



# Z-Wave Sniffer Manual

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# 1. Installation

## 1.1.MacOS

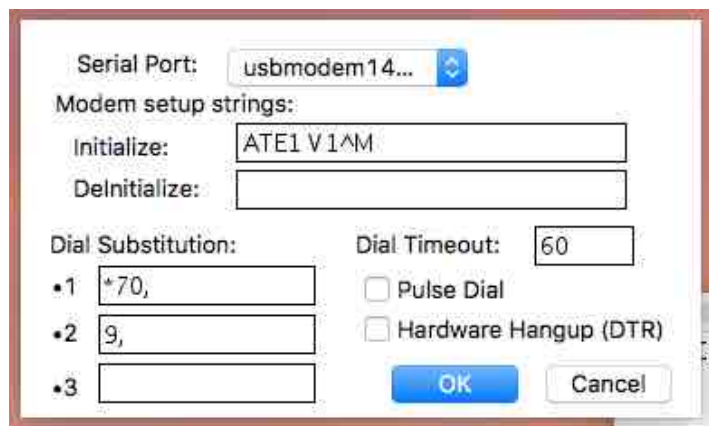
Please go to <http://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers> to download the macOS driver before you proceed.

Next you will need to install a terminal application.

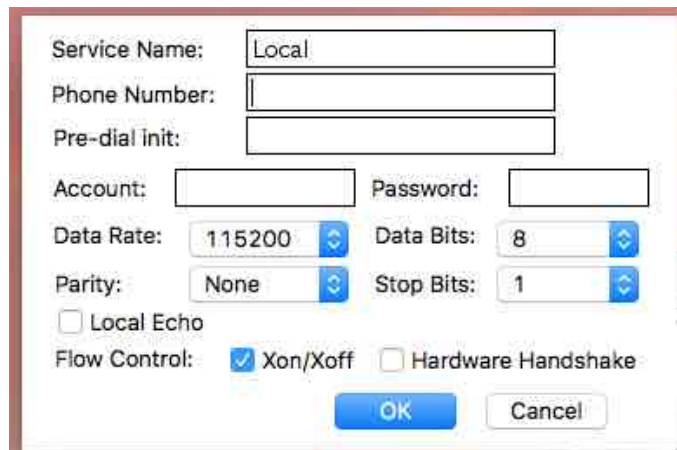
If you want to use a free terminal application, we suggest you use Z-Term. You can download Z-Term from here: <http://www.dalverson.com/zterm/>.

Once you have launched Z-Term, please go to menu and choose «Settings->Modem Preferences» In this menu, you need to select the serial port of Z-Wave sniffer. The name of the device will start with **SLAB\_USBtoUART**.

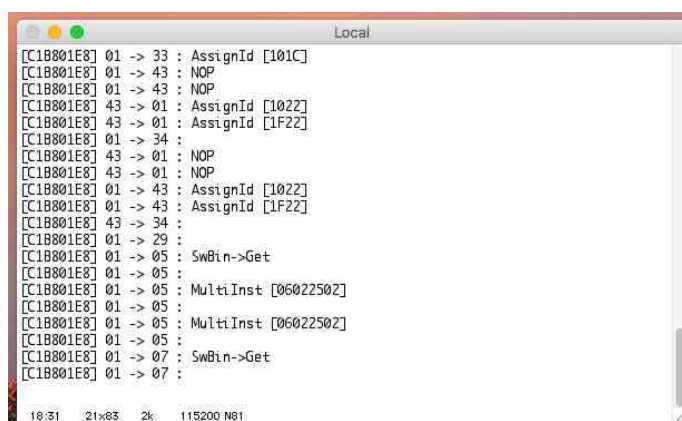
Press OK, to go out of this dialog box.



Next you need to go to the menu «Settings->Connection». Please select Data Rate: 115200. Confirm by pressing OK.



You are now inside the terminal. Read more about how to use the Z-Wave Sniffer in usage chapter.



## 1.2.Linux

Linux has normally built in drivers for the serial support required for Z-Wave Sniffer.

Therefore you only need to setup a terminal application.

