Signalisation Electronique Services

Fabrication – Vente – Location
d'équipements de signalisation routière

USER GUIDE

RADAR SPEED SIGN
RAD50

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700 Montée Monette RR 1, St-Mathieu-de-Laprairie (Québec), Canada, J0l 2H0
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1 EQUIPMENT DESCRIPTION

The radar speed sign RAD50 is an effective traffic calming device designed to slow speeders down by alerting them of their speed.

Traffic statistics can also be acquired and used to show helpful information on the number of vehicle and speed at the location and used to plan intervention based on the real data gathered over a period.

1.1 RAD50 RADAR SPEED SIGN

The radar speed sign offers a three color speed display and a full matrix amber message display. The message display is able to show messages and graphics based on the current vehicle speed appropriate to the local speed limit. The displays are contained in a light and IP65 rated enclosure.

The sign connections are made at the back of the display.

The power connection is made using a keyed circular connector.

A push button can be used (if enabled) to change the speed limit without having to connect to the sign with the RadStat suite of software. Predefined messages are programmed by default « THANK YOU », « SLOW DOWN» and « DANGER» but can easily be changed using the RadStat software.

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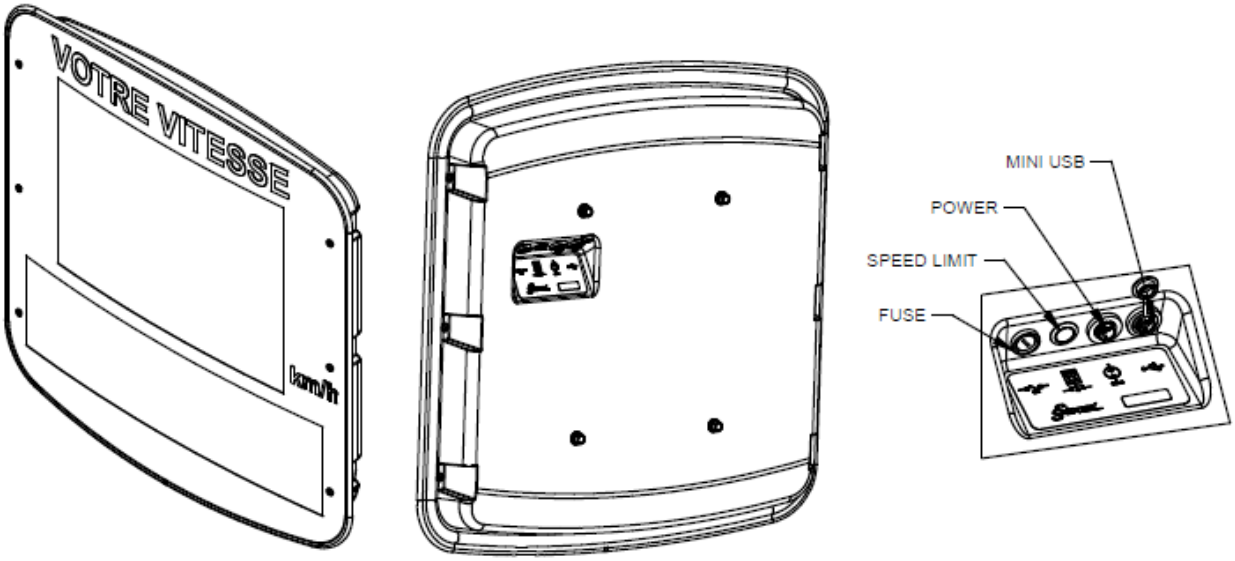
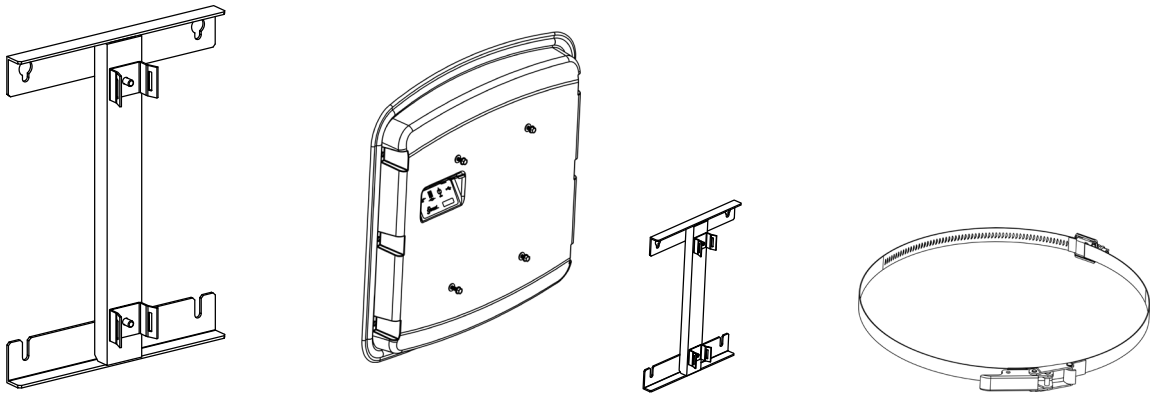
An AGC 1/4x1-1/4 fuse is replaceable without opening the enclosure.



The display sign is supplied with aluminum mounting hardware and stainless steel flange bolts for easy installation on a post.

Looped belts with quick release clips can also be supplied depending on the type of installation. Please ask your representative for the best solution for your installation.



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1.2 SIGN POWER SUPPLY

The sign itself is made to operate on 12 VDC.

Power consumption varies depending on the information displayed:

- Speed only: 0.3 - 0.5 A
- Speed and messages: 1.0 – 1.5 A
- Idle: 0.1 A

The sign performs load shedding according to the available supply power in order to avoid draining the batteries to a critical level. Three levels are available:

- Speed display only (no messages).
- Only above limit speed display.
- No display.

Load shedding levels can be changed by the user using the RadStat application.

The sign is protected using a 10 A, AGC fuse (fast) 1/4 x 1-1/4 (cylindrical).

According to the available power supply available on site, the following products are available:

- 120 VAC mains operated, RAD50A
- 347 VAC lighting equipment, RAD50B
- Solar powered, RAD50S

1.2.1 120 VAC mains operated, RAD50A

Where 120 VAC is available, an economical option consists of an AC-DC converter installed in a sealed enclosure. This option does not require batteries to operate.

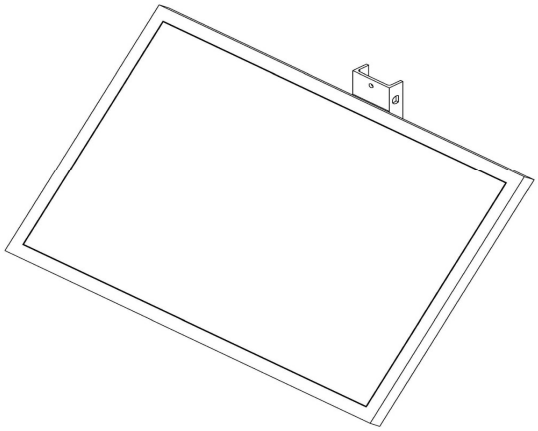
1.2.2 347 VAC lighting equipment, RAD50B

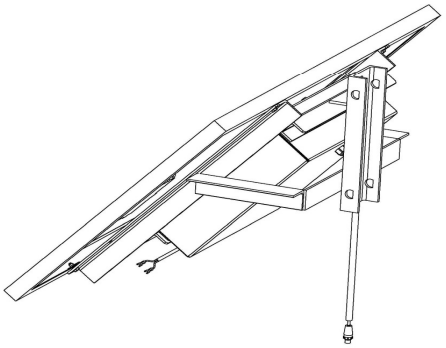
For an installation on lighting equipment this option provides an AC-DC ballast with a charger and battery in order to ensure daytime operation.

1.2.3 Solar powered, RAD50S

The solar power option allows the sign to operate independently from other sources of energy. It is an autonomous power supply unit that includes a 100 watts solar panel, a 6 A charge regulator and two 12 V-26 Ah batteries with supporting hardware.

Since the weight of the whole unit is not negligible, it has been designed for modular installation.





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2 INSTALLATION AND START-UP

2.1 ROADSIDE PLACEMENT

The sign should be installed at a height of 2 m to 2.5 m measured from the bottom of the sign.

A side clearance of 0.5 m to 3 m is allowed.

The sign must be perpendicular to the road axis in order to provide the best speed accuracy.

The vertical angle of the Doppler radar is in most cases enough to allow a square installation. In cases where the gradient is more than 5 degrees either up or down, shimming may be required for best operation. Please ask your representative for the best solution for your installation.

Conditions to avoid :

Installation close to large objects which would block the radar beam such as existing street signs, publicity signs, large vehicle parking, trees.

Installation within 150 m of an overpass or other important gradient as it may impair readings.

Installation at an intersection where incoming vehicles from secondary roads may interfere with your primary data analysis target. Also, vehicles slowing down (or speeding up) from a stop will not give you pertinent data.

Installation in a curve.

For installation with the solar powered option, the location must have a clear view of the south all year round. Obstacles such as trees, buildings and such will cast shadow to the solar panel which requires direct sunlight in order to charge the batteries. Failure to do so will significantly reduce the speed display sign autonomy.

2.2 RADAR SPEED SIGN INSTALLATION

Required tools
½ wrench
Belt tensioner

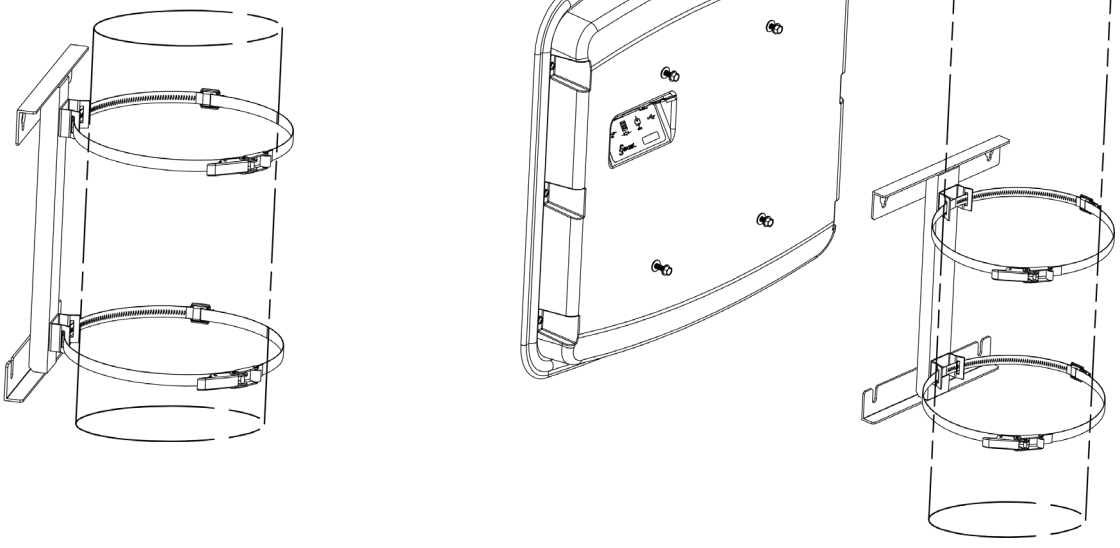
First proceed with the installation of the post mounting support, holes up and slots down. Attachment is achieved by using two looped belts or bolting it directly to the post.

