FC-500C LED RGBW Spot Light



USER MANUAL

Guangdong Nanguang Photo&Video Systems Co., Ltd.

Introduction

NANLITE

Thank you for purchasing Nanlite product -- FC-500C!

The FC-500C is the first RGBW full-color point light source in the FC series, offering a high-power, high-performance lighting solution for content creation. It boasts a rated power of 520W, a wide color temperature range of 2700K-7500K, ±150 green and magenta adjustment, and 15 effects. It supports a wide range of colors through built-in HSI, RGBW, and GEL modes. It provides multiple control options including on-board, remote controller, Nanlink App and DMX/RDM. Designed with a Bowens mount and umbrella hole, it is compatible with Nanlite and other mainstream light control accessories. Equipped with 4 fan modes (smart/full speed/low speed/off), it caters to both lighting and sound recording needs.

The FC-500C, with its stylish and compact design, features built-in control on the lamp head. It also supports power supply by the FC PowerController through cable connection or battery, making it convenient for elevated rigging and outdoor shooting.

Notice

- 1. Please remove the COB protective cap before using the fixture.
- 2. Please do not look directly at the emitter when the fixture is on.
- 3. Please keep for 10s after settings before turn off the fixture.
- 4. Please do not place any object on the fixture or allow liquid to flow inside the fixture.
- 5. Please do not place the fixture near any flammable or volatile substances like alcohol or gasoline.
- 6. Please do not use strong detergent for cleaning. Please wipe off the dirt by using a cloth with neutral cleanser when cleaning the fixture.
- 7. Please set up the fixture in a dry and well-ventilated place. Please do not use it in any humid, dusty or overheated environment. Meanwhile, please also check whether the fan and vent are unimpeded.
- Please do not disassemble the fixture to repair at will. Qualified professionals should conduct maintenance under the condition of strictly following the operating procedures described in this manual.
- 9. Please do not cover the vents when using, to avoid affecting heat dissipation, and resulting in damage. Please pay attention to anti-scald when using the fixture for a long time, since the surface temperature of fixture will be high.

FC-500C LED RGBW Spot Light

Product Diagram



Technical Data

Rated Power: 520W Input: DC 48V/10.8A Max AC 100-240V 50/60HZ Color Temperature: 2700K-7500K (GM±150) CRI: Average 95 TLCI: Average 94

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Detailed Description

- 1. Handle: For lifting the fixture and adjusting the direction of light.
- 2. USB Port: For updating the firmware.
- 3. Display Screen: For displaying the settings.
- 4. Right Knob: For switching options.
- 5. Left Knob: For adjusting the parameters or switching among different selections.
- 6. MODE Button: For switching the lighting modes.
- 7. MENU Button: For switching between the lighting modes and the menu.
- 8. DMX In/Out: To connect the DMX adapter cable for DMX signal input and output.

(Note: DMX adapter cable is sold separately).

- 9. Fixture Body Input Socket: To connect the DC connection cable for connecting between fixture body and power supply.
- 10. Power Switch: For turning on/off the fixture.
- 11. Reflector: For gathering light to improve the central illumination.
- 12. Umbrella Mount: For installing and detaching an umbrella.
- 13. Adjustable Handle: For adjusting and fixing the direction of fixture in tilt.
- 14. Yoke: Enabling the fixture to be mounted on the light stand and allowing for the tilting of the fixture.
- 15. Bracket Fixing Knob: For securing the fixture on the light stand.
- 16. Lock Catch: For securing and detaching Bowens mount accessories.
- 17. DC Output Socket: To connect the DC connection cable to output DC power to the fixture body.
- 18. Power Socket: To connect the AC power cable for connecting the power supply to the AC power outlet.
- 19. Quick Release Plate: For mounting the quick release clamp.

Includes



Usage

1. Installation and Detachment of Reflector



When installing the reflector, align the reflector to the fixture's Bowens mount, rotate the reflector in the direction shown on the fixture until it clicks into place.

2. Installation of Umbrella



When removing the reflector, push and hold the lock catch and rotate the reflector until it is free to be removed from the fixture.



Press the lock catch to remove the reflector.



Loosen the adjustable handle.



