ECS TUNING

Schwaben
Professional VAG Scan Tool
Functions, Settings, and Operation

schwaben®

Volkswagen

VAG

INTRODUCTION

Today's cars, they're all about electronics. Computers have a hand in virtually every system on the car, so it goes without saying that a scan tool is one of the most important pieces of equipment you need. Whether it's maintenance, diagnosis, or performance you're after, it's an absolute necessity, and when you own a Volkswagen or Audi, you're undoubtedly familiar with some of the fun and useful things you can do. For a long time, the only option for many service procedures and coding was to utilize the factory VAG-COM systems that only authorized dealers had access to. Now, with the **Schwaben VAG Scan Tool**, you have this ability at home! You can communicate with your VW/Audi for diagnosis and repair, and even better, have some fun and personalize the features of you car.

ECS Difficulty Gauge

1 - Easy Pro - 4

2 - Moderate Advanced - 3

Overall, using the **Schwaben VAG Scan Tool** is relatively simple, so we're going to leave our Difficulty Gauge at 1 - Easy. Keep in mind, however, that as with most computer related systems and devices, you have to familiarize yourself with its operation, and how to navigate through it, before you become really efficient with its use.

To help you learn all of the functions of the new **Schwaben VAG Scan Tool**, we've written this in house users manual to keep you on the right path. We're going to cover the basic setup and operation, then move on to some of the advanced procedures, giving you step by step examples of the scan tool operation. We'll also help you break down the VIN and vehicle codes for your car, which will help you get the most out of using your scan tool. As we figure out more and more things that you can do, we'll continuously add information. So check back from time to time, we're going to have fun with it!

On the next page you'll find the Table of Contents for everything in the manual, and then we'll begin things off with Vehicle Identification to get you started. We've also included a page for you to fill out with your VIN and vehicle codes, which will be useful information for you to have for all types of repairs. We hope you enjoy this new scan tool and as always, we appreciate your business!

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VEHICLE IDENTIFICATION - GET THE MOST OUT OF YOUR SCAN TOOL

The Schwaben VAG scan tool contains a lot of information, and one of the keys to successful operation is utilizing it to its full potential. The trick is knowing the **VIN, Production Date,** and all of the **Service and Model Codes** for your vehicle. Even though the Schwaben VAG scan tool works without them, it also gives you the ability to identify your vehicle using these specific codes. This may take a little research on your part, but it will be well worth your time. Entering these codes into the scan tool allows it to positively identify all of the control units and systems on your car, "tailoring" it for your vehicle's specific options and features.

The **VIN** is a 17 digit number in which each digit has a specific meaning or represents a specific feature. The VIN is located in a number of different places, the most visible of which is on the windshield VIN plate, visible through the lower LH side of the windshield.

The **Production Date** is printed on a label in the lower rear area of the LH front door jamb.

The **Service and Model Codes** are manufacturer specific codes which include the **Sales Type**, and **Engine** and **Transmission** codes. They are printed on the Service ID Label, which is generally located in the trunk or spare tire area. It may be on the inside of the trunk lid, spare tire cover, or even on a rear shock tower. You may have to look around a bit to find it.

On the next page we've given you pictures of the typical styles of information plates and labels on most Volkswagens and Audis. We follow it up with a VIN key to help you find all of this info on your car. We've also prepared a blank VIN Worksheet that you can either print out or use interactively to write down your vehicle's information. Once you have it all documented, you'll have some neat information, and you'll be ready to use the new scan tool to the best of its capabilities.

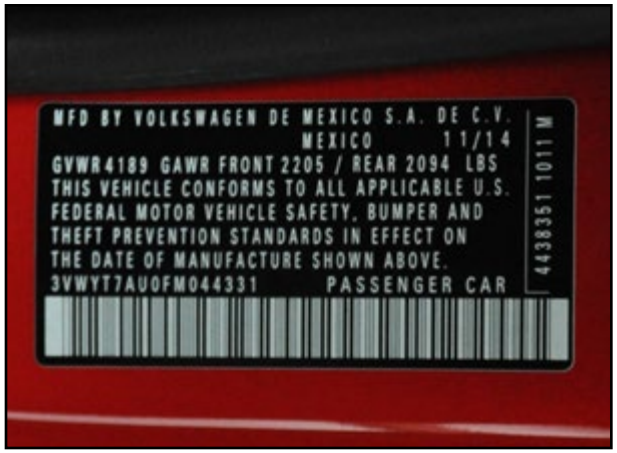
Decoding your VIN can be tricky at times due to the thousands of different manufacturer codes, however you'll find that you can extract a lot of information from the Service ID Label and many times the window sticker and original sales information that came with your car. Don't forget that engine codes are stamped into the cylinder head as well, you just have to look around and find them. If you really get stuck, your local VW dealer should be able to extract all of this information from the VIN.

ID PLATE LOCATIONS

Windshield VIN Plate

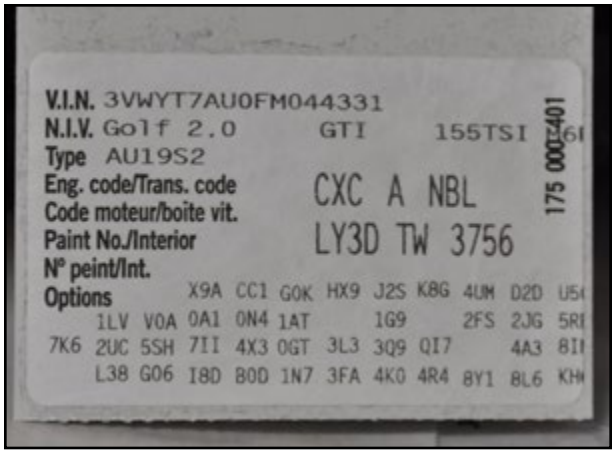
The windshield VIN plate is visible at the base of the windshield on the LH side. The VIN is located on the other ID tags as well but in many cases it is easiest to read here.

Door Jamb ID Plate



The door jamb ID plate is located in the lower rear area of the LH door jamb. The most important piece of information here is the build date, and the VIN is also located on this tag.

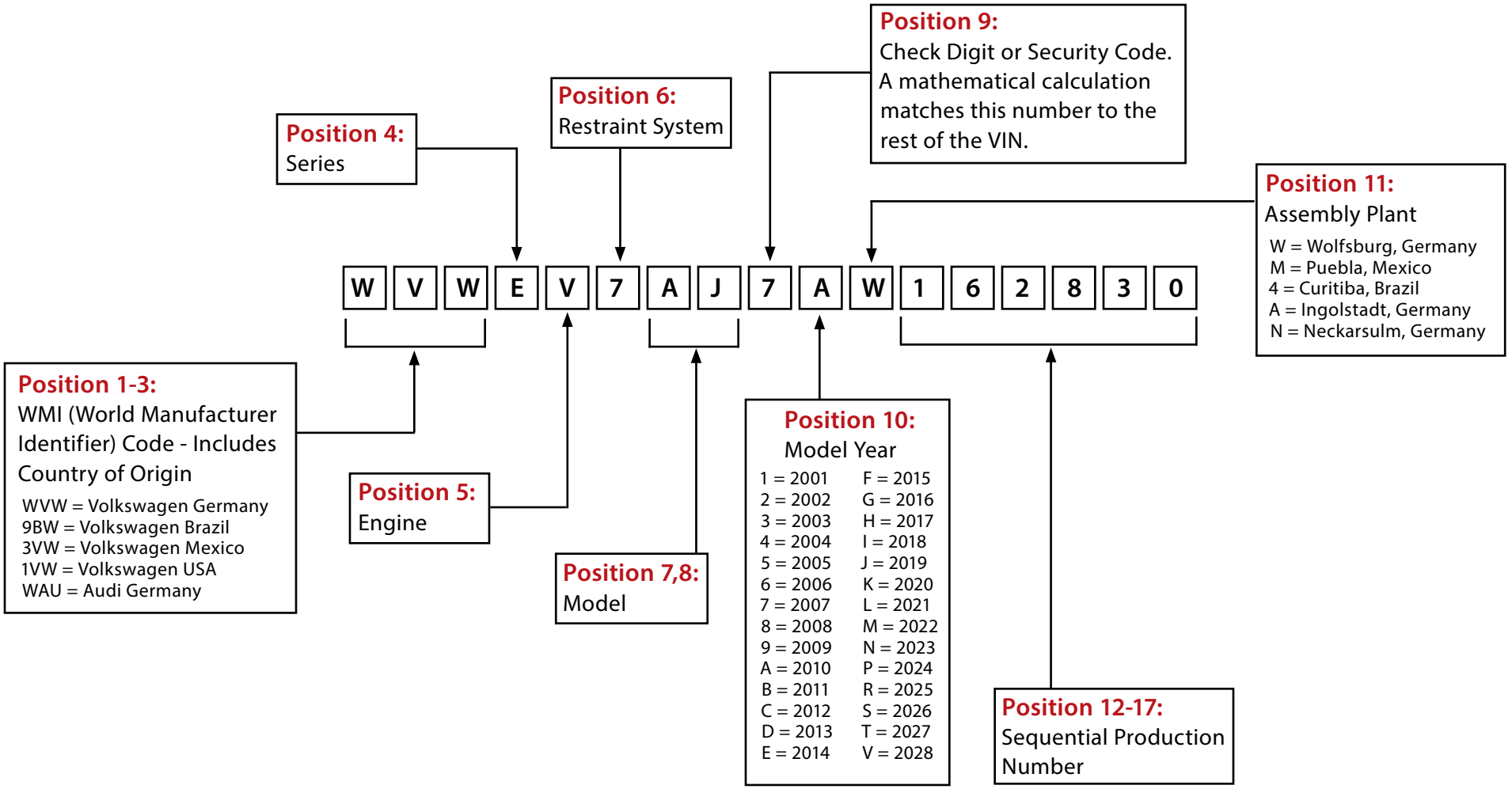
Service ID Label



The service ID label is generally located in the trunk or spare tire area. It may be on the trunk lid, spare tire cover, or even on a rear shock tower. You may have to look around a bit to find it. This label will contain sales type, engine code, and transmission code.

VIN CONFIGURATION

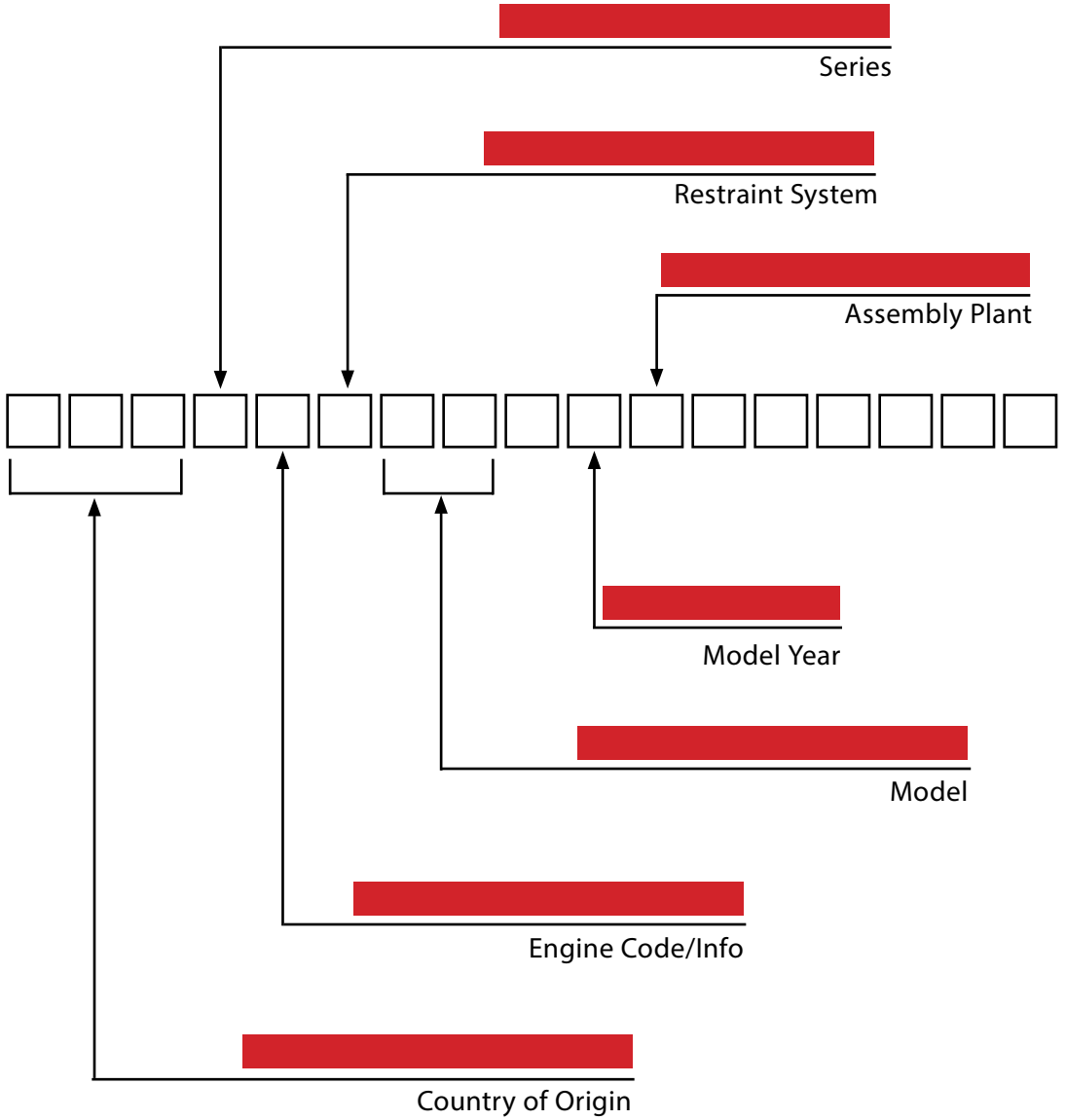
Here is a standard VIN configuration for all vehicles sold in the United States. On the next page is a VIN worksheet you can fill out with all of the information from your vehicle.



Vehicle Information and Codes

Enter your VIN into the boxes on the right. Then, fill out your vehicles information using the VIN key and the information from your Vehicle ID Tags.

1. Series
2. Engine Code/Info
3. Production Date
4. Sales Type
5. Transmission Code
6. Country of Origin
7. Restraint System
8. Model
9. Model Year
10. Assembly Plant



BASIC FUNCTIONS, SETTINGS, AND OPERATION

Choose From the Following Options:

- Scan Tool Components Page 9
- Scan Tool Keys Page 10
- Power Up Page 11
- Setup Options Pages 12-19
- Play Back Page 20
- Register and Update Page 21
- OBDII Functions Page 22
- VAG Functions Page 23

SCAN TOOL COMPONENTS

OBDII Cable

Connects to the OBDII port on your vehicle

Users Guide and CD

The CD contains the users guide (in .PDF format) and application updates.

Micro SD Card

The Micro SD card comes installed in your scan tool. It stores data backup and software updates.

USB Cable

Used to connect the scan tool to a PC or laptop

Micro SD Card Slot

The Micro SD card comes installed in your scan tool. It stores data backup and software updates.

The Micro SD card may be referred to as a TF (Trans Flash) card. They are the same thing.

USB Port

Used to connect the scan tool to a PC or laptop

Micro SD Card Reader

Plugs into your PC's USB port to read and update the Micro SD Card

SCAN TOOL KEYS

Function or Shortcut Keys

Perform the function or shortcut displayed on the screen directly above the key.

Arrow Keys

Allow you to scroll up, down, left, or right to select an icon, data, or text.

Back Key

Exits the current screen and generally returns to the previous screen

Enter Key

Executes the selected option

Power Key

Push and hold to reboot the scanner

Help Key

Displays scanner function information

POWER UP

The scan tool will power up when you plug it into the OBDII port on your vehicle. It will also power up when you plug it into the USB port on your PC or laptop using the supplied USB cable.

The scan tool will remain on the whole time it is connected to the OBDII port. If you press and hold the **Power** key, the scan tool will reboot. This is only necessary if it "locks up" during use.

When the scan tool powers up, it will boot to the main menu screen shown on the right. You will see 4 different icons indicating your initial options:

1. **OBDII**
2. **VAG COM Functions**
3. **Setup**
4. **Playback**

You will also see a menu bar at the bottom. This menu bar corresponds directly to the function/shortcut keys underneath. Any time this menu bar is present, pressing the corresponding function/shortcut key will perform the listed function or shortcut. If the menu bar is not present, the function keys will not do anything.

The shortcuts on the menu bar can set to your preference.

SETUP OPTIONS

Use the **Arrow** keys to select the "Setup" icon as shown in the picture, then press the **Enter** key.

Once you enter the "Setup" screen, you will see the following icons:

1. **Language**
2. **Unit**
3. **Beep Set**
4. **Key Test**
5. **LCD Test**
6. **About**
7. **Shortcuts**

From this screen, press the **Back** key to return to the main menu.

Continue on the next page for more **Setup** options.

