UNITY™

USER MANUAL

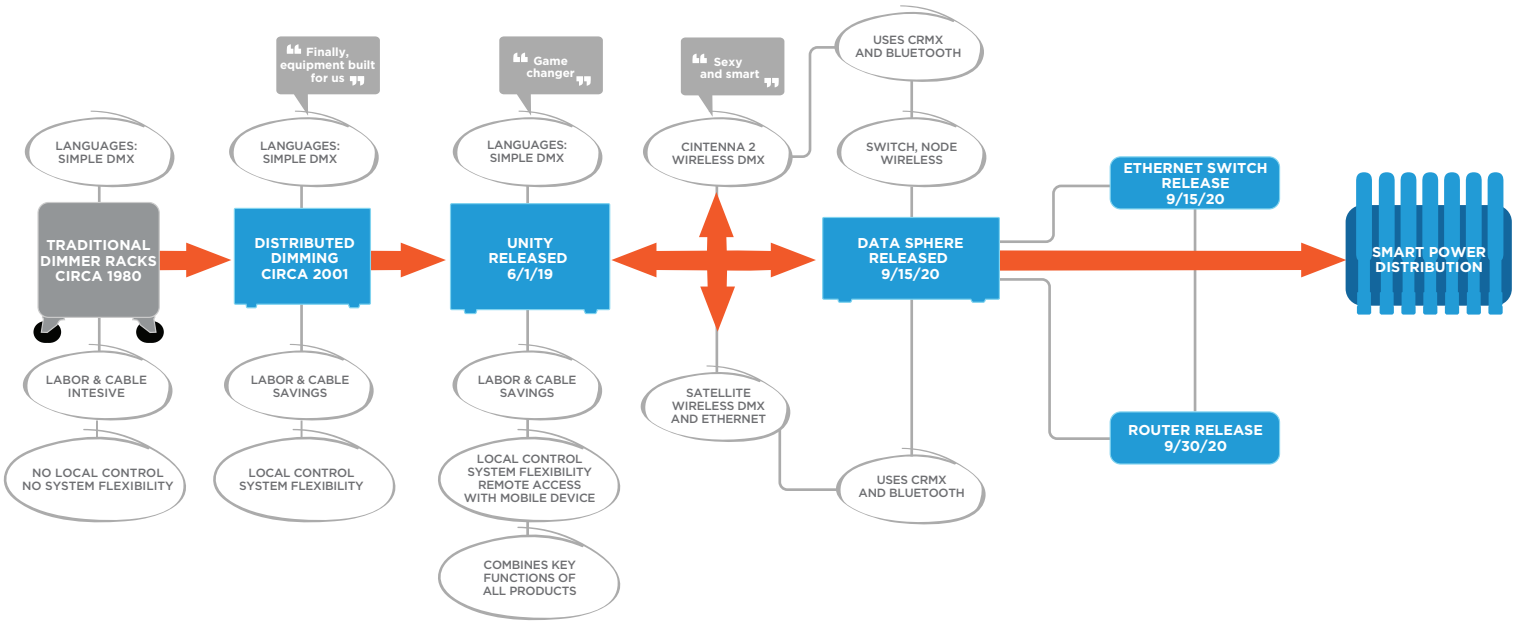
DATA AT YOUR COMMAND

RATPAC® CONTROLS

THE EVOLUTION OF UNITY AND SMART POWER DISTRIBUTION

The RatPac Controls Unity is a device designed to meet a growing demand for data transfer while providing traditional lighting control that set industry standards. It is the cornerstone of the RatPac ecosystem; a product designed to integrate the various elements of lighting control into one device. It was built using feedback and advice from respected leaders in the entertainment industry.

The Unity ecosystem will grow to include more complex data products and wireless solutions, and will come with the technical support needed to meet the ever-changing needs of the business.



u·ni·ty *noun*

The state of being joined as a whole. The quality of not being multiple.

