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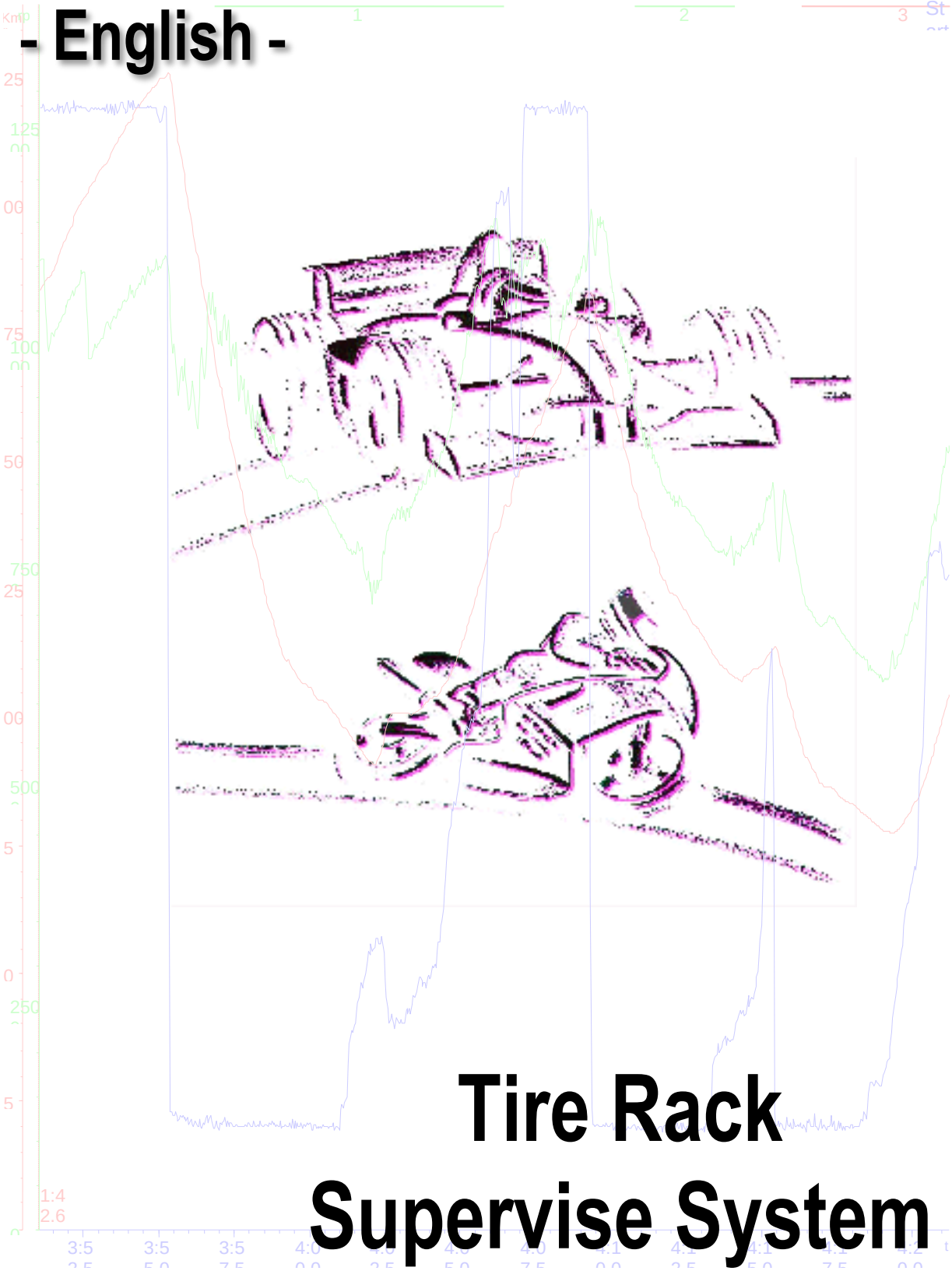
- English -



Tire Rack Supervise System

modified 22/03/17

Content

Symbols used in the text

These paragraphs contain tips and practical advice for working with the 2D system

In the paragraphs highlighted with this symbol, you will find additional information and it is very important that you follow the instructions given.

