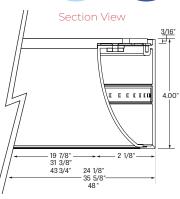


ACOUSTIX - CHROMAWERX DUO, SOLA AND QUADRO





Project: Туре:



Togo Acoustix provides generous ambient illumination from a minimal and elegant ring form. Nestled in a crisp 4" high opaque band, the distinctive, annular diffuser glows inwardly. The diffuser's softly rounded compound curve lends Togo Acoustix a slender appearance. Available in 24", 36" and 48" diameters. Togo's outer housing of extruded aluminum is welded and buffed to a seamless band that can be painted in a variety of standard finishes, or an RAL custom color, to coordinate with virtually any interior finish. The Togo driver mounts remotely, either above or below the ceiling. In addition to a conventional power cord, Togo Acoustix also offers an ultra-clean mounting detail with integrated power and suspension cables. Togo Acoustix is available in Chromawerx SOLA, DUO and QUADRO. Static White is also available, see separate spec sheets.

Order Guide

LUMINAIRE ID	SIZE	OPTICS	LIGHT SOURCE	CRI	LUMEN PACKAGES			VOLTAGE		
TOGOACOP		ULO		90						
TOGOACOP - Togo Acoustix Pendant	24 - 24" diameter 36 - 36" diameter 48 - 48" diameter	ULO - Uniform Lambertian Optic	DUO - Tunable white 2-channel control 27K to 65K SOLA - Dim-to-warm single-channel control 22K to 35K QUADRO- four-channel RGB with 3500K/90CRI	90 - 90CRI	Ø 24* Ø 36* Ø 48*	Low L2500lm L3800lm L5000lm	Medium M3500lm M5300lm M7000lm	High H4500lm H6800lm H9000lm for lumen pa	QUADRO* 27W - 27W output 40W - 40W output 54W - 54W output ckages over 4500lm.	120 -120V 277 - 277V UNV - 120V-277V

DRIVER	ELECTRICAL	POWER/MOUNTIN	POWER/MOUNTING						
	1								
		DRIVER BOX	CANOPY FINISH	POWER	MOUNTING POINTS	HEIGH	Т		
SOLA DA* - DALI 0-10V - Single 0-10V input DUO DA* - DALI 0-10V - Dual 0-10V input for CCT/intensity DMX* - DMX with remote driver only (to specify see pages 8 to 16)	1-1 circuit	RCD - Round canopy driver box* RDB - Remote driver box * RCD is NOT available for lumen packages over 6000lm (3500lm for Lutron	AL - Aluminum B - Matte black W - Matte white CF# - Custom finish specify RAL#	BAC - Black power cord + aircraft cable WAC - White power cord + aircraft cable For more information see page 3.	1C - 1 canopy 3C - 3 canopies 4C - 4 canopies	##IN* - Distance from the canopy to the fixture in inches * For 1 canopy option, the minimum mounting heights are:		.3	
QUADRO		drivers).				Fixture size	Round canopy driver box	Remote driver box	
DMX* - DMX with remote driver only (to specify see pages 8 to 16) *On-site commissioning is required.						Ø 24" Ø 36" Ø 48"	min 17.5" min 26.75" min 37"	min 18.5" min 29" min 39.25"	

FIXTURE FINISH	FELT COLOR	₹	DMX WALL CONTROLS (OPTIONAL)				
AL - Aluminum	STANDARD C	OLORS	PREMIUM CO	DLORS*			DUO
W - Matte white BK - Black	FWN	LVN	PKN	CDN	IVN	вни	WCW - Wall controller white WCB - Wall controller black
RAL 1028 - Yellow	FON	LEN	OGN	LCN	SLN	CFN	CHARRE
RAL 2004 - Orange RAL 3020 - Red RAL 4010 - Magenta RAL 5002 - Blue	ION	CYN	LNN	SYN	CNN	GRN	QUADRO WCIW - Wall controller 1 white
	TBN	PMN	LMN	BLN	GHN	MON	WC1B - Wall controller 1 black WC2W - Wall controller 2 white
RAL 6018 - Green	MDN	FGN	EGN	NVN	CLN	ESN	WC2B - Wall controller 2 black
CF# - Custom finish, specify RAL#			* Please consult factory for more color options. * Lead time may vary.				To specify see pages 8 to 16.













