



## K-AD400 User manual

Version: V104

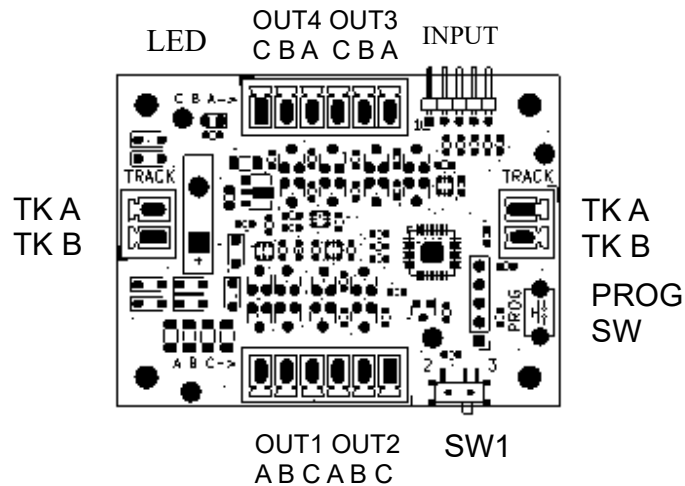
- **Precautions**

1. Please read the instruction manual carefully before use.
2. This product is not a toy and is not suitable for children under 14 years of age.
3. Do not change the product parts to avoid damage.
4. Do not place conductive materials on the surface of the product.
5. Make sure to connect the correct turnout motor after setting the turnout output to avoid damage to the decoder or turnout motor.

- **Features**

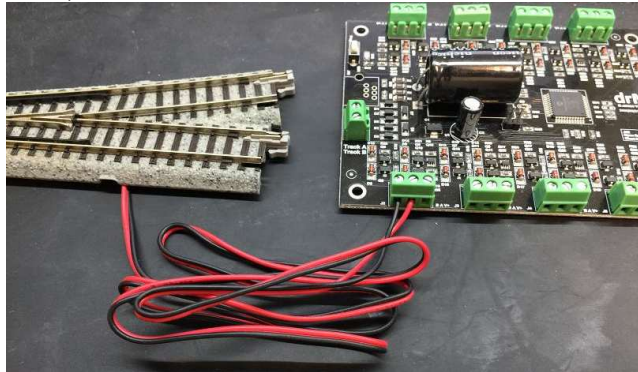
1. It can be connected with 2-wire turnout coil motor (Kato, Tomix), 3-wire turnout coil motor (Peco, Fleischmann...), Cobalt iP Analog motor, MTB MP1 motor, LED display for turnout status, and LED display for level crossing.
2. 4 sets of turnout output.
3. DCC can set address 1~1023.
4. Turnout address, single key setting.
5. This product complies with NMRA Association DCC specifications.
6. The K-AD400 has external dimensions of 60mm x 45mm x 20mm.

- Connection Diagram

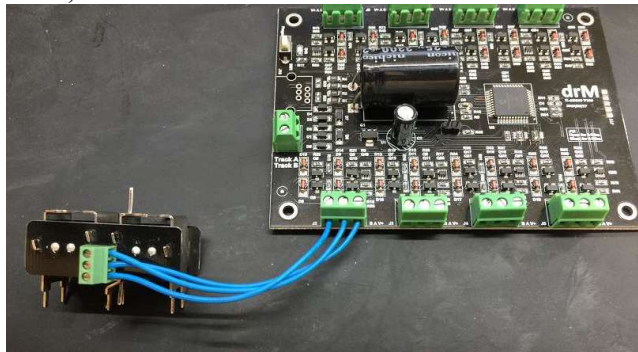


1. OUT1~4      For turnout output terminals, the three-wire connection mode C represents the common end point, A/B is the bipolar end point, and the two-wire connection mode, A/B connects both ends of the turnout wiring.
2. TKA/B      DCC Track power input terminals.
3. PROG SW      DCC address programming button.
4. LED      When the LED is off, it means Power OFF, the LED flashes once for the two-wire coil motor (Kato, Tomix), the LED flashes twice for the three-wire coil motor (Peco...), and the LED flashes three times for the two-wire electric motor (Cobalt iP), LED Four flashes of the three-wire electric motor (MTB MP1), five flashes of the LED represent the turnout LED display, and six flashes of the LED represent the level crossing LED display.
5. SW1      When SW1 is switched to position 2, all outputs switch to two-wire devices; when switched to position 3, all outputs switch to three-wire devices.
6. INPUT      INPUT is used to switch the output state when a joystick switch is installed.

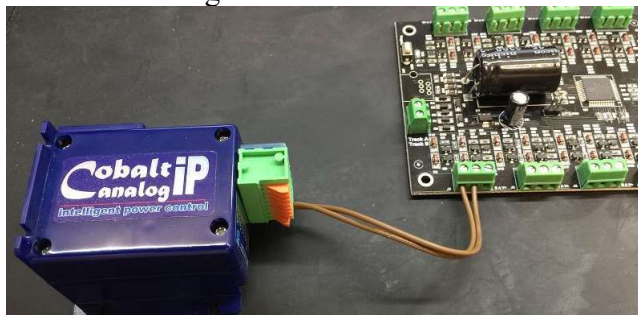
- Kato, Tomix connection method



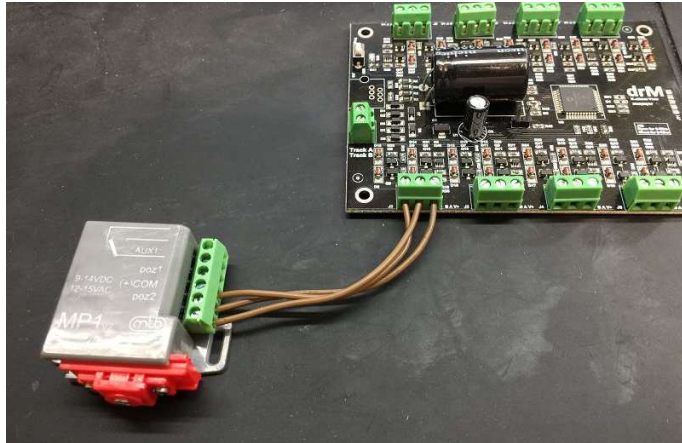
- Peco, Fleischmann..... connection method



