

# MAC 700 Wash DMX protocol

| 16-bit Basic Mode | 16-bit Extended Mode | DMX Value  | Percent | Function  |
|-------------------|----------------------|------------|---------|---|
| 1                 | 1                    | 0 - 19     | 0 - 7   | <b>Shutter, strobe, reset, lamp on/off</b><br>Shutter closed (lamp switches to 400 W mode after 10 seconds while shutter is closed) |
|                   |                      | 20 - 49    | 8 - 19  | Shutter open  |
|                   |                      | 50 - 72    | 20 - 28 | Strobe, fast → slow   |
|                   |                      | 73 - 79    | 29 - 30 | Shutter open  |
|                   |                      | 80 - 99    | 31 - 39 | Opening pulse, fast → slow  |
|                   |                      | 100 - 119  | 40 - 47 | Closing pulse, fast → slow  |
|                   |                      | 120 - 127  | 48 - 50 | Shutter open  |
|                   |                      | 128 - 147  | 51 - 57 | Random strobe, fast   |
|                   |                      | 148 - 167  | 58 - 65 | Random strobe, medium   |
|                   |                      | 168 - 187  | 66 - 73 | Random strobe, slow   |
|                   |                      | 188 - 190  | 74      | Shutter open  |
|                   |                      | 191 - 193  | 75      | Random opening pulse, fast  |
|                   |                      | 194 - 196  | 76      | Random opening pulse, slow  |
|                   |                      | 197 - 199  | 77      | Random closing pulse, fast  |
|                   |                      | 200 - 202  | 78 - 79 | Random closing pulse, slow  |
|                   |                      | 203 - 207  | 80 - 81 | Shutter open  |
|                   |                      | 208 - 217  | 82 - 85 | Reset fixture* **   |
|                   |                      | 218 - 227  | 86 - 89 | Shutter open  |
|                   |                      | 228 - 237  | 90 - 93 | Lamp on   |
|                   |                      | 238 - 242  | 94 - 95 | 400 W mode (active until 700 W value is selected)   |
| 243 - 247         | 96 - 97              | 700 W mode |         |   |
| 248 - 255         | 98 - 100             | Lamp off*  |         |   |
| 2                 | 2                    | 0 - 255    | 0 - 100 | <b>Dimmer (MSB)</b><br>Closed → open  |
| -                 | 3                    | 0 - 255    | 0 - 100 | <b>Dimmer, fine (LSB)</b>   |
| 3                 | 4                    | 0 - 255    | 0 - 100 | <b>Cyan (MSB)</b><br>White → full cyan  |
|                   |                      | 0          | 0       | <b>Cyan range in random CMY color</b> when set on channel 9 (basic) or 15 (extended)<br>Normal (full range)                         |
|                   |                      | 1 - 127    | 1 - 50  | Minimum cyan setting (127 = full cyan)  |
|                   |                      | 128 - 254  | 51 - 99 | Maximum cyan setting (128 = no cyan)  |
|                   |                      | 255        | 100     | Normal (full range)   |
| -                 | 5                    | 0 - 255    | 0 - 100 | <b>Cyan, fine (LSB)</b>   |
| 4                 | 6                    | 0 - 255    | 0 - 100 | <b>Magenta (MSB)</b><br>White → full magenta  |
|                   |                      | 0          | 0       | <b>Magenta range in random CMY color</b> when set on channel 9 (basic) or 15 (extended)<br>Normal (full range)                      |
|                   |                      | 1 - 127    | 1 - 50  | Minimum magenta setting (127 = full magenta)  |
|                   |                      | 128 - 254  | 51 - 99 | Maximum magenta setting (128 = no magenta)  |
|                   |                      | 255        | 100     | Normal (full range)   |
| -                 | 7                    | 0 - 255    | 0 - 100 | <b>Magenta, fine (LSB)</b>  |
| 5                 | 8                    | 0 - 255    | 0 - 100 | <b>Yellow (MSB)</b><br>White → full yellow  |
|                   |                      | 0          | 0       | <b>Yellow range in random CMY color</b> when set on channel 9 (basic) or 15 (extended)<br>Normal (full range)                       |
|                   |                      | 1 - 127    | 1 - 50  | Minimum yellow setting (127 = full yellow)  |
|                   |                      | 128 - 254  | 51 - 99 | Maximum yellow setting (128 = no yellow)  |
|                   |                      | 255        | 100     | Normal (full range)   |
| -                 | 9                    | 0 - 255    | 0 - 100 | <b>Yellow, fine (LSB)</b>   |
| 6                 | 10                   | 0 - 255    | 0 - 100 | <b>CTC (MSB)</b><br>White → full CTC  |

