



HYDROCAST

HYDRO**CAST**TM 108
OUTDOOR LED by COLORVERGE

Model: HC108

by

COLORVERSE[®]
LED STAGE LIGHTING

SPECIFICATIONS:

- High output 36 x 3 watt LEDs, 108 watts total (12 R, 12G, 12B)
- Ultra smooth 16-bit dimming
- High temperature protection for LED lamps
- LED display control panel with lock-out feature
- Custom color mixing with or without DMX controller
- Quiet, fanless operation
- Internal programs: Static colors, Gradual change, Auto,
- Std. Beam angle: 25° (Opt. 15° and 40°)
- Lux output: 16,552 @ 1m | 2652 @ 3m
- LED lifespan 50,000+ hrs, (to >75% luminous output, based on manufacturers test data)
- Included power cable: Edison (NEMA 5-15), to proprietary IP65 input power cord
- Included DMX cable: Standard DMX input, convert to IP65 proprietary input
- Sturdy die-cast aluminum housing with built-in heat sink
- Power / current: 120V, 60Hz: 120W, 1A operating
- AC power: Auto-switching 100V-240V 50/60Hz
- Weight: 9 lbs (4kg)
- Size: 10.5in x 8.5in
- Indoor/outdoor use, rated IP65 (do not submerge)

SAFETY PRECAUTIONS

- **WARNING:** Do not look directly into the lighting fixture, sensitive persons may suffer epileptic seizures
- This fixture is designed for indoor use only, do not expose to moisture or submerge in liquid
- Do not attempt to open and service or alter this fixture, while under warranty this light should only be serviced or repaired by a authorized Colorverse® Lighting repair technician
- Installation of the fixture should only be completed by a qualified person in accordance with related local codes
- A periodic safety inspection should be completed to assure all hardware is secure and mounting is safe for use
- Improper installation can result in serious bodily injury
Do not mount in areas where unauthorized persons can handle or manipulate this fixture
- Make sure the mounting surface or truss can adequately support the fixture prior to mounting
- This fixture must have a secondary safety device installed (such as the included safety cable) properly rated for this fixture
- Be sure to have a qualified electrician perform all electrical connections
- Do not connect this fixture to a dimmer pack or rheostat (variable voltage)
- Complete all installation procedures prior to plugging in power cord
- Keep fixtures away from flammable objects by at least 2 feet (.6 meters)
- Do not Power-Link more than (10) **HYDRORcast 108** fixtures in a single chain (10 amperes max)

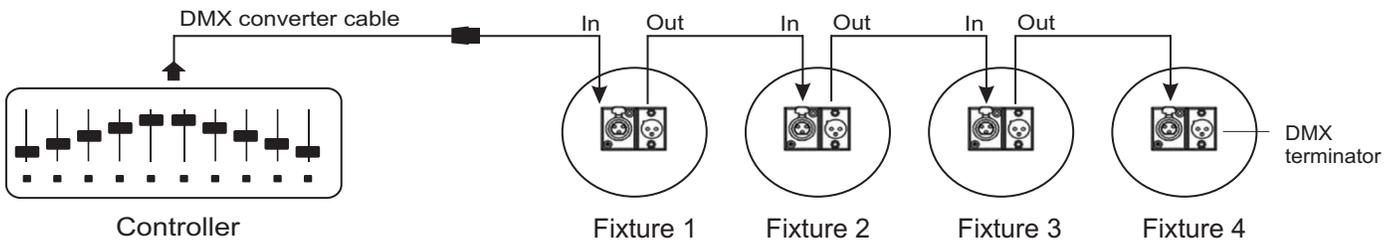
Colorverse makes efforts to ensure information in this manual is true and accurate, however it makes no guarantee or warranty of this information and assumes no liability from or of misinformation contained within.

