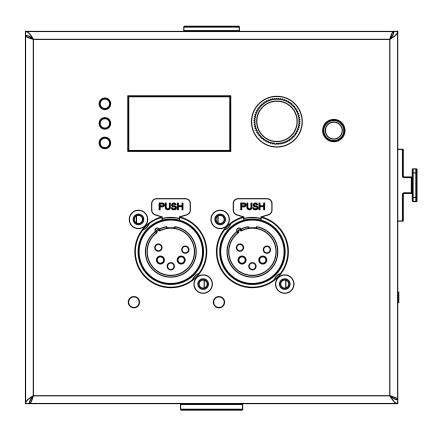
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CONTROL SYSTEMS



NETR®N E72 User Guide

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ELATION PROFESSIONAL B.V.

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

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
27/12/2021	1	Initial Release

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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 +1(844) 999-9942 | support@obsidiancontrol.com

OVERVIEW

The **NETRON EP2** is a compact Ethernet to DMX gateway with two RDM compatible ports designed for wall mount, truss mount and standalone installations.

It is configurable via its internal web remote and powered over Ethernet or via the convenient USB-C connection.

KEY FEATURES:

- RDM, ArtNet and sACN support
- Factory and user presets for plug and play setups
- POE or USB-C powered
- 1.5" OLED Display with rotary knob
- Remote configuration via internal webpage
- Powder-coated compact aluminum housing
- Connect to ONYX PC for a full four Universe Solution
- In-wall, On-Wall, Truss and Standalone mounting

SOFTWARE AND OPERATION

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

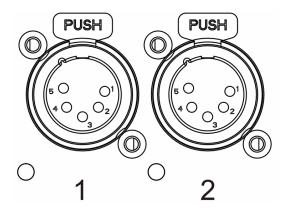
The NETRON Ether-DMX devices offer a comprehensive and easy to use feature set, and are continuously improving. It is advised to periodically check for updates on the Obsidian product pages.

CONNECTIONS

DMX CONNECTIONS:

All DMX Output connections are 5pin female XLR; 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.

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



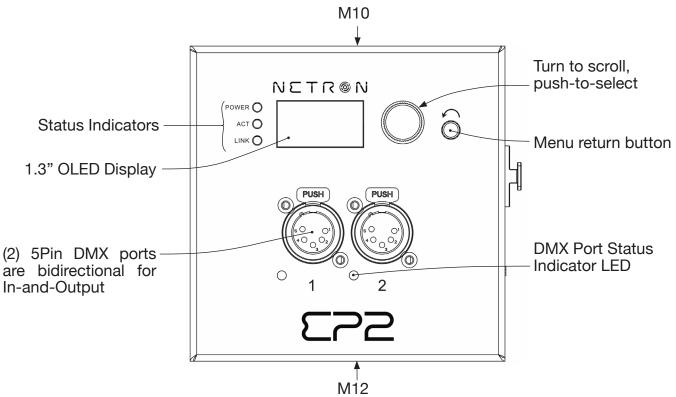
ETHERNET DATA CONNECTION

The Ethernet cable is connected on the side of the EP2 device. This device cannot be daisy chained. Although this is an Locking RJ45 Ethernet connector, and the use of a Locking RJ45 Ethernet cables is recommended, any RJ45 connector is suitable.

The Ethernet connection is also used to connect a computer to the EP2 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 starting on page 14 of this manual.

CONNECTIONS: FRONT & SIDE PANELS

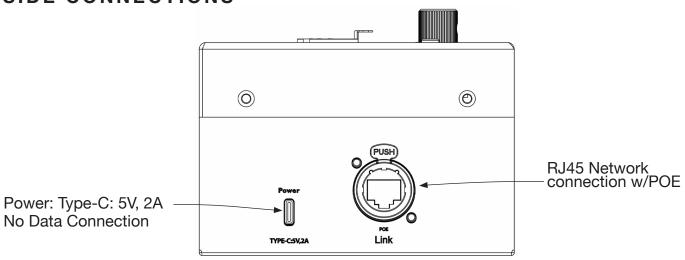
FRONT CONNECTIONS:



DMX PORTS STATUS INDICATOR LEDs

LED Color	Solid	Blink	Routing
DMX PORTS RED			
DMX PORTS GREEN	DMX In	DMX Lost	
DMX PORTS BLUE	DMX Out Stable	DMX Lost	
DMX PORTS WHITE			Flash on RDM packets

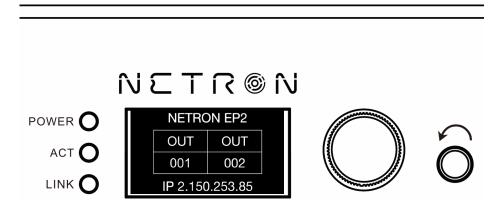
SIDE CONNECTIONS



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.

