



GX3 SFX-Torch

Manual 2.0


As of January 2021



PREAMBLE

Dear Explo customer,

Before using your device, please read through these instructions carefully. It contains many important informations, that will help you in getting to know the system.



Reading through this manual, will support you in a responsible usage of this product.

We ask that you follow the safety- and usage hints as recommended by us closely.

Should you have any questions, or should any unclarities arise during the use of the product, that these instructions cannot answer, please do not hesitate to contact us either via phone or by mail.

We hope you have a great time with your effect device,

Your Explo Team



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1 OVERVIEW OF THE GX3 SFX-TORCH

1.1 FUNCTION OF THE GX3 SFX-TORCH

The GX3 SFX-Torch is an effect device, used to create flame bursts of up to 2,5m range. It is being held in both hands by the user, and is activated manually via two trigger buttons. The fuel is taken from two Aerosole cartridges (600mL).

1.2 AREAS OF USE AND POSSIBILITIES

The SFX-Torch is usable for indoor- and outdoor shows. Typical areas of use are stage productions, and concerts.



2 COMPONENTS OF THE GX3 SFX-TORCH

2.1 VIEW OF THE GX3 SFX-TORCH



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Components of the GX3 SFX-Torch

1	Nozzle, ignition and protective cover
2	Grip with trigger buttons
3	Connector for Aerosole cartridges
4	Key-switch
5	Status LEDs
6	Charging socket and cover



2.2 DESCRIPTION OF COMPONENTS

2.2.1 IGNITION AND PROTECTIVE COVER

The front of the SFX-Torch features the effect nozzle and ignition of the device. To protect against touching these components, they are framed by a protective cover.



During use, the protective cover heats up. We recommend to not touch said cover after using the SFX-Torch.

2.2.2 CONNECTOR FOR AEROSOLE CARTRIDGES

Here you can find two separate connector threadings (7/16") for Aerosole cartridges. For current informations regarding recommended and tested cartridges, please contact us via phone or by mail.

2.2.3 GRIP WITH TRIGGER BUTTONS

The SFX-Torch must be held at both grips during use. Two separate trigger buttons are used to trigger the flame effect.

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2.2.4 STATUS LEDs

The integrated Status LEDs can give you a feedback about the mode of the SFX-Torch.

Status feedback of green LED during start (Battery charge)	
3x Flashing	Battery is fully charged.
2x Flashing	Battery is partly charged.
1x Flashing	Battery is empty and must be charged.

Status feedback of green LED during use (Battery charge)	
Continuously lit	Battery okay
Continuous flashing	Battery is empty and must be charged.

Status feedback of red LEDs during use (Ignition)	
Slow flashing	Device is ready.
Fast flashing	First trigger button is pressed.
Continuously lit	Second trigger button is pressed → Device ignites.

Status feedback of all LEDs during start	
Fast flashing	Safety block. A trigger button is already pressed during start. Let go of the button, and switch the device on again.



2.2.5 CHARGING SOCKET AND COVER

The charging socket is primarily used to charge the internal NiMH-battery, using the provided charger. Further, the socket can be used to update the firmware (requires a separately available Bootloader programming cable).

The Pins are connected as follows:

Pin connection of the programming socket	
Pin 1	GND
Pin 2	RX
Pin 3	TX
Pin 4	Battery (+12VDC)
Pin 5	Not connected
Pin 6	Not connected
Pin 7	Not connected



Only use the originally provided charger to charge the battery.

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2.2.6 KEY-SWITCH

The key-switch is used to switch the device on and off. The key can be removed if needed, to prevent unauthorized personell from using the device.



3 USING THE GX3 SFX-TORCH

3.1 PLANNING THE SHOW

A successful show begins with the planning. We recommend to note the following points:

Checklist planning

Can the SFX-Torch be used at the location?

Can I keep the necessary safety distances?

3.2 PREPARING THE DEVICES FOR THE SHOW

In order to not forget the Aerosole cartridge in storage, we recommend to check the following before leaving for the location:

Checklist for the show preparation

Do I have the correct amount of SFX-Torches with me?

Do I have enough Aerosole cartridges?

Has the battery been charged?

Do I have a charger, to charge the SFX-Torch in an emergency?

Does the SFX-Torch work (Testing for function without fuel)?

