

NAV-TV

INTERFACING THE FUTURE

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MDAS-9

NTV-KIT915
Quick Install Guide



Overview

The MDAS-9 by Movon is an advanced driver safety system designed to save lives, increase awareness of bad driving habits & record driving statistics (with video) for fleet management users and conventional drivers alike. This installation manual highlights the most important information required and assumes an experienced installer uses common industry practices for a successful integration.

Kit Content



GPS Antenna
(optional)



Rear Camera kit
(optional)



Main (front) camera unit preparation

- The main unit comes prepared for bus/large truck setup (cable routing) or vehicles with mostly vertical windshields. *To set up the unit for an average truck or passenger vehicle, dismantle partially as shown below:*



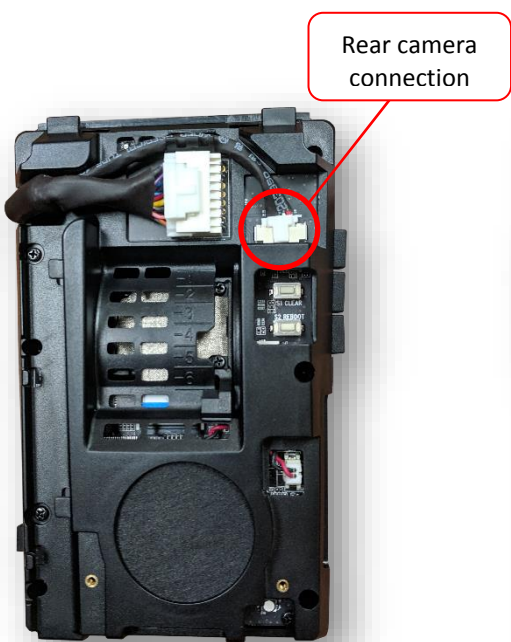
1. Remove cover



2. Remove (2x) screws, remove plastic cover



3. Remove (2x) screws, pry plastic mounting frame off unit from corners



4. Reroute the main cable (and rear camera cable, if adding) around unit to front (glass side)



5. Press tightly into channels when routing cables. Remove front camera dust sticker.



6. Replace 1 cover *only* removed from step 3. Replace 2 screws. Leave the remaining covers off until the **last step**.

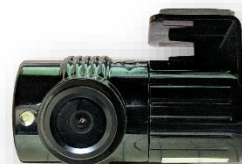
Vehicle Installation

1. Clean the spots on the windshield with the *provided alcohol wipe* where you plan to mount the hardware. Remove the red 3M tape and mount the main unit underneath the rearview mirror as centered (left/right) and straight as possible (if it *must be off center* by a few inches, that's okay – measurements will be taken later). Be certain not to obstruct the drivers view.



2. Run the main-unit cable across the headliner and down to the driver side under-dash. This may require removing the A-pillar temporarily. *Follow factory harnesses, always run behind any airbags.*

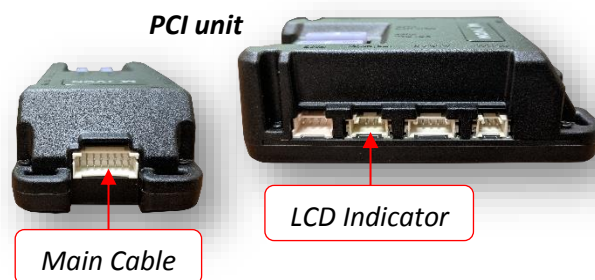
3. Run the rear camera cable to the rear of the vehicle (if using it for a true rear camera) **or** loop it back to where the rear camera will be mounted for an interior-view camera. For the rear camera placement, the arrow icon must be at the top (ignore the direction of the arrow icon – just keep it at the top) for mounting. *Mount like shown here (right).*



4. Attach the mount (from the plastic bag) and stick the LCD indicator on the windshield in the driver's line-of-sight, usually close to the A-pillar so it can be easily seen and controlled if required. Run this cable down to the driver's under-dash as well.



5. Once both cables are run to the under-dash, connect them to the provided PCI unit at the proper ports.



6. Connect the (optional) GPS antenna somewhere within a few inches of the main unit (stuck to windshield). Connect to the main unit via the GPS port (3.5mm).



7. Connect the provided Power/Ground harness connection to a chassis ground (black wire) and Ignition source (red wire). The circuit must provide ~3 Amp @12v. Connect the plug to the PCI unit at the 'Power' port.



