

LDperformance

Keypad

Manual



Description

The LDperformance CAN keypad is a universal 6 button keyboard compatible with BlinkMarine CANOpen protocol and Ecumaster J1939 protocol. This makes it compatible with most aftermarket ECUs.

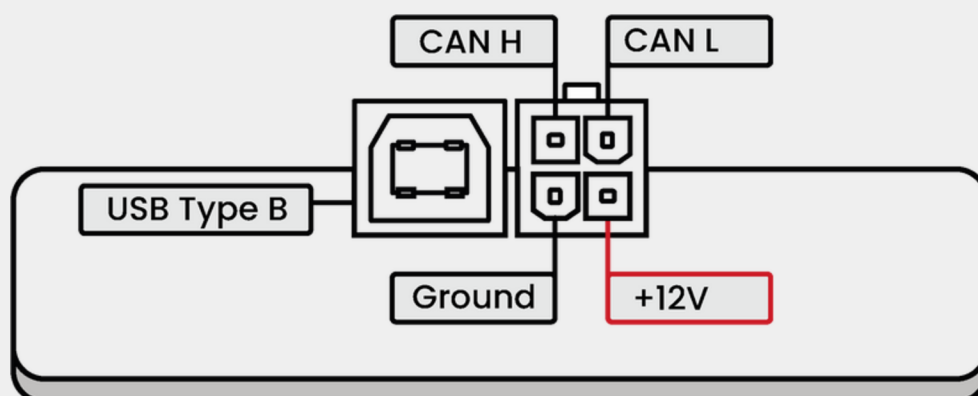
- ✓ RGB lights on each button
- ✓ Fully configurable CAN bus speed and IDs
- ✓ USB type B for easy firmware updates

Compatibility

- ✓ LDperformance PDM
- ✓ EMU
- ✓ Maxxecu (BlinkMarine)
- ✓ MS3
- + Many more

Pinout

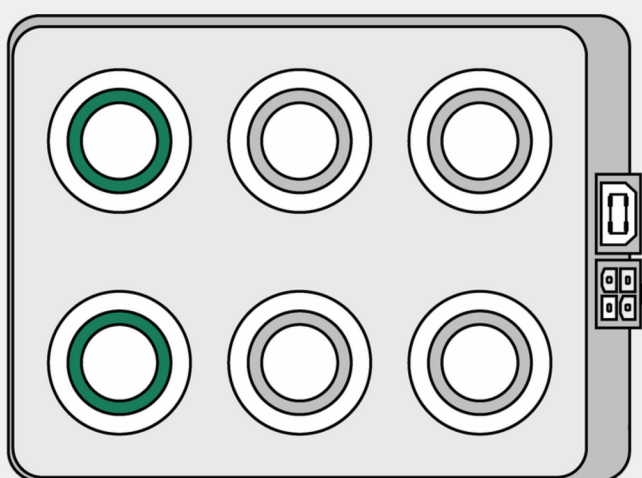
The device needs power and CAN connection. To guarantee a stable connection CANH and CANL wires must be twisted together and if there are more than 2 devices on the same network make sure to use "ring" topology instead of "star". The two devices at the ends of the "ring" should have termination resistors - 120ohm.



Use with LDperformance PDM or ecumaster EMU

To load the correct default settings:

1. Turn off the keyboard
2. Press and hold these two buttons while turning on the keyboard:



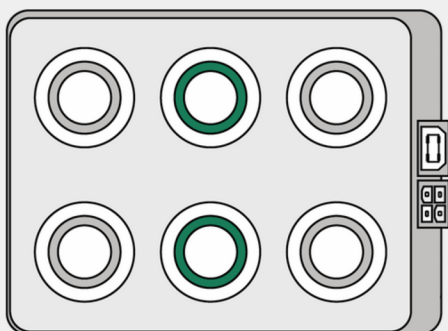
They will flash twice if successful.

Use the LDperformance PDM software or EMU software to configure positions.

Use with MS3

To load the correct default settings:

1. Turn off the keyboard
2. Press and hold these two buttons while turning on the keyboard:



They will flash twice if successful.

Configure MS3 as shown in the picture below.

You can use CANIN* as a trigger for antilag/ boost/ table switch, etc.

