

DASHBOARD OWNER'S MANUAL

GDASH DTA

1. Dashboard's power on



When the car is electrically powered on, the logo appears for two seconds.

Warning :

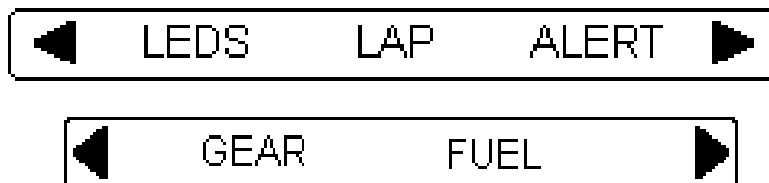
- If the message "Warning low battery Backup" is displayed at the beginning, the dashboard has to be sent in the XAP office in order to replace the battery backup.

2 Set-up screens

Special screens allow to set-up the dashboard.

Access to these screens is allowed by pulling and releasing at the same time both dash's switches while the DTA fast logo is on the screen.

A scrolling menu shows the 5 possible sets-up :



Pulling the "+" switch allows to move the cursor on the right .

Pulling the «-» switch allows to move the cursor on the left .

To go in a special menu , a pull on the «Valid» switch(the green one) is necessary.

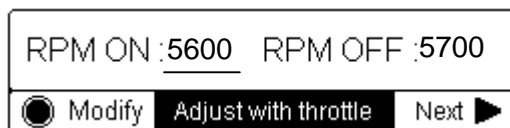
A pull on the «Escape» switch(the red one) makes you exit this mode.

1.1. LEDS SETUP

With this screen you can parameter the RPM of the Gear Display's Led. The first RPM is the one where the led will flash (RPM ON), and the second is the RPM where it will stop (RPM OFF).

Pulling switch «+» and switch «-» let you select between RPM ON, RPM OFF for the green led and the red led.

When selected the LED lights on.



You can modify the values RPM ON and RPM OFF by pulling simultaneously on the 2 switches «Valid» and «+» to increase, «Valid» and «-» to decrease.

When the correct value appears, you only have to release the «Valid» switch(green).

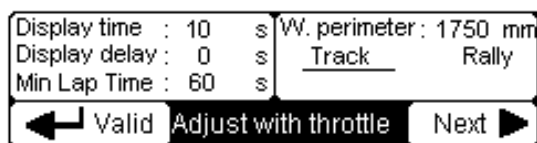


This screen appears when all the values have been fixed. Thus the RPM is simulated with the switches «Valid» and «+» to increase and «Valid» & «-» to decrease. The Gear Change Light will switch on at the correct value of RPM.

To «Escape» this screen, you have to pull the «Escape» switch (red one) one time and release.

The new values will be recorded after a dash board reset.

1.2. Lap setup



With this screen you can parameter:

- The display time (The lap time display time)
- The display delay (the delay from the beacon the lap time is screened)
- The min Lap time (minimum time to validate a lap)
- The wheel perimeter, this value is necessary to calculate the vehicle speed
- The choice between an XAP Beacon or a switch to calculate the Lap time.

You can modify the value by pulling simultaneously both switches «Valid» and «+» to increase («Valid» and «-» to decrease).

When the correct value appears, you only have to release the «Valid» switch(green).

To exit from this screen, you have to pull the «Escape» switch (red one) one time and release.

The new values will be recorded after a dash board reset.

1.3. Warning Set-Up

	Min	3000	
	Min	2,5	Max 9,0
	Min	40	Max 105
	Min	9,0	Max 16,0
Press	Min	3,5	Max 6,5
	Min	50	Max 130
Alert set-up			

With this screen you can parameter the level for critical sensors of the dashboard. If the RPM is lower of the RPM Min value, no warning will be available.

Different levels can be selected with the switches «+» and «-». The selected value will change of color.

To validate the value you have to pull one time on the «Valid» switch and release.

To escape this screen, you have to pull the «Escape» switch (red one) one time and release.

The new values will be recorded after a dash board reset.

1.4. Gear Set-Up

R	Min	1250	Max	1450
N	Min	1450	Max	1650
1	Min	1750	Max	2000
2	Min	2100	Max	2350
3	Min	2400	Max	2700
4	Min	2750	Max	3000
5	Min	3150	Max	3450
6	Min	3500	Max	3800

With this screen you can parameter the Gearbox configuration with the barrel sensor .

Different levels can be selected with the switches «+» and «-». The selected value will change of color.

To validate the value you have to pull one time on the «Valid» switch and release.

To escape this screen, you have to pull the «Escape» switch (red one) one time and release.