Project:

Standard Color Options





















Premium Color Options*









































*Please consult factory for more color options. *Lead time may vary.











Project:

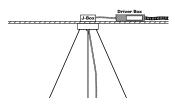
Туре:

Mounting Options

Togo Acoustix Chromawerx uses suspension cables plus a jacketed power cord.

REMOTE DRIVER BOX IN DRYWALL

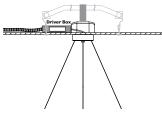




RDB - Remote driver box for drywall - driver is in a 26"x4"x5.5" enclosure with brackets for mounting to ceiling joists or other supporting members. The 5 1/2" diameter x 1 5/8" deep wiring compartment canopy conceals and supports suspension and power cables. It is available in standard finishes (see ordering code).

REMOTE DRIVER BOX IN GRID





RDB - Remote driver box for grid ceiling - driver is in a 26"x4"x5.5" enclosure with brackets for mounting to ceiling runners. The 5 1/2" diameter x 1 5/8" deep wiring compartment conceals and supports suspension and power cables.
*Additional anchor support(s) not included.











Project:

ACOUSTIC CALCULATOR

Using the Lumenwerx Acoustix Value Calculator table, you can determine the number of acoustic luminaires required in a space by fixture type. We have three levels of recommended sound reduction: good, better, and best. Choosing one of these options will reduce the sound accordingly. The best option indicates the best acoustic improvement. Calculations are based on a standard ceiling height of 9 feet.



- \bigcirc Calculate the square feet of your room (L x W).
- (2) Choose the level of acoustical improvement you are looking for, and find the corresponding value based on your room dimension and luminaire configuration.

% in reduction in reverberation time							
(GOOD	25%					
99	BETTER	40%					
000	BEST	50%					

	Room dim	ensions unde	r 300 sq ft	Room dimensions over 300 sq ft			
SIZE	GOOD <u></u>	BETTER	BEST ① ① ①	GOOD <u></u>	BETTER	BEST	
24"	18	9	6	28	14	9	
36"	42	20	14	65	32	22	
48"	75	38	25	120	59	41	

3 Use the Lumenwerx Acoustix Value Formula to determine the number of luminaires needed in the room.

Square feet ÷ Value = Number of luminaires

Example:

Luminaires: Togo Acoustix, 48" diameter **Room square feet:** L: 20 ft x W: 18 ft = 360 sq ft **Desired acoustical improvement:** Better = 59

Number of luminaires needed in the room: 360 ÷ 59 = 7 luminaires

NOTES:

- You can mix lit and blank fixtures.
- Lumenwerx acoustic calculators were developed to act as a guide. For precise acoustic performance in a space, please consult an acoustician.









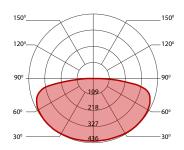
Project:

Type:

Technical Specifications

Uniform Lambertian Optic (ULO) - thermoformed from impact-modified white PMMA, the ULO optic provides even luminosity, with up to 88% transmission.

Combined with the LED array running around the inside of the supporting band, the annular form and ULO optic create a widespread 67% direct light distribution with spacing criteria of 1.6.





CHROMAWERX - SOLA and DUO

Custom linear array of alternating color temperature mid-flux LEDs are mounted directly to the housing for optimal thermal performance. For the DUO products, a color temperature range from 2700K - 6500K is achievable with color points on or below the black body curve. For the SOLA products, a color temperature range from 2200K - 3500K is controlled synchronously with intensity. Color consistency between fixtures is maintained within 3 SDCM. LEDs are operated at a reduced drive current to optimize efficacy and lumen maintenance. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance are greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

Chromawerx SOLA is a single-channel control that dims output while warming the color temperature in a pre-determined relationship. A simple analog control sends a common signal to dual output digital drivers, which are programmed to adjust a specially populated LED array to emulate the effect of dimming a filament source. Dimming range is programmable but the default option runs from 3500K at 100% of full power to 2200K at 5% of full power. CRI is maintained above 80 throughout the dimming range.

