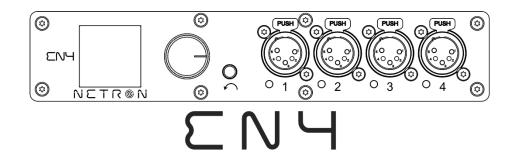
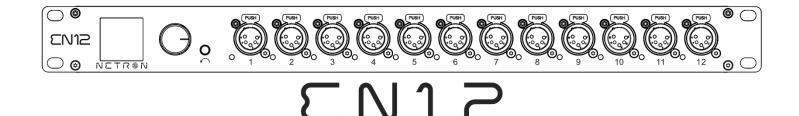
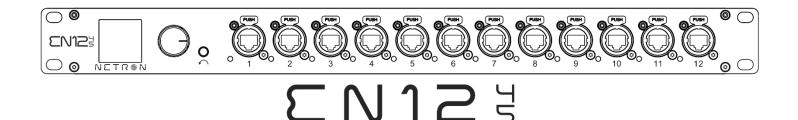
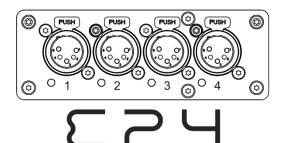
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CONTROL SYSTEMS









# NETR®N User Guide

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#### ELATION PROFESSIONAL B.V.

Junostraat 2 | 6468 EW Kerkrade, The Netherlands +31 45 546 85 66

#### Art-Net

This device incorporates Art-Net™, Designed by and Copyright Artistic License Holdings Ltd

#### FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### FCC RADIO FREQUENCY INTERFERENCE WARNINGS & INSTRUCTIONS

This product has been tested and found to comply with the limits as per Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device uses and can radiate radio frequency energy and, if not installed and used in accordance with the included instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be deter- mined by turning the device 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 device.
- Increase the separation between the device and the receiver.
- Connect the device to an electrical outlet on a circuit different from which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### Energy Saving Matters (EuP 2009/125/EC)

Saving electric energy is a key to help protecting the environment. Please turn off all electrical products when they are not in use. To avoid power consumption in idle mode, disconnect all electrical equipment from power when not in use. Thank you!

Document Version: An updated version of this document may be available online. Please check <u>www.obsidiancontrol.com</u> for the latest revision/update of this document before beginning installation and use.

Date	Document Version	Note					
12/17/19	1.0	INITIAL RELEASE					
12/27/19	1.5	Added Art-Net copyright					
01/06/20	2.0	DateUpdated software					
01/21/20	2.5	Updated Menu Options					
09/21/20	3.0	Updated Firmware to V2.4					
02/02/21	3.5	Updated Firmware to V2.6 for EN4, EN12, EP4; & updated silkscreens for EN4 & EN12					
03/29/21	4.0	Added EN12-45					
05/25/22	4.5	Updated FCC Statement					

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# **GENERAL INFORMATION**

#### INTRODUCTION

Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this device. These instructions contain important safety and use information.

#### **CUSTOMER SUPPORT**

Contact your local Obsidian Controls Systems dealer or distributor for any product related service and support needs. Also visit <u>forum.obsidiancontrol.com</u> with questions, comments or suggestions.

OBSIDIAN CONTROL SERVICE EUROPE – Monday – Friday 08:30 to 17:00 CET +31 45 546 85 63 | support@obsidiancontrol.com

OBSIDIAN CONTROL SERVICE USA – Monday – Friday 08:30 to 17:00 PST (866) 245 – 6726 | <u>support@obsidiancontrol.com</u>

### OVERVIEW INTRODUCTION

The Netron devices offer unique and powerful DMX management features. Most settings can be accessed from the intuitive display and menu system.

All settings are available from the integrated web page, which allows remote access to this device from any web-browser. The multi-purpose EN4, EP4, EN12, and EN12-45 EtherDMX Gateways essentially package Art-Net and sACN conversion, Merger, DMX patch-bay, and a DMX scene recorder into one device.

### **KEY FEATURES**

- sACN and Art-Net to DMX conversion
- Factory defined NETRON presets
- 10 User Presets
- 99 Cues with Fade Time, Hold Time and Cue linking
- External contact closures to trigger cues and preset recall (EN12 only)
- DMX Monitor
- DMX and Ethernet Test Generator

### SOFTWARE AND OPERATION

This document provides safety information and mechanical installation instructions.

For setup and operation of all software features, please update the devices to the latest release. Download and study the full user guides from <u>http://obsidiancontrol.com/netron</u>.

The NETRON Ether-DMX devices offer a comprehensive and easy to use feature set, and are continuously improving. It is advised to periodically check for updates on the Obsidian product pages.

# CONNECTIONS

### DMX CONNECTIONS (EN12)

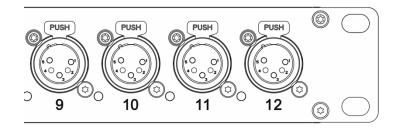
All DMX Output connections are 5pin female XLR; however, the pin – out on all sockets is pin 1 to shield, pin 2 to cold (-), and pin 3 to hot (+). Pins 4 and 5 are not used.

Carefully connect DMX cables to the respective ports.

To prevent damaging the DMX ports, provide strain relief and support. Avoid connecting FOH Snakes to the ports directly.

Certain functions may require adapters (purchased separately), such as a 5 pole XLR male to 5 pole XLR male.

Pin	Connection						
1	Com						
2	Data –						
3	Data +						
4	Not connected						
5	Not connected						

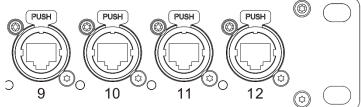


### DMX CONNECTIONS (EN12-45)

All DMX Output connections are RJ45; Pin1: DATA+, Pin2: DATA -, Pin7+8; Ground (ESTA Compliant) Carefully connect RJ45 cables to the respective ports.

To prevent damaging the ports, provide strain relief and support. Avoid connecting FOH Snakes to the ports directly.

L	Connection						
1	Data +						
2	Data -						
3	Not connected						
4	Not connected						
5	Not connected						
6	Not connected						
7	Com						
8	Com						
Shield	Earth						



### ETHERNET DATA CONNECTION

The Ethernet cable is connected on the back of the gateway into the port labeled A or B. Devices can be daisy chained, but it is recommended not to exceed 10 Netron devices in one chain. Because these devices use locking RJ45 connectors, and the use of locking RJ45 ethernet cables is recommended, any RJ45 connector is suitable.

To connect multiple devices to an EtherDMX Source, an Ethernet switch is required to split the data into the desired number of streams.

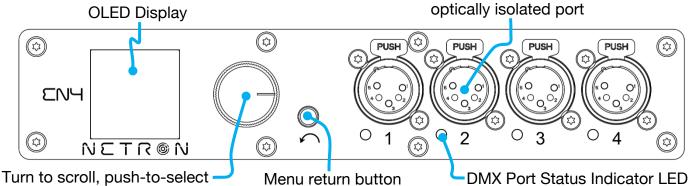
The Ethernet connection is also used to connect a computer to the Netron device for remote configuration via a web browser. To access the web interface, simply enter the IP address shown in the display in any web browser connected to the device. Information about the web access can be found in the manual.

# **CONNECTIONS: EN4 (FRONT & REAR PANELS)**

### FRONT CONNECTIONS

- (4) 5pin DMX/RDM optically isolated ports
- Ports are bidirectional for DMX In and Output
- Full color OLED display
- Encoder w. Push to Select / Exit Button





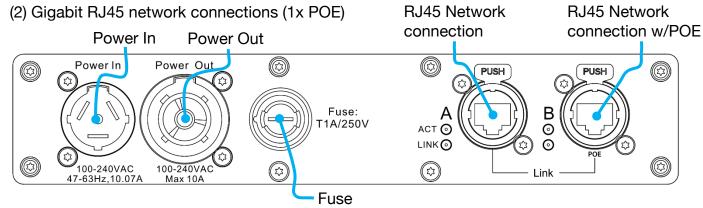
### DMX PORTS STATUS INDICATOR LEDS

LED Color	Solid	Blink	Flashing/Strobing
DMX PORTS RED	Error		
<b>DMX PORTS GREEN</b>	DMX In	DMX Lost	
DMX PORTS BLUE	DMX Out Stable	DMX Lost	
DMX PORTS WHITE			Flash on RDM packets
		CC ' 11 NA	

All LEDs are dimmable and can be turned off via the Menu/System/Display menu.