UNITY SERIES USER GUIDE

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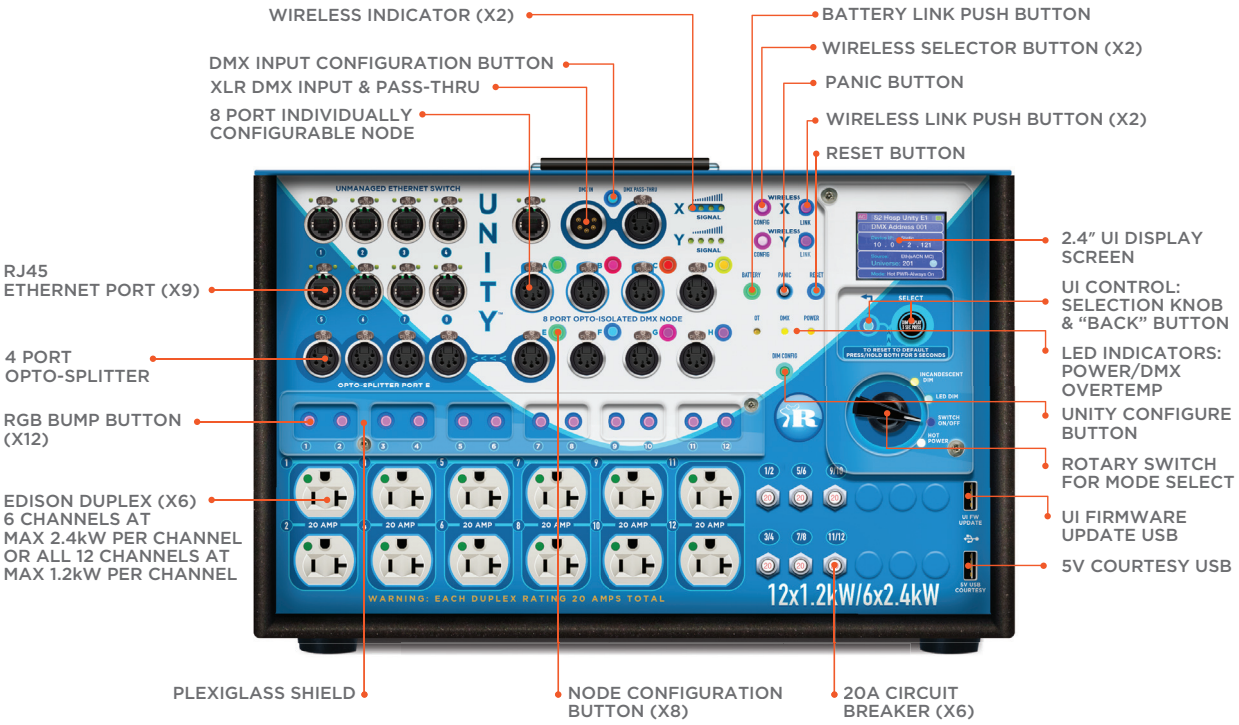
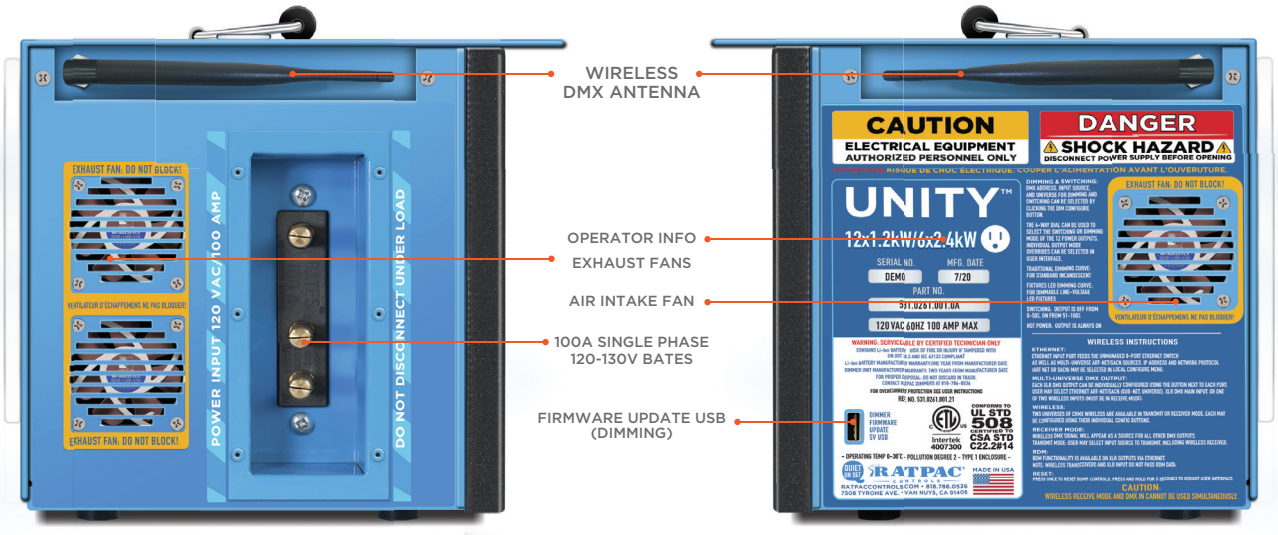
TECH SUPPORT

For regional tech support options and to view our entire product line, visit
www.ratpaccontrols.com
For purchasing or general repair solutions: 818.786.0536 7 AM-5PM PST M-F
To request or schedule tech support (available in a little as 60 minutes,)
or for live phone support, contact
Anthony Bernal (747.249.1140) or
Richard Castillo (818)275.0354 8AM - 10PM PST M-F, 8AM-5PM PST SAT./SUN

OVERVIEW

No single product can solve every problem, but the Unity comes closer than ever. It provides incandescent dimming, hot power, switchable power, and low-wattage LED control. All of the options may be utilized simultaneously with individually assignable power channels. It also features Wireless DMX, multi-universe access with individually assignable colors, an 8-port optical splitter, an unmanaged Ethernet switch, and an intuitive user interface that can be accessed locally and remotely.





INTEGRATION

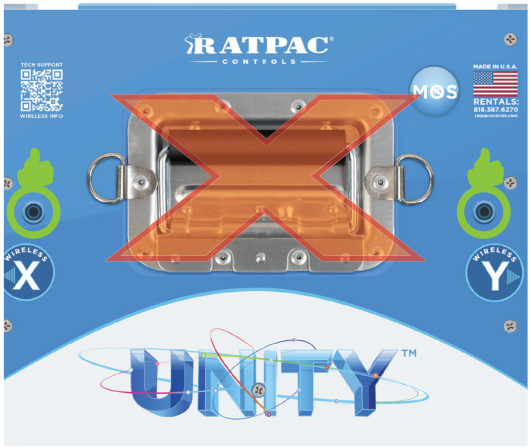
The device was designed to continue RatPac Controls' mission of keeping things simple. It's an on-set device that operates with thermostatically controlled, whisper-quiet fans. Just like our line of Lunchbox Dimmers, you can rest assured that noise will not be a concern, and you will be able to focus on what you need instead of where it goes.

