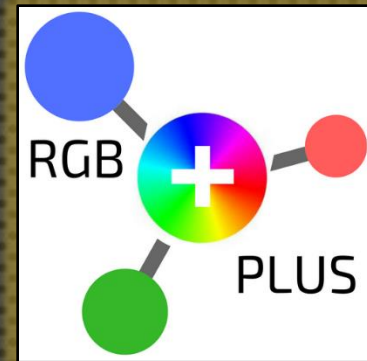




2018 RGB+ Controller Guide



illuminations

HOLIDAY, EVENT & LANDSCAPE LIGHTING



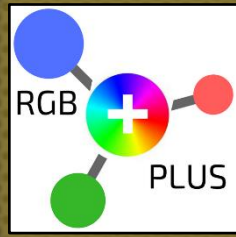
YOUR PROVIDER OF LEADING EDGE LED LIGHTING PRODUCTS





RGB+ CONTROLLERS

TABLE OF CONTENTS



Note: Guidelines herein are for both Minleon's legacy RGB Line & Minleon's 2017-18 RGB Plus Line controllers. Variations will be slight & work to our advantage, as the Plus Line will take slightly less power & allow for longer runs between power injections.

The NEC will work with both systems.

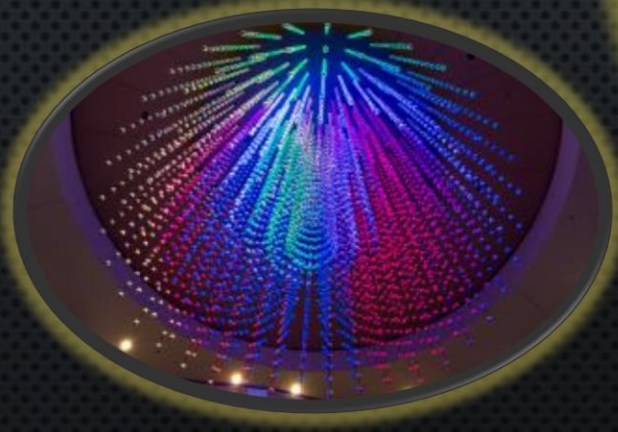
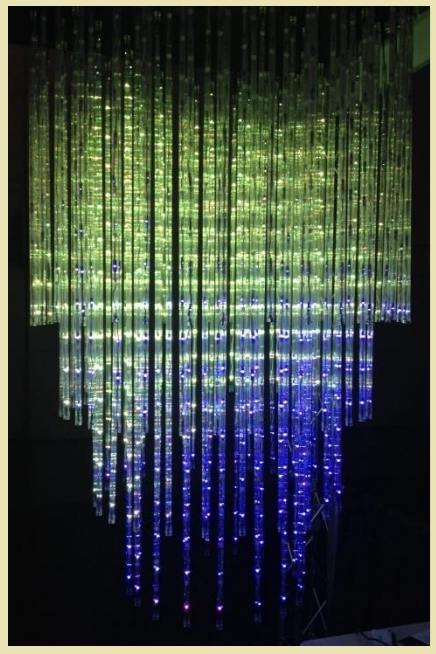
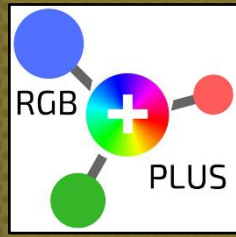
Controller functionality for the MC+ & WEC+ are the same as their predecessors. Look for the **2018 NDB+ User Guide** for the Plus Line which adds significant features.



