Instruction manual





Version 02/2024



Scope of delivery

- 1 classic² or highpower²
- 1 5l empty canister
- 1 tank cap with quick coupling
- 1 fluid hose with quick coupling and grommet
- 1 Power cord with TrueOne plug
- 1 Tank holder
- 1 Wide jet nozzle (only with highpower²)
- 1 Noise-reducing nozzle (only for highpower²)
- 1 Operating instructions

Please check the completeness of the delivery



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1. Introduction

The classic² and Highpower² are powerful fog machines with classic accumulating evaporators. The large storage volume allows large amounts of fog to be generated. Likewise, the smallest fog clouds can be generated.

The highpower² also has a control output for an EC fan and an alternating nozzle system. Here, a choice can be made between a wide-jet nozzle and a noise-reducing nozzle.

There are many possible uses, ranging from theme parks and fire drills to small and large stages.

The diverse control options enable use in a wide variety of scenarios.

The machines are designed to create artificial fog.



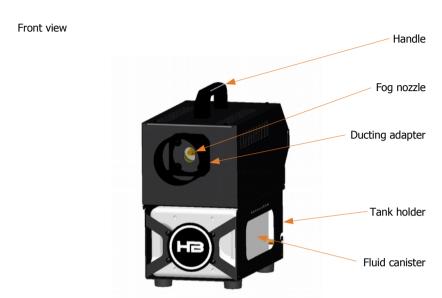
2. Safety instructions

- Very hot steam escapes from the mist outlet. Caution: Danger of burns!
- During the fogging process, very hot fluid droplets may occasionally escape from the fog outlet opening. Therefore, there must be no persons or heatsensitive objects within a distance of 1.5 m from the fog outlet opening.
- Never handle the mist outlet during operation or when activated.
- The device must be set up in a place that is not sensitive to heat. Keep a minimum distance of 60 cm from flammable, combustible and heat-sensitive objects.
- The fogging fluid used contains a glycol which burns with a slightly bluish, almost invisible flame. Therefore, never fog into strong ignition sources such as open fire.
- Never open the device connected to a power source.
- During operation, sporadic leakage of hot fluid droplets is possible. Care should therefore be taken to ensure that these cannot become a hazard to people. Keep a safety distance of 3m to the fog outlet nozzle.
- Do not ingest the fog fluid and keep away from children. In case of eye contact, rinse with plenty of water. In case of accidental ingestion, consult a doctor.
- Spilled or splashed fluid can cause slipping hazards. Absorb the fluid and dispose of it in accordance with the regulations.
- Do not let visibility drop below 2m, you are responsible for people moving in the foggy room.
- The mist produced can set off smoke detectors.

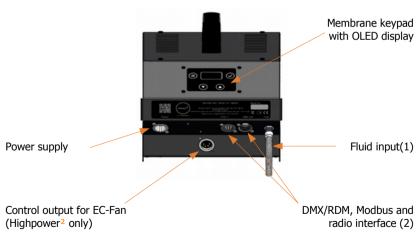
The method used here to generate artificial fog is largely harmless and is used worldwide in the entertainment sector. We are not aware of any case in which a healthy person has been harmed by the use of this artificial fog. **Nevertheless, we recommend that ill persons or persons with previous damage to the respiratory tract or a tendency to allergies avoid contact with artificial fog!**



3. Designation of the parts









4. Preparation

4.1 Selection of the site

The location where the classic²/highpower² is operated must

- have good ventilation, with cold and fog-free air.
- be dry.
- be vibration and shock free.
- consist of a non-flammable footprint.
- be far enough away from easily flammable objects.
- have an ambient temperature between 5 °C and 45 °C.
- have a relative humidity of less than 80%.

4.2 Changing the canister

- Release the plug-in nozzle from the quick coupling by pressing the locking button
- Remove the canister lock
- Take the canister out of the tank holder
- Unscrew the tank cap from the empty canister and screw it onto a new, or full, canister
- Push the canister back into the tank holder
- Reattach the canister lock to the tank holder
- Put the plug-in nozzle back into the tank cap

4.3 Ducting adapter

The classic²/highpower² is equipped with a ducting adapter (100 mm). Please only use hoses that can cope with the temperatures. The hose may only be pushed a maximum of 50 mm onto the adapter so that the fog nozzle is surrounded by sufficient fresh and cold air.

