
JUNIOR

SCAN 3

Instruction Manual



from software version 1.0
(instruction version 0.91)



email: service@glp.de
Internet: <http://www.GLP.de>

This side is intentionally unlabelled.

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1 Description of the Device



Figure 1-1

1.1 Safety Instructions



The **JUNIOR SCAN 3** is a High-Tech Product. To guarantee a smooth operation, it is necessary to keep the following rules. The manufacturer of this device will not take responsibility of damages through disregard of the information in this manual. Warranty adjustments will be canceled.

1. Make sure before putting into operation, that the fan and the air inlets are clean and not blocked by anything.
2. **Attention:** Don't touch the device during the operation. This can cause injuries or damages.
3. **Unplug the JUNIOR SCAN 3 from the AC outlet before any service.**
4. It is necessary to wait at least 30 minutes after disconnecting the AC before you open the **JUNIOR SCAN 3**. Please do not touch the bulb of the lamp if you are not absolutely sure it is cold. **-Danger of BURNING-**
5. Never look directly into the beam of the lamp. You risk injury of your retina and blindness.
6. Pay attention of the maximum lamp operation time. You have to change it if the lamp shows any deformations or damages. The same is with all glass components, color filters, lenses and mirrors.
7. To allow a secure operation, follow also the Installation guide described in chapter 2. Operating the **JUNIOR SCAN 3** without suited safety aids like Safety cables or clamps/hooks can increase the risk of an accident.
8. The installation should be done by qualified staff only. You need to pay attention to the common rules of technology that are not explicit mentioned in this manual.
9. Use only original spare parts. Any structural modification will cancel all warranty adjustments.

2 Preparation and Installation

2.1 Mounting

Mount clamps and/or hooks directly to the mounting (relay) brackets of the **JUNIOR SCAN 3**. Please make sure to use right sized clamps and hooks and fit them securely. Keep a safety distance of 0.5 m towards any easy inflammable materials (decoration etc.).



Pay attention to the regulations of: BGV C1 (former VBG 70) and DIN VDE 0711-217.

The installation should be done by qualified staff only.

2.2 Secure the JUNIOR SCAN 3

Regardless of the rigging of the **JUNIOR SCAN 3** you have to use a stipulated safety wire that can hold at least 10 times the weight of the fixture. Install it through the handle and connect it with the truss-support. Pay attention to a safe and proper fastening.

2.3 Connectors

2.3.1 Power supply

230 Volt, 50 Hz,

Connected load 370W \Leftrightarrow 2,2 A (blind current compensation).

or 115V, 60 Hz

Connected load 740W \Leftrightarrow 4,4 A (blind current compensation).

2.3.2 DMX

USITT DMX 512 Standard input/output.

[+] = Pin 3 / [-] = Pin 2 / [Ground] = Pin 1

The DMX- Addressing starts at the DMX- Address [001].

2.4 Fuses

The **JUNIOR SCAN 3** electronic system is protected by a 5x20 mm fuse.

230V / T 3,15A (EU model) or 115V / T 6,3A (US model)

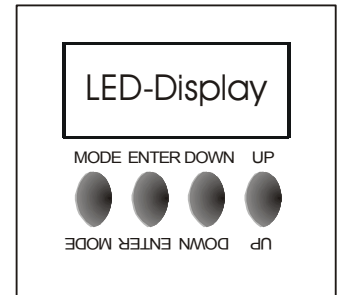
Please see the printing on the **JUNIOR SCAN 3** for more details.

Attention:

- **Disconnect AC outlet before changing a fuse!**
- **Use only the original declared fuse type!**

3 The Menu Field / DMX Address and Functions

You find the control board on the front side of the casing. It allows you to make all necessary adjustments of the **JUNIOR SCAN 3**. With the **Mode**-key you get into the main menu. Afterwards you can navigate through the menu with the **Up/Down**-keys. Push the **Enter**-key to get in the next menu level or to confirm your settings. Make them and set functions **ON/OFF** with the **Up/Down**-keys. Confirm and save it with the **Enter**-key (the display shows *OK*). Push the **Mode**-key to cancel the entry and go back to the main menu.