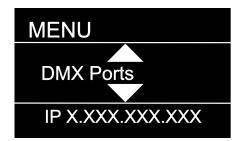


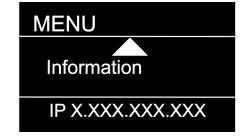


Wheel Right	Scroll down in menu list / increase values
Wheel Left	Scroll up in menu list / decrease values
Wheel Push	Enter Menu, Select menu item, go down one level in menu, confirm values.
Back Arrow	Go up one level in menu tree, cancel change of values, hold for 2 seconds to return to home screen

MENU: 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: PRESETS

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



SUB MENU	OI	PTION / VALUES	DESCRIPTION		
	1. ArtNet 2.x	Universe 1-32767			
	2. ArtNet 10.x	Universe 1-32767			
	3. ArtNet 192.x	Universe 1-32767			
	4. ArtNet 172.x	Universe 1-32767			
	5. ArtNet DHCP	Universe 1-32767			
	6. ArtNet In	Universe 1-32767			
NETRON Presets	7. ArtNet In/Thru	Universe 1-32767		See NETRON Presets	
	8. sACN 2.x	Universe 1-32767			
	9. sACN 192.x	Universe 1-32767			
	10. sACN 172.x	Universe 1-32767			
	11. sACN 172.x	Universe 1-32767			
	12. sACN DHCP	Universe 1-32767			
	13. sACN DHCP In	Universe 1-32767			
USER PRESETS	1. MyPreset 1 10. MyPreset 10	Load Preset	Preset Loaded		

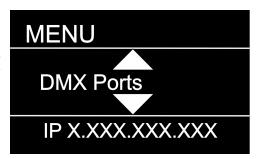
MENU: NETRON PRESETS

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

Label	Ethern			DMX	Ports	
	IP Address	Subnet	Protocol	Option	1	2
Artnet 2.x	Automatic 2.x	255.0.0.0	Artnet	Universe #	Output	Output
				Х	X	X+1
			RDM		Y	es
Artnet 10.x	Automatic 10.x	255.0.0.0	Artnet	Universe #	Output	Output
				Х	X	X+1
			RDM		Y	es
Artnet 192.x	Automatic 192.x	255.0.0.0	Artnet	Universe #	Output	Output
				Х	X	X+1
			RDM		Y	es
Artnet 172.x	Automatic 172.x	255.0.0.0	Artnet	Universe #	Output	Output
				Х	X	X+1
			RDM		Y	es
Artnet DHCP	DHCP	DHCP	Artnet	Universe #	Output	Output
				Х	Χ	X+1
			RDM		Y	es
Artnet In	Automatic 2.x	255.0.0.0	Artnet	Universe #	Input	Input
				Х	Χ	X+1
sACN 2.x	Automatic 2.x	255.0.0.0	sACN	Universe #	Output	Output
				Х	Χ	X+1
			RDM	<u> </u>	Y	es
sACN 10.x	Automatic 10.x	255.0.0.0	sACN	Universe #	Output	Output
				Х	X	X+1
			RDM		Y	es
sACN 192.x	Automatic 192.x	255.0.0.0	sACN	Universe #	Output	Output
				Х	X	X+1
			RDM		Y	es
sACN 172.x	Automatic 172.x	255.0.0.0	sACN	Universe #	Output	Output
				X	Х	X+1
			RDM			es
sACN DHCP	DHCP	DHCP	sACN	Universe #	Output	Output
	2	2.70.	5. 1011	X	Х	X+1
			RDM			es
sACN DHCP	DHCP	DHCP	sACN	Universe #	Input	Input
<u>In</u>	DHOF	DHOF	SACIN	-		· ·
				X	X	X+1

MENU: DMX PORTS

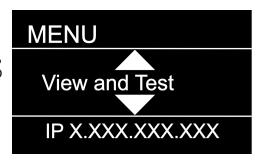
Select a port number to adjust its settings. Depending on the Mode, certain options are not relevant and hidden from the display or web interface.



