DMX CHANNEL	FUNCTION	DESCRIPTION
Ch1	Pan MSB	High Pan byte - in 8-bit operation, only this byte is sent
Ch2	Pan LSB	Low Pan byte for 16-bit positioning
Ch3	Tilt MSB	High Tilt byte - in 8-bit operation only this byte is sent
Ch4	Tilt LSB	Low Tilt byte for 16-bit positioning
Ch5	CTO	CTO filter insertion 0 –127 Filter OUT 128 – 255 Filter IN
Ch6	Color	6 colors + Open White selection and sound to light music change
Ch7	Effect	3 colors + 3 gobos + sound to light music change
Ch8	Shutter/ Strobe	Shutter and strobe with music sync Black – out and colour change
Ch9	Dimmer	Full dark to full brightness
Ch10	Framing Shutter 1	Out to In
Ch11	Rotation Framing Shutter 1	Angle - Parallel Angle +
Ch12	Framing Shutter 2	Out to In
Ch13	Rotation Framing Shutter 2	Angle - Parallel Angle +
Ch14	Framing Shutter 3	Out to In
Ch15	Rotation Framing Shutter 3	Angle - Parallel Angle +
Ch16	Framing Shutter 4	Out to In
Ch17	Rotation Framing Shutter 4	Angle - Parallel Angle +
Ch18	Reset/Lamp	
Ch19	Mspeed	Movement speed Cross-fade Slowest Fastest
Ch20	Focus	
Ch21	Zoom	16° to 24° variable zoom
Ch22	Variable Frost	Hard edge to wash beam
Ch23	Mod_color	
Ch24	Mod_effect	
Ch25	Shake_Effect1	
Ch26	Shake_Effect2	
Ch27	Macro	

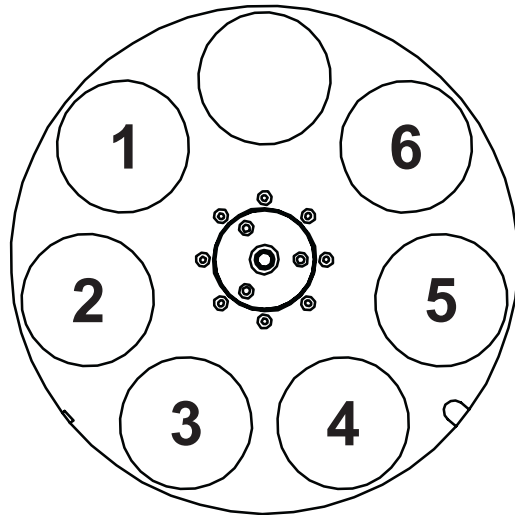### 4.1 Cto channel -ch 5-

DMX VALUE	FUNCTION
0 -127	CTO DISABLED
128 - 255	CTO FULLY INSERTED

4.2 Color channel -ch 6-

Giotto Profile is fitted with a color wheel comprising 6 dichroic filters. Color changes are controlled via channel 6, whereas 'color mode' is selected via channel 23. 3 different modes can be selected. (ref. CH23).

With Color Mode CH23 = FULL COLOR

DMX VALUE	CENTRAL VALUE	FUNCTION
0 – 36	18	WHITE
37 – 72	54	AMBER
73 – 108	90	GREEN
109 – 144	126	RED
145 – 180	162	MAGENTA
181 – 216	198	BLUE
217 – 255	234	YELLOW

Side towards the lamp

With Color Mode CH23 = RAINBOW SOFT

DMX VALUE	CENTRAL VALUE	FUNCTION
0 -15	8	SPEED 1
16 – 31	24	SPEED 2
32 – 47	40	SPEED 3
48 – 63	56	SPEED 4
64 – 79	72	SPEED 5
80 – 95	88	SPEED 6
96 – 111	104	SPEED 7
112 – 127	120	SPEED 8
128 – 143	136	SPEED 9
144 – 159	152	SPEED 10
160 – 175	168	SPEED 11
176 – 191	184	SPEED 12
192 – 207	200	SPEED 13
208 – 223	216	SPEED 14
224 – 239	232	SPEED 15
240 – 255	248	SPEED 16

With Color Mode CH23 = MUSIC HARD CHANGE

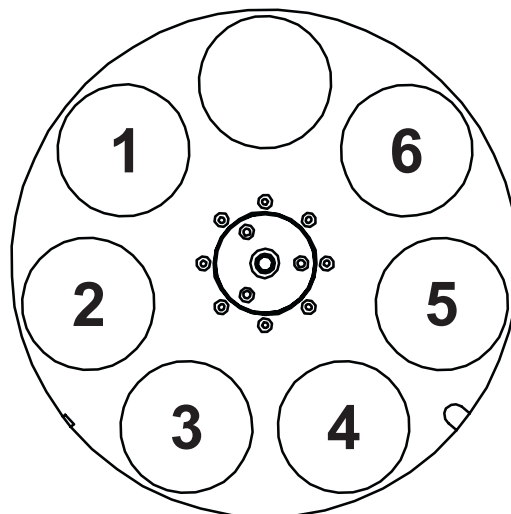| DMX VALUE	FUNCTION
0 – 255	music hard change full color

4.3 Effect channel -ch 7-

Giotto Profile is fitted with a effect wheel comprising 3 colors, 3 gobos. Effect changes are controlled via channel 7, whereas 'effect mode' is selected via channel 24. 3 different modes can be selected. (ref. CH24).