Easy integration means keeping things organized. Unity uses a variety of colors to incorporate quick recognition of DMX Universes to simplify your rig. The device facilitates multiple universes, each with an assignable color that displays both on the remote graphic user interface and locally on the box itself. Universe colors are broad and assigned to both Satellite™ and Cintenna 2™ working in tandem with the Unity.

INITIAL SETUP

Before connecting any live power, be sure that the Unity is securely in place, planted on a solid, flat, level surface. If elevating the Unity, use both of the 3/8" threaded receivers atop the unit that are meant to be rigging points for clamps. Thread safety cables through both D-Ring loops for extra assurance.

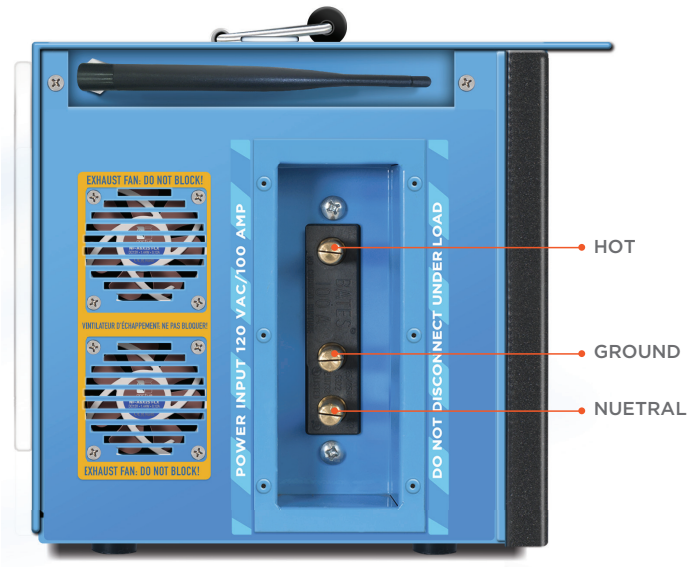
The handle is not meant as a rigging point : using it as such may cause damage to the unit and potential safety issues. Use both 3/8" threaded receivers atop the unit as rigging points for clamps. As seen circled in green.



POWERING ON:
Power the Unity™ with a single-phase 120V, 60Hz power source.
POWERING OFF: Safely disconnect the Unity from its power source. The box will remain lit for up to 15 seconds before shutting down.

POWER:
PRESS ONCE TO ACTIVATE BATTERY POWER.

PRESS AND HOLD 4 SEC. FOR POWER OFF.



DO NOT EXCEED 100A OF TOTAL OUTPUT

POWER: PRESS 1X FOR ON. HOLD FOR 4 SEC. FOR OFF

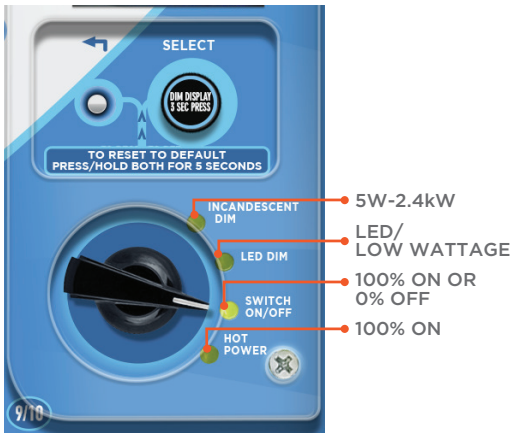
BATTERY POWER

The internal battery of the Unity can be activated while not connected to AC power, allowing you up to 2 hours of extra time to begin configuring settings before connecting to power. The device will save settings when powered off or transferred to live power. There is no power or data output from the device when on battery power.

POWER MODES: 4 SEPARATE POWER MODES

There are four distinct local power modes available globally through the large selector dial.

- Hot Power: Full, 100% power. A hot, 120V outlet that operates up to 20A per duplex. Unaffected by the Sine wave.
- Switchable Power: Designed for use with smart fixtures that feature their own on-board dimming but still may require a reboot from time to time. No need to unplug or manually reset smart fixtures. Power activates to 100% when a DMX controller reaches the 53% threshold. Power switches back to 0% output when dimming down past 49%.
- LED Dimming: A dimming mode optimized by on-board firmware for use with linear LED tubes and other low-wattage fixtures that may require more power when firing up, but more sensitivity when in full operation. 1% dimming begins at 5 volts. This dimming option has been designed to work with all major brands of LED tubes.
- Incandescent Dimming: Smoothly dim loads down to 5 watts and up to 2.4kW.



SET THE UNITY SO THAT ITS CHANNELS DEFAULT TO ONE OF ITS (4) AVAILABLE OPTIONS WITH A TURN OF THE 4-WAY SELECTOR KNOB.

A NOTE ON AVOIDING DIFFICULTIES:

Test all LED Tubes and other lighting fixtures before using with cameras during a shoot. It is imperative that the operator test all LED bulb/lamp types intended for use during shoot, and that smart fixtures that may contain on-board firmware be updated. Lower quality LED's may cause noise or extra current on your neutral line, which may cause even incandescent lamps to flicker.

A NOTE ABOUT MAXIMUM OUTPUT:

The total maximum operating load of the Unity is 100 amps. How you get to that limit depends on your setup and the model/mode configuration you are operating.

Unity Edison has (6) 20-amp breakers. Each breaker represents the total load for the corresponding duplex.

Unity Socapex has (6) 20-amp breakers, allowing channels 1-6 to operate up to 2.4kW fixtures, and (6) 10-amp breakers, allowing 7-12 channels to operate up to 1.2kW features.