SUB MENU	OPTION / VALUES			DESCRIPTION
		Disable		The port is disabled.
Port 1		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
Port 2		Send Value	0 – 255	Send a static DMX value
	Universe	1 – 32767		Select the EtherDMX Universe
		Art-Net		
	Protocol	sACN		Select the EtherDMX protocol per port
		None		

MENU: VIEW AND TEST

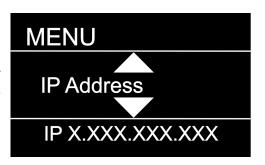
Select a View and Test mode to test . Depending on the Mode, certain options are not relevant and hidden from the display or web interface.



SUB MENU		OPTION / VA	LUES	DESCRIPTION	
		View	Port 1 – 2	View the DMX values of a specific port	
	ew	Start Monitor		Start Monitoring Values. Use Encoder to dial to the desired DMX address. Push Encoder to change display readout style (Grid, List, Address)	
DMX View	DMX View	Port 1 DMXx C Value 25 IP X.XXX.XXX	5 20	Port 1 x	
		Universe	1 – 32767	View a specific Art-Net Universe	
	/iew	Start Monitor		Start Monitoring Values. Use Encoder to dial to the desired DMX address. Push Encoder to change display readout style (Grid, List, Address)	
Art Net View	ArtNet View	Port 1 DMXx	55 10	Port 1 x	
		Universe	1 – 32767	View a specific sACN Universe	
sACN View	iew	Start Monitor		Start Monitoring Values. Use Encoder to dial to the desired DMX address. Push Encoder to change display readout style (Grid, List, Address)	
DMX Port Test	sACN View	Port 1 DMXx C Value 25	55 10		
Art Net Test		IP X.XXX.XXX	XXX	IP X.XXX.XXX	
7	ort	Output	Port 1 - 2	Send generator values on specific port	
	DMX Port Test	· .	All Ports	Send generator values on all ports	
sACN Test	ΣĔ	Speed	1 – 10, Manual	Select the speed of generator	
	-	Value	0 -255		
	ArtNet Test	Universe	1 – 32767	Select Art-Net Universe	
	Aff	Speed	1 – 10, Manual	Select the speed of generator	
		Value	0 -255		
	Z +	Universe	1 – 32767	Select sACN Universe	
	sACN Test	Speed	1 – 10, Manual	Select the speed of generator	
		Value	0 -255		

MENU: IP ADDRESS

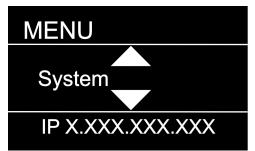
Set the desired device IP address in this menu. Every Netron device is set to a unique 2.x.x.x address at the factory, and after every reset to this default. For Art-Net systems, it should never be necessary to adjust this IP. Any custom address and subnet can be assigned so the node can operate within any network environment.



SUB MENU	OPTI	ON / VALUES	}	DESCRIPTION
DHCP IP	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	Automatic 2.x			The device is set to a unique 2.x.x.x Address, Subnet 255.0.0.0
Automatic 10.x	Automatic 10.x.x			The device is set to a unique 10.x.x.x Address, Subnet 255.0.0.0
Custom IP	Custom IP	IP Address Subnet		Assign any desired numbers. The device does not check the validity of address and subnet values.
Automatic 192.x	Automatic 192.x	Mask	x.x.x.x	The device is set to a unique 192.x.x.x Address, Subnet 255.0.0.0
Automatic 172.x	Automatic 172.x			The device is set to a unique 172.x.x.x Address, Subnet 255.0.0.0

MENU: SYSTEM

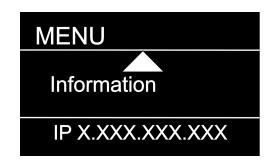
This menu contains all the settings to configure and manage the device