If you want to use a free terminal application, we suggest you use picocom or minicom. If you are using Debian or Ubuntu, you can download picocom using command line:

```
sudo apt-get install picocom
```

To use Z-Wave sniffer in Linux, you first need to figure out which serial port the Sniffer use.

To do this, you need to type `ls -l /dev/` and look for a device called either `ttyUSBn` or `ttyACMn`.

Then you can start picocom in the following way:

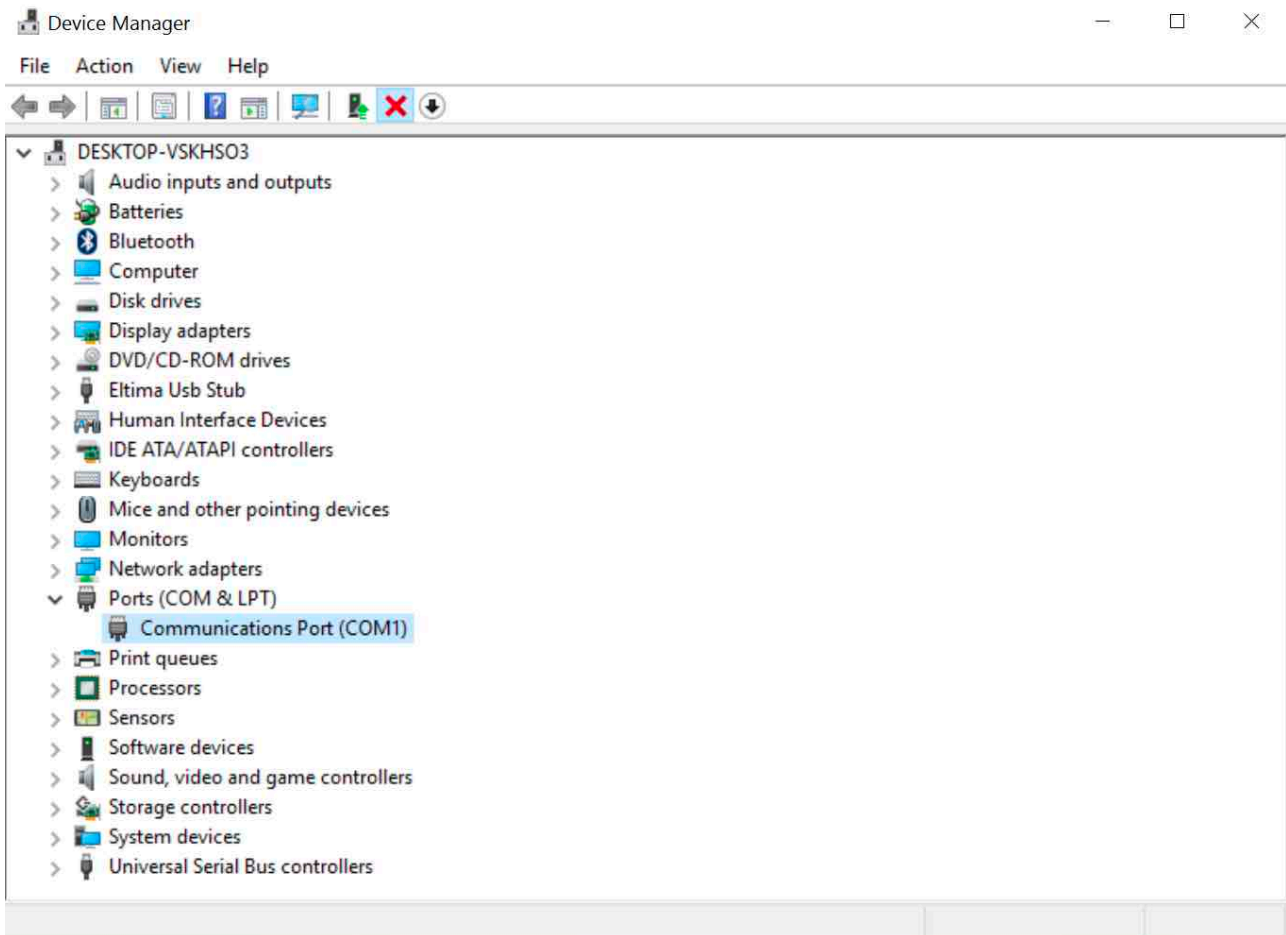
```
sudo picocom --baud 115200 /dev/ttyACM0
```

You should start to see output if there is any Z-Wave units near by. For further information, look at usage section.

