



Solo 2 GPS Lap Timer





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Solo 2 GPS Lap Timer

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1. Solo 2 in a few words

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Anything else?

Of course, yes!

Solo 2 is the new AiM GPS lap timer

Why Solo 2? Because it features:

What is Solo 2?

integrated GPS + Glonass receiver

■ a huge tracks database that Solo 2 manages to automatically select the track where you are racing

■ a powerful and comfortable Wi-Fi connection

different type of races: speed and performance

■ 10 RBG LEDs that clearly show you if you are improving or not

■ A huge amount of internal memory (four gigabytes) capable of recording a lot of tests An app for iPhone is coming! In a few weeks you will be able to analyse essential data on your iPhone; furthermore, you will be able to see in real time all the values Solo 2 samples, upgrade its firmware, create new tracks as well as update your database, modify Wi-Fi settings.



2. What is in the kit?

Solo 2 kit includes:

1 - Solo 2

2 - Solo 2 power cable with car lighter socket
3 - Solo 2 power cable with AC adapter
4 - Solo 2 mounting bracket with screws

Solo 2 user manual Race Studio 3 software installation CD AiM sticker











3. Installation, powering and accessories

Thanks to its small dimensions and to the different accessories available for installation Solo 2 can be installed on any kind of motorsport vehicle.

The internal battery keeps Solo 2 alive for about 4/5 hours: please, keep in mind that the power consumption depends upon the activity of:

- Wi-Fi (about 100 mA/hour when ON)
- Backlight
- Shift Light LEDs

GPS tracking: at the power ON, Solo 2 starts searching the satellites: this activity is rather power consuming and continues for about 40-50 seconds. After this short period, the power consumption sensibly decreases.

Solo 2 can anyway be powered by a 12V, not stabilized, external power source.

AiM provides different installation accessories, to say:

support for roll-bar: X46KSTG00





■ support for suction cup: X46KSVS00

support for generic tube:

X46KSTP00





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Solo 2



4. At power ON

When switched on Solo 2 shows satellite page.

5. Configuration menu

Before using your Solo 2 you need to set some parameters as explained here below. Press "MENU" and this page shows up.



To optimize the display management, the keyboard disappears when not necessary. Please, simply press one of the pushbuttons for making it show up again.



The icons are to manage:









Type of racing Tracks Management

Display setup

3

Wi-Fi

System settings

5.1 Type of racing



Solo 2 features two different type of races, each of them with different options:

speed (left image below)

performance (right image below)

Type of Racing:SpeedPredictive Ref:Best Lap of Today	Type of Racing:PerformancePerformance Type:0-60 mph
PREV NEXT CHANGE EXIT	PREV NEXT CHANGE EXIT

Speed racing

Solo2 automatically selects the track in which you are performing: after having found the proper track, it may calculate and show:

the lap times

the predictive lap time, the time at the end of the actual lap, computed looking at the actual speed, compared with a reference lap.

The predictive lap time may be shown as an **Absolute Time** (i.e. 1:34.45) or as a **Gap** (i.e. + or -0.25 sec), between the actual lap and a reference Lap. The Reference Lap may be:

- the best lap of the test or
- the best lap of the day

Performance racing:

This racing mode shows you different performance options according to the measure unit you set in "System settings" -> "Unit of measure" menu:

using **imperial** unit of measure (mph) the available performance options are:

- 0 60 mph
- 60 0 mph
- 1/8 miles
- 1/4 miles

using **decimal** unit of measure (km/h) the available options are:

- 0 -100 km/h
- 0 -160 km/h
- 100 m
- 150 m
- 400 m
- 1000 m



AUTOMATIC

Solo 2 built in GPS receiver is used for:

Lap time calculation

Speed calculation

Predictive lap time calculation

Position on the track in Analysis.

To calculate these data the system needs to know the Start/Finish line coordinates.

Solo 2 comes with a long list of the world main tracks, list that is constantly updated by our technicians and is automatically upgraded your PC when you run our Race Studio3 software and an Internet connection is available.

Mode:

Solo 2 provides two track selection modes: automatic and manual.

Automatic:

Solo 2 automatically recognizes the track you are running on, loads start/finish line and calculates lap times. This is the best mode in most cases.

Manual:

allows you to manually select the track from the internal database.

.....

Track List Type: Nearest Tracks Info PREV NEXT CHANGE EXIT

This mode is to be preferred when multi-	6
ple track configurations are available ne-	
arby. In this case Solo 2 would anyway	
recognize the track but would need at	
least one complete track lap.	
To be ready from the first lap manual	
mode would be helpful.	