SETUP OPTIONS - LANGUAGE

From the "Setup" screen, use the **Arrow** keys to select the “Language” icon as shown in the picture, then press the **Enter** key.

Use the **Arrow** keys to select the language, then press the **Enter** key.

The scan tool will display an acknowledgment of the new language for approximately two seconds, then return to the language screen. A small green check mark will appear over the upper right hand corner of the selected language.

From the language screen, press the **Back** key to return to the “Setup” screen.

Continue on the next page for more **Setup** options.

SETUP OPTIONS - UNIT

From the "Setup" screen, use the **Arrow** keys to select the “Unit” icon as shown in the picture, then press the **Enter** key.

From the "Unit of Measure" screen, use the **Arrow** keys to select the unit of measure, then press the Enter key.

Once you select a unit of measure and press the **Enter** key, the scanner will return to the "Setup" screen.

Continue on the next page for more **Setup** options.

SETUP OPTIONS - BEEP SET

From the "Setup" screen, use the **Arrow** keys to select the “Beep Set” icon as shown in the picture, then press the **Enter** key.

Once you enter the “Beep Set” screen, use the **Arrow** keys to select "Beep Set" on or off, then press the **Enter** key.

Once you select on or off and press the **Enter** key, the scanner will return to the "Setup" screen.

Continue on the next page for more **Setup** options.

SETUP OPTIONS - KEY TEST

From the "Setup" screen, use the **Arrow** keys to select the “Key Test” icon as shown in the picture, then press the **Enter** key.

On the "Key Test" screen, press any key and the icon on the screen will be highlighted, indicating that the key is recognized and working properly.

Press the **F2** key twice to exit the "Key Test" screen.

Continue on the next page for more **Setup** options.

SETUP OPTIONS - LCD TEST

From the "Setup" screen, use the **Arrow** keys to select the “LCD Test” icon as shown in the picture, and press the **Enter** key.

Once you enter the “LCD Test” screen, you will see multiple colors sweep the screen allowing you to look for any missing spots, indicating a problem.

To exit the "LCD Test" screen, press the **Back** key.

Continue on the next page for more **Setup** options.

SETUP OPTIONS - ABOUT

From the "Setup" screen, use the **Arrow** keys to select the “About” icon as shown in the picture, then press the **Enter** key.

The "About" screen will give you two pieces of important information.

1. The Product Serial Number. This will match the serial number printed on the back of the unit and will be required when you register the scan tool.
2. The Register Password. This password will be required when you register the scan tool.

From the "About" screen, press the **Back** key to return to the “Setup” screen.

Continue on the next page for more **Setup** options.

SETUP OPTIONS - SHORTCUTS

Use the **Arrow** keys to select the “Shortcuts” icon as shown in the picture, then press the **Enter** key.

Once you enter the “Shortcuts” screen, you will see the option to select the shortcut function for each of the Function keys. Use the **Arrow** keys to select the Function key that you would like to change, then press the **Enter** key.

Use the **Arrow** keys to select the shortcut you would like to apply, then press the **Enter** key.

The scan tool will prompt you that the change has been made and to hit any key to continue. Once you do so, it will return to the "Shortcuts" screen.

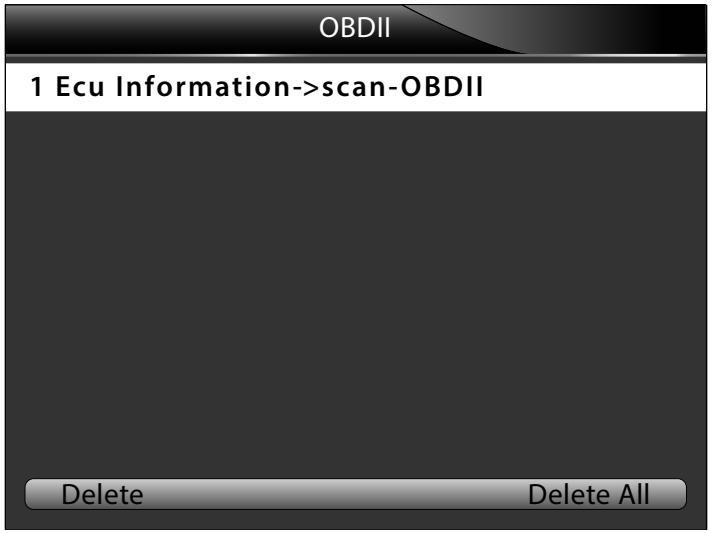
From the "Shortcuts" screen, press the **Back** key to return to the “Setup” screen.

PLAY BACK

The "PlayBack" screen will allow you to view any information which you have saved from different screens.

From the Main Menu screen, use the **Arrow** keys to select PlayBack, then press the **Enter** key.

If there is no data saved, you will simply see the message "No data available".



All data that is saved will be listed on this screen, You can use the Arrow keys to highlight the data and the Enter key to select and view it. You will also have the option to delete the data.

REGISTER AND UPDATE

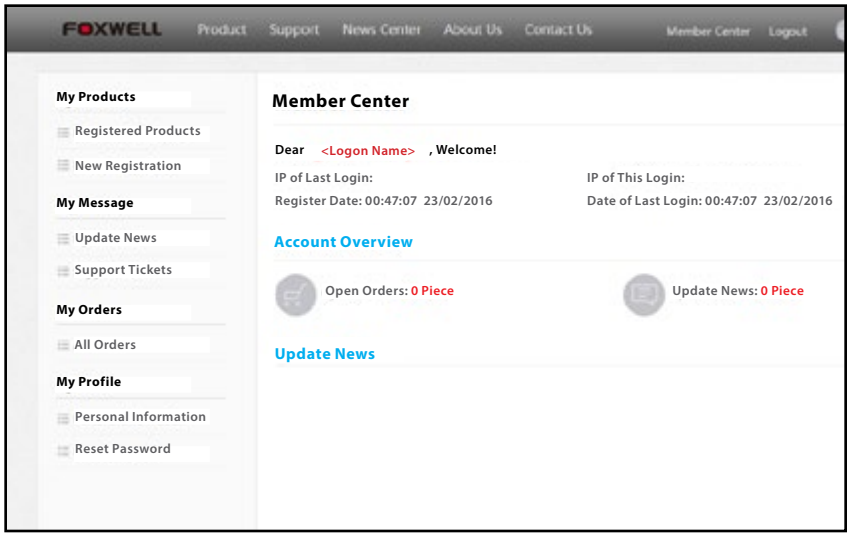
Registering your scan tool is a simple on-line process that allows you to update it and keep it current with the most recent software revisions.

First, create a Foxwell ID:

1. Go to foxwelltech.com
2. Click on the "Register" link in the upper RH corner.
3. Enter your personal information.
4. Submit the information and you will receive a validation e-mail.
5. Click on link in the email to validate your registration.
6. Log in!

When you log in, you will land in the Member Center where you can make changes to your account, and register and update your scan tool.

TIP: If you navigate away from the Member Center, click on your logon name in the upper RH corner to return.



To Register your Scan Tool:

1. Log on to foxwelltech.com and go to the "Member Center".
2. Under "**My Products**" click on "New Registration" and the "Product Registration" window will open.
3. Select **VAG_Scanner_7868SCH** as the part number.
4. Enter the scan tool serial number (located on the back of the scan tool or on the "About" screen (see Page 18).
5. Enter the registration password (located on the "About" screen (see Page 18).

TIP: If you make a mistake typing in the serial number or password, you will need to completely log out of foxwelltech and log back in before trying it again.

To Update your Scan Tool:

1. Log on to foxwelltech.com and go to the "Member Center".
2. Under "**My Products**", click on "Registered Products".
3. Click on "Software Details". The software versions on your scan tool will be shown along with a status indicating either "Current" or "Updateable"
4. If updateable, click where it says "click here to download the update client", then follow the instructions to install the client.
5. Launch the Fox Scanner installer.
6. Remove the TF Card from the Scanner, insert it into the Micro SD card reader and plug the reader into your PC's USB port.
7. Log in to the Installer and follow the instructions to complete the software update.

OBDII FUNCTIONS

The Schwaben VAG Professional Scan Tool can be used to communicate with any OBDII vehicle.

From the Main Menu screen, use the **Arrow** keys to select OBDII, then press the **Enter** key (or you may use one of the shortcut keys).

The scan tool will take a few moments to establish communication with your vehicles computer, then it will take you to the "System Status" screen, as shown in the bottom photo.

If you press the **OK** key (**F3** function key) you will be taken to the OBDII Main Menu.

If you press the **Save** key (**F1** function key) this information will be saved for you to view on the "Playback" screen (see Page 20).

The OBDII Functions are:

1. System Status
2. Read Codes
3. Erase Codes
4. Live Data
5. Freeze Frame
6. I/M Readiness
7. O2 Monitor Test
8. On-Board Monitor Test
9. Component Test
10. Vehicle Info
11. Modules Present
12. DTC Lookup

System Status	
MIL Status	ON
Codes Found	3
Monitors N/A	2
Monitors OK	5
Monitors INC	3

Save OK

VAG FUNCTIONS

Use the **Arrow** keys to highlight the **VAG** icon and press the **Enter** key. Or, you may simply press the **Shortcut** (Function) key that corresponds to the **VAG** option on the menu bar.

The next screen you see (shown below) will allow you to select the manufacturer you are working with.

The VAG functions are very in depth and this scan tool is designed to offer functionality as close as possible to an OEM VAG scan tool. As with many electronic devices such as this, the more you use it and the more comfortable you become with it, the more features you will discover.

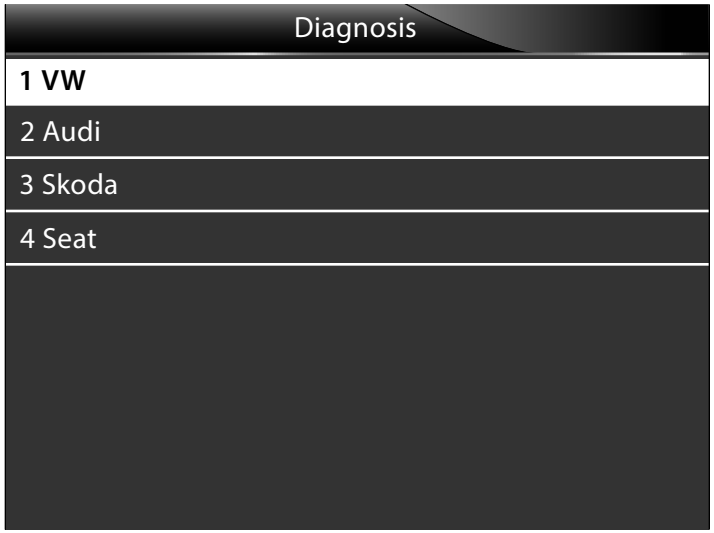
To get you started, please read through the following sections about **Model Selection**, **Control Unit Selection**, and **Advanced Scan Tool Procedures and Worksheets**.

Page 31 will provide you with information on how to use the worksheets along with the advanced scan tool procedures, which will allow you to become more familiar with the vast number of VAG functions that are available.

MODEL SELECTION (GUIDE FUNCTION)

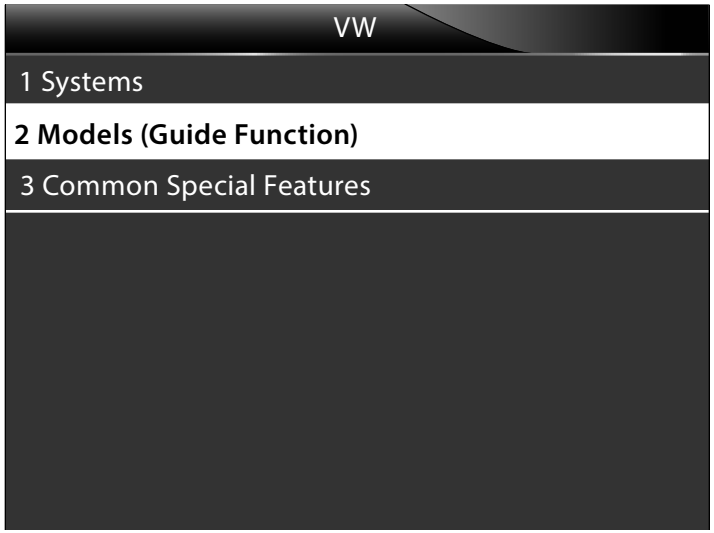
Step 1:

Enter the VAG diagnostic function and you will see the screen on the right. Use the up-down **Arrow** keys to highlight the vehicle manufacturer, then press the **Enter** key.



Step 2:

Use the up-down **Arrow** keys to highlight "Models (Guide Function)", then press the **Enter** key.



MODEL SELECTION (GUIDE FUNCTION)

Step 3:

On this screen you will see all of the different available models listed.

TIP: The ">" symbol used after a model year indicates "greater than", for example, "2010>" means 2010 and newer.

For **VW** Models:

You will see the 7th and 8th VIN digits displayed before the model.

There are two things in particular to pay attention to here:

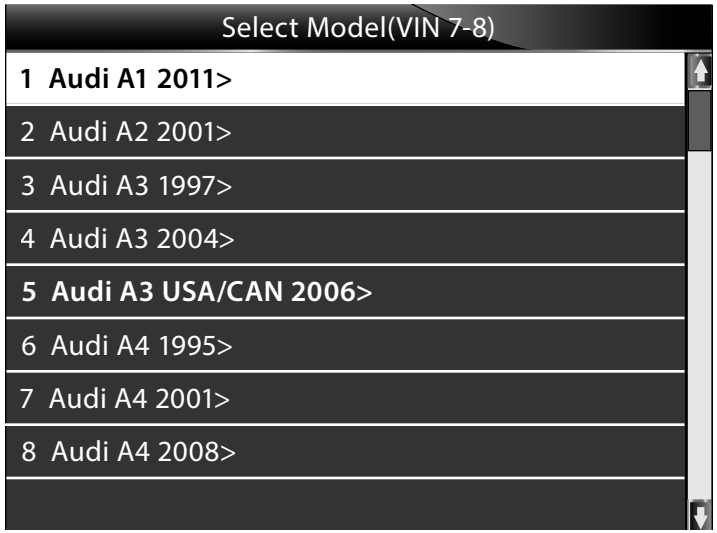
1) There can be more than one model that shares the same 7th and 8th VIN digits so be sure that you utilize the ***model description*** as well.

2) In rare situations you may find that your vehicle is not available under the 7th and 8th VIN digit selection. This is usually related to late production or a model change. If you encounter this, use the first two digits of your sales code to locate your vehicle.

For **Audi** Models:

You will not see the VIN digits listed, but you will see the model and model year.

Use the up-down **Arrow** keys to highlight your model, then press the **Enter** key.

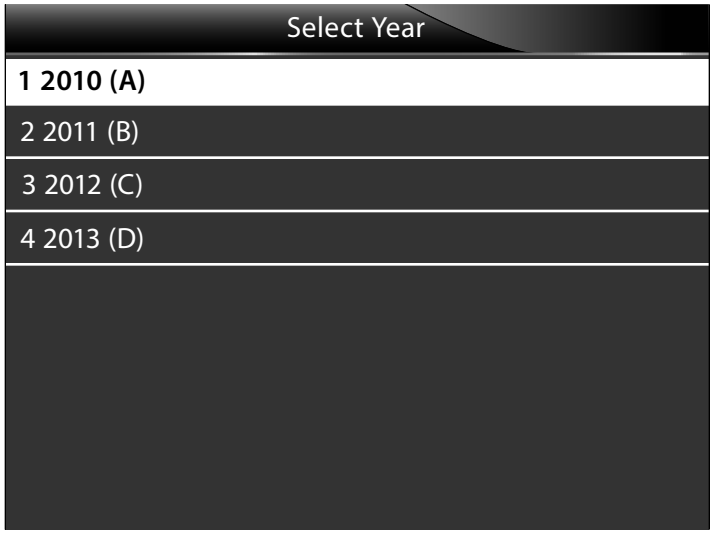


MODEL SELECTION (GUIDE FUNCTION)

Step 4:

All of the possible years for the model selected will appear on the screen. Use the up-down **Arrow** keys to highlight the model year of your car and press the **Enter** key.

NOTE: The number or letter listed after each model year is the corresponding 10th VIN digit.



Step 5:

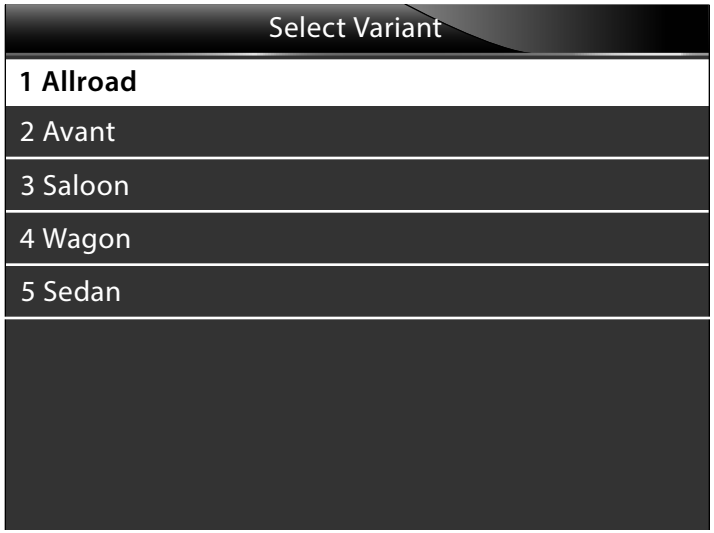
You will now see all of the possible different body styles (referred to as "Variant") available for your current selection. Sometimes you may see only one, we are showing all of these for descriptive purposes.

