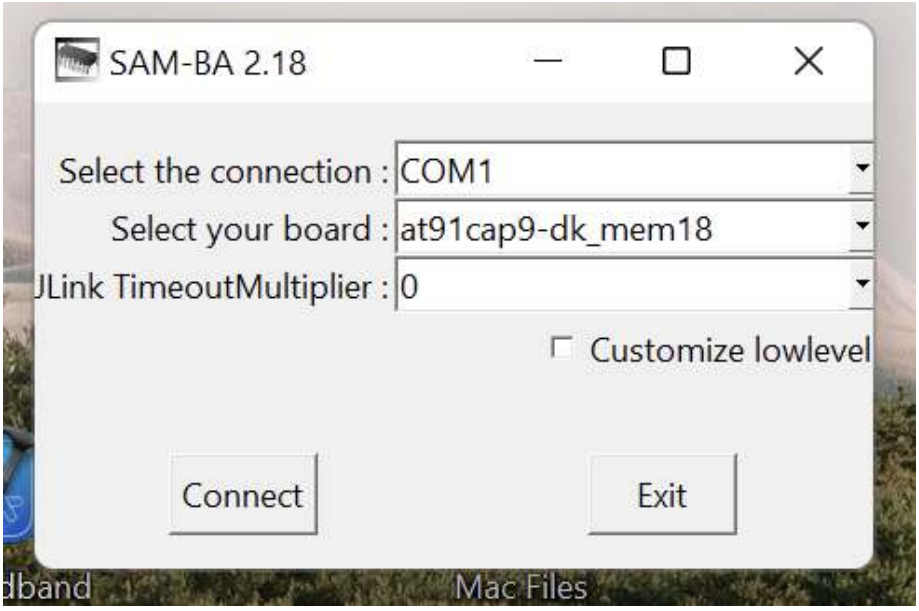
# Installing Firmware

***Warning:*** *The firmware in your calculator is copyrighted. It's forbidden to trade or exchange this firmware.*

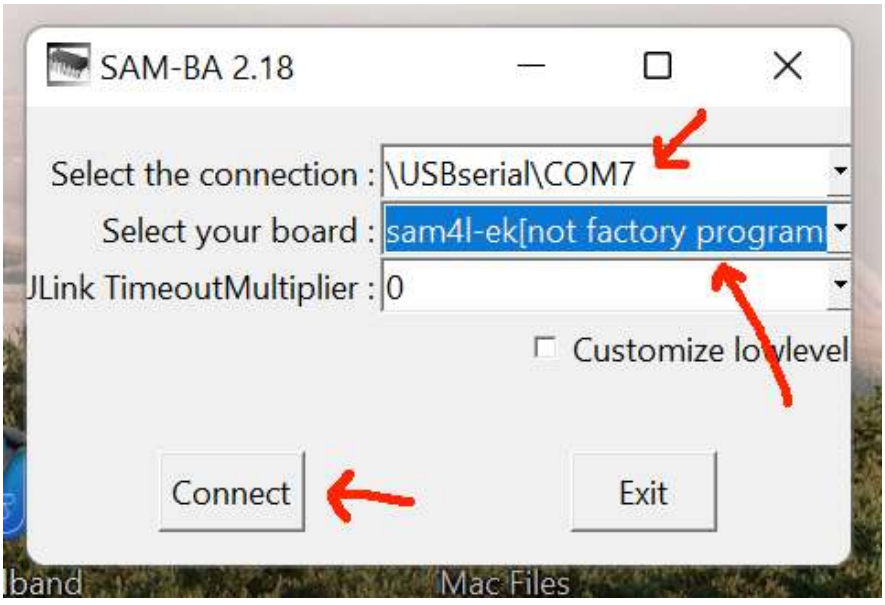
- Let's assume that you have already installed SAM-BA 2.18 software and properly connected your calculator to Windows, so that it appears in the Device Manager. If not, please read the "How to Use the Programming Cable" guide.