### REAR CONNECTIONS

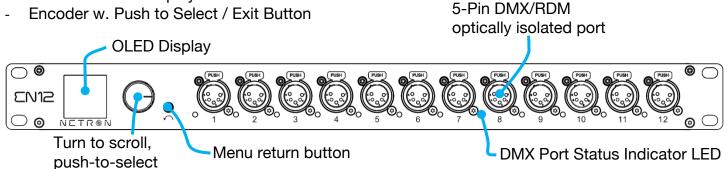
- Power In/Thru



# **CONNECTIONS: EN12 (FRONT & REAR PANELS)**

### FRONT CONNECTIONS

- (12) 5pin DMX/RDM optically isolated ports
- Ports are bidirectional for DMX In and Output
- Full color OLED display



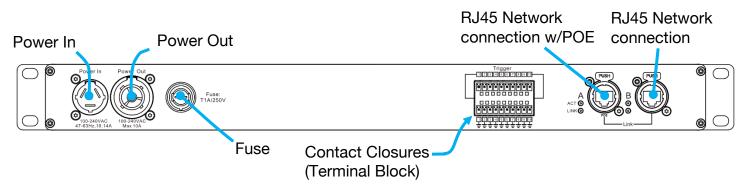
### DMX PORTS STATUS INDICATOR LEDS

LED Color	Solid	Blink	Flashing/Strobing
DMX PORTS RED	Error		
<b>DMX PORTS GREEN</b>	DMX In	DMX Lost	
DMX PORTS BLUE	DMX Out	DMX Lost	
DMX PORTS WHITE			Flash on RDM packets

All LEDs are dimmable and can be turned off via the Menu/System/Display menu.

### REAR CONNECTIONS

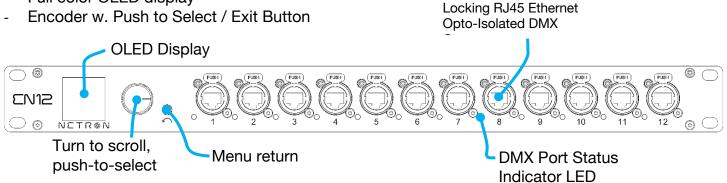
- (2) Gigabit RJ45 network connections (1x POE)
- (10) Contact Closures (Terminal Block)



# **CONNECTIONS: FRONT & REAR PANELS EN12-45**

### FRONT CONNECTIONS

- (12) RJ45 DMX/RDM optically isolated ports
- Ports are bidirectional for DMX In and Output
- Full color OLED display



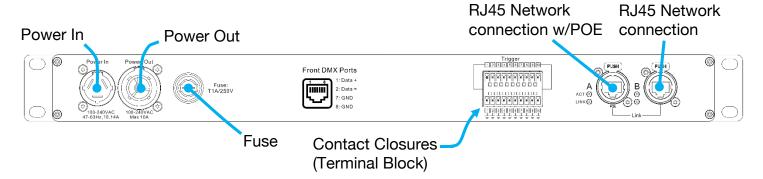
### **RJ45 PORTS STATUS INDICATOR LEDs**

LED Color	Solid	Blink	Flashing/Strobing
DMX PORTS RGB	Error		
DMX PORTS RGB	DMX In	DMX Lost	
DMX PORTS RGB	DMX Out	DMX Lost	
DMX PORTS WHITE			Flash on RDM packets

All LEDs are dimmable and can be turned off via the Menu/System/Display menu.

### REAR CONNECTIONS

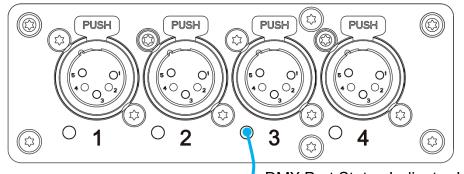
- (2) RJ45 network connections (1x POE)
- (10) Contact Closures (Terminal Block)



# **CONNECTIONS: EP4 (FRONT & REAR PANELS)**

### FRONT CONNECTIONS

- (4) 5pin DMX/RDM optically isolated ports
- Ports are bidirectional for DMX In and Output



DMX Port Status Indicator LED

#### DMX PORTS STATUS INDICATOR LEDs

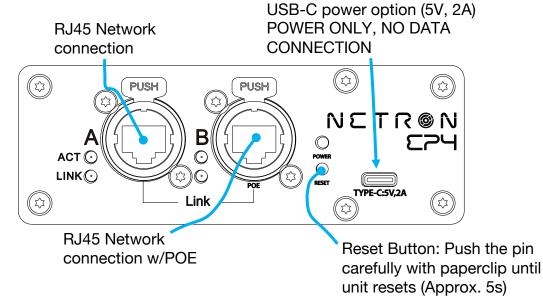
Ports	LED Color	Solid	Blink	Flashing/Strobing
DMX	RED	Error		
DMX	GREEN	DMX In	DMX Lost	
DMX	BLUE	DMX Out Stable	DMX Lost	
DMX	WHITE			Flash on RDM packets

The LEDs are dimmable from the System – Display menu and can be turned off completely if desired.

### REAR CONNECTIONS

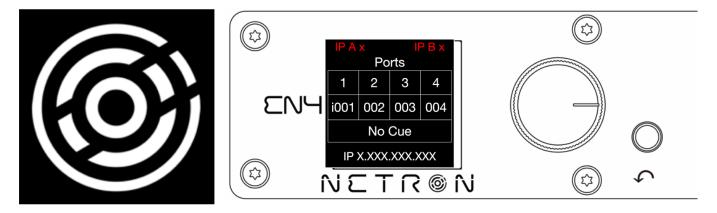
#### USB-C power option (5V, 2A). **POWER ONLY, NO DATA CONNECTION**

- (2) Gigbabit RJ45 network connections (1x POE)

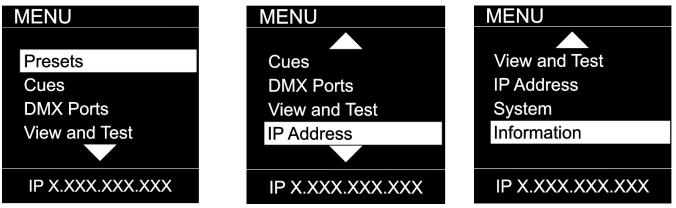


# **MENU: NAVIGATION**

The Netron devices use a small OLED display for feedback and setup. The encoder dials up and down through the menu, a push of the encoder selects an item or saves an entry. Revert to a previous menu or cancel an entry with a single push of the back arrow.



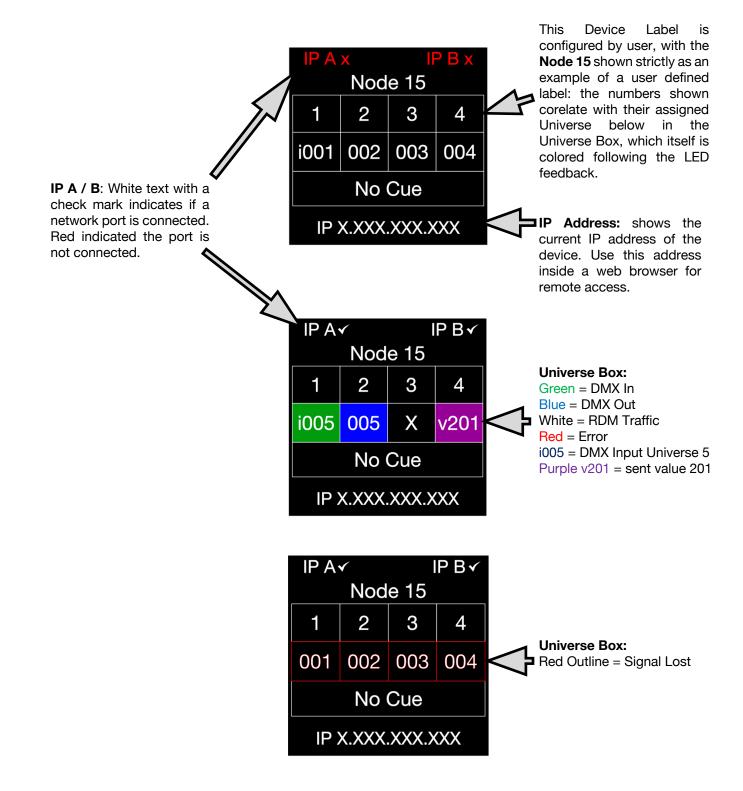
Wheel Right	Scroll down in menu list / increase values
Wheel Left	Scroll up in menu list / decrease values
Wheel Push	Enter Menu, Select menu item, go down one level in menu, confirm values.
	Go up one level in menu tree, cancel change of values, hold for 2 seconds to return to home screen



As you scroll up or down the menu, the arrows indicate that more items are available above or below that which is displayed, and only show when needed.

