Vision5 Junior

Getting Started Guide

Pc Hardware/Software Requirements

To run correctly, Magneti Marelli Vision5 Junior software needs a PC with the following HW/SW features:

- RAM: 1024 Mb
- Video graphics card: 1024 x 768 (or higher)
- Optical device reader: DVD
- Connection ports: USB or serial RS-232
- Software internet: Explorer 6 (or higher)
- Lan communication Line (ethernet), or CAN card, or Blue Tooth key
- Operating System Windows: 2000/ XP/ XP SP2/ Vista
- PC Administrator rights

Installation

First time installation

1. Run setup.exe from the installer package.
2. Choose the install path where to install Vision.
3. After completion, run Vision.

Version Upgrade

1. Close Vision.
2. Run setup.exe from the installer package.
3. Select Update/Repair then continue.
4. If at the end of the installation a reboot of the PC is prompted, please carry it out otherwise some components will not be installed correctly.

To avoid this situation, please carry out the following procedure before installation.

1. Open Task Manager and check if any Vision process is still running.
2. End any such process.

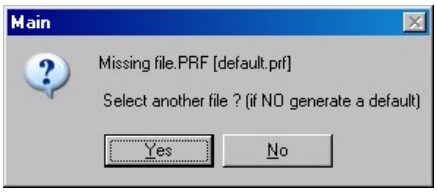
How to change the path where Vision is installed

1. Close Vision.
2. Run setup.exe from the installation package.
3. Select Remove then Continue.
4. When uninstall has completed, run setup.exe again and proceed like for first time installation.

System files

Some system files are needful to execute Vision5 Junior. Some other system files are necessary for executing specific functions. The extensions and functions of these files are as follows:

- ***.BIN**, contains information about *Client* and *habilitation level*. The full file name can be **SUPERU.BIN** or **LICENSE.BIN**.
- ***.LPS**, contains information about ECU device components and their functional/operating characteristics.
- ***.PRF**, preferences file that stores Vision5 general settings.
  This file it's no strictly needed at first Vision5 run: just select *No* in window that Vision5 displays at first run (as shown in following figure), and the file will be automatically created with default settings.



.BIN file must be in the same directory of Vision configuration files to be loaded (.CFG), or in the directory of application .exe file.

.LPS file can be in any directory.

For ease of use, it's recommended to keep .BIN and .LPS files in the same directory of Vision5 configuration files to be loaded.

Hardware devices and features

Hardware devices that can be used with Vision5 are ECUs.

Using Vision5 Junior is possible to:

- display on PC data from running ECU devices.
- calibrate ECU devices.

Connecting hardware devices to PC

Several types of communication lines can be used to connect Vision5 to ECU devices:

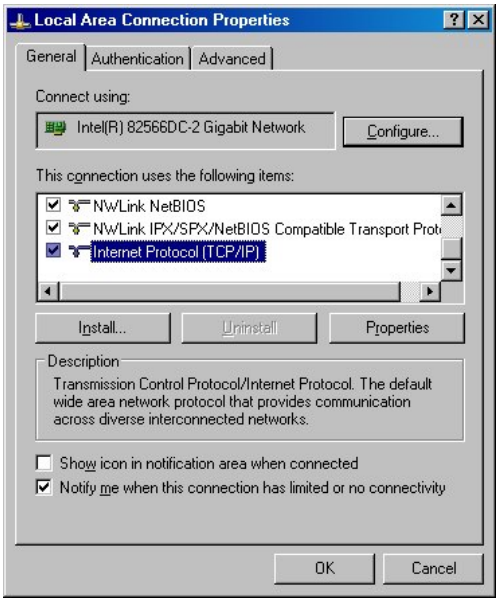
- Ethernet,
- CAN,
- Blue Tooth.

