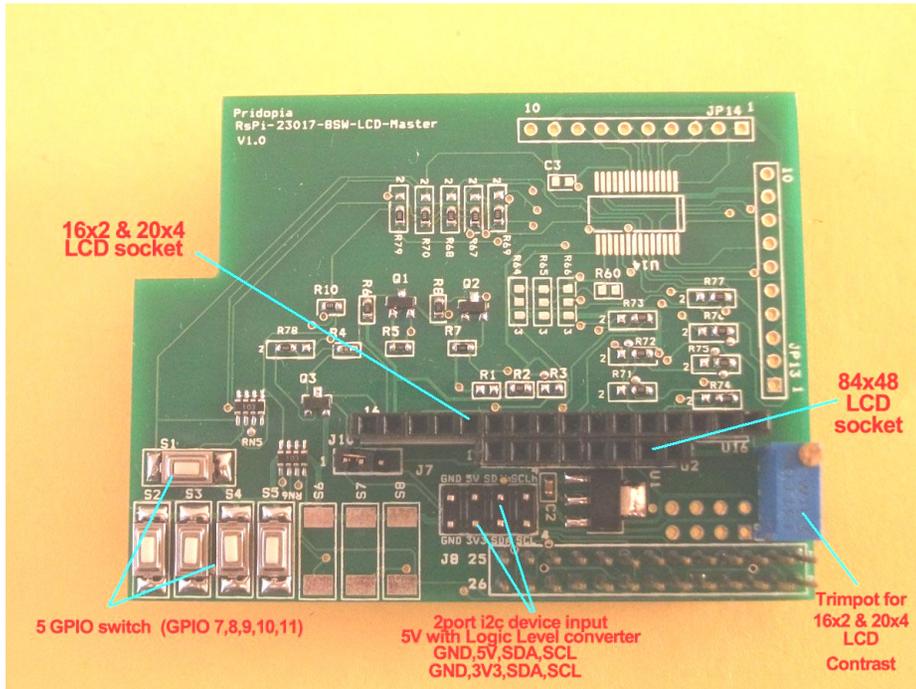


RsPi- 16x2 character GPIO LCD Master Board User Manual



1. 5 GPIO (7,8,9,10,11) Micro Switch
2. back light control circuit can control by software
3. software LCD contrast control for 84x48 pixels LCD
4. support our Scratch control driver
5. 2 i2c device input port J7 (GND, 5V,SDA,SCL) & J8 (GND,3V3,SDA,SCL)
J7 with Logic Level converter
6. build-in 3v3 power regulator provide 3v3 to 84x48 LCD
7. 10k Trimpot for 16x2 & 20x4 LCD contrast control
8. GPIO interface for 16x2 & 20x4 LCD
9. GPIO interface for 8x48 LCD
Din = GPIO 23 , SCLK = GPIO 24, DC = GPIO 22 ,RST = GPIO 17 , CS =GPIO 27
10. J10 2-3 84X48 LCD back light always ON, 1-2 control by GPIO18
11. 16X 2 & 20X4 LCD GPIO Pin
pin 1 to 16 (VSS,VDD,V0,RS,RW,E,D0,D1,D2,D3,D4,D5,D6,D7,A,K)

VSS - GND, VDD - 5V, V0 to 10K trimpot, RS - pin 22 GPIO 25 , RW - GND
E - pin 18 GPIO 24 , A - 5V, K - pin 12 GPIO 18
4bit mode D4 - pin 16 GPIO 23 , D5 - pin 11 GPIO 17, D6 - pin 13 GPIO 27
D7 - pin 15 GPIO 22

Test Program can be download from our web site

<http://www.pridopia.co.uk/pi-1602-LCD-master.html>
1602glcd.tar -- C & Python code for 16x2 LCD

