited.

Contents

Skin Prep and 12 Lead Placement	1
Acquire an ECG	2
Print Continuous Rhythm	3
RR Analysis	4
Acquire an Arrhythmia	6
File Manager	7
Exporting to SD Card	10
Connectivity Options	12



Skin Prep and 12 Lead Placement



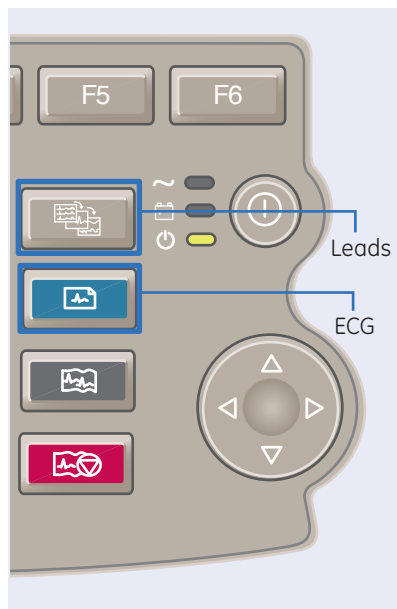
The quality of your ECG tracing is a direct result of skin prep and lead placement.

1. Shave hair from application site.
2. Gently rub area to remove dead skin cells.
3. Cleanse site with alcohol solution.
4. Dry skin completely.

Lead	Electrode Placement
V1	Fourth intercostal space next to the sternum on the right side.
V2	Fourth intercostal space next to the sternum on the left side.
V3	Midway between locations V2 and V4.
V4	At the mid-clavicular line in the fifth intercostal space.
V5	At the anterior axillary line on the same horizontal level as V4.
V6	At the mid-axillary line on the same horizontal level as V4 and V5.
RA and LA	Place on the corresponding right and left wrist. An alternate placement to reduce muscle artifact is on the right and left deltoid respectively.
RL and LL	Place on the corresponding right and left ankle. An alternate placement to reduce muscle artifact is on the upper leg as close to the torso as possible.

Acquire an ECG

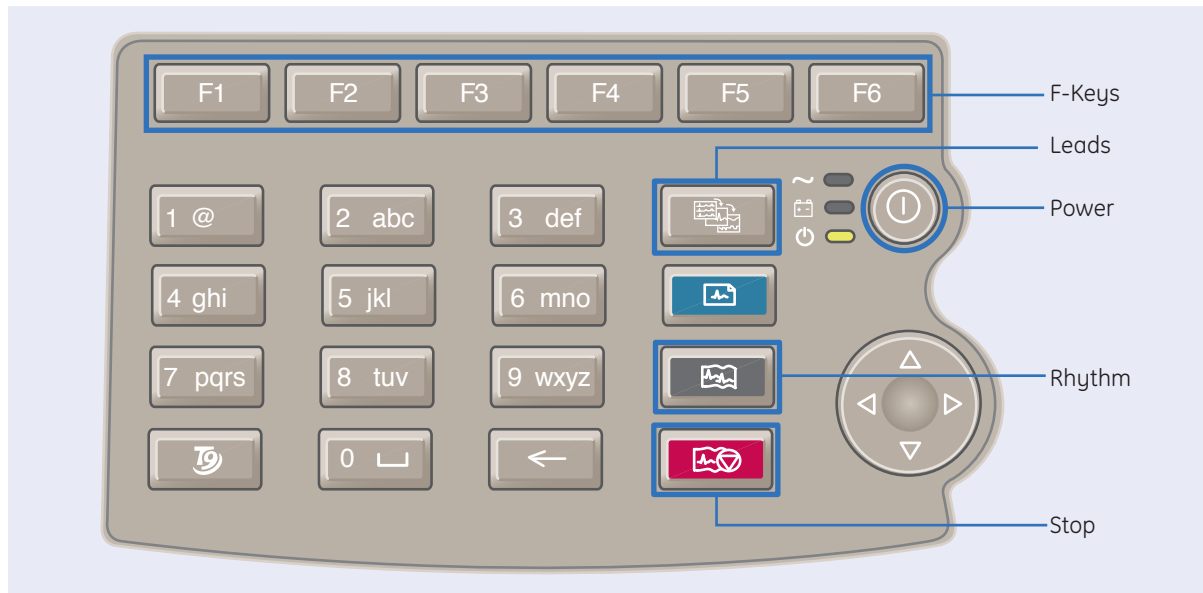
1. Prepare the patient.
2. Open the Resting ECG function in one of two ways:
 - Power on the unit or
 - From **Main Menu** select **Resting ECG (F1)**.
3. Verify waveform quality by:
 - Checking **Hook-up Advisor**. Green indicates a good quality waveform.
 - Cycle through the lead groups to visually verify lead quality by pressing the **Leads** key on the keyboard.
4. Use the **(F)** keys to make adjustments to (if necessary):
 - **Speed (F2)**
 - **Gain (F3)**
 - **Filter (F4)**
5. Press **F1** to open the Patient Data window. Enter the patient information.



