

Download or upgrade firmware part for USB-LCD-20x2



● Install and run the Test Software on a PC

For this operation, a personal computer is needed with Windows 98 or Windows XP (Home or Pro) operating system and at least one available USB connector. This Test Software will help you to configure and try all the functions of the USB-LCD-20x2 device i.e. firmware updating, saving, configuring start splash screen text contents, setting up display time intervals, testing buttons, programming new alphanumerical characters, visualizing the infrared remote control signals and shut down or power up the PC from USB-LCD-20x2 device buttons or by operating with a proper IR remote control device.

First, please install the proper software driver for this type of HID device:

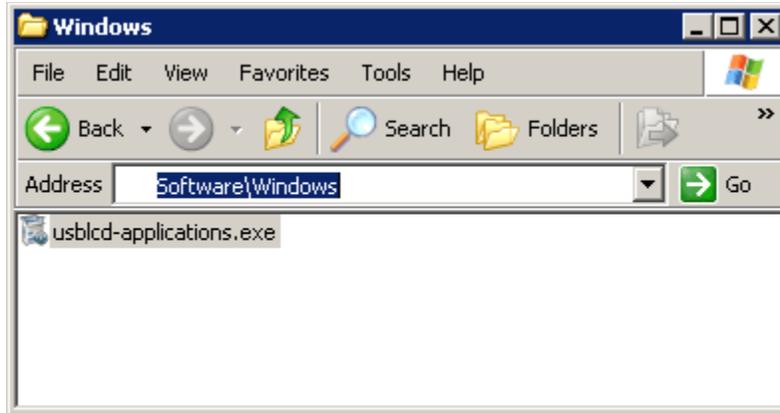
- If you plug in the USB-LCD-20x2 device for the first time into a USB connector the Windows operating system will notify you that there appears a new device named USB-LCD-20x2. Just following the well-known "Next, Next, OK, OK..." procedure to automatically installing the right device drivers.
- If other HID devices already exists on the same PC You not need to install any new driver, the Windows operating system will just notifying You there appears a new device named USB-LCD-20x2.

Please check out in Start/Control Panel/ System/Device-Manager menu point if the HID device drivers appear correctly. You will not see any red exclamation mark or yellow bubbles with question mark inside. If you see something like that please inspect carefully if the Human Interface Devices driver was installed properly. If not, please delete it from Device Manager menu and try to reinstall it again.

After the driver installation or "device plugged in" notification is complete you are ready to install the Test Software. Put the Install CD in your CD driver unit and run the `usb lcd-applications.exe` from the CD. This will help you to install the software components needed to use the USB-LCD-20x2 device.

The Test Software package contains two executables, the first and most important is the daemon software, which must be running while you want to use the USB-LCD-20x2 device.





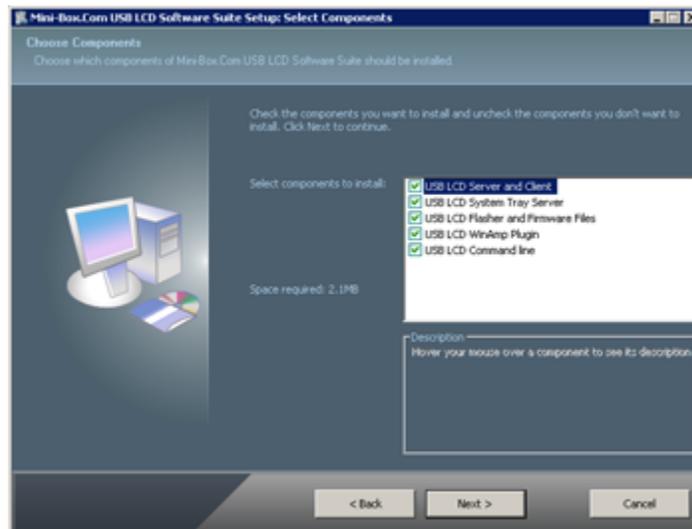
Once the daemon software is running you will be able to connect through it to the USB-LCD-20x2 device.

The connection socket allows local connections as well as remote connections. This means you have possibilities to connect to the USB-LCD-20x2 device via TCP/IP protocols and to configure and manage its firmware contents and settings remotely.

- **Important Note:** The daemon software has a text mode version (named USBLCDServer.exe) and a GUI mode version too (named USBLCDFlasher.exe).

The text mode version (many letters in a massive block ☺) serves more as local server software and was designed to silently receive local or remote connections from GUI software and it doesn't allow any firmware downloading procedure!