Pi_Scratch interface software download from our web site

<http://www.pridopia.co.uk/rs-pi-set-scratch.html>

Install GPIO Library for software

<https://pypi.python.org/pypi/RPi.GPIO> GPIO library

GPIO library - RPi.GPIO-0.5.3a.tar.gz

WiringPi LCD library 84x48 LCD library

<http://wiringpi.com/>

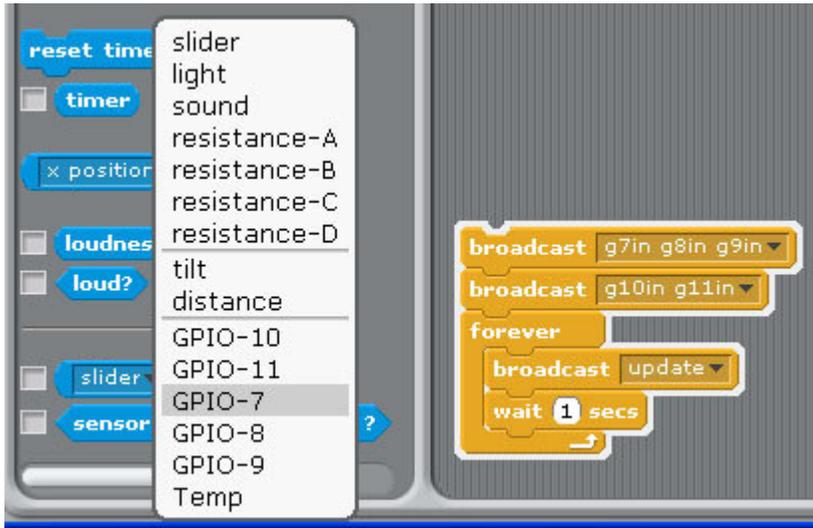
Install python , library and run the test program

```
# sudo apt-get install python-dev
# wget http://www.pridopia.co.uk/pi-pgm/RPi.GPIO-0.5.3a.tar.gz
# gunzip RPi.GPIO-0.5.3a.tar.gz
# tar -xvf RPi.GPIO-0.5.3a.tar
# cd RPi.GPIO-0.5.3a
# sudo python setup.py install
# sudo python xxx.py (xxx.py it's your test program)
```

Package Content

- 1x Rs-Pi 16x2 GPIO LCD Master board
- 1x 16x2 character blue/white LCD
- 1x manual

(1) 5 GPIO Switch GPIO 7,8,9,10,11



1. Setting GPIO 7,8,9,10,11 as input
2. broadcast "Update"
3. in Sensing --> Slider, you will see the GPIO-7,8,9,10,11 in the list

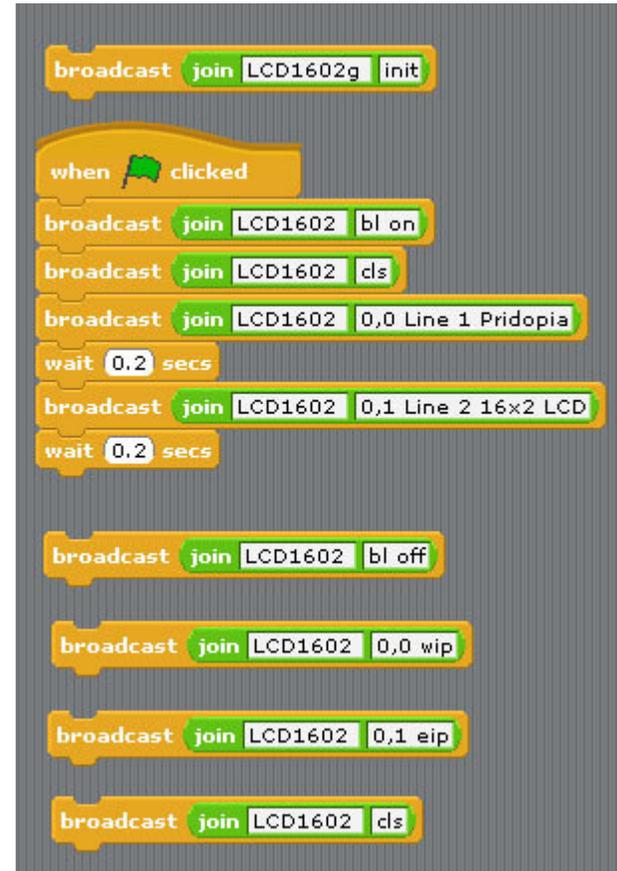
(2) RSS function (Scrolling text Display top 4 News message) message format

Line1 --> Time + message 1 + " ->-> " + Message 3 + Time
 Line2 --> Time + message 2 + " ->-> " + Message 4 + Time



command "LCD1602g init" initial GPIO 16x2 LCD
 command "LCD1602 bl on" turn on LCD back light
 command "LCD1602 rss" + " speed" Active RSS function (need have internet)
 LCD1602 rss 8 speed (1 to 20 - 1 is fast, 20 is slow)
 command "LCD1602 rss off" stop RSS function

(3) command



command "LCD1602g " + "init" initial GPIO 16x2 LCD
 command "LCD1602 " + "X, Y " + " MESSAGE" Display message to LCD in location x,y
 command "LCD1602 " + "cls" clean screen
 command "LCD1602 " + "bl " + "on/off" LCD back light ON / OFF
 command "LCD1602 " + "X, Y " + " wip" Display WiFi IP to LCD in location x,y
 command "LCD1602 " + "X, Y " + " eip" Display Ethernet IP to LCD in location x,y
 command "LCD1602 " + "X, Y " + " time" Display Time to LCD in location x,y
 command "LCD1602 " + "X, Y " + " date" Display Time to LCD in location x,y

 command "LCD1602 " + "X, Y " + " ram" Display RAM usage in location x,y
 command "LCD1602 " + "X, Y " + " wifi" + " ip" Display WiFi IP in location x,y
 command "LCD1602 " + "X, Y " + " ssid" Display WiFi SSID in location x,y
 command "LCD1602 " + "X, Y " + " gsig" Display wifi signal with bar chart in location x,y