

Programming Interface (Loader) Users Guide

The Programming Interface (Loader) is shown in figure 1. It has 2 connectors, 2 slide switches and 1 push button switch. It can generate a special pulse sequence to the reset pin of a microcontroller making it start at the boot vector.

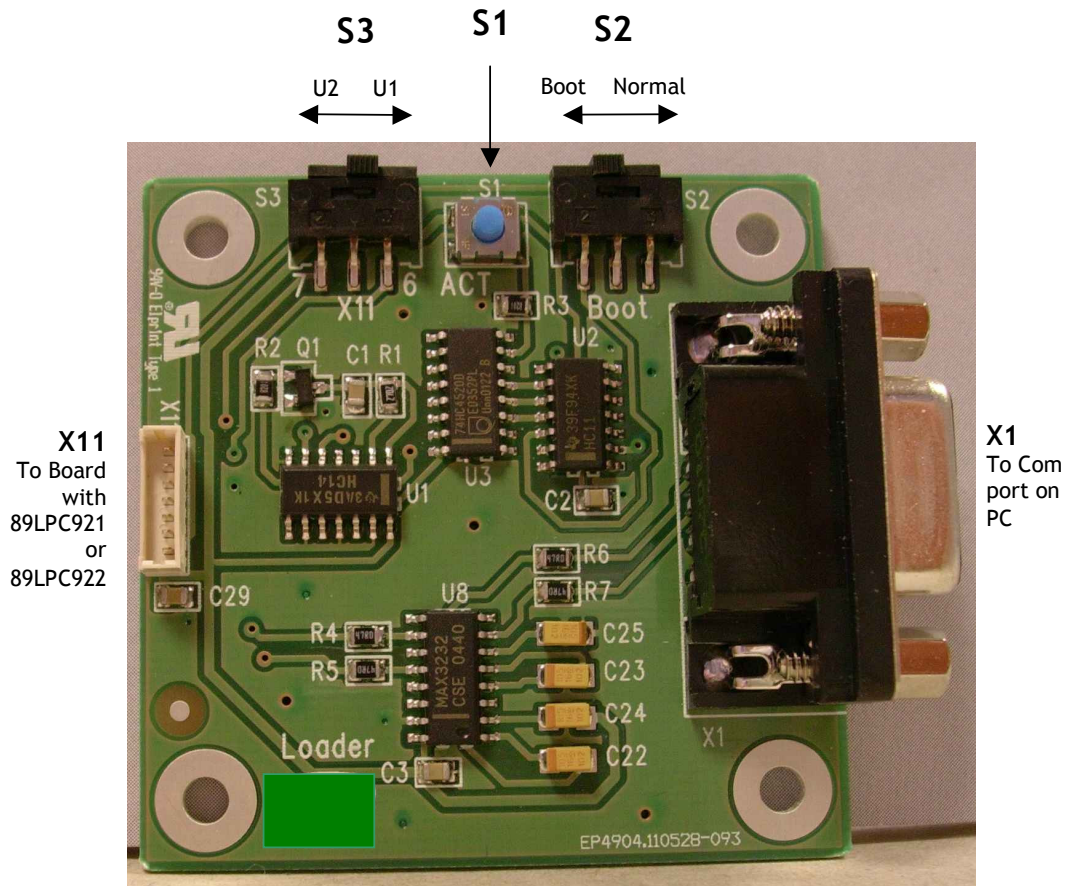


Figure 1

1. The Loader is connected to the application board that are to be programmed via connector X11 (figure 2). No power on the application board. ^{*note}

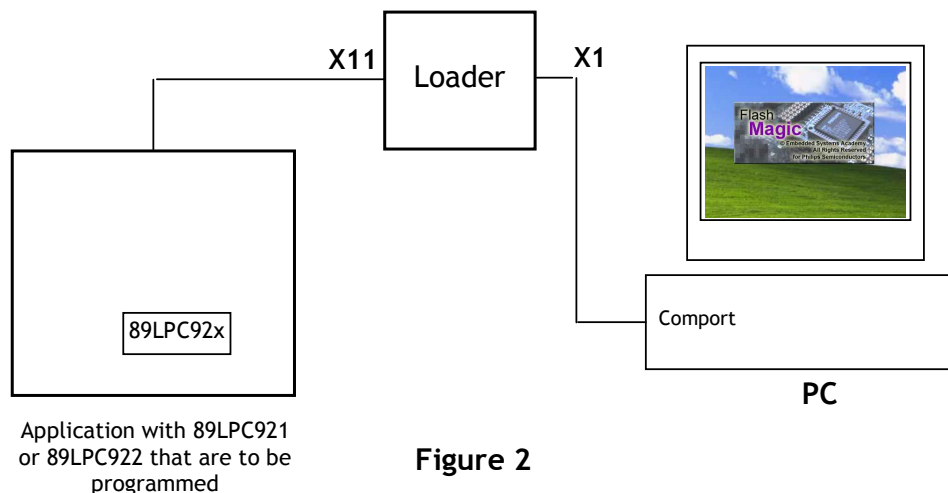


Figure 2

Programming Interface (Loader) Users Guide

2. Connector X1 is connected to a serial port on a PC (ex Com 1 or Com 2). Cable is a crossed 9 pole male to female, pin 3 to pin 2, pin 2 to pin 3, pin 5 to pin 5.
3. Switch S3 is set in accordance with the reference to the microcontroller on the application board (U1 or U2) that are to be programmed.
4. Switch S2 is set to position *Boot*.
5. Activate S1 and hold it activated while power is switched on to the application board and then release it.
6. Run the Flash Magic application on the PC. (Flash Magic is freeware and can be downloaded from <http://www.esacademy.com/software/flashmagic/>)
7. The picture shown in figure 3 appears on the PC screen.

