

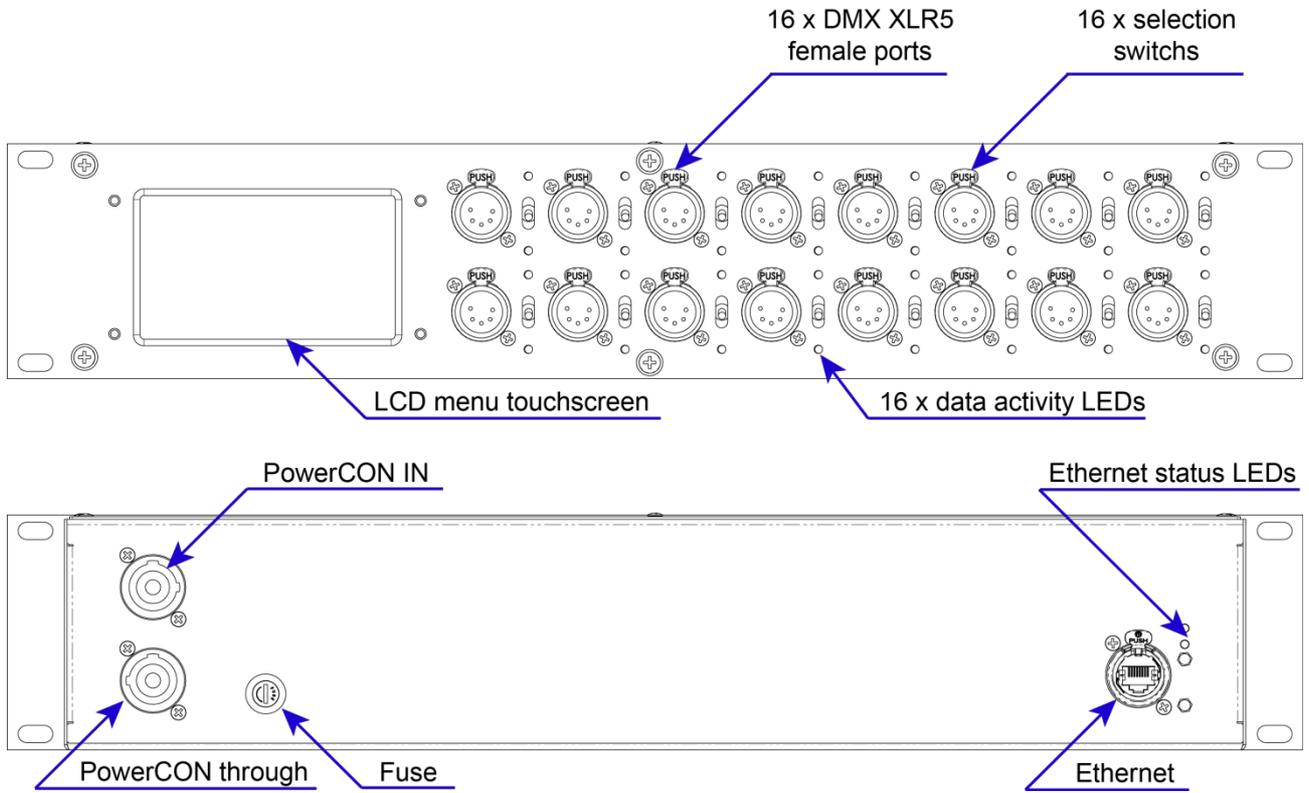
# DigiNet 416

## USER MANUAL



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# Fixture overview



Level 1	Level 2	Level 3	Level 4	Notes
Node setup	Node name			Node name
		Label		Enter node name label.
	Universe format			In this menu you can set the universe format for your needs.
		Base 16 (0-15)		
		Hex (0-F)		
		Decimal (0-32767)		
	Screen lock time			Time after which the screen will automatically get locked.
		0, 5-600		0- off 5- minimum 600- maximum Values in seconds
	LCD/ LED brightness			You can adjust LCD and LED brightness settings for your needs.
		Off		
	Dimmed			
	Full			
Protocol setup	Protocol			Choose out of the 2 possible data processing protocols.
		Art-Net		Art-Net protocol
		sACN		sACN protocol
	Easy priority			If EASY PRIORITY is ON, when two or more of the same universes are coming in to the node, the console with the higher channel 512 value will have control over the universe.
		Off		
		On		
	On source loss			This setting determines what will happen on source loss
		Hold output		On source loss holds the last received DMX values when DMX signal is lost.
		Blackout		After source loss the last value will not be held and there will be a "blackout" as there is no source.
		Stop DMX		After source loss the outgoing DMX signal will be disabled
	Source loss timeout			This setting determines after how many seconds will be source loss timeout
		VALUE		
	DMX out refresh rate			The refresh rate for outgoing DMX data (actions per second)
		Adaptive		Adapts to the input data
	20Hz		Fixed 20Hz refresh rate	
	30Hz		Fixed 30Hz refresh rate	
	40Hz		Fixed 40Hz refresh rate	

