# IR-CT01 EZ Controller

The IR-CT01 EZ controller is an Arduino based standalone controller for MIGHTYZAP actuators. This is for the users who do not have their own controller such as P/C, embedded system or PLC. With built-in basic program, user is able to control MIGHTYZAP actuator and also it is programmable according to user's desire.

Features

- Operating mightyZAP simply and easily through various input devices on the board by using the built-in basic program.

- Various motion programming is available by example program provided from us or by your own coding via Arduino.

- Connectable with various external accessories. (External switch, etc.)

- No need for a separate circuitry to control the mightyZAP linear actuator. Also, for safety, it is equipped with power protection circuits for prevention of reverse power, over-current, and static electricity.

Functional Description
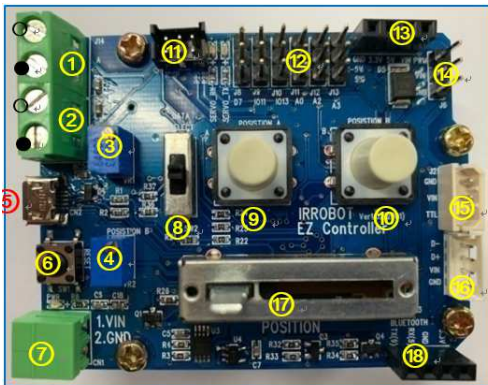
① **A Position External switch input (○: +, ●:-)**
② **B Position External switch input (○: +, ●:-)**
: Position command by external switch or external signal. It is same function as ⑨,⑩ push button.
: For position setting, use ③ and ④
③ **"A" Position setting V/R** : "A" position setting by adjusting variable resistor. (A position command made by ① or ⑨)
④ **"B" Position setting V/R :** "B" position setting by adjusting variable resistor. (B position command made by ② or ⑩)

Set the positions of the A and B points by adjusting the blue V/R ③ (A position) and ④ (B position) respectively.
-Clockwise: - (actuator retraction direction)
-Counterclockwise: + (actuator extension direction)

For convenience, it is recommended to set A to minimum position and B to maximum position as shown below.
-A point (part ③): Turn clockwise to set the minimum position
-B point (part ④): Turn counterclockwise to set the maximum position
Please note that the minimum and maximum positions of A and B may be reversed and changed depending on user settings.

⑤ **PC** connection micro USB terminal : Arduino Sketch download/Serial communication
⑥ Reset Switch: Controller reset
⑦ 12V main power input terminal
⑧ Mode selection Switch
⑨ A Position push button Switch
⑩ B Position push button Switch
⑪ MCU F/W download connector(ICSP) : User manipulation prohibited
⑫ Arduino I/O 핀(Digital:3 , Analog:3 / GND, 12V, SIG)
⑬ Internal power terminal(GND / 3.3V / 5V / 12V) : power output terminal internally used.
   [Current Limit of each terminal]
   –   3.3V : ~150mA / 5V : ~ 900 mA / 12V : Depending on Input Voltage Source
⑭ PWM port
⑮ TTL port   ⑯ RS-485 port
⑰ Linear Potentiometer for manual position
⑱ User external communication terminal (Bluetooth : TX / RX / GND / 3.3V).   =End=