CINEO
LIGHTING ™

CINEO | HSX ™

User Guide

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Information and specifications in this document are
subject to change without notice.

www.cineolighting.com

Welcome to Cineo HSX

CINEO|HSX

Cineo Lighting introduces HSX: a color-tunable soft source with the same powerful, accurate light output as the HS^2 Remote Phosphor fixture. Leveraging our years of experience in solid-state lighting and material sciences, Cineo has created a compact, 25,000 lumen fixture with the same beautiful color rendering and extended deep-red spectrum as their Remote Phosphor fixtures. Unlike other color-tunable sources, HSX remains consistent throughout the life of the fixture with no color shift or need for calibration. Accurate color tuning is supported in a range from 2700K to 6000K.

The HSX fixture consists of an integrated lamphead and power supply, based on the HS^2 Wave platform. Unlike the HS^2 series, the HSX system is shipped with the power supply permanently attached directly to the back of the lamphead.It is both lightweight and rugged, and includes industry-standard 80/20 mounting slots on both the sides and back of the fixture for attaching yokes and other mounting options. The dimensions and output match all legacy HS fixtures. HSX is designed to use all HS-series light control accessories and mounting options.

The HSX power supply features Cineo's new advanced control panel and comes equipped with a Lumen Radio™ wireless DMX transceiver. It works in conjunction with the unit's wired DMX interfaces to provide dimming and RDM programming of the fixture.

HSX employs Cineo's Photo-Accurate Dimming curve, which mates the output control of the fixture to stops on the camera lens.

The Cineo team was first to create a high-power LED studio fixture with the quality that motion picture and television professionals demand. Cineo fixtures continue to be the color-accurate LED lighting standard for image capture worldwide.

General Notes

1. Please read through this manual carefully before operating Cineo HSX, and keep this manual for future reference.

2. There are numerous safety instructions and warnings that must be adhered to for your own safety.

3. Cineo HSX is not intended for residential use. It is intended for use in a professional studio.

4. Cineo HSX must be serviced by a qualified technician.

5. The Cineo HSX are rated as IP22 – for damp environments.

6. Cineo products are not certified for use in hazardous locations.

7. The Cineo HSX has a typical operating temperature of 55°C (130°F).

Fixture Set Up

Read these safety instructions carefully to ensure fixture and accessories are used safely.

Ensure the 28mm spigot is correctly mounted onto the yoke before rigging.

Always use secondary safety cables of suitable length when hanging Cineo HSX lampheads or power supplies.

The HSX lamphead weighs 25 lbs. (11.3 kg) excluding accessories. The weight should be considered when choosing a suitable safety cable.

Safety cables must be securely attached to the yoke on HSX or the top metal handle of the power supply and be as short as possible to reduce travel distance if primary hanging accessory fails.

