* Avr Studio(4.18)에서 TEST 프로그램 사용법.

1. AVR Studio를 시작 합니다.

📾 Atmel AVR Tools	🕨 🔖 AVR Studio 4
📷 WinAVR-20100110	🕨 🧝 AVR Tools Help
	🥬 Plug-in Manager
	🛐 AVR Battery Studio
	🖌 AVR Wireless Studio

2. Open Project를 버튼을 누룹니다.

Welcome to AVR S	tudio 4	
	New Project Open	
	Recent projects	Modified
	🕼 D:\lang\avrstudio\test\test.aps	30-Mar-2010 22:51:47
	C:\lang\project\lot\memory\memory.aps	20-Mar-2010 15:52:17
	D:\lang\\atmega128_clcd\tm0027z_128_64\test.aps	29-Dec-2008 11:08:30
	D:\lang\project\lot\memory_test\memory.aps	12-Mar-2010 11:31:57
	😨 D:\lang\project\ubline_mp3\ethernet\master.aps	05-0ct-2009 14:44:31
	🕼 D:\lang\project\inchon\zigbee\slave\test.aps	06-Feb-2010 11:58:57
	🕼 D:\lang\cpuplaza\avrstudio\atmega128\test\test.aps	18Jan-2010 18:23:38
	🕼 D:\lang\cpuplaza\colalfeeder\sim_prog\main.aps	17-Nov-2009 17:13:21
	🛱 D:\lang\cpuplaza\avrstudio\atmega88\test\test.aps	11-Dec-2009 22:37:05
	📽 D:\lang\cpuplaza\avrstudio\atmega8\test\test.aps	11-Dec-2009 22:29:46
Ver 4.18.684 🗹 Show d	alog at startup	
	<< Back Next >> Finish	<u>C</u> ancel Help

Open Project F	ile or Object Fil	e				? 🗙
찾는 위치(<u>l</u>):	🚞 test		~ (3 🖻 🖻	•	
D Recent	🛅 default 💌 test, aps					
() 바탕 화면						
내 문서						
및 내 컴퓨터						
내 네트워크 환경	파일 이름(<u>N</u>): 파일 형식(<u>T</u>):	test, aps Project Files, Object Files (*,	.aps,∗,he	ex;*,d90;*	•	열기(<u>0</u>) 취소

3. C Source 프로그램을 컴파일 한후 에러를 확인 합니다.

AVR Studio - [test.c]							
ile <u>P</u> roject	<u>B</u> ui	Id	<u>E</u> dit	<u>∨</u> iew	<u>T</u> ools	D	
i 🗋 💕 🛃 🕼 🙂		<u>Β</u> ι	F7				
Trace Disabled		Re	ebuild .	<u>A</u> ll			
AVR GCC		Вι	uild an	d <u>R</u> un	Ctrl+F7		
🖃 🖏 test (default)+		Co	ompile		Alt+F7		
😑 🚖 Source Fil		СІ	ean		F12		
<u>≦</u>] test.c C3 Header Fil		E>	«port M	akefile			



4. Conect to the Selected AVR Programmer 버튼을 클릭 합니다.

* 1	AVR 9	Studic) -	[D:₩I	ang∀	tavrs	tudiot	Mtes	st₩te	est.c]		
: 🗈	<u>F</u> ile	<u>P</u> roje	ect	<u>B</u> uild	<u>E</u> dit	<u>∨</u> iew	<u>T</u> ool	s\ [ebug	<u>W</u> indo	ow j	<u>H</u> elp
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; Tr	ace D	isabled	ł	Ŧ	82 9	(₁ 0 -	业不	Con	AWB	*** '* '	∑2 AU	ro 🗄 🛔
AVE	100					-		7	/			-

