

# DMX PROTOCOL

This section contains two DMX protocols (both from protocol version 1.0A):

- “16-bit protocol” on page 39
- “8-bit protocol” on page 42

The 16-bit is the default protocol that is used. To modify this use the control menu. For more information see “Control menu” on page 45.

# 16-bit protocol

| DMX channel | Value     | Percent  | Function   | Start code = 0                     |  |
|-------------|-----------|----------|--|------------------------------------|--|
| 1           | 0 - 19    | 0 - 7    | <b>Shutter, Strobe, Reset, Lamp On/Off</b><br>Shutter Closed (lamp reduced to 700 W (E-ballast) after 10 sec.) |                                    |  |
|             | 20 - 49   | 8 - 19   | No function (Shutter Open)   |                                    |  |
|             | 50 - 72   | 20 - 28  | Strobe on fast->slow   |                                    |  |
|             | 73 - 79   | 29 - 31  | Shutter open, lamp reduced to 700 W (E-ballast)  |                                    |  |
|             | 80 - 99   | 32 - 39  | Pulse opening fast ->slow  |                                    |  |
|             | 100 - 119 | 40 - 47  | Pulse closing fast ->slow  |                                    |  |
|             | 120 - 127 | 48 - 50  | No function  |                                    |  |
|             | 128 - 147 | 51 - 57  | Random Strobe Fast   |                                    |  |
|             | 148 - 167 | 58 - 65  | Random Strobe Medium   |                                    |  |
|             | 168 - 187 | 66 - 73  | Random Strobe Slow   |                                    |  |
|             | 188 - 190 | 74 - 74  | No function  |                                    |  |
|             | 191 - 193 | 75       | Random pulse opening fast  |                                    |  |
|             | 194 - 196 | 76       | Random pulse opening slow  |                                    |  |
|             | 197 - 199 | 77       | Random pulse closing fast  |                                    |  |
|             | 200 - 202 | 78 - 79  | Random pulse closing slow  |                                    |  |
|             | 203 - 207 | 80 - 81  | No function  |                                    |  |
|             | 208 - 217 | 82 - 85  | Reset Fixture  |                                    |  |
|             | 218 - 227 | 86 - 89  | No function  |                                    |  |
|             | 228 - 237 | 90 - 93  | Lamp On (Power On)   |                                    |  |
|             | 238 - 247 | 94 - 97  | No Function  |                                    |  |
|             | 248 - 255 | 98 - 100 | Lamp Off (Power Off) <b>Note:</b> T > 5 seconds  |                                    |  |
|             | 2         | 0 - 255  | 0 - 100  | <b>Intensity</b><br>0 – 100%       |  |
|             | 3         | 0 - 255  | 0 - 100  | <b>Cyan</b><br>White -> Cyan       |  |
|             | 4         | 0 – 255  | 0 - 100  | <b>Magenta</b><br>White -> Magenta |  |
| 5           | 0 – 255   | 0 - 100  | <b>Yellow</b><br>White -> Yellow   |                                    |  |
| 6           | 0 – 255   | 0 - 100  | <b>CTC</b><br>White -> CTC   |                                    |  |
| 7           | 0 – 9     | 0 - 3    | <b>Rotating gobo 1 selection</b><br>Open gobo  |                                    |  |
|             | 10 – 14   | 4 - 5    | Gobo 1 – Indexing (set index on channel 8)   |                                    |  |
|             | 15 – 19   | 6 - 7    | Gobo 2 – Indexing (set index on channel 8)   |                                    |  |
|             | 20 – 24   | 8 - 9    | Gobo 3 – Indexing (set index on channel 8)   |                                    |  |
|             | 25 – 29   | 10 - 11  | Gobo 4 – Indexing (set index on channel 8)   |                                    |  |
