

PCAN-Diag FD

Quick Start Guide

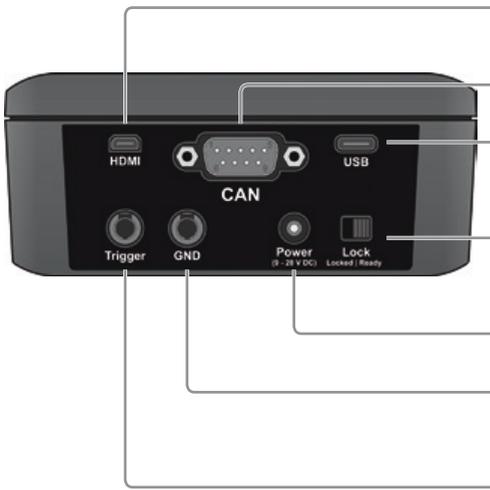


This guide covers the basic operation and use of your PCAN-Diag FD. You can find a detailed documentation in PDF format ...

... on the PCAN-Diag FD memory card in the directory: *PCAN-Diag FD\Documentation*.

... on our website. See the last page of this quick start for download links.

Connectors



Display connector (Micro-HDMI)

... to display the screen signal with an external monitor or beamer.

CAN connector (D-Sub)

... for connecting a High-speed CAN bus.

PC connector (USB)

... for configuring the device with the software PCAN-Diag FD Editor and for accessing the memory card.

Lock switch

... for securing the device for transport. If the switch is on the left on *Locked*, the device cannot be switched on.

Voltage supply

... 12 V DC (9 - 28 V possible).



GND socket (4 mm)

... for establishing a separate ground connection between the PCAN-Diag FD and the device under test.

Trigger output (4 mm)

... for providing the oscilloscope trigger signal for external measurement devices.

Operation

Voltage Supply

Set up the voltage supply with the included AC adaptor. Apply the appropriate plug adaptor to the AC adaptor (Euro, U.S., or UK).

For mobile use, the PCAN-Diag FD can be supplied via the internal rechargeable batteries. Charging is carried out with external supply, even during operation.

Switching On and Off

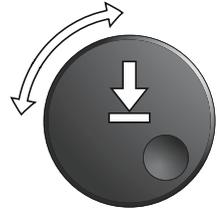
Set the Lock switch on the rear of the device to the position *Ready*. Hold down the push dial for at least half a second to switch on the device.

Select **Power Off** from the main menu or hold down the push dial for at least 10 seconds to switch off the device.

Operating the Device

The operation is done primarily with the push dial:

- Dial:** Changes the selection or the value to be edited.
- Press:** Executes the selected function or sets the adjusted value.



The functions of the four hotkeys vary and are indicated on the display beside the control panel.

CAN Connection

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

To successfully establish a connection, the CAN configuration of the PCAN-Diag FD must match the parameters of the connected CAN bus. In the **Settings** area you can adjust the necessary settings.

CAN protocol

Configuration of the CAN protocol to be used.

Allow bit rate switch

Allows transmission of the data part of CAN messages with the higher data bitrate if using the CAN FD protocol.

Bit Rate

Configuration of the bitrates via preconfigured profiles (**CAN Bit Rate Presets**) or selection lists:

Clock: The possible bitrates derive from the selected clock frequency.

Nominal Bit Rates: With the nominal bitrate, the bitrate of the CAN communication is set.

Data Bit Rates: If using the CAN FD protocol, a higher bitrate for the transmission of the data part of CAN messages is set with the data bitrate.

Please note:

With **Detect CAN bit rate** the bitrates can be determined automatically. This function requires data traffic on the CAN bus between at least two nodes.

Receiving and Transmitting Messages

Displaying Incoming CAN Messages

Navigate to the menu item **CAN Data** > **CAN Message View**. Incoming CAN messages are displayed as a list, sorted by the CAN ID (column *RxID*). The representation of the CAN data bytes (*Data 0...N*) is in hexadecimal format. Each occurrence of a CAN message increments its *Count*.

Creating and Transmitting CAN Messages

Navigate to the menu item **CAN Data** > **CAN Message View**. With the **View** function you can display the transmit list (table with the column *TxID*).

Creating a CAN message

- Select the transmit list by rotating and pressing the push dial.
- Open the context menu with the **MENU** hotkey and choose **Add**.
- Enter the parameters for the new CAN message.
- Save the message with the **OK** hotkey.
- This closes the dialog and the new CAN message appears in the transmit list.

Transmitting a CAN message

- Select a CAN message from the transmit list.
- You can start or stop the periodic transmission by pressing the push dial.
- With the **SEND** hotkey, you can transmit the message manually once.

Oscilloscope Function

In order to analyze incoming signals with the oscilloscope function, select **Scope** from the main menu. If needed, you can adjust the configuration of the oscilloscope in the **Settings** area.

Trigger

Selection of the event that triggers the sampling of the signals (e.g. start or end of a CAN frame, CAN ID, CAN error, or bitrate switch of a CAN FD frame).

View

In this section, you can customize the signal sources to be displayed.

Export

In this section, you can configure which data will be saved on the memory card when using the Export function.

After confirming the settings with the **SAVE&OK** hotkey, you can start the sampling.

Single

Triggers a single sampling of the signal.

Run/Stop

Starts and stops the repeated sampling of the signal.

The presentation of the signal course can be manipulated via menu functions.

Zoom

Zooms in or out.

H-pos.

Moves the visible section horizontally.

Device Configuration with Projects

The PCAN-Diag FD can be adapted quickly to different application scenarios. The device settings and required files are set up in form of projects with the Windows software PCAN-Diag FD Editor; afterwards the projects are transferred to your PCAN-Diag FD via USB. You can find the program (*PcanDiagFdEdt.exe*) ...

... on the PCAN-Diag FD memory card in the directory: *PCAN-Diag FD\Tools*.

... in the download package from our website. See the last page of this quick start for the download link.

Detailed instructions about the creation of and the work with projects can be found in the PCAN-Diag FD user manual or in the PCAN-Diag FD Editor software help.

Documentation

Simplified EU Declaration of Conformity

PEAK-System Technik GmbH declares: The product *PCAN-Diag FD (IPEH-003069)* is in compliance with the EU directives 2014/30/EU (EMC) and 2011/65/EU (RoHS 2) + 2015/863/EU. The full text of the EU declaration of conformity is available in the PCAN-Diag FD documentation. With these links you can get the documentation from our website.



Documentation German (pdf)

[www.peak-system.com/
quick/Doc3069D](http://www.peak-system.com/quick/Doc3069D)



Documentation English (pdf)

[www.peak-system.com/
quick/Doc3069E](http://www.peak-system.com/quick/Doc3069E)

Updating the Firmware

Keep your PCAN-Diag FD up-to-date. The PCAN-Diag FD package is available for download on our website. It contains the latest firmware, documentation, device help, and software.

- Download the latest PCAN-Diag FD data package from our website or directly with the following link to your PC. Unpack the data package.
- Make sure that the PCAN-Diag FD is powered externally.
- Connect your PCAN-Diag FD to the PC. For this, use the supplied USB cable and activate the USB connection via the main menu item **USB Connection**.
- Transfer the entire content of the data package to the memory card. The new firmware file (*.bin) is located in the directory */PCAN-Diag FD/Firmware/*.
- End the USB connection.
- Navigate to the menu item **Support** > **Update Firmware**.
- Select the new firmware (*.bin) from the list to start the update. As soon as the process is completed, the device switches off.



Download Package (zip)

[www.peak-system.com/
quick/DLP3069](http://www.peak-system.com/quick/DLP3069)