* 장치요구시 아래 내용 설정

1. USB-ISP 경우(STK500)

Connect failed - Select A	VR Programmer	×				
Platform:	Port:					
AVR ONE! STK600 QT600 AVRISP mkll STK500 JTAGICE mkll AVR Dragon AVRISP	Auto COM1 COM2 COM3 COM4	Connect Cancel Baud rate: 19200 (Default)				
Tip: To auto-connect to the program button on the toolbar. Note that a tool cannot be used for p a debugging session. In that case, se Disconnected Mode	ner used last time, press the 'Programm rogramming as long as it is connected i lect 'Stop Debugging' first.	active immediately. er'				
STK500/AVRISP		×				
An AVRISP with firmware version 2,07 has been detected. The firmware version corresponding to this installation of AVR Studio is 2,0A, Press OK to launch the upgrade program to perform an upgrade, or Cancel to continue without upgrading, NOTE! Correct operation is not guaranteed if an upgrade is not performed.						
Ĺ	확인 취소 💌					
		취소 버튼 누				

2. USB-JTAG 경우(JTAG ICE)

Platform: Port: STK600 Image: COM1 QT600 Image: COM1 AVRISP mkli Image: COM2 STK500 Image: COM3 JTAGICE mkli Image: COM4 AVRISP Image: COM4 JTAGICE Image: COM4 JTAGICE

3. ATMEL AVRISP mkii 경우

Connect failed - Select AVR Programmer	
Platform: Port: AVR ONE! STK600 QT600 STK500 JTAGICE mkII STK500 JTAGICE mkII STK500 AVRISP STK500 Tip: To auto-connect to the programmer used last time, press the 'Programmer' button on the toolbar. Note that a tool cannot be used for programming as long as it is connected in a debugging session. In that case, select 'Stop Debugging' first. Disconnected Mode	Connect Cancel Baud rate: 19200 (Default)

4. ATMEL사의 JTAGICE mkii 경우

Connect failed - Select AVR Programmer 🛛 🔀							
Platform: AVR ONE! STK600 QTEO0 AVRISP mkll STK500 UTAGICE mkll AVR Dragon AVRISP	Port: Auto USB COM1 COM2 COM3 COM4	Connect Cancel Baud rate: 19200 (Default)					
Tip: To auto-connect to the program button on the toolbar. Note that a tool cannot be used for p a debugging session. In that case, se Disconnected Mode	ner used last time, press the 'Programmer' rogramming as long as it is connected in elect 'Stop Debugging' first.	active immediately.					

5. Main 항목에서 CPU종류 를 설정후 프로그램 장치 모드를 확인 합니다.

STK500 in ISP mode vith ATmega128	
Main Program Fuses LockBits Advanced H	W Settings HW Info Auto
Device and Signature Bytes	
ATmega128	Erase Device
Signature not read	Head Signature
Programming Mode and Target Settings	Settings
	ISP Frequency: 460,8 kHz
	†
、 ATxmegaxxx 시리즈 사용시 Pl	DI mode
The selected device does Getting isp parameter., SD=0x01 ,, OKnot support ISF	programming

- *. ISP사용시 Main 항목 Setting에서 Freqence를 확인후 적정 주파수로 설정해 주세요.
 - 당사 ISP : 230 460KHz, Atmel 정품 : 2MHz 이상

Target Settings	
ISP Clock ISP Freq: 460.8 kHz Attainable: 460.8	i kHz Read
Note: The ISP frequency must be less than 1/4 o	Close f the target

6. Fuses 항목을 아래와 같이 설정 한후 Program 합니다.

5	GTK500 in ISP m	ode with ATm	ega128	
	Main Program	Fuses LockBits	Advanced HW Settings HW Info Auto	
	Fuse	Value		^
	M103C			
	WDTON			
				=
	SPIEN			
	EESAVE			
	BOOTSZ	Boot Flash size	=4096 words start address=\$F000 🔹	
	BOOTRST		,	
	СКОРТ	v		~
	EXTENDED			
		0×09 0×7F		
		0.511		
	🗹 Auto read			
	🔽 Smart warning	js		
	🗹 Verify after pro	ogramming	Program Verity	Read
		ing model OKI		~
	Entering programm Reading fuses addi	ing mode,, UK! ress 0 to 2,, 0x7F,	0x89, 0xFF OK!	
	Leaving programmi	ng mode,, OK!		
				×

