

FR 2-11 / 72-76

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DE 22-31 / 72-76

ES 32-41 / 72-76

RU 42-51 / 72-76

NL 52-61 / 72-76

IT 62-71 / 72-76

GYSFLASH 100.12 HF 102.12 HF

SAFETY INSTRUCTIONS



This manual contains safety and operating instructions. Please read it carefully before using the device for the first time and keep it for future reference. This machine should only be used for charging or power supply operations specified within the limits indicated on the machine and in the instruction manual. The operator must observe the safety precautions. In case of improper or unsafe use, the manufacturer cannot be held liable.



The device is destined to be used indoors. Must not be exposed to the rain.

This unit can be used by children aged 8 or over and by people with reduced physical, sensory or mental capabilities or lack of experience or knowledge, if they are properly monitored or if instructions for using the equipment have safely been read and potential risks understood. Children must not play with the product. Cleaning and maintenance should not be performed by an unsupervised child.

Do not use to charge domestic batteries or non rechargeable batteries.

Do not use the charger if the mains cable or plug is damaged.

Do not use the device if the charging cable appears to be damaged or assembled incorrectly in order to avoid any risk of short circuiting the battery.

Never use on a frozen or damaged battery.

Do not cover the device.

Do not place the unit near a heat source or expose to prolonged high temperatures (above 60°C).

The operating mode of the automatic charger and the restrictions applicable to its use are explained later in this manual.



Fire and explosion risks!

- A battery can emit explosive gases when on charge.
- During the charge, the battery must be placed in a well ventilated area.
- Avoid flames and sparks. Do not smoke.
- Protect the electrical contact surfaces of the battery against short circuits.



Do not leave a charging battery unattended for a long time.



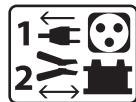
Risk of acid dispersion!



- Wear protective goggles and gloves.



- In case of contact with the eyes or the skin, rinse immediately with water and see a medical doctor as soon as possible.

Connection / disconnection :

- Disconnect the power supply before plugging or unplugging the connections to/from the battery.
- Always ensure the Red clamp is connected to the «+» battery terminal first. If it is necessary to connect the black clamp to the vehicle chassis, make sure it is a safe distance from the battery and the fuel line. The charger must be connected to the mains.
- After charging, disconnect the charger from the mains, then disconnect the negative clamp from the car body and then disconnect the positive clamp from the battery, in this order.

**Connection :**

- The charger must be connected to an earthed power supply.
- The connection to the power supply must be carried out in compliance with national standards.

**Maintenance :**

- If the power supply cable is damaged, the replacement cable must be obtained from the manufacturer or its service team.
- Maintenance should only be carried out by a qualified person.
- Warning ! Always disconnect from the mains before performing maintenance on the device.
- The device does not require any specific maintenance.
- If the internal fuse is melted, it must be replaced by the manufacturer (GYS dedicated sales service) or by an equally qualified person to prevent any accidents.
- Do not use solvents or any aggressive cleaning products.

**Regulations :**

- The Machine is compliant with European directives.
- The declaration of conformity is available on our website.
- EAEC Conformity marking (Eurasian Economic Community).
- Equipment in compliance with British requirements. The British Declaration of Conformity is available on our website (see home page).
- Equipment in conformity with Moroccan standards.
- The declaration C_o (CMIM) of conformity is available on our website (see cover page).

**Waste management:**

- This product should be disposed of at an appropriate recycling facility. Do not throw away in a household bin.

GENERAL DESCRIPTION

The GYSFLASH 100.12 HF / 102.12 HF provides a high powered stabilised power supply incorporating SMPS (Switch Mode Power Supply) technology. Designed to sustain 12V battery (liquid/AGM/gel) for vehicles during diagnostic work. This device will also ensure an ideal charging cycle for battery maintenance for the most modern vehicles and battery types. It can be fitted with cables up to 2x8m in 16mm². Changing charging cables requires recalibration (see page 18). It is considered a fixed device not a mobile product.

These devices have 5 modes including 2 that are hidden:

- **Charge Mode:** for charging lead (sealed, liquid, AGM...) or lithium (LiFePO4) starter batteries from 20 Ah to 1200 Ah at 12V.
- **Supply mode « Diag + »:** GYSFLASH supply up to 100A to ensure compensation of current used by high-energy consumers (engine fan, window regulator, electronic suspension, etc). In this mode the voltage can be precisely adjusted.
- **Supply mode « Showroom »:** ensure current compensation when using electrical features of a demonstration vehicle (window regulator, heating, morrors, etc) enabling permanent display of the vehicle. In this mode the voltage can be precisely adjusted.
- **« Change battery » mode:** ensures a stabilised power supply to the vehicle during battery replacement to preserve memory settings. By default this mode is inactive and doesn't appear in the mode list.
- **Power Supply » mode:** This mode is intended for experimented user only. By default this mode is inactive and doesn't appear in the mode list. This mode enables to use the charger as a powerful stabilised power supply with regulated voltage and adjustable maximum current.

