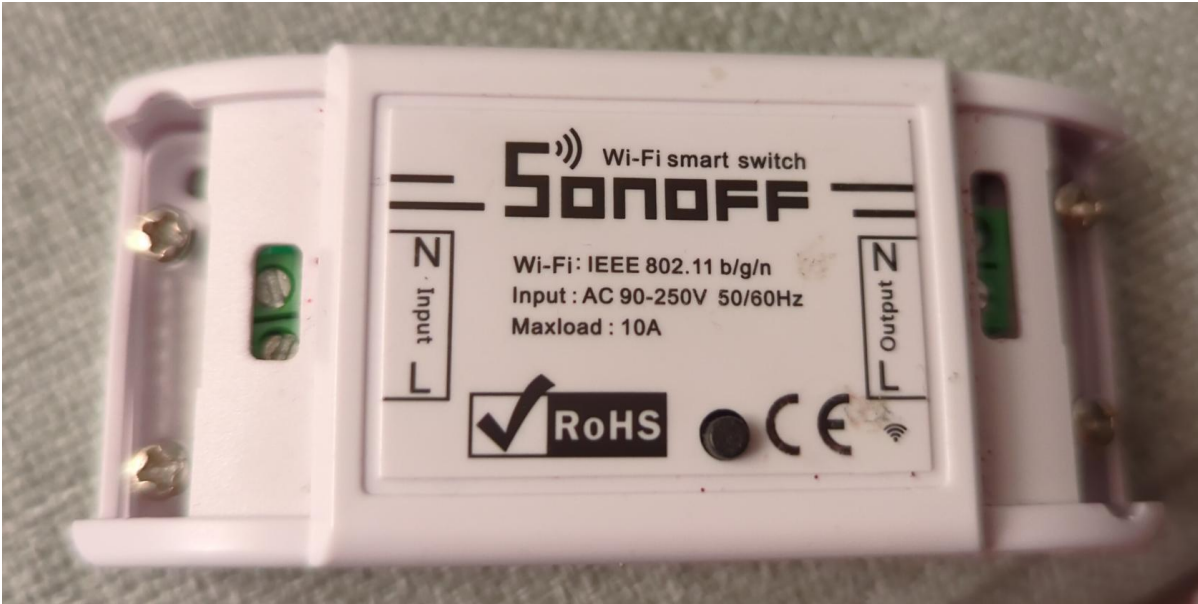
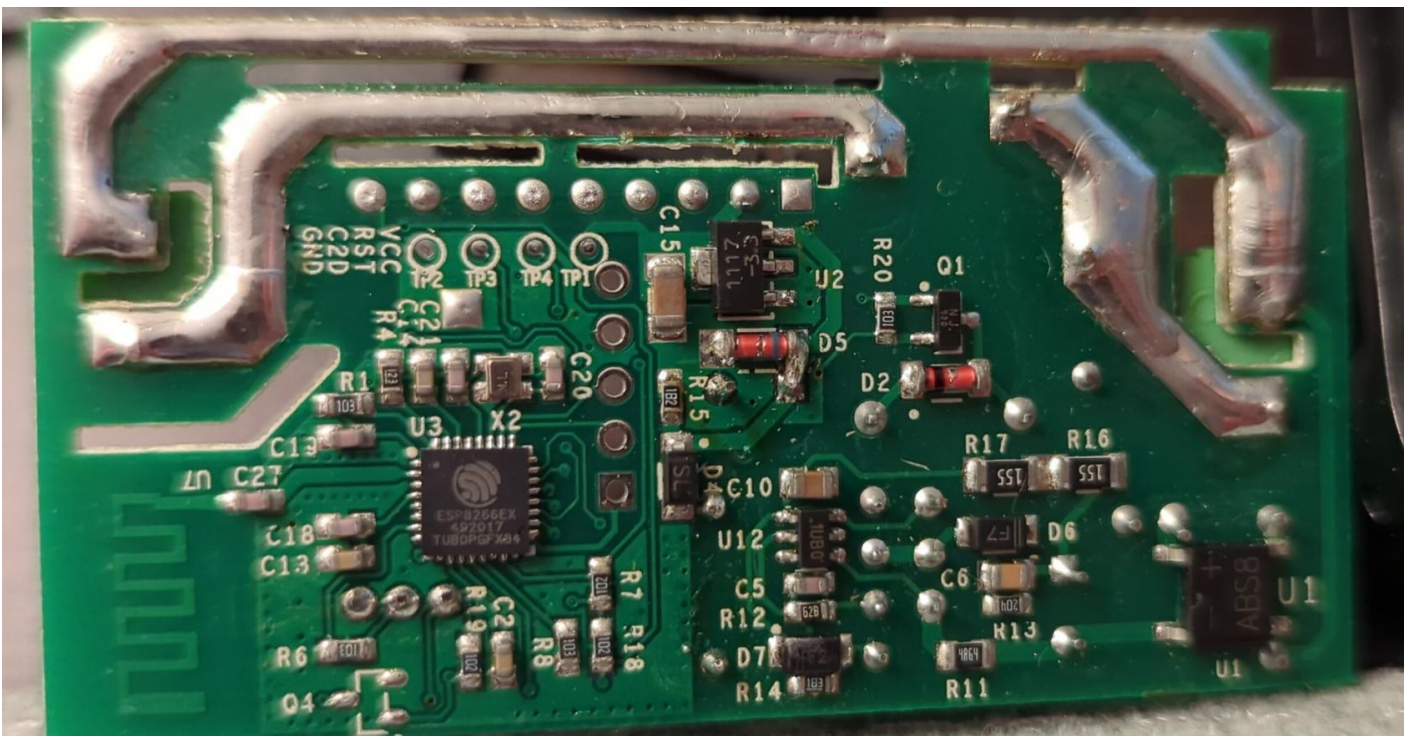