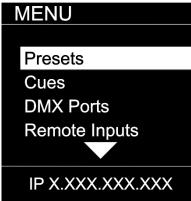
# **MENU: HOME SCREEN**

This is the default screen providing quick status feedback and indicates IP and DMX traffic.



### **MENU: PRESETS**

Several simple presets are preprogrammed into the device for fast setup. Some presets require additional input like a start Universe.



SUB MENU	OP	TION / VALU	JES	DESCRIPTION
	1 :ArtNet 2.x	Universe 1 – 327	767	
MENU	2 :ArtNet 10.x	Universe 1 – 327	767	
	3 :ArtNet 192.x	Universe 1 – 327	767	
NETRONER	4. ArtNet 172.x	Universe 1 – 327	767	
NETRON Presets	5. ArtNet DHCP	Universe 1 – 327	767	
USER PRESETS	6. ArtNet In	Universe 1 – 327	767	
	7. :ArtNet In/Thru	Universe 1 – 327	767	See NETRON Presets
	8. sCAN 2.x	Universe 1 – 327	767	See NETRON Tresets
	9. sCAN 10.x	Universe 1 – 327	767	
		Universe 1 – 327	767	
	11. :sACN 172.x	Universe 1 – 327	767	
IP X.XXX.XXX.XXX		Universe 1 – 327		
	13. sACN DHCP In	Universe 1 – 327	767	
	14. :Splitter Port1		1	
MENU			Preset Saved	
		Load Preset	Preset Loaded	
NETRON Presets				
USER PRESETS	1 .M. Drooot 1			
BOERT REDETO	1 :MyPreset 1			
	 10 :MyPreset 10	Ronamo Prosot	12 Character Label	
	TO IMPITESEL TO	nename riesei	12 Onaracter Laber	
IP X.XXX.XXX.XXX				

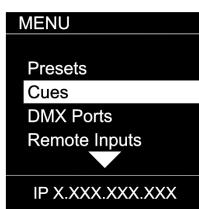
# **MENU: NETRON PRESETS**

These simple presets are preprogrammed into the device for fast setup. Some presets require additional input like a start Universe. Note that DMX Ports 1-12 apply to model EN12, and that greyed DMX Ports 1-4 apply to EN4/EP4 models.

Label	Ether	net								DMX	Ports					
	IP Address	Subnet	Protocol	Option	1	2	3	4	5	6	7	8	9	10	11	12
Artnet 2.x	Automatic 2.x	255.0.0.0	Artnet	Universe #	Output	Output	Output		Output	Output	Output	Output	Output	Output	Output	Output
	2.7			X	х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Artnet 10.x	Automatic 10.x	255.0.0.0	Artnet	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
				Х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Artnet 192.x	Automatic 192.x	255.0.0.0	Artnet	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
				Х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Artnet 172.x	Automatic 172.x	255.0.0.0	Artnet	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
				Х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Artnet DHCP	DHCP	DHCP	Artnet	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
			RDM	X	X Yes	X+1 Yes	X+2 Yes	X+3 Yes	X+4 Yes	X+5 Yes	X+6 Yes	X+7 Yes	X+9 Yes	X+10 Yes	X+11 Yes	X+12 Yes
	A	1			165	165	165	165	165	165	165	165	165	165	165	165
Artnet In	Automatic 2.x	255.0.0.0	Artnet	Universe #	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input
				х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
Artnet In / Thru	Automatic 2.x	255.0.0.0	Artnet	Universe #	Input	Input	Input	Input	Input	Input	Output	Output	Output	Output	Output	Output
				х	Х	X+1	X+2	X+3	X+4	X+5	Clone 1	Clone 2	Clone 3	Clone 4	Clone 5	Clone 6
sACN 2.x	Automatic 2.x	255.0.0.0	sACN	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
				х	х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM	not supported												
sACN 10.x	Automatic 10.x	255.0.0.0	sACN	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
				Х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM	not supported												
sACN 192.x	Automatic 192.x	255.0.0.0	sACN	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
				х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM	not supported												
sACN 172.x	Automatic 172.x	255.0.0.0	sACN	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
		1		Х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM	not supported						-						
sACN DHCP	DHCP	DHCP	sACN	Universe #	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output
				Х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
			RDM	not supported												
sACN DHCP In	DHCP	DHCP	sACN	Universe #	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input
	·			Х	Х	X+1	X+2	X+3	X+4	X+5	X+6	X+7	X+9	X+10	X+11	X+12
Splitter Port 1	Automatic 2.x	255.0.0.0	Artnet		Input	Output	Output	Output								
		·			Х	Clone 1	Clone 1	Clone 1								

### **MENU: CUES**

A cue is a full static snapshot of all DMX values of all ports. The device supports 99 cues with fade and hold times, plus a link option to loop multiple cues together. This allows small "mini" cuelists to be created. Cues are used for standalone operation, as a backup for signal loss or can be assigned to one of the switch inputs. This is often used for fire alarm situations where a system has to go to a defined state and stop all console playback. Cues can be sent as Ethernet Universes so one device can drive many other Netron nodes.

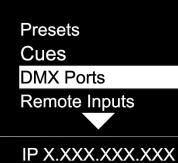


SUB MENU		OP	TIONS /	VALUES	DESCRIPTION				
MENU	Run Cue	1 – 99	Go/Off		Go/Off		Go/Off		Select the desired cue
Run Cue Save Cues Rename Cue Link Cues	Save Cue	1:Cue 1  99:Cue 99	Save Cue?	Yes/ <b>No</b>	Save all values on all ports to a cue slot				
IP X.XXX.XXX.XXX MENU	Rename Cue	1 – 99	12 Charact	er Label	Edit name of cue				
	ŷ			0s – 99.59min	Set the fade time of the cue				
Save Cues Rename Cue Link Cues	Link Cues	1 – 99	Link to Cue	<u>0s – 99.59min</u> Disable, 1 – 99	Set the time to hold the cue until the next cue is started Set the next Cue				
Resend Ethernet	Disable				Cue data is not sent over Ethernet				
IP X.XXX.XXX.XXX	Resend Ethernet	Enable			Cue data is sent on the Universe number and protocol assigned to the ports.				

# **MENU: DMX PORTS**

Select a port number to adjust its settings. Depending on the Mode, certain options are not relevant and hidden from the display or web interface.

