VConnect
2024

Viezu V-Connect Installation and BENCH / BOOT User Guide

Viezu Technologies Limited

www.viezu.com

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Contents

Included in the V-Connect Kit

Included within your V-Connect kit is as follows:

- V-CONNECT Tool. This hardware is used to Connect to all vehicles and is the key part of your V-CONNECT kit.
- Bench box which is used to read and write data to the ECU via bench mode.
- OBDII Cable. This cable is used to Connect the V-CONNECT unit to the vehicle that you are tuning. OBDII ports can be in different places, but most are located in the driver's foot well or within the center console. For further assistance with OBDII location please contact desk@viezu.com
- OBD Truck cable for the same kind of interfacing but truck specific.
- USB cable. This cable is used to Connect the V-Connect hardware to the computer and can be used in any USB port or your PC.
- Breakout cable M.F.C D48CBM02.
- Charger plug.
- Clear box of various ribbon cables, resistors, adapters and Connectors.

A picture of the full kit of the Vconnect

V-Connect kit contents

Figure 1

The VConnect box

Figure 2

The multifunction breakout cable

Figure 3

The bench box

Figure 4

The USB cable and power supply

Figure 5

Box of cables, resistors and adaptors

Figure 6

Standard OBD cable

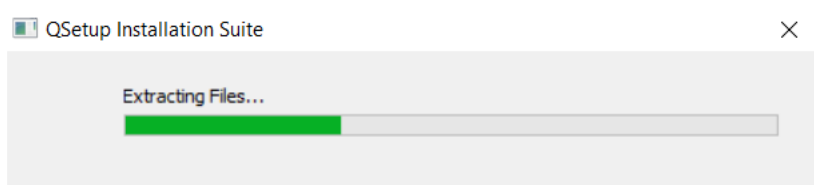*Figure 7*

Truck OBD cable

Figure 8

Installation

1. Navigate to Viezu.com/software and click download on the Vconnect software.

2. Download the file.

3. Run the execution file, KT200Slave.

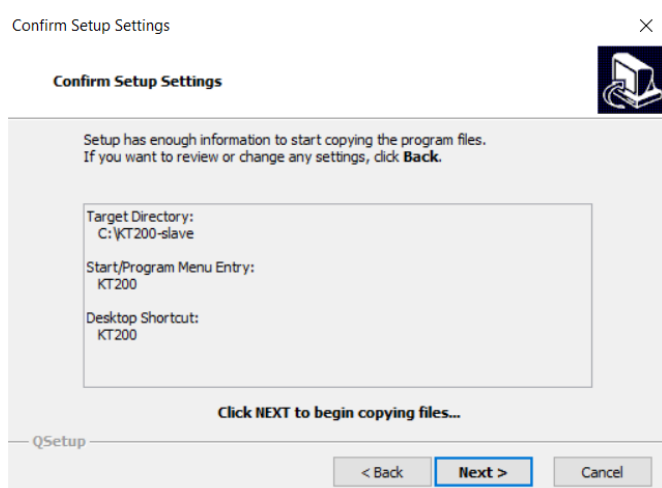| KT200Slave	27/01/2023 14:43	Application	880,657 KB

4. Extract files will progress, let it do so.

5. Setup of the V-Connect software will now begin. Please follow the installation wizard to install the software.

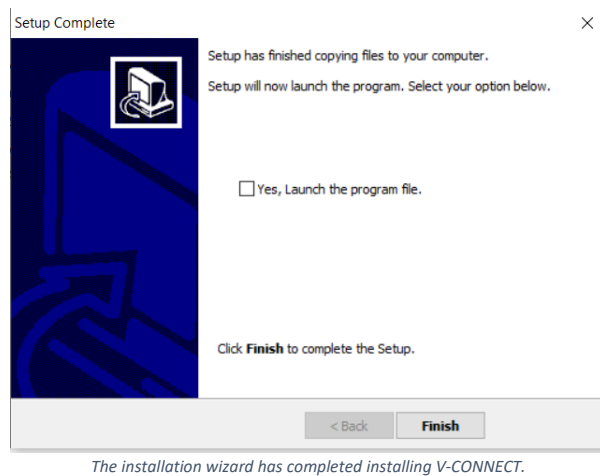*V-CONNECT - installation wizard, first window*

6. License and use agreement.

7. Continue to progress through the installation wizard and click Next.

8. Once the installation has completed you will be able to select 'Finish' to complete the setup

The installation wizard has completed installing V-CONNECT.

Post installation

Before opening the program you will need to configure you anti-virus and firewall settings to allow the program to run.

In some instances, depending upon your IT setup and configuration you may need to install it on a computer that is not part of a wider IT network.
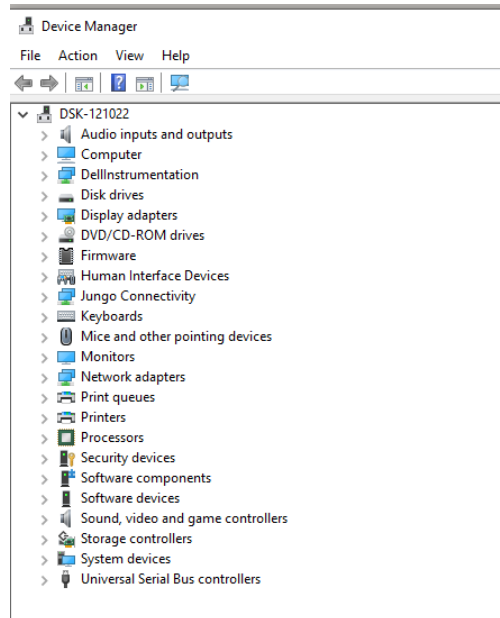
The computer must NOT be part of a domain to successfully install and work with V-Connect

> For any issues please see the troubleshooting guide

1. The next part of the process is to install the drivers. If you open your device manager from the start menu you can see all the drivers you currently have.
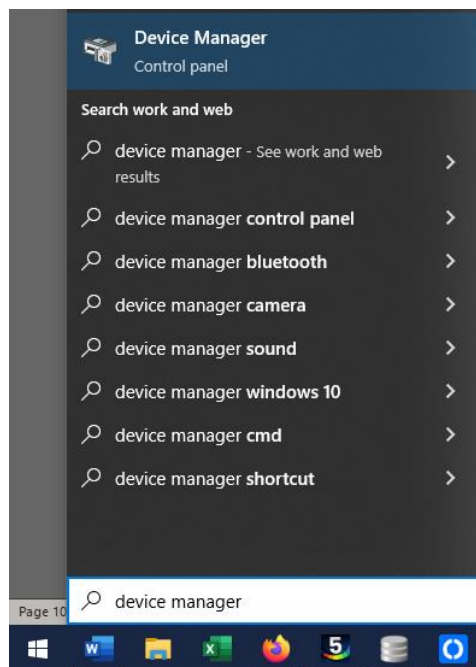
2. This is the device manager window. Plug in the V-Connect tool.
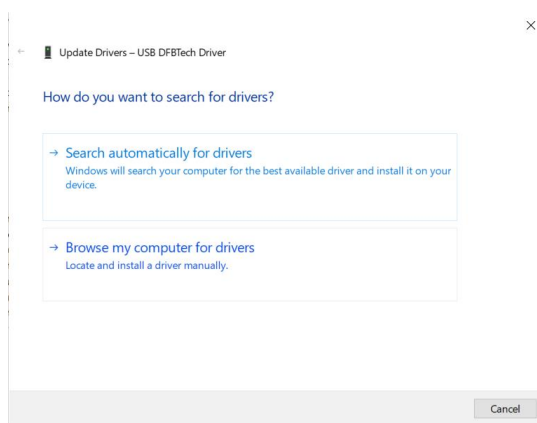