Documentation reference

- A user manual reference number is provided so the user can seek further assistance

1 The Tire Rack Supervise System

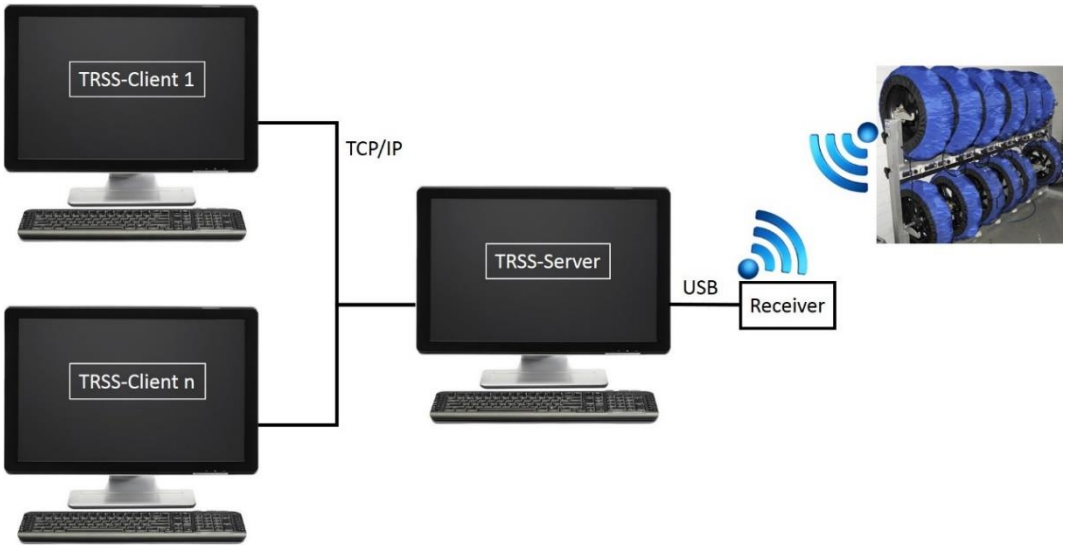
The 2D Tire Rack Supervise System (TRSS) is an extension to the 2D Tire Monitoring System (TMS). With the Tire Rack Supervise System it is possible to keep track of the temperature and air pressure of a number of tires sitting in a rack in the paddock. The whole system consists of the following components (see picture below):

- The rack with the tires. Each tire is equipped with a sender. Each sender has a TMS-code which identifies the tire towards the system.
- A receiver unit. The receiver unit receives the air pressure and tire temperature data and transmits them to the telemetry server (TRSS-Server).
- The TRSS-Server is the gateway between the receiver unit and the TRSS-Clients. It distributes the data to one or more TRSS-Client(s).
- The TRSS-Client presents the information to the user.

TRSS-System running on a single computer

It is also possible to distribute the components of the system onto different computers connected by a local area network like shown in the picture below. There may be more than one TRSS-client connected to the TRSS-server at the same time.

With this it is possible to have one client on one computer to show all tires for “rider A” and a second client with the tire information for “rider B” on another (or the same) computer.