The new values will be recorded a dash board reset .

1.5. Fuel Tank Set-Up

5 Liters	▼	30 Liters	▼
10 Liters	▼	35 Liters	▼
15 Liters	▼	40 Liters	▼
20 Liters	▼	45 Liters	▼
25 Liters	▼	50 Liters	▼
(+/-) to Move		Valid to adjust	

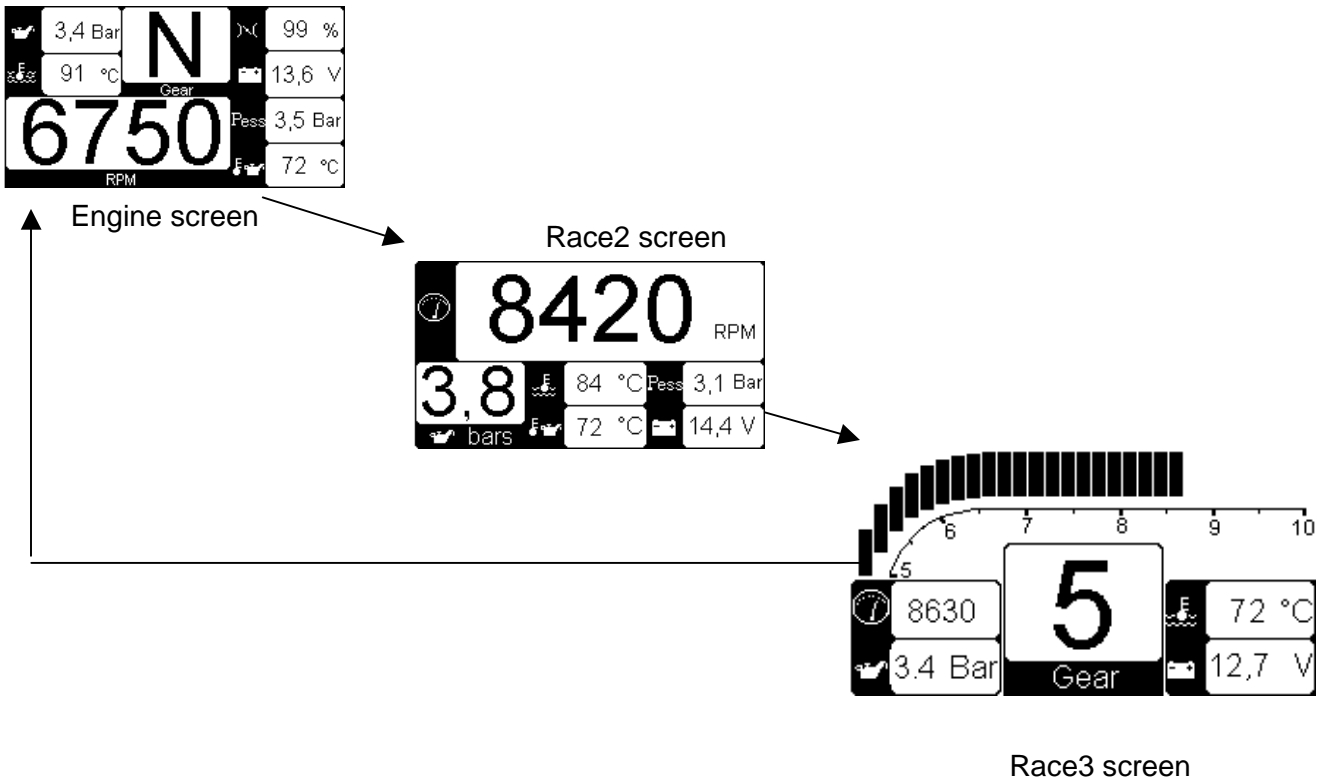
With this screen you can parameter the car fuel tank gauge.
Different levels can be selected with the switches «+» and «-». The selected value will change of color.
To validate the value you have to pull one time on the «Valid» switch and release.
To escape this screen, you have to pull the «Escape» switch (red one) one time and release.

The new values will be recorded a dash board reset .

