Installation and Communications Problem Solving Guide

Version 1.6

INTRODUCTION

This document is intended as a guide for those who have purchased Nistune and despite reading all the documentation, are still having trouble getting started. You did read the documentation didn't you?

If not then please consider doing so. Just go to www.nistune.com and click on the documentation link. There's a lot of information there and it's worth your while setting aside some time and having a good read.

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1.   Problem Solving Flow Chart

Use the following flow chart to assist with sorting out connection issues

1. Are you able to connect to the vehicle using Nistune?

   YES – Question 14
   NO – Question 2

2. Have you selected the correct vehicle selection for the ECU you are using?


   YES – Question 3
   NO – Select the matching ECU part number in File > Select Vehicle. Check the Nissan ECU part number matches the part number (and description in the list)

3. Are you using a vehicle with a Nistune Type 1 board fitted to the ECU?

   YES – Question 4
   NO – Type 2 – Type 5 board ECU refer to Question 7

4. **Type 1 ECU:** Does Nistune recognise the Type 1 board? Vehicle must have ignition on for Windows to recognise the device. It will display the following error if the Type 1 board is not found:
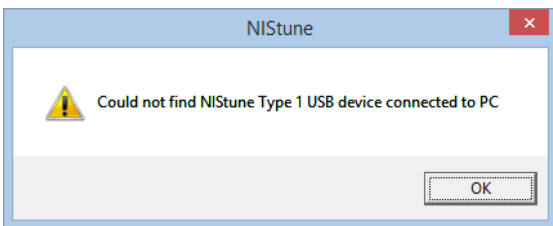

   YES – Board is recognised proceed to Question 6
   NO – Above error printed because board not found Question 5

5. Inside Control Panel > Device Manager is your Nistune board recognised? It will display as 'Nistune USB communications device' or 'Nistune Type 1 board'.
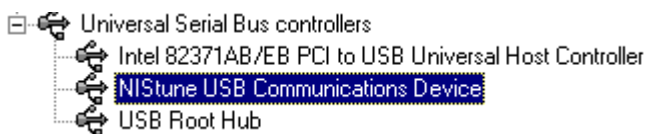
   YES – Make sure your Type 1 drivers are installed correctly. Refer to *Section 4.3 USB Drivers - Type 1 boards.* If installed correctly then refer to Question 6
   NO – There is a problem with the Type 1 board or the USB cable. Make sure your USB connector is fitted to the Type 1 board correctly and the board is installed correctly to the ECU. Windows cannot see the USB device. Try another USB cable if there is still an issue.
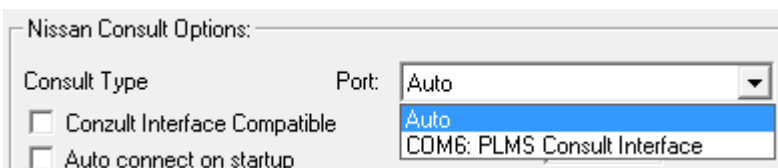
6. Do you get any other type of error message reported such as 'No data received'?

ECU connectivity error
No data received. Check connections
OK
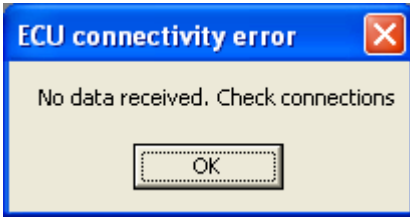
YES – Refer to Section *6.1 Type 1 boards* regarding limp mode. Also refer to *'Type 1 Nistune Diagnostics Document'* on the Type 1 hardware installation document page.
NO – Contact Nistune for further support with board information and any information which you can provide us.

7. **Consult with Type 3-5 boards:** Inside Nistune under File > Configuration > Nissan Consult Options > Port can you see your consult cable in the drop down list?

Nissan Consult Options:
Consult Type   Port: Auto
☐ Conzult Interface Compatible   Auto
☐ Auto connect on startup   COM6: PLMS Consult Interface

YES – Question 9
NO – Question 8

8. If the consult cable is not in the drop list then check if your cable is showing inside Control Panel > Device Manager and is installed correctly (with no errors)

Ports (COM & LPT)
PLMS Consult Interface (COM6)
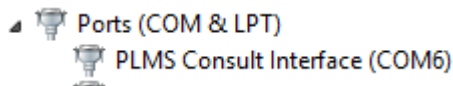
Is your cable a PLMS USB consult cable?

YES – Refer to *Section 7 Checking PLMS USB consult drivers* and make sure drivers are installed correctly. Note that each USB port installs its own set of drivers and assigns a different COM port.

NO – Refer to your manufacturers consult cable instructions and check that their cable works with their supplied consult software before trying it with Nistune

9. Is your consult cable a PLMS USB consult cable?

Nissan Consult Interface
PLMS Developments   USB
PWR Tx Rx
www.plmsdevelopments.com

YES – PLMS Cable: Make sure that when your cable is plugged into your laptop the RED LED is lit. When you attempt connection to the ECU the green 'Rx' light should flicker.

Proceed to Question 10

NO – Check that the cable works on your vehicle or another Nissan vehicle where available to check their cable works with their supplied software before attempting to use it with Nistune

10. Does the Rx light on the PLMS consult cable flicker when you attempt to connect?

   YES – Question 11
   NO – There is no Rx light activity when connecting to the consult COM port in Nistune. Contact PLMS Developments regarding the cable

11. Does the orange Tx light on the cable respond to the green Rx light flicker when attempting to connect?

   YES – Check that the correct vehicle has been selected inside Nistune. If the Tx light is flickering then the ECU is responding to communications and Nistune should be connecting
   NO – Question 12

12. Does the vehicle have a Nistune board installed?

   YES – Question 13
   NO – Check the ECU wiring. Has the vehicle had an engine transplant or any rewiring of the communications port? There may be an issue with the wiring preventing connectivity to the standard ECU. Try another Nissan vehicle where possible. Refer to *Section 4.6 Consult port wiring issues.*

13. Were you able to connect to the ECU prior to the Nistune board being installed or able to connect to another Nissan with the consult cable?