1. MINLEON'S HISTORY & VISION
2. THE MINI-CONTROLLER (MC+)
3. WI-FI EFFECTS CONTROLLER (WEC+)
4. NETWORK DATA BOX (NDB+)
5. NETWORK EFFECTS CONTROLLER (NEC)
6. MINLEON SHOW CONTROLLER
7. INCORPORATING NON-RGB ELEMENTS
 - EXPRESS CONTROLLER
8. QUESTIONS & RESOURCES



RGB+ CONTROLLERS OUR HISTORY



THE WORLD OF MINLEON

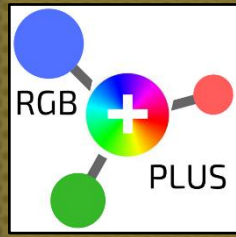
FIRST — WE MANUFACTURED DECORATIVE
LEDs

THEN — WE INNOVATED THE FIRST DIMMING
RETROFIT LEDs

NOW — WE ARE A LEADER IN THE
DEVELOPING COLOR-CHANGING, RGB-
LED MARKET



RGB+ CONTROLLERS OUR VISION



THE FUTURE OF DECORATIVE LIGHTING WILL BE DRIVEN BY RGB TECHNOLOGY & MINLEON-RAINMIN IS COMMITTED TO BEING ONE OF THE MAJOR PLAYERS IN RGB LIGHT OFFERINGS.

Our Mission:

To develop leading edge, technology-based, innovative lighting products for the holiday, architectural, interior design, retail, entertainment, & signage markets.

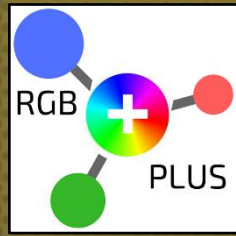


MINLEON RGB IS VERTICALLY INTEGRATED:

1. WE MANUFACTURE RGB LIGHTS & ACCESSORIES
2. WE MANUFACTURE RGB LIGHT CONTROLLERS, AND
3. WE WRITE & MAINTAIN RGB LIGHT SHOW SEQUENCING & ANIMATION SOFTWARE



RGB+ CONTROLLERS MINI-CONTROLLER



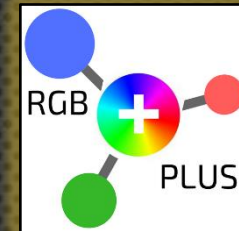
Specifications



Item #	RGB+MC
# Individually Controllable RGB's	500
Output	single light string port
Built-In Software	Yes
Art-Net / DMX Compatible	No, but can receive data from ENTEC USB Pro devices
USB Port	Yes
IP Rating	IP 65
UL / cUL Listed	Yes
FCC Certified	Yes
Working Temperature	Neg-4 to +122 Deg Fahr. / Neg-20 deg to Plus+50 deg. C
Dimensions	3" L x 2 ½" W x 1" H
Power Adapter	100 – 240VAC input / 12Vdc 1-5 amps output (12-24 Vdc MC+)
Supply Voltage	12-24 Vdc (12 Vdc legacy MC 2014-17)
Max Current	5 Amps



RGB+ CONTROLLERS MINI-CONTROLLER



More Specs

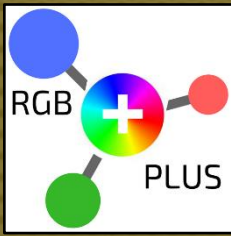
Wireless Control	via remote control*
# Built-In Effects	25
Color Selection	Up to 3 custom colors (saturated/pastel/whites)
Effects with Custom Colors	16
Light Show Mode	Yes
# Favorites / Quick Reference	4
Speed Control	10 levels
Brightness/Intensity Control	8 levels
Remote Control	12-button, multi-function / NEC-UI add-on
Remote Control Battery Type	12VDC Alkaline, Type: 23A
Minleon Compatible Accessories	Power T, Data Boosters, Show Controller

**For more features please reference the
Mini-Controller User Guide tutorial.**



RGB+ CONTROLLERS

WI-FI EFFECTS CONTROLLER



Preset colors:

Favorite Show

Rainbow

Color Change

Expander

Color Wheel

Test Pattern

Custom colors:

Fixed Colors

Shift

Paint

Chaser

Flashing Chaser

Waves

Moving Blend

Xmas Lights



Specifications

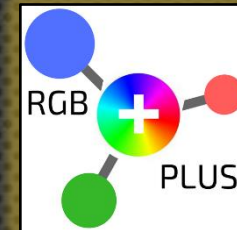
Item #	RGB+WEC
# Individually Controllable RGB's	400
Output	single light string port
Built-In Software	Yes
Protocol	Art-Net, DDP
IP Rating	IP 65
UL / cUL Listed	Yes
FCC Certified	Yes
Working Temperature	4 to 122 deg Fahr. / Neg-10 deg to Plus+50 deg. C
Supply Voltage	12 VDC
Max Current	5 Amps
Power Adapter	100 – 240VAC input / 12VDC 2-5 amps output
Power when lights are out	50 m/A
Dimensions	2.5" x 2" x 1"; 76mm L x 63.5mm W x 25.5mm H

A sampling of the WEC's custom effects,
as shown on the Built-In Interface



RGB+ CONTROLLERS

RGB+WEC



More Specs

MINLEON WEC 1.8

COLORS	EFFECTS	FAVORITES	CONFIGURATION	ON/OFF
--------	---------	-----------	---------------	--------

Favorite Effects

Recall	Effect	Intensity%%	Speed	Color1	Color2	Color3	ShowTime	Set
Recall	Multi Chaser	100	7				30	Set
Recall	Fixed Colors	100	5				10	Set
Recall	Fixed Colors	50	5				10	Set
Recall	Glow	100	5				30	Set
Recall	Xmas Lights	100	7				60	Set
Recall	Ping Pong	100	7				10	Set
Recall	Twinkle	100	5				60	Set
Recall	Color Wheel	100	10				0	Set
Recall	Rainbow	100	10				0	Set
Recall	Moving Blend	100	10				0	Set

ShowTime is seconds to run each effect for Favorites Show. [Save ShowTimes](#)

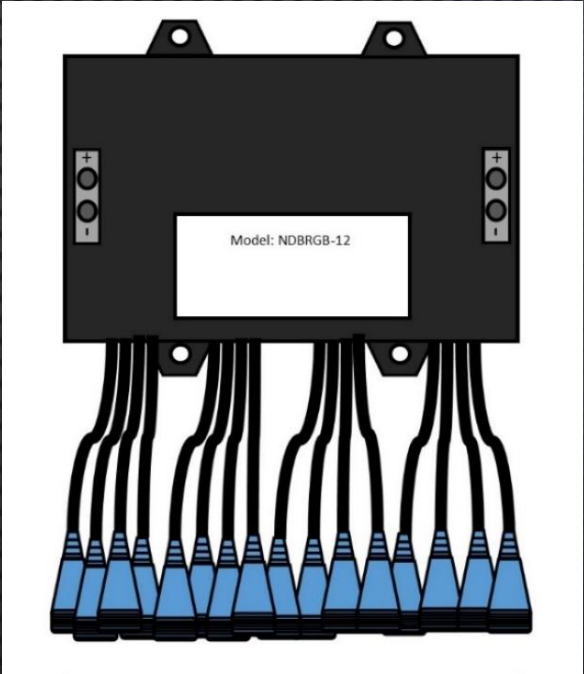
For more features please reference the Wi-Fi Effects Controller User Guide tutorial.

Default IP Address	192.168.2.2
Default SSID (Wi-Fi Name)	Minleon-WEC
Remote Control	via Smart Phone, Tablet, Laptop, PC
Link Multiple Controllers	up to 4 as Master-Client, wirelessly
Wireless Range	50-75-feet (line of sight)
App Compatibility	For Apple devices, WEC-Mate App (iTunes/App Store)
Built-In Interface	Yes, will work without App
# Built-In Effects	27
Color Selection	Up to 3 (saturated/pastel/whites)
Effects with Custom Colors	16
Light Show Mode	Yes
# Favorites / Quick Reference	10
Speed Control	10 levels
Brightness/Intensity Control	10 levels
Minleon Compatible Accessories	Smart T's, Power T, Data Boosters



