Operating Instructions

Force 120

Content

1 Representation conventions

This manual contains recurring features that reflect the function of certain information:

Warning

Indicates a hazard with a medium level of risk, that may result in severe injury or death if it is not avoided.

Attention

Risk of equipment damage.

Advice

Indicates a helpful note in the current context.

One or more **bolded** words indicate a term that can be found exactly the same on the product.

One or more *italicized* words indicates an index entry or an important technical term.

1. Instructions are numbered.

   ✓ As are results or outcomes of these actions.

2 Safety

2.1 General safety information

Important information

- Read documentation carefully

- Observe the safety information in this chapter

- Follow instructions and warnings

- Only use equipment as instructed in this document

- Observe notes and symbols on the product

- Keep documentation on hand for later reference

- Pass documentation on to the next user

- Keep available near the system at all times

- Observe documentation for additional components used as well

Danger through electrical voltage

- Only connect equipment to a grounded safety socket

- The corresponding fuse must be the correct size for the equipment

- Completely cut the power to the equipment before installation, cleaning, maintenance, or repairs

- Do not clean equipment under running water or by immersing in liquid

Proper handling

- Do not make any modifications to the equipment

- Do not drop equipment or expose it to severe mechanical pressure. The equipment can sustain heavy damage from the impact.

- Regularly check equipment for damage. If damaged, turn the equipment off and fully disconnect from the power supply. Contact customer service or retailer.

Maintenance and repair

- Do not repair equipment yourself. Contact customer service or retailer.

2.2 Intended use

This device is developed for commercial use. Private use is not permitted.

It may only be operated indoors in a dry environment.

Protect against moisture and spray water.

Several devices must not be stacked on top of each other.

The device serves as a wind machine to generate moving light effects at events. It may not be used for any other purpose.

This device is not intended to be used by people with limited physical, sensory or mental capabilities or lack of experience and/or lack of knowledge unless supervised or instructed by a person responsible for their safety the device.

The manufacturer is not liable for damage caused by improper use of the device.

3 Transport and storage

! **Attention**
Do not drop equipment or expose it to severe mechanical pressure. The product can sustain damage from the impact.
Only store equipment in dry areas.

Use the supplied or appropriate packaging material for storage and transport.

To lift the device, use the carrying handles on the casing.

4 Scope of delivery

	Advice
i	Check the scope of delivery for completeness after unpacking. Check device for visible damage.

Number/component	Description
1 x Force 120	
1 x Neutrik powerCON TRUE1	
1 x Operating Instructions	

	Advice
i	Order optional accessories directly from your specialist retailer. List to be found online at www.germanlightproducts.com.

5 Description of devices
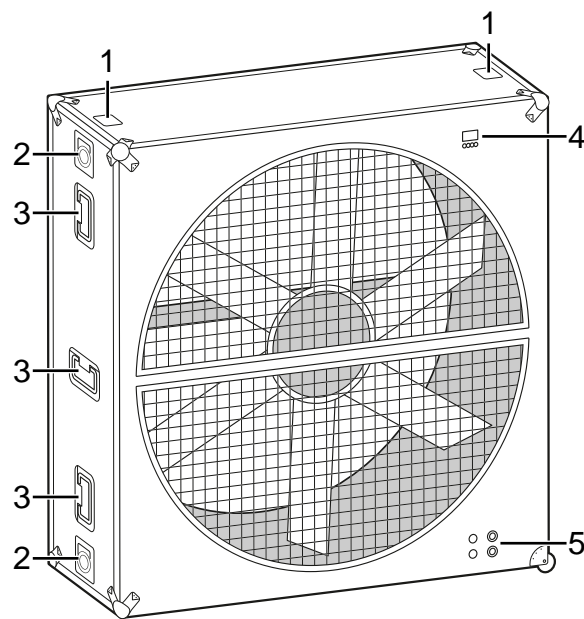

Image 1: Description - Force 120 (back)

1	Safety eyelets	**4**	Display with buttons
2	D-rings/suspensions (two-sided)	**5**	Connections
3	Carrying handles (two-sided)		

6 Assembly and connection

6.1 Set up device

The device can be operated standing and hanging. With safety factor 12, a maximum of two devices can be operated among each other.

> **!** **Attention**
> High air flows. Objects in the area can be damaged or damage the Force 120.
>
> ■ Make sure that there are no light, unsecured objects up to 3 meters in front of and behind the device.

Stationary

Condition(s)

■ The installation site has sufficient carrying capacity (at least 100 kg).

1. Place the device on the ground with the rubber feet.
2. Orient the device so that the front is clearly visible.
3. Secure the device with safety ropes.

   ✓ The device is set up and can be connected.

Hanging

1. Attach the brackets to the D-Rings.
2. Secure the device with safety ropes.

   ✓ The device is suspended and can be connected.

