USER MANUAL
SONICBOOM® ReCO₂

V1.3

2025/11/28

SHOWVEN Technologies Co., Ltd.

Thanks for choosing SHOWVEN® SONICBOOM® ReCO$_2$, we wish it will bring you lots of exciting moments.
Please read the following manual carefully before operating this product.

△ SAFETY CONSIDERATIONS

\ Unauthorized repair are prohibited, it may cause serious incident.

\ Make sure power supply in consistent with the rated voltage of the equipment, and the socket must well grounded. Unplug and turn off the machine when not use.

\ For adult use only, keep it away from fire, inflammable and explosive articles.

\ Installed in well ventilated area, ensure at least 50cm space around the machine, cover of the nozzle is forbidden.

\ If the machine fails to work, please stop operation and unplug the machine. Check fog fluid, fuse, power connection etc. carefully, if can't solve the problem, please contact SHOWVEN® or your local SHOWVEN® partner for advice.

\ Suggest use SHOWVEN® original FX-S / FX-CI fog fluid, other fluid may lead to clog or malfunction. Please do not adding any other material such as pigment, water etc. to the fuel tank.

\ If need to install SONICBOOM® ReCO$_2$ in invert direction, please place the machine on it's side, then swap the top and bottom fluid tank lid. Check liquid level, make sure the fog fluid won't leak from tank port when turn machine to sideway.

\ In case of eye contact of fog fluid, please wash it with clean water. If fluid is swallowed immediately look for medical advice.
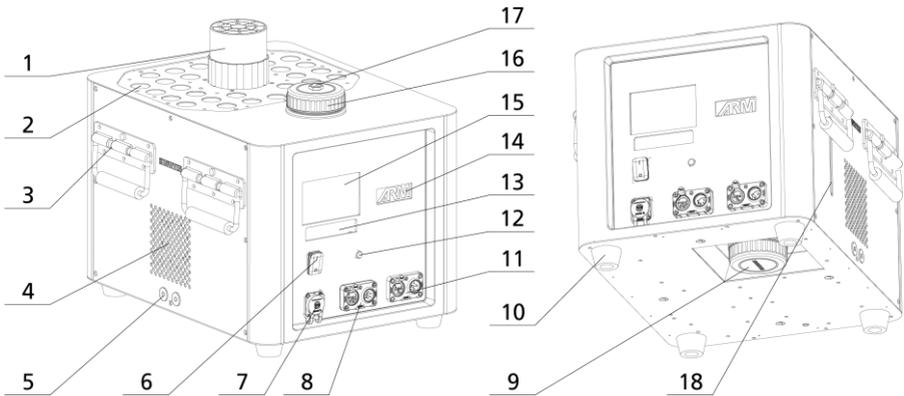
△ Description

SONICBOOM® ReCO$_2$ is real CO$_2$ JET simulator evolved from our SONICBOOM® platform but with an additional high-speed turbofan, which makes it same blast speed as CO$_2$ JET and even more powerful output upto 15m. With the 5L built-in tank, it can generate accumulatively 10min smoke columns, equals to 15 large size CO$_2$ gas bottles. Just similar as our SONICBOOM® JET, it also integrated with 30pcs of 9W LED, makes the smoke columns more colorful and impressive.

△ Technical Specifications

\ **MODEL:** SONICBOOM® ReCO$_2$

\ **DIMENSION:** 432×325×365mm

\ **WEIGHT:** 30kg

\ **VOLTAGE:** AC220-240V / AC100-120V,50/60Hz

\ **POWER:** 3000W/1800W(220V),2400W/1800W(110V)

\ **LED POWER:** 9W×30pcs

\ **MAX. OUTPUT DISTANCE:** 15m

\ MAX. CONTINUOUS OUTPUT DURATION: 8s

\ HEATING UP TIME: 12-15min for 220V standard power mode (low power mode and 110V version takes longer time to heat up)

\ OUTPUT: 120000cuft/min

\ FLUID CONSUMPTION RATE: 500ml/min

\ BUILT-IN TANK CAPACITY: 5L

\ DMX CHANNEL: 1/11

\ CONSUMABLES: FX-CI, FX-S

∆ Structure

1. Output Nozzle
2. LED Plate
3. Handle
4. Air Inlet
5. Bracket Installation Hole
6. Power Switch
7. Power IN Socket
8. 5-PIN DMX
9. Bottom Fluid Tank Lid
10. Feet
11. 3-PIN DMX
12. Fuse
13. LCD Screen Keypad Area
14. ARM Indicator Light
15. LCD Screen
16. Top Fluid Tank Lid
17. Air Exchange Hole
18. Liquid Level Window