With Effect Mode CH24 = FULL COLOR

DMX VALUE	CENTRAL VALUE	FUNCTION
0 – 36	18	_
37 – 72	54	CYAN
73 – 108	90	GOBO
109 – 144	126	PINK
145 – 180	162	GOBO
181 – 216	198	ORANGE
217 – 255	234	GOBO

Side towards the lamp

With Effect Mode CH24 = RAINBOW SOFT

DMX VALUE	CENTRAL VALUE	FUNCTION
0 -15	8	SPEED 1
16 – 31	24	SPEED 2
32 – 47	40	SPEED 3
48 – 63	56	SPEED 4
64 – 79	72	SPEED 5
80 – 95	88	SPEED 6
96 – 111	104	SPEED 7
112 – 127	120	SPEED 8
128 – 143	136	SPEED 9
144 – 159	152	SPEED 10
160 – 175	168	SPEED 11
176 – 191	184	SPEED 12
192 – 207	200	SPEED 13
208 – 223	216	SPEED 14
224 – 239	232	SPEED 15
240 – 255	248	SPEED 16

With Efect Mode CH24 = MUSIC HARD CHANGE

DMX VALUE	FUNCTION
0 – 255	MUSIC HARD CHANGE FULL COLOR o EFFECT

4.4 Shutter/strobe channel - ch 8-

The Shutter/Strobe can be regulated via channel 8. The mechanism which enables the strobe effect to be generated is the same as that used for dimming the light beam, however it's also possible to control the light's intensity while the strobe's enabled It also enables instantaneous blackout without any light spill. High-impact visual effects such as strobe effects in sync with the bass notes and blackout during color and gobo changes can obtained using this channel.

DMX VALUE	CENTRAL VALUE	FUNCTION
0 - 7	4	Closed
8 -15	12	Strobe at a frequency of 1Hz
16 - 23	20	Strobe at a frequency of 1,38 Hz
24 – 31	28	Strobe at a frequency of 1,6 Hz
32 – 39	36	Strobe at a frequency of 1,9 Hz
40 - 47	44	Strobe at a frequency of 2,3 Hz
48 - 55	52	Strobe at a frequency of 2,7 Hz
56 - 63	60	Strobe at a frequency of 3,4 Hz
64 - 71	68	Strobe at a frequency of 4 Hz
72 -79	76	Strobe at a frequency of 5 Hz
80 -87	84	Strobe at a frequency of 6 Hz
88 - 95	92	Strobe at a frequency of 7 Hz
96 - 103	100	Strobe at a frequency of 8 Hz
104 - 111	108	Strobe at a frequency of 9 Hz
112 - 119	116	Strobe at a frequency of 10 Hz
120 - 136	128	Shutter strobe low strobe effect at maximum frequency in sync with bass n otes
137 - 153	145	Music flash low
154 – 170	162	Autoshade open on the colors
171 - 187	179	Autoshade open on the effects
188 - 204	196	Autoshade open on the effects and colors
205 - 255		Open

4.5 Dimmer –ch 9-

Adjustable via channel 9, allows linear regulation of luminous power. Giotto's dimmer is mechanical and ensures good linear adjustment as well as high operating speed and very low noise.

DMX VALUE	FUNCTION
0 – 255	0 – 100% LINEAR REGULATION

4.6 Framming shutter opening -ch 10, ch12, ch14, ch16-

DMX VALUE	FUNCTION
0	OPEN
0 – 255	LINEAR REGULATION
255	CLOSED

4.7 Framming shutter rotation -ch 11, ch13, ch15, ch17-

DMX VALUE	FUNCTION
0	NO ROTATION
0 – 255	LINEAR REGULATION
255	MAX ROTATION ANGLE

4.8 Remote lamp striking and reset -ch 18-

The ignition (or dousing) of the lamp can be controlled via DMX using a lighting console. In fact, after having switched on the Giotto, the lamp remains off until it receives a "lamp strike" command. This function has no effect if it's not enabled by means of the fixture's built-in microcomputer. In this case, the lamp will ignite automatically without waiting to receive the command from the lighting console. Should the lamp be accidentally switched off, it's advisable to wait at least 5 minutes before sending the ignition command. However, if the command is sent sooner, Giotto Profile will ignite the lamp by running restrike attempts at regular 3-minute intervals.

