

# Studio Color<sup>®</sup> 250 Construct Parameters



Table A-3 lists the 15 Studio Color 250 constructs and their corresponding DMX controller values. If you have a numeric-type controller, use the Value Decimal (dec.) column. If you have a fader-type controller, use the Value Percentage (%) column. If your controller allows you to program hex values, use the Value (hex) column.

The values in Table A-3 may vary slightly depending on your controller's rounding convention.

Table A-3. Studio Color<sup>®</sup> 250 Construct Parameters

| Channel | Construct        | Description                            | Value (dec.) | Value (%) | Value (hex) |
|---------|------------------|--|--------------|-----------|-------------|
| 1       | Pan              | Pan Coarse                             | 0 - 255      | 0-100     | 0-FF        |
| 2       | Pan              | Pan Fine                               | 0 - 255      | 0-100     | 0-FF        |
| 3       | Tilt             | Tilt Coarse                            | 0 - 255      | 0-100     | 0-FF        |
| 4       | Tilt             | Tilt Fine                              | 0 - 255      | 0-100     | 0-FF        |
| 5       | Color Function   | <i>Full Speed Control</i>              |              |           |             |
|         |                  | Continuous                             | 0 - 15       | 0-6       | 0-0F        |
|         |                  | Indexed                                | 16-31        | 6-12      | 10-1F       |
|         |                  | Pure Mix                               | 32-47        | 13-18     | 20-2F       |
|         |                  | Spin                                   | 48-63        | 19-25     | 30-3F       |
|         |                  | Cycle                                  | 64-79        | 25-31     | 40-4F       |
|         |                  | <i>Not Assigned - To Be Determined</i> | 80-95        | 31-37     | 50-5F       |
|         |                  | Random                                 | 96-111       | 38-44     | 60-6F       |
|         |                  | Blink-Indexed                          | 112-127      | 44-50     | 70-7F       |
|         |                  | <i>MSpeed Control</i>                  |              |           |             |
|         |                  | Continuous                             | 128-143      | 50-56     | 80-8F       |
|         |                  | Indexed                                | 144-159      | 57-62     | 90-9F       |
|         |                  | Pure Mix                               | 160-175      | 63-69     | A0-AF       |
|         |                  | Spin                                   | 176-191      | 69-75     | B0-BF       |
|         |                  | Cycle                                  | 192-207      | 75-81     | C0-CF       |
|         |                  | <i>Not Assigned - To Be Determined</i> | 208-223      | 82-88     | D0-DF       |
|         |                  | Random                                 | 224-239      | 88-94     | E0-EF       |
|         |                  | Blink-Indexed                          | 240-255      | 94-100    | F0-FF       |
| 6       | Cyan Color Wheel | <i>Continuous Mode</i>                 |              |           |             |
|         |                  | Open                                   | 0            | 0         | 0           |
|         |                  | Color 1                                | 42           | 17        | 2A          |
|         |                  | Color 2                                | 85           | 33        | 55          |
|         |                  | Cyan In (Full saturation)              | 127          | 50        | 7F          |
|         |                  | Cyan Out (Low saturation)              | 255          | 100       | FF          |
|         |                  | <i>Indexed Mode</i>                    |              |           |             |

