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GAM Product #TS6120, #TS6140
Rosco Product #206 3650 00000, # 206 3640 00000

CAUTION

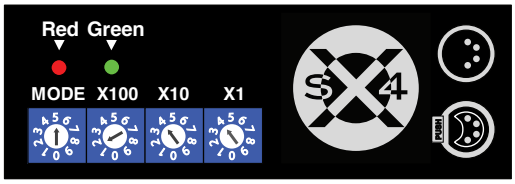
When using a DMX device with a discharge lamp such as CDM or an HMI, it's suggested that you separate the power circuit for the discharge lamp from the DMX control device. When using DMX controlled units such as an Indexing TwinSpin™ or SX4® Gobo Changer or DMX Loop Tray, the "noise" from the discharge lamp ballast may cause some interference and or damage the electronics. For best results we recommend providing separate line voltage to the DMX devices and the discharge light fixture.

PRODUCT INSTRUCTIONS

SX4® 4 & 6 GOBO TRAY • DISC TRAY (Modes 6 - 9)

Four channel setting switches are on the control box. The MODE switch to the far left.

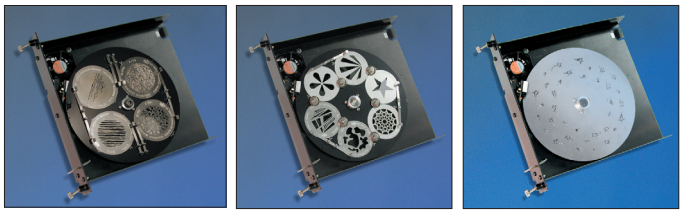
Address then X10 and X100



It is powered by 24 volt DC and controlled by DMX512, either from most color scroller power supplies or a standalone power supply. Once powered, the unit will show a red power LED to indicate the power is on. The unit is also fitted with a green LED which indicates the status of operation.

After it is powered, the unit needs to initialize to find the home position of the gobos. This takes about 2 seconds during which time the green LED will flash. Once the home sensing is complete the flashing will stop. If the LED is not lit then DMX is not present. If the LED continues flashing, it means there has been a fault detecting the sensor and the unit operates but without correct index positioning.

MODE	DMX SETTING	FUNCTION
0	0	Standlone: select one gobo for focus
1	1	DMX gobo select by fader
2	2	DMX gobo select speed & position
3	0	Standalone: speed, direction, timed
4	0	Standalone: 2 to 6 gobos, timed
5	0	Standalone: continuous rotate, set speed
6	1	DMX controlled rotation only
7	1	DMX control index / rotate one fader
8	2	DMX index/rotate on two faders
9	2	16 bit indexing / 10,000 positions



MODE 0 OPERATION = 0
Standalone Single Gobo Mode - For Focusing

Set X1 Dial - This number is for gobo selection. Each gobo is individually selected according to the following table:

XI	SIX-GOBO CHANGER	FOUR-GOBO CHANGER
Selection	Gobo Displayed	Gobo Displayed
0,11	1	1
22	2	2
33	3	3
44	4	4
55	5	4
66	6	4
76	6	4
86	6	4
96	6	4

MODE 1 OPERATION • MODE SWITCH = 1
DMX Gobo Selector - One Channel Operation

Set DMX address on SX4® - This number is the desk control (fader) channel. Gobo will change at the levels shown in the charts below. Moves at maximum speed and via the shortest route.

FOUR-GOBO CHANGER		
Channel Level	DMX Level	Four
100% 76%	255 192	Gobo 4
51%	191 128	Gobo 3
26%	127 64	Gobo 2
0%	63 0	Gobo 1

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MODE 1 OPERATION • MODE SWITCH = 1
DMX Gobo Selector - One Channel Operation

Set DMX address on SX4® - This number is the desk control (fader) channel. Gobo will change at the levels shown in the charts below. Moves at maximum speed and via the shortest route.