Ensure that the yoke lock is correctly tightened when manipulating HSX in the required orientation for safety purposes.
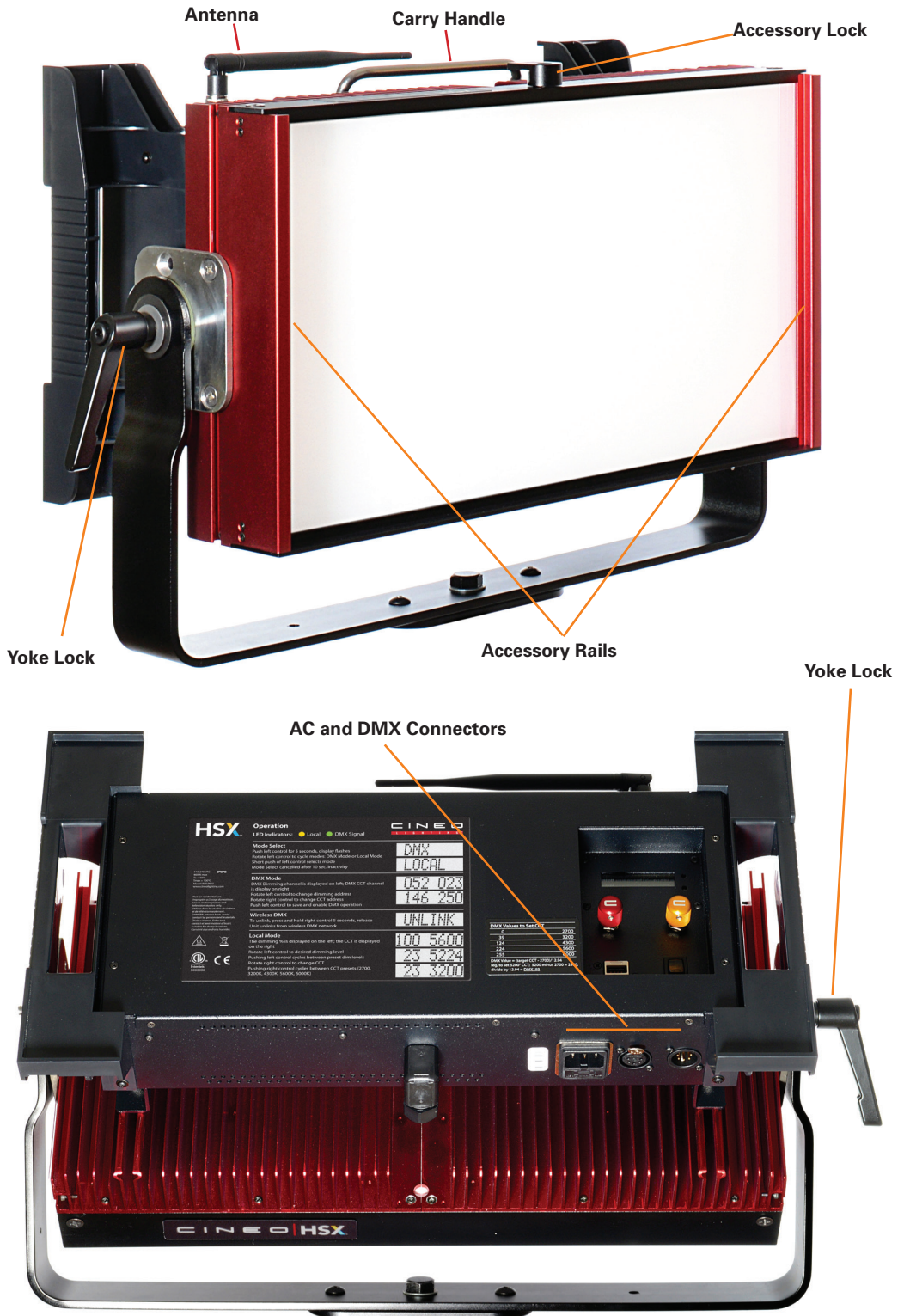
Ensure the Cineo HSX is operated within an ambient temperature range of -20 to +50°C (-4 to 122°F).

System Components, Connections and Controls

Cineo HS2 Lamphead

The HSX lamphead is controlled by an attached power supply. Unlike HS2 systems, the lamphead is directly wired to the power supply and cannot be detached. The lamphead is sealed and is not designed to be opened under normal operating conditions.

Please refer to the Cineo catalog for current lamphead mounting options and light control.

Antenna   Carry Handle   Accessory Lock

Yoke Lock   Accessory Rails   Yoke Lock

AC and DMX Connectors

Accessory Attachment

The accessory attachment rails are designed to accept all Cineo HS-series light control accessories including louvers, egg crates, barn doors, gel frames and soft boxes. The HSX includes an accessory lock on the top of the lamphead that can be positioned to hold the accessories in place. Reference the Cineo Catalogue for various light control options.

Yoke Adjustment

The HSX yoke is attached to the lamphead via the 80/20 slots on the side of the fixture. To adjust the yoke rotation point, loosen the (4) screws on the yoke mounting plate and slide the yoke up or down to the desired position and then tighten the four screws.

HSX Power Supply

All connectors and system controls for the Cineo HSX system are located on the power supply.

The power supply can be operated with local control or remotely via wired or wireless DMX. Additionally, the fixture can be remotely programmed using RDM protocol.