   YES – Check that your ECU is operating correctly and not running limp mode
   - *Section 6.2 Type 2 boards*
   - *Section 6.3 Type 3 boards*
   - *Section 6.4 Type 4 boards*

   Note: If the ECU is an ER34/WC34 RB25DET and the ECU experiences a disconnect the vehicle may require a power off, wait, power on sequence to restart the ECU. You will then be able to reconnect to the vehicle.

   NO – Contact PLMS about the consult cable connectivity issues

14. **Consult Initially Connects:** Are you experiencing disconnection issues after initial connection is established?

   YES – Question 15
   NO – Ensure you have selected the correct vehicle inside Nistune. If correct vehicle is selected make sure for Type 3-5 ECUs that you have moved the ECU jumper to external board mode. If this has been moved, restore the ECU to factory mode and remove the board and retry connecting. Refer to your installation manual for the ECU jumper positions. Otherwise contact Nistune for further support

15. Does the vehicle disconnect after cranking or during high RPMs but maintains a connection with ignition switched on but engine not running?

   YES – Electrical noise associated with engine operation is triggering interference with consult communications to the ECU. Refer *Section 5 Consult Dropping Out*.
   NO – Check your consult cable. Wiggle the consult cable wires whist connected. If the connection drops when the cable is moved then replace the cable. Otherwise contact Nistune for further support

2. Limp Home mode

Nissan ECUs all have some sort of limp home capability built in. The type of limp mode depends on what is occurring with the ECU

Sensor limp mode

In the cases where AFM signal is not present, a default AFM value (enough to allow the vehicle to rev upto 2000rpm before leaning out the engine) will be used. Where the coolant temperature sensor is not present, a default temperature value will be used in the tables indexed by temperature. Similarly other sensors will use default values when their inputs are not valid

Missing or out of range signals will be reported to the user via the consult Diagnostic Terminal Codes available inside Nistune as well as via the diagnostic LEDs (where available on the ECU).

Processor limp mode

Later model ECU's have an internal processor limp mode also. When the program from the ECU chip or daughter board is not functioning, an auxiliary processor will inject a set pulse width for each injection regardless of other sensor inputs and ECU program. When in limp mode, this will be indicated to the operator through the means of a LED in the ECU or the

Note: Earlier model ECU's such as the older JECS style used in R31, Z31, S12 etc ECUs only have a single processor and do not support processor limp mode. Later model ECUs such as ER34 Skyline and WC34 Stagea do not have processor limp mode. The ECU will be unable to function at all if there is a problem and the vehicle will not start.

Processor limp mode is entered when a major fault has occurred. Major faults occur with anything to do with the ECU micro code being unable to run. This can be a result of the various factors where the processor is unable to execute the code properly. If it occurs after resoldering and resoldering then there may be an introduced problem causing the ECU to go into processor limp mode.

The processor bus on any ECU consists of 8-16 data lines and 16 address lines plus control lines. If any of these lines is broken or shorted during the installation process, it will stop data flowing correctly on the lines and the ECU will not be able to run properly.

Symptoms vary depending on engine (specifics covered in the relevant section for each engine) but one thing is constant across all engines – Consult communications will NOT be active in limp mode. So you will not be able to connect to it.

3.   Trouble starting engine – some tips

The golden rule here is that if the engine isn't starting (or starts and runs very badly) then don't keep trying. Work out what the problem is or you'll cause yourself extra trouble. EFI engines will become flooded with fuel very quickly if they are continuously cranked and the fuel is not ignited. This is a real trap. Because the spark plugs become wet with fuel - so even after the fault is fixed the engine won't fire. So if you've had trouble and the engine has been cranked for awhile then pull the plugs. If they smell strongly of fuel then dry them out before continuing.

If the engine has been starting but is running very poorly or in limp mode then it's very easy to foul the plugs. Usually the engine will run worse and worse until finally the plugs won't ignite the mixture any more and the engine stops. When the plugs are removed they'll be black with carbon, which can be cleaned off and away she'll go again. The tip here is the same as for wet plugs – if it's not running right then don't keep trying as you'll only make things worse!

4.   Consult Connection Issues

If you can't connect to consult, there are a few reasons why this might happen:

4.1   Limp Home Mode

If the ECU has gone into limp mode then communication with ECU will not be possible (see section **Error! Reference source not found.**). Make sure the ECU is not running in limp home mode and revert to factory ROM installation if necessary to try and get the vehicle running first, and in the case of Type 2 - 4 boards a working consult connection prior to using the daughter board
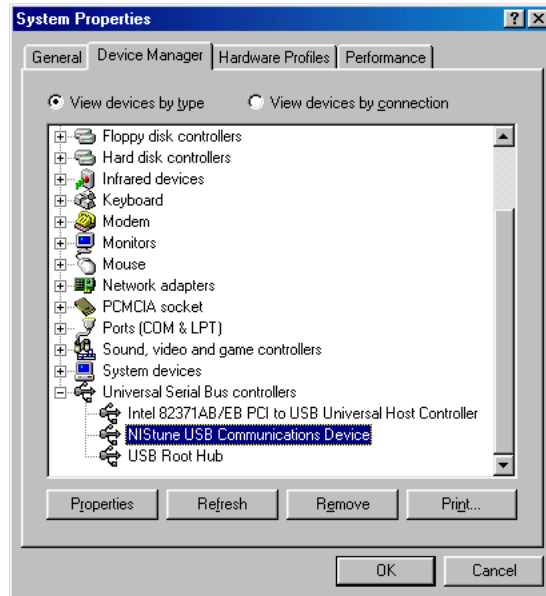
4.2   USB Drivers

