



ColorBlast TR

Industry-standard theatrical and rental LED wash fixture with intelligent color light



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ColorBlast TR is a rugged, full-color LED fixture designed specifically to withstand taxing stage, set, and touring environments. This rental-friendly fixture offers ease of installation and control, along with the ability to produce millions of saturated colors without gels or filters. It features a built-in power cable that can be extended up to 60 ft (18 m) with a standard 4-pin XLR patch cable, an elastomeric sleeve to protect the fixture from rough handling, and a pivoting bezel for easy exchange of lenses. An industrial-grade hinge affords quick and reliable fixture aiming and locking. The mounting base easily accommodates truss clamps and other mounting and positioning options. Designed with live entertainment in mind, ColorBlast TR is the ideal color-changing LED fixture for demanding temporary and touring environments.

- Pivoting bezel and exchangeable lenses — The pivoting bezel and included 23° soft-focus and 10° clear tempered glass lenses let you switch quickly between soft-edge wash lighting and extended beam projection.
- Quick fixture aiming and locking — An industrial-grade constant torque hinge offers stable, 110° fixture tilting for quick and dependable aiming. Standard set screws let you lock the fixture in position without special tools.
- Versatile mounting options — The pre-assembled mounting base offers a range of options for mounting on the floor or various stage truss clamps. An integral safety bracket lets you easily attach a safety cable.
- On-board temperature monitoring — A compensation circuit prevents damage to the fixture if operating temperatures rise to unsafe levels. An auto-cycling feature automatically restores normal operation after 30 minutes.
- Innovative protective sleeve — Because stage and set environments can take their toll on equipment, ColorBlast TR features an innovative elastomeric sleeve to protect the fixture and lens from the rigors of multiple setups and teardowns.
- Accessories and additional spread lenses — City Theatrical Inc. offers a line of accessories designed for ColorBlast TR, including top hats, half top hats, barndoors, egg crate louvers, glass spread lenses, and polycarbonate holographic lenses.
- Industry-standard power and control — ColorBlast TR works seamlessly with the full range of Philips controllers, including Light System Manager and iPlayer 3, or third-party controllers. City Theatrical Inc. offers a line of power / data supplies specifically designed for use with ColorBlast TR fixtures.



Innovative Protective Sleeve

Because stage and set environments can take their toll on equipment, ColorBlast TR features an innovative elastomeric sleeve to protect the fixture and lens from the rigors of multiple setups and teardowns.

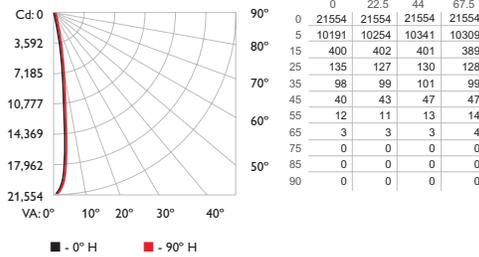
Photometrics

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

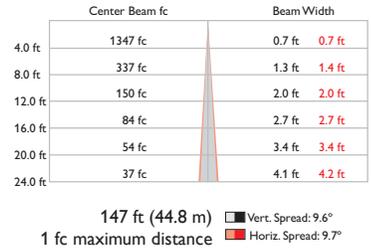
ColorBlast TR 10° beam angle

LED	Lumens	Efficacy
RGB	960	13.7

Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Lamp	% Luminaire
0-30	845.2	88%	88.2%
0-40	907.6	94.5%	94.7%
0-60	954.8	99.4%	99.6%
60-90	3.8	0.4%	0.4%
0-90	958.6	99.8%	100%
90-180	0	0%	0%
0-180	958.6	99.8%	100%
Total Efficiency: 99.8%			