TRSS-System running on a network

2 System setup

Setting up the system consist of the following steps:

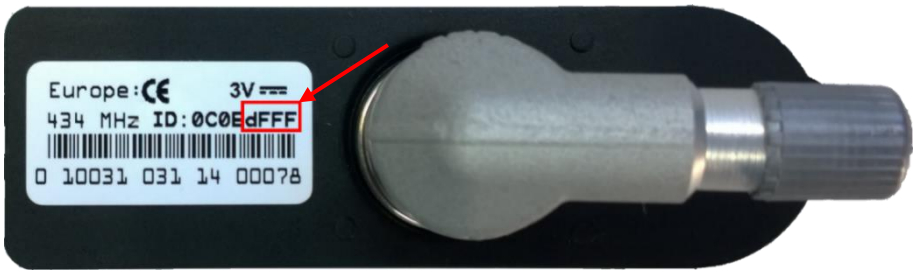
1. Install the Race 2017 software[1] or newer[2]. There is no need to license the software for the TRSS function.
2. Configure the receiver unit to be able to receive the information from the tires.
3. Configure the TRSS-Server to be able to transmit the information to the clients.
4. Start the TRSS-Server and configure the TRSS-Client

2.1 Configuration of the receiver-unit

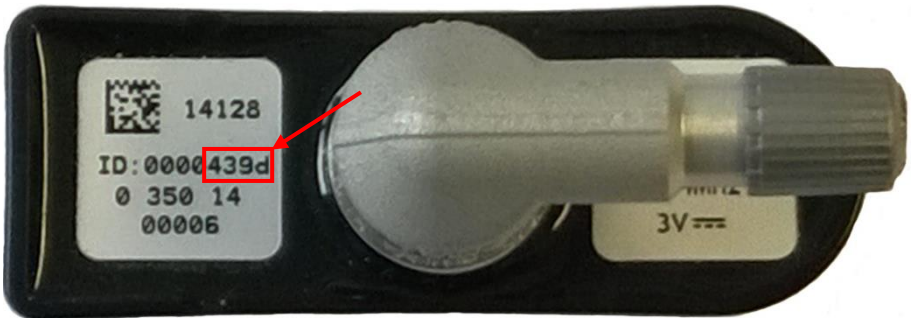
The task of the receiver unit is to receive information from your tires and send that information to the TRSS-server. To be able to identify the correct tires it has to have the IDs of the Wheel Unit Sensors (WUS).

To recognize the Wheel Unit Sensors (WUS) of your system you have to enter its ID into the TMS-code table. You can find the ID of the printed label on the sensor (last 4 characters).