If the drivers have not been installed correctly then Nistune will be unable to see the cable or the vehicle. At the end of installing Nistune ensure that you have ticked the driver installation
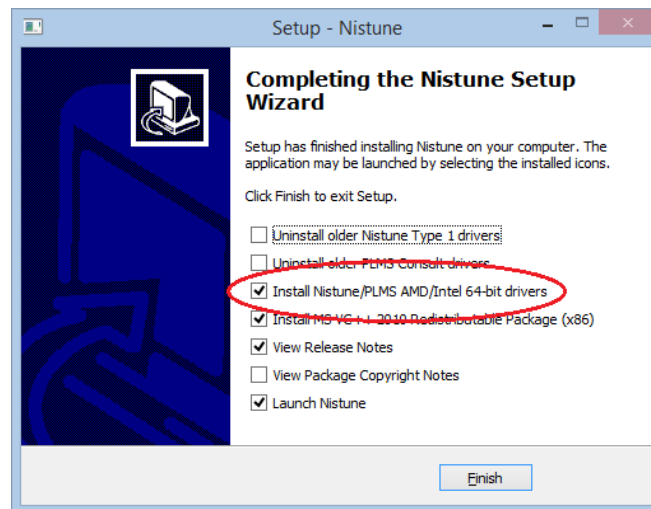
4.3   USB Drivers - Type 1 boards

If you are using a Type 1 board and Nistune tells you that the drivers haven't been installed correctly then you will not be able to connect. It is necessary to install the drivers prior to connecting to your vehicle.

Reinstall Nistune and ensure the tickbox for drivers has been ticked. Inside Control Panel > System > Device Manager > Universal Serial Bus Controllers you should see 'Nistune USB communications device'

4.4 USB Drivers - Consult cable (Used with Type 2 - 4 boards)

If you're using a PLMS USB Consult cable and the drivers have not been installed correctly then no communications will happen until this is fixed. It's easy to check if it's a USB driver issue - the laptop will not be able to communicate with the cable at all

When you hit "Consult" in Nistune you should see the green LED blink briefly. This is the information going from laptop to ECU. If there's a driver problem then you won't see the green LED flash as Nistune will not be able to access the COM port of the laptop. Driver installation instructions are provided with the Consult cable but are also available at www.plmsdevelopments.com/usb_drivers.htm.

To check if your drivers have installed correctly just go to My Computer - Control Panel - System - Hardware - Device Manager, Ports. If all is well you should see "PLMS USB Consult Cable" in the list of ports. If either of these devices has an exclamation mark (!) against them then you will need to reinstall the drivers for the cable. Do this by double clicking on the device and then click the Driver tab and reinstall the driver.
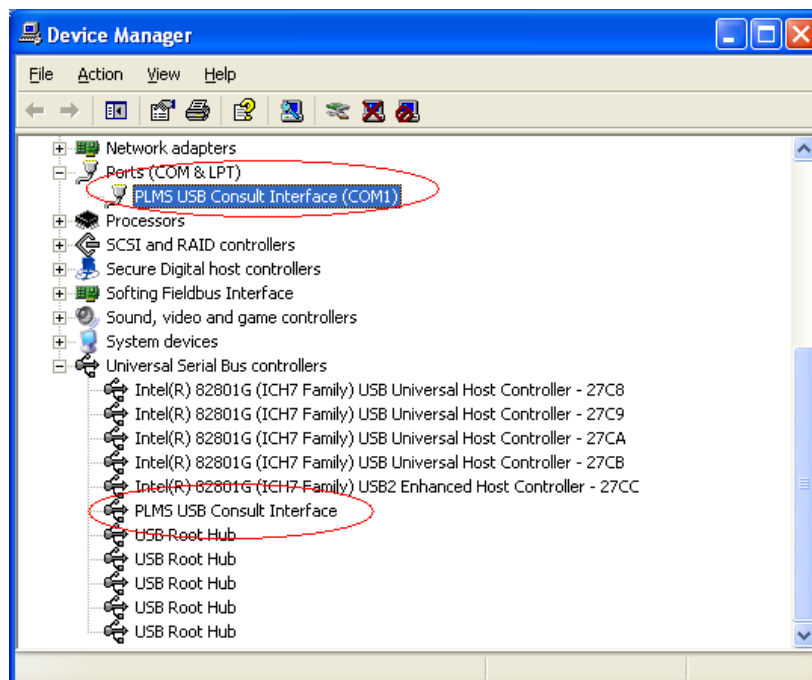
4.5   Incorrect Vehicle Selected

You must have the correct vehicle selection (address file) for your engine loaded in Nistune. Address files are included with Nistune and depending on connection type are usually determined when connecting to your ECU. File > Select Vehicle and make sure you have selected the correct vehicle you are trying to connect to.

4.6   Consult port wiring issues

Some customers have had situations where the consult port does not function in their vehicle. This may be due to engine transplant, bad wiring or other reasons.

For the consult port to function you must have the TX (Transmit), RX (Receive), CLK (Clock), Ignition (12 volts) and Ground wires going to the consult plug from the ECU

Most engine transplants do not wire the ECU loom into the instrument loom correctly, if at all. This means that the consult lines which go via the instrument loom to the consult plug (normally near the fusebox or streering wheel panel area) **are not connected**.

Refer to our **Nistune MAF and ECU Wiring** document on the Nistune website under Support > Documentation > General Documentation for wiring details.

Note that later model vehicles including ER34 GTT, R34 GTR, N15 SR16 etc do not have CLK lines going to the consult port. If you transplant into a vehicle without the CLK line then you will need to splice the CLK line into the ECU plug and wire either to the consult plug via the instrument loom, or preferably cut and remove the consult plug and wire directly into the ECU loom.

To check the consult plug, use a multimeter in continuity mode. Images on the next page show the various connectors for ECUs and lines that go to the consult plug

The consult 12V and ground lines must show power on the meter when the ignition switch is turned on.

