



## M4000 Version 4.1 Installation Guide

This document explains how to install the M4000 software version 4.1 on a laptop or the M4200C Controller.

### Requirements

Laptop requirements are as follows:

- Operating system—Windows 2000 or newer
- Web browser—Microsoft Internet Explorer V5.0 or newer

The M4200C Controller must run the M4200 Thermal printer driver as the default.

To confirm that the M4200 Thermal driver is the default printer driver:

1. Open the **Start** menu and select **Control Panel**.
2. Select **Printers and Other Hardware**.
3. Open **View installed printers and fax printers**.
4. Confirm that **M4200 Thermal** is selected as the default (a black circle with a checkmark in it should appear next to the driver name in the list).
  - If it is not the default printer, highlight the M4200 Thermal printer icon, open **File** on the menu and select **Set as Default Printer**.
  - If the M4200 Thermal printer is not listed, please contact your Doble principal engineer or local representative.

### Downloading M4000

To download M4000 from the Doble web site:

1. Go to [www.Doble.com](http://www.Doble.com).
2. Open the **Support** menu and click **Downloads**.
3. Click the **M4000** link, and on the M4000 page, click the **M4KV41.exe** link.
4. Click **Save** to save the file to your hard disk, or click **Run** to run Setup.exe immediately. Go to [“Installing the Software” on page 2](#).

## Installing the Software

To install M4100:

1. Double-click the **Setup.exe** file.

The Choose Setup Language window appears. It enables you to select the language in which the remaining setup instructions will be presented.

2. Select a language from the drop-down list and click **OK**.
3. Read the Welcome advisory information and, if acceptable, click **Next**.
4. Read the software license agreement and, if acceptable, click **Yes**.

5. In the Choose Destination Location window:

- Click **Next** to accept the default folder for the M4000 software.

or

- Browse to another folder and click **Next**.

6. In the Select Program Folder window, choose a location for the M4000 program icon and click **Next**.

The Laptop/M4200 Controller Options window appears.

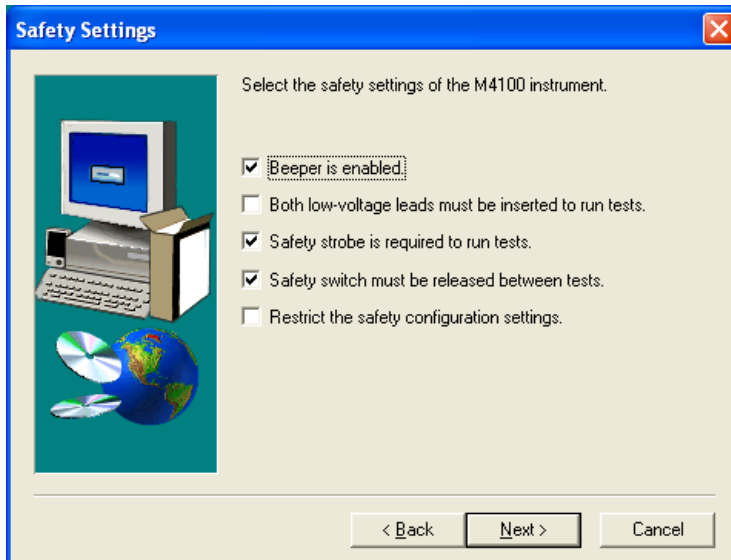
7. Select these options as appropriate:

- **Launch M4000 at Startup**—Automatically starts M4000 each time the PC or M4200 Controller is turned on.
- **Set the serial port to COM2 (default is COM1)**—Select this option if you use an M4200 Controller, which always requires COM2.

8. Click **Next**.

The Safety Settings window appears. These settings are stored as Registry entries and can be changed by users through the Tools/Configuration menu, unless access is restricted.

Check marks appear in the options that are turned on by default.



9. In the Safety Settings window, select the safety options as appropriate:
  - **Beeper is enabled**—Enables the warning beep that signals the beginning of each test (recommended).
  - **Both LV Leads must be inserted to run test**—Requires that both the red and blue leads be inserted into the test set to run a test (rarely used).
  - **Safety strobe is required to run test**—If the strobe bulb or cable fails, you can disable it so that you can continue testing.
  - **Safety switch must be released between tests**—Discourages users from artificially holding the safety switch down for the duration of several tests.
  - **Restrict the Safety Configuration settings**—Locks the above four selections so that they cannot be changed from within the application.
10. Click **Next**.

The Auto-fill the Company Field window appears. Any name entered in this field automatically appears in the Company field whenever a new test form is created.
11. Enter a name or leave the field blank. Click **Next**.

12. In the M4000 Language Support window, select one or more languages for the M4000 user interface. Click **Next**.

The Choose the M4000 Data Directory window appears. This directory will store all results of tests run with the M4100 clipboard.

13. Accept the default directory or browse to a different directory. Click **Next**.

The Start Copying Files window appears. It summarizes the configuration options you have selected.

14. If necessary, click **Back** to modify the setup options. Then click **Next** to start file installation.

The Copying Resource Files window appears and displays a progress bar. When the process is complete, the Setup Complete window appears.