*\*If disabled in the control menu, Reset fixture and Lamp off work only if the following effects are selected:*

- Color wheel to slot 1 using DMX value 17 on channel 7 (in basic mode) or 12 (extended mode)
- Beam shaper on using DMX value 1 - 255 on channel 8 (basic) or 14 (extended)

*\*\* A five-second delay for the Reset fixture command can be set in the control menu under IRES.*

| 16-bit Basic Mode | 16-bit Extended Mode | DMX Value  | Percent   | Function   |
|-------------------|----------------------|--|---|--|
| -                 | 11                   | 0 - 255  | 0 - 100   | <b>CTC, fine (LSB)</b><br>White → increased CTC  |
| 7                 | 12                   | 0<br>1 - 16<br>17<br>18 - 33<br>34<br>35 - 50<br>51<br>52 - 67<br>68<br>69 - 84<br>85<br>86 - 101<br>102<br>103 - 118<br>119<br>120 - 135<br>136<br>137 - 152<br>153<br><br>154 - 158<br>159 - 163<br>164 - 168<br>169 - 173<br>174 - 178<br>179 - 183<br>184 - 188<br>189 - 193<br>194 - 198<br><br>199 - 219<br>220 - 240<br><br>241 - 245<br>246 - 250<br>251 - 255 | 0<br>1 - 6<br>7<br>8 - 12<br>13<br>14 - 19<br>20<br>21 - 26<br>27<br>28 - 32<br>33<br>34 - 39<br>40<br>41 - 46<br>47<br>48 - 52<br>53<br>54 - 59<br>60<br><br>61 - 62<br>63 - 64<br>65 - 66<br>67 - 68<br>69 - 70<br>71 - 72<br>73 - 74<br>75 - 76<br>77 - 78<br><br>79 - 86<br>87 - 94<br><br>95 - 96<br>97 - 98<br>99 - 100 | <b>Color wheel (MSB)</b><br><i>Continuous scroll</i><br>Open<br>Open → slot 1<br>Slot 1 (Blue 110)<br>Slot 1 → slot 2<br>Slot 2 (Green 206 IAD)<br>Slot 2 → slot 3<br>Slot 3 (Pink 312)<br>Slot 3 → slot 4<br>Slot 4 (Orange 306M)<br>Slot 4 → slot 5<br>Slot 5 (Half minus green)<br>Slot 5 → slot 6<br>Slot 6 (CTC 3200 - 4100 K)<br>Slot 6 → slot 7<br>Slot 7 (UV transmitter)<br>Slot 7 → slot 8<br>Slot 8 (Red 308)<br>Slot 8 → open<br>Open<br><br><i>Stepped scroll</i><br>Slot 8 (Red 308)<br>Slot 7 (UV transmitter)<br>Slot 6 (CTC 3200 - 4100 K)<br>Slot 5 (Half minus green)<br>Slot 4 (Orange 306M)<br>Slot 3 (Pink 312)<br>Slot 2 (Green 206 IAD)<br>Slot 1 (Blue 110)<br>Open<br><br><i>Continuous rotation</i><br>CW, fast → slow<br>CCW, slow → fast<br><br><i>Random color</i><br>Fast<br>Medium<br>Slow |
| -                 | 13                   | 0 - 255  | 0 - 100   | <b>Color Wheel, fine (LSB)</b>   |
| 8                 | 14                   | 0<br>1 - 255   | 0<br>1 - 100  | <b>Beam shaper: indexed angled position, rotation direction and speed</b><br>Open<br>Indexed angle, 0° → 360°<br><br><i>If continuous rotation is selected on Macro channel (9 in basic or 15 in extended mode)</i><br>Open<br>1 - 127<br>128<br>129 - 255   |
| 9                 | 15                   | 0 - 15<br>16 - 55<br>56 - 95<br>96 - 135<br><br>136 - 175<br>176 - 215<br>216 - 255  | 0 - 6<br>7 - 22<br>23 - 37<br>38 - 53<br><br>54 - 69<br>70 - 84<br>85 - 100   | <b>Macros</b><br>No effect<br>Color wheel shake, slow → fast<br>Beam shaper continuous rotation<br>Color wheel shake, slow → fast, plus beam shaper continuous rotation<br><br>Random CMY (set min. max. limits on channels 3, 4 and 5 in basic mode or 4, 6 and 8 in extended mode)<br>Fast<br>Medium<br>Slow   |
| 10                | 16                   | 0 - 255  | 0 - 100   | <b>Zoom (MSB)</b><br>Flood → spot  |