△ Operation Area

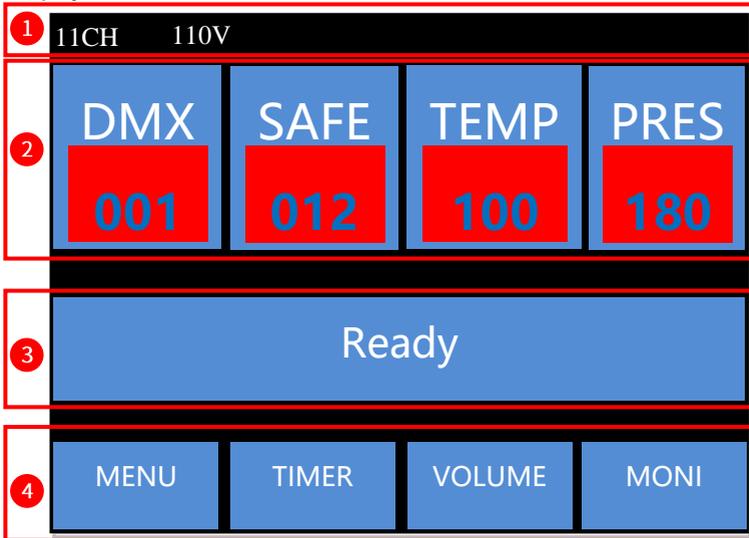### 1. ARM alarming light

OFF: DMX IN signal.
BLINK: DMX armed, ready for firing
ON: No DMX signal.
NOTE: you can turn off the ARM light in ADVANCED menu by switch the ARM State to OFF status.

2. Dispaly Interface

11CH	110V		
DMX **001**	SAFE **012**	TEMP **100**	PRES **180**

Ready

| MENU | TIMER | VOLUME | MONI |

2.1 Status Bar
11CH, DMX mode display: three modes optional 1CH / 11CH / 12CH-P
110V, Power input: Power input display

2.2 Data Bar
DMX: DMX address, red background means DMX connected.

SAFE: Safety channel address, it appears when "Channel Mode" is "12CH-P", when safety channel DMX value is between 50-200 the background color will turn into RED, otherwise it is BLACK.

TEMP: Temp. percentage of heating block, RED background means machine temp. reached 95% of set temp. and ready to shot, otherwise it is in WHITE background. BLACK background and display 995 means temp. sensor disconnect.

PRESS: Device present pressure value. RED background means machine pressure ready to shot. Background turns to WHITE if current pressure lower than setting pressure

2.3   Message Bar
Shows device status, error information if any, or firing duration and intervals when firing manually.

2.4   Touch Keypad Bar
MENU / BACK: MENU or BACK
UP / LEFT / TIMER: Parameters up, items switch up or left, firing interval
DOWN / RIGHT / VOLUME: Parameters down, items switch down or right, manual firing
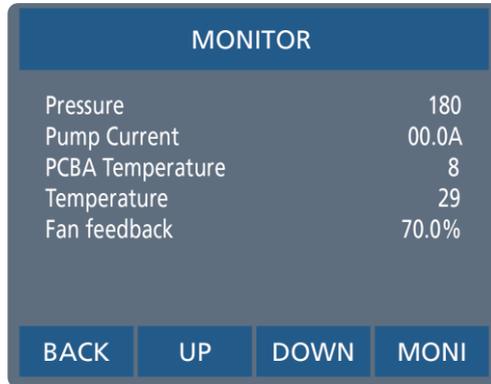**MONI / EDIT / SAVE:** Data monitoring, edit or save