Both models can operate all 12 of their channels at 1.2kW. Tripped breakers are resettable by simply pressing back into place. You may need to provide time for the breakers to cool. Always use Unity in a system with a 100-amp branch breaker in-line

ADDITIONAL OUTPUT METHODS

BUMP AND PANIC: The device has two additional features to help your workflow.

BUMP BUTTONS: Above Unity's power outlets are bump buttons assigned to each power outlet. Pressing each will activate the outlet at 100% power. Pressing again will deactivate the bump and return to the outlet's programmed output.

PANIC: Close to the LCD display is a panic button that will activate all power channels at 100% capacity. Press it again to deactivate panic and return all outlets to their programmed output. If left unattended, Panic Mode will shut down after 20 minutes.

RESET

The reset button located next to the Panic button can be used to cancel the panic function, cancel bump functions, and reset any programmed output of local power channels given they have been disconnected from a data source. The reset button does not affect your configured settings. Power channels receiving data will momentarily switch off, then reset to their assigned levels.

USB

There are three externally-facing USB ports on the Unity box, 2 front-facing ports on the face of the unit, and one on the side. The bottom, front-facing USB port is a live, 5V convenience port, perfect for charging small devices like smartphones and tablets. The other two ports are specifically for updating firmware without having to open the device. Updating firmware is covered further in a different section of this guide.

ADDITIONAL OUTPUT METHODS

GHOST LOAD:
In order to aid in dimming at low wattages, each power output on the Unity has its own ghost load setting. Activating or disabling individual ghost loads is covered in section (Local LCD GUI – Ghost load).

You can use all channels with a ghost load activated, however, when working with larger fixtures it is recommended to deactivate ghost loads to reduce heat.

Note:
The programmer can lock out all features from the console including Bump buttons and Panic Mode. This feature is available through the remote GUI.

CUSTOMIZED POWER TO EACH CHANNEL

Expand on your customizable power options by individually assigning one of the four available modes to any power outlet.

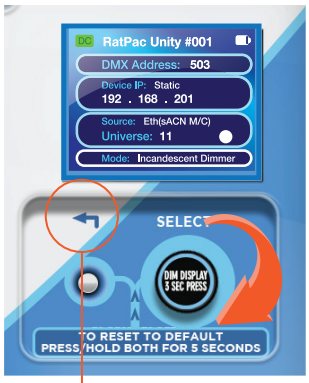
You can access this feature quickly by using the local or remote user interface. The following instructions will focus on local configuration. Use of the remote user interface is covered in Chapter 5.

On the Unity's LED home screen are (4) horizontal panels. Use the Rotary Selector to scroll down until you reach the bottom panel: "Mode." Press the Rotary Selector button to access the panel's menu.

In Mode, you can scroll between each individual channel and select the configuration you need for the intended application.

For example:
- Channels 1-4: Hot Power
- Channel 5: Switchable Power
- Channels 6-10: LED Dimming
- Channels 11 and 12: Incandescent Dimming

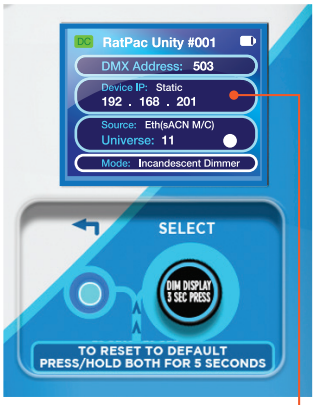
Once you have finished making your selections, press the back button to return to the home screen. The variety does not stop with local power. There is a plethora of customization and control options built into the Unity, and many of them are accessible through one of two user interfaces.



SCROLL TO "MODE"

LOCAL CONFIGURATION THROUGH LCD MENU

If you want to knock out setup while rigging a unit, or if you're close to the box and you want to make some quick adjustments, you can do so right on the device using the local GUI.



WEB SEARCH TO ACCESS

NAVIGATING THE MENU

The rotary selector knob directly below the Unity's Local interface functions both as a means of navigation and selection. Turn the knob right to scroll down through a menu and left to move back up. When you are ready to make a selection, press the selector. The selector is your way forward when navigating through menus. To move directly backwards out of a menu, press the back button marked by a left pointing arrow.

SO MANY OPTIONS...

The following segments are organized top to bottom in the same fashion that menus and features are accessible on the Unity's LCD interface.

TITLE HEADER

Maintaining a focus on organization to aid your workflow, each Unity box features a programmable name that you can change to clarify a unit's location, purpose...anything you would like to specify about the unit's job. Located at the very top of the screen, this header is modifiable through the remote GUI and is explained in section "Remote GUI" of this guide.

DMX ADDRESS:

The first setting that you can change through the local interface is the starting DMX address for local power control features. Whatever universe these power outputs are operating in, this sets their starting address.
Simply scroll down to the DMX Address panel, press the rotary selector, set the address with rotations and a press, then press the back button to exit the menu. The new local address will be displayed within the DMX Address panel.

DEVICE IP PANEL:

This panel displays the IP address of the internal, unmanaged ethernet switch. This key piece of information allows you to access the unit's browser-based configuration menu and is also often needed when connecting to programming software and integrating the Unity into your data system. Selecting this menu will bring you to a submenu where you can adjust connectivity settings.

Network Protocol: Each Unity can operate within ***either*** an sACN or Art-Net network.

DEVICE IP: You can set the device's IP address to operate as either a static address, which can be manually assigned by the technician, or through DHCP, which will automatically assign an available address for you once connected to a network. Networking settings will vary based on the infrastructure available for your shoot. Consult an external guide or IT professional for further assistance setting up or troubleshooting network settings.

Under the Device IP is the option to reassign each octet of an IP address using the selector.