Install the 5/16-18 bolts to the back of the sign and assemble to the support, then proceed with tightening the bolts.

Take care to properly orient the support to ensure that the radar speed sign will be properly oriented to the road.

For your safety, it is recommended to use a boom lift to install the sign.

NOTE: For an installation where the sign will be solar powered, it is recommended to install the solar block before the sign. This way you will proceed in an unobstructed manner from top to bottom.



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2.3 SOLAR POWER BLOC INSTALLATION

Required tools

7/16 wrench
Phillips screwdriver
Belt tensioner
Multimeter

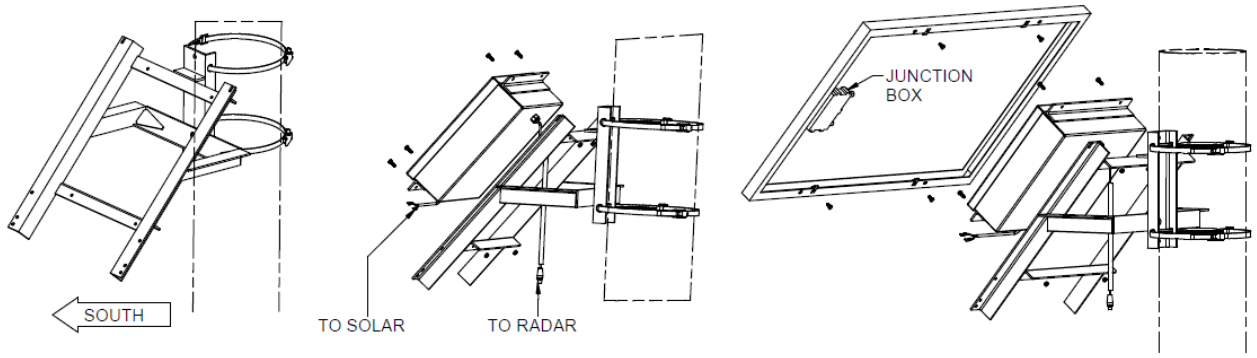
Prior to leaving the workshop for installation it is important to check the voltage at the power supply connector to ensure that at least 12 VDC is present. First check if the batteries are connected inside the power block enclosure as those are usually disconnected prior to delivery in order to prevent battery drainage. If the battery level is below 12 VDC, please charge the battery prior to installation.

First install the support arm to the post making sure that the solar panel will be oriented full south.

Attachment is achieved by using two looped belts or bolting it directly to the post.

Next insert the battery enclosure in the support arm and attach using four 1/4-20 bolts.

Finally, bolt the solar panel to the support arm using four ¼-20 bolts and connect the power block to the solar panel at the solar panel junction box.



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2.4 MAINS OR LIGHTING POWER

Required tools
½ wrench
Phillips screwdriver
Belt tensioner
Multimeter

If your installation includes a battery, it is important to check the voltage at the power supply connector to ensure that at least 12 VDC is present. First check if the batteries are connected inside the power enclosure as those are usually disconnected prior to delivery in order to prevent battery drainage. If the battery level is below 12 VDC, please charge the battery prior to installation.

Insert the power cable inside the cable gland at the enclosure bottom. Route the cable leaving a loop for water-draining.

Make sure you have voltage at the front power connector. Lighting equipment may require to be on.

NOTE: It is strongly recommended to install a 15 A fuse or breaker upstream from the power unit. Signel Services cannot be held accountable for damage caused by an improper installation.

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2.5 START-UP

The radar speed sign will power up as soon as connected to a 12 VDC power source.

As the sign starts it will display the manufacturer name, firmware version, battery voltage and the date & time. This information can be used to ensure that the batteries are well charged and that the date and time are correct. It will also help you ensure you have the latest firmware installed on your sign.

Factory defaults settings are as follow:

- Speed limit is 50 km/h.
- Message for speed below or equal to the speed limit is “THANK YOU”.
- Message for speed between 51 to 60 km/h is “SLOW DOWN”.
- Message for speed between 61 to 70 km/h is “DANGER”.
- Speed from 50 to 55 km/h displayed in yellow.
- Speed will flash when displayed in red.

The speed limit can be adjusted with the push button at the back of the unit, in increments of +5 km / h up to 100 maximum to start back at 10 minimum. When the push button is pressed, the yellow display confirms the current setting.

Please see the later sections describing all available parameters and factory defaults.

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3 RADSTAT APPLICATION (SLO14)

The RadStat software suite includes a Microsoft™ Windows® application, a tablet application (Android/iPad) and a smart phone application (Android/iPhone) that allows you to work with your radar speed sign.

The Windows® application allows you to do the most with your radar speed sign. You can view and edit the sign parameters, edit and save parameter files that may be later transferred to a sign and where the data storage and analysis is done. The application can store data for multiple signs and multiple periods which can then be queried using the analysis module to get multiple reports on your traffic data.

The tablet application does not perform data analysis. It is used to view and edit a sign's parameters, download the data stored in the sign and transfer the data to the Windows application for analysis.

The smart phone application (RadStat Wallet) is limited to parameter upload (no edit) and data gathering for later transfer to the Windows application

The Windows and Android applications are available for download on our web site at www.signel.ca/downloads while the iOS applications are available from the AppStore.

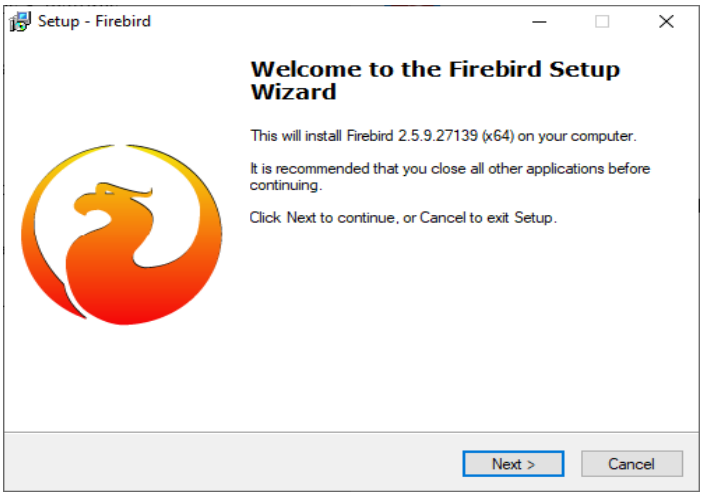
4 RADSTAT FOR WINDOWS

4.1 INSTALLATION

Two components must be installed for using the software, first is Firebird which is a database manager then the RadStat application itself.

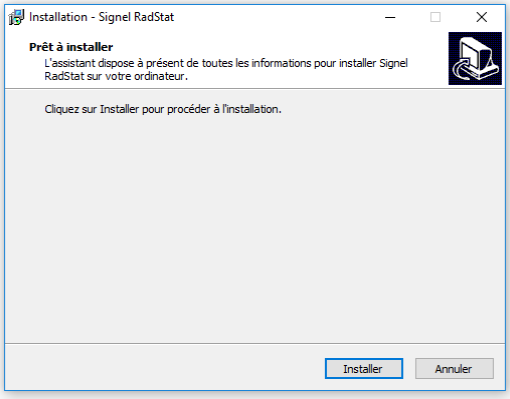
It is a good idea to consult with your I.T. department prior to installing the software as you may require permission/passwords in order to proceed with a successful installation.

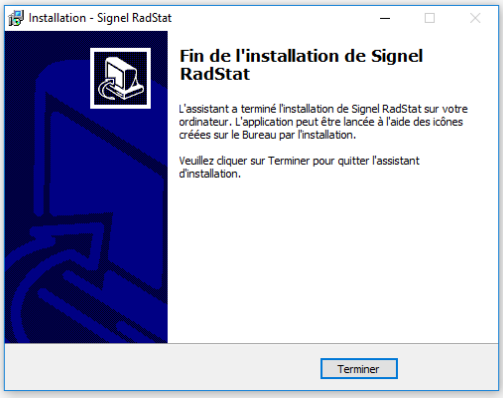
When you download the application from our web site, the two files required for installation are included in the downloaded zip file (compressed file).



When installing Firebird, you will require to agree to their terms of usage, all other options should remain at their default values.

When Firebird has been successfully installed, launch the RadStat setup to install the application.





You can now start the application. If you have a radar speed sign in Wi-Fi range connect to it, read on for important information on using the software.

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4.2 CONNECTING TO THE RADAR SPEED SIGN

Connection to the sign is made using Wi-Fi. First make sure the sign is powered on and that you are within range, usually 25m.

Connecting to the radar speed sign is the same as connecting to any other Wi-Fi access point. If you are using Windows 10 the following figure shows the Wi-Fi list where you can select your sign.

Chose the correct SSID and enter the password supplied with your sign to establish the connection.

***IMPORTANT**: The factory SSID (Service set identifier) or simply the network name for a radar speed sign is made of the prefix RAD followed by 6 alpha numeric characters, the associated factory set password will be the same alpha numeric characters but prefixed with "pwd" instead of RAD.*

Ex: RADa0a0a0 -> pwda0a0a0

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4.3 STARTING RADSTAT ON WINDOWS

To start the application select it from the windows Start menu, unless you have changed the group name, the application should reside under the “Signel Services” menu.