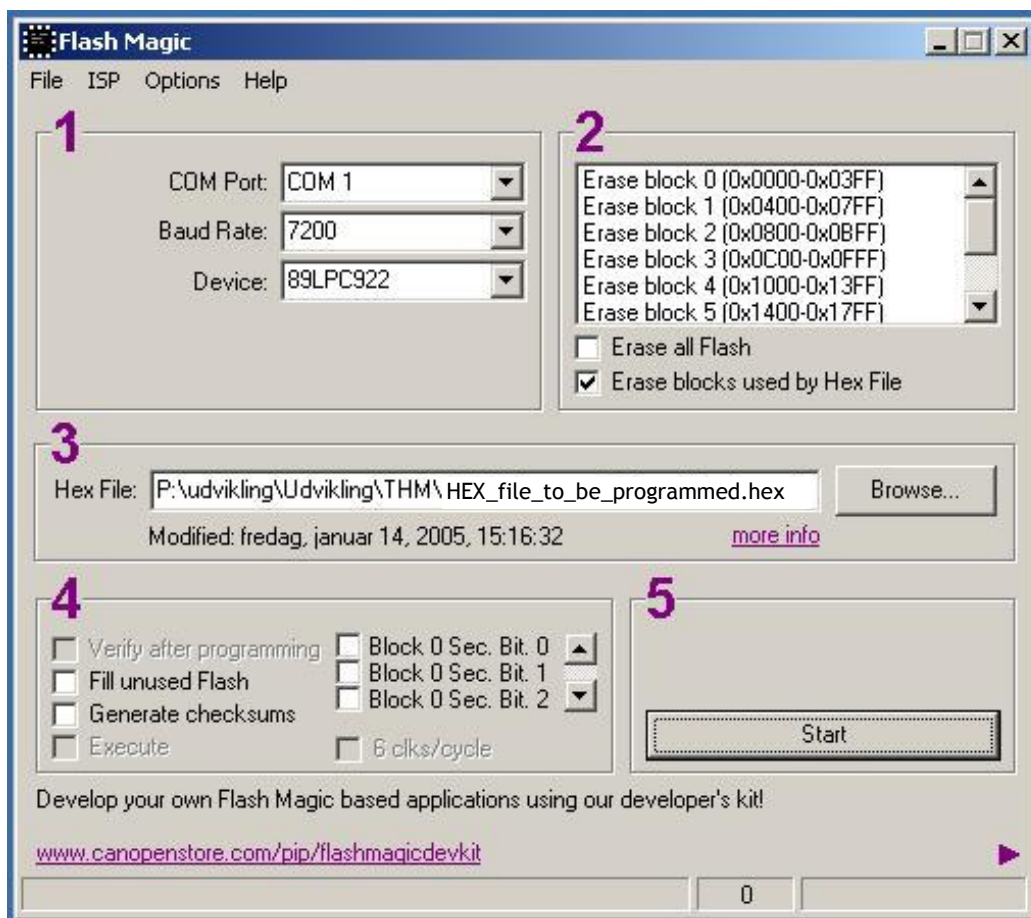
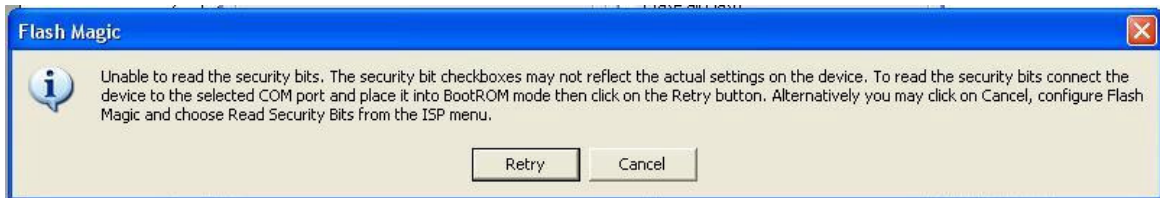


Figure 3

Programming Interface (Loader) Users Guide

8. If a message appears across the screen saying



then there is no contact with the microcontroller. Try switching the power off and switching it on while activating S1. Activate "Retry".
If the message box re-appears, the fault is to be found in the hardware on the application board.

9. Setup section 1 in Flash Magic as shown in figure 3 (if the target is 89LPC921 the device is changed)
10. Select the Hex file in section 3 in Flash Magic
11. Start programming in section 5 in Flash Magic
12. Switch off the power to the application after finishing the programming.

If the switch S2 is set to *normal* position and power is switched on without activating S1 it is possible to communicate with the application board via Hyperterminal (and the application software supports this feature).

*note

A cable for connecting X11 to the application board can be made from 2 Molex 53047 connectors (Farnell number 615-110) and 7 wires with crimped on terminals (Farnell number 889-593). The two connectors are mounted with a wire from pin 1 to pin 1, pin 2 to pin 2 and so on.