



## AiM Infotech

### Marelli SRA Customer Protocol

Release 1.02

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ECU



# 1

## Software setting

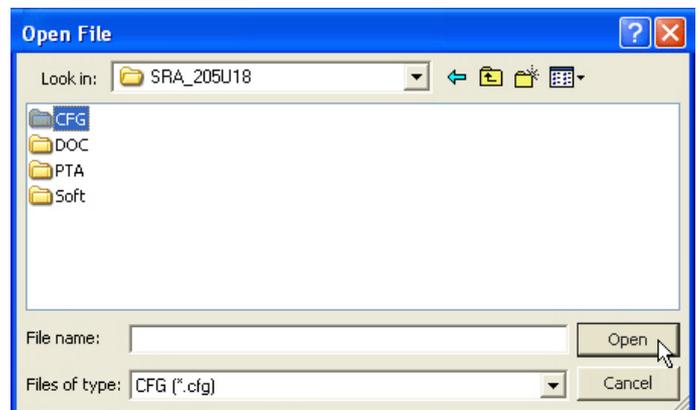
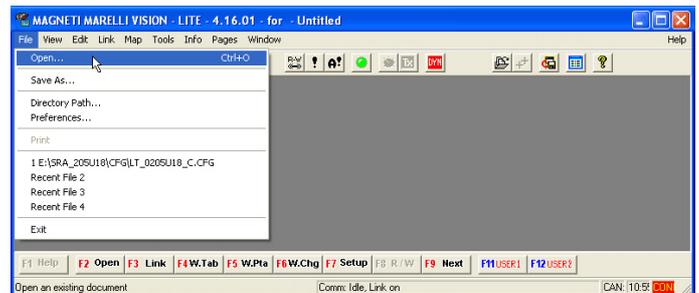
This tutorial explains how to connect Marelli SRA ECU to AiM devices using a Customer Protocol.

Marelli SRA ECU needs a software setting to correctly communicate with AiM devices. To perform it use Marelli "Vision" software and follow these instructions:

- Install and run it and follow the following instructions.

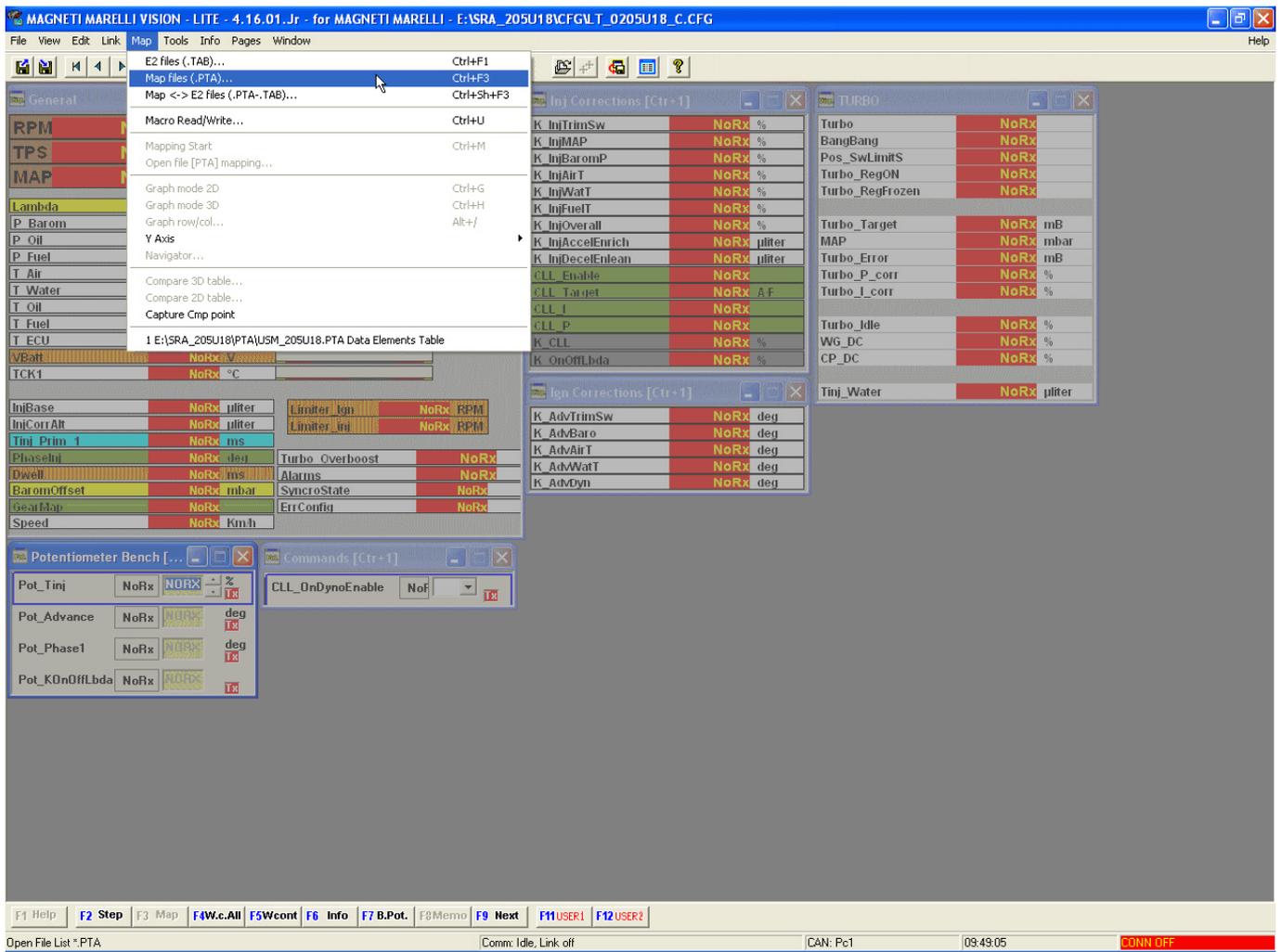
Follow this path:

- File -> Open
- Select "SRA\_XXXXXX" folder
- Select "CFG" sub folder
- Click "Open"

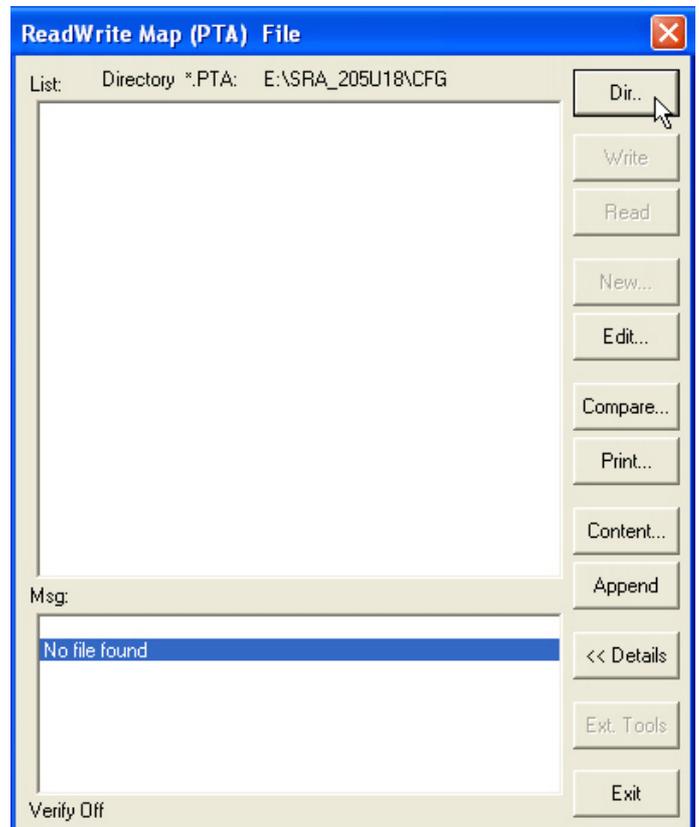




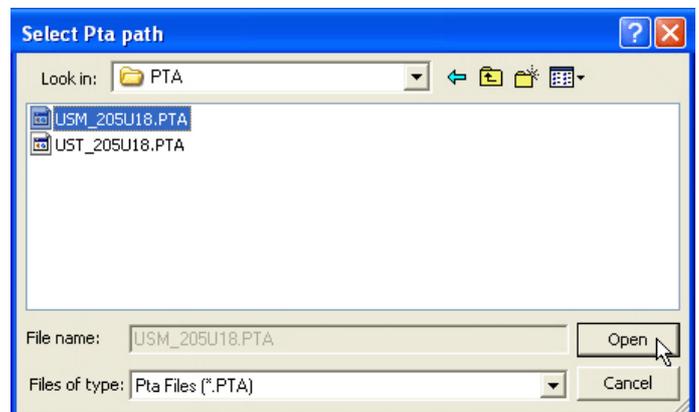
- Select the configuration to open and click "Open"
- "Vision" software main window shows up
- follow this path: "Map -> Map files (PTA)..."