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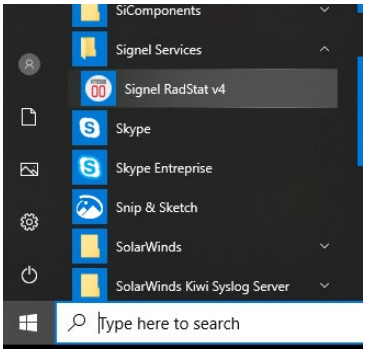
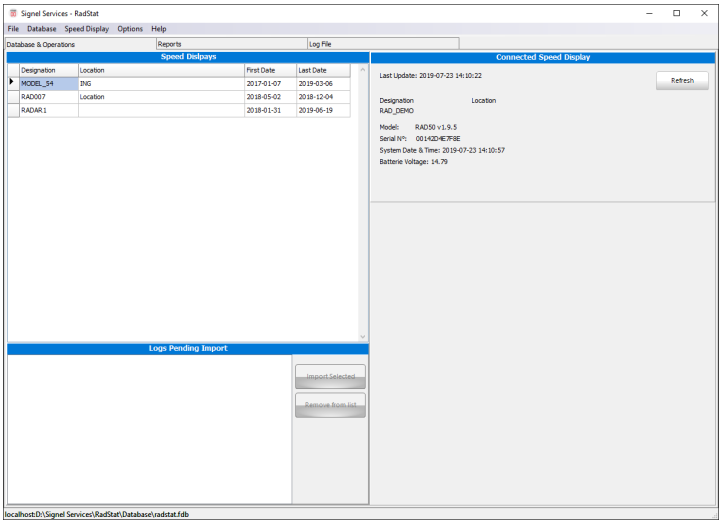


The first time the application is launched, you are offered to connect to a central database or a local database. In most cases leaving the default to a local database is what you need. If your I.T. department would rather have you use a central storage instead, please have them contact our technical support.

The application main window consists of three tabs which will be described later

- Database & Operations
  Reports
- Log File.



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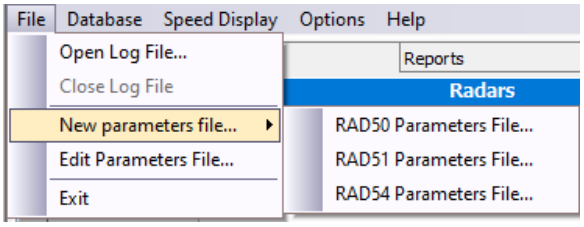
4.4 RADSTAT MAIN MENU

4.4.1 The « File » menu

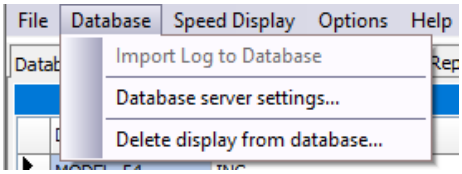


The file menu contains the commands used to open log files and work with offline parameter files that can later be transferred to a radar speed sign or RadStat mobile applications

Open Log file…	Open a speed log file previously downloaded from a radar speed sign
Close Log file	Close an opened log file
New parameters file	Create a new file containing the parameters for various radar speed signs
Edit parameters file	Edit an existing parameters file
Exit	Close the RadStat application

Please note that the application supports other radar speed sign models. In this case, the file extension for a RAD50 parameters file is « .rpar50 ».

4.4.2 The « Database » menu



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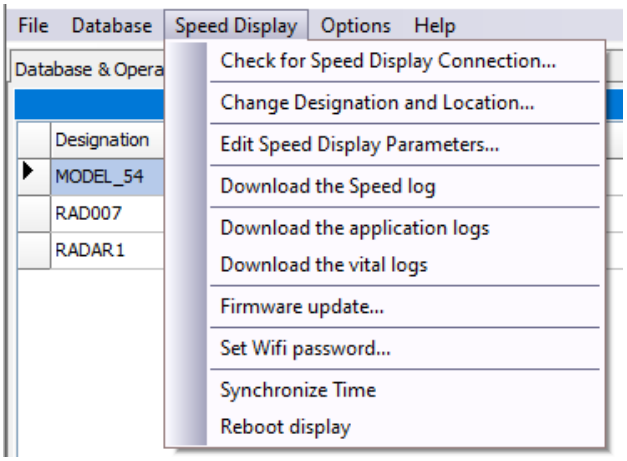
The Database menu contains commands to import a speed log file into the database server, change database server settings (Advanced) and allow the deletion of a speed sign from the database server.

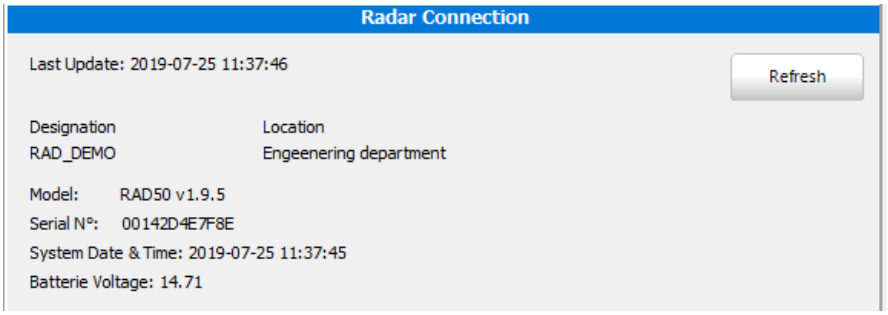
Import log to Database	Use this command to import a speed log file into the database server. Check is performed in order to prevent duplicate data. Also note that imported data will go into the proper dataset according to the sign's designation.
Database server settings	This allows the use of a central server instead of storing the data locally.
Delete display from database	Allow to completely delete the currently selected sign and its data from the database

4.4.3 The « Speed display » menu



Commands in this menu are used with a radar speed sign to which a connection is established. As opposed to the file menu, you can interact directly with the radar speed sign.

Check for Speed Display Connection	This command will attempt to request information form the radar speed sign then refresh the information panel in RadStat main tab. If the connection to the sign is not made, the information fields will be empty, otherwise basic information will be displayed.

	***IMPORTANT**: The software tries to refresh this information automatically but sometimes will not get the notification to do so. This command allows you to do this manually. If the information is not updated, you will not be able to access other menu items in this group.* 
Change Designation and Location	This command opens a dialog box where you can change the sign's designation and location labels. The designation is used primarily as a key in the radar database. Changing the designation will force the next dataset to be imported in a new (or existing) radar entry with the same designation. The location label is purely informative. If you are using a radar in multiple locations, you can use the designation to your advantage by using a specific designation per site. This will allow you to have the data for each location stored separately therefore making your report coherent, when returning to a previous site, just use the same identifier as the last time. ***IMPORTANT**: The content of the speed log is cleared when the designation is changed. Make sure you download your data before changing the designation if you intend to keep it.*
Edit Speed Display Parameters	This command will bring you to the parameters editing dialog box. You can tailor the sign's parameters to fit your need. The parameters are described later.
Download the Speed Log	This command will have the speed log from the sign downloaded to the local hard drive. After successful download the data will be cleared from the sign and the data acquisition restarted.

Download the application logs	This command will download the application logs. This can be used if experiencing problems with the sign and may be requested by our technical support staff.
Download the vital logs	This command will download the vital logs. This can be used if experiencing problems with the sign and may be requested by our technical support staff.
Firmware update	This command allows you to update the radar firmware to a newer release. Please check regularly our web site for newer version of RadStat for Windows / Android and keep your firmware up to date.
Set Wi-Fi password	This command allows you to change the Wi-Fi password. Please remember that the password shall be no less than 8 characters.
Synchronize time	This command allows you to synchronize the sign's time with the computer time. If your sign is equipped with a GPS this step is not necessary nor desired. Make sure your computer date time is correct before using this command. ***IMPORTANT**: The content of the speed log is cleared when the Date time is changed. Make sure you download your data before changing the designation if you intend to keep it.*
Reboot display	This command will have the radar speed sign restart.

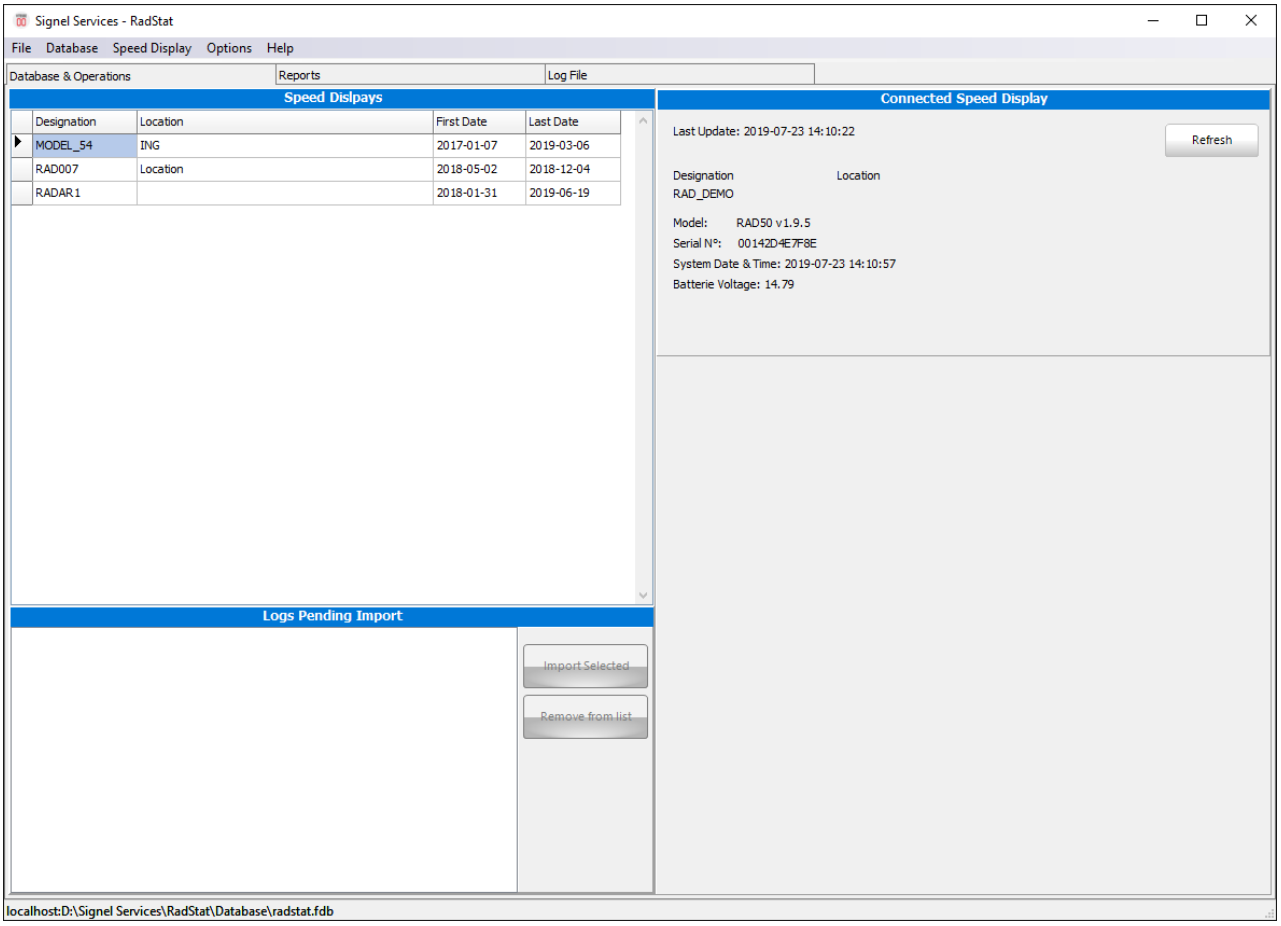
4.4.3.1 The « Options » menu

The options menu currently only allows you to change the application language between English and French.