DMX LINKING

Connecting your fixtures with DMX cable

DMX fixtures are always wired in a “series” style wiring chain. You can have a DMX single chain with up to 16 fixtures or create multiple chains, each with 1-16 fixtures. To create multiple chains, you must use a DMX optical splitter or use wireless receivers. Each receiver can provide signal to one chain. The DMX controller connects to the first fixture in the chain, to the fixture 1 "In-connector" then the fixture 1 "Out-connector" plugs into the fixture 2 "In-connector" and so on. Always use a DMX terminator on the last fixture in the chain. Refer to the drawing below. Maximum length of cabling per chain should not exceed 200 ft. Maximum fixtures per chain should not exceed 16. If more fixtures are needed use an optical DMX splitter to create additional chains. Shorter chains with fewer fixtures will keep the data stream clean and error-free.

Install a DMX cable converter when using a DMX controller > Standard DMX cable to IP65 DMX cable converter



POWER LINKING YOUR FIXTURES

This fixture is equipped with power jumper cables to allow power linking of multiple fixtures. Follow the guide below to properly link fixtures. Power the first fixture in the chain with the included power cable (IP65 conversion power cable). Then jump each subsequent fixture with IP65 **power out** cable and connect to the subsequent **power in** cable.

WARNING: DO NOT POWER LINK MORE THAN (10) FIXTURES IN ONE SINGLE CHAIN, ELECTRICAL OVERLOAD MAY OCCUR. Be sure to install the included endcap to the **power out** cable on the last fixture in the power link chain.



WARNING: DO NOT POWER LINK MORE THAN (10) HYDROcast FIXTURES IN ONE SINGLE CHAIN, ELECTRICAL OVERLOAD MAY OCCUR.

MENU MAP

The chart below is a global view of the Main Modes, Sub Modes and the Value options for each mode. To choose a main mode, press **Up** or **Down**, then press **ENTER** to select the mode. Then press **Up** or **Down** to choose a sub menu or value for the selected mode, then press **ENTER** to activate. If the "Key Lock" feature is enabled, you will need to press and hold any button for 2 seconds to unlock the control panel. See Config settings to change key-lock mode.

MODE:	VALUE/RANGE:
DMX ADDRESS 	 Use this mode to set the DMX start address for each fixture
SPEED MODE 	 This mode adjusts the speed of the Auto Modes, after adjusting the speed you must return to Auto Mode to see the changes. 001 is the fastest, 031 is the slowest setting.
AUTO COLOR MODE 	 Auto - Gradual Color Fade (full color spectrum)  Auto - 7 Color Change  Auto - 3 Color Change
SOUND ACTIVATE MODE 	 Sound Activated Cross-fade Color Change  Sound Activated 7 Color Change  Sound Activated 3 Color Change  Sound Activated Strobe Color Change
STATIC COLOR MODE 	 Red  Green  Blue  Yellow  Magenta  Cyan  White Choose from one of seven preset static colors. See chapter on the next page 'Creating custom colors' for information on more color options.
OPERATION TIMER 	 Hours of operation timer

MENU MAP (continued)

MODE:

VALUE/RANGE:

CALIBRATION MODE

CCAL →

2 001-255
9 001-255
6 001-255

This adjusts global output of Red LEDs

This adjusts global output of Green LEDs

This adjusts global output of Blue LEDs

⚠ Note: It is highly recommended to keep these values at 220 or below to reduce the heat generated by the LED lamps. This will extend the life of the lamps.

⚠ Note: This mode can be used to create custom colors. See chapter below "Creating Custom Colors"

TEMPERATURE MODE

TEMP →

52C

This value shows the internal temperature of the LED plate (in Celsius). In the example to the left, the temp of the light would be 52 degrees Celsius.

**This is a simple C° to F° conversion:
C° X 2, then add 25**

e.g. 52° x 2 = 104, then add 25 - F° temp is 125°
(this is a approximate conversion, not 100% accurate)

CONFIGURATION MODE

CONF →

CHAN CHAS

This setting selects how many DMX channels you wish to use within the fixture, 8 channel mode will allow you to use all the features within the fixture and is recommended

disc INST

This is a global setting that allows color changes to be instant (without a cross-fade effect)

DELTA

This is a global setting that allows the fixture to change colors with a quick cross-fade effect

⚠ NOTE: To utilize the 16 bit dimming feature, you must be in 8 channel mode

LOCK LOC

This setting locks the control panel after 30 seconds of inactivity. Press any key for 2 seconds to unlock