This device has an automatic restart feature enabling in Charge, Showroom and Power Supply modes to automatically restart the device in case of power cut. The function «Lock Showroom», if activated, restricts the device to Showroom Mode only, to facilitate its use for vehicles demonstrators.

START UP

1	Connect the charger to the mains. Single phase mains voltage 230V ± 15% (50/60Hz).	
2	"Turn the switch to "ON". For 3s the display will show "GYSFLASH 100.12 HF Vx.x" / «GYSFLASH 102.12 HF Vx.x»	
3	Select the required mode. By default the charger will automatically select the last setting.	

- The "Mode" key enables access to several menus :



Charge > Diag+ > Showroom (>Change Battery*) (> Power Supply*) *hidden by default.

- To access the "configuration" menu press the "mode" key for 3s :



3 sec - Configuration

CHARGE MODE

This product will charge the battery safely even if the battery is still in the vehicle.

Ensure that the correct sequences are followed.

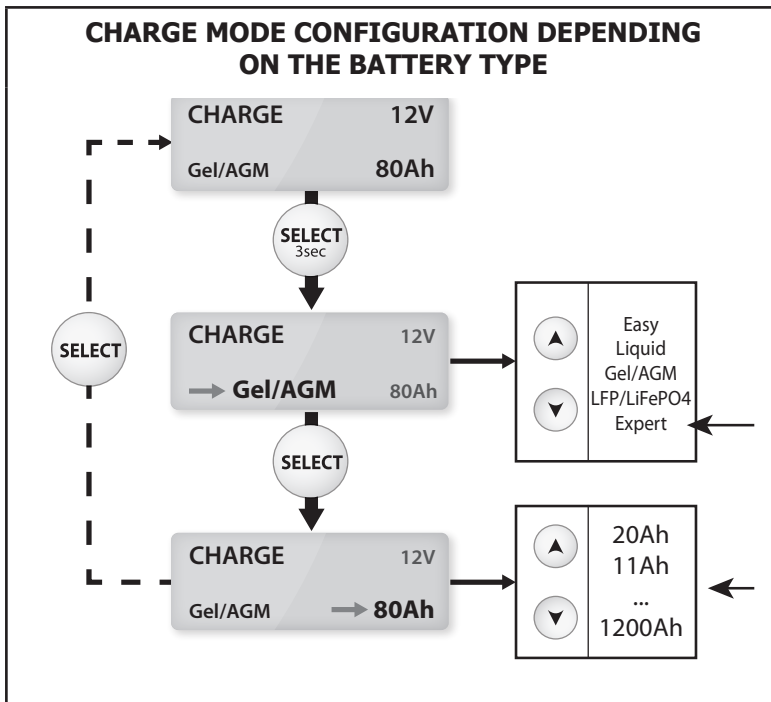
Charge configuration :

Before starting to charge the battery, ensure that the charger has been correctly set (battery voltage, charging curve and battery capacity).

Several charging curves are available :

- Easy: simplified curve, suitable for every lead battery and which for it is not required to know the battery capacity. However for an optimized charge, it is recommended when possible to use the liquid or gel/AGM batteries charging curves.
- Liquid: charging curve for vented battery (lead, lead calcium, lead calcium-silver, etc). For this charging curve the battery capacity in Ah must be selected.
- Gel/AGM: charging curve for sealed battery (gel, maintenance free, AGM...). For this charging curve the battery capacity in Ah must be selected.
- LFP/LiFePO4: charging curve for LFP (Lithium Iron Phosphate) type lithium batteries. For this charging curve the battery capacity in Ah must be selected.
- Expert: charging curve type IU₀I₀U adjustable via the menu Expert configuration and intended for experimented user (see page 15). By default this curve is inactive and doesn't appear in the curve list of the CHARGE mode.

WARNING: According to the configuration of the expert curve (see page 19), it can be necessary to disconnect vehicle's battery before starting the charge in order to protect the electronic of the vehicle.