6. Press **Page Down (F4)** to access other Test Information windows.
7. Select **Save (F6)** to save and close the Patient Data window.
8. Press the **ECG key** on the keyboard to record and print an ECG.
9. If you have your system set to **Preview before Analysis**, press **Continue (F4)** to proceed to analyze and print an ECG or

Cancel (F3) to cancel the analysis. Press **Laser Print (F5)** to print to an external laser printer if desired.

10. If finished, continue with Step 11, or continue with these options:
 - Press **Print (F2)** to print another copy
 - Select **Save (F3)** if the unit is not set to save the ECG automatically.
 - Select **Transmit (F4)** to transmit that single record to the default transmit location.
 - Select **Next Patient (F1)** to start a new patient or press the **ECG key** to take another ECG on the same patient.
11. When finished, do one of two things:
 - Proceed to **File Manager** to transmit records. (See **Transmit Stored Records.**)
 - Turn the unit off and plug it into AC power.



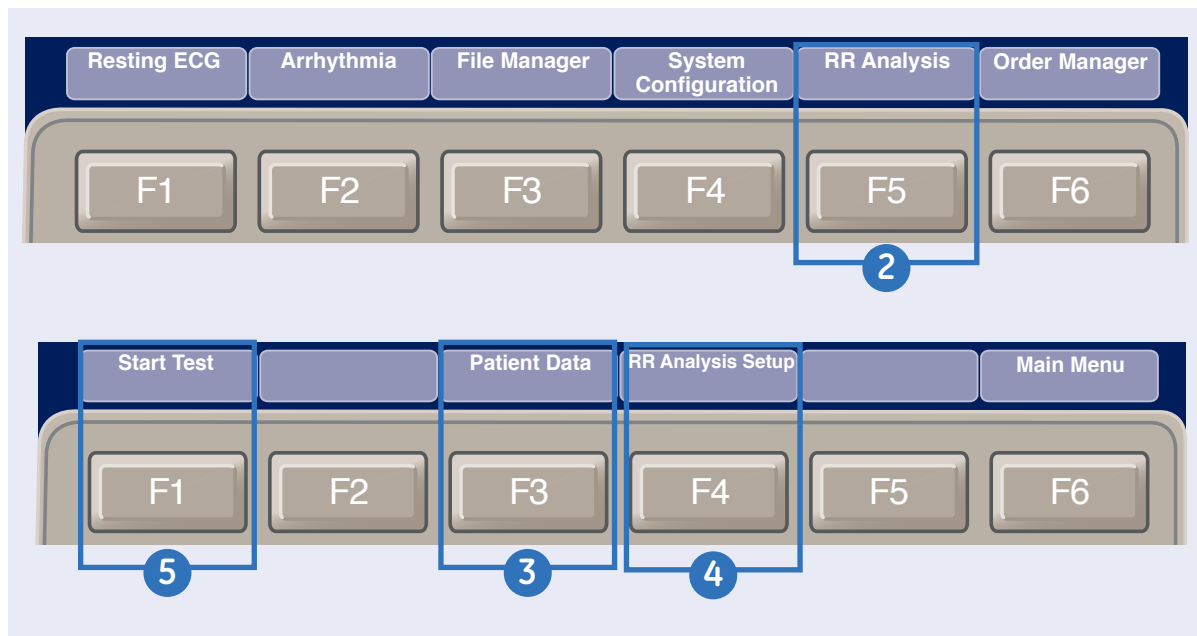
Print Continuous Rhythm

1. Prepare the Patient.
2. Open the Resting ECG function in one of two ways:
 - Power on the unit or
 - From **Main Menu** select **Resting ECG (F1)**
3. Verify waveform quality by:
 - Checking **Hook-up Advisor**. Green indicates a good quality waveform.
 - Cycle through the lead groups to visually verify lead quality by pressing
4. Use the **(F)** keys to make adjustments to (if necessary):
 - **Speed (F2)**
 - **Gain (F3)**
 - **Filter (F4)**
5. Press **F1** to open the Patient Data window.
6. Press Page **Down (F4)** to access other Test Information windows
7. Select **Save (F6)** to save and close the Patient Data window.
8. Press the **Rhythm** key on the keyboard to print a continuous rhythm.
9. Press the **Stop** button to stop printing.