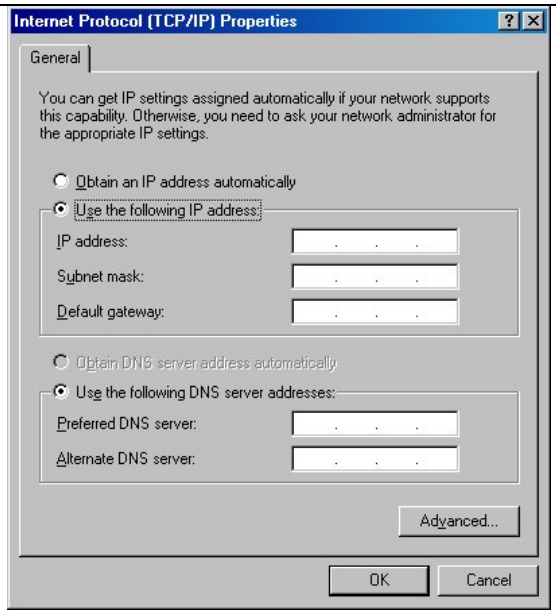
ETHERNET line set-up

Usually, operating system or router software (*FindDevs*) automatically detects ECU devices, connected via Ethernet.

Only if connection via Ethernet is *point to point*, it's necessary to set-up *IP Address* and *SUBNET mask* correspondent to the ECU device; in this case, vendor supplies correct *IP Address* and *SUBNET mask*.

This can be done using standard Windows PC environment in *Control Panel/ Network Connection*, modifying IP Address and SUBNET mask in Protocol TCP/IP properties, as shown in following figures.





Check correct correspondence between IP Address and Subnet Mask set for ECU and PC ones.
All field values must match exactly, except last IP address value, which must be different from ECU to PC, as explained in following example:

	ECU	PC
IP address	192 . 122 . 3 . ***11***	192 . 122 . 3 . ***12***
Subnet mask	255 . 255 . 0 . 0	255 . 255 . 0 . 0

These values must be different from ECU to PC.

Valid values for PC are in range [1, 253]

CAN line set-up

Configure drivers for specific CAN card on PC.
For reference, see documentation supplied by CAN card vendors.
Supported CAN cards are:

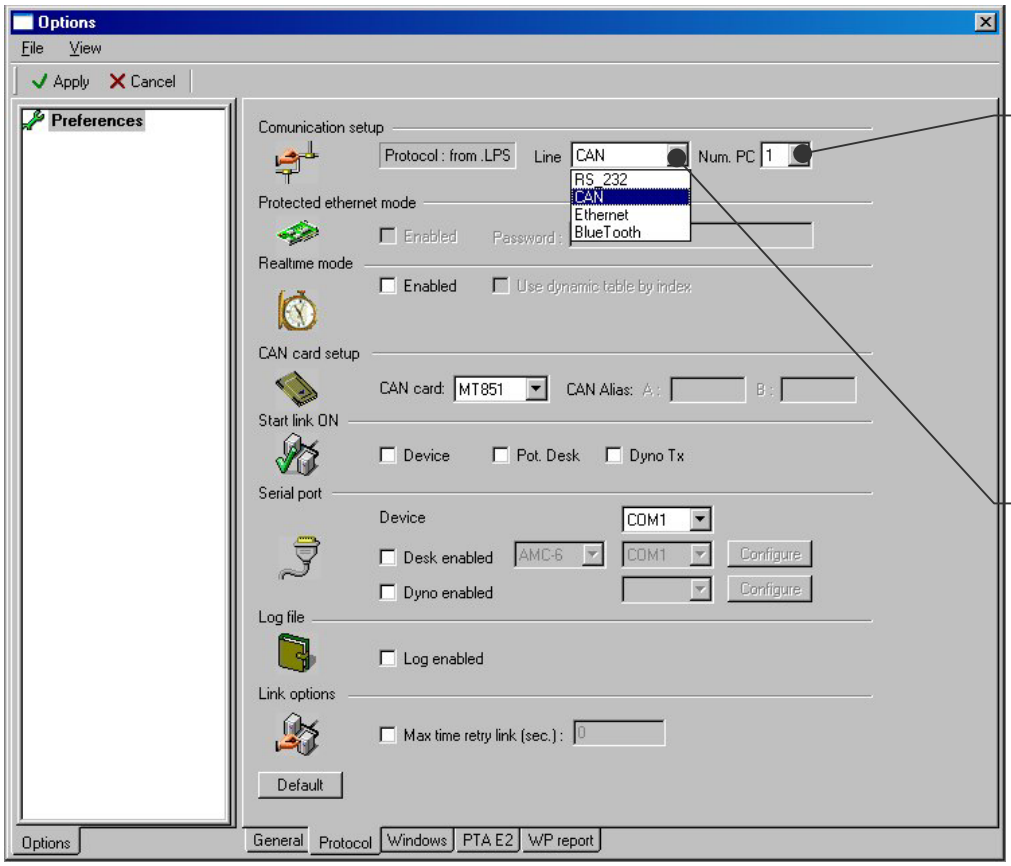
- Pcmcia-canMT851,
- VECTOR,
- USB/CAN PEAK.
  Note: USB/CAN PEAK interface needs dynamic library file *pcan_usb.dll* to be manually installed in directory *windows/system32*, or in *Vision5.exe* directory.

