



LASER HEAD 5000RGB



User Manual

Please keep reading this manual carefully for further use!

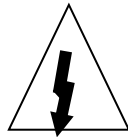
Please read this manual carefully before operating the system. It gives you general information for your safe and better operation.

1. INSPECTION

Check for the contents in the package referring to the following list:

- **Laser lighting:** 1 unit
- **Power cable:** 1 unit
- **User manual:** 1 unit

2. SAFETY INSTRUCTIONS



DANGER: LASER RADIATION! AVOID EXPOSURE TO BEAM! CLASS 3B LASER PRODUCT.

3. TECHNICAL PARAMETERS

- Laser Diode: DPSS
- Red: 638nm (1000mW)
- Green: 530nm (1000mW)
- Blue: 445nm (3000mW)
- Power Supply: AC 110V-220V, 50/60Hz

- Total Laser Power: 5000mW (5W)
- Scanner: 20 kpps high-speed stepper motor
- Control Mode: Sound Control / Auto / DMX / Master-Slave
- Dimensions: 285mm × 215mm × 440mm
- Net Weight: 7.45 KG
- Gross Weight: 9.8 KG

4. MENU AND OPERATION

LED Display Panel

The display panel allows you to control the device settings.

LED Indicator Status Description:

- **Red and Green blinking slowly:** Laser lock condition / Off optical protection state.
- **Red:** DMX / Slave machine mode.
- **Green blinking at medium speed:** Auto Mode (Self-walking).
- **Green blinking at slow speed:** Sound Control Mode (Voice control).
- **Green fast flashing:** ILDA Interface mode.

Operation:

- **MENU / SELECT:** Rotate left/right to select the required function menu.
- **ENTER:** Press to confirm/enter the selected function.
- **EXIT:** Return to the previous menu.

LCD Menu Structure

Level 1 Menu	Level 2 Menu	Level 3 / Options	Description
1. Function Mode	1. DMX-512		DMX Control Mode
	2. Auto Mode		Self-walking / Automatic Mode
	3. Sound Mode		Voice/Sound Control Mode
	4. ILDA Mode		ILDA Computer Control Interface
2. Laser Show	Play laser program	All / 001	Select specific program
	Show program	All / 001	
	Laser effect	All / Off	Toggle laser output
3. MoveHead Show	Play MoveHead	Off / All	Pan/Tilt Automatic Movement
	Position	128 / 128	Manual Position Set
	MoveHead Speed	255	Speed of movement
	LED Show	OFF / All / 001	LED Ring control
	LED Speed	50	LED Effect speed
	LED Bright	255	LED Brightness
4. Play Setup	1. Play Speed	1% - 100%	Speed of internal programs
	2. Play Mode	Loop / Random	Cycle or Random playback

5. Address Code	Address code	001 - 512	Set DMX Address
6. Channel Setup	Mode	Normal Mode / Expert Mode	Select Channel Personality
7. Laser Setup	1. Scanner	20KPPS	Scanner speed setting
	2. Color	RGB / Single / RGY / RBP / GBC / RGBWYPC	Color mixing mode
	3. Laser	Analog / TTL	Modulation type
	4. Invert	Normal / X Invert / Y Invert / XY Invert	Invert scan axes
	5. Image Size	Auto Size X / Auto Size Y	Auto-scaling settings
	6. Position	Position X / Position Y	Center point offset
8. MoveHead Setup	1. Reset Default	Yes / No	Factory Reset
	2. Safety Protected	Turn ON / Turn OFF	Beam block safety
	3. Master Setup	Turn ON / Turn OFF	Master/Slave setting
	4. Back Light	Normally ON / Delay 15S OFF	Screen backlight timeout
	5. Language	Chinese / English	Menu Language

8. MoveHead Setup	6. Display Setup	Rotate 180deg / Normal	Flip screen orientation
	7. About System	Software Version	e.g., 1.0 XGD:2022031504H
	8. MoveHead Motor	Motor Invert / Pan Fine / Tilt Fine	Motor calibration
	9. MoveHead Reset	Yes / No	Reset Pan/Tilt motors

5. ADVANCED SETTINGS (SET A - SET D)

Use the UP and DOWN buttons to select the SET menu, press ENTER to access.

SET A (Screen Backlight):

ON: Screen always on (Always Bright).

5S: Screen turns off after 5 seconds of inactivity.

SET B (Beam Protection):

ON: Beam protection active (Single beam protection).

OFF: Beam protection disabled.

SET C (Master/Host Mode):

ON: Set as Master (Host).

OFF: Set as Slave (Closed).

SET D (DMX Channel Mode):

Select between 12 CH, 23 CH, or 49 CH (Professional) modes.

DEFA (Factory Reset):

YES: Restore default settings.

