Installing USBasp in Atmel Studio ver.7

Version 28.11.2015

(based on http://dthoughts.com/blog/2014/04/09/interfacing-usbasp-programmer-with-atmel-studio)

1. Installing USBasp driver and AVRDUDE

This will be a quick tutorial on how to install USBasp Programmer in Atmel Studio.

- a) Download USBasp drivers here- <u>http://www.fischl.de/usbasp/usbasp-windriver.2011-05-28.zip</u> and extract it somewhere on your PC/Laptop.
- b) Now connect your USBasp programmer to the USB port of your PC/laptop. Ignore the message that 'Device driver software was not successfully installed'.
- c) Go to Device Manager in control Panel and you will find 'LibUSB-Win32 Devices'. Click on it and select 'Update Driver Software...'
- d) Select 'Browse my computer for driver software'. After this browse to the location where you have extracted the USBasp drivers. (select usbasp-windriver.2011-05-28\usbasp-windriver.2011-05-28\libusb_1.2.4.0). Don't forget to check the "include subfolders" box.
- e) Click next and ignore the security warning 'Windows can't verify the publisher of this driver software' and select 'Install this driver software anyway'.

More information about AVR and USBasp with AVRDUDE (AVR Programming with USBasp - <u>http://dthoughts.com/blog/2014/04/04/avr-programming-with-usbasp</u>).

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Device Manager Control Panel

How to use USBasp under Linuxa or MacOS X <u>http://www.fischl.de/usbasp</u>. How to install driver for WIN8 and WIN8.1

 WIN 8
 (http://letsmakerobots.com/node/36841)

 WIN8.1
 (https://openchrysalis.wordpress.com/2014/09/26/installing-usbasp-driver

 software-in-windows-8-1/)

Next, you are going to need to install some software - AVRDUDE, for version 6.1 (<u>http://download.savannah.gnu.org/releases/avrdude/avrdude-6.1-mingw32.zip</u>). Make sure you put the AVRdude (two files: avrdude.exe and avrdude.conf) somewhere where you aren't going to move it because if you do, it will break the method.

PDF file about AVRDUDE 6.1 (http://mirror2.klaus-uwe.me/nongnu//avrdude/avrdude-doc-6.1.pdf).

2. Configuration Atmel Studio

Open Atmel Studio and go to the *Tools* menu and click on *External tools* and click on "*ADD*" (Menu -> Tools -> External Tools). The commands in the capture are listed below the image.

For quick and easy copy pasta, the commands are right here: E:\AVRDUDE\avrdude.exe. The command field is where your avrdude.exe is located.

Title: USBasp

Command: E:\AVRDUDE\avrdude.exe

Arguments: -p m32 -c usbasp -P usb -U flash:w:"\$(ProjectDir)Debug\\$(TargetName).hex":i (arguments are for ATMEGA32)

Dont forget to check *Use output window* and Prompt for arguments (optional). After adding these entries your external tools window will look like this. Press OK.

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[itle:	USBasp	
Command:	E:\AVRDUDE\avrdude.exe	
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nitial directory:		
Z Use Output windo	w Prompt for ar	guments

Note that you do have to "Build" (or press F7) your project before you can program with these programmers (that may be with anything too though) so don't forget to do that!

Now if you press *Tools* and *USBasp* you can see the USBasp will burn the hex to flash. You can see the messages in Atmel Studio's output window.

Тоо	ols Window Help										
>	Command Prompt										
	Device Pack Manager										
4	Device Programming	Ctrl+Shift+P									
*	Add target										
2	Data Visualizer										
	Code Snippets Manager	Ctrl+K, Ctrl+B									
邙	Extensions and Updates										
	Atmel Gallery Profile										
	USBasp										
	External Tools										
	Import and Export Settings										
	Customize										
ø	Options										

You can also put USBasp in the main menu. Select **Tools -> Customize** and select the **Commands** tab and select the options menu bar, **Tools** and **Add Command**.

Choose a mono or	toolloge to rearrange:		
) Menu <u>b</u> ar:	Menu Bar		
<u>]</u> oolbar:	Atmel Debugger		
) Conte <u>x</u> t menu:	Editor Context Menus		
<u>Controls:</u>			
VAssist <u>X</u>			Add Command
ASF			Add New Menu
<u>P</u> roject		•	
<u>B</u> uild		•	Delete
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F <u>o</u> rmat		• =	Modify Selection •
Mesource		•	
Tools	/	•	<u>K</u> eset All
Window		•	
Help		•	
Full Screen			

In the *Add Command* window, select *Categories -> Tools* and in *Commands* window -> *External Command* 1, then press *OK*.

Categories:	Comman <u>d</u> s:	
ASF Build Debug Design Edit File Format Help Project Project Project Project VASIDA VASIDA	Customize Device Pack Manager Device Programming Extensions and Updates External Command 1 External Command 11 External Command 12 External Command 13	E

In the main menu there is USBasp function.

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ADC_ch0.c 😔 🔀 ASF Wizard															
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	1 / *														

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Output Window during programming.

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Output
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Show output from: USBasp
 avrdude.exe: AVR device initialized and ready to accept instructions
 avrdude.exe: Device signature = 0x1e9502
 avrdude.exe: NOTE: "flash" memory has been specified, an erase cycle will be performed
           To disable this feature, specify the -D option.
 avrdude.exe: erasing chip
 avrdude.exe: reading input file "D:\Erasmus\test2014\test2014\Debug\test2014.hex"
 avrdude.exe: writing flash (150 bytes):
 avrdude.exe: 150 bytes of flash written
 avrdude.exe: verifying flash memory against D:\Erasmus\test2014\test2014\Debug\test2014.hex:
 avrdude.exe: load data flash data from input file D:\Erasmus\test2014\test2014\Debug\test2014.hex:
 avrdude.exe: input file D:\Erasmus\test2014\test2014\Debug\test2014.hex contains 150 bytes
 avrdude.exe: reading on-chip flash data:
 avrdude.exe: verifying ...
 avrdude.exe: 150 bytes of flash verified
 avrdude.exe: safemode: Fuses OK (E:FF, H:C9, L:EF)
 avrdude.exe done. Thank you.
```