Table A-3. Studio Color® 250 Construct Parameters

| Channel   | Construct                | Description                     | Value (dec.) | Value (%) | Value (hex) |
|-----------|--------------------------|---------------------------------|--------------|-----------|-------------|
| 6 (cont.) | Cyan Color Wheel (cont.) | Open                            | 0-15         | 0-6       | 0-0F        |
|           |                          | Color 1                         | 16-47        | 6-18      | 10-2F       |
|           |                          | Color 2                         | 48-79        | 19-31     | 30-4F       |
|           |                          | Cyan Full Saturation            | 80-111       | 31-44     | 50-6F       |
|           |                          | Cyan Medium High Saturation     | 112-143      | 44-56     | 70-8F       |
|           |                          | Cyan Medium Saturation          | 144-175      | 57-69     | 90-AF       |
|           |                          | Cyan Medium Low Saturation      | 176-207      | 69-81     | B0-CF       |
|           |                          | Cyan Low Saturation             | 208-239      | 82-94     | D0-EF       |
|           |                          | Open                            | 240-255      | 94-100    | F0-FF       |
|           |                          | <i>Pure Mix Mode</i>            |              |           |             |
|           |                          | Cyan In (Full saturation)       | 0            | 0         | 0           |
|           |                          | Cyan Out (Low saturation)       | 255          | 100       | FF          |
|           |                          | <i>Spin Mode</i>                |              |           |             |
|           |                          | Continuous Positioning          | 0-127        | 0-50      | 0-7F        |
|           |                          | Spin Reverse Fastest            | 128-157      | 50-62     | 80-9D       |
|           |                          | Spin Reverse Slowest            | 158-187      | 62-73     | 9E-BB       |
|           |                          | Spin Stop                       | 188-195      | 74-77     | BC-C3       |
|           |                          | Spin Forward Slowest            | 196-225      | 77-88     | C4-E1       |
|           |                          | Spin Forward Fastest            | 226-255      | 89-100    | E2-FF       |
|           |                          | <i>Cycle &amp; Random Modes</i> |              |           |             |
| Slow Rate | 0                        | 0                               | 0            |           |             |
| Fast Rate | 255                      | 100                             | FF           |           |             |
| 7         | Magenta Color Wheel      | <i>Continuous Mode</i>          |              |           |             |
|           |                          | Open                            | 0            | 0         | 0           |
|           |                          | Color 1                         | 42           | 17        | 2A          |
|           |                          | Color 2                         | 85           | 33        | 55          |
|           |                          | Magenta In (Full saturation)    | 127          | 50        | 7F          |
|           |                          | Magenta Out (Low saturation)    | 255          | 100       | FF          |
|           |                          | <i>Indexed Mode</i>             |              |           |             |
|           |                          | Open                            | 0-15         | 0-6       | 0-0F        |
|           |                          | Color 1                         | 16-47        | 6-18      | 10-2F       |
|           |                          | Color 2                         | 48-79        | 19-31     | 30-4F       |
|           |                          | Magenta Full Saturation         | 80-111       | 31-44     | 50-6F       |
|           |                          | Magenta Medium High Saturation  | 112-143      | 44-56     | 70-8F       |
|           |                          | Magenta Medium Saturation       | 144-175      | 57-69     | 90-AF       |
|           |                          | Magenta Medium Low Saturation   | 176-207      | 69-81     | B0-CF       |
|           |                          | Magenta Low Saturation          | 208-239      | 82-94     | D0-EF       |
|           |                          | Open                            | 240-255      | 94-100    | F0-FF       |
|           |                          | <i>Pure Mix Mode</i>            |              |           |             |

Table A-3. Studio Color® 250 Construct Parameters



| Channel   | Construct                   | Description                   | Value (dec.) | Value (%) | Value (hex) |
|-----------|-----------------------------|-------------------------------|--------------|-----------|-------------|
| 7 (cont.) | Magenta Color Wheel (cont.) | Magenta In (Full saturation)  | 0            | 0         | 0           |
|           |                             | Magenta Out (Low saturation)  | 255          | 100       | FF          |
|           |                             | <i>Spin Mode</i>              |              |           |             |
|           |                             | Continuous Positioning        | 0-127        | 0-50      | 0-7F        |
|           |                             | Spin Reverse Fastest          | 128-157      | 50-62     | 80-9D       |
|           |                             | Spin Reverse Slowest          | 158-187      | 62-73     | 9E-BB       |
|           |                             | Spin Stop                     | 188-195      | 74-77     | BC-C3       |
|           |                             | Spin Forward Slowest          | 196-225      | 77-88     | C4-E1       |
|           |                             | Spin Forward Fastest          | 226-255      | 89-100    | E2-FF       |
| 8         | Yellow Color Wheel          | <i>Continuous Mode</i>        |              |           |             |
|           |                             | Open                          | 0            | 0         | 0           |
|           |                             | Color 1                       | 42           | 17        | 2A          |
|           |                             | Color 2                       | 85           | 33        | 55          |
|           |                             | Yellow In (Full saturation)   | 127          | 50        | 7F          |
|           |                             | Yellow Out (Low saturation)   | 255          | 100       | FF          |
|           |                             | <i>Indexed Mode</i>           |              |           |             |
|           |                             | Open                          | 0-15         | 0-6       | 0-0F        |
|           |                             | Color 1                       | 16-47        | 6-18      | 10-2F       |
|           |                             | Color 2                       | 48-79        | 19-31     | 30-4F       |
|           |                             | Yellow Full Saturation        | 80-111       | 31-44     | 50-6F       |
|           |                             | Yellow Medium High Saturation | 112-143      | 44-56     | 70-8F       |
|           |                             | Yellow Medium Saturation      | 144-175      | 57-69     | 90-AF       |
|           |                             | Yellow Medium Low Saturation  | 176-207      | 69-81     | B0-CF       |
|           |                             | Yellow Low Saturation         | 208-239      | 82-94     | D0-EF       |
|           |                             | Open                          | 240-255      | 94-100    | F0-FF       |
|           |                             | <i>Pure Mix Mode</i>          |              |           |             |
|           |                             | Yellow In (Full saturation)   | 0            | 0         | 0           |
|           |                             | Yellow Out (Low saturation)   | 255          | 100       | FF          |
|           |                             | <i>Spin Mode</i>              |              |           |             |
|           |                             | Continuous Positioning        | 0-127        | 0-50      | 0-7F        |
|           |                             | Spin Reverse Fastest          | 128-157      | 50-62     | 80-9D       |
|           |                             | Spin Reverse Slowest          | 158-187      | 62-73     | 9E-BB       |
|           |                             | Spin Stop                     | 188-195      | 74-77     | BC-C3       |
|           |                             | Spin Forward Slowest          | 196-225      | 77-88     | C4-E1       |
|           |                             | Spin Forward Fastest          | 226-255      | 89-100    | E2-FF       |