Coefficients Of Utilization - Zonal Cavity Method

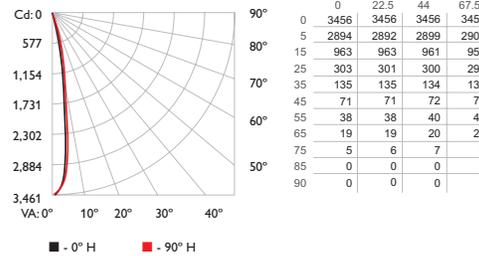
RCC %:	Effective Floor Cavity Reflectance: 20%																	
	80			70			50			30			10					
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.15	1.13	1.12	1.10	1.13	1.11	1.10	.98	1.07	1.06	1.05	1.04	1.03	1.02	1.00	1.00	.99	.97
2	1.12	1.09	1.06	1.04	1.10	1.07	1.05	.95	1.04	1.02	1.00	1.01	1.00	.98	.99	.97	.96	.95
3	1.09	1.05	1.02	.99	1.07	1.04	1.01	.93	1.01	.99	.97	.99	.97	.95	.97	.95	.94	.93
4	1.06	1.01	.98	.95	1.05	1.00	.97	.91	.99	.96	.94	.97	.95	.93	.95	.93	.92	.91
5	1.04	.99	.95	.92	1.02	.98	.95	.89	.96	.93	.91	.95	.92	.91	.93	.91	.90	.89
6	1.02	.96	.93	.90	1.00	.96	.92	.88	.94	.91	.89	.93	.91	.89	.92	.90	.88	.87
7	.99	.94	.90	.88	.99	.93	.90	.86	.92	.90	.87	.91	.89	.87	.91	.88	.87	.86
8	.98	.92	.89	.86	.97	.92	.88	.85	.91	.88	.86	.90	.87	.86	.89	.87	.85	.84
9	.96	.90	.87	.85	.95	.90	.87	.84	.89	.86	.84	.89	.86	.84	.88	.86	.84	.83
10	.94	.89	.86	.84	.94	.89	.86	.83	.88	.85	.83	.87	.85	.83	.87	.85	.83	.82

RCC %: Ceiling reflectance percentage, RW %: Wall reflectance percentage, RCR: Room cavity ratio

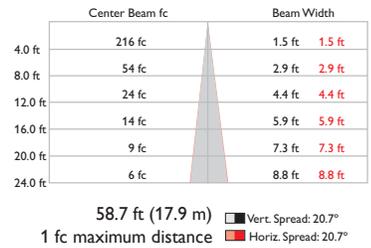
ColorBlast TR 23° beam angle

LED	Lumens	Efficacy
RGB	859	12.3

Polar Candela Distribution



Illuminance at Distance



Zonal Lumen

Zone	Lumens	% Lamp	% Luminaire
0-30	653.8	76.1%	76.1%
0-40	739.3	86.1%	86.1%
0-60	831.1	96.8%	96.8%
60-90	27.8	3.2%	3.2%
0-90	858.9	100%	100%
90-180	0	0%	0%
0-180	858.9	100%	100%
Total Efficiency: 100%			

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	Effective Floor Cavity Reflectance: 20%																	
	80			70			50			30			10					
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.11	1.09	1.07	1.11	1.09	1.07	.94	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96	.94
2	1.09	1.04	1.00	.97	1.06	1.02	.99	.89	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3	1.04	.98	.93	.89	1.02	.96	.92	.84	.94	.90	.87	.91	.88	.86	.89	.87	.85	.83
4	.99	.92	.87	.83	.97	.91	.86	.79	.89	.85	.82	.87	.84	.81	.85	.82	.80	.79
5	.95	.87	.82	.78	.94	.87	.82	.76	.85	.81	.77	.83	.79	.77	.82	.78	.76	.75
6	.91	.83	.78	.74	.90	.83	.77	.72	.81	.77	.73	.80	.76	.73	.78	.75	.72	.71
7	.88	.80	.74	.71	.87	.79	.74	.69	.78	.73	.70	.77	.73	.70	.76	.72	.69	.68
8	.85	.76	.71	.67	.84	.76	.71	.66	.75	.70	.67	.74	.70	.67	.73	.69	.66	.65
9	.82	.73	.68	.65	.81	.73	.68	.64	.72	.67	.64	.71	.67	.64	.70	.67	.64	.63
10	.79	.71	.66	.62	.78	.70	.65	.62	.69	.65	.62	.69	.65	.62	.68	.64	.62	.61