|             | 30 – 34   | 12 - 13  | Gobo 5 – Indexing (set index on channel 8)   |                                    |  |
|             | 35 – 39   | 14 - 15  | Gobo 1 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 40 – 44   | 16 - 17  | Gobo 2 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 45 – 49   | 18 - 19  | Gobo 3 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 50 – 54   | 20 - 21  | Gobo 4 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 55 – 59   | 22 - 23  | Gobo 5 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 60 – 74   | 24 - 29  | <b>Gobo shake (indexing)</b><br>Gobo 1 slow -> fast  |                                    |  |
|             | 75 – 89   | 30 - 35  | Gobo 2 slow -> fast  |                                    |  |
|             | 90 – 104  | 36 - 41  | Gobo 3 slow -> fast  |                                    |  |
|             | 105 – 119 | 42 - 46  | Gobo 4 slow -> fast  |                                    |  |
|             | 120 – 134 | 47 - 52  | Gobo 5 slow -> fast  |                                    |  |
|             | 135 – 149 | 53 - 58  | <b>Gobo shake (continuous gobo rotation)</b><br>Gobo 1 slow -> fast  |                                    |  |
|             | 150 – 164 | 59 - 64  | Gobo 2 slow -> fast  |                                    |  |
|             | 165 – 179 | 65 - 70  | Gobo 3 slow -> fast  |                                    |  |
|             | 180 – 194 | 71 - 67  | Gobo 4 slow -> fast  |                                    |  |
|             | 195 – 209 | 77 - 82  | Gobo 5 slow -> fast  |                                    |  |
|             | 210 – 232 | 83 - 91  | <b>Gobo wheel continuous rotation (continuous gobo rotation)</b><br>CW slow -> fast                            |                                    |  |
|             | 233 – 255 | 92 - 100 | CCW fast -> slow   |                                    |  |

| DMX channel | Value     | Percent             | Function  | Start code = 0 |
|-------------|-----------|---------------------|---|----------------|
| 8           | 0 – 255   | 0 - 100             | <b>Rotating gobo 1 index coarse, MSB</b> (Set gobo selection on channel 7)<br>Index min. -> max     |                |
|             | 0 – 2     | 0                   | <b>Rotating gobo 1 cont. rotation</b> (Set gobo selection on channel 7)<br>Static                   |                |
|             | 3 – 127   | 1 - 50              | CCW slow -> fast  |                |
|             | 128 – 252 | 51 - 99             | CW fast -> slow   |                |
| 9           | 253 – 255 | 100                 | Static  |                |
|             | 0 – 255   | 0 - 100             | <b>Rotating gobo 1 index fine, LSB</b> (Set gobo selection on channel 7)<br>Index min. -> max       |                |
| 10          | 0 – 255   | 0 - 100             | <b>Rotating gobo 1 cont. rotation</b> (Set gobo selection on channel 7)<br>No function              |                |
|             | 0 – 9     | 0 - 3               | <b>Gobo Animation wheel position</b><br>No Effect   |                |
|             | 10 – 19   | 4 - 7               | Vertical position – Indexing (set index on channel 10)  |                |
|             | 20 – 29   | 8 - 11              | Horizontal position – Indexing (set index on channel 10)  |                |
|             | 30 – 39   | 12 - 15             | Vertical position – Cont. Rotation (set dir/speed on channel 10)                                    |                |
|             | 40 – 49   | 16 - 19             | Horizontal position – Cont. Rotation (set dir/speed on channel 10)                                  |                |
|             | 50 – 139  | 20 - 54             | Animation wheel scroll position (Vertical -> Horizontal) – Indexing (set index on channel 11)       |                |