RGB CONTROLLERS NETWORK DATA BOX

For updated specs on the **2017-18 NDB+ Plus**, please refer to the 2018 *NDB+ Line User Guide*



Specifications

Item #	RGB-NDB
# Individually Controllable RGB's	1600 via DDP; 1530 via ArtNet*
Output	16 ports
Built-In Software	No
Protocols	Art-Net, DDP
Supply Voltage	12 VDC
Max Current	40 Amps
Working Temperature	Neg-10 deg to Plus+50 deg. C / Neg-14 deg to Plus 122-deg F
IP Rating	IP 24 under cover
UL / cUL Listed	Yes
Power Adapter	100 – 240VAC input 12VDC 10-40 amps output
Dimensions	4" L x 5 1/4" W x 1 3/8" H

*Limit can be reached with proper power injection & ≤ 4" pixel spacing.



RGB CONTROLLERS NETWORK DATA BOX

More Specs

Link Multiple NDB's	Yes – via Network Switch
Max lights per Output Port	800*
Built-In Interface	For configuration with signal test
Default IP Address	10.0.0.100
NetMask	255.255.255.0
Minleon Compatible Accessories	Smart T's, Data Boosters, Power Blocker, NEC (Power T's ONLY in RGB PLUS LINE)

*With proper power injections

For updated specs & detailed features on
the **2017-18 NDB+ Plus**, please refer to the
2018 NDB+ Line User Guide

NDB Config v2.2

IP: . . .
NetMask: . . .
Gateway: . . .

Protocol: ☒ DDP ☐ ArtNet

Changes above this line will require a power-cycle

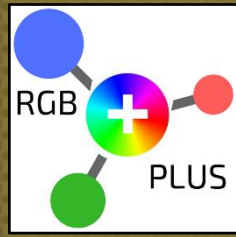
ArtNet Universes: through 10

Output	T's	Lights/String	Starting Slot
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2	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="31"/>
3	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="61"/>
4	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="91"/>
5	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="121"/>
6	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="151"/>
7	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="181"/>
8	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="211"/>
9	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="241"/>
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12	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="331"/>





RGB+ CONTROLLERS NETWORK EFFECTS CONTROLLER



Minleon's NEC works with **both legacy & Plus Line** NDB's and LED's

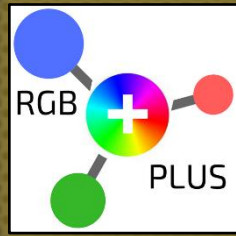


Specifications

Item #	RGB+NEC
# Individually Controllable RGB's	8000
Output	Ethernet Network, DMX, ArtNet
Built-In Software	Yes
Protocol	Art-Net, DDP, DMX
Supply Voltage	7.5-12 VDC (included)
Max Current	5 Amps
Working Temperature	5 to 50 deg. C / 40 to 122 deg. F
IP Rating	IP 24, under cover
UL / cUL Listed	Yes
FCC Certified	Yes
Power Adapter	100 – 240VAC input 7.5-12VDC 1 amp output
Dimensions	3 1/2" L x 6 1/8" W x 1 1/2" H