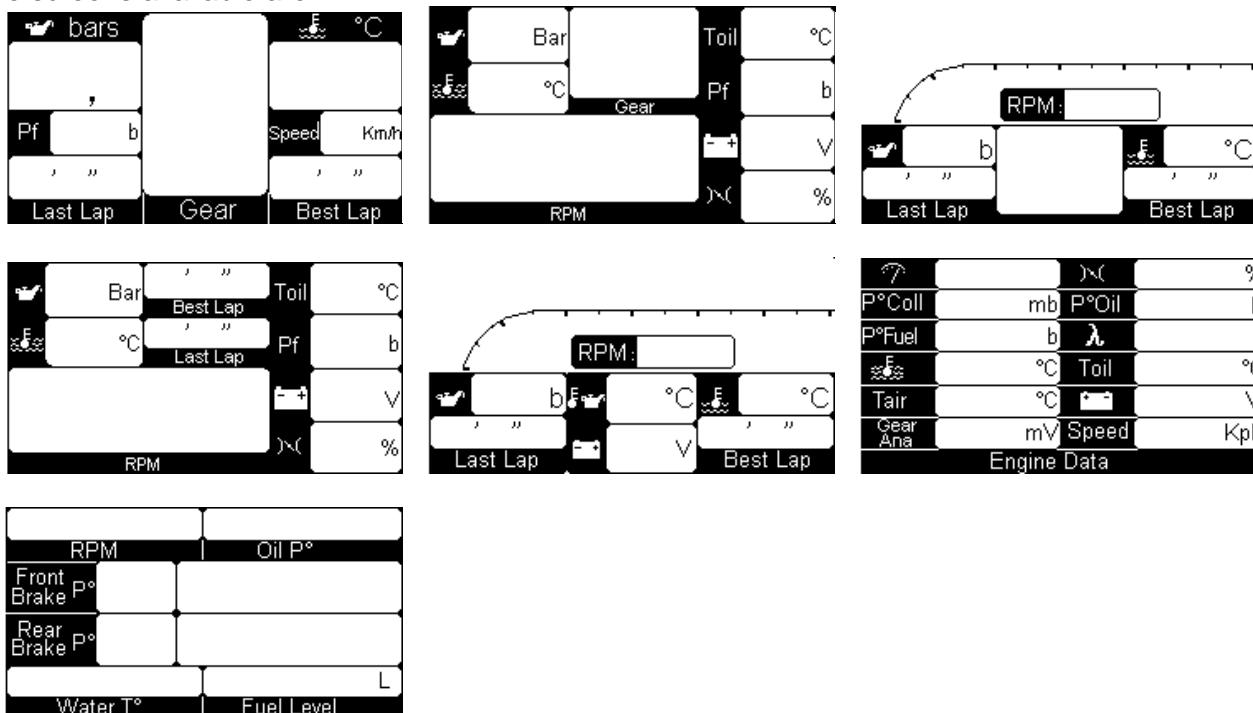
2. NORMAL MODE

At work, the dash-board has 3 different screens which can be selected.

You can select any screen by using the red switch «Escape» .



the screens available are:



3. ADVANCED MODE

This mode is intended to give more informations to the team and the mechanics.
To reach these screens, pull « Valid » switch (Green) and the following menu appears.












Select the desired mode with «+» and «-» switch.

3.1. Diagnosis Mode





The first screen of this mode is showing all the car sensors.
The second one resumes the different types of alerts which could occur.
You select one of these screen by pulling either «+» or «-» switch.

The first screen works in live with the engine. Thus, you can observe all the sensors at the same time.

- | | |
|-------------------|-------------------------|
| Oil pressure | RPM |
| Water temperature | Vehicle speed |
| Fuel pressure | Gear box sensor voltage |
| Battery voltage | Throttle sensor |
| Oil temperature | Lambda sensor |
| Air temperature | |

	3,5 Bar		6750 Rpm
	84 °C	Speed	124 Km/h
Pess	3,1 Bar		794 mV
	14,4 V		12 %
	72 °C		74 %
	21 °C	Conso	12,4 Liters
Real Time Display			

The second screen resumes the different types of alerts which could occur. The number shows the time where the alert was active from 0 up to 25,5 seconds. The values are shown in tenth of second.

	10
	255
Pess	0
	0
	0
Warning Location (+/-) To Clear Values	







Pulling simultaneously both switches «+» and «-» resets the recorded datas.

TO EXIT FROM THE DIAGNOSIS MODE PULL «ESCAPE» SWITCH.

3.2. Data logging Screen

The dash board stores in a save memory the following datas.

- RPM Max.
- Oil pressure, Min and Max.
- Water temp, Min and Max.
- Oil temperature, Min and Max.
- Air pressure Min and Max.
- Fuel pressure, Min and Max.
- Air temperature, Min and Max.
- Battery voltage, Min and Max.
- Wheel speedMax








 Max	8920 rpm
 Min-Max	2,4 - 5,2 Bar
 Min-Max	64 - 102 °C
 Min-Max	12 - 26 °C
 Min-Max	11,1 - 14,2 V
Press Min-Max	3,1 - 3,5 Bar
 Min-Max	87 - 109 °C
Conso	12,4 Litres

Pulling simultaneously both switches «+» and «-» resets the datas recording. The recording starts after a reset, and when the RPM overrides 2000 rounds/mn. A special screen is available for each sensors, it provides more details about the selected parameter.