IP setup	IP address		Set the IP address of DigiNet here
		VALUE	
	Subnet mask		Set the subnet mask of DigiNet here
		VALUE	
	Easy IP		This setting will ensure that software will search for all masks, not only for a specified subnet mask
Configuration profiles	User cfg. 1 (your name)		User configuration profile 1
	Load		Button for loading the configuration settings
		Confirm	
		Retreat	

	Record		Button for recording the configuration settings
		Confirm	
		Retreat	
	Delete		Button for deleting the configuration settings
		Confirm	
		Retreat	
	User cfg. 2 (your name)		User configuration profile 2
	Load		Button for loading the configuration settings
		Confirm	
		Retreat	
	Record		Button for recording the configuration settings
		Confirm	
		Retreat	
	Delete		Button for deleting the configuration settings
		Confirm	
		Retreat	
Defaults	Port defaults		This setting will restore port defaults
		Load	

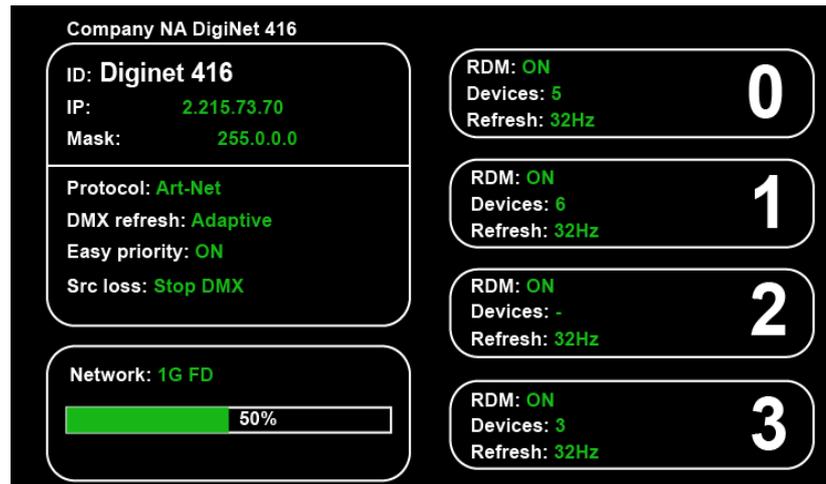
# CONFIGURATION USING RESISTIVE LCD TOUCHSCREEN

DigiNet 416 can be configured locally on device by using control panel buttons or remotely through Ethernet port by accessing built-in web page with WEB browser or with DigiNet manager software.

Navigation through menus is done using resistive LCD touch screen.  
When device is turned on, loading screen is shown.

At this point, if pressed anywhere on the screen, a touch screen calibration screen will appear.

Now you are at the main menu and see the main screen with most important information:



## Configuration:

Here you can see:  
Assigned ID (name) for your DigiNet;  
Mask;  
Protocol;  
DMX refresh (rate);  
Easy priority;  
Src loss (source loss).