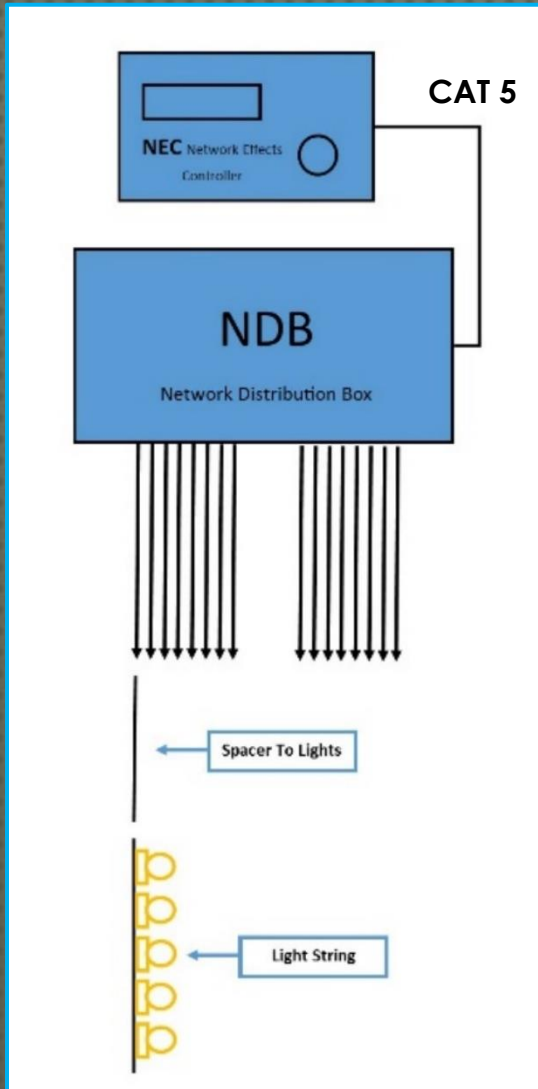
RGB+ CONTROLLERS RGB+NEC



More Specs

Light Outputs	None – runs via NDB
NDB Limit	up to 16 per NEC
Audio Player	Yes - .WAV support
SD/HC card slot / File Player	Yes – .BIN (sequence) & .WAV files support
Wireless Connect-ability	Yes – via Minleon Show Controller
Remote Control	via Smart Phone, Tablet, Laptop (as add-on)
Link Multiple Controllers	Yes - Master-Client, wirelessly
# Built-In Effects	23
Color Selection	Pallets (saturated/pastel/whites); individual colors on certain effects
Light Show Mode	Yes
# Favorites / Quick Reference	3
Speed Control	100 levels
Brightness/Intensity Control	100 levels
Minleon Compatible Accessories	NDB, NDB+, Smart T's, Data Boosters, Power Blockers, Minleon Show Controller

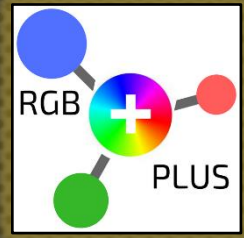
For more features
please reference
the 4-part
Network Effects
Controller User
Guides.





Minleon's Show Controller works with **both legacy & Plus Line** NDB's and LED's

RGB+ CONTROLLERS MINLEON SHOW CONTROLLER



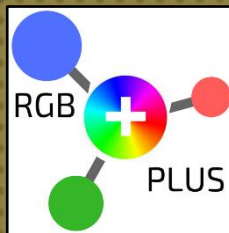
Specifications

Item #	RGB-MSC
# Individually Controllable RGB's	10,000+
Output	Enttec USB Open, Enttec USB Pro
Built-In Software	Yes
Protocol	DMX
Supply Voltage	5 VDC (included)
Working Temperature	5 to 50 deg. C / 40 to 122 deg. F
IP Rating	IP 24, under cover
FCC Certified	Yes
Power Adapter	100 – 240 VAC input 5 VDC 1 amp output, 0.4 Amps Max
Dimensions	2.5" x 5.625" x 1.25"

NEC Mode – quick reference effects buttons & variation sliders.