Mode: Track List Type: Track selection	MANUAL All Tracks
PREV NEXT CH/	ANGE EXIT

Both track modes provide three track list type:

nearest: shows only tracks in a 10 km distance with max 5 tracks shown

- all tracks: shows all tracks stored in the system in alphabetical order
- custom: shows only the tracks you have previously created (learning mode)

5.2.1 Creating a track with Solo 2

If you are running in a track NOT included in Solo 2 database the device switches to "learning" mode and behave this way:

it starts sampling all track points

when detects that it is crossing the same points for the second time it realizes that the track is closed and sets a temporary start/finish line showing lap time each time it crosses that point:

at the end of the session the system shows the track map with start/finish line: you can move start/finish line using Solo 2 bottom buttons;

■ you can add this new map to Solo 2 database, modify start/finish line coordinates, name the track and transmit it to the PC at first PC-Solo 2 connection

For further information about track management with Race Studio 3 refer to "Track manager" user manual you find in download area/software/Race Studio 3 documentation of www.aim-sportline.com.

CHAPTER 5

5.3 Display setup

Selecting this icon the page shown below shows up.



Here you can set the system backlight as well as its display pages.

5.3.1 Backlight



.....

You can set Solo 2 backlight as "ON" (default setting) or "OFF" as well as choose among eight different colours:



5.3.2 Pages Setup



Solo 2 can show from two up to five pages according to the type of race you set. Some pages are enabled by default and need to be set while other – custom, available only if you set type of race: speed – needs to be enabled before being set.

The Pages enabled by default are:

- track page (see related paragraph)
- lap time page (left image below)
- predictive page (right image below speed race only)



Lap time page: here you can set lap time format as:

■ rolling: dynamic is shown for 5 seconds when you cross start/finish line and then starts rolling again

static: shown steady for the entire lap; changes when crossing start/finish line **Predictive page ("Type of race: speed" only):** here you can set lap time format as:

predictive: shows the predicted time result

■ +/- best: shows time gap between current lap and reference lap you set in "Type of race" menu

None

Static

Rolling +/- Best

Predictive Best Lap

EXIT

3

5.5 – System settings

Selecting this icon you enter this page:



5.5.1 Unit of measure



You can set the measure unit of:

speed: km/h or mph: please remember that according to the measure unit you set here you will see different options in "Type of Race" menu if selecting "Performance" type (refer to the related paragraph for further information)

OFF

good GPS signal)

ON

(left image below).

Number of Measures:

CONFIG NEXT CHANGE EXIT

Page:

Enabled:

5.4 Wi-Fi

"Wi-Fi Reset CFG" allows you to reset Wi-Fi configuration and is very useful if you do not remember Wi-Fi password

Auto: switches Wi-Fi on when the vehicle is stopped and automatically switches it

off when Solo 2 starts recording (speed higher than 10 km/h for 3 seconds with a

The two custom pages (speed race only) need to be enabled as shown here below.

This way "CONFIG" button appears (right image below). Press it to configure the page. Each custom page can show up to four fields. All fields can show all available options

iPS Speed

None

PREV NEXT SELECT

Custom 1

YES

4

Here you can manage Wi-Fi as well as reset its configuration. Wi-Fi modes are:

WiFi Mode: WiFi Reset CFG	ON
WiFi:	BUSY
SSID:	000101-SoloBrizio
IP:	10.0.0.1
Fw Yer:	01.01.20
PREY NEXT	CHANGE EXIT



LED





Here you can set the 10 lateral LEDs of
Solo 2 function and working mode
(value).

Function can be:

Laptime
OFF

Led Value can be:





Working mode:

Setting Laptime mode the lateral LED switches on green or red indicating if your lap time is improving (green) or getting worse (red).

The LED values indicate the time gap to be assigned to each LED. Assuming your lap time is improving of 0.3 sec toward the reference lap:

■ if you selected 0.1 sec LED Value your Solo 2 will switch on 3 LEDs green;

■ if you selected 0.2 sec LED value the green led will be 1;

■ if you selected 0.05 LED value all your Solo 2 LED will switch on green.



SOLO 2

Here you can set the time zone of your Solo 2 as well as enable/disable "Daylight Saving time" option. Time zone is always set manually. Date and time can be shown in different format.

Time is automatically synchronized as Solo 2 receives the GPS signal.

Time Zone:	+1: Paris	Berlin	Rome
Daylight Sav	ing Time:		ON
Time Forma	t:		24H
Date Formal	:	DD/I	MM/YY
Now:	11:47:42	25/01	1/2018

5.5.4 Language



You can set Solo 2 language. Default setting is English. At present available languages are (in this order):



5.5.5 System info



This page shows serial number as well as firmware and boot version of your Solo 2.