Installation: for CAN-equipped vehicles

Many vehicles are available in Movon's database for using the CAN bus for vehicle signals (turn signals, brake and speed sense). This makes for a much faster installation. See below for checking availability of a downloadable CAN file for your vehicle. **NOTE: not all vehicles are available on the database currently, even if the vehicle has CAN. The list is constantly updated, so if the vehicle isn't there now, it may be later. The installation may still be completed using analog connections instead of CAN – see next section.**

- Check to see if there is a CAN file available by opening a Chrome browser and going to info.mdas.co.kr:

USER: *tech@navtv.com*

PASS: *profit*

1. Choose the vehicle *make* and *model* into the selector at the left.
2. Click the page icon (at right) and the database information will show CAN wire location information (if available) and download the 'CAN File Download' file at the bottom. **NOTE: this filename will always be 'mdasinfo.dat' and cannot be renamed – so if you're installing another MDAS-9 and using this computer to set up, make a separate file folder (every time) with the vehicle year and model, and put this file inside of it.**

Vehicle Profile (CAN-BUS) Database

Language: English My Page Logout

Search

AUDI x

A6 x

Year



Input Vehicle Information

My Vehicle Information List

Multi CAN data download

Search Result

(Total: 2 Cars)

| No | Manufacturer | Model | Year | Engine Type | Country Code | Date | Details |
|----|--------------|-------|------|-------------|--------------|---------------------|---|
| 1 | AUDI | A6 | 2016 | Gasoline | NL | 2017-05-11 23:36:16 |  |
| 2 | AUDI | A6 | 2017 | Gasoline | IL | 2017-12-04 15:12:45 |  |

3. If there is a CAN file available, connect the provided CAN harness (contactless reader) to the (transmission) CAN bus wires – *either where stated or at the OBD2 port, typically pins 14 & 6, if the vehicle is available on the MOVON database only.*



NOTE: this connection uses inductance. There is no need to strip the CAN wires – just open the black box, lay the CAN High and Low in the channels, then close the box.

4. Connect the 4-pin plug from the CAN harness to the 'CAN' port on the PCI unit.

- **If the vehicle is not listed in Movon's database, you must use the provided Analog harness, see next section. NOTE: vehicles that are 1 year (or so) off, may still work for CAN access!**

Installation: For Analog signals (no CAN)

If the vehicle has no CAN bus or there is no CAN file available, you must tap turn signal (left and right), brake and speed signal manually (various locations). Speed sense can be accessed with an *optional GPS antenna* instead of the SS wire, this would also be beneficial for location of the vehicle along with recorded video and fleet management information.

1. With a digital multimeter or test light, locate the brake signal wire that activates when the brake is pressed (vehicle may need to be ON). Connect and insulate the **black/white wire** to this vehicle's wire. *This may be a (+) or (-) signal.*
2. With a digital multimeter or test light, locate the left turn signal wire that activates with the left turn signal. Connect and insulate the **blue/white wire** to this vehicle's wire. *This may be a (+) or (-) signal.*
3. With a digital multimeter or test light, locate the right turn signal wire that activates with the right turn signal. Connect and insulate the **blue wire** to this vehicle's wire. *This may be a (+) or (-) signal.*
4. Locate the VSS wire. Connect and insulate the **brown/white wire** to this vehicle's wire.
5. NO other wires are required for typical installation – **ground the remaining wires.**



MDAS-9 Calibration

MDAS-9 Calibration requires:

- a laptop with an internet connection and a browser (Chrome is best)
- micro-USB cable
- tape measure
- parking the car with a clear, open stretch of about a 50-yard unobstructed view (try to park close to your facility to keep the internet connection accessible – at least during the calibration driver installation)
- a partner to drive the vehicle while speed correction is performed

- Before beginning, insert the provided micro-SD card into the main unit in the location shown here (right) until it clicks and turn the Ignition ON. Wait for the prompt, then press and release the center button one time. After the successful prompt and the unit reboots, continue to step 1.



1. Park the vehicle in a spot with a clear stretch of unobstructed line-of-sight (about 50 yards). Leave the vehicle running.