	Level 1	Level 2	Level 3	Remark
	DDI			Define the DMX start address
	TEST			Test program of all functions
	AUDI	ASLW		Self-running audio program (slow)
		AFST		Self-running audio program (fast)
		MSTR		Master for the audio program
		SAPT		Basic position for the audio program
		SIZE		Size for the audio program (NORM-BIG-MID-SMALL)
	LAMP			Switch on/of the lamp direct at the YPOC 250
	RESE			Reset
	TIME	POWR		Running time of the fixture (no destructible)
		LA1		Running time of the lamp (erasable)
		LA2		Running time of the lamp (no destructible)
	RPAH			Reverse Pan-direction
	RTL			Reverse Tilt-direction
	SPEC	MANU		Manual drive of all device functions
		LAPU		Automatic lamp start
		DLOF		Switch off lamp via DMX
		DMX1		Reed out actual DMX-values
		DISP	DI ON	Display On/Off
			REV	Twist the display
		AJUU	CODE XXXX	Use the code for entering the calibration menu (for authorized person only)
			COLO	Calibration of the color wheel
			GOBO	Calibration of the gobo wheel
			PRIS	Calibration of the prism wheel
			SHT1	Calibration of the shutter 1
			SHT2	Calibration of the shutter 2
			POFS	PAN Offset
			TOFS	TILT Offset
			CLRE	Settings in the internal memory (super user only)
			ARES	ADJUST RESET
	DISE			Call on the default function values
	TRB1			Software settings for the TRB1 board
	TRB2			Software settings for the TRB2 board
	EFLG			Correction of faults

3.1 Adjust the DMX- Address [000 1]

Right after turning on the JUNIOR SCAN 3 you can see the current DMX-Address. If there is no DMX- Signal the display flashes.



For the address setting please follow this procedure:

1. Switch On the JUNIOR SCAN 3 and wait until the fixture reset has finished ('RESE' is flashing in the display).
2. Press the **Mode**-key in order to access the main menu. Browse through the menu by pressing the **Up/Down**-keys until the display shows **000 1**. Confirm by pressing the **Enter**-key (the decimal point is flashing)
3. Use the **Up/Down**-keys to select the desired address. Confirm the setting by pressing the **Enter**-key (the display shows **OK**) or press the **Mode**-key to cancel.

The DMX- Address is stored also while switching off the JUNIOR SCAN 3!

3.2 The Test Program [TEST]



The **Test**-program allows you to run a complete self test procedure of all functions. Press **Enter** to confirm or **Mode** to cancel.

3.3 The Audio Program [AUDI]



The **Audio**-menu allows you to run a stand alone audio program. This chaser can run either fast or slow. **AFST**: Every sound impulse on step of the chaser. **ASLW**: Every second sound impulse one step of the chaser.

Additional you can choose a basic position for this audio chaser. Use therefore either the internal manual mode or an external controller to set the desired Pan/Tilt position. Confirm this setting in the **SVPT** menu by pressing the **Enter**-key.

You can also set the size of the audio chaser in the **SIZE** menu. You have the choice between: NORM (no basic position has to be chosen), 'BIG', 'MID' and 'SMALL'.

If you want to run the systems simultaneously, one of the **JUNIOR SCAN 3** must be switched as the master. All others must be "Slave" Master = OFF. **Notice:** The Audio function is only working if **no** DMX is connected. This function can work e.g. on small events or as an emergency program.

3.4 Lamp On/Off [LAMP]

LAMP

Use the **Up/Down**-keys to select lamp **ON** or lamp **OFF** Press **Enter** to confirm or **Mode** to cancel and return to the main menu. (The lamp **OFF** command is only working if the shutter is closed at the same time. Use an external controller or the manual drive mode, see also chapter 3.9.1 on page 10)

3.5 Reset [RESE]

RESE

Press the **Enter**-key to run a reset of all fixture functions (**RST** is shown in the display).

3.6 Running time of lamp and unit [TIME]

TIME

You can read out three different running times of the fixture.