SUBNET MASK: Modify to set the device into a specific subnetwork, which helps to further specify the networking address of the Unity.

PROTOCOL:

This menu is where you configure the source of data that controls local power output. By default, the mode for the 12 channels is Transmit Only, which means the controller responsible for the power output is only wired to accept DMX instructions from an outside source. The Source allows you to set where the Unity receives its local DMX control data from. This can be from Local DMX-in, sACN or Art-Net access through ethernet, any of the 8 ports of the DMX node, or from either of the wireless nodes available on the device. If operating within sACN or Art-Net, you'll have access to an additional steps to select which universe of your network the box operates in (the first channel of power on the box being the DMX address set within the DMX Address panel).

LOCAL CONFIGURATION THROUGH LCD MENU

MODE:
The Mode panel will display the default power setting for local control, which is initially the global setting made by the 4-way selector knob. Pressing this will allow you to customize individual channel modes, as explained in the section "Customized Power to each Channel."

GHOST LOAD:
At the bottom of the Mode menu is a selection that will take you to the ghost load modification page, a menu where you can choose to activate or deactivate a ghost load for each individual channel that aids in controlling low-wattage fixtures that would otherwise face control issues related to a minute amount of power leakage. The ghost load adds a small amount of resistance, electronically saving you the trouble of adding a small incandescent load to a channel.
Note: Test your lighting equipment before use on camera. The varying quality of LEDs can cause variances in operation. Specifically, lower quality LEDs can cause extra noise or current on your neutral wire, which can cause dimming issues.

INPUT/OUTPUT MENU:
There is an extra menu not displayed as a panel on the home screen of the user interface. Its purpose is to clarify data input/output information for each of the available XLR ports and wireless nodes of the Unity covered in section 4A (The Optical Splitter). On the home screen, press the back button without making an additional selection.
You will be presented with a list of modes and source information for the device.

The local configuration GUI allows you to configure how your Unity outputs power and how to make it part of a larger data network. But the built-in LCD also displays useful information about organizing data transfer through the Unity box, and there are even more adjustments that can be made using all those available ports.

DATA CONTROL- PLENTY TO GO AROUND

THE OPTICAL SPLITTER

Unity comes equipped with an optical splitter, the node, labeled A-H, plus an additional 4-port splitter attached to XLR port E. The color of the LED within each port button acts as an identifier for a specific universe operating through the node.

Pressing the LED button adjacent to each port will cause the LCD to display modifiable data information for the associated port. This is the same menu covered in the section "Local GUI Protocol," but with information and settings specifically for that port.

Within the menu, use the rotary selector to change mode."Transmit" means to send data, usually to smart lighting devices. "Receive" means to accept data, typically to be transferred to other ports or data management. If a port is in transmit mode, you can select a source for the transmitting data. This can be a different XLR port on the node, either wireless node, or an Art-Net/sACN source through the unmanaged switch. Any port set to receive data can operate as a source for transmitting ports. For example, if an Art-Net universe is assigned to the Unity, you can configure any XLR on the node to transmit the data from that universe.

DIM CONFIG:

The Dim Config button displays a customization page for the source and addressing associated with the Unity's local dimming outlets. This is a shortcut to the same menu provided on the home screen of the local user interface.

WIRELESS CONNECTIVITY

There are two more identifiable LED push buttons on the Unity that display modifiable information for either of the device's wireless ports. These ports, labeled X and Y, operate much like RatPac's previous wirelessly connectible products. They can be set to either transmit data to other wireless DMX-capable devices, or to receive data to pass through to other output sources on the device. Press the config button of either X or Y to access the same menu available for each XLR port and local power control to set where to receive data from and where to send it to. Unity's wireless uses TimoTwo technology and is fully compatible with all RatPac wireless legacy products.

CONNECTING WIRELESSLY

With X or Y set to transmit, pressing the Link button to the right of the identifying letter on the box will begin a 10-second identifying period where that port will attempt to identify and connect to all in-range unlinked devices ready to receive wireless DMX.
The strength indicator to the left will blink until the process is complete. If either port is set to receive and you wish to disconnect it from its transmission source, simply press and hold the link button for the receiving port for five seconds, then release. The signal will be dropped.

To disconnect all receiving devices associated with a port set to transmit, press and hold the transmitting port's link button for five seconds, until the signal is dropped, and release.

A NOTE ABOUT WIRELESS CONNECTION STRENGTH:
There are signal strength indicators for both the X and Y node. These represent signal strength when receiving data. When transmitting from either source, you will not see signal strength on the Unity. Your receiving devices may display a signal strength for the connection. The maximum observed, operable transmission distance has been measured to about a quarter mile when working through open air without obstruction. Maximum indoor transmission distance on a closed set has been observed to be up to 750 feet, though a number of factors can affect range including obstructions, especially solid concrete, reflective surfaces, and water (which makes up at least 60% of the human body). Unity's wireless uses TimoTwo technology and is fully compatible with all RatPac wireless legacy products. Improve range by raising antennas, elevating the unit, and removing obstructions between the transmitter and receiver when possible. We recommend rigging the Unity box at eye level or above.

COPYING DATA OPERATIONS

By default, each XLR port, as well as the X and Y wireless nodes and Dim Config (local dimming) of the Unity is assigned to a different data source. But that does not mean you have to use all of those data sources, nor are you limited to one port per data source. Let's say you have a universe operating a number of devices and you need more ports. It's a simple matter of copying information from one port to another. Press and hold the LED button of a port where you have established a connection that you would like to assign to other ports on the device. While holding the primary button down, press and release the LED button of each port you would like to copy that source information to. The LEDs for each port you are copying information to will blink with the parent color. Once you are done with your selection, release the button of the primary port. Press any of the newly copied ports to verify that your selection has been made.