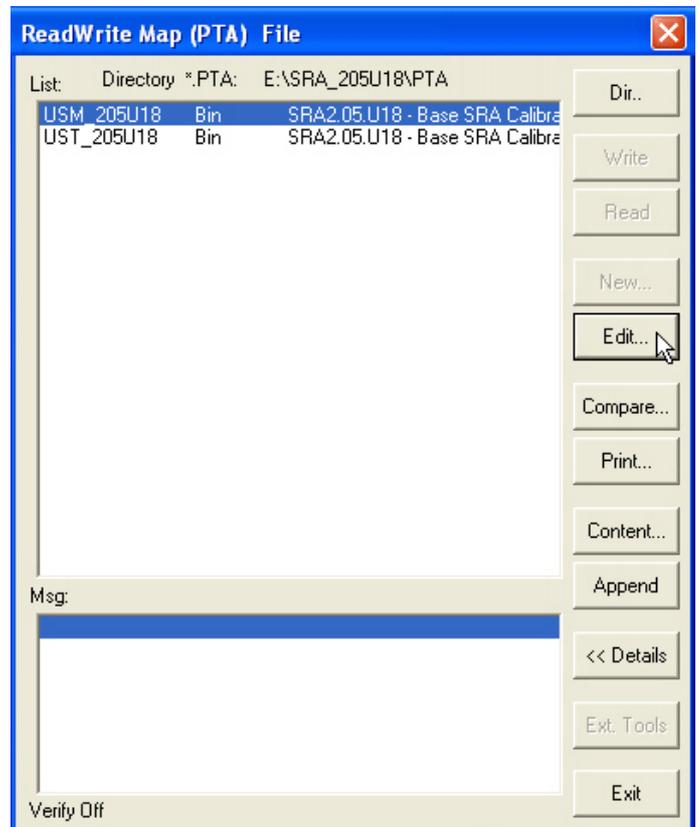
- Click "Dir.."



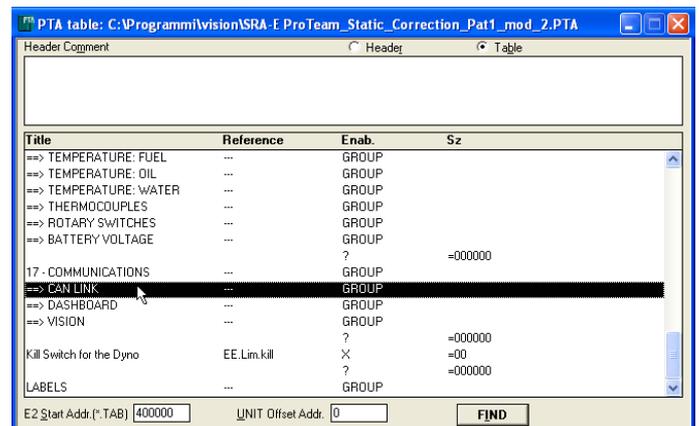
- Select the file to open
- Click "Open"



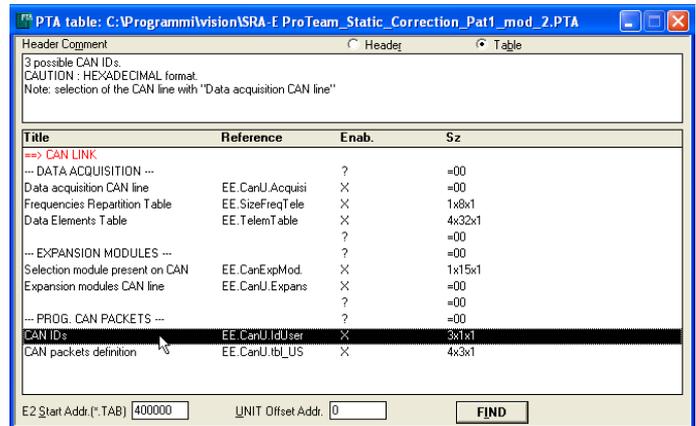
- Click "Edit..."