|             | 140 – 229 | 55 - 89             | Animation wheel scroll position (Horizontal -> Vertical) – Cont. Rot. (set dir/speed on channel 11) |                |
|             | 230 – 235 | 90 - 92             | No Effect   |                |
|             | 236 – 239 | 93                  | <b>Gobo Animation MACROS</b><br>Macro 1   |                |
| 240 – 243   | 94 - 95   | Macro 2             |   |                |
| 244 – 247   | 96        | Macro 3             |   |                |
| 248 – 251   | 97 - 98   | Macro 4             |   |                |
| 252 – 255   | 99 - 100  | Macro 5             |   |                |
| 11          | 0 – 255   | 0 - 100             | <b>Gobo Animation wheel index</b> (Set position on channel 10)<br>Index min. -> max                 |                |
|             | 0 – 2     | 0                   | <b>Gobo Animation wheel cont. rotation</b> (Set position on channel 10)<br>Static                   |                |
|             | 3 – 127   | 1 - 50              | CCW slow -> fast  |                |
|             | 128 – 252 | 51 - 99             | CW fast -> slow   |                |
| 12          | 253 – 255 | 100                 | Static  |                |
|             | 0         | 0                   | <b>Effect selection</b><br>Open   |                |
|             | 1 – 234   | 1 - 91              | Variable Frost min. -> max.   |                |
|             | 235 – 242 | 92 - 95             | Effect 1  |                |
| 13          | 243 – 250 | 96 - 98             | Effect 2  |                |
|             | 251 – 255 | 99 - 100            | Open  |                |
|             | 0 – 199   | 0 - 77              | <b>Iris</b><br>Open -> close  |                |
| 14          | 200 – 215 | 78 - 84             | Close   |                |
|             | 216 – 229 | 85 - 89             | Pulse opening fast -> slow  |                |
|             | 230 – 243 | 90 - 94             | Pulse closing fast -> slow  |                |
|             | 244 – 246 | 95 - 96             | Random pulse opening fast   |                |
|             | 247 – 249 | 97                  | Random pulse opening slow   |                |
|             | 250 – 252 | 98 - 99             | Random pulse closing fast   |                |
|             | 253 – 255 | 100                 | Random pulse closing slow   |                |
|             | 0 – 2     | 0 - 1               | <b>Framing MACRO functions</b><br>No Macro  |                |
| 3 – 255     | 2 - 100   | Reserved for MACROs |   |                |
| 15          | 0 - 255   | 0 - 100             | <b>Focus</b><br>Focus far -> near   |                |
| 16          | 0 – 255   | 0 - 100             | <b>Zoom</b><br>Zoom wide -> narrow  |                |
| 17          | 0 – 255   | 0 - 100             | <b>Framing shutter 1</b><br>Out -> In   |                |
| 18          | 0 – 126   | 0 - 49              | <b>Framing shutter 1</b><br>Angle –   |                |
|             | 127 - 128 | 50                  | Parallel  |                |
|             | 129 – 255 | 51 - 100            | Angle +   |                |
| 19          | 0 – 255   | 0 - 100             | <b>Framing shutter 2</b><br>Out -> In   |                |

| DMX channel | Value  | Percent  | Function  | Start code = 0 |
|-------------|--|--|---|----------------|
| 20          | 0 – 126<br>127-128<br>129 – 255  | 0<br>50<br>100   | <b>Framing shutter 2</b><br>Angle –<br>Parallel<br>Angle +  |                |
| 21          | 0 – 255  | 0 - 100  | <b>Framing shutter 3</b><br>Out -> In   |                |
| 22          | 0 – 126<br>127 - 128<br>129 – 255  | 0<br>50<br>100   | <b>Framing shutter 3</b><br>Angle –<br>Parallel<br>Angle +  |                |