CLARIFYING WITH COLOR

You will notice, after copying information, that any ports that have received new information will change their LED color to match that of the parent port you copied from. This is because color is used as an identifier on Unity to help distinguish between the different universes you are working in. Universe colors appear both on the face of the box as well as on the input/output menu mentioned in the Local GUI section of this guide. These colors are assignable through the GUI, which will be explained further in remote GUI. These assignable colors will auto-assign to any RatPac Cintenna 2 or Satellite devices working in conjunction with the Unity, as covered in "Expanding Your Network."

ETHERNET NETWORKING

Unity means everything working together as one. Leaving anything out would only limit a device's capabilities. By including an unmanaged, 1Gb 16-port Ethernet switch, the Unity is built to help you build your command center. To ensure the device operates under the maximum data threshold, only 9 ports of this 16-port switch are utilized. Use Ethernet to connect your programming software to the switch, and from the Unity you will be able to run further connections to any data or lighting devices capable of accepting data through ethernet on an Art-Net or sACN network. Though you can change which type of network whenever you would like, the Unity can only operate within Art-Net OR sACN at one time. There is no simultaneous networking of both types. Unity comes with the bonus addition of a web browser-based graphic user interface, which means you'll have access to all of the configuration features of your device, plus a few extras, on the same device where you're running your programming software.

Note: Sending large packets of data may cause latency issues. Consult an external guide or IT professional for information regarding networking, and data transfer information.

ETHERNET SETUP

Simply plug an ethernet cable into any of the ethernet ports on the Unity. The 9th port on the box has been placed separately from the cluster of 8, so it can be utilized to help identify which cable is connected to your programming computer.

Connect the other end of the cable to a computer with an active ethernet port. You may need to activate the ethernet port of your computer, a setting that is typically located in Network Preferences on a PC or System Preferences on a Mac. Consult a separate guide for your device if needed.

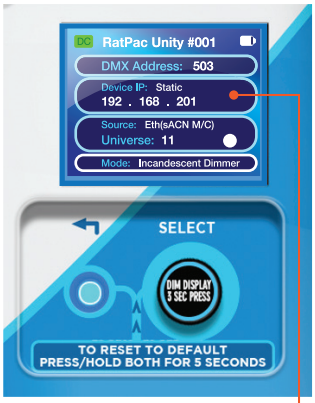
A green light will illuminate above the connecting port on the Unity when a live connection is established.

Follow the instructions of your programming software to identify and connect to the Unity as a data node. Besides distributing data, you should be able to control the power capabilities of the Unity itself as part of an Art-Net or sACN network. Refer to the Mode instructions of the Local GUI section of this guide for further information on controlling your Unity through Art-Net/sACN.

Once a live connection is made between computer and Unity, you will be able to access the browser- based GUI by simply typing a few numbers into a web browser.

REMOTE GUI

Local control of the Unity is great for initial setup, quick adjustments, and testing, but for the programmer who wants to consolidate their workflow to be as fast, efficient, and remote as possible, every configuration can be completed remotely via Ethernet and your computer.

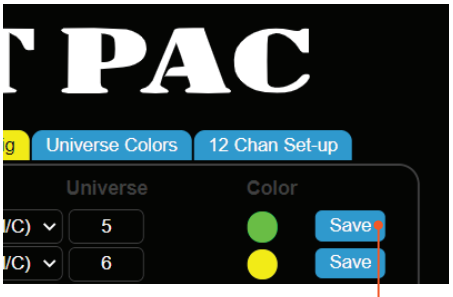


WEB SEARCH TO ACCESS

ACCESSING THE REMOTE GUI

Connect a standard ethernet cable to your computer, inserting the other end into one of the ethernet ports on the Unity. A light just above the port will light up green, indicating a live connection. Open a web browser (Google Chrome is the recommended standard) and enter the IP address found on the home screen of the Unity box. For information on configuring IP settings, see section 3E, Device IP Panel.

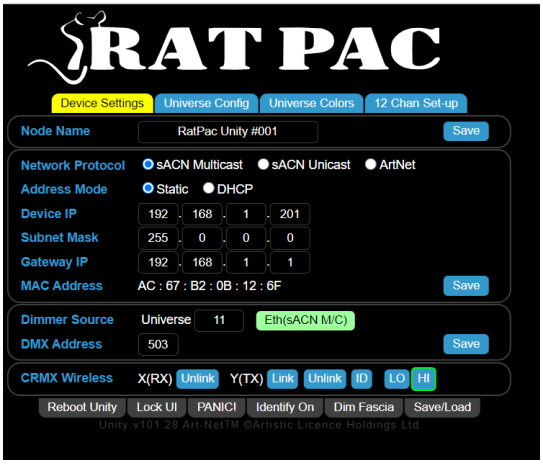
You will be greeted by a user interface for the Unity, where you will have access to a range of configuration options. The following guide will go tab by tab across the interface to cover every feature available. Much of the functionality carries over from that of the local GUI interface, but with some extras and useful options that should be taken advantage of to maximize use of the device.



PUSH ME

SAVE OFTEN

This is a note that seems obvious, but justifies having its own section within this guide. Whenever you manipulate settings within the Remote GUI, be sure to press the SAVE button before moving on to a different tab. The interface will stop you to double check if you have made changes and have not saved before loading a new page. Pressing SAVE will update the Unity in real time. Whenever you change something, hit the related SAVE button.



