

TECH NOTICE



Subject: Fixture Control Channel Timing
Manufacturer: PRG
Bulletin No: TN-051
Date: 4 September 2018

INTRODUCTION

Control Channel Timing for Luminaire Firmware

PRG manufactured luminaires running the most recent firmware are experiencing a timing issue with executing Control Channel Macros that use more than the recommended wait time between the execution of the command and the Idle call.

The recommended wait/hold time after calling up the value on the Control Channel is 3 to 5 seconds; users with wait/hold times exceeding the recommended time are experiencing what is ostensibly an expiration of the Control Channel command, resulting in the Control Channel macro not executing in the fixture (Lamp Strike, Lamp Douse, Reset, *et al*).

Users experiencing the issue have reported wait times of 8 to 10+ seconds in their Control Channel Macros. When recording macros for use with PRG fixtures, be sure to adhere to the recommended wait time of 3-5 seconds after executing your Control command. 8 seconds is the upper limit at which the command expires.

Example: LAMP STRIKE Command Syntax

Use the example below for reference with respect to your programming and the Control Channel Macro Syntax. The example below applies to all macros in the Control Channel.

LAMP STRIKE MACRO for Best Boy HP v3.03

Control Channel 36 is given a 8-bit value of 30 (Lamp Strike);
Immediately following this input value, a wait/hold of 3-5 seconds of the value 30 is observed;
Immediately following the wait/hold of 3-5 seconds, Control Channel 36 is given an 8-bit value of 0 (idle).

Products Referenced:

- + Version 3.03 for Best Boy HP/4000
- + Version 3.03 for Best Boy Wash
- + Version 3.02 for Bad Boy HP
- + Version 1.00 for GC Bad Boy
- + Version 1.00 for GC Best Boy
- + Version 1.03 for GCLT

The following pages list each fixture's Control Channel Values and functions:

"Best Boy HP DMX Control Channel Detail" on page 2

"Best Boy Wash DMX Control Channel Detail" on page 3

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"GroundControl™ Bad Boy DMX Control Channel Detail" on page 5

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"GroundControl™ Longthrow DMX Control Channel Detail" on page 7

Best Boy HP DMX Control Channel Detail

Below is a quick reference of the functions of Best Boy HP Control Channel 36 for your reference. Make sure to observe a wait/hold time of the control channel value you want when building macros, followed immediately by entering value 0 before clearing your macro from the programmer.

