

Velleman K-8061 Installation With uManager (v1.3)

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Index

What you will need for installation:

Setup in uManager

Testing Functionality

What you will need for Installation

Running a Velleman board with uManager doesn't take much. Some items are required while others are optional:

Required Components:

- Velleman USB Interface Board (Assembled by you or purchased pre-assembled).
- 12v, unregulated AC-DC power supply with a minimum of 300ma output.
- Installed copy of uManager 1.3 or higher.
- Administrator Log in on your PC.

Optional Items:

- Multi-meter
- Enclosure

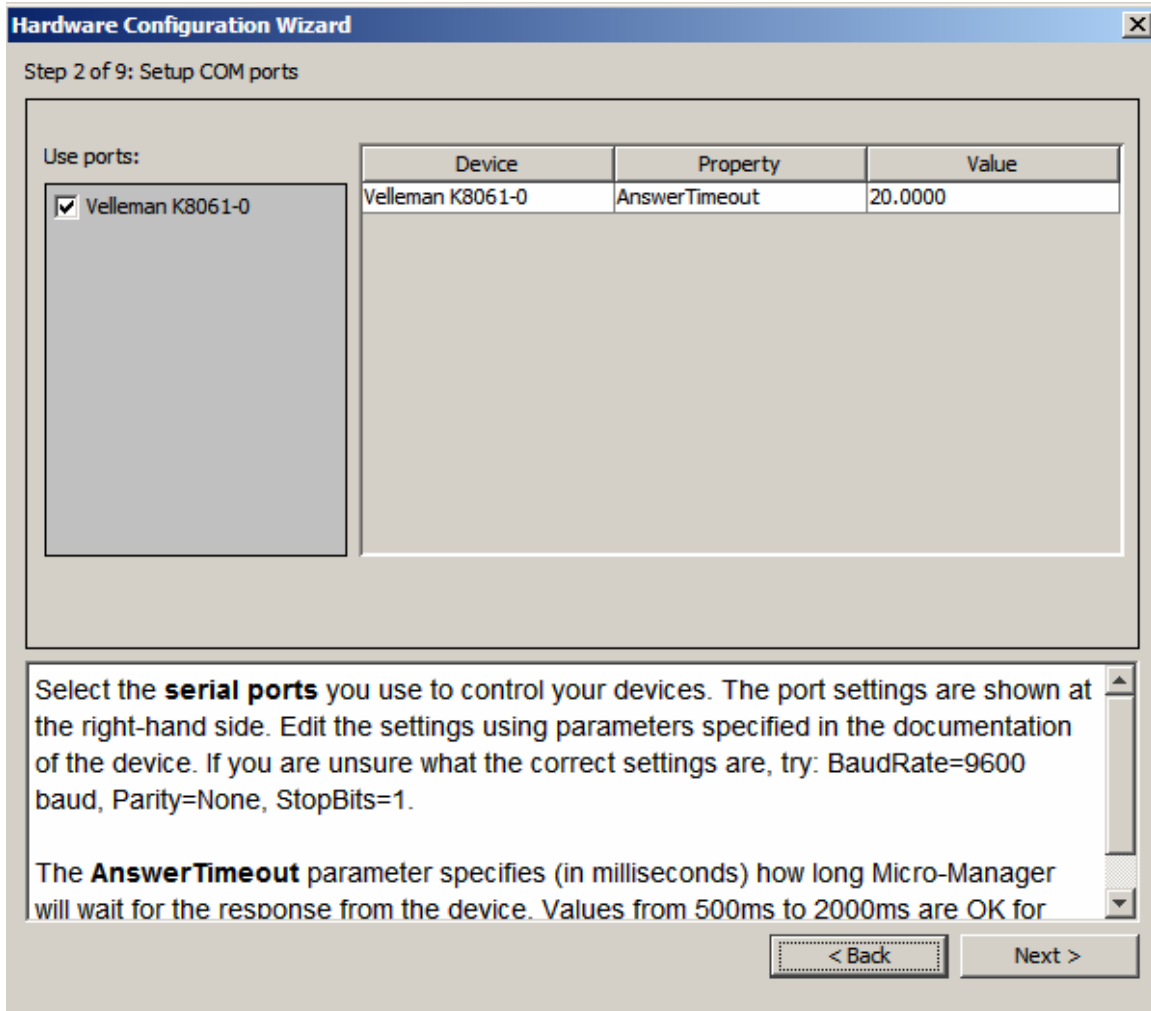
Setup

1. Start your PC under administrator rights.
2. Connect the 12v power adapter to the Velleman board. You should see the "RUN" LED flash.