CAN Parameters

View Help

CAN Parameters

- My CAN ID: 0
- Master Enable: On
- 29bit Megasquirt CAN Enable: On
- CAN baud rate (caution!): 500k
- Enable PWM Polling: Disable
- Remote CAN Id: 5
- Remote Table Number For PWM Data: 7
- Remote Table Offset For PWM Data(bytes): 58
- Remote Clock(MHz): 24
- Remote Prescale: 16
- Remote Divider: 3
- Enable ADC Polling: Disable
- Digital ports: 0
- Remote CAN Id: 5
- Table: 7
- Enable Input Port: Enable
- Offset(bytes): 77
- Enable Output Port: Two
- Offset(bytes): 75
- Enable PWM Outputs: Disable
- Remote CAN Id: 5
- Table: 7
- Offset(bytes): 94
- Force Duty To 0-255: Disable

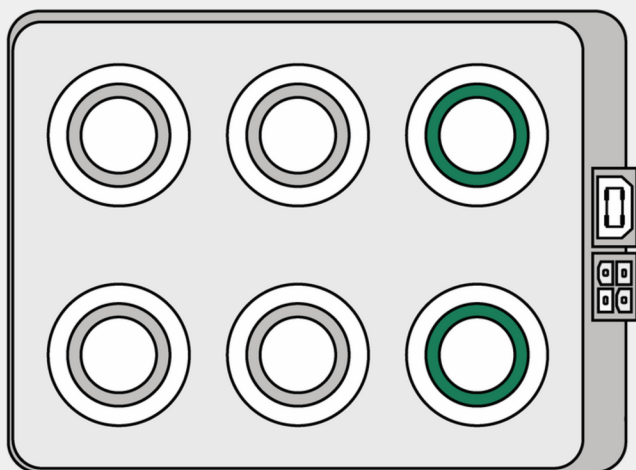
CAN ADC selection

| CAN ADC group on/off | CAN Id | Table | Offset |
|----------------------|--------|-------|--------|
| CAN ADC 1-4: Off | 5 | 7 | 2 |
| CAN ADC 5-8: Off | 5 | 7 | 10 |
| CAN ADC 9-12: Off | 5 | 7 | 18 |
| CAN ADC 13-16: Off | 5 | 7 | 26 |
| CAN ADC 17-20: Off | 5 | 7 | 34 |
| CAN ADC 21-24: Off | 5 | 7 | 42 |

Use with Maxxecu

To load the default settings for use with Maxxecu:

1. Turn off the keyboard
2. Press and hold these two buttons while turning on the keyboard:



They will flash twice if successful.

The keyboard will load the Blinkmarine protocol which is compatible with Maxxecu.

You can then use the Mtune to configure the keyboard.

If you ever need to reset to default settings repeat step 2.

The CANopen protocol used is described in detail here:

<https://media.blinkmarine.com/pkp-2300-si-canopen-um>

Using more than one keyboard

It is possible to connect more than one keyboard to the same CAN bus if 6 buttons are not enough.

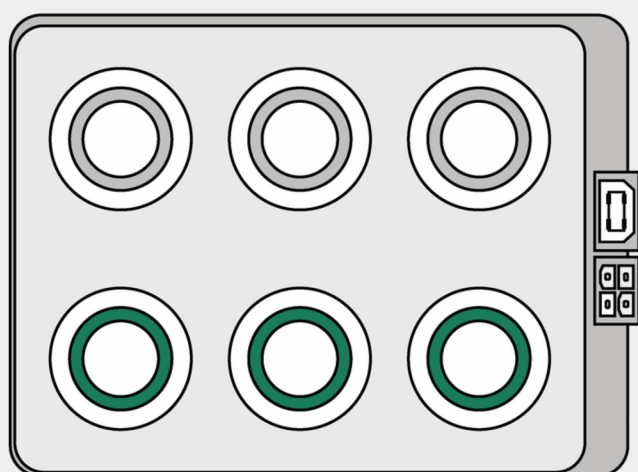
To do that, first get the system working with one keyboard. Then change the CAN ID before connecting the second one. To do that check the user manual of the ECU or PDM you are using it with.

Firmware update

First obtain a hex file from Idperformance.

Get a usb B cable.

Press and hold these three buttons while connecting the usb cable:



The device will appear as a drive in *My Computer*.

Paste the firmware file.

The drive will disappear shortly.