| 23          | 0 – 255  | 0 - 100  | <b>Framing shutter 4</b><br>Out -> In   |                |
| 24          | 0 – 126<br>127 - 128<br>129 – 255  | 0<br>50<br>100   | <b>Framing shutter 4</b><br>Angle –<br>Parallel<br>Angle +  |                |
| 25          | 0 – 255  | 0 - 100  | <b>Rotate framing shutters</b><br>Right - > Center -> Left  |                |
| 26          | 0<br>127<br>255  | 0<br>50<br>100   | <b>Pan coarse</b><br>Max Left<br>Neutral<br>Max Right   |                |
| 27          | 0<br>127<br>255  | 0<br>50<br>100   | <b>Pan fine</b><br>Max Left<br>Neutral<br>Max Right   |                |
| 28          | 0<br>127<br>255  | 0<br>50<br>100   | <b>Tilt coarse</b><br>Max Up<br>Neutral<br>Max Down   |                |
| 29          | 0<br>127<br>255  | 0<br>50<br>100   | <b>Tilt fine</b><br>Max Up<br>Neutral<br>Max Down   |                |
| 30          | 0 - 2<br>3 – 236<br>237 – 239<br>240 – 242<br>243 – 245<br>246 – 248<br>249 – 251<br>252 – 255 | 0 - 1<br>2 - 92<br>93<br>94<br>95<br>96 - 97<br>98<br>99 - 100 | <b>Speed: Pan/Tilt Movement</b><br>Tracking<br>Speed Fast -> Slow<br>Tracking (Slow speed - Overriding the PTSP menu setting)<br>Tracking (Normal speed - Overriding the PTSP menu setting)<br>Tracking (Fast speed - Overriding the PTSP menu setting)<br>Fan speed (Regulation, min. noise level – Overriding the FAN menu setting)<br>Fan speed (Full speed, max. cooling – Overriding the FAN menu setting)<br>Blackout while moving  |                |
| 31          | 0 – 2<br>3 – 239<br>240 – 242<br>243 – 245<br>246 – 248<br>249 – 251<br>252 – 255              | 0<br>1 - 93<br>94 - 95<br>96<br>97 - 98<br>99<br>100           | <b>Speed: Dimmer, Cyan, Magenta, Yellow, CTC, Effect, Iris, Focus, Zoom</b><br>Tracking<br>Speed Fast -> Slow<br>Tracking (Studio mode disabled – Overriding the MOfE menu setting)<br>Tracking (Studio mode enabled – Overriding the MOfE menu setting)<br>Tracking (Shortcuts disabled - Overriding the SCUT menu setting)<br>Tracking (Shortcuts enabled - Overriding the SCUT menu setting)<br>Fast Speed<br><br><b>Speed: Gobo 1, Framing, Animation wheel pos., Animation wheel rot.</b><br>Tracking<br>Speed Fast -> Slow<br>Tracking (Studio mode disabled – Overriding the MOfE menu setting)<br>Tracking (Studio mode enabled – Overriding the MOfE menu setting)<br>Tracking (Shortcuts disabled - Overriding the SCUT menu setting)<br>Tracking (Shortcuts enabled - Overriding the SCUT menu setting)<br>Blackout while moving |                |

# 8-bit protocol

| DMX channel | Value     | Percent  | Function   | Start code = 0                     |  |
|-------------|-----------|----------|--|------------------------------------|--|
| 1           | 0 - 19    | 0 - 7    | <b>Shutter, Strobe, Reset, Lamp On/Off</b><br>Shutter Closed (lamp reduced to 700 W (E-ballast) after 10 sec.) |                                    |  |
|             | 20 - 49   | 8 - 19   | No function (Shutter Open)   |                                    |  |
|             | 50 - 72   | 20 - 28  | Strobe on fast->slow   |                                    |  |
|             | 73 - 79   | 29 - 31  | Shutter open, lamp reduced to 700 W (E-ballast)  |                                    |  |
|             | 80 - 99   | 32 - 39  | Pulse opening fast ->slow  |                                    |  |
|             | 100 - 119 | 40 - 47  | Pulse closing fast ->slow  |                                    |  |
|             | 120 - 127 | 48 - 50  | No function  |                                    |  |
|             | 128 - 147 | 51 - 57  | Random Strobe Fast   |                                    |  |
|             | 148 - 167 | 58 - 65  | Random Strobe Medium   |                                    |  |
|             | 168 - 187 | 66 - 73  | Random Strobe Slow   |                                    |  |
