Kodak

Update 3 for Magnus 400 Controller

Software
Version 1.01.391.003

Release Notes
English

739-00280A-EN Rev B

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Introduction

These release notes highlight the changes and improvements that were implemented in release 1.01.391.003 Update 3 of the Kodak® Magnus™ 400 Controller software. Update 3 includes Update 2.

Important: Update 3 is undergoing production testing.

Update 3 is relevant for Magnus 400 platesetters with an LDA head.

Update 2 is relevant for Magnus 400 Quantum platesetters.

Prerequisites:

- Kodak Brisque® software version 5.0.61.6 with update 10 (UPD_Brisque_61_FP_10)
- Kodak Magnus 400 Controller software version 1.01.391.003
- For Kodak Xpo™ software devices: Xpo version 1.00.68
- Update 2 (with the new distribution card) is a prerequisite to Update 3.

What Is in These Release Notes

The release notes include the following sections:

New Features—describes features that were added to the Magnus 400 Controller software.

Enhancements—describes improvements that were made to existing features.

Limitations—describes a problem that cannot be fixed due to the constraints of software.

Problems Fixed—lists problems in the previous release or update of the Magnus 400 Controller software that are now resolved.

Known Problems—lists problems that are not yet resolved.

Installing Update 3—describes how to install the Update 3 software.

New Features

This section lists features that were added in Update 3 of the Magnus 400 Controller software.

- *Magnus 400S-type LDA Head Support* on page 2
- *New Parameters* on page 4
- *Distribution Board* on page 4
- *Tweezer Functionality* on page 5
- *Direct RS-232 Cable Connection for Smart Edge Detection (SED)* on page 5

Magnus 400S-type LDA Head Support

Update 3 supports the following types of LDA heads:

- **400F**: 42 lasers plus 6 spare lasers
- **400S (current)**: 32 lasers plus 16 spare lasers on one side
- **400S (new)**: 32 lasers plus 16 spare lasers—8 spare lasers on each side of the 32 lasers. Centering the working lasers helps to prevent artifacts and improve image quality.

Note: Kodak provides the following working spare lasers:

- For the Magnus 400S-type platesetter:
  - Minimum spares = 4
  - Maximum spares = 11
- For the Magnus 400F-type platesetter:
  - Minimum spares = 2
- Maximum spares = 6

The following diagrams illustrate the three types of LDA heads and their laser distribution:

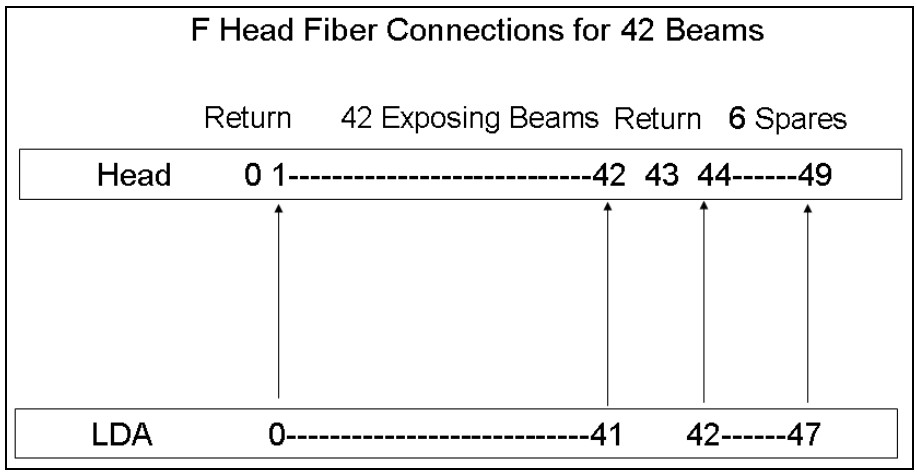


Figure 1: F-head fiber connections

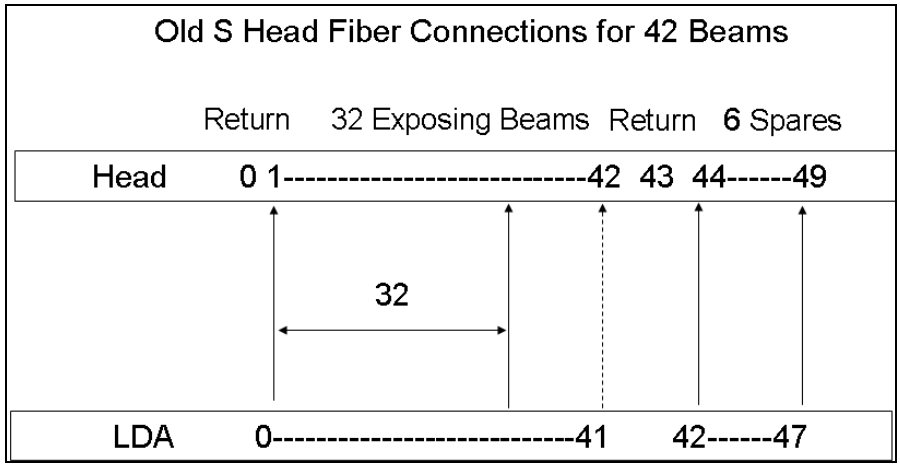


Figure 2: S-head (current) fiber connections

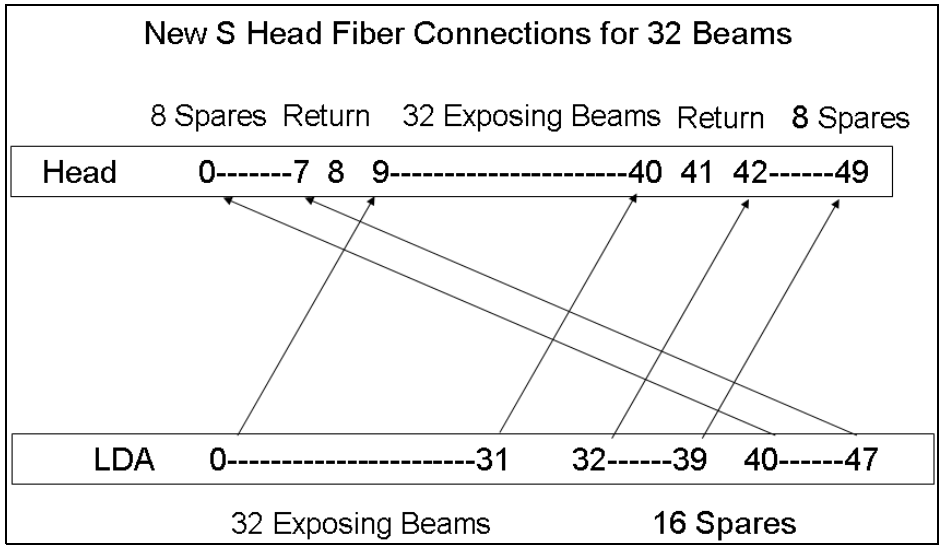


Figure 3: S-head (new) fiber connections

New Parameters

The following parameters are now available in the registry.