DEVICE SETTINGS

The device settings tab is where you will find general information, network settings, addressing for local dimming features, and wireless CRMX settings. Node Name: Use this field to change the identifying title of the Unity box you are using. Situated at the top of the LCD display, this name can help to clarify the unit's location, purpose, or any other information you wish to include.

Network Protocol: The Unity can operate within one of three protocols: Art-Net, sACN Unicast, and sACN Multicast.
This tab is also where you modify IP address settings, switching between Static or DHCP addressing, and setting a static IP address if applicable.

The tab below IP settings displays the source of data for the local dimming features of the device. It also provides you with the option to configure where the Unity's local dimming address begins.

CRMX WIRELESS:

This panel mimics the functionality of the link button of both the X and Y wireless ports of the Unity device. If X or Y is in Transmit Mode, you can choose to either identify and Link to available DMX receivers or unlink all connected receivers. If in Receive mode, you will have the option to unlink from a connected transmitting device.

The wireless panel also has buttons to activate identify mode for either the X or Y wireless ports, which will flash the Unity's connection strength indicators, as well as any indicators of units connected wirelessly to receive DMX from a transmitting Unity.

LO and HI: Set the output strength of the wireless TimoTwo cards to 15mW to 100mW.
The option to switch ports X and Y between transmit and receive are included on the Universe Config tab (section 5D of this guide).

The functions available at the bottom of the Device Settings tab persist throughout all configuration tabs with a few exceptions.

REBOOT UNITY:

This function performs a reboot of the device, powering the Unity down and restarting it back up again. This function does not reset or undo configuration settings of the device and can be used as the "turn it off and on again" portion of your troubleshooting procedure.

LOCK UI:

When you have everything configured how you like, prevent accidental changes by locking the user interface, completely disabling changes at the local level until Lock UI is deactivated. This feature disables everything available on the GUI menu, as well bump, panic, and all local push buttons on the device. Your power and all other settings will remain intact. Once locked, the Unity can only be unlocked through the remote GUI.

PANIC:

This function mimics the panic button of the device, activating all power channels at 100% solid power.
Press again to return output to normal programmed levels.

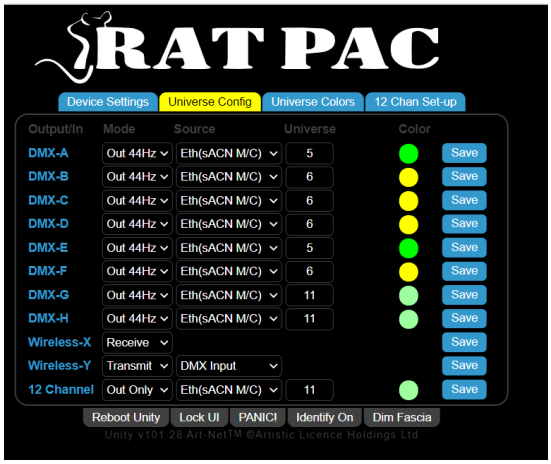
IDENTITY ON:

This function causes all LED push buttons on the Unity to blink a rainbow of colors, meant to help identify the unit in question. This feature does not activate power out channels in any way. Press again to deactivate.

DIGITAL USER INTERFACE

SAVE/LOAD:
Allows you to save all your configuration settings as a .rldm file. It also allows you to load a saved .rdlm file.

UNIVERSE CONFIG
This tab of the user interface is where you can remotely configure the mode and source of each data input/output on the Unity (excepting the ethernet ports, which operate on an unmanaged switch). This includes XLR ports A-H, the X and Y wireless ports, and the local 12-channel lighting control of the device. It is highly recommended to SAVE each line as you make modifications to finalize changes.



Modifying settings within this tab mimics the configuration options available when one of the LED push buttons on the device are pressed for any of the ports listed above.
Locally configuring I/O information for each port on the box is covered in the Optical Splitter section of this guide.

While there is no quick-copy feature between ports like that which are available for local configuration of the device, you should find that the drop-down menus for each data port can be quickly modified through the remote user interface.

OUTPUT/IN:
This column identifies which of the data ports you are modifying.

MODE:
This column is where you set I/O settings for each port to either transmit or receive data. For XLR ports A-H, as well as Local 12-Channel Control: TX Only means the port is set to output data, either to lighting fixtures or another data device like a Unity with a port designated to receive data.

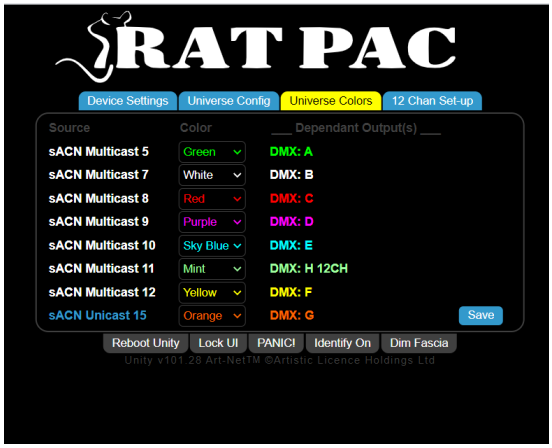
RX ONLY
Means a port has been designated to intake data from a transmission source. This data can then be transmitted to another port within the box and passed along to another device through a TX Only port. For Wireless X and Y: Transmit means the wireless port is set to broadcast data to eligible wireless DMX receivers.

RECEIVE
Means the port is set to receive wirelessly transmitted DMX.

