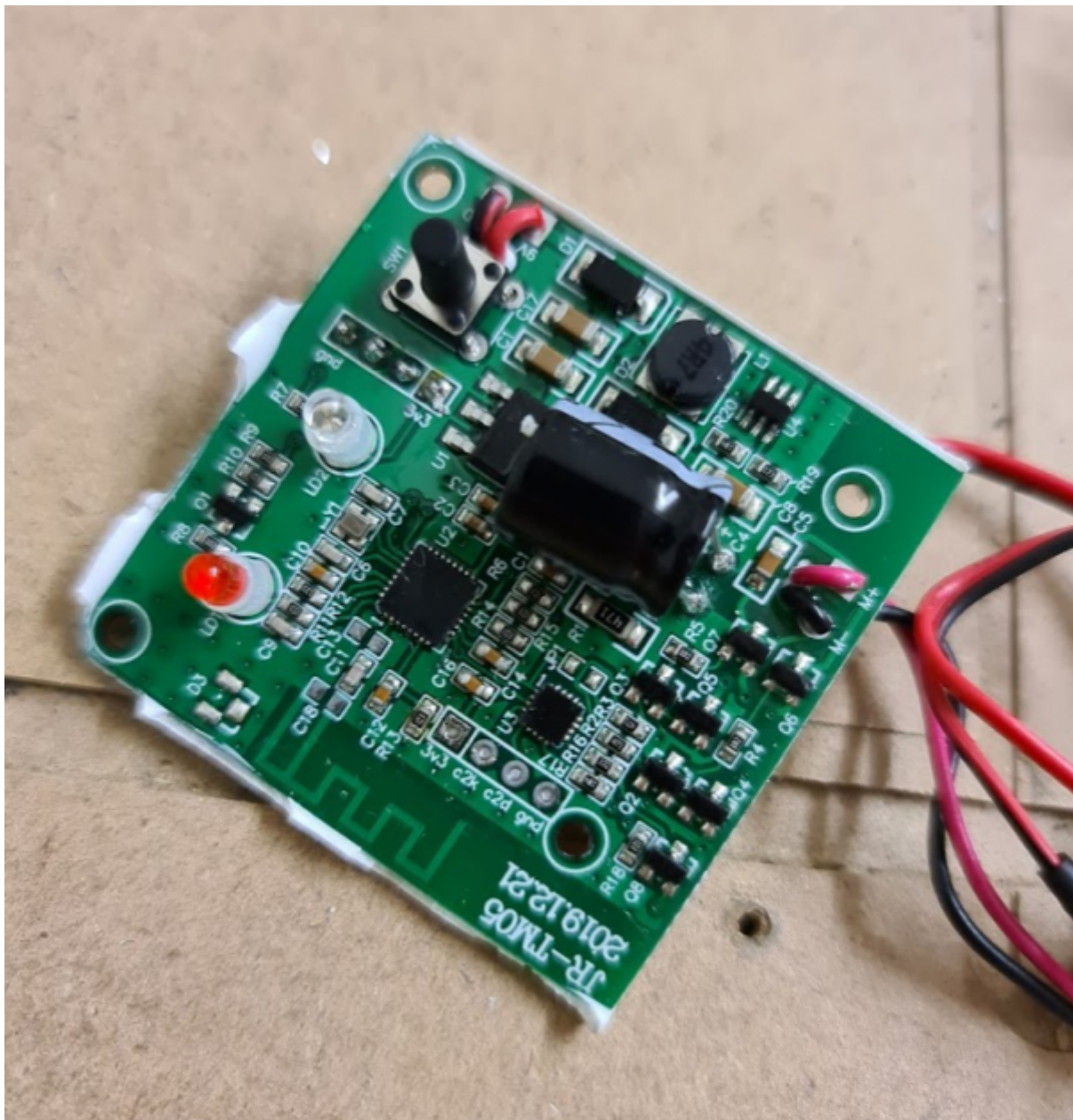


JR-TM05S Water Supply Timer

I recently bought a wifi enabled water supply timer [JR-TM05S](#) on [Banggood](#). i hoped that this device would be ESP8266 based so that i could run tasmota on it and integrate it into my smarthome via MQTT..