Serial N.:	101
Fw Yersion:	02.22.02
Boot Yersion:	02.21.03

6. On the track

Some Solo 2 pages are available for online visualization. To scroll them press "NEXT" ("Type of Race: Speed" only). Pages can change according to the device configuration.

6.1 Track page

This is the first page that appears when you switch Solo 2 on and can be recalled pressing "TRACK" button. When you start the engine of your car it goes away automatically. It shows:

■ on the left the selected track; you can select a new one manually or automatically

("MENU"/ Track Management); in case of "Automatic" selection the track is selected in dependence of the coordinates of your vehicle; in case the track you are running on is not included in your Solo 2 database the laptimer switches to "learning mode" as shown in the bottom image here on the right

■ on the right the satellite bar (visible satellites and signal level of each one) useful for evaluating the status of the GPS signal.





6.2 Other pages

Other available pages are: Laptime Page, predictive Page and two custom Pages. Use "NEXT" button to scroll them.

Laptime page is shown no matter which type of race you set your Solo 2 on. It shows the lap time.



Predictive page: shows the predicted current lap time in the format you set:

- +/- in relation to the Reference Lap
- Predicted lap time

Custom pages you may freely customize up to two pages for showing all the information you wish. The pages needs to be created and enabled as explained in Pages setup paragraph.

7. Data Recall

At the end of the test you can recall sampled data pressing "MEM". Data Recall is different according to the type of race you set your Solo 2 on.

7.1 Data Recall "Speed" mode

If you set "Type of Race – Speed" data recall shows these pages.

The first is "Summary page". Select the session you want to see and press "ENTER"

Once the session selected you see all tests in a box showing time of the test and best lap of the test. Select the test you want to see and press "ENTER".

04/12/	2015:	Ноп	iestead (FL
04:15AM 1:25.71	1 04:16	AM Lap	04:19AM 1 Lap	
04:18AM 1 Lap	1 04:17) 1	AM Lap	04:17AM 1 Lap	
PREV	NEXT	ENTE	R BACK	

Here you see the three best lap of the test with max speed value per every lap.Press "PAGE"

	04/12/2015 04	:15AM
Lap	Best Laps	mph
4	1:25.71	156.9
З	1:25.86	158.1
5	1:26.12	157.5
	PA	GE TESTS

This page is a histogram test summary. Moving the cursor left and right you can see all laps.

	04/12/2015 04:15AM	
	·····	
Best:	1:25.71	
	NEXT PAGE TESTS	h.
FREY	NEAT FACE TESTS	

"Session page" shows you all the laps of the session from the most recent backwards.

Press "ENTER" to enter "TEST" page.

YESTERDAY				
03:02AM	03:01AM	02:58AM		
0:09.10	0:09.37	0:10.03		
02:56AM	02:51AM	02:47AM		
0:14.63	0:14.90	0:09.20		
PREV NEXT ENTER BACK				

7.2 Data Recall "Performance" mode

If you set "Type of Race – Performance" data recall shows these pages. If your test is max two hours old you are automatically forwarded to the "Test" page. This page shows:

the selected performance top right (1/8 mile in the example)
 the lap time and the speed in the right box (9.10 and 72.3 mph)
 a table showing length, time and speed at the of the performance and in a set split on the left
 press "TESTS"

You come to "Test sessions summary" page, that is the first one you see if your last test is more than 2 hours old. It shows all the sessions from the most recent backwards.

Select the session you want to see and press "ENTER".

YESTER	DAY 03:	02AM	1/8 mi
ft	sec	mph	
60	01.05	40.9	09.10
330	15.14	45.1	72.3 mph
			TESTS

TEST SESSIONS
12/12/2017:
12/09/2017:
12/03/2017:
UP DOWN ENTER EXIT

3

8. Wi-Fi configuration

Solo 2 configuration can be made only using Race Studio 3 software. Two possible Wi-Fi modes are available.

1 - As an Access Point (AP - default)

This is the ideal configuration if you have one only device and one only computer. In this situation your Solo 2 creates a Wi-Fi network and works as an Access Point you can connect your PC to.



2 – Existing network (to connect to an existing Wi-Fi network – WLAN)

This mode is complex and implies an external access point (AP) but it is also more flexible and powerful because allows you to communicate with more than one device and with more than one computer in the same network. Solo 2 and the PC must connect to an existing Wi-Fi network made by a device that works as an external access point.



When working in WLAN mode Solo 2 has two available security levels:

network authentication: network password
 device authentication: Solo 2 password

Both levels allow you to use different strategies. A PC in WLAN, for example, can see several AiM devices but can communicate only with those he knows the password of. If you forget the password you can reset Wi-Fi configuration from Solo 2 menu as explained before.

