![Topkodas logo]

CAN-Translator

User's guide

CAN-Translator

The interface translating CAN-bus information USER

GUIDE
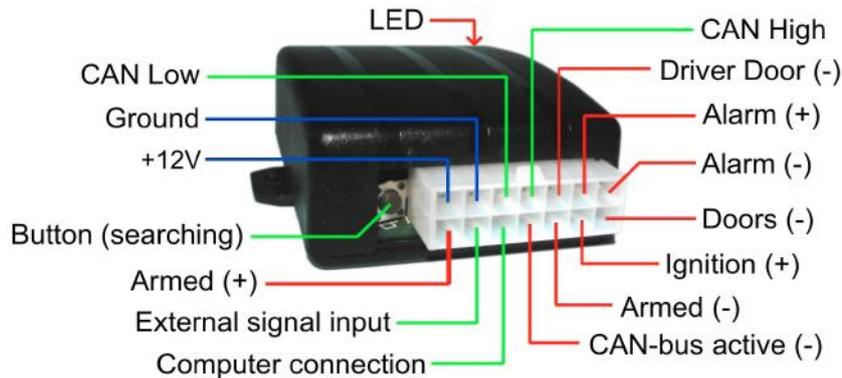
CAN-TRANSLATOR DEVICE DESCRIPTION

- Button (searching) - the button, that starts car searching mode or enables LED diode flashing (which shows device's mode).
- LED diode (on the rear side panel) - shows device's mode
    OUTPUTS:
- Driver Door - active, when driver door is opened
- Doors - active, when any door, boot or hood is opened
- Ignition - active, when ignition is switched on
- Alarm - active, when alarm condition appears (two outputs of opposite polarization)
- Armed - active, when car is locked (two outputs of opposite polarization)
- CAN-bus active - active, when CAN-bus is not in sleep mode
    INPUTS:
- External signal input - when shorted to ground, alarm can be activated
- CAN High and CAN Low - CAN-bus terminals
- +12V and GND - power supply
- Computer connection - input for CAN-translator programming and configuration (dedicated cable needed)

PINOUT DESCRIPTION:

1. + 12V (the top row, near the button)
2. GND
3. CAN-Lovv
4. CAN-High
5. Driver Door output (GND)
6. Alarm output (+)
7. Alarm output (GND)
8. Armed output (+)
9. External signal input
10. Computer connection
11. CAN-bus active output (GND)
12. Armed output (GND)
13. Ignition output (+)
14. Doors output (GND)

CAR MODEL SEARCHING

To make CAN-Translator to support particular car model, searching procedure must be performed. Do the following steps:

1. Connect CAN-bus wires according to installation diagram.
2. Turn the ignition on!
3. Power on the CAN-translator – LED diode lights red for 3 seconds.
4. While LED lights red, press and hold the device's button for about 2 seconds.
5. Release the device's button, immediately after LED lights green.

If car model searching procedure is run on the device for the first time, steps 4 and 5 may be skipped.

Then car model searching begins. LED diode is flickering red during the procedure. The car model searching procedure lasts up to 1 minute.

If car model is detected, LED lights green. To make sure if right car model had been detected, car testing can be performed. When LED lights green, all CAN-translator's outputs are being activated according to car's detectors conditions:

- Doors [14], when any door, boot or hood are opened,
- Driver door [5], when driver door is opened,
- Ignition [13], when ignition key is on ACC,
- Armed [8] and [12], when car is locked with remote's button,
- Alarm [6] and [7], when hazard lights flashing.

The state of output can be checked with i.e. voltmeter or electrical probe.

Test all CAN-translator's outputs to be sure if right car model had been detected. If it had, turn the device's power off and then, after 5 seconds, turn it on. CAN-translator starts in the work mode.

If while testing CAN-translator's outputs do not follow the car state, car model searching procedure should be continued. To continue searching – press and release device's button. LED will start flickering red again (searching is in progress).

If none car model is detected (the car is not in CAN-translator's memory), after searching LED diode lights red. After next 30 seconds, car model searching restarts.

WORK MODE

When in work mode, CAN-translator's outputs are activated and deactivated following the car state:

- Doors [14], when any door, boot or hood are opened,
- Driver door [5], when driver door is opened,
- Ignition [13], when ignition key is on ACC,
- Armed [8] and [12], when car is locked with remote's button,
- Alarm [6] and [7], when, in armed mode, any of protected sectors is violated.

In work mode and armed mode LED blinks green - once every second when CAN-bus is active or once every 4 seconds when CAN-bus sleeps. To save the power LED blinks for only one minute after device's power is on. If you want LED to blink longer -press device's button.

When CAN-bus gets sleep, CAN-translator enters low-power "**idle mode**".

ARMED MODE

The device enters armed mode after car is closed - when remote's "lock" button is pressed and then doors are locked, by default[1]. Remote's buttons are ignored when ignition is on[1].

If, in armed mode, one of following events is detected, the Alarm outputs will be activated. The events are[1]:
- opening the driver door,
- opening the passenger door,
- opening the rear-left door,
- opening the rear-right door,
- opening the boot (except of opening with remote),
- opening the hood,
- switching the ignition on,
- opening the central lock without use of remote,
- hazard lights flashing,
- external signal input shorted to ground,
- power on.