SUB MENU		OPTION / V	ALUES		DESCRIPTION	
Device Name	Device Name	12 Character Label			Set a device name	
Device ID	Device ID	0-999			Set an optional device ID	
		Display Timeout	Disable		Display stays on indefinitely	
		. ,		1m, 5m, 10m	Display goes dark after this time	
B: 1	ay	Screen Brightness	1-10		Adjust the brightness of the internal display	
Display	Display	LED Brightness	0-10		Adjust the brightness of the front LEDs. Set to 0 to disable them.	
	_		Device In	fo	The display shows port and connectivity information	
		Home Screen	Cue Brov	/ser	The display shows a list of stored cues which can easily be browsed and started by the encoder wheel	
Art-Net Offset	ArtNet Start	Universe 1 Universe 0			Universe 1 is sent to Art-Net 0-0 Universe 1 is sent to Art-Net 0-1	
	Ф		Lask	Disable	The device does not require a pin	
Lock Device	švic		Lock	Timeout	The device asks for a pin after the display times out	
	Lock Device	PIN: 000 (011)	Manual Lock: 000 (011)	Lock/Unlock	Lock the device immediately	
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	
		Send 0				
Signal Loss	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.	
	ign	Fade to 0	0-60s (30	s)	Crossfade to DMX 0. Set to 0s for instant out.	
	0)	Disable DMX			DMX traffic is turned off on all ports	
	♀ ᠪ	Save Config	Config Sa	aved	Save current configuration including all cue data	
Backup Config	Backup Config	Load Config	Config Lo	paded	Reload configuration. Backups can be exported and imported from the web interface	
	g	All Disable			Disables RDM processing on the device	
RDM Processing	RDM Processing	All Enable			Enables all RDM processing on the device	
Factory Reset	Factory Reset	Pin: 000 (011)	Confirm	Device will be reset to factory defaults. Yes/ No	Reset the device to factory default. It will reload NETRON Preset 1. All cues are deleted, and all settings are set to default.	
	Factor		Confirm	Device will be reset to User Preset 1. Yes/ No	Reset the device to User Preset 1.	

MENU: INFORMATION

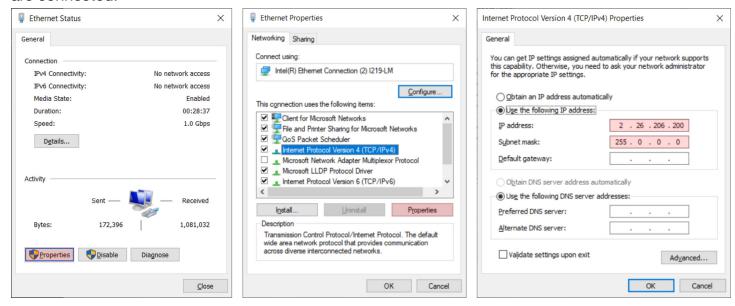
This menu provides information about the device.



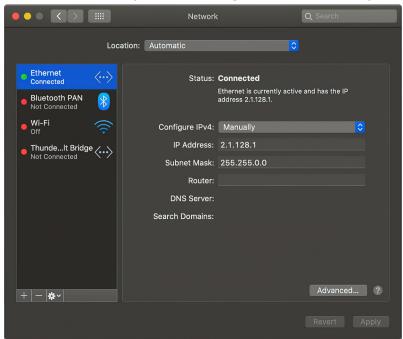
SUB MENU		OPTION / VALUES	DESCRIPTION
Software Version	Software Version	Boot SW V# Firmware: V#	Display the current software version
Product On Time	Product On Time	Time: XXXXX(H)	Total time the device has been powered on.
MAC Address	Mac Address	:x:x:x:x:x	Displays MAC address
RDM UID	RDM UID	UID1: xxxx	Displays product RDM UID.

WEB REMOTE CONFIGURATION

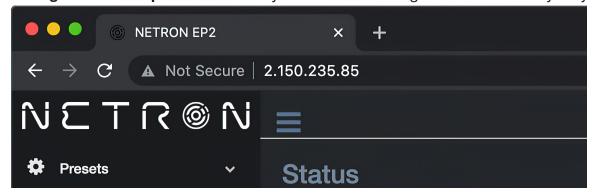
Ensure the device and a computer do not share IP address, but are in the same IP address range, and are connected.