SIX-GOBO CHANGER		
Channel Level	DMX Level	Six
100% 84%	255 215	Gobo 6
67%	214 172	Gobo 5
51%	171 129	Gobo 4
34%	128 86	Gobo 3
18%	85 43	Gobo 2
0%	42 0	Gobo 1

MODE 2 OPERATION • MODE SWITCH = 2
DMX Gobo Select with Direction and Speed Control - Two Channel Operation

Set DMX address on SX4® - This number is the desk control (fader) channel
Channel 1: Gobo will change at the levels shown in the charts as per Mode 1
Channel 2: Sets speed and direction per chart below

FOUR & SIX GOBO CHANGER		
Channel Level	DMX Level	Direction
100% 76%	255 192	Fast counterclockwise Variable speed levels Slow counterclockwise
51%	191 128	Fast clockwise Variable speed levels Slow clockwise
26%	127 64	Shortest route slow Variable speed levels
0%	63 0	Shortest route fast

MODE 3 OPERATION • MODE SWITCH = 3
Standalone operation displays all gobos in sequence

- Use the X100 switch on the SX4® to set direction and speed per chart below.
- Use the X10, X1 switch on the SX4® to set the display time of each gobo. Setting these switches from 1 to 99 varies the time in 0.1 second steps from 0.1 to 9.9 seconds.

FOUR & SIX GOBO CHANGER					
X100	DIRECTION	SPEED	X10	X1	TIME (SECS)
9	Conterclockwise	Very slow	0	0	0
8	Clockwise		0	1	1
7	Conterclockwise	Slow	4	2	2
6	Clockwise		5	0	0
5	Conterclockwise	Medium	9	8	8
4	Clockwise		9	9	9
3	Conterclockwise	Fast			
2	Clockwise				
1	Conterclockwise	Very fast			
0					

MODE 4 OPERATION • MODE SWITCH = 4
Standalone operation for less than maximum number of patterns

X1 switch on SX4® will set the display time each gobo from 1 to 10 seconds.

- Set on 0 for 1 second
- Set on 9 for 10 seconds

X100 switch on SX4® selects the first position used on the turret wheel.
X10 switch on SX4® selects the last position used on the turret wheel.

If you have three patterns, you put them in positions 1,2 and 3. Adjust the X100 switch to 1 and the X10 switch to 3 and the unit will auto select those three positions only.

- If X100 = 1 and X10 = 3, the selection order is 1,2,3,2,1, etc
- If X100 = 2 and X10 = 5, the selection order is 2,3,4,5,4,3,2, etc
- If X100 = 5 and X10 = 2, the selection order is 5,6,1,2,1,6,5,6,1,2, etc

MODE 5 OPERATION • MODE SWITCH = 5
Standalone operation for continuous rotation

- X100 sets the direction - Select 1 for counter-clockwise rotation or 2 for clockwise rotation
- X10, X1 sets speed of rotation - 00 is the slowest and 63 is the fastest speed

MODE 6 OPERATION • MODE SWITCH = 6
Rotation DMX controlled only

- Applies to single pattern disc effects.
- Select DMX control channel on SX4® switches X100, X10 and X1
- Selected channel fader operates speed and direction of rotation as per chart below

Channel Level	DMX Level	Direction
100%	255	Fast counterclockwise Variable speed levels
51%	129	Slow counterclockwise
50%	128	STOPPED
49%	127	Slow clockwise Variable speed levels
0%	0	Fast clockwise

MODE 7 OPERATION • MODE SWITCH = 7
DMX single channel linear indexing and rotation control

- Applies to single pattern disc effects
- Select DMX control channel on SX4® switches X100, X10 and X1
- Control channel fader operates index/rotate functions as per chart below

Channel Level	DMX Level	Direction
100%	255	Slow clockwise Variable speed levels Continuous rotation
52%	130	Fast clockwise
51%	129	STOPPED
50%	128	360 degrees Indexing to position with shortest route maximum speed
0%	0	0 degrees (home)

MODE 8 OPERATION • MODE SWITCH = 8
DMX two channel indexing with variable speed rotation

- Applies to single pattern disc effects and gobos
- Select DMX control channel on SX4® switches X100, X10 and X1
  Control channel fader has two functions:
- Operates as an indexing fader from zero to 99%
- If set at 100%, then it holds the disc in continuous rotation mode

SETTING UP CHOICES FOR CHANNEL 1		
Channel Level	DMX Level	Direction
100%	255	Continuous rotation mode
99%	254	359 degrees Variable index positions
0%	0	0 degrees (home)

Second channel controls speed & direction of disc when 1st channel is set at 100% continuous rotation mode.