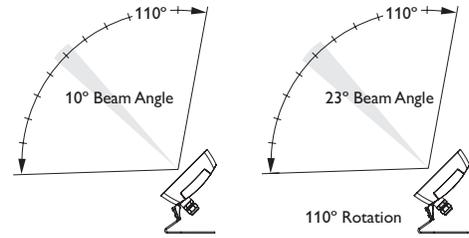
RCC %: Ceiling reflectance percentage, RW %: Wall reflectance percentage, RCR: Room cavity ratio

For lux multiply fc by 10.7

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	10° Beam Angle	23° Beam Angle
Output	Beam Angle	10°	23°
	Lumens*	960	859
	LED Channels	Red / Green / Blue	
	Mixing Distance	6 in (152 mm) to uniform light	
	Lumen Maintenance†	50,000+ hours L50 @ 50° C (full output)	
Electrical	Input Voltage	24 VDC via PDS-750 TRX, PDS-375 TRX, PDS-150e, or PDS-60	
	Power Consumption	50 W maximum at full output, steady state	
Control	Interface	DMX via power / data supply Fixture firmware addressable 8- or 16-bit control	
	Control System	Philips full range of controllers, including Light System Manager, iPlayer 3, or any third-party controllers	
Physical	Dimensions (Height x Width x Depth)	8 x 13.5 x 2.6 in (203 x 343 x 66 mm)	
	Weight	6.4 lb (2.9 kg)	
	Housing	Die-cast aluminium, powder-coated black finish	
	Lens	Clear glass	Frosted glass
	Fixture Connections	6 ft (1.8 m) power / data cable with 4-pin XLR connector	
	Temperature Ranges	-40° – 122° F (-40° – 50° C) Operating -4° – 122° F (-40° – 50° C) Startup -40° – 176° F (-40° – 80° C) Storage	
	Humidity	0 – 95%, non-condensing	
Certification and Safety	Maximum Cable Length	60 ft (18 m), with extension to built-in 6 ft (1.8 m) power cable	
	Certification	UL / cUL, FCC Class A, CE, PSE, C-Tick, SAA	
	Environment	Dry Location, IP20	



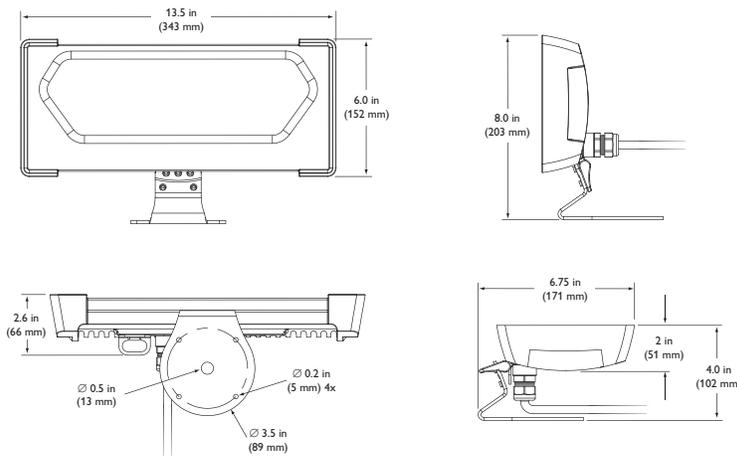
In addition to the PDS-750 TRX power / data supply, City Theatrical Inc. offers a line of power / data supplies specifically designed for Blast TR fixtures. Visit www.citytheatrical.com for details.

* Lumen measurement complies with IES LM-79-08.

† L50 = 50% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED fixtures are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/apnotes/lm-80-08.pdf for more information.



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Included in the box

ColorBlast TR fixture with 6 ft (1.8 m) power cable
Frosted glass 23° lens
Clear glass 10° lens
Protective elastomeric sleeve
3/16 in hex key wrench
Installation Instructions

Replacement parts

✳️ You must remove the fixture's protective sleeve before you can attach the accessory holder. Reinstall the protective sleeve after use.

City Theatrical Inc. offers a line of polycarbonate holographic lenses for ColorBlast TR, with a range of symmetric and asymmetric beam angles. Visit www.citytheatrical.com for details.



Fixtures and Power / Data Supplies

ColorBlast TR fixtures are part of a complete low-voltage system which includes one or more power / data supplies and any Philips DMX or third-party controller.