#### MENU



SUB MENU	(	OPTIONS / VALUES	DESCRIPTION
		Disable	The port is disabled.
	Mode	Input	The port receives DMX values and assigns them to the selected Universe.
	Mode	Output	The port sends out DMX Values on the selected Universe
		Send Value 0 – 255	Send a static DMX value
	Universe	1 – 32767	Select the EtherDMX Universe
MENU	Protocol	Art-Net, sACN, None	Select the EtherDMX protocol per port
	FrameRate	10, 15, 20, 25, 30, <b>35</b> , 40	Select the desired frame rate.
	RDM	Disable, <b>Enable</b>	Disable / Enable RDM traffic for this port
Port 1		OFF	The merger is disabled
Port 2		HTP	The sources are merged by Highest Takes Precedence
Port 3	Marga	LTP	The sources are merged by Last Takes Precedence
Port 4	Merge	Toggle	The complete source Universe is switched as soon as a single value changes
		Backup	The merge universe is activated if the main universe has no valid traffic
IP X.XXX.XXX.XXX	Clone	None, Port 2, Port 3, Port 4	Replicates the identical DMX data from another port
	_	From: 1 – 512	To limit the DMX range, set the first address of the DMX port
	Range	To: 1 – 512	To limit the DMX range, set the last address of the DMX port
	Offset Addr	Off, 2 - 511	Offset start address, incoming channel X value is sent on this port as channel X+Offset, Channels are cut off if they exceed 512

# **MENU: REMOTE INPUT**

The device supports ten remote assignments that can trigger specific actions like recalling a cue or preset. These events are recalled using local contact closures, DMX In, or a specific EtherDMX Universe / Address.

# MENU Presets Cues DMX Ports Remote Inputs

IP X.XXX.XXX.XXX

SUB MENU	OPTIONS / VALUES			DESCRIPTION
MENU	Cue	1 – 99		Recall a specific cue number
		Trigger		The cue is activated, and all times and links are processed even if the contact is opened again
Input 1 Input 2 Input 3 Input 4	Cue Mode	Toggle		The cue is activated, and all times and links are processed only if the contact is closed. Once toggle is opened, device will assume DMX traffic or No DMX status. This allows to alternate between two cues for example with the toggle switch.
	Netron Preset	a,b,c,		Recalls this Netron preset when the contact is closed
IP X.XXX.XXX.XXX	User Preset	1 – 10		Recalls this user preset when contact is closed
MENU	Disable DMX			Stops all DMX output for as long as contact is closed
	Send Value	0 – 255		Sends specific DMX value on all ports for as long as contact is closed
Input 1		disabled		Input is disabled
Input 2		DMX Port	1 – xx	Use DMX Port. Port must be set as Input
Input 3		Art-Net		Art-Net Trigger
Input 4	Source	sACN		sACN Trigger
		Universe		Set Universe for remote trigger
IP X.XXX.XXX.XXX		Address		Set DMX Address for remote trigger

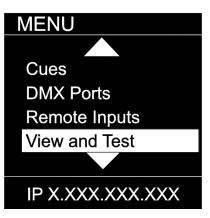
### DMX Map for Remote Trigger

Inputs can be remotely activated over DMX, Art-Net, or sACN. The input is activated if the DMX value is at the value shown below.

Value	Action
0 – 10	Idle
11 – 20	Input 1
21 – 30	Input 2
31 – 40	Input 3
41 – 50	Input 4
51 – 60	Input 5
61 – 70	Input 6
71 – 80	Input 7
81 – 90	Input 8
91 – 100	Input 9
101 – 110	Input 10
111 – 255	Idle

## MENU: VIEW AND TEST

This Netron device provides a variety of tools right from the front display to monitor and test the system. Colors indicate changing values.



SUB MENU	OPTIC	ONS / VALUE	Description	
		View	Port 1 – 4	View the DMX values of a specific port
	Ň	Range	From: 1 – 512	default 1
	<ie></ie>	nange	To: 1 – 512	default 512
	MX View			Start Monitoring Values. Use Encoder to dial to the
		Start Monitor		desired DMX address. Push Encoder to change
MENU				display readout style (Grid, List, Address)
	≥	Universe	1 - 32767	View a specific Art-Net Universe
	Art-Net View	Range	From: 1 – 512	default 1
DMX View	et		To: 1 – 512	default 512
	Z L			Start Monitoring Values. Use Encoder to dial to the
Art-Net View	Ar	Start Monitor		desired DMX address. Push Encoder to change
sACN View		Universe	1 - 32767	display readout style (Grid, List, Address) View a specific sACN Universe
	≥	Universe	From: 1 – 512	default 1
DMX Port Test	sACN View	Range	To: 1 – 512	default 512
	z		10. 1 - 512	Start Monitoring Values. Use Encoder to dial to the
IP X.XXX.XXX.XXX	AC	Start Monitor		desired DMX address. Push Encoder to change
	0)	oluitinointoi		display readout style (Grid, List, Address)
			Port 1 – 4	Send generator values on specific port
MENU	DMX Port Test	Output	All Ports	Send generator values on all ports
	⊢ ਦ	Denge	From: 1 – 512	default 1
	Pol	Range	To: 1 – 512	default 512
sACN View	¥			
DMX Port Test	D	Speed	1 – 10, Manual	Select the speed of generator
			4 00707	
Art-Net Test	5t	Universe	1 - 32767	Select Art-Net Universe
sACN Test	т Ц	Range	From: 1 – 512	default 1
3/1011 1031	let	-	To: 1 – 512	default 512
	Art-Net Test	Created	1 10 Manual	
IP X.XXX.XXX.XXX	Ar	Speed	1 – 10, Manual	Select the speed of generator
	• <u> </u>	Universe	1 – 32767	Select sACN Universe
	les	Banga	From: 1 – 512	default 1
	z	Range	To: 1 – 512	default 512
	sACN Test	Speed	1 – 10, Manual	Select the speed of generator

# MENU: VIEW AND TEST (continued)

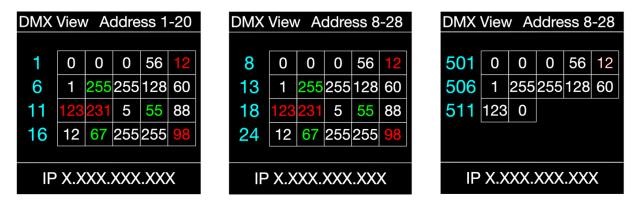
### Monitor (DMX View, Art-Net View, sACN View)

The monitoring options are helpful to find faults, or simply watch incoming traffic. Three styles are available by clicking the encoder wheel. Dial the wheel to change the display to the desired address, and exit the monitor with the back button.

#### DMX Test Display - Grid

The color coding helps to quickly identify changing DMX values.

- Cyan: DMX Address
- Green: Value Decreased
- Red: Value Increased
- White: Value stable (after 10 seconds)



DMX Test Display – Line

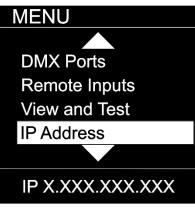
DMX View Address 1-5					
		Min	Max		
1	0	0	12		
2	1	0	60		
3	121	5	123		
4	12	98	255		
5	88	8	88		
IP X.XXX.XXX.XXX					

#### DMX Test Display - Address

DMX View					
Address	Value				
1	127				
	50%				
Min	0				
Max	255				
IP X.XXX.XXX.XXX					

# **MENU: IP ADDRESS**

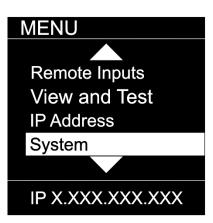
Set the desired device IP address in this menu. Every Netron device is set to a unique 2.x.x.x address at the factory, and after every reset to this default. For Art-Net systems, it should never be necessary to adjust this IP. Any custom address and subnet can be assigned so the node can operate within any network environment. EP4 devices default to 2.0.0.1 as they contain no display. Configure each EP4 to a unique IP using the web remote access.



SUB MENU	SUB MENU			Description
MENU	DHCP IP			The device waits for a DHCP server address After 30s it assigns itself a unique 169.254.x.x address but continues to monitor DHCP server requests.
	Automatic 2.x			The device is set to a unique 2.x.x.x Address, Subnet 255.0.0.0
DHCP IP Automatic 2.X	Automatic 10.x.x			The device is set to a unique 10.x.x.x Address, Subnet 255.0.0.0
		IP Address	x.x.x.x	
Automatic 10.x Custom IP	Custom IP	Subnet Mask	x.x.x.x	Assign any desired numbers. The device does not check the validity of address and subnet values.
IP X.XXX.XXX.XXX	Automatic 192.x			The device is set to a unique 192.x.x.x Address, Subnet 255.0.0.0
	Automatic 172.x			The device is set to a unique 172.x.x.x Address, Subnet 255.0.0.0

### **MENU: SYSTEM**

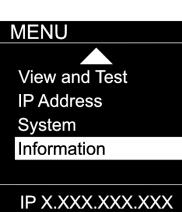
This menu contains all the settings to configure and manage the device.