Insert the umbrella into the umbrella mount.



Tighten the adjustable handle to lock the umbrella.

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Remote Control

·The FC-500C is built with DMX In/Out, enabling it to be controlled by wired DMX/RDM.

- ▲ The FC-500C is built with 2.4G and Bluetooth modules, enabling it to be controlled by the remote controller or NANLINK APP.
- ▲ Remote controller is sold separately.
- ▲ The address needs to be set before operating the remote control via 2.4G, DMX or RDM.
- 1. 2.4G Control

The wireless protocol needs to be set before operating the remote control via remote controller.

Please set the fixture in V2.0 while using the WS-RC-C2 remote controller, and set it in V1.0 while using other remote controllers.

1.1. Address Setting



Press the MENU button to enter the menu.

MENU	CH: 512 뿌		ME	ENU	CH: 512 Ϋ
ADDRESS/DMX			AD	DRESS	
WIRELESS CON	TROL		DN	1X MODE	
FAN CONTROL		and the second s	DN	IX REDUCED C	HANNELS
ROTATE SCREEN	1			AX DIMMING (URVE
SCREEN BRIGH	TNESS		DN	IX SMOOTHIN	G
	🖧 SMART	<pre></pre>			🖧 SMART

Rotate the right knob to ADDRESS/DMX and press the right knob to enter the secondary menu.



Rotate the right knob to ADDRESS, and press the right knob to enter the tertiary menu.



Rotate the right knob to select the address and press the right knob to set.

Note: Each FC-500C occupies 21 channels. When using DMX or RDM to control multiple FC-500C, the address for the first fixture can be set to 001, the second to 022, the third to 043, and so on.

1.2. Wireless Protocol Setting



Rotate the right knob to WIRELESS CONTROL, and press the right knob to enter the secondary menu.

MENU CH: 512 🕇			MENU	CH: 512 벅
BLUETOOTH SETTINGS			WIRELESS PR	OTOCOL
2.4G SETTINGS			WIRELESS DM	X
	I I I I I I I I I I I I I I I I I I I	-	WIRELESS DM	X UNIVERSE
PRESS 'MENU' TO RETURN SMART			PRESS 'MENU' TO RETUR	N 🖧 SMART

Rotate the right knob to 2.4G SETTINGS, and press the right knob to enter the tertiary menu.



Rotate the right knob to WIRELESS PROTOCOL, and press the right knob to enter the next menu.



Rotate the right knob to select V1.0 or V2.0, and press the right knob to set.



Rotate the right knob to WIRELESS DMX, and press the right knob to enter the next menu.



Rotate the right knob to select ON or OFF, and press the right knob to set. When WIRELESS DMX is on, the WIRELESS DMX UNIVERSE can be selected.



Rotate the right knob to WIRELESS DMX UNIVERSE, and press the right knob to enter the next menu.



Rotate the right knob to select the needed universe, and press the right knob to set. Remote controller or transmitter box can't be used when wireless DMX is on.

2. Bluetooth Control

Bluetooth reset should be done on the fixture before using the NANLINK APP to control.



Rotate the right knob to WIRELESS CONTROL, and press the right knob to enter the secondary menu.



Rotate the right knob to BLUETOOTH SETTINGS, and press the right knob to enter the tertiary menu.



Press the right knob enter the interface of RESET BLUETOOTH.



Rotate the right knob to RESET, and press the right knob to set.

- 3. DMX Control
- 3.1. For address settings, please refer to the instructions in section (1.1)
- 3.2. DMX Settings

①DMX Mode



Rotate the right knob to DMX MODE, and press the right knob to enter the tertiary menu.



Rotate the right knob to select the DMX mode, and press the right knob to set.

②DMX REDUCED CHANNELS



Rotate the right knob to DMX REDUCED CHANNELS, and press the right knob to enter the tertiary menu.



Rotate the right knob to select ON or OFF, and press the right knob to set.

③DMX DIMMING CURVE



Rotate the right knob to DMX DIMMING CURVE, and press the right knob to enter the tertiary menu.



Rotate the right knob to select LINEAR, EXPONENT, LOGARITHM, S CURVE or GAMMA 2.2, and press the right knob to set.

