



STARSHINE LIGHTS

PRODUCT MANUAL



PROFESSIONAL STAGE LIGHTING

F22 381W MOVING HEAD BEAM LIGHT

PRODUCT MANUAL

18CH DMX512	381W MSD SOURCE	DUAL PRISM SYSTEM
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READ BEFORE USE

Please read this manual carefully before installing, operating, or servicing the fixture. Keep it available for future reference.

Starshine Lights | www.starshinelights.com

F23 MINI 295W MOVING BEAM LIGHT

PRODUCT MANUAL



A compact, high-output moving-head beam fixture designed for weddings, bars, stages and concerts. The F23 combines a 295W light source, fast pan/tilt movement, dual rotating prism effects, electronic focus and DMX512 control in a lightweight metal housing.



LIGHT SOURCE

295W high-output beam
Up to 15,000 lm



CONTROL

16-channel DMX512
Auto & sound modes



MOVEMENT

540° pan / 270° tilt
8-bit / 16-bit

READ BEFORE USE

Please read this manual carefully before installation and operation. Keep it with the fixture for future reference. The F23 is designed for indoor professional use (IP20).



Thank you for choosing the Starshine Lights F23 Mini 295W Moving Beam Light. This manual contains important installation, operation and maintenance information. Follow all instructions to maintain safe, reliable performance.

Package contents

- F23 Mini295W MovingBeam Light - 1 pc
- User manual - 1 pc
- Power cable - 1 pc
- DMX signal cable - 1 pc

Recommended applications

- Wedding venues and event halls
- Bars, clubs and live-music stages
- Small and medium concerts
- Studios and theatrical productions

IMPORTANT SAFETY NOTICE

Do not connect the fixture immediately after exposure to extreme temperature changes. Allow it to return to room temperature to prevent condensation damage. Use only a correctly grounded Class I power outlet. Do not expose this IP20 fixture to rain or moisture.

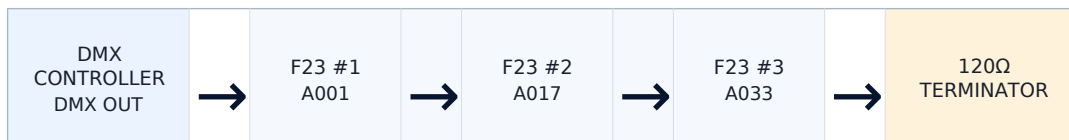
TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
Input voltage	AC 90-240V, 50/60Hz
Light source	295W
Rated power	450W
DMX channels	16CH
Control modes	DMX512 / Auto program / Sound control
Luminous flux	Up to 15,000 lm
Color temperature	Up to 7,500K
Color wheel	14 colors + white
Gobo wheel	13 gobos + open; shake and scrolling effects
Strobe	1-11 flashes/sec
Prism system	8 + 16 + 24-facet rotating prism effects
Dimming	0-100% mechanical dimming
Focus	Electronic focus
Beam angle	0-4°
Pan / Tilt	540° / 270°, 8-bit or 16-bit
Protection	Overheat protection; IP20
Power electronics	Electronic ballast and AC/DC switching power supply; PF up to 0.99; THD <20%
Energy saving	Half-power lamp mode and display energy-saving mode
Fixture size	260 × 235 × 450 mm
Net weight	10.8 kg



DMX512 signal connection

Use a two-coreshielded data cable suitable for RS-485/DMX512. Connect each fixture in a daisy chain from DMX OUT to DMX IN. The pins of all 3-pin XLR connectors must correspond correctly. For stable operation, connect a 120-ohm, 1W terminator between pins 2 and 3 of the last fixture's DMX OUT connector.



Starting address calculation

- The starting address of each fixture equals the previous starting address plus 16 channels.
- Fixture 1: A001; Fixture 2: A017; Fixture 3: A033; continue in the same sequence.
- Ensure the controller provides enough channels for every connected fixture.
- Each fixture must have its own address unless the fixtures are intentionally mirrored.