6.2 Connect the device

Connection panel
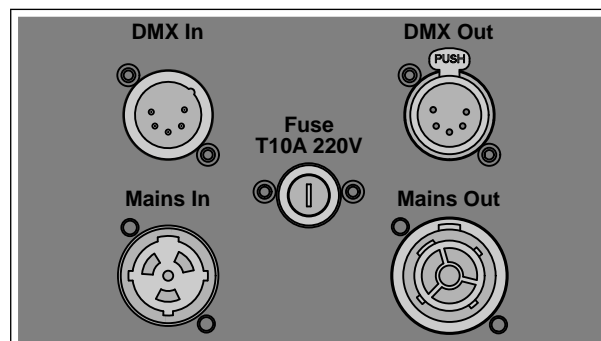
Image 2: Connection panel

DMX in: DMX input (5-pin)   **Mains in:** Input Neutrik powerCON TRUE1
DMX out: DMX output (5-pin)   **Mains out:** Output Neutrik powerCON TRUE1
Fuse: Fuse holder

Connect the device

Conditions

■ The device is set. ([see chapter 6.1](#))

1. To establish the signal connection, connect the device and other devices or the controller with a DMX cable. Therefore plug in the DMX cable **DMX in** and **DMX out**.
2. Plug in the powerCON TRUE1 cable into the powerCON TRUE1 input **Mains in** of the device.
3. Plug in the plug of the powerCON TRUE1 cable into a socket.

   ✓ The device is now connected and ready for use.

7 Operation

7.1 Control device

Control panel
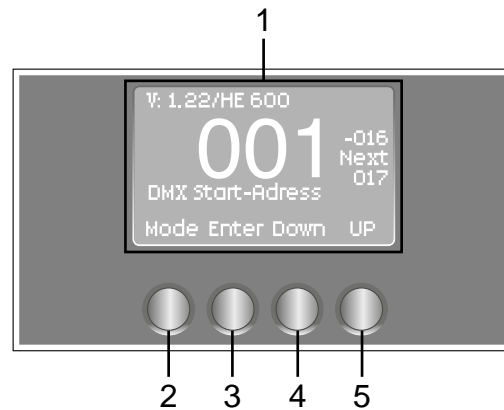
Image 3: Control panel

1	Display	**4**	**DOWN**: Navigate up/increase value
2	**MODE**: Opens the main menu	**5**	**UP**: Navigate down/decrease value
3	**ENTER**: Open menu item or confirm setting		

Use DMX control

> **Conditions**
> - The device is connected with a DMX control.
> - The fan is not covered by other objects.

▸ Control the speed, acceleration and lighting with a DMX control.

  ✓ The device conducts the setup.

7.2 Menu structure

The menu structure consists of up to 5 menu levels.

7.2.1 DMX start address and setup

DMX start address

Level 2	Level 3	Level 4	Level 5	Value	Description
1 - 505					DMX start address

Setup

Level 2	Level 3	Level 4	Level 5	Value	Description
DMX mode	Normal				
	High resolution				
DMX input	**Wired DMX**				Use wired DMX as input

7.2.2 DMX channel layout

Extended mode (CH16)

Channel	Function	Values		Snap/Fade	Default	Remarks
1	Fan	0	3	snap	0	stop
		4	128	fade		Fan Rotation Forward (Slow > Fast)
		129	132	snap		Stop
		133	255	fade		Fan Rotation Backward (Slow > Fast)
2	LED Intensity Master	0	255	fade	0	LED Output 0-100%
3	Shutter	0	15	snap	255	Closed
		16	47	fade		Random strobe - Slow to Fast
		48	79	fade		Fade on, Snap off, Random - Slow to Fast
		80	111	fade		Snap on, Fade off, Random - Slow to Fast
		112	143	fade		Fade on, Fade off, Random - Slow to Fast
		144	199	fade		Strobe with b/o pause
		200	239	fade		Strobe - Slow to Fast
		239	255	snap		Shutter Open
4	Control	0	50	snap	0	Idle
		To activate Settings hold value for 3 s				
		51	64	snap		no function
		65	99	snap		no function
		100	102	snap		Adjust the PWM to 582Hz
		103	105	snap		Adjust the PWM to 583Hz
		106	107	snap		Adjust the PWM to 584Hz
		108	110	snap		Adjust the PWM to 585Hz
		111	112	snap		Adjust the PWM to 586Hz
		113	115	snap		Adjust the PWM to 587Hz
		116	118	snap		Adjust the PWM to 588Hz
		119	120	snap		Adjust the PWM to 589Hz
		121	123	snap		Adjust the PWM to 590Hz
		124	125	snap		Adjust the PWM to 591Hz

