

Searduino at Chalmers' GNU/Linux computers

Searduino is installed (version 0.9.94) and set up for you.

Preparation

Setup AVR tools

- Log in to a computer
- Add the following paths to the environment variable PATH
 - `/chalmers/sw/unsup64/searduino-0.9.94/searduino/lib/`
 - `/chalmers/sw/unsup64/searduino-0.9.94/searduino/lib/avr/bin`

You can do this by copy/paste these three lines to a shell/terminal:

```
export SPATH="/chalmers/sw/unsup64/searduino-0.9.94/searduino/"
echo "PATH=$SPATH/lib/:$PATH" >> ~/.bashrc
echo "PATH=$SPATH/lib/avr/bin:$PATH" >> ~/.bashrc
```

Next time you log in (or start a shell) you will find the avr tools. To fix it in this session, simple type: `. ~/.bashrc`

Using searduino for the first time

Create a new project

To create a new project, called `blinker`, you simply type:

```
searduino-builder --create blinker
```

Note: A C file and a Makefile have been created for you in the `~/searduino/blinker`

Run the project in the simulator

- Go to the directory:

```
cd ~/searduino/blinker
```

- Load the code in the simulator, using makefile

```
make sim-start
```

- Start the simulation

Click **Start** in the GUI.

Edit the code

- Open the C file in your favorite editor (time to learn Emacs? :)).

Normal use

Preparation

- start the simulator in a terminal by typing `seardunio-jeardunio.sh`
- in the simulator open up the project you want to work on by clicking “Searduino -> Open Searduino Project”. Find the folder and click “Open”.
- fire up your favorite editor and open the C file of your project.

Work flow

- Edit the code
- Rebuild and run in the simulator by Clicking “Searduino -> Build for simulator” and click “Start”

Upload to Arduino board

Using the Simulator

We're assuming you have the Seardunio project loaded in the simulator.

- Plug in the Arduino UNO in to the computer using the USB cable
- In the Simulator, click “Board -> Uno”
- In the Simulator, click “Arduino -> Upload to Arduino board”

Note: See Known bugs and limitations

Using the makefile

- Plug in the Arduino UNO in to the computer using the USB cable
- Change the ARDUINO variable to “Uno” in the Makefile
- Type `make upload`

Known bugs and limitations

- due to permission problem with the USB ports Searduino can currently not upload code to Arduino board (neither can the Arduino software).