Control Panel

Operating Instructions

USB Port

Power Switch
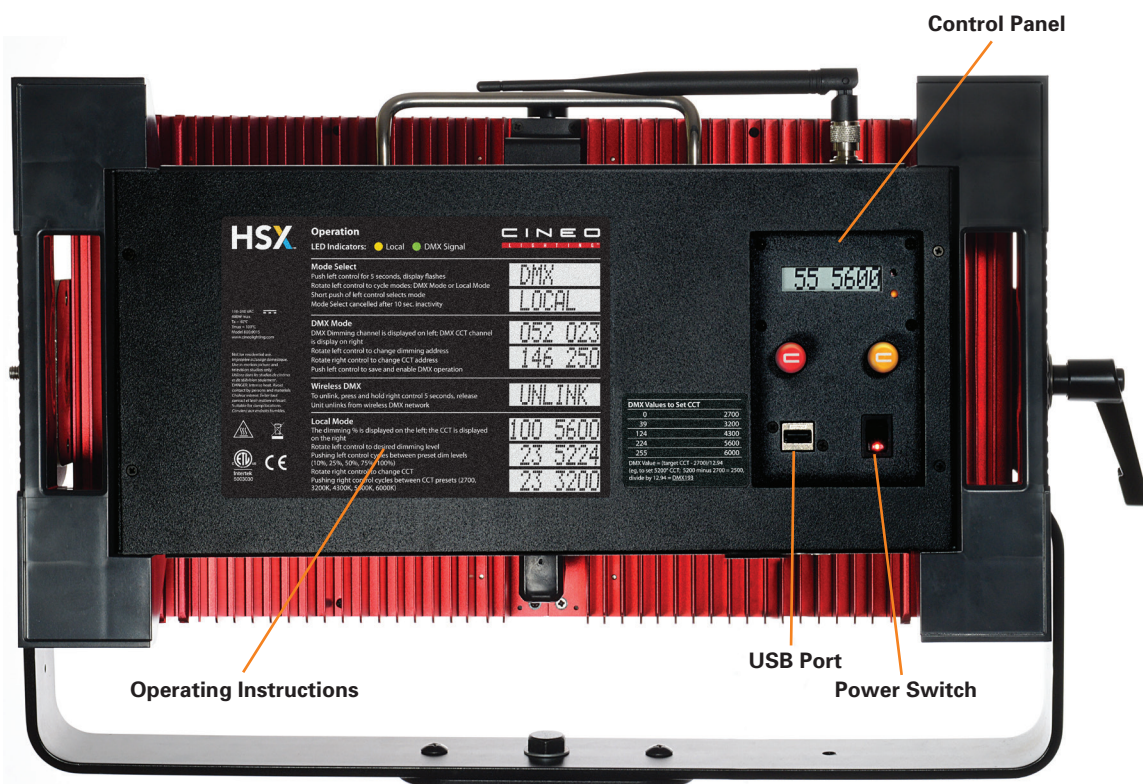
Power Connections

AC Power In: The IEC power cable connects to the power supply via this port.

AC Fuse Holder: An AC fuse is located under the flip-out panel.

NOTES:

1. Ensure the power cable is disconnected before servicing.

2. Do not connect to a variable supply, such as a dimmer rack.

3. The power cable should be plugged into the power supply before switching the power ON. The power supply should be switched OFF before removing the power cable.

Indicator Lights

The front panel of the power supply includes two LED indicators. By observing the state of these indicators, the operating state of the power supply can be determined:

● GREEN

The Green indicator will illuminate when the unit is in DMX mode, AND valid DMX signal is present on either the DMX Input jack or the built-in wireless DMX transceiver.

● YELLOW

The Yellow indicator lights up when the unit is configured to operate in Local Mode. All dimming control is routed to the left (red) knob on the control panel.

Controls

Control of the HSX system is facilitated by use of (2) rotary encoders, each with a "push" function, and displayed on an 8-digit illuminated control panel.

The HSX power supply includes two modes of operation, which can be set locally on the power supply or remotely using RDM protocol.

Changing Modes

Changing operation mode and selecting DMX addresses can be accomplished using the control panel, or remotely using RDM. Please refer to the Operating Instructions on the back of the fixture.

Mode change via the control panel is as follows:

1. Push and hold the left (red) knob for approximately 5 seconds. The display will show the current operating mode.

2. Turn the left knob until the desired mode is displayed: LOCAL and DMX.

3. Push the knob again to select mode.

Mode selection instructions are attached to the front of the power supply for quick reference.

Local Mode

In this mode, all functions of the fixture are managed through the control panel. 0-100% dimming is controlled by turning the left (red) rotary knob. Pushing the knob cycles the output at these levels: 20%, 40%, 60%, 80% and 100%.

The color temperature (CCT) of the fixture is controlled by turning the right (yellow) knob in a continuously variable range of 2700K to 6500K. Pushing the right control knob cycles the CCT of the fixture between popular settings: 2700, 3200, 4300, 5600 and 6500K.

When in Local Mode, the yellow LED is illuminated, and the display shows the percentage dim level on the left side of the display and the CCT on the right.

DMX Mode

In this mode, the output and CCT of the fixture are controlled remotely on two DMX address in the address range of 001 to 512. The left knob is used to set the DMX address for dimming; the right knob is used to set the address for CCT control. When both address are selected, push the left controller to save and enter DMX mode. The selected addresses are shown on the display.