3. Expand '*Universal Serial Bus Controllers'* and find the driver containing "DFB", it is only visible if the tool is plugged in. It automatically identified it will be called "DFBTech Driver". If it has not, it will be labelled 'Unknown Driver'
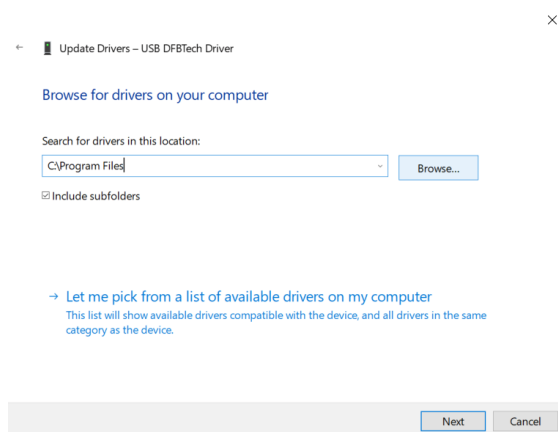

4. Right click USB DFBTech_Driver. Choose update driver.
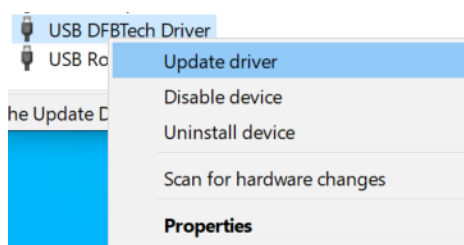
5. Select '*browse my computer for drivers*'.

6. Click '*Browse*'.

7. In the browsing menu, navigate to the KT200 folder.
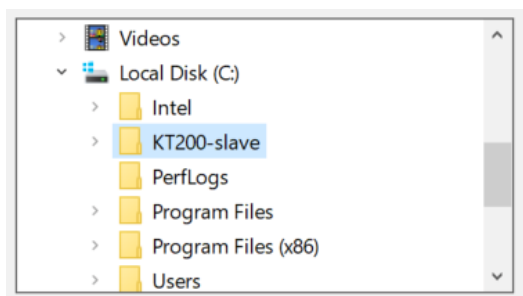
8. Expand the KT200 folder to get to the *DFBTech_DRIVER* folder. Select the folder and click '*OK*'
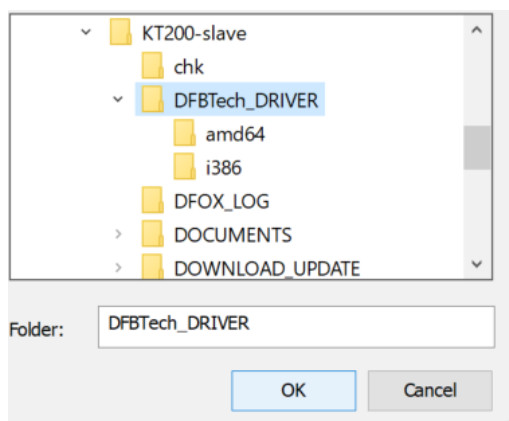
9. With the file path set to *the DFBTech_DRIVER* folder, click '*next*'.
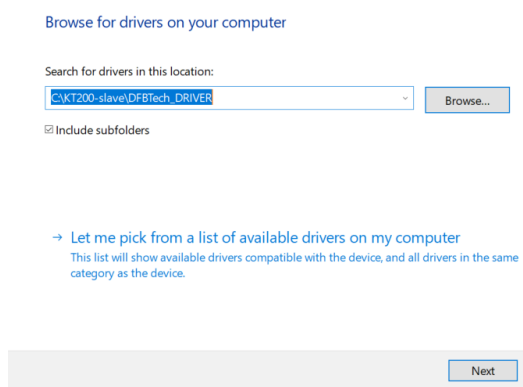
Using V-Connect

Dashboard
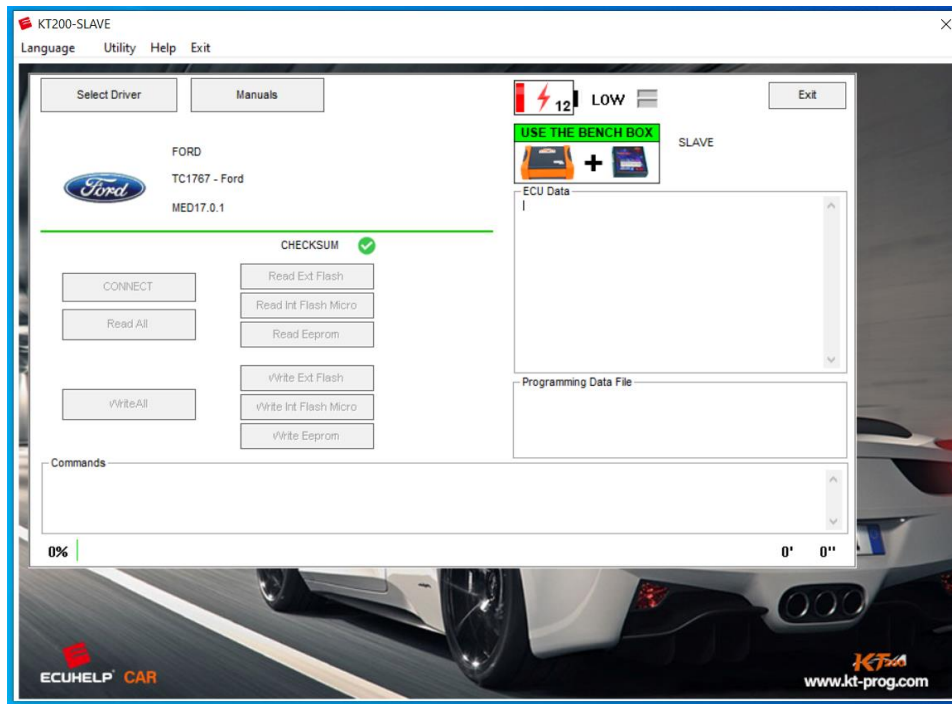
When you connect the V-Connect to the PC via the USB cable the 'Manuals' and 'Select Driver' buttons will become selectable.

