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TEENSY4.0-N2K-SIM-EN
Teensy 4.0 NMEA 2000
Simulator with Enclosure



SK Pang electronics TEENSY4.0-N2K-SIM-EN Teensy 4.0 NMEA 2000 Simulator with Enclosure User Guide

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SK Pang electronics TEENSY4.0-N2K-SIM-EN Teensy 4.0 NMEA 2000 Simulator with Enclosure



Product Information

Specifications:

- Product Name: Teensy 4.0 NMEA 2000 Simulator with Enclosure
- Model Number: TEENSY4.0-N2K-SIM-EN
- Manufacturer: SK Pang Electronics Ltd

Product Usage Instructions

1. Power Supply:

The simulator can be powered from the NMEA2000 connector or an external 12V source. The external 12V input is a 2.1mm DC power socket with the center pin as positive (+).

2. CAN Terminator:

If the NMEA2000 network does not have two terminators, set switch (8) to 1 to enable one terminator. The default setting is off.

3. Connection:

Using a NMEA2000 cable, connect one end to the NMEA2000 port (7) of the simulator and the other end to your network.

4. Parameter Adjustment:

Adjust parameter values using the PGN adjustment potentiometers (1). The ACT indicator (2) will flash to indicate activity.

5. Indicator D1:

This indicator is user programmable and is connected to D8 of the Teensy module.

6. User Buttons:

User Button SW1(4) and SW2(5) can be used for custom functions. They are connected to D6 and D7 of the Teensy module.

FAQ:

Q: Can I modify the firmware of the Teensy 4.0 NMEA2000 Simulator?

A: Yes, you can modify the firmware to suit your needs. Make sure to install the Arduino IDE, Teensyduino add-on,

and access the Teensy sketch provided on GitHub.

Teensy 4.0 NEA2000 Sim Rev C 1.0

Teensy 4.0 NMEA2000 Simulator USER GUIDE V1.0

- Product name Teensy 4.0 NMEA 2000 Simulator with Enclosure
- Model number TEENSY4.O-N2K-SIM-EN
- Manufacturer SK Pang Electronics Ltd

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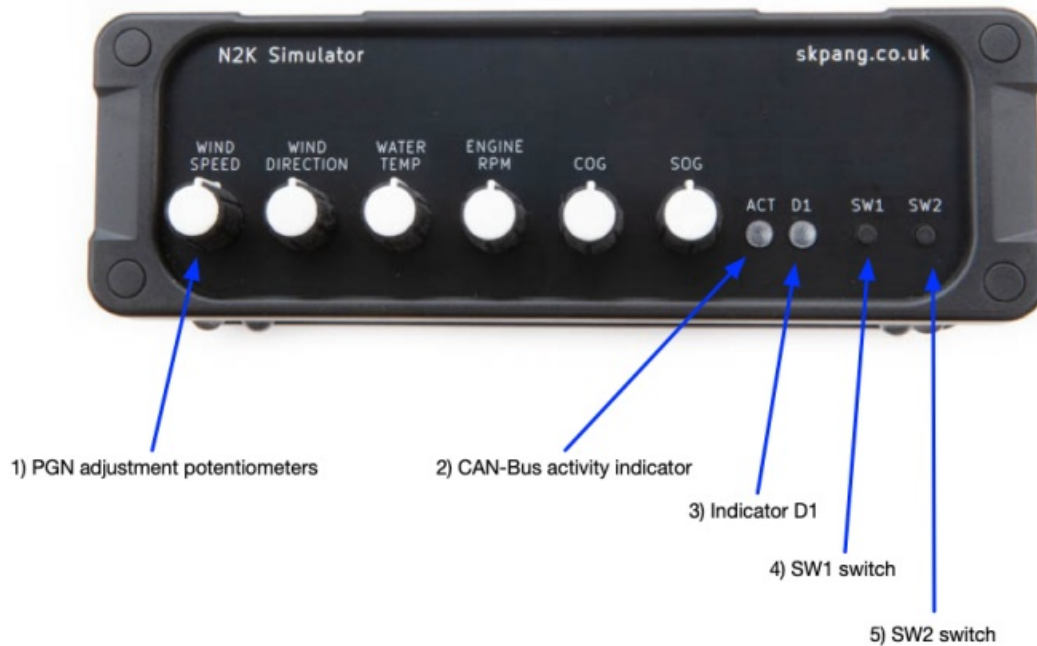
Introduction

This is a NMEA 2000 using the Teensy 4.0 module (included). Useful for testing NMEA 2000 devices on the bench. Six PGN are adjustable via potentiometers.

Features

- Teensy 4.0 module (installed)
- Teensy pre-programmed with simulator firmware
- 250kb/s CAN speed
- Open source firmware
- Micro-C connector
- 6x potentiometers for PGN adjustment
- Two LED indicators
- Two user push buttons
- Firmware Features :
 - Adjustable PGN parameters via potentiometers
 - PGN 130310 Water temperature
 - PGN 130306 Wind speed and direction
 - PGN 127488 Engine RPM
 - PGN 129026 COG and SOG

Open source firmware, other PGNs can be added.



Usage

Power supply

The simulator can be powered from the NMEA2000 connector or external 12v. The external 12v input (6) is a 2.1mm DC power socket with center pin +.

CAN Terminator

If the NMEA2000 network does not have two terminators this switch (8) can be set to 1 to enable one terminator. Default is off.

Connect Up

Using a NMEA2000 cable, connect it to the NMEA2000 port (7). The other end to your network.

Parameter Adjust

Use the PGN adjustment potentiometers (1) to adjust the parameter value. You should see the ACT indicator (2) flashes when there is activities.

Indicator D1

This indicator is user programmable and it is connected to D8 of the Teensy.

User Button

SW1(4) and SW2 (5) can be used for your own function. They are connected to D6 and D7 of the Teensy.

Modifying the firmware

You can modify the firmware to suit your own needs.

- The Arduino IDE would need to be installed first: <https://www.arduino.cc/en/software>
- Then the Teensyduino add-on: <https://www.pjrc.com/teensy/teensyduino.html>
- The Teensy sketch: https://github.com/skpang/Teensy40_NMEA2000_simulator

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Documents / Resources

	SK Pang electronics TEENSY4.0-N2K-SIM-EN Teensy 4.0 NMEA 2000 Simulator with Enclosure [pdf] User Guide TEENSY4.0-N2K-SIM-EN Teensy 4.0 NMEA 2000 Simulator with Enclosure, TEENSY4.0-N2K-SIM-EN, Teensy 4.0 NMEA 2000 Simulator with Enclosure, Simulator with Enclosure, Enclosure
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References

-  [SK Pang Electronics Ltd - Electronic supply for engineer and hobbyist](#)
-  [GitHub - skpang/Teensy40_NMEA2000_simulator](#)
-  [Software | Arduino](#)
-  [Teensyduino - Add-on for Arduino IDE to use Teensy USB development board](#)
- [User Manual](#)

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