Blue Tooth line set-up

For complete reference, see detailed steps described in Help *Vision5 Junior - User guide*.

Vision5 start and selection of HW device to use

1. Run Vision5.
2. Open window *Options* with command *System/ Options*, select page *Protocol* and select communication line.



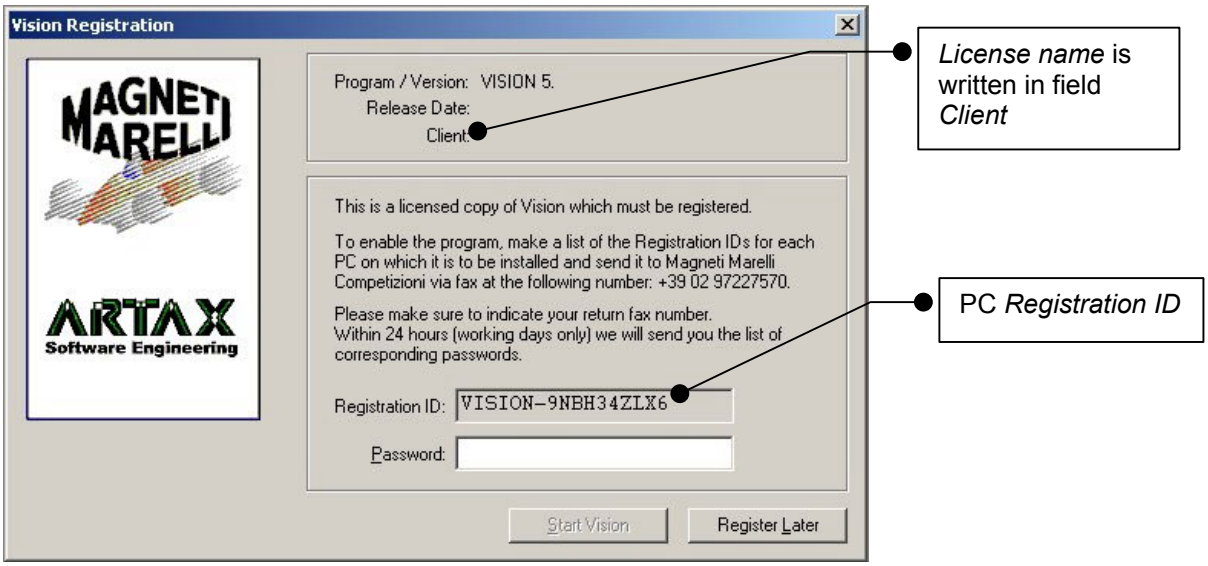
Select a unique *Num. PC*, when *Line* selected is CAN, Ethernet or BlueTooth, and several Vision applications are connected at same time to same ECU.