|             | 188 - 190 | 74 - 74  | No function  |                                    |  |
|             | 191 - 193 | 75       | Random pulse opening fast  |                                    |  |
|             | 194 - 196 | 76       | Random pulse opening slow  |                                    |  |
|             | 197 - 199 | 77       | Random pulse closing fast  |                                    |  |
|             | 200 - 202 | 78 - 79  | Random pulse closing slow  |                                    |  |
|             | 203 - 207 | 80 - 81  | No function  |                                    |  |
|             | 208 - 217 | 82 - 85  | Reset Fixture  |                                    |  |
|             | 218 - 227 | 86 - 89  | No function  |                                    |  |
|             | 228 - 237 | 90 - 93  | Lamp On (Power On)   |                                    |  |
|             | 238 - 247 | 94 - 97  | No Function  |                                    |  |
|             | 248 - 255 | 98 - 100 | Lamp Off (Power Off) <b>Note:</b> T > 5 seconds  |                                    |  |
|             | 2         | 0 - 255  | 0 - 100  | <b>Intensity</b><br>0 – 100%       |  |
|             | 3         | 0 - 255  | 0 - 100  | <b>Cyan</b><br>White -> Cyan       |  |
|             | 4         | 0 – 255  | 0 - 100  | <b>Magenta</b><br>White -> Magenta |  |
| 5           | 0 – 255   | 0 - 100  | <b>Yellow</b><br>White -> Yellow   |                                    |  |
| 6           | 0 – 255   | 0 - 100  | <b>CTC</b><br>White -> CTC   |                                    |  |
| 7           | 0 – 9     | 0 - 3    | <b>Rotating gobo 1 selection</b><br>Open gobo  |                                    |  |
|             | 10 – 14   | 4 - 5    | Gobo 1 – Indexing (set index on channel 8)   |                                    |  |
|             | 15 – 19   | 6 - 7    | Gobo 2 – Indexing (set index on channel 8)   |                                    |  |
|             | 20 – 24   | 8 - 9    | Gobo 3 – Indexing (set index on channel 8)   |                                    |  |
|             | 25 – 29   | 10 - 11  | Gobo 4 – Indexing (set index on channel 8)   |                                    |  |
|             | 30 – 34   | 12 - 13  | Gobo 5 – Indexing (set index on channel 8)   |                                    |  |
|             | 35 – 39   | 14 - 15  | Gobo 1 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 40 – 44   | 16 - 17  | Gobo 2 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 45 – 49   | 18 - 19  | Gobo 3 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 50 – 54   | 20 - 21  | Gobo 4 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 55 – 59   | 22 - 23  | Gobo 5 – Cont. Rotation (set dir/speed on channel 8)   |                                    |  |
|             | 60 – 74   | 24 - 29  | <b>Gobo shake (indexing)</b><br>Gobo 1 slow -> fast  |                                    |  |
|             | 75 – 89   | 30 - 35  | Gobo 2 slow -> fast  |                                    |  |
|             | 90 – 104  | 36 - 41  | Gobo 3 slow -> fast  |                                    |  |
|             | 105 – 119 | 42 - 46  | Gobo 4 slow -> fast  |                                    |  |
|             | 120 – 134 | 47 - 52  | Gobo 5 slow -> fast  |                                    |  |
|             | 135 – 149 | 53 - 58  | <b>Gobo shake (continuous gobo rotation)</b><br>Gobo 1 slow -> fast  |                                    |  |
|             | 150 – 164 | 59 - 64  | Gobo 2 slow -> fast  |                                    |  |
|             | 165 – 179 | 65 - 70  | Gobo 3 slow -> fast  |                                    |  |
|             | 180 – 194 | 71 - 67  | Gobo 4 slow -> fast  |                                    |  |