| Val | Function | Val | Function | Val | Function |
|-----|--|-----|--|-----|--|
| 0 | Idle | 74 | Zoom Table Select: 300' Throw | 135 | Follow Spot: Intensity/Iris/Edge |
| 1 | Reserved; No Function | 75 | Zoom Speed Select: Maintain Focus (Default) | 136 | Follow Spot: Intensity/Iris/Edge/Zoom |
| 10 | Recalibrate: All | 77 | Zoom Speed Select: Move Fast | 137 | Follow Spot: Intensity/Iris Zoom |
| 11 | Recalibrate: Erred Mechanisms | 80 | Gobo: Set Zero Positions | 138 | End Follow Spot Mode |
| 12 | Recalibrate: Zoom/Edge + Effects | 90 | Display: Backlight ON | 139 | Follow Spot: Intensity |
| 14 | Recalibrate: Color | 95 | Display: Backlight OFF | 140 | Follow Spot: Intensity/Edge |
| 16 | Recalibrate: Gobos | 98 | Clear Pan/Tilt Lock/Free | 141 | Follow Spot: Intensity/Edge/Zoom |
| 17 | Recalibrate: Shutters | 100 | Pan: Lock | 142 | Follow Spot Intensity/Zoom |
| 18 | Recalibrate: Dimmer/Strobe/Iris | 102 | Pan: Unlock | 143 | Follow Spot: Iris |
| 19 | Recalibrate: Pan/Tilt | 104 | Tilt: Lock | 144 | Follow Spot: Iris/Edge |
| 20 | Lamp: Douse | 106 | Tilt: Unlock | 145 | Follow Spot: Iris/Zoom |
| 30 | Lamp: Start | 108 | Pan/Tilt: Free Motion | 146 | Follow Spot: Iris/Edge/Zoom |
| 40 | Lamp Power Limit Select: High (Default) | 110 | Pan/Tilt: Free Lock | 147 | Follow Spot: Edge |
| 45 | Lamp Power Limit Select: Medium | 112 | Pan/Tilt: End Free Motion | 148 | Follow Spot: Edge/Zoom |
| 50 | Lamp Power Limit Select: Low | 114 | No Fade Out | 149 | Follow Spot: Zoom |
| 56 | Zoom Table Select: 15' Throw | 116 | Fade Out after 30s | 150 | Follow Spot: Turn Intensity Scaling ON |
| 58 | Zoom Table Select: 25' Throw | 118 | Fade Out after 60s | 152 | Follow Spot: Turn Intensity Scaling OFF |
| 60 | Zoom Table Select: 30' Throw (Default) | 120 | Clear Logs | 154 | FSC: Enable Frost Control |
| 62 | Zoom Table Select: 42' Throw | 122 | Invert Pan | 156 | FSC: Disable Front Control |
| 64 | Zoom Table Select: 58' Throw | 124 | Don't Invert Pan | | |
| 66 | Zoom Table Select: 80' Throw | 126 | Invert Tilt | | |
| 68 | Zoom Table Select: 112' Throw | 128 | Don't Invert Tilt | | |
| 70 | Zoom Table Select: 115' Throw | 130 | Swap Pan/Tilt | | |
| 72 | Zoom Table Select: 215' Throw | 132 | Don't Swap Pan/Tilt | | |
| | | 134 | Follow Spot: Intensity/Iris | | |

Best Boy Wash DMX Control Channel Detail

Below is a quick reference of the functions of Best Boy Wash Control Channel 26 for your reference. Make sure to observe a wait/hold time of the control channel value you want when building macros, followed immediately by entering value 0 before clearing your macro from the programmer.

| Val | Function |
|-----|--|
| 0 | Idle |
| 1 | Reserved; No Function |
| 10 | Recalibrate: All |
| 11 | Recalibrate: Erred Mechanisms |
| 12 | Recalibrate: Zoom/Edge |
| 14 | Recalibrate: Color |
| 16 | Recalibrate: Gobos |
| 18 | Recalibrate: Dimmer/Strobe/Iris |
| 19 | Recalibrate: Pan/Tilt |
| 20 | Lamp: Douse |
| 30 | Lamp: Start |
| 40 | Lamp Power Limit Select: High (Default) |
| 45 | Lamp Power Limit Select: Medium |
| 50 | Lamp Power Limit Select: Low |
| 78 | Edge: Near Focal Plane |
| 79 | Edge: Far Focal Plane |
| 80 | Gobo: Set Zero Positions |
| 82 | Gobo: Always Take Shortest Path |
| 84 | Gobo: Take Natural Direction with Timing |
| 90 | Display: Turn Backlight ON |
| 95 | Display: Turn Backlight OFF |
| 98 | Clear Pan / Tilt Lock / Free |
| 108 | Pan / Tilt: Free Motion |
| 112 | Pan / Tilt: End Free Motion |
| 114 | No Fade Out |
| 116 | Fade Out after 30s |
| 118 | Fade Out after 60s |
| 120 | Clear Logs |
| 122 | Invert Pan |
| 124 | Don't Invert Pan |
| 126 | Invert Tilt |
| 128 | Don't Invert Tilt |
| 130 | Swap Pan / Tilt |
| 132 | Don't Swap Pan / Tilt |

Bad Boy HP DMX Control Channel Detail

Below is a quick reference of the functions of **Bad Boy Control Channel 42** for your reference. Make sure to observe a wait/hold time of the control channel value you want when building macros, followed immediately by entering value 0 before clearing your macro from the programmer.