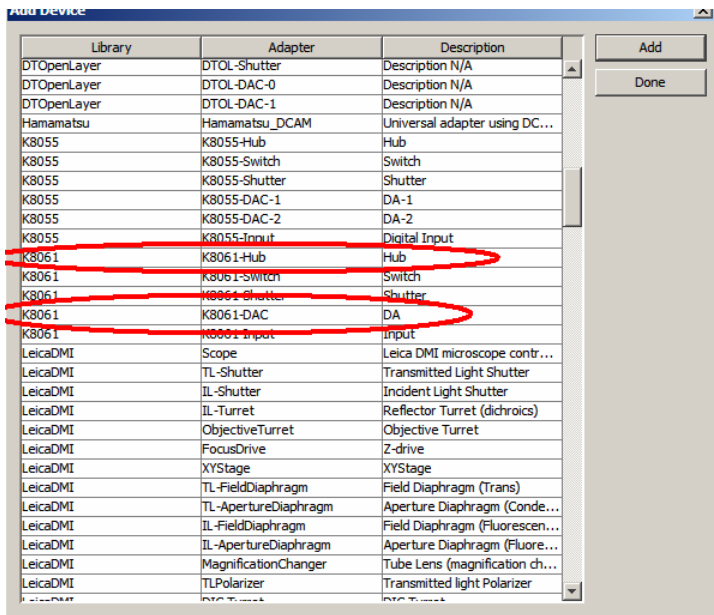
3. Connect the USB cable to the board and PC.



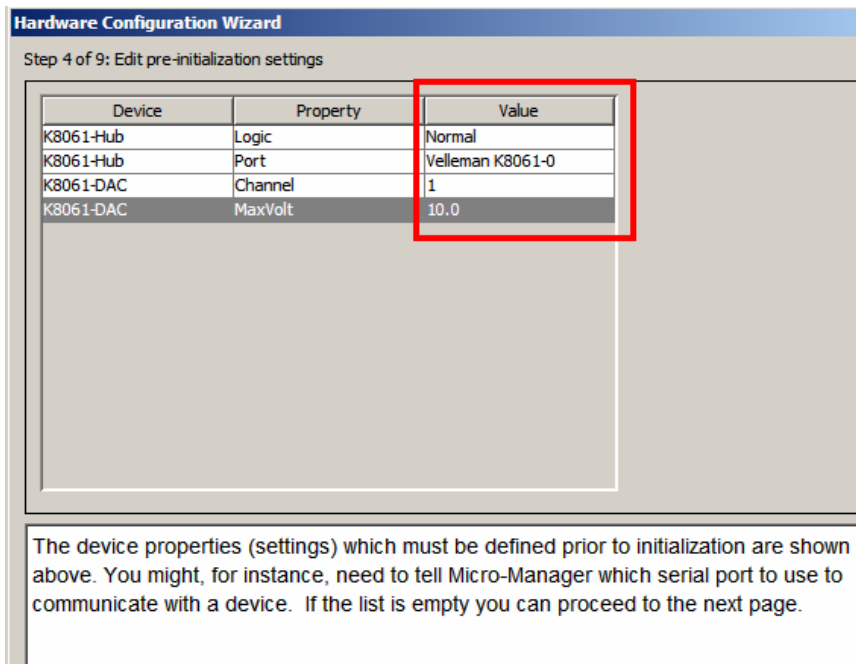
4. When you are prompted for a driver **DO NOT use the Velleman driver.** Instead choose "Search for a driver to install" and browse to "C:\Program Files\Micro-Manager-1.3\drivers". This will install a uManager-compatible driver for the board.
5. With installation of the board complete in Windows (check the device manager for any errors) open uManager.
6. Select "Tools" then "Hardware Configuration Wizard".
7. Choose to modify your current hardware configuration (we will save our changes under a new file so the original config isn't corrupted).
8. Your first selection should be to use "ports" on the system. Choose the Velleman board. If this is not an option don't worry as we can re-run the hardware config again later.



9. Click NEXT after selecting the port.
10. Now we need to add the devices into the hardware config. We need TWO devices. The first is the K-8061 Hub. Add this device. Second is the k8061 D/A. Add this (and any other devices you want from the Velleman board).