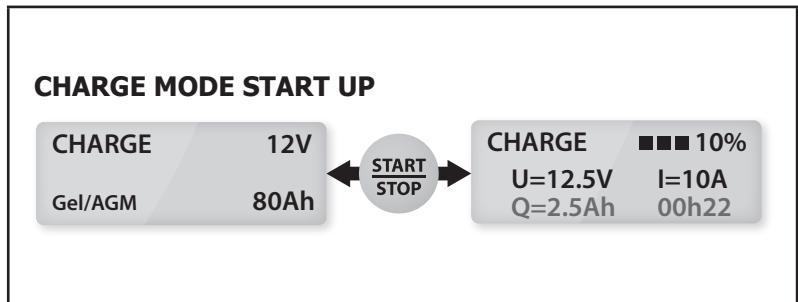


Charging curves available if activated in «Advanced Menu».

Only for liquid, gel/AGM and expert charging curves.

Start up :

- Connect the clamps : red to the (+) and black to the (-) of the battery.
- Push the START/STOP key to start the charge.
- During the charge, the product alternates between displaying the progressing percentage of the charge, voltage, current, injected ampere hours and elapsed time.
- Push the START/STOP key again to stop the charge.



NB: When the charge ends (100%), if the battery remains connected the charger maintains the charge level of the battery by applying a floating voltage.

Precaution: Check the electrolyte level and fill if necessary before charging.

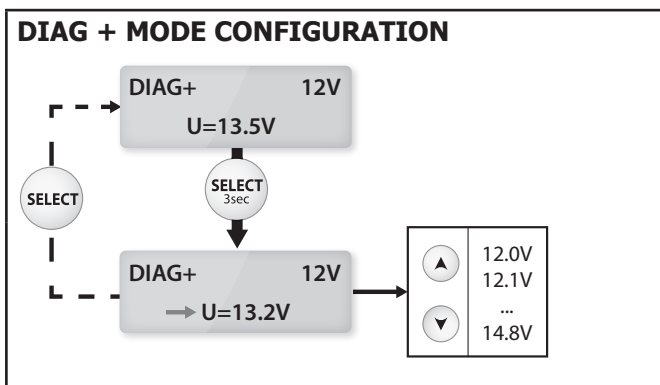
When charging on vehicle, it is recommended to reduce the electrical consumption of the vehicle to a minimum (switch off the lights, close the doors...) in order to do not disturb the charging process.

DIAG+ MODE

On a stationary vehicle the GYSFLASH supplies up to 100A to test high-energy consumers: engine fan, window regulator, electronic suspension, etc... By supplying a steady voltage: - 12V to 14.8V

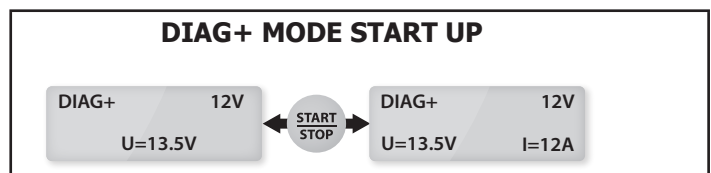
Voltage adjustment

It is possible to adjust the voltage in steps of 0.1V according to manufacturer's specifications.



Start up :

- Connect the clamps : red to the (+) and black to the (-) of the battery.
- Push the START/STOP key to start the mode.
- During use the current consumed and the instantaneous voltage are displayed.



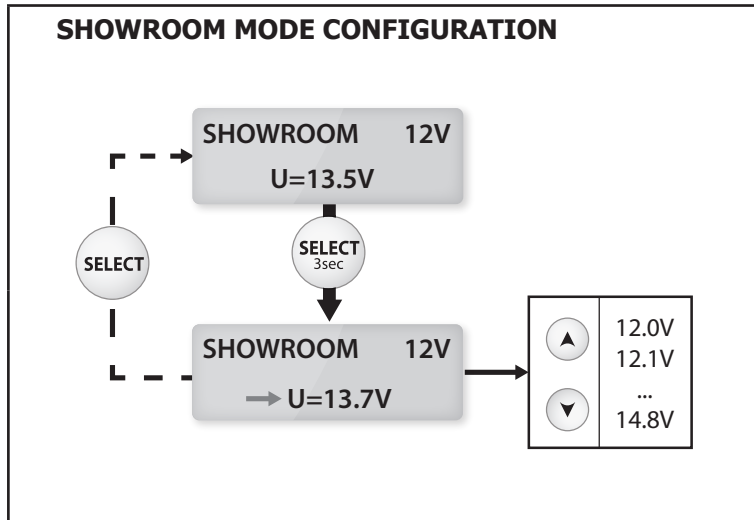
Precaution : If the screen displays a current greater than 10A, it indicates the battery is discharged. The device will start charging automatically. Check all electrical consumers are switched off on the vehicle. Wait until the current falls below 10A and then re-launch the diagnostic.