The GUI mode version of the daemon can be used as a standalone firmware-downloading tool and in the same time it can receive local or remote connections.



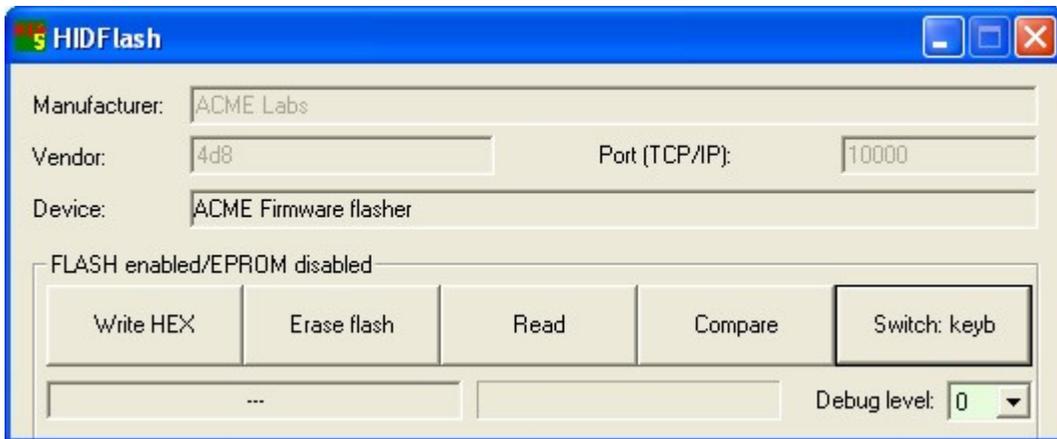
- **Download or upgrade a firmware version in HID-LCD-20x2**

- **Important Note:** If you are using the USB-LCD-20x2 device for the first time you must download an actual firmware version into it. For this please read the following instruction steps.

Plug-in the USB-LCD-20x2 module in an available USB connector and look on the main LCD screen. If you're able to see the following image and text displayed:

It means there is no firmware running in the USB-LCD-20x2 module and must be programmed first to do something you are waiting for.

For this please run USBLCDFlasher.exe. The GUI will appear

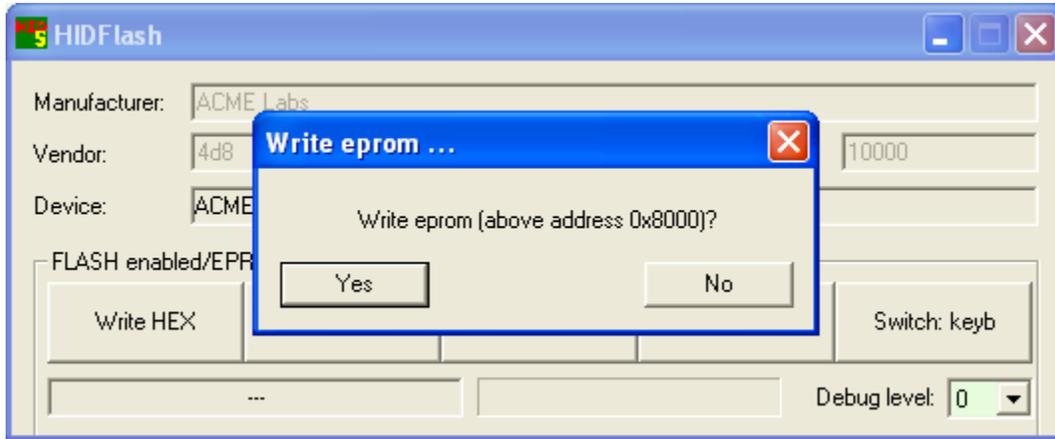


immediately.

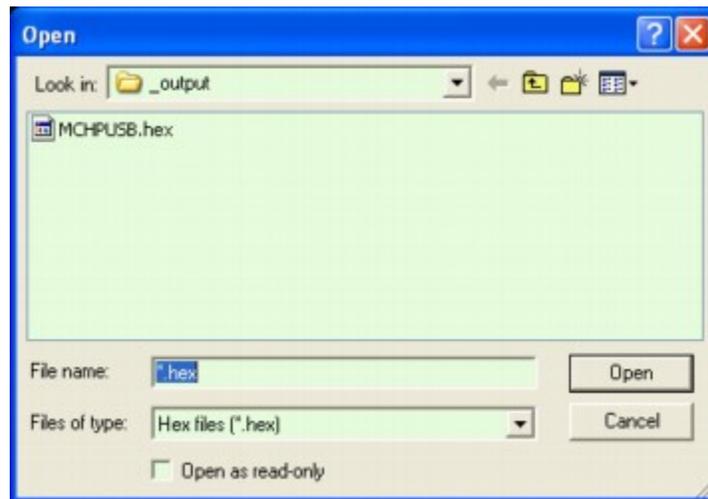
If the software finds a connected USB-LCD-20x2 module the "Manufacturer", "Vendor" and the "Device" rows will be filled as shown in the picture. With the USB-LCD-20x2 module in Flasher Mode you will be able to download an actual firmware version into it.