When connecting to a vehicle or an ECU with the V-connect, it is important to ensure the voltage is between 12.5v and 14v shown in the top right of the V-Connect software screen.

Navigating the V-ConnectSoftware

Main screen of the V-Connect Software.

The main window of the V-CONNECT software

The options displayed on screen are as follows.

- **Menu bar** contains options for language, utility, help and exiting the program.
- **Manuals** will open a page in your web browser. There are dropdowns on the left-hand side of the screen to get to the manual relevant to your vehicle. This is where you will find important connection guides and information for the control unit and vehicle you are working on.
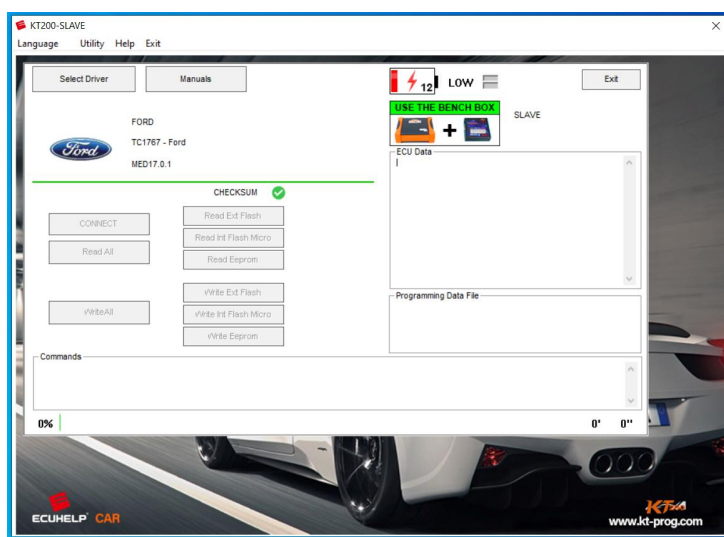- **Select Driver** will take you to a screen where you can find your ECU through a series of dropdown menus, and sections. You will need to know what ECU is in the car to select your driver.
- **Connect** is used for finalising the Connection between the ECU and the tool. This is done after Connecting to the ECU physically and after selecting your driver. Once the Connection is finalised the read and write buttons will become available.
- **Read all / Write all** Read all the data from the ECU and save it to your computer. Once you have the tuned file use write all and select the tuned file to tune the car.
- **Read / Write: Ext Flash / Int Flash Micro / Eeprom** are the different components of a vehicles control unit that can be communicated with. Not all control units will have all three of these options available.
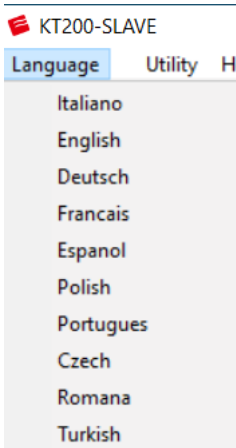
  Each of the available options are described further individually in the following sections of this document.

Menu Bar

Language

The language section provides a selection of 10 languages at the time of writing. The change is instant and doesn't require the software to be restarted. Select the language that best suits you from here:

Help

This section takes you to the V-CONNECT help page. On the left you can find manuals and in the top right you have a link to their main website. If you are a slave under us then most of your help will come from the Viezu technical support team. However, if you are a master then you can use the contact us feature on their website.

Exit

This allows you to close the program.

Manuals

With the V-CONNECT we highly advise you to start with the manual section. Navigate through the website using the dropdown menus on the left-hand side. Once you get to the manual for your vehicle check to see if there are any special instructions for the vehicle or control unit you are working on.

The main information you will need from the manuals will be the bench Connections. These need to be done before you select Connect in the V-CONNECT software as the read and write buttons will not become active until a solid Connection is established. This is to prevent any damage.
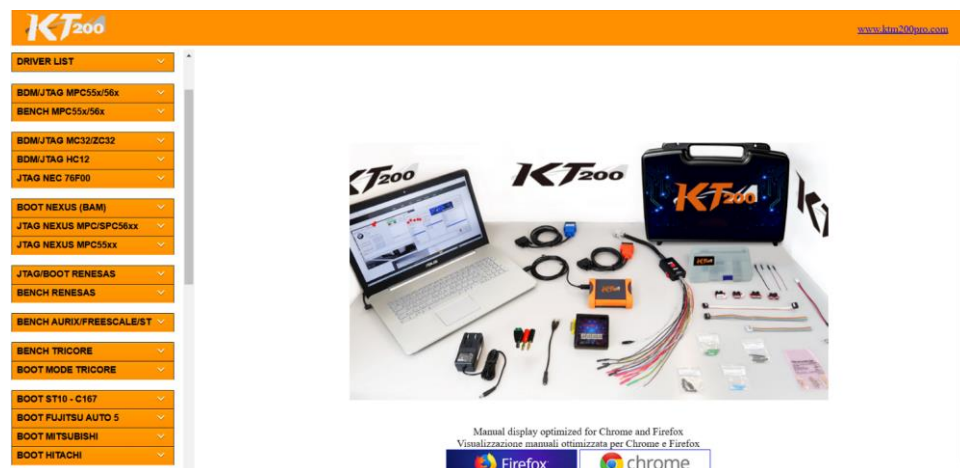
On the left hand side are all the manuals.

These manuals contain very specific information for anything you could need to do with this tool. The first section is driver list which shows every ECU in every car they cover and the Connection method associated with it.

DRIVER LIST ⌄
- ECU - Engine
- TCU - Gear

The pinouts section contains all the information needed to Connect directly to an ECU.

PINOUTS ⌄

BOSCH	⌄
CONTINENTAL	⌄
DELCO	⌄
DELPHI	⌄
DENSO	⌄
HEINZMANN	⌄
LUCAS	⌄
MARELLI	⌄
PHILIPS	⌄
PHOENIX	⌄
SIEMENS	⌄
TRANSTRON	⌄
TRW	⌄
VALEO	⌄
VISTEON	⌄

Plug diagnose shows you how to convert the truck/car OBD cable into the format for the specific vehicle (TRUCK / BIKE / BOAT / AGRI)

PLUG DIAGNOSE ⌄

OBD II Plug diagnose port

- Aprilia - Marelli 5DM
- Aprilia - Marelli MIU1/15
- BMW
- BMW MOTO - Bosch ME9
- BRP Canam QUAD
- Case - EDC7U31
- Case - EDC16C39
- Cat Challenger - ADEM IV

Generic information contains all the manuals which show exceptions. Like how to keep the dash awake on a keyless car by pressing the button in the correct way.

