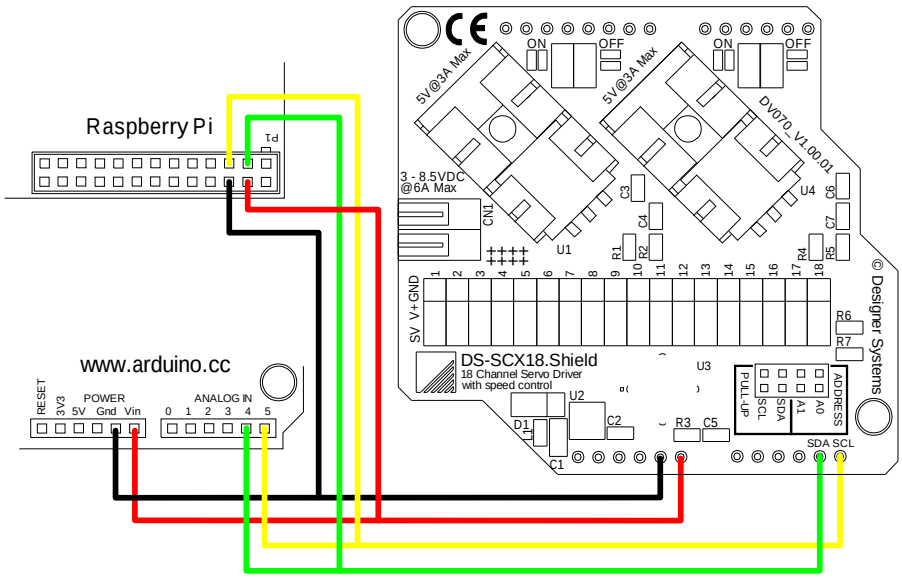
DS-SCX18.S quick start guide

Connection:

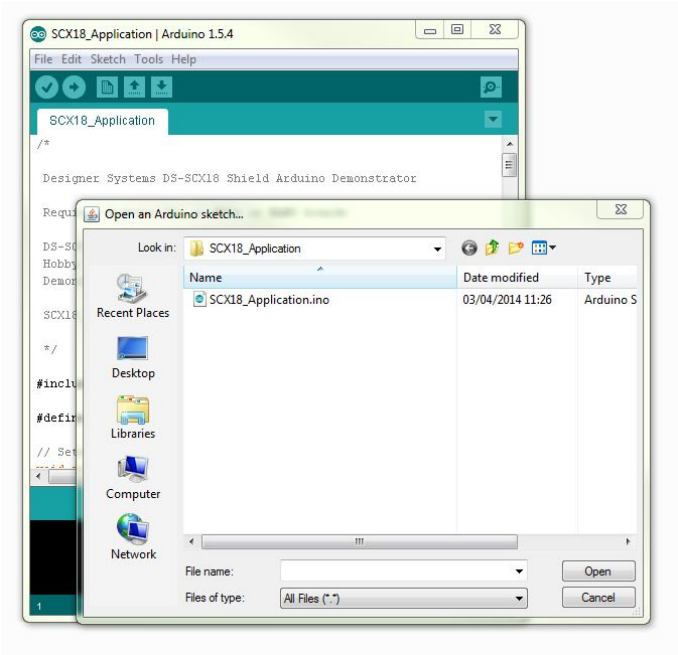
The DS-SCX18.S should be connected to the Arduino or Raspberry-Pi boards using the supplied wires or plugged into the Arduino board after soldering pin headers into the SCX18.S board [not supplied]. The wiring diagram below shows the connections that need to be made:



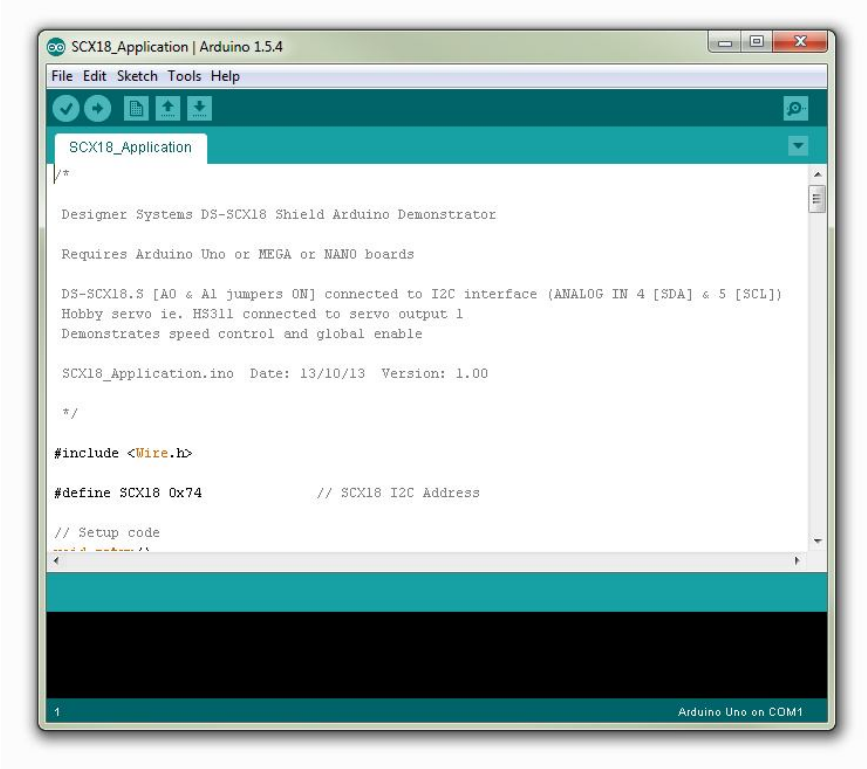
Connect a hobby servo (ie. HS311) to servo output 1, ensuring that black wire on the servo connects to the row of pins marked ‘GND’, and connect a battery or power supply of 6 to 8.5Volts to the servo power terminal block (ENSURE THAT POSITIVE ON THE BATTERY/POWER CONNECTS TO THE TERMINAL MARKED WITH +++++++).

Arduino demo software application:

After downloading and installing the open-source Arduino environment from http://arduino.cc/hu/Main/Software also download the DS-SCX18.S application sketch from http://www.designersystems.co.uk/SCX18.S_Disk.zip and unzip and load this sketch file into the Arduino environment.



Connect the Arduino board to the computer using a USB cable and power up the board with an external power adaptor. Within the Arduino environment click on ‘File’ then ‘Upload’. (Note: This assumes that you have already selected the Arduino board and COM port using ‘Tools’, ‘Board’ or ‘Port’)



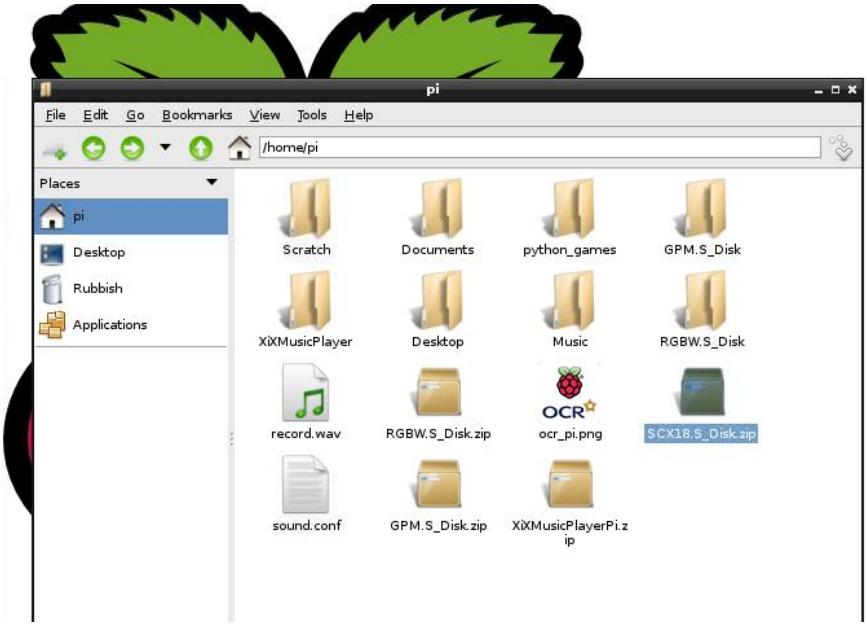
When the application has been uploaded it will start the demonstration. You can modify the demonstration code to access other servos (2-18), experiment with the speed control, soft-start & reverse within the SCX18.S. Standard routines are provided within the demo program that can be used in your own programs.