TIP: Some terminology is slightly different than we are used to. Here are some helpful tips:

Saloon = Sedan **Avant** = Wagon **Estate** = Wagon

Sedan = Used to describe a hardtop, 2 or 4 door

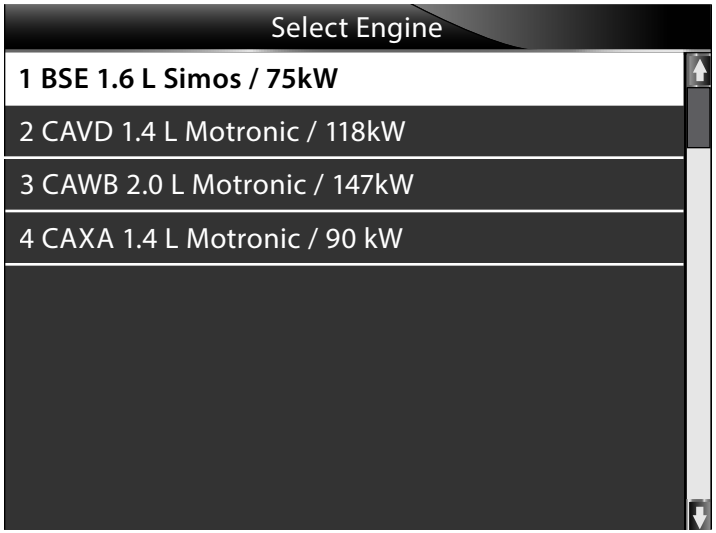
Use the up-down **Arrow** keys to highlight the body style of your car and press the **Enter** key.



MODEL SELECTION (GUIDE FUNCTION)

Step 6:

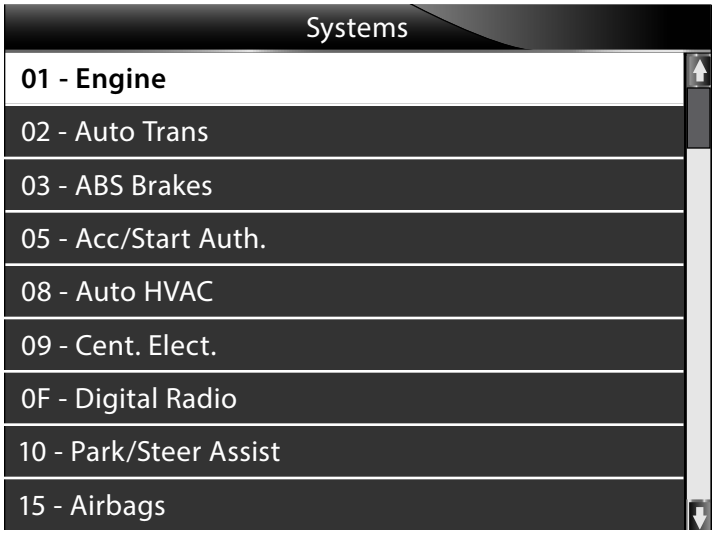
The screen will now display all of the possible engines for your current selection. Be sure to select the correct engine that matches your engine code. Use the up-down **Arrow** keys to highlight the engine in your car and press the **Enter** key.



Step 7:

You have now completed the model selection and you will see a displayed list of all the related control units. You are now ready to use one of the advanced operation worksheets.

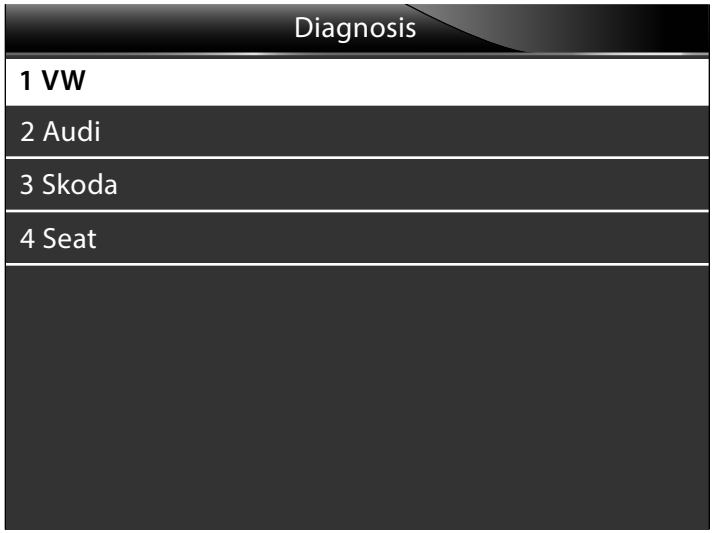
NOTE: The systems shown on the right are used as an example and will differ depending on your car.



DIRECT SYSTEM (CONTROL UNIT) SELECTION

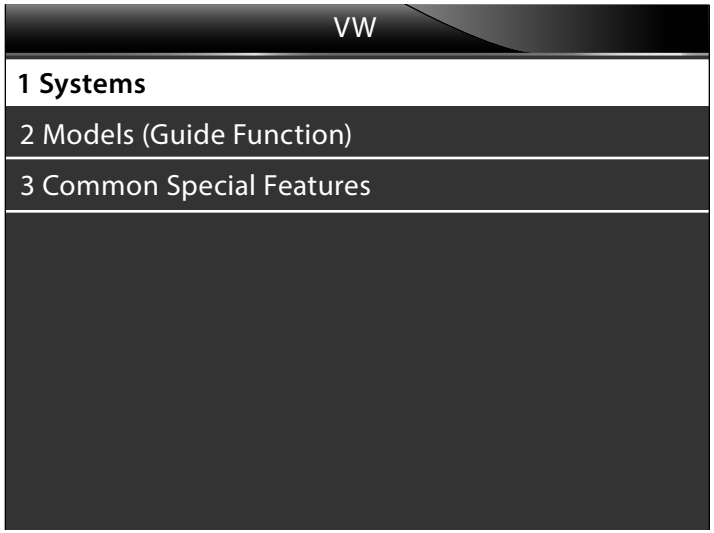
Step 1:

Enter the VAG diagnostic function and you will see the screen on the right. Use the up-down **Arrow** keys to highlight the vehicle manufacturer, then press the **Enter** key.



Step 2:

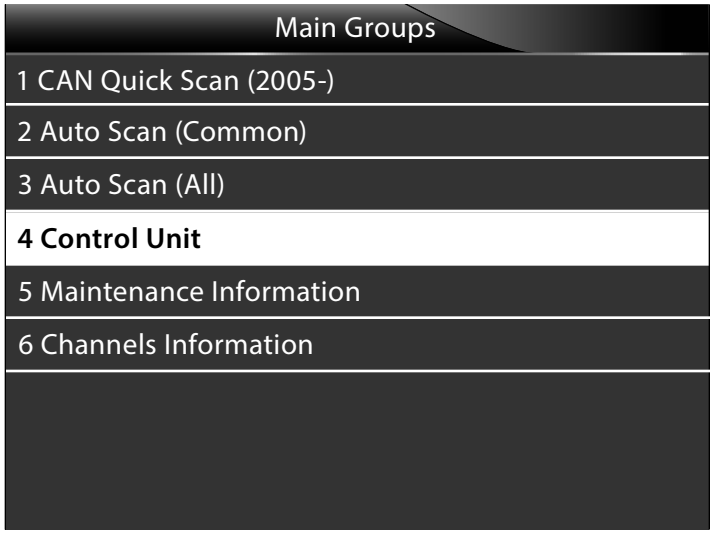
Use the up-down **Arrow** keys to highlight "Systems", then press the **Enter** key.



DIRECT SYSTEM (CONTROL UNIT) SELECTION

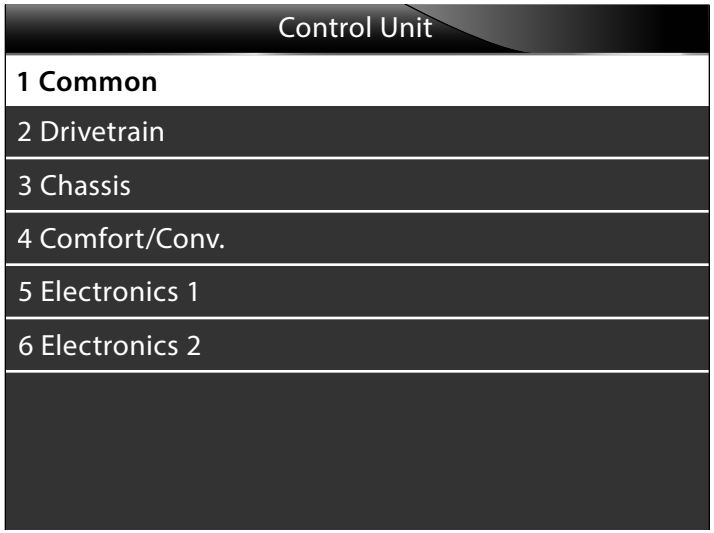
Step 3:

Use the up-down **Arrow** keys to highlight "Control Unit", then press the **Enter** key.



Step 4:

You have now reached the control unit selection screen and are ready to perform the operation specified on the worksheet you are using.



ADVANCED SCAN TOOL PROCEDURES

Your Volkswagen/Audi is no longer a simple machine that can be maintained and adjusted with basic mechanical procedures. The computer systems in your car control almost ***everything*** about it, and the computer system is **CRITICAL** to proper vehicle operation, dependability, safety, and emission control. When Volkswagen/Audi engineers designed the computer system on your car, they realized that within any given vehicle, they would need the ability to control certain systems for diagnosis and to make programming changes as well. There are many reasons for this, including climate, vehicle options, service procedures, and government regulations where the vehicle is going to be sold. So they designed an interface to communicate with their computer systems and allow their authorized dealers to make these changes when necessary. The interface is called VAG-COM.

So what does VAG-COM do? For the professional VW/Audi technician, it is an essential tool for diagnosis and repair. There are many service procedures referred to as **Adaptation and Basic Settings** that are mandatory to properly perform certain repairs. VAG-COM allows these procedures as well as direct control of many components for testing purposes, and it also allows you to change vehicle **Coding**.

Adaptation:

Adaptation is a function which allows you to change certain preset values and/or settings within a control module. It is sometimes used for diagnostic purposes, and sometimes for changing convenience features. Some examples of Adaptation would be changing the idle speed value in the engine control unit, or changing the number of times that the turn signals blink when using the "comfort" turn signal.

Basic Settings:

Basic Settings is a mode that you place a control module in that allows it to perform various calibrations. Used for service procedures and diagnostics, an example of Basic Settings would by placing the engine control unit in Basic Settings mode so it can relearn -or - "adapt" a new throttle body. Occasionally the term "Adaptation" is used for a procedure performed using the Basic Settings mode. Do not let it confuse you with the Adaptation function of the VAG scan tool.

Coding:

Coding is the arrangement of the Bits and Bytes of your cars computer that control the operation and features of the original vehicle systems. Changing the coding can allow us to do some really neat stuff and allow us to add options to our cars, for example, adding a hatch pop button and coding the control unit to recognize the button input. But use caution. The most important thing to remember is that when you begin to make these changes, you have to be **VERY** careful. Any mistakes or errors, even one single Bit among millions and millions, can render a vehicle system, or your entire vehicle, inoperable.

ADVANCED SCAN TOOL PROCEDURES

How to use the Advanced Worksheets:

1. Find the worksheet for the specific procedure you are going to perform on Page 65, ***Advanced worksheets.***
2. Review the worksheet. The heading of each worksheet will give the make, model, operation, and the procedure required. We recommend that you print out the worksheet (or have it available on a portable device) to use along side the scan tool.
3. Read the corresponding section of this manual that gives an example of the procedure that is required to perform the worksheet you have chosen.

NOTE: ***The procedures will be listed in a green heading to the right of the make, model and operation. If no procedure is listed, all of the required information is on the worksheet and the scan tool will prompt you as required.***

4. Perform the procedure, using the coding and/or settings on the worksheet in place of the coding and/or settings used in our examples.
5. Immediately after you have completed the procedure, always check and make sure that the desired result has been achieved.

Example Procedures:

Adaptation Page 32

Basic Setting Page 42

Coding Page 50

Before you begin:

We strongly recommend connecting a battery charger before performing any adaptation, basic setting, or coding. These procedures are performed with the key on, engine off, and you must ensure that the battery voltage does not drop too low during the process, or damage to the computer/control unit can occur.

Perform a scan of all systems and make sure there are **NO TROUBLE CODES** stored. Stored trouble codes can interfere with the ability of the scan tool to successfully change coding, adaptation, or settings.

Be sure to park the vehicle in a safe, well lit area, and apply the parking brake.

ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Getting Started:

We strongly recommend connecting a battery charger before performing any adaptation, basic setting, or coding. These procedures are performed with the key on, engine off, and you must ensure that the battery voltage does not drop too low during the process.

- Determine the procedure that you are going to perform (see Page 31 for ***How to use the Advanced Worksheets***).
- Plug the scan tool into the Data Link Connector on your vehicle.
- Turn the ignition key to the "on" position.
- Use the **Arrow** keys to highlight the **VAG** icon and press the **Enter** key. Or, you may simply press the **Shortcut** (Function) key that corresponds to the **VAG** option on the menu bar.

NOTE: The example we are using to demonstrate Adaptation is changing the Comfort Blinker setting on a Volkswagen MK6 GTI.

Proceed to the next page to see an example of adaptation.

ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

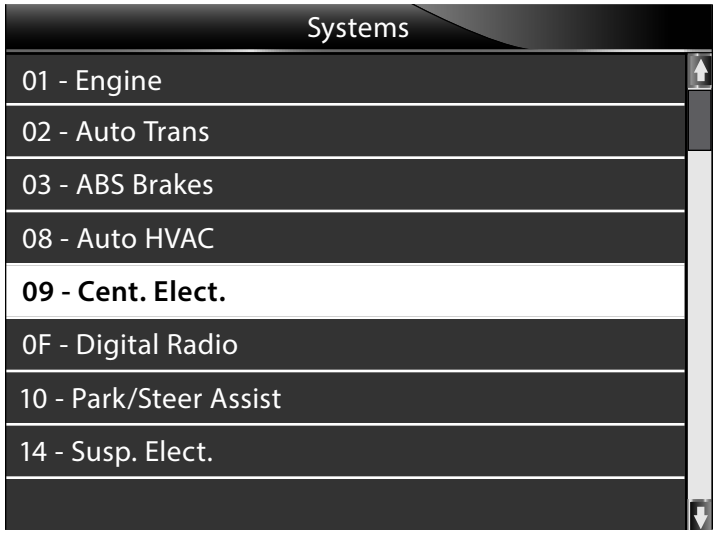
Step 1:

Access the control unit for your specific procedure using one of the two following methods and the scan tool path listed on the corresponding Advanced Worksheet:

1. Model Selection (Guide Function) on Page 24.

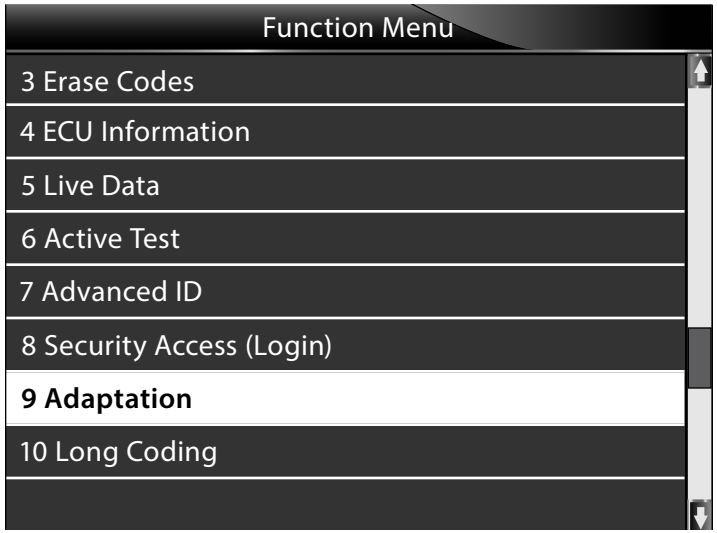
2. Direct System (Control Unit) Selection on Page 28.

Use the up-down **Arrow** keys to highlight the control unit specified on the Advanced Worksheet for your specific procedure, in this example, "09 - Cent. Elect.", then press the **Enter** key.