"old" sensor

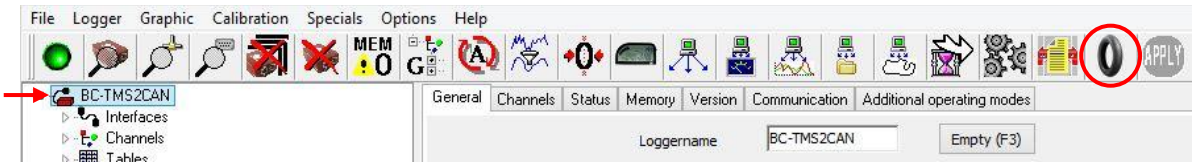


"new" sensor



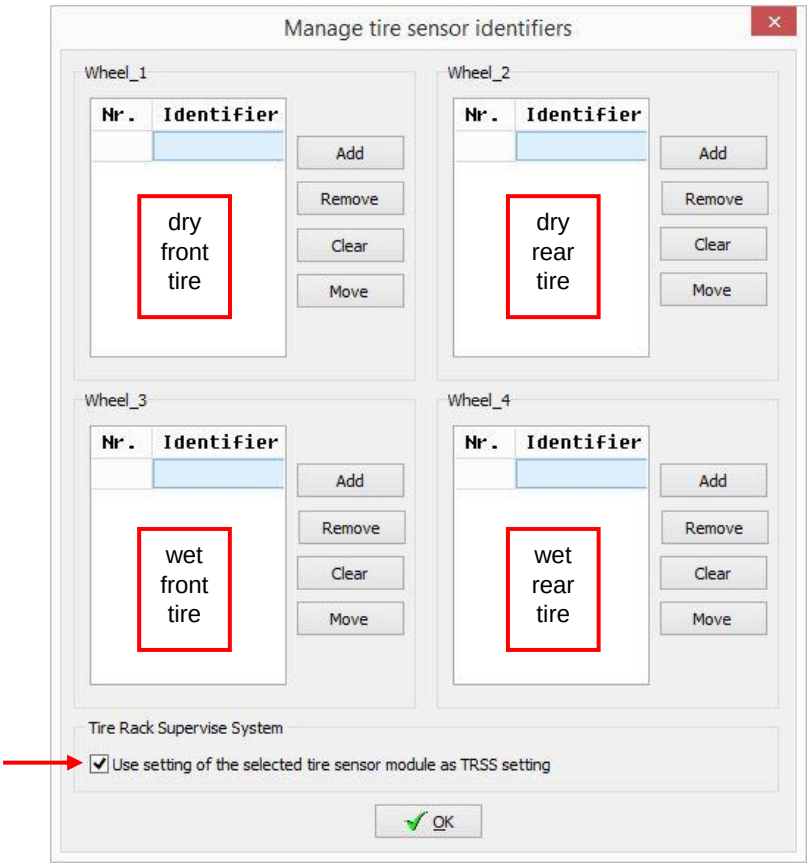
Connect your receiver to the PC which will be the TRSS-Server and start *"Set up the TRSS"* (*WinARace* toolbar ⇒ ).

To enter the WUS IDs click on the wheel icon. You can find it in the *ServIt* toolbar if you select your receiver unit in the system tree:



[1] Refer to the manual "Software installation guide". It can be downloaded from: http://2d-datarecording.com/en/downloads/manuals/ ⇒ Software installation
[2] The software can be downloaded from: http://2d-datarecording.com/en/downloads/setups/ ⇒ Race 2017 (or newer)

You can sort your WUS IDs in four columns and each column is meant for one type of tire - dry front, dry rear, wet front and wet rear:



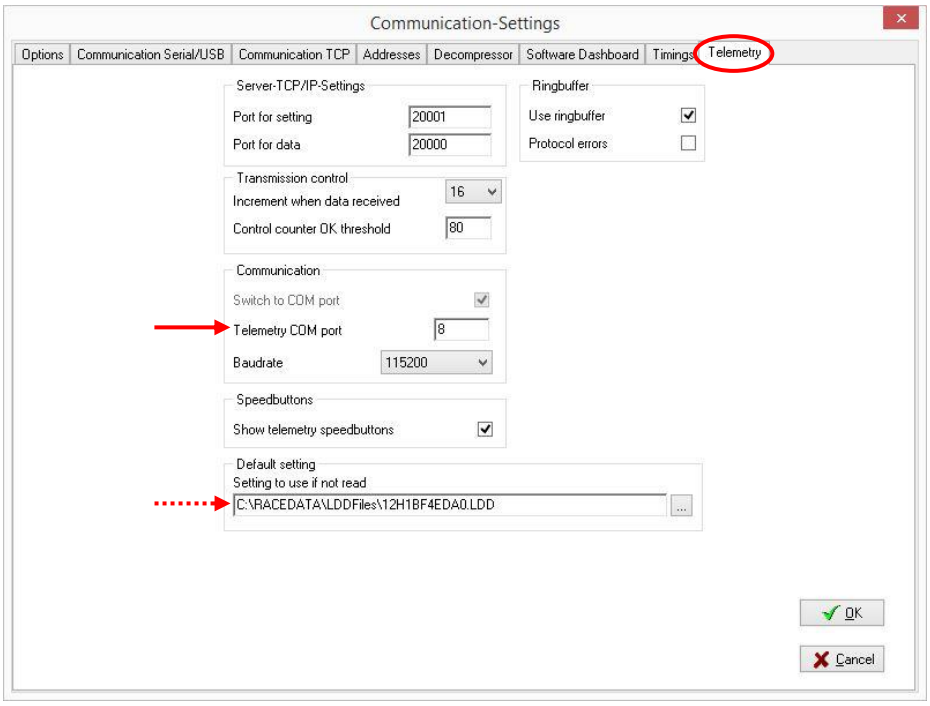
Enter your WUS IDs as printed (last four characters as marked in the picture above) in the corresponding column and save this table.