NO: Do not restore.

6. DMX CONTROL PARAMETER CHART

Standard Mode (32 Channels)

Channel	Value	Function	Description
CH 1	0-255	Horizontal Motor (Pan)	Pan movement
CH 2	0-255	Horizontal Motor 16Bit	Pan Fine adjustment
CH 3	0-255	Vertical Motor (Tilt)	Tilt movement
CH 4	0-255	Vertical Motor 16Bit	Tilt Fine adjustment
CH 5	0-255	Motor Speed	Pan/Tilt speed
CH 6	0-250	Invalid	No function
	251-255	Reset	System reset after 3 seconds delay
CH 7	0	Laser Off	Turn off the laser
	1-255	Dimmer	Laser brightness 1-100%
CH 8	0-26	Auto Trigger	Default auto-run speed
	27-127	Auto Speed	Select auto-run speed
	128-255	Sound Active	Sound control sensitivity selection

CH 9	0-255	Pattern & Effect Library	Select Library (changes every 8 values)
CH 10	0-255	Pattern Selection	Select specific pattern (changes every 2 values)
CH 11	1-255	Strobe	Stroboscopic speed selection
CH 12	0-255	Pattern Size	Adjust pattern size from large to small
CH 13	0-255	Horizontal Position (X)	128 is center. Valid only when CH12 is 1-255
CH 14	0-255	Vertical Position (Y)	128 is center. Valid only when CH12 is 1-255
CH 15	0~63	Color Selection	Fixed color selection
	64-95	Color Change Speed	Fixed color / Color change effect speed
	96-127	Color Effect Speed	Change color effect speed
	128-159	Flow Effect	Flow effect speed selection
	160-191	Water Effect	Water effect speed selection
	192-223	Water Effect	Water effect speed selection (Alternative)
	224-255	Crescendo Effect	Crescendo effect speed selection
CH 16	0-255	Color Section	Color segmentation / segment effects
CH 17	0-127	Line Scan Speed	Line scan speed selection

CH 17	128-255	Point Scan Speed	Point scan speed selection
CH 18	0-127	Rotation Z Angle	Fixed Angle Z
	128-255	Rotation Z Speed	Rotating Speed Z
CH 19	0-127	Rotation X Angle	Fixed Angle X
	128-255	Rotation X Speed	Rotating Speed X
CH 20	0-127	Rotation Y Angle	Fixed Angle Y
	128-255	Rotation Y Speed	Rotating Speed Y
CH 21	0-127	Horizontal Move Position	Fixed horizontal position
	128-255	Horizontal Move Speed	Horizontal movement speed
CH 22	0-127	Vertical Move Position	Fixed vertical position
	128-255	Vertical Move Speed	Vertical movement speed
CH 23	0-127	Zoom (Fixed)	Scale fixed size selection
	128-255	Zoom (Dynamic)	Zoom speed selection
CH 24	1-255	Drawing	Gradual drawing speed selection
CH 25	1-127	Horizontal Wave	Wave velocity selection
	128-255	Vertical Wave	Vertical wave velocity selection
CH 26	0-255	LED Overall Brightness	LED brightness 0-100%
CH 27	0-255	LED Red Brightness	LED Red brightness 0-100%
CH 28	0-255	LED Green Brightness	LED Green brightness 0-100%

CH 29	0-255	LED Blue Brightness	LED Blue brightness 0-100%
CH 30	0-7	LED Effect	LED effect follows the laser effect
	8-255	LED Effect Selection	Select LED effects (one every 8 values)
CH 31	0-255	LED Effect Speed	Select LED effect speed (slow to fast)
CH 32	0-255	LED Strobe	Select LED strobe speed (slow to fast)

Mode: PRO / Professional Mode (49 Channels)

Channel	Value	Function	Description
CH 1	0-255	Horizontal Motor (Pan)	Pan movement
CH 2	0-255	Horizontal Motor 16Bit	Pan Fine adjustment
CH 3	0-255	Vertical Motor (Tilt)	Tilt movement
CH 4	0-255	Vertical Motor 16Bit	Tilt Fine adjustment
CH 5	0-255	Motor Speed	Pan/Tilt speed
CH 6	0-250	Invalid	No function
	251-255	Reset	System reset after 3 seconds delay
CH 7	0	Laser Off	Turn off the laser
CH 7	1-255	Dimmer	Laser brightness 1-100%
CH 8	0-26	Auto Trigger	Default auto-run speed

