AVRISP Manual Firmware Upgrade

Firmware Upgrading is usually done either automatically by AVR Studio, if AVR Studio detects that the Firmware distributed with AVR Studio is newer that the Firmware present in the AVRISP, or by selecting "upgrade" in the STK500/AVRISP dialog window opened from the Tools Menu in AVR Studio. However, if the communication between the AVRISP and the PC is broken during Firmware Upgrading the AVRISP stops responding, both Firmware Upgrading and Programming will not work. The AVR ISP is NOT broken, but it is no longer able to automatically enter Programming mode – Programming mode have to be forced to do a firmware upgrade. Once this is done the AVRISP is up and running again.

The problem can occur if removing the power from the target application (which provide the target voltage for the AVR ISP) or if the serial cable is removed during the Programming.
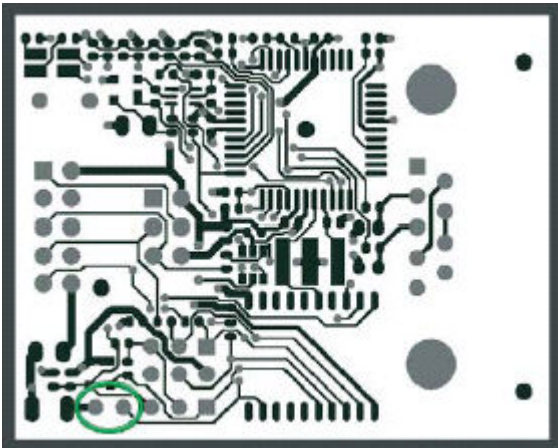

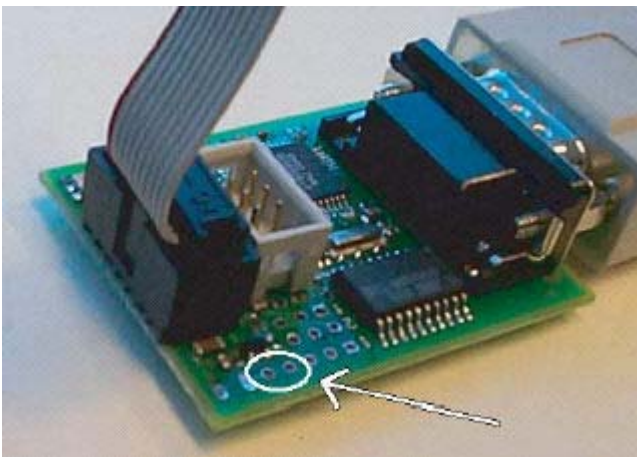Figure 1: AVR ISP PCB Layout – Pin Holes Marked with Green Circle

Fugure 2: AVR ISP without Housing – Pin Holes Marked with White Circle

Procedure for manually upgrading the AVR ISP Firmware:

- Power off the AVRISP by powering off the target board that supplies the power to the AVRISP.
- Short the pin holes marked on Figure 1 (PCB layout) and Figure 2 (photo).

- Power on the AVRISP by powering the target board that supplies the power to the AVRISP (1).
- Wait for 5 seconds.
- Remove the short.
- Start AVR Studio.
- Start the application "AVR Prog" located in the Tools menu.
- Click "Browse" button in Hex file window. Locate the firmware upgrade hex-file 'stk500.ebn' by pushing the 'Browse'-button in the 'Avr Prog Hex File'-window. The path for the 'stk500.ebn' for a normal AVR Studio installation is "C:\Program Files\Atmel\AVR Tools\STK500".
- Click "Program" button in Flash window.
- Close "AVR Prog" after Programming and verification is completed.
- Power off the AVRISP.

The Firmware of the AVRISP is now upgraded and the programmer is ready for usage.

Note: 1. If the STK500 is used to provide power to the AVRISP, make sure to use the headers SPROG1/2/3 and remove any devices present in the STK500. If a custom target board is used to supply power to the AVRISP, make sure to erase the device prior to the AVRISP upgrade to ensure that the device is not driving the ISP Lines.