SUB MENU		<b>OPTIONS / VALUES</b>			Description
	Device Name	12 Character Label			Set a device name
	Device ID	0 – 999			Set an optional device ID
MENU		Display	Disable		Display stays on indefinitely
		Timeout	10s, 30s	, 1m, 5m, 10m	Display goes dark after this time
Device Name	lay	Screen Brightness	1-10		Adjust the brightness of the internal display
Device ID	Display	LED Brightness	0-10		Adjust the brightness of the front LEDs. Set to 0 to disable them.
Display			Device Ir	nfo	The display shows port and connectivity information
ArtNet Start		Home Screen	Cue Brov	wser	The display shows a list of stored cues which can easily be browsed and started by the encoder wheel
	ArtNet Start	<b>Universe 0</b> Universe 1			Universe 1 is sent to Art-Net 0-0 Universe 1 is sent to Art-Net 0-1
			Lock	Disable	The device does not require a pin
MENU	vic			Timeout	The device asks for a pin after the display times out
Lock Device	Lock Device	PIN: 000 ( <b>011</b> )	Manual Lock: 000 ( <b>011</b> )	Lock / Unlock	Lock the device immediately
Startup		Cue			Run a specific Cue at startup
Signal Loss Backup Config	Startup	Wait for Data			No DMX is sent until valid data is received for the ports. The last incoming values continue to be sent on the ports until the time is expired. Once timeout has completed the device will perform one of the below actions
IP X.XXX.XXX.XXX		Send 0			
MENU	Signal Loss	Hold Last Look		0s, 10s, 30s, 10m, 60m	The last incoming values continue to be sent on the ports until the time is expired. Once timeout has completed the device will perform one of the below actions.
	jnal	Fade to 0	0-60s <b>(3</b>	0s)	Crossfade to DMX 0. Set to 0s for instant out.
Signal Loss	Sic	Cue	No Cue		Start Cue X
		Disable DMX	0		DMX traffic is turned off on all ports
Backup Config RDM Processing	Backup Config		Config S Config L		Save current configuration including all cue data Reload configuration. Backups can be exported and
	9 B	All Disable			imported from the web interface Disables RDM processing on the device
Factory Reset	sin ا				
	RDM Processing	All Enable			Enables all RDM processing on the device
IP X.XXX.XXX.XXX	y Reset		Confirm	Device will be reset to factory defaults. Yes/ <b>No</b>	Reset the device to factory default. It will reload NETRON Preset 1. All cues are deleted, and all settings are set to default.
	Factory	Pin: 000 ( <b>007</b> )	Confirm	Device will be reset to User Preset 1. Yes/ <b>No</b>	Reset the device to User Preset 1.

## **MENU: INFORMATION**

This menu provides information about the device.



SUB MENU		<b>OPTIONS / VALUES</b>	DESCRIPTION
MENU	- m	Boot SW V# Firmware: V#	Display the current software version
Software Version Product On Time MAC Address RDM UID	Product On Time	Time: XXXXX(H)	Total time the device has been powered on.
IP X.XXX.XXX.XXX		XIXIXIXIX	Displays MAC address
	MDM UID	UID1: xxxx	Displays product RDM UID.

# WEB REMOTE CONFIGURATION

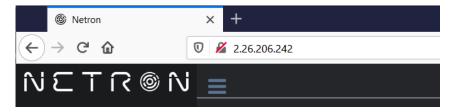
Ensure the device and a computer are do not share IP address, but are in the same IP address range and connected.

🕌 Ethernet Status	× 🕴 Ethernet Properties	Internet Protocol Version 4 (TCP/IPv4) Properties         ×
General	Networking Sharing	General
Connection IPv4 Connectivity: No network access IPv6 Connectivity: No network access Media State: Enabled Duration: 00:28:37 Speed: 1.0 Gbps Dgtails Activity	Connect using: Intel(R) Ethemet Connection (2) 1219-LM Configure This connection uses the following items: Client for Microsoft Networks Gas Packet Scheduler Microsoft Network Adapter Multiplexor Protocol Microsoft Network Adapter Multiplexor Protocol Microsoft LLDP Protocol Driver Microsoft LLDP Protocol Driver Intermet Protocol Version 6 (TCP/IPv6)	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.            Q btain an IP address automatically             Q btain an IP address automatically             Q btain an IP address:             IP address:             Q btain an IP address:             IP address:             Q btain the set of the
Sent — Received Bytes: 172,396   1,081,032	Install Uninistal Properties Description Transmission Control Protocol/Internet Protocol. The default	Preferred DNS server: Alternate DNS server:
Properties Diagnose Diagnose	wide area network protocol that provides communication across diverse interconnected networks.	Valjdate settings upon exit Advanced

**PC Configuration Sample:** Please note your PC configuration results may vary.

	Network	Q Search
Location:	Automatic	
Ethernet	Status:	Connected
Bluetooth PAN     Not Connected		Ethernet is currently active and has the IP address 2.1.128.1.
Wi-Fi Bluetooth PAN	Configure IPv4:	Manually
ThundeIt Bridge     Not Connected	IP Address:	2.1.128.1
Not Connected	Subnet Mask:	255.0.0.0
	Router:	
	DNS Server:	
	Search Domains:	
		Advanced ?
+ - *		

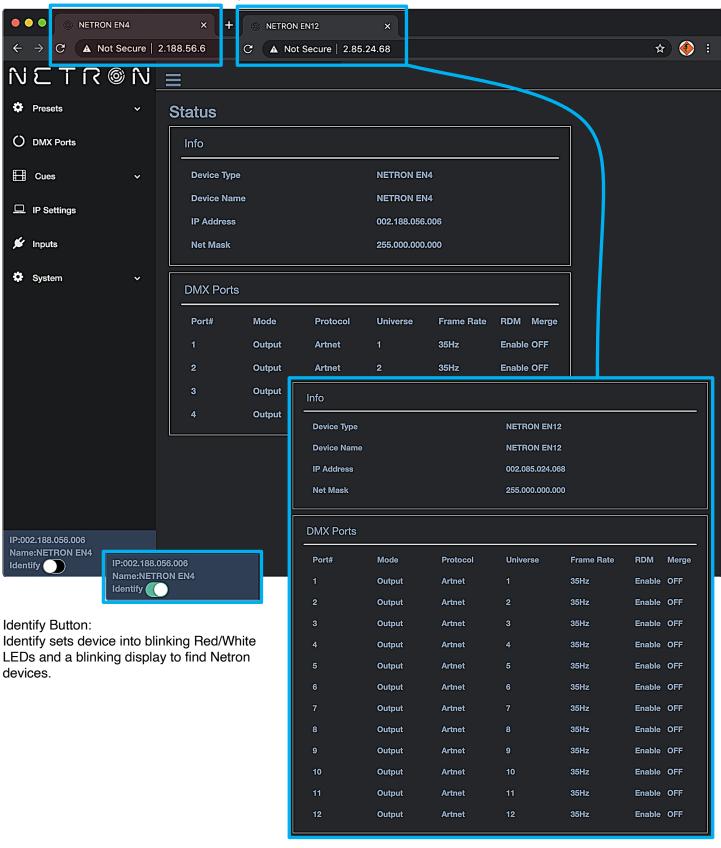
**MAC OS Configuration Sample:** Please note your MAC OS configuration results may vary.



Browser Sample: Enter the device IP address into a web browser to access the device page.