Item	Item Number	Philips 12NC
ColorBlast TR	116-000023-00	910503700581
Protective Sleeve	120-000062-00	910503700370
Mounting Base	120-000060-00	910503700369
Lenses (23° frosted glass and 10° clear glass)	120-000066-00	910503700367
Mounting Hinge and Hardware	120-000072-00	910503700515
PDS-375 TRX	109-000030-01	910503702284
PDS-750 TRX	109-000030-00	910503702319
SmartJack Pro	103-000024-00	910503700582

Use Item Number when ordering in North America.

Accessories

Designed specifically for the family of Blast fixtures, accessories provide additional options for controlling and dispersing light. Accessory holders screw to the side of the fixture and are required for mounting accessories. Accessory holders prevent accessories from falling out if the fixture is tipped or hung upside down.

Item	Housing Color / Type	Item Number	Philips 12NC
Accessory Holders	Black	120-000003-04	910503702840
Half Top Hats	Black	120-000009-04	910503702848
Top Hats	Black	120-000005-04	910503702844
Egg Crate Louvers	Black	120-000015-04	910503702852
Barndoors	Black	120-000019-04	910503702856
Horizontal Glass Spread Lens*	36° (ribs out) / 50° (ribs in)	120-000025-00	910503703897
Horizontal / Vertical Glass Spread Lens*	40°	120-000025-01	910503703898

* Intended for use with Blast fixtures with 10° clear lens

Use Item Number when ordering in North America.

Installation

ColorBlast TR fixtures are designed for easy setup, configuration, and teardown. You can connect ColorBlast TR fixtures directly to a power / data supply, such as the PDS-750 TRX, using the built-in 6 ft (1.8 m) power cable with standard XLR connector.

Owner / User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate ColorBlast TR fixtures in such a manner as to comply with all applicable codes, state and local laws, ordinances, and regulations. Consult with the appropriate electrical inspector to ensure compliance.

Create a Lighting Design Plan and Layout Grid

1. Determine the appropriate location of each power / data supply in relation to the light fixtures, and of the light fixtures in relation to each other.

ColorBlast TR connects to the power / data supply over a built-in 6 ft (1.8 m) power cable with a standard 4-pin XLR male connector. The power cable can be extended with a standard XLR male to XLR female patch cable, up to a maximum overall length of 60 ft (18 m).

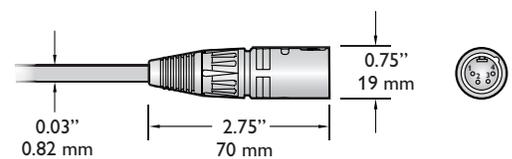
The number of ColorBlast TR fixtures that each power / data supply can support is determined by the such factors as the supply's capacity and number of available ports, line voltage, circuit load, voltage drop, and cable lengths. The PDS-750 TRX, for example, can support up to 12 ColorBlast TR fixtures, each with a cable of up to 60 ft (18 m).

2. On an architectural diagram or other diagram that shows the physical layout of the installation, identify the locations of all switches, controllers, power / data supplied, fixtures, and cables.

* The built-in power cable can be extended with a standard XLR male to XLR female patch cable, up to a maximum overall length of 60 ft (18 m).

* Refer to the ColorBlast TR Installation Instructions for specific warning and caution statements.

Power Cable connector dimensions



Power cable pinouts

Pin	Signal	Wire Color
1	+24 VDC	Red
2	(not used)	
3	Data	White
4	DC Common	Black

Start the Installation

1. Install all power / data supplies, including any interfaces with controllers. Power / data supplies and external controllers send power and control signals to the fixtures over the fixture's leader cable.
2. Verify that all additional supporting equipment (switches, controllers) is in place.
3. Ensure that all additional parts and tools are available, including:
 - The included 3/16 in hex key wrench for locking the fixtures in position
 - A Phillips head screwdriver for removing the bezel screws
 - C-clamps or bases for pipe, truss, or floor mounting, as required

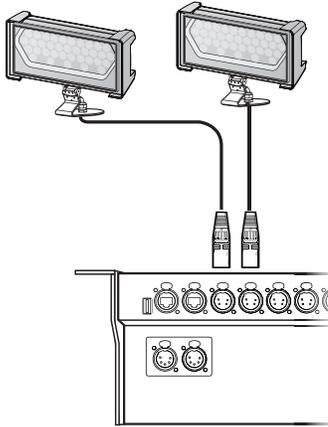
Install the Fixtures

Make sure the power is OFF before mounting and connecting ColorBlast TR fixtures.

