It can be connected to single-board controller. 4 solenoids can be controlled. With switch for manual operation.

MULTI CONTROLLER A 【User guide】

Arduino, micro:bit, Grove, Raspberry Pi, and Ichigojamcan be connectied!

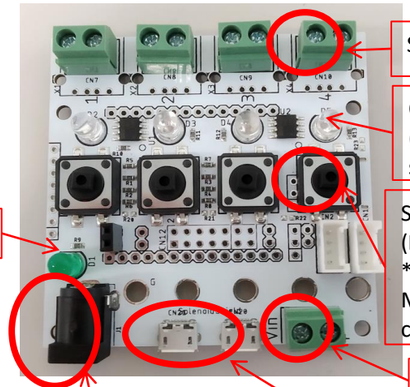
Product

1. Up to 4 solenoids are controlled by switch on the board or single-board microcontroller.
2. Power supply: USB AC adapter, mobile battery, etc.
3. Maximum power supply voltage = 24V

Connecting power supply

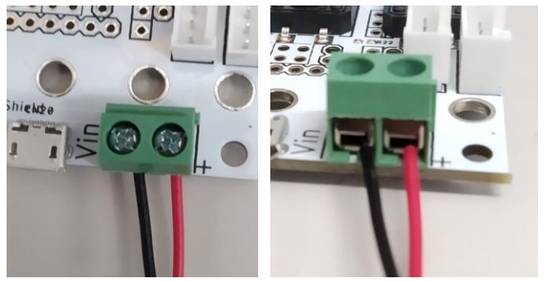
●Connect either power supply
・AC adapter （ϕ2.1mm・center +）
・+/- cable from battery holder
・Mobile battery (via USB microB cable）
（use only one connector）
●Adjust the voltage to the solenoid used.
●Connect only one power supply

Name and function of ①



Caution of power terminal ②

●Connect +/- correctly （see left image）
※Reverse connection may cause failure
●The core of the conductor does not come out of the terminal (Esee right image)
*** Risk of short circuit**
●If it is easy to come off, use a rod terminal



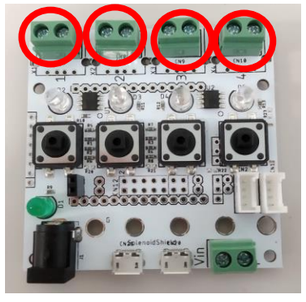
Power supply ③

●AC adapter

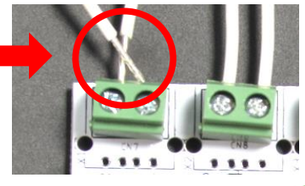
●Battery holder

Connecting to solenoid ④

●Connect the solenoid to the solenoid connector
Loosen the screw on the connector terminal, insert the metal part of the lead wire, and tighten the screw.



Be careful of short circuit
The board may be damaged!

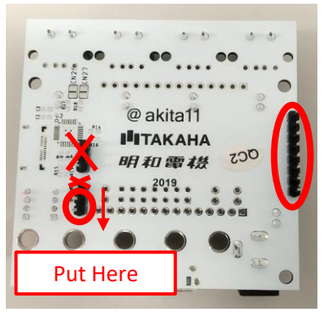


Basic usage

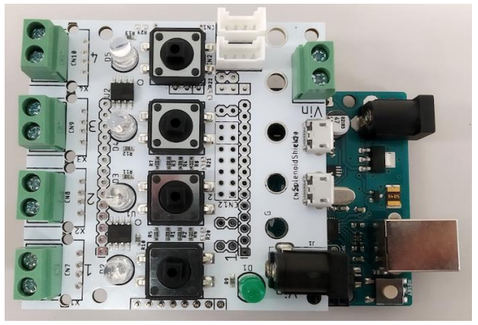
After connecting the power supply and solenoid, pressing the switch turns on the corresponding solenoid.

（Connecting to Arduino） ⑤

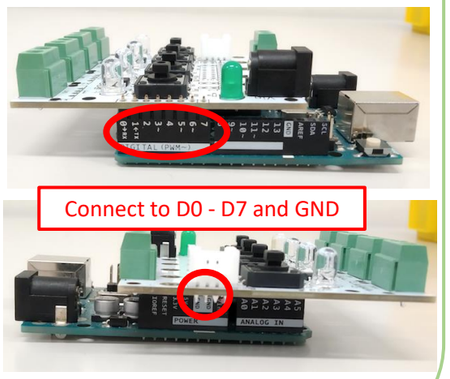
Put the pin header （2ｐ,8ｐ）



Connect to Arduino like below image.
- Pay attention to connector position



Connect a power such as a AC adapter to this board.

