# CO2-Jet 230V

## Manual 2.0

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# PREAMBLE

Dear Explo-Customer,

Please read through this document before usage of the devices. It contains many information which will help you with using the system.

**Reading through this manual will support you in a responsible use of this product.**

We ask you to adhere to the safety and usage guidelines we have listed.

Should you have any questions or should any unclarities arise during the usage of the devices, that can't be answered by this manual, please do not hesitate to contact us either by mail or by phone.

We wish you a lot of fun with your new ignition device.

*Your Explo Team*

# INDEX

1 About the CO2-Jet 230V ..... 4
1.1 Function of the CO2-Jet 230V ..... 4
1.2 Usages and possibilities ..... 4
2 Components of the CO2-Jet 230V ..... 5
2.1.1 Frontal view of the CO2-Jet 230V ..... 5
2.1.2 Back view of the CO2-Jet 230V ..... 6
2.1.3 Description of Components ..... 7
3 Using the CO2-Jets 230V ..... 8
3.1 Planning the show ..... 8
3.2 Preparing the deivces for the Show ..... 8
3.3 Positioning of the CO2-Jets ..... 8
3.4 Using and connecting CO2-bottles ..... 9
3.5 Controlling the CO2-Jet 230V ..... 9
3.6 Dismantling the system ..... 9
3.7 Storing the system ..... 10
3.8 Maintenance of the devices ..... 10
4 General safety hints ..... 10
5 Recommended safety distances ..... 11
6 Technical Data ..... 11
7 Disposal ..... 11

# 1 ABOUT THE CO2-JET 230V

## 1.1 FUNCTION OF THE CO2-JET 230V

The CO2-Jet 230V is an effect device, used to create CO2 fog effects. Activation of the device is made exclusively via the supply of 230VAC. The jet activates for as long as it is supplied with power. Using a Switch Pack, you could also control it with DMX.

Due to its small size and the included ground plate with holes, it is ideal for stage shows and various types of fixing.

The powerCN connectors are featured doubly (IN and OUT), and allow the serial use of multiple CO2-effect devices, and their simultaneous use.

## 1.2 USAGES AND POSSIBILITIES

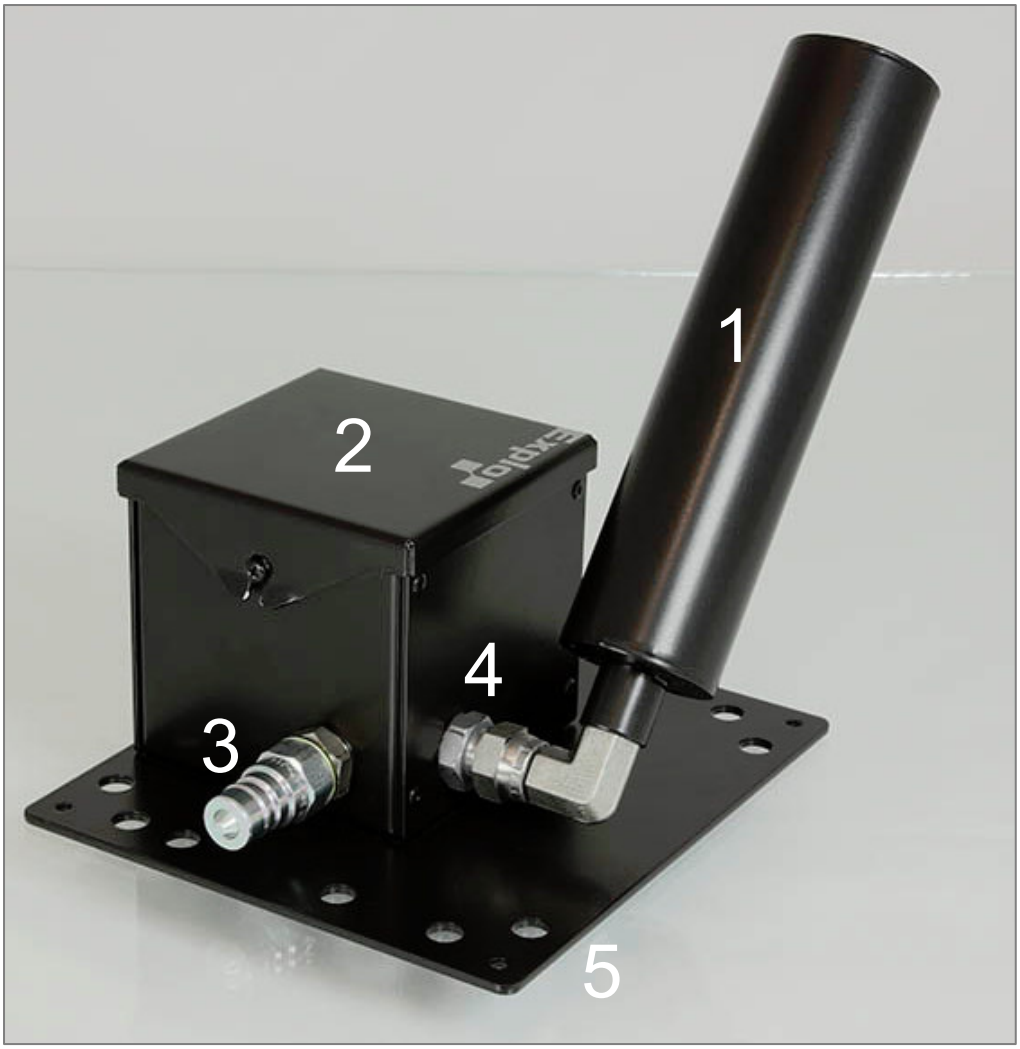
The CO2-Jet can be used for indoor and outdoor shows. Its usages can range from concerts, stage shows, special effects during theatre productions and sport events.