| 16-bit Basic Mode | 16-bit Extended Mode | DMX Value   | Percent  | Function   |
|-------------------|----------------------|---|--|--|
| -                 | 17                   | 0 - 255   | 0 - 100  | Zoom, fine (LSB)   |
| 11                | 18                   | 0 - 255   | 0 - 100  | Pan (MSB)<br>Left → right (128 = neutral)  |
| 12                | 19                   | 0 - 255   | 0 - 100  | Pan, fine (LSB)<br>Left → right  |
| 13                | 20                   | 0 - 255   | 0 - 100  | Tilt (MSB)<br>Left → right (128 = neutral)   |
| 14                | 21                   | 0 - 255   | 0 - 100  | Tilt, fine (LSB)<br>Left → right   |
| 15                | 22                   | 0 - 2<br>3 - 242<br>243 - 245<br>246 - 248<br>249 - 251<br>252 - 255  | 0 - 1<br>1 - 95<br>96<br>96 - 97<br>98<br>99 - 100   | <b>Pan/tilt speed</b><br>Tracking<br>Fast → slow (vector control mode)<br>Tracking, <i>PTSP</i> = <i>SLOW</i> (menu override)<br>Tracking, <i>PTSP</i> = <i>NORM</i> (menu override)<br>Tracking, <i>PTSP</i> = <i>FAST</i> (menu override)<br>Blackout while moving   |
| 16                | 23                   | 0 - 2<br>3 - 245<br>246 - 251<br>252 - 255<br><br>0 - 2<br>3 - 245<br>246 - 248<br>249 - 251<br>252 - 255<br><br>0 - 251<br>252 - 255 | 0 - 1<br>1 - 96<br>96 - 98<br>99 - 100<br><br>0 - 1<br>1 - 96<br>96 - 97<br>98<br>99 - 100<br><br>0 - 98<br>99 - 100 | <b>Effects speed</b><br><i>Dimmer, cyan, magenta, yellow, CTC and zoom</i><br>Tracking<br>Fast → slow (vector control mode)<br>Tracking<br>Blackout while moving<br><br><i>Color wheel</i><br>Tracking<br>Fast → slow (vector control mode)<br>Tracking, <i>SCUT</i> = <i>OFF</i> (menu override)<br>Tracking, <i>SCUT</i> = <i>ON</i> (menu override)<br>Blackout while moving<br><br><i>Beam shaper</i><br>Normal (no blackout)<br>Blackout while moving |