0-100% dimming is controlled through DMX values of 0-255. Note that changing the dim value between 1 and 254 will include a dimming hysteresis, or smoothing. When switching between DMX values of 0 and 255, the value change is instantaneous, allowing the fixture to be externally switched on and off in a strobe effect.

CCT is continuously variable from 2700K to 6500K using DMX values 0-255. Standard CCT values and their DMX addresses are shown in the table, at right:

DMX Values to Set CCT	
0	2700
34	3200
107	4300
195	5600
221	6000
255	6500

DMX Value = (target CCT − 2700)/14.9
(eg, to set 5200° CCT; 5200 minus 2700 = 2500, divide by 14.9 = DMX 168

Wired DMX Connections

HSX uses industry-standard 5-Pin XLR male and female connectors to receive DMX signals and output DMX signals. The DMX port is self-terminating and does not require external DMX termination when used in a chain. If the unit is the last device on a DMX chain, make sure that there is no cable inserted into the DMX Thru connector.

The DMX pin wiring is as follows:

• Pin 1: Signal Common

• Pin 2: Data -

• Pin 3: Data +

• Pin 4: Spare

• Pin 5: Spare

Wireless DMX Control

If the unit is configured to be controlled via DMX and no cable is inserted in the DMX IN port, the Lumen Radio Wireless DMX transceiver is activated, and the unit can be linked to a wireless DMX network. Please note that each fixture can only be linked to a single network at a time, and maintains the network ID of its previous linking. Therefore, the fixture's linking data must be cleared prior to linking to a new network.

To unlink an HSX fixture, follow these steps:

1. Push and hold the right (yellow-colored) control knob on the control panel for 5 seconds. Release.

2. The display will show "UNLINK".

3. In a few seconds, the display indicates "UNLINKED", clearing the network memory in the fixture.

Refer to your wireless DMX transmitter instructions for linking fixtures to a wireless network.

Third party wireless products can be used by plugging the third party wireless antenna into the DMX XLR port. If power is needed for the antenna the powered USB port can provide such up to 5W.

RDM Support

The HSX can remotely report unit information to an RDM controller attached via wired or wireless DMX. The information provided includes the Unit ID, the firmware revision programmed into the unit. The unit also supports the RDM Identify Command, and will flash the fixture when an Identify command is issued.

Remote programming of DMX address, Mode and Calibrate functions are supported. The power supply defaults to a 3-address footprint for RDM auto-assign functions.

Cineo Photo-Accurate Dimming

The dimming curve on the HSX follows a new strategy that provides relative output levels that correspond to image capture. Both DMX values and local control levels directly correlate to camera stops in a meaningful way. The result is extremely predictable light levels within the full output range of the fixture.

The following table shows the relationship between DMX and local values as they relate to camera stops:

DMX Value (0-255)	Local Value (0-100)	% Output increase	Stop Increase
50	20%	100	0
100	40%	200	+1
150	60%	400	+2
200	80%	800	+3
250	100%	1600	+4

Here are examples of how to accurately match camera stops to dimming levels:

DMX Control: The Rule of 50 (0-255 scale)

Increase output 1 Stop: Add 50 DMX values (fc/lux is doubled)

Decrease output 1 Stop: Subtract 50 DMX values (fc/lux is reduced 50%)

Adjust ½ Stop = 25 DMX Values

Local Control: The Rule of 20 (0-100 scale)

Increase output 1 Stop: Add 20 units (fc/lux is doubled)

Decrease output 1 Stop: Subtract 20 units (fc/lux is reduced 50%)

Adjust ½ Stop = 10 Units (0-100)

Calibration

The HSX system can be calibrated for optimal dimming characteristics. To perform a calibration sequence, please perform the following:

1. With the power OFF, Push and hold the left (red) knob on the control panel while turning the power supply ON.

2. Initially, the display will show the firmware revision level for the power supply. Continue to push the knob down until the display shows "CAL" with an animated character sequence.

3. When the calibration sequence completes, the system returns to its previous mode and dim level.

USB Port

An A-type USB port is included on the control panel for installation of software updates. It can also supply 5 VDC, 500ma power to attached devices. Refer to installation instructions supplied with software upgrade.