8.1 Configuring Solo 2 as an access point (AP)

This is Solo 2 default configuration and is the easiest and most direct connection mode, ideal if you want to communicate with one Solo 2 using one PC. It is free and so completely accessible by anyone. Please set an access password as soon as possible.

To establish a Wi-Fi connection:

ensure that the Wi-Fi is enabledread your Solo 2 Name



run Race Studio 3
 click Wi-Fi icon and select your device

in a few seconds the connection is established

<u></u>	AiMAiM
<u></u>	AiM_Guest
(((HP-Print-9D-ENVY 5530 series
0	Vodafone-34181618
÷	WiFi-AIM-Timenet
•	AiM-MXG-01286-CIRIBIRIBI
?	AiM-MXM-000099
?	AIM-MYC5-011675-DECIMO MERIDIO
(((•	AiM-SOLO2-000033
•	AiM-SOLO2-000100-100_Max1
?	AiM-SOLO2-000101 Connect
WiFi	Settings

To set other parameters create a unique password to protect your device/your network.

With a password, the communication is safe and encrypted using WPA2-PSK standard.

Characters allowed in the password are all letters, also capital, all digits and these characters: $+-_{()[]}$

"Space" type can be used if it is not the first one because this could cause incomprehension in some Windows[™] versions.

RaceStudio3 3.16.31			
* * * *	° 🔐		<u> 😤 </u>
		Solo2 ID 101	
All Configurations	Live Measures Download WiFi and Properties	Settings Tracks Logo Firmware	
······································	Refresh Transmit		
Manual Collections			
	Device Name	Solo2 ID 101	
	WiFi		
	WiFi Power Mode	Auto	\$
	WIFI Mode	Access Point	\$
	WiFi Network Name	AIM-SOLO2-00101	
	WIFI Password		C Show
	Properties		
	Racer Name		
	Vehicle Name or Number		
	Championship		
	Venue Type		\$
Connected Devices			
📮 Solo2 ID 101			
Trash Trash			

This AP or SSID name is unique for your device. An example of name is:" AiM-Solo2-00101" where:

- "AiM" is the prefix of all AiM devices
- "Solo 2" is the device identifier
- "00101" is your device serial number assigned by the factory.

To make your device more recognizable you can add a name to the SSID. The limit is of eight characters. Allowed characters are all letters, capital too, all digits and these characters: '+ - _ () [] {}!. "Space" type can be used provided that it is not the first one because it can cause incomprehension in some Windows[™] versions.

If, for example you add the driver's name, Tom Wolf, the network name (SSID) becomes:

"AiM-Solo2-00101-TomWolf"

Once all parameters set click "Transmit".

Solo 2 reboots and is configured with the new parameters.

If Solo 2 is protected by a password, as recommended, Race Studio 3 will ask that password to authenticate.



Please Note: the same Wi-Fi connection can be created with the operative system tool. Once the device has been authenticated in the Wi-Fi network you can communicate with it using Race Studio 3.

8.2 Adding Solo 2 to an existing network

This situation is ideal for a team with multiple drivers and staff members and is desired to communicate with one or more AiM devices using the same PC network. Each Solo 2 can have its password that adds another security and privacy level to the network. Race Studio 3 will show all Solo 2 connected to the same network under "Connected devices" label, bottom left of the software page: click your device.

Enter "Wi-Fi and properties" tab and set it on "Existing Network"; fill in network name, network password and device password.

Transmit the network settings to your device clicking "Transmit": your device reboots and joins that network.

Please note: the only admitted password are those following WPA2-PSK standard.

To complete this procedure use Race Studio 3 software as here explained.

👁 RaceStudio3 3.16.31	~				
* 🐲 🖾 🕰	ala +ô	- 谷 -		••)	*
				Tom Wolf	
All Configurations		Live Measures Dov	wnload WiFi and Properties Set	ttings Tracks Logo Firmware	
		Refresh Tra	insmit		
Devices (5)					
Manual Collections	¢	De	vice		
		De	vice Name	Tom Wolf	
		Wi	FI		
		Wil	Fi Power Mode	Auto 🗘	
		Wil	Fi Mode	Existing network \$	
		Wil	Fi Network Name	AiM	
		Wil	Fi Password	******	C Show
		De	vice Password		C Show
		Pro	operties		
		Ra	cer Name	Tom Wolf	
		Vel	hicle Name or Number		
		Ch	ampionship		
		Ve	nue Type	\$	
Connected Devices					
AiM	_				
Tom Wolf	•				J

Here above you see a device "Solo2-00101" that switched from AP to WLAN mode (Existing Network). Network name is "AiM" and does not work with free access because is protected by a password.