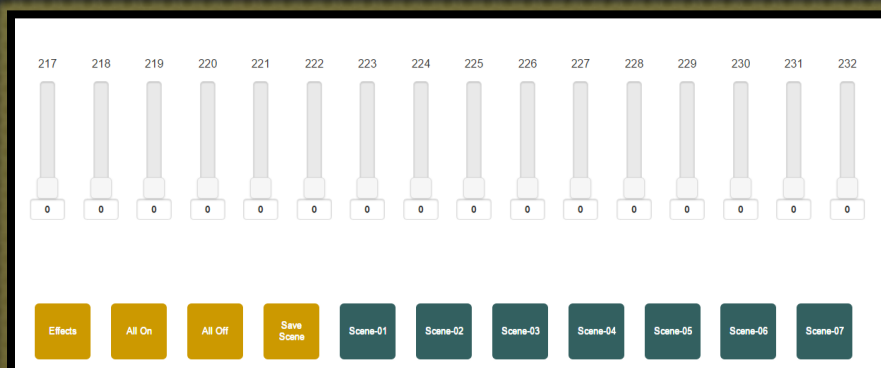
Web Interface Homepage



RGB+ CONTROLLERS MINLEON SHOW CONTROLLER

More Specs

Default IP Address	192.168.201.1
Default SSID (Wi-Fi Name)	necui, p/w minleon_nec
Remote Control	via Smart Phone, Tablet, Laptop, PC
Control Multiple NEC's	Yes
Wireless Range	100-feet (line of sight)
Built-In Interface	Yes, will work without App
Scheduling Capability	Year-round calendar
Battery Back-up	For RTC & Scheduler
Effects with Custom Colors	Yes
Light Show Mode	Yes
# Favorites / Quick Reference	dozens
Speed Control	Yes
Brightness/Intensity Control	Yes
Minleon Compatible Accessories	NEC v1.62, Mini-Controller, Express



