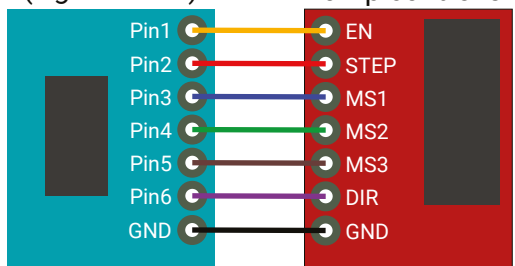


a

Low-level hardware control

Microcontroller
(e.g. Arduino)

ControlPump.ino

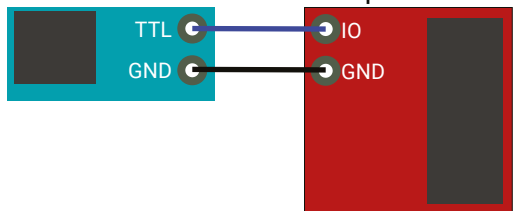
```
(...)  
  
void loop() {  
  
    //Pulse with a 4s period  
    //by toggling STEP input  
  
    digitalWrite(Pin2, HIGH);  
    delay(2000);  
    digitalWrite(Pin2, LOW);  
    delay(2000);  
}
```

b

Hybrid control

Configuration

TTL Source



Events

- ☒ Step state
- ☒ Direction state
- ☒ Switch forward state
- ☒ Switch reverse state
- ☒ Input state
- ☒ Protocol state

Protocol

Protocol direction

Reverse

Protocol type

Step

Number of steps

15

Step period [ms]

10

Input/Output

Digital input

Use as a pure digital input

Digital output 0

Digital output controlled by software

Digital output 1

Digital output controlled by software

Other

Motor microstep

Full step

c

Software control



bonsai
VISUAL REACTIVE PROGRAMMING



Pump
Commands



SyringePump



PumpEvents



KeyDown



SyringePump.
Enable
ProtocolPayload



Pump
Commands