5.   Consult Dropping Out

(a) Disconnects randomly
(b) Disconnects when RPMs are high
(c) Disconnects during starting

5.1   Problem

You may have electrical noise from the vehicle gets into the Type 1 USB cable or your consult cable, that so much noise occurs that it disconnects the laptop.
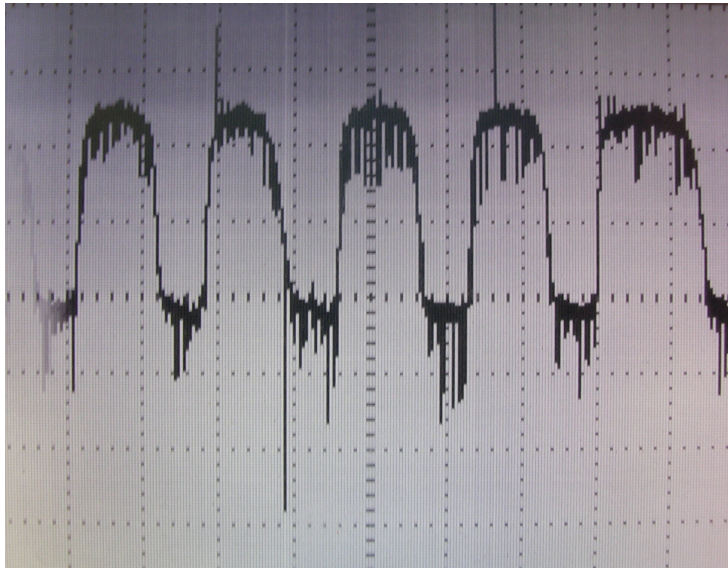
USB Communications scope trace showing noise

Electrical noise is generated by the engine, ignition system and also injectors. It feeds back through the signal lines back to the ECU. However the ignition system is grounded via the plugs to the engine and the injectors to the ECU.

That electrical noise is getting into your laptop from the ECU causing the disconnects via the USB bus. This can occur with Type 1 boards or using a USB Consult cable with Type 2-5 boards.

5.2   Background

We have followed the design rules for USB with appropriate filtering and grounding. The USB bus is differential line pair, which means that if a spike enters the cable then both lines should rise/fall at the same time. However get too much noise and start getting a differential difference and then you start to lose data

The higher the RPMs, the more electrical noise that you get. I measured the USB lines with a scope and noted this as RPMs it increases so does the noise (ignition noise can feedback through the system)

Put a lot of noise in continuously and no data can get over the bus (communications will fail and windows will fail to read the device any more). This is when you get the Nistune disconnect

With Type 1 boards we have added filtering and decoupling capacitors for a start, but that's not enough. Nistune software has had extra features added to effectively drop and reconnect the device in the event of serious communication issues. PLMS cables have been designed with extra filtering circuitry to smooth out noise spikes at various frequencies and are more effective than other consult cables on the market. Use a cheaper cable and you may experience more communications issues.

5.3   Solutions

These solutions are from discussions with many customers and workshops over the years who have had these issues. Many are caused by a problem with the vehicle which was unnoticed otherwise and the majority of connection issues are in vehicles which have had engine transplants!

Check list:

• Sufficient grounding of engine to chassis, chassis to battery and ECU to chassis are required. The grounding absorbs the majority of electrical noise. Your path of grounding should be from:

  (a)   Battery to engine block
  (b)   Battery to chassis
  (c)   ECCS grounding wires to plenum (which then go back to ECU)

  Take note of these in particular installations where battery in boot relocation is noted to cause problems and grounding battery to chassis only (and not directly to engine) is not sufficient for suitable grounding required to maintain a stable connection

• Check all grounding points are clean and secure for these items. Remove the connectors and use a wire brush or fine and paper to clean the terminals/connectors and the areas they bolt to.

• Note your battery voltage reported by your gauges and consult in Nistune. If there is a significant drop between reported voltage at the ECU and what you measure directly at the battery terminals then you may have an issue there.

• Check the ECU earthing connection. This normally bolts to the top of the plenum on the engine from the engine loom.

• Check the ignition system capacitors in your loom in the engine bay are clean and secure as these absorb the spark signal

• Check and clean distributor cap points and button

• Check ignition system high tension leads and low voltage wiring going to coil and power transistors or coil packs

• Check voltage from alternator and check monitor if it goes low or drops down under load. The battery will hold 12 volt power normally and the alternator will usually maintain 14 volt DC power to the vehicle. Problems with the battery will result in the voltage dropping under 14 volts under low engine speed. Problems with the alternator will result in the vehicle voltage not reaching 14 volts when the engine has been running

• Check the alternator for reverse voltage or Alternating Current. This indicates a problem in the diodes used by the alternator when it converts Alternating Current to Direct Current. Using a volt meter in AC setting or scope to monitor for reverse voltage spikes may assist in diagnosing an issue with the diodes.

• Using an AM radio not tuned to any particular station has been useful in assisting some people locate sources of electrical interference with their vehicles. As the static of the radio increases around particular components, it indicates a potential source of electrical noise which may be affecting your communications

• Use a clip on ferrite core which connects around the USB lead and use a shorter USB cable. These are available from electronics shops such as Jaycar Electronics.

- Make sure ECU is installed to chassis and that the USB connection for Type 1 board is mounted to the frame of your ECU and your ECU is firmly grounded to the chassis. The electrical noise should be absorbed via the chassis

- If still having problems with the laptop on Type 1 boards, try running from battery only and then also try grounding USB point going into laptop (ie shield) to an earthing point such as cigarette lighter ground

A properly grounded vehicle will not disconnect. I found during my testing that particular laptops were prone. My newer Dell Inspiron and Vostro laptops never miss a beat on my Type 1 RB30 but with my last car the older dell latitude would suffer the issue you saw until I grounded the ECU and laptop itself to the chassis to absorb the noise going into the chassis.

5.4   USB Driver Tweaking Solutions

If after doing the above you are still having disconnects on the PLMS and Blazt USB consult cables that use the FTDI USB chip, you can tweak the latency settings in the drivers which have been reported to work well by some users who have provided us with feedback.