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



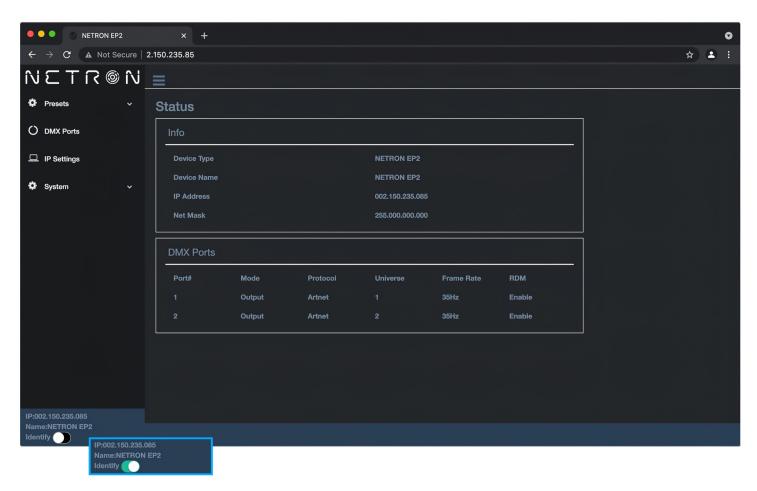
MAC OS Configuration Sample: Please note your MAC OS configuration results may vary.



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

WEB REMOTE MENU: HOMEPAGE

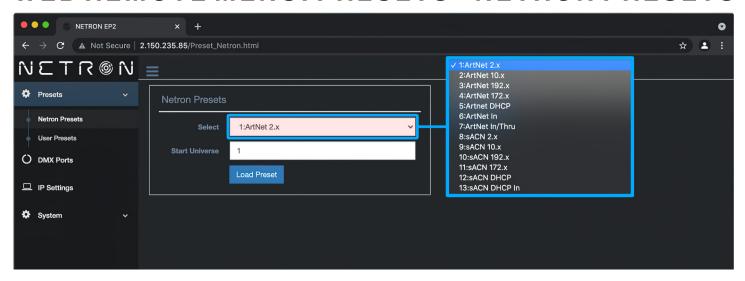
Please note that Netron devices are not compatible with Microsoft Internet Explorer. Also, the antivirus software AVAST is known to block important communication with NETRON, and must be disabled for the web interface and firmware updates to function.



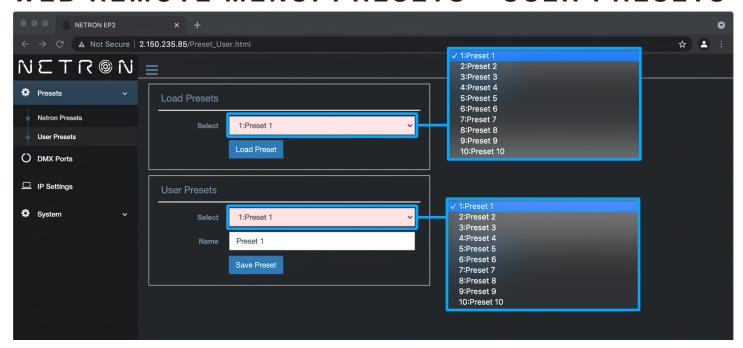
Identify Button:

Identify sets device into blinking Red/White LEDs and a blinking display to find Netron devices.