# WEB REMOTE MENU: HOMEPAGE

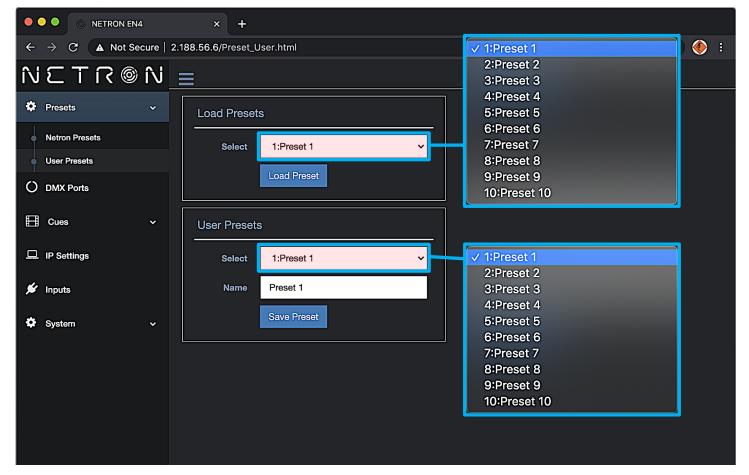
Please note that Netron devices are not compatible with Microsoft Internet Explorer. Also, the antivirus software AVAST is known to block important communication with NETRON, and must be disabled for the web interface and firmware updates to function.



### **WEB REMOTE MENU: PRESETS – NETRON PRESETS**

•		ON EN4	× +		✓ 1:ArtNet 2.x 2:ArtNet 10.x	
÷	→ C ▲ M	Not Secure   2.	.188.56.6/Preset_N	etron.html	3:ArtNet 192.x 4:ArtNet 172.x	☆ 📀 :
N	NT3	© î∖i			5:Artnet DHCP 6:ArtNet In 7:ArtNet In/Thru	
٠	Presets	~	Netron Prese	əts	8:sACN 2.x 9:sACN 10.x 10:sACN 192.x	
0	DMX Ports		Select	1:ArtNet 2.x	11:sACN 172.x 12:sACN DHCP 13:sACN DHCP In	
Ħ	Cues	~	Start Universe	1	14:Splitter Port1	
	IP Settings			Load Preset		Netron Presets
*	Inputs					Select 14:Splitter Port1
۵	System	~				Load Preset

### WEB REMOTE MENU: PRESETS – USER PRESETS



## WEB REMOTE MENU: DMX PORTS – OUTPUT

•	) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	NETRON EN4		× +					
÷	→ C	A Not Sec	ure   2.	188.56.6/DMX_Por	ts.html			☆	؛ 🏈
íV	εT	@ N	î\ _				Disable Input V Output		
۵	Presets		~	DMX Port Co	onfiguration		Send Value		
0	DMX Ports			1 2 3	4		✓ ArtNet sACN None		
₿	Cues		~			/	10 Hz		
묘	IP Settings			Mode	Output	~	10 Hz 15 Hz 20 Hz		
*	Inputs			Universe	1	/	25 Hz 30 Hz		
۵	System		~	Protocol	ArtNet	~	✓ 35 Hz 40 Hz		
				Framerate	35 Hz				
				RDM			✓ OFF		
				Merge	OFF	~	HTP LTP		
				Resend Protocol	ArtNet		Toggle Backup		
				DMX Range From	1		✓ ArtNet		
				DMX Range To	512		sACN None		
				Offset Address	1				
				Clone Port	None	~	✓ None		
					Save		Port 2 Port 3 Port 4		

	✓ OFF	
Merge	HTP HTP LTP Toggle	
Merge Universe	5 Backup	
Resend Protocol	ArtNet sACN None	
Resend Merge Universe	9	
DMX Range From	1	
DMX Range To	512	
Offset Address	1	
Clone Port	None Port 2 Port 3 Port 4	

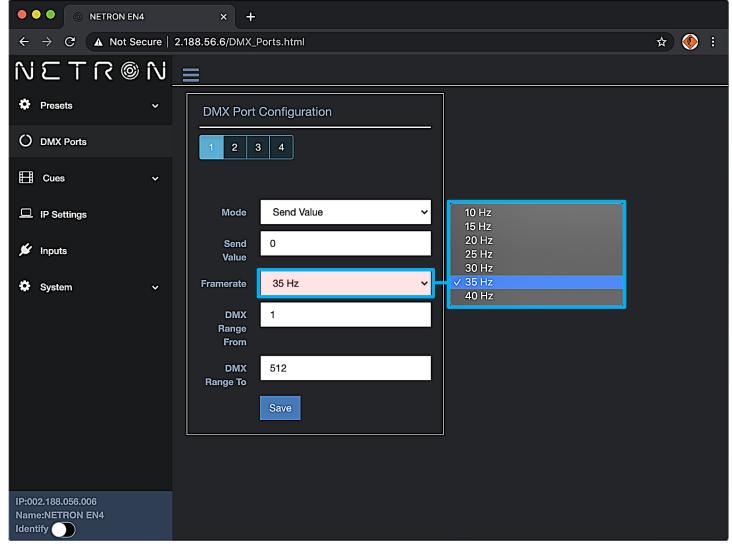
## WEB REMOTE MENU: DMX PORTS – DISABLE

•	🔍 💿 NETRON E	N4	× +			
←	$\rightarrow$ C $\blacktriangle$ Not S	Secure   2.188	3.56.6/DMX_Ports.h	ntml		☆ 终 🗄
íN	S T R @	) îv 📃				
٠	Presets	~	DMX Port Confi	guration		
0	DMX Ports		1 2 3 4			
⊞	Cues	~				
묘	IP Settings		Mode Dis	able	~	
*	Inputs		Sav	•		

### WEB REMOTE MENU: DMX PORTS – INPUT

••••	4 ×	+		
$\leftarrow$ $\rightarrow$ C $\blacktriangle$ Not Se	cure   2.188.56.6/DM	X_Ports.html		☆ 终 :
NETR®	î\i <u>≡</u>			
Presets	• DMX Po	rt Configuration		
O DMX Ports	1 2	3 4		
E Cues	~			
IP Settings	Mode	Input	×	
🖋 Inputs	Universe	1		_
System	✓ Protocol ✓ DMX Range From DMX Range To Offset Address	1 512 1	✓ ArtNet SACN None	

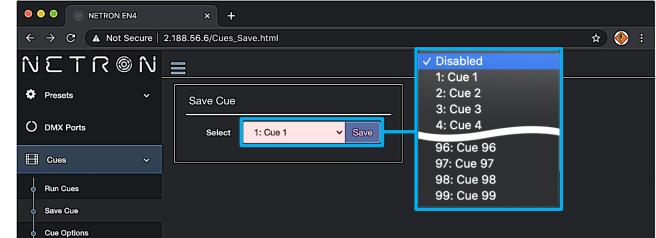
### WEB REMOTE MENU: DMX PORTS - SEND VALUE



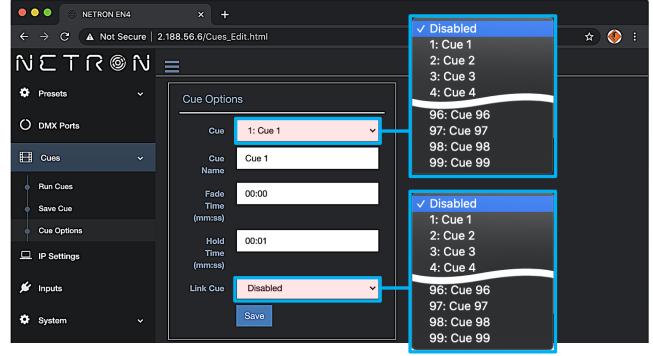
### **WEB REMOTE MENU: CUES – RUN CUES**

• • • • © NETRON EN4	× +		
$\leftarrow \rightarrow \mathbf{C}$ A Not Secure	2.188.56.6/Cues_Run.html		🖈 终 :
NETR®N	=	✓ Disabled 1: Cue 1	
Presets	Run Cues Select Disabled V Run	2: Cue 2 3: Cue 3 4: Cue 4	
E Cues 🗸	Current No	96: Cue 96 97: Cue 97	
Run Cues	Cue Cue Resend	98: Cue 98 99: Cue 99	
Cue Options	Ethernet		