All the following screens are called from the previous display by selecting the desired parameter with the «+»and «-»switches, and appears when “valid” switch is pressed (green).

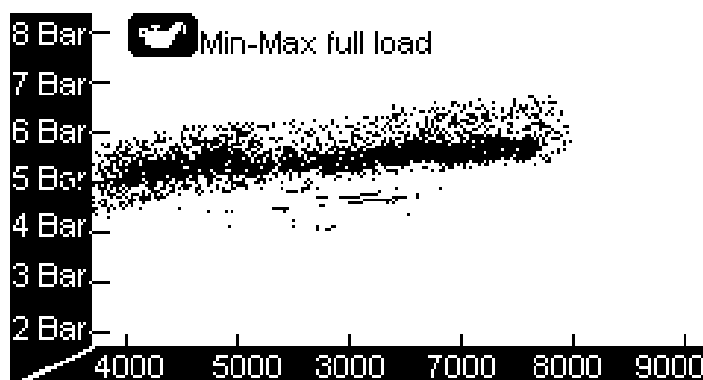
The graphics show the behaviour of the sensor value during the recorded elapsed time.

RPM ANALYSIS :








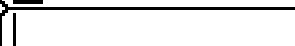
Speed Max	178 Km/h
 Max Gear 6	8760 rpm
4000 - 5000	7% 
5000 - 6000	10% 
6000 - 7000	27% 
7000 - 8000	35% 
8000 - 9000	19% 
9000-10000	0% 

OIL PRESSURE ANALYSIS :



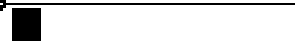
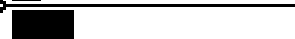
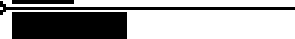


The following screen shows the variation of the oil pressure related to the RPM during the recorded time.




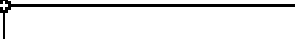



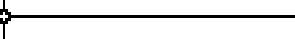
WATER TEMPERATURE ANALYSIS :

 Min	24	°C
 Max	101	°C
0 - 40 °C	7%	
40 - 60 °C	9%	
60 - 80 °C	29%	
80 - 90 °C	43%	
90 - 100 °C	10%	
100-120 °C	1%	



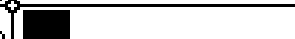


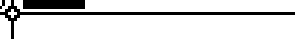
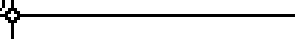
OIL TEMPERATURE ANALYSIS :

E 	Min	24	°C
	Max	107	°C
0 - 40 °C	3%		
40 - 60 °C	7%		
60 - 80 °C	13%		
80 - 90 °C	30%		
90 - 100 °C	40%		
100-120 °C	7%		






FUEL PRESSURE ANALYSIS:

Pess	Min	3.1	Bar
	Max	3.7	Bar
0 - 2 Bar	0%		
2 - 3 Bar	0%		
3 - 3.3 Bar	43%		
3.3 - 3.6 Bar	56%		
3.6 - 4 Bar	0%		
4 - 6	0%		

AIR TEMPERATURE ANALYSIS :

F 	Min	12	°C
	Max	27	°C
0 - 10 °C	0%		
10 - 20 °C	13%		
20 - 25 °C	70%		
25 - 30 °C	16%		
30 - 40 °C	0%		
40 - 60 °C	0%		

BATTERY VOLTAGE ANALYSIS :

	Min	11,1	V
	Max	14,2	V
8 - 10 V	0%		
10 - 11 V	0%		
11 - 12 V	6%		
12 - 13 V	64%		
13 - 14 V	35%		
14 - 16 V	5%		

TO EXIT FROM THE DATA LOGGING MODE PULL «ESCAPE» SWITCH.

3.3. Laptime screen

	0'00"00		0'00"00
	0'00"00		0'00"00
	0'00"00		0'00"00
	0'00"00		0'00"00
	0'00"00		0'00"00
	0'00"00		0'00"00
	0'00"00		0'00"00
	0'00"00		0'00"00
Lap Time	(+/-) To Clear Values		

This screen presents the whole time of a test/race session. Pulling simultaneously both switches «+» and «-» resets the recorded Lap Time.

TO EXIT FROM THE TRIPMASTER SET-UP MODE PULL "ESCAPE" SWITCH (RED).