- Under **IO OBJECTS\LASER GROUP\Laser Group**:
  - **Laser blinking frequency type: 0 - dynamic, 1 - static, 2 - without frequency**. The default is **1**.
- Under **IO OBJECTS\Lif Data Card\LIF\00.00.01\LifIaldaParam**:
  - **Limit between low and high power ranges (mW)**: 220.000
  - **LdaRbfName**: lda_calib.rbf
  - **LdaRbfName**: lda_expose.rbf

Distribution Board

Note: If Update 2 is already installed, Update 3 overwrites the existing Update 2 files.

Update 3 supports the new distribution board (part number 503-00334B or higher) that is implemented to resolve communication (retry) problems.

Parameters and .dll files were changed to accommodate the modified PROM and to eliminate the intermittent, momentary, false signals that caused the recovery messages.

- Changed .dll files:
  - **Distribution.dll**
  - **Distribution400BoardDiag.dll**
- Parameters changed (both the parameter value and the default value):
  - **TimeOut For Embedded Communication [mSec]**
    (path—**\IO OBJECTS\DISTRIBUTION\Distribution Card**)

    This parameter value was reduced from 3000 to **1000**.
  - **Baud Rate**
    (path—**\IO OBJECTS\COMMUNICATION PORTS\COM5**)

    This parameter value was increased from 19,200 to **57,600**.

Tweezer Functionality

Note: If Update 2 is already installed, Update 3 overwrites the existing Update 2 files.

Update 3 supports improved tweezer functionality.

- Scripts changed:
  - **CPaperDisposalTask.Script**
  - **ConfigLoadingsystem.Script**
- Parameters added:
  - **Y Up After Extra To Catch Paper (mm)**
    (path—**\IO OBJECTS\Loading System\Load Plate\Paper Disposal Stage**)

Direct RS-232 Cable Connection for Smart Edge Detection (SED)

Note: If Update 2 is already installed, you do not need to replace the USB cable. In addition, Update 3 overwrites the existing Update 2 files.

The RS-232 cable must be connected directly to COM6 to resolve USB-related error messages. Disconnect the USB cable and connect the RS-232 cable directly to COM6 on the computer, as described in *Installing the Update 3 Software* on page 17.

- Changed .dll files:
  - **LotemMachine.dll**
  - **PlateEdgeDetection.dll**
  - **Lotem400VMachine.dll**
- Parameters added:
  - **Communicator for SED Card (USB0=0, COM6=1)**
    (For LDA devices only**)**
    (path—**\MACHINE**)
  - **Com Driver**
    (path—**\IO OBJECTS\Plate Edge Detection System\Smart Plate Edge Card**)

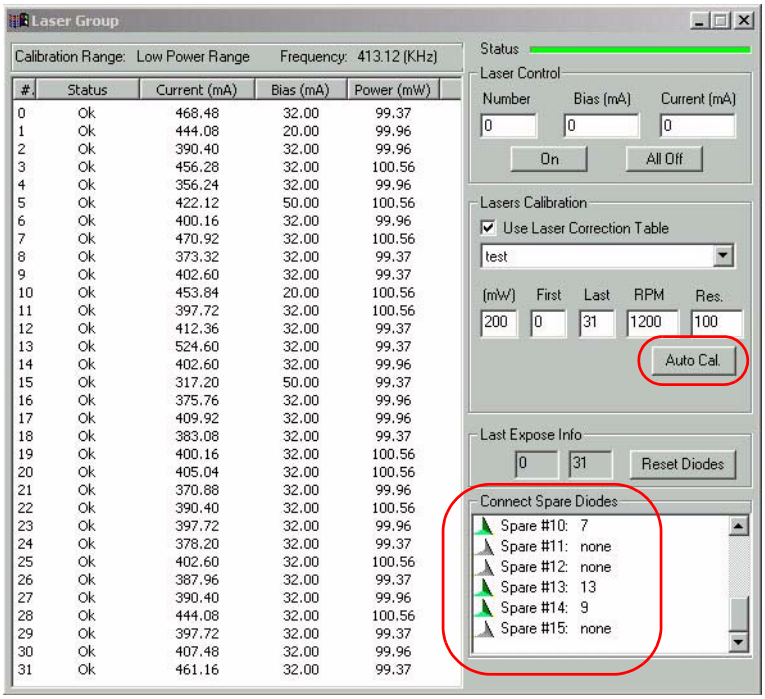
Enhancements

This section lists features that were improved in this release of the Magnus 400 Controller software. Features that were modified as a result of a problem in the software are described in *Problems Fixed* on page 9.

Laser Group Dialog Box

The Laser Group dialog box enables you to do the following tasks:

- Locate spare diodes available for use: None appears beside spare diodes that are not in use.
- Check whether a spare diode has replaced a malfunctioning diode: If a spare diode has been put to use, in the **Connect Spare Diodes** area, the diode appears green and the number of the diode that it replaces appears.



- Check whether a spare diode is functioning: Before splicing, you can check whether the spare is functioning. Select the spare, select the number of the diode that you want to replace, and click **Auto Cal**. The platesetter checks the new (spare) diode.

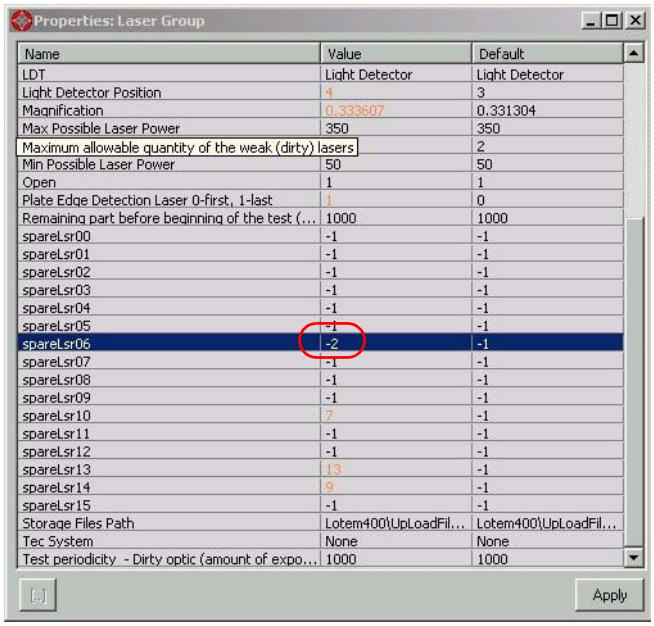
  To check whether a spare diode is functioning:

  ➢ Next to a diode that says **none**, type the number of the diode that you want to replace and click **Auto Cal**. The system checks the spare diode.

