Software Update

After the initial programming (done by the manufacturer) only two subroutines can be updated - **Bootloader** and **Operation System**. Each of them is updated through the previous subroutine (located on a lower level). Respectively the **Bootloader** should be updated through the **Firmware Loader**, and core operating system **OS** should be updated through the **Bootloader**.

	Note that each update **Bootloader** ALWAYS destroys the installed operating system. So after each update of the Bootloader, you should always install the **Operating System**, whether a newer version or the same that was installed until the update of the **Bootloader**.

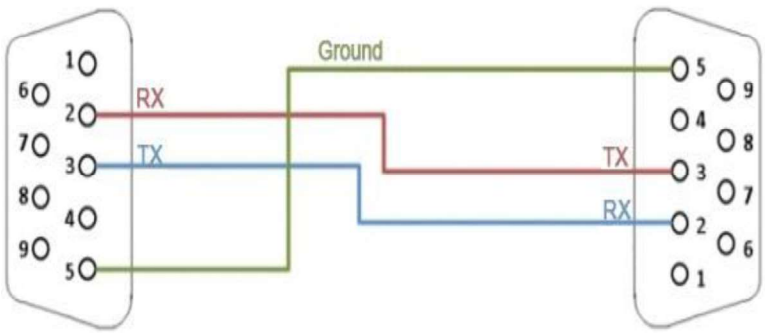
	**WARNING!** The process of updating of the **Bootloader** and the **OS** should NOT be interrupted. This can cause damage to the device and it had to be returned to the manufacturer for reprogramming!

Update of the Bootloader

Bootloader is updatable through the subroutine Firmware Loader. Firmware Loader only works via PC connection. The connection is made through a serial interface (RS232) and the computer needs to have hardware serial port or have USB-> RS232 serial cable.

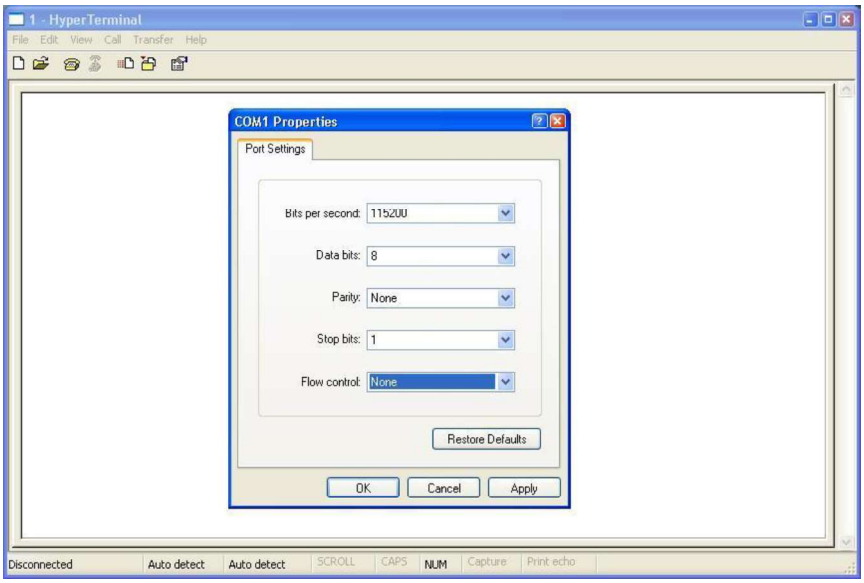
PC COM port (RS232)

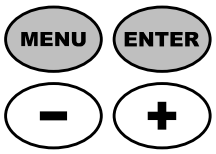
USB to SERIAL (RS232) cable



Picture and circuit diagram of the serial cable required for connection between a computer and a sampler.

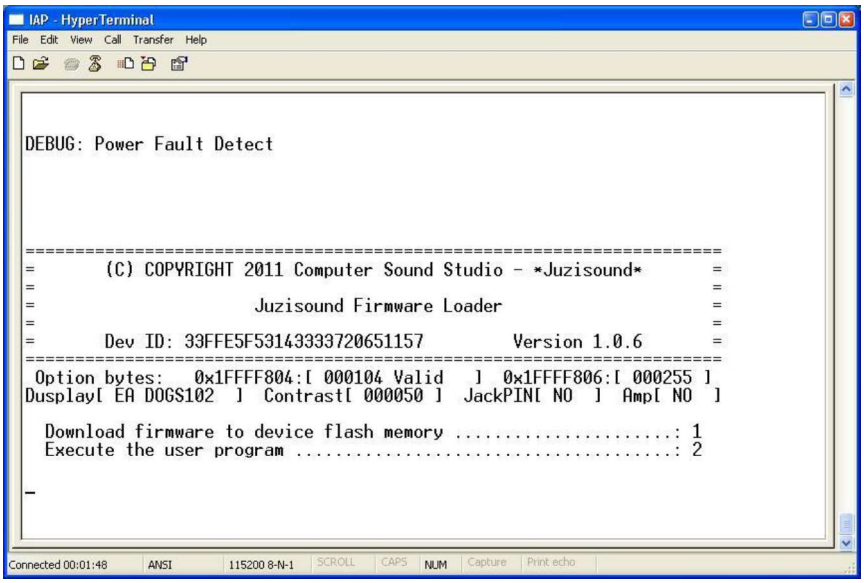
To upgrade the Bootloader from the computer you need to have the software Hyper Terminal, and it can be configured as follows:





