

Firmware Update process

Firmware Update includes two files:

- 1) Zipped software, software.zip.
- 2) Zipped firmware.

Firmware.zip, includes two files:

- 1) <mcu1_L.hex> for linear motion equipment.
- 2) <mcu1_A.hex> for angular motion equipment.

Prepare a computer with a functioning GPIB card.
Test the GPIB to make sure it's working.

Unzip the software (software.zip) to a folder, and then click on the file setup for software installation.

The software installation will create a folder \SunolFirmwareUpdate, and a program with the name <Firmware Update> in the <All program> list

Unzip the firmware file (Firmware.zip) to the folder \SunolFirmwareUpdate.
During update, the program(Firmware Update) always looks for a file with the name mcu1.hex.

If you are going to update a channel of linear motion first, rename the file <mcu1_L.hex> to <mcu1.hex>, by deleting "_L" and keep the second file as it is.

After finishing linear motion update, and if you are going to update a channel of angular motion, restore the file name <mcu1.hex> as it was before by adding "_L" .

Rename the file <mcu1_A.hex > into <**mcu1.hex**>, by deleting "_A".

Firmware Update defaults to GPIB address 2, as shown in figure 1. Change the GPIB address of the channel you are intending to update to address 2, or change the default GPIB address to the address of the particular channel you are intending to update, as shown in figure 2 and 3. Press **RESET** key to clear GPIB interface.

Make sure that each channel has a unique address, selected from 1 to 30.
Once a channel has finished updating, it is defaulted to GPIB address -1(FFh).

This address, -1, is invalid. Change the address to a valid address before proceeding to update firmware of another channel

No other programs are allowed to run while Firmware Update is running, to protect the process. The Update program shouldn't be interrupted while running.

Once you are done updating all channels, restore the file names as they were before <mcu1_L.hex> and <mcu1_A.hex>.

Start firmware update

Select start -> All programs -> **Firmware Update**

A panel appears on the screen title "**Firmware Update thru GPIB V0n**".