SOURCE:
This column is where you can adjust the source for data being passed through any of the listed ports.
For example, DMX-In means the port will operate with data provided by the top-center DMX In port of the Unity Box.
This can be set to any available port, including A-H, X and Y, as well as the Art-Net or sACN network you may be working in. If either networking options is selected, you will be prompted to declare a network number and universe number for the device. This tab also displays the color of each universe. Meant to aid in your workflow and organization, these colors can be reassigned on the Universe Colors tab.

UNIVERSE COLORS

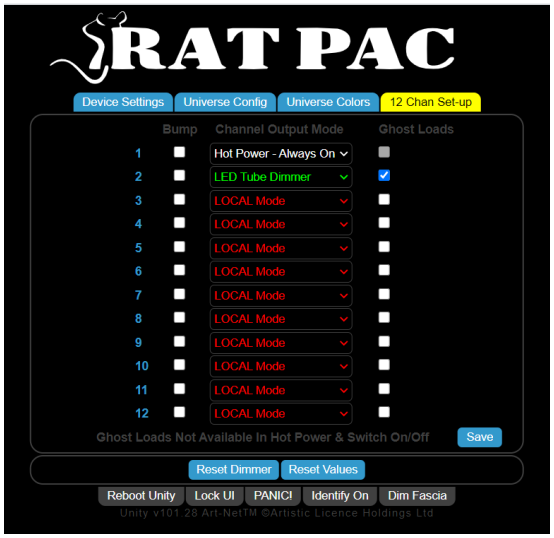
This tab displays information regarding each Universe of data passing through/being used within the Unity box, plus associated colors meant to help with organizing your workflow. The left-most column displays address information in the order NET: Sub-Uni (a combination of the subnet and universe). You can modify the associated color of each universe using the drop-down menus provided. To the right, you will also find which of the ports of the Unity are operating within a given universe.



12-CHAN SET UP

The fourth tab of the browser UI contains the same functionality available in the Mode tab of the LCD user menu. Use the drop-down menus to individually assign each channel of local power control to one of four modes available in the Unity box: Hot Power, Switchable On/Off Power, LED Dimming, and Incandescent dimming. More information on managing power options is available in the section CUSTOMIZED POWER TO EACH CHANNEL.

Use the check buttons on either side of the Channel Output Mode to bump a channel (push it to 100% until deactivated) or activate ghost load for low-wattage dimming support.



FCC DECLARATION OF CONFORMITY

We Lumen Radio AB Svangatan 2B, 41668 Gothenburg, Sweden, declare under our sole responsibility that 800-8105, TiMo RX RDM and 800-8106,TiMo FX RDM, comply with Part 15 of FCC Rules. Operation is subject to the following two conditions: This device may not cause harmful interference. This device must accept any interference received, including interference that may cause undesired operation.

FCC RADIO FREQUENCY INTERFERENCE WARNINGS & INSTRUCTIONS

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an electrical outlet on a circuit different from that which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications made to the product, unless expressly approved by Lumen Radio AB and RatPac Controls, could void the user's right to operate the equipment as per their country's regulations.

Recycling and Disposal: Device contains Li-ion battery, do not discard in trash. For disposal, please deposit at an appropriate recycling facility or simply send to: RatPac Controls 7508 Tyrone Ave. Van Nuys, CA 91405 United States of America

INDUSTRY CANADA STATEMENT

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.
Le resent appareil numerique német pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Réglement sur le broullage radioélectrique édicté par le ministére des Communications du Canada.

CE

RatPac Controls declares that the Cintenna product family complies with the essential requirements and other relevant provisions of CE standards for safety and RF exposure. Lumen Radio declares that 800-8105 TiMo RX RDM and 800-8106 TiMo FX RDM comply with the Essential Requirements of RED (Radio Equipment Directive) of the European Union (2014/53/EU).
TiMo RX RDM and TiMo FX RDM meet the ETSI EN 300 328 V1.8.1 and ETSI EN 300 328 V1.9.1 conformance standards for radio performance.

FCC ID: XRSCRMXTIMO101 or FCC ID: XRSTIMOMWAN201
FCC ID: 2ACSV-HF-A21-SMT

No User Serviceable parts inside.
Please follow proper disposal and recycling procedures. Do not incinerate. For Indoor Use Only.

RATPAC CONTROLS LIMITED WARRANTY

We warranty all workmanship and parts to be free of defect and to work as intended for the specific product's designed use for two years from the date of purchase. Accidents, deliberate breakage and/or misuse of the products voids the warranty. We will repair or replace at our discretion parts or whole units in order to remedy issues with workmanship and/or functionality of the products provided the products were used for their intended purpose and in conditions suitable for electronic devices. All buyers understand that electronics involving control via DMX or WiFi are only as good as the system in which those products work. Since it is assumed that our products will be used in conjunction with DMX controls and/or products that we do not manufacture the buyer accepts responsibility for understanding and implementing the use of our products in the context of a larger lighting control system which may or may not include third party products and RatPac Controls products. Since we have no control of the environments the products are used in we do not warranty the cosmetic finish, whether paint, vinyl or silk screen. If the product has been modified by the buyer the warranty is void. If the buyer's product has been modified at RatPac Controls the warranty will be extended 2 years on the new parts and workmanship performed by RatPac Controls. If RatPac Controls is at fault in a warranty issue we will cover the cost of shipping the products to and from the service location of our choosing provided we chose the method of shipping. If we determine that the product has been damaged by using incorrect voltage or otherwise not cared for in an appropriate manner the warranty is void. RatPac Controls is not liable for incidental or consequential damages associated with the use of this product. RatPac and Innovative Dimmers liability will not exceed the purchase value of the product. Warranty claims must be accompanied with proof of purchase including date of purchase and must be made in writing and cannot be transferred or sold to any party or individual.