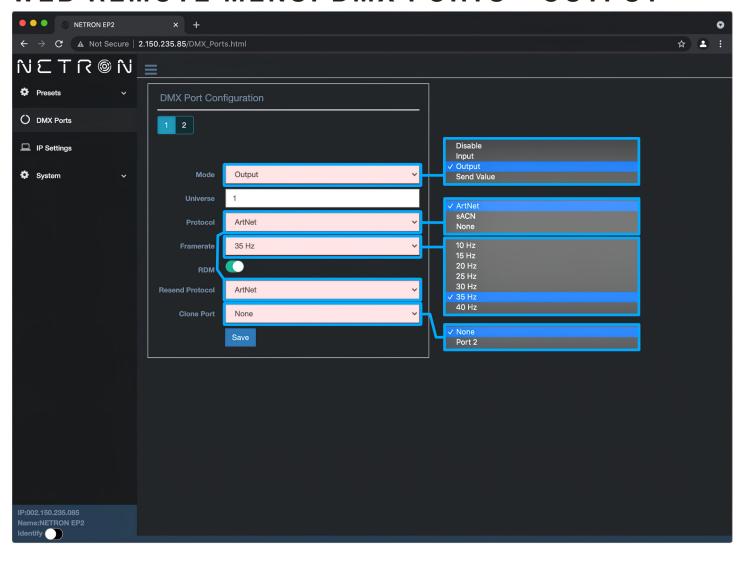
WEB REMOTE MENU: PRESETS - NETRON PRESETS



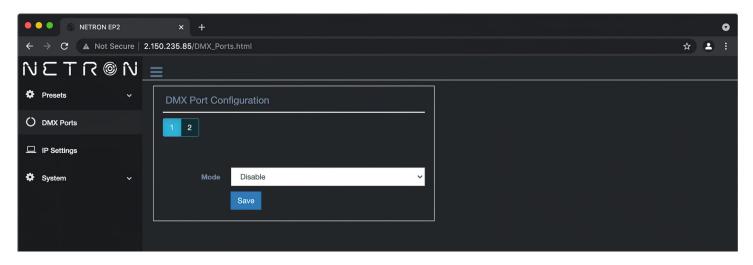
WEB REMOTE MENU: PRESETS - USER PRESETS



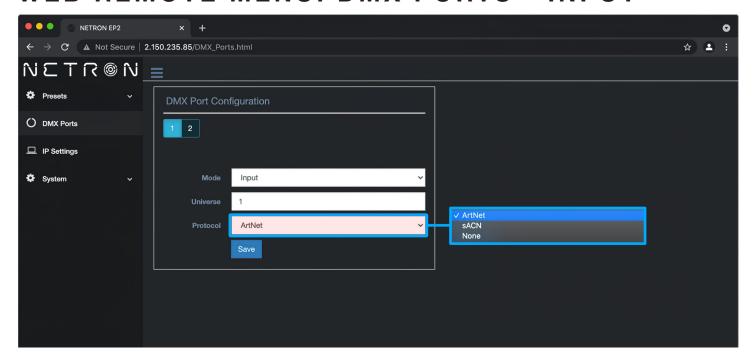
WEB REMOTE MENU: DMX PORTS - OUTPUT



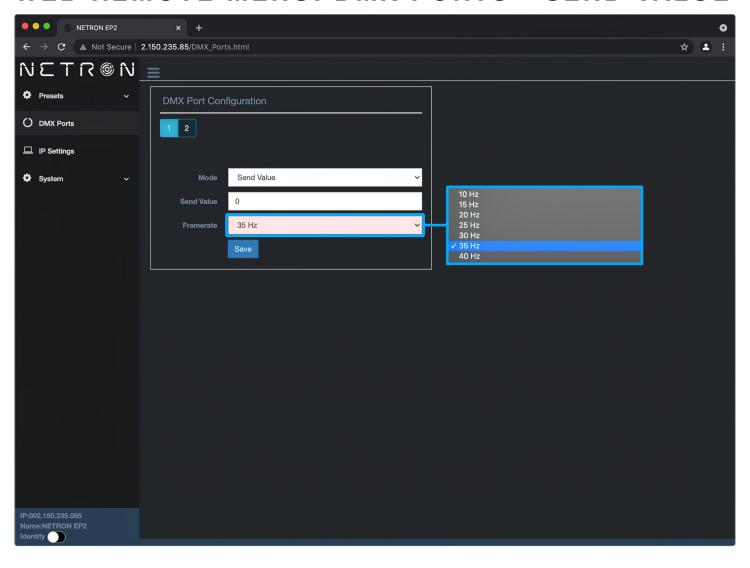
WEB REMOTE MENU: DMX PORTS - DISABLE



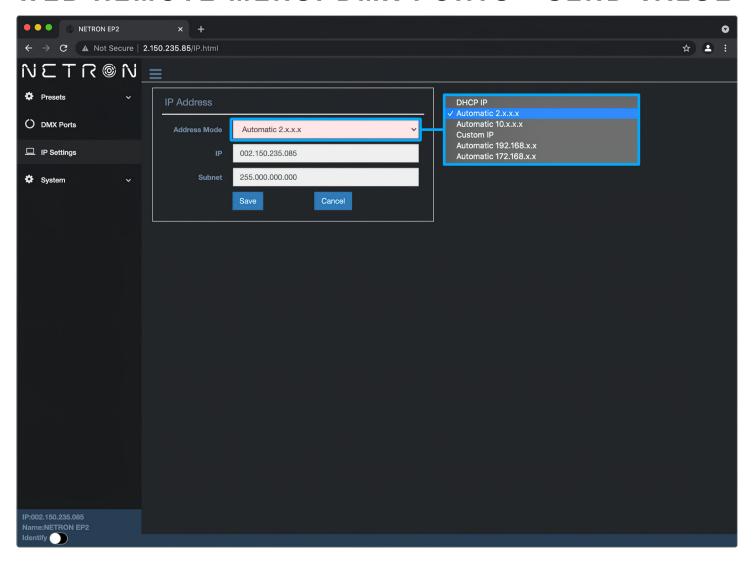
WEB REMOTE MENU: DMX PORTS - INPUT



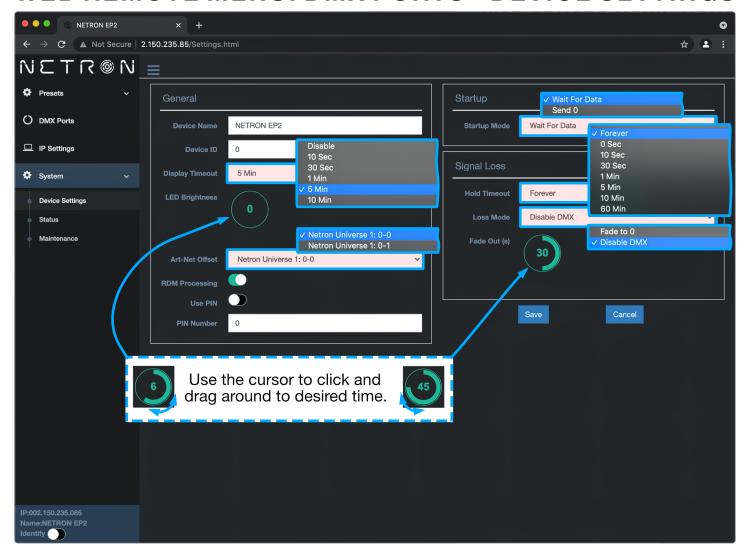
WEB REMOTE MENU: DMX PORTS - SEND VALUE



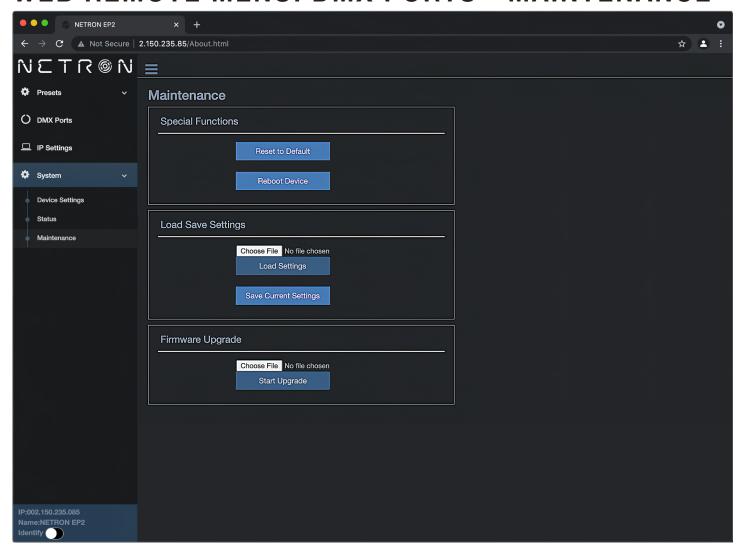