4.4.3.2 The « Help » menu

This menu has the About command which you can use to see your RadStat application version.

4.5 DATABASE AND OPERATIONS



The database and operations tab is divided in three parts, the first is a list of radar speed signs that have data stored in the database, the second is a list of speed logs that were downloaded for a sign but not yet imported into the database and on the right basic information about the currently connected radar (if any).

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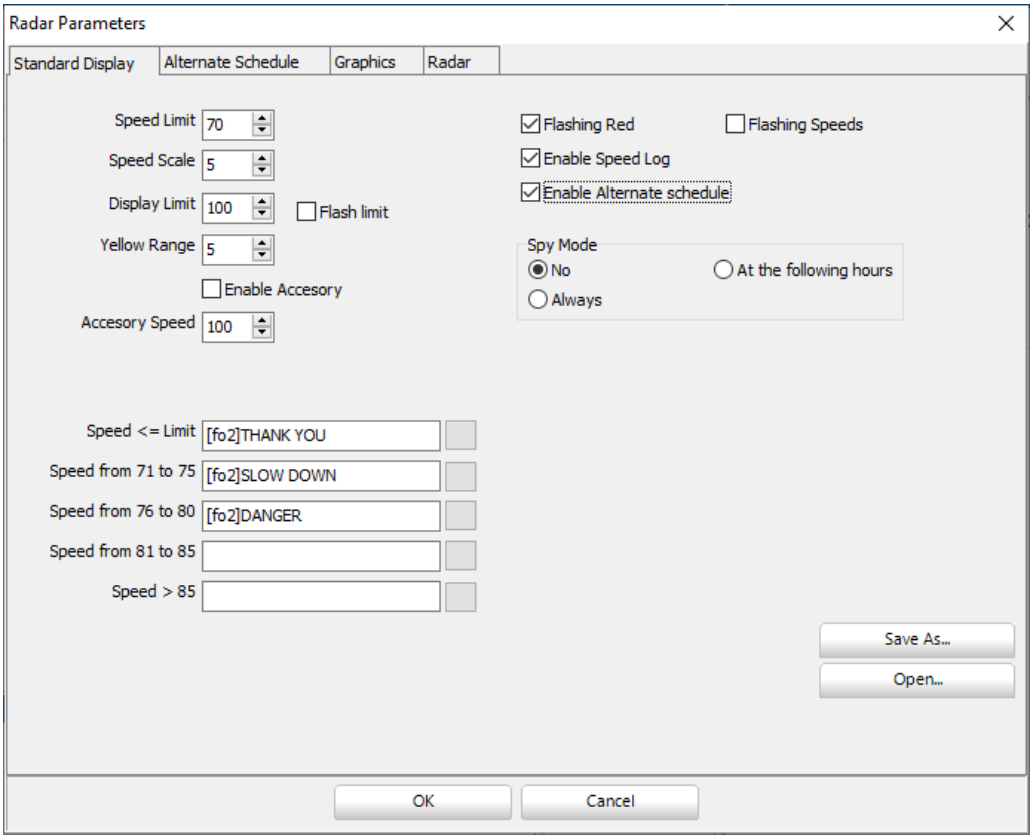
4.5.1 Radar speed sign parameters

An extensive set of parameters allows you to tailor the sign's behavior to your need.

4.5.1.1 Standard display tab



The standard display tab has the following parameters

Speed limit	The speed limit in effect at the radar speed sign location ***Note**: There is an optional alternate schedule described later which allows for zone that have two speed limits according to date and time factor such as school zones.*

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Speed scale	The speed scale used for messages; this allows to change the speed range of each message's step.
Display limit	This sets the maximum speed that will be displayed by the radar speed sign. Speeds will still be logged (if enabled) but won't be displayed. This is usually done to prevent drivers to use the sign as a "show off".
Flash limit	If this option is selected instead of not showing the actual speed when above the display limit, the speed limit will be blinked.
Yellow range	The radar speed display can display speed in yellow, the range can be set from 0 (no yellow) to 15 and will have the speed displayed in yellow from speed limit to speed limit + range. ***Note**: During winter month it is recommended to keep this range as low as possible if not zero in order to save power.*
Enable accessory	If your radar speed sign is equipped with an accessory such as a strobe, select this option to enable it.
Accessory speed	The speed at which the accessory will be activated
Messages area	These fields allow you to set the messages according to speed ranges. The first field is always for speed below or equal to the speed limit. Other ranges vary in function of the speed scale parameter. ***Note**: A later section will describe message editing.*
Flashing red	When selected, speed displayed in red will also flash.
Flashing speeds	When selected, all speeds will flash (useful during winter months as it reduces power consumption)

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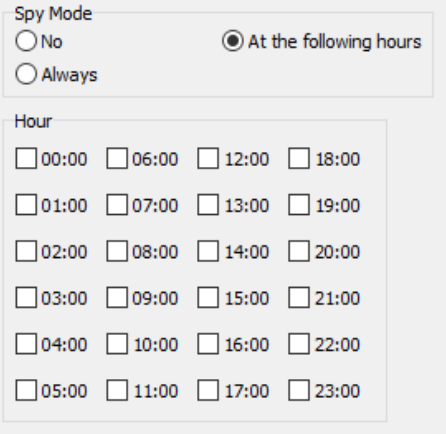
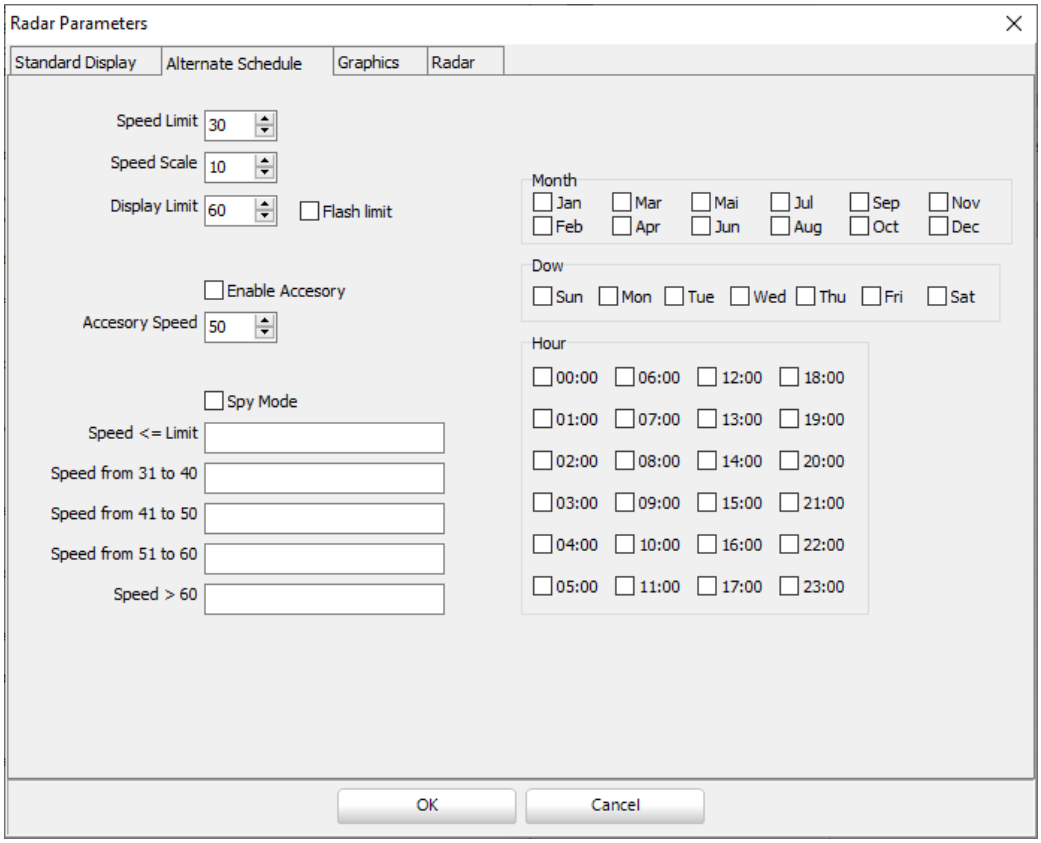
Enable speed logs	This enables speed logging for analysis. If you have no interest in keeping the data, uncheck this option.
Enable alternate schedule	If you are in a location with two speed limits or you would like to use different parameters for a period of time, then selecting this option will give you access to the alternate schedule tab. Uses include school zone, spy mode at night…
Spy mode	This parameter allows you to set the radar in spy mode. You can select no (No spy mode), always (full spy mode) or schedule the hours at which you do not want speed and messages displayed. ***Note**: In spy mode the radar speed sign remains fully operational with the exception that no display is made. Logging if enabled will still work.* 

4.5.1.2 Alternate schedule tab



The Alternate schedule tab has the following parameters

Speed limit	The speed limit in effect at the radar speed sign location ***Note**: There is an optional alternate schedule described later which allows for zone that have two speed limits according to date and time factor such as school zones.*