Now press the “Write HEX” button on the GUI panel and select “Yes” to choose the hex file. This question is about to write only the firmware part of hex file or include the splash screen content to. For firmware download only the answer is “No”, because the firmware memory field in the main controller is



situated below address 0x8000. For the splash screen content the answer is “Yes”, because the EEPROM memory field in the main controller is mapped on addresses above 0x8000).



Now select the file named “MCHPUSB.hex” and press the “OPEN” button. The program will change back to his initial face and will display a progress bar, which will indicate the writing procedure steps. In the same time you will see some activities on the device display too, a running square chain which will indicate in same mode the main controller internal writing procedure steps.

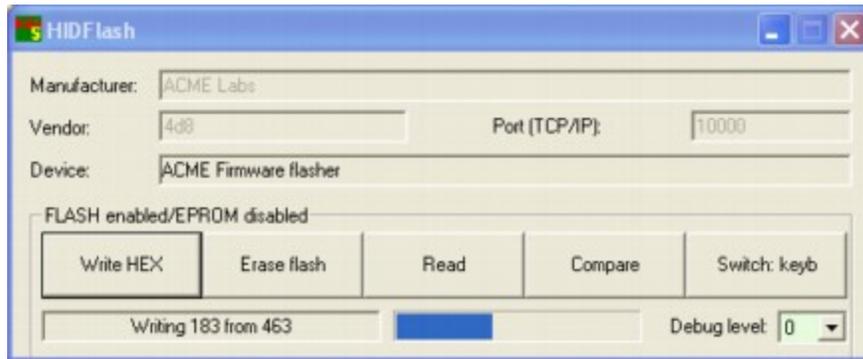


After firmware downloading succeeded you will see the following image and text displayed on the LCD screen:



As you can see next to the displayed “Firmware:” text appears the firmware version number: “01.50”. In this moment the USB-LCD-20x2 device has a valid firmware in his main program memory and now is ready for use.

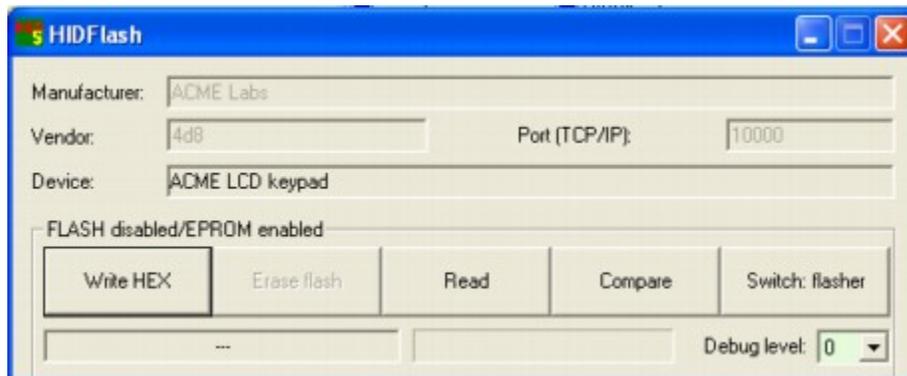
The last step consist in a mode changing by pressing the “**Switch: keyb**” button on the GUI and wait until the software indicates the USB-LCD-20x2 device is ready for use.



Once switched in keyboard mode you can select a custom “Debug level” to see more system level notifications in a window below the main HID Flash GUI window..

The user can see now the “**Write HEX**”, “**Read**”, “**Compare**” and “**Switch: flasher**” buttons active. The first tree serves to write, read and compare hex files referring to predefined splash screen contents.

With the “**Switch: flasher**” button you can turn back the device in Flasher mode and repeat the whole firmware upgrade procedures again and again.



From now the user can also start locally or remotely the second part of the software, named "USBLCDClient.exe".