Table A-3. Studio Color® 250 Construct Parameters

| Channel  | Construct                                 | Description                    | Value (dec.) | Value (%) | Value (hex) |
|----------|---|--------------------------------|--------------|-----------|-------------|
| 9        | Beam Shaping (Lenticular Wheel)           | Continuous Positioning         | 0-127        | 0-50      | 0-7F        |
|          |   | Spin Reverse Fastest           | 128-157      | 50-62     | 80-9D       |
|          |   | Spin Reverse Slowest           | 158-187      | 62-73     | 9E-BB       |
|          |   | Spin Stop                      | 188-195      | 74-77     | BC-C3       |
|          |   | Spin Forward Slowest           | 196-225      | 77-88     | C4-E1       |
|          |   | Spin Forward Fastest           | 226-255      | 89-100    | E2-FF       |
| 10       | Focus                                     | Focus In                       | 0            | 0         | 0           |
|          |   | Focus Out                      | 255          | 100       | FF          |
| 11       | Shutter                                   | Close                          | 0-23         | 0-9       | 0-17        |
|          |   | Periodic Strobe (Variable)     | 24-49        | 9-19      | 18-31       |
|          |   | Random/Rand Strobe (Variable)  | 50-75        | 20-29     | 32-4B       |
|          |   | Random/Sync (Variable)         | 76-101       | 30-40     | 4C-65       |
|          |   | Ramp Open/Snap Shut (Variable) | 102-127      | 40-50     | 66-7F       |
|          |   | Snap Open/Ramp Shut (Variable) | 128-153      | 50-60     | 80-99       |
|          |   | Ramp Open/Ramp Shut (Variable) | 154-179      | 60-70     | 9A-B3       |
|          |   | Random Ramp/Snap (Variable)    | 180-205      | 71-80     | B4-CD       |
|          |   | Random Snap/Ramp (Variable)    | 206-231      | 81-91     | CE-E7       |
|          |   | Open                           | 232-255      | 91-100    | E8-FF       |
| 12       | Dim                                       | Close                          | 0            | 0         | 0           |
|          |   | Open                           | 255          | 100       | FF          |
| 13       | MSpeed<br>(see Table A-4<br>on page A-14) | Disable                        | 0-3          | 0-1       | 0-3         |
|          |   | Longest (252.7 sec.)           | 4            | 2         | 4           |
|          |   | Shortest (0.15 sec.)           | 255          | 100       | FF          |
| 14       | Macro/LAD                                 | No Macro / LAD off             | 0-7          | 0-3       | 0-07        |
|          |   | Macro 1                        | 8-11         | 3-4       | 08-0B       |
|          |   | Macro 2                        | 12-15        | 5-6       | 0C-0F       |
|          |   | Macro 3                        | 16-19        | 6-8       | 10-13       |
|          |   | Macro 4                        | 20-23        | 8-9       | 14-17       |
|          |   | Macro 5                        | 24-27        | 9-11      | 18-1B       |
|          |   | Macro 6                        | 28-31        | 11-12     | 1C-1F       |
|          |   | Macro 7                        | 32-35        | 13-14     | 20-23       |
|          |   | Macro 8                        | 36-39        | 14-15     | 24-27       |
|          |   | Macro 9                        | 40-43        | 16-17     | 28-2B       |
|          |   | Macro 10                       | 44-47        | 17-18     | 2C-2F       |
|          |   | Macro 11                       | 48-51        | 19-20     | 30-33       |
|          |   | Macro 12                       | 52-55        | 20-22     | 34-37       |
|          |   | Macro 13                       | 56-59        | 22-23     | 38-3B       |
|          |   | Macro 14                       | 60-63        | 24-25     | 3C-3F       |
| Macro 15 | 64-67                                     | 25-26                          | 40-43        |           |             |