4.4 Interchangeable nozzle (highpower² only)

The highpower² has an interchangeable nozzle system.

ATTENTION! Please change the nozzle only when the heating element is cold, danger of burns!

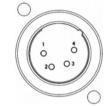


To do this, unscrew the nozzle from the front using a 14 mm nut with extension and ratchet. Make sure that the copper sealing ring is still on the nozzle adapter. Now screw the new nozzle onto the nozzle adapter. The nozzle should be screwed on tightly without overtightening the thread. If leaks occur at the copper sealing ring, tighten the nozzle again. If necessary, replace the sealing ring if it is worn.

4.5 Control output for EC-Fan (highpower² only)

The highpower² has an output to control an EC fan. To do this, connect the fan to the power supply and connect the control cable to the highpower². The plug in the highpower² is a four-pin XLR plug with the following pin assignment:

- 1. Ground
- 2. Tacho input
- Control output
- +12V input for fan detection and control signal generation



5. Fog fluids

Four different fluids are available for the classic²/highpower²

- base*X is a very long-lasting fluid
- base*L is a long-lasting fluid
- base*M is a normal lasting fluid
- base*O is a very fast dissolving fluid

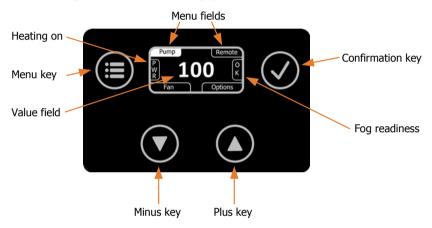


6. Working with the classic2/highpower2

The classic²/highpower² is a fog machine with powerful output. From a small cloud of fog to dense, room-filling fog, any desired effect can be achieved. The fine adjustment of the pump allows fog output settings between 1% and 100%.

After plugging in the power plug, the machine heats up the heating element. This takes between 8 and 12 minutes, depending on the machine.

6.1 Control panel of the classic2/highpower2



The classic²/highpower² is operated via the four keys (menu, minus, plus, confirmation) and the OLED display. The menu fields are located in the corners of the display, and the value field, which displays the value of the selected menu field, is located in the center. The menu key is used to select the individual menus counterclockwise. The corresponding value can then be changed with the help of the plus and minus keys and then saved with the confirmation key.

On the left edge of the screen, "PWR" indicates whether the heating is active. On the right edge of the screen, "OK" indicates that the machine is ready to fog.



6.2 Operation in stand-alone mode

The simplest case of control is the stand-alone mode. For this, the pump value is set to the desired value and the confirmation key is pressed. If fogging readiness is displayed, the fogging process starts immediately.

The pump value can also be changed during the fogging process.

Pressing the confirmation key again stops the fogging process.

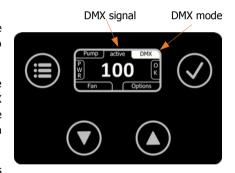
highpower² only: If a fan is detected on the control output, the intensity of the fan can be set in the menu "Fan". If the confirmation key is pressed, the fan is started or stoped. The start of the fogging process also starts the fan, whereas the start of the fan doesn't start the fogging process.

6.3 Operation via DMX512/RDM

When operating via DMX512, the XLR input (2) must first be set to DMX (see chapter Options).

As shown, "DMX" appears in the upper right menu field. The DMX address can be changed with the plus and minus keys and must then be saved with the confirmation key.

If a valid DMX signal is present, this



is displayed at the top center with "active". The currently read pump value can be displayed by selecting the pump menu item. If the received value is greater than zero, the classic²/highpower² starts the fogging process and stops it accordingly at the value zero.

The highpower² needs to DMX channels for operations. One channel is for the pump and the second is for the fan. Both values are shown in the respective menu.

Via RDM the classic²/highpower² is configurable (DMX address) as well as readable (error or temperature data). Furthermore, a firmware update can be done via this RDM input.



6.4 Operarion via Modbus-RTU

When operating via Modbus RTU, the XLR input (2) must first be set to Modbus (see chapter Options). The interface is designed as RS485 half-duplex connection.

The communication parameters of the connection can be set in the "Modbus" submenu. First, the Modbus menu item must be selected. "enter" is displayed in the



value field. The confirmation key is used to access the submenu for Modbus.