Chromawerx DUO is a two-channel control. It uses an analog (0-10V) protocol for separate control of luminaire CCT and intensity or a digital (DMX, DALI) protocol for synchronous control of both warm and cool LED arrays to enable the user to set color temperature and light output. Commonly called "tunable white", Chromawerx two-channel control provides the range of warm (2700K) to cool (6500K) color that can be useful for helping to entrain circadian rhythms, stimulate alertness for improved educational and work productivity, and compensate for jet lag, among other applications. The Chromawerx drivers are programmed to limit maximum light output and power usage across all color temperatures. CRI is maintained above 80.

ANSI C78.377-2015 0.46 0.44 2700 K 3000 k 0.42 4000 K 0.40 4500 K 0.38 50001 5700 K 0.36 6500 K 0.34 0.32 0.30 Black body curve

LUMENWERX



CHROMAWERX - RGBW

Chromawerx QUADRO is a four-channel control that operates an RGBW LED array and addresses the need for more expressive color in architectural applications. The DMX driver supports familiar programming tools for both dynamic multi-hued color and precise white color point control. While a typical user interface will be a DMX controller by others, Lumenwerx also offers a simple control station for standalone color changing applications.







rioject.		
Typo:		

ELECTRICAL REMOTE

All remote drivers are furnished with factory enclosure for recessed installation in drywall and grid ceilings.

0-10V (SOLA and DUO):

Driver features factory-set adjustable output current with 120-277V AC line input. Dimmable from 100% to 1%. Rated life (90% survivorship) is 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. 0-10V 1% Driver performance at maximum load, efficiency > 84%, Power Factor > 0.9, THD < 20%.

DALI (SOLA and DUO):

Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Using an existing DALI control system (supplied by others), one control channel adjusts the fixture color temperature, and the other control channel adjusts fixture brightness. Dimming range from 100%-0%. At maximum driver load, efficiency<86%, PF>0.9, THD<20%.

DMX (QUADRO and DUO):

Factory-set, adjustable output current, multi-channel LED driver with universal (120-277VAC) input. Using DMX wall controls (optionally supplied by Lumenwerx) or an existing DMX control system, either two channels of LEDs (warm-white & cool-white) for DUO or four channels of LEDs (Red/Green/Blue/White) for QUADRO are independently adjustable. Each DMX driver has multiple output channels that can be independently addressed at the factory or on-site using built-in RDM (Remote Device Management) functionality. Dimming range from 100%-0%. At maximum driver load, efficiency<89%, PF>0.9, THD<20%.

WEIGHT

Togo Acoustix 24 - 8.05lbs - 3.65kg Togo Acoustix 36 - 12.08lbs - 5.48kg Togo Acoustix 48 - 16.1lbs - 7.30kg

CONSTRUCTION

Housing - Rolled and seamlessly welded aluminum extrusion, wide variety of colored powder coating

Diffuser - Uniform Lambertian optic, co-extruded flexible polycarbonate satine finished lens.

FINISH

Interior - 95% reflective, matte white powder coating **Exterior** - side trim is offered in a range of vibrant color powder coatings

ACOUSTIC FINISH

Material is 100% polyester containing up to 50% of recycled plastic bottles (PET) with an ASTM E-84 Class A fire rating and is moisture resistant.

CARE

Remove dust and debris with a clean, dry, soft, lint-free cloth, or vacuum.

ENVIRONMENT

Ambient temperature at fixture location shall not exceed 30°C/86°F. For indoor use only.

CERTIFICATIONS

ETL - Rated for Indoor Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

WARRANTY

Lumewerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website. Wall controllers are covered by the manufacturer warranty.







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	-			

IMFNWFRX









WELL for Light - The WELL building standard focuses on light quality in several features. There are three categories that are fully attributed to the construction and features of a luminaire. In WELL V1, it's Feature 54 Circadian Lighting, Feature 55 Glare Control, and Feature 58 Color Quality. In WELL V2, it's Feature L03 Circadian Lighting, Feature L04 Glare Control, and Feature L07 Electric Light Quality.