UNLO

This setting leaves the control panel unlocked

STAY Hold

This setting will hold the last scene if the DMX signal is interrupted (controller crash, unplugged cable, etc)

OFF

This setting will black-out the fixture (go dark) if the DMX signal is interrupted (controller crash, unplugged cable, etc)

CREATING CUSTOM COLORS



To create a near infinite selection of static colors and intensities, press **UP** or **DOWN** until you see **Color Calibr**, press **ENTER**, then press **UP** or **DOWN** to choose one of the 3 color lamps, press **ENTER**, now press **UP** or **DOWN** to change the intensity of that color. Press **ESC**, then **UP** or **DOWN** to choose another color. Now repeat the procedure until you reach the desired color.

NOTE: This is only for use without a DMX controller. This is a global change and will affect the ability of a DMX controller to color mix. For example: If you create a custom color such as dark magenta (Red 200, Blue 225, Green 000), you will not be able to turn on the green color channel since you have reduced the global intensity to 000. You will need to reset the Calibrate value to 220 (recommended) for all colors to have full control of color mixing with a DMX controller.

CONTROL PANEL FUNCTIONS in detail

Address: DMX ADDRESS MODE

This mode is used to set the start address for this fixture and is the most commonly used mode for DMX lighting. You must use some type of DMX controller when operating in this mode. Check the manual for your controller to determine the recommended start address for each fixture. See the section 'DMX Primer' in this manual for more information about DMX Addressing.

▣ To set the DMX start address for this fixture, press **UP** or **DOWN** until you see **Address**, press **ENTER**, Then press **UP** or **DOWN** until you reach the desired DMX address, press **ENTER** to store.

Speed: SPEED MODE

This mode allows you to change the rate of the Auto color modes cycle.

▣ To change the speed rate, press **UP** or **DOWN** until you see **Speed**, press **ENTER**, then choose between values 001 (fastest) - 031 (slowest) press **ENTER** to store.

Note: After making changes to the **Speed** setting, you must press **ESC** and "re-enter" Auto Color Mode to see the changes. See below to enter Auto Color Mode.

Auto: AUTO COLOR MODE

This mode is an internal program that changes color automatically at varying speeds. This mode can only be used without a DMX controller, please disconnect your controller before activating **Auto Color Mode**.

- ▣ To enter Auto Color Mode, press **UP** or **DOWN** until it shows **Auto**, press **ENTER**, press **UP** or **DOWN** to choose one of 3 sub-modes, then press **ENTER** to store.
- **Auto 0:** Gradual Color Fade through the entire color spectrum
 - **Auto 1:** Change through 7 colors (White, Red, Green, Blue, Yellow, Cyan, Magenta)
 - **Auto 2:** Change through 3 colors (Red, Green, Blue)

Note: The rate of change can be adjusted in the Speed mode. See Speed Mode chapter above.

Audi: SOUND ACTIVATION MODE

The internal microphone activates color changes based on sound. Please disconnect your controller before activating **Audi: Sound Activate Mode**. Bass frequencies offer the best results (continued on next page).

CONTROL PANEL FUNCTIONS in detail (continued 1)

Audi: SOUND ACTIVATION MODE (continued from previous page)

- ▣ To enter Sound Activation Mode, press **UP** or **DOWN** until you see **Audi**, press **ENTER**. Press **UP** or **DOWN** to choose one of these 4 sub-modes:
 - **Mode 0:** Cross-fading Colors
 - **Mode 1:** 7 color (Red, Green, Blue, Yellow, Magenta, Cyan, White)
 - **Mode 2:** 3 color (Red, Green, Blue)
 - **Mode 3:** 7 Color Strobe Effect

Color: STATIC COLOR MODE

This mode allows you to choose one of 7 static colors. This mode can only be used without a DMX controller, please disconnect your DMX controller before activating Static Color Mode.

- ▣ To enter Static Color Mode, press **UP** or **DOWN** until you see **Color**, press **ENTER**. Press **UP** or **DOWN** to choose: (Red) (Green) (Blue) (Yellow) (Magenta) (Cyan) (White), then press **ENTER** to store.

