*D*ESIGN *N*OTE #*011*

AVR Freaks

KEYWORDS:
JTAG ICE, FIRMWARE UPGRADE

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Manual JTAG ICE Firmware Upgrade

Introduction

Firmware upgrading is usually done automatically by AVR Studio, if AVR Studio detects that the Firmware distributed with AVR Studio is newer that the Firmware present in the JTAGICE, or by selecting "upgrade" in the STK500/AVRISP/JTAG ICE dialog window opened from the "Tools" menu in AVR Studio.

However, the JTAG ICE can stop responding to firmware upgrading if the firmware of the JTAG ICE is corrupted. Corruption of the firmware can happen if the communication between the JTAG ICE and the PC is broken during firmware upgrading or if the firmware in the JTAG ICE is re-programmed with the wrong file. The JTAG ICE is NOT broken, but the STK500/AVRISP/JTAG ICE dialog window is no longer be able to make it enter Programming mode. You will need to do a manual firmware upgrade to get it up and running again.

Manually Upgrading

Procedure for manually upgrading of the JTAG ISP firmware:

• Power off the JTAG ICE.

• Disconnect it from any target.

• Power on the JTAG ICE.

• Start AVR Studio.

• Start the application "AVRprog" located in the "Tools" menu (see Figure 1).

• Click "Browse" button in Hex file window. Locate and select the "upgrade.hex" in the AVR Studio subfolder named JTAGICE. Typical path is "C:\Program Files\Atmel\AVR Studio\JTAGICE" in AVR Studio 3.x and "C:\Program Files\Atmel\AVR Tools\JTAGICE" in AVR Studio 4.x.

• Click "Program" button in Flash window.

• Close "AVRprog" after programming and verification is completed.

• Power off the JTAG ICE.

• The firmware of the JTAG ICE is now upgraded and the programmer is ready for usage.

Figure 1. AVRprog Programming Software