**Steps:**

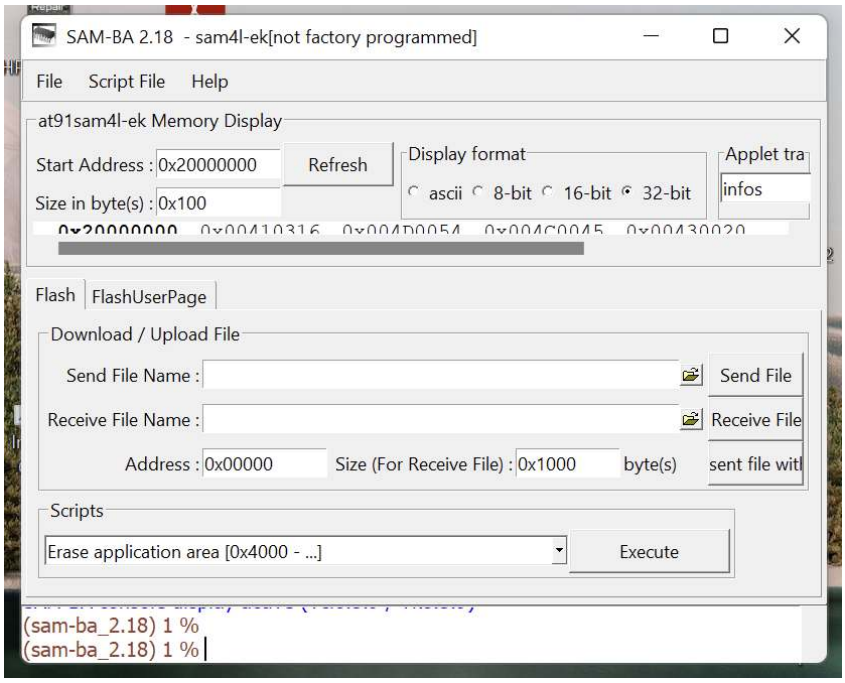
1. Start the SAM-BA 2.18 software.