|             | 195 – 209 | 77 - 82  | Gobo 5 slow -> fast  |                                    |  |
|             | 210 – 232 | 83 - 91  | <b>Gobo wheel continuous rotation (continuous gobo rotation)</b><br>CW slow -> fast                            |                                    |  |
|             | 233 – 255 | 92 - 100 | CCW fast -> slow   |                                    |  |

| DMX channel | Value     | Percent   | Function  | Start code = 0 |
|-------------|-----------|-----------|---|----------------|
| 8           | 0 – 255   | 0 - 100   | <b>Rotating gobo index</b> (Set gobo selection on channel 7)<br>Index min. -> max                   |                |
|             | 0 – 2     | 0 - 1     | <b>Rotating gobo cont. rotation</b> (Set gobo selection on channel 7)<br>Static                     |                |
|             | 3 – 127   | 2 - 50    | CCW slow -> fast  |                |
|             | 128 – 252 | 51 - 98   | CW fast -> slow   |                |
|             | 253 – 255 | 99 - 100  | Static  |                |
| 9           | 0 – 9     | 0 - 3     | <b>Gobo Animation wheel position</b><br>No Effect   |                |
|             | 10 – 19   | 4 - 7     | Vertical position – Indexing (set index on channel 10)  |                |
|             | 20 – 29   | 8 - 11    | Horizontal position – Indexing (set index on channel 10)  |                |
|             | 30 – 39   | 12 - 15   | Vertical position – Cont. Rotation (set dir/speed on channel 10)                                    |                |
|             | 40 – 49   | 16 - 19   | Horizontal position – Cont. Rotation (set dir/speed on channel 10)                                  |                |
|             | 50 – 139  | 20 - 54   | Animation wheel scroll position (Vertical -> Horizontal) – Indexing (set index on channel 10)       |                |
|             | 140 – 229 | 55 - 89   | Animation wheel scroll position (Horizontal -> Vertical) – Cont. Rot. (set dir/speed on channel 10) |                |
|             | 230 – 235 | 90 - 92   | No Effect   |                |
|             |           |           | <b>Gobo Animation MACROS</b>  |                |
|             |           | 236 – 239 | 93  | Macro 1        |
|             | 240 – 243 | 94 - 95   | Macro 2   |                |
|             | 244 – 247 | 96        | Macro 3   |                |
|             | 248 – 251 | 97 - 98   | Macro 4   |                |
|             | 252 – 255 | 99 - 100  | Macro 5   |                |
| 10          | 0 – 255   | 0 - 100   | <b>Gobo Animation wheel index</b> (Set position on channel 9)<br>Index min. -> max                  |                |
|             | 0 – 2     | 0 - 1     | <b>Gobo Animation wheel cont. rotation</b> (Set position on channel 9)<br>Static                    |                |
|             | 3 – 127   | 2 - 50    | CCW slow -> fast  |                |
|             | 128 – 252 | 51 - 98   | CW fast -> slow   |                |
|             | 253 – 255 | 99 - 100  | Static  |                |
| 11          | 0         | 0         | <b>Effect selection</b><br>Open   |                |
|             | 1 – 234   | 1 - 91    | Variable Frost min. -> max.   |                |
|             | 235 – 242 | 92 - 94   | Effect 1  |                |
|             | 243 – 250 | 95 - 98   | Effect 2  |                |
|             | 251 – 255 | 99 - 100  | Open  |                |
| 12          | 0 – 199   | 0 - 78    | <b>Iris</b><br>Open -> close  |                |
|             | 200 – 215 | 79 - 84   | Close   |                |
|             | 216 – 229 | 85 - 89   | Pulse opening fast -> slow  |                |
|             | 230 – 243 | 90 - 95   | Pulse closing fast -> slow  |                |
|             | 244 – 246 | 96        | Random pulse opening fast   |                |