POWR	Running time of the fixture (no destructible).
LA 1	Running time of the lamp (erasable). Push the Up/Down -keys at one time to delete this running time.
LA 2	Running time of the lamp (no destructible).

3.7 Invert Pan Movement [RPAI]

RPAI

This function allows you to invert the Pan movement. Use the **Up/Down**-keys to select invert **ON** or **OFF**. Press **Enter** to confirm or **Mode** to cancel and return to the main menu.

3.8 Invert Tilt Movement *(RTL T)*

RTL T

This function allows you to invert the Tilt movement. Use the **Up/Down**-keys to select invert *ON* or *OFF*. Press **Enter** to confirm or **Mode** to cancel.

3.9 Special Functions *(SPEC)*

SPEC

This menu allows you to enter further special functions of the **JUNIOR SCAN 3**.

In detail they are:

3.9.1 Manual Drive *(MANU)*

MANU

This function allows you to drive all the fixture functions manually. Select the desired function with the **Up/Down**-keys and confirm with **Enter**. Now choose the desired value with the **Up/Down**-keys and confirm again with **Enter** or cancel and return to the menu with the **Mode**-key.

Function	Value	Remark
<i>PAN</i>	<i>000 - 255</i>	Pan Position
<i>TILT</i>	<i>000 - 255</i>	Tilt Position
<i>COLO</i>	<i>000 - 255</i>	Color wheel
<i>GOBO</i>	<i>000 - 255</i>	Gobo wheel
<i>GROT</i>	<i>000 - 255</i>	Gobo rotation
<i>PRIS</i>	<i>000 - 255</i>	Prism rotation
<i>SHUT</i>	<i>000 - 255</i>	Shutter / Strobe function (the lamp strikes at DMX 255 if dimmer is "open" = DMX 255)
<i>DIMR</i>	<i>000 - 255</i>	Dimmer
<i>FOCU</i>	<i>000 - 255</i>	Focus
<i>SPEC</i>	<i>000 - 255</i>	Lamp Off, Reset, ...

3.9.2 Lamp On automatically [LAAU]

LAAU

This function enables to switch On the lamp automatically after switching On the fixture. Use the **Up/Down**-keys to select **ON** if you want to switch on the lamp automatically after switching on the fixture or **OFF** if you don't want this function. Press **Enter** to confirm or **Mode** to cancel and return to the menu. If you have chosen **OFF** you have the possibility to start the lamp either via DMX or direct at the **JUNIOR SCAN 3** in the Lamp menu.

3.9.3 Lamp Off via DMX [DLOF]

DLOF

This function enables to switch off the lamp via DMX or not. Use the **Up/Down**-keys to select **ON** if you want to switch off the lamp via DMX or **OFF** if you don't want this function. Press **Enter** to confirm or **Mode** to cancel and return to the menu. If you have chosen **OFF** you have the possibility to switch off the lamp either direct at the **JUNIOR SCAN 3** in the Lamp menu or switch off the main switch.

3.9.4 DMX Input [DMXI]

DMXI

Readout DMX values of each channel received by the fixture. Use the **Up/Down**-keys to select desired channel and press **Enter** to read its value.

Function	Value	Remark
<i>PAN</i>	<i>000 - 255</i>	Pan Position
<i>TILT</i>	<i>000 - 255</i>	Tilt Position
<i>COLO</i>	<i>000 - 255</i>	Color wheel
<i>GOGO</i>	<i>000 - 255</i>	Gobo wheel
<i>GROT</i>	<i>000 - 255</i>	Gobo rotation
<i>PRIS</i>	<i>000 - 255</i>	Prism wheel
<i>SHUT</i>	<i>000 - 255</i>	Shutter / Strobe function
<i>DIMR</i>	<i>000 - 255</i>	Dimmer
<i>FOCU</i>	<i>000 - 255</i>	Focus
<i>SPEC</i>	<i>000 - 255</i>	Lamp Off, Reset, ...

3.9.5 Display (DISP)

DISP

Use this function to choose between different display indications. Use the **Up/Down**-keys to select desired function and press **Enter** to confirm or **Mode** to cancel and return to the menu.