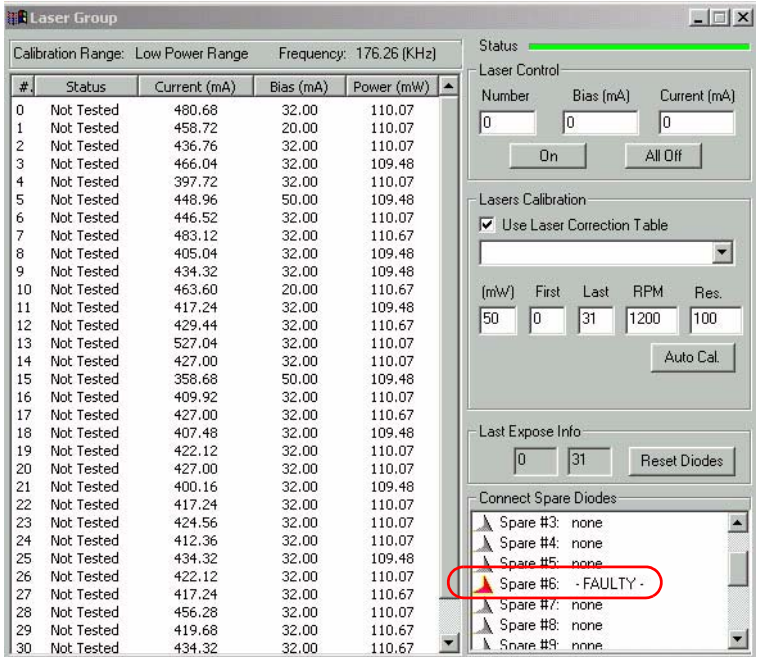
  If the spare diode is faulty, you must neutralize it so that it cannot be used.

To neutralize a faulty spare diode:

1. In the Hardware tree, select **Expose System > Laser System > Laser Group** and right-click **Properties**.
2. In the Properties Laser Group dialog box, change the value of that laser to **–2**.

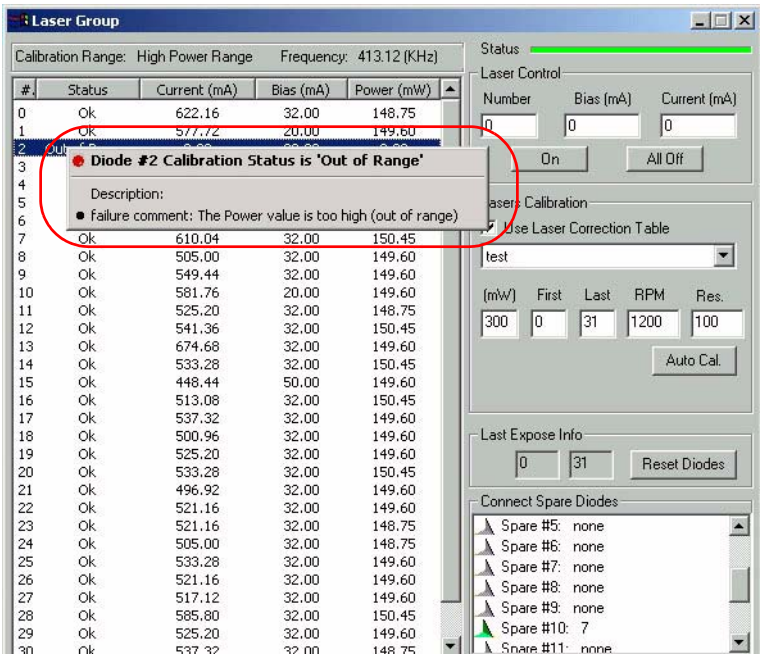


Next to the neutralized spare diode, the word FAULTY appears.



- View a log to see why a calibrated laser does not pass testing: If you calibrate a laser and it does not pass testing, in **Service** mode, you can check to see what the problem is.

  ➢ To check the laser, in the Laser Group dialog box, right-click the diode. An error log appears.



Limitations

Using COM6 for edge detection prevents the use of the Universal Debris Removal Cabinet (UDRC) LC.

Problems Fixed

Note: If Update 2 is already installed, Update 3 overwrites the existing Update 2 files.

- **Tail gripper recovery message**—illegal gripper width. Tail grippers are not in the required position.

  Script changed:
  LoadPlateFromDrumEntryToDrumTask.Script—changed to increase the range in which the side-to-side detector looks for the tail gripper.

- **Interlocks, drum deviation and drum temperature recovery messages**—by modifying a board PROM, the communication path between the distribution board and the computer was improved.

- **100% expose stalls** (LDA only)—after expose, the plate does not unload and the expose indicator window does not reach 100 percent.

  Firmware changed:

  - **LMCE firmware 1.02.03**

  Changed .dll files:

  - **Rcon.dll**
  - **McfCard.dll**
  - **LotemMachine.dll**
  - **Lotem400VMachine.dll**
  - **CtrlMachine.dll**

- **Intermittent laser failures**—resolved by using new calibration sequence.

- **Edge detection—**after startup, edge detection fails. This problem has been fixed in Update 3.

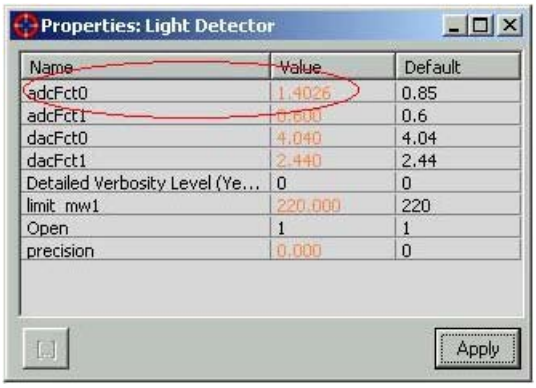
Known Problems

This section lists known problems in Update 3 for Magnus 400 Controller software. They may be outstanding issues from a previous release or new problems. When a problem listed here is resolved, the solution is described in the *Problems Fixed* section of the release notes for the next version of Update 3 for Magnus 400 Controller software.

