

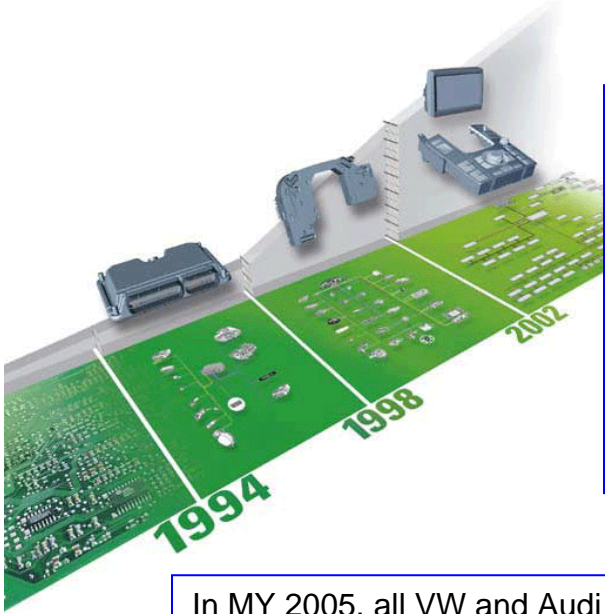


**Euro Systems Automotive Training Inc**

# **Volkswagen and Audi Advanced CAN (Controller Area Network) for 2010**

Modern Volkswagen & Audi automobiles utilize different CAN systems to interconnect and communicate within the network structure. There are four main reasons why most manufacturers needed to establish the CAN system.

- **Safety**
- **High Speed Data Transfer**
- **Reliability**
- **Emissions**



**CAN Networks**  
The increase of control units for convenience and functionality now requires the uses of an even more wide range of electronic communications and standards.

**CAN Topology**  
This includes and not exclusive to:

- Twisted pair CAN
- Lin
- MOST
- RS232
- Bluetooth
- FlexRay

In MY 2005, all VW and Audi controllers are on full CAN diagnostics

This seminar and workshop is a must for the repair facilities and technicians to get a grasp on the latest technology. This includes a detailed manual, resource CD with graphics on the entire CAN system to 2008.

**NOTE:** There is a prerequisite to this seminar. All attending technicians or shop owners must have completed the VW and Audi Data Blocks seminar. It will be impossible to comprehend this seminar otherwise.

**VW and Audi training with technical support**  
**Call 1-866-245-7602 Email: [esatinc@esatinc.ca](mailto:esatinc@esatinc.ca)**

# Topology and what you should know



The twisted pair CAN with the images on the left, will become standard equipment in these models.

### **Volkswagen**

Passat, Jetta/City, Golf, Beetle R32, Touareg, Tiguan, Eos, Rabbit

### **Audi**

A3, A5, A4, A6, A8L, TT, TTR, R8, Q7, S/RS



Can you:

Distinguish single/dual channel mode in CAN.

Diagnose a fiber optic system.

Understand the LIN commands.

See and comprehend CAN on the scan tool.

Test CAN signals and message headers.

Isolate CAN sub systems.

Diagnose/Repair any of these systems

There are 84 known control addresses built into the VW and Audi model line up. Some, but not all controllers are installed.

In this seminar, you will know its structure, connection, behavior and communication status via scan tool and oscilloscope patterns.

This seminar includes live data within the power point presentation. Technicians will follow the included CAN Resource manual, CD, live data with the presentation. Bring your Data Blocks manual and resources from that CD, on your laptop.

Time	=	Money
Training	=	Efficiency
Efficiency	=	Money
Knowledge	=	Power
Power	=	Money

This is the way of the future.  
This is how I teach.  
This is what you need to learn.  
There are no answers, it's the choices that are made. (AF)

## The VW and Audi Immobilizer with Generations

In addition to this CAN seminar, we're going to introduce the VW and Audi Immobilizer. The seminar and workshop is a must for the repair facilities and technicians to get a grasp on the latest technology.

Adding or replacing any keys in a VW or Audi will require the 5 digit PIN. That same PIN is required to replace an ECM or Instrument Cluster. If the repair facility is not able to get the PIN, expect the customer to return to the dealer.

With the correct hardware and software combination, a generated PIN is possible in most cases. We have various remote methods that include a data link to the DLC via ECM or Instrument Cluster to acquire the PIN codes.