DISP	Display On/Off (If you've chosen OFF , the display will go out within 15 seconds after the last input. The next key touch will reactivate the display).
REV	Turn around the display

3.9.6 Adjustments and Calibrations (ADJU)

ADJU

With this function you can adjust and calibrate the positions of the different wheels and other motors. This can be necessary after a service or repair work.

For this function you have to entry the fixture code. This work should be done only by authorized persons.

Use the **Up/Down**-keys to select desired function and press **Enter** to confirm or **Mode** to cancel and return to the menu. Use now the **Up/Down**-keys to set the adjustment values and confirm once more with the **Enter**-key or cancel with the **Mode**-key.

Function	Value	Remark
COLO	- 99 - + 99	Color wheel
GOTO	- 99 - + 99	Gobo wheel
PRIS	- 99 - + 99	Prism wheel
SHT 1	- 99 - + 99	Shutter 1
SHT 2	- 99 - + 99	Shutter 2
POFS	- 99 - + 99	PAN Offset
TOFS	- 99 - + 99	TILT Offset
CLRE	Adjustments in the internal circuit.	
ARES	ADJUST RESET	
TRB 1	Software settings for the TRB1 board	
TRB 2	Software settings for the TRB2 board	

3.9.7 Default Settings [JFSE]

JFSE

Press **Enter** to reset all fixture personalities (not the adjusted functions) to the default values. On the display will appear **OK** to indicate that the defaults are set.

Function	Display	Default Values			
DMX Address	DMX 1	DMX 1			
Pan reverse	R PAN	ON	OFF ✓		
Tilt reverse	RTLT	ON	OFF ✓		
Automatic lamp on	L ARO	ON	OFF ✓		
Lamp on via DMX	DMX	ON ✓	OFF		
Display	DISP	DMX ✓	REV		
Cooling fan	FANS	HIGH	REG ✓	LOOF	LOHI

3.9.8 Correction of faults [EFLG]

EFLG

(Function available for authorized persons only)

3.10 Error and Information Messages

HEAT	This message appears if you try to switch on the lamp within 5 minutes after having switched off (lamp too hot). The message will appear on the display if the lamp doesn't ignite within 20 seconds. The fixture will store this command and automatically ignite the lamp after 5 minutes.
LAER	After the ignition of the lamp was two times not successful the display will show LAER . That means the lamp could be damaged or even missed, the fixture is overheating or there could be a failure on the igniter or ballast. Switch off the power supply and solve the possible problem.
OTMP	This error message informs you that the fixture was overheating and that the relay switches off the lamp. Please look for possible reasons (fan faulty, air in/outlets blocked or very dirty, lamp broken or very old, too high ambient temperature). Switch off the power supply and solve the possible problem.
RSER	This message informs you that one of the fixture function wasn't able to do its reset correct (magnetic sensor, stepping motor, driver on the PCB, cables, etc.). Repair the defect and start the fixture again.