GENERIC INFORMATION   ⌄
BMW F-Series OBD
Clone Tricore ECUs
FCA Group - SGW
Infiniti FX Key
PSA Keyless
Renault Key card
SUZUKI Key coder EDC16 C3-9

Select driver
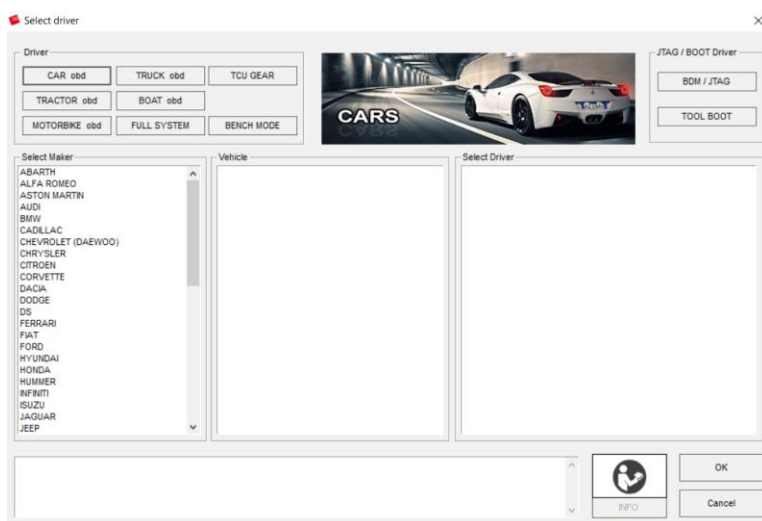
This is the select driver screen where you can Select the correct driver for the Vehicle you are working with. This is the first part of the tuning process. You must enter the select driver screen first and choose a driver before the Connect button on the main screen will become useable.

At the top left of the screen is the driver category section.
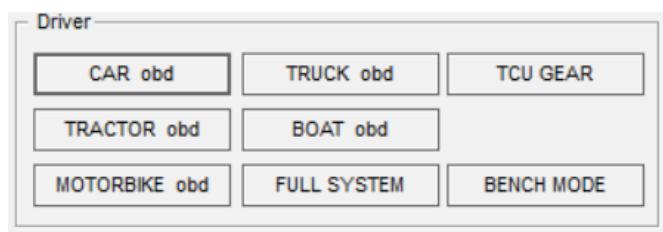
Car OBD, truck OBD Tractor OBD, Boat OBD and Motorbike OBD are all grouped by their vehicle type but all of the vehicles in those sections can be read through the OBD port on that vehicle. This is the easiest kind of job only requiring the respective OBD cable and the V-CONNECT box.

TCU GEAR – This is for reading/writing to vehicle transmissions or gearboxes.

BENCH MODE – This is the method of connecting directly to the control unit of the vehicle (ECU / TCU). It will often require the control unit to be completely removed from the vehicle to connect to it.

FULL SYSTEM is where you can find the protocols for BOOT MODE. This is very similar to the BENCH mode, where the control unit (ECU/TCU) will need to be removed from the vehicle. However, in BOOT MODE you will need to connect directly to the control circuit board to communicate with it.

Connect

This button is used after selecting a driver and after setting up the V-CONNECT unit Connecting it to the computer, a power source and the vehicle.

Once these are done the Connect button will change it's appearance to be highlighted.
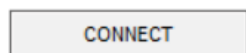
Clicking it will start the Connection process. Make sure your voltage is around 12.5 to 14v to ensure a healthy Connection with minimal chance of issues.

Assuming the voltage is good and the Connections are correct the software will go through a process of Connecting you in preparation for reading and writing. Once the bar below reaches 100% you are Connected.

Once this has successfully completed you will see that all the reading and writing buttons become useable.
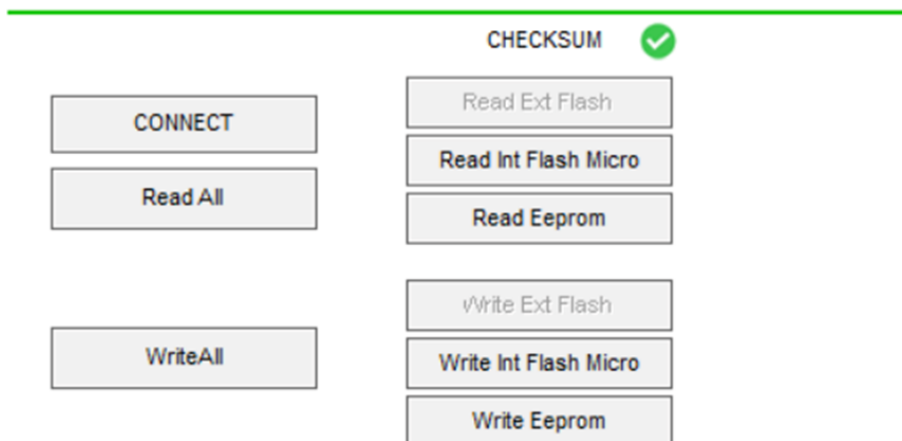
We are ready to move on to reading the vehicle.

Read and write all

It is always recommended to take a full back up before making any changes to the ecu.

Once a full back up is taken, proceed to read each individual component available.

When the reading is completed for the backup and all individual components, submit the files to Viezu for Tuning.
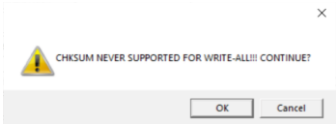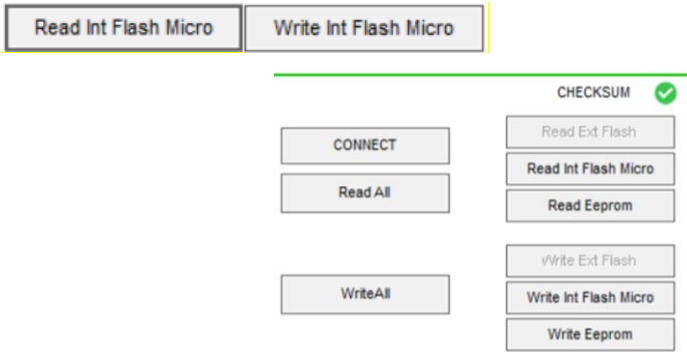
Before Tuning

Before you begin the tuning process there are things that you will need to check.