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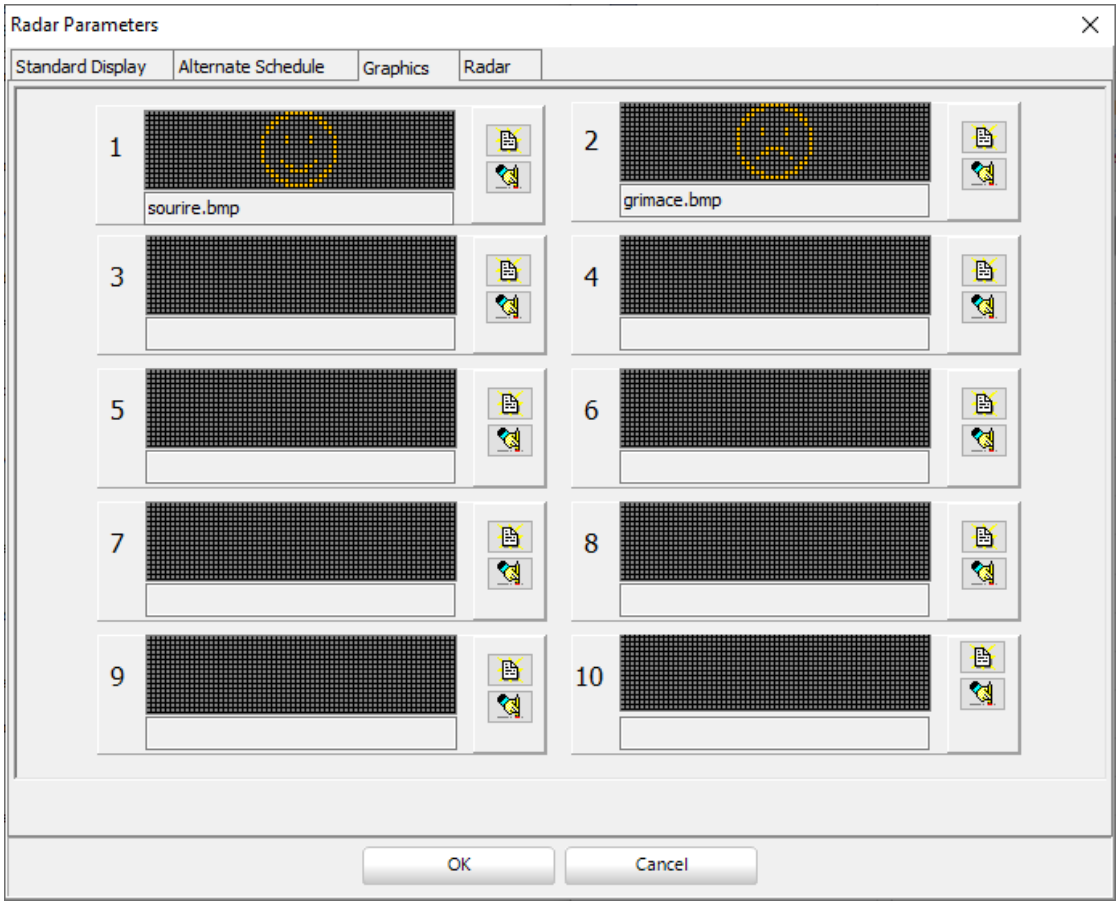
Speed scale	The speed scale used for messages; this allows the user to change the speed range of each message's step.
Display limit	This sets the maximum speed that will be displayed by the radar speed sign. Speeds will still be logged (if enabled) but won't be displayed. This is usually done to prevent drivers to use the sign as a "show off".
Enable accessory	If your radar speed sign is equipped with an accessory such as a strobe, select this option to enable it.
Accessory speed	The speed at which the accessory will be activated
Spy mode	When selected the radar display sign will be in spy mode during alternate schedule time.
Messages area	These fields allow you to set the messages according to speed ranges. The first field is always for speed below or equal to the speed limit. Other ranges vary in function of the speed scale parameter. ***Note**: A later section will describe message editing.*
Month	Select the month where the alternate schedule is to be enabled.
Dow	Select the day of the week where the alternate schedule is to be enabled.
Hours	Select the hours where the alternate schedule is to be enabled.

4.5.1.3 Graphics tab



RadStat has no built-in graphic editor but will let you import bitmaps created with a program such a Paint. The graphic created must be of the same size as the message matrix (64x16 pixels for a RAD50) and be monochrome.

The two buttons on the side of each matrix allow you to:

Load a bitmap file 

Clear the graphic entry  .

Please note that the file name of the graphic should be kept under 64 characters, otherwise it will be truncated to 64 characters.

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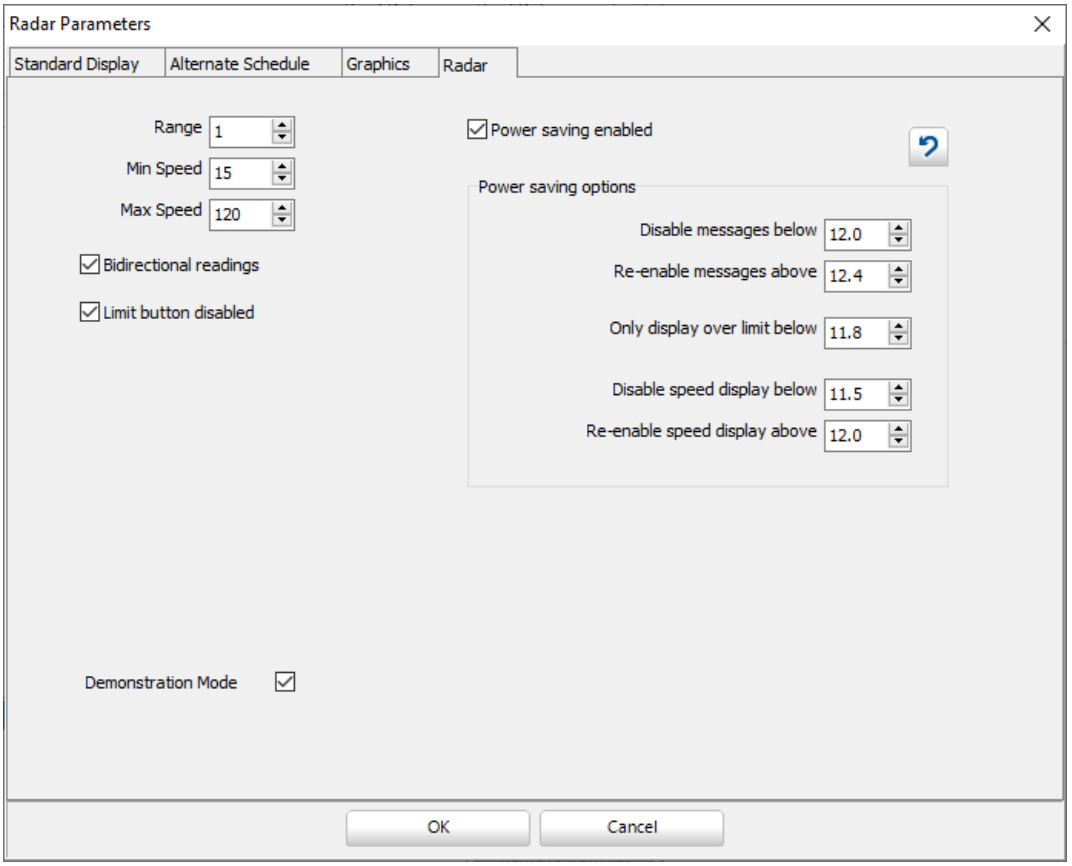
4.5.1.4 Radar tab



The radar tab has the following parameters

Range	The Doppler radar range (1 to 5) allows you to adjust the range at which vehicles will be detected.
Min speed	The minimum speed recorded and displayed.
Max speed	The maximum speed recorded and displayed, if under Display limit.
Bidirectional readings	Specifies if receding traffic data is also logged.
Limit button disabled	Disables the button used to change the speed limit at the back of the sign to prevent tampering.

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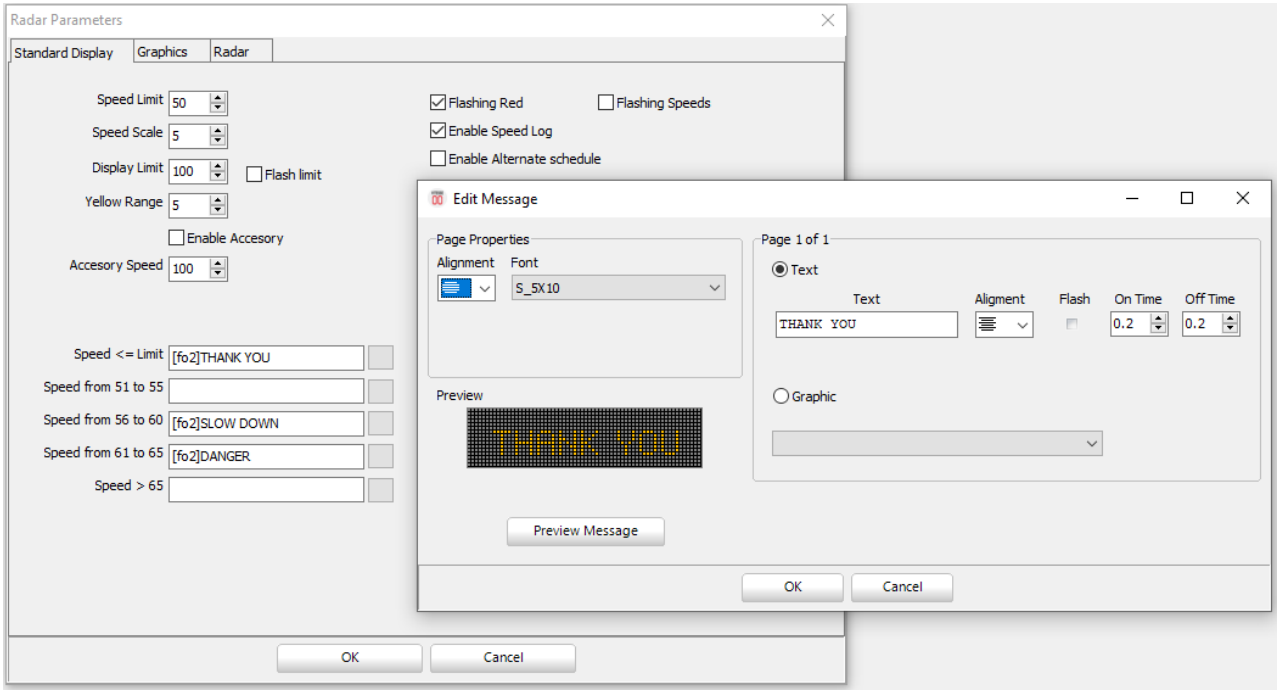
Demonstration mode	Enables a demonstration mode where speeds are randomly generated, and messages displayed according to the parameters. This is useful in reviewing the actual physical effect of your custom settings.
Power saving enabled	Enables power shedding in relation to the power supply voltage.
Power saving options	These thresholds are self-explanatory and let you adjust the voltage at which each power shedding starts and stops.

4.5.2 Message editing



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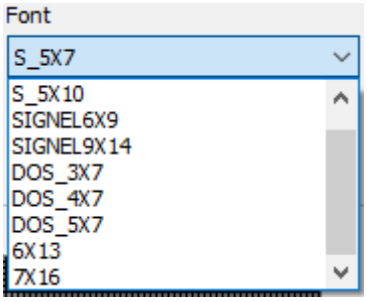
Messages can be edited by entering the text with NTCIP encoding in the edit box. Or otherwise, press the button to the right to open a formatting dialog box. The dialog box allows you to easily choose the font, alignment, and other message properties. It also allows you to preview the message as it will appear on the display sign.

All messages will be validated upon exiting the edit parameters dialog box or when saving the parameters to file. Keep in mind the display's width and height when composing a message.

In order to select a graphic in the message editing dialog it must first be loaded in the edit parameter dialog as previously showed.