4 DMX Channel Selection (DMX Protocol)

Channel	Function	Time and Value	DMX	HEX	%	
1) PAN-coarse	0 .. 230°	min. 2,65 s	0..255	00..FF	0..100	
2) PAN-fine	High- Pos ... High- Pos + 2,1° (16 Bit)		0..255	00..FF	0..100	
3) Tilt-coarse	0 .. 110°	min. 1,68 s	0..255	00..FF	0..100	
4) Tilt-fine	High- Pos ... High- Pos + 1,1° (16 Bit)		0..255	00..FF	0..100	
5) Color	Open (fast)	Chaser from color to color max. 140 BPM => 0,43 s	0..1	00..01	0,2	
	Open / Color 1 (fast)		2..3	02..03	1,0	
	Color 1, red (fast)		4..5	04..05	1,8	
	Color 1 / Color 2 (fast)		6..7	06..07	2,5	
	Color 2, green (fast)		8..9	08..09	3,3	
	Color 2 / Color 3 (fast)		10..11	0A..0B	4,1	
	Color 3, dark green (fast)		12..13	0C..0D	4,9	
	Color 3 / Color 4 (fast)		14..15	0E..0F	5,7	
	Color 4, blue (fast)		16..17	10..11	6,5	
	Color 4 / Color 5 (fast)		18..19	12..13	7,3	
	Color 5, yellow (fast)		20..21	14..15	8,0	
	Color 5 / Color 6 (fast)		22..23	16..17	8,8	
	Color 6, orange (fast)		24..25	18..19	9,6	
	Color 6 / Color 7 (fast)		26..27	1A..1B	10,4	
	Color 7, magenta (fast)		28..29	1C..1D	11,2	
	Color 7 / Color 8 (fast)		30..31	1E..1F	12,0	
	Color 8, neon green (fast)		32..33	20..21	12,7	
	Color 8 / Color 9 (fast)		34..35	22..23	13,5	
	Color 9, UV blue (fast)		36..37	24..25	14,3	
	Color 9 / Color 10 (fast)		38..39	26..27	15,1	
	Color 10, dark blue (fast)		40..41	28..29	15,9	
	Color 10 / Color 11 (fast)		42..43	2A..2B	16,7	
	Color 11, cyan (fast)		44..45	2C..2D	17,5	
	Color 11 / Open (fast)		46..47	2E..2F	18,2	
	Open (fast)		48..63	30..3F	19,0	
	Open (slow)		Chaser from color to color max. 70 BPM => 0,86 s	64..65	40..41	25,3
	Open / Color 1 (slow)			66..67	42..43	26,1
	Color 1, red (slow)			68..69	44..45	26,9
	Color 1 / Color 2 (slow)			70..71	46..47	27,6
	Color 2, green (slow)			72..73	48..49	28,4
	Color 2 / Color 3 (slow)			74..75	4A..4B	29,2
	Color 3, dark green (slow)			76..77	4C..4D	30,0
	Color 3 / Color 4 (slow)			78..79	4E..4F	30,8
Color 4, blue (slow)	80..81	50..51		31,6		
Color 4 / Color 5 (slow)	82..83	52..53		32,4		
Color 5, yellow (slow)	84..85	54..55		33,1		
Color 5 / Color 6 (slow)	86..87	56..57		33,9		
Color 6, orange (slow)	88..89	58..59		34,7		
Color 6 / Color 7 (slow)	90..91	5A..5B		35,5		
Color 7, magenta (slow)	92..93	5C..5D		36,3		
Color 7 / Color 8 (slow)	94..95	5E..5F	37,1			
Color 8, neon green (slow)	96..97	60..61	37,8			
Color 8 / Color 9 (slow)	98..99	62..63	38,6			
Color 9, UV blue (slow)	100..101	64..65	39,4			
Color 9 / Color 10 (slow)	102..103	66..67	40,2			
Color 10, dark blue (slow)	104..105	68..69	41,0			
Color 10 / Color 11 (slow)	106..107	6A..6B	41,8			
Color 11, cyan (slow)	108..109	6C..6D	42,5			
Color 11 / Open (slow)	110..111	6E..6F	43,3			