15. As appropriate, select these options:

- **Yes, I want to view the ReadMe file.**
- **Yes, I want to launch M4000.**

16. Click **Finish**.

## Running Multiple Versions of M4000

You can run multiple versions of M4000 by installing them in different directories. Be aware that whenever you switch from one version to another, M4000 prompts you to download new firmware. To prevent this prompt from appearing:

1. Locate the `M4i.x0`, `BootBlok.x0`, and `Loader.x0` in the directory in which version 3.4 or 4.0 is installed. The default directory is `C:\Program Files\Doble\M4000`.
2. Copy these three files into the other M4000 directories.

## Updating the Firmware

*This section is for newer M4100 instruments only, with a serial number format of four digits, a numeral one, and four more digits (xxxx1xxxx).*

### Introduction

When M4000 is updated, new firmware is downloaded with it but not installed. The updated M4000 automatically checks the currently installed firmware and, if appropriate, displays a message stating that new firmware is available. Immediate upgrade is not required; you can wait for a suitable time.

### Time Requirements

The firmware upgrade takes 25 to 30 minutes. The associated amplifier upgrade, which is sometimes required, takes an additional 15 minutes.

### Cable Requirements

The USB cable supplied with the M4100 is required for this upgrade. You must manually install the USB driver for this cable.

If the upgrade is attempted using a USB-to-RS232 adapter with the old serial cable, the upgrade will fail.

## Procedures for Firmware and Amplifier Firmware Update

The following procedures describe how to upgrade the firmware, and how to upgrade the amplifier (PUC) firmware if necessary.

### Read This First!

As you begin upgrading, please keep the following information in mind:

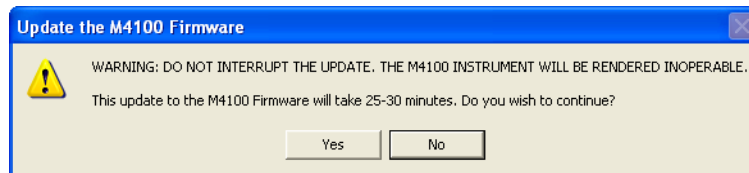
- **Do not power cycle the M4100 during the upgrade. Power cycling during a firmware or amplifier firmware upgrade causes the M4100 to become unusable.** You will have to ship the unit back to Doble for reconfiguration.
- If M4000 is accidentally closed during an upgrade, power cycle the M4100 and start the upgrade over again.
- Depending on the version of the firmware or amplifier firmware you are upgrading, **an Error 101 message may appear after the upgrade completes successfully.** Close it and continue with the upgrade process.

## Upgrading the Firmware

To upgrade the firmware:

1. Open the **Tools** menu and select **Update the Firmware**.

A warning message appears.



*Do not power cycle the M4100 during the upgrade for any reason! If power cycling occurs, the M4100 becomes unusable and must be shipped back to Doble for reconfiguration.*

2. To start the upgrade, click **Yes**.

Several progress bars appear during the upgrade.

Depending on the version of the firmware being updated, an Error 101 message may appear after the upgrade is completed successfully.

3. Click **OK** and power cycle the M4100.

## Upgrading the Amplifier (Power Unit Control)

To determine if the Amplifier (PUC) firmware needs to be updated:

1. Open the **Diagnostic** menu and select **System Status**.

The M4000 - System Status Diagnostic window appears.

2. Press **F2** to run the test.

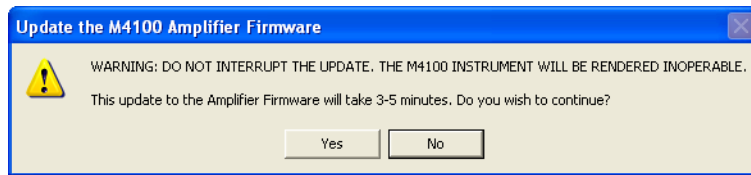
When complete, the Reported Status for each item should be **Enabled**.

3. Look at the M4100 Instrument Amplifier Version field. If it displays a:
  - **Blank**—The Amplifier/PUC cannot be upgraded in the field and unit must be returned to Doble for upgrading.
  - **Number**—Go to step 4.

4. Open the **Tools** menu and select **Update the Amplifier Firmware**.

One of these messages appears:

- **Error 105**—Indicates that the amplifier firmware cannot be upgraded in the field. Click **OK** and power cycle the M4100. You can continue to use the instrument while you make arrangements to ship it to Doble for upgrade.
- **Update the M4100 Amplifier Firmware**



*Do not power cycle the M4100 during the upgrade for any reason! If power cycling occurs, the M4100 becomes unusable and must be shipped back to Doble for reconfiguration.*

5. To start the upgrade, click **Yes**.

Several progress bars appear during the upgrade.

Depending on the version of the firmware being updated, an Error 101 message may appear after the upgrade is completed successfully.

6. Click **OK** and power cycle the M4100.
7. Run another System Status test.

The following data should appear:

- M4100 Instrument Firmware Version: 3.4555
- M4100 Instrument Amplifier Version: 1.31

## Reporting Problems

Please communicate any problems or enhancement requests to your Doble principal engineer or local Doble representative.