This fixture meets Features:

- Feature 54 or L03 when DUO is selected
- Feature 58 or L07 when 90CRI is selected

All LED drivers used at Lumenwerx are deemed to have a low risk level of flicker, of $5\,\%$ or less below 90Hz operational as defined by IEEE standard 1789-2015 LED.



WELL for Sound - This luminaire is recommended for use as an acoustical absorption surface to limit reverberation times (RT) in a given space. This luminaire contributes to noise reduction and vibration dampening to promote focus and concentration. Reverberation needs to be calculated in each space based on the materials used.



WELL for Mind (SOLA and DUO only) -This luminaire meets WELL for mind as it is a human centric luminaire offering quality light, excellent color, smooth optics, and a sound diminishing element. If any of these features are incorporated in a luminaire, it can improve the ability to focus, concentrate, and persist longer on a given task. This fixture harmoniously operates in a space to assist the mind.

For more information please contact well@lumenwerx.com.







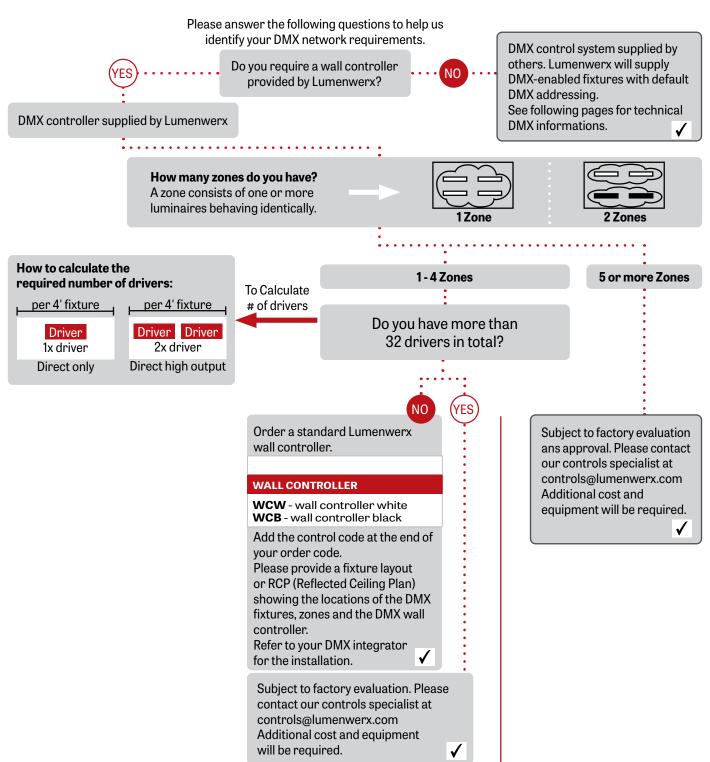




Project:

DUO DMX SPECIFICATION

A qualified DMX integrator is required to assure proper installation and commissioning of the DMX network. When placing the PO, please provide the <u>contact information of your DMX integrator.</u>