## Status:

Network (state + information about network speed)  
Network usage (in percent).

## Outputs:

Information about 4 DMX output groups.

## Configuration:

Fixture ID: (DigiNet 416 in this case);

DMX refresh: (40Hz in this case);

IP: (2.145.232.108. in this case);

Mask: (255.0.0.0 in this case);

Protocol: (Art-Net in this case).

## Status:

Network: (Link down in this case, when there is network, it shows the network type, 1G FD (1 gigabit, full duplex) for example and it shows the network usage in percent);

Device and version description: (Company NA DigiNet 416 in this case)

## Port information:

Information of all 16 DMX ports, labeled as A; B; C...

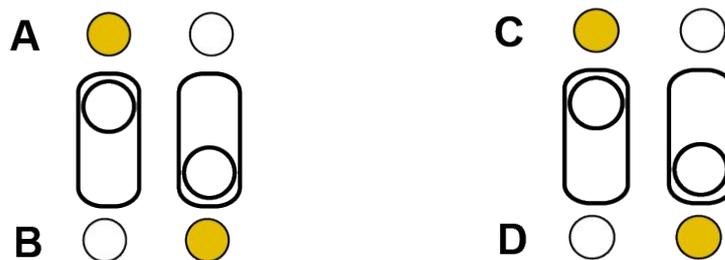
If using the Art-Net protocol, the universes start from universe 0.

In case you are using sACN, there is no universe 0 so universe numbering will start from universe 1.

## Overall information about device:

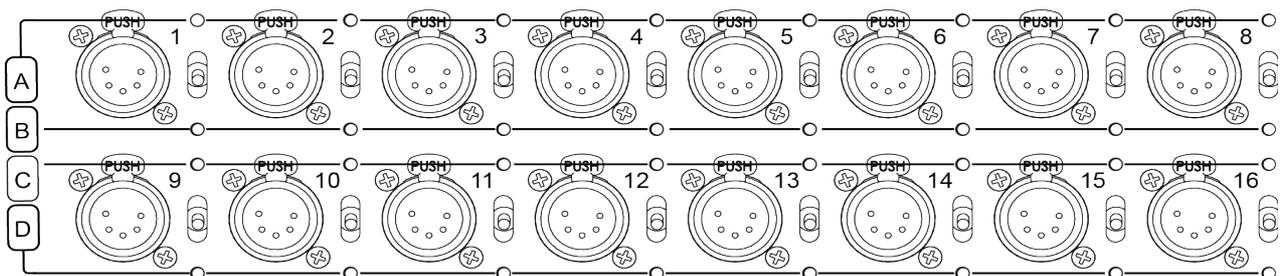
The DigiNet 416 has 2 status LEDs for each DMX port.

Each port has assigned switch that defines which universe the port depends on.



