
M Series AHA/ERC Guidelines 2005

Software Configuration Overview

This page provides a summary of configuration options that have been added to support the American Heart Association and European Resuscitation Council Guidelines in 2005. Medical direction for each individual user should be consulted to determine the optimal settings for your hospital or EMS System. Further details can be found in the M Series Configuration Guide, revision YA.

Overview:

To support compliance with the 2005 AHA/ERC Guidelines for CPR, new configuration options have been added. These configuration options work in conjunction with Advisory and AED modes on the M Series.

1. Number of Stacked Shocks: can be set to 1 or 3
2. CPR Interval Duration: Configurable duration of 1, 2, 3, or 4 minutes. After the CPR Interval expires, the unit will do one of two things:
 - a. Automatically restart analysis – if the third shock in a stacked sequence
 - b. Prompt to “PRESS ANALYZE”
3. Check Pulse option: If this is enabled, the unit displays the “CHECK PULSE” message and sounds an audible message prior to the start of the CPR interval.
4. CPR Message: Configurable to display either “If No Pulse, Perform CPR”, or just “Perform CPR”

AED units configured in Semi-Auto mode also have the option of starting up with an Extra CPR interval immediately upon power-up.

Additionally, the “No Shock Advised Prompt” configuration has been retired. The default behavior is to emit combined “No Shock Advised” and “Check Pulse” messages.

A summary of configuration options can be found in the following table:

Configuration Settings:

(Refer to Configuration Guide for complete details)

Configuration Parameter	Default Setting (AHA 2000)	Recommended Guidelines 2005 Setting	Effect on Device Function
Extra CPR Interval Before 1 st Analysis	No	Yes	When set to "YES", prompts the caregiver to perform a period of chest compressions immediately following device power on and before the 1 st ECG Analysis. When set to "NO", prompts caregivers to ATTACH PADS and PRESS ANALYZE after the defibrillator is turned on.
Duration of Extra CPR Interval	—	2, 3 or 4 minutes	Sets duration of the CPR interval immediately following power up when "Extra CPR Interval Before 1 st Analysis" is set to YES.
Stacked Shocks	3	1	Number of 'stacked' ECG Analyses/Shocks between each period of CPR.
Check Pulse	Yes	No	Prompt issued after No Shock Advised analysis result or delivery of the last shock in a stacked shock sequence. When set to "NO" no check pulse prompts are issues.
CPR Message	If No Pulse, Perform CPR	Perform CPR	Prompt issued after each "No Shock Advised" analysis or the last shock in a set of stacked shocks.
Duration of CPR Interval	1 minute	2, 3 or 4 minutes	Period allowed between stacks of ECG analyses/shocks for performing CPR. This setting controls the duration of all CPR periods except the "Extra CPR Interval Before 1 st Analysis" period.

Software Upgrade Instructions – M Series

Please verify that you are installing the correct version of software as noted on the Software Update Acknowledgment Form. Software updates **MUST NOT** be performed on units with software and/or hardware versions that are not compatible.

Always verify your device's current software configuration prior to updating it with new software.

PURPOSE

This document provides instructions on performing the software upgrade of the ZOLL M Series.

COMPATIBILITY

This upgrade instruction is applicable to release 38.75 of the M Series MCU Software.

WARNING: For Bluetooth device only: Verify correct Upload and Bluetooth baud rate settings before uploading new Software according to the following steps:

1. Turn unit selector switch to monitor mode while depressing the left-and right-most softkeys until the System Configuration Menu appears.
2. Enter Configuration Passcode: 0-0-0-0-0-0-0-0
3. Press ENTER to select Language
4. Press CHANGE CONFIG softkey
5. Press NEXT ITEM softkey to scroll through the menus until you get to Upload Baud Rate
6. Verify Upload Baud Rate is set to 38400
 - a. If setting is not at 38400, press the CHANGE VALUE softkey until 38400 bps is displayed
7. Press EXIT CONFIG softkey
8. Press ENTER to Save Changes and Exit
9. Press NO softkey in response to Save Changes to Card
10. Turn unit off to save changes
11. If Bluetooth baud rate has been configured to a setting other than 38400, follow these steps to reset baud rate to desired setting after installing the 38.75 MCU upgrade

CONFIGURATION CARDS

If you use configuration cards to configure your devices, please verify that the Boot Loader versions (i.e. version 6.00, 6.70, 8.00, etc) are the same for all units being configured with that card. If versions are not the same, the unit may appear to be configured properly; however the new Guidelines options may not be changed. To verify Boot Loader:

1. Turn selector switch to Monitor or On position
2. Press SUMMARY softkey
3. Press PRINT CONFIG softkey
4. The configuration will start to print. The first sheet of the printout contains the Boot Loader information.