| Val | Function | Val | Function | Val | Function |
|-----|--|-----|--|-----|--|
| 0 | Idle | 70 | Zoom Table Select: 15' Throw | 130 | Swap Pan/Tilt |
| 1 | Reserved; No Function | 72 | Zoom Table Select: Narrow Throw | 132 | Don't Swap Pan/Tilt |
| 10 | Recalibrate: All | 75 | Zoom Speed Select: Maintain Focus (Default) | 134 | Follow Spot: Intensity/Iris |
| 11 | Recalibrate: Erred Mechanisms | 77 | Zoom Speed Select: Move Fast | 135 | Follow Spot: Intensity/Iris/Edge |
| 12 | Recalibrate: Zoom/Edge | 80 | Gobo: Set Zero Positions | 136 | Follow Spot: Intensity/Iris/Edge/Zoom |
| 14 | Recalibrate: Color | 90 | Display: Backlight ON | 137 | Follow Spot: Intensity/Iris Zoom |
| 16 | Recalibrate: Gobos | 95 | Display: Backlight OFF | 138 | End Follow Spot Mode |
| 18 | Recalibrate: Dimmer/Strobe/Iris | 98 | Clear Pan/Tilt Lock/Free | 139 | Follow Spot: Intensity |
| 19 | Recalibrate: Pan/Tilt | 100 | Pan: Lock | 140 | Follow Spot: Intensity/Edge |
| 20 | Lamp: Douse | 102 | Pan: Unlock | 141 | Follow Spot: Intensity/Edge/Zoom |
| 30 | Lamp: Start | 104 | Tilt: Lock | 142 | Follow Spot Intensity/Zoom |
| 40 | Lamp Power Limit Select: High (Default) | 106 | Tilt: Unlock | 143 | Follow Spot: Iris |
| 45 | Lamp Power Limit Select: Medium | 108 | Pan/Tilt: Free Motion | 144 | Follow Spot: Iris/Edge |
| 50 | Lamp Power Limit Select: Low | 110 | Pan/Tilt: Free Lock | 145 | Follow Spot: Iris/Zoom |
| 55 | Lamp: Override Start-Up Power Limit | 112 | Pan/Tilt: End Free Motion | 146 | Follow Spot: Iris/Edge/Zoom |
| 60 | Zoom Table Select: 30' Throw (Default) | 114 | No Fade Out | 147 | Follow Spot: Edge |
| 62 | Zoom Table Select: 50' Throw | 116 | Fade Out after 30s | 148 | Follow Spot: Edge/Zoom |
| 64 | Zoom Table Select: 75' Throw | 118 | Fade Out after 60s | 149 | Follow Spot: Zoom |
| 66 | Zoom Table Select: 100' Throw | 120 | Clear Logs | 150 | Follow Spot: Turn Intensity Scaling ON |
| 68 | Zoom Table Select: 300' Throw | 122 | Invert Pan | 152 | Follow Spot: Turn Intensity Scaling OFF |
| | | 124 | Don't Invert Pan | 154 | FSC: Enable Frost Control |
| | | 126 | Invert Tilt | 156 | FSC: Disable Front Control |
| | | 128 | Don't Invert Tilt | | |

GroundControl™ Bad Boy DMX Control Channel Detail

Below is a quick reference of the functions of GC Bad Boy Control Channel **37** for your reference. Make sure to observe a wait/hold time of the control channel value you want when building macros, followed immediately by entering value 0 before clearing your macro from the programmer.