You can switch ports 1-8 as A port group or B port group outputs

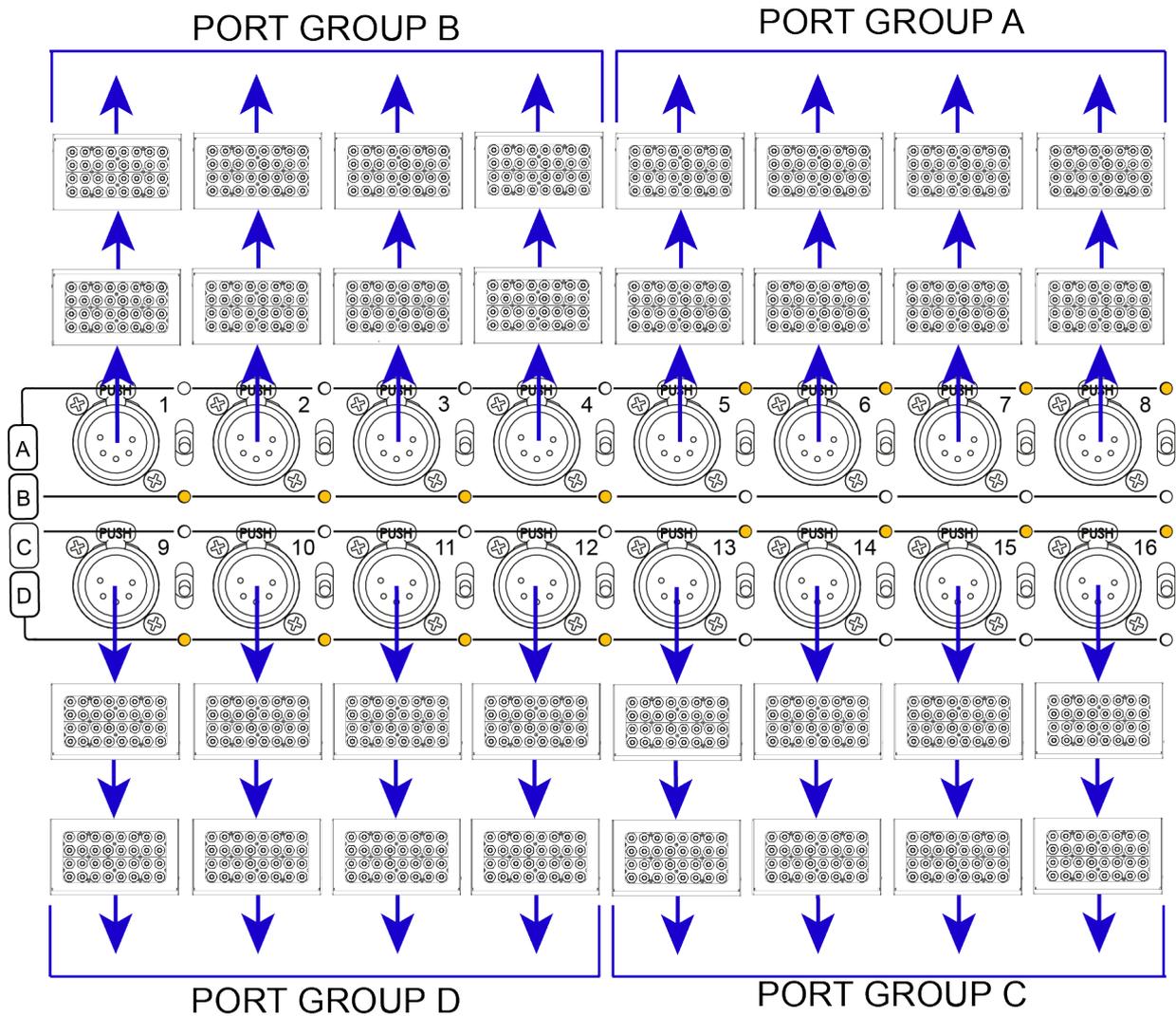
You can switch ports 9-16 as C port group or D port group outputs.



Due the fact that there is just 4 maximum universes to assign (one universe for each of 4 port groups), you can easily use this fixture as a DMX data splitter.