To obtain connectivity on the device the PC has to be authenticated to the same network as shown here below.



When the PC is authenticated to the network called "AiM" it can see all devices you configured to access the same network. In the image below two AiM devices are connected to the same "AiM" WLAN.

RaceStudio3 3.16.31		
* * * * *		<u></u>
	1	Fom Wolf
2 All Configurations	Live Measures Download WiFi and Properties Settings Tr	acks Logo Firmware
-	Refresh Transmit	
Devices (5)		
Manual Collections 🔅	Device	
	Device Name Tom Wo	lf
	WIFI	
	WiFi Power Mode Auto	\$
	WiFi Mode Existing	network 🗢
	WiFi Network Name AIM	
	WiFi Password	E Show
Connected Devices	Device Password	Show
AiM	Properties	
Tom Wolf	Racer Name Tom Wo	lf
📮 100_Max1 🛜	Vehicle Name or Number	
	Championship	
	Venue Type	\$

8.3 Wi-Fi network settings

In this chapter you find a short description of how to configure a WLAN including AiM devices and a PC.

Here below is an example of configuration.

ROUTER SETTINGS			
Use this section to configure the inter configured here is the IP Address that you change the IP Address here, you network again.	you use to access the Web-ba	ased management ir	nterface. :
Router IP Address :	192.168.0.1		
Subnet Mask :	255.255.255.0		
Device Name :	Network_1		
Local Domain Name :		(option	nal)
Enable DNS Relay :	v		
Use this section to configure the built-	in DHCP Server to assign IP a	ddresses to the com	nputers o
DHCP SERVER SETTINGS Use this section to configure the built- your network.	in DHCP Server to assign IP a	ddresses to the com	nputers o
Use this section to configure the built- your network. Enable DHCP Server :	in DHCP Server to assign IP a	ddresses to the com	nputers o
Use this section to configure the built- your network.	2	ddresses to the com 2.168.0.6	nputers or
Use this section to configure the built- your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time :	2		nputers or
Use this section to configure the built- your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast :	✓ 192.168.0.2 to 19	2.168.0.6	nputers or
Use this section to configure the built- your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast : NetBIOS announcement :	✓ 192.168.0.2 to 19 10080 (minutes)	2.168.0.6	nputers or
Use this section to configure the built- your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast : NetBIOS announcement : Learn NetBIOS from WAN :	✓ 192.168.0.2 to 19 10080 (minutes) ✓ (compatibility for some DF	2.168.0.6 4CP Clients)	nputers or
Use this section to configure the built your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast : NetBIOS announcement : Learn NetBIOS from WAN : NetBIOS Scope :	✓ 192.168.0.2 to 19 10080 (minutes)	2.168.0.6 4CP Clients)	nputers or
Use this section to configure the built- your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast : NetBIOS announcement : Learn NetBIOS from WAN :	to 19 192.168.0.2 to 19 10080 (minutes) (compatibility for some DF (option (option S Broadcast only (use when	2.168.0.6 4CP Clients) nal) no WINS servers co]
Use this section to configure the built your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast : NetBIOS announcement : Learn NetBIOS from WAN : NetBIOS Scope :	to 19 102.168.0.2 to 19 10080 (minutes) (compatibility for some DF (option proadcast only (use when Point-to-Point (no broadcast	2.168.0.6 (CP Clients) nal) no WINS servers co st)]
Use this section to configure the built your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast : NetBIOS announcement : Learn NetBIOS from WAN : NetBIOS Scope :		2.168.0.6 HCP Clients) nal) no WINS servers co st) en Point-to-Point)]
Use this section to configure the built your network. Enable DHCP Server : DHCP IP Address Range : DHCP Lease Time : Always Broadcast : NetBIOS announcement : Learn NetBIOS from WAN : NetBIOS Scope :	to 19 102.168.0.2 to 19 10080 (minutes) (compatibility for some DF (option proadcast only (use when Point-to-Point (no broadcast	2.168.0.6 HCP Clients) nal) no WINS servers co st) en Point-to-Point)]

For better network performances, we suggest the use of a network device equipped with a DHCP server and using 3x3 MIMO technology like, for example a Linksys AS3200.

To maximize the bandwidth, you should not allow the Internet on this WLAN; this means the DHCP server should be configured without any DNS address nor gateway by default.

CHAPTER 8

The parameters for the device network configuration in this example are:

Wireless network name: network_1

It means that the WLAN network name is "network_1." A PC has to be authenticated in this network to interact with any AiM device of this network.