Channel	Function	Time and Value	DMX	HEX	%
	open (slow)		112..127	70..7F	44,1
	color rotation, slow-fast, CW	min. 1,4 turns/h	128..191	80..BF	50..75
	color rotation, fast-slow, CCW	max. 2,9 turns/sec.	192..253	C0..FD	76..98
	Audio color chaser slow	each 4 th sound impulse → new color	254	FE	99
	Audio color chaser fast	each sound impulse → new color	255	FF	100
6) Gobo	Gobo 1 (open, fast)	Chaser from gobo to gobo max. 100 BPM => 0,6 s	0..3	0..3	0..1,2
	Gobo 2 (fast)		4..7	4..7	1,6..2,7
	Gobo 3 (fast)		8..11	8..0B	3,1..4,3
	Gobo 4 (fast)		12..15	0C..0F	4,7..5,9
	Gobo 5 (fast)		16..19	10..13	6,4..7,5
	Gobo 6 (fast)		20..23	14..17	7,8..9,0
	Gobo 7 (fast)		24..27	18..1B	9,4..10,6
	Gobo 8 (fast)		28..31	1C..1F	11,0..12,2
	Gobo 9 (fast)		32..63	20..3F	12,5..24,7
	Gobo 1 (Open, slow)	Chaser from gobo to gobo max. 40 BPM => 1,51 s	64..67	40..43	25,1..26,3
	Gobo 2 (slow)		68..71	44..47	26,7..27,8
	Gobo 3 (slow)		72..75	48..4B	28,2..29,4
	Gobo 4 (slow)		76..79	4C..4F	29,8..31,0
	Gobo 5 (slow)		80..83	50..53	31,4..32,5
	Gobo 6 (slow)		84..87	54..57	32,9..34,1
	Gobo 7 (slow)		88..91	58..5B	34,5..35,7
	Gobo 8 (slow)		92..95	5C..5F	26,1..37,3
	Gobo 9 (open, slow)		96..127	60..7F	37,6..49,8
	Gobo rotation, slow-fast, CW	min. 1,4 turns/h	128..191	80..BF	50,2..74,9
	Gobo rotation, fast-slow, CCW	max. 1,0 turns/sec.	192..253	C0..FD	75,3..99,2
	Audio gobo chase, slow	each 4 th sound impulse → new gobo	254	FE	99,6
	Audio gobo chase, fast	each sound impulse → new gobo	255	FF	100
7) Gobo Posi./Rot	Gobo position 0 ... 540°		0..131	00..7F	0..50
	Gobo rotation, slow-fast, CW	min. 2,0 turns/h	132..191	80..BF	51..75
	Gobo rotation, fast-slow, CCW	max. 3,8 turns/sec.	192..253	C0..FD	76..100
	Audio gobo rotation, slow	each 4 th sound impulse → new position	254	FE	99
	Audio gobo rotation, fast	each sound impulse → new position	255	FF	100
8) Prism	Prism swing out		0..5	00..05	0..2
	Prism position 0 ... 540°		6..129	06..7F	0..50
	Prism rotation, slow-fast, CW	min. 1,6 turns/h	130..191	80..BF	51..75
	Prism rotation, fast-slow, CCW	max. 4,4 turns/sec.	192..253	C0..FD	76..100
	Audio prism rotation, slow	each 4 th sound impulse → new prism	254	FE	99
Audio prism rotation, fast	each sound impulse → new prism	255	FF	100	
9) Shutter	Shutter closed		0..15	00..0F	0..6
	Random Strobe (different pattern)		16..31	10..1F	7..11,9
	Strobe Pulse effect , slow - fast	min. frequent 0,7 Hz	32..47	20..2F	12..12,9
	Strobe effect , slow - fast		48..63	30..3F	13..25
	Shutter open (lamp start)	max. frequent 10 Hz	64..239	40..EF	26..93
	Shutter closed		240..255	F0..FF	94..100
10) Dimmer	Dimmer closed (0%)		0..3	0..3	0..1
	Dimmer 1%...99%	movement time 0,3 sec.	4..251	4..FB	2..98
	Dimmer open (100%)		252..255	FC..FF	99..100

