

UPGRADING THE FLASH MEMORY

The UltraView has flash memory, which means its firmware may be reloaded, to support new features or fix any problems in its operation. You have a choice of two baud rates at which to load the flash file, either 9600 baud or 57600 baud. Both require an 8 bit, no parity, and 1 stop bit protocol. You must have the proper serial cable. You can obtain it from Rose Electronics or make it from the specification in Appendix B.

The file can be obtained from the Rose Electronics bulletin board or FTP site and is of the form UrrN.HEX where rr is the revision number and N is either E for multi-platform, P for PC, and S for Sun, or A for Apple. Please make sure to get the right file. The unit won't let you load the incorrect file. There are two methods to load the flash file.

Method 1 - Using a communication program

1. Connect the RS232 cable from your computer's serial port to the RS232 port on the unit.

2. Press both the - and + switches on the front panel, at power-on of the UltraView. The UltraView is ready to accept the upgrade file at 9600 baud as shown by LED 1 being lit. To use 57600 baud, press the + switch, LED 4 will light. Before loading the file you can always change between the baud rates by pressing the - switch (9600 baud, LED 1 lit) or the + switch (57600 baud, LED 4 lit). Run your communication program. Set the baud rate to the correct rate and put the program in direct connect mode. When you press the - or + switch, you should see the message:

Waiting for file at 9600 baud or Waiting for file at 57600 baud.

3. Send the file to the unit using a simple ascii text file protocol. While the file is being sent, periods are sent to indicate file copy progress. Once the file has been sent, you should see the message:

*Receive successful
Hit space to program*

3. Hit the space bar. The flash is now being programmed and verified. Programming and verifying progress is indicated by sending periods. You should see the following message:

Programming flash

.....
Verifying flash

.....
*Verify successful
Hit enter to boot*

4. Hit the enter key. The new firmware now executes and diagnostic information is sent to your screen as well as the on-screen display. Observe the new revision number matches that of the file. Then you will see:

Hit enter key to continue

5. Hit the enter key. The box is now operational and port 1 is selected. The flash procedure is complete.

You may receive any of the following error messages when receiving the file:

Checksum error or Record error or Data error
Receive failed
Try again Y/N?

If any of these errors occur, it means the RS232 cable is bad, the RS232 protocol is not configured correctly, or there are bad transmit or receive levels, or there are hardware problems on either the receiver or transmitter end. Only three wires are necessary to the UltraView, transmit, receive and ground. Enter Y to try again and it takes you back to the beginning *Waiting for file ...* Enter N and the box will prompt you *Hit enter to boot* which brings you to the same point as step 4, with the firmware unchanged.

If verifying fails, the box should be serviced. You can try to program the flash again though by hitting enter.

Verify failed
Hit enter to program

Method 2 - Using the LEDs and front panel switches with a file copy

1. Connect the RS232 cable from your computer™ serial port to the RS232 port on the unit.
2. Press both the - and + switches on the front panel, at power-on of the UltraView. The UltraView is ready to accept the upgrade file at 9600 baud as shown by LED 1 being lit. To use 57600 baud, press the + switch, LED 4 will light. Before loading the file you can always change between the baud rates by pressing the - switch (9600 baud, LED 1 lit) or the + switch (57600 baud, LED 4 lit).
3. Copy the file to the unit. While the file is being copied LED 1 or 4 will flash. Once the file is copied, LED 2 will light.
4. Press and release the + switch, LED 2 flashes off for a brief instant. The flash is now being programmed and verified. LED 3 now lights.
5. Press and release the + switch, LED 3 flashes off for a brief instant. The new firmware is now run and diagnostic information is sent to the on-screen display. Observe the new revision number matches that of the file. LED 4 now lights.
6. Press and release the + switch. LED 1 now lights. The box is now operational and port 1 is selected. The flash loading procedure is complete.