| Val | Function | Val | Function | Val | Function |
|-----|--|-----|---|-----|---|
| 0 | Idle | 80 | Gobo: Set Zero Positions | 155 | FSC: Reinitialize Camera |
| 1 | Reserved; No Function | 90 | Display: Backlight ON | 160 | LOCKOUT: Prevent controller operator from using any non-FSC mechanisms |
| 10 | Recalibrate: All | 95 | Display: Backlight OFF | 161 | ALLOW Controller Operator to override any mechanism |
| 11 | Recalibrate: Erred Mechanisms | 98 | Clear Pan/Tilt Lock/Free | 171 | Splitter: Select Fixture #1 |
| 12 | Recalibrate: Zoom/Edge | 100 | Pan: Lock | 172 | Splitter: Select Fixture #2 |
| 14 | Recalibrate: Color | 102 | Pan: Unlock | 173 | Splitter: Select Fixture #3 |
| 16 | Recalibrate: Gobos | 104 | Tilt: Lock | 174 | Splitter: Select Fixture #4 |
| 18 | Recalibrate: Dimmer/Strobe/Iris | 106 | Tilt: Unlock | 176 | Splitter: SOLO Mode ON |
| 19 | Recalibrate: Pan/Tilt | 108 | Pan/Tilt: Free Motion | 178 | Splitter: SOLO Mode OFF |
| 20 | Lamp: Douse | 110 | Pan/Tilt: Free Lock | | |
| 21 | Lamp: Wait on Power Up | 112 | Pan/Tilt: End Free Motion | | |
| 22 | Lamp: Strike on Power Up | 114 | No Fade Out | | |
| 30 | Lamp: Start | 116 | Fade Out after 30s | | |
| 40 | Lamp Power Limit Select: High (Default) | 118 | Fade Out after 60s | | |
| 45 | Lamp Power Limit Select: Medium | 120 | Clear Logs | | |
| 50 | Lamp Power Limit Select: Low | 122 | Invert Pan | | |
| 55 | Lamp: Override Start-Up Power Limit | 124 | Don't Invert Pan | | |
| 70 | Zoom Table Select: 15' Throw | 126 | Invert Tilt | | |
| 75 | Zoom Speed Select: Maintain Focus (Default) | 128 | Don't Invert Tilt | | |
| 77 | Zoom Speed Select: Move Fast | 130 | Swap Pan/Tilt | | |
| | | 132 | Don't Swap Pan/Tilt | | |
| | | 150 | Follow Spot: Turn Intensity Scaling ON | | |
| | | 152 | Follow Spot: Turn Intensity Scaling OFF | | |
| | | 153 | FSC: Reset Mechanisms to Default Positions | | |

GroundControl™ Best Boy DMX Control Channel Detail

Below is a quick reference of the functions of GC Best Boy Control Channel 37 for your reference. Make sure to observe a wait/hold time of the control channel value you want when building macros, followed immediately by entering value 0 before clearing your macro from the programmer.

| Val | Function | Val | Function | Val | Function |
|-----|--|-----|---|-----|---|
| 0 | Idle | 90 | Display: Backlight ON | 160 | LOCKOUT: Prevent controller operator from using any non-FSC mechanisms |
| 1 | Reserved; No Function | 95 | Display: Backlight OFF | 161 | ALLOW Controller Operator to override any mechanism |
| 10 | Recalibrate: All | 98 | Clear Pan/Tilt Lock/Free | 171 | Splitter: Select Fixture #1 |
| 11 | Recalibrate: Erred Mechanisms | 100 | Pan: Lock | 172 | Splitter: Select Fixture #2 |
| 12 | Recalibrate: Zoom/Edge | 102 | Pan: Unlock | 173 | Splitter: Select Fixture #3 |
| 14 | Recalibrate: Color | 104 | Tilt: Lock | 174 | Splitter: Select Fixture #4 |
| 16 | Recalibrate: Gobos | 106 | Tilt: Unlock | 176 | Splitter: SOLO Mode ON |
| 18 | Recalibrate: Dimmer/Strobe/Iris | 108 | Pan/Tilt: Free Motion | 178 | Splitter: SOLO Mode OFF |
| 19 | Recalibrate: Pan/Tilt | 110 | Pan/Tilt: Free Lock | | |
| 20 | Lamp: Douse | 112 | Pan/Tilt: End Free Motion | | |
| 21 | Lamp: Wait on Power Up | 114 | No Fade Out | | |
| 22 | Lamp: Strike on Power Up | 116 | Fade Out after 30s | | |
| 30 | Lamp: Start | 118 | Fade Out after 60s | | |
| 40 | Lamp Power Limit Select: 1630W (Default) | 120 | Clear Logs | | |
| 45 | Lamp Power Limit Select: 1400W | 122 | Invert Pan | | |
| 50 | Lamp Power Limit Select: 1200W | 124 | Don't Invert Pan | | |
| 55 | Lamp: Override Start-Up Power Limit | 126 | Invert Tilt | | |
| 75 | Zoom Speed Select: Maintain Focus (Default) | 128 | Don't Invert Tilt | | |
| 77 | Zoom Speed Select: Move Fast | 130 | Swap Pan/Tilt | | |
| 80 | Gobo: Set Zero Positions | 132 | Don't Swap Pan/Tilt | | |
| | | 150 | Follow Spot: Turn Intensity Scaling ON | | |
| | | 152 | Follow Spot: Turn Intensity Scaling OFF | | |
| | | 153 | FSC: Reset Mechanisms to Default Positions | | |
| | | 155 | FSC: Reinitialize Camera | | |