In the Modbus submenu the menu fields are replaced. At the top left the address of the device can be set. At the bottom left the baud rate of the communication is set and at the bottom right the data width, parity and stop bits. The setting is done analog to the main menu.

To exit the submenu, the menu item "exit" must be selected and confirmed with the confirmation key.



In the appendix you will find the definitions of the registers that are necessary for programming the PLC.

6.5 Operation via cable remote control (option)

When operating via the cable remote, the XLR input (2) must first be set to Remote (see chapter Options).

After plugging in the cable remote control, the classic²/highpower² automatically recognizes that an analog cable remote control has





been plugged in. On the cable remote control there is an on switch and a potentiometer for setting the pump value.

In the highpower² the start of the fogging process also starts the fan with the manual set value. Is the fogging process stoped by switching of the remote or by reducing the value, the fan will also be stoped.

6.6 Operation via radio remote control (option)

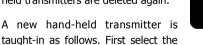
When operating via the radio remote control, the XLR input (2) must first be set to Remote (see chapter Options).

After the radio remote control has been plugged in, the classic²/highpower² automatically detects that a radio remote control has been plugged in.



Up to 60 different handheld transmitters can be programmed on the machine. For this purpose, the "Remote" submenu must first be selected.

In the Remote submenu, the menu fields are replaced. The channel (key on the handheld transmitter) can be selected at the top left. At the bottom left, a new hand-held transmitter is taught-in and at the bottom right, the taught-in handheld transmitters are deleted again.





menu item add and confirm this with the confirmation key. "Adding" now appears at the bottom left. The machine now waits for a valid radio signal. To do this, press any key on the handheld transmitter. The teach-in process is now complete and "adding" appears again at the bottom left. You can then select the key and save it.

To delete the handheld transmitters already taught-in, select the "del" menu item and confirm it. "Deleting" now appears at the bottom right. The deletion process is now in progress. The display changes back to "del" after a successful deleting process.



To exit the submenu, the menu item "exit" must be selected and confirmed with the confirmation key.

6.7 Operation via the internal timer

To set and activate the internal timer, you must first switch to the Timer submenu.

To set and to activate the internal timer you must first switch to the menu "Timer" in the submenu "Options".

Here, too, the menu fields are changed accordingly. At the top left,





Bottom left the waiting time can be set in 0.1 minute (6 sec.) steps. Analogously, the fogging time can be set in steps of seconds at the bottom right. To activate the timer, the confirmation key can be pressed for both the waiting time or the fogging time. This activates or deactivates the timer. Depending on the selected menu item, the timer starts with the waiting time or the fog time.

The pump value can still be changed even when the timer is activated.

In the highpower² the fan is operated simultaniously at the manual set value in the main menu. As the fan needs some time to start, the fan is started before the fog process begins to reach the full rotation speed when the fogging starts. Is the waiting time to short, the fan will be switched to the lowest speed setting.

If the "Timer" submenu is exited, the timer will be deactivated.



7. "Options" menu item

In the submenu "Options" the pump characteristics can be set, as well as the protocol of the XLR sockets can be selected. The menu for the timer can also be found here.

7.1 Setting the pump characteristics

After activating the submenus, the menu fields in the corners are changed.

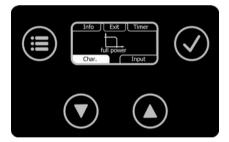
The menu item "Char." now appears at the bottom left and the menu item "Input" at the bottom right.

In the menu item "Char." you can choose between the pump characteristics "full power", "max. time" and "non stop".

Full power

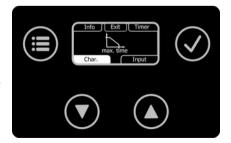
The pump is not regulated down, regardless of the falling temperature in the heating element.





Max. Time

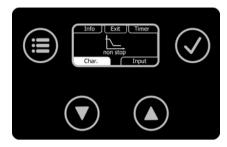
The pump is regulated down depending on the temperature in the heating element. This extends the time of the fogging process. Nevertheless, the pump switches off as soon as the temperature falls below the evaporation temperature.





Non stop

The pump is regulated down to continuous fog mode.