Please enable “Use setting of the selected tire sensor module as TRSS setting”. By this the actual setting will be automatically used to configure the TRSS-Server.

Confirm your changes with <**OK**> and <**Apply**>.

2.2 Configuration of the TRSS-Server

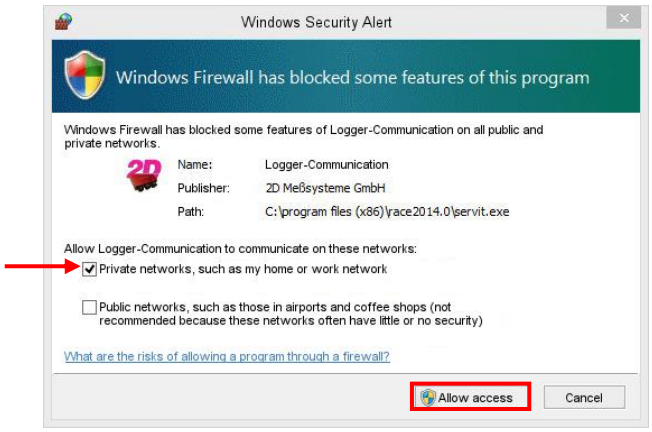
To configure the TRSS-Server you connect your receiver to the PC and start *“Set up the TRSS”*. Select *Options*, *Settings* ⇒ tab *“Telemetry”*. Enter the correct COM port (you can find the correct COM port in the left corner at the bottom of the configuration window: Full LogIn on COM8). The setting of your module will be automatically inserted, if you´ve enabled “Use setting of the selected tire sensor module as TRSS setting”. Confirm your changes with <**OK**>.



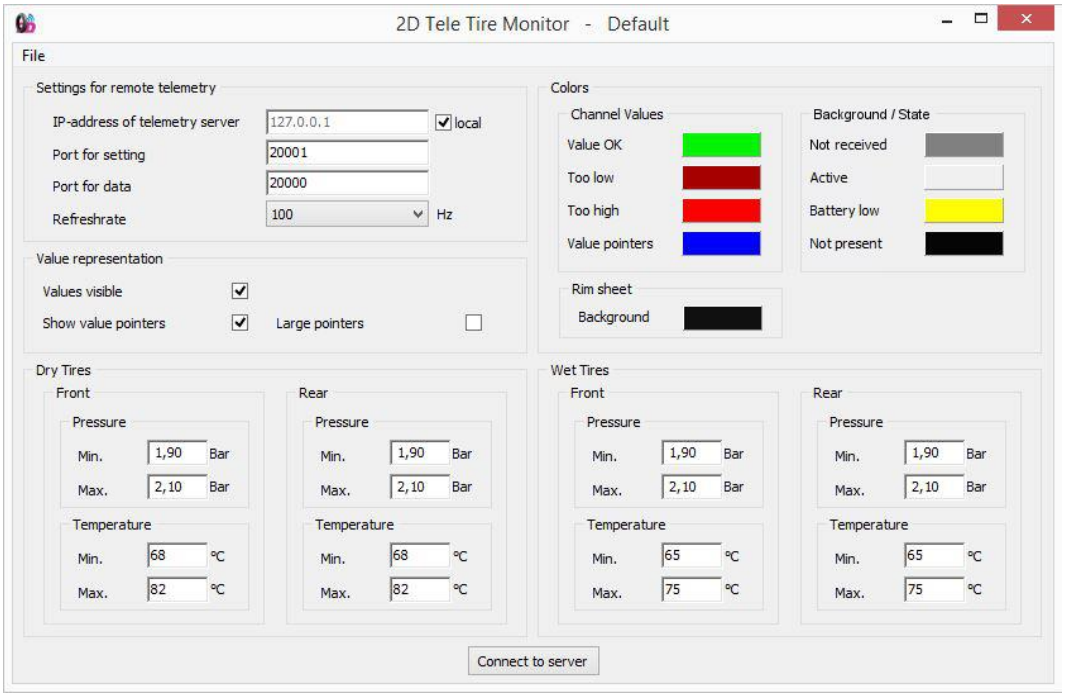
2.3 *Start the TRSS-Server and configure the TRSS-Client*