GroundControl™ Longthrow DMX Control Channel Detail

Below is a quick reference of the functions of GC Longthrow Control Channel 32 for your reference. Make sure to observe a wait/hold time of the control channel value you want when building macros, followed immediately by entering value 0 before clearing your macro from the programmer.

| Val | Function | Val | Function | Val | Function |
|-----|---|-----|--|-----|---|
| 0 | Idle | 90 | Display: Backlight ON | 155 | GroundControl: Reinitialize Camera |
| 1 | Reserved; No Function | 95 | Display: Backlight OFF | 160 | LOCKOUT: Prevent controller operator from using any non-FSC mechanisms |
| 10 | Recalibrate: All | 98 | Clear Pan/Tilt Lock/Free | 161 | ALLOW Controller Operator to override any mechanism |
| 11 | Recalibrate: Erred Mechanisms | 100 | Pan: Lock | 171 | Splitter: Select Fixture #1 |
| 12 | Recalibrate: Zoom/Edge | 102 | Pan: Unlock | 172 | Splitter: Select Fixture #2 |
| 14 | Recalibrate: Color | 104 | Tilt: Lock | 173 | Splitter: Select Fixture #3 |
| 16 | Recalibrate: Gobos | 106 | Tilt: Unlock | 174 | Splitter: Select Fixture #4 |
| 17 | Recalibrate: Framing | 108 | Pan/Tilt: Free Motion | 176 | Splitter: SOLO Mode ON |
| 18 | Recalibrate: Dimmer/Strobe/Iris | 110 | Pan/Tilt: Free Lock | 178 | Splitter: SOLO Mode OFF |
| 19 | Recalibrate: Pan/Tilt | 112 | Pan/Tilt: End Free Motion | | |
| 20 | Lamp: Douse | 114 | No Fade Out | | |
| 21 | Lamp: Wait on Power Up | 116 | Fade Out after 30s | | |
| 22 | Lamp: Strike on Power Up | 118 | Fade Out after 60s | | |
| 30 | Lamp: Start | 120 | Clear Logs | | |
| 40 | Lamp Power Limit Select: High (Default) | 122 | Invert Pan | | |
| 45 | Lamp Power Limit Select: Medium | 124 | Don't Invert Pan | | |
| 50 | Lamp Power Limit Select: Low | 126 | Invert Tilt | | |
| 80 | Gobo: Set Zero Positions | 128 | Don't Invert Tilt | | |
| 82 | Gobo: Always take Shortest Path | 130 | Swap Pan/Tilt | | |
| 84 | Gobo: Take Natural Direction with Timing | 132 | Don't Swap Pan/Tilt | | |
| | | 150 | GroundControl: Turn Intensity Scaling ON | | |
| | | 152 | GroundControl: Turn Intensity Scaling OFF | | |
| | | 153 | GroundControl: Reset Mechanisms to Default Positions | | |