7.2 Setting the communication protocol of the XLR sockets

In the menu item "Input" the communication protocol of the XLR sockets can be selected. The following protocols can be selected here:

- DMX/RDM
- Modbus
- Remote (cable or radio)

Please select the desired protocol and confirm it with the confirmation button.



8. Care and maintenance

- Avoid running the classic²/highpower² without fluid. The pump will otherwise run dry.
- Avoid overheating the device due to direct sunlight or direct spotlight. The permissible ambient temperature can be found in the technical data.
- Make sure that the ventilation slots of the machine are not clogged with dust deposits. If necessary, the ventilation slots must be cleaned.
- · Wipe up leaked fluid immediately.
- Check the suction strainer in the tank from time to time. Clean it or replace it.
- If you use the same fluid canister frequently, you should rinse it thoroughly before each filling with fresh fluid. This will prevent contamination.
- The tank holder can be unscrewed for permanent installation.
 - **Please note:** The difference in height between the external canister and the machine must not exceed 1.5 meters, otherwise the pump will no longer be able to suck in the fluid)!
- Clean the surface of the device, if necessary with a suitable, solvent-free cleaning agent
- Make sure that sufficient mist-free cooling air permanently surrounds the machine. Otherwise, moisture damage could occur inside the machine.
- PLEASE NOTE: The vaporizer of our fog machines does NOT need to be cleaned! Cleaning liquids offered on the market can damage the vaporizer! The warranty will be void in this case.



9. Troubleshooting

The classic²/highpower² does not mist

- Check external control
- Check power source
- Check fluid quantity
- · Check connection at fluid tank for tightness
- Check suction strainer in tank for contamination
- Check fluid hose and connector for tightness

The classic²/highpower² hums loudly when fogging

- The pump runs dry. This must be avoided at all costs.
- Refill fluid
- Check hose and coupling, engage again if necessary.

The classic²/highpower² shows the error message "machine too hot" in the display

 The temperature inside the device is too high. After cooling down, the error disappears again.

The classic²/highpower² shows the error message "thermocouple broken" in the display

 One of the thermocouples is broken. The machine switches off for safety reasons.

The highpower² shows the message "fan not available" in the fan menu

- The fan is not connected to the power supply
- The fan doesn't supply a voltage for detection and signal generation



10. Technical data

10.1 highpower²

Device type Vaporizer Fog Machine

Power 230V~, 50 Hz, 3100 W (PowerCON TRUE1)

Heating time approx. 8 min

Fluid consumption up to 300 ml/min (full power mode, wide jet

nozzle),

up to 70 ml/min with continuous fog

Tank capacity 5 liters

Operation 1.3" OLED display, membrane keypad

Interfaces 5pol XLR In/Out

Fog nozzles (changeable) Wide jet nozzle

Noise reduction nozzle

Fog output Adjustable 1-100% in 1% steps

Ejection distance Up to 20 m with wide jet nozzle

Up to 15 m with noise-reducing nozzle

Supported protocols DMX512, RDM, Modbus RTU, JT-Remote

Control DMX/RDM, cable remote control, radio remote

control, integrated timer, stand alone

Accessories (option) Radio remote control, cable remote control

Fog Time up to 20 sec. at full power mode,

up to 50 sec. in max time mode, Permanent fog with non-stop mode

Fluid types base*X (extremely long-lasting)

base*L (long lasting)

base*M (normal persistent) base*O (fast dissolving)

Dimensions (LxWxH) 480 x 212 x 240 mm

(height with tank holder 388mm)

Weight 14 kg



10.2 classic2 - 230V

Device typeVaporizer Fog MachinePower230V~, 50 Hz, 1600 W

(PowerCON TRUE1)

Heating time approx. 12 min

Fluid consumption up to 200 ml/min (full power mode),

up to 35 ml/min with continuous mist

Tank capacity 5 liters

Operation 1.3" OLED display, membrane keypad

Interfaces 5pin XLR In/Out

Fog output Adjustable 1-100% in 1% steps

Ejection distance Up to 15 m

Supported protocols DMX512, RDM, Modbus RTU, JT-Remote

Control DMX/RDM, cable remote control, radio remote

control, integrated timer, stand alone

Accessories (option) Radio remote control, cable remote control

Fog Time up to 20 sec. at full power mode,

up to 50 sec. in max time mode, Permanent fog with non-stop mode

Fluid types base*X (extremely long-lasting)

base*L (long lasting)

base*M (normal persistent)

base*Q (fast dissolving)