Lastly, Giotto Profile has a function which automatically reduces lamp power by 50% every time the shutter or dimmer is closed. This function ensures considerably better fixture cooling and increases lamp life. The lamp obviously returns to full power when the shutter or dimmer are reopened.

Should any problems occur, a reset command can be sent to the fixture in order that all the motors return to their starting positions before continuing to execute commands received from the console.

DMX Level range 0 - 255	FUNCTION	
0 – 60	off	
61 – 129	Hysteresis	LAMP
130 - 179	on	
180 – 239	Hysteresis	RESET
240 – 255	Reset	

4.9 Mspeed –ch 19-

Mspeed affects PAN and TILT and is intended as the time required to complete a movement from one position to another. This means that the fixtures with the same Mspeed value will reach destination at the same instant. It's therefore possible to set movement times for each fixture which are independent of the times sent by the lighting console. The DMX values between 000-003 allow the console to control the movement, whereas with DMX value 004 a time can be allocated to the movement. To find Mspeed times, refer to the conversion table.

DMX VALUE	FUNCTION
0 - 3	CONTROLLER CROSS FADE
4… 255	SLOWEST … FASTEST

4.10 Electronic focus -ch 20-

This channel is used for precise linear focussing, ensuring well-defined projections at any distance, or eye-catching blurred effects. **IMPORTANT!! For correct electronic focus operation, fit the dichroic gobos with their coated side outwards.**

DMX VALUE	FUNCTION
0 – 255	0 - 100% LINEAR REGULATION

4.11 Zoom -ch 21-

By means of this channel it's possible to widen or narrow the light beam from 12° to 24°. When the zoom is used, gobos remain in focus.

DMX VALUE	FUNCTION
0	ZOOM IN (16° ANGLE)
0 – 255	LINEAR VARIATION
255	ZOOM OUT (18° ANGLE)

4.12 Frost –ch 22-

Adjusted using channel 22, gives linear variable frost.

DMX VALUE	FUNCTION
0	FROST DISABLED
0 – 255	LINEAR VARIATION
255	FROST FULLY INSERTED

4.13 Color mode –ch 23-

DMX VALUE	CENTRAL VALUE	FUNCTION	
0 – 85	42	FULL COLOR	Digital regulation of the colors on centre positions
86 – 170	128	RAINBOW SOFT	Continuous color rot ation at adjustable speed
171 – 255	213	MUSIC HARD CHANGE	Digital color change in sync with bass notes

4.14 Effect mode –ch 24-

DMX VALUE	CENTRAL VALUE	FUNCTION	
0 – 85	42	FULL COLOR	Digital regulation of the effects on centre positions
86 – 170	128	RAINBOW SOFT	Continuous effect rotation at adjustable speed
171 – 255	213	MUSIC HARD CHANGE	Digital effe ct change in sync with bass notes

4.15 Shake effect 1 –ch 25-

DMX VALUE	CENTRAL VALUE	FUNCTION
0 – 47		Effect1shake disinserito
48 – 60	54	Effect1shake speed 1
61 – 73	67	Effect1shake speed 2
74 – 86	80	Effect1shake speed 3
87 – 99	93	Effect1shake speed 4
100 – 112	106	Effect1shake speed 5
113 – 125	119	Effect1shake speed 6
126 – 138	132	Effect1shake speed 7
139 – 151	145	Effect1shake speed 8
152 – 164	158	Effect1shake speed 9
165 – 177	171	Effect1shake speed 10
178 – 190	184	Effect1shake speed 11
191 – 203	197	Effect1shake speed 12
204 – 216	210	Effect1shake speed 13
217 – 229	223	Effect1shake speed 14
230 – 242	236	Effect1shake speed 15
243 – 255	249	Effect1shake speed 16

4.16 Shake effect 2 –ch 26-

DMX VALUE	CENTRAL VALUE	FUNCTION
0 – 47		Effect2shake disinserito
48 – 60	54	Effect2shake speed 1
61 – 73	67	Effect2shake speed 2
74 – 86	80	Effect2shake speed 3
87 – 99	93	Effect2shake speed 4
100 – 112	106	Effect2shake speed 5
113 – 125	119	Effect2shake speed 6
126 – 138	132	Effect2shake speed 7
139 – 151	145	Effect2shake speed 8
152 – 164	158	Effect2shake speed 9
165 – 177	171	Effect2shake speed 10
178 – 190	184	Effect2shake speed 11
191 – 203	197	Effect2shake speed 12
204 – 216	210	Effect2shake speed 13
217 – 229	223	Effect2shake speed 14
230 – 242	236	Effect2shake speed 15
243 – 255	249	Effect2shake speed 16