Table A-3. Studio Color® 250 Construct Parameters



| Channel                 | Construct  | Description  | Value (dec.) | Value (%) | Value (hex) |
|-------------------------|--|--|--------------|-----------|-------------|
| 14 (cont.)              | Macro/LAD (cont.)  | Macro 16   | 68-71        | 27-28     | 44-47       |
|                         |  | Macro 17   | 72-75        | 28-29     | 48-4B       |
|                         |  | Macro 18   | 76-79        | 30-31     | 4C-4F       |
|                         |  | Macro 19   | 80-83        | 31-33     | 50-53       |
|                         |  | Macro 20   | 84-87        | 33-34     | 54-57       |
|                         |  | Macro 21   | 88-91        | 35-36     | 58-5B       |
|                         |  | Macro 22   | 92-95        | 36-37     | 5C-5F       |
|                         |  | Macro 23   | 96-99        | 38-39     | 60-63       |
|                         |  | Macro 24   | 100-103      | 39-40     | 64-67       |
|                         |  | Macro 25   | 104-107      | 41-42     | 68-6B       |
|                         |  | Macro 26   | 108-111      | 42-44     | 6C-6F       |
|                         |  | Macro 27   | 112-115      | 44-45     | 70-73       |
|                         |  | Macro 28   | 116-119      | 46-47     | 74-77       |
|                         |  | Macro 29   | 120-123      | 47-48     | 78-7B       |
|                         |  | Macro 30   | 124-127      | 49-50     | 7C-7F       |
|                         |  | Macro 31   | 128-131      | 50-51     | 80-83       |
|                         |  | Macro 32   | 132-135      | 52-53     | 84-87       |
|                         |  | Random Macros (Variable)                                 | 136-167      | 53-66     | 88-A7       |
|                         |  | LAD Off / No Macros                                      | 168-199      | 66-78     | A8-C7       |
| LAD Modulate (Variable) | 200-231  | 78-91  | C8-E7        |           |             |
| LAD On                  | 232-255  | 91-100   | E8-FF        |           |             |
| 15                      | Control<br>(After choosing a control channel value, set the Shutter channel to "O" to access the Control channel settings) | Safe (normal operation)                                  | 0-9          | 0-4       | 0-9         |
|                         |  | Pan & Tilt MSpeed Off                                    | 10-19        | 4-8       | 0A-13       |
|                         |  | Display Off  | 20-28        | 8-11      | 14-1C       |
|                         |  | Display Dim  | 30-38        | 12-15     | 1E-26       |
|                         |  | Display Bright   | 40-48        | 16-19     | 28-30       |
|                         |  | Home   | 60-68        | 24-27     | 3C-44       |
|                         |  | Lamp On  | 80-88        | 31-35     | 50-58       |
|                         |  | Lamp Off   | 90-98        | 35-38     | 5A-62       |
|                         |  | Shutdown (send this value for approximately two seconds) | 120-130      | 47-51     | 78-82       |

## MSpeed Times

Table A-4 lists the MSpeed (motor) movement times and their corresponding DMX controller values. If you have a numeric-type controller, use the Value Decimal (dec.)