Fixture installation

- The fixture may be placed upright or installed at an angle or upside down using suitable professional clamps.
- Confirm that the mounting structure is stable and rated for the total load.
- For suspended installation, attach an independent safety cable through the safety point/handle and the supporting structure.
- Keep the area below clear during installation and commissioning.
- Inspect the safety cable, clamps and fasteners regularly for wear or looseness.
- Unlock pan and tilt before powering the fixture. Keep ventilation openings unobstructed.

INSTALLATION RESPONSIBILITY

Damage or injury caused by unstable mounting, unsuitable clamps, missing safety cables or incorrect installation is not the manufacturer's responsibility. Installation must be completed by qualified personnel.

CHECK	BEFORE POWER-ON
1	Correct voltage and grounded Class I outlet
2	Fixture and packaging free from transit damage
3	Clamps, safety cable and fasteners secured
4	Pan/tilt movement path is unobstructed
5	DMX address and channel mode set correctly



Use the panel navigation keys to select a menu item. Press OK to enter or edit, use Up/Down to change the value, then press OK again to save. Use Exit to leave without saving.

OK Enter / edit / save	UP / DOWN Select or change value	EXIT Return without saving	AUTO ROTATE Screen follows fixture orientation
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MAIN MENU	RANGE / OPTION	FUNCTION
Address	001-512	Set DMX starting address
System Setting / Operation Mode	DMX / Sound Control / Auto	Select operating mode
System Setting / Channel Mode	16CH	Select DMX channel mode
X-axis Default Position	0-255	Set pan home offset
Y-axis Default Position	0-255	Set tilt home offset
X-axis Reverse	On / Off	Reverse pan direction
Y-axis Reverse	On / Off	Reverse tilt direction
XY-axis Swap	On / Off	Exchange pan and tilt channels
Signal Hold	On / Off	Hold last look after DMX loss
Color Linear Change	On / Off	Enable smooth color transitions
Optocoupler Error Correction	On / Off	Enable position correction
Hall Error Correction	On / Off	Enable Hall sensor correction
Backlight Timing	15s / 30s / 60s / Always On	Set display timeout
Screen Reversal	Normal / Reverse / Auto	Set screen orientation
Language	Chinese / English	Select menu language
Synchronized Update	On / Off	Enable synchronized menu update
Restore Factory Settings	Confirm / Cancel	Restore default settings
Manual Mode	Channel value 0-255	Manually test the selected DMX channel
System Calibration	Password: 2021	Open service calibration menu
Lamp / Light Bulb	Power On / Manual / Half Power	Lamp control and usage records
System Reset	Head / XY / All	Select reset type
System Information	Errors / DMX / Sensors / Versions / Time	View fixture status



System calibration

Enter password 2021 and press OK. Calibration values range from 0 to 255; a value of 127 means no adjustment unless otherwise stated. Calibration settings should be changed only by qualified service personnel.

OPTION	DESCRIPTION
Initial Position	Adjust the initial position of pan, tilt, strobe, color wheel, gobo wheel, prism and focus motors.
Stroke Calibration	Adjust the travel range of pan, tilt, strobe, prism and focus motors.
Speed Calibration	Adjust the operating speed of pan, tilt and effect motors 1-4.
Force Calibration	Adjust the drive strength of pan, tilt and effect motors 1-4.
Fan Control	Switch the fan on/off and adjust fan speed.
Other Calibration	Adjust sound sensitivity, review use time and change the calibration password.

RESET	FUNCTION	SYSTEM INFORMATION	FUNCTION
Head Reset	Reset effect motors other than pan/tilt	Reset Information	View details when the red ERR indicator is illuminated
XY Reset	Reset pan and tilt motors	DMX Data Monitoring	View the received DMX value for each channel
All Reset	Reset the complete fixture	Sensor Information	Monitor optocouplers and Hall sensors in real time
		Hardware Version	View fixture hardware version
		Software Version	View software version
		Usage Time	View total fixture operating time

SERVICE CAUTION

Incorrect calibration values can affect movement limits, motor force and optical alignment. Record original values before making changes.