Address	Flash mode
2	1

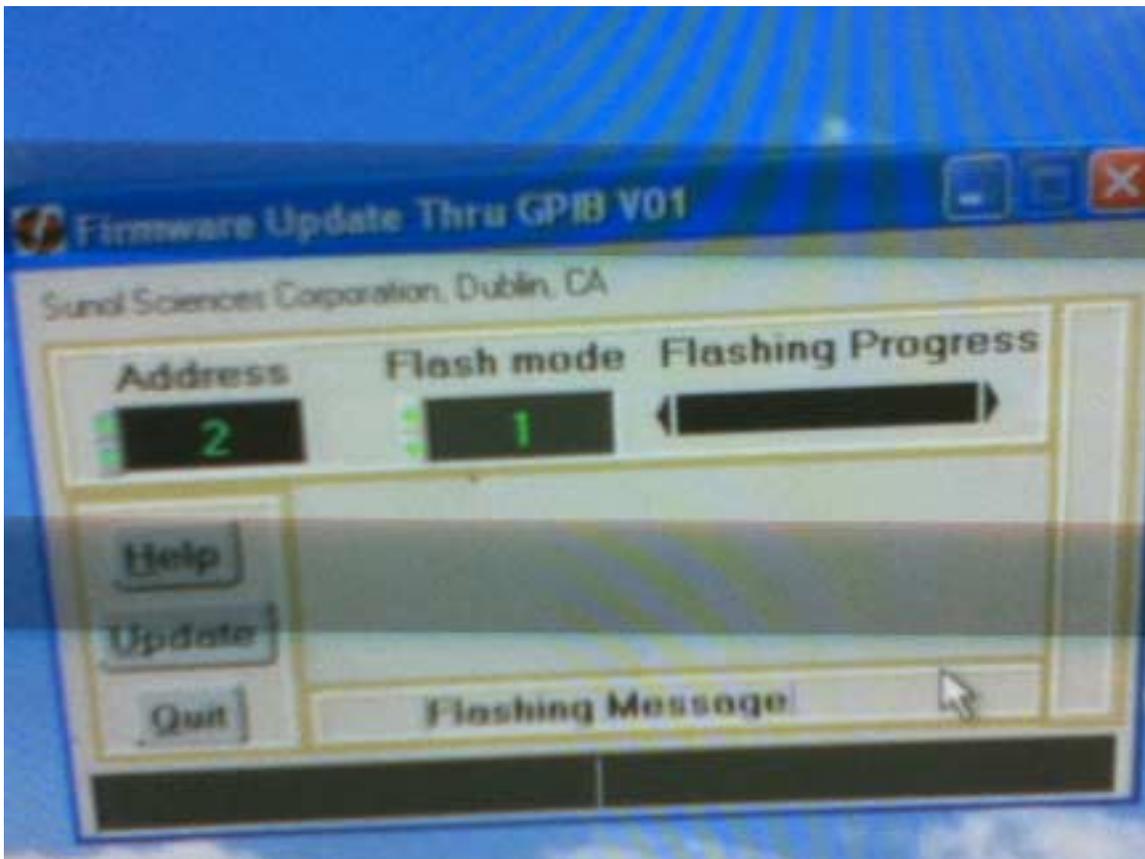


Figure 1

Either change the address on the panel or on the control channel to match each other.



Figure 2



Figure 3

Now we are ready to replace the old firmware with a new firmware.

To start updating the firmware, click on the button <Update>.

On the controller LCD you should see a message " **MCU1 Update FW**", as shown in figure 4.



Figure 4

While update is in progress, you will see a progress green bar, under the title "**Flashing Progress**", as shown in figure 5,6 and 7 .

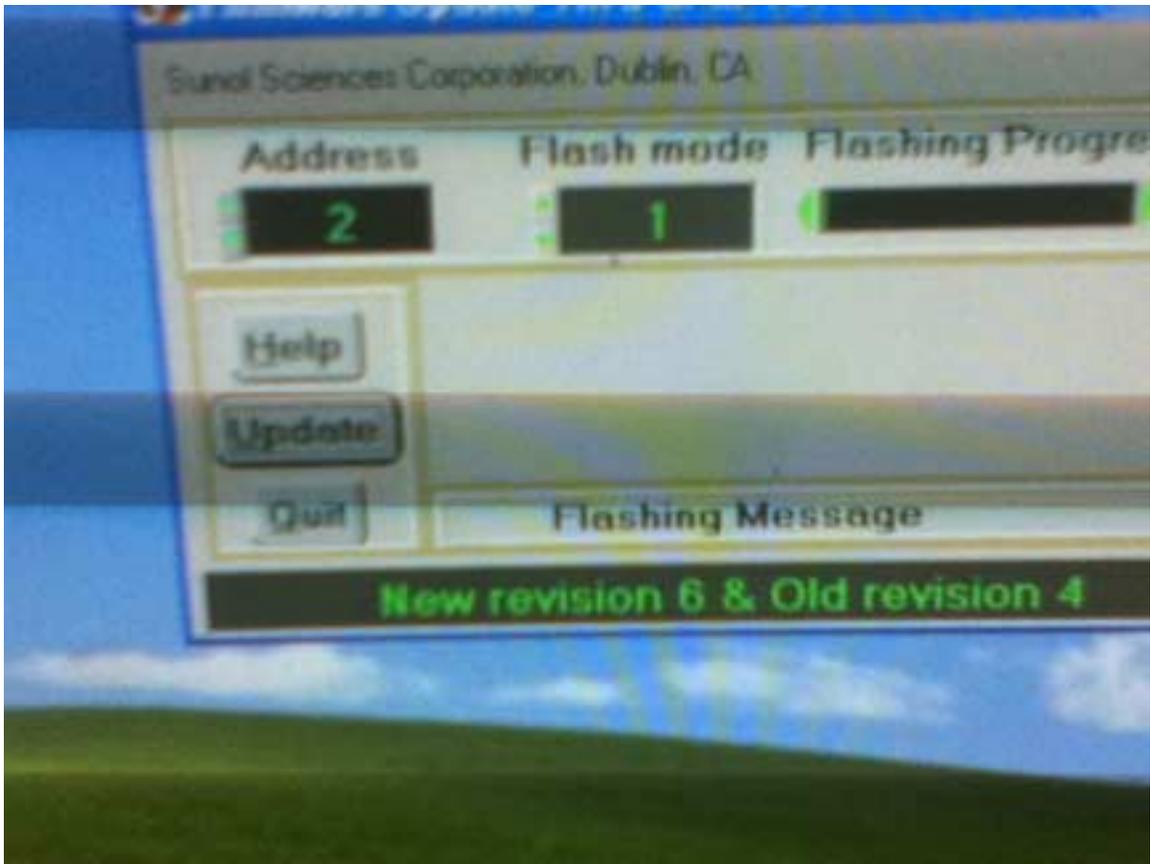


Figure 5



Figure 6



Figure 7

When the update is finished, you will see a message " **Flash success**", under the title "**Flashing Message**", as shown in figure 8.