Channel	Function	Values		Snap/Fade	Default	Remarks
		126	128	snap		Adjust the PWM to 592Hz
		129	130	snap		Adjust the PWM to 593Hz
		131	133	snap		Adjust the PWM to 594Hz
		134	136	snap		Adjust the PWM to 595Hz
		137	138	snap		Adjust the PWM to 596Hz
		139	141	snap		Adjust the PWM to 597Hz
		142	143	snap		Adjust the PWM to 598Hz
		144	146	snap		Adjust the PWM to 599Hz
		147	149	snap		Adjust the PWM to 600Hz
		150	151	snap		Adjust the PWM to 601Hz
		152	154	snap		Adjust the PWM to 602Hz
		155	156	snap		Adjust the PWM to 603Hz
		157	159	snap		Adjust the PWM to 604Hz
		160	161	snap		Adjust the PWM to 605Hz
		162	164	snap		Adjust the PWM to 606Hz
		165	167	snap		Adjust the PWM to 607Hz
		168	169	snap		Adjust the PWM to 608Hz
		170	172	snap		Adjust the PWM to 609Hz
		173	174	snap		Adjust the PWM to 610Hz
		175	177	snap		Adjust the PWM to 611Hz
		178	179	snap		Adjust the PWM to 612Hz
		180	182	snap		Adjust the PWM to 613Hz
		183	185	snap		Adjust the PWM to 614Hz
		186	187	snap		Adjust the PWM to 615Hz
		188	190	snap		Adjust the PWM to 616Hz
		191	192	snap		Adjust the PWM to 617Hz
		193	194	snap		Adjust the PWM to 618Hz
		195	197	snap		Adjust the PWM to 1200Hz
		198	200	snap		Adjust the PWM to 2400Hz
		201	210	snap		No Function
		211	215	snap		Braking Delay ON

Channel	Function	Values		Snap/Fade	Default	Remarks
		216	220	snap		Braking Delay OFF
		211	247	snap		No Function
		248	255	snap		Reset all fixtures (Hold for more than 3 seconds)
5	ColorWheel	0	7	snap	0	open
		8	15	snap		Red
		16	23	snap		Amber
		24	31	snap		Warm Yellow
		32	39	snap		Yellow
		40	47	snap		Green
		48	55	snap		Turquoise
		56	63	snap		Cyan
		64	71	snap		Blue
		72	79	snap		Lavender
		80	87	snap		Mauve
		88	95	snap		Magenta
		96	103	snap		Pink
		104	111	snap		CTC 3200K
		112	119	snap		CTC 5600K
		120	127	snap		CTC 7200K
		128	128	snap		Rainbow Effect - Stop
		129	223	fade		Rainbow Effect - Slow to Fast
		224	255	fade		Random Colors - Slow to Fast
6	Red (Top LED Line)	0	255	fade	0	0-100%
7	Green (Top LED Line)	0	255	fade	0	0-100%
8	Blue (Top LED Line)	0	255	fade	0	0-100%
5	ColorWheel (Top LED Line)	0	7	snap	0	open
		8	15	snap		Red
		16	23	snap		Amber
		24	31	snap		Warm Yellow

Channel	Function	Values		Snap/Fade	Default	Remarks
		32	39	snap		Yellow
		40	47	snap		Green
		48	55	snap		Turquoise
		56	63	snap		Cyan
		64	71	snap		Blue
		72	79	snap		Lavender
		80	87	snap		Mauve
		88	95	snap		Magenta
		96	103	snap		Pink
		104	111	snap		CTC 3200K
		112	119	snap		CTC 5600K
		120	127	snap		CTC 7200K
		128	128	snap		Rainbow Effect - Stop
		129	223	fade		Rainbow Effect - Slow to Fast
		224	255	fade		Random Colors - Slow to Fast

7.2.3 Settings

Level 2	Level 3	Level 4	Level 5	Value	Description
Shutter	Error Blackout	ON / **OFF**			Light output is stopped if an error occurs
	No DMX Blackout	ON / **OFF**			Light output is stopped if DMX fails for 3 seconds
Init Positions	Save				Save current positions as initial positions after reset without DMX
	Reset				Reset initial positions after reset without DMX
Dimming Curve	Linear				Set the desired dimming curve
	Soft				
	Extra Soft				
DMX hold	**Hold**				Last DMX values are hold if DMX fails
	Off				Fixture blacks out if DMX fails

Level 2	Level 3	Level 4	Level 5	Value	Description
	Fade out				Last DMX values are hold if DMX fails
PWM frequency	Set 582-618 Hz, 1200Hz, 2400Hz				Sets the LED PWM frequency
Display	Contrast	0 - **50** -100 %			Contrast of the display
	Brightness	0 - **100** %			Brightness of the display (auto brightness has to be disabled)
	Blackout time	1 - **10** -30 s			Time after which the display blacks out after last keystroke (auto blackout has to be enabled)
	Display orientation	Normal			Flip display up/down
		Inverted			
		Auto			Display is flipped automatically by the acceleration sensor if fixture is hanging
	No DMX Flash	**ON** / OFF			Display flashes if DMX fails
Reset factory settings	Confirm (yes/no)				Resets all values to default (except for serial number)