- You will need to have a steady state battery charger Connected to the vehicle before you begin communicating with the vehicle, something that is putting out at least 12V/25amps is sufficient.
- You will need to ensure your computer's charge is good or that you are Connected to a power source.
- Any Bluetooth, Parrot or Aftermarket stereos may affect communication dependent on how they are wired in, please ensure that all of these are turned off or disconnected. Any phones that may be Connected to In Car Bluetooth will need to be disconnected.
- Ensure heaters, stereos and any interior/exterior lights are switched off as they can drain battery power from the vehicle whilst you are communicating.
- When you are communicating to the vehicle do not open any windows, doors, bonnet or boot as this can disrupt the communication to the ECU also.
- If the vehicle is a manual, ensure it is in neutral, if it is an Automatic; ensure the vehicle is in PARK. Not doing this could lose vital information for gearing.
- **Do not** add any unsafe keyboard symbols such as **_ - , ( )** or any other such punctuation into the file name as this can corrupt the file. Keep the file names as text and numbers - nothing more.
- Some vehicles, for example Audi RS4's and R8's have two ECUS', one master and one slave. You will be prompted if this is the case on screen before you read the ECU. Always remember to read the MASTER first and SLAVE second, save both with different names, **by adding the word MASTER OR SLAVE to the end of the file name will work** and to email both reads to us for modifications.
- Some vehicles will require you to read injector codes after reading the file. If this is the case you will also have the selection of TOOL in the programming screen as shown. Select tool, then READ INJ CODES. This guide explains how to code the injectors when programming.

Importantly before tuning go and find the manual for the ECU you are tuning. In this example we will be tuning an EDC17CP14 on the bench. Doing this without consulting the manual will not be possible as we will need to see which pins the wires will go on to.

Under the bench Tricore drop-down under Audi is the manual for the EDC17CP14. Without the below information tuning can't proceed.

Beginning the tuning procedure

To begin the tuning procedure, from the main V-CONNECT window you click on select driver. This opens up a list of every ECU that the V-CONNECT can tune.
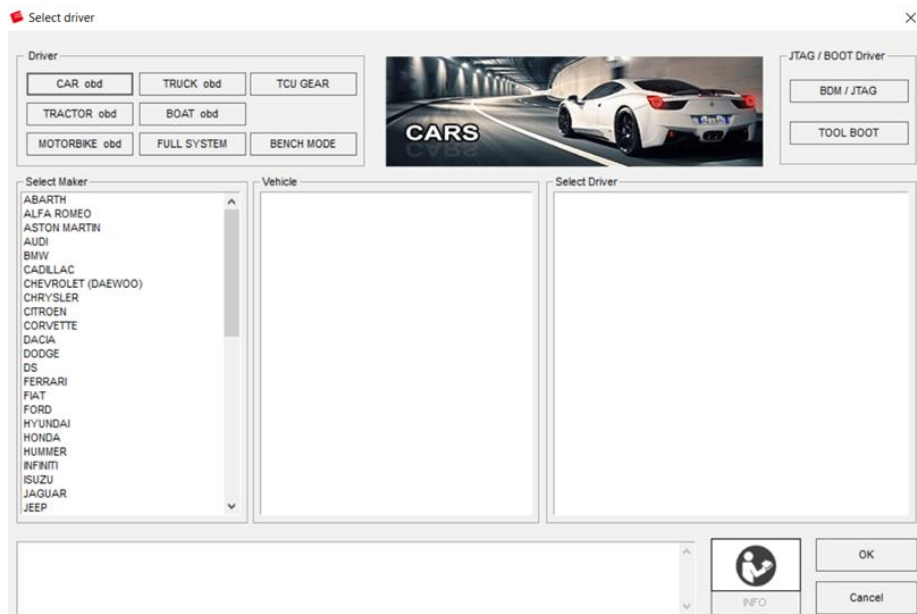
At the top of the page are 8 categories that can help you get to the driver for your ECU. For our example we are tuning an EDC17CP14 on the bench. So we select BENCH MODE from the driver menu.
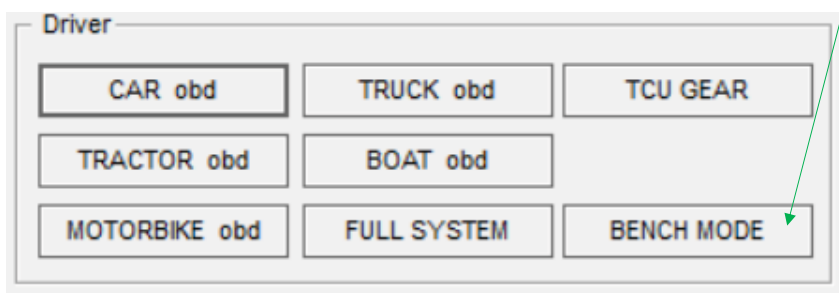
Selecting a Vehicle

The vehicle selection screen allows you to proceed towards tuning operations Read and Write based on a vehicle selection you make. First of all we select the manufacturer from the Select Maker drop-down menu. This changes the content in the next drop-down.
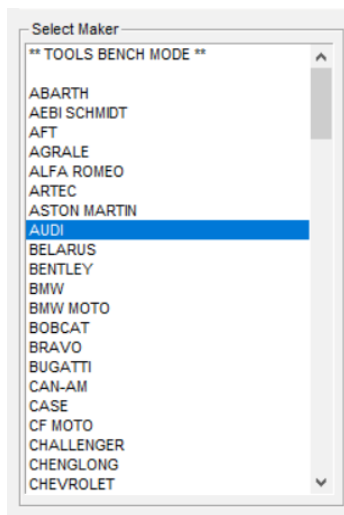
In the vehicle menu it is looking for you to select the chip type. Our EDC17CP14 is tricore and we can find it under TC1796. Selecting this changes the content in the final drop-down menu.
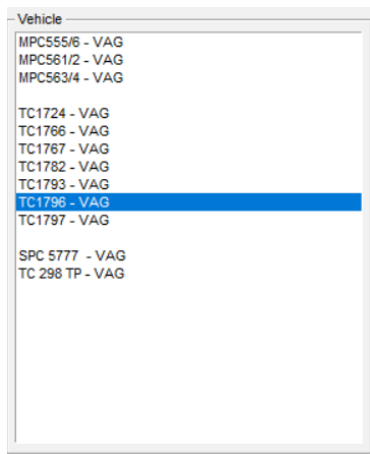
In the final drop-down under the diesel vehicles here is our EDC17CP14.
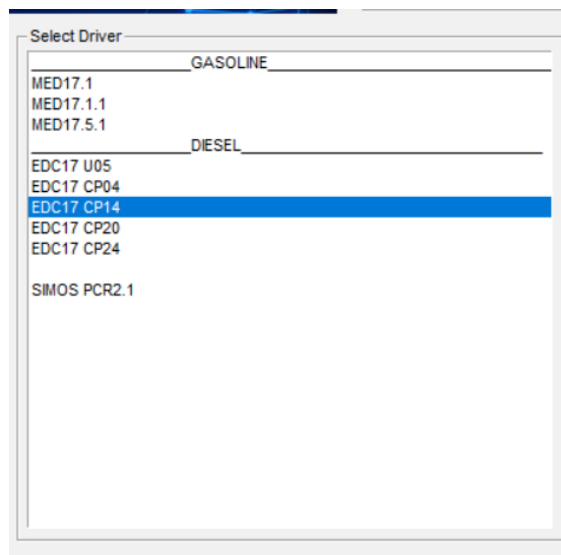
You will need to go through the manufacturer – chip type/vehicle menu and driver select menu to select the correct one then press ok.
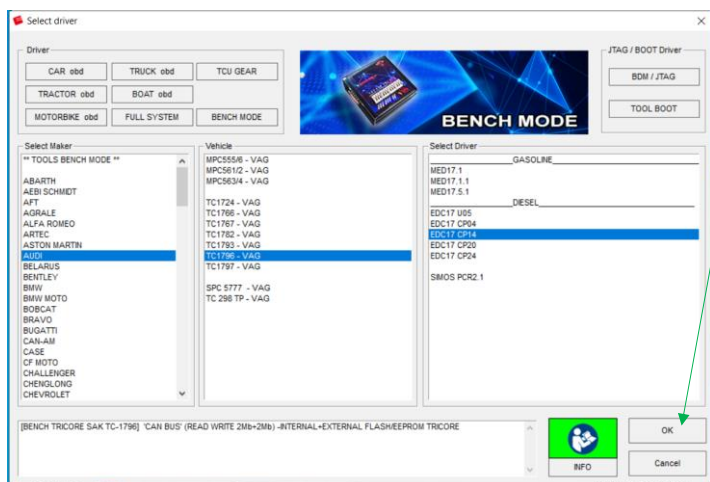
Tool/ECU Connection