Dimensions (LxWxH) 480 x 212 x 240 mm

(height with tank holder 388mm)

Weight 14 kg



10.3 classic2 - 115V

Device type Vaporizer Fog Machine

Power 115V~, 60 Hz, 1700 W

(PowerCON TRUE1)

Heating time approx. 12 min

Fluid consumption up to 240 ml/min (full power mode),

up to 40 ml/min with continuous mist

Tank capacity 5 liters

Operation 1.3" OLED display, membrane keypad

Interfaces 5pin XLR In/Out

Fog output Adjustable 1-100% in 1% steps

Ejection distance Up to 15 m

Supported protocols DMX512, RDM, Modbus RTU, JT-Remote

Control DMX/RDM, cable remote control, radio remote

control, integrated timer, stand alone

Accessories (option) Radio remote control, cable remote control

Fog Time up to 20 sec. at full power mode,

up to 50 sec. in max time mode, Permanent fog with non-stop mode

•

Fluid types base*X (extremely long-lasting)

base*L (long lasting)

base*M (normal persistent) base*Q (fast dissolving)

Dimensions (LxWxH) 480 x 212 x 240 mm

(height with tank holder 388mm)

Weight 14 kg



11. Warranty conditions

For the purchased fog machine classic²/highpower² hazebase provides warranty according to the following conditions:

- We shall remedy free of charge in accordance with the following conditions (Nos. 2 to 6) damage or defects to the device which are demonstrably due to factory defects if they are reported to us immediately upon discovery and within 24 months of delivery to the end user. A warranty obligation is not triggered by minor deviations from the nominal condition which are insignificant for the value and usability of the device, by damage from the effects of water and generally from abnormal environmental conditions or force majeure.
- 2. The warranty service is provided in such a way that defective parts are repaired free of charge or replaced by faultless parts at our discretion. Devices for which a warranty claim is made with reference to this warranty must be handed over to us and sent free of charge. The proof of purchase with the date of purchase and/or delivery must be presented. Replaced parts become our property.
- 3. The warranty claim expires if repairs or interventions are carried out by persons who are not authorized by us to do so or if our devices are equipped with supplementary or accessory parts that are not matched to our devices. Furthermore, the warranty claim expires if a fog fluid other than the original hazebase fog fluid was used. If the devices are sent to us without prior removal or emptying of the fluid canister, the warranty also expires, as well as in the case of demonstrable disregard of the operating instructions or in the case of faults due to improper handling / handling as well as in the case of damage due to the effects of violence.
- 4. We do not grant any performance claims for components or component groups what are subject to natural wear or normal wear. In particular, all fluid-conveying parts such as pumps and heating elements are considered to be wearing parts. A goodwill settlement will be checked in each individual case.
- 5. Warranty services do not cause an extension of the warranty period, nor do they start a new warranty period. The warranty period for installed spare parts ends with the warranty period for the entire device.



- 6. If a damage or defect cannot be remedied by us, or if the remedy is refused or unreasonably delayed by us, within 6 months from the date of purchase/delivery, at the request of the end user either
 - a. replacement delivered free of charge or
 - b. the reduced value is remunerated or
 - take back the device for a refund of the purchase price, but not more than the market price.
- Further or other claims, in particular those for compensation for damage occurring outside the device, are excluded - unless liability is mandatory by law.