3. Error information

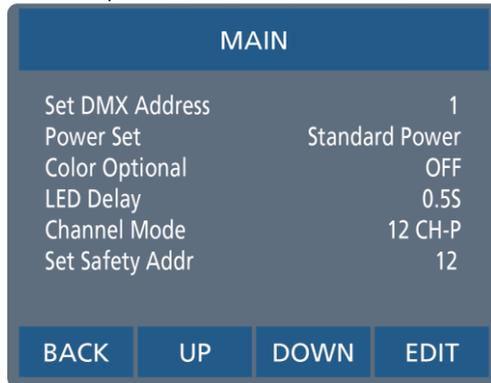| Error information	Explanation
E0 Factory Mode	Device under "Factory Mode", please change to "User Mode"
E1 Pressure Err	Pressurize time exceed setting time, pressurize fail or no fog fluid. Fill tank and restart.
E2 Temp. Sensor	Temperature sensor fault (disconnect or damage)
E3 Ptemp Over	Machine chassis over temp.
E4 Pressure Sensor	Pressure sensor fault (disconnect or damage)
E5 KTemp Over	Heating block over temp.
E6 Heat Fail	Heating up time exceed setting time. Heating element damage or circuit fault or unstable voltage
E7 Pump Protect	Pump over current, restart machine

4. Monitor interface:

From this interface, we can check the pressure, pump current, PCBA TEMP., heating block temp. of machine.

5. Main Menu

Select "MAIN" in main interface, Press "EDIT" enter main menu.

Options	Range	Default	Explanation
Set DMX Address	1~501	1	Set DMX address
Color Optional	Red/Green/Blue/Pink/Purple/Orange/Yellow/Skyblue/White /Rand/OFF	OFF	LED color set when manual firing
LED Delay	0-3s	0.5s	LED delay after smoke output stop
RDM	ON/OFF	OFF	RDM function setting
Channel Mode	11CH/1CH/12CH-P	11CH	Channel mode switch
Set Safety Addr.	12-512	12	Safety address setting
Power Set	Standard / Low Power	Standard Power	Setting working power for the machine

6. Advanced Menu

Select "ADVANCED" in main interface, Press "EDIT" enter main menu.

Options	Range	Default	Explanation
Drive Test	Close/Relief/Priming/Pump/Reflux/Arm	Close	Test the related hardware working status
Pressure Set	120-200	180	Setting target pressure
Duration Set	1-8s	1s	Smoke output duration
Interval Set	1-200s	30s	Interval time
Pump Timeout	8-15s	15s	Pump stop working after pressurize the setting time here.
Pump Protect	ON/OFF	ON	Pump protection set
ARM State	ON/OFF	ON	ARM light ON/OFF setting
语言 (Language)	中文/English	English	Language switch
LCD Backlight	ON/OFF	ON	ON: LCD screen flash when firing OFF: LCD turn off after no operation during a period of time
Key Sound	ON/OFF	ON	Key pad sound ON/OFF switch
Key Lock	ON/OFF	OFF	Keypad lock if no operation in 30s, restart machine to enable
Set Stop Time	0.2s-1.0s	0.5s	Set reflux valve working time
ARM State	ON/OFF	ON	ARM indicator light setting
Default Parameter	ON/OFF	OFF	Parameters reset to default setting

∆ DMX Control

There are three DMX channel mode for SONICBOOM® ReCO$_2$, single channel mode, 11 channel mode and 12 channel professional mode switchable.

1CH: Single channel mode
Fog output and LED color controlled in the same channel.

DMX value	Function
0-5	FOG OFF
6-40	FOG ON – WHITE STROBO
41-60	FOG ON - RED
61-80	FOG ON – GREEN
81-100	FOG ON – BLUE
101-120	FOG ON - PINK
121-140	FOG ON – PURPLE
141-160	FOG ON – ORANGE
161-180	FOG ON – YELLOW
181-200	FOG ON – SKY BLUE
201-220	FOG ON – WHITE
221-235	FOG ON - RANDOM
236-255	FOG ON – LED OFF

11CH: 11 channels mode

Channels	Function
Channel 1	**Fog ON/OFF**: (0-5) OFF, (6-255) ON
Channel 2	**LED RED**: (0-9) OFF, (10-255) LED brightness increase
Channel 3	**LED GREEN**: (0-9) OFF, (10-255) LED brightness increase
Channel 4	**LED BLUE**: (0-9) OFF, (10-255) LED brightness increase
Channel 5	Reserved
Channel 6	Reserved
Channel 7	Reserved
Channel 8	**LED Random**: (0-9) OFF, (10-255) LED random color, use together with channel 9.
Channel 9	**LED color change speed**: (0-9) OFF, (10-255) LED color change speed increase
Channel 10	**LED strobe**: (0-9) OFF, (10-255) LED strobe increase
Channel 11	**LED dimmer**: (0-9) OFF, (10-255) LED brightness increase