With the driver selected and knowing what manual we are following we now must proceed to get the ECU physically connected to the V-CONNECT and the V-CONNECT to a power supply. Both the driver and the physical Connections must be done before we are able to press Connect.

For the power supply we Connect a 12V supply to the V-CONNECT tool.

Once this is done the software now shows a voltage measured around 12.5V

if your voltage shows as low then you need to restart the software or use a working power supply as this effectively means the voltage is 0 – 11 which will cause reading and writing issues.

Follow the instructions which are specific to each ECU. For this particular read we can see that software shows us:

Use the bench box along with the VConnect.

This is shown after the driver is selected. Since we need both of them to do it I Connect them as seen below.

The pins on one side of the bench box fit into the slot on the V-CONNECT for bench Connections. Then on the other side of the bench box we slot in the Multi-function cable.

Here is how it should be Connected to the bench box.

Following our instructions from the manual we opened earlier:

We must Connect the cables from the Multi-function cable to the ECU pins.

Our red wires are the live ones and black ones for grounding. The rest of the wires are for communication. Incorrect live/ground Connections can damage an ECU so always double check your work.

Here is an example of how they are connected.
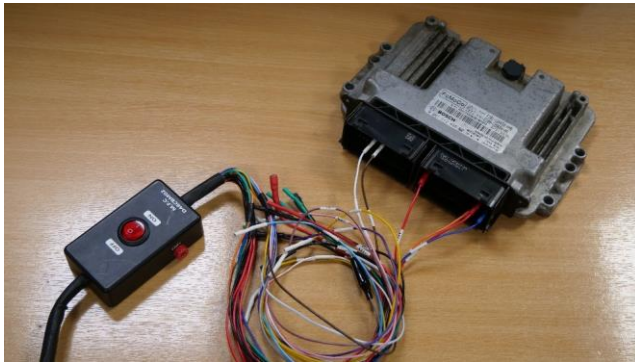
The pins go on the underside of the ECU.
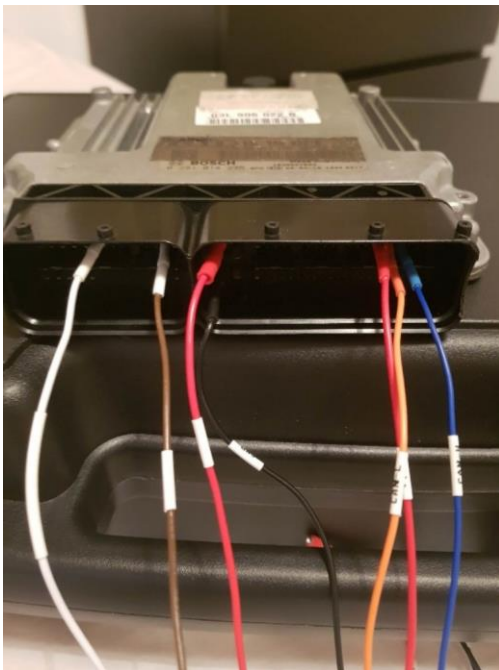
Software Connection

The Connect button is by default inactive and will become active when a driver is selected and the voltage is around 12.5v

CONNECT

Once the driver has been selected the Connect button will light up. During this time you will need to get the Connection information for the ECU you are tuning from the relevant manual.
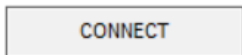
CONNECT

Be aware this button will light up once a driver is selected and the voltage is stable regardless of if your Connections are correct. It is up to you to follow the manual and ensure they are correct before clicking Connect.

Follow the manual instructions to the letter and then once you are happy with the setup press the Connect button. This will send some handshaking signals to the ECU to make sure it's done correctly.

100%

If the setup is correct then all of the buttons for reading and writing on the software will light up instead of being greyed out.

CHECKSUM ✅

CONNECT	Read Ext Flash
Read All	Read Int Flash Micro
	Read Eeprom

	Write Ext Flash
WriteAll	Write Int Flash Micro
	Write Eeprom
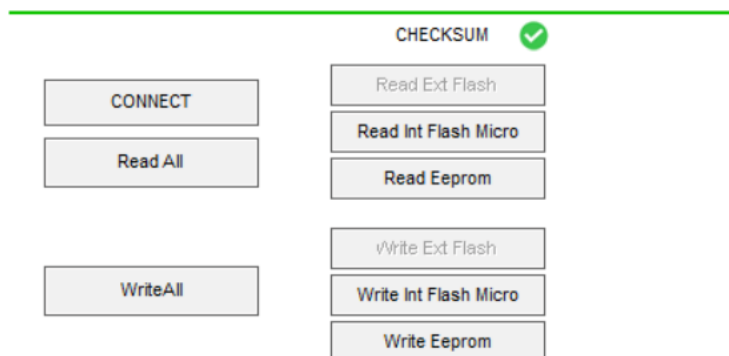
Safe reading and writing is now possible..

Reading a Vehicle

The Read operation

- You will be asked to wait as the file is read, and a bar will fill up
- You will be asked to name the read file at the start of the process
- This process will take on average around 15 minutes. The period will depend entirely on the vehicle, its age, the health of the ECU, and more potential factors.