Gateway address: 192.168.0.1

primary DŃS server: 0.0.0.0 secondary DNS server: 0.0.0.0 (These settings prevent Internet connectivity on this WLAN.)

Subnet mask: 255.255.255.248

Enable DHCP server: yes DHCP IP address range: 192.168.0.2 to 192.168.0.6

These settings enable a DHCP server running on this WLAN and provide an IP address in a 2-6 range. This means that this network allows 5 network hosts.

The number of devices on a WLAN network depends on the subnet mask. Here below you see typical examples of network masks and IP addresses range.

The configuration in bold is the one we suggest (if a greater number of devices is not needed), being the one that makes it easier and quicker for Race Studio 3 the identification of the devices in the network.

Subnet mask:	IP address range:	Number of devices
255.255.255.0	192.168.0.1 – 254	254
255.255.255.128	192.168.0.1 – 126	126
255.255.255.192	192.168.0.1 – 62	62
255.255.255.224	192.168.0.1 – 30	30
255.255.255.240	192.168.0.1 – 14	14
255.255.255.248	192.168.0.1 – 6	6

8.4 The Internet connectivity

For an optimal speed of your AiM device(s) we recommend not to allow the Internet on the same network and to set the WLAN in the same way.

You can of course allow the Internet access on your network but this would degrade the communication.

This slightly slower speed can be suitable for your needs but you can also have a second Wi-Fi connection using an additional hardware (NIC).

This configuration would provide an optimal speed of the data network of your AiM device(s) and at the same time would provide an internet connectivity with the second NIC.

8.5 Connection issues

It can occur that MyChron5 is correctly connected to Race Studio 3 via Wi-Fi but the user interface does not show it. This may be because Wi-Fi port setting is set with a static IP.

To switch it to dynamic (DHCP):

- open "Network and sharing centre" in the WindowsTM research engine
- right click on the Wi-Fi connection and a panel shows up
- select "Properties" option
- double click on "Internet Protocol version 4 (TCP/IPv4)"
- verify that option "Obtain an IP address" is active

For further information refer to FAQ section, Wi-Fi of www.aim-sportline.com.

Race Studio 3 only works on Windows[™] operative systems; Mac users can eventually use a virtualized Windows[™] machine.

The main problem is that the host OS (Mac) must share its Wi-Fi interface with the virtualized operative system (Windows) as Ethernet interface and not as Wi-Fi interface.

8

🖷 Mouse & Keyboar

Boot Order

Uideo

🚔 Print

Floppy Disk

CD/DVD 1

Hard Disk 1

Network 1

USB & Bluetoot

+ -

-

Configuring Parallels(™)

Select "Configure... in Parallels "Menu".



Some of the settings on this page cannot be changed until the virtual machine is shut down.

0

Connecte

NIC Type: Intel(R) PRO/1000 M

00:1C:42:56:7E:FD

Type: im Wi-F

DHCP Server:

Press "Hardware" – top on the page that shows up – and select "Network" in the drop-down menu on the left.

Right on the configuration panel set "Type" field on "Wi-Fi".

Then select the device you want to communicate with.

To ensure that the communication works select "Open Network preferences..." menu.



Verify that the status in the window that shows up is "Connected" and that the IP address associated is, for example, 10.0.0.10 (could be 10.0.0.11, 10.0.0.12, or generically 10.0.0.x).



CHAPTER 8

To enable Race Studio 3 correctly working on a Mac with virtualized Windows[™]:

press Wi-Fi icon

select "Wi-Fi Settings..." icon



enable the checkbox shown here below.



8.7 Connected device visualization issues

It may occur that using Race Studio 3 on a Mac with virtualized Windows the device connected via Wi-Fi takes some time to be shown in the network or is not shown at all. This is why we always suggests using an Wi-Fi (WLAN) router.

This router work as an Access Point allowing more external devices to connect to its network. Solo 2 Wi-Fi configuration is to be set on Existing Network as explained in the related paragraph.



9. PC connection

Solo 2 can be connected to the PC only via Wi-Fi. To do it:

- check that Solo 2 Wi-Fi is set on "AUTO" or on "ON"
- read your Solo 2 name mid of Solo 2 home page bottom line – or look for it in "System Information" page.
- click Race Studio 3 Wi-Fi icon and select your Solo 2.



