

## Section 8: Updating the BAC-5051(A)E router

This section describes the procedure for flashing a BAC-5051(A)E Conquest router with new firmware.

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Topics in this section cover the following information and procedures.

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- ◆ [Prepare to upgrade on page 49](#)
- ◆ [Flashing the router on page 50](#)
- ◆ [Return to service on page 52](#)

### Applicable models

The procedures in this section apply only to flashing the firmware in model BAC-5051(A)E Conquest Router.

### Prepare to upgrade

Before updating the firmware in a controller, set up the computer as follows:

- ◆ Turn off screen savers and hibernation modes. As an alternative, set screen savers and hibernation to 30 minutes or longer.
- ◆ Close all open files and exit from all open programs.
- ◆ Download the Firmware Upgrade Tool from the KMC Controls partner web site. Follow the instructions in the topic [Getting started with the Firmware Upgrade Tool on page 5](#).
- ◆ Add the model specific firmware image or images. Follow the instructions in the topic [Adding model specific firmware images on page 15](#).

In addition to the Firmware Upgrade Tool you will need the following items.

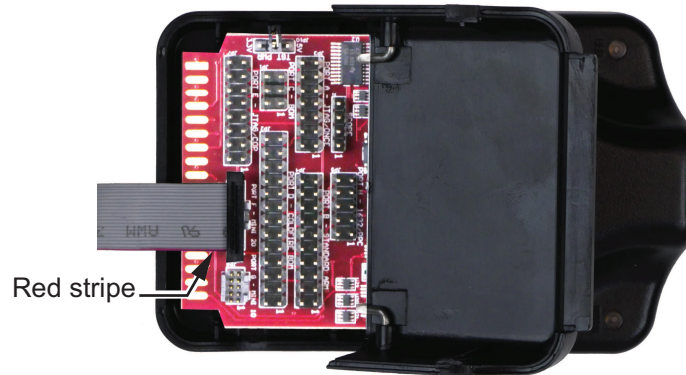
- ◆ A USB-A to USB-B cable.
- ◆ A programming pod with a 20-conductor ribbon cable from an HTO-1104 upgrade kit.

If a 20-conductor cable is not connected to the pod, do the following to prepare the programming pod from the HTO-1104 upgrade kit.

1. Open the cover of the pod.
2. Remove any installed ribbon cables.
3. Position the red stripe of the cable over Pin 1 as shown in the following illustration.
4. Push the cable down over the group of pins.

5. Close the cover.

**Illustration 8–1 Programming pod with 20-conductor cable installed.**



When the computer and pod are ready, prepare the controller by doing the following.

1. Connect the USB cable to a USB port on your computer.
2. Connect the other end of the USB cable into the programming pod. The blue LED illuminates to indicate a good connection.

The first time you plug the USB Flash upgrade interface into a computer, you will see a prompt that new hardware has been found. Choose the install option and allow the system to proceed.

## Flashing the router

You must follow these instructions exactly and in the order listed for this procedure to be successful.




### Caution

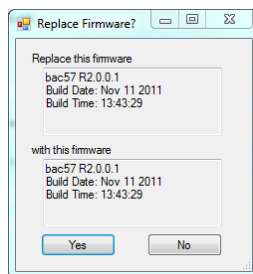
Perform the following procedure in a static free work area. The router can be permanently damaged from static electricity.



### Caution

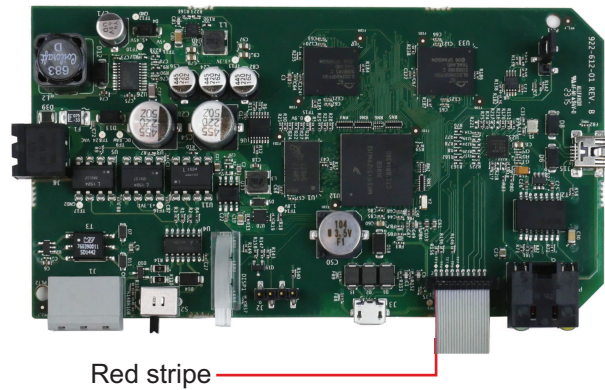
The flash process will take several minutes. Do not click Cancel in the Flash Programmer tab after clicking Yes in the Replace Firmware dialog.

1. Disconnect power from the router.
2. Disconnect all network connections from the controller.
3. Squeeze the green sides of the router, pull the case apart and then remove the circuit board from the router.
4. Plug the flat ribbon cable into the flash pins of the router. For the flash pin location, see the illustration *Flash pins in the BAC-5051(A)E router* on [page 52](#). Note the orientation of the red stripe.
5. Reconnect power.
6. Start the Firmware Upgrade Tool.
7. Locate the model of the controller in the Product List.
8. Click  next to the model number to reveal the firmware builds.
9. Double-click the build number under the model number.
10. Select or clear the **Create Image First** check box.
  - If the check box is selected, the Firmware Upgrade Tool will save a copy of the existing firmware and configuration.
  - If the check box is not selected, the existing firmware and configuration will not be saved.
11. Click **Start** and follow the on-screen instructions.
12. When the Replace Firmware dialog opens, click **Yes** to continue or **No** to cancel.



The Upload Progress bar will indicate the status of the upload. Do not click **Cancel** during the upload or the firmware may become corrupt.

13. When the process is complete, return the controller to service as described in the next topic.

**Illustration 8–2 Flash pins in the BAC-5051(A)E router****Return to service**

Once the new firmware is loaded, return the router to service.

1. Remove power from the router.
2. Remove the ribbon connector from the flash port of the controller.
3. Place the router circuit board in the case and snap the two halves together.
4. Reconnect the network connections.
5. Reconnect power to the router.

The programming process is now complete. The ready LED on the router should be blinking at this point. If it is not blinking, cycle power to the router.