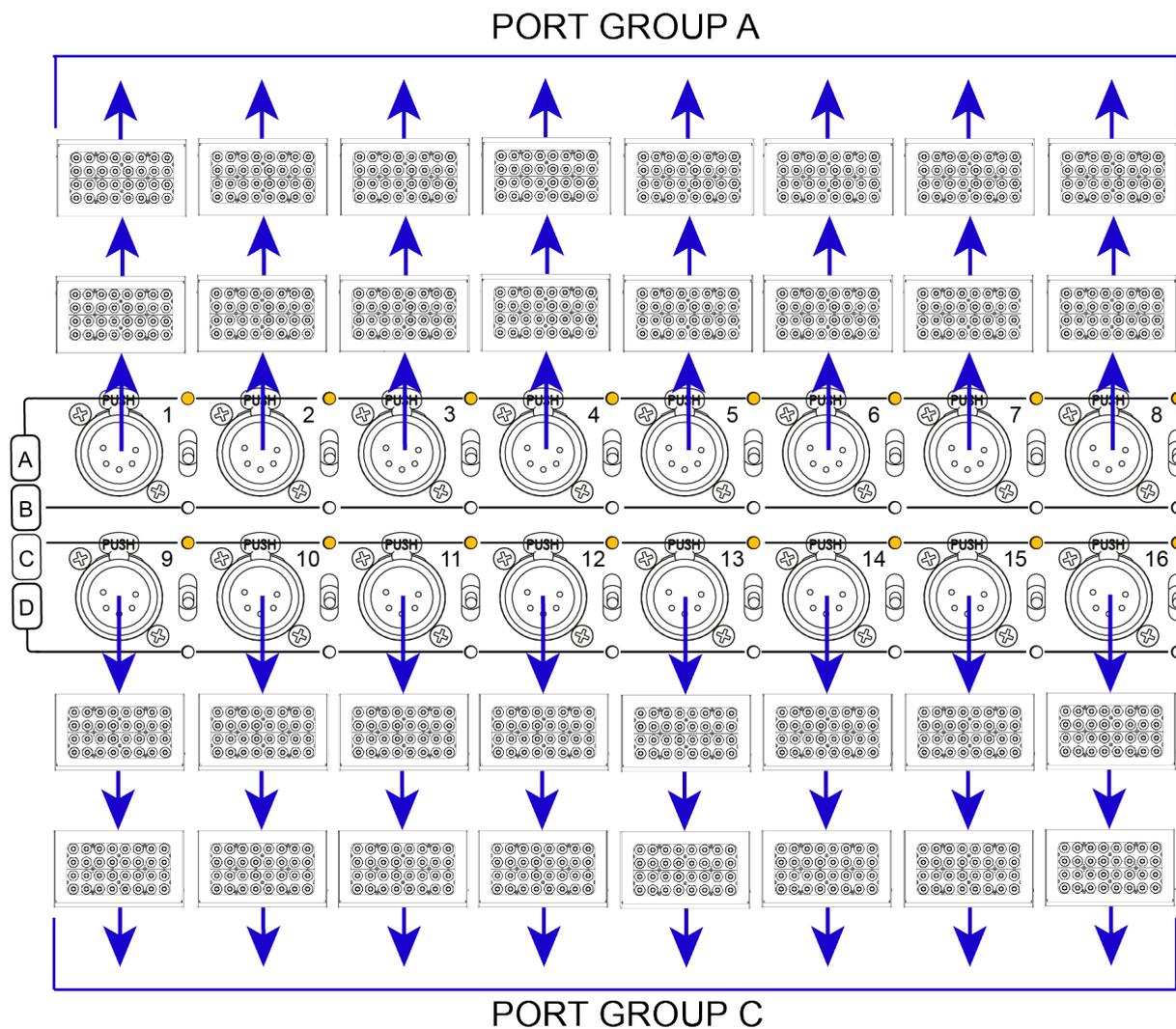
For example, you can use the DigiNet 416 as 2x8 port splitters or 4x4 port splitters.

There are 4 different port groups.  
A, B, C and D.



In this example scheme you can see that the DigiNet 416 is set up as 4 independant splitters.

- Ports 1, 2, 3, 4 are assigned to port group B;
- Ports 5, 6, 7, 8 are assigned to port group A;
- Ports 9, 10, 11, 12 are assigned to port group D;
- Ports 13, 14, 15, 16 are assigned to port group C.