DMX
Mode



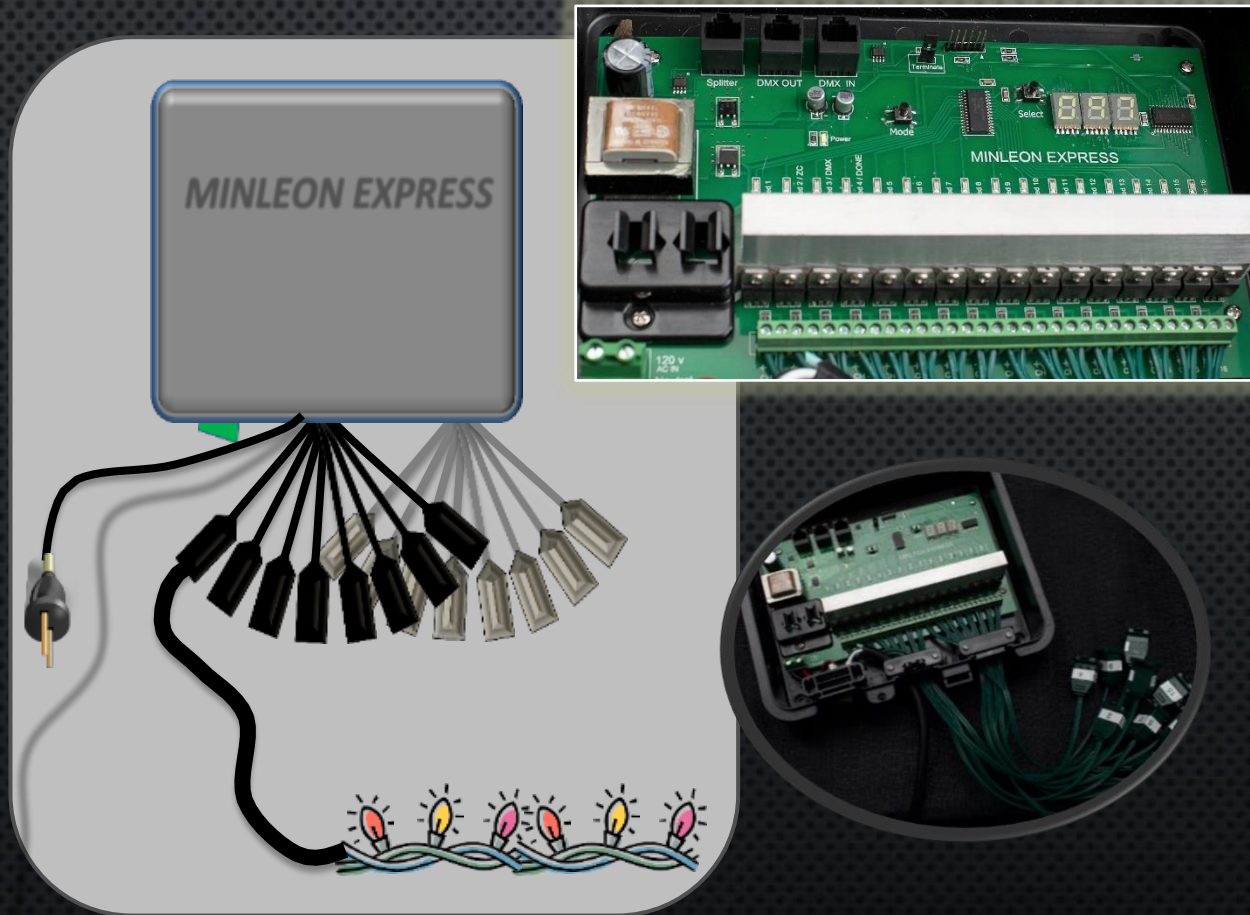
RGB CONTROLLERS

EXPRESS CONTROLLER

Note: The Express is not designed to control 3-channel, DC-powered RGB lights, but serves a purpose as an accessory in many medium-to-large light design systems.

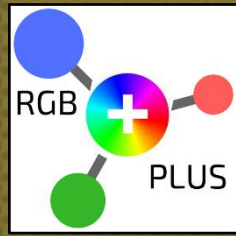
Specifications

Item #	ML-EXP
Dimmable Outputs	16
Protocols	DMX
DMX Outputs	2
Connect Multiple Controllers	Yes
Supply Voltage	110 VAC
Max Current	20 Amps / 2 Amps per channel
Power Adapter	none, 110 VAC plug hard-wired
Working Temperature	Neg-10 deg to Plus+50 deg. C / Neg-14 deg to Plus 122-deg F
IP Rating	IP 56
UL / cUL Listed	No
Dimensions	11 * 9.5 * 3.25 inches
Built-In Software	To Test Lights
DMX Splitter	on board
DMX Addressable	on board
Minleon Compatible Accessories	NEC, Show Controller





RGB+ CONTROLLERS A QUICK COMPARISON



Controllers:	Mini	WEC	NDB	NEC	Express
Minleon Show Controller compatibility	Yes	No	NEC	Yes	Yes
Art-Net compatibility	No	Yes	Yes	Yes	No
DMX compatibility	*	No	No	Yes	Yes
Remote control functionality	Yes	Yes	No	SC	SC
Smart phone/Wi-Fi functionality	SC	Yes	No	SC	SC
Control small # of lights (less than 500)	Yes	Yes	No	No	Yes
Control large # of lights (more than 500)	No	No	Yes	Yes	Yes
Use Minleon ' built-in ' effects software	Yes	Yes	NEC	Yes	No
Execute custom light shows directly from computer	Yes	No	Yes	Yes	Yes
Execute custom light shows without the need of a computer	Yes	Yes	NEC	Yes	NEC
Incorporate non-RGB light elements	No	No	No	SC	Yes
Built-in audio player	SC	No	NEC	Yes	SC

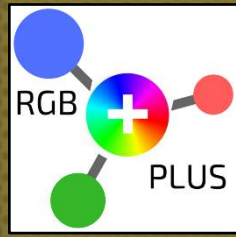
*Can receive data from ENTEC USB Pro devices.

NEC = Yes via NEC

SC = Yes via Show Controller



RGB+ CONTROLLERS QUESTIONS & RESOURCES



PLEASE E-MAIL

MITCH@ILLUMINATIONSCANADA.COM

& REFERENCE THIS PRESENTATION.

WE ENCOURAGE YOU TO VIEW THESE RELATED TUTORIALS:

- **VARIOUS LIGHT CONTROLLER USER GUIDES**
 - **NDB+ USER GUIDE**
 - **RGB+ LUMINARIES**

THANK YOU FOR YOUR INTEREST IN
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