Select communication line.

3. Load a valid configuration file .CFG (*File/ Open...*).

   In the same directory of configuration file to be loaded there must be correspondent license file (license.bin or superu.bin) and at least one .LPS system file.

   If licence file is under password protection, an authentication dialog will be presented with a Registration ID and prompting for a password.



   User must send *License name* (see field *Client* in window *Vision Registration*) and *PC Registration ID* to Magneti Marelli to obtain the password.

4. Set ECU device power ON.

5. Select an ECU device (use command *Link/ Select Alias...* to display pop-up window list of devices detected, or select an item in the main toolbar devices combo).

6. Run command *Link/ Device Start* or click on icon in the main toolbar.
   If connection is OK, icon becomes green and Status bar displays “CONN ON”
   ETH: Pc1 CONN ON.

If link status is still OFF, open window *Log Window* (*View/ LogWIN*) and try to connect again. Possible errors can be found reading messages in *Log Window* report.

Configuration files and MAP files

Vision5 mainly uses two types of files for storing configuration and table information. Usually, these files are already provided together with ECU firmware.

- ***.CFG** files contains the screen layout prepared for the interaction with the ECU.
- ***.PTA** files contains tables configuration (MAPs), which can be displayed and edited in alphanumeric windows.

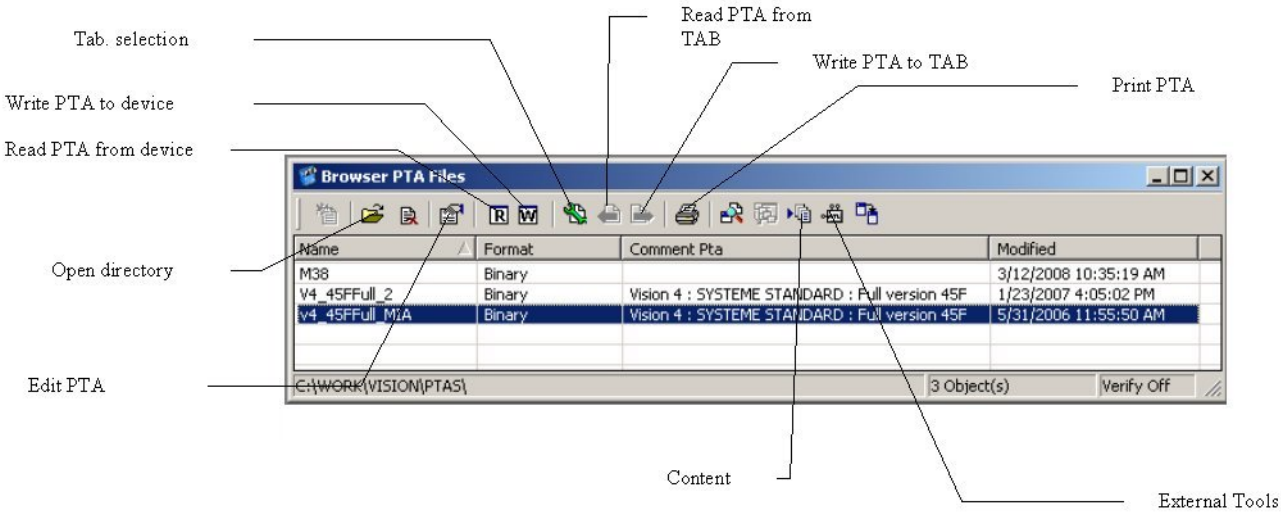
.CFG files management

CFG configuration files are usually supplied together with ECU device firmware.
More pages, containing several display windows, make up these layout files.