Note! *Rhythm reports are not stored to File Manager.*





Printing an RR Analysis Report

(not sold in all countries)

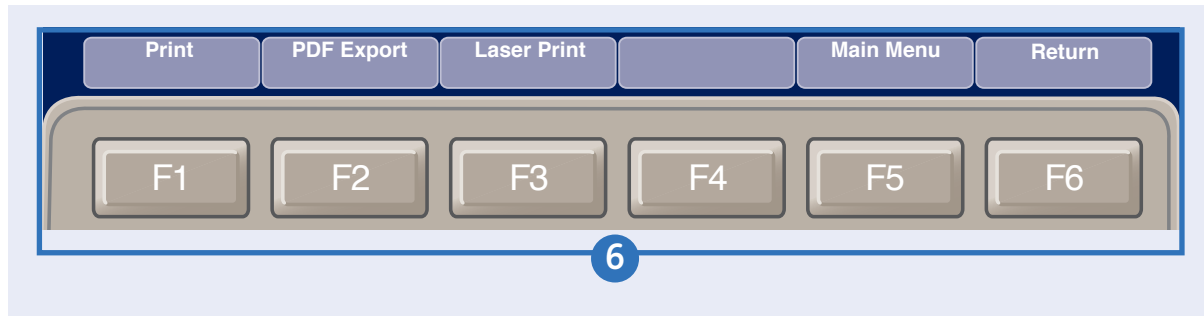
Use the following steps to generate an RR Analysis report.

1. Prepare the patient.
2. From the Main Menu, press **RR Analysis (F5)**. You can also access RR Analysis from the Resting ECG mode after an ECG has been acquired.
3. Press **Patient Data (F3)** and enter the patient data.
4. Adjust the setup options (target, record lead, gain, speed, filter, pacemaker detection, rhythm record, and RR table) as necessary by pressing **RR Analysis Setup (F4)**.
5. Press **Start Test (F1)** to start the test.

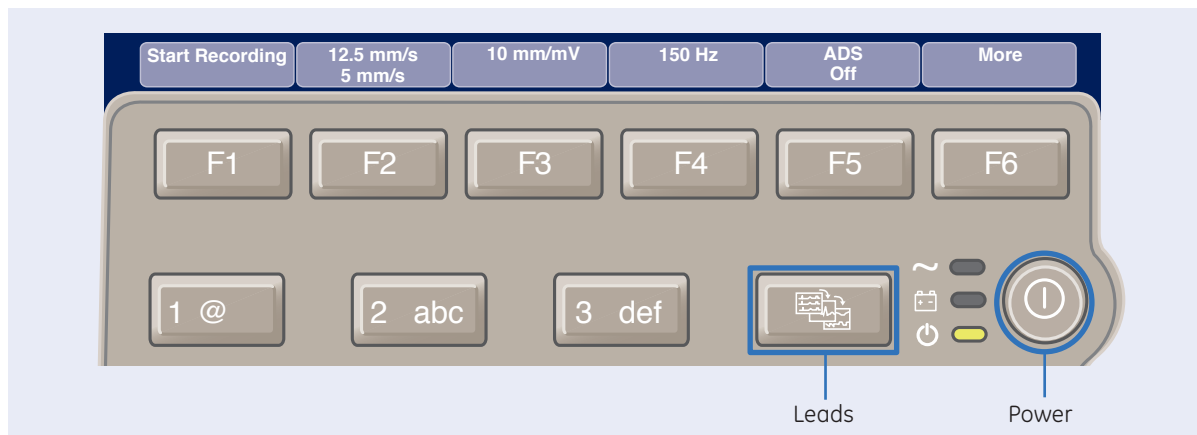
When the target is achieved, a preview of the summary results, histogram, and trendgram are shown on the display.



Note! You may press **Stop Test (F1)** to stop the test prior to the reaching the target.