## 1.3.Windows

Please go to <http://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers> to download the Windows driver before you proceed.

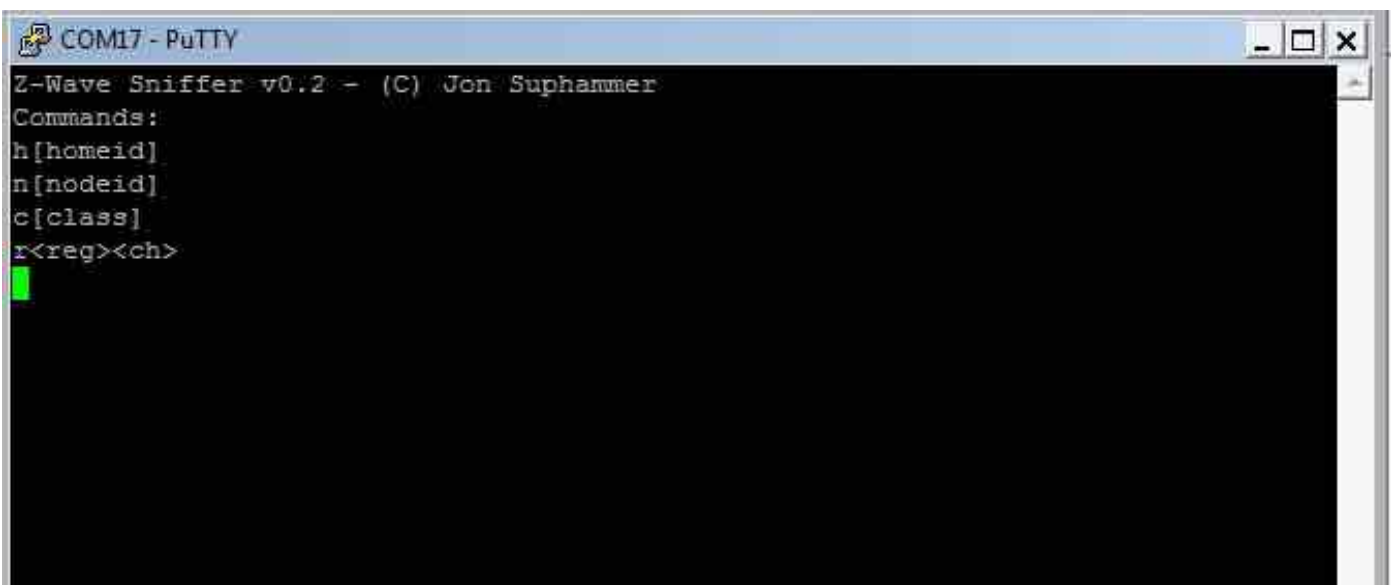
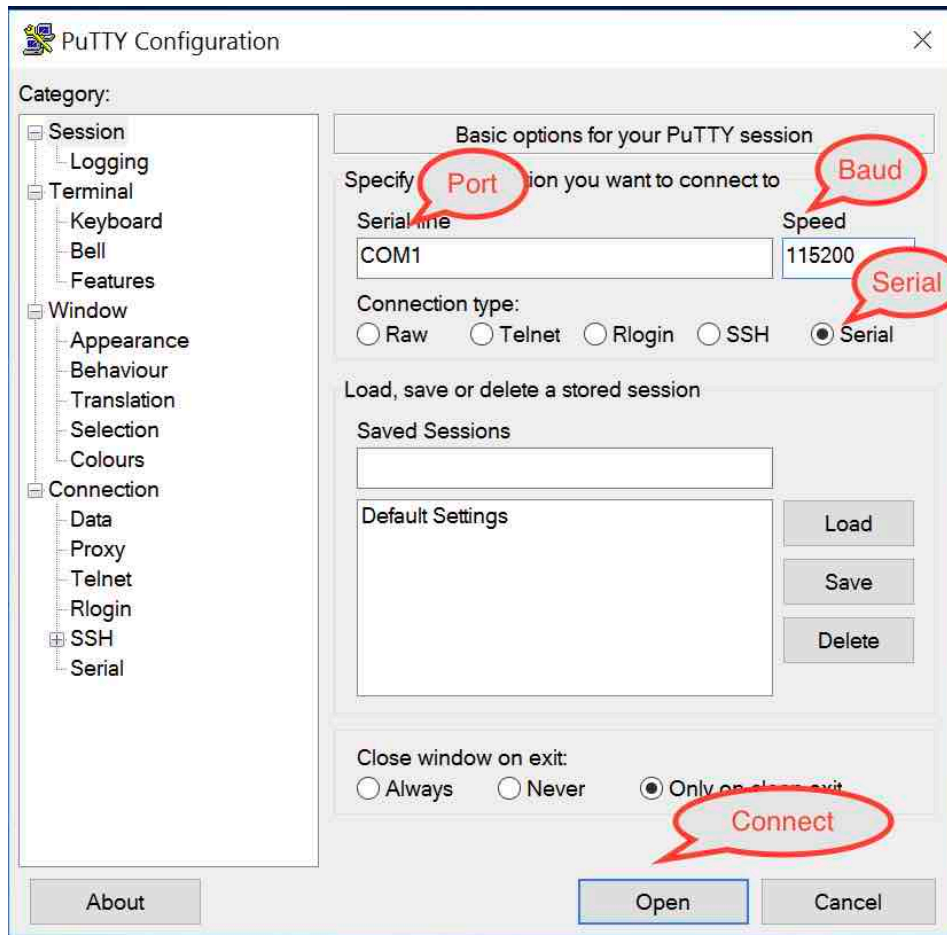
Once you installed the driver, you will need to start Device Manager to see available Serial Ports. Below you will see COM17 is Z-Wave Sniffer port.