# 2 COMPONENTS OF THE CO2-JET 230V

## 2.1.1 FRONTAL VIEW OF THE CO2-JET 230V

| Components of the CO2-Jet 230V front | |
|---|---|
| 1 | Effect ejection pipe |
| 2 | Power connectors |
| 3 | CO2 connector |
| 4 | Ground plate |

## 2.1.2 BACK VIEW OF THE CO2-JET 230V




| Components of the CO2-Jet 230V back | |
|---|---|
| 1 | Effect ejection pipe |
| 2 | Top |
| 3 | CO2 connecor |
| 4 | Connector for the effect pipe |
| 5 | Ground plate |

## 2.1.3 DESCRIPTION OF COMPONENTS

### 2.1.3.1 EFFECT EJECTION PIPE

The effect ejection pipe of the CO2-Jet 230V is the output of the effect device. After loosening the union nut (22mm wrench width) at the connector, the pipe can be moved to any direction, and then fixed again.

### 2.1.3.2 POWER CONNECTORS

As power connectors of the CO2-Jet, “powerCON 20A” sockets are being used. The provided power cable can be connected to the blue socket. The grey socket can be used to further connect the power of 230V with another CO2-Jet.

### 2.1.3.3 CO2 CONNECTOR

To this quick coupling (previously a 3/8” connector threading), the provided CO2 hose can be connected, which then supplies the device with CO2.

### 2.1.3.4 CONNECTOR FOR THE EFFECT EJECTION PIPE

The CO2 ejection pipe can be connected to this connector (3/8“ threading).

### 2.1.3.5 GROUND PLATE

The ground plate of the CO2-Jet can be used to mount the device. It is also ideal to connect it to Truss-systems by use of clamps. Protecting the device by fixing and mounting it firmly is highly important. It prevents the device from being tossed around by the recoil uncontrollably.



### 2.1.3.6 TOP

By loosening the crosshead screws on both sides, the top can be removed, to allow access to the inner valve (for maintenance purposes).

# 3 USING THE CO2-JETS 230V

## 3.1 PLANNING THE SHOW

A successful show starts at the planning stages. We recommend checking for the following:

| Planning checklist |
|---|
| Can I use the CO2-Jet at the location? |
| Can the safety distances be adhered to? |
| How many CO2-Jets do I want to use? |
| (Optionally) Do I use a Switch pack for DMX control? |

## 3.2 PREPARING THE DEIVCES FOR THE SHOW

In order to not forget the CO2 hose in storage, we recommend to check the following points before leaving for the show location:

| Checklist before the Show |
|---|
| Have the devices been tested? (Highly recommended) |
| Do I have the correct amount of devices with me? |
| Do I have the ejection pipes with me? |
| Do I have enough CO2 hoses in the correct length with me? |
| Do I need accessories? (eg: hose extensions, connector cables,…) |
| Do I need any tools? (eg: wrench) |
| Do I have the needed controllers? |
| Do I have enough fuel (CO2) at the location or with me? |

If the above can be answered with YES, you are one step closer to a great show.



## 3.3 POSITIONING OF THE CO2-JETS

The devices need to be placed firmly, and be proofed against unwanted movement, and the recoil of the CO2 effect. It is highly recommended to mount the device, using the ground plate. It can be fixed using screws or anchors to the floor, or to truss systems, using clamps. In the attachments of this manual, you can find a schematic of the holes that are used for this, in the ground plate.