â AiM		
AIM_Guest		
WiFi-AIM-T		
AIM-EVO5	00012	
AIM-SOLO	2-000100-100_Max1	
RIM-SOLO	02-000101-Tom Wolf	Connect
WiFi Settings		-1,3



Once the connection is established you have these options:

- Live Measures: to check all Solo 2 channels;
- Download: to download data, see the related chapter;

Wi-Fi and Properties: to manage the Wi-Fi configuration – see the related chapter;
 Settings to:

- set date format
- enable/disable daylight time
- set time format and time zone
- set backlight colour
- enable/disable night vision
- Tracks: to manage the tracks stored in the device memory
- Logo: transmit/receive the logo that shows up when switching Solo 2 on; supported image format are JPEG or BMP; always use the most recent Windows[™] versions (Windows8 or Windows10) whose graphic libraries are more updated
- Firmware: to check or update your Solo 2 firmware version.

10. Track Management



Solo 2 built in GPS receiver is used for:

- Lap Time calculation
- Speed calculation
- Predictive lap time calculation
- Position on the track in analysis

To calculate these data the system must know the start/finish line coordinates. Solo 2 comes with a long list of the world main tracks. The tracks are constantly updated by our technicians and are automatically loaded on your PC when you run our software Race Studio 3.

Solo 2 provides two track selection modes: automatic and manual.

Automatic:

Solo 2 automatically recognizes the track you are running on, loads the start/finish line and calculates lap times.

This is the best mode in most cases.

Manual:

allows to manually select the track from the internal database. This mode is to prefer when multiple track configurations are available nearby. In this case Solo 2 would recognize the track anyway but would need at least one complete track lap. To be ready from the first lap manual mode would be helpful. You can scroll the list of available tracks choosing among these options:

- nearest: shows only tracks in a 10 km distance
- all: shows all tracks stored in the system in alphabetical order
- custom: shows only the tracks you have previously created (learning mode)

Nearest
E EXIT

Mode:	MANUAL
Track List Type: Track selection	Nearest
Track Selection	
PREV NEXT CH/	
FREY DEAT CH	ANUL LAIT

10.1 Creating a track with Solo 2

If you are running in a track NOT included in Solo 2 database the device switches to "learning" mode and behave this way:

■ it starts sampling all track points

when detects that is crossing the same points for the second time it realizes that the track is closed and sets a temporary start/finish line showing lap time each time it crosses that point;

■ at the end of the session the system shows the track map with start/finish line: you can move start/finish line using Solo 2 buttons

■ you can add this new map to Solo 2 database, modify start/finish line coordinates, name the track and transmit it to the PC at first PC-Solo 2 connection.

For further information about track management with Race Studio 3 refer to "Track Manager" user manual you find in download area /software/Race Studio 3/documentation of www.aim-sportline.com.

11. Data download

Once Solo 2 - PC connection is established activate "Download" tab to download sampled data.

All Configurations		easures Download		a state as a			
-		easures Download		scipione			
		1	1	ties Settings Tracks Logo	Firmware		
	Down	oad Unhide Downloa	ded Delete				Refresh List
			-				
nual Collections	Q		0	2 febbraio 2017 15:26	10	0:48.139	
		1		?)	a_0284.xrz	458 kB	
				2 febbraio 2017 15:25	- 11	0:48.139	
		2	AB (0	a_0334.xrz	505 kB	
			0	2 febbraio 2017 15:24	14	0:48.139	
		3 4	AB (0	a_0337.xrz	649 KB	
			0	2 febbraio 2017 15:23	5	0:49.833	
		4		2	a_0283.xrz	222 KB	
				2 febbraio 2017 15:23	6	0:48.858	
		5 W	AB (0	a_0301.xrz	273 kB	

This page shows all information about the files stored in the system: number of laps, best lap, date/time and file dimensions.

Select one or more files and press "Download" to download and analyse them.

12. Data Analysis

When data have been downloaded press Analysis icon and Race Studio Analysis software will open showing this page.