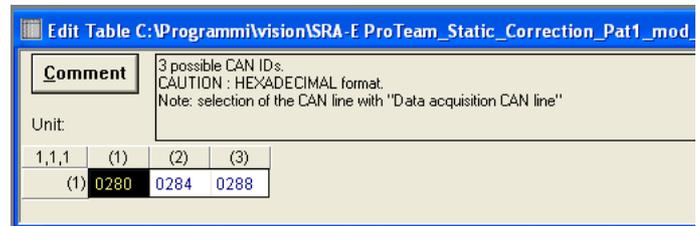
- Double click "CAN LINK"



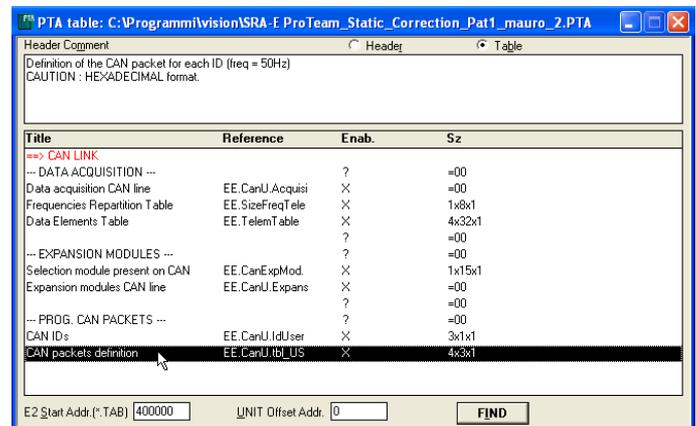
- Double click "CAN IDs"



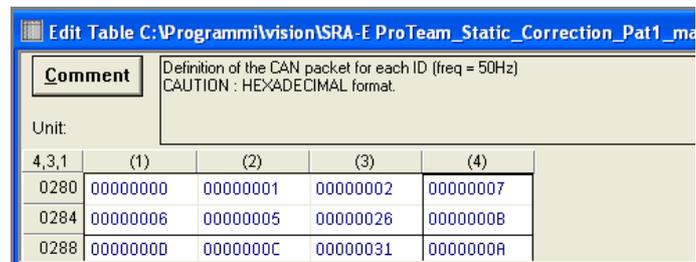
- Fill "Edit table" with the following digits:
  - column (1): 280
  - column (2): 284
  - column (3): 288



- Double click "CAN packets definition"



- Fill "Edit Table" with the following digit:
  - row 0280: 0, 1, 2, 7
  - row 0284: 6, 5, 26, B
  - row 0288: D, C, 31, A



- Close the window

The software comes back to the previous page:

- close the window clicking on the top red cross

Header Comment

Definition of the CAN packet for each ID (freq = 50Hz)  
CAUTION : HEXADECIMAL format.

Title	Reference	Enab.	Sz
==> CAN LINK			
--- DATA ACQUISITION ---		?	=00
Data acquisition CAN line	EE.CanU.Acquisi	X	=00
Frequencies Repartition Table	EE.SizeFreqTele	X	1x8x1
Data Elements Table	EE.TelemTable	X	4x32x1
		?	=00
--- EXPANSION MODULES ---		?	=00
Selection module present on CAN	EE.CanExpMod.	X	1x15x1
Expansion modules CAN line	EE.CanU.Expans	X	=00
		?	=00
--- PROG. CAN PACKETS ---		?	=00
CAN IDs	EE.CanU.IdUser	X	3x1x1
CAN packets definition	EE.CanU.tb_US	X	4x3x1

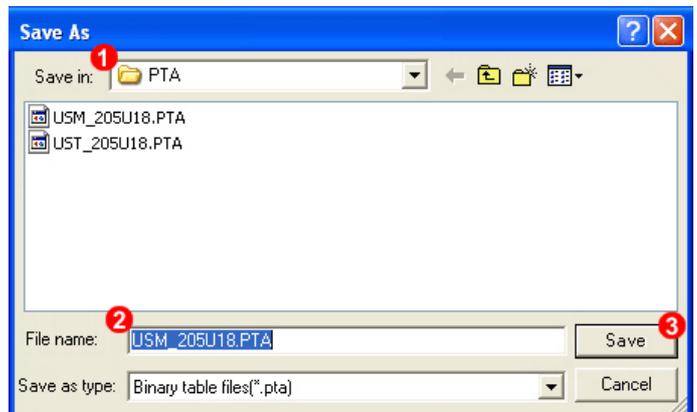
E2 Start Addr. (\*.TAB)  UNIT Offset Addr.