STK500 in ISP m	ode with ATmega128	×
Main Program	Fuses LockBits Advanced HW Settings HW Info Auto	
Fuse	Value	•
JTAGEN		
SPIEN		
EESAVE		
BOUTSZ	Boot Flash size=409b words start address=\$F000 👻	
BODLEVEL	Brown-out detection level at VCC=4,0 V	
BODEN		
SUT_CKSEL	Ext, Crystal/Resonator High Freq.; Start-up time: 16K CK + 64 戻	~
EXTENDED	0xFF	
HIGH	0x89	
LOW	0x7F	
	Fuses 프로그램	
Auto road	/	
Smart warning	с	
Verify after pro	oramming Program Verify Read	
Entering programmi	ng mode., OK!	~
Writing fuses addres Reading fuses addr	ss 0 to 2, 0x7F, 0x89, 0xFF, 0K! ess 0 to 2, 0x7F, 0x89, 0xFF, 0K!	
Fuse bits verification	n, OK	
Leaving programmin	ng mode,, UN!	~

7. Program 항목에서 프로그램할 파일(test.hex)를 지정합니다.

STK500 in ISP mode with ATmega128	X
Main Program Fuses LockBits Advanced HW Settings HW Info Auto	
Frase Device	
Flash O Use Current Simulator/Emulator FLASH Memory O Input HEX File D:₩lang₩project₩lot₩memory₩default₩tcps,hex	
Program <u>V</u> erify <u>R</u> ead	
EEPROM ○ Use Current Simulator/Emulator EEPROM Memory ③ Input HEX File Program Verify Read	
ELF Production File Format	5
Input ELF File:	
Save From: FLASH EEPROM FUSES LOCKBITS Fuses and lockbits Program Save before saving to ELF	
Getting isp parameter., SD=0x01 ., OK	

* Test.hex 파일은 작업 디렉토리 폴더의 default 방안에 있습니다.

열기						? 🔀
찾는 위치(!):	🗀 default	~	0	🗊 E	• 📰	
D Recent	🛅 dep 📾 tops,hex					
() 바탕 화면						
(네 문서						
(내 컴퓨터						
내 네트워크 환경	파일 이름(<u>N</u>):	tcps,hex			*	열기(<u>0</u>)
	파일 형식(<u>T</u>):	Flash Intel Hex Files (*,hex)*,a90)			*	취소

8. Program 항목에서 Program 버튼을 클릭하여 test.hex를 프로그램 합니다.

STK500 in ISP mode with ATmega128	X				
Main Program Fuses LockBits Advanced HW Settings HW Info Auto	_				
Erase Device					
✓ Erase device before flash programming ✓ Verify device after programming					
_ Flash					
 ○ Use Current Simulator/Emulator FLASH Memory ③ Input HEX File D:₩lang₩project₩lot₩memory₩default₩tcps.hex 					
Program Verify <u>R</u> ead					
EEPROM					
Use Current Simulator/Emulator EEPROM Memory Input HEX File					
Program Verify Read					
ELF Production File Format					
Input ELF File:					
Save From: FLASH EEPROM FUSES LOCKBITS Fuses and lockbits settings must be specified					
ProgramSave before saving to ELF					
Erasing device., OK!					
Reading FLASH OK! 프로그램 Reading FLASH OK! FLASH contents is equal to file OK					
Leaving programming mode,, ÖK!	~				

9. Program 항목 활용하기

*. Program항목의 ELF Production File Format를 사용하면 FUSE, LOCKBITS, FLASH 파일, EEPROM 파일 항목을 설정 저장 한후 생산시 활용 할수 있습니다.

STK500 in ISP mode with ATmega128	
Main Program Fuses LockBits Advanced HW Settings HW Info Auto]
Erase Device	
C Lase device beidre flash programming V venty device after	programming
 Flash ○ Use Current Simulator/Emulator FLASH Memory ③ Input HEX File D:₩lang₩project₩lot₩memory₩default₩tcps,hex 	
Program Verify E	<u>1</u> ead
EEPROM Use Current Simulator/Emulator EEPROM Memory OInput HEX File	
Program Verify F	Re <u>a</u> d
ELF Production File Format	
Input ELF File:	
Save From: ♥ FLASH ♥ EEPROM ♥ FUSES ♥ LOCKBITS Fuses and settings m Program Save before sav	I lockbits Tust be specified ving to ELF
Getting isp parameter,, SD=0x01 ,, OK	
프로그램 현재 설정된 · · · · · · · · · · · · · · · · · · ·	과거에 설정한 상태를 로드