SHOWROOM MODE

On a stationary vehicle, the GYSFLASH supplies up to 100A to test high-energy consumers (engine fan, window regulator, electronic suspension, etc...) by supplying a steady voltage adjustable:
 - 12V to 14.8V

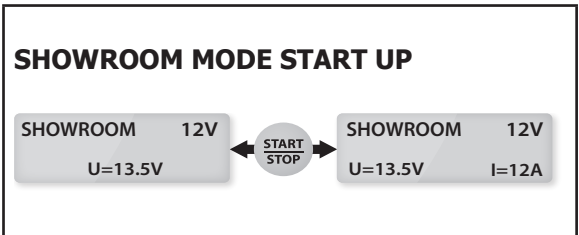
Volatage adjustment:

It is possible to adjust the voltage in steps of 0.1V according to manufacturer's specifications.



Start up with battery :

- Connect the clamps : red to the (+) and black to the (-) of the battery.
- Push the START/STOP key to start the mode.
- During use the current consumed and the instantaneous voltage are displayed.



Start without battery (not recommended)

It is possible to supply power to the vehicle without a battery by pushing the START/STOP key for 3 secondes. The screen will display "no battery" for 1 second before starting to supply the vehicle.
 Warning: polarity reversal can damage vehicle electronics.

Precaution :

If the screen displays a current higher than 10A, it indicates the battery is discharged. The device will start charging automatically. Check all electrical consumers are switched off on the vehicle. Wait until the current falls below 10A before using any electrical functions of the car.

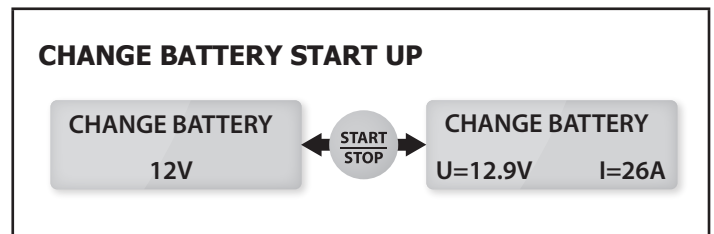
CHANGE BATTERY MODE (OPTIONAL)

The GYSFLASH will maintain a stabilised power supply to the vehicle during battery replacement to preserve memory settings. By default this mode is inactive and doesn't appear in the mode list. It can be activated via the Advanced menu (see page 19).

Start up :

- Connect :
 1 : Red clamp to the (+) of the battery / battery terminal, in such a way that the battery can be changed without disconnecting the clamp.
 2 : Black clamp to the vehicle chassis or earth.

- Press the START/STOP key to start the mode.
- During use, the current consumed and the instantaneous voltage are displayed.
- When changing the battery ensure the polarity is correct. While exchanging the batteries, be careful not to disconnect the charger clamps to avoid loss of electronic data.



⇒ **Warning: polarity reversal can damage the vehicle electronics.**

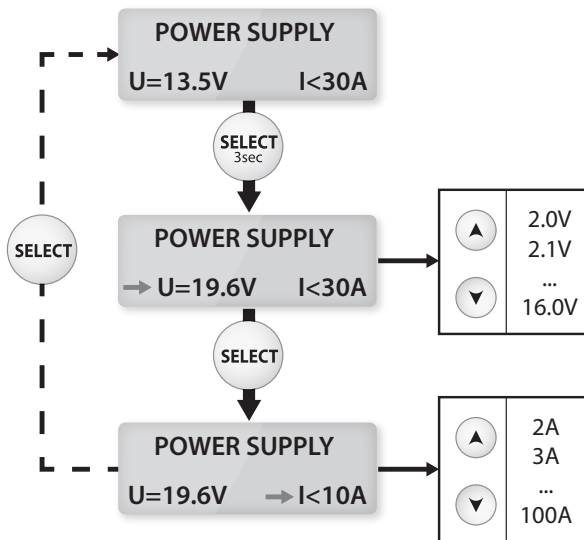
POWER SUPPLY MODE (OPTIONAL)

This mode is intended for expert users only. This mode enables the charger to be used as a stabilised power supply, with regulated voltage and adjustable maximum current. By default this mode is inactive and doesn't appear in the mode list. It can be activated via the Advanced menu (see page 19).