DMX CHANNEL CHART

16-CHANNEL MODE · CHANNELS 1-9

Set the fixture to 16CH mode. Values shown below are decimal DMX values from 0 to 255.

CH	FUNCTION	VALUE	DMX EFFECT
1	Pan	0-255	0-540°
2	Tilt	0-255	0-270°
3	Pan Fine	0-255	Fine pan adjustment
4	Tilt Fine	0-255	Fine tilt adjustment
5	Pan/Tilt Speed	0-255	Fast to slow
6	Frost / Color Effect	0-127	No effect
6	Frost / Color Effect	128-192	Frost insertion
6	Frost / Color Effect	193-255	Color effect insertion
7	Strobe	0-3	Shutter closed
7	Strobe	4-206	Synchronized strobe, slow to fast
7	Strobe	207-212	Shutter open
7	Strobe	213-250	Random strobe, slow to fast
7	Strobe	251-255	Shutter open
8	Dimmer	0-255	0-100%, dark to bright
9	Color Wheel	0-4	White
9	Color Wheel	5-9	Color 1
9	Color Wheel	10-14	Color 2
9	Color Wheel	15-19	Color 3
9	Color Wheel	20-24	Color 4
9	Color Wheel	25-29	Color 5
9	Color Wheel	30-34	Color 6
9	Color Wheel	35-39	Color 7
9	Color Wheel	40-44	Color 8
9	Color Wheel	45-49	Color 9



DMX CHANNEL CHART

CHANNEL 9 COLOR WHEEL · CHANNEL 10 GOBO

CH	FUNCTION	VALUE	DMX EFFECT
9	Color Wheel	50-54	Color 10
9	Color Wheel	55-59	Color 11
9	Color Wheel	60-64	Color 12
9	Color Wheel	65-69	Color 13
9	Color Wheel	70-74	White + Color 1
9	Color Wheel	75-79	Color 1 + Color 2
9	Color Wheel	80-84	Color 2 + Color 3
9	Color Wheel	85-89	Color 3 + Color 4
9	Color Wheel	90-94	Color 4 + Color 5
9	Color Wheel	95-99	Color 5 + Color 6
9	Color Wheel	100-104	Color 6 + Color 7
9	Color Wheel	105-109	Color 7 + Color 8
9	Color Wheel	110-114	Color 8 + Color 9
9	Color Wheel	115-119	Color 9 + Color 10
9	Color Wheel	120-124	Color 10 + Color 11
9	Color Wheel	125-129	Color 11 + Color 12
9	Color Wheel	130-134	Color 12 + Color 13
9	Color Wheel	135-139	Color 13 + White
9	Color Wheel	140-195	Counterclockwise color-wheel rotation, fast to slow
9	Color Wheel	196-199	Stop
9	Color Wheel	200-255	Clockwise color-wheel rotation, slow to fast
10	Gobo Wheel	0-7	Open / white
10	Gobo Wheel	8-11	Gobo 1
10	Gobo Wheel	12-15	Gobo 2
10	Gobo Wheel	16-19	Gobo 3
10	Gobo Wheel	20-23	Gobo 4
10	Gobo Wheel	24-27	Gobo 5
10	Gobo Wheel	28-31	Gobo 6
10	Gobo Wheel	32-35	Gobo 7
10	Gobo Wheel	36-39	Gobo 8
10	Gobo Wheel	40-43	Gobo 9
10	Gobo Wheel	44-47	Gobo 10
10	Gobo Wheel	48-51	Gobo 11
10	Gobo Wheel	52-55	Gobo 12
10	Gobo Wheel	56-59	Gobo 13
10	Gobo Wheel	60-69	Gobo 1 shake, slow to fast
10	Gobo Wheel	70-79	Gobo 2 shake, slow to fast
10	Gobo Wheel	80-89	Gobo 3 shake, slow to fast