12CH-P: 12 channels mode

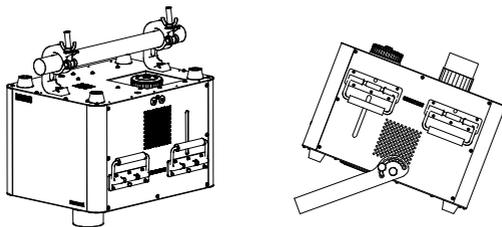| Channels	Function
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Channel 11	**LED dimmer**: (0-9) OFF, (10-255) LED brightness increase
CH-S	**Safety Channel:** 50-200: pressurize, heating up and turbo fan work at low speed; other value: heating off, turbo fan off, depressurize and firing disable. And machine will perform a pressure relief operation.

△ Operation Guide

1. Installation

SONICBOOM® ReCO$_2$ can be installed in any direction even upside down. But please watch out for the fog fluid leakage from the top fluid tank lid.

For sideway installation as below, please make sure the fog fluid level, otherwise there will be fog fluid flow out from top fluid tank lid.

For upside-down installation, please place the machine in sideway first, interchange the top fluid tank lid and the bottom fluid tank lid.

For safety, hanging installation should install safety rope.

The bracket and clamps are optional parts, if you need please contact SHOWVEN sales to order.

2. Fill the machine

Fill the fluid tank with fog fluid.

For best effect please use SHOWVEN® original fluid FX-CI, FX-S. Improper use of fluid will lead to machine malfunction. Warranty will be void if any other type of fog fluid is used.

3. Check the output nozzle
Check the output nozzle make sure there is nothing block the nozzle and nothing drop to the turbofan. Otherwise please clean it before power on machine.

4. Power ON SONICBOOM® ReCO₂
Connect the machine to suitable rated power supply. Make sure power supply in consistent with the rated voltage of the equipment, and the socket must well grounded.
Turn on the machine and allow it to heat up. It shows "Warm up" on LCD screen.
There are Standard power mode and Low power mode switchable, based on the power supply circumstance operator can switch the power mode in the menu. When in Low power mode the heating up time will be longer.

5. DMX setting
Set DMX address for each machine. Connect machines with DMX cable in series.
Suggest to plug in a DMX terminator into the DMX out in last unit of machine.
If operate manually, please disconnect DMX connection.

6. Firing
Once the machine has reached operating temperature, the LCD display of TEMP and PRES background color turns to red, and "TEMP" value reached 100, "PRES" value reached 180. Now the machine is ready for operation.
Manual operation: Press the "VOLUME" to start generating fog, press "STOP" to stop.
DMX control: please operate according to the DMX control table.

7. Power OFF and packing
After each show please turn off machine, allow it cool down before packing the machine.
Please empty the fluid tank and wash the pipe system with distilled water if not use the machine for a long period of time.

△ Maintenance

1. Use SHOWVEN® original fog fluid FX-CI, FX-S.
2. Check the filter in fluid tank before each show, clean or replace it when it is necessary.
3. Running the machine at least once per month.
4. Clean machine regularly to avoid dust, liquid accumulate on the machine.
5. Whenever storage or not use the machine for a period of time, please use distilled water to wash the pipe system by filling the fluid bottle with distilled water and firing the machine several times.
6. With a continuous use of 40h, please use distilled water to firing the machine 10-15times.

△ Warranty Instructions

**** Sincere thanks for your choosing our products, you will receive quality service from us

**** The product warranty period is one year. If there are any quality problems within 7 days after shipping out from our factory, we can exchange a brand new same model machine for you

**** We will offer free of charge maintenance service for machines which with hardware malfunction (except for the instrument damage caused by human factors) in warranty period. Please don't repair machine without factory permission

Below situations NOT included in warranty service:

**** Damage caused by use other type of fog fluid which is not SHOWVEN® FX-CI, FX-S.

**** Damage caused by improper transportation, usage, management, and maintenance, or damage caused by human factors;

**** Disassemble, modify or repair products without permission;

**** Damage caused by external reasons (lightning strike, power supply etc.)

**** Damage caused by improper installation or use;

**** For product damage not included in warranty range, we can provide paid service.

**** Invoice is necessary when applying for maintenance service from SHOWVEN®.

SHOWVEN®

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