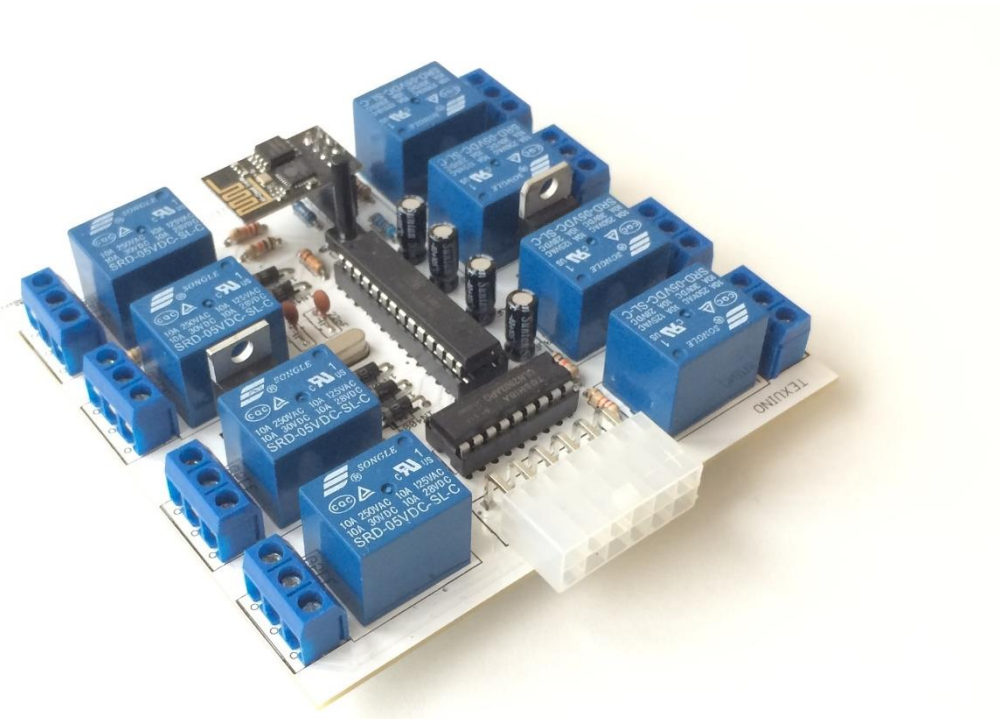
Texuino
User
Manual



v1.0

Contents

1. Getting Started

Thank you for purchasing Texuino! This small compact platform can help bring to life your custom projects with minimal effort. Texuino uses a Wi-Fi connection to wirelessly monitor its inputs and control its outputs. Packing 8 relays means you can control plenty of different electronic components and feedback input if you so desire.

1.1. Powering up Texuino

Texuino accepts 6-8V DC at a minimum of 500mA. Please see plug diagram for correct wiring of positive and negative terminal to Texuino plug. Once you have powered up Texuino you should notice an initial blue LED flash and a constant red one located near the tactile reset switch. Please refer to relay datasheet in appendix E for relay tolerances.

1.2. Using the app

Download the 'Texuino RC' app from the google play store. Once you have opened the app it will immediately begin searching for Texuino using default network parameters. The default network name of the Texuino (SSID) is "TEXUINO" and password is "texdefaultpass". You can also manually search for the Texuino by sliding the options menu from the left of the screen and selecting 'Connect' where you will be shown a list of available devices to connect to. If for any reason the app fails to identify Texuino, go to android Wi-Fi settings and connect to the device there using aforementioned parameters. Once you have done that open the app again and connection should be successful. **Please note:** The first time you use the app you must go to the 'Connect' option via the sliding menu in order to give the app permission to use networking functions.