Channel	Function	Time and Value	DMX	HEX	%	
11) Focus	in - out (2m - infinite)	full distance 1,5 sec.	0..255	0..FF	0..100	
12) Special	no function		0..15	00..0F	0..6	
	Gobo-seesaw +/- 10° slow – fast	3,5 moves / min. up to 60 moves / max.	16..31	10..1F	7..12	
	Gobo-seesaw +/- 20° slow – fast	3,5 moves / min. up to 60 moves / max.	32..47	20..2F	13..18	
	Gobo-seesaw +/- 30° slow – fast	3,5 moves / min. up to 60 moves / max.	48..63	30..3F	19..24	
	Color-chaser C / C+1 slow – fast	0,7 BPS ... 2,3 BPS => 1,43 s ... 0,43 s	64..79	40..4F	25..31	
	Color-chaser C / C+2 slow – fast	0,7 BPS ... 2,0 BPS => 1,43 s ... 0,5 s	80..95	50..5F	32..37	
	Audio Pan / Tilt slow	each 4 th sound impulse → new position	96..111	60..6F	38..43	
	Audio Pan / Tilt fast	each sound impulse → new position	112..127	70..7F	44..50	
	no function		128..249	80..E5	50..97	
	Lampe AUS (3 sec.)		230..249	E6..F9	92..97	
Reset		250..255	FA..FF	98..100		
13) Move- ment	no movement		0	00	0	
	Movement	Size	Phase			
	PAN	1	0°	01..01	01..01	0,5
		1	90°	02..03	02..03	1,0
		1	180°	04..05	04..05	1,7
		1	270°	06..07	06..07	2,5
	PAN	2	0°	08..09	08..09	3,3
		2	90°	10..11	0A..0B	4,1
		2	180°	12..13	0C..0D	4,9
		2	270°	14..15	0E..0F	5,7
	PAN	3	0°	16..17	11..11	6,5
		3	90°	18..19	12..13	7,3
		3	180°	20..21	14..15	8,0
		3	270°	22..23	16..17	8,8
	PAN	4	0°	24..25	18..19	9,6
		4	90°	26..27	1A..1B	10,4
		4	180°	28..29	1C..1D	11,2
		4	270°	30..31	1E..1F	12
	TILT	size / phase see also PAN		32..63	20..3F	13..25
	PAN / TILT	size / phase see also PAN		64..95	40..5F	26..37
PAN / TILT (inverse)	size / phase see also PAN		96..127	60..7F	38..50	
Circle	size / phase see also PAN		128..159	80..9F	51..62	
Circle (inverse)	size / phase see also PAN		160..191	A0..BF	63..75	
lying eight	size / phase see also PAN		192..223	C0..DF	76..87	
random movement	size see also PAN		224..255	E0..FF	88..100	
14) Speed Pan/Tilt	Pan/Tilt relative movement		0..15	00..0F	0..6	
	Pan/Tilt slow – fast Use this channel 14) also for the speed of the movements (channel 13).	Pan Min. 230° = xx s Pan Max. 230° = 200 s Tilt Min. 110° = xx s Tilt Max. 110° = 110 s	16..255	10..FF	7..100	
Lamp ON	Shutter open		240..255	F0..FF	94..100	
Lamp OFF	Channel 12 (min. 3 sec.) (only if shutter is closed, channel 9 = 0 ..15)		230..249	6E..9F	92..97	

5 Change the Lamp

For a frictionless operation please read this chapter carefully and follow all instructions.

5.1 Safety Regulations

- **Pull out the main plug!**
- Wait min. 20 minutes after the last operation to cool down the fixture.
- Don't touch the bulb of the lamp with bare fingers (this can cause damages).
- Before you put the **JUNIOR SCAN 3** into operation close the casing, otherwise your retina can be hurt!

5.2 Realize the Lamp Change

Please have also a look at Figure 1-1 on page 4.

1. **Pull out the main plug!**
2. Open the two Phillips screws on the bottom side of the unit.
3. Release carefully the lamp holder plate from the duct where the lamp is mounted on.
4. Replace the old lamp. (Don't touch the glass bulb of the lamp with bare fingers).
5. Put the lamp holder plate carefully back in the duct.
6. Close the two Phillips screws again.
7. Adjust the optimum position of the lamp with the three adjustment screws on the lamp holder sheet.

Attention: Pay attention on a firm fit of the lamp!

6 Change a Gobo

The **JUNIOR SCAN 3** is fitted with standard gobos (outside diameter 25 mm, image size 17 mm). You can use ether steel or glass gobos.

Gobo thickness: ~0,15 mm (stainless steel) or ~1,1 mm (glass)

6.1 Safety Regulations

- **Pull out the main plug!**
- Wait min. 20 minutes after the last operation to cool down the fixture.

- Before you put the JUNIOR SCAN 3 into operation close the casing, otherwise your retina can be hurt!

6.2 Realize the Gobo Change

1. Open the unit as described in the chapter before.
2. Hold the two Gobo springs aside and remove the Gobo.
3. Insert and snap in the new Gobo under the spring. Control the secure fit of the Gobo.
4. Close the JUNIOR SCAN 3 in reverse order.