Adjustment of the voltage regulation and current limitation :

The voltage regulation can be adjusted from 2V to 16V and the maximum current from 2A to 100A:

POWER SUPPLY MODE CONFIGURATION



Start up :

- Push the START/STOP key to start the mode.
- During use, the current consumed and the instantaneous voltage are displayed.

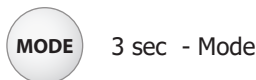
POWER SUPPLY START UP



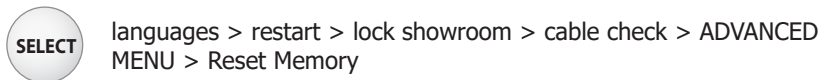
NOTE: Unlike other modes, Power Supply mode, the charger does not compensate cables voltage drop. In this case, the voltage displayed on the screen corresponds to the output voltage of the charger (not the voltage on the clamps).

CONFIGURATION MENU

Access to configuration menu :



To browse in the sub menu press the «Select» key :



Sub menu :

• **Languages :**

This menu enables to select the language (use the arrows to change the language).

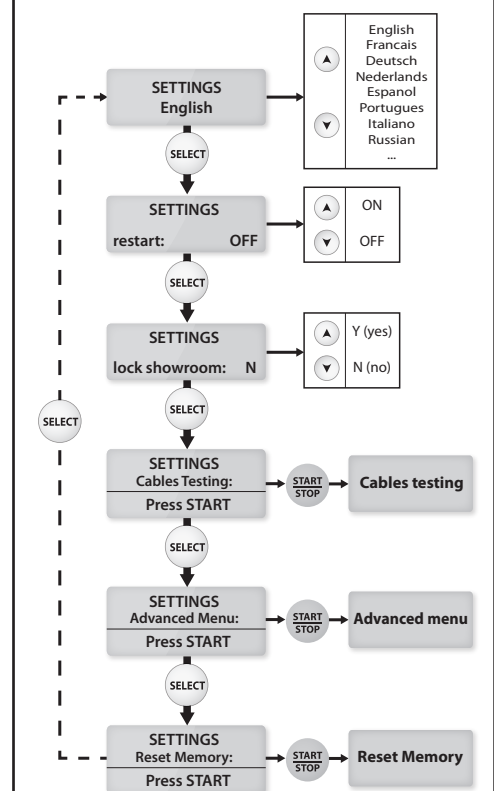
• **Automatic restart :**

Automatic restart only works with «Showroom», «Charge» and «Power Supply» mode. This feature enables charger to restart automatically and to restart charging after a cut in power. To activate the «Automatic restart» feature « Configuration | Restart : ON ».

• **Lock Showroom :**

To lock the device in Showroom Mode (to avoid misuse). To activate the «Lock Showroom» feature « Configuration | Lock Showroom : Y ».

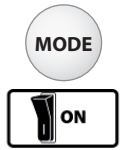
CONFIGURATION MODE



Shortcut to Lock Showroom :

The «Lock Showroom» feature can be activated without accessing the configuration menu.

- Turn OFF the device (main switch in the OFF position)
- Press MODE key
- Turn ON the switch, while the MODE key is still pressed. The screen displays «GYSFLASH **100.12 HF Vx.x**» / «GYSFLASH **102.12 HF Vx.x**» for 3 seconds.
- Hold the MODE key until the creen displays «lock showroom: Y»



• Cables calibration :

This mode must be used each time the cables are changed. The GYSFLASH can be fitted with cables up to 2x8m in 16mm².

OK : The calibration was successful.

FAIL : A problem occurred during the calibration. In this case, the calibration is reset to the factory setting. Check that the cables are in good condition and properly put in short-circuit and repeat the procedure.

• ADVANCED MENU (code 1-9-6-4) :

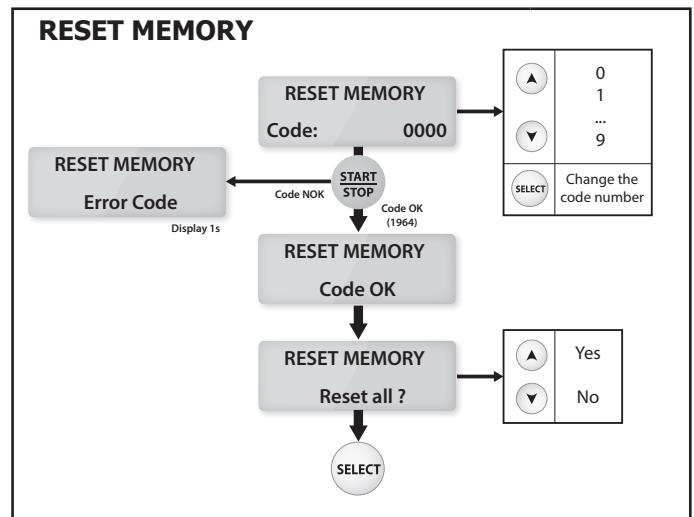
This menu is intended for experimented user only.