1. The mounting base of each ColorBlast TR fixture provides a clearance hole for a 1/2 in bolt for mounting to a pipe, truss, weighted base, or floor using a standard theatrical C-clamp or other mounting hardware. When mounting ColorBlast TR, ensure that the installation is suitable and safe and that the hardware is properly rated for the task.



✳ For complete instructions on how to wire the PDS-750 TRX, refer to the PDS-750 TRX User's Manual.



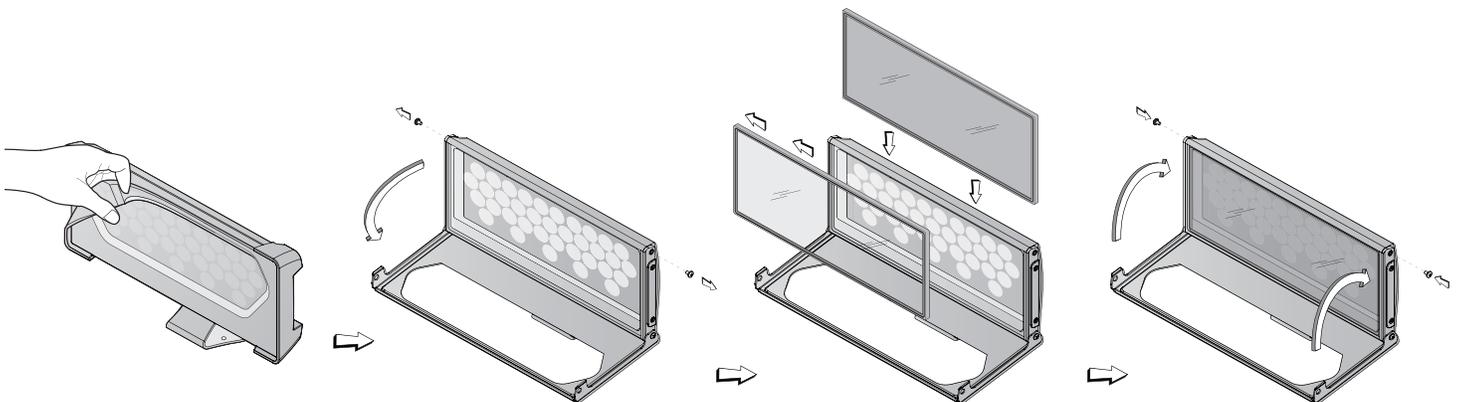
2. When mounting ColorBlast TR fixtures on the floor or a base, ensure that the fixture sits flush to the surface and use mounting hardware suitable for the mounting surface.
3. Connect each ColorBlast TR fixture to an available female 4-pin output on the power / data supply, ColorBlast TR fixtures are provided with a permanently connected 6 ft (1.8 m) cable. The cable can be extended with a standard XLR male to XLR female patch cable, up to a maximum overall length of 60 ft (18 m).

✳ To ease removal and replacement of the protective cover, run the fixture at full power until the heat from the fixture housing softens the cover material.

Exchanging ColorBlast TR Lenses

ColorBlast 12 TR is designed to let you quickly and easily exchange lenses. The clear 10° lens is designed for long throw and spotlighting applications, while the frosted 23° lens is designed for wash lighting applications. The 23° lens is factory installed, and the 10° lens is included in the box.

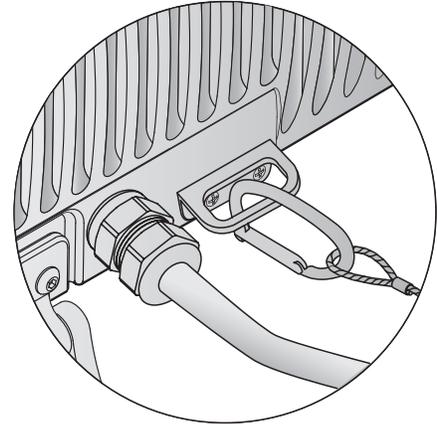
1. Remove the protective cover from the fixture.
2. Using a Phillips head screwdriver, remove the two lock-down screws located on each side of the fixture at the top of the bezel. (Do not remove the pivot screws on the edge of the bezel closest to the base.)
3. Using the tabs on the bezel, pivot the bezel forward to access the lens.
4. Remove the installed lens.
5. Clean both sides of the lens using a mild, non-abrasive cleaner. Handle the lens by the gasket, making sure not to touch or soil either surface. Place the lens in the fixture housing, making sure the gasket around the lens is properly fitted.
6. Close the bezel, tighten the lock-down screws, and replace the protective cover.