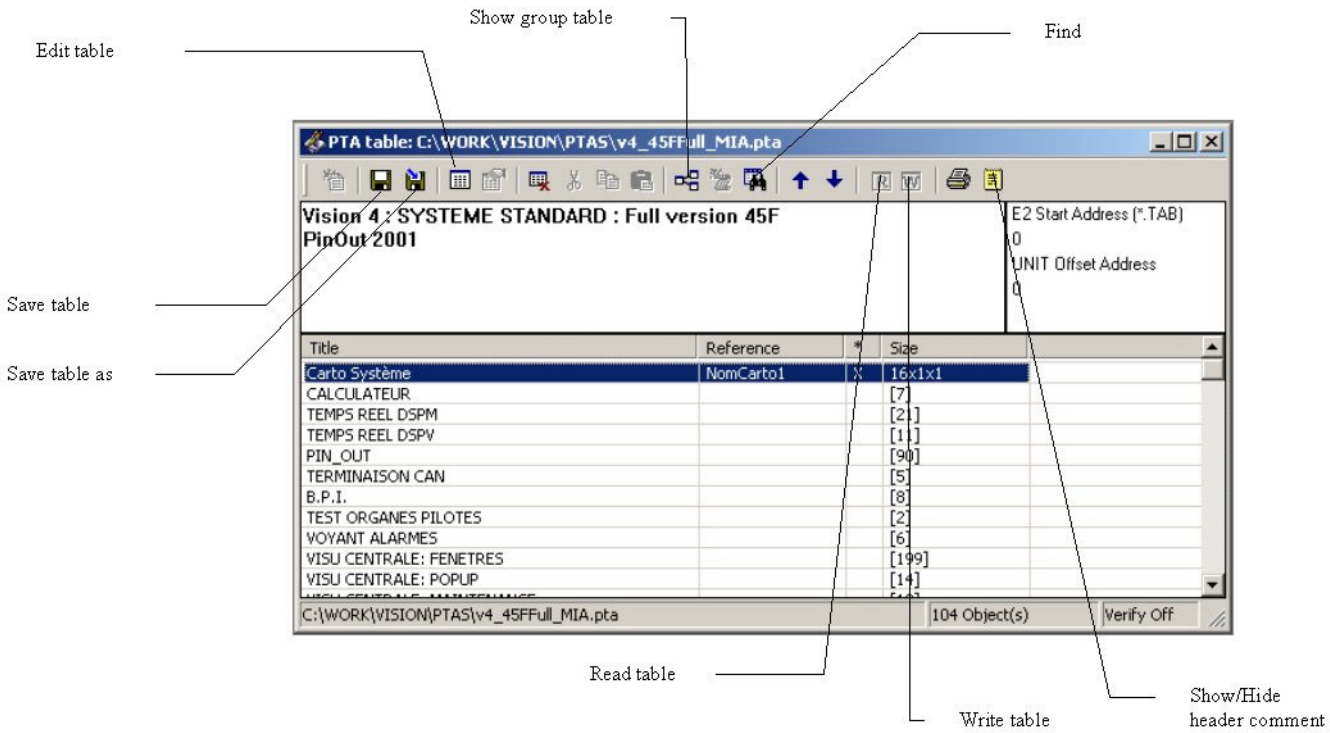
1. Run Vision5.
2. Use command *File/ Open* to load a configuration file.
3. Switch between pages using commands in menu *Page*.

.PTA files management

1. Run Vision5 and load a valid configuration file.
2. Open window *Browser PTA Files* with command *Map/ Open PTA Window*.
   (If no item appears in the list, browse with icon *Open Directory*).



3. Select an item (.PTA file) in the list and open it with mouse double click. Window *PTA Table* will open, listing all tables configured in the .PTA file.



To display single table content, select an item in the list and open it with mouse double click, or with command *Map/ Edit table*. Window *Edit Table* will show table values.