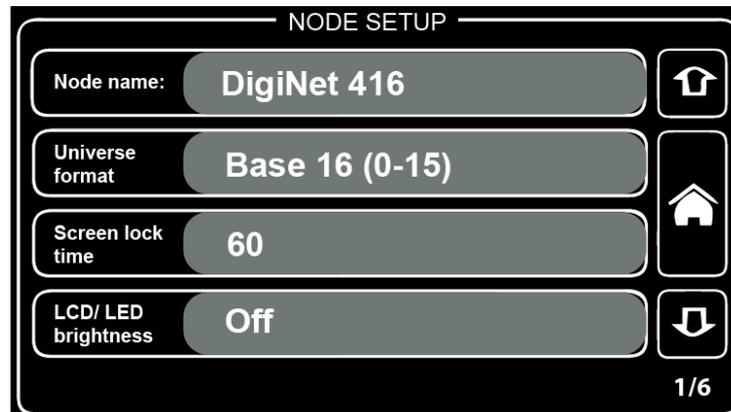
In case you need to use DigiNet 416 as 2x8 port DMX splitter, the configuration will look like this:

Ports 1, 2, 3, 4, 5, 6, 7, 8 are assigned to port group A;

Ports 9, 10, 11, 12, 13, 14, 15, 16 are assigned to port group C.

## Configuration menu:

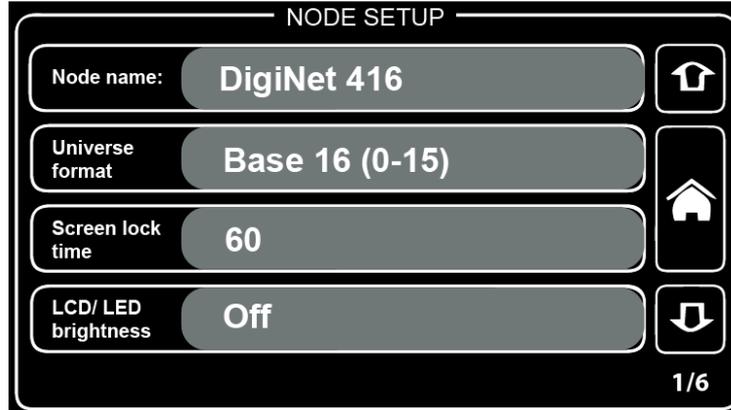
By pressing the "Configuration" button, a new configuration sub menu will pop up.



There are 6 pages:

- 1) ***Node setup***
- 2) ***Protocol setup***
- 3) ***Protocol setup***
- 4) ***IP setup***
- 5) ***Configuration profiles***
- 6) ***Defaults***

# 1) NODE SETUP:



## Node name:

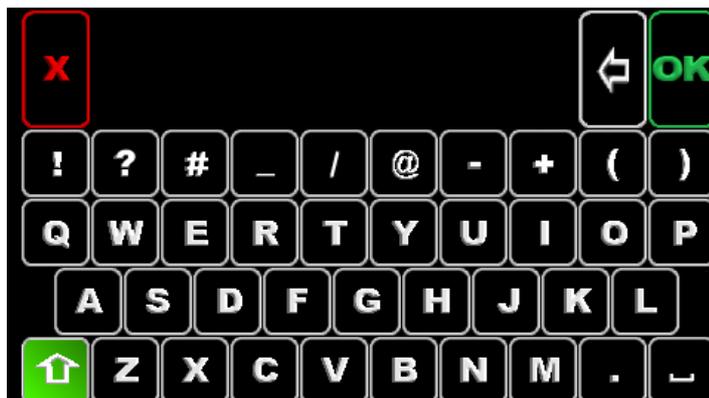
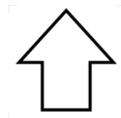
Here you can exchange the node name, replace the default name (DigiNet 416 is the default one) with your desired name.

By pressing this button, a new window will pop up:



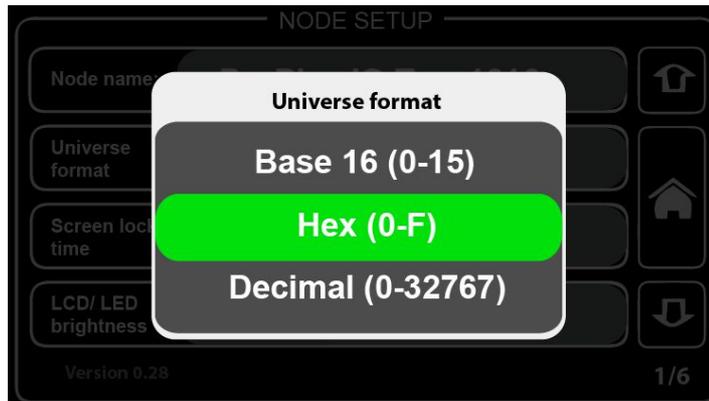
Using this keyboard you can exchange the name to your desired name.