The power cables (=controllercables) are to be placed in such a way that no one may fall over them.

Generally, the device needs to be far enough away from all persons and objects, so that they may not be harmed by the effect of the device. The manufacturer recommends a distance of 6meters in the direction of the ejection, and 0,5meters around the effect. However, all distances that the local safety personell dictates, are to be adhered to.

If these distances are not adhered to, there might be dangers due to coldness.

**Always mount devices. (Recoil)**
**Place power cables carefully. (Trip danger)**
**Adhere to safety distances. (Danger due to coldness)**

## 3.4 USING AND CONNECTING CO2-BOTTLES

The general safety guidelines for the use of CO2, as well as the instructions of the safety data sheet of the manufacturer are to be adhered.

The CO2-bottles must be placed atop firm and horizontal ground, and be protected against tipping. Direct sun light and heat should be avoided, since the pressure will rise with higher temperatures. In the cold, it is recommended to keep the bottles warm.

The CO2 hose should first be connected to the CO2-Jet, and then with the CO2-bottle. When connecting the hose to the bottle, the power or controller cable of the device, should not be connected to a power supply, or the controller.

We recommend using a leak tightness spray, to check the system for any leakages, and make a test shot, to remove any ait from the hose.

## 3.5 CONTROLLING THE CO2-JET 230V



Usage of the CO2-Jet 230V is used only by supplying the device with 230VAC, by use of the provided power cable. Simply put: Plug into socket > CO2-Jet activates, Plug is removed > CO2-Jet stops.

For a controlled activation, we recommend using a 230V switchboard, a DMX Switch Pack (not a dimmerpack!), or any others like these.

Important: Continuous use of the CO2-Jet may lead to icing of the ejection pipe, and in turn the valve getting stuck, leading to light, snow like ejections. Since the icing can be due to many factors (time of use, outer temperature, temperature of the bottle), we recommend testing the devices under realistic conditions before the show.

## 3.6 DISMANTLING THE SYSTEM

After usage, the valve at the bottle should be closed first. Vent the hose and device, by activating it, until no more CO2 is being ejected. After venting, the bottle can be disconnected, and the hose from the device. Never transport devices that are under pressure, since that is not only a safety risk, but may also lead to damages on the device.

## 3.7 STORING THE SYSTEM

Store the CO2-bottles according to local guidelines. Consult the safety data sheet of the manufacturer for this.

Ideally, the CO2-Jets are stored at room temperature. Never store devices under pressure. Not only is it a safety risk, but may also lead to damages on the devices.

Clean the devices before storage.

## 3.8 MAINTENANCE OF THE DEVICES

The devices should be cleaned after the show. Remove any dirt and dry the devices. We recommend using pressurized air for this.

Further, you can clean the inside of the solenoid valve, by removing the coil and plunger from it.

# 4 GENERAL SAFETY HINTS

The device may only be used when it is in good shape, and well maintained. Defective devices must be repaired by the manufacturer or another accredited partner. Undor no circumstances may defective devices be used.



The devices need to be placed atop firm ground, and be proofed against tipping, due to recoil.

The safety distances mentioned in the manual, are to be adhered. All persons taking part in the show, should be informed about the safety distances, any dangers, and the basic function of the devices.

The person controlling the devices should always have a clear view of them, either directly, or via cameras. This person must ensure that the distances around the device are being kept, and be ready to abort the show at any moment.

Before use, the system should be checked for tightness, to prevent unwanted escaping of CO2.

## 5 RECOMMENDED SAFETY DISTANCES

| Ejection direction | Safety distance |
|---|---|
| In effect direction | 6 Meters *) |
| Around the effect | 0,5 Meters *) |

*) The distances mentioned above, are meant for coldness affected objects and an audience in general. For objects that are not affected by this, and for actors, technicians and such, the distance can be reduced.

These distances are simply recommendations. For the positioning, and calculating the distances, the user themselves are responsible.

## 6 TECHNICAL DATA

| CO2-Jet 230V | |
|---|---|
| **Measurements** | 110 x 110 x110mm(without pipe and ground plate) |
| **Weight** | 2,6kg |
| **Power supply** | 230VAC |
| **Case** | Aluminium |
| **CO2 connector** | 3/8“ (older version), or quick coupling |
| **Fuel** | Liquid CO2 |



## 7 DISPOSAL

**According to the european WEEE guidelines, this device may not be thrown away in your trash. Please dispose of this product at a fitting collection point for electrics and old electronic devices.**

**Alternatively, you can send your old device to us for disposal, free of charge.**

**Should you have any further questions about the correct disposal, do not hesitate to contact us.**