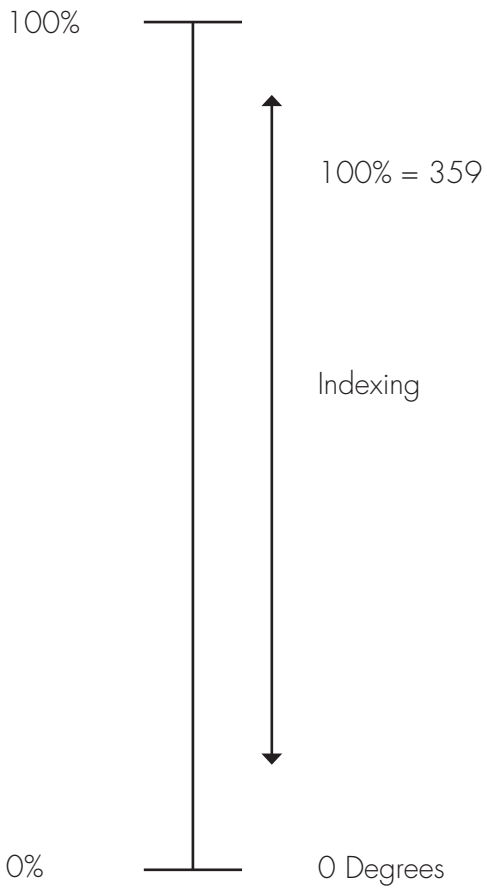
SECOND CHANNEL CONTROLS SPEED & DIRECTION OF DISC PER CHART WHEN FIRST CHANNEL IS AT 100% CONTINOUS ROTATION MODE		
Channel Level	DMX Level	Direction
100%	255	Fast counterclockwise Variable speed levels Continuous rotation
51%	129	Slow counterclockwise
50%	127, 128	STOPPED
49%	126	Slow clockwise Variable speed levels Continuous rotation
0%	0	Fast clockwise

SECOND CHANNEL CONTROLS SPEED & DIRECTION OF DISC PER CHART WHEN 1ST CHANNEL IS SET FROM 0-9 INDEXING MODE		
Channel Level	DMX Level	Direction
100%	255	Fast counterclockwise Variable speed levels indexing
51%	128	Slow counterclockwise
50%	127	Slow clockwise Variable speed levels Continuous rotation
1%	1	Fast clockwise
0%	0	Shortest route full speed

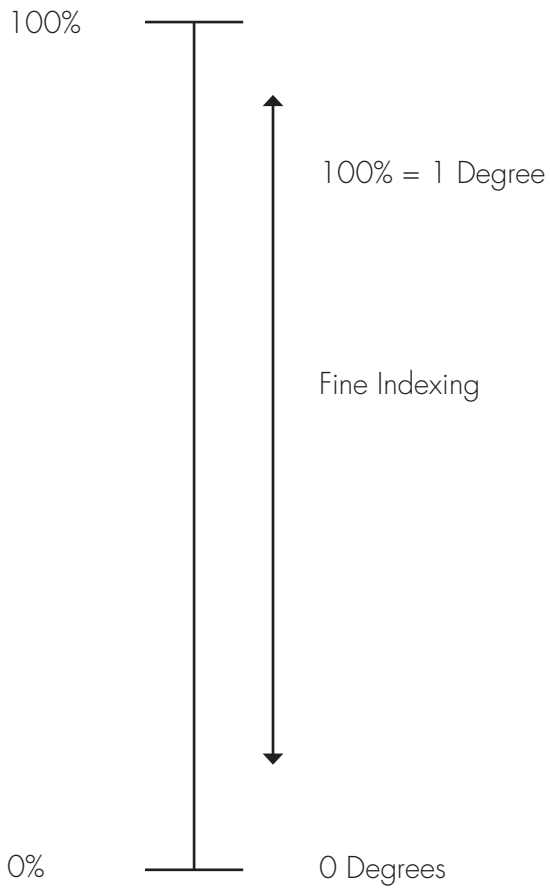
MODE 9 OPERATION • MODE SWITCH = 9
DMX two channel highly accurate 16 bit linear indexing for all disc types

Select DMX control channel on SX4® switches - X100, X10, X1:

Use channel 1 for the whole degree positions and channel 2 for fine alignment positions between the single degree settings of channel 1.



Channel 1
COARSE POSITION



Channel 1
FINE POSITION