## MintCanIV－R1．3 DCC Controller Instruction

Figure


| System Suppor | DCC128，MM，Analog PWM（31KHz） |
| :--- | :--- |
| DCC addressing | Loco 1－9999（50QT），Turnout 1－2044 |
| Function | F0－F28 |
| CV Protocol | OPS mode，Direct mode |
| Voltage and current | 12－19V，1．5A max |

## Specification

※ In both modes，it is possible to select the loco address and change the loco speed．

## Function operation screen

When the power is on，it is the function operation screen． 1 to 50 asigned Loco address selection（ 0 is analog mode）， Assign function numbers from 0 to 28 to Fn and Fx buttons，and turn them on and off．

## Route operation screen

Select the route number from 1 to 25 ， and perform the DIV（branch）with the Fn button and the STR（straight） operation with the Fx button．

## Route edit screen

At most 10 accessary addresses from 1 to 2044 can be registered to each route number from 1 to 25 ．
Select the registration number in the

Function operation screen

| LOCO $\dagger 9999$ FwD ${ }^{\text {DCC }}$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Func | 0 |  | 28 |
|  | on |  | ¢FF |
| SEL | 7 |  | F28 | On Foo $\uparrow$ FO F28 $\uparrow$ sEL $+\nabla \downarrow$ 个 $\operatorname{seL}+\Delta$ ルート操作画面

 the button and set the 4 digit address．

## Option mode

Long press SEL on the function operation screen ...

| LOCO | 9999 |  | ${ }^{\text {DCC }}$ |
| :---: | :---: | :---: | :---: |
| OPT: | > OP | S MODE |  |
| CV | 50 | VAL | 1 |
| SEL |  | CVW | ESC |

OPT:OPS MODE
Write the CV to the decoder of the address selected on the running track.

## OPT:CONSIST

Writing the consist address (ADR) to the decoder address being selected, driving multiple Locomotive with one address.
DIR is normal direction or opposite direction. (Unsupported because support decoder is unconfirmed)

Long press SEL on the route operation screen ...
OPT:OPS MODE
Write the CV to the selected accessory address.
※Since the accessory address to be selected displays the address registered

by route editing, duplicate addresses may be displayed.

Fn (CVW) ••• Write Excec , Fx (ESC) ••• Return to operation
Writing ADR 0 releases the Consist address.
For details of the operation method, please see the DesktopStation - Wiki page below.
https://desktopstation.net/wiki/doku.php/mint can controller2

## Address asign and writing

Long press and Power on ...Asign the base address from 1 to 50 with any extended address from 1 to 9999.

Assigned by ENT and CV is written in by CVW.
If you do not need to change CV29 you can skip writing with SEL $+{ }_{\nabla}$.

## Accessory address write

Fn Long press and Power on ...
Writes addresses from 1 to 2044 to the accessory decoder.

Accessory address write


## CV writing

Long press SELin Address asign or Write accessory address mode to change to CV writing mode. ※Please understand CV and operate it.

## MintCanIV-R1.5 DCC controller kit assembly

When it's soldered from a part with the low height by order of the right partial list, it's easy.
Forget about soldering or please pay attention to solder bridge. Since CN1, SW1 have high specific heat, use a large soldering iron or adjust the soldering iron and let the solder flow completely.

## Caution

- Bending of IC1 pin Begin to hold it by thin radio pliers in a point and bend from the center so that a stress isn't given to a mold. The bend location is 1 mm from a mold.
- Orientation of IC 2 and soldering of C3 $\longrightarrow$
- The polarity of C1 and the orientation of IC3


IC2

- Tilt of CN1, CN2, SW1, SW2 - SW6.
- The height of S1+OLED is 11 mm , Spacer beside IC 3 is 10 mm . then OLED does not horizontal.

Parts List ※Oder Code : akizukidenshi.com mail order code

| No | Parts | Oder Code | comment |
| :---: | :---: | :---: | :---: |
| R2 | 6.8Kohm 1/4W resistor |  | 682 5\% |
| IC1 | TB6643KQ | I-07688 |  |
| (IC3) | DIP 28pins socket | P-00013 |  |
| C5 | 0.1uF(104), MLCC | P-11701 | 5.08 mm |
| C4,6 | 1uF(105), MLCC | P-04066 | 2.54 mm |
| CN2 | KF2EDG-3.81 (L-2P) |  | Aliexpress |
| XT1 | Ceramic resonator | P-04549 | 16 MHz |
| IC2,C2,C3 | TA48M05F(SQ) | I-00451 |  |
| TMX(J1) | $1 \times 2$ pin header | C-00167 |  |
| J2 | $1 \times 6$ pin header | C-00167 |  |
| CN1 | DC juck | C-09408 |  |
| SW1 | SS12D10 2A slide | [SS12D10] | Aitendo |
| R1 | R0921GS 10KOhm | [R0921GS] | Aitendo |
|  | Knob | P-00253 |  |
| C1 | $220 u F 35 V 105^{\circ} \mathrm{C}$ | P-11758 |  |
| S1 | $1 \times 7$ pin frame | C-05779 | h 11 mm |
| SW3-6 | Tact switch Black Cap | P-09824 |  |
| SW2 | Tact switch Red Cap | P-09825 |  |
| IC3 | ATMEGA328P-PU | I-03142 |  |
| D1 | OLED0.98 SPI I/F |  | Aliexpress |
|  | M2 nylon screw set |  | h 10 mm |