④DMX SMOOTHING

MENU	CH: 512 벅			MENU	CH: 512 벅
ADDRESS				OFF	
DMX MODE				ON	
DMX REDUCED C	HANNELS				
DMX DIMMING C	URVE				
DMX SMOOTHIN	G				
PRESS 'MENU' TO RETURN	SMART 😽	<pre>/ '</pre>	8	PRESS 'MENU' TO RETURN	SMART 😽

Rotate the right knob to DMX SMOOTHING, and press the right knob to enter the tertiary menu.



Rotate the right knob to select ON or OFF, and press the right knob to set.

3.3. DMX Connection

In DMX control mode, the DMX output of the last light fixture should be connected with a DMX terminator (not included). The terminator is connected with a $120\Omega(OHM)$ resistor across Pin 2 and Pin 3 (As shown below). This prevents interference caused by DMX signals in the transmitting process.



DMX Terminator Connection Connect a 120Ω(OHM) resistor across Pin 2 and Pin 3 in an XLR plug and insert into the DMX OUT socket on the last unit.



3.4. DMX Control

Refer to the DMX CHARTS and control the fixture via DMX/RDM console. (For detailed operation, please refer to the DMX/RDM console operation manual.)

▲ Download the latest technical data from www.nanlite.com.

4. RDM Control

- 4.1. For address settings, please refer to the instructions in section (1.1)
- 4.2. For DMX settings, please refer to the instructions in section (3.2)
- 4.3. RDM Connection

Connect the light fixture to the console with RDM function by using a connection cable. The connecting method is the same as that of DMX console.

4.4. RDM Control

Control the fixture via a console with RDM function. (For specific operation methods, please refer to the RDM console operation manual.)

Note: The UID format of the fixture is as follow:



Operating Instructions

1. Make sure the fixture is off, remove the COB protective cap, connect the fixture and power supply via the DC connection cable, connect the power supply to the power outlet via the AC power cable, and turn on the power switch, the screen will display "NANLITE".



2. The FC-500C has 5 built-in lighting modes, including CCT, HSI, RGBW, GEL and EFFECT modes.



Press the MODE button on any lighting mode interface to enter the lighting mode list interface.



Rotate the right knob to select the needed lighting mode, and press the right knob to enter the corresponding lighting mode interface.

2.1. CCT Mode

Rotate the right knob to select DIM (range: 0.0%-100.0%), CCT (range: 2700K-7500K) or G/M (range: -150 to 150), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select the DIM, CCT or G/M.





Note: ①In other modes, the adjusting ranges of DIM, CCT and G/M are the same as in CCT mode. ②In other modes, press the left knob to set the DIM to 0.0%, press again to restore the brightness,

and press continuously to switch between on and off.

2.2. HSI Mode

Rotate the right knob to select DIM, HUE (range: 0-360) or SAT (range: 0-100), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, HUE or SAT.



Rotate the left knob to set the corresponding parameters.

Note: In other modes, the adjusting ranges of HUE and SAT are the same as in HSI mode.

2.3. RGBW Mode

Rotate the right knob to select DIM, Red (range: 0-255), Green (range: 0-255), Blue (range: 0-255) or White (range: 0-255), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, Red, Green, Blue or White.





2.4. Gel Mode

Rotate the right knob to select DIM, CCT (3200K or 5600K) or Gel, and rotate the left knob to set the corresponding parameters or select the needed gel.



Rotate the right knob to select DIM, CCT or Gel.

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Rotate the left knob to set the corresponding parameters or select the needed gel.

2.5. EFFECT Mode

FC-500C has 15 built-in effects, including HUE Loop, CCT Loop, INT Loop, Flash, Pulse,

Storm (Storm Auto and Storm Manual), Police Car, TV, Paparazzi, Candle/Fire, Disco, Bad Bulb, Firework, Explosion (Explosion Auto and Explosion Manual) and Welding.



Rotate the left knob to select the needed effect, which can be selected in a loop.

1 HUE LOOP

Rotate the right knob to select DIM, HUE, SAT or SPEED (range: 2s-30s), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, HUE, SAT or SPEED.