1.3. Using PuTTY

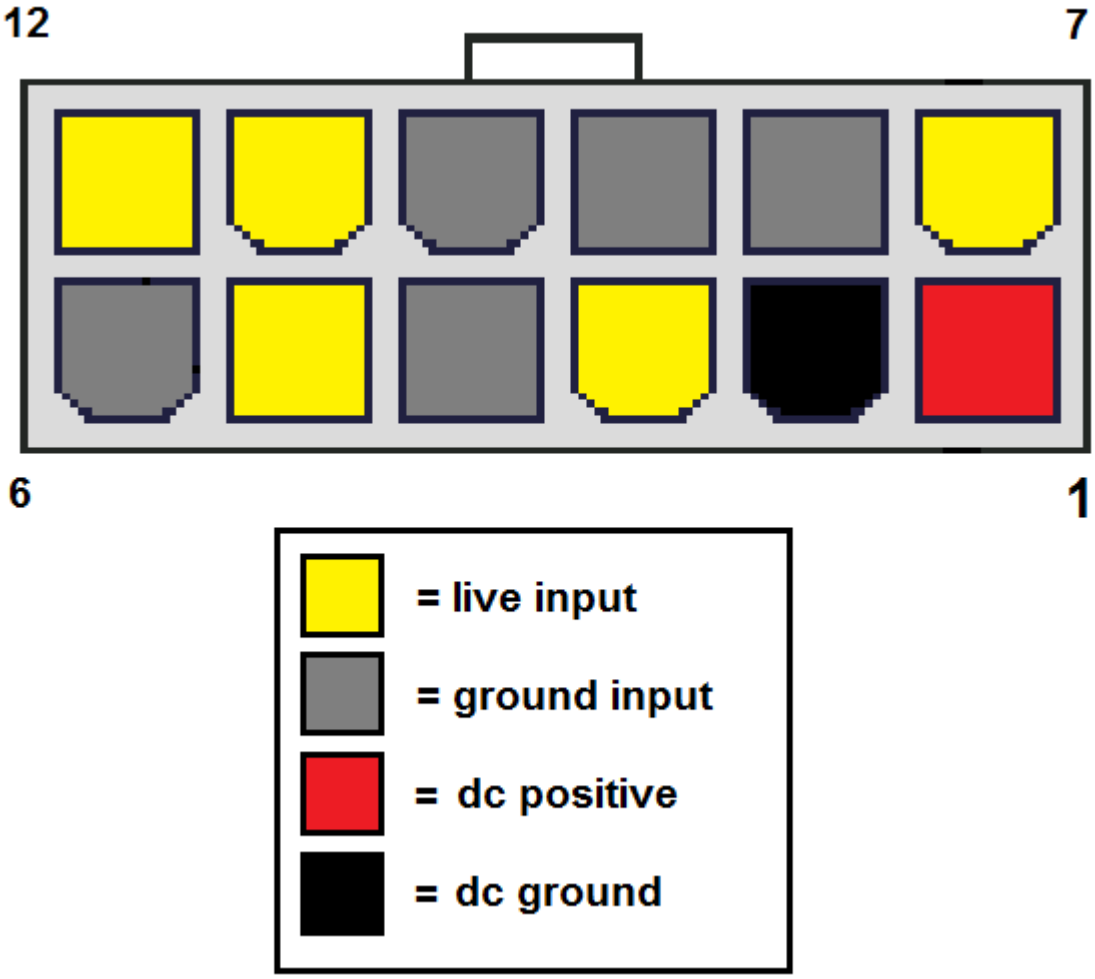
You can explore the capabilities of Texuino in a more informative manner by using a command line client like PuTTY. Download PuTTY if you do not have it already and once you have fired it up in the session tab choose connection type 'Raw'. Use "192.168.4.1" for IP address and "5050" for port. In the terminal tab choose 'Force on' for both Local echo and Local line editing. Click open and test Texuino communication by typing 'MSGS'. This should activate the messaging feature and any other command sent Texuino will send back an acknowledgment. For a full list of available commands please see appendix B.

