# ► NO COMMUNICATION :

## ► 1) CONTROL UNIT POWER SUPPLY :

**- Verify for: Low battery voltage**

**- Verify that the diagnostic cable is properly connected to the diagnostic socket and to the computer port.**

**- Bad power or ground circuits on the diagnostic socket**

Inspect the diagnostic socket for:

- broken pins
- missing pins
- damaged pins
- wiring harness damage

**- Verify on all the power and the ground contacts (corrosion, etc….)**

**- Verify the Communication port setting from the computer**

## ► 2) CABLE HARNASS :

**- Disconnect the connectors and:**

- Inspect the Control Unit

- Inspect for broken wiring connections

- Inspect for loose wiring connections

- Verify each power ground circuit to the module

- Verify the resistance between connectors and the ground

## ► 3) CONTROL UNIT CODING :

**- Verify the control unit coding and the vehicle equipment.** - If necessary change the control unit configuration

# ► 4 CAN BUS :

## A) Possible cause and remedy:

**If several fault codes regarding CAN communication have been stored, the fault Is most likely caused by :**

**- An open circuit in voltage supply to the control units involved.**
**- An open circuit or short circuit of the CAN wires.**
**- The connector sleeves of the CAN bus.**

**If CAN communication between a specific control unit and at least one other control unit is fault free, there is no fault at the CAN element of the specific control unit.**

**In this case :**

**- Read the error memory of control unit to which there is a fault in the communication. If a CAN fault regarding communication with the specific control unit is present in this control unit, then first of all test CAN lines between the two control units.**

## B) Possible CAN error codes:

**- CAN Timeout Error**

A CAN timeout error code is stored when a CAN input signal is missing. This can be caused by the transmitter control unit or by the CAN networking itself.

Example error code: No CAN message was received from the CDI control unit

**- Bus Off Error**

A Bus Off error codes is stored; when the control unit cannot send amount of messages to the CAN bus or that the messages sent are incomplete. The control unit then switches off for a short time from the CAN bus.

Example error code: CAN controller : CAN bus OFF

**- CAN functional Error**

A functional CAN error code is stored because of an implausible CAN input signal. The cause of this is not the CAN networking, but the transmitter control unit or its sensors.

Example error code : CAN controller : CAN signal from CDI control unit is implausible

**- BUS wake-up event**

An event that wakes up the CAN bus without reason is designated a bus wake-up event. The cause of this is not the CAN networking, but the transmitter control unit or its sensors. Further possible causes of error:
- Magnetic fields caused by nearby high-voltage installations, railroad installations or power plants.
- Magnetic field can radiate on to lines and control units in rare cases and cause undefined behaviour in the control units.
-A special CAN tool can be used to log bus wake-up events, bus keep awake events and other signals.

**- BUS keep awake event**

When a control unit keeps communication on the bus awake without reason, this is designated a bus keep awake event.
The cause of this is not the CAN networking, but the transmitter control unit or its sensors.
Further possible causes of error:
- Magnetic fields caused by nearby high-voltage installations, railroad installations or power plants.
- Magnetic field can radiate on to lines and control units in rare cases and cause undefined behaviour in the control units.
-A special CAN tool can be used to log bus wake-up events, bus keep awake events and other signals.

## C Possible Aids and their usage.

**- Multimeter**

For voltage and resistance measurement.

**- Measuring systems**

For graphic representation of CAN signal and voltage levels. The specified characteristics shown are used to recognize changed CAN voltage levels, which can be caused by faulty CAN components.

## ► Menu Buttons (1/2) :


**Back ► To return to the previous screen**


**Main ► To return to the Main Menu**


**Start ► To start the total diagnosis**


**Help ► Help file**


**Scan ► To start scanning the error memory**


**Erase Codes ► To erase the error codes**


**No Com. ► No Communication with the vehicle**

## ► Menu Buttons (2/2) :


**Save ► To save the data to disk**


**Print ► To print the data on paper**


**Exit ► To exit the program**

# ► CONTROL UNIT ABRIVIATIONS

| German | English | Description |
|---|---|---|
| | | |
| AB | AB | Airbag Control Unit |
| ABR | ABR | Adaptive Brake System |
| ABS | ABS | ABS Control Unit |
| AGW | AGW | Audio Gateway Control Unit |
| AHE | AHE | Trailer Recognition Control Unit |
| AIRCO | AIRCO | Air conditioning Control Unit |
| AIRMatic | AIRMatic | Airmatic System Control Unit |
| AKR | AKR | Semi Automatic Gear Box Control Unit W168 |
| BAS | BAS | BAS Control Unit |
| CDI | CDI | Common Rail Diesel Engine Control Unit |
| Command | Command | Command |
| DBE | OCP | Overhead Control Panel Control Unit |
| EDW | ATA | Anti Theft Alarm Control Unit |
| EGS | EGS | Electronic Gearbox Control Unit |
| ERE | DFI | Diesel Engine Control Unit |
| ESP | ESP | ESP Control Unit |
| ESVVL | ESAFL | Electronic Seat Adjustment Control Unit |
| ESVVR | ESAFL | Electronic Seat Adjustment Control Unit |
| EVE | IFI | Diesel Engine Control Unit |
| EWM | ESM | Electronic slever Control Unit |
| EZS | EIS | Electronic Ignition System |
| FBS | DAS | Drive Authorization Signal Control Unit |
| HFM | HFM | Petrol Engine Control Unit |
| KI | IC | Instrument Cluster Control Unit |
| LWR | HRA | Headlight Range Adjustment Control Unit |
| ME | ME | Petrol Engine Control Unit |
| MRM | SCM | Steering Column Module Control Unit |
| OBF | UCP | Upper Control Panel Control Unit |
| PMS | PMS | Petrol Engine Control Unit |
| PSE | PSE | Pneumatic Control Unit |
| PTS | PTS | Parktronic System Control Unit |
| SAM | SAM | Signal Acquisition Module Control Unit |
| SAMH | SAMR | Rear Signal Acquisition Module Control Unit |
| SAMV | SAMF | Front Signal Acquisition Module Control Unit |

| | | |
|---|---|---|
| **SAMVL** | **SAMFL** | Front Left Signal Acquisition Module Control Unit |
| **SAMVR** | **SAMFR** | Front Right Signal Acquisition Module Control Unit |
| **SBC** | **SBC** | Sensitive Brake Control Unit |
| **SIH** | **HS** | Heated Seats Control Unit |
| **SSG** | **SSG** | Sprintshift Control Unit |

| | | |
|---|---|---|
| **System** | **System** | System Control Unit |
| **TSG** | **TSG** | Door Control Unit |
| **TSGHL** | **DCMRL** | Rear Left Door Control Unit |
| **TSGHR** | **DCMRR** | Rear Right Door Control Unit |
| **TSGVL** | **DCMFL** | Front Left Door Control Unit |
| **TSGVR** | **DCMFR** | Front Right Door Control Unit |
| **UBF** | **LCP** | Lower Control Panel Control Unit |
| **UHI** | **CTEL** | Telephone |
| **UVS** | **RST** | Roadster Roof Control Unit |
| **VD** | **VD** | Vario Roof Control Unit |
| **ZGW** | **CGW** | Central Gateway Control Unit |