The radar speed display uses NTCIP encoding to describe the text properties. By default the text is centered, uses font #1 and does not flash. The default does not need to be explicitly specified. Here are some of the most used encoding.

[fox]	Used to select the font used for display. Depending on the radar display sign model, a certain number of fonts are available for display. Change x for the font number (starting at 1). Here for example are the fonts found on a RAD50. Default is S_5x7 or [fo1]. 
[jpx]	Used to change the page justification (Vertical). Possible x values are: 2- Align top 3- Align center 4- Align bottom
[jlx]	Used to change the line justification. Possible x values are: 2- Align left 3- Align center 4- Align right 5- Align justified
[fltxxoxx] [/fl]	Used to make part of a line of text flash. This encoding requires and end marker [/fl]. The two xx fields represent flash on time and flash off time in 1/10th seconds. To have the text "TEST" flash on 0.2 seconds

	then off 0.2 seconds use the following encoding [flt02o02]TEST[/fl]
[nl]	Use to change line in a multiple line message.

Some examples:

[fo2]DANGER
Will display DANGER using font #2 (S_5x10) centered both vertical and horizontal, not flashing.

[fo2]SLOW[nl]DOWN
Will display SLOW DOWN using font #2 on two lines.

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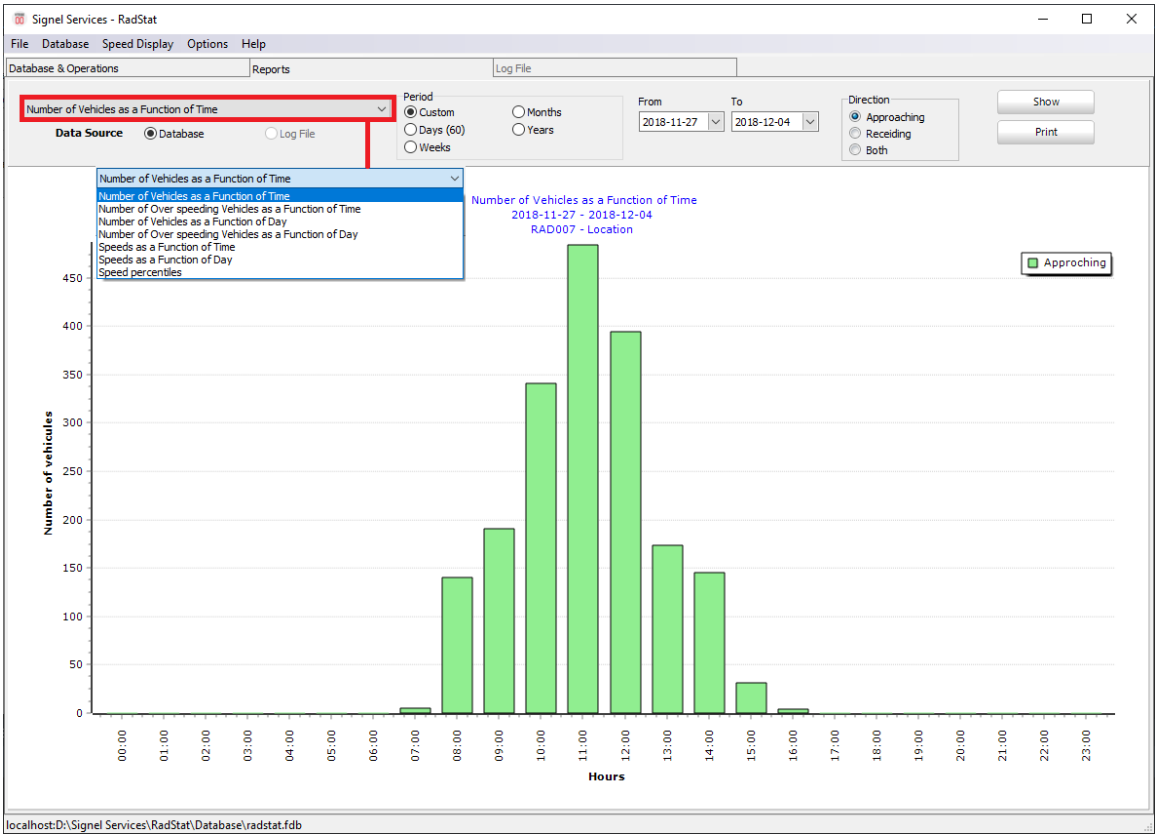
4.6 REPORTS

The reports tab allows you to see reports based on the information gathered from a radar speed display. Seven predefined reports are available



Available reports:

- Number of vehicles as a function of time.
- Number of over speeding vehicles as a function of time.
- Number of vehicles as a function of the day of the week.
- Number of over speeding vehicles as a function of day of the week.
- Speeds as a function of time.
- Speeds as a function of day.
- Speed percentiles.

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Report data source selection:

- Database: Reports will be produced from the currently selected radar display sign in the Database & Operations tab.

- Log file: Reports will be produced from a log file loaded by using the file menu commands. This allows you to work without the database storage or preview data prior to importing into the database.

To create a report, first select the data source, then the report you want from the list of available reports. You may then select date and direction criteria. When you have these chosen, just click on the “Show” button to have the report created.

Once you have a report displayed, the “Print” button will allow you to print the report.

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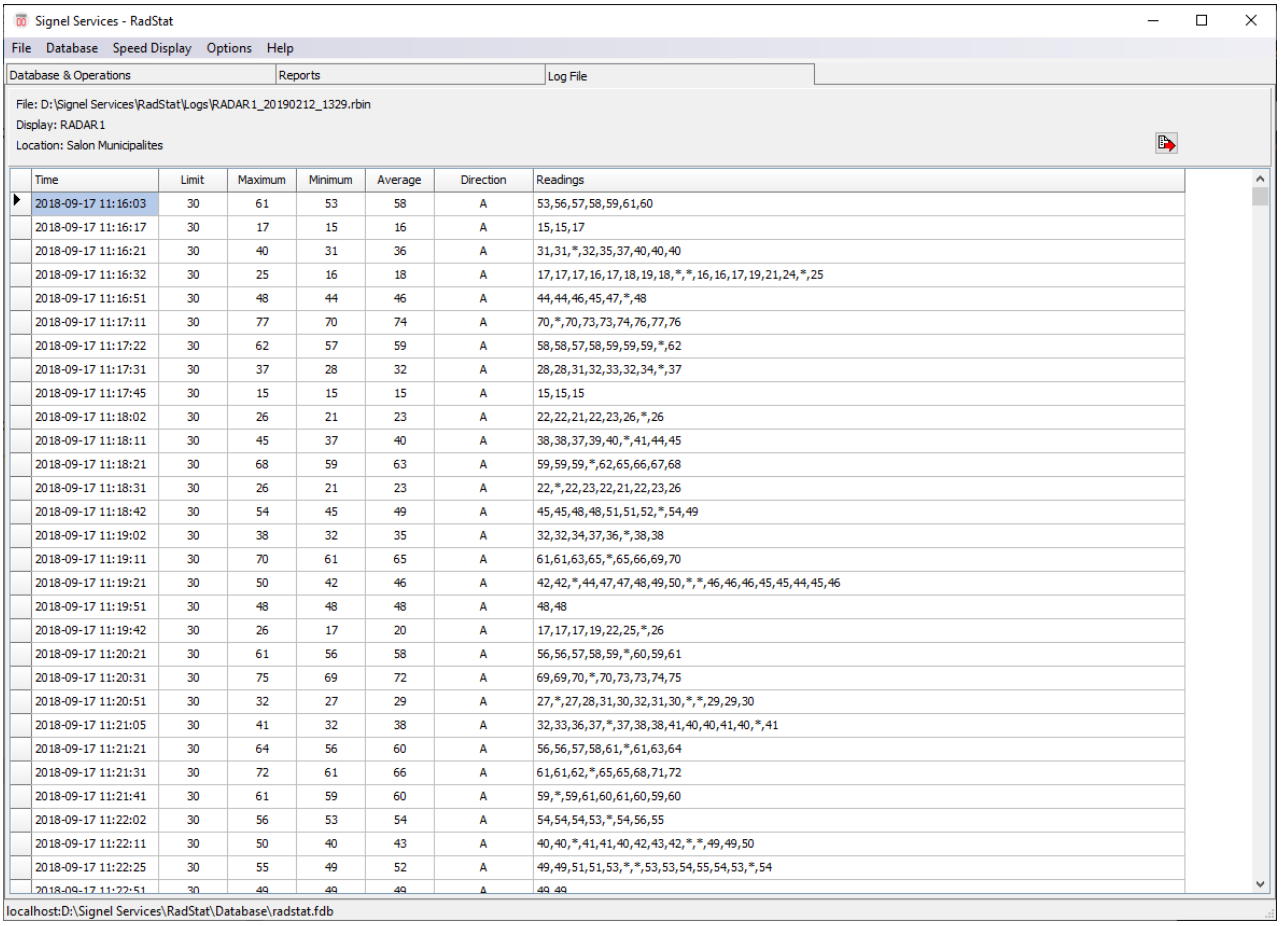
4.7 SPEED LOG FILE

The Log file tab allows you to see the data form a speed log file pre analysed by the software. Every line represents a vehicle and its associated calculated values.

Please note that the average speed is used when producing reports.

A button to the top right allows you to export the data to a Microsoft Excel file for your own analysis needs.