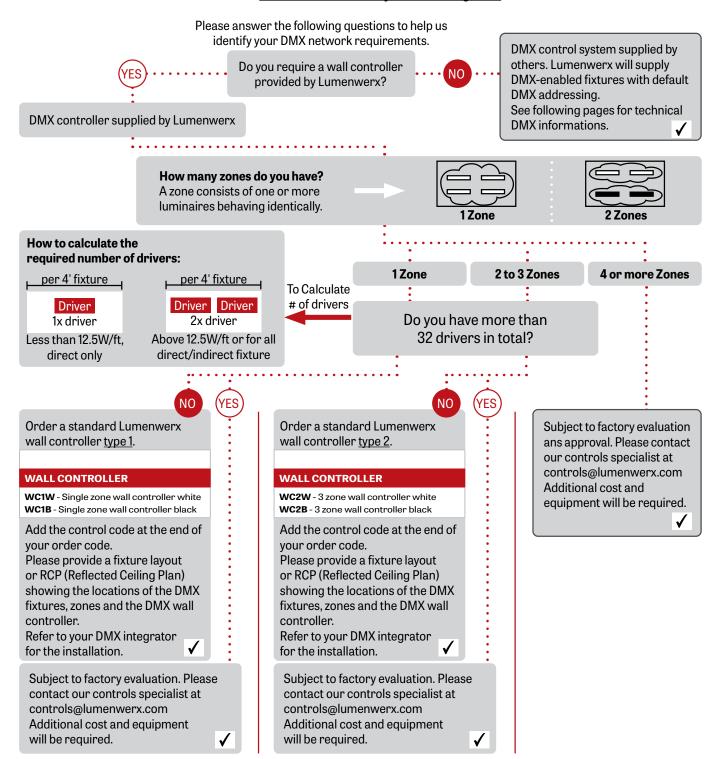




Project:

QUADRO DMX SPECIFICATION

A qualified DMX integrator is required to assure proper installation and commissioning of the DMX network. When placing the PO, please provide the contact information of your DMX integrator.