WEB REMOTE MENU: DMX PORTS - SEND VALUE



WEB REMOTE MENU: DMX PORTS - DEVICE SETTINGS



WEB REMOTE MENU: DMX PORTS - MAINTENANCE



FIRMWARE UPDATES

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

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

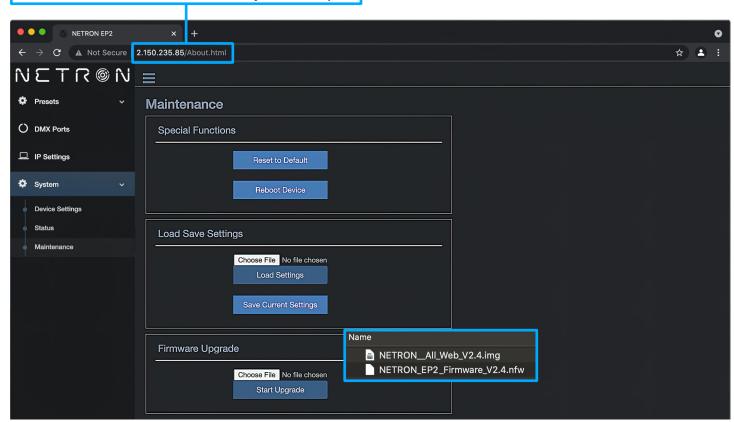
Always back up the configuration first. Export to a file using the web interface.

- 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, of which the one shown below is only an example.



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