7 Maintenance and Cleaning the JUNIOR SCAN 3

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not built up on or within the fixture. Otherwise the fixture's light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliable throughout its life.

A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

The inside optical system should be maintained only by authorized persons. Please contact your local dealer.

7.1 Safety Regulations

- **Pull out the main plug!**
- Wait min. 20 minutes after the last operation to cool down the fixture.
- Before you put the JUNIOR SCAN 3 into operation close the casing, otherwise your retina can be hurt!

7.2 Circumference and Interval (rule-of-thumb)

The contamination of the fixture depends on the environmental conditions. Therefore no general guidelines can be given. Hence the intervals are only suggestions from our practice experience.

Position	Interval	In this way
Outside optic	weekly	soft cloth and glass cleaning fluid
Color filter	monthly	soft cloth and glass cleaning fluid
Gobos	yearly	vacuum cleaner, airbrush, etc.

Glass gobos	monthly	soft cloth and glass cleaning fluid
Prism	monthly	soft cloth and glass cleaning fluid
Dimmer/Shutter	yearly	vacuum cleaner, airbrush, etc.
Inside lens	monthly	soft cloth no glass cleaning fluid
Fan and air channel	monthly	vacuum cleaner, airbrush, etc.
Reflector	never	
Lamp	never	
Moveable parts	yearly	suitable fatty oil

Attention:

1. **Never** let optical parts come into contact with oil or grease.
2. **Before** running the fixture wait until all parts are dried up.
3. **Never** clean the aspheric lens with water or other cleaners. Change the lens if it looks milky (about 1-2 years). For that please contact your local dealer.

7.3 Cleaning the Optical System

1. **Pull out the main plug!**
2. Wait min. 20 minutes after the last operation to cool down the fixture.
3. Open the upper shell of the casing by loosening the 4 Phillips screws.
4. Do the work as explained in the list above.
5. Close the **JUNIOR SCAN 3** in reverse order.

7.4 Mirror and Optical System

Clean the mirror and the optical system of the **JUNIOR SCAN 3** with water and some glass detergent. Be careful while drying the parts. To clean the inner side of the lens, it can be screwed out completely.

7.5 Fan and Cooling System

Clean the fans, air channels/inlets and grills regularly.

Attention: Do not cover the air inlets!

8 Technical Specification

Power supply	
Power consumption	370 Watt (blind current compensated)
EU-model	AC 230V / 50 Hz~
Fuse protection	T3,15A, 250V, 5x20 mm (fine-wire fuse)
US-model	AC 115V / 60 Hz~
Fuse protection	T6,3A, 115V, 5x20 mm (fine-wire fuse)
Lamp type	
Type 1 - Philips	MSD 250/2 Philips, lifetime: 2000h, color temperature: 8500k
Type 2 - GE	CSD 250/2/SE GE, lifetime: 2000h, color temperature: 8500k
Type 3 - Osram	HSD 250/78 Osram, lifetime: 3000h, color temperature: 7800k
Optical system	
Parabolic reflector	
Doubles condenser lens	
18° standard objective	
Lens anti-reflex	
Colors	
11 dichroic filter plus white	
Gobos	
10 rotating and positioning Gobos + open	
Gobo outside diameter 25 mm, image size 17 mm	
Gobo thickness (stainless steel): 0,15 mm, Gobo thickness glass: 1,1 mm,	
Shutter / Strobe / Dimmer	
Strobe- effect with variable speed 1 - 10 flashes per second	
Continuously mechanical dimmer 0 - 100%	
Prism	
Rotating 3-face prism, rotating and variable in speed	
Focus	
Motor driven focus from near to far away	
DMX Drive (14 Channels)	
Standard USITT DMX-512, 3 pole XLR; [+] = Pin 3 [-] = Pin 2 [Ground] = Pin 1. The DMX- addressing starts at the DMX- address [001].	
Pan / Tilt (16 Bit)	
Pan- movement	230° in max. 2,65 seconds, 16 bit resolution
Tilt- movement	110° in max. 1,68 seconds, 16 bit resolution
Weights and measures	
Length	700 mm
Width	385 mm
Height	280 mm
Weight	14,5 kg

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