Smart switch ESP8266EX

Sonoff WiFi smart switch



- Original firmware: fwbackup.bin
- Installing alternative firmware: <https://tasmota.github.io/docs/Getting-Started/>

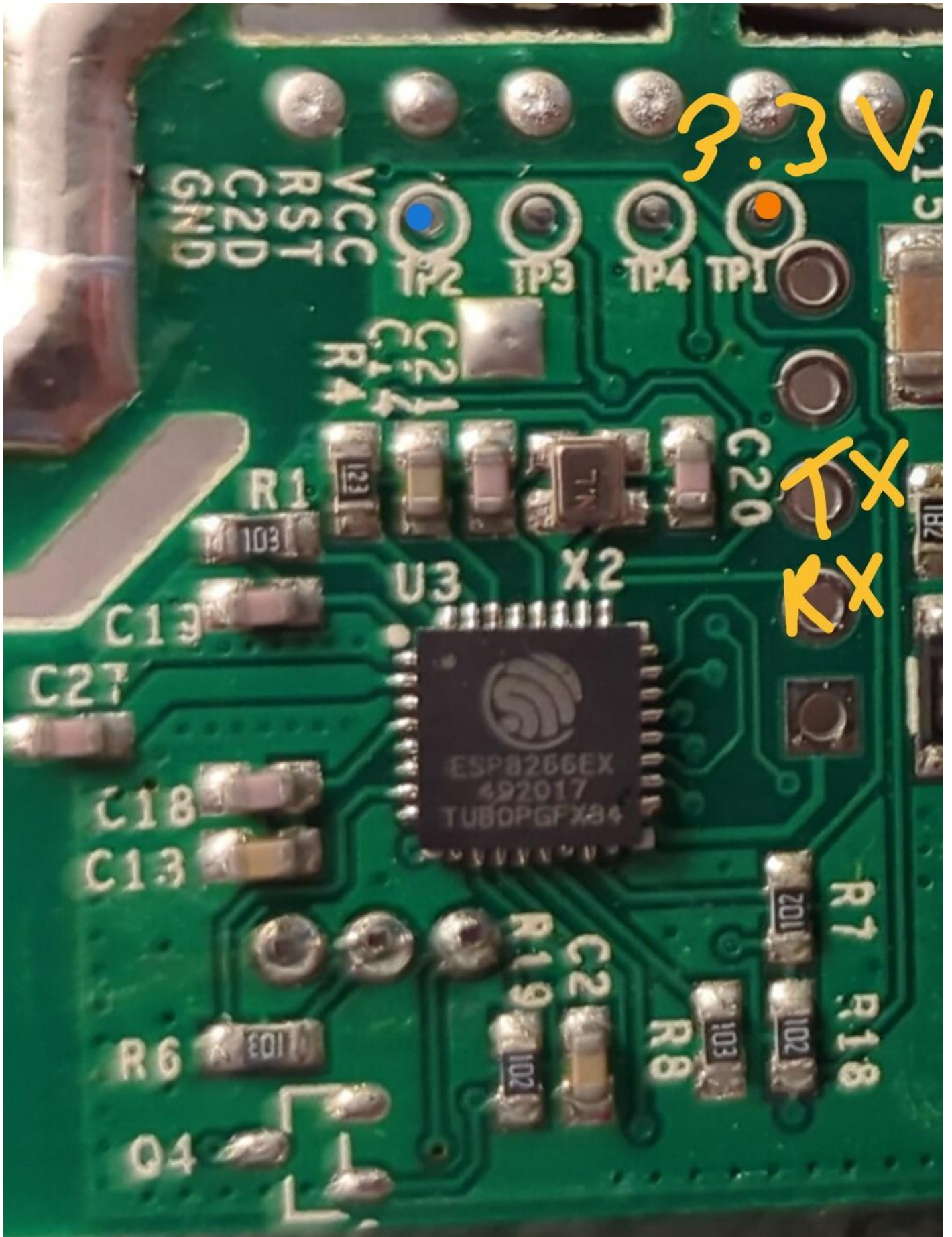


