

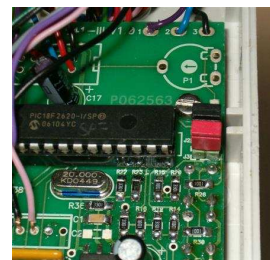
# Updating the 1541-III's firmware

## *Firmware update in just a few steps...*

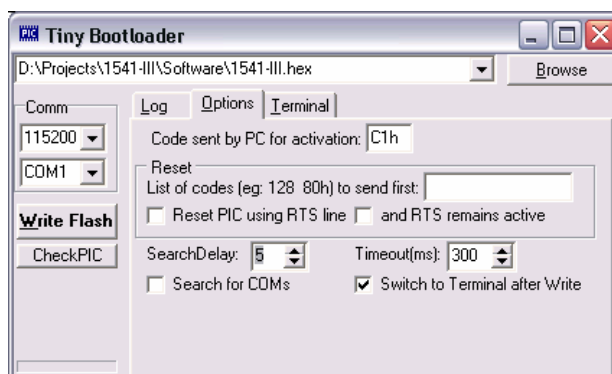
The 1541-III can, using a serial (RS-232) connection to a PC (Windows), update its firmware. Using a special program (bootloader) that is stored inside the 1541-III's microcontroller the entire program memory can be re-programmed. Updaten your 1541-III does not have to be a problem.



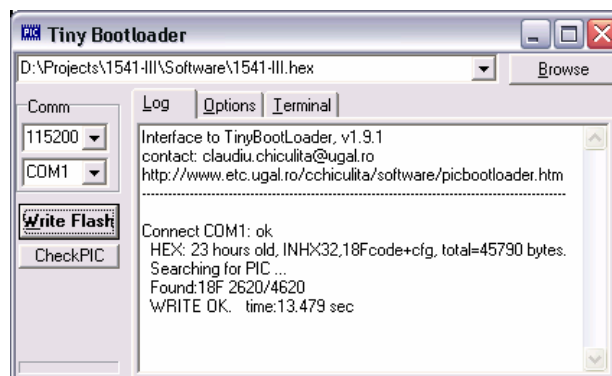
To activate the bootloader inside the 1541-III, open up the 1541-III (left) and place the red jumper (right). This jumper is labelled J3. If the jumper J3 is placed the bootloader will directly after reset or power-up try to connect to the PC's bootloader application. This for a period of 5 seconds. When no connection can be made the 1541-III will function as normal.



Switch off your CBM and PC and connect your 1541-III to your CBM as usual, also connect a 9 pole serial extension cable (NOT A NULL MODEM CABLE). Switch on the PC and start the bootloader application (tinybootloader.exe). Select the tab labelled "Options" and make sure that all settings are according the figure (right).



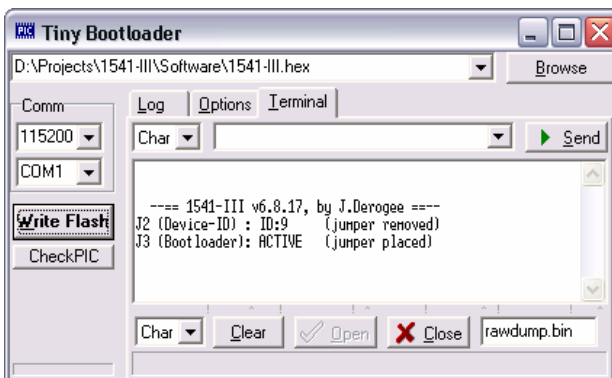
Select the tab labelled "Log" and select, using the button "Browse" the file "1541-III.hex". Select the com-poort to which the serial cable is connected (usually this would be COM1) also make sure that the speed of the serial port is set to 115200. Press the button "Write Flash" and now swicth on (within 5 seconds) the CBM. The Tiny Bootloader's screen will show that the connection to the 1541-III's microcontroller is made and that new firmware will be uploaded



If this operation fails to succeed the first time, try again by switching of your CBM, press again on the "write flash" button and switch on the CBM within 5 seconds. If still not succesful then first switch on the CBM and then press the "Write Flash" button.

Once the downloading of the firmware has succeeded the PC software automatically switches to the tab labelled "Terminal". After 5 seconds this will show the version number of your new uploaded firmware. Followed by the settings of the jumpers inside the 1541-III.

To disable the bootloader inside the 1541-III, remove the jumper with the label J3. Also remove the serial cable between the 1541-III and the PC.



The 1541-III is now ready for use.

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## *The serial port and the serial extension cable*

Below a picture of the back of the PC within the picture the description of each connector. The cable required for updating the 1541-III's firmware is a 9 pole serial extension cable. The electrical connections are shown in the tables below. You can use both cables, although the 1541-III only uses the wires of pin 2,3 and 5. The remaining wires are simply not connected inside the 1541-III.



Full 9 pole extension cable (standard cable)		
9 polige sub-D female	9 polige sub-D male	
Pin 1	Pin 1	
Pin 2	Pin 2	
Pin 3	Pin 3	
Pin 4	Pin 4	
Pin 5	Pin 5	
Pin 6	Pin 6	
Pin 7	Pin 7	
Pin 8	Pin 8	
Pin 9	Pin 9	

Basic 9 pole extension cable (DIY)		
9 polige sub-D female	9 polige sub-D male	
Pin 1	-	
Pin 2	Pin 2	
Pin 3	Pin 3	
Pin 4	-	
Pin 5	Pin 5	
Pin 6	-	
Pin 7	-	
Pin 8	-	
Pin 9	-	