By pressing the shift ([Level 2 Select key](#)) button on the virtual keyboard, all letters will change to capital letters and symbols will exchange.



### Universe format:

By pressing the "**Universe format**" section, a new window will pop up.



In this window you can choose the universe format. By default the universe format is set at Hex (hexadecimal) but you can change it to Base 16 or decimal counting system.

### Screen lock time:

By pressing the "**Screen lock time**" section, a new window will pop up.

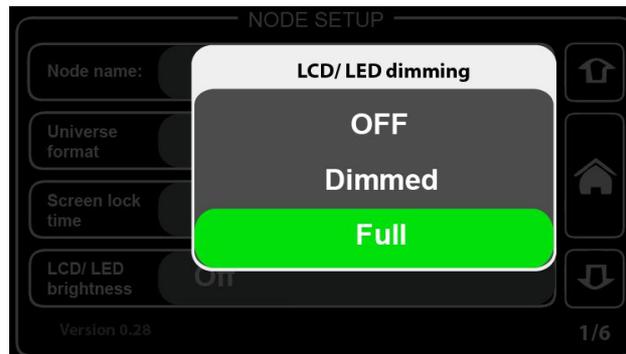


Here you can set the screen lock time. This setting will change the time after which DigiNet will lock the screen.

You can put a value from 5 to 600, which means from 5 to 600 seconds.

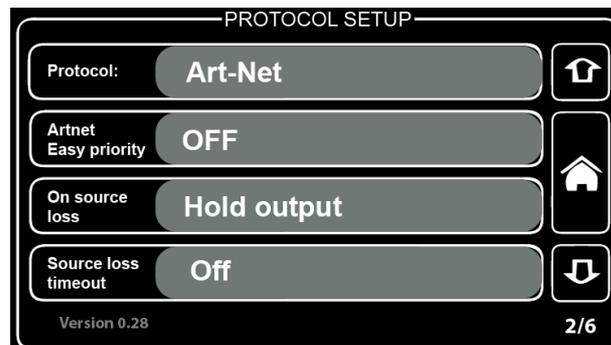
## LCD/ LED brightness:

By pressing the "LCD/ LED brightness" section, a new window will pop up.



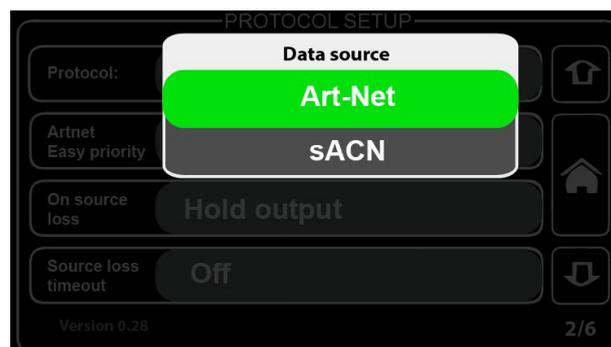
You can select out of 3 settings: OFF, Dimmed and Full.

## 2) PROTOCOL SETUP:



### Protocol:

By pressing the "Protocol" section, a new window will pop up.



You can select out of 2 "DMX over Ethernet" protocols: Art-Net and sACN (e1.31).

## **What is Art-Net and what is sACN?**

**Art-Net** is an Ethernet protocol based on the TCP/IP protocol suite. Its purpose is to allow transfer of large amounts of DMX512 data over a wide area using standard networking technology

**Streaming ACN (sACN)** is a protocol to efficiently transport DMX universes over the network. It is comparable to ArtNET in many aspects. One nice thing is the multicast option allowing very easy configuration. sACN is a popular protocol to control large number of RGB LEDs.