To start the TRSS-Server and TRSS-Client select *"Start TRSS"* in the *WinARace* toolbar:  .

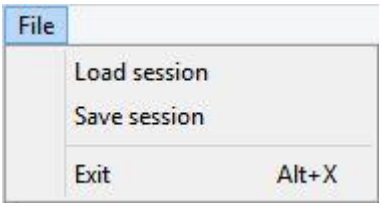
If you get a "Windows Security Alert" click on <**Allow access**>.



In the Tele Tire Monitor window you can modify various settings:

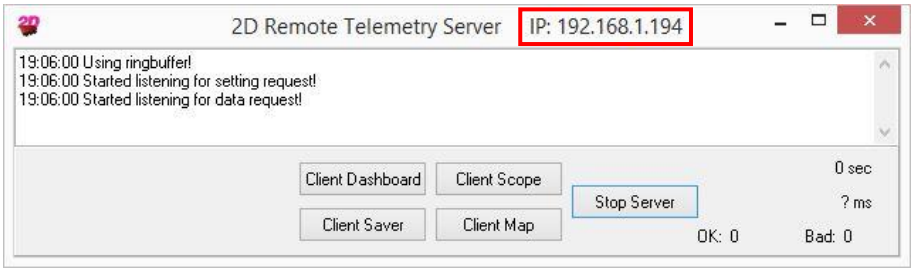


In menu “File” you have the option to save or load saved settings.



IP address of your telemetry server

If the TRSS-Server is running on the PC you are working on you can enable the box “local”. If the server is on a different machine you can find its IP address on the window which opens by starting the telemetry server:



Do not close this window!
If you close this window, the telemetry server does not work. Only minimize it, if it is blocking your view.

Refresh rate

Select the refresh rate from the drop-down list. It is recommended to use a low refresh rate because temperature and air pressure do not change very fast. And a low rate keeps the communication load on your computer and network down.

Value representation
Select the way to indicate the values:

values visible

values and value pointers visible

large value pointers

Limits for pressure
Enter the minimum and maximum pressure value for the wet and dry, front and rear tires. If the channel value is between these values, it will be indicated as “OK”.

Limits for temperature
Enter the minimum and maximum temperature value for the wet and dry, front and rear tires. If the channel value is between these values, it will be indicated as “OK”.

Colors for faster recognizing the channel values
You can program different colors for the tire fields:

- If the values for this tire are not received
- If it is active
- If the battery voltage of the WUS is low