Figure 8

Change the GPIB address for the channel that has been updated from -1 into a legal address (1 through 30).

Firmware Update fails:

Turn off/on the power of the SC110V controller. The LCD for that channel will be black, as shown in figure 9.

Quit Firmware Update , and then start it again with the same address and change Flash mode to 2, as shown in figure 10.

Address	Flash mode
2	2



Figure 9

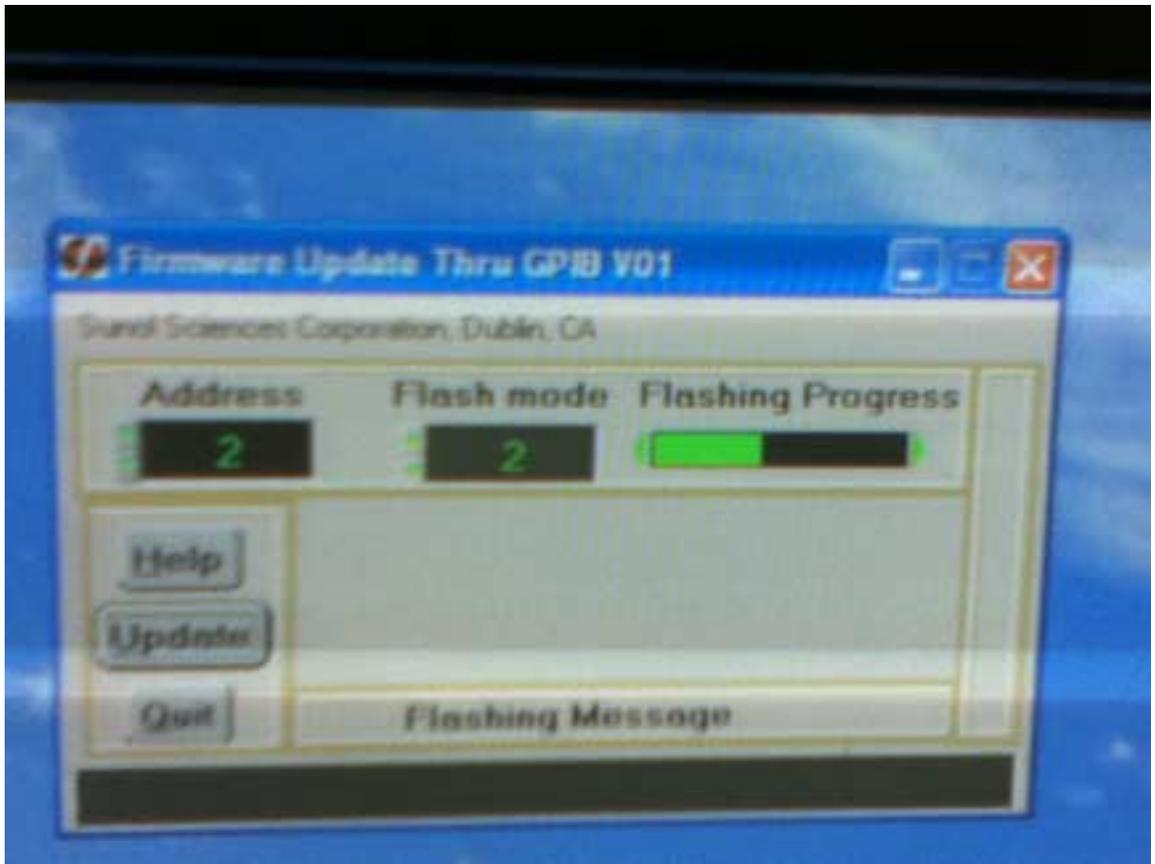


Figure 10

Click on "**Update**".