Time	Limit	Maximum	Minimum	Average	Direction	Readings
2018-09-17 11:16:03	30	61	53	58	A	53,56,57,58,59,61,60
2018-09-17 11:16:17	30	17	15	16	A	15,15,17
2018-09-17 11:16:21	30	40	31	36	A	31,31,*,32,35,37,40,40,40
2018-09-17 11:16:32	30	25	16	18	A	17,17,17,16,17,18,19,18,*,*,16,16,17,19,21,24,*,25
2018-09-17 11:16:51	30	48	44	46	A	44,44,46,45,47,*,48
2018-09-17 11:17:11	30	77	70	74	A	70,*,70,73,73,74,76,77,76
2018-09-17 11:17:22	30	62	57	59	A	58,58,57,58,59,59,59,*,62
2018-09-17 11:17:31	30	37	28	32	A	28,28,31,32,33,32,34,*,37
2018-09-17 11:17:45	30	15	15	15	A	15,15,15
2018-09-17 11:18:02	30	26	21	23	A	22,22,21,22,23,26,*,26
2018-09-17 11:18:11	30	45	37	40	A	38,38,37,39,40,*,41,44,45
2018-09-17 11:18:21	30	68	59	63	A	59,59,59,*,62,65,66,67,68
2018-09-17 11:18:31	30	26	21	23	A	22,*,22,23,22,21,22,23,26
2018-09-17 11:18:42	30	54	45	49	A	45,45,48,48,51,51,52,*,54,49
2018-09-17 11:19:02	30	38	32	35	A	32,32,34,37,36,*,38,38
2018-09-17 11:19:11	30	70	61	65	A	61,61,63,65,*,65,66,69,70
2018-09-17 11:19:21	30	50	42	46	A	42,42,*,44,47,47,48,49,50,*,*,46,46,46,45,45,44,45,46
2018-09-17 11:19:51	30	48	48	48	A	48,48
2018-09-17 11:19:42	30	26	17	20	A	17,17,17,19,22,25,*,26
2018-09-17 11:20:21	30	61	56	58	A	56,56,57,58,59,*,60,59,61
2018-09-17 11:20:31	30	75	69	72	A	69,69,70,*,70,73,73,74,75
2018-09-17 11:20:51	30	32	27	29	A	27,*,27,28,31,30,32,31,30,*,*,29,29,30
2018-09-17 11:21:05	30	41	32	38	A	32,33,36,37,*,37,38,38,41,40,40,41,40,*,41
2018-09-17 11:21:21	30	64	56	60	A	56,56,57,58,61,*,61,63,64
2018-09-17 11:21:31	30	72	61	66	A	61,61,62,*,65,65,68,71,72
2018-09-17 11:21:41	30	61	59	60	A	59,*,59,61,60,61,60,59,60
2018-09-17 11:22:02	30	56	53	54	A	54,54,54,53,*,54,56,55
2018-09-17 11:22:11	30	50	40	43	A	40,40,*,41,41,40,42,43,42,*,*,49,49,50
2018-09-17 11:22:25	30	55	49	52	A	49,49,51,51,53,*,*,53,53,54,55,54,53,*,54
2018-09-17 11:22:51	30	49	49	49	A	49,49

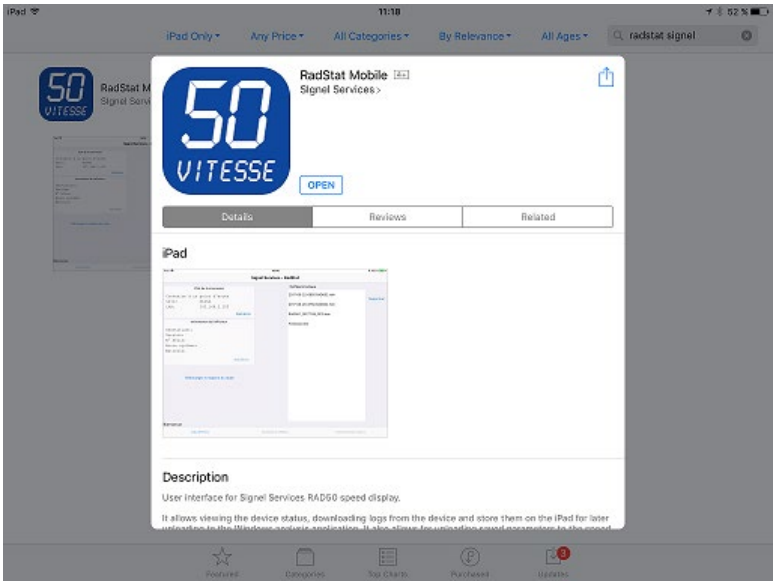
5 MOBILE APPLICATION

A tablet application (iPad / Android) is available to use with the radar display sign. The application allows the following:

- Download speed logs locally and transfer them on to RadStat for Windows for analysis.
- Display and modify the radar display sign parameters.
- Change the designation.
- Store different parameters files for later upload to radar speed displays.

5.1 APPLICATION INSTALLATION

iPad application can be installed from the Apple store. The Android application can be downloaded and installed from Signel Services web site at www.signel.ca/downloads



5.2 CONNECTING TO THE RADAR SPEED DISPLAY

Connection to the sign is also made using Wi-Fi. Please use the correct pair of SSID and password to connect to the signs Wi-Fi access point.

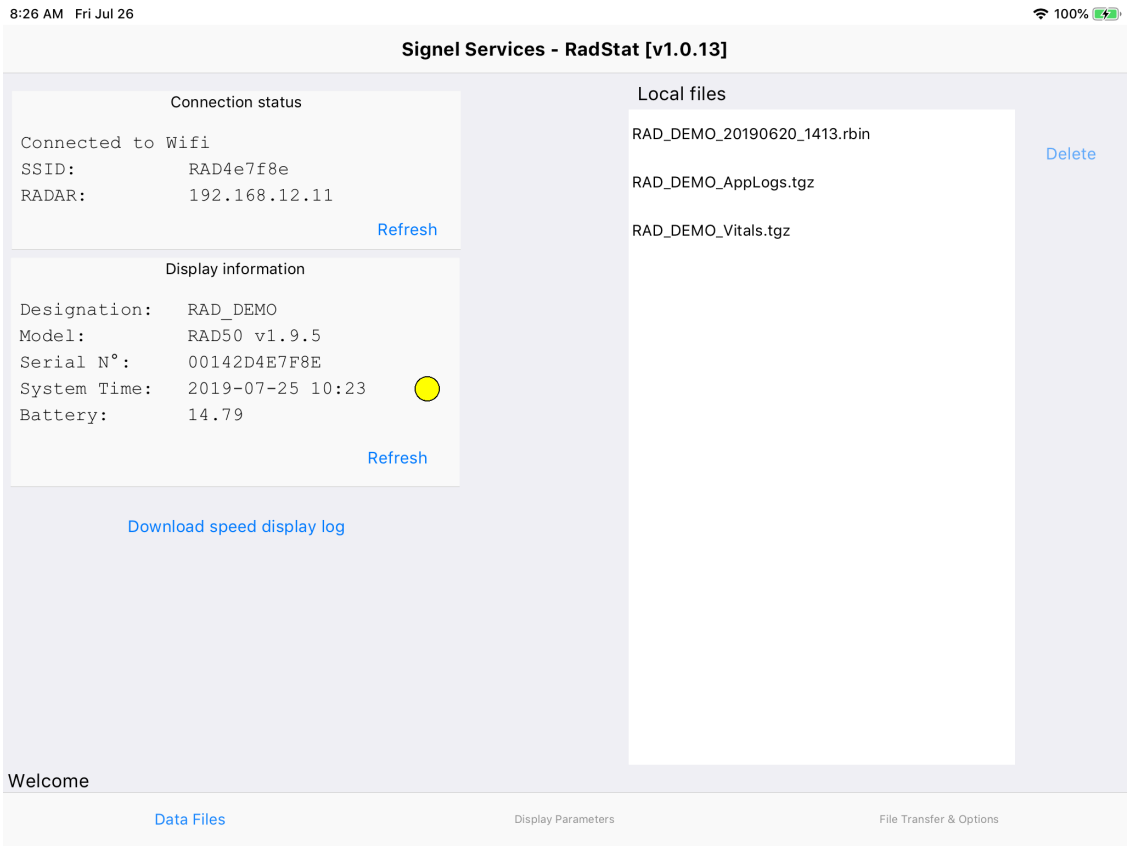
Once connected, start the application and you should have the information about the connected radar speed sign you are currently linked to.

5.3 APPLICATION START-UP

Press the application icon to start the mobile application

5.3.1 Data Files tab

The application starts showing the data files tab which also includes the status of the connected radar speed display if any.



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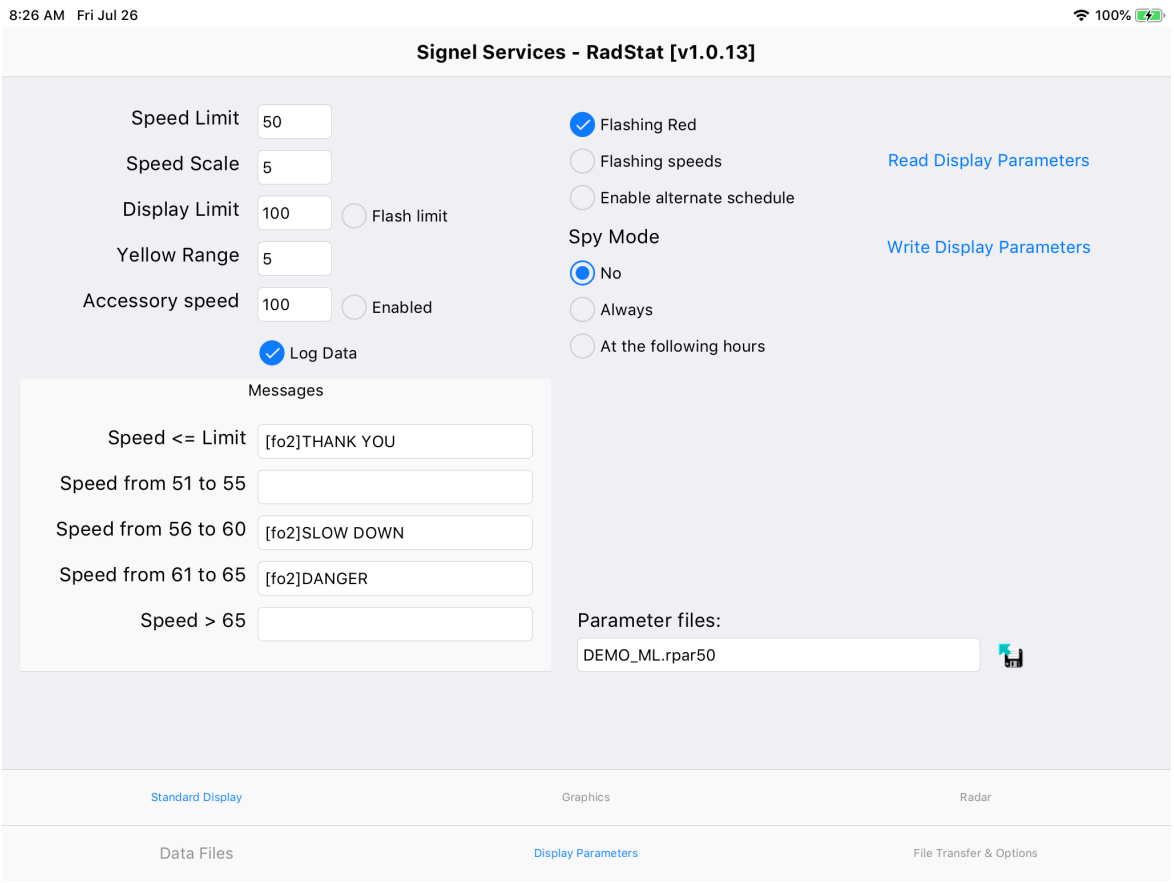
The connection status area shows the active Wi-Fi connection, this information is required in order to adapt the functions available wether you are connected to a radar speed sign or your local work Wi-Fi network. Please refresh the information if you change connection.