|             | 247 – 249 | 97        | Random pulse opening slow   |                |
|             | 250 – 252 | 98        | Random pulse closing fast   |                |
|             | 253 – 255 | 99 - 100  | Random pulse closing slow   |                |
| 13          | 0 – 2     | 0 - 1     | <b>Framing MACRO functions</b><br>No Macro  |                |
|             | 3 – 255   | 2 - 100   | Reserved for MACROs   |                |
| 14          | 0 – 255   | 0 - 100   | <b>Focus</b><br>Focus far -> near   |                |
| 15          | 0 – 255   | 0 - 100   | <b>Zoom</b><br>Zoom wide -> narrow  |                |
| 16          | 0 – 255   | 0 - 100   | <b>Framing shutter 1</b><br>Out -> In   |                |
| 17          | 0 – 126   | 0         | <b>Framing shutter 1</b><br>Angle –   |                |
|             | 127-128   | 50        | Parallel  |                |
|             | 129 – 255 | 100       | Angle +   |                |
| 18          | 0 – 255   | 0 - 100   | <b>Framing shutter 2</b><br>Out -> In   |                |
| 19          | 0 – 126   | 0         | <b>Framing shutter 2</b><br>Angle –   |                |
|             | 127-128   | 50        | Parallel  |                |
|             | 129 – 255 | 100       | Angle +   |                |

| DMX channel | Value  | Percent  | Function  | Start code = 0 |
|-------------|--|--|---|----------------|
| 20          | 0 – 255  | 0 - 100  | <b>Framing shutter 3</b><br>Out -> In   |                |
| 21          | 0 – 126<br>127-128<br>129 – 255  | 0<br>50<br>100   | <b>Framing shutter 3</b><br>Angle –<br>Parallel<br>Angle +  |                |
| 22          | 0 – 255  | 0 - 100  | <b>Framing shutter 4</b><br>Out -> In   |                |
| 23          | 0 – 126<br>127-128<br>129 – 255  | 0<br>50<br>100   | <b>Framing shutter 4</b><br>Angle –<br>Parallel<br>Angle +  |                |
| 24          | 0 - 255  | 0 - 100  | <b>Rotate Framing Shutters</b><br>Right - > Center -> Left  |                |
| 25          | 0<br>127<br>255  | 0<br>50<br>100   | <b>Pan</b><br>Max Left<br>Neutral<br>Max Right  |                |
| 26          | 0<br>127<br>255  | 0<br>50<br>100   | <b>Tilt</b><br>Max Up<br>Neutral<br>Max Down  |                |
| 27          | 0 - 2<br>3 – 236<br>237 – 239<br>240 – 242<br>243 – 245<br>246 – 248<br>249 – 251<br>252 – 255 | 0 - 1<br>2 - 92<br>93<br>94 - 95<br>96<br>97<br>98<br>99 - 100 | <b>Speed: Pan/Tilt Movement</b><br>Tracking<br>Speed Fast -> Slow<br>Tracking (Slow speed - Overriding the PTSP menu setting)<br>Tracking (Normal speed - Overriding the PTSP menu setting)<br>Tracking (Fast speed - Overriding the PTSP menu setting)<br>Fan speed (Regulation, min. noise level – Overriding the FAN menu setting)<br>Fan speed (Full speed, max. cooling – Overriding the FAN menu setting)<br>Blackout while moving  |                |
| 28          | 0 – 2<br>3 – 239<br>240 – 242<br>243 – 245<br>246 – 248<br>249 – 251<br>252 – 255              | 0 - 1<br>2 - 93<br>94 - 95<br>96<br>97<br>98<br>99 - 100       | <b>Speed: Dimmer, Cyan, Magenta, Yellow, CTC, Effect, Iris, Focus, Zoom</b><br>Tracking<br>Speed Fast -> Slow<br>Tracking (Studio mode disabled – Overriding the MOfE menu setting)<br>Tracking (Studio mode enabled – Overriding the MOfE menu setting)<br>Tracking (Shortcuts disabled - Overriding the SCUT menu setting)<br>Tracking (Shortcuts enabled - Overriding the SCUT menu setting)<br>Fast Speed<br><br><b>Speed: Gobo 1, Framing, Animation wheel pos., Animation wheel rot.</b><br>Tracking<br>Speed Fast -> Slow<br>Tracking (Studio mode disabled – Overriding the MOfE menu setting)<br>Tracking (Studio mode enabled – Overriding the MOfE menu setting)<br>Tracking (Shortcuts disabled - Overriding the SCUT menu setting)<br>Tracking (Shortcuts enabled - Overriding the SCUT menu setting)<br>Blackout while moving |                |