Specifications

Input voltage: 100-240 VAC 50/60 Hz.
Power consumption: 400 watts, max
Lamp head dimensions: 12" H x 21" W x XX" D (290 mm x 532 mm x XX mm)
Total unit weight: 25 lbs (11.3 kg)
35,000 hr. L70 rated
Environmental temperature range: -20º - + 50º C
Max temperature rise: +45º C
2-year parts and labor warranty
Zero UV light emitted
ETL, cETL certified, CE compliant
Made in USA

Warnings, Disclaimers and Warranty

Risk of Electric shock / Risk of Fire
Do not open. To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

Burning Injuries
Be aware of high temperatures in excess of 50°C inside the lamphead during and after fixture use. Do not touch the LEDs to avoid burning injuries.

Flammable Materials
Keep flammable materials away from the installation. Insure that the amount of air flow required for safe operation of the equipment is not compromised. Proper ventilation must be provided.

ESD and LED's
LED components used in HSX lamphead are ESD (Electro-Static Discharge) sensitive. To prevent the possibility of destroying LED components do not touch either in operation or while switched off.

Blue Light Output
Do not bypass the lamphead safety switches that turn off the blue LEDs when phosphor panels are removed. The light-output intensity may be harmful to human eyes. No UV or IR is emitted at any time from this fixture.

This Equipment MUST be Grounded
In order to protect against risk of electric shock, the installation should be properly grounded. Defeating the purpose of the grounding type plug will expose you to the risk of electric shock.

AC Power Cords
Use only a rated IEC Connector. The user is responsible for ensuring power cables are of adequate condition for each application. If the power cords are damaged, replace them only with new ones.

Environmental: Disposal of Old Electrical & Electronic Equipment
This product shall not be treated as household waste.

CINEO LIGHTING LIMITED WARRANTY

Products from Cineo Lighting are warranted against defects in materials and workmanship for two years from the date the Product is shipped to Customer. Products are guaranteed to perform substantially in accordance with the accompanying written materials within the warranty period under normal use.

If the Product fails to work as warranted, Cineo Lighting will, in its sole discretion, repair or replace the Product with a new or remanufactured Product that is at least equivalent to the original Product. Customer must obtain a Return Material Authorization number from Cineo Lighting before returning any Products under warranty to Cineo Lighting.

Customer shall pay expenses for shipment of repaired or replacement Products to Cineo Lighting's repair facility. Any repaired or replaced Products will be warranted for the remainder of the original warranty period or thirty (30) days, whichever is longer. Cineo Lighting will pay shipping of repaired goods back to the customer. After examining and testing a returned product, if Cineo Lighting concludes that a returned product is not defective, Customer will be notified, the product returned at Customer's expense.

This Limited Warranty is void if failure of the Products has resulted from accident, abuse, misapplication, or use outside of normal operating conditions. Warranty is void if serial number has been defaced or removed.

NO OTHER WARRANTIES. EXCEPT AS EXPRESSLY SET FORTH ABOVE, THE PRODUCTS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, AND NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED ARE MADE WITH RESPECT TO THE PRODUCTS, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE OR NON-INFRINGEMENT OR ANY OTHER WARRANTIES THAT MAY ARISE FROM USAGE OF TRADE OR COURSE OF DEALING. ELEMENT DOES NOT WARRANT, GUARANTEE, OR MAKE ANY REPRESENTATIONS REGARDING THE USE OF OR THE RESULTS OF THE USE OF THE PRODUCTS IN TERMS OF CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE AND DOES NOT WARRANT THAT THE OPERATION OF THE PRODUCTS WILL BE UNINTERRUPTED OR ERROR FREE. CINEO LIGHTING EXPRESSLY DISCLAIMS ANY WARRANTIES NOT STATED HEREIN. NO LIABILITY FOR CONSEQUENTIAL DAMAGES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL ELEMENT AND ITS LICENSORS, DISTRIBUTORS, AND SUPPLIERS (INCLUDING ITS AND THEIR DIRECTORS, OFFICERS, EMPLOYEES, AND AGENTS) BE LIABLE FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES, EXPENSES, LOST PROFITS, INSTALLATION COSTS, LOST SAVINGS, BUSINESS INTERRUPTION, LOST BUSINESS INFORMATION, OR ANY OTHER DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCTS, EVEN IF ELEMENT OR ITS LICENSORS, DISTRIBUTORS, AND SUPPLIERS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. CINEO LIGHTING'S TOTAL LIABILITY ON ALL CLAIMS, WHETHER IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE OR BREACH OF STATUTORY DUTY), STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE AMOUNTS PAID BY CUSTOMER FOR THE PRODUCTS.

Customer acknowledges that the applicable purchase price or license fee for the Products reflects this allocation of risk. Because some states/jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply. The above limitations shall apply notwithstanding the failure of any limited remedy to fulfill its essential purpose.

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