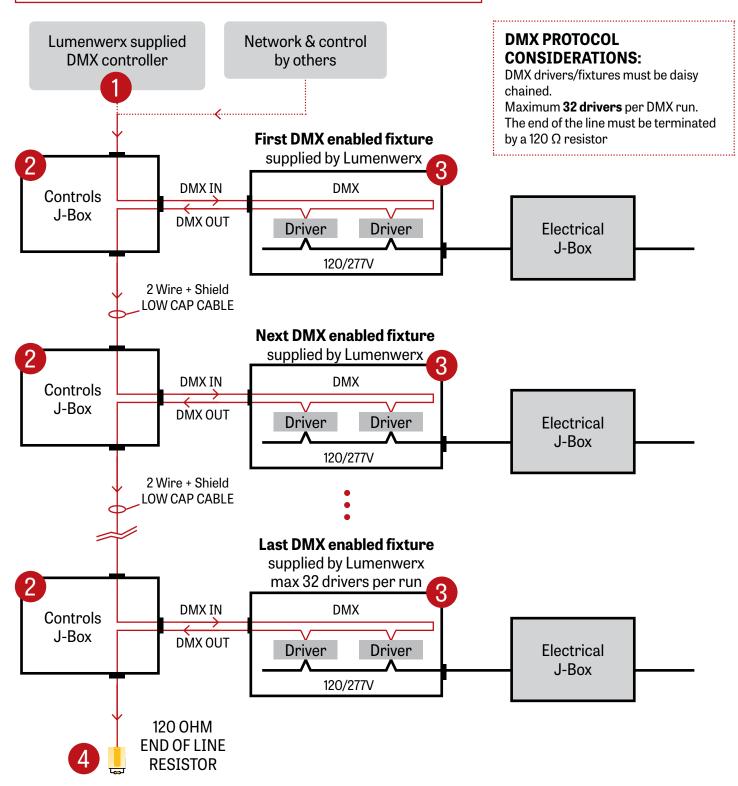








GENERIC DMX NETWORK ARCHITECTURE



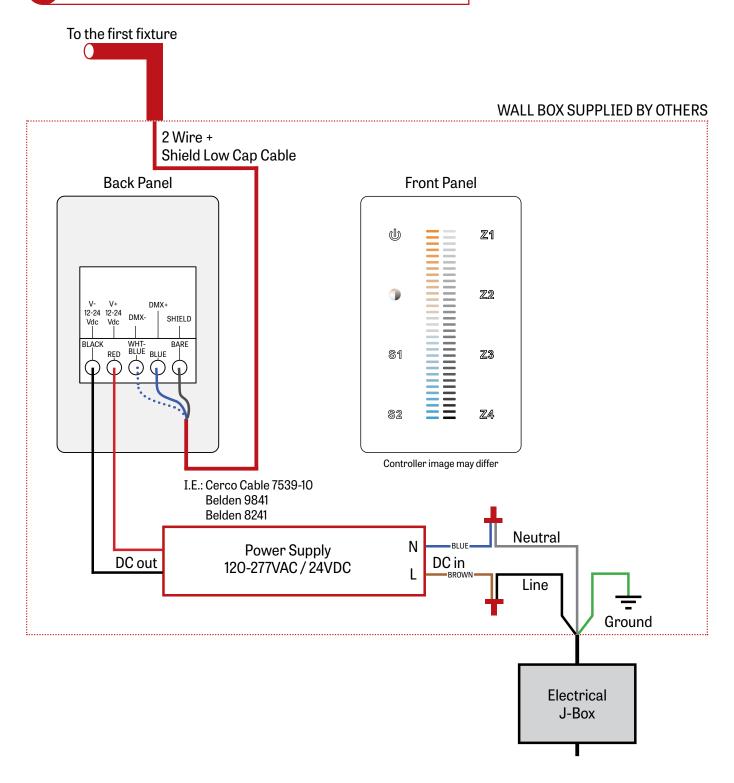








1 LUMENWERX SUPPLIED DMX CONTROLLER









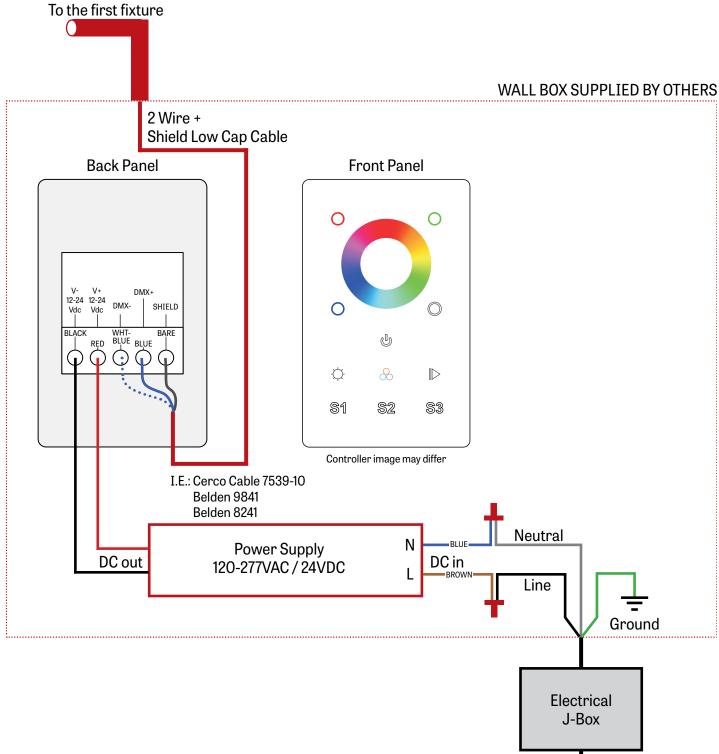
LUMENWERX





Project: Type:

1 LUMENWERX SUPPLIED DMX CONTROLLER







LUMENWERX



2 J-BOX DMX DAISY CHAIN DETAIL

Low capacitance DMX cable from previous fixture Shielding foil touches the bare Bare metal drain wire (shield) ΙN metal drain wire MUST NOT TOUCH J-BOX inside **DMX IN** Controls DMX ENABLED FIXTURE J-Box **DMX OUT** Ground Bare metal drain wire (shield) **OUT** MUST NOT TOUCH J-BOX