2. Customising Your Texuino

It is possible to create your own firmware for the Texuino if you desire a more bespoke solution. To do so you will need to have an Arduino UNO with a removable MCU and you will **need to increase the serial buffer size to 128b**. If you are opting for this solution then it is assumed you have are a good trouble-shooter and have some programming experience in objective C. To create your own firmware for the platform simply upload your own sketch to your Arduino and then remove the MCU and put it in the Texuino. To help you with your sketch and see which pins are connected where please refer to appendix C.

3. Appendices

3.1. Appendix A – Plug pins



Pin	Use
1	Positive terminal of power supply
2	Negative terminal of power supply
3	Input #8 in app
4	Input #4 in app
5	Interrupt #2 in app
6	Interrupt #1 in app
7	Input #7 in app
8	Input #3 in app
9	Input #2 in app
10	Input #1 in app
11	Input #6 in app
12	Input #5 in app

3.2. Appendix B – Default FW command sheet

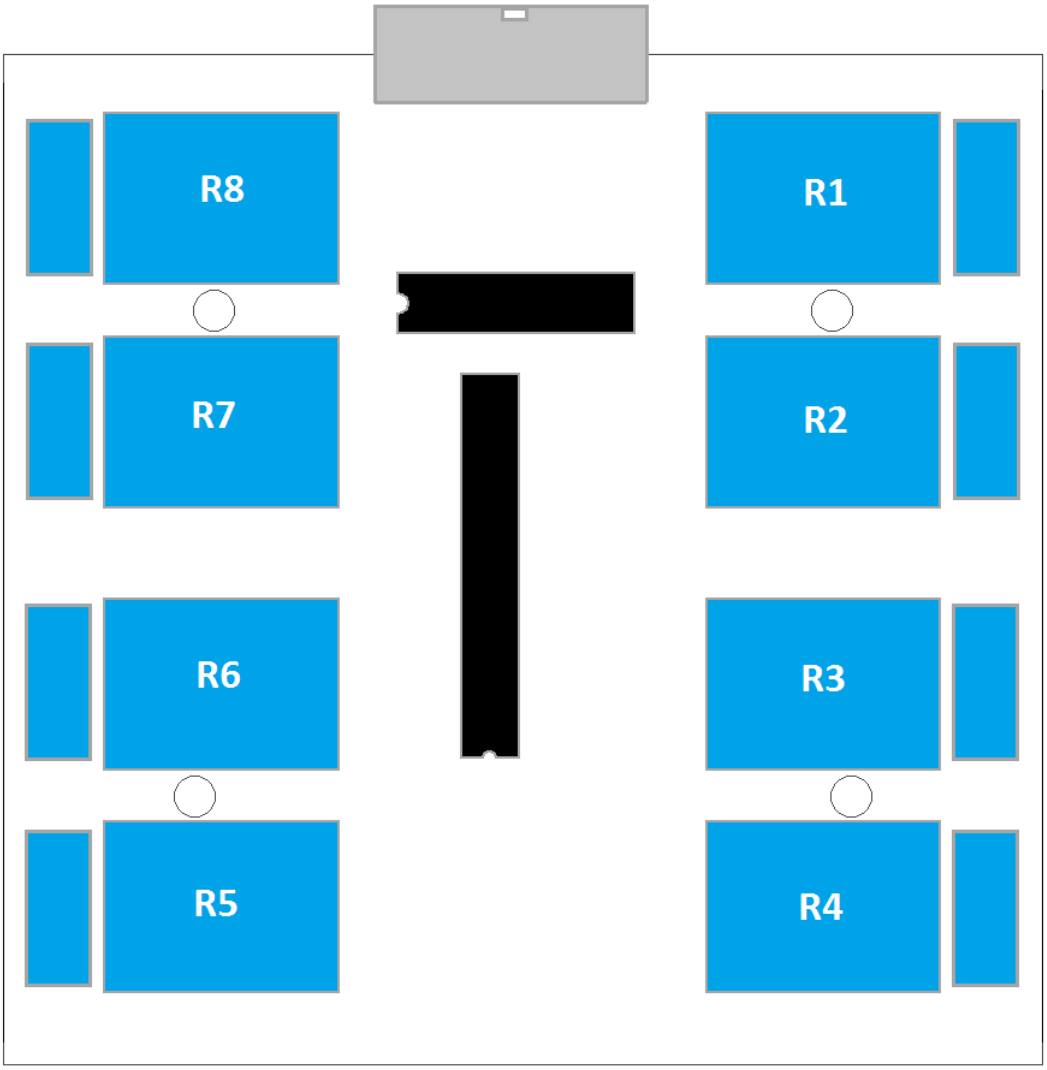
Command	Description
MSGS	Toggle messages on or off
OSD	Safe disconnect on – Turn off all relays upon disconnect
ISD	Safe disconnect off – Leave all relays in current state upon disconnect
OR1	Turn off Relay 1
OR2	Turn off Relay 2
OR3	Turn off Relay 3
OR4	Turn off Relay 4
OR5	Turn off Relay 5
OR6	Turn off Relay 6
OR7	Turn off Relay 7
OR8	Turn off Relay 8
IR1	Turn on Relay 1
IR2	Turn on Relay 2
IR3	Turn on Relay 3
IR4	Turn on Relay 4
IR5	Turn on Relay 5
IR6	Turn on Relay 6
IR7	Turn on Relay 7
IR8	Turn on Relay 8
OAR	All relays off
IAR	All relays on
GRB	Return relay status byte. From left to right: • 1st bit – Relay 1 • 2nd bit – Relay 2 • 3rd bit – Relay 3 • 4th bit – Relay 4 • 5th bit – Relay 5 • 6th bit – Relay 6 • 7th bit – Relay 7 • 8th bit – Relay 8 If bit is 0 then relay is off, if bit is 1 then relay is on.
GIB	Return inputs byte. From left to right: • 1st bit – Ground input 1 • 2nd bit – Ground input 2 • 3rd bit – Ground input 3 • 4th bit – Ground input 4 • 5th bit – Live input 1 • 6th bit – Live input 2 • 7th bit – Live input 3 • 8th bit – Live input 4 For live input If bit is 0 then no signal is detected, if bit is 1 then signal is present. For ground input If bit is 0 then signal is detected, but if bit is 1 then signal is not present.
INRPT	Return interrupts byte. From left to right: • 1st bit – ground interrupt