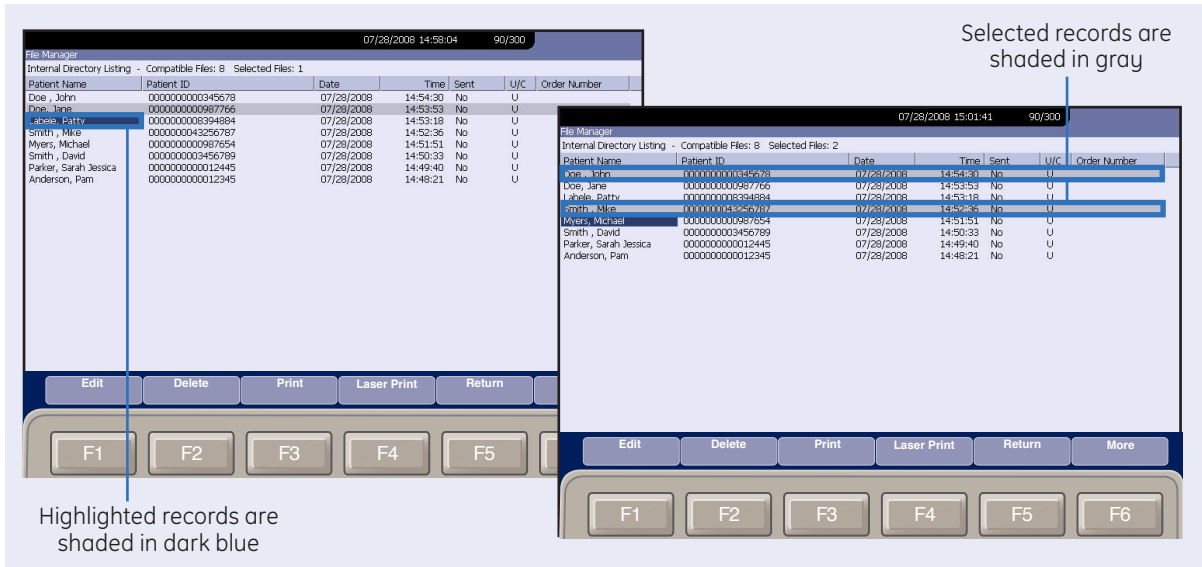


6. While reviewing the preview, do any of the following:
- To discard the reading and begin over, press **Return (F6)**, and repeat from Step 5.
 - To discard the reading and return to the Main Menu, press the **Main Menu (F5)**.
 - To accept the reading and print the report on the thermal printer, press the **Print (F1)**.
 - To accept the reading and export the results as a PDF file, press **PDF Export (F2)**.
 - To accept the reading and print the report on an external laser printer, press **Laser Print (F3)**.



Acquire an Arrhythmia

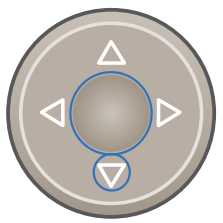
1. Prepare the Patient.
2. Open the Arrhythmia function in one of two ways:
 - Power on the unit or
 - From **Main Menu** select **Arrhythmia (F2)**
3. The **Patient Data** window automatically opens. Enter the desired information.
4. Press **Page Down (F4)** to access other Test Information windows.
5. Select **Save (F6)** to save and close the Patient Data window.
6. Verify waveform quality by:
 - Checking **Hook-up Advisor**. Green indicates a good quality waveform.
 - Cycle through the lead groups to visually verify lead quality by pressing the **Leads** key on the Keypad. The lead group displayed on the screen will be the lead group that prints as the rhythm strip.
7. Use the **(F)** keys to make adjustments to (if necessary):
 - **Speed (F2)**
 - **Gain (F3)**
 - **Filter (F4)**
8. Press the **Start Recording (F1)**.
9. Press the **Stop Recording (F1)**.
10. Press **Confirm Stop (F2)** to stop the recording or **Continue Recording (F5)** to continue to collect information.
11. After the recording is stopped, select the type of Arrhythmia report you wish the printout to include: Summary Report, Table Report, or Episode Report.
12. Select **Main Menu (F5)**.



File Manager

Select Records

- From **Main Menu** select the **(F)** key for **File Manager**.
- From File Manager you can select records to:
 - Transmit
 - Print
 - Edit
 - Delete
 - Preview
 - Import
 - Export



- Press the key **(F)** for the desired function, such as **Print (F3)**.