Time: OPERATION TIMER

This mode displays the amount of hours the fixture has been in operation. The timer accrues if power is applied even if the light is not on. This is useful to determine how often the fan may need cleaning. In some environments (that use fog or cigarette smoke), the fan may need cleaning every 300 hours.

Color Calibr: COLOR CALIBRATE

This mode allows you to globally calibrate the intensity of each color: Red, green or Blue. For example, if your red lamps are too bright at 100% (relative to the other colors) you can reduce the intensity in this mode. Changes to this mode affect all color mixing at the controller.

- ▣ To enter Color Calibrate Mode, press **UP** or **DOWN** until you see **Calibr**, press **ENTER**. Press **UP** or **DOWN** to choose: Red, Green or Blue, then press **ENTER**, then press **Up** or **Down** to change the value **000** (off) to **255** (full intensity), press **ENTER** to store the setting. Press **ESC** then, Up or Down to choose another Color and repeat.

Note: Most commonly this mode is used to create custom colors for use without a DMX controller. See chapter "**Creating Custom Colors**" for more information.

CONTROL PANEL FUNCTIONS in detail (continued 2)

Config: CONFIGURATION MODE

This mode allows you to make global changes to the fixture. There are 4 sub-modes:

Channel Mode - Dimmer Mode - Key Mode - DMX Status Mode

✕ To enter Configuration Mode, press **UP** or **DOWN** until you see **Config**, press **ENTER**. Press **UP** or **DOWN** to choose one of four sub-modes, press **ENTER**, then press **Up** or **Down** to change the values within the sub-mode.

■ CHANNEL MODE:

3 Channel

Utilizes (3) DMX channels on your controller

- 1: Red
- 2: Green
- 3: Blue

5 Channel

Utilizes (5) DMX channels on your controller

- 1: Dimmer
- 2: Red
- 3: Green
- 4: Blue
- 5: Strobe

8 Channel

Utilizes (8) DMX channels on your controller

- 1: Dimmer
- 2: Red
- 3: Green
- 4: Blue
- 5: 6: Strobe
- 6: Macros (see Macro chapter)
- 7: Macro Speed
- 8: Dimming Delay

■ DIMMER MODE:

Instant This is a global setting that allows color changes to be instant (without a cross-fade effect)

Delay This is a global setting that allows the fixture to change colors with a quick cross-fade effect

Note: To use the 16 bit dimming delay feature, the fixture must be in 'Delay' mode, otherwise Channel 8 (the dimming channel) will be inactive.

■ KEY MODE:

Unock This setting leaves the control panel unlocked

Lock This setting locks the control panel after 30 seconds of inactivity. Press any key for 2 seconds to unlock.

■ DMX STATUS MODE:

Hold This setting will hold the last scene if the DMX signal is interrupted (controller crash, cable issue, etc.)

Clear This setting will black-out the fixture (go dark) if the DMX signal is interrupted

Load Defaults Mode:

To load the default settings, simply press **UP** or **DOWN** and choose **YES**, then press **ENTER**.

16 BIT DIMMING DELAY

This feature is very useful when a slow dramatic fade-off or fade-on is required. The dimming is ultra-smooth and can be adjusted from .2 seconds all the way to 120 second delay on or off.

As mentioned above, the fixture must be set to '**Dimmer Mode: Delay**' and '**Channel Mode: 8 ch.**' to utilize the dimming delay feature. Follow the directions above to achieve these settings. When operating in Delay mode all 'ON, OFF and color changes' will occur with a minimum 200 millisecond delay as a default, rather than instant changes. To use the dimming delay feature, use your DMX controller to adjust fixture channel 8. The dimming delay range is from 200 millisecond (value 000) all the way to a maximum 120 second delay (value 255). *Continued on next page...*

16 BIT DIMMING DELAY

Please note this will affect both the dimming fade-off and fade-on time. The fixture will raise and lower the intensity at the rate determined by the Dimming Delay channel (ch.8).

Example of how to create a 5 second dimming delay.

Using your controller adjust fixture channels 1, 2, 3, 4, to value 255. Adjust channel 8 to value 032. Now turn off channel 1 very quickly, you will see the colors 'fade off' at a very smooth rate of 5 seconds (see chart below). Conversely, turn channel 1 back up very quickly. You will see the colors 'fade on' at the same rate of 5 seconds.