This upgrade is NOT compatible with your device if:

1. The software currently installed in your device is prior to release 30.00, or
2. The device is an NIBP unit with a Boot Loader version below 6.70.

To verify your current software version, simply power the unit on and the version will display briefly on the bottom right hand corner of the display.

If you have questions or experience problems, call ZOLL Technical Support at 800-348-9011.

This software version will impact the functionality of the M Series End Tidal Carbon Dioxide (EtCO2) option. You should review the latest revision of the End Tidal Carbon Dioxide (EtCO2) Option Insert prior to installing the software. Device users should be made aware of the changes. A copy of the latest revision of the insert should be placed in the device's Operator's Guide.

INSTRUCTIONS

A. M SERIES MCU SYSTEM SOFTWARE UPGRADE

WARNING: Verify your device is compatible with the software version you are about to load (see compatibility above).

1. Turn unit off and unplug from AC power. Install battery, ensuring the M Series unit is off for at least 10 seconds before installing release 38.75 of the M Series MCU Software.
2. Insert the provided software card into the PCMCIA slot on the lower right front of the unit.
3. Turn the unit's main switch to the MONITOR or ON position.
4. The unit will make a "clicking" noise while the software is loading. When the software has been successfully updated, the screen will display characters, and (briefly) the newly installed software revision in the lower right corner.
5. Remove the software card from the PCMCIA slot by depressing the black release button.

B. LANGUAGE UPGRADE (Non-English Only)

1. Select System Configuration mode per the instructions in the ZOLL M Series Configuration Guide. At the *Select Language* menu, press the ENTER softkey to select the highlighted language.
2. The main configuration menu should now be displayed. Press the **Read From Card** softkey and select LANGUAGE.
3. Insert the M Series Language Card into the PCMCIA slot and press the **Enter** softkey.
4. If the language card has been properly inserted in the PCMCIA slot, the screen will display a "**Reading Card**" message and the unit will beep while loading the data from the card.
5. If the language card has been successfully read, the screen will display a "**Card Read**" message.
6. Press the **Exit Config** softkey and then select **Save Changes and Exit** from the main configuration menu.

WARNING: Do not save changes to card.

C. LANGUAGE CONFIGURATION

Note: Perform the steps outlined in this section only if the language you are loading was not previously installed.

1. Select System Configuration mode per the instructions in the ZOLL M Series Configuration Guide. At the *Select Language* menu, press the **Next Value** softkey to highlight the appropriate language. Press the **Enter** softkey to select the highlighted language.
2. Press the **Exit Config** softkey and then select **Save Changes and Exit** from the main configuration menu.

WARNING: Do not save changes to card.

D. DEVICE TESTING AND UPGRADE DOCUMENTATION

1. Power the unit on and verify device powers up normally. Perform the 30 Joule Self Test and verify you receive a "Test OK" message.
2. Record device serial number on the enclosed Acknowledgement Form and check-off check box if upgrade was successful.
3. Upon completion of all upgrades sign off Acknowledgement Form and return or FAX to:

QA/RA Software Update Coordinator
ZOLL Medical Corporation
269 Mill Road
Chelmsford, MA 01824-4105
FAX (978) 421-0010

Note: Federal Law requires the tracking of defibrillators. As an owner of this device, you have the responsibility under this law to notify ZOLL Medical Corporation if this product has been received; lost, stolen or destroyed; or has been donated, resold, or otherwise distributed to a different organization. In addition to these events, we are also asking our customers to inform us of any software updates.

If any of the events described above occur, please contact ZOLL Medical Corporation.