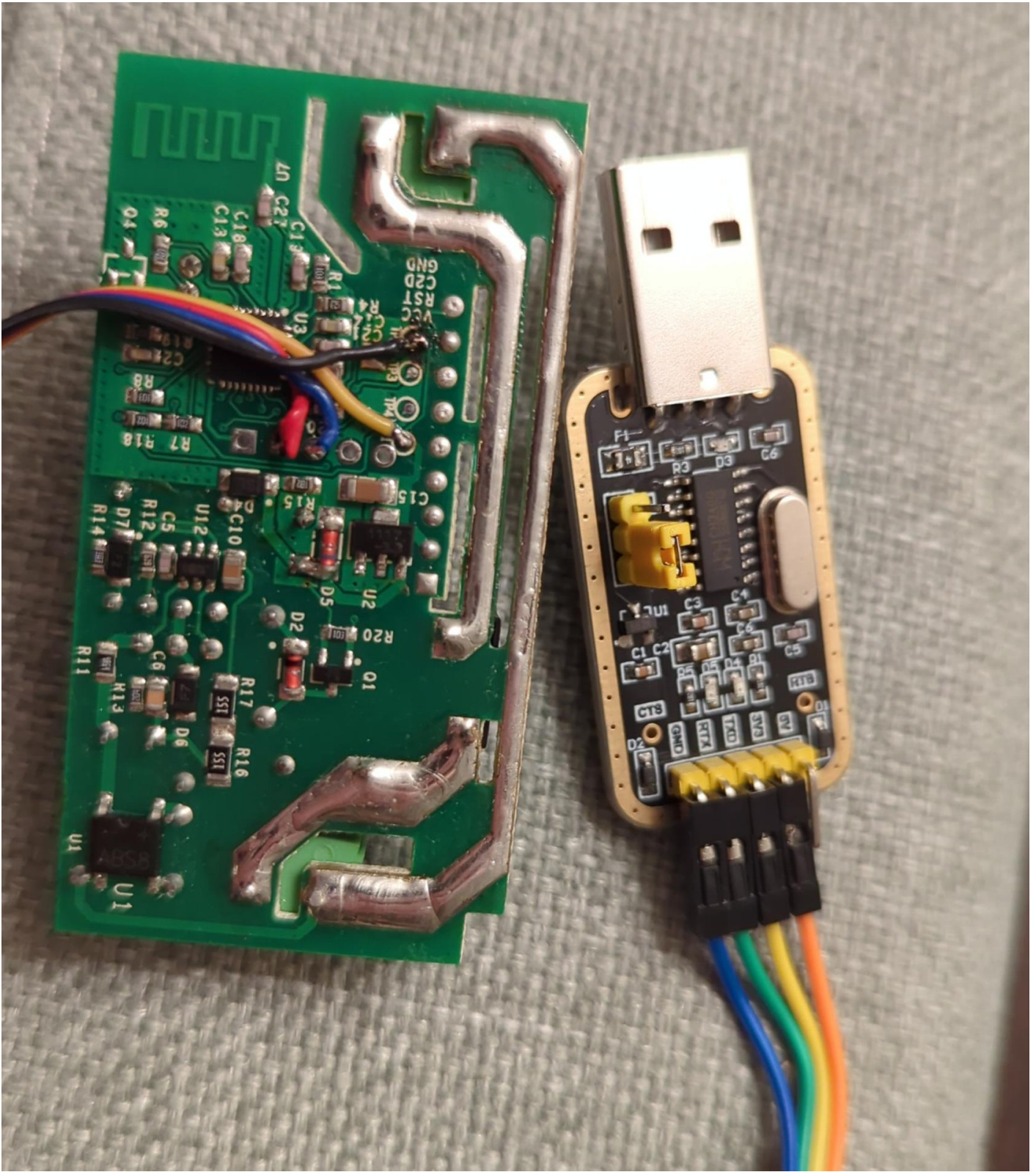
Input for the board is from mains. It is then rectified and transformed down to 3.3V via DS1117 regulator to power the ESP8266EX chip and the relay that switches the mains relay.