To access this menu, enter in the code above («Select» key to change the digit selection and «Start/Stop» key to confirm the code).

For more details, see page 19.

• Reset Memory (code 1-9-6-4) :

This menu is intended to factory reset the charger settings by entering the code above. Any personal parameters are deleted.



ADVANCED MENU

This menu controls the advanced parameters of the charger. To move from one parameter to another push the Select key :



Activation «Change battery» > Activation «Power Supply» > Activation «Expert Curve» (> Adjustment of the «Expert Curve» parameters)

● **CHANGE BATTERY mode activation:**

To activate the CHANGE BATTERY mode, select «ADVANCED MENU | Change bat: ON». Now this mode will be accessible from the mode list.

● **POWER SUPPLY mode activation:**

To activate the POWER SUPPLY mode, select «ADVANCED MENU | Power Supply: ON». Now this mode will be accessible from the mode list.

● **«EXPERT» curve activation:**

To activate the «RECOV» curve, select «ADVANCED MENU | Expert curve: ON». Now this curve will be available in the charging curves list from the CHARGE mode.

● **Parameters adjustment of the «Expert» curve:**

If the charging curve is activated, the charging curve parameters can be adjusted (type IU₀I₀U):

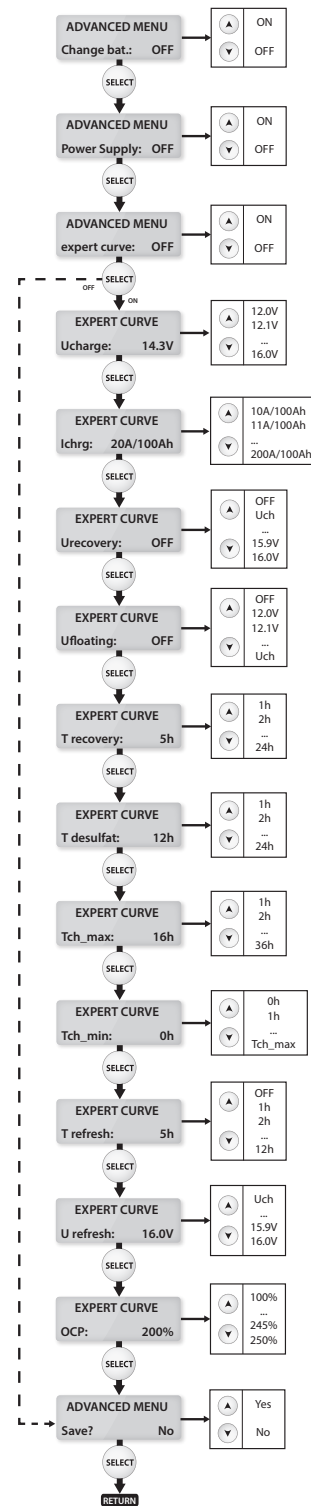
- **Ucharge:** Charge voltage adjustable from 12.0 to 16.0V (Step 7).
- **Icharge:** Charging current adjustable from 10A to 200A per 100Ah of specified capacity (Step 6).
- **Urecovery:** Recovery voltage adjustable up to 30.0V. If the value «OFF» is selected the recovery function is inactive (Step 2 and 4).
- **Ufloating:** Floating voltage adjustment. If the value «OFF» is selected the floating function is inactive (Step 9).
- **Trecovery:** Maximum time for shorted cells recovery, adjustable from 1h to 24h (Step 2).
- **Tdesulfat:** Maximum time adjustable from 1h to 24h of the desulfation phase (Step 4).
- **Tch_max:** Maximum charging time (Step 7 and 6).
- **Tch_min:** Minimum charging time (Step 7 and 6).
- **Urefresh:** Maximum voltage during the cooling phase (Step 8).
- **OCP (Over Charge Protection):** Maximum percentage of the nominal capacity which can be injected before the protection begins.