- Click "Yes" to save changes

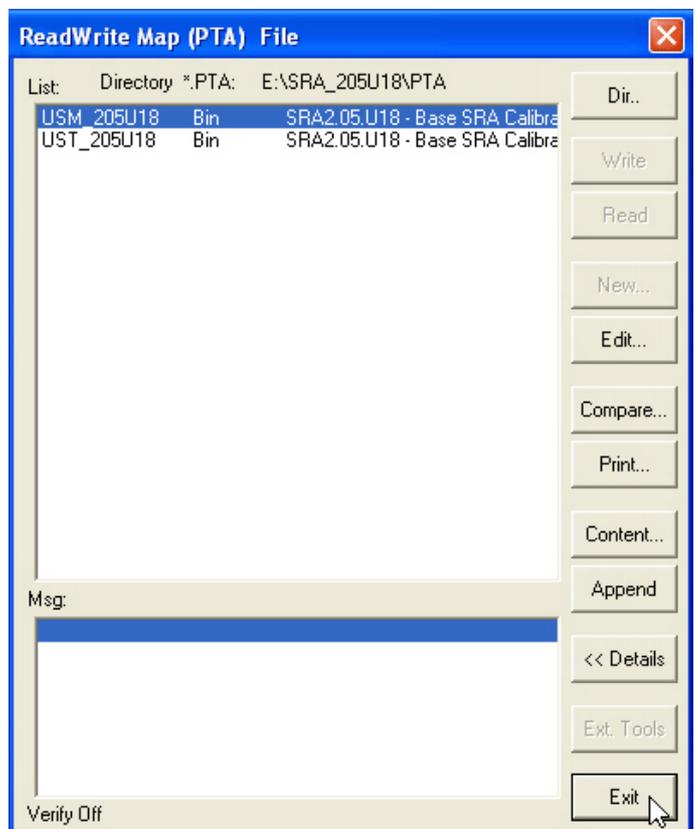
Vision Windows Application

Save changes to E:\SRA\_205U18\PTA\USM\_205U18.PTA

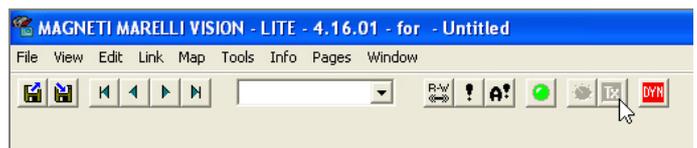
- select file destination folder (1)
- fill in file name (2)
- click "Save" (3)



- Click "Exit"

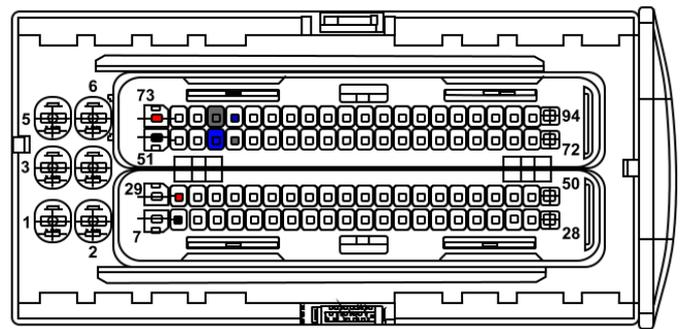


- Click "Tx" on the software icon toolbar



## 2 Connection to AiM devices

Magneti Marelli SRA ECU features a bus communication protocol based on CAN on the 94 pins front right connector. Here below it is indicated on the left; on the right is connector pinout in detail.



Here below is connection table. As said before the ECU has two CAN lines: CAN0 and CAN1; AiM suggests to use CAN1.

**Please note:** be sure to **never** cross CAN High and CAN low of different CAN lines.

94 Pins connector pin	Pin function	AiM cable
76	CAN0 High	CAN+
54	CAN0 Low	CAN-
<b>55</b>	<b>CAN1 High</b>	<b>CAN+</b>
<b>77</b>	<b>CAN2 Low</b>	<b>CAN-</b>
8 or 51	Ground	GND
73 or 30	Battery Positive Pole	9-15 VDC

## 3

# AiM device configuration

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Before connecting the ECU to AiM device set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer "MARELLI"
- ECU Model "CustomerProtocol"

## 4

# Available channels

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Channels received by AiM devices connected to "MARELLI" "CustomerProtocol" protocol are:

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	MAR_RPM	RPM
ECU_2	MAR_THROTTLE	Throttle position sensor
ECU_3	MAR_MANIFOLD_PRESSURE	Manifold air pressure
ECU_4	MAR_AIR_T	Intake air temperature
ECU_5	MAR_WATER_T	Engine coolant temperature
ECU_6	MAR_OIL_P	Oil pressure
ECU_7	MAR_GEAR	Engaged gear
ECU_8	MAR_BATTERY	Battery supply
ECU_9	MAR_CONSUMPTION	Fuel consumption
ECU_10	MAR_KLAMBDA	Lambda value
ECU_11	MAR_DIAG	Diagnostic
ECU_12	MAR_GEAR_POS	Gear position