Step 2:

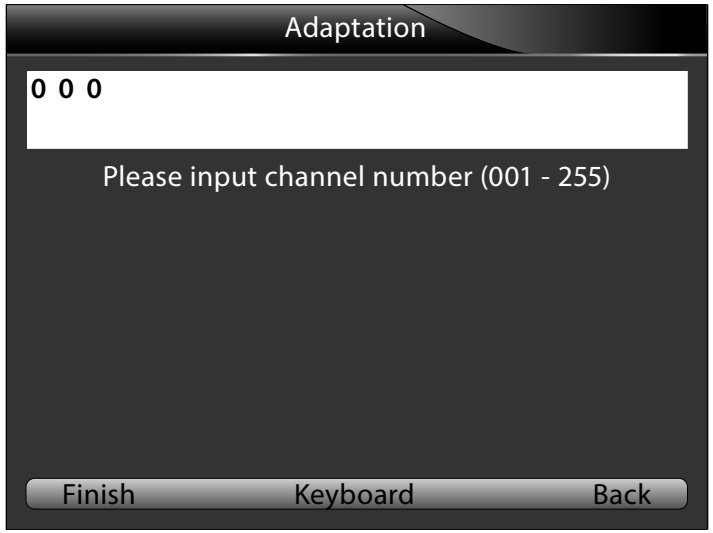
Use the up-down **Arrow** keys to highlight "Adaptation", then press the **Enter** key.



ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 3:

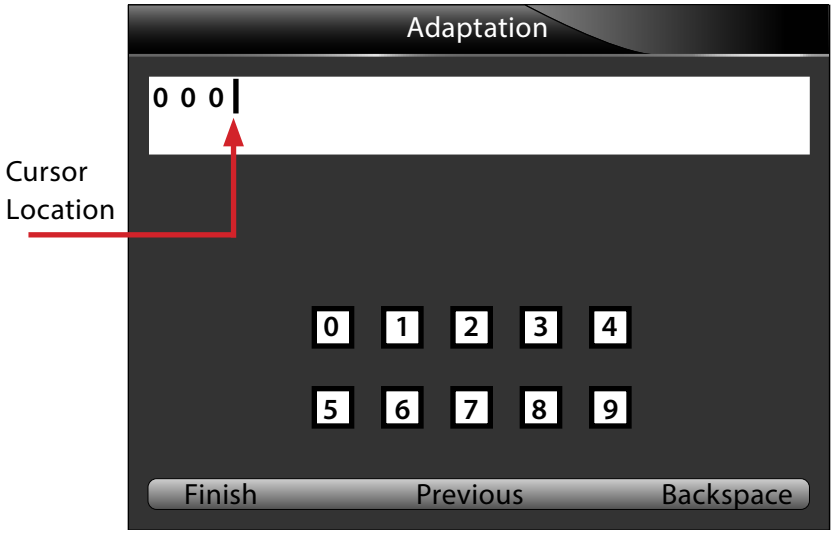
You will see the Adaptation screen as shown on the right. The default channel number is 000. This is where you will have to input the channel number listed on the worksheet for your specific procedure.



Now, to enter the channel number, select **Keyboard** on the menu bar by pressing the corresponding **F2** Function key.

Step 4:

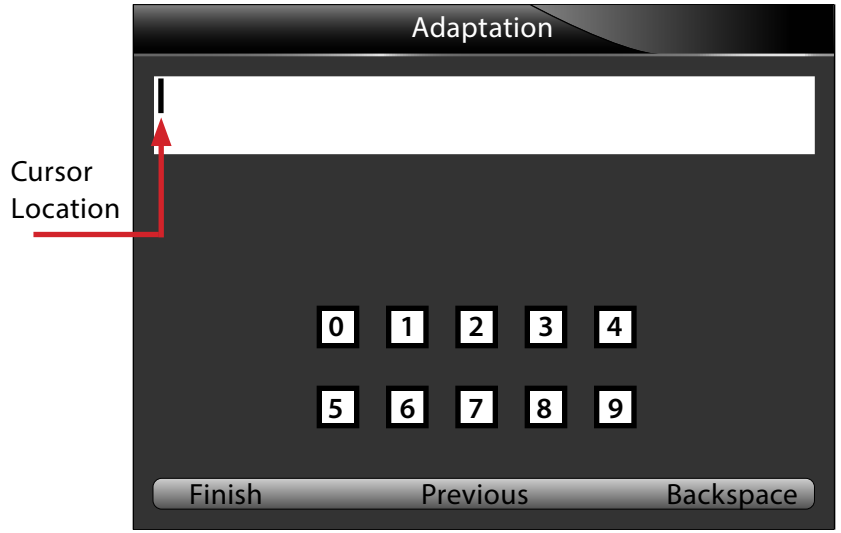
You will see the keyboard appear on the screen and you will notice the cursor located at the end of the default channel number.



ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 5:

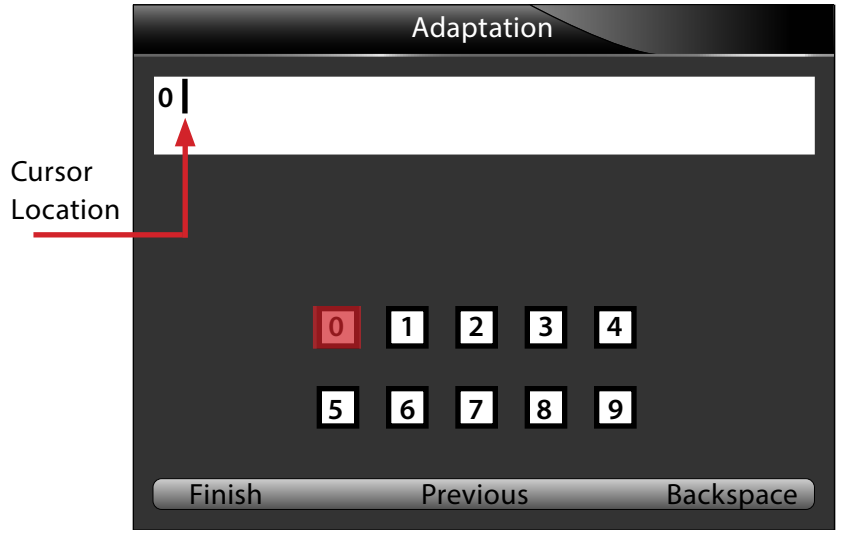
Press the **Backspace** key (**F3** Function key) three times to erase the default channel number.



Step 6:

In this example, the channel number we need is 031.

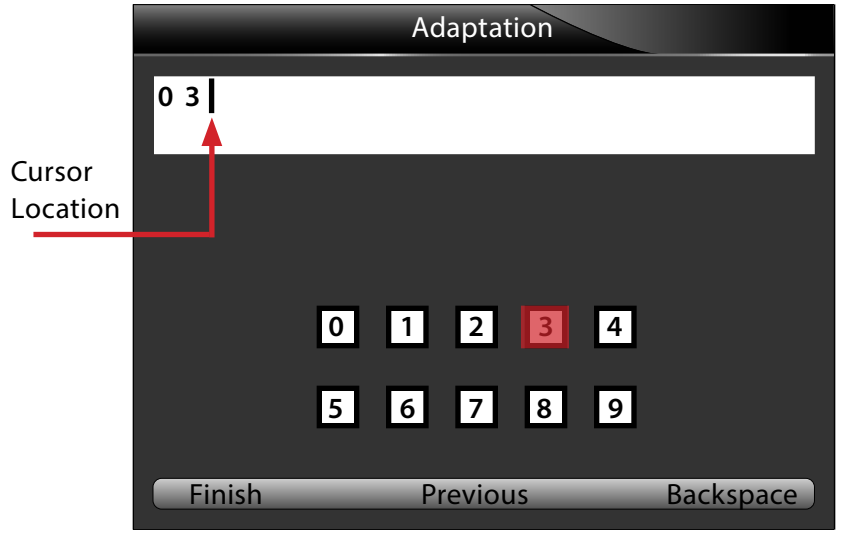
Use the **Arrow** keys to select the number "0" on the keyboard and press the **Enter** key. You will see the "0" appear on the screen.



ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 7:

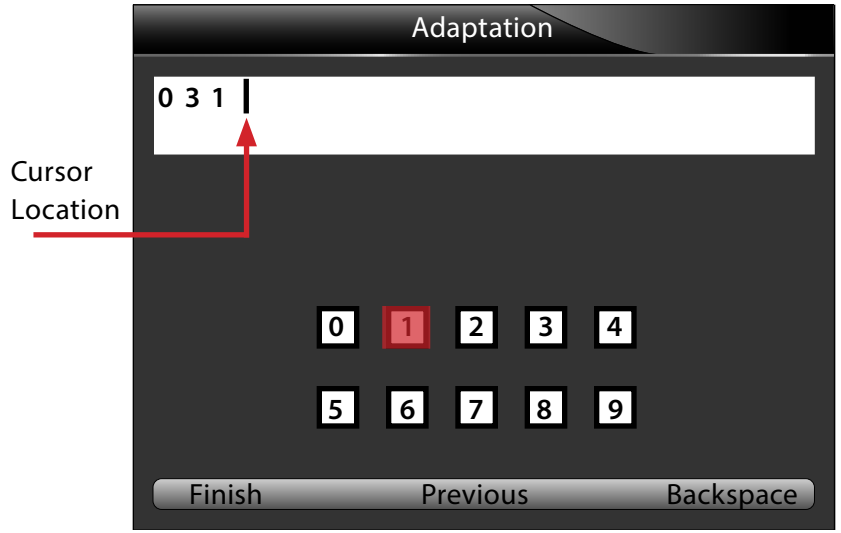
Use the **Arrow** keys to select the number "3" on the keyboard and press the **Enter** key. You will see the "3" appear on the screen.



Step 8:

Use the **Arrow** keys to select the number "1" on the keyboard and press the **Enter** key. You will see the "1" appear on the screen.

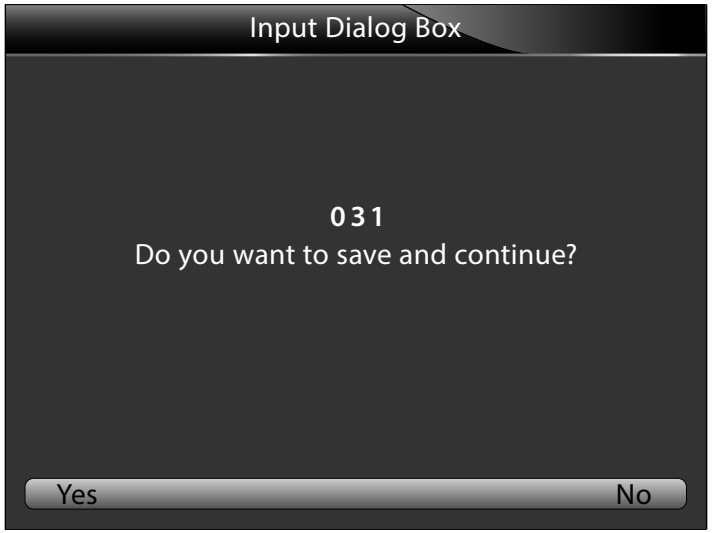
Now that you have the channel number entered on the screen, press the **Finish** key (**F1** Function key).



ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 9:

This screen will confirm the channel number. If it is correct, press the **Yes** key (**F1** Function key).



Step 10:

You will now be taken to the channel screen, with the channel number displayed at the top. Notice here that the "Store Value" in the green bar on the top shows the number of times the turn signals will flash when using the lane change feature.

Now, to change the stored value, press the **Set new Val** key (**F2** Function key).

NOTE: Pressing the **Next** (**F1**) and **Previous** (**F3**) keys will select other Adaptation channels.

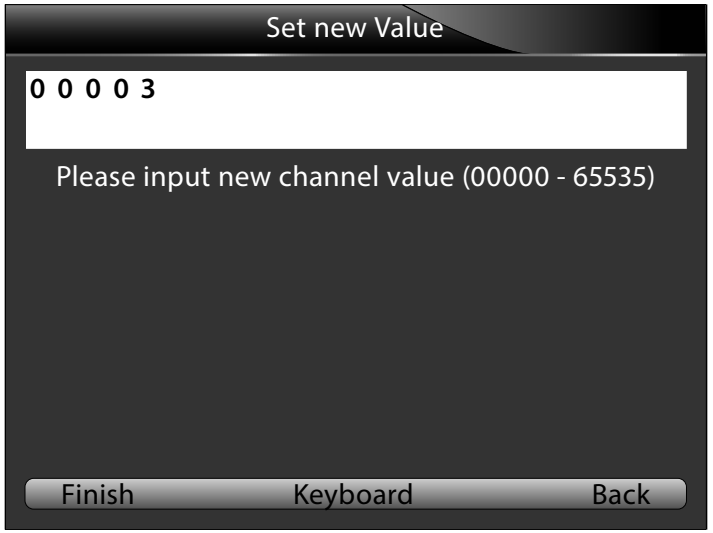
ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 11:

You will now see the value entry screen, showing the current set value, in this example, 3.

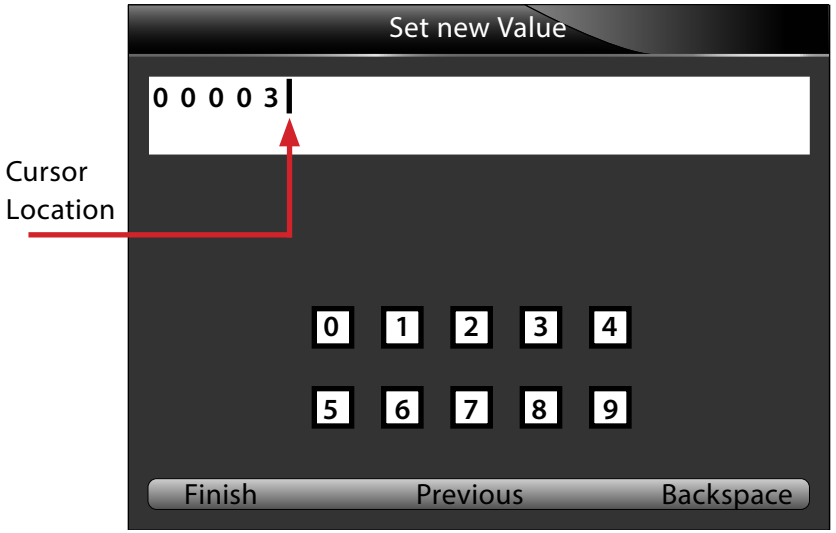
NOTE: The scan tool shows a default 5 digit channel value for all Adaptations, even though in most cases you will clearly and obviously not be entering such a large number.

Now, press the **Keyboard** key (**F2** Function key).



Step 12:

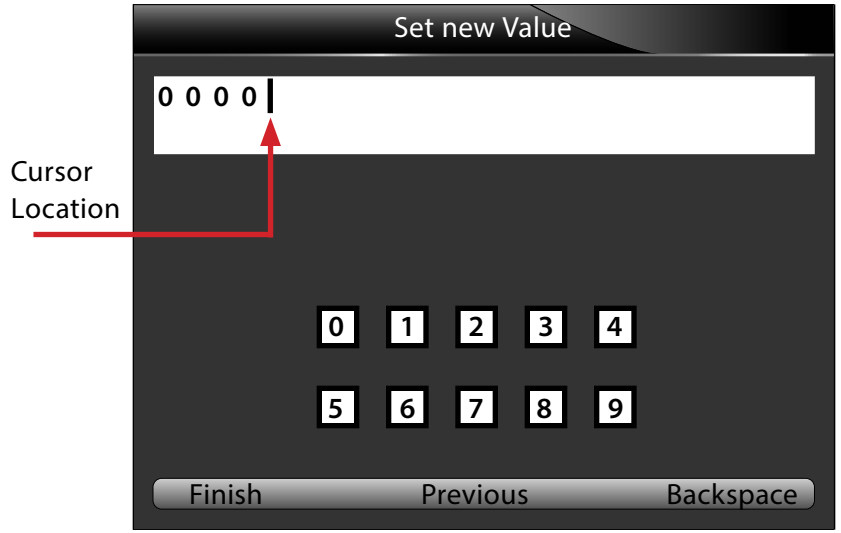
You will see the keyboard appear on the screen and you will notice the cursor located at the end of the current set value.



ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 13:

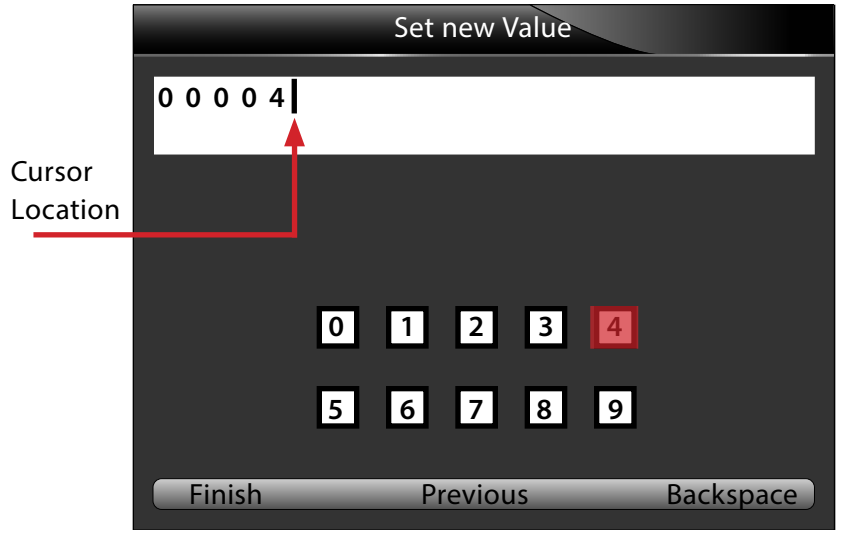
In this example, we are going to change the set value "3". Press the **Backspace** key (**F3** Function key) and the "3" will be erased.



Step 14:

Use the **Arrow** keys to select the number "4" (or any value from 1-6 for this example) on the keyboard and press the **Enter** key. You will see the "4" appear on the screen.

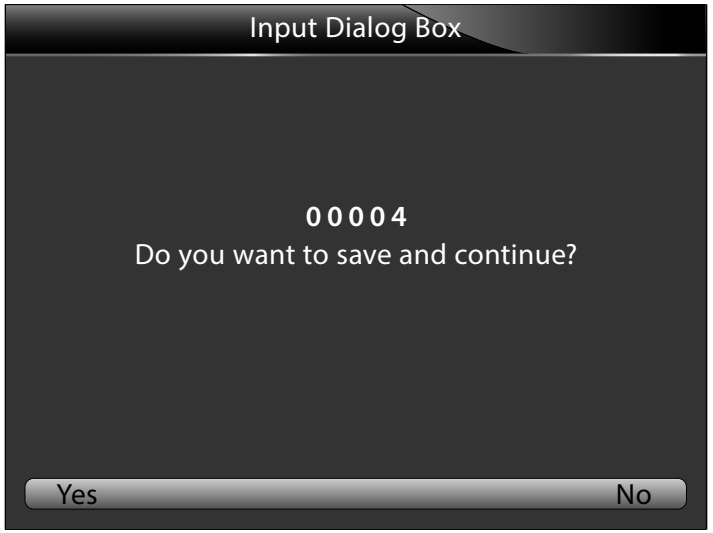
Now that you have the new channel value entered on the screen, press the **Finish** key (**F1** Function key).



ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 15:

This screen will confirm the new channel value. If it is correct, press the **Yes** key (**F1** Function key).



Step 16:

You will be directed to the channel screen, where you will have to confirm the value again.

Press the **Yes** key (**F1** Function key) to confirm the value.

ADVANCED SCAN TOOL - ADAPTATION PROCEDURE

Step 17:

The value set will be confirmed and you will be prompted to press any key to continue.

Step 18:

Finally, you will be directed again to the Adaptation channel screen where you will see the new setting.

Your Adaptation procedure is complete!

ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

Getting Started:

We strongly recommend connecting a battery charger before performing any adaptation, basic setting, or coding procedures. These procedures are performed with the key on, engine off, and you must ensure that the battery voltage does not drop too low during the process.

- Determine the procedure that you are going to perform (see Page 31 for ***How to use the Advanced Worksheets***).
- Plug the scan tool into the Data Link Connector on your vehicle.
- Turn the ignition key to the "on" position.
- Use the **Arrow** keys to highlight the **VAG** icon and press the **Enter** key. Or, you may simply press the **Shortcut** (Function) key that corresponds to the **VAG** option on the menu bar.

NOTE: The example we are using to demonstrate Basic Setting is Throttle Body Adaptation on a Volkswagen MK6 GTI.

Proceed to the next page to see an example of Basic Setting.

ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

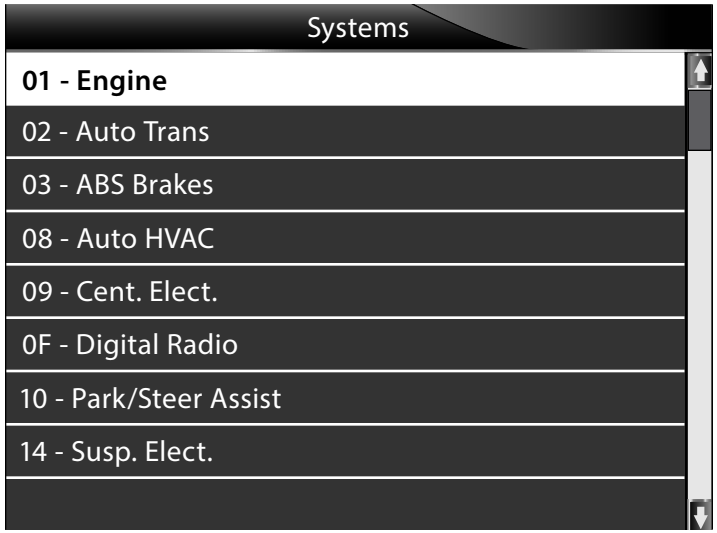
Step 1:

Access the control unit for your specific procedure using one of the two following methods and the scan tool path listed on the corresponding Advanced Worksheet:

1. Model Selection (Guide Function) on Page 24.

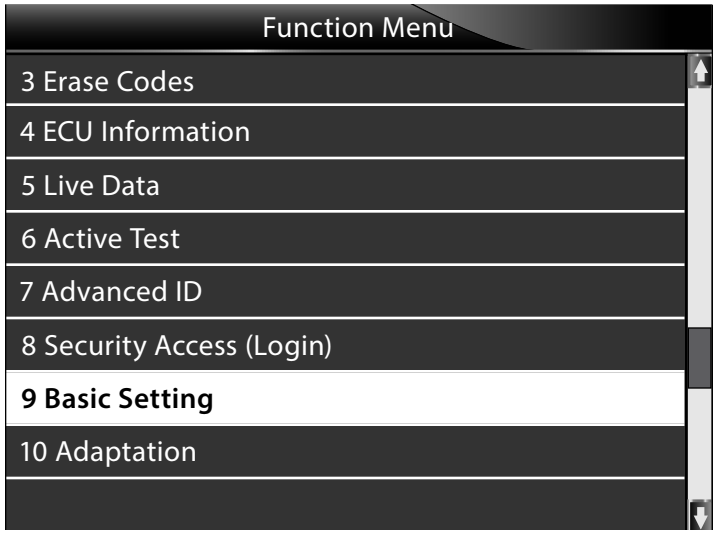
2. Direct System (Control Unit) Selection on Page 28.

Use the up-down **Arrow** keys to highlight the control unit specified on the Advanced Worksheet for your specific procedure, in this example, "01 - Engine.", then press the **Enter** key.



Step 2:

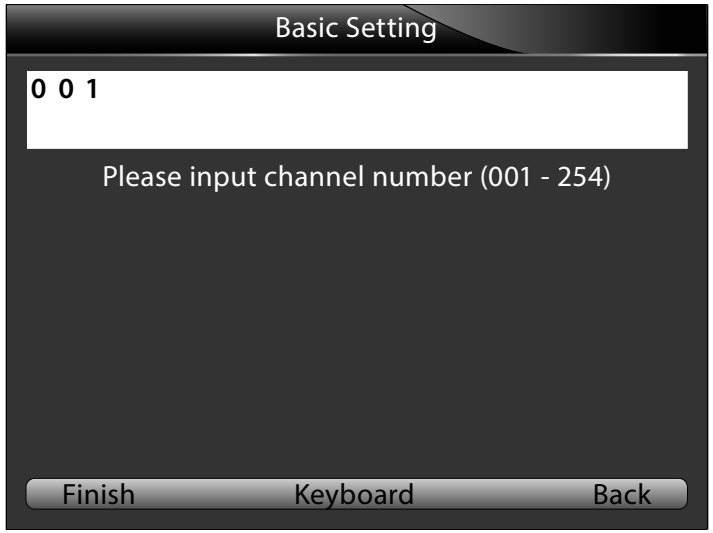
Use the up-down **Arrow** keys to highlight "Basic Setting", then press the **Enter** key.



ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

Step 3:

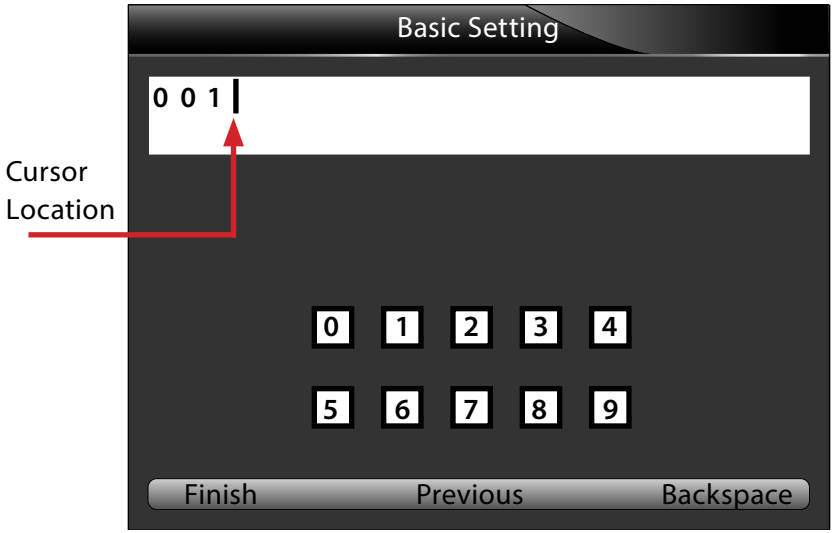
You will see the Basic Setting screen as shown on the right. The default channel number is 001. This is where you will have to input the channel number listed on the worksheet for your specific operation.



Now, to enter the channel number, select **Keyboard** on the menu bar by pressing the corresponding **F2** Function key.

Step 4:

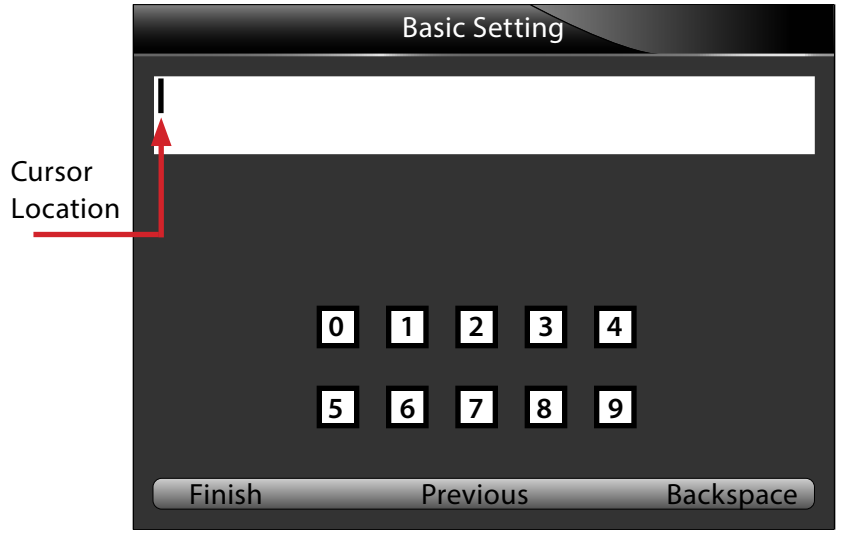
You will see the keyboard appear on the screen and you will notice the cursor located at the end of the default channel number.



ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

Step 5:

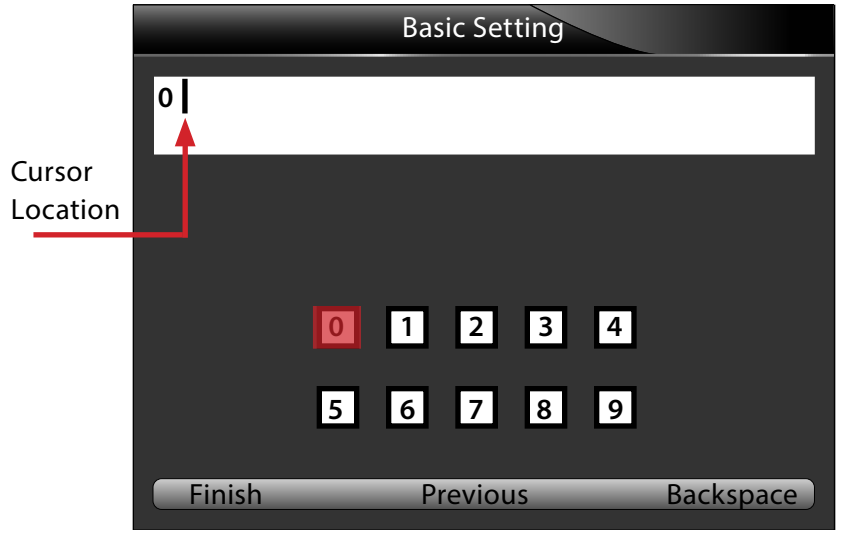
Press the **Backspace** key (**F3** Function key) three times to erase the default channel number.



Step 6:

In this example, the channel number we need is 060.

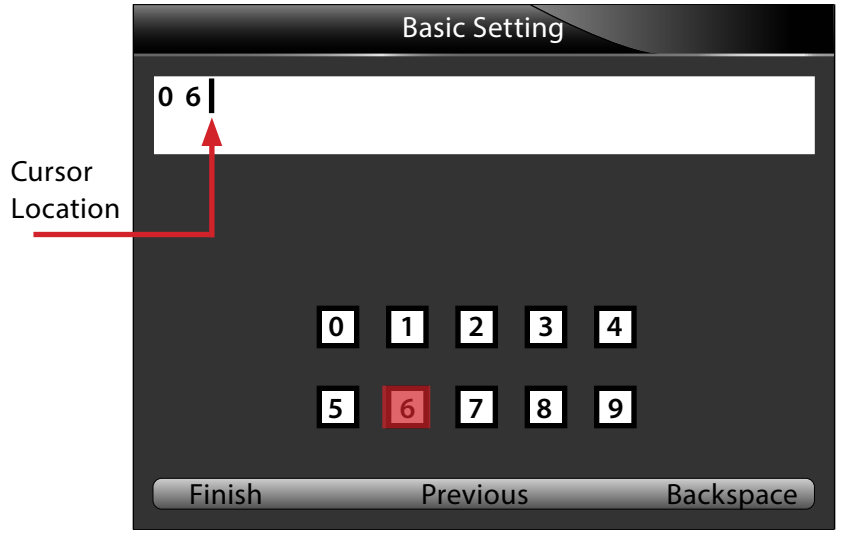
Use the **Arrow** keys to select the number "0" on the keyboard and press the **Enter** key. You will see the "0" appear on the screen.



ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

Step 7:

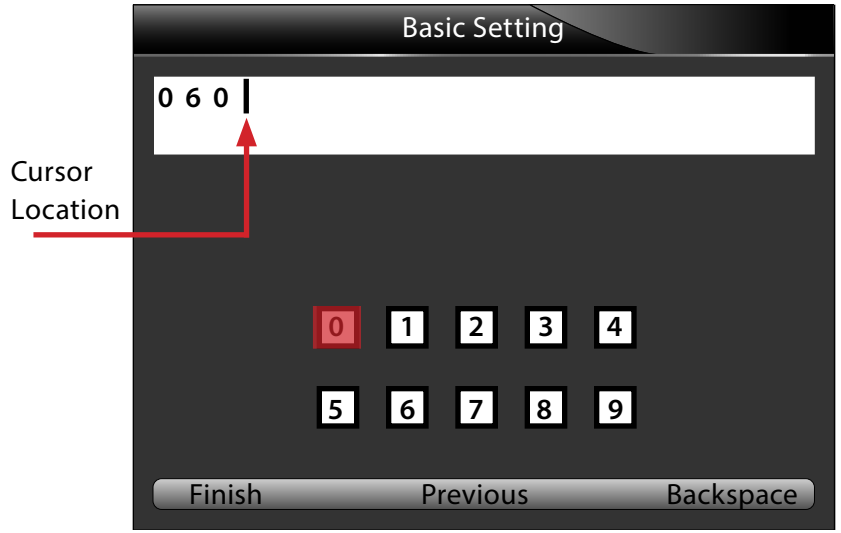
Use the **Arrow** keys to select the number "6" on the keyboard and press the **Enter** key. You will see the "6" appear on the screen.



Step 8:

Use the **Arrow** keys to select the number "0" on the keyboard and press the **Enter** key. You will see the "0" appear on the screen.