Attach Safety Cable (optional)

Each ColorBlast TR fixture is designed for use with a safety cable to tether it to a secure anchor point. When dictated by local or state code or advised by a structural engineer, attach a safety cable to the bracket on the back of the fixture using a standard carabiner clip. Attach the safety cable to the mounting surface using a method that follows the code or engineer's requirements.

Safety cable bracket location on fixture



Address and Configure the Fixtures

Make sure the power is ON before addressing and configuring fixtures.

ColorBlast TR fixtures operate in 8-bit mode by default. You can configure ColorBlast TR to operate in 16-bit mode, which increases fixture resolution for smoother dimming.

In 8-bit mode, fixtures use one DMX address per LED channel (red, green, and blue). In 16-bit mode, fixtures use two DMX addresses per LED channel. The first DMX address corresponds to the "coarse" data for that channel, and the second corresponds to the "fine" data. By using double the number of DMX addresses, 16-bit mode increases fixture resolution from 256 dimming steps to 65,536 (256 x 256) dimming steps.

DMX Channel Assignments

	1		2		3	
8-Bit Mode	Red		Green		Blue	
16-Bit Mode	1	2	3	4	5	6
	Red Coarse	Red Fine	Green Coarse	Green Fine	Blue Coarse	Blue Fine

ColorBlast TR fixtures come factory-addressed with a starting DMX address of 1. For light show designs where fixtures work in unison, all fixtures can be assigned the same starting DMX address. For light show designs that show different colors on different fixtures simultaneously, you must assign unique DMX addresses to your fixtures and sort them in a useful order.

The PDS-750 TRX and other power / data supplies from City Theatrical Inc. offer convenient, automatic addressing appropriate for most ColorBlast TR installations. Starting from a base number that you set using onboard controls, the power / data supply automatically assigns unique, sequential DMX addresses to the installed fixtures. If your fixtures were previously addressed for use in other installations, you can easily reset them to starting DMX address 1 with the power / data supply's built-in Mini-Zapi button. Refer to the Operator's Manual of your power / data supply for complete details.

Aim and Lock the Fixtures

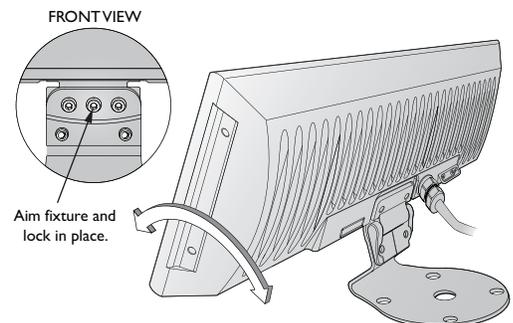
Using the provided hex key wrench, loosen the tilting set screws located on the front of the fixture's mounting base. Aim the fixture by tilting the beam as desired. Tighten the set screws to lock the fixture in place.

Safety cable minimum requirements

Material	316 Stainless Steel
Size	5/64 to 3/16 in (2 to 5 mm) nominal diameter. Minimum break load must be greater than 400 lbs (181 kg)
Construction	7 x 7 (49 wires) preformed stranded

* If necessary, you can individually address ColorBlast TR fixtures using QuickPlay Pro and SmartJack Pro. For complete details, download the Addressing and Configuration Guide from www.philipscolorkinetics.com/support/addressing/

* You can switch between 8-bit mode and 16-bit mode using QuickPlay Pro with SmartJack Pro controller. You can download QuickPlay Pro from www.philipscolorkinetics.com/support/addressing/



* Do not look directly into the fixture when aiming and locking.



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