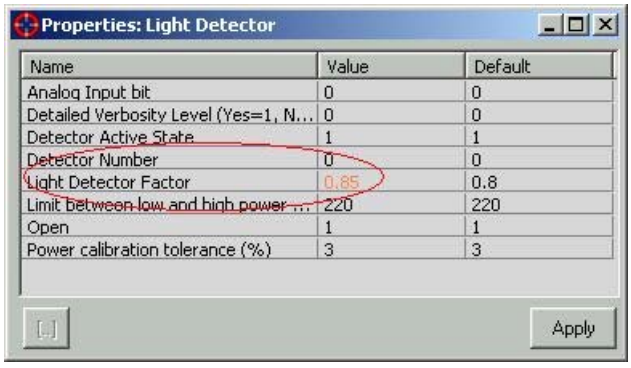
- Laser calibration fails after installing Update 3 on older model Magnus 400 platesetters.

  To fix the laser calibration:

  1. Before installing Update 3, save the registry.
  2. After the installation, in the Magnus 400 Controller software, select **Utilities > Hardware > Expose System > Laser System**.
  3. Right-click **Light Detector** and select **Properties**.
  4. In the Properties: Light Detector window, manually correct the value of the **Light Detector Factor** parameter.



Before installing Update 3

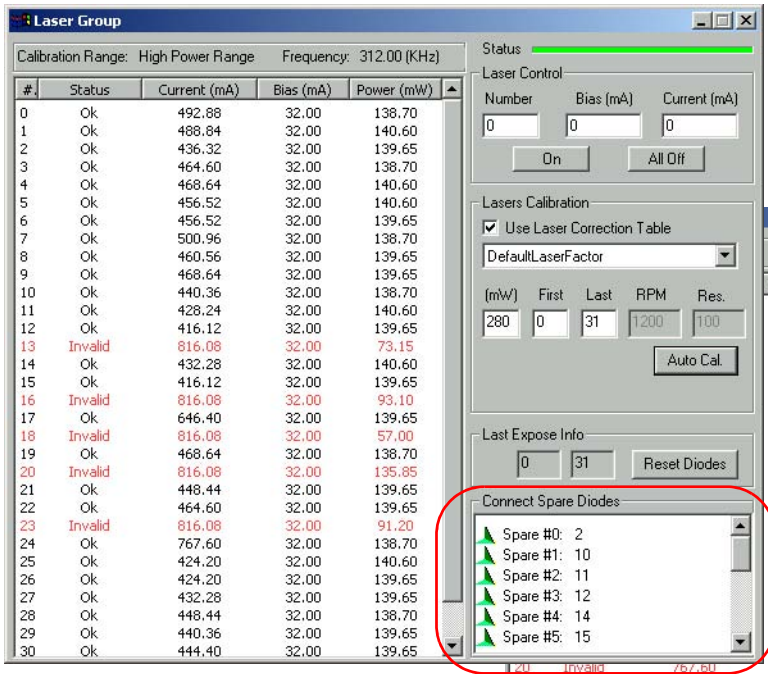


After installing Update 3

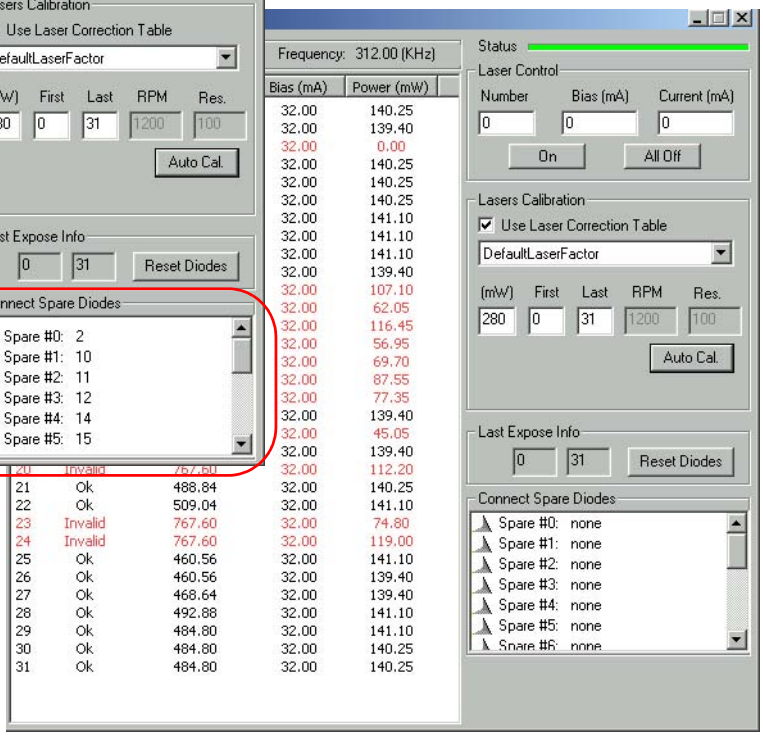
- After installing Update 3, spare laser information is missing.

  To update the spare laser information:

  1. Before installing Update 3, write down the value for each of the six spare lasers.
  2. After the installation, in the Magnus 400 Controller software, select **Utilities > Hardware > Expose System** and double-click **Laser Group** to open the Laser Group window.



Before installing UPD3



After installing UPD3

3. In the **Connect Spare Diodes** area, manually type the value for each of the new spare lasers.

Important: The previous software version included only six spare lasers (#0–5). Update 3 has 16 spare lasers. When updating the spare laser information, use the following table to make sure that the new spare laser values are inserted correctly. For example, if Spare #2 = 11 in the previous software version, then Spare #12 = 11 in the UPD3 software version.

Previous Spare Lasers	UPD3 Spare Lasers
Spare #0	Spare #10
Spare #1	Spare #11
Spare #2	Spare #12
Spare #3	Spare #13
Spare #4	Spare #14
Spare #5	Spare #15

Installing Update 3

This section describes how to install Update 3 for Magnus 400 platesetters.

The installation procedure for Update 3 includes the following steps:

Note: If Update 2 is already installed on your computer, the only sections relevant for you are Installing the Update 3 Software on page 17 and Testing the Update Installation on page 25.