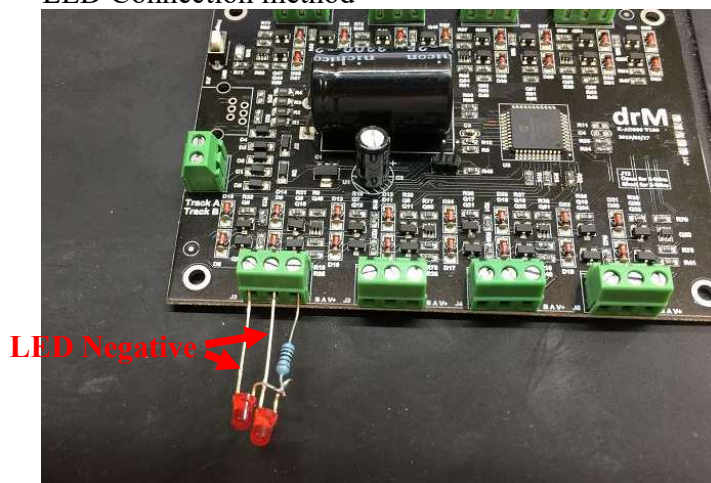
- Cobalt iP Analog connection method



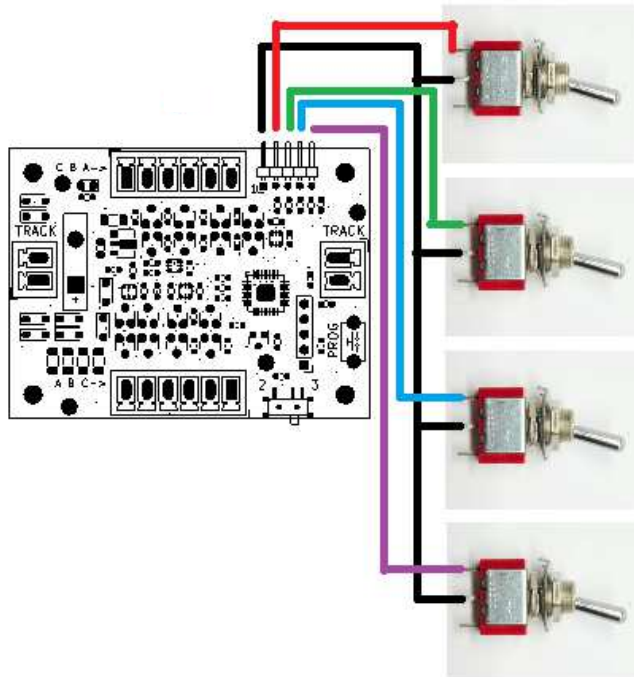
- MTB MP1 connection method



- LED Connection method



INPUT Connection method. Black lines are shared; purple PORT1 switches; blue PORT2 switches; green PORT3 switches; red PORT4 switches.



- **DCC address setting**

1. Connect DCC rail power supply.
2. Turn on the power of the DCC controller and the LED will light up.
3. After pressing the PROG SW, the LED will stay on.
4. Select the address number you need in the DCC controller, press the switch track action key (C/T), the LED light returns to flashing to indicate that the address setting is complete.
5. The OUT1 address is the address set on the DCC controller, and other outputs are the set address plus one increment.

- **List of CV values**

CV	Description	Range	Factory setting
8	Reaet	8	

47	Turnout output setting 0 : 2-Wire coil (Kato, Tomix) 1 : 3-Wire coil (Peco, Fleischmann...) 2 : 2-Wire electric (Cobalt iP) 3 : 3-Wire electric (MTB MP1) 4 : LED output (turnout display) 5 : LED output (level crossing sign display)	0~5	1
48	Trunout output 1 delay time (Cobalt iP, MTB MP1 )	1~10	5
49	Trunout output 2 delay time (Cobalt iP, MTB MP1 )	1~10	5
50	Trunout output 3 delay time (Cobalt iP, MTB MP1 )	1~10	5
51	Trunout output 4 delay time (Cobalt iP, MTB MP1 )	1~10	5
56	Level crossing signal light display time	1~10	5
57	Kato Coil Delay	0~10	1
58	3-Wire Coil Delay	2~4	2

- **Reset decoder**

If you want to reset the decoder CV value, please turn off the power first, press the PROG switch until the CV is written, use the Direct mode on the controller to edit the CV value, write 8 in CV8, and power on all the CV values will return to Factory set value.

- **Decoder editing.**

Please turn off the power first, press the PROG switch until the CV is written, use the Direct mode on the controller to edit the CV value to write, after writing, the controller displays an error message, please ignore it, and the new set CV value will be loaded after power on.

- **Precautions**

- **Do not place conductive materials on top of the circuit board.**
- **Please confirm that the CV47 settings and output devices are correct.**
- **The above errors may damage the K-AD400.**