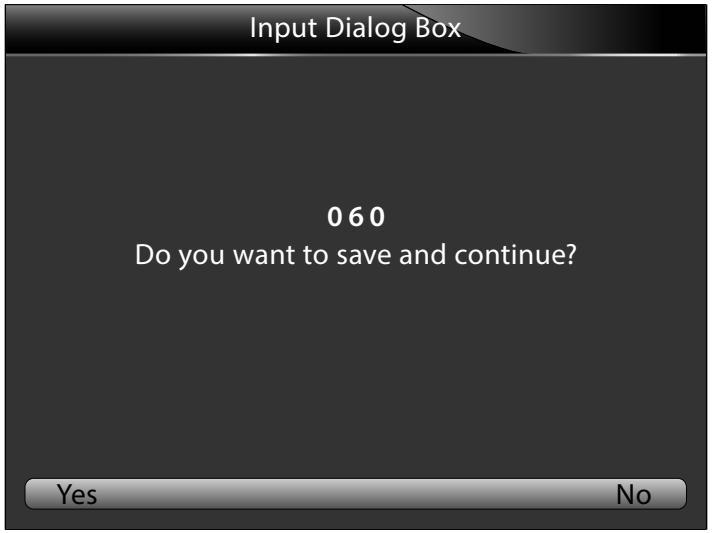
Now that you have the channel number entered on the screen, press the **Finish** key (**F1** Function key).



ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

Step 9:

This screen will confirm the channel number. If it is correct, press the **Yes** key (**F1** Function key).



Step 10:

You will now be taken to the Basic Settings screen, with the channel number displayed at the top. Note how the Basic Settings mode in the green top bar is shown as "OFF". To begin the Throttle Body Adaptation, press the **ON/OFF** key (**F2** Function key).

ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

Step 11:

You will see the Basic Settings mode in the green top bar change to "ON" and you will see "ADP. Run" displayed on the bottom of the chart.

Step 12:

When the Throttle Body Adaptation is complete, you will see the message "ADP. OK" appear on the bottom of the chart. Notice that the Basic Settings mode is still displayed as "ON".

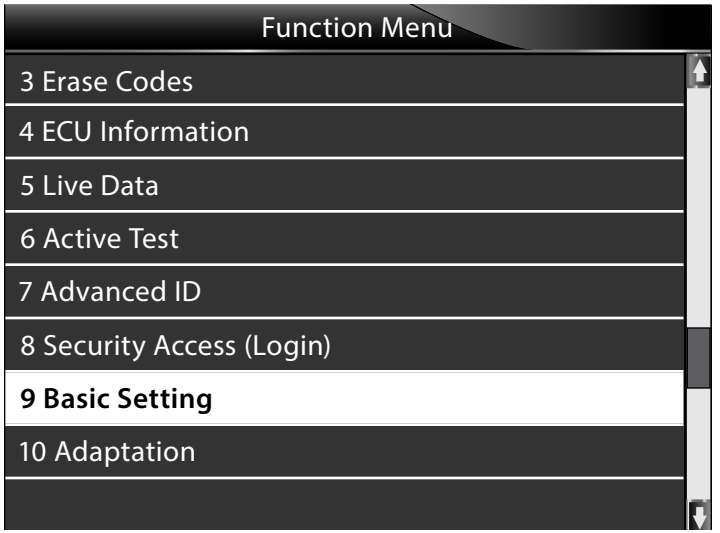
ADVANCED SCAN TOOL - BASIC SETTING PROCEDURE

Step 13:

Press the "**ON/OFF**" key (**F2** Function key) so the Basic Settings mode changes to "OFF".

Step 14:

Press the **Back** key to return to the Function Menu. Throttle Body Adaptation is complete.



ADVANCED SCAN TOOL - CODING PROCEDURE

Getting Started:

We strongly recommend connecting a battery charger before performing any adaptation, basic setting, or coding. These procedures are performed with the key on, engine off, and you must ensure that the battery voltage does not drop too low during the process.

- Determine the procedure that you are going to perform (see Page 31 for ***How to use the Advanced Worksheets***).
- Plug the scan tool into the Data Link Connector on your vehicle.
- Turn the ignition key to the "on" position.
- Use the **Arrow** keys to highlight the **VAG** icon and press the **Enter** key. Or, you may simply press the **Shortcut** (Function) key that corresponds to the **VAG** option on the menu bar.

NOTE: The example we are using to demonstrate Coding is programming the Door Electronics Module to enable the addition of a hatch release button in the console of our Volkswagen MK6 GTI.

Proceed to the next page to see an example of Coding.

ADVANCED SCAN TOOL - CODING PROCEDURE

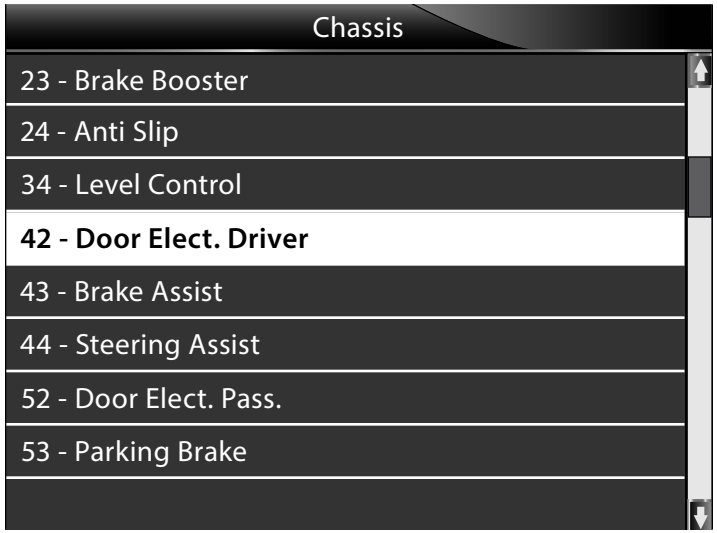
Step 1:

Access the control unit for your specific procedure using one of the two following methods and the scan tool path listed on the corresponding Advanced Worksheet:

1. Model Selection (Guide Function) on Page 24.

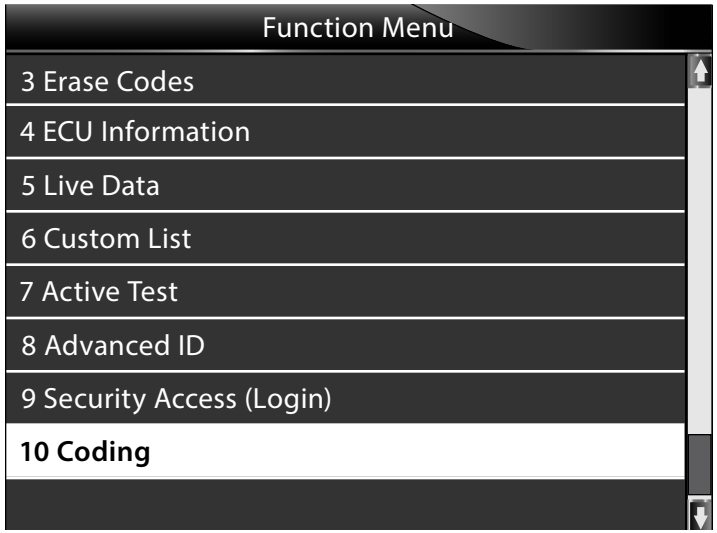
2. Direct System (Control Unit) Selection on Page 28.

Use the up-down **Arrow** keys to highlight the control unit specified on the Advanced Worksheet for your specific procedure, in this example, "42 - Door Elect. Driver", then press the **Enter** key.



Step 2:

Use the up-down **Arrow** keys to highlight "Coding", then press the **Enter** key.



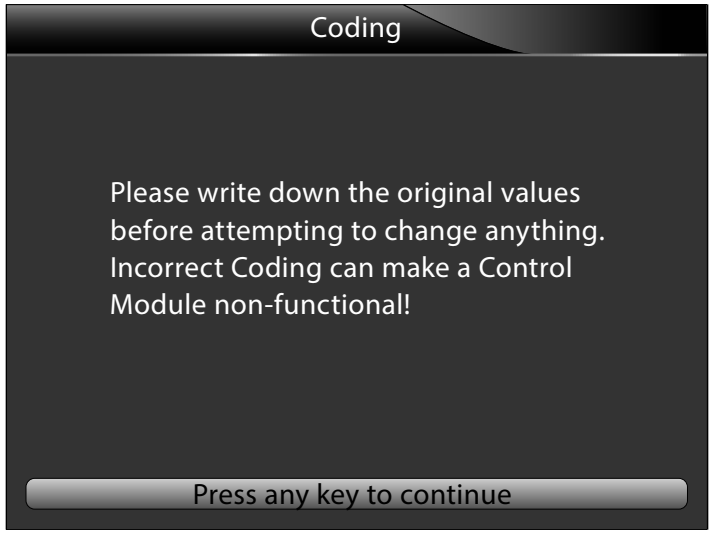
NOTE: ***Some menus will list "Long Coding" which is the same and will utilize the same procedure, the only difference is that the factory "code" is very long - it may contain as many as 60 digits.***

ADVANCED SCAN TOOL - CODING PROCEDURE

Step 3:

The scan tool will warn you to write down the original coding values before you continue. **ALWAYS** write them down, or, if you are using one of our Advanced Worksheets, compare them to the factory coding values that we have listed, noting any differences in your coding. Remember, the original coding in your car is **ALWAYS** correct. It is possible that what we have listed may be slightly different due to different model years or options.

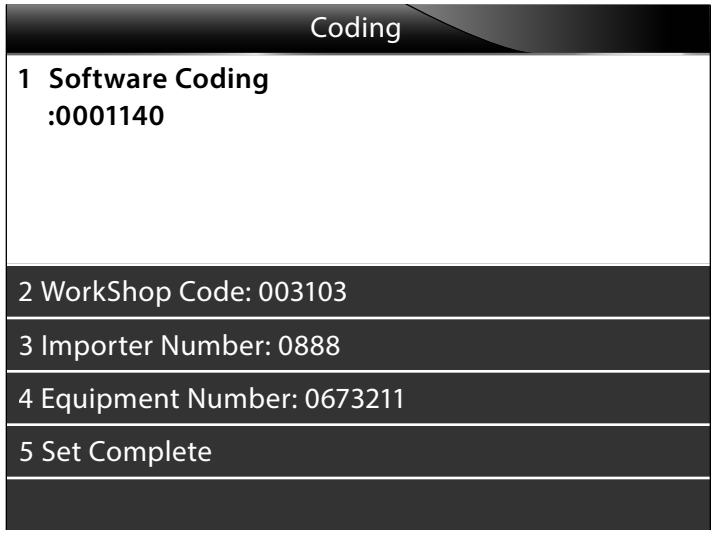
Press any key to continue.



Step 4:

Now you will see the original coding listed. Write it down or compare it with what we have listed - yes, we have said this again - this is important in case you make a mistake.

Use the up-down **Arrow** keys to highlight the software coding, then press the **Enter** key.



ADVANCED SCAN TOOL - CODING PROCEDURE

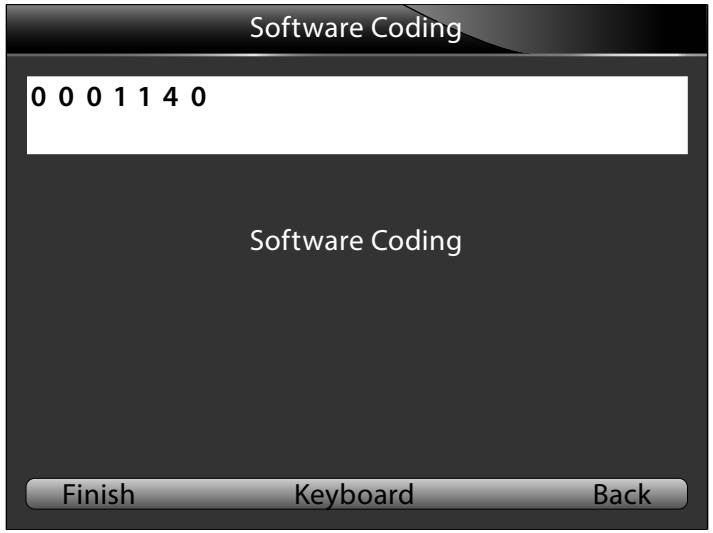
Step 5:

Stop! We recommend that you completely read steps 6-10 before you proceed to familiarize yourself with the data entry of the scan tool.

You will now see the coding listed on the software coding screen.

Now, to begin the process, select **Keyboard** on the menu bar by pressing the corresponding **F2** Function key.

NOTE: Keep in mind that if you have a complete Long Code, you will not see all of it. The digits at the end will not be visible.



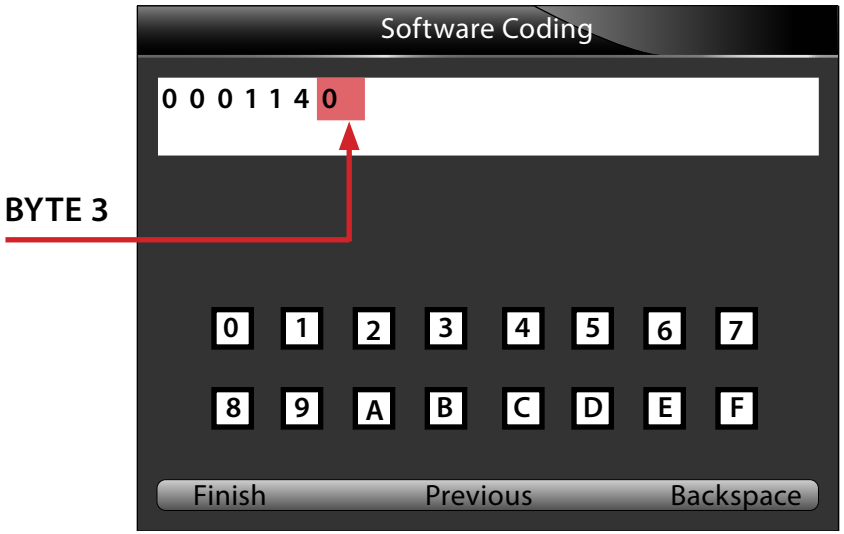
Step 6:

You will see the keyboard appear on the bottom of the screen, as well as three options on the menu bar, Finish, Previous, and Backspace.

Now, look at the code, and using your worksheet, locate the Byte that you will need to change. In this example, we are going to change the value in Byte 3 (The first Byte is Byte 0).

We have highlighted the Byte in this photo for reference, this is **NOT** a function of the scan tool.

Do **NOT** press any keys until you have read steps 7-10.

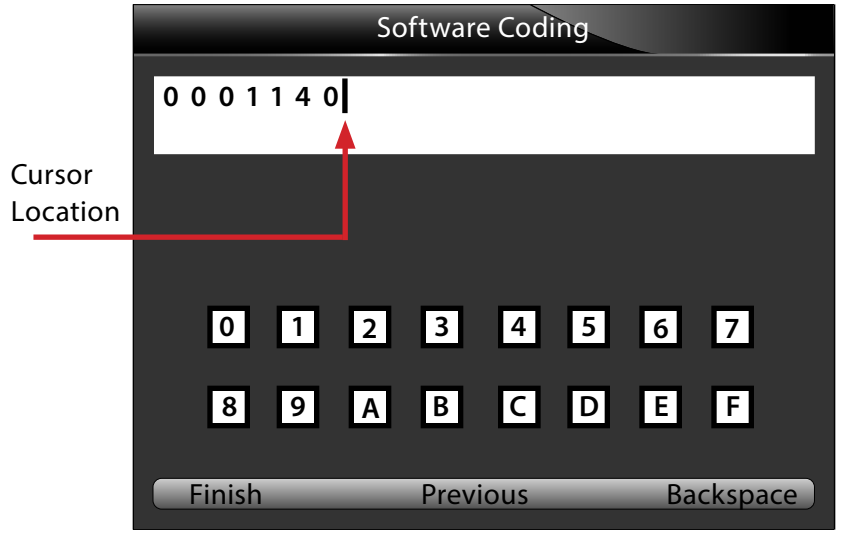


ADVANCED SCAN TOOL - CODING PROCEDURE

Step 7:

Look closely and you will see the cursor flashing at the end of the code. In this example, it will be just to the right of the "0".

NOTE: ***If you have a "Long" code, that fills the entire text box, the cursor will appear at the beginning of the code.***



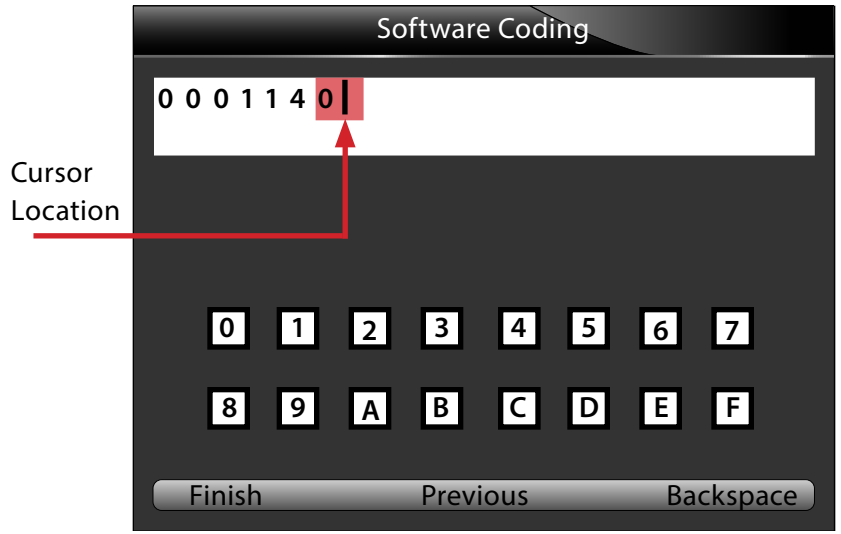
Step 8:

By looking at the worksheet for this example, you know that the value of Byte 3 is 0 and you are going to change it to 1.