To Select Individual Records:

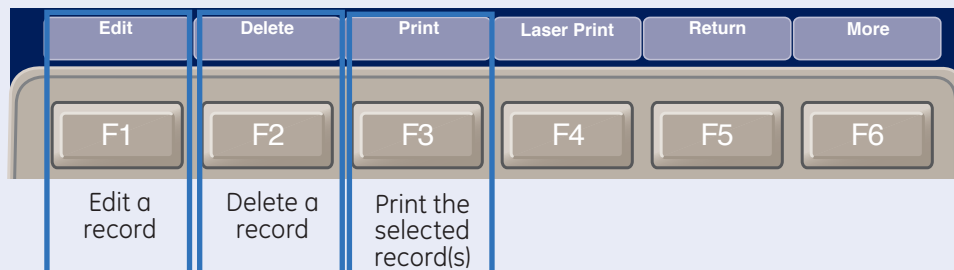
To Select All:

- Press **Select All (F2)**. All records are selected.

- Press **Select (F1)**.

- Use the arrow keys on the trimpad to highlight the record. Highlighted records are shaded in dark blue.
- Press the middle of the trimpad to select the records. Selected records are then shaded in gray.
- If needed, continue to select other records.
- Press the **(F)** key for the desired function, such as **Print (F3)**.



Tier 1 F Keys
for File
ManagerTier 2 F Keys
for File
Manager**Edit Stored ECG Records**

1. From Main Menu press the (**F**) key for **File Manager**.
2. Press (**F1**) to select the individual record to edit. You may only select one record to edit at a time.
3. Press **Edit (F1)** to edit the selected record.
4. Use the arrow keys on the the Trimpad to to select the Patient Information to be edited.

5. Edit the data as required.

6. Press **Page Down (F4)** to access other Test Information Windows
7. Edit the data as required.
8. Press **Save (F6)** to save edited fields and close the data window.
9. Highlight the record using the Trimpad and press **Print (F3)** to print the edited record.

Delete Stored ECG Records

1. From Main Menu press the (**F**) key for **File Manager**.
2. Press (**F1**) to select individual records to delete. Press (**F2**) to select all records.
3. Press **Delete (F2)**.
4. A message will appear verifying whether you want to delete the selected record(s).
5. Press **Yes (F6)** to delete the record(s). Press **No (F5)** to cancel the delete function.



Print Stored ECG records

1. From Main Menu press the **(F)** key for **File Manager**.
2. Press **(F1)** to allow you to select individual records to print. Press **(F2)** to select all records.
3. Press **Print (F3)** to print the selected record(s) to the thermal printer or press **(F4) Laser Printer** to print the selected record(s) to external laser printer.

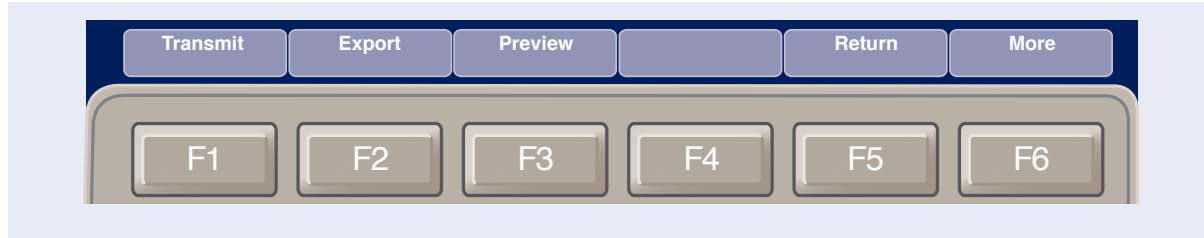
Transmit Stored Records

1. From **Main Menu** press the **(F)** key for **File Manager**.
2. Press **Print Directory (F4)** to print a list of stored files

3. Press **Select All (F2)** to select all records to transmit or press **Select (F1)** to select individual records.
4. Press **More (F6)** then press **Transmit (F1)** to transmit selected records
5. One of two things will happen:
 - If only one location is defined, the file(s) will be transmitted to the default location.
 - If multiple locations are defined, select the desired location and press **Ok (F6)**.

Preview Stored ECG Records

1. From the Main Menu press the **(F)** key for File Manager.
2. Press **(F1)** to select the record to preview.
3. Press **More (F6)**.
4. Press **Preview (F3)**.
5. The 12 lead display of the ECG record will be displayed.
6. Press **Return (F6)** to return to the File Manager main screen.