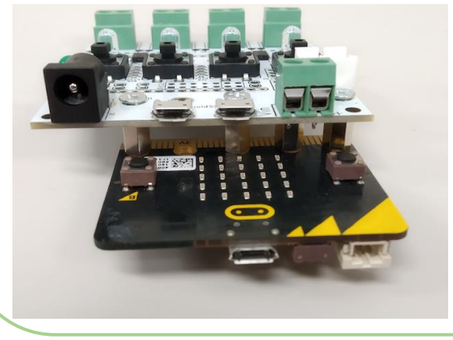


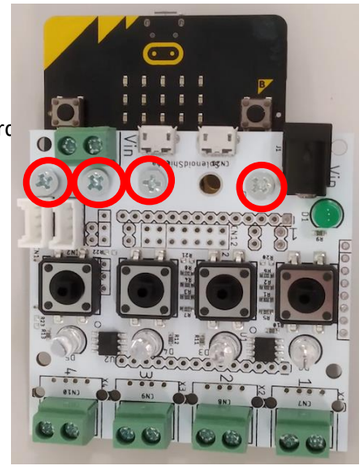
●Arduino D2-D5 react to solenoids #1- #4
●Set D2 - D5 to Digital Out —1 （HIGH） ＝ON
—0 （LOW） ＝OFF

（Connecting to micro:bit） ⑥

Connect 4 locations with micro: bit screw.
Not connect 1 location. See right image.

Connect a power such as a AC adapter to this board

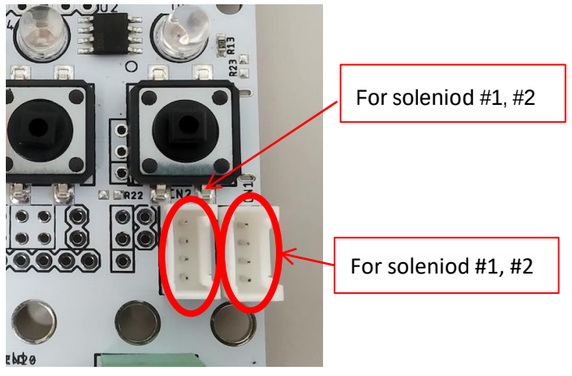




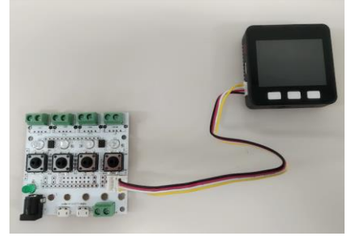
●micro:bit IO pin 0-2 react to solenoid #1-#3
solenoid #4 is uncontrolled
●Set IO pins 1 and 2 as output
—1 （HIGH） ＝ON
—0 （LOW） ＝OFF

（Groveとの接続） ⑦

Grove connector of M5stack, Seeduino, etc. connect to grove connector of this board.



●Connector for solenoid #1, #2
react to Grove digital IO no. 1 and no.2
Degital Out 1(HIGT)＝On, 0(LOW)＝Off
●Connector for solenoid #3, #4
react to Grove digital IO no. 1 and no.2
Degital Out 1(HIGT)＝On, 0(LOW)＝Off



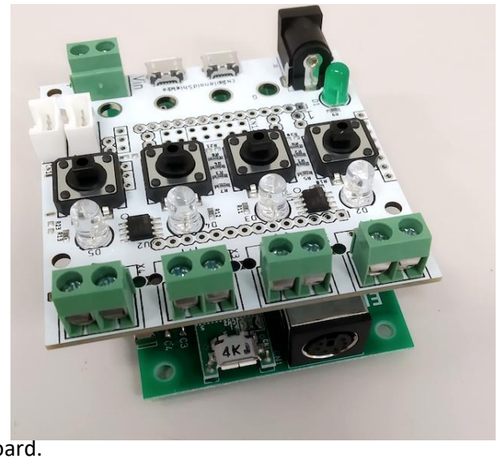
（Connecting to Ichigojam）

Put the pin header（6 pcs）

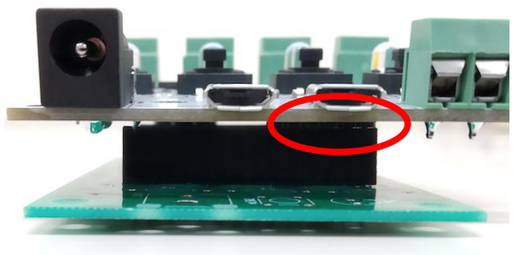
Connect to Ichigojam. See below image.