Press the **Previous** key (**F2** Function key), and you will see the cursor move to the left. The trick here is that the cursor will ***only*** move to the **LEFT**.

Continue to press the **Previous** key (**F2** Function key) until the cursor moves through the code and returns back to the end.

You actually did not have to move the cursor for this example, but it was important to demonstrate the scan tool data entry procedure so you are familiar with the scan tool operation for other coding.

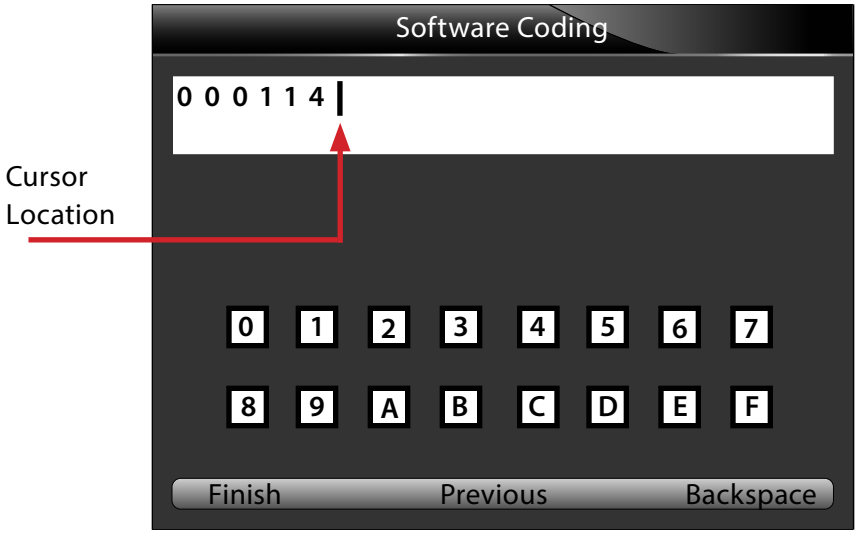


ADVANCED SCAN TOOL - CODING PROCEDURE

Step 9:

Now, press the **Backspace** key (**F3** Function key) **ONE** time.

This will erase the number "0" at the beginning of Byte 3.

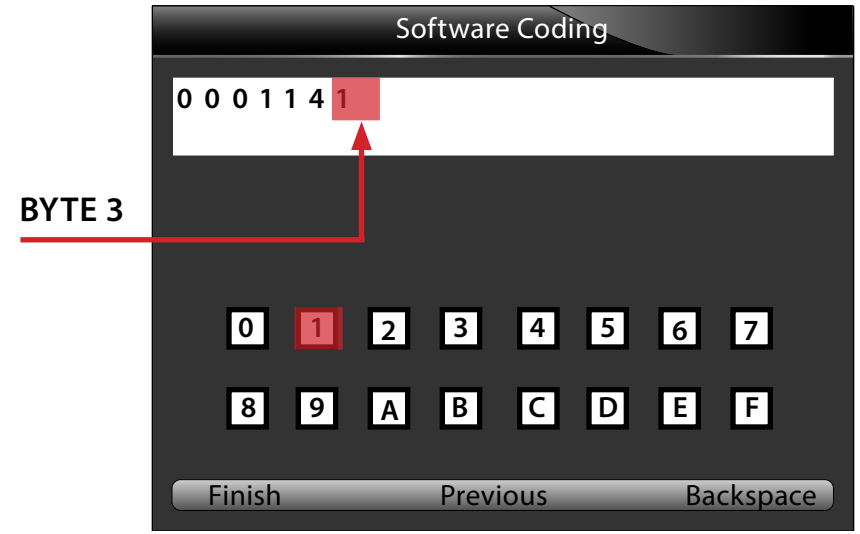


Step 10:

Now use the **Arrow** keys on the main keypad (***NOT the previous or backspace keys***) to highlight the digit in the "keyboard" that you would like to place back into the coding. In this example it is a "1".

Once you have highlighted the digit "1", press the **Enter** key. You will see it appear into the coding at the beginning of Byte 3.

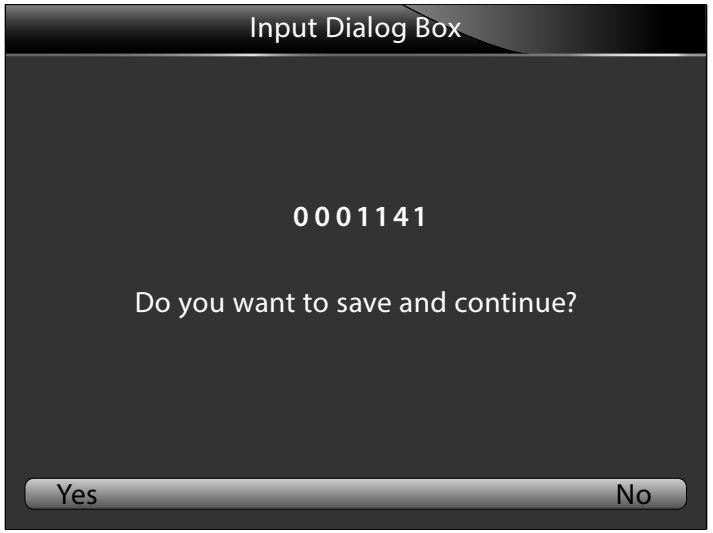
Now press the **Finish** key (**F1** function key).



ADVANCED SCAN TOOL - CODING PROCEDURE

Step 11:

The new coding will be displayed on the scan tool. Confirm the coding a final time and press the **Yes** key (**F1** Function key).



Step 12:

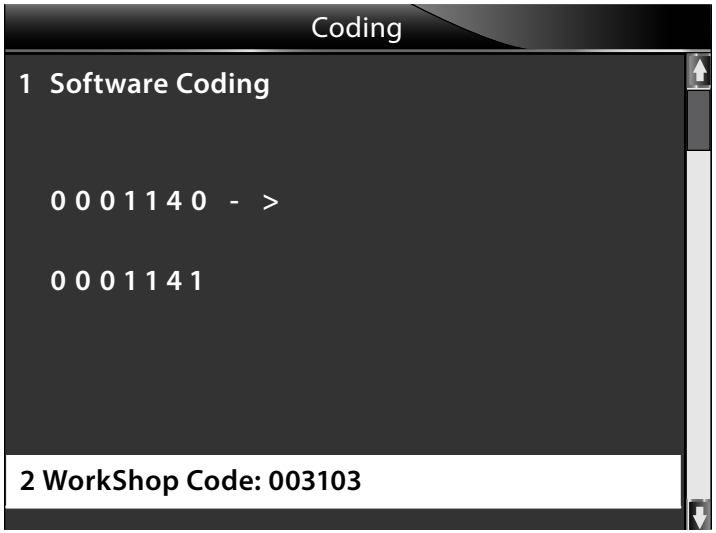
The scan tool will return to the coding menu and display the old coding and the new coding that you have entered.

Do not assume that you can go directly to 5-Set Complete to finish the coding. You **MUST** complete steps 13 through 24 to set the Workshop Code, Importer Number, and Equipment Number before you can complete the coding change.

ADVANCED SCAN TOOL - CODING PROCEDURE

Step 13:

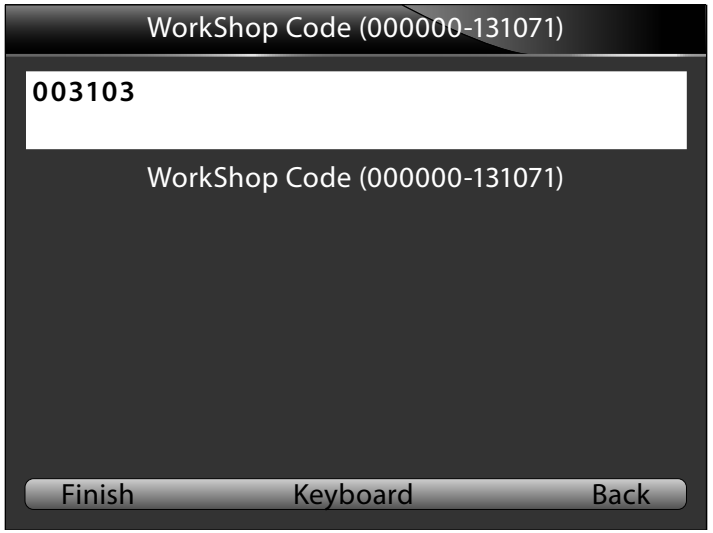
Use the up-down **Arrow** keys to highlight "Workshop Code", then press the **Enter** key.



Step 14:

The Workshop Code will appear as the coding did, and you will have the option to change it, but ***DO NOT*** change the number. The scan tool simply needs to link the Workshop Code to the new coding and it must do this before it will allow you to save the new coding.

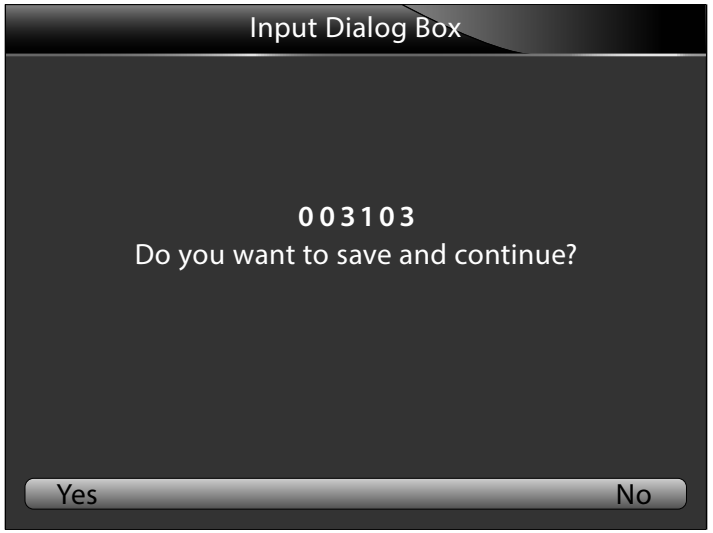
Now press the **Finish** key (**F1** Function key).



ADVANCED SCAN TOOL - CODING PROCEDURE

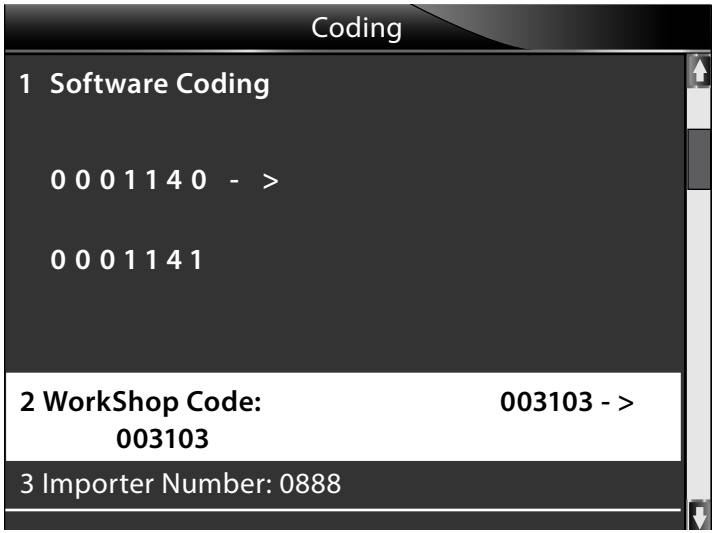
Step 15:

The Workshop Code will be displayed on the scan tool. Press the **Yes** key (**F1** Function key).



Step 16:

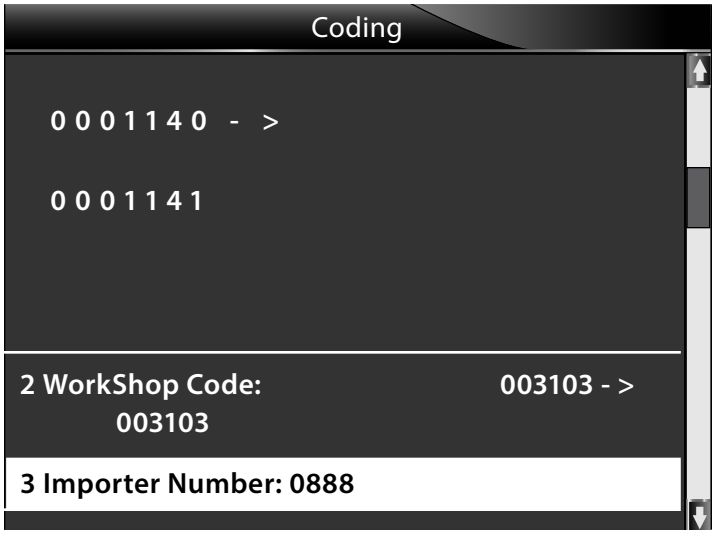
Now you have linked the Workshop Code to the new coding. You will have to do the same for the Importer Number and Equipment Number as described in steps 17 through 24.



ADVANCED SCAN TOOL - CODING PROCEDURE

Step 17:

Use the up-down **Arrow** keys to highlight "Importer Number", then press the **Enter** key.



Step 18:

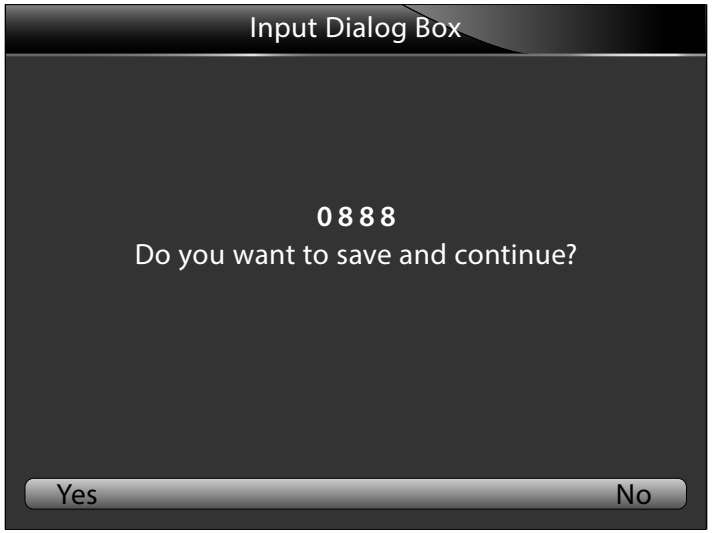
The Importer Number will appear as the coding did, and you will have the option to change it, but ***DO NOT*** change the number. The scan tool simply needs to link the Importer Number to the new coding and it must do this before it will allow you to save the new coding.

Now press the **Finish** key (**F1** Function key).

ADVANCED SCAN TOOL - CODING PROCEDURE

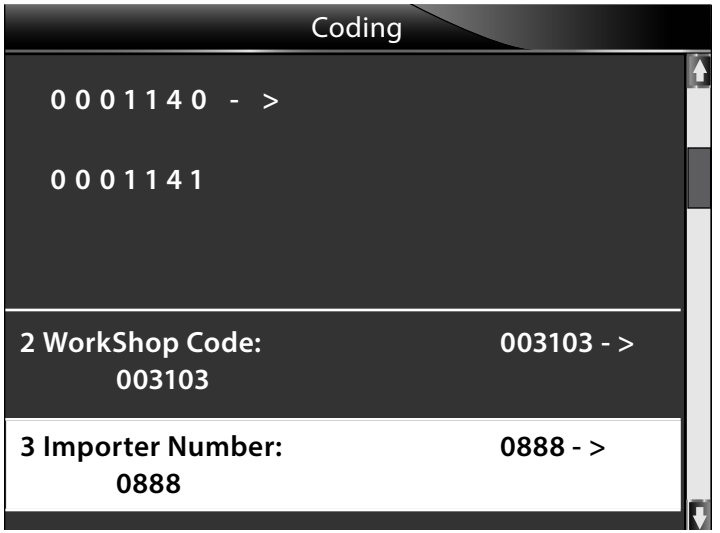
Step 19:

The Importer Number will be displayed on the scan tool. Press the **Yes** key (**F1** Function key).