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If you can answer all of the above with YES, you are one step closer to a successful show.

3.3 USING THE AEROSOLE CARTRIDGES

The notes on the safety datasheet of the used fuel are to be strictly adhered to.

Before the first use or changing empty cartridges, you will need to switch off the SFX-Torch and close both connector valves.

The SFX-Torch is meant to be used with two Aerosole cartridges. Due to the needed pressure, the SFX-Torch should be used with two evenly filled cartridges.

The Aerosole cartridges must be screwed onto the connectors tightly. After connecting, check the system for leak tightness. Should you find any obvious damages, do not activate the device. Disconnect the cartridges in this case immediately. A leak tightness spray can be used to search for leaking spots.

Use only fuels tested and recommended by us. Untested cartridges can damage the gaskets of the device, and thus be a source of danger.



3.4 SWITCH ON

After connecting the cartridges, the SFX-Torch can be switched on. Before doing so, check that the recommended safety distances (see safety hints) can be kept at all times.

To activate the device, turn the key-switch 90° clockwise. Also keep an eye on the status LEDs during start. These give you a feedback about the status of the device, and if there would be any errors on one of the trigger buttons.

Should all status LEDs flash continuously after starting the device, there could be a problem with one of the trigger buttons. In this case, turn it off, and check that neither of the two buttons is pressed, before switching it on again. Should the problem persist, please contact the manufacturer.



After switching the device on, the recommended safety distances as described in this manual must be kept at all times.

3.5 TRIGGERING THE FLAME EFFECT

To trigger the flame effect, the SFX-Torch must be switched on, and wait until it begins to flash slowly (about every 3 seconds). This shows that the SFX-Torch is ready.

Now keep pressing one of the two trigger buttons. The red status LEDs should now flash quickly.

To activate the flame effect, the second trigger button must now be pressed simultaneously to the first. The effect will be activated for as long as both buttons are pressed.



Since there might be rests of air in the system after starting the device for the first time, we recommend firing a test shot.

3.6 SWITCH OFF

Before switching the SFX-Torch off with the key-switch, the rest of the fuel should be discharged from the system, and vent the SFX-Torch with it. Close both Aerosole connector valves, and then trigger the effect until there is no further flame effect. Should the safety distances allow for it, we recommend pointing the SFX-Torch straight upwards during venting.

After venting, the SFX-Torch can be switched off. Simply turn the key-switch 90° anti-clockwise. Then disconnect the aerosole cartridges and store them according to their material safety datasheet.



4 STORAGE AND CARE

The SFX-Torch should be completely vented and cleaned after every show. You can use a cleaning cloth and spiritus to clean all outside parts, until no residue can be seen.

Should there be soot collecting at the ignition electrodes, you can clean them carefully with a toothbrush. The cables leading to the electrodes should be checked for damages periodically.

Charge the battery even when not using the device, after at least 6 months of storage.



The SFX-Torch may never be stored while still pressurized, since fuel residues and pressure might damages the gaskets and seals.

5 SAFETY

The SFX-Torch features multiple safety functions, that protect the device from damages, and allow the used the possibility to take certain safety precautions to prevent damages to personell or materials. Further, the user can prevent risks by adhering to the recommendations made in this manual. Any mentioned safety hints or safety distances must be adhered to in any case however.

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5.1 SAFETY FUNCTIONS

5.1.1 AEROSOLE CONNECTOR VALVES

By using the built in connector valves, the fuel supply can be stopped mechanically at any point.

5.1.2 AUTOMATIC SAFETY TEST

During starting, the system checks if one of the trigger buttons is being pressed due to damages or other reasons. This will lead to a warning (all LEDs flashing) and the device will not start, to prevent a faulty activation of the flame effect.

5.1.3 DOUBLE TRIGGER BUTTONS

The two stage activation of the effect via the two trigger buttons makes an unwanted activation of the effect more difficult.

5.1.4 KEY-SWITCH

Using the key-switch, the SFX-Torch can be turned off at any time. The integrated solenoid valve closes automatically, and prevents the flow of the fuel.

The key can be removed if needed, to prevent unauthorized personell from using the device.



5.1.5 PROTECTIVE COVER

The protective cover at the end of the device prevents unwanted touching of the ignition electrodes, protecting you from getting an electrical shock, and the electrode from mechanical damages.