- [3.3V regulator](#)

Marked are 3.3V VCC and GND. The ESP8266EX UART-0 is on marked points TX and RX.

- [ESP8266EX datasheet](#)





Boot message

```
ets Jan 8 2013,rst cause:4, boot mode:(3,6)
```

```
wdt reset
```

Flashing

While holding the button connect the USB UART.

```
$ esptool.py -p /dev/ttyUSB0 flash_id
esptool.py v4.5.1
Serial port /dev/ttyUSB0
Connecting...
Detecting chip type... Unsupported detection protocol, switching and trying again...
Connecting...
Detecting chip type... ESP8266
Chip is ESP8266EX
Features: WiFi
Crystal is 26MHz
MAC: 5c:cf:7f:xx:xx:xx
Stub is already running. No upload is necessary.
Manufacturer: 5e
Device: 4014
Detected flash size: 1MB
Hard resetting via RTS pin...
```

Backup original firmware and erase flash.

```
$ esptool.py -p /dev/ttyUSB0 read_flash 0x000000 0x100000 fwbackup.bin
...
1048576 (100 %)
1048576 (100 %)
Read 1048576 bytes at 0x00000000 in 96.5 seconds (86.9 kbit/s)...
Hard resetting via RTS pin...

$ esptool.py -p /dev/ttyUSB0 erase_flash
...
Erasing flash (this may take a while)...
Chip erase completed successfully in 52.8s
Hard resetting via RTS pin...
```

Now power cycle with button pressed again to enter programming mode.

```
$ esptool.py -p /dev/ttyUSB0 write_flash -fm dout 0x0 tasmota.bin
....
```


I had issues with device not able to connect (needed 3-4 restarts), disabling *Short Preamble* and changing channel to 1 on my AP improved chances to connect.

Via UART type and hit enter: `Backlog <ssid>; password1 <pass>`

```
00:09:45.138 RSL: RESULT = {"Password1":"<pass>"}
00:09:46.504 APP: Restarting

ets Jan 8 2013,rst cause:1, boot mode:(3,6)

load 0x4010f000, len 3584, room 16
tail 0
chksum 0xb0
csum 0xb0
v3969889e
~ld

00:00:00.002 HDW: ESP8266EX
00:00:00.054 CFG: Loaded from flash at F7, Count 29
00:00:00.060 QPC: Count 1
00:00:00.071 Project tasmota - Tasmota Version 14.3.0(release-tasmota)-2_7_7(2024-10-15T08:18:01)
00:00:01.166 WIF: Connecting to AP1 <ssid> in mode 11n as tasmota-79E7BE-1982...
00:00:06.559 QPC: Reset
00:00:09.791 WIF: Connected
00:00:10.043 HTP: Web server active on tasmota-79E7BE-1982 with IP address 192.168.80.206
17:58:21.023 RSL: INF01 = {"Info1":{"Module":"Sonoff Basic","Version":"14.3.0(release-tasmota)","FallbackTopic":"cmd/DVES_79E7BE_fb/","GroupTopic":"cmd/tasmotas/"}}
17:58:21.029 RSL: INF02 = {"Info2":{"WebServerMode":"Admin","Hostname":"tasmota-79E7BE-1982","IPAddress":"192.168.80.206"}}
17:58:21.039 RSL: INF03 = {"Info3":{"RestartReason":"Software/System restart","BootCount":13}}
17:58:21.047 RSL: RESULT = {"POWER":"OFF"}
17:58:21.051 RSL: POWER = OFF
17:58:25.476 RSL: STATE = {"Time":"2024-10-26T17:58:25","Uptime":"0T00:00:17","UptimeSec":17,"Heap":27,"SleepMode":"Dynamic","Sleep":50,"LoadAvg":19,"MqttCount":0,"POWER":"OFF","Wifi":{"AP":1,"SSId":"<ssid>","BSSId":"62:D7:9A:61:55:DE","Channel":11,"Mode":"11n","RSSI":100,"Signal":-44,"LinkCount":1,"Downtime":"0T00:00:11"}}
```

Timezone

Use web console or UART:

- List of commands for given time zone: <https://tasmota.github.io/docs/Timezone-Table/>
- For Ireland/Dublin:

```
Backlog0 Timezone 99; TimeStd 1,0,3,1,1,60; TimeDst 1,0,10,1,2,0
```

Revision #17

Created 2024-10-22 18:22:22 IST by hxd

Updated 2024-10-27 19:14:11 GMT by hxd