- *Replacing the Distribution Board* on page 13
- *Replacing the USB Cable With the RS-232 Cable* on page 16
- *Installing the Update 3 Software* on page 17
- *Enabling SED Firmware Upload Through COM1* on page 19
- *Updating the SED Board With Embedded Firmware* on page 20
- *Reconnecting the SED Board to COM6* on page 24
- *Loading LMCE Firmware* on page 25
- *Testing the Update Installation* on page 25

Replacing the Distribution Board

1. From the Magnus 400 Controller software, open the rear door of the platesetter.
2. Quit the Magnus 400 Controller software, turn off the platesetter, and disconnect the main power.
3. Open the left and right side doors of the platesetter.
4. Remove the back door.
5. Remove the vacuum pump cover.

6. Remove the two cross-head screws from the distribution box, and open the distribution box door.



To remove the distribution board:

1. Disconnect all cable connections from the distribution board.



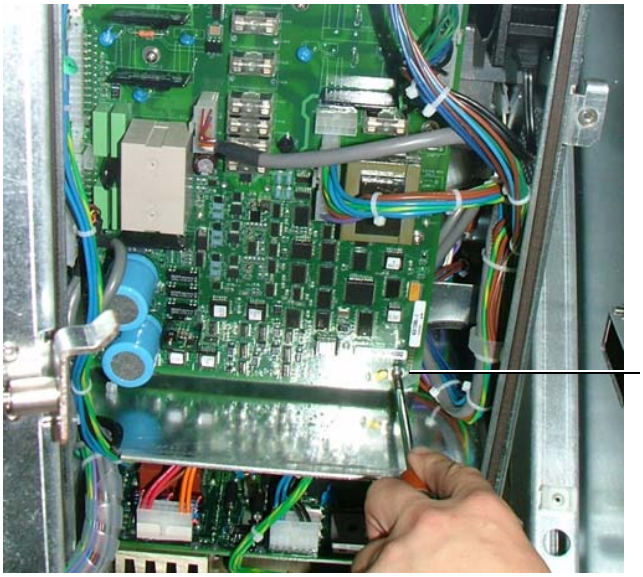
Connections to remove

2. Make sure to disconnect the cables from the side of the board.



Connections to remove

3. Remove the four cross-head screws.



Cross-head screw location

4. Remove the distribution board.

To install the updated distribution board:

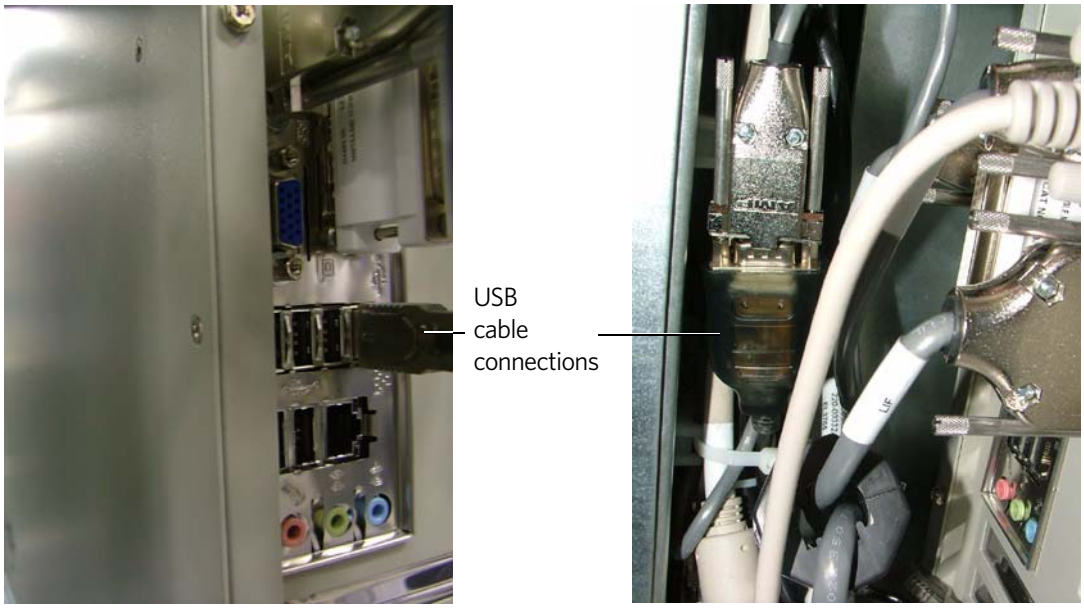
1. Insert the distribution board (part number 503-00334B), and secure it with the four cross-head screws.
2. Connect all cables.
3. Close the distribution box door, and secure it with the two cross-head screws.

Replacing the USB Cable With the RS-232 Cable

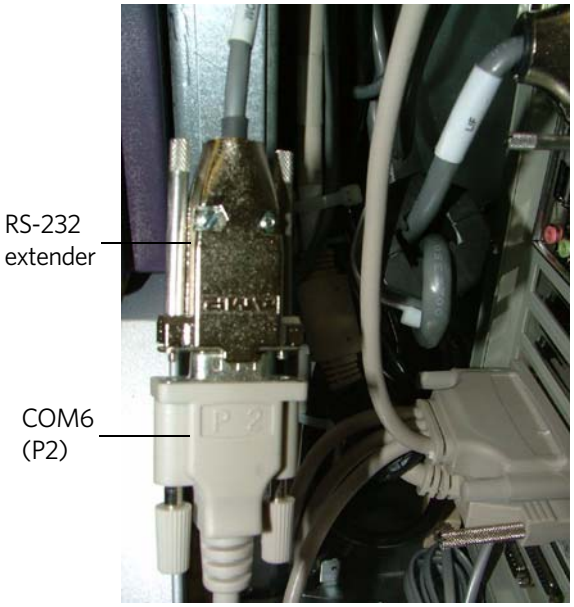
Note: This section is relevant for LDA devices only. If your device is a Magnus 400 Quantum platesetter, proceed to Installing the Update 3 Software on page 17.

The USB cable is no longer needed. Instead, the RS-232 cable connects to COM6.

1. On the right side of the platesetter, disconnect the USB cable from the USB port, and from the RS-232 cable.



2. Connect the RS-232 cable to the RS-232 extension cable.
3. Connect the RS-232 extension cable to the COM (P2) port on the rear panel of the computer.