3.4. DTA Menu



It's a diagnostic screen which present:

- The version of embedded software
- The number of reset from the last upgrade of the Dashboard
- The number of errors of transmission

TO EXIT FROM THE DTA MENU PULL "ESCAPE" SWITCH (RED).

3.5. Contrast Adjustment

The contrast adjusting can be reached at any time on the 3 main screens : the contrast increases with the «+» switch, and decreases with the «-» one.

4. Mode alerte

The dashboard automatically goes to different warning screens when a sensors indicates a value lower or upper than the warning level.

As the warning is true, the Warning Leds flashes.

As the Oil pressure Warning is severe, a special screen is dedicated to it.



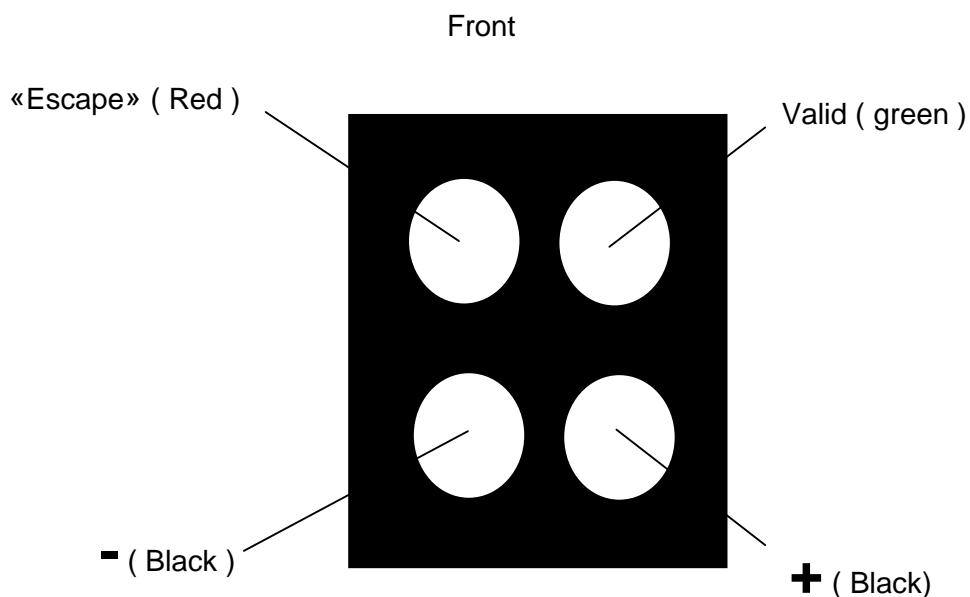
This screen inverts at 3 hz , all the dashboards led flashes at the same frequency as the Gear Display's warning Led.

In other case the following screen appears, and the concerned parameters inverts at 3 Hz. Although, led are not flashing.

The navigator has to pull the red switch to escape from a warning screen and come back to the previous screen.

As the alarm is true , the first led of the dashboard flashes fast.

5. The command plate



Back

6. Connector Pin/Out

Pin	Name	Type	Level
1	Ground	Input	0V
2	Analogic 5V	Output	5 V, max 200 mA
3	Wheel Speed 1	Input	Hall sensor, intern pull-up
4	GearBox sensor	Input	0-5V sensor
5	Darkness Input	Input	0-12V
6	Brake pressure sensor (front)	Input	0-5V sensor
7	RX-232	Input	RS232
8	analogic Input 1	Input	0-5V sensor
9	Analogic Ground	Input	0V
10	12 V	Input	8 - 19 V
11	Laptime input	Input	Internal pull-up 4K7
12	Fuel tank gauge input	Input	Internal pull-up 120
13	Brake pressure sensor (rear)	Input	0-5V sensor
14	analogic Input 2	Input	Internal pull-up 1K5
15	TX-232	Output	RS232
16	analogic Input 3	Input	0-5V sensor
17	Peripheric ground	Output	0V
18	Switch 0	Input	Pull to ground, intern pull-up
19	Switch 1	Input	Pull to ground, intern pull-up
20	Afficheur A	Output	Pulled down by the dash
21	Afficheur B	Output	Pulled down by the dash
22	Afficheur C	Output	Pulled down by the dash
23	Peripheric 12V	Output	12 V, 500 mA max
24	Switch 2	Input	Pull to ground, intern pull-up
25	Switch 3	Input	Pull to ground, intern pull-up
26	RPM Green Light	Output	Pulled down by the dash
27	Warning Red Light	Output	Pulled down by the dash
28	RPM Red Light	Output	Pulled down by the dash