Not only is the Immobilizer of importance to the vehicle owner, it's as important to the shop owner. There are many choices and various systems to acquire PIN codes, it's a question of Time, Money and Security.

You'll need to ask yourself if "buying" into the system is worth the \$7000.00 plus monthly fees are acceptable when working on few systems per year.

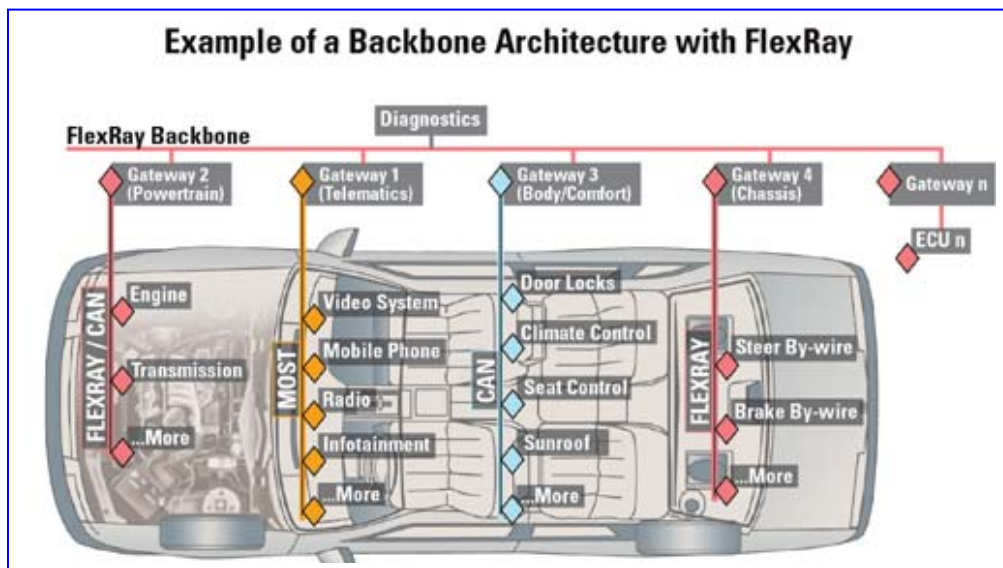
Depending on year make or model, the immobilizer will reside within different systems. As an example:

<b>Model</b>	<b>Type</b>	<b>Location</b>
2001 Golf 2.8L Manual	Immobilizer II	Cluster and ECM
2002 Jetta 2.0L Automatic	Immobilizer III	Cluster and ECM
2003 A4 1.8L Automatic	Immobilizer III	Cluster and ECM
2004 A8 4.2L Automatic	Immobilizer III	Kessy and ECM
2005 Touareg 3.2L Auto	Immobilizer III	Kessy and ECM
2005 Mk5 Golf/Jetta	Immobilizer IV	Cluster and ECM
2007 A6 3.2L Automatic	Immobilizer V	Steering Lock and ECM

Some systems can be accessed within the Instrument Cluster and others within the ECM. The A8, Phaeton, Touareg and the Porsche Cayenne are accessed within the Kessy Unit. Those units require removal and read with a programmer. Today, the difficulties are the new generation IV and V. Those systems produce a "challenge code" at every key cycle. Even if a code is known, the issues are within the system called "component protection".

Some of this work can be done remotely, that will be shown in the class, some will require specialized programmers.

# This is the future!



Conventional mechanical and hydraulic systems can only go so far. Likewise, the in-vehicle serial data buses that pass electronic signals between a vehicle's electronic control units (ECU) and associated electronic devices can no longer cut it. The future is FlexRay—a new communications protocol designed for the high data transmission rates required by advanced automotive control systems. These are the same control systems that, in the next few years, are expected to replace nearly every hydraulic line and mechanical cable in today's automobiles with wire-based networks, sensors, and actuators.

**Schedule your reservation for this class by contacting:  
Euro Systems Automotive Training Inc. at 1-866-245-7602  
Reservations and seating is limited.**



Secure Payment options.



**Seminar Dates:** July 09-2010 (6 to 8 pm) July 10-2010 (start 8:00am)  
**Host Facility:** Euro Auto hosted by Eric Dibner  
Aircraft Mechanics Training Center, LLC  
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