7.2.4 Information

Level 2	Level 3	Level 4	Level 5	Value	Description
System errors				List	Show all recent errors (permanent)
System versions	Main (SW/HW)				Show all versions: Software (main application, boot loader) & hardware
Fixture information	Fixture hours	Total hours		0-99999 h	Time the fixture is running in total
		Resettable hours		0-99999 h	(resettable)
	Boot count			0-99999	Count how often the fixture was switched on
DMX input monitor	Fan			**0 - 255**	Show all DMX values
	Speed/angle			**0 - 255**	

Level 2	Level 3	Level 4	Level 5	Value	Description
	Special/control			**0 - 255**	
	Shutter			**0 - 255**	
	Dimmer			**0 - 255**	
	Red			**0 - 255**	
	Green			**0 - 255**	
	Blue			**0 - 255**	
	Color			**0 - 255**	

7.2.5 Manual control

Level 2	Level 3	Level 4	Level 5	Value	Description
Reset	Full system reset	Confirm (yes/no)			
Manual DMX	Fan	**0 - 255**			
	Speed/angle	**0 - 255**			
	Special/control	**0 - 255**			
	Shutter	**0 - 255**			
	Dimmer	**0 - 255**			
	Red	**0 - 255**			
	Green	**0 - 255**			
	Blue	**0 - 255**			
	Color	**0 - 255**			
	Reset all values	Confirm (yes/no)			Set all manual DMX values to 0

7.2.6 Test

Level 2	Level 3	Level 4	Level 5	Value	Description
Pan	ON / **OFF**				
Color test	ON / **OFF**				
All test	ON / **OFF**				

7.2.7 Service

Level 2	Level 3	Level 4	Level 5	Value	Description
Key code	**0** - 255				Enter code first to get in the service menu (reset automatically after fixture restart or after 10min with no display input)
Serial	0 - 99999				Last 5 digits of the serial number. Needed for correct working RDM
LED calibration	LED1	Red	0 - **128** - 255		
		Green	0 - **128** - 255		
		Blue	0 - **128** - 255		

7.3 Switch off device

▸ Disconnect the device from the power supply.

　✓ The device is switched off.

8 Cleaning and maintenance

Force 120 is a low-maintenance device. Depending on the operating environment, surfaces must cleaned on a regular basis.

⚠️ **Warning**

Danger of electrical shock. Electric cables can cause serious injury if they come into contact with cleaning agents.

- Disconnect the mains plug before cleaning.
- Observe local health and safety regulations.
- Wait until the device has cooled down after previous operation.
- Do not repair the device yourself. Contact the customer service or retailer. (see chapter 11)

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1. Clean the surface with a dry, soft and clean cloth.

! **Attention**

Do not use aggressive detergents, alcohol or other chemical agents.

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2. Suck or sweep away dust from the openings.

    ✓ The cleaning is complete.

9 Technical data

Version	Force 120
Device dimensions	400 x 1,400 x 1,400 mm 15.75 x 55.12 x 55.12 inch
Weight (net)	94 kg 208 lbs
Supply voltage	100-240 VAC, 50-60Hz
Power (at 230 V)	1,000 W
DMX allocation	5 pin XLR: (+) = pin 3; (-) = pin 2; Ground = pin 1
Protection class	IP20
Minimum / maximum ambient temperature	-20 – 45 °C -4 – 113 °F
Maximum fan speed	750 revolutions/min.
Minimum fan speed	30 revolutions/min.

10 Recycling/disposal/environmental protection

Recycling

Dispose of packaging material in an environmentally friendly manner in accordance with local waste disposal regulations.

Dispose of residues of operating materials in accordance with locally or operationally applicable disposal regulations.

After decommissioning and disassembly of the system or individual components, these must be disposed of in agreement with the manufacturer according to local regulations.

Do not dispose of batteries and rechargeable batteries in household waste. Dispose of batteries and rechargeable batteries at designated collection points.

This device is marked in accordance with the European Directive 2012/19/EU on waste electrical and electronic equipment.

Electrical and electronic devices must not be disposed of with household waste. Their components must be supplied separately for reuse and disposal.

At the end of its service life, return the device free-of-charge to the manufacturer, point of sale or a public collection point set up for this purpose.

11 Contact

Manufacturer

GLP German Light Products, Inc.

1145 Arroyo Ave., Unit A

San Fernando, CA 91340

Support

Online	www.germanlightproducts.com
	To use the online support, it is required to go through a one-time registration process. Then log into the online support using your registered user account.
E-mail	support@germanlightproducts.com
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