You can freely select the events vvhile configuration.

Alarm will not be activated in 10 seconds from entering armed mode (events are ignored).

The alarm lines are activated for 30 seconds[1] by default. Alarm lines are deactivated prematurely if remote's "unlock" button[1] is pressed (leaving armed mode).

CONFIGURATION WITH PROGRAMMER APPLICATION

CAN-translator can be configured with the "Configurator" - the application for PC computer. Connect CAN-translator to the PC computer's COM port with dedicated RS232 cable (USB to RS232 converter is also supported).
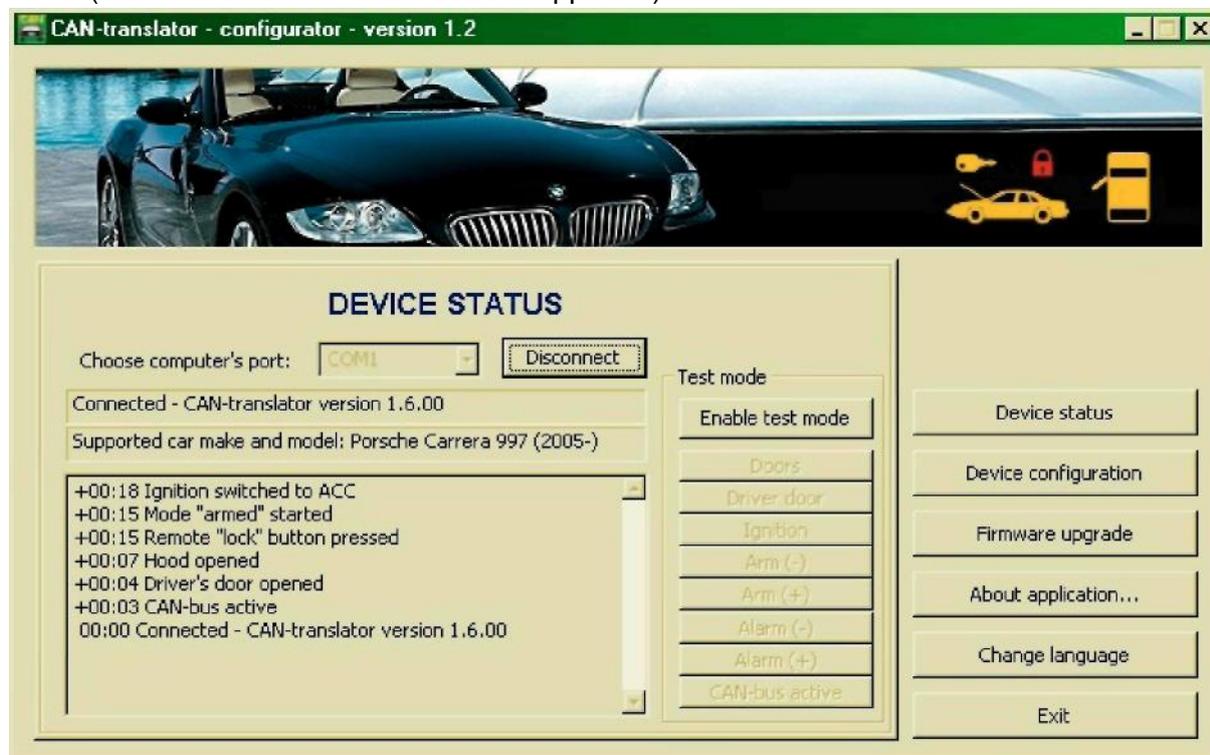
other settings are possible (use the programmer on PC computer)

The buttons on the right side of application window open particular pages of application.

The "About application…" page contains the CAN-translator's pinout.

DEVICE STATUS

To connect the device to the PC computer, on the "Device status" page select proper COM port and press "Connect" button.

When the device is connected to the PC computer, device's firmware version number and supported car model is shown. All information about changes of the car's or the device's state are updated and displayed systematically. In the top right corner of application window (against a background of photograph), when the device is connected, icons indicating the car state are shown and systematically updated.

When "Enable test mode" button is pressed, the application controls the device's outputs. Test mode allows to check if all outputs works properly (i.e. there is no short circuit). Consecutive pressing the test mode buttons enables and disables particular outputs.

DEVICE CONFIGURATION

When CAN-translator is connected to the application, "Device configuration" page may be selected. All the configuration is entered in several steps:

- car make and model,
- the event (or sequence of events) that makes the device goes to the armed mode (remote's button and central lock, only remote's button or only central lock); not all ways of arming are available for all car models,
- the time alarm is activated for (the time, "Alarm" outputs are activated for),
- events, that triggers the alarm (protected sectors, see "Armed mode" section) – you can freely choose which events trigger the alarm and which do not;
- after "Finish" button on the last screen is pressed, the configuration will be stored to the device.

There is "Get default settings" button on each configuration page. When pressed, default settings for this page will be selected.

There is "Get device's current settings" button on each configuration page. When pressed, device's current settings for this page will be selected.

TECHNICAL SPECIFICATION

Supply voltage	min. 6 V	max 18 V
Operating temperature	min. -40°C	max. 85°C
Supply current - work mode	typ. 4 mA	
Supply current - idle mode	typ. 2,5 mA	
Sink/source current (each output)	max. 0,5A	