	• 2nd bit – live interrupt For live input If bit is 0 then no signal is detected, if bit is 1 then signal is present. For ground input If bit is 0 then signal is detected, but if bit is 1 then signal is not present.
GFB	Return all bytes in string separated by ":" in the format inputs:relays:interrupts. Example: "64:255:02"
CNET<SSID>{PASSWORD}	Configure network name and password. **Note** password must be a minimum of 8 characters

3.3. Appendix C – MCU I/O pins

Command	Description	Comments
A0	Live input	Plug pin 12
A1	Live input	Plug pin 11
A2	Ground input	Plug pin 10
A3	Ground input	Plug pin 9
A4	Ground input	Plug pin 8
A5	Live input	Plug pin 7
D2	Ground input	Interrupt, plug pin 6
D3	Live input	Interrupt, plug pin 5
D4	Ground input	Plug pin 4
D5	Relay 1	
D6	Relay 2	
D7	Relay 3	
D8	Relay 4	
D9	Relay 5	
D10	Relay 6	
D11	Relay 7	
D12	Relay 8	
D13	Live input	Plug pin 3

3.4. Appendix D – Board relays



3.5. Appendix E – Links

Description	URL
Texuino twitter page	https://twitter.com/texuino
Guide to increase Arduino serial buffer size	http://www.hobbytronics.co.uk/arduino-serial-buffer-size http://internetofhomethings.com/homethings/?p=927
Relays datasheet	http://www.datasheetcafe.com/srd-05vdc-sl-c-datasheet-pdf/
Buy Texuino	https://www.tindie.com/products/Geekchic/wi-fi-relay-board-8-relays10-inputs-android-app/
Email Support	stfneur@gmail.com