Rotate the left knob to set the corresponding parameters.

②CCT LOOP

Rotate the right knob to select DIM, CCT, G/M or SPEED (range: 2s-30s), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, CCT, G/M or SPEED.



Rotate the left knob to set the corresponding parameters.



③INT LOOP

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M, or SPEED (range: 2s-30s), and rotate the left knob to set the corresponding parameters.



UJARAT

Rotate the left knob to set the corresponding parameters.

When the COLOR is set to HSI, rotate the right knob to select HUE, SAT, or SPEED (range: 2s-30s), and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

④FLASH

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M or INTERVALS (range: 0.1s-10.0s), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT, G/M or INTERVALS.



Rotate the left knob to set the corresponding parameters.

When the COLOR is set to HSI, rotate the right knob to select HUE, SAT or INTERVALS (range: 0.1s-10.0s), and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

⑤PULSE

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M or PULSES/MIN (range: 1-240), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT, G/M or PULSES/MIN.



Rotate the left knob to set the corresponding parameters.

When the COLOR is set to HSI, rotate the right knob to select HUE, SAT or PULSES/MIN (range: 1-240), and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

©STORM (STORM AUTO and STORM MANUAL) STORM AUTO

Rotate the right knob to select DIM, CCT or INTERVAL RANGE (range: 1s-60s), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, CCT or INTERVAL RANGE.



Rotate the left knob to set the corresponding parameters.



STORM MANUAL

Rotate the right knob to select DIM or CCT, and rotate the left knob to set the corresponding parameters. Press the right knob to trigger the storm effect.



Rotate the left knob to set the corresponding parameters.

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Press the right knob to trigger the storm effect.

⑦POLICE CAR

Rotate the right knob to select DIM, COLOR (range: BLUE, RED&BLUE, BLUE&WHITE, RED&BLUE&WHITE), MODE (range: SINGLE, DOUBLE, TRIPLE, QUAD) or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, COLOR, MODE or SPEED.





®TV

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT, G/M or SPEED.







When the COLOR is set to HSI, rotate the right knob to select HUE, SAT or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

③PAPARAZZI

Rotate the right knob to select DIM, CCT, G/M or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, CCT, G/M or SPEED.



Rotate the left knob to set the corresponding parameters.

@CANDLE/FIRE

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT, G/M or SPEED.





When the COLOR is set to HSI, rotate the right knob to select HUE, SAT or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

1 DISCO

Rotate the right knob to select DIM, AMOUNT (range: 3, 6, 9, 12, 15, 18, 21, 24), SPEED (range: 1-100) or SAT, and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, COLOR, SPEED or SAT.



Rotate the left knob to set the corresponding parameters.

12 BAD BULB

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT, G/M or SPEED.





When the COLOR is set to HSI, rotate the right knob to select HUE, SAT or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

®FIREWORK

Rotate the right knob to select DIM, AMOUNT (range: 3, 6, 9, 12, 15, 18, 21, 24), SPEED (range: 1-100), DECAY (range: 1-100) or SAT, and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select DIM, COLOR, SPEED, DECAY or SAT.





@EXPLOSION (EXPLOSION AUTO and EXPLOSION MANUAL) EXPLOSION AUTO

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT, G/M or SPEED.





When the COLOR is set to HSI, rotate the right knob to select HUE, SAT or SPEED (range: 1-100), and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

EXPLOSION MANUAL

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT or G/M, and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT or G/M.

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Press the right knob to trigger the explosion effect.

When the COLOR is set to HSI, rotate the right knob to select HUE or SAT, and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

15 WELDING

Rotate the right knob to select DIM or COLOR (CCT or HSI).

When the COLOR is set to CCT, rotate the right knob to select CCT, G/M, SPEED (range: 1-100) or PAUSE (ON/OFF), and rotate the left knob to set the corresponding parameters.



Rotate the right knob to select CCT, G/M, SPEED or PAUSE.



Rotate the left knob to set the corresponding parameters.

When the COLOR is set to HSI, rotate the right knob to select HUE, SAT, SPEED (range: 1-100) or PAUSE (ON/OFF),

and rotate the left knob to set the corresponding parameters. (Same operation as when COLOR is set to CCT)

NOTE: When the PAUSE is on, the welding effect will pause.