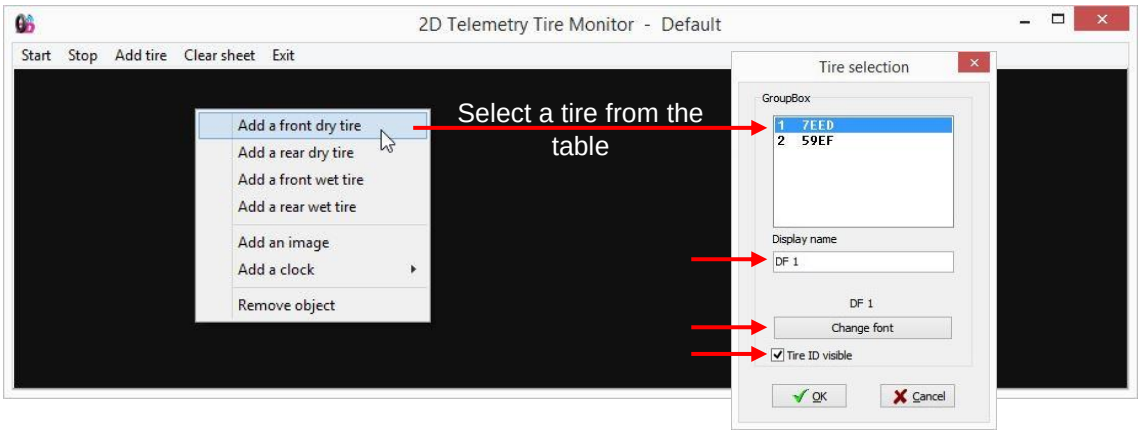
In addition you can program different colors for the channel values. That will help you to recognize any problems by having a short look at it:

- If the channel value OK
- If the channel value is too low
- If the channel value is too high

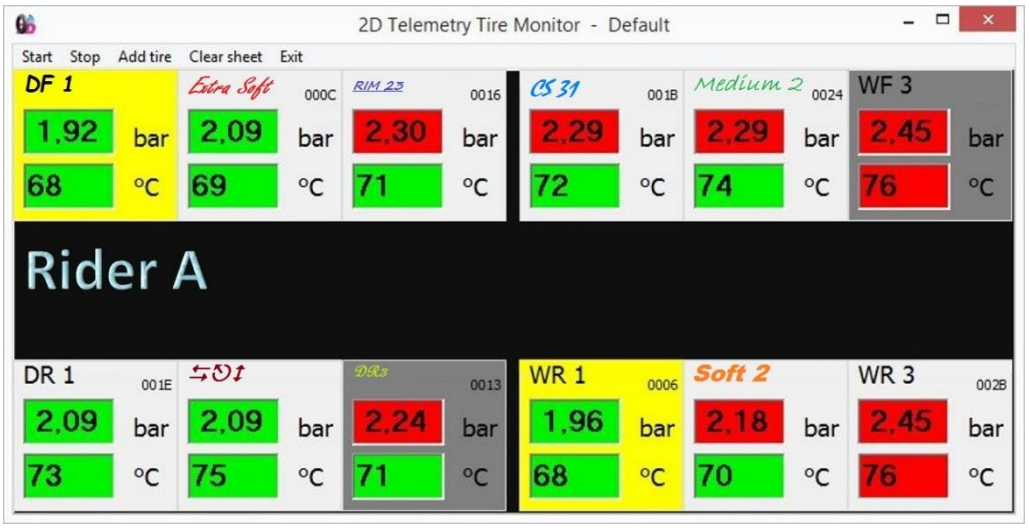
To change the colors simply click on them – a dialog to select the color will open:

To get a display with the actual tire data click on <**Connect to server**>.

In the beginning the following window is empty. You can easily add the tires of the tables, images or clocks (analog, digital or countdown) by right-mouse click and then selecting them:



When you select the tire, you can use the standard tire naming (for example “DF 1”) or you can rename the tire. To rename the tire please enter a name in the field “Display name”. You can also modify the names font, font size, color, etc. Additionally you can select if you want to show the WUS´ ID (enable/disable “Tire ID visible”). You can move an object by left-clicking and dragging the field. If you double-click on a tire object, you can edit its settings.



You only have to create this layout once. Next time the telemetry tire monitor is started with the last setting.

When you close the window you´re asked if you want to save the layout changes (if anything changed):

3 Additional information on the Wheel Unit Sensors

3.1 Status channel

The information of the status channel (#STAT_) is bit-coded:

Bit	Value	Description
0	1	
1	2	
2	4	Battery low!
3	8	
4	16	
5	32	
6	64	
7	128	