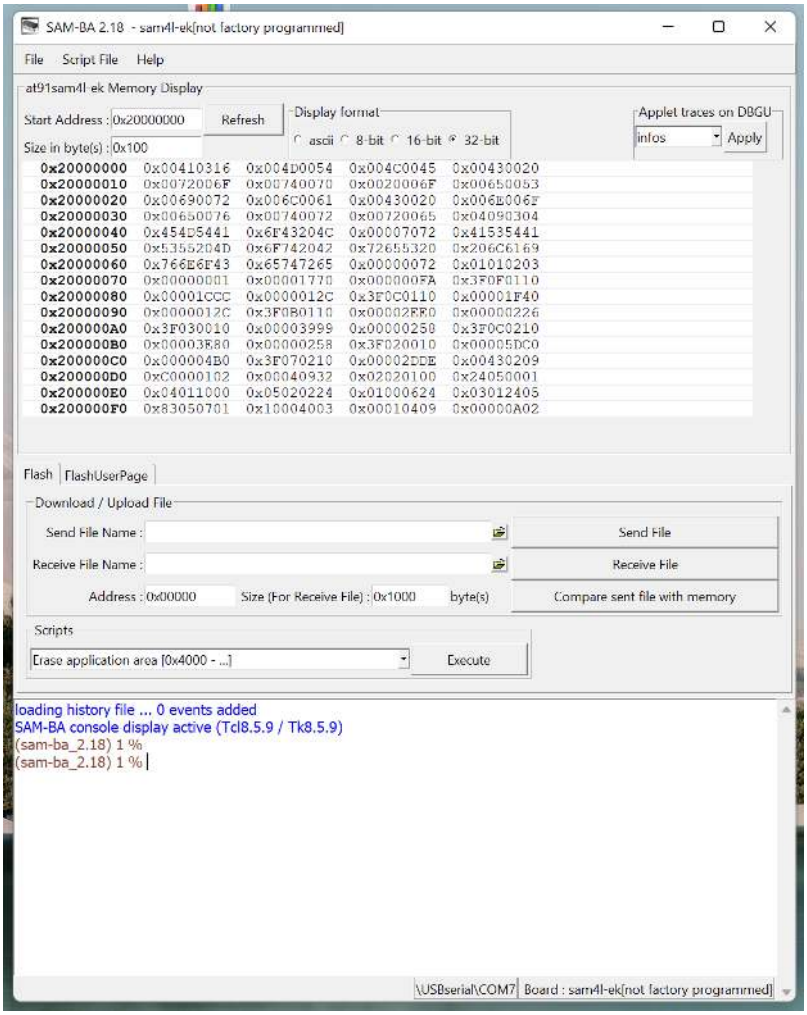

2. Choose the serial port that you see in the device manager.
3. Choose the model to be programmed: sam4l-ek [not factory programmed].



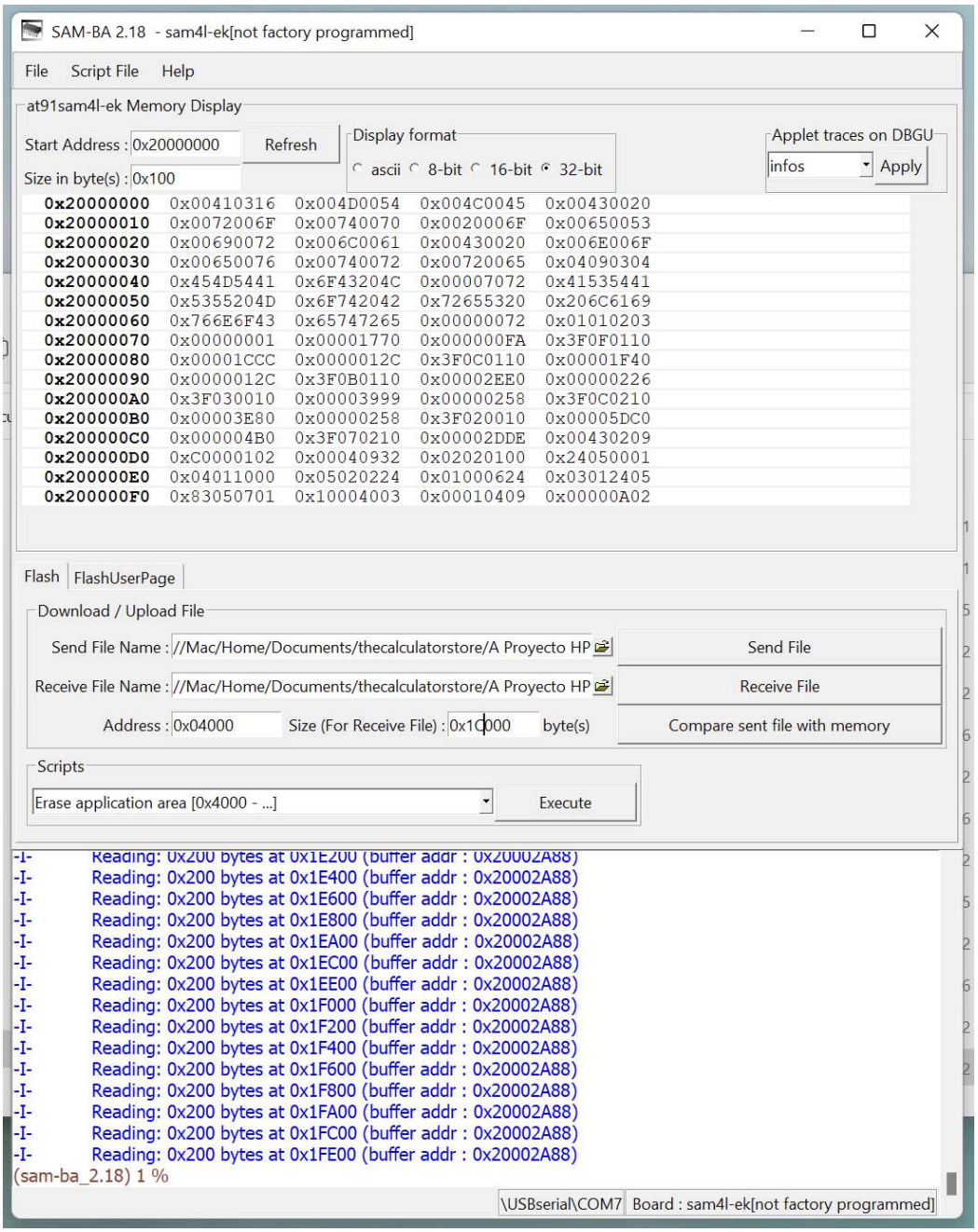
4. Press “Connect”. You should see the screen below:



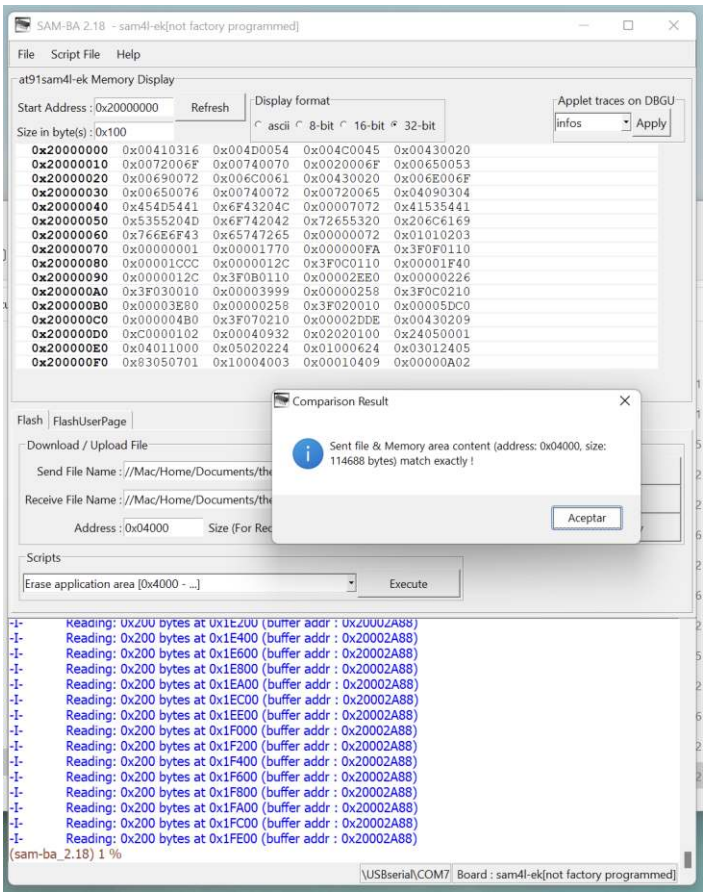

5. Enlarge the screen so that you can see all the fields:



6. Click the folder icon to the right of the “Send File Name” field and browse to select your firmware file. The filename usually ends with .bin.
7. Put “0x04000” in the “Address” field, to place the pointer at the start of the user firmware and after the booting firmware of the Atmel processor. This is required to avoid overwriting the bootloader firmware at the beginning of the Atmel memory space.
8. Click on “Send File” button.



9. Check that the memory content is equal to the file you have sent by pressing "Compare sent file with memory". You should see the result below:




10. Press “RESET” button on the cable (You can also poke a paperclip into the RESET hole in the back of the calculator).
11. Press “ON” on your calculator.
12. "pr error" appears on the screen. Your user memory has been cleared.
13. Press any key to start using the calculator. “0.0000” appears on the screen.

- To make sure the process was successful, you can check the firmware checksum in your calculator. To do so, switch the calculator off, and, while pressing “g+ENTER”, press "ON". You get to a menu: " 1.L 2.C 3.H ". Press “2” to get to the checksum. See the hexadecimal number below:

  - The original firmware that came with the HP15c had a checksum “**9090h”**
  - The new firmware has a checksum “**0A0Ah”**