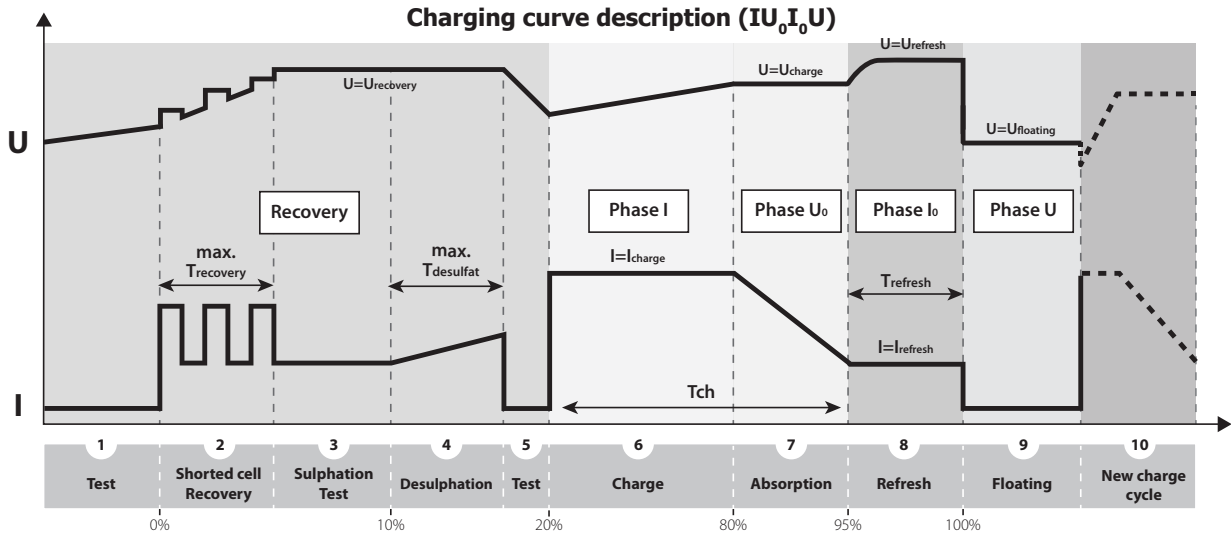
⇒ **Warning:**

When charging in-situ, a «Urecovery» or «Urefresh» too high might damage the electronics of the vehicle. We advise NOT to adjust these settings above 15V.

To save and validate the new settings, select «ADVANCED MENU» | save? Yes» Push the «MODE» key to exit the «Configuration» menu.

ADVANCED MENU





1	Battery analysis
2	Recovering damaged elements from an extended deep discharge
3	Sulphated battery test
4	Sulphated battery recovery
5	Checking the battery recovery
6	Battery charged to 80%
7	Battery charged to 95%
8	Battery cells refresh
9	Maintenance charge
10	Starts a charge cycle for maintaining performance = maintenance

PROTECTIONS

This device is protected against short-circuits and polarity inversions. It has an anti-spark feature which prevents sparks whilst connecting the Gysflash to the battery. The Gysflash will not deliver current if there is no battery detected (no voltage in the clamps). The charger is fitted with an internal 125A fuse (ref. 054585), to protect against misuse.

TROUBLESHOOTING

TROUBLESHOOTING		CAUSES	REMEDIES
1	Screen flashing : « #error (+)<-->(-) » + alarm beep	The polarity has been reversed on the clamps	Connect the red clamp to the (+) and the black clamp to the (-) of the battery.
2	Screen flashing : « #erreur U>Umax » + alarm beep	Battery voltage too high	Charger not suitable (ex: 24V battery instead of 12V battery).
3	Screen flashing : « #battery error » + alarm beep	Battery short-circuited or damaged	Change the battery.
		Battery not connected or clamps in short-circuit	Check clamps connection.
		6V Battery connected	Charger not suitable.
4	Screen flashing : « >100A » + alarm beep	Consumption exceeds the output of the charger	Turn off electrical consumers to reduce power demand
5	The GYSFLASH delivers a high current (greater than 10A) before the diagnostic tool has been activated.	Several consumers are active on the vehicle	GYSFLASH works to specification. Turn off consumers to check the battery is not too discharged (see cause n°2).
		Battery discharged	Battery deeply discharged, the GYSFLASH delivers current to charge it. Wait until the output current is below 10A to start the diagnostic.