Exporting to SD Card

1. Press **F1** to select individual records to export. Press **F2** to select all records.



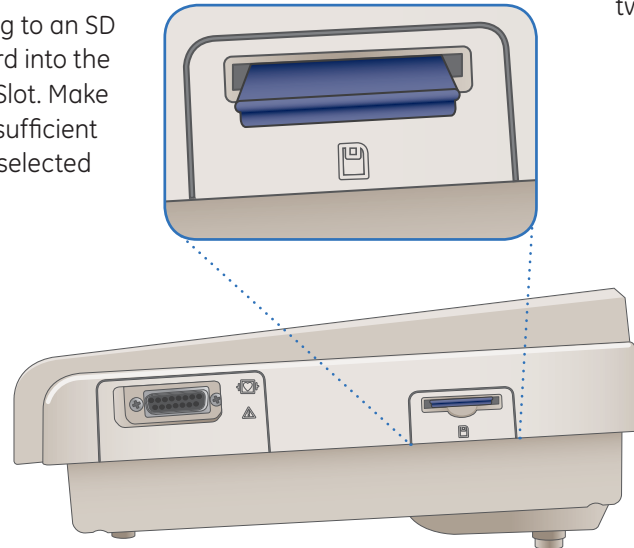
2. If you are exporting to an SD card, insert the card into the MAC 800 SD Card Slot. Make sure the card has sufficient free space for the selected

records and that it is not write protected. If there is not sufficient space on the SD card a message will appear indicating that.

3. Press **More (F6)**.
4. Press **Export (F2)**. The F keys change to allow you to select

the format in which to export the data.

- To export the data in XML, skip to step 5.
 - To export the data in PDF, proceed to step 8.
5. To export the data in XML, press **Hilltop XML (F1)**. One of two things happens:
 - If a shared directory was defined, a window opens for you to select the destination.





Skip to step 6.

- If a shared directory was not defined, the selected records are exported to the SD card.

A window opens to inform you of the export's progress. The window closes when the export is complete.

6. Do one of the following:
 - To export to the SD card, select SD Card in the window.
 - To export to the shared directory, select Shared Directory in the window.
7. Press **OK (F6)**. The selected records are exported to the selected destination. A window opens to inform

you of the export's progress. The window closes when the export is complete.



Note! When exporting to a shared directory, the MAC 800 device logs on to the directory with the user name and password defined on the **Communications Setup** window. If either of those values are incorrect, you will receive an error message. Correct the user name and password on the **Communication Setup** window and repeat the export process.

8. To export the data as a PDF, press **PDF (F2)**.
9. Follow steps 6 through 7.





Modem 1	Wired/Wireless LAN 2	External Peripherals 3	COMM Port 4	SD Card 5
<p>RJ11 connector for the optional internal modem to an analog phone line.</p>	<ul style="list-style-type: none"> • RJ45 Network LAN connector. • LAN connection to connect to MUSE or CASE/CS systems. • Supports the export of ECG records in PDF and Hilltop/XML formats. 	<p>USB connector for such USB devices as Barcode Reader, Magnetic card reader, Laser Printer and USB keypad.</p> <ul style="list-style-type: none"> • See System Configure> Resting ECG Settings>Laser Printing Setup for setup of a Laser Printer device. • See System Configure>Patient Setup for setup of Barcode and Magnetic Card Readers. 	<p>Serial connector for data communication with MUSE or CASE/CS system with a serial cable.</p>	<ul style="list-style-type: none"> • Allows for input and export of system configurations from unit to unit. • Supports the export of ECG records in PDF and Hilltop XML formats. • Allows the export of ECG records to MUSE or CS via SD Card Reader.





© 2012 General Electric Company – All rights reserved.

General Electric Company reserves the right to make changes in specifications and features shown herein, or discontinue the product described at any time without notice or obligation.

GE, GE Monogram, Marquette, 12SL, MAC 800 and MUSE are trademarks of General Electric Company. GE Medical Systems Information Technology, a General Electric company, doing business as GE Healthcare.

Notice: The materials contained in this document are intended for educational purposes only. This document does not establish specifications, operating procedures or maintenance methods for any of the products referenced. Always refer to the official written materials (labeling) provided with the product for specifications, operating procedures and maintenance requirements.

All patient names or other protected health information or data contained in any image within this material is fictitious. Any similarity to actual persons is coincidental.

Proprietary Training Material Property of GE. Use of these materials is limited to agents and employees of GE Healthcare or other parties expressly licensed by GE. Unlicensed use is strictly prohibited.



GE Healthcare
9900 Innovation Drive
Wauwatosa, WI 53223
USA
www.gehealthcare.com

GE Medical Systems Information Technologies GmbH
Munzingerstrasse
5 79111 Freiburg, Germany
Tel: +49 761 45 43 -0
Fax: +49 761 45 43 -233



imagination at work



2020786-285 Rev A
Printed in U.S.A.