A1. Appendix

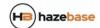
1. Modbus Interface classic²

Number	Name	Description																
1	Ready	This input is 1 if the machine is ready to produce fog. If an error occours the Input will be zero.																
2	Thermocouple 1 error	This	input	will be	e 1 if t	there	is a	n err	or in zer		therr	noco	uple	1 othe	erwise	e it w	ill be	
3	Thermocouple 2 error	This	input	will be	e 1 if t	there	is a	n err	or in zer		therr	noco	uple	2 othe	erwise	e it w	ill be	
4	Overtemperature	-	This in	put wi	ll be 1	L if th				nt te			re is	higher	than	70°0	<u>.</u>	
5 Coils	reserved				7	his in	nput	will a	alway	/s be	read	d as	zero					
Number	Name	1						De	escri	ptio	n							
1	Enable	This coil enables the fog output with the amount of fog wich is set in holding register 1																
Input Regi	<u>sters</u>																	
Number	Name	Description																
1	Status	This register is the status register. It is used to inform the application about the																
		state of the machine. Note: The bits contained in this register are the same as the discrete inputs.																
		rrote. The bits contained in this register are the same as the distrete inputs.																
		16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
		-	-	-	-	-	-	-	-	-	-	-	0	OVRT	T2	T1	RD	
		Bits	16:6	not	used	The	se bi	ts ar	e no	t use	d an	d rea	ad as	zero				
		Bit 5		rese	rved													
		Bit 4		OVR	Overtemperature flag													
						This bit is set by the machine if a temperature over 70°C is detected												
						0: Environment Temperature in range												
						1: Temperature to high												
		Bit 3		T2		Thermocouple 2 Error flag												
		0: No Error detected																
						1: The Thermocouple 2 is broken												
		Bit 2		T1		Thermocouple 1 Error flag												
						0: No Error detected												
						1: The Thermocouple 1 is broken												
		Bit 1		RDY	Ready flag													
										ady (or				
						1: M	1achi	ne re	eady	to p	rodu	ce fo	g					
2	Temperature	Th	is regi	ster h	old th	e env	/ironi	ment	tem	pera	ture.	It is	a si	gned 1	6-bit	num	ber	
Holding R	<u>egister</u>																	
Number	Name									ptio								
1	Fog			The	fog o	utpu	t valı	ıe: a	llowe	ed va	lues	are 1	from	0 to 2	55			
2	reserved			Th	is regi	ster	will b	e igr	nored	and	alw	ays r	ead	as zero	ο.			



2. Modbus Interface highpower²

Number	Name	Description This input is 1 if the machine is ready to produce fog.																
1	Ready	If an error occours the Input will be zero.																
2	Thermocouple 1 error	This	s input	will be	e 1 if	there	is a	n err	or in zer		therr	nocc	uple	1 othe	erwise	e it w	ill be	
3	Thermocouple 2 error	This	s input	will be	e 1 if	there	is a	n err	or in zer		therr	noco	uple	2 othe	erwise	e it w	ill be	
4	Overtemperature		This in	put wi	ill be 1	L if th			enme se it				re is	higher	than	70°0	С.	
5 Coils	Fan available	This i	nput w	ill be 1	1 if a f	an is	pres	ent	at th	e far	con	nect	or. C	therw	ise it	will b	e ze	
Number	Name							De	escri	ptio	n							
1	Enable	Th	nis coil	enable	es the	fog	outp		th th		noun	t of	og v	vich is	set ir	holo	ding	
<i>nput Regi.</i> Number	<u>sters</u> Name	Description																
1	Status	This register is the status register. It is used to inform the application about the state of the machine. Note: The bits contained in this register are the same as the discrete inputs.																
		16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
		-	-	-	-	-	-	-	-	-	-	-	FAN	OVRT	T2	T1	RDY	
		Rite	16:6	not	usad	The	ice hi	te ar	e no	t uce	nd an	d re	ad a	zero				
		Bit 5		FAN		These bits are not used and read as zero Fan available flag												
						0: Fan not detected												
						1: Fan detected												
		Bit 4	ļ.	OVR	т	Overtemperature flag												
						This bit is set by the machine if a temperature over 70°C is detected												
						0: Environment Temperature in range												
						1: Temperature to high												
		Bit 3	3	T2		Thermocouple 2 Error flag												
					0: No Error detected													
						1: The Thermocouple 2 is broken												
		Bit 2	2	T1	Thermocouple 1 Error flag													
						0: No Error detected												
						1: The Thermocouple 1 is broken												
		Bit 1	L	RDY	Ready flag													
						Machine not ready due to an error Machine ready to produce fog												
						1: N	1achi	ne re	eady	to p	rodu	ce fo	g					
2	Temperature	Tł	nis regi	ster h	old th	e env	vironi	nent	tem	pera	ture	. It is	a si	gned 1	6-bit	num	ber	
Holding Re								_										
Number 1	Name	-		Th-	for -	utor	+ \(\alpha\)		escri	_		are	fror	0 += 2	EE			
	Fog	The fog output value: allowed values are from 0 to 255 This register will be ignored and always read as zero.																











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