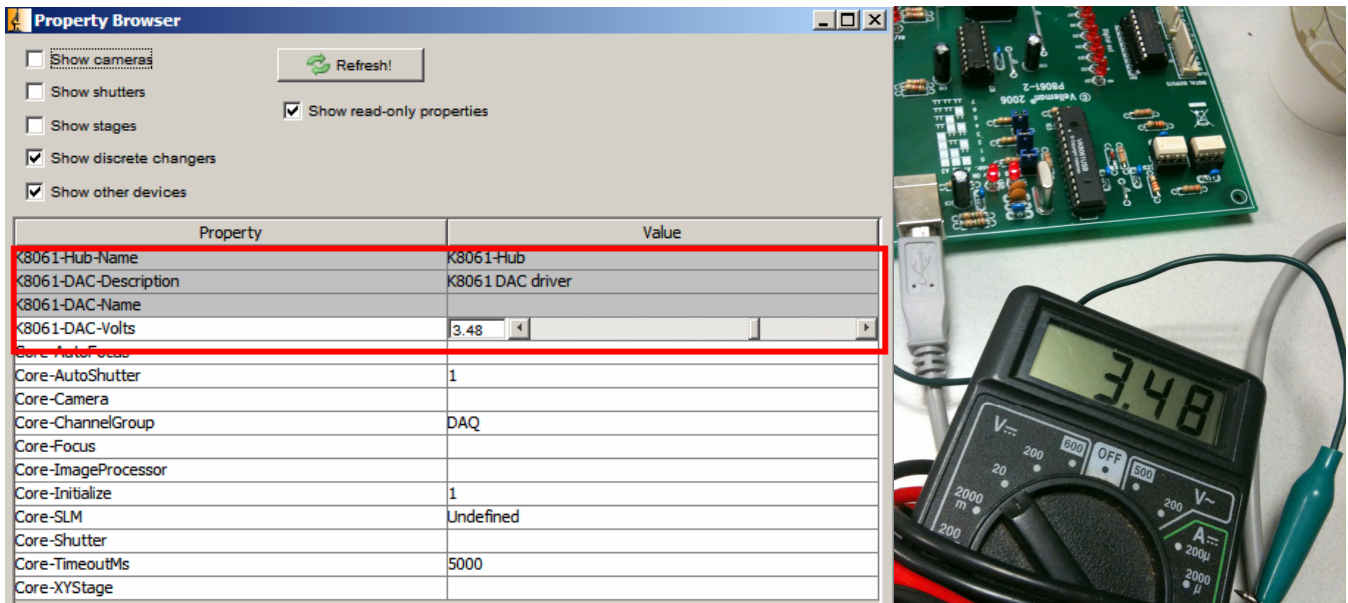
11. When you have added the device types you want to control click NEXT.
12. In the next window (step 4) we need to set up the pre-initialization strings for each of our devices. Basically this defines various settings for each device. Be sure to CLICK on EACH "Value" box. This will refresh the box, selecting either the only available value or providing a range of values you can select. I recommend using D/A line # 1 to start for simplicity's sake. My device was set up as follows:



13. With this done we can click “Next” through the rest of the setup.
14. When prompted to save your configuration it is highly recommended that you save this as a new filename, which will avoid fouling up your original setup.
15. ***If you didn't see a port option in step 8 of these instructions simply re-run the hardware setup and you should now be able to check the port.
16. You should not have the board added and ready to be controlled by uManager. The first confirmation is to see if the driver is talking to the board. Your RUN status LED on the board should now be a solid red (if it's blinking it's still disconnected) and the RX/TX should be dimply illuminated. If this is not the case try restarting uManager and checking your hardware setup and the driver being used by the board in the Device Manager of windows.

Testing Functionality

1. To test the board connect a multimeter to the output line you specified in setup step 12. Open the “Device/Property Browser” in uManager and attempt to change the value of the DAQ line. You should see a corresponding output change on your multimeter.



2. If the multimeter values are roughly 2x higher than that specified or ½ that specified it is due to you selecting a 0-5v range on setup of uManager, but using a 10v output on the board. Each D/A line on the board has a blue jumper. If the jumper is in place the daq range is 10v while if it is off the board range is 5v. The software doesn't know this so you need to match these two settings yourself.

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