Step 20:

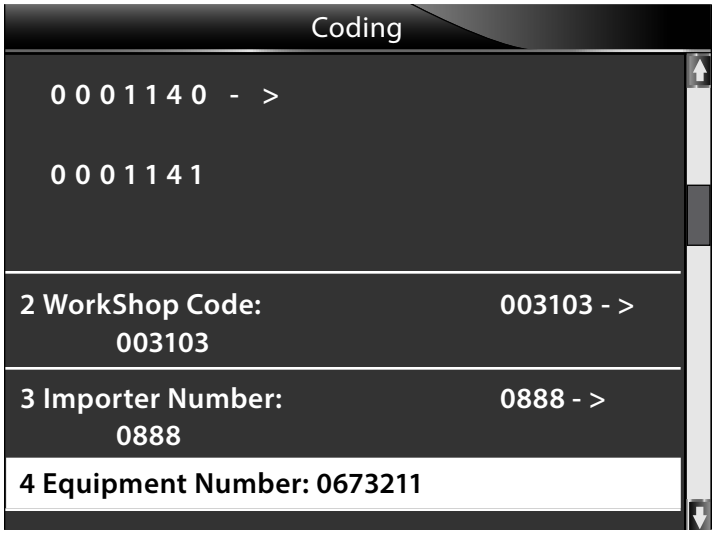
You have now linked the Importer Number to the new coding.



ADVANCED SCAN TOOL - CODING PROCEDURE

Step 21:

Use the up-down **Arrow** keys to highlight "Equipment Number", then press the **Enter** key.



Step 22:

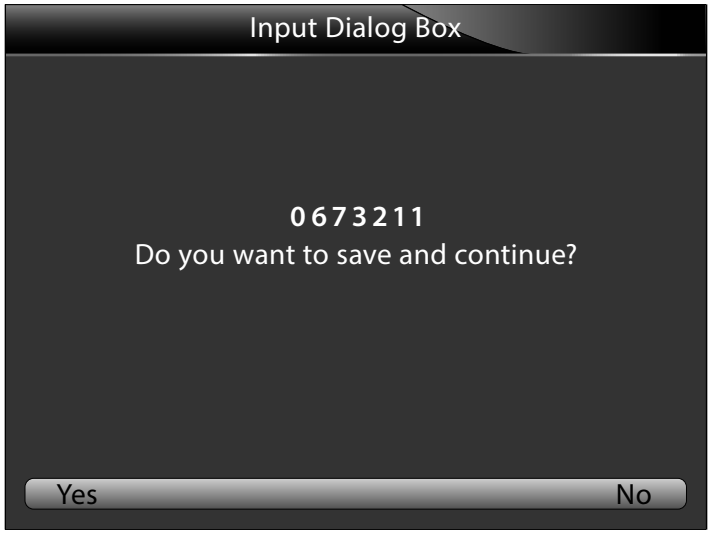
The Equipment Number will appear as the coding did, and you will have the option to change it, but ***DO NOT*** change the number. The scan tool simply needs to link the Equipment Number to the new coding and it must do this before it will allow you to save the new coding.

Now press the **Finish** key (**F1** Function key).

ADVANCED SCAN TOOL - CODING PROCEDURE

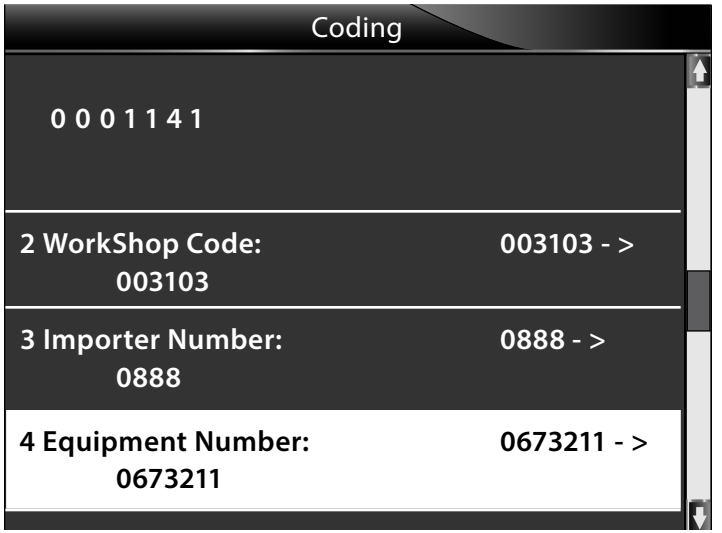
Step 23:

The Equipment Number will be displayed on the scan tool. Press the **Yes** key (**F1** Function key).



Step 24:

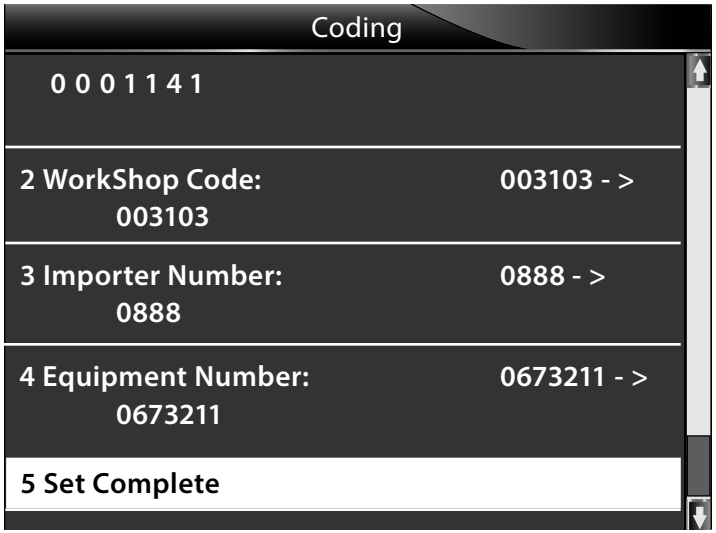
You have now linked the Equipment Number to the new coding.



ADVANCED SCAN TOOL - CODING PROCEDURE

Step 25:

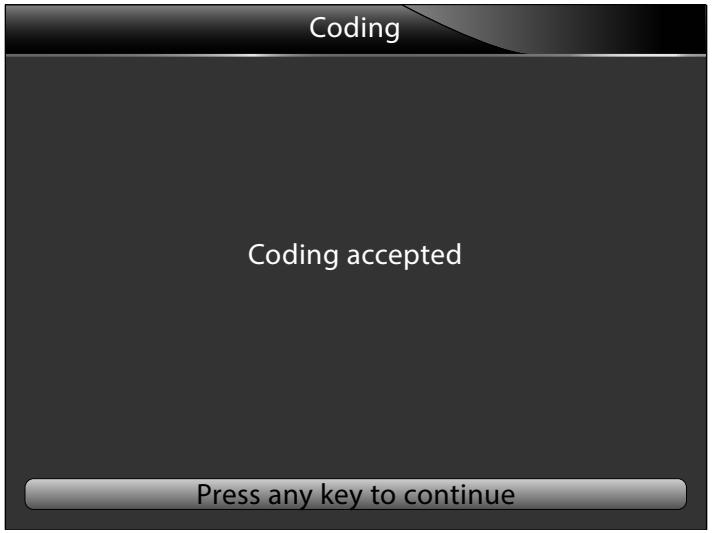
Use the up-down **Arrow** keys to highlight "Set Complete", then press the **Enter** key.



Step 26:

You should receive the message "Coding accepted" as shown.

Your coding is complete! Proceed to the next page for some final tips and information.

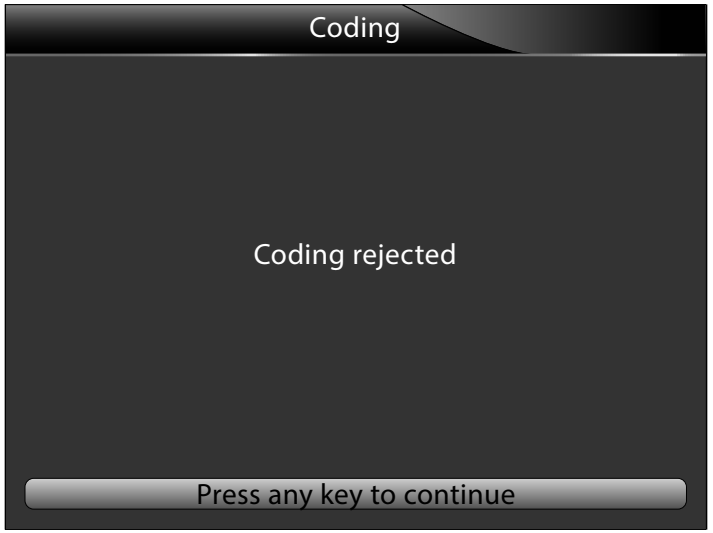


ADVANCED SCAN TOOL - CODING PROCEDURE

Step 27:

If you get the message "Coding Rejected", check/perform the following:

- Check the control unit for any trouble codes, and repair them as required before attempting to change the coding again.
- Make sure your battery if fully charged and that you have a charger on it during these procedures.
- Disconnect the scan tool, cycle the key off then back on, and reconnect the scan tool.
- Confirm that you are correctly entering the new coding.

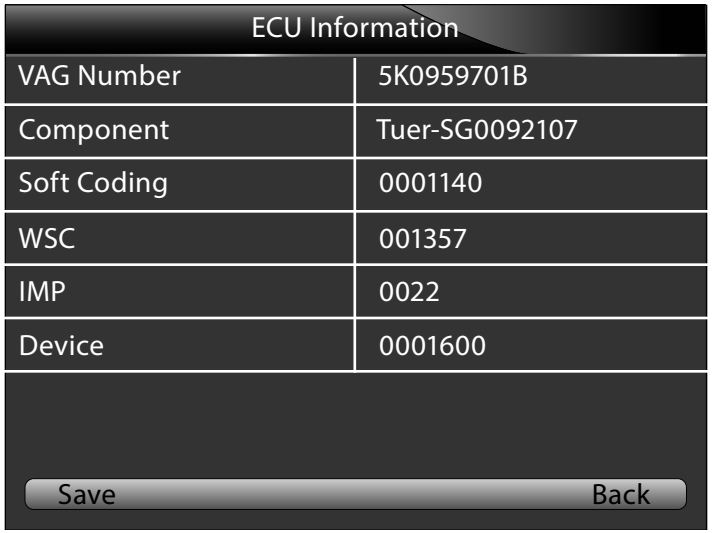


Step 28:

If you do not hit a key after coding is accepted, the scan tool will automatically take you to this information page after a few seconds. Here you can see the information pertaining to the coding you have just performed.

If you press the **Back** key (**F3** Function key) you will return to the Coding page.

If you press the **Save** key (**F1** Function key), this information will be saved and you can retrieve it on the "Playback" screen (see Page 20).



ADVANCED WORKSHEETS

Please read "***How to use the Advanced Worksheets***" on Page 31 before using the information on these worksheets.

Volkswagen MK6 Worksheets

Door Unlock Setting (Number of Doors) pg.66
Comfort Blinker Setting pg.67
Air Conditioning Flap Basic Setting pg.68
Throttle Body Adaptation..... pg.69
Hatch Release Button (Double Apex Kit) pg.70
Instrument Cluster and Gauge Sweep Tests..... pg.71

More to come!

VW - MK6 GTI 2 DOOR - DOOR UNLOCK SETTING — ADAPTATION

Door Unlock Setting

Return to Advanced Worksheets on Page 65

From the factory, when you press the unlock button on your key fob one time, only the drivers door will unlock. Using this Adaptation channel, you can change this setting to unlock all doors at one time.

Scan Tool Path VW → Systems → Control Unit → Common → 09-Cent. Elect. → Adaptation

- OR -

Scan Tool Path VW → Model Selection (Guide Function) → 09-Cent. Elect. → Adaptation

Adaptation Channel → 003

Adaptation Stored Values:

001= Drivers door unlock only

000 = All door unlock

TIPS:

In the Adaptation screen, the channel number will be listed at the top.

From the Adaptation screen, you can use the **Next** (**F1**) and **Previous** (**F3**) keys to select other Adaptation channels.

Be sure there are **NO TROUBLE CODES** stored in the Central Electronics Control Unit.

VW - MK6 - COMFORT BLINKER SETTING

ADAPTATION

Comfort Blinker Setting

Return to Advanced Worksheets on Page 65

From the factory, when you use the lane change feature of the turn signals, they will flash three times. Using this Adaptation channel, you are able to change this number so they will flash anywhere from one to six times.

Scan Tool Path VW → Systems → Control Unit → Common → 09-Cent. Elect. → Adaptation

- OR -

Scan Tool Path VW → Model Selection (Guide Function) → 09-Cent. Elect. → Adaptation

Adaptation Channel → 031

TIPS:

In the Adaptation screen, the ***stored value*** is the number of times that the turn signals will flash when using the lane change feature.

In the Adaptation screen, the channel number will be listed at the top.

From the Adaptation screen, you can use the **Next** (**F1**) and **Previous** (**F3**) keys to select other Adaptation channels.

Be sure there are **NO TROUBLE CODES** stored in the Central Electronics Control Unit.

VW - MK6 - AIR CONDITIONING FLAP ADAPTATION | BASIC SETTING

Air Conditioning Flap Adaptation

Return to Advanced Worksheets on Page 65

Whenever any of the HVAC control flaps or motors are replaced or repaired, or the control unit is replaced, the control unit must relearn the flap end stops.

Scan Tool Path

VW → Systems → Control Unit → Common

- OR -

VW → Model Selection (Guide Function)

→ 08 - Auto HVAC → 6 - Basic Setting → 3 - Adapt Flap End Stops

TIPS:

Be sure there are **NO TROUBLE CODES** stored in the HVAC Control Unit.

This procedure requires no coding or channel entry.

Once in the Basic Settings screen, you will be required to "Start" the end flap adaptation process.

Once you start the adaptation process, you will be able to hear the flaps moving and the light on the "AC" button will flash during the process. It should only take a few seconds to complete. Once the light stops flashing, the process is complete.

Once the process is complete, the scan tool will still show "Started" on the Basic Setting Screen. Press the **Stop** key (**F2** Function key) to exit Basic Setting Mode.

VW - MK6 - THROTTLE BODY ADAPTATION | BASIC SETTING

Throttle Body Adaptation

Return to Advanced Worksheets on Page 65

Whenever the throttle body is cleaned or replaced, the engine control unit must relearn the idle and full throttle positions of the throttle plate. This function, although referred to by VW/Audi as "Adaptation", is performed by using the Basic Settings Mode.

Scan Tool Path VW → Systems → Control Unit → Common → 01-Engine → Basic Setting

- OR -

Scan Tool Path VW → Model Selection (Guide Function) → 01-Engine → Basic Setting

Basic Setting Channel → 060

TIPS:

Be sure there are **NO TROUBLE CODES** stored in the Engine Control Unit.

In the Basic Settings screen, the scan tool will tell you if the throttle body adaptation is OK.

Once in the Basic Settings screen, you will be required to turn the Basic Setting mode "ON" in order for it to perform the throttle body adaptation.

VW - MK6 GTI - HATCH RELEASE BUTTON DOUBLE APEX KIT — CODING

Factory Hatch Release Operation

Return to Advanced Worksheets on Page 65

From the factory, the MK6 GTI only has the option to release the hatch using the button on the key fob.

Factory Coding

00	01	14	0																										

Hatch Release Button Operation - Double Apex Kit

The Double Apex Kit adds a hatch release button to the center console. One press of the button will release the hatch with the doors locked or unlocked, key on or key off, as long as the vehicle is not moving.

Scan Tool Coding Path VW → Systems → Control Unit → Chassis → 42 - Door Elect. Driver → 10 - Coding

- OR -

Scan Tool Coding Path VW → Model Selection (Guide Function) → 42 - Door Elect. Driver → 10 - Coding

Long Coding: Change the value in Byte 3 from 0 to 1

TIP: Be sure there are **NO TROUBLE CODES** stored in Door Elect. Control Unit.

00	01	14	1																										

VW - MK6 - INSTRUMENT CLUSTER TESTS AND GAUGE SWEEP

Instrument Cluster Tests and Gauge Sweep

Return to Advanced Worksheets on Page 65

These tests include a number of different warning lamp and audible tests and will perform a gauge sweep on the speedometer, tachometer, fuel gauge, and coolant gauge. The gauge tests will sweep the complete range of the specified gauge from the lowest to the highest reading, back to zero, then hold a constant reading. These tests are very useful diagnostic aids in determining the cause of a non functioning gauge or warning indicator.

Scan Tool Path

VW → Systems → Control Unit → Common

- OR -

VW → Model Selection (Guide Function)

→ 17 - Instruments → 5 - Active Test

1 - Acoustic Turn Signal Acknowledgment
2 - Gong
3 - Buzzer/gong
4 - Tachometer
5 - Speedometer
6 - Fuel Gauge
7 - Engine Coolant Temperature Gauge
8 - Brake Pad Warning
9 - Seat Belt Indicator
10 - Low Fuel Lamp
11 - Oil Pressure
12 - Oil Level
13 - Hot Light
14 - Glow Plug Light
15 - Windshield Washer Level
16 - Brake Warning Lamp

TIPS:

Be sure there are **NO TROUBLE CODES** stored in the Instrument Cluster Control Unit.

The scan tool will require you to "start" and "stop" each test.

You can select any of the tests that are listed. The scan tool will prompt you if the selected feature is not available.

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Schwaben Professional VAG Scan Tool

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