4.16 Macro –ch 27-

From this channel it's possible to select one of the 11   preset Macros

MACRO	DESCRIPTION	CHANNELS USESD
1	Slow dimmer opening ramp and fast closing Dimmer	Dimmer (9) Shutter (8)
2	Slow dimmer closing ramp and fast opening	Dimmer (9) Shutter (8)
3	Odd-numbered fixtures run a slow dimmer opening ramp. Even -numbered fixtures run a slow dimmer closing ramp	Dimmer (9) Shutter (8)
4	Odd-numbered fixtures run a slow dimmer opening ramp and even -numbered fixtures' shutters are closed. Then even -numbered fixtures run a slow dimmer opening ramp and odd -numbered fix tures' shutters are closed.	Dimmer (9) Shutter (8)
5	Odd-numbered fixtures run a slow dimmer closing ramp while even -numbered fixtures' shutters are open. Then even -numbered fixtures run a slow dimmer closing ramp and even -numbered fixtures' shutters are open	Dimmer (9) Shutter (8)
6	Random strobe	Shutter (8)
7	Slow Frost insertion ramp followed by slow removal ramp	Frost (22)
8	Slow Frost insertion ramp followed by fast removal	Frost(22)
9	Slow Frost insertion ramp on even -numbered fixtures, whereas Frost is disabled on odd-numbered units. Then slow Frost insertion ramp on odd -numbered fixtures and Frost disabled on even -numbered fixtures	Frost(22)
10	Vertical rectangle is moved to right and on the left	Framing Shutter 10,12,14,16 Rotation Framing Shutter 11,13,15,17
11	Horizontal rectangle is moved low and up	Framing Shutter 10,12,14,16 Rotation Framing Shutter 11,13,15,17

*SGM reserves the right to modify any specifications without prior notice.

DMX VALUE	MSPEED (in seconds)	DMX VALUE	MSPEED (in seconds)	DMX VALUE	MSPEED (in seconds)	DMX VALUE	MSPEED (in seconds)
0 -- 1	cross fade	65	150	129	72	193	17
2	cross fade	66	149	130	70	194	17
3	cross fade	67	147	131	69	195	16
4	243	68	146	132	68	196	16
5	241	69	145	133	67	197	15
6	240	70	143	134	66	198	15
7	238	71	142	135	65	199	14
8	236	72	141	136	64	200	14
9	234	73	139	137	63	201	13
10	233	74	138	138	62	202	13
11	231	75	137	139	61	203	12
12	229	76	135	140	60	204	12
13	227	77	134	141	59	205	12
14	226	78	133	142	58	206	11
15	224	79	131	143	57	207	11
16	222	80	130	144	56	208	10
17	221	81	129	145	55	209	10
18	219	82	128	146	54	210	10
19	217	83	126	147	53	211	9
20	216	84	125	148	52	212	9
21	214	85	124	149	51	213	9
22	213	86	122	150	50	214	8
23	211	87	121	151	49	215	8
24	209	88	120	152	48	216	8
25	208	89	119	153	47	217	7
26	206	90	117	154	46	218	7
27	205	91	116	155	45	219	7
28	203	92	115	156	45	220	6
29	202	93	114	157	44	221	6
30	200	94	112	158	43	222	6
31	199	95	111	159	42	223	6
32	197	96	110	160	41	224	5
33	195	97	109	161	40	225	5
34	194	98	108	162	39	226	5
35	192	99	106	163	38	227	5
36	191	100	105	164	38	228	4
37	189	101	104	165	37	229	4
38	188	102	103	166	36	230	4
39	187	103	101	167	35	231	4
40	185	104	100	168	34	232	4
41	184	105	99	169	34	233	3
42	182	106	98	170	33	234	3
43	181	107	97	171	32	235	3
44	179	108	95	172	31	236	3
45	178	109	94	173	30	237	3
46	176	110	93	174	30	238	3
47	175	111	92	175	29	239	3
48	173	112	91	176	28	240	2
49	172	113	90	177	28	241	2
50	171	114	88	178	27	242	2
51	169	115	87	179	26	243	2
52	168	116	86	180	25	244	2
53	166	117	85	181	25	245	2
54	165	118	84	182	24	246	2
55	164	119	83	183	23	247	2
56	162	120	82	184	23	248	2
57	161	121	80	185	22	249	2
58	159	122	79	186	22	250	2
59	158	123	78	187	21	251	2
60	157	124	77	188	20	252	2
61	155	125	76	189	20	253	2
62	154	126	75	190	19	254	2
63	153	127	74	191	19	255	2
64	151	128	73	192	18		