Installing the Update 3 Software

Installing the Update 3 software requires you to perform some hardware changes also. Be sure to observe safety regulations when performing these changes.

Note: If update 1 is installed, you must remove it before you install update 3.

Note: If you perform a cold start before installing Update 3, before you begin, start the Magnus 400 Controller software and then quit the software.

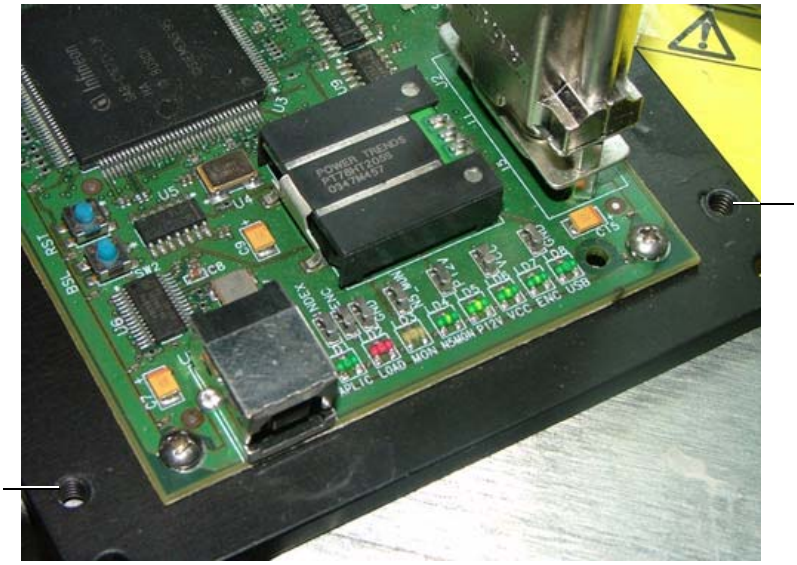
1. Back up the registry and the database.

   Note: If Update 2 is already installed on your computer, proceed to step 8.

2. In the Magnus 400 Controller software, open the top door of the platesetter.
3. Quit the Magnus 400 Controller software, and shut down the platesetter.
4. Open the left and right side doors of the platesetter, and remove the left and right side panels.
5. Check whether the SED board in your device has a cover. If the SED board does not have a cover, proceed to step 8.

   Note: On early versions of the Magnus 400 platesetter, the SED board is partially covered, and you must remove the cover.

6. From the SED board, remove the four cross-head screws and remove the SED board cover. You will not need to reinstall the cover.



7. Connect the main power and turn on the platesetter, but do not start the Magnus 400 Controller software.

   Note: If you performed a cold start before installing Update 3, when you start the software, error messages related to the distribution board appear. The Magnus 400 Controller software version does not recognize the updated distribution board. Before you begin, start the Magnus 400 Controller software, and then quit the software.

   If the LDA head is type S, after the software loads, you must change the following two parameters:

   a. In the Hardware tree, select **Laser Group** and click **Properties**.

   b. Change the following parameters:

      - **Last Laser**: Change to **31**.
      - **Last Laser Active**: Change to **31**.

8. Make sure that the Magnus 400 Controller software is closed, and then insert the Update 3 CD into the platesetter CD-ROM drive.
9. In Explorer, double-click the CD-ROM drive.
10. In the Welcome dialog box, click **Next**.
11. Follow the Update 3 installation wizard, and then click **Finish**.
12. Restart the computer, as follows:

    - **LDA head**: Do not load the Magnus 400 Controller software. Load only the Microsoft® Windows® operating system.
    - **Quantum**: Load the Windows operating system and the Magnus 400 Controller software, and then proceed to *Testing the Update Installation* on page 25.

Changing Head Type

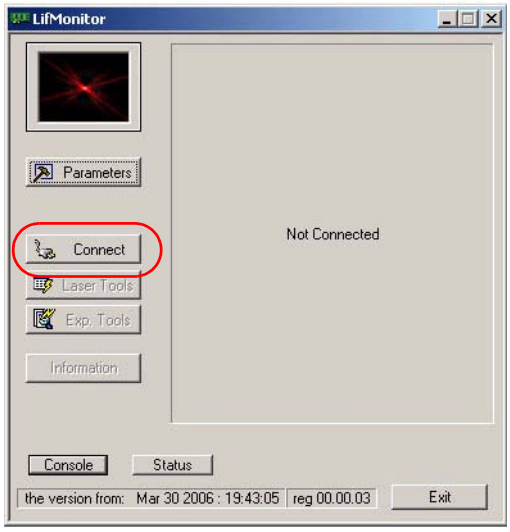
If you have replaced an LDA head that has 42 lasers with one that has 32 (or vice versa), you must change three parameters.

1. In the Magnus 400 Controller software, in the Hardware tree, select **Laser Group** and click **Properties**.
2. Change the following parameters as indicated:

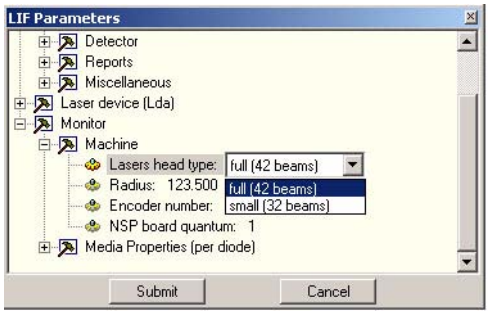
   - **Last Laser**: For 42 lasers, change to **41**. For 32 lasers, change to **31**.
   - **Last Laser Active**: For 42 lasers, change to **41**. For 32 lasers, change to **31**.

3. In the registry, select **IO OBJECTS\Lif Data Card\LIF\00.00.01\LifIaldaParam** and delete all spare lasers (spareLsr).

4. To update the laser type:
   a. Locate **C:\Lotem\Util\Lif Monitor** and double-click **LifMonitor.exe**.
   b. In the LifMonitor dialog box, click **Connect**.



   c. In the LIF Parameters dialog box, select **Monitor > Machine > Lasers head type** and select the relevant laser head:
      - **Magnus 400F**: full (42 beams)
      - **Magnus 400S**: small (32 beams)



Enabling SED Firmware Upload Through COM1

Note: If Update 2 is already installed, Update 3 overwrites the existing Update 2 files.

The Smart Edge Detection embedded firmware uploads through COM1, so you must temporarily connect the SED cable to COM1.

1. On the right side of the platesetter, disconnect the COM1 cable from the COM1 port (located under the mouse and keyboard ports).
2. Disconnect the RS-232 cable from the COM6 port.
3. Connect the RS-232 cable to the COM1 port.

