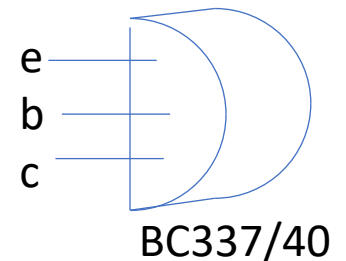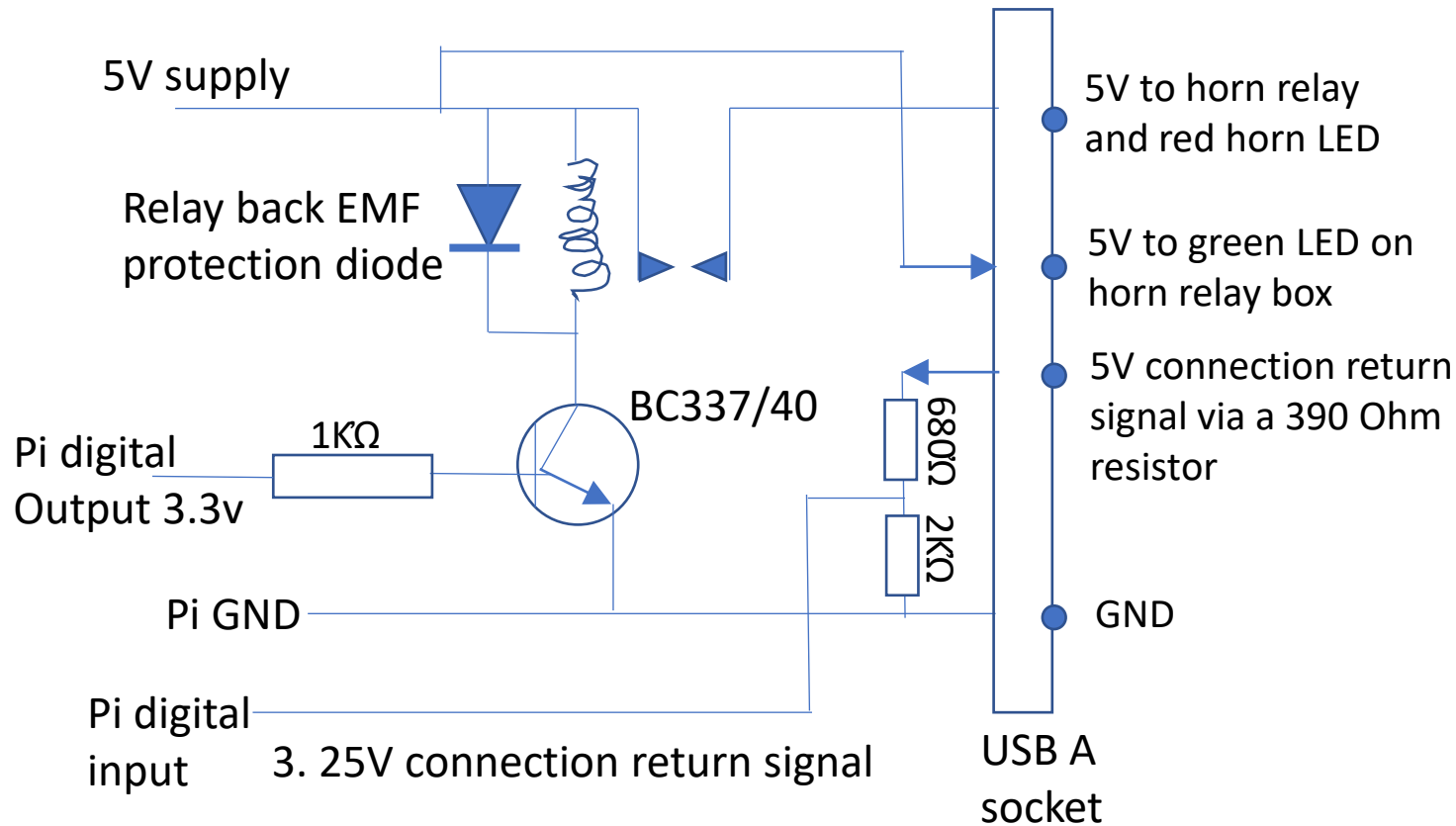# Raspberry Pi boat start timer 2020
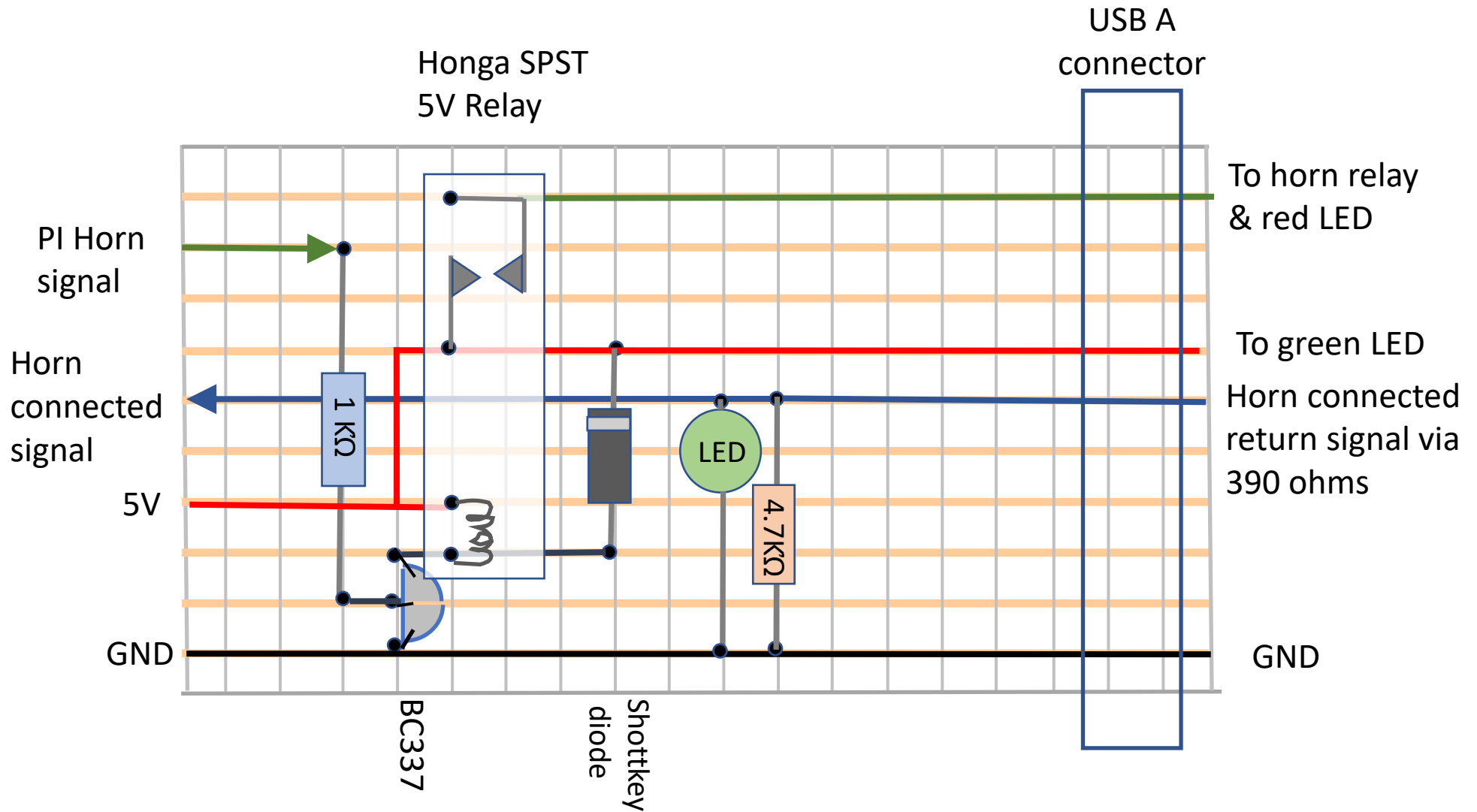
Horn connection circuit

Hongfa HF49FD 5A Miniature PCB Mount Power Relays SPST coil resistance 208 ohms current 25mA

Relay Wiring Diagram
(Bottom view)

5V supply

Relay back EMF
protection diode

BC337/40

Pi digital
Output 3.3v

1KΩ

680Ω

2KΩ

Pi GND

Pi digital
input

3. 25V connection return signal

USB A
socket

5V to horn relay
and red horn LED

5V to green LED on
horn relay box

5V connection return
signal via a 390 Ohm
resistor

GND

e
b
c

BC337/40

Boat start horn relay veroboard circuit

Honga SPST
5V Relay

USB A
connector

To horn relay
& red LED

PI Horn
signal

To green LED

Horn
connected
signal

Horn connected
return signal via
390 ohms

1 KΩ

5V

LED

4.7KΩ

GND

GND

BC337

Shottkey
diode

Circuit at horn relay box

USB A

relay signal

5V

Horn connected feedback

GND

390Ω

390Ω

390Ω

LED

LED

6V Mains relay

To Horn

240VAC Mains Input