—Pay attention to connector position

⑧



Connect a power such as a AC adapter to this board.



●Ichigojam OUT 1 - 4 react to solenoid #1 - #4

—1（HIGH）＝ON

—0（LOW）＝OFF

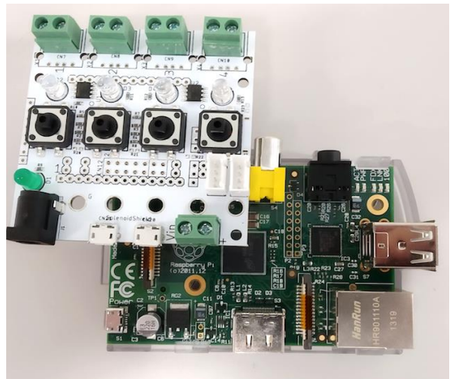
（Connecting to Raspberry Pi）

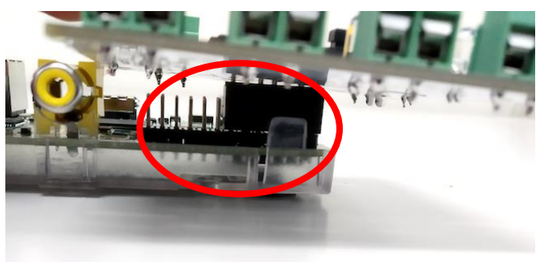
Put pin socket (2 x 7 pcs)

Connect to GPIO connector of Raspberry Pi. See below image.

—Pay attention to connector position

⑨





Connect a power such as a mobile battery to this board.

●RaspberryPi GPIO2, 3, 4, 17 react to solenoid #1 - #4

—1（HIGH）＝ON

—0（LOW）＝OFF

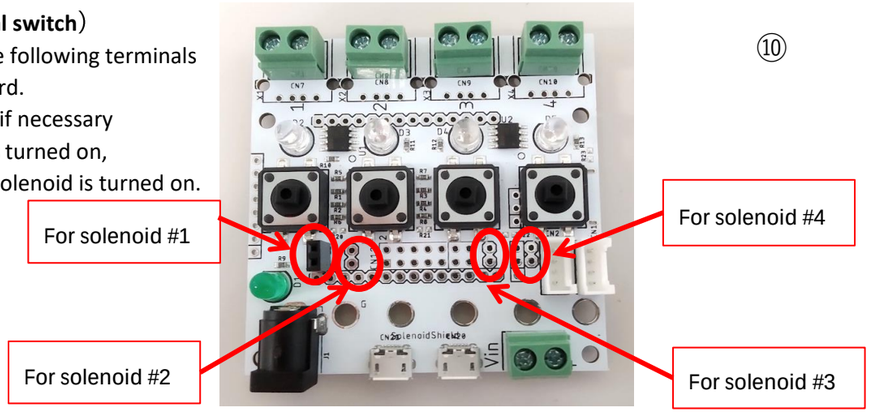
（Connecting an external switch）

Connect the switch to the following terminals (1 set, 2 pins) on this board.

—Use pin sockets etc. if necessary

—When each switch is turned on, the corresponding solenoid is turned on.

⑩



“Solekit Multi Controller” is also on sale!

It is supervised by Nobumichi Tosa, Maywa Denki.

What is solenoid…

Solenoid is a electromagnet that pulling the plunger when energized.

Solenoids are used in automatic doors, cars and vending machines etc..

Developer Junichi Akita（twitter @akita11）

Seller Takaha Kiko Co., Ltd.

958-9 Ariyasu Iizuka Fukuoka

Japan 820-0111

＜Solenoid Purchase on webset＞

https://www.takaha-japan.com/

■Attention (For Parents)

- Please read this manual carefully before use. Please read this also for parents.
- Use a DC5V power supply (mobile battery, smartphone charger, battery, etc.).

Do not connect to computer and laptop.

- Avoid high temperature and humidity, use and store indoors at room temperature.
- Please be careful not to give a big impact as it may cause damage.
- Product specifications and shapes are subject to change without notice.

■Contact us

TAKAHA KIKO E-MAIL: info@takaha.co.jp

What is multi controller A

It is a boad for solenoid!

Arduino, Grove,

micro:bit, RaspberryPi,

and Ichigojam

are can be connected!

4 solenoid is contorolled.

With switch for manual operation.

@akita11

明和電機

TAKAHA

（Developer profile）

Junichi Akita

Kanazawa University

Prof. Dr. (Engineering)