DMX CHANNEL CHART

GOBO SHAKE · PRISM SYSTEM · FOCUS · RESET

CH	FUNCTION		VALUE	DMX EFFECT
10	Gobo	Wheel	90-99	Gobo 4 shake, slow to fast
10	Gobo	Wheel	100-109	Gobo 5 shake, slow to fast
10	Gobo	Wheel	110-119	Gobo 6 shake, slow to fast
10	Gobo	Wheel	120-129	Gobo 7 shake, slow to fast
10	Gobo	Wheel	130-139	Gobo 8 shake, slow to fast
10	Gobo	Wheel	140-149	Gobo 9 shake, slow to fast
10	Gobo	Wheel	150-159	Gobo 10 shake, slow to fast
10	Gobo	Wheel	160-169	Gobo 11 shake, slow to fast
10	Gobo	Wheel	170-179	Gobo 12 shake, slow to fast
10	Gobo	Wheel	180-189	Gobo 13 shake, slow to fast
10	Gobo	Wheel	190-221	Counterclockwise gobo-wheel rotation, fast to slow
10	Gobo	Wheel	222-223	Stop
10	Gobo	Wheel	224-255	Clockwise gobo-wheel rotation, slow to fast
11	Prism 1		0-127	Open / no prism
11	Prism 1		128-255	Prism 1 inserted
12	Prism 1 Rotation		0-127	Angle adjustment
12	Prism 1 Rotation		128-189	Counterclockwise rotation, fast to slow
12	Prism 1 Rotation		190-193	Stop
12	Prism 1 Rotation		194-255	Clockwise rotation, slow to fast
13	Prism 2		0-127	Open / no prism
13	Prism 2		128-255	Prism 2 inserted
14	Prism 2 Rotation		0-127	Angle adjustment
14	Prism 2 Rotation		128-189	Counterclockwise rotation, fast to slow
14	Prism 2 Rotation		190-193	Stop
14	Prism 2 Rotation		194-255	Clockwise rotation, slow to fast
15	Focus		0-255	Linear electronic focus
16	Lamp / Reset		0-99	No function
16	Lamp / Reset		100-105	Lamp off - hold for more than 3 seconds
16	Lamp / Reset		200-205	Lamp on - hold for more than 3 seconds
16	Lamp / Reset		230-235	Pan/Tilt motor reset
16	Lamp / Reset		240-245	Effect motor reset
16	Lamp / Reset		250-255	Full reset

RESET COMMANDS

To avoid accidental resets or lamp switching, keep the specified DMX value active for more than 3 seconds where indicated.



Before each use

- Inspect the fixture, power cable, DMX cable, clamps and safety cable.
- Confirm the pan/tilt locks are released and the movement area is clear.
- Verify that the fixture is dry, at room temperature and connected to the correct voltage.
- Check the DMX address, 16CH mode and operating mode before programming.

During operation

- Keep ventilation openings clear and do not cover the fixture.
- Do not look directly into the beam at close range.
- Do not disconnect power during a reset or lamp-start cycle unless necessary for safety.
- If the red ERR indicator illuminates, open System Information > Reset Information to view the error.

After use and storage

- Allow the fixture to cool before handling, packing or transporting.
- Store indoors in a dry, clean area away from moisture, dust and extreme temperature changes.
- Use protective packaging during transport and inspect the unit before reconnecting power.

SYMPTOM	CHECK / ACTION
No power	Check the outlet, power cable, fuse and main switch. Confirm the input voltage is within AC 90-240V.
No DMX control	Check the DMX cable, connector pinout, starting address, 16CH mode and controller patch. Add a 120-ohm terminator to the final fixture.
Movement error	Run XY Reset or All Reset. Check for physical obstruction. Review Reset Information and Sensor Information.
Lamp does not ignite	Confirm lamp control is enabled, allow adequate restart time and check the lamp/reset DMX channel.
Display orientation incorrect	Set Screen Reversal to Normal, Reverse or Auto in System Settings.

TECHNICAL SUPPORT

For product support, replacement parts and updated documentation, visit www.starshinelights.com or contact your authorized Starshine Lights dealer. Always provide the model number F23 and the fixture serial number.

STARSHINE LIGHTS

Professional lighting solutions for stages, events and installations.