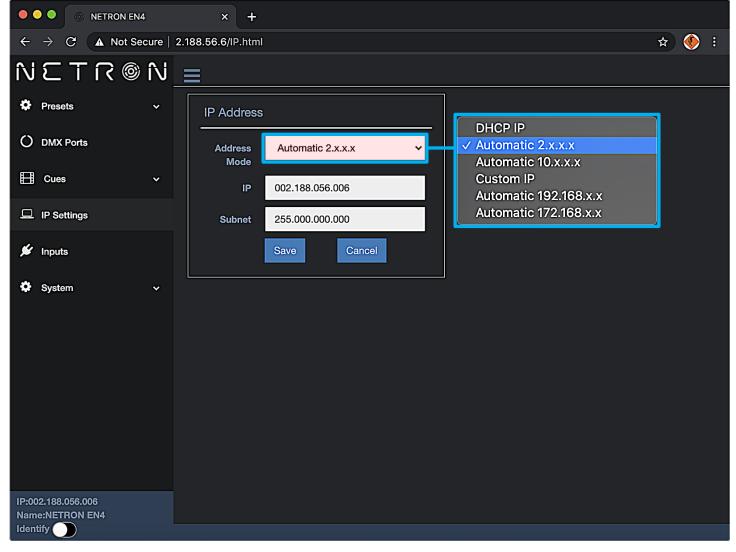
### **WEB REMOTE MENU: CUES – SAVE CUES**



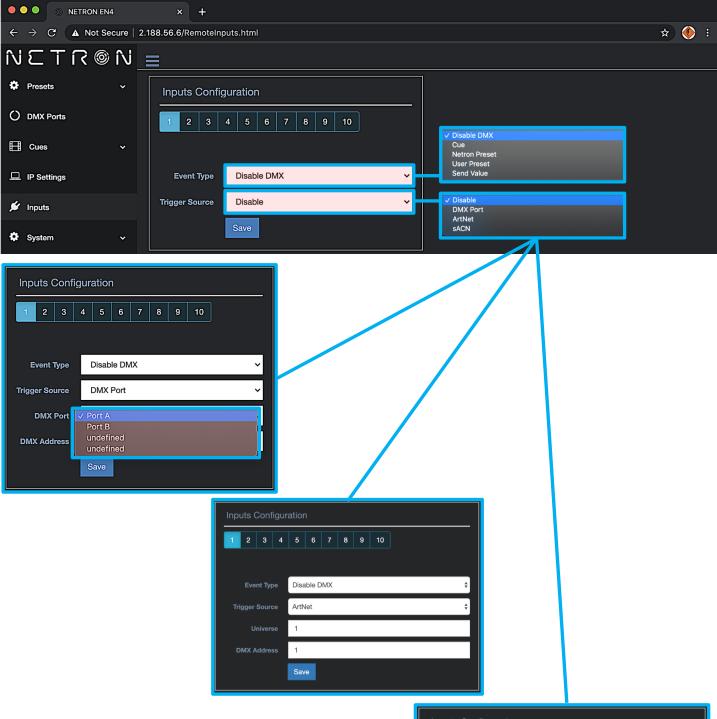
### WEB REMOTE MENU: CUES - CUE OPTIONS



## WEB REMOTE MENU: IP SETTINGS



### WEB REMOTE MENU: INPUTS – DISABLE DMX



1 2 3 4 5 6 7 8 9 10	
Event Type Disable DMX	¢
Trigger Source SACN	¢
Universe 1	
DMX Address 1	
Save	

### WEB REMOTE MENU: INPUTS – CUE



# WEB REMOTE MENU: INPUTS – NETRON PRESETS

••• • • • NETRON EN4 × +	✓ 1:ArtNet 2.x
← → C ▲ Not Secure   2.188.56.6/RemoteInputs.html	2:ArtNet 10.x 2:ArtNet 192.x
$N \subseteq T \cap \otimes N \equiv$	4:ArtNet 172.x 5:Artnet DHCP
Presets V Inputs Configuration	6:ArtNet In 7:ArtNet In/Thru
O DMX Ports	8:sACN 2.x 9:sACN 10.x
E Cues v	10:sACN 192.x 11:sACN 172.x
IP Settings     Event Type     Netron Preset	12:sACN DHCP 13:sACN DHCP In 14:Splitter Port1
✓ Inputs Netron Preset 1:ArtNet 2.x ✓	
System      V	✓ Disable DMX Port
Save	ArtNet
	SACN
Inputs Configuration           1         2         3         4         5         6         7         8         9         10	
Event Type Netron Preset	
Netron Preset 1:ArtNet 2.x	
Trigger Source DMX Port	
Port B undefined	
undefined Save	
Inputs Configuration	
1 2 3 4 5 6 7 8 9 10	
	Inputs Configuration
Event Type Netron Preset 🗸	1 2 3 4 5 6 7 8 9 10
Netron Preset 1:ArtNet 2.x 🗸	
Trigger Source ArtNet 🗸	Event Type Netron Preset V
Universe 1	Netron Preset 1:ArtNet 2.x V
DMX Address 1	Trigger Source SACN V
Save	Universe 0
	DMX Address 1
	Save

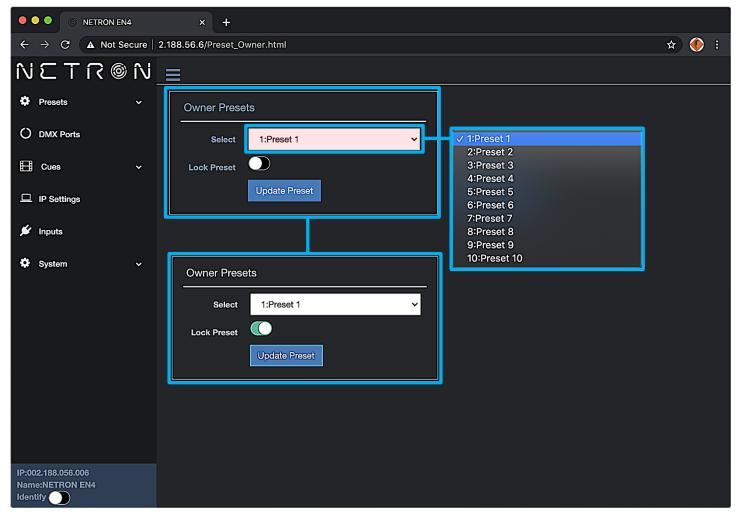
# **WEB REMOTE MENU: INPUTS – USER PRESETS**

••• • • • • • • • • • • • • • • • • •			
$\leftrightarrow$ $\rightarrow$ C $\blacktriangle$ Not Secure   2.188.56.6/Remo	iteInputs.html	-	☆ 终 :
N E T R 🛛 N 😑 📃		✓ 1:Preset 1	
	onfiguration	2:Preset 2 3:Preset 3 4:Preset 4	
	3 4 5 6 7 8 9 10	5:Preset 5 6:Preset 6	
L IP Settings Event Ty	pe User Preset 🗸	7:Preset 7 8:Preset 8 9:Preset 9	
🖋 Inputs User Pre:	set 1:Preset 1 🗸 🗸	10:Preset 10	
Trigger Sour	ce Disable 🗸	✓ Disable	
System v	Save	DMX Port ArtNet SACN	
Inputs Configuration         1       2       3       4       5       6       7       8       9       10         Event Type       User Preset       User Preset       User Preset       1       <	figuration		
1 2 3	4 5 6 7 8 9 10	Inputs Configuration	
Event Type	User Preset 🗸	1 2 3 4 5 6 7 8	9 10
User Prese	1:Preset 1 V		
Trigger Source	ArtNet ~	Event Type User Preset	~
Universe	1	User Preset 1:Preset 1	~
DMX Address	1	Trigger Source SACN	~
	Save	Universe 0	
		DMX Address 1	
		Save	