The Reading operation can be done by selecting the READ ALL or the READ micro/Eeprom/flash option in the window given after the Connection succeeds.

After selecting READ ALL you may get another popup like this:
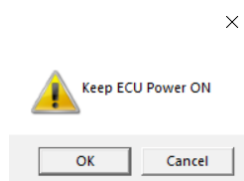
This means you need to ensure the power switch on the multi-function cable is switched on. You may also be asked to turn it off at certain times, follow the on screen instructions as necessary.

Once the multi-function cable is on click OK and allow the bar to fill up as the ECU file is being read.
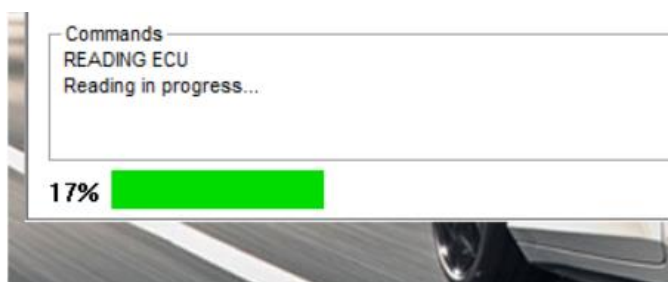
When the bar is done you will be asked to save a file to your computer. Name it something sensible like the vehicle REG or the VIN and send it over to us on our file submissions portal. Ideally leave the ECU there as the setup for writing is exactly the same.

Sending and receiving modified files through Viezu

There are two ways to send and receive files.

One way is to use our automated 24 hour pay as you go service at http://www.viezu-client-files.com/

This service allows you to submit and pay for your file online. **Please note as this is a pay as you go service you can't use any keys that you have pre-brought on your account.**

Alternatively, you can email the file to us and use credits that you have on your account.

Submitting via our Portal

To submit your files and questions via the portal please go to https://desk.zoho.eu/portal/viezu/, click submit ticket. This will take you to a new window, please fill out the fields on the form - keep the subject title as simple as possible, "Vehicle License Plate" is a general suggestion. At the bottom of the selection, you have an attach button to attach your read files.

Without these details we will not provide the modified file for you. We take all of the above into consideration when creating the modified file. For example, an engine with a bigger/hybrid Turbo may be able to run more Boost Pressure whereas an engine with high mileage would be given less to consider wear and tear on the engine's components. At the very bottom of the form is a space for you to add any additional information that you think may be relevant for the tuning process. For example:

Vehicle is used to tow a caravan

Client has a DTC that is unexpected

Client has a flat spot around a certain RPM

All of this information helps us to achieve the best possible modifications for your client. Once all the relevant information has been received the modified file will be produced. The Service Level Time is 60 minutes on receiving the original read.

Receiving the File

Once the modified file has been created for your client, you will receive the file back via email notification it will also appear on the dealer portal. The file name will be as you saved it,

For example, "AB01 2CD VPERF" This is the modified file you will need to save to your computer, do not change the name of the file when saving.

Save the file to a location you have set aside for your Tuning Work and do not alter the File Type when saving. Once saved in the appropriate place, you have received the file and you are ready to write back to the vehicle.

Writing a Vehicle

Before you begin the writing process, there are a few things that you will need to ensure are done correctly.

- When writing through OBD ensure there is a good steady state battery charger on the vehicle before Connecting to the vehicle, writing to the ECU draws voltage from the battery and vehicle dependent can run the voltage very low. Should the battery level drop to a low enough level, usually below 11volts, you can cause damage to the ECU, which at worst case can leave you with an immobilized vehicle. If you are ever unsure, please contact the Viezu Technical Team.
- When writing through OBD ensure that there are no stereos or heaters, heated seats, lights (including interior and exterior) are turned on. Make sure they are off before you start communicating.
- When writing through OBD ensure that any phones Connected to a Bluetooth system are disConnected as communication between them can cause an issue when writing.
- When writing through OBD **Do not** open any doors, bonnet, boot, windows or remove any sensors from the engine when you are communicating. Doing anything of this nature could damage the ECU.
- When writing through OBD if the vehicle is a manual, ensure it is in neutral, if it is an Automatic; ensure the vehicle is in PARK. Not doing this could lose vital information for gearing – unless instructed by the V-CONNECT manual to do otherwise.
- Some vehicles, for example Audi RS4's and R8's have two ECUS', one master and one slave. You will be prompted if this is the case on screen before you write to the ECU. Always remember to write the MASTER first and SLAVE second. When writing through OBD ensure you **DO NOT** START THE VEHICLE UNTIL YOU HAVE PROGRAMMED BOTH ECUs – always see the manual for more information or contact us.

In order to write the modified file back to the vehicle you will need to select the vehicle in exactly the same way that you did for reading. You will also need to remember to select the exact same vehicle and ECU that you did when you took the read. Not selecting the correct vehicle could cause an issue in the programming process.

> **!** **If you are ever unsure, do not proceed and instead contact the Viezu Technical Team.**

Writing the file

- You will be asked to wait as the file writes, a progress bar will be displayed.
- This process will take on average around 20 minutes. The period will depend entirely on the vehicle, its age, the health of the ECU, and more potential factors.

To hand (On your computer system), you may need:

1. The modified map file   (Mod file – The modified (mapped) file)
2. An original read file   (Original, or stock read – An original read of the vehicle)

The writing operation can be done by selecting the WRITE ALL option or the Write Micro/Eeprom/flash
Depending on the file you receive (Eg if you receive back a micro file only write back to the micro)

Select write micro and then select the tune we sent you back:
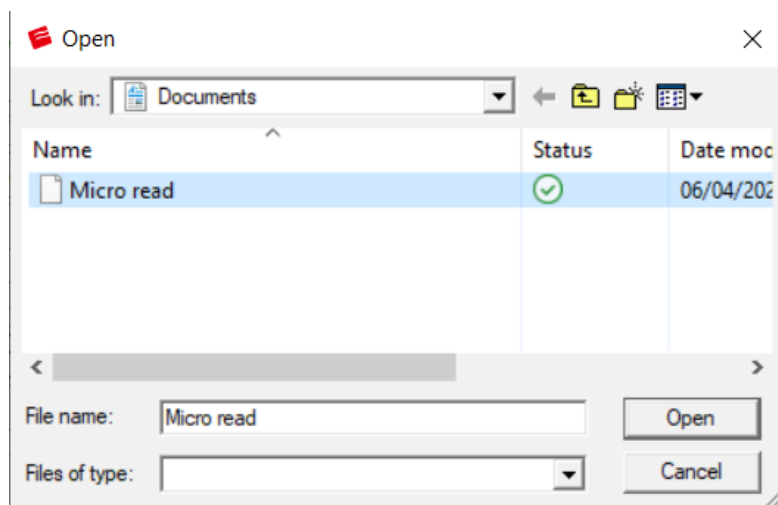
You need to select the file we sent you back on the viezu dealer portal.