Dimming delay times (fixture ch. 8)

DMX value 000 = .2 seconds (200 milliseconds)

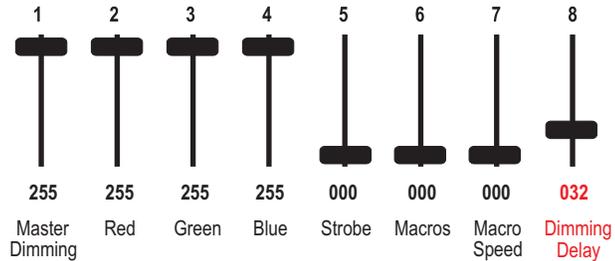
DMX value 032 = 5 seconds

DMX value 064 = 10 seconds

DMX value 096 = 15 seconds

DMX value 128 = 22 seconds

DMX value 255 = 120 seconds



DMX CHANNEL PROTOCOL

CHANNEL	VALUE	FUNCTION
Channel 1	000 - 255	MASTER DIMMER
Channel 2	000 - 255	RED
Channel 3	000 - 255	GREEN
Channel 4	000 - 255	BLUE
Channel 5	000 - 255	STROBE
Channel 6	000 - 095 Static Colors 096 - 127 Gradual Color Fade 128 - 159 Quick Color Change 160 - 191 Sound Activate Mode 1 192 - 255 Sound Activate Mode 2	MACROS
Channel 7	000 - 255 Slow to Fast	MACRO SPEED
Channel 8	000 - 255 Fast to Slow	DIMMING DELAY

When using Macro channel 7, you must turn on channels 1, 2, 3, 4, otherwise the Macro features will not function properly.

Macro Speed only affects Macro features in the DMX value range of 096 - 159 (Gradual Color Fade & Quick Color Change)

The fixture must be in 'Dimmer Mode: Delay' and 'Channel Mode: 8 ch.' to utilize the dimming delay feature (see chapter: Control Panel Functions detail pages).

ABOUT MACROS

Normally when you adjust channels 1 - 4 you only get static colors, but with the Macros you can create 'dynamic' scenes. For example, if you want your fixture to run auto-color, gradual color change or sound activate, you can do this by adjusting channel 6 and 7.

Note 1: The fixture must be set to '8 Channel Mode' to enable the Macro Features.

Note 1: You must turn on channels 1, 2, 3, 4, otherwise the Macro features will not function properly.

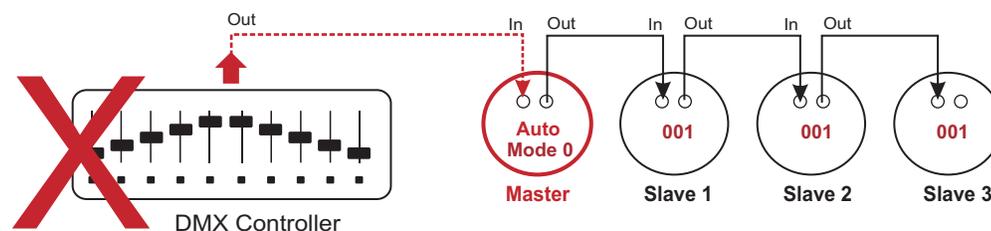
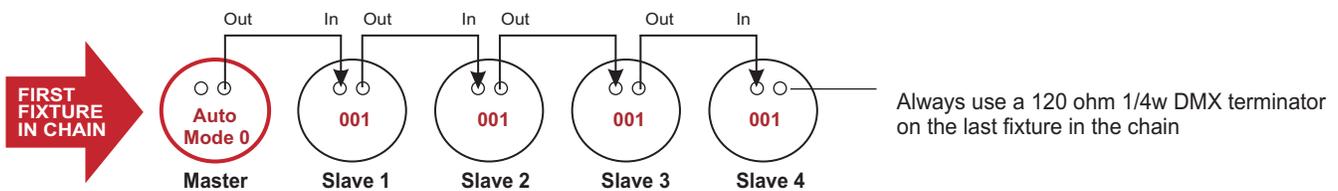
Note 2: Macro Speed (Ch. 7) only affects Macro features in the DMX value range of 096 - 159 (Gradual Fade & Quick Color Change)

MASTER / SLAVE MODE

This mode is convenient when you wish to operate multiple fixtures and do not have a DMX controller. Please note that in this mode all fixtures will operate in 'Unison' (all perform the same operation). It is recommended to operate fewer than 16 fixtures in one Master / Slave configuration. If you need to connect more than 16 fixtures, please use an 'Optical Isolated DMX Splitter' and run multiple chains (See chapter: **DMX Cabling Tips** for more info).