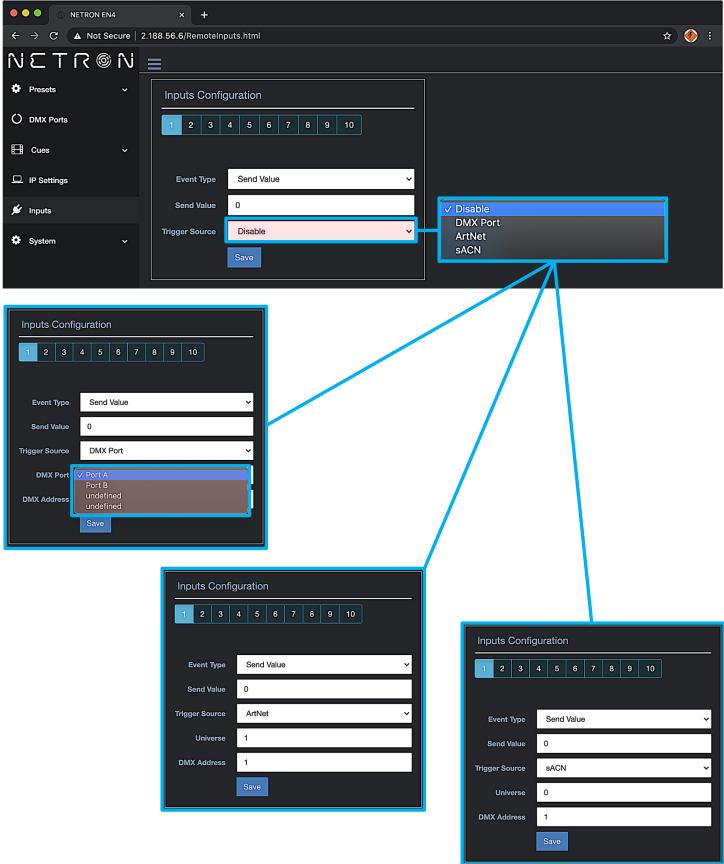
# **WEB REMOTE MENU: INPUTS – OWNER PRESET**

Device owners can lock any of the user presets so they cannot be overwritten. This is especially useful for rental equipment to ensure a company specific preset can be reloaded and is not edited by any user.

To access this function, use the specific URL IP\_Address/Preset\_Owner.htm, which is not part of the main interface. Select the desired preset, activate the lock, and Update to confirm. Owner presets are indicated with a lock symbol in the display.



### WEB REMOTE MENU: INPUTS - SEND VALUE

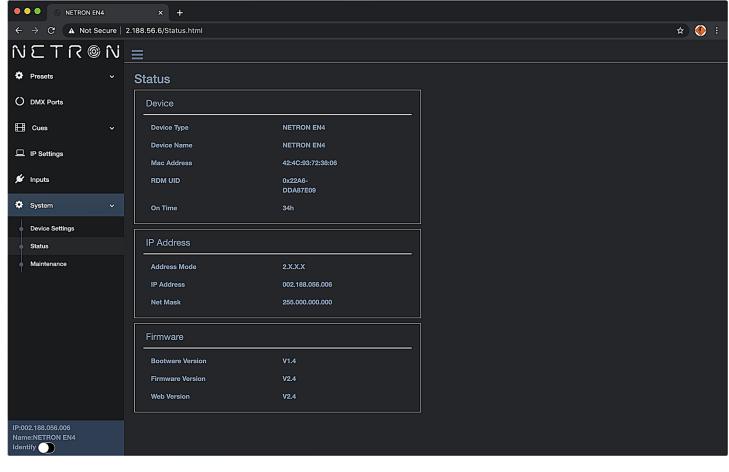


## WEB REMOTE MENU: SYSTEM – DEVICE SETTINGS

🔍 🔍 🍥 NETRON E	N4	× +						
← → C ▲ Not S								☆ 🍥 🗄
NETR®	Ni 🗄	=						
Presets		General			Startup	Cue VWait For Da Send 0		
O DMX Ports		Device Name	NETRON EN4		Startup Mode	Wait For Data	✓ Forever 0 Sec 10 Sec	
E Cues		Device ID	0 10 Sec 30 Sec				30 Sec 1 Min	
🖵 IP Settings			5 Min 5 Min 10 Min		Signal Loss		5 Min 10 Min	
🖋 Inputs		Display Brightness	10		Hold Timeout		60 Min	
System	~	, (	$\mathbf{O}$		Loss Mode	Disable DMX	Fade to 0 Cue	
Device Settings	_	LED Brightness			Fade Out (s)	30		
Status			10				1	
Maintenance	<u> </u>			✓ Netron Universe 1: 0-0			<u></u>	
		Art-Net Offset	Netron Universe 1: 0-0	Netron Universe 1: 0-1		Save	Cancel	
		Home Screen	Device Info					
		RDM Processing						
			0		Signal Loss			
		Pilv Number	0		Hold Timeout	Forever		~
					Loss Mode	Cue		~
IP:002.188.056.006 Name:NETRON EN4					Loss Cue	0:No Cue		~
Identify					Fade Out (s)	30	✓ 0:No Cue	
Diaplay Brightness				Hold Timeout Forever			1:Cue 1 2:Cue 2	
Display Brightness	4			Loss Mode Fade to 0			3:Cue 3 4:Cue 4	
				Fade Out (s)			96:Cue 96	
LED Brightness				45			97:Cue 97 98:Cue 98	
	9						98:Cue 98 99:Cue 99	

Use cursor to click and drag around to desired time.

### WEB REMOTE MENU: SYSTEM - STATUS



### WEB REMOTE MENU: SYSTEM – MAINTENANCE

ONETRON EN4	× +	
$\leftarrow \rightarrow \mathbf{C}$ A Not Secure	2.188.56.6/About.html	☆ 🌖 :
NETR®N		
🍄 Presets 🗸 🗸	Maintenance	
O DMX Ports	Special Functions	
🖽 Cues 🗸 🗸	Reset to Default	
IP Settings	Reboot Device	
🖋 Inputs		
🗘 System 🗸 🗸	Load Save Settings	
<ul> <li>Device Settings</li> </ul>	Choose File No file chosen Load Settings	
Status		
Maintenance	Save Current Settings	
	Firmware Upgrade	
	Choose File No file chosen Start Upgrade	
IP:002.188.056.006 Name:NETRON EN4 Identify		

### FIRMWARE UPDATES

Updates for improved performance or to add additional features may be available on <u>www.obsidiancontrol.com</u>.

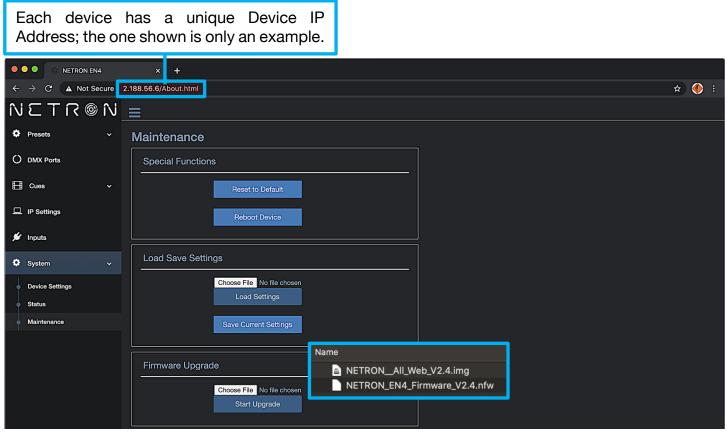
To install a firmware upgrade, connect to the device through a web browser and open the System – Maintenance menu.

Always back up the configuration first. Export to a file using the web interface.

- Upload the firmware file, then update the device. Do not power cycle during the update process. The update is provided in two files, Display NFW and Web IMG. Both need to be installed for a full upgrade.
- Reset to factory defaults.
- Reload the configuration file from the web interface.

Confirm the upgrade is installed from the Information/Software Version Display.

If the system menu is corrupt and or cannot be opened, then the Netron device can be updated from an IP address e.g. 2.26.206.242/update.html.



Each device has a unique Device IP Address; the one shown is only an example.

••• Ketron Firmware Update x +		
← → C ▲ Not Secure   2.188.56.6/updatetips.html		☆ 🊸 🗄
NETRON Firmware Update	2.188.56.6 says Web data has been updated!	
<b>!!WARNING:</b> Software is being updated, do not dis	ок connect device. Please wait.	
EXIT FIRMWARE UPDATE		