2. Connect the USB cable to the Micro-USB port on the side of the main unit (windshield) and the other end to the laptop. If on a windows 10 machine, it should automatically install the required driver. If not or on an older machine, go to movon.co.kr, go to the 'ADAS' tab at the top then to 'Downloads' under *Support*. Download the appropriate zip file (contains driver) and extract it fully for your version of Windows OS (if using the 7/8 driver, install the .exe file). If WIN10, once downloaded, disconnect/reconnect the USB and it should automatically install, or find the unit in Device Manager and right-click, *Update Driver* and *browse for driver locally*.*



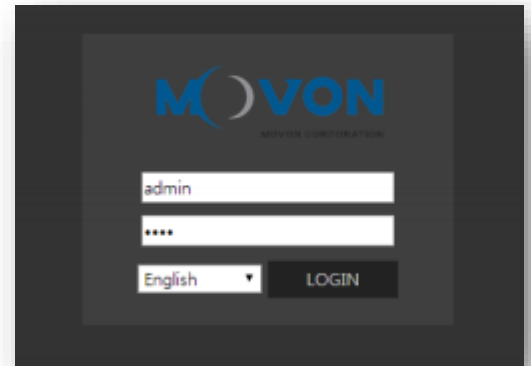
NOTE: the unit will beep about once a second while in calibration mode – this mode will remain until the USB cable is disconnected.

**The MDAS-9 unit will show up in Windows Device Manager as 'USB Ethernet/RNDIS...' under Network Adapters once installed properly.*

- Open Chrome browser again and type in '10.0.0.1' into the URL bar. If the driver was installed properly, the MOVON calibration screen will appear. Input credentials and press *LOGIN*:

USER: *admin*

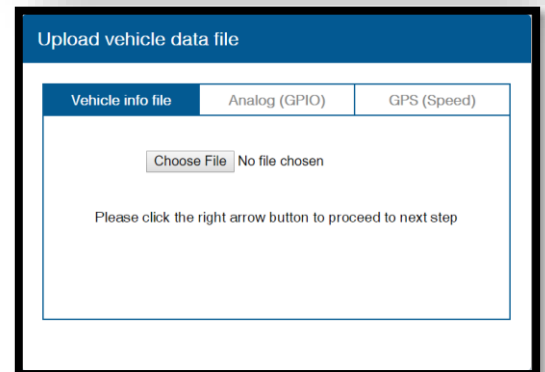
PASS: *1234*



- Select Vehicle Signal Type:** there are 3 wiring options for installation: **CAN-BUS** / **Analog (GPIO)** / **GPS (Speed)**. Select the proper calibration option based off which was installed: CAN (if CAN file is available), Analog (if analog signals were tapped) or GPS (if a GPS antenna was used, typically with analog signals)

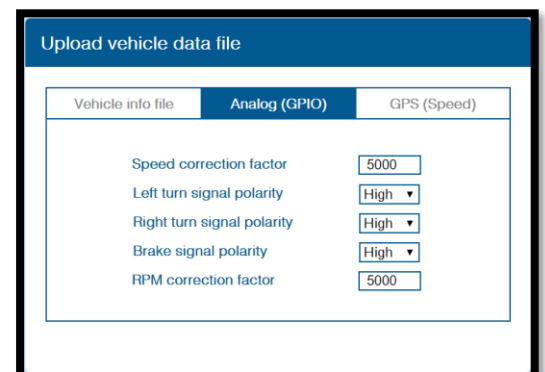
Vehicle Data File (CAN-BUS)

For CAN-BUS connection, choose the 'Vehicle info file' tab and select 'Choose File' to upload the previously downloaded 'mdasinfo.dat' file (see 'CAN-Equipped vehicles' section).



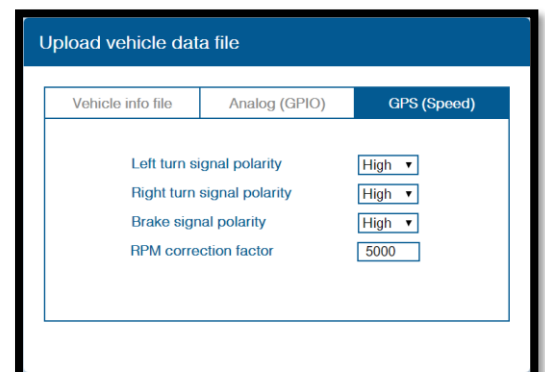
Analog (GPIO)

When using Analog signals, uploading a CAN file isn't required. Click the Analog (GPIO) tab. Enter speed correction factor value and RPM correction value (leave alone if unsure). Change polarity for turn signals and brake signal based on the vehicle. (HIGH = Positive trigger, LOW = Negative trigger)



GPS (Speed)

If using the optional GPS antenna, click the GPS tab. Change polarity for turn signals and brake signal (HIGH = Positive trigger, LOW = Negative trigger). Enter RPM correction value (leave alone if unsure).



Continue the calibration via the prompts on setup screen via laptop. For more detailed information, download the full installation manual at https://navtv.com/media/products_file/2019/04/29/MDAS-9_Installation_Manual.pdf