CH 8	27-127	Auto Speed	Select auto-run speed
	128-255	Sound Active	Sound control sensitivity selection
CH 9	0-255	Pattern & Effect Library	Select Library (changes every 8 values)
CH 10	0-255	Pattern Selection	Select specific pattern (changes every 2 values)
CH 11	1-255	Strobe	Stroboscopic speed selection
CH 12	0-255	Pattern Size	Adjust pattern size from large to small
CH 13	0-255	Horizontal Position (X)	128 is center. Valid only when CH12 is 1-255
CH 14	0-255	Vertical Position (Y)	128 is center. Valid only when CH12 is 1-255
CH 15	0~63	Color Selection	Fixed color selection
	64-95	Color Change Speed	Fixed color / Color change effect speed
	96-127	Color Effect Speed	Change color effect speed
	128-159	Flow Effect	Flow effect speed selection
	160-191	Water Effect	Water effect speed selection
	192-223	Water Effect	Water effect speed selection (Alternative)
	224-255	Crescendo Effect	Crescendo effect speed selection

CH 16	0-255	Color Section	Color segmentation / segment effects
CH 17	0-127	Line Scan Speed	Line scan speed selection
	128-255	Point Scan Speed	Point scan speed selection
CH 18	0-127	Rotation Z Angle	Fixed Angle Z
	128-255	Rotation Z Speed	Rotating Speed Z
CH 19	0-127	Rotation X Angle	Fixed Angle X
	128-255	Rotation X Speed	Rotating Speed X
CH 20	0-127	Rotation Y Angle	Fixed Angle Y
	128-255	Rotation Y Speed	Rotating Speed Y
CH 21	0-127	Horizontal Move Position	Fixed horizontal position
CH 21	128-255	Horizontal Move Speed	Horizontal movement speed
CH 22	0-127	Vertical Move Position	Fixed vertical position
	128-255	Vertical Move Speed	Vertical movement speed
CH 23	0-127	Zoom (Fixed)	Scale fixed size selection
	128-255	Zoom (Dynamic)	Zoom speed selection
CH 24	1-255	Drawing	Gradual drawing speed selection

CH 25	1-127	Horizontal Wave	Wave velocity selection
	128-255	Vertical Wave	Vertical wave velocity selection
CH 26	0-255	Pattern & Effect Library	Select Library (Layer 2)
CH 27	0-255	Pattern Selection	Select Pattern (Layer 2)
CH 28	1-255	Strobe (Layer 2)	Stroboscopic speed selection
CH 29	0-255	Pattern Size (Layer 2)	Patterns from large to small selection
CH 30	0-255	Horizontal Position (Layer 2)	128 is middle. Valid when CH12 is active
CH 31	0-255	Vertical Position (Layer 2)	128 is middle. Valid when CH12 is active
CH 32	0 - 63	Color (Layer 2)	Fixed color selection
	64-95	Color Change Speed	Fixed color/color change effect speed
	96-127	Color Effect Speed	Change color effect speed
	128-159	Flow Effect	Flow effect speed selection
	160-191	Water Effect	Water effect speed selection
	192-223	Water Effect	Water effect speed selection
	224-255	Crescendo Effect	Crescendo effect speed selection
CH 33	0-255	Section of Color	Color segmentation different effect selection

CH 34	0-127	Line Scan Speed	Line scan speed selection
	128-255	Point Scan Speed	Point scan speed selection
CH 35	0-127	Rotation Z	Rotate Z Angle selection
	128-255	Rotation Z Speed	Rotate Z speed selection
CH 36	0-127	Rotation X	Rotate X Angle selection
	128-255	Rotation X Speed	Rotate X speed selection
CH 37	0-127	Rotation Y	Rotate Y Angle selection
	128-255	Rotation Y Speed	Rotate Y speed selection
CH 38	0-127	Move Horizontally	Horizontal movement position selection
	128-255	Move Horizontally Speed	Horizontal movement speed selection
CH 39	0-127	Vertical Motion	Vertical movement position selection
	128-255	Vertical Motion Speed	Vertical movement speed selection
CH 40	0-127	Zoom	Scale fixed size selection
	128-255	Zoom Speed	Zoom speed selection
CH 41	1-255	Gradually Draw	Gradual drawing speed selection
CH 42	1-127	Horizontal Wave	Wave velocity selection

CH 42	128-255	Vertical Wave	Wave velocity selection
CH 43	0-255	LED Overall Brightness	LED brightness 0-100%
CH 44	0-255	LED Red Brightness	LED Red brightness 0-100%
CH 45	0-255	LED Green Brightness	LED Green brightness 0-100%
CH 46	0-255	LED Blue Brightness	LED Blue brightness 0-100%
CH 47	0-7	LED Effect	LED effect follows the laser effect
	8-255	LED Effect Selection	Select LED effects (one every 8 values)
CH 48	0-255	LED Effect Speed	Select LED effect speed (slow to fast)
CH 49	0-255	LED Strobe	Select LED strobe speed (slow to fast)

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