Low capacitance DMX cable to next fixture

3 DMX CONNECTION PENDANT & WALL







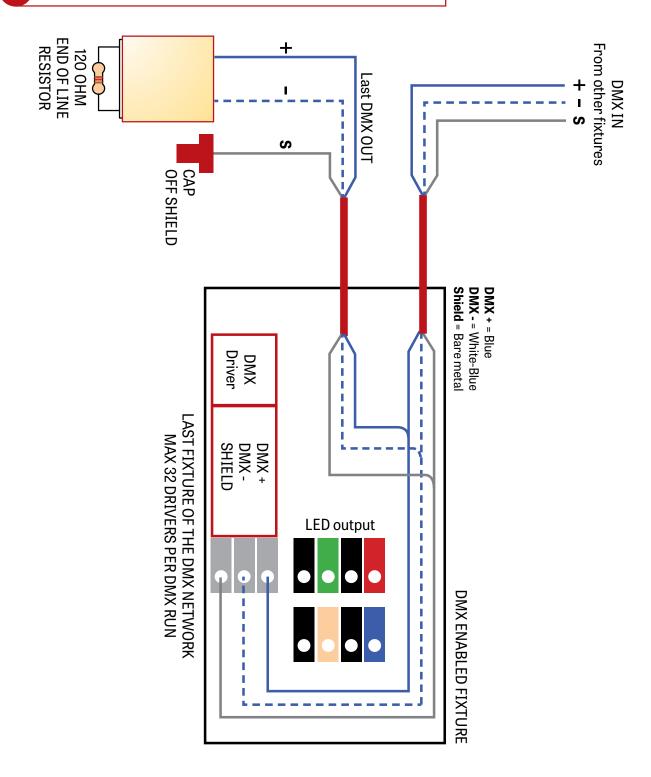


ACOUSTIX - CHROMAWERX DUO, SOLA AND QUADRO





DMX LAST FIXTURE DETAIL









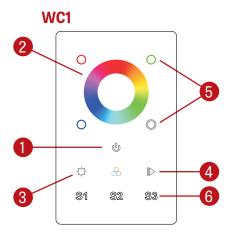




Type:

Project:

DMX WALL CONTROLLER



(1) Power: Use this button to turn ON or OFF the RGBW fixture.

(2) Color Wheel: The wheel is used to rapidly select a color (RGB colors only).

(3) Brightness (RGB): Hold down this button to either increase or decrease the

brightness of the current RGB selection. White will not be

affected by the RGB brightness button.

(4) Color Cycle: This button will start an animation, rotating between Reds

Greens and Blues, the arrows allow the user to speed up or

slow down the animation.

(5) Individual Colors: By pressing and holding a color it will be possible to brighten or

dim it. Quickly pressing a color will turn it OFF or turn it ON to

its previous dim level.

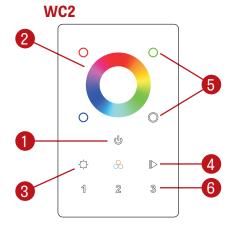
White: In order to activate or deactivate and dim the White

channel, the White button needs to be used.

(6) Scenes: By holding down one of the scenes button, the current color

selection is saved. It can be later accessed by quickly pressing

on one of the Scene buttons.



(1) Power: Use this button to turn ON or OFF the RGBW fixture.

(2) Color Wheel: The wheel is used to rapidly select a color (RGB colors only).

(3) Brightness: Hold down this button to either increase or decrease the

brightness of the current RGB selection. White will not be

affected by the RGB brightness button.

(4) Color Cycle: This button will start an animation, rotating between Reds

Greens and Blues, the arrows allow the user to speed up or

slow down the animation.

(5) Individual Colors: By pressing a color it will be possible to brighten or dim that

specific color.

White: In order to activate or deactivate and dim the White

channel, the White button needs to be used.

(6) Zone: By holding down one of the zone buttons, a zone can be

selected and controlled.

Default DMX Addresses:

1 Red

2 Green

3 Blue

4 White







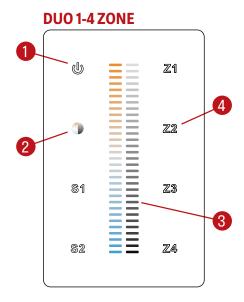




Project: Type:

DMX WALL CONTROLLER

SOLA AND QUADRO



(1) Power: Use this button to turn ON or OFF the fixture.

(2) Brightness/CCT: Use the color/brightness toggle button to choose between color/brightness. When Blue: brightness is selected, when

Yellow: color is selected.

(3) Slider: Depending on the mode chosen in step 2, the slider will allow

the user to set desired color or brightness.

(4) Zone select: Up to 4 zones can be selected either independently or together.

Once selected, the commands will be sent to the zone identified

by a Blue LED.

Default DMX Addresses:

1 Warm 2 Cool