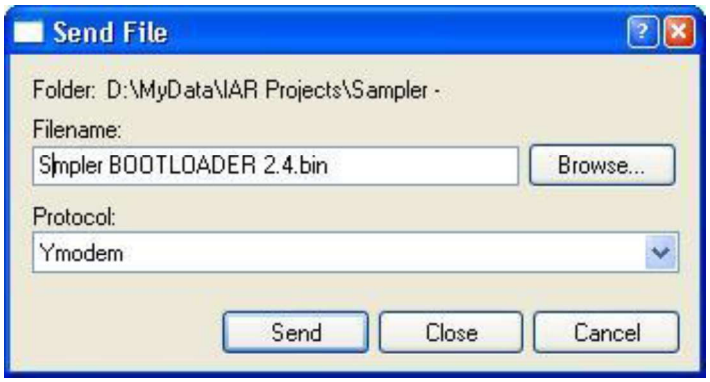
Then you should start the sampler in a special way to start the subroutine Firmware Loader, which helps to upgrade Bootloader. For this purpose, during power-up you have to press and hold simultaneously the buttons MENU and ENTER on the front panel of the sampler.

If Firmware Loader was launched successfully on a computer screen you should see a message similar to the one shown below:

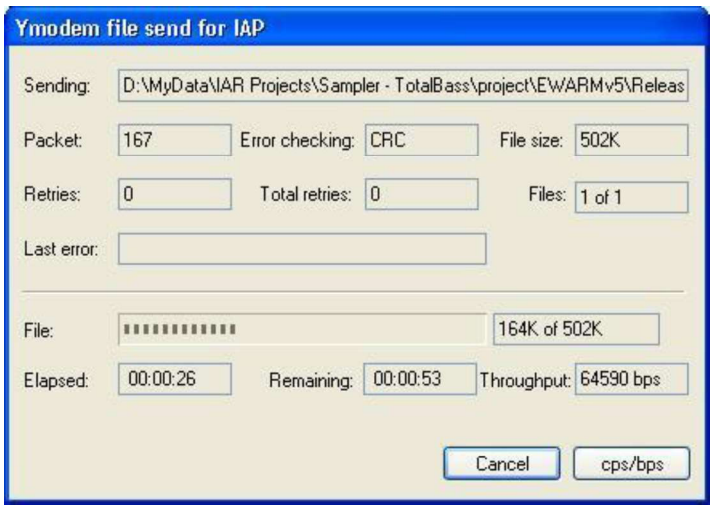


On the screen of the sampler you can see the version of the Firmware Loader.

Then you need to press the key [1] Windows PC keyboard. This selects the loading function from the menu of Hyper Terminal "**Download firmware to device flash memory**". Once the function is selected, on the sampler should light the lamp EDIT, rather than Hyper Terminal you have to select "**Transfer**" and "**Send File ...".** On the computer screen should appear a window for selecting the file to be sent to the sampler and to select the protocol for file transfer. For a file, you should select the BIN file with the new version of the **Bootloader**, and for the protocol type from the drop down menu you should select the type **Ymodem**.



After selecting the file type and the protocol, you should press [Send] which starts loading of the **Bootloader**. On the computer screen should shows up another window that shows the status and progress of the loading. On the screen of the sampler will shows a message "**Loading ...**" and progress indicator that also shows the progress of the update. During loading the uppermost lamp L1 of the front panel of the sampler flashes.



If the loading of the Bootloader is successful, on the computer screen in the window of Hyper Terminal should display a message similar to the following:

```
Programming OK!
Name: Sampler BOOTLOADER 2.4.bin
Size:  514048 Bytes
```

If you see the message "Programming OK", this means that the loading was successful. In all other cases, you will have a different error message, which describes in detail the type of error that occurred.