The Display information is only active if you are connected to a radar speed display. This should also be refreshed upon changing connection.

This tab has the button used to download the speed log and save it the tablet storage for later transfer to the RadStat Windows application.

5.4 DISPLAY PARAMETERS



This tab allows you to work with the radar speed sign parameters either by uploading a parameter file to the display or by directly modifying the display parameters. Please refer to the RadStat for Windows section for the parameter descriptions.

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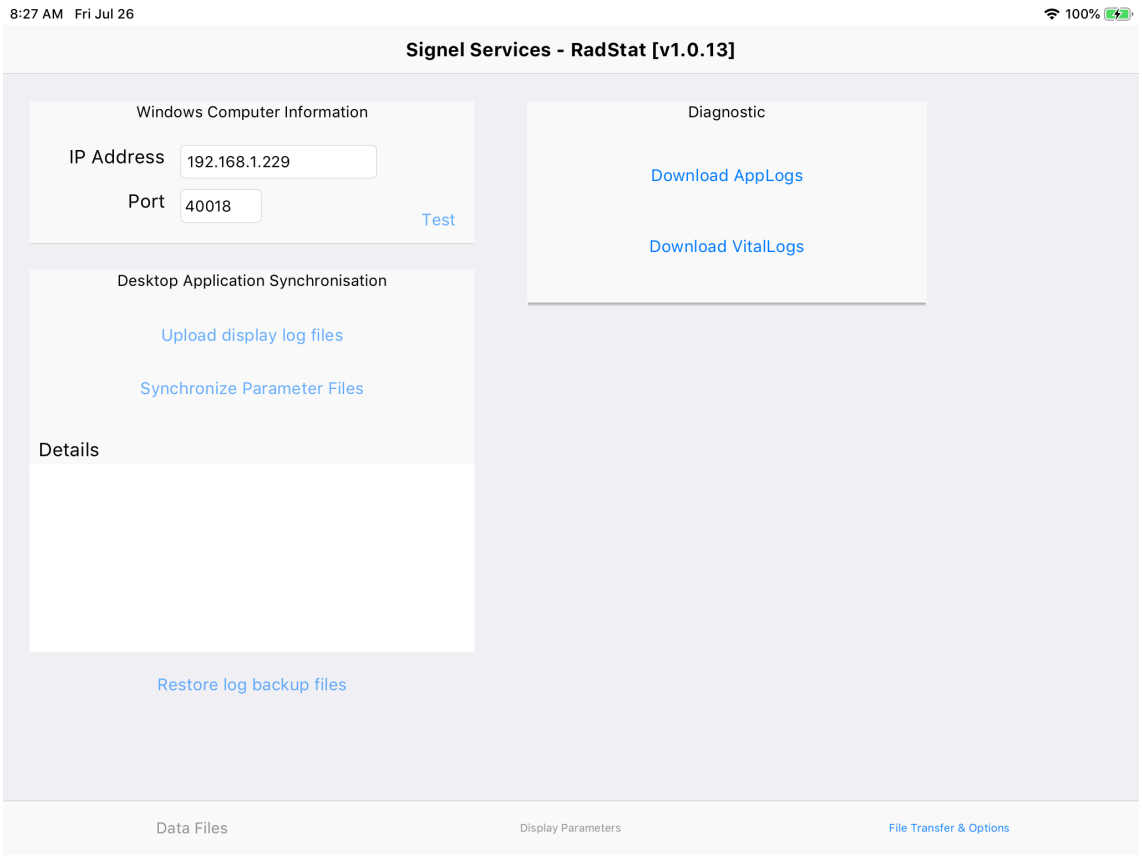
Please note that the graphics cannot be modified using this interface.

The parameter files selection list is filled by syncing with your installed Windows RadStat application that transfers the parameters file you have saved.

5.5 FILE TRANSFER AND OPTIONS



This tab allows you to transfer data from the device to a computer running RadStat for Windows and download parameters files from a computer for later transfer to a radar speed display. There are also two buttons that allow you to download diagnostic information that may be required by our technical support team.

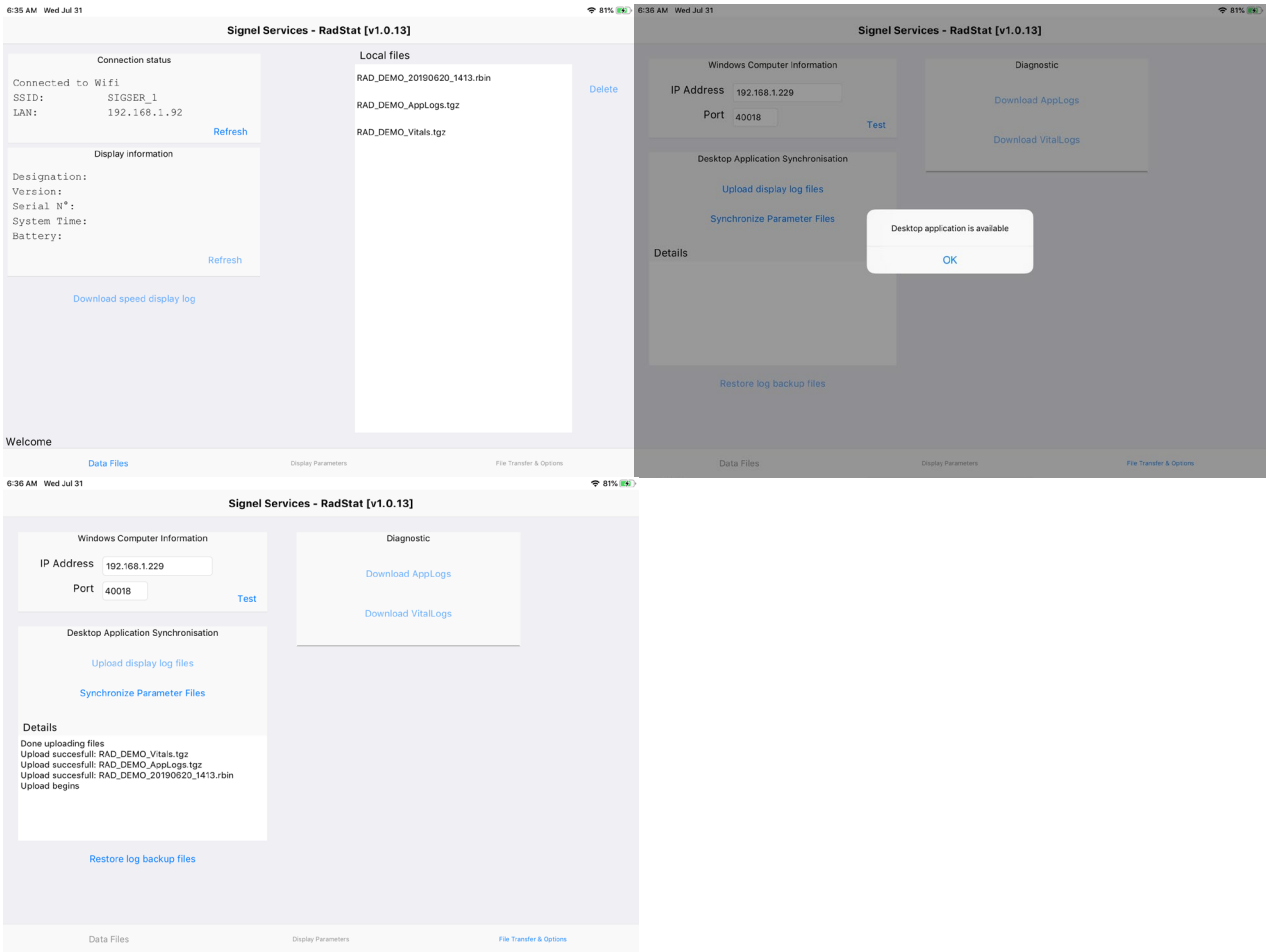
In order to transfer files to and from the device, it must be connected via Wi-Fi to the same local area network as the computer running RadStat. You must also refresh the connection status on the first tab so that the application knows that you are connected to a LAN (local area network) and not a radar speed display.

The field IP Address must contain the address assigned to the computer running RadStat. If you are unsure of the address, please ask your network manager to supply you with this information. Once the address is entered and the RadStat for Windows application is running, hit the test button to confirm that all components are ready for transfer. Testing the connection is required to activate the transfer buttons.

Now you can use the <Upload display log files> which will transfer all the speed log files from the device to the computer running RadStat for Windows. Speed log files are stored under <My Documents\Signel Services\RadStat\Logs>.

Also available is the <Synchronize parameter files> which will synchronize the parameter files contained in <My Documents\Signel Services\RadStat\Param> with the device, this is the default folder when saving files that you created.

The details area will show details about files being transferred.



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6 RAD50 TECHNICAL DATA

Radar	
Precision	+/- 1kmh
Speed range	5kmh à 240kmh
Detection range	150m typical, 1250m max
Frequency	24.125 MHz, +/- 100MHz
Beam width	12º horizontal, 24º vertical
Power supply	7.4 VDC to 24 VDC
Approval	IC : 1293A-DRUIII FCC : IVQDRU-III
Display	
Speed	Green, Amber and Red colors 330 x 465mm (13.0'' x 18.4'') 7-segments
Message	Monochrome Amber 150 x 615mm (6.0 x 24.3'') 64x16 pixels, full matrix
Viewing angle (Iv 50%)	25º Around central axis 50º total
Enclosing	
Front	Polycarbonate 1/8'' (3.2mm)
Body	ABS, UV resistant
Ingress protection	IP65
Dimensions	Height: 29.1'' (740mm) Width: 28.7'' (730mm) Depth: 4.0'' (100mm)
Weight	12 lb (5.5kg)

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7 DOPPLER RADAR

This device is approved by Industry Canada (IC) for operation without a licence.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not covered in this Guide must be approved in writing by the manufacturer's Regulatory Engineering Department. Changes or modifications made without written approval may void the user's authority to operate this equipment.

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8 TROUBLESHOOTING

NOTE
There are no internal components serviceable by the user.

Problem

No display.

Possible solutions

- Check the radar speed display fuse and any other protections on the power supply, verify that you have 12 VDC at the power supply connector.
- Check the radar speed display parameters to insure it's not on <Spy mode>.
- Check if the battery voltage in not in power shedding range..

Problem

Late vehicle detection.

Solution

- Check for proper installation (Radar display sign is oriented properly with no obstruction).
- Radar range can be raised in the radar parameter tab in RadSat.

Problem

Missing or erronous speed log entries.

Solution

- Check for proper installation (Radar display sign is oriented properly with no obstruction).
- Check that speed logging is enabled.
- Check that the clock is set properly.

For more information or technical support, please contact us.

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