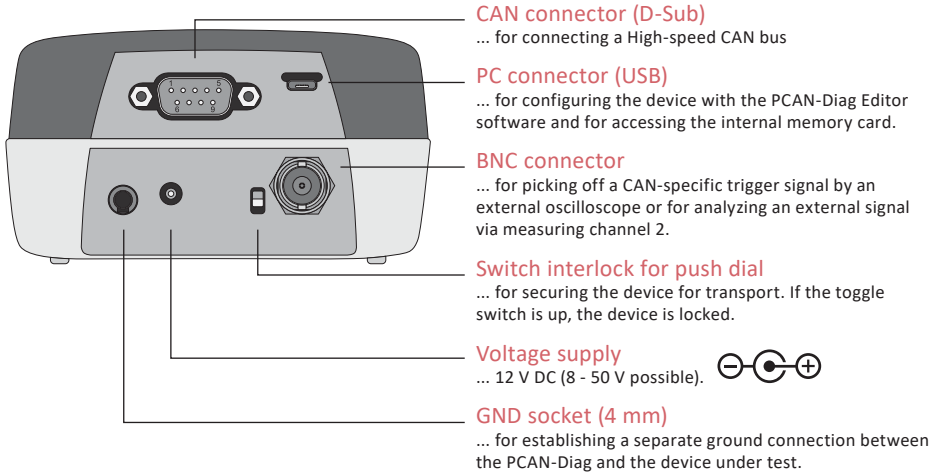# PCAN-Diag 2

Quick Start Guide

This guide covers the basic operation of the PCAN-Diag. A comprehensive documentation in PDF format (German and English) is available on our website or on the internal memory card of the PCAN-Diag in the directory *PCAN-Diag\Documentation*.

Note: The "PCAN-Diag 2 package" is available for download on our website. Beside the documentation and the device help, it contains the current firmware as well as the software PCAN-Diag Editor and PCAN-Symbol Editor.

Download: *www.peak-system.com/quick/DLP2069*

Connectors

CAN connector (D-Sub)
... for connecting a High-speed CAN bus

PC connector (USB)
... for configuring the device with the PCAN-Diag Editor software and for accessing the internal memory card.

BNC connector
... for picking off a CAN-specific trigger signal by an external oscilloscope or for analyzing an external signal via measuring channel 2.

Switch interlock for push dial
... for securing the device for transport. If the toggle switch is up, the device is locked.

Voltage supply
... 12 V DC (8 - 50 V possible).

GND socket (4 mm)
... for establishing a separate ground connection between the PCAN-Diag and the device under test.
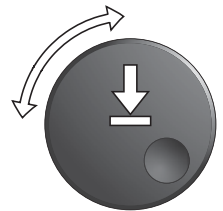
Operation

Voltage Supply

Set up the voltage supply with the supplied AC adaptor. Apply the appropriate plug adaptor to the AC adaptor (Euro, U.S., or UK). For mobile use, the PCAN-Diag can be supplied by batteries (also in the scope of supply).

Connecting to a CAN Bus

Connect the PCAN-Diag to a CAN bus via the CAN connector (D-Sub) on the rear of the device.

Turning on and Operating the Device

Hold down the push dial for at least half a second. The main menu appears after a blip and the splash screen. Any user input is done via the push dial:

Dial: Changes the selection or the value to be edited.

Press: Executes the selected function or sets the adjusted value.

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Adjusting the CAN Bit Rate

To successfully establish a connection to a CAN bus, the bit rate used by the PCAN-Diag must correspond to the one on the bus. The setting is done in the `Device Settings` area with one of the following entries:

`CAN bitrate` Manual selection of a bit rate from a list.

`Detect CAN bitrate` Automatic detection of the bit rate (only possible when there's CAN traffic on the connected bus).

Receiving and Transmitting

Displaying Incoming CAN Messages

Navigate to the `CAN Data` > `Receive Messages` menu entry. Incoming CAN messages are displayed as a list, sorted by the CAN ID (column ID). The representation of the CAN data bytes (D0…D7) is in hexadecimal format.

Transmitting CAN Messages
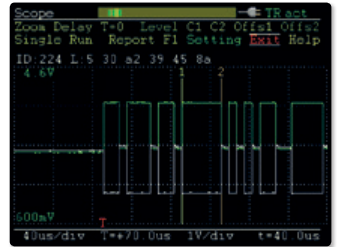
Navigate to the `CAN Data` > `Manage Transmit Lists` menu entry. Here you can create transmit lists with one or more CAN messages:

└── Enable the transmit list entry with the corresponding check box.

└── By clicking on the name, you can edit the transmit list. On this page you can insert single messages with `I` on the right side or edit an existing one with `E`.

└── Afterwards, edit the period for repeated transmission of the list in the `Cycle time(ms)` column.

└── Close the page with `Save&OK`.

For the transmission of the list open `CAN Data` > `Transmit Messages`. Here you can start and stop the CAN transmission by clicking on the name of the list.

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Oscilloscope Function

In order to analyze incoming signals with the oscilloscope function, select the `Scope` entry from the main menu. Before first use, adjust the following settings for the oscilloscope in the `Setting` area, if needed:

`Ch(1/2) source`   Selection of the signal sources to be viewed.

`Trigger`   Selection of the event that triggers the sampling of the signals (e.g. CAN frame start or end, CAN ID, CAN error, level).

After confirming the settings with `Save&OK`, you can start the recording and manipulate the view with the following functions:
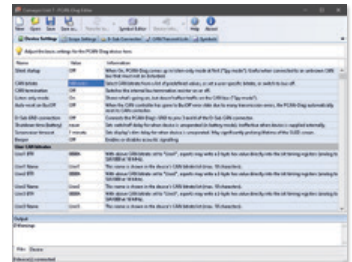
`Single`   Triggers a single recording of the signal.

`Run`   Starts the repeated recording of the signal (end with `Stop`).

`Zoom / Delay`   Adjusts the view regarding the horizontal axis.

Device Configuration with Projects

The device and oscilloscope settings, CAN transmit lists, and the symbolic view of incoming CAN messages can be set up comfortably in form of projects on a PC with the software PCAN-Diag Editor. Afterwards the projects are transferred to your PCAN-Diag via USB.

You can find the program (*PcanDiagEdt.exe*) on the internal memory card of the PCAN-Diag in the directory: *PCAN-Diag\Tools* or on our website.

Comprehensive instructions about the creation of and the work with projects are in the user manual for the PCAN-Diag or in the program help of the PCAN-Diag Editor.

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