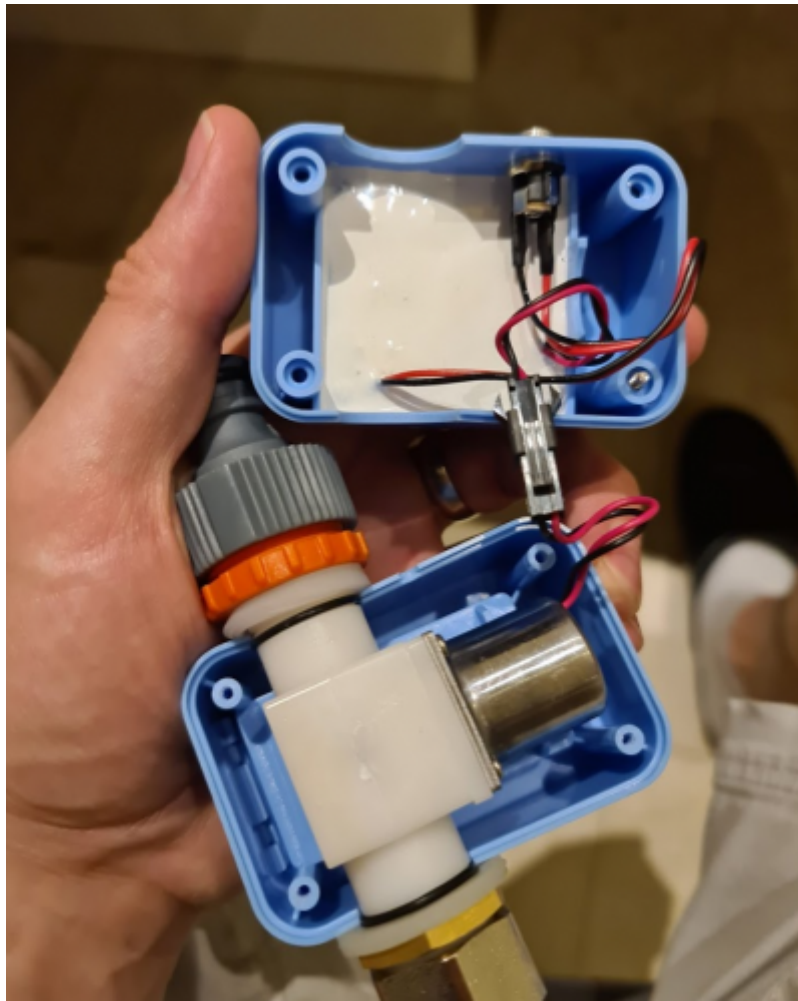
I was lucky, it is based on ESP8285 which is 100% compatible with ESP8266 but has more memory! the necessary 4 pins are even routed to some contacts where you just need to plug-in a pin-header and solder it down, to comfortably program the device! the only slightly annoying part is, that the unit is covered in silicone to waterproof it. i think they have done a good job at that.. but we have to peel it off to get to the pin headers.



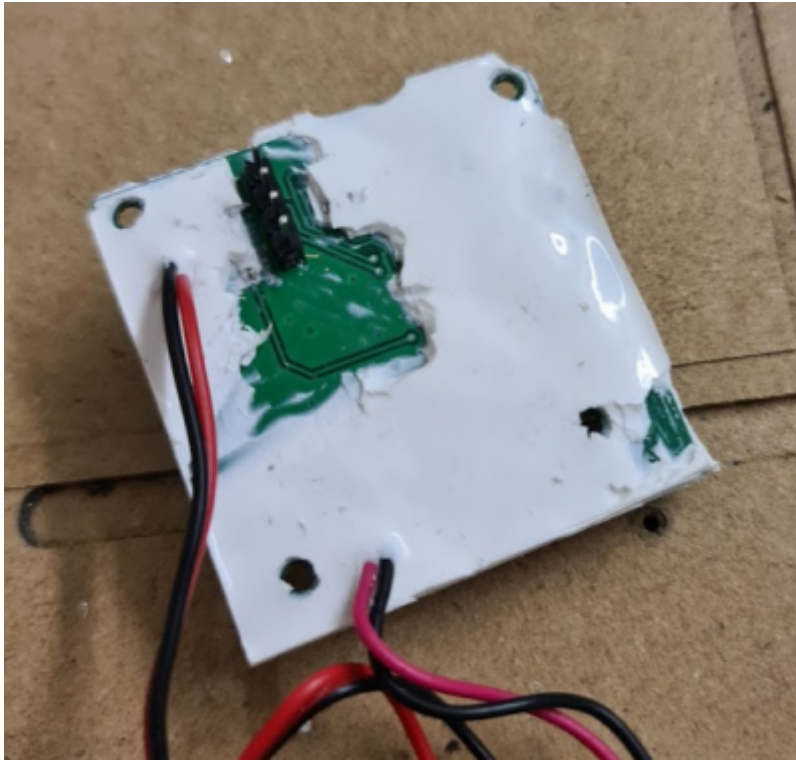
luckily the only button on the board is connected to GPIO0 which makes it also the flash-mode switch :)

so to prepare the unit, remove the big front-cover sticker and unscre the four screws in the corner,

this will split open the case



now remove the board by carefully cutting away some of the white silicone from the back and also remove the silicone where the pi header next to the button is



Pin header next to the button is used to re-program. the pinout is as follows (from pin closest to the outside edge of the board towards the inside of the board): 1.) GND 2.) TX 3.) RX 4.) 3.3V

connect those 4 to a programmer, no additional power supply is needed

press the button on the device while you plug-in the usb programmer, this will start the programming mode

install `esptool.py`

```
pip3 install esptool
```

make a

backup of original firmware

`esptool.py -p /dev/ttyUSB0 read_flash 0x00000 0x100000 JR-TM05S.bin` re-start programming mode and erase the flash

```
esptool.py -p /dev/ttyUSB0 erase_flash
```

re-start the programming mode again and flash the tasmota binary from the latest release

```
esptool.py -p /dev/ttyUSB0 write_flash -fs 1MB -fm dout 0x0  
../Downloads/tasmota.bin
```

unplug and power back on using the power cable that came with the unit, take your cellphone and connect to the tasmotaxyz wifi to configure tasmota

open a web browser and enter <http://192.168.4.1>

and there you go.. even the gpio pre-config seems to work right away, the button still opens and

closes the valve and the toggle button on the web interface does the same :)

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