You will get a popup about the power asking you to keep it on.
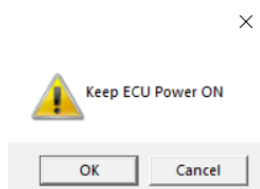
This means you need to ensure the multi-function cable is switched on. You may also be asked to turn it off at certain times, follow the on screen instructions as necessary.

After selecting OK allow the bar to fill up as the file is being written.

End means the vehicle is tuned. Click ok.

Troubleshooting & Frequently Asked Questions

Frequently Asked Questions

The vehicle is a push button start; how do I achieve ignition two?

If you are communicating with a touch button vehicle, you will need to have the key in the ignition, (or if it is a keyless card, the card will need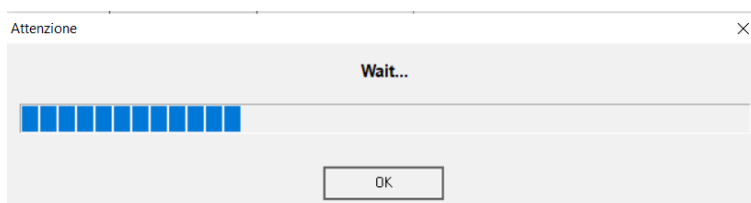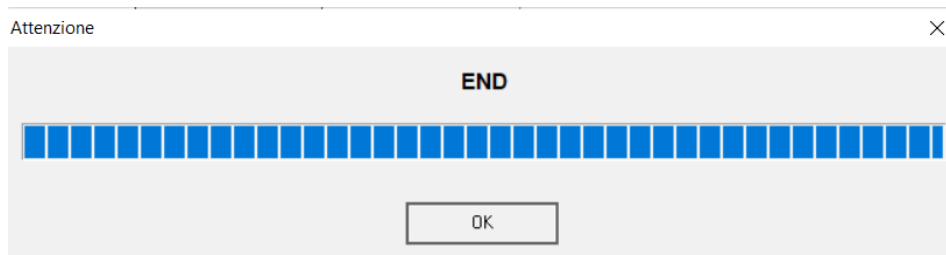 to be in the vehicle). Press and release the button once press and release again but do not hold as this will start the vehicle. All the lights should appear on the dashboard, and you should hear an acoustic sound from the dashboard, this is ignition two.

After clicking write all it says "checksum never supported continue?" what do I do?

This error means that the write all feature needs the check sum to be corrected manually. Files you get back from Viezu should always have this done for you so just click continue. If the file won't write due to a checksum error then let the Viezu technical team know and we will fix it for you. The best way to avoid this issue altogether is to use the specific sections of the file, the Micro, Flash and Eeprom.

The software shows a MASTER and a SLAVE option, why is this?

Some vehicles, for example Audi RS4's and R8's have two ECUS', one master and one slave. You will be prompted if this is the case on screen before you communicate to the ECU. Always remember to read the MASTER first and SLAVE second, save both with different names, by adding the word MASTER OR SLAVE to the end of the file name and to email both reads to us for modifications. Always remember to write the MASTER first and SLAVE second. <u>DO NOT START THE VEHICLE UNTIL YOU HAVE PROGRAMMED BOTH ECUs</u>.

Why do I need a battery stabilizer?

The unstable nature of a car battery especially as the ignition is turned on and off presents a potential danger to the transmission of data between the V-CONNECT tool and the ECU. Should the power fluctuate too intensely, the transmission of data over the cable may fail, partially transmit, or transmit corrupted data. This is the most common cause of failure during IDs, Reads and Writes. A stabiliser is used to guarantee a constant value for the voltage supplied by the power source. <u>DO NOT USE JUMP LEADS WHEN READING OR WRITING A VEHICLE.</u>

I can't find a Vauxhall on the vehicle list… where is it?

The majority of Vauxhall vehicles will be listed under Opel.

I keep getting the error message Error:126 libcrypto-3.dll how do I proceed?

KT200.exe   ✕

❌ Cannot load file libcrypto-3.dll
     Error: 126

                                        OK
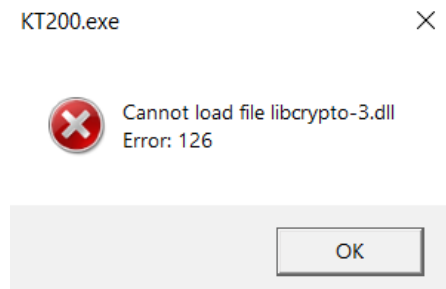
if you need to install Microsoft Visual C++ redistributable 2015 this error message appears.

In the file you can download for the Vconnect tool on our website: Viezu.com/software there are two files.

∨ Today (16)
   📄 vc_redist.x64.exe
   📄 vc_redist.x86.exe
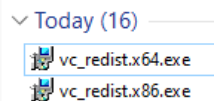
 If your computer is a 64bit architecture install vc-redist.x64.exe if you are on a 32bit operating system then install vc-redist.x86.exe. If you don't know then there is no harm in installing both. Open the Vconnect software again after installing these and you should find the issue is resolved, if it persists restart your computer. You can also get these files from Microsoft at: https://www.microsoft.com/en-gb/download/details.aspx?id=48145

Definitions (Glossary)

- **ECU** – It can vary from different Bosch, Siemens, or Delphi ECUs. It is not necessary for you to know this before tuning the vehicle however it is something that is worth making a note of for future reference.
- **ORI file** – An original file. An initial and unmodified read of a vehicle's ECU, sourced via the read operation of a Vconnect
- **Driver** – All ECU types are associated with a driver name. We will ask for this driver if you experience any problems when reading or writing.
- **KLINE/CAN** – The KLINE communications standard is an older means of communication using the Vconnect and an ECU. CAN is newer and more common. When given the option, the correction selection must be made for a vehicle.

Viezu Technical Team Contact Details

Emails are answered during both onsite and out of hour's operation times. Contact email addresses are:

desk@viezu.com

When contacting a team member directly please always cc the Technical Email Address. The Technical Email Address is copied to all members of the Technical Team; this will ensure your email is also seen in out of hour's service and picked up as soon as it is received.

Our operation hours are as follows (all times are UK)

For file service:

Monday - 07.00am to 21.00pm

Tuesday - 07.00am to 21.00pm

Wednesday - 07.00am to 21.00pm

Thursday - 07.00am to 21.00pm

Friday – 07.00am to 21.00pm

Saturday - 07.00am to 18.00pm

Sunday - 07.00am to 14.00pm

> **Commented [VT1]:** Confirm

During these hours our Service Level Times are **1 hour** from the receipt of the original file. The contact number for these hours is **+44 (0) 1789 774444**