You may create or modify *.PTA files with an external editor if you prefer. Make sure you follow the rules concerning the PTA file format, and remember that only the built-in editor guarantees coherent, controlled data.

Base features

Visualize ECU Data values

1. Run Vision5.
2. Load a valid configuration file (.CFG) with command *File/ Open*.
3. Select an ECU device compatible with loaded configuration.
4. Connect to ECU device (*Link/ Device Start*).
5. Running channel values logged up from ECU will be displayed on windows of Vision5 configuration.

ECU calibration with MAP and tables

To read a table from ECU device:

1. Open a table from a .PTA file.
2. Select ECU device and connect to it.
3. Press F6 for read table content from ECU device.

Window *Edit Table* will show table values read from device.

To send table content to ECU device:

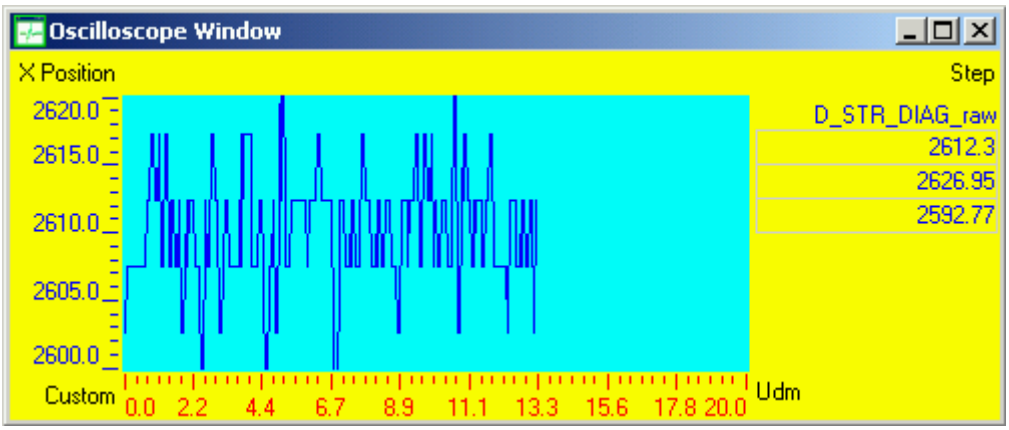
1. Open a table from a .PTA file.
2. Select ECU device and connect to it.
3. Edit table values if necessary.
4. Press F7 for sending table value currently displayed to ECU device.

Advanced features

Oscilloscope

The oscilloscope window allows showing graphically the evolution of up to 16 channels.

1. Connect to an ECU device.
2. Open an *Oscilloscope* window with command *View/ Oscilloscope/ Open close oscilloscope....*
3. Use Drag & Drop to add channels from *Vision Channel List* window directly to *Oscilloscope* window. You can even press F2 to open window for *Oscilloscope* window set-up.
4. Press F3 for starting displaying channel values on *Oscilloscope* window.



Work Points

Vision5 allows to save certain parameters corresponding to a given work point, relative to channels defined in the *Vision Channel List*. Then it's possible to show the sequence of values running on configuration windows in Link OFF status, simulating ECU working.

1. Open window *Work point report Set-up* with command *Tool/ Work point set-up ...* and configure work point.
2. Select an ECU device and connect to it (link status On).
3. Set Work point mode On with command *Tool/ Work point on/off*.
4. To log one shot work point value use command Tool/ Work point write.
5. To log a sequence of work point values, use command *Tool/ Work point write continuous*, once for starting and then another time for stopping acquisition.
6. Set Work point mode OFF with command *Tool/ Work point on/off*, to save work point values on file (.PQT).
7. Set link status Off.
8. Load a work point data file (.PQT) with command *Tool/ Work point load .PQT....*

Use commands *Work point simulation single step/ continuous/ reset* in *Tool* menu to show logged value on configuration windows. A progress on status bar will show current simulation step.