6	Displays for 1s : « no battery » + alarm beep	Showroom mode is working on « no battery »	Showroom without battery : GYSFLASH operating normally. To deactivate the "no battery" function, press the "START/STOP" key, and then press the "START/STOP" key again to start the Showroom mode with battery.
7	The device is locked in Showroom mode	Lock Showroom active	Normal operation of GYSFLASH. Refer to configuration menu to deactivate this function.
8	Screen displays : « #error T(°C) » + alarm beep	Faulty fan	Contact your distributor.
		Extended exposure to sunlight	Do not leave the device exposed to sunlight. Leave the device ON until the fault disappears. (The alarm beep can be stopped. Possibility to stop the alarm beep by pressing the START/STOP key).
9	Screen displays : « #error IHM » + alarm beep	Electronic fault	Contact your distributor.
10	Screen displays : « #error fuse » + alarm beep	Mishandling	Internal fuse must be changed by a qualified person (ref. 054585 : 125A).
11	The device doesn't display anything	Input fuse HS	Input fuse must be changed by a qualified person (temporised fuse 10A 5x20).
		Faulty electrical network	Check the voltage of the electrical network is between 180V and 260V.

WARRANTY

The warranty covers faulty workmanship for 2 years from the date of purchase (parts and labour).



The warranty does not cover:

- Transit damage.
- Normal wear of parts (eg. : cables, clamps, etc..).
- Damages due to misuse (power supply error, dropping of equipment, disassembling).
- Environment related failures (pollution, rust, dust).

In case of failure, return the unit to your distributor together with:

- The proof of purchase (receipt etc ...)
- A description of the fault reported.

SPÉCIFICATIONS TECHNIQUES / TECHNICAL FEATURES / TECHNISCHE EIGENSCHAFTEN / ESPECIFICACIONES TÉCNICAS/ ТЕХНИЧЕСКИЕ СПЕЦИФИКАЦИИ / TECHNISCHE SPECIFICATIES

		GYSFLASH 100.12 HF	GYSFLASH 102.12 HF
Tension d'alimentation assignée Rated input voltage Netzspannung Tensión de red asignada Номинальное напряжение питания	Nominale voedingsspanning Tensione di alimentazione nominale	220-240 VAC ~ 50/60 Hz	
Puissance assignée Rated power Bemessungsstrom Potencia asignada Номинальная мощность	Nominale vermogen Potenza nominale	1600 W	
Rendement Efficiency Wirkungsgrad Rendimiento Производительность	Opbrengst Rendimento	93%	
Fusible d'entrée Input fuse Eingangssicherung Fusible de entrada Входной плавкий предохранитель	Zekering Fusibile d'entrata	T 10A  (5x20)	
Tensions de sortie assignées Rated output voltage Bemessungsspannung Tensiones de salida asignadas Номинальные выходные напряжения	Uitgaande nominale spanning Tensione di uscita nominale.	12 VDC	
Plage de tension Voltage range Spannungsbereich Rango de tensión Диапазон напряжения	Spanningsbereik Intervallo di tensione	2 – 16 V	
Courant de sortie assignée Rated output current Nennstrom Corriente de salida asignada Номинальный выходной ток	Uitgaande nominale spanning Corrente di uscita nominale	100 A	
Fusible de sortie Output fuse Ausgangsicherung Fusible de salida Выходной плавкий предохранитель	Zekering Fusibile d'uscita	 125 A	
Type de batterie Battery type Batteriearte Tipo de batería Тип аккумулятора	Accu soort Tipo di batteria	Plomb / Lithium-ion LFP Lead / Lithium-ion LFP Blei / Lithium-Ionen LFP Plomo / Ión-litio LFP Свинец / Литий-ионный LFP Lood/lithium-ion LFP LFP al piombo / agli ioni di litio	
Capacité assignée de batterie Rated battery capacity Nennkapazität der Batterie Capacidad asignada de batería Номинальная емкость батареи	Nominale accu capaciteit Capacità nominale della batteria	20 - 1200 Ah	
Nombre d'éléments par batterie Number of elements per battery Anzahl der Zellen pro Batterie Número de elementos por batería Количество элементов в батарее	Aantal elementen per accu Numero di elementi per batteria	6	
Consommation batteries au repos Battery consumption when idle Rückstrom Consumo de baterías en reposo Потребление АКБ в нерабочем состоянии	Accu verbruik in ruststand Consumo batterie in riposo	< 1 mA	
Courbe de charge Charging curve Ladekennlinie Curva de carga Кривая зарядки	Laadcurve Curva di carica	IU ₀ U	
Température de fonctionnement Operating temperature Betriebstemperatur Temperatura de funcionamiento Рабочая температура	Werktemperatuur Temperatura di funzionamento	0°C – +40°C	
Température de stockage Storage temperature Lagertemperatur Temperatura de almacenado Температура хранения	Opslagtemperatuur Temperatura di stoccaggio	-20°C – +80°C	
Indice de protection Protection rating Schutzart Índice de protección Степень защиты	Beschermingsklasse Indice di protezione	IP21	



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