▲ Some Effect functions may be updated with firmware upgrades.

Please refer to the latest firmware function description at www.nanlite.com.

3. MENU Button: Press the MENU button to enter the interface of menu.

Rotate the right knob to select the options, press the right knob to enter the secondary menu, rotate the right knob to select the corresponding parameters, and then press the right knob to set. Press the MENU button to return to the previous menu.



3.1. ADDRESS/DMX

For detailed operations, please refer to P9.

3.2. WIRELESS CONTROL

For detailed operations, please refer to P11.

3.3. FAN CONTROL



Rotate the right knob to FAN CONTROL, and press the right knob to enter the secondary menu.

MENU	CH: 512 벅			MENU	CH: 512 뿌
SMART					
FULL			())))))	FAN HAS SWIT	CHED TO
LOW				OFF,	
OFF				MAX POWR OUT	PUT IS 8%
PRESS 'MENU' TO RETURN	SMART \$	ζ '	2	PRESS 'MENU' TO RETURN	SMART 😽

Rotate the left knob to select SMART, FULL, LOW or OFF.

Note: When the fan is in SMART or FULL mode, the maximum power output of the fixture is 100%.

When the fan is in LOW mode, the maximum power output of the fixture is 50%.

When the fan is in OFF mode, the interior fan will stop working, and the maximum power output of the fixture is 8%.

3.4. ROTATE SCREEN



Rotate the right knob to ROTATE SCREEN, and press the right knob to enter the secondary menu.



Rotate the right knob to select YES or NO, and press the right knob to set.

3.5. SCREEN BRIGHTNESS



Rotate the right knob to SCREEN BRIGHTNESS, and press the right knob to enter the secondary menu.



Rotate the right knob to select the screen brightness, and press the right knob to set.

3.6. LANGUAGE



Rotate the right knob to the LANGUAGE, and press the right knob to enter the secondary menu.



Rotate the right knob to ENGLISH or 简体中文, and press the right knob to set.

3.7. FIRMWARE UPDATE

Download the two firmware files and put them into the root directory of the USB drive (ensure the versions of the firmware files are the same), and insert the USB drive to the USB port.



Rotate the right knob to FIRMWARE UPDATE, and press the right knob to enter the interface of searching for the firmware files.

Note:

①Please do not rename the firmware files.

②Ensure the USB drive is formatted to FAT, FAT32 or exFAT.

③If prompted that "NO FIRMWARE FOUND", please check whether the firmware files are correct, whether the firmware

files are stored in the root directory of the USB drive, or whether the USB drive format is FAT, FAT32 or exFAT. (a) If all the above steps are done and the firmware files still cannot be found, please format the USB drive again. (b) If the light fixture still cannot identify the USB drive, please replace the USB drive.



After firmware files are found, enter the firmware update interface, rotate the right knob to select UPDATE, and press the right knob to make update. After update, the light fixture will automatically restart.

3.8. RESET ALL SETTINGS



Rotate the right knob to RESET ALL SETTINGS, and press the right knob to enter the secondary menu.



Rotate the right knob to select YES or NO, and press the right knob to set.

3.9. VERSION



Rotate the right knob to VERSION, and press the right knob to check the current version.

4. When the fixture is not in use, please turn off the power switch.

General Fault Detection and Diagnosis

Fault Detection	Diagnosis		
The light won't boot up properly.	 Please check whether the connection between power supply and cable or fixture are loose. Please check whether the voltage value of power supply is within the specified range. 		
The fixture can be operated manually, but DMX control is not working.	 Please check whether the DMX address setting is correct. Please check whether the DMX adapter cable is connected correctly and without damaged. 		
The fan doesn't work.	 Please check whether the fan is OFF. Please contact the place of purchase or manufacturer for repair if the fan is damaged. 		



Please scan the QR code for more details.







DMX Charts

Nanlite Website

Nanlink App

This manual has been compiled based on rigorous testing for Nanlite products.

For any subsequent product changes, the latest manual of this product can be downloaded from www.nanlite.com.



Certification



Made in China

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NANLITE

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