5.2 GENERAL SAFETY HINTS

The SFX-Torch may only be used by personell that has been trained in the usage and the safety hints mentioned in this manual. As manufacturer, we offer trainings at any time, should you wish.


The device may only be used if it is in good condition. Defective devices must be repaired by the manufacturer, or a certified service. Under no circumstances may defective devices be used.

After prolonged storage of the SFX-Torch, it should be checked for function and leak tightness before usage.

During use, the safety distances mentioned in this manual are to be adhered to.

Try not to touch the protective cover during and after usage, since it can heat up and lead to burns on your skin. Let the SFX-Torch cool off at a fitting place, after usage.

Ignition of the fuel is being made by a high voltage spark. Make sure no body- or clothing parts, or other objects are near the ignition electrodes while the device is activated.



**Never activate the flame effect against the wind direction.
Wind can affect the direction of the flame effect greatly.**



**Never point the switched on SFX-Torch at animals, persons
or flammable objects.**



5.3 RECOMMENDED SAFETY DISTANCES

Direction	Recommended distance
Direction of ejection	5m (16,5ft)*
In radius around the effect	2m (6,6ft)*

*) The safety distances mentioned are respective to the distance to flammable objects or an audience. For non-flammable objects (Concrete walls, glass panes, metal contraptions) and for actors / technicians, these safety distances can be reduced.

If the SFX-Torch is used by trained pyrotechnical personell, the safety distances above can be adjusted individually in accordance to any risks and dangers.

The values mentioned are only true for calm winds. The safety distances are recommendations. For the positioning and calculation of the safety distances, the user themself is responsible.

The safety distance should be raised, if any easily flammable objects are in the direction of the effect.

Due to the great number of different fire safety regulations, the manufacturer cannot guarantee that a usage of the SFX-Torch inside closed rooms is possible, even if the recommended safety distances can be kept.

Before using the effect device, any local authorities and fire safety specialists of the location should be consulted, since they will need to allow the use of the SFX-Torch in the end.

12 Should there be any questions by said authorities, we remain at your disposal and can be reached by phone.




6 TECHNICAL DATA

GX3 SFX-Torch	
Measurements	550x140x250mm
Weight	3,0kg (without cartridges)
Power supply	1x 12VDC NiMH-battery
Case	Stainless steel casing
Cartridge connector	7/16"
Fuel	Aerosole gas cartridges
Effect range	Up to 2,5m

7 ACCESSORIES (OPTIONALLY AVAILABLE)

Optional accessories for the GX3 SFX-Torch	
Cartridge covers	A black cloth cover for standard aerosole cartridges.

8 DISPOSAL

	<p>According to the european WEEE-norms, this product may not be disposed of in your household trash. Please dispose of this device in a fitting collection point for electrical devices.</p>
	<p>Alternatively, you can send us your old device and we will dispose of them free of charge.</p>
	<p>Should you have any further questions about the correct disposal, please do not hesitate to contact us.</p>



EG-Conformity declaration

According to the Low Voltage Directive **2014/35/EU** and to the EG-guidelines for electromagnetic tolerance (EMC Directive) **2014/30/EU**

Manufacturer and representative

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The sole responsibility for the issuing of this conformity declaration lies with the manufacturer.

Item of this declaration

Name: GX3 SFX Torch (Handfackel GX3)
Type and marketing name: Gas projector
Model: Handfackel GX3 v1.0
Serial number:

Applied norms:

EN 60950-1:2006 / A1:2010+A2:2013+A11:2009+A12:2011
EN 61000-3-2:2015-03
EN 61000-3-3:2014-03

Function: The GX3 SFX Torch is a modification of the GX3 (Stage Torch). The SFX Torch is a handheld device. The flame effect is triggered with two button. The fuel is supplied by two aerosol cans (600mL).

We hereby declare that the described machine, in its concept and build, as well as the variant brought onto the market by us, adheres to the basic safety- and health guidelines of the EG-guidelines 2014/35/EU and 2014/30/EU. This declaration is void for any modifications made to the machine not coordinated with us.

This declaration has been handed in in Klagenfurt a.W., on the 17.05.2021 by Mr. Harald Kulterer (Owner Explo Ignition systems).

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