Updating the SED Board With Embedded Firmware

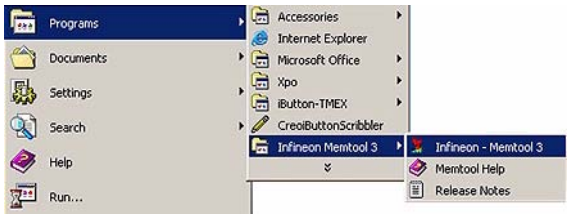
Note: If Update 2 is already installed, Update 3 overwrites the existing Update 2 files.

To upload the Smart Edge Detection embedded software:

1. In Explorer, in the CD-ROM drive (**F:**) select the **Smart ED** folder, and double-click **Infineon_memtool_3_4_0.exe**.
2. In the Memtool installation wizard, click **Next** twice, and click **Finish**.

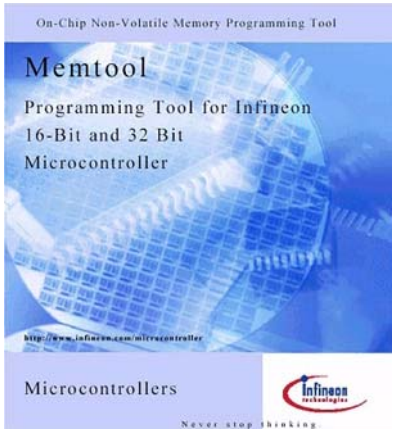
To select the target folder for the embedded files:

1. Select **Start > Programs > Infineon Memtool 3 > Infineon - Memtool 3**.

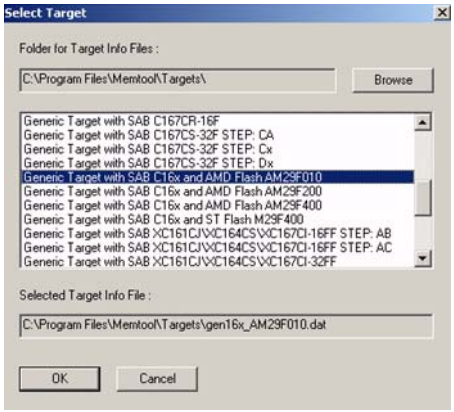


Note: If at any stage the required results do not appear, continue the process from where you left off.

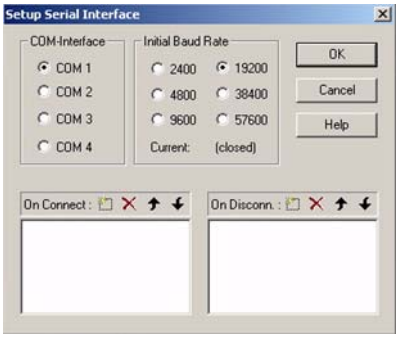
2. Click inside the Memtool window.



3. In the Select Target dialog box, select **Generic Target with SAB C16x and AMD Flash AM29F010** and click **OK**.



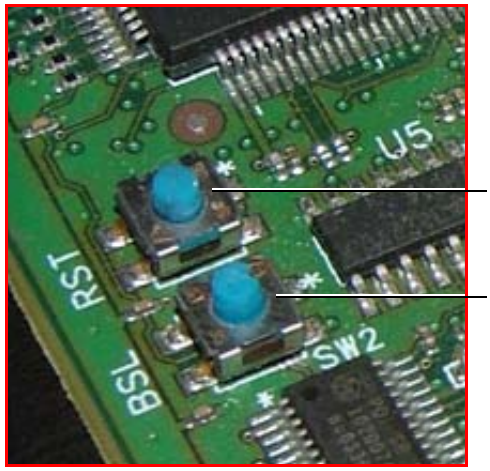
4. In the Setup Serial Interface dialog box, click **OK**.



Important: Before performing step 5, read through steps 5–7.

5. On the left side of the platesetter, on the open SED board, press the **BSL** button down and continue to hold it down.

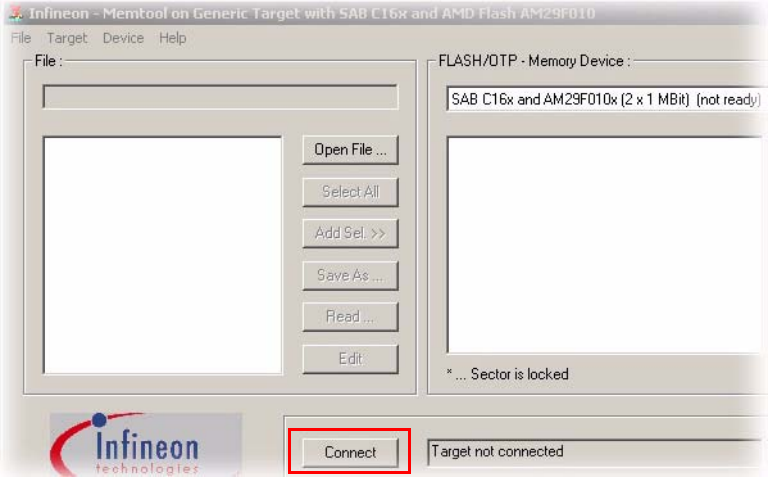




6. While you are pressing the BSL button, press and release the **RST** button.
7. Release the BSL button. All LEDs should be on.

To import the SED board file:

1. On the workstation, in the Infineon dialog box, click **Connect**.



2. To import the file for the SED board, select **Open File**.

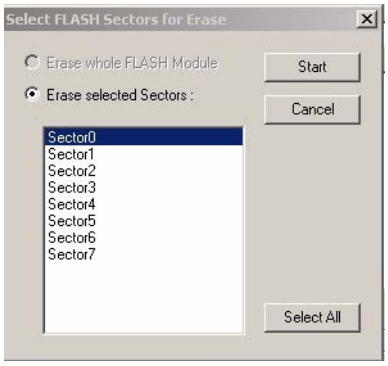
3. In the CD drive (**F:**), select the **SmartED** folder.
4. In the **SmartEd** folder, select the **edgedet_monitor_20mhz.hex** file and click **Open**.