-									
	Utiliza oriteri di selezione								
Impostazione circuito	Impostazione veicolo	Impostaz	ione pilota	Impostazione campionato	Impostazione tipo di pro	sva.			
Lonato	Mostra tutti	Mostra tutti		Y Mostra tutti	Mostra tutti				
Nome della prova		Tempo g	iro Pilota	Tipo di prova	Veicolo	Ca			
894 Marra_Lonato_201506_a_0003	Fri, 25 Sep, 2015 17:01:27	11 1 1 00.25	0.712 Marra	Prove generiche	None	No			
893 Marra_Lonato_201506_a_0002			L375 Marra	Prove generiche	None	N			
892 Marra_Lonato_201506_a_0001	Fri, 25 Sep, 2015 16:02:10		8.941 Marra	Prove generiche	None	N			
891 Marra_Rozzano_201510_a_0023	Sat, 26 Sep, 2015 14:51:14		i.391 Marra	Prove generiche	None	N			
890 Marra_Rozzano_201510_a_0022	Sat, 26 Sep, 2015 14:49:14		1.369 Marra	Prove generiche	None	N			
889 Marra_Rozzano_201510_a_0021	Sat, 26 Sep, 2015 13:51:19		8.303 Marra	Prove generiche	None	N			
888 Marra_Rozzano_201510_a_0020	Sat, 26 Sep, 2015 13:51:02		i.509 Marra	Prove generiche	None	N			
887 Marra_Rozzano_201510_a_0019	Sat, 26 Sep, 2015 13:00:57		1.399 Marra	Prove generiche	None	N			
886 Marra_Rozzano_201510_a_0018	Sat, 26 Sep, 2015 12:48:36		5.270 Marra	Prove generiche	None	N			
885 Marra_Rozzano_201510_a_0017	Sat, 26 Sep, 2015 11:49:03		i.963 Marra	Prove generiche	None	N			
884 Marra_Rozzano_201510_a_0016	Sat, 26 Sep, 2015 11:48:53		L305 Marra	Prove generiche	None	N			
883 Marra_Rozzano_201510_a_0015	Sat, 26 Sep, 2015 11:48:31		1.499 Marra	Prove generiche	None	N			
882 Marra_Rozzano_201510_a_0014 881 Marra Rozzano 201510 a 0024	Sat, 26 Sep, 2015 11:30:47		1.421 Marra	Prove generiche	None None	N			
	Sun, 27 Sep, 2015 13:13:27		i.523 Marra	Prove generiche		N			
880 a emiliano_201504_a_0164 879 a T MC5 LdH Thomas 106	Fri, 30 Oct, 2015 08:52:57		2.289 Emiliano 3.077 Thomas Mesch	Prove generiche	Barracuda Birel Shifter TM	D			
877 T MC5 LdH Simon 104	Tue, 13 Oct, 2015 12:03:02 Tue, 13 Oct, 2015 11:28:19		7.175 Simon Solgat	Prove generiche Prove generiche	Birel Shifter TM	N			
877 TMC5 LdH Thomae 103	Tile 13 Oct 2015 11:28:19		688 Thomas Mearh	Prove generiche Drove neneriche	Birel Shifter TM Rirel Shifter TM	N			
Apri prova	Chiudi prova Pro	prietà prova	Importa pr	ova Rimuovi prova	Esporta prova				

Select your file double clicking on it and start analysing it. A lot of pages, graphs and images will help you analysing your data in the best way.



13. New firmware upgrade

Our technicians and engineers are constantly working to improve both the firmware (the application that manages your device) and the software (the application you install on your PC).

Each time a new firmware and/or software version is available the icon here above appears with an arrow indicating that something is available for download (otherwise the icon only shows the cloud).

Click it and freely download the new applications.

RaceStudio3 3.16.00			
* 🚣 🏍 🏶 🔂 🖽 🚔 🕸			?
Connected Devices	Download Install SW Export Import Update Device		
	✓ Name	On the web	On my PC Info
	Software		
	RaceStudio3	3.16.00	3.16.00
	Firmware		· _ ·
	EVO4S	01.26.14	01.26.08
	🚥 🖌 EVO5	01.26.14	01.26.08
	MXG	01.26.14	01.26.08
	🚥 🗸 MXL2	01.26.14	01.26.08
	MXS	01.26.14	01.26.08
	🚥 🗸 MXS Strada	01.26.14	01.26.08
	MyChron 5	01.24.62	01.24.64
	SmartyCam HD	01.03.64	01.03.64

Once the new firmware has been downloaded, connect your device to the PC via Wi-Fi to perform a firmware upgrade.

In a few seconds, the device is ready.

14. Technical specification and drawings

Solo 2 pinout

external view

50L0 2 Display Graphical Display resolution 238 x 99 pixels Ο Ο Display pages Up to 5 freely configurable 0 0 Ο 7 configurable RGB colour Backlight Ο ShiftLights/alarms LEDs Ο 10 configurable RGB LEDs Ο \bigcirc \Box Integrated track database Yes Inertial platform Internal 3 axis ±5g accelerometer + 3 axis gyro RAND + 3 axis magnetometer Wi-Fi connection Yes Integrated GPS 10Hz GPS+Glonass External power 12V Memory 4GB **Rechargeable Lithium** Battery type Pushbuttons Metallic Weight 240g battery included EXP connector Dimensions 98x73.7x30.2mm nc Waterproof IP67 GND 2 3 4 5 nc Analysis software Race Studio Analysis freely downloadable nc +Vb ext from www.aim-sportline.com 5 pins Binder 712 female connector



Our web site, www.aim-sportline.com is constantly upgraded. Please, refer to it for downloading the last release of our documentation

