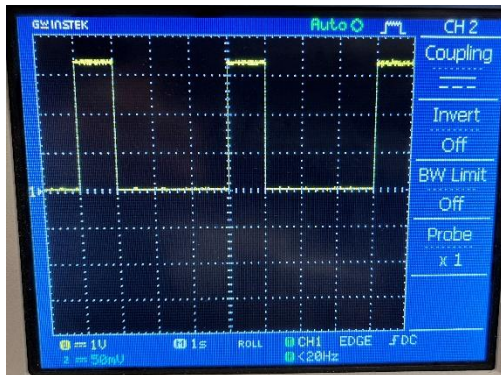


Period: 4s

Duty Cycle: 25%



The fan won't turn on when directly connected to the pico because the pico can't supply enough power to the fan. It can't offer enough voltage because the pico is capped at 5V.

The fan requires 12V at 0.93A which results in a power of 11.16W. Even if the pico could supply 12V, the USB is limited to only 0.5A which is half what is required from it (0.93A).

```
from machine import Pin
import time

led = Pin(16, Pin.OUT) # set GPIO16 to an output

period = 4 # set period length (seconds)
duty_cycle = 0.25 #set duty cycle (%)

# loop 10 times
for i in range(10):
    led.high() # turn on GPIO pin
    print("ON")
    print(led.value()) # digital logic level of pin,
                        # returning 0 or 1 corresponding to low and high voltage signals
    time.sleep(period*duty_cycle) # sleep for duty cycle percent of period length
    led.low() # turn off GPIO pin
    print("off")
    print(led.value()) # digital logic level of pin
    time.sleep(period - period*duty_cycle) # sleep for rest of period length
```