So both of them are Ethernet protocols made to transport DMX universes over the network, with a few minor differences.

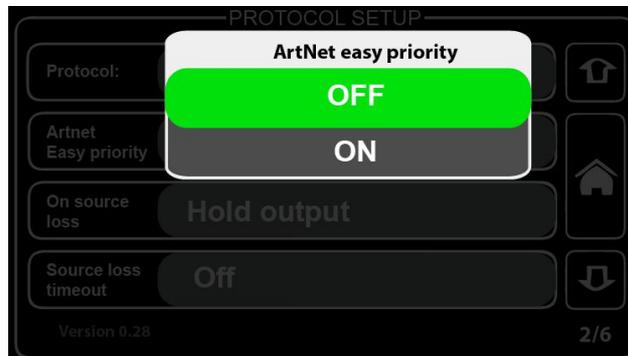
Art-Net allows user to use the RDM protocol.

When using the sACN protocol, the universe 0 is not allowed to be used. The system will show a warning sign if the universe 0 + sACN protocol has been chosen.

Also, it is not possible to use RDM functionality when sACN protocol is used.

## **ArtNet easy priority:**

By pressing the "**ArtNet easy priority**" section, a new windows will pop up.



You can turn the ArtNet easy priority ON or OFF.

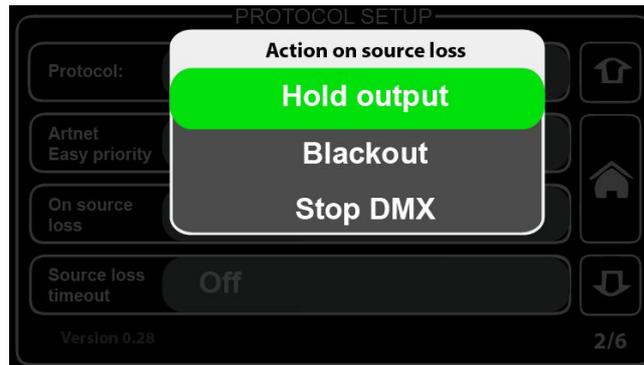
**Note:** the ArtNet easy priority setting works only when the ArtNet is selected as the data transfer protocol (not sACN).

## **What easy priority does?**

When easy priority is ON, when two or more of the same ArtNet/ sACN universes are coming into the DigiNet 416 fixture, the console with the higher channel 512 value will have control over the universe.

## On source loss:

By pressing the "**On source loss**" section, a new window will pop up.



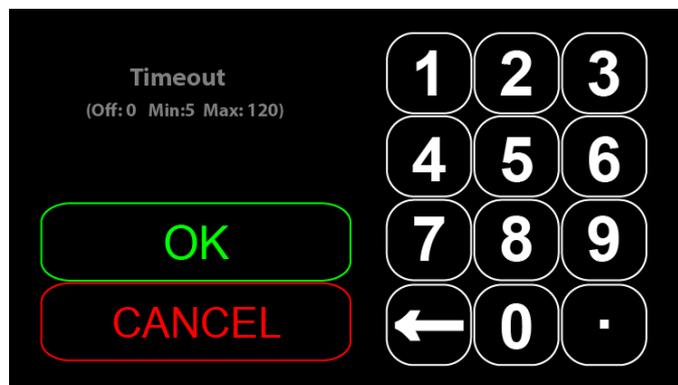
When "**Hold values**" setting is chosen, after source loss there is no action at all, old data remains in output

When "**Blackout after:**" setting is chosen, after DMX source loss the last value will not be held and there will be a "blackout" (after delay, drop all DMX channels to 0).

When "**Stop DMX**" setting is chosen, after source loss the DMX signal will be disabled (after delay, stop DMX generation at all - fixtures doesn't see DMX anymore and can react accordingly by themselves).