After you have found the port. We suggest you use PuTTY as terminal application on Windows. You can download PuTTY from here: <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

Once you have started PuTTY, you will see a dialog box.

- Make sure «Serial is selected as connection type.
- Specify the port you got from device manager as «Serial line».
- Select 115200 as Speed.
- Press Open to connect to the Z-Wave Sniffer.



## 2. Usage

Z-Wave Sniffer firmware is still involving, so the manual might not always be in sync with the functionality of the Sniffer. Please contact us or go to the forum at [www.suphammer.net](http://www.suphammer.net) if you have any questions regarding the Sniffer.

After you connect to the Z-Wave Sniffer it will be in output mode. The Sniffer you have received should have already be configured for the region you are located in.

The format of the Z-Wave packets is as follows:

[hhhhhhhh] s -> d : mmm [uuuuuuuuu]

**H:** homeid - Z-Wave network identification (in hex)

**S:** source node (in decimal)

**D:** destination node (in decimal)

**M:** Z-Wave message

**U:** Unparsed message. I.e the parameters of a function.

To do more specific actions like filtering or change region, you need to go into the command menu. You can enter command meny by pressing 'c'.

Here is list if the commands in the command menu:

- 'h' will lock which home id you will see. I.e. typing "hDDC54389" will limit output to home id "DDC54389". Typing only "h" will reset back to default which is all home id's.
- 'n' will filter on node. "N2" will output only messages from node 2 or too node 2. Typing "n" will reset back to all nodes.
- 'c' will filter on class. This one is more tricky. You need to know the class number and in decimal. You can see a reference of numbers here: [http://wiki.micasaverde.com/index.php/ZWave\\_Command\\_Classes](http://wiki.micasaverde.com/index.php/ZWave_Command_Classes). Example: "c37" will filter on SWITCH\_BINARY. Typing "c" will reset back to all classes.
- 'r' is for changing region and channel. So your primary region is EU, but you can also test for all other Z-Wave regions by typing the region name. You also need to specify the channel. Normaly channel 0 is for inclusion/exclusion, channel 1 for primary traffic and in some cases channel 2 for high speed traffic. Typing rEU1 will set region EU, channel 1. Please note that region function is persistent while all other options here is reset on power cycle.
- 'q' is for selecting raw mode. Using this mode you will see the Z-Wave message in hex and can potentially make your own scripts to parse more detailed.