To erase Sector 0:

1. In the Infineon dialog box, click **Erase**.



2. In the Select FLASH Sectors for Erase dialog box, from the list, select **Sector0** and click **Start**.

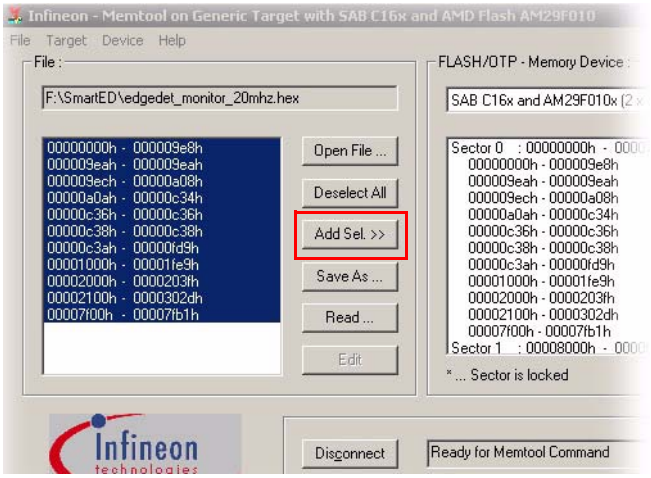


3. In the Execute Memtool Command dialog box, in the **Operation** box, verify that **success** appears, and click **Exit**.

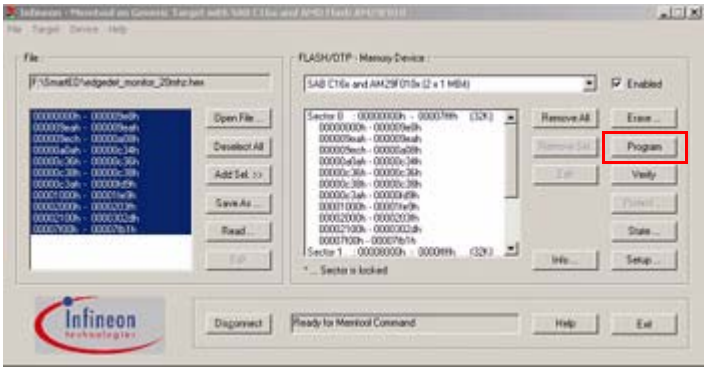


4. In the Infineon dialog box, click the **Select All** button.

5. To add what you selected, click the **Add Sel** button.



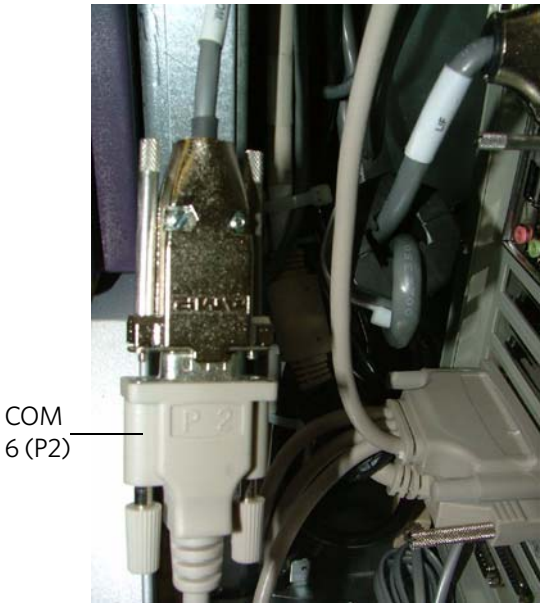
6. Click the **Program** button. The program uploads to the SED board.



7. Click **Exit**, and click **Exit** again to quit the Infineon software.
8. On the left side of the platesetter, on the SED board, press the **RST** button. Confirm that the red and orange LEDs are off, and that the green LED on the left is flashing.

Reconnecting the SED Board to COM6

1. On the right side of the platesetter, disconnect the RS-232 cable from the COM1 port.
2. Connect the COM1 cable to the COM1 port.
3. Connect the RS-232 cable to the RS-232 extension cable.
4. Connect the RS-232 extension cable to the COM6 port (labeled P2).
   The following illustration shows the RS-232 cable connected to the COM6 port. The RS-232 extension cable is not shown.



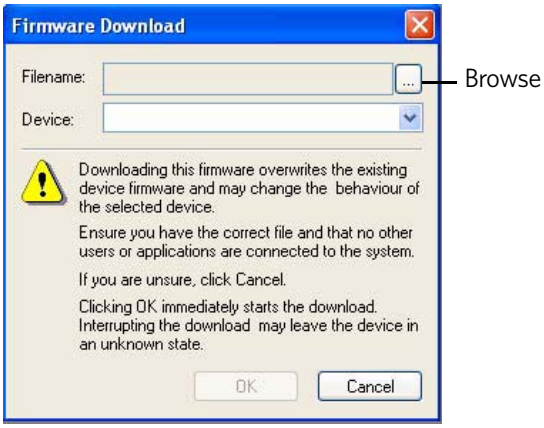
Loading LMCE Firmware

Important: Make sure that your Kodak Service Shell version is 2.5. Do not load from Service Shell version 2.6 Service Pack 1.

1. On the Service Shell toolbar, click the **Download Firmware** icon.



2. In the Firmware Download dialog box, click the **browse** button and locate **C:\Lotem\Lotem400\UploadFile\Lmce.**
   - For Update 2, select the **Magnus400fmw1.02.03** file and click **OK**.
   - For Update 3, select the **Magnus400fmw.bin** file and click **OK**.



Testing the Update Installation

1. Select **Utilities > Machine Info** and confirm that **Service Pack 3** appears.
2. Click **OK**.

Note: If the LMCE firmware does not load, or if an earlier LMCE version appears, load the LMCE firmware manually using the `Bload` command, as described in the following procedure:

1. Open the Splot terminal.
2. At the `Quantum>>` prompt, type `reset boot`
3. When the `Boot>>` prompt appears, quit the Splot terminal to free the serial port.
4. Open a command-prompt window and at the prompt, type `cd \th2\tools`
5. At the <drive letter>:\TH2\Tools> prompt, type `bload f=filename.bin p=8 i=main`
   The file name is either:
   - **QuantumFmw120-03.bin**
   - **mcefirmware.bin**
6. After the file is successfully loaded, open the Splot terminal.
7. At the `Boot>>` prompt, type `reset`

8. At the `Quantum>>` prompt, type `scan eh_&Logicpower bon`
9. At the `Quantum>>` prompt, type `reset`

Note: To reinstall the update, you must first uninstall it. To uninstall the update, in Explorer, locate **Control Panel > Add/Remove Programs** and remove the **Magnus Update 1.01.391.003 upd3** file.