More information:

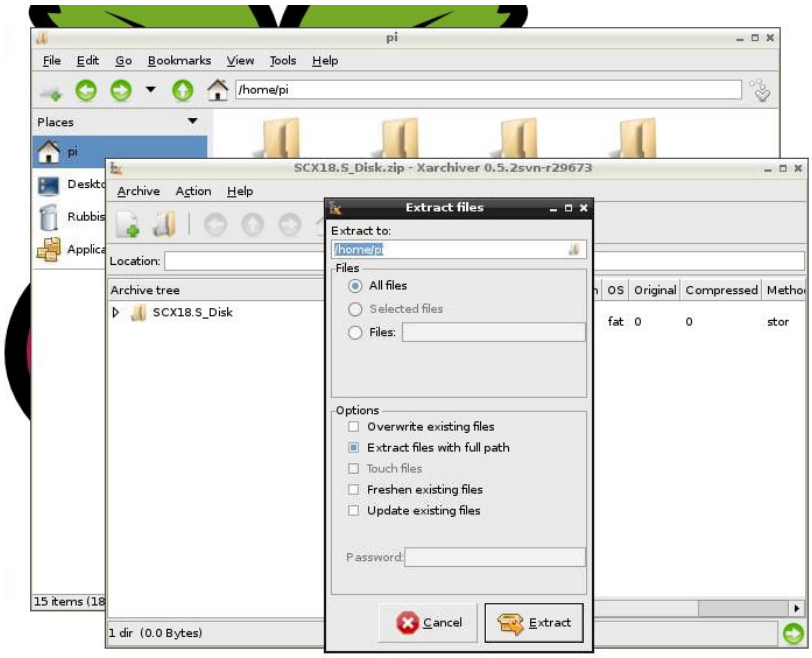
For a PDF of this quick start guide or a full technical datasheet please visit:
http://www.designersystems.co.uk/DS-SCX18.S_info.htm

Raspberry-Pi demo software application:

After preparing an SD card with the latest release of the NOOBS (New Out Of Box Software) downloaded from http://www.raspberrypi.org/downloads start the Raspberry-Pi, log in (default username 'pi', password 'raspberry') and start the desktop using the command 'startx'.
Click on the start menu icon in the bottom left-hand corner of the desktop and select 'Internet' and 'NetSurf Web Browser'.
Navigate to http://www.designersystems.co.uk/SCX18.S_Disk.zip and confirm that you want to save this file.
Close the NetSurf browser and click on the start menu icon, 'Accessories' and 'File Manager', you should then see the SCX18.S_Disk.zip file listed under the /home/pi directory as below:

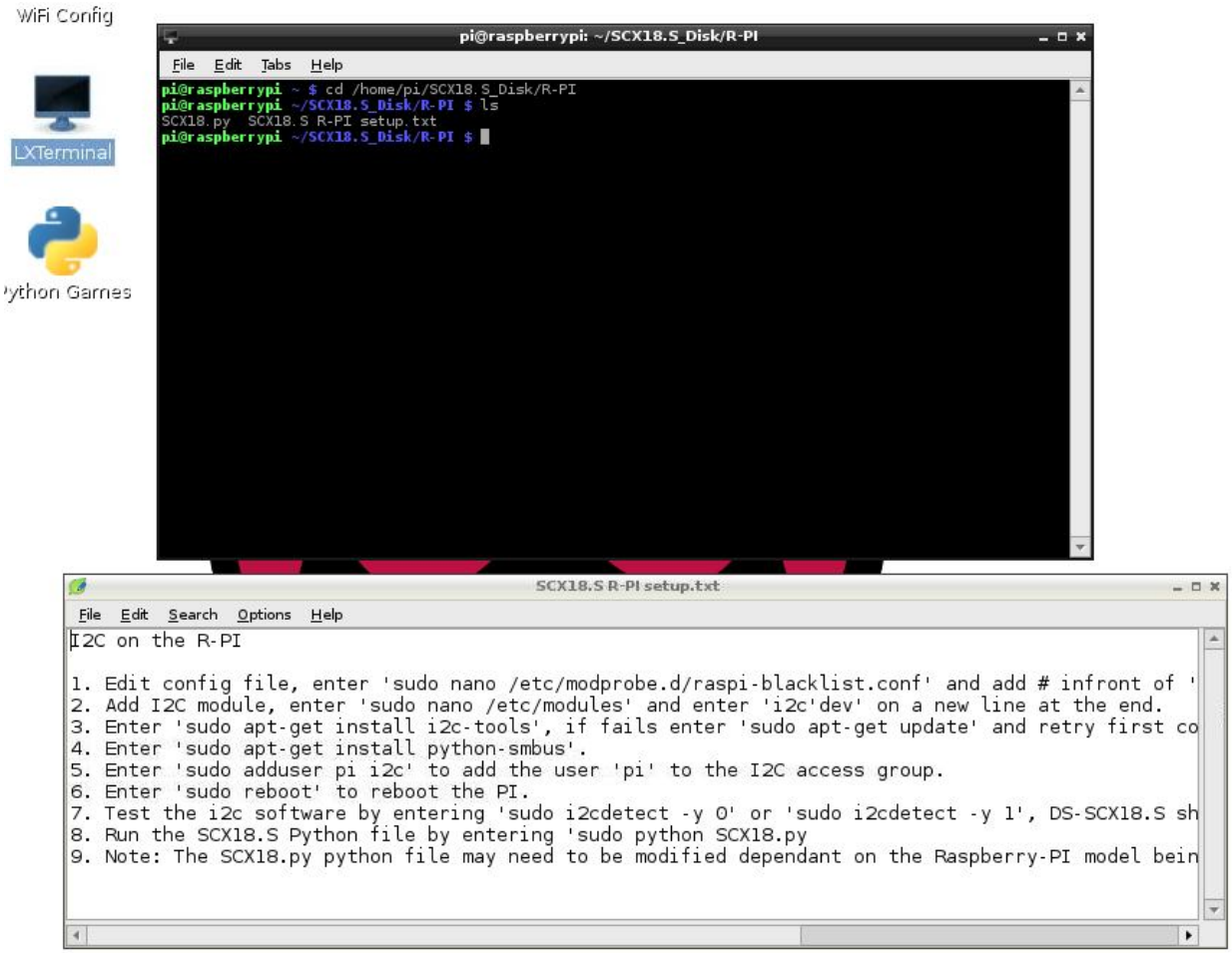


Double click on this file to start the zip extractor and then go the 'Action', 'Extract' and click on the 'Extract' button as below:



Close the XArchiver window and file manager window should now contain a directory called 'SCX18.S_Disk'. Double click on this directory, then 'R-PI' and locate the 'SCX18.S R-PI setup.txt' file and double click to open this file so that it can be read.

You now need to start the LX Terminal window to run the demo program, so close the file manager window and double click the 'LXTerminal' icon on the desktop. Type in 'cd /home/pi/SCX18.S_Disk/R-PI' and then 'ls' to list the files. You should now have a desktop that looks similar to the below:



If you have not run any I^2C connected devices on your Raspberry-Pi before then follow the procedure listed in the SCX18.S R-PI setup.txt file. A reboot will be required to bring you back to desktop.

Restart the LXTerminal, if required, and enter 'sudo python SCX18.py' to start the DS-SCX18.S application, you should then see the servo connected to the SCX18.S start its demonstration.

The SCX18.py program can be customised to access other servos (2-18), experiment with the speed control, soft-start & reverse by editing the SCX18.py file using the command line 'sudo nano SCX18.py'. Standard routines are provided within the demo program that can be used in your own programs.

More information:

For a PDF of this quick start guide or a full technical datasheet please visit:
http://www.designersystems.co.uk/DS-SCX18.S_info.htm