Configure your Master /Slave Network

1. If you have a DMX controller, unplug it from the DMX chain. You cannot use a controller and operate a Master / Slave configuration at the same time.
2. Choose the first fixture in your chain, this will be your MASTER fixture. All other fixtures connected to it will be the Slave fixtures and will operate with the same functions as the Master. Power on the fixture (Master) and set it to the desired mode (e.g. Static color, Auto Gradual Fade, Audi Sound Activate, etc.)
3. Now, power on all other fixtures in the chain and set them to DMX address 001, this address is the receive address for the Slave fixtures.
4. Now connect your DMX cables as the diagram show below. Your Master / Slave mode should be complete. You can adjust the Master fixture as you wish to run the different internal programs. Your Slave fixture will follow the Master in perfect unison.



Note: Do not operate some fixtures in **Auto Modes** while others (in the same chain) are connected to a controller. This will create data errors in the signal. All of your fixtures must be either in "**DMX Address Mode**" with a controller, or **Master/Slave** mode without a controller. **Unplug your controller!**

WARRANTY

1. Colorverse® Lighting hereby warrants our products to be free of defects due to manufacturing, materials, and workmanship for a period of one year from the date of purchase. This limited warranty shall be valid only if the product is purchased within the 48 contiguous United States and only to the original purchaser. All claims for warranty must be accompanied by proof of purchase from an authorized dealer.
2. For a warranty claim, contact Colorverse® Lighting and obtain an RA number prior to shipping the product. Send the product only to the Colorverse® Lighting company address. Visit Colorverse.com/support for shipping information. Shipping charges are the responsibility of the purchaser. If the requested repairs are deemed to be a valid warranty request, Colorverse® Lighting will pay return shipping charges to an address within the 48 contiguous United States. If the entire fixture is to be returned, it must be in the original package and shipped in a “double-wall box” for proper protection, failure to do so may void warranty and Colorverse® Lighting will have no liability for the safe return thereof.
3. Colorverse® Lighting will replace defective parts at its expense, and cover repair labor by reason of defects in materials and or workmanship. The sole responsibility of Colorverse® Lighting under this warranty shall be limited to the repair or replacement of the warranted product, at the sole discretion of Colorverse® Lighting. Colorverse® Lighting reserves the right to replace a warranted product with a similar replacement product of equal value and similar specifications in the event that parts are not available or repairs cannot be made for any reason, solely at the discretion of Colorverse® Lighting.
4. The following may void the warranty: tampering or altering any part on the fixture; evidence of physical damage or shock, dents, etc.; evidence of incorrect supply voltage or water damage; excessive dust build up in the fixture or internal fans which can cause overheating. While under warranty, Colorverse® Lighting products may not be serviced by anyone other than the Colorverse® Lighting service department or authorized technicians. It is the responsibility of the purchaser to properly maintain and service the product as set forth in the operations manual.
5. The purchaser’s and or authorized dealer’s sole remedy shall be such repair or replacement as is expressly provided above in this warranty statement; and under no circumstances shall Colorverse® Lighting be liable for any damage, loss, direct or consequential, arising out of the use of, or inability to use, the warranted product.
6. Colorverse® Lighting reserves the right to make any changes in design and or improvements to its products without any obligation to include these changes to older products.
7. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products described above. Except to the extent prohibited by applicable law, all implied warranties made by Colorverse® Lighting in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired.

RETURNS

No product will be accepted for a warranty claim without first obtaining a return authorization number from Colorverse® Lighting. To obtain a RA#, visit the support page on www.Colorverse.com/support and fill out the appropriate form.