1. Go into Device Manager and select properties on the USB COM port matching your USB consult cable

2. Click on 'Port Settings' tab
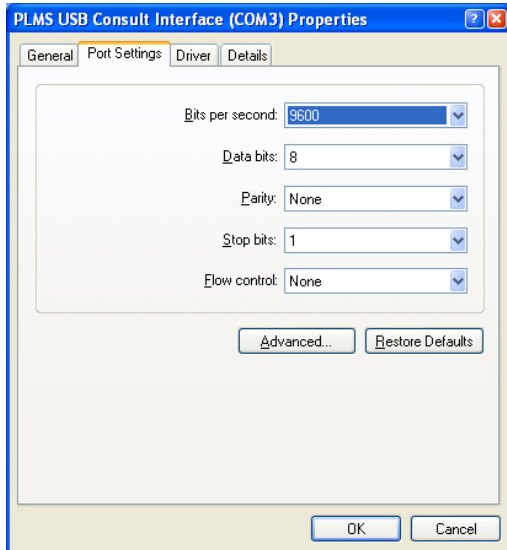
3. Click on Advanced and change the Latency Timer (msec). Based on user feedback try experimenting with values between 5 and 50+ msec. The less latency means that frames may overlap on slower machines but on faster machines the data may take too long.
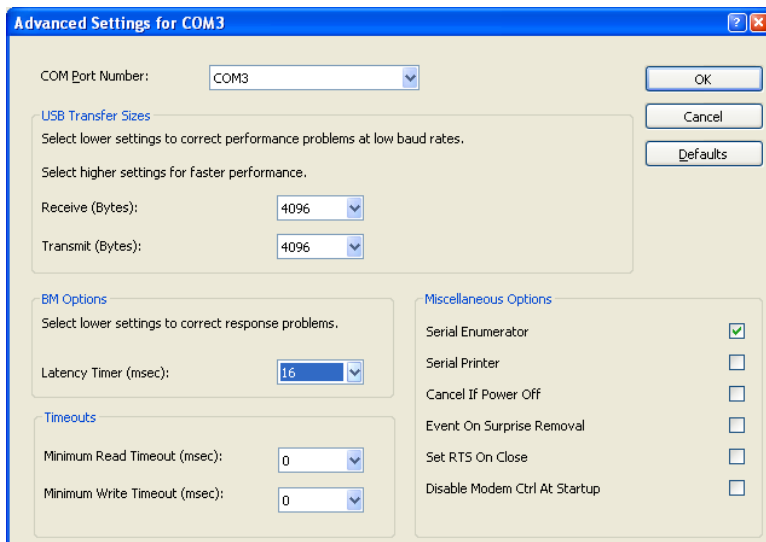
6. Checking ECU functionality

6.1 Type 1 boards

Check section 4 if you can't connect to your ECU.

Signs of limp mode on common ECUs:

1)   CR31 RB30, VL/VLT RB30ET, S12 CA18, Z31 VG30

- Both ECU LEDs will either stay lit or pulsate
- Fuel pump may pulsate or stay on continuously.
- Will not be able to connect to the ECU.
- Vehicle will not start whilst trying to crank

2) S13 CA18DET

- ECU LEDs will be off or both LEDs will pulsate
- Fuel pump may stay off or pulsate or stay on continuously.
- Will not be able to connect to the ECU.
- Vehicle will not start whist trying to crank

3) S13 KA24E

- ECU LEDs will be off or both LEDs will pulsate
- Fuel pump may stay off or pulsate or stay on continuously.
- Will not be able to connect to the ECU.
- Vehicle will not start whist trying to crank

2) J30 VG30E
- ECU red LED will either stay lit or both LEDs will pulsate
- Will not be able to connect to the ECU.
- Vehicle may start in limp mode but will not rev above 2000rpm without leaning out

3) A31 RB20DET

- ECU red LED will flash or both LEDs will pulsate
- Will not be able to connect to the ECU.
- Vehicle may start in limp mode but will not rev above 2000rpm without leaning out
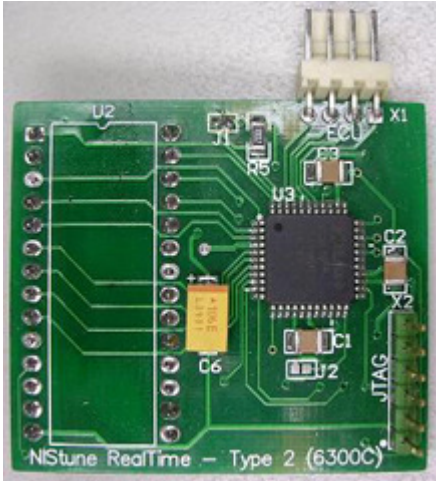
These ECUs will typically go into limp mode or stop working when:

(a) Socket is not correctly soldered
(b) Post install damage to pads tracks on ECU
(c) Jumpers have not been shifted correctly
(d) Connector is not correctly installed
(e) Incorrect ROM image loaded on board

Diagnosis

• If you have these problems then try fitting the factory chip back where the board is currently installed and see if the above problems still occur. If so then you may have a problem with your resocketing. If the ECU does not run when the factory chip is installed correctly, then you need to check the soldering of the 28 pin socket in your ECU.

• For earlier model dual ROM chip ECUs where jumpers needed to be changed, check you have changed the jumpers as instructed for your ECU in the Type 1 manual.

• Soldering of 28 pin socket. Clean flux from all joints and inspect each joint using an eyeglass and a good light. In particular look for solder bridges between pins. Look for any cracks in tracks caused by pushing to hard with the desoldering gun.

• If you only have problems with the Nistune board installed check the 4 way CPU ribbon cable – this connects the Nistune board to some control signals in the ECU. Check you have the correct wires soldered to the CPU and they are in the correct order as per the Type 1 manual.

• Then check the correct plug is pushed into the socket connectors on the Type 1 board. The CPU cable plug should be on the X1 connector and the USB cable plug should be on the X2 connector.

• Then check pins on the Nistune board to make sure they have not been damaged during fitting. You will need to remove the board to check. Be careful not to damage the pins during removal! Use a flat blade screw driver between the board and socket and carefully pry underneath being careful not to damage parts on the Nistune board, lifting at the edge and rock the board so it carefully removes without bending the pins and causing further damage!

• Check the ECU part number written on the board matches your ECU where possible. We program and test the boards prior to sending so we know each board works correctly when you receive it

• You can next check continuity of the CPU connector from where it is soldered from the ECU into where the connector plug solders into the Nistune board. This will verify each crimp connection on the connector is conducting electricity.

6.2   Type 2 boards

Check section 4 if you can't connect to your ECU.

Signs of limp mode on common ECUs:

1) R32 RB20DET, BNR32 RB26DETT

- ECU red LED and Exhaust Warning Light on dash will flash on / off
- Will not be able to connect to the ECU using consult
- Vehicle may start in limp mode but will not rev above 2000rpm without leaning out

2) Z32 VG30DE/DETT, M30 VG30E

- ECU red LED and Check Engine Light (CEL) will stay on
- Will not be able to connect to the ECU using consult
- Vehicle may start in limp mode but will not rev above 2000rpm without leaning out

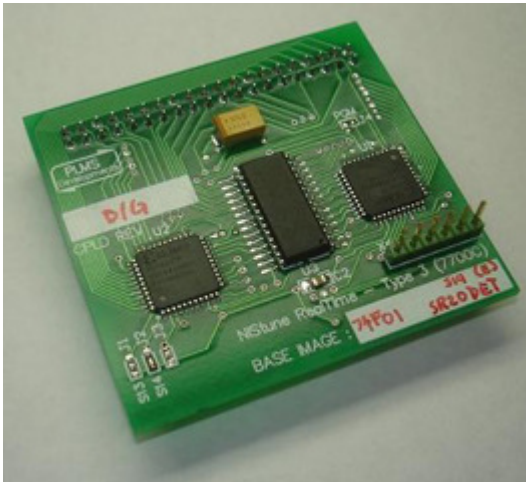These ECUs will typically go into limp mode or stop working when:

(a) Socket is not correctly soldered
(b) Post install damage to pads tracks on ECU
(e) Connector is not correctly installed
(d) Incorrect ROM image loaded on board

Diagnosis

- If you have these problems then try fitting the factory chip back where the board is currently installed and see if the above problems still occur. If so then you may have a problem with your resocketing. If the ECU does not run when the factory chip is installed correctly, then you need to check the soldering of the 28 pin socket in your ECU.

- Soldering of 28 pin socket. Clean flux from all joints and inspect each joint using an eyeglass and a good light. In particular look for solder bridges between pins. Look for any cracks in tracks caused by pushing to hard with the desoldering gun.

- If you only have problems with the Nistune board installed check the 4 way CPU ribbon cable – this connects the NIStune board to some control signals in the ECU. Check you have the correct wires soldered to the ECU board in the correct order as per the Type 1 manual. Pin 1 is marked on the connector plug in small wiring (purple wire)

• Then check pins on the Nistune board to make sure they have not been damaged during fitting. You will need to remove the board to check. Be careful not to damage the pins during removal! Use a flat blade screw driver between the board and socket and carefully pry underneath being careful not to damage parts on the Nistune board, lifting at the edge and rock the board so it carefully removes without bending the pins and causing further damage!

• Check the ECU part number written on the board matches your ECU where possible. We program and test the boards prior to sending so we know each board works correctly when you receive it

• You can next check continuity of the CPU connector from where it is soldered from the ECU into where the connector plug solders into the Nistune board. This will verify each crimp connection on the connector is conducting electricity.

6.3   Type 3 boards

Check section 4 if you can't connect to your ECU.

Engine running badly is defined as engine may start but idle will be poor and engine will overfuel badly, resulting in obvious clouds of partially burnt fuel coming from exhaust. Engine may not run at all if injectors and/or AFM are non-standard. May lean out when rev exceed 2000rpm

Signs of limp mode on common ECUs:

*   Check engine light and/or ECU LED will stay on
*   Will not be able to connect to the ECU using consult
*   When IGN is turned on fuel pump will only pulse on momentarily rather than running for 3 to 5 seconds.
*   Engine will not run correctly. Engine may start but idle will be poor and engine will overfuel badly, resulting in obvious clouds of partially burnt fuel coming from exhaust. Engine may not run at all if injectors and/or AFM are non-standard. May lean out when rev exceed 2000rpm

If you've performed the NIStune board install yourself and the ECU has gone into limp mode then please check the following:

*   Soldering of 20+20 header. Clean flux from all joints and inspect each joint using an eyeglass and a good light. In particular look for solder bridges between pins and slugs of solder on the ECU
*   Check that tracks have not been cut by pushing too hard on the desoldering gun
*   Check that you have moved the necessary jumper(s) for the ECU to use the daughter board
*   Check the part number on your board matches your ECU number when possible

If you are still having problems then remove the daughter board, and put the ECU jumper back to factory position. Check that the ECU functions as normal with the jumper in factory position and just the header pins soldered in.

Remember, we test every board in an ECU before shipping, so we check the board works before posting them out to you

6.4   Type 4 boards

Check section 4 if you can't connect to your ECU.

Engine running badly is defined as engine may start but idle will be poor and engine will overfuel badly, resulting in obvious clouds of partially burnt fuel coming from exhaust. Engine may not run at all if injectors and/or AFM are non-standard. May lean out when rev exceed 2000rpm

Signs of limp mode on common ECUs:

•   Check engine light and/or ECU LED will stay on
•   Will not be able to connect to the ECU using consult
•   When IGN is turned on fuel pump will only pulse on momentarily rather than running for 3 to 5 seconds.
•   Engine will not run correctly. Engine may start but idle will be poor and engine will overfuel badly, resulting in obvious clouds of partially burnt fuel coming from exhaust. Engine may not run at all if injectors and/or AFM are non-standard. May lean out when rev exceed 2000rpm

If you've performed the Nistune board install yourself and the ECU has gone into limp mode then please check the following:

•   Ensure that the connector has been soldered in the correct direction! This is designated by pin 1 on the adaptor board having a square pin. This should like up to pin 1 on the ECU connector pads. The adaptor board should face correct orientation such that the adaptor board fits correctly to Type 4 board when installed in the ECU.
•   Desoldering of the pads and soldering of the connector is a delicate job. Ensure that all holes are open before inserting the connector cable. Ensure that none of the cable wires bend when inserting into the ECU pad holes. When soldred, make sure that solder has flowed right through. Check the end pins have soldered to the top side of the ECU
•   Check that tracks have not been cut by pushing too hard on the desoldering gun
•   Check that none of the connector strip wires have broken through too much bending on the adaptor board
•   Check that you have moved the necessary jumper(s) for the ECU to use the daughter board
•   Check the part number on your board matches your ECU number when possible
•   Use a multimeter in continuity mode to check adaptor pin from the board to the ECU
•   Make sure that solder has flowed all the way through the solder pads. Check the joints from the top. If the iron is not hot enough then use flux and a small part of solder to heat from the top without melting the strip plastic

If you are still having problems then remove the daughter board, and put the ECU jumper back to factory position. Check that the ECU functions as normal with the jumper in factory position and just the header pins soldered in. Remember, we test every board in an ECU before shipping, so we check the board works before posting them out to you

7. Checking PLMS USB consult drivers

To check if your drivers have installed correctly just go to My Computer - Control Panel - System - Hardware - Device Manager, Ports. If all is well you should see "PLMS USB Consult Cable" in the list of ports.
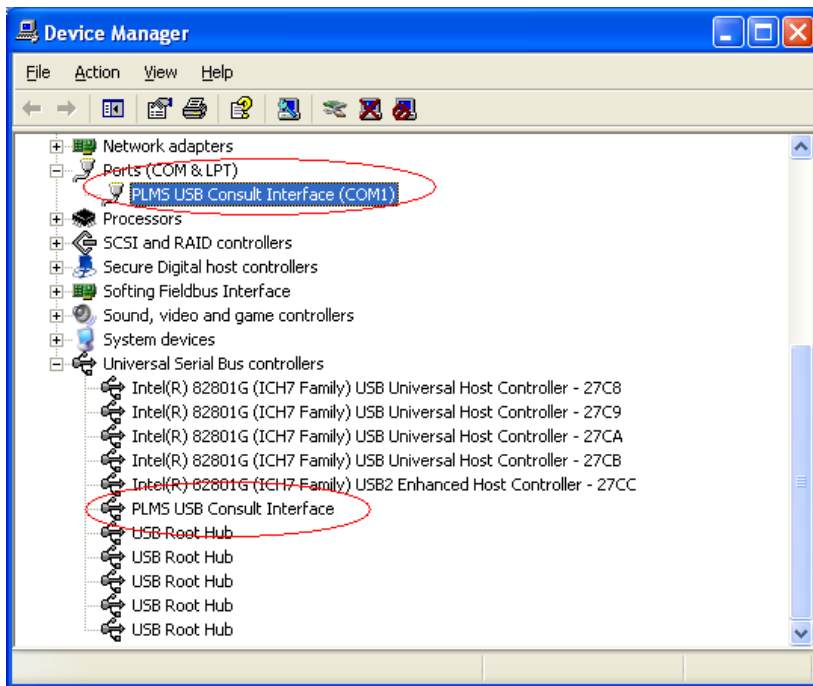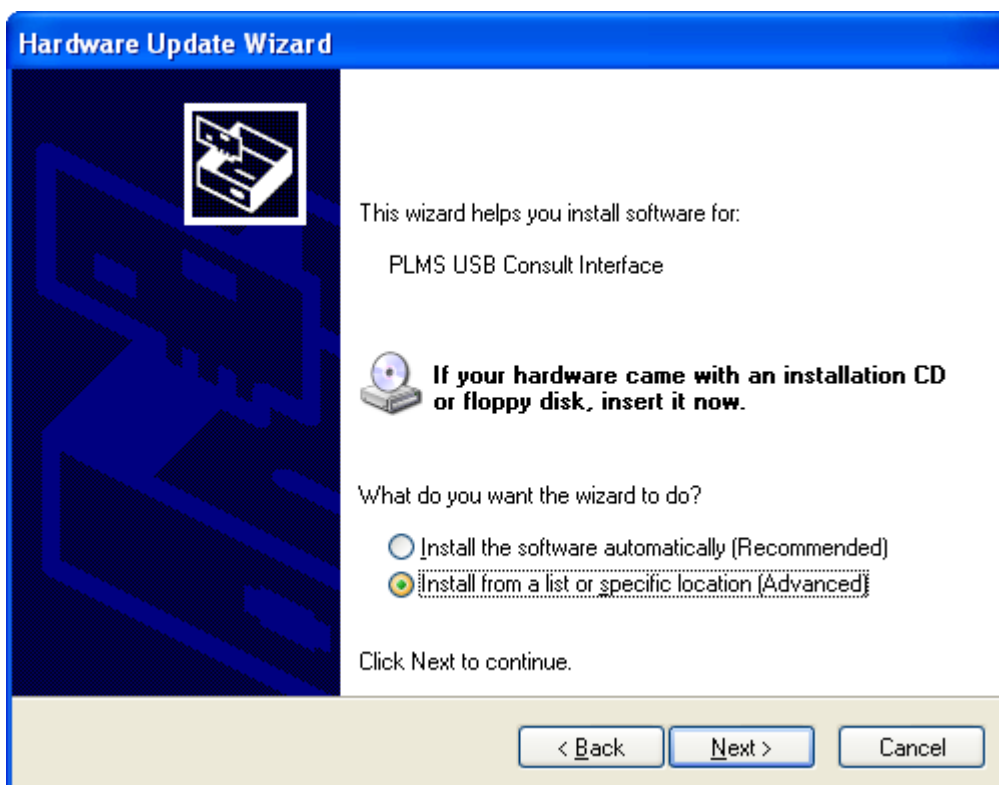

If either of these devices has an exclamation mark (!) against them then you will need to reinstall the drivers for the cable. Do this by double clicking on the device and then click the Driver tab
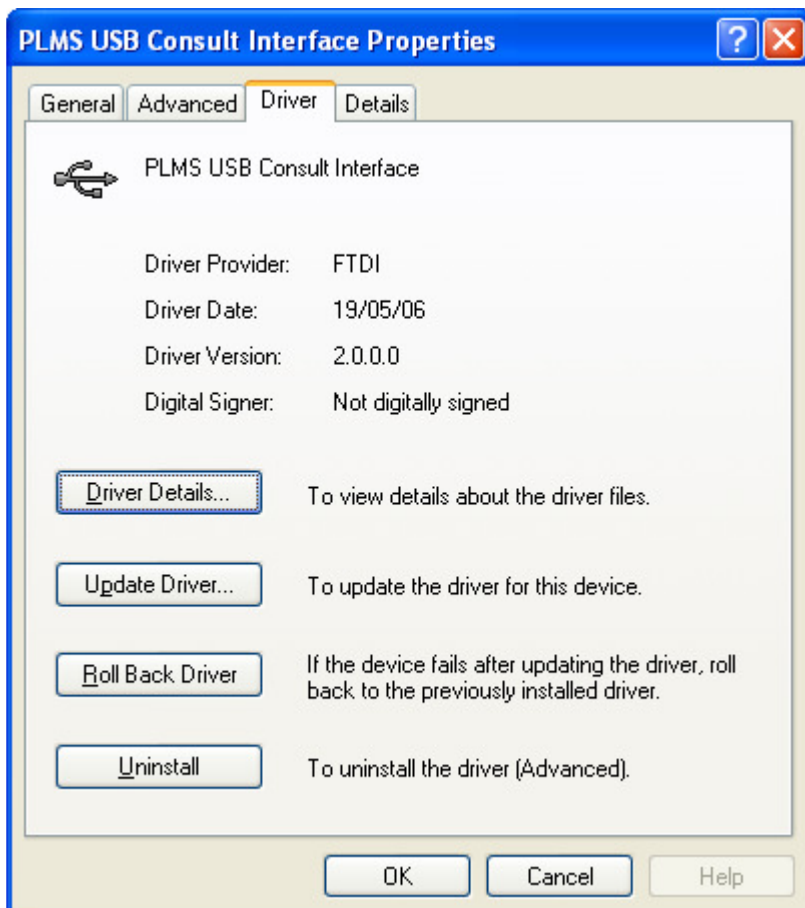
Click Update Driver

Click 'No' for searching the computer

Click 'Install from a list or specific location'

Drivers are located in the following folders when you install Nistune
(Depending on the version of windows you are running)

C:\Program Files\NIStune\FTDI_Win2K_XP_Vista_Drivers

C:\Program Files (x86)\NIStune\FTDI_Win2K_XP_Vista_Drivers
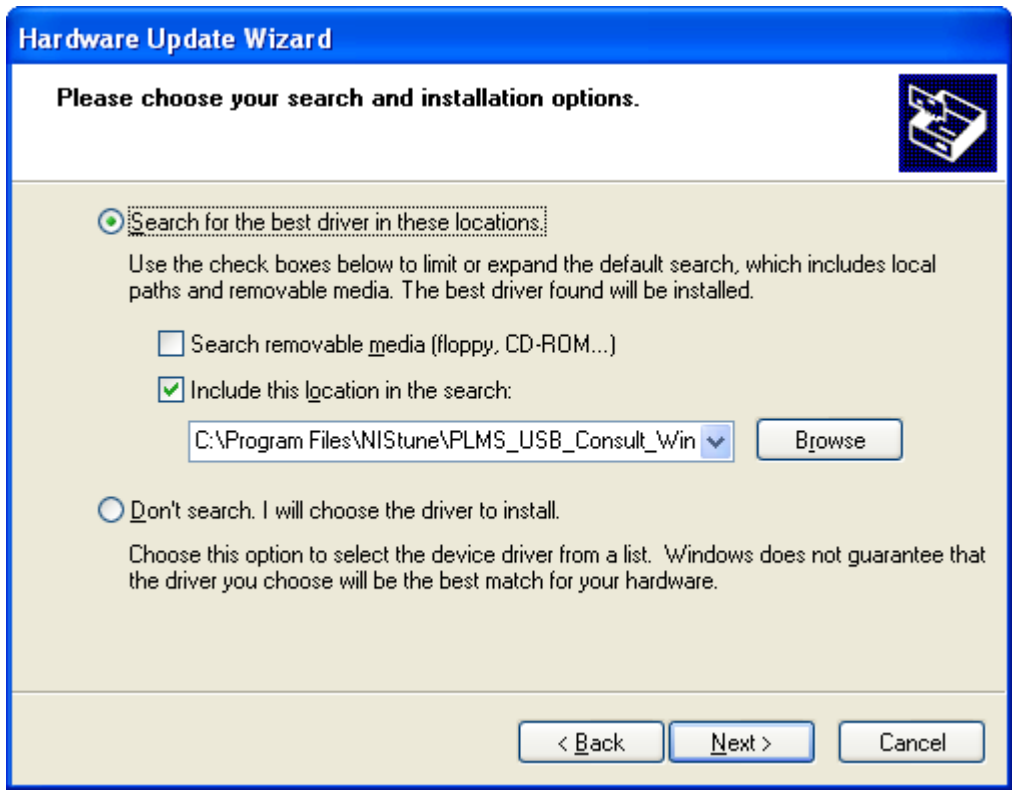
After these steps the driver should be installed, and once this procedure is performed for both the USB portion and the COM port portion of the 'PLMS USB Consult Interface' it should be able to work

REVISION HISTORY

DATE	VERSION	DESCRIPTION	AUTHOR
16May08	1.0	Document Creation	PL
20Apr09	1.1	Rehash of existing document. Added specifics	MB
21Jun10	1.2	Added consult cable latency workaround	MB
22Jun10	1.3	Updates based on user feedback for latency	MB
27Mar12	1.4	Updates on more user feedback	MB
3Apr12	1.4.1	Update consult power information	MB
8Apr14	1.5	Updates on further updated information	MB
8Jun14	1.6	Added diagnostic flow chart. Fixed heading formats	MB

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