Getting Started with Basic11 and MicroStamp11

- 1) Download Basic11 from http://support.technologicalarts.ca/docs/BASIC11/setup11_511.exe
- 2) Double-click on the "setup11_511.exe" file and the screen shown below will be displayed
- 3) Enter the free license key **4711-bax-1459** directly into the box. (*Important! Do not use the drop-down menu to select* "*Basic11*
- 511 Freeware"; otherwise it will ask for your license key every time you start the program)

INSTALLATION
Installing on your disk: Basic11 511
© Copyright Controlord, La Farlede, 1994-2005 All Rights reserved License (Format 9999-aaa-9999)
xxxxxx-bax-xxxx
Port to connect the target
© COM1 ○ COM2 ○ COM3 ○ COM4
Windows Group to install Basic11
Basic11 -
Installation directory
c\basic11
🖲 English 🔿 Deutsch 🔿 Français
INSTALL Cancel

- 4) Select your COM port and language preference
- 5) Click INSTALL
- 6) You will see this screen:



7) Please be patient and read this screen. Wait until the "I agree" button appears.



8) Select "I agree" and you are done.

Once the installer has finished, you will find an icon for Basic11 in your start menu. The next section of this document covers setting up and using BASIC11.

Setting up Basic11. Launch Basic11 via its icon, and a setup wizard will appear, as shown in the figure below. The only setting you need to change is **Port.** Set it to *SIM*. Ignore everything else, because we won't be using the loading and debugging features of the IDE. Click *OK* and that's all there is to it!

Debugger Conf	iguration		
Port		SIM	-
Hardware			-
Crystal		8000000	-
Baud rate		9600	-
Comm time	out (ms)	2000 ms	-
Talker .S19	file	ram	-
Ram	32 k 🚔	0×0000 🚔 -	0×7FFF
EEPROM	32 k 🌲	0×8000 🚔 -	0×FFFF
ОК	Cancel	debug.def	Sound ?

Now you can get started with a simple example. Open the example file called *ms11flashPA6.bas* (http://support.technologicalarts.ca/docs/BASIC11/MicroStamp/ms11flashPA6.bas) or create it in the IDE's editor window. The contents are as follows:

```
'Target = MicroStamp11 (8K, 32K, or 64K)
'This program flashes the Docking Module LED (connected to PA6)
ProgramPointer $E000
                       'put it in top 8K so it will work on all boards
DataPointer
               $0040
StackPointer
               $00FF
byte PORTA at $0000
byte CONFIG at $003F
       CONFIG = 4
                       'disable COP watchdog and ROM
int
     i
                               ' forever
do
       if PORTA.6=0 then PORTA.6=1 else PORTA.6=0
       for i = 1 to 20000
                               ' delav
       next i
1000
       org $fffe
                       ;define reset vector
asm
asm
       fdb $e000
                       ;to point to beginning of code
```

Compile the project and then download it to MicroStamp11 using the Windows-based downloader MicroLoad from Technological Arts. MicroLoad can be found here: http://support.technologicalarts.ca/docs/MicroLoad/ml131.zip.



Using INCLUDE Files. Below, we have re-written the example program using the *include* directive. Since the memory map definitions, register names, and reset vector location are always required for every program, they can all be combined into a single file for any given hardware target. So we have created startup files containing these items. You can use the *include* directive to add them to your program. This will save you having to explicitly define them in each program you write.

📽 Basic11 511 MC11flashPA6alt.bas (C:\basic11\MC11 Exam 🔳 🖃 🔀	' Target hardware: MicroStamp11 (any memory size)		
Files Compile Windows Options ?			
basio11 - Ubasio11 MC11flashPA8alt.bas AC111flashPA8alt.bas AC111flashPA8alt.bas: 0 Errors	' Flash the red LED connected to PA6		
File Edit Search MC11FLASHPA6ALT.BAS			
' Target hardware: MicroCorell 8K or 32K ' Flash the red LED connected to PA6	<pre>#include "startms118k.bas"</pre>		
<pre>#include "startNC118k.bas"</pre>	int i		
int i Do	D-		
E003 if PORTA.6=0 then PORTA.6=1 else PORTA.6=0	Do		
E012 For i = 1 to 20000	if PORTA.6=0 then PORTA.6=1 else PORTA.6=0		
E026 Loop	For $i = 1$ to 20000		
■	Next i		
	Loop		
Load State Stop Go Step Next Abort Init Debugger	тоор		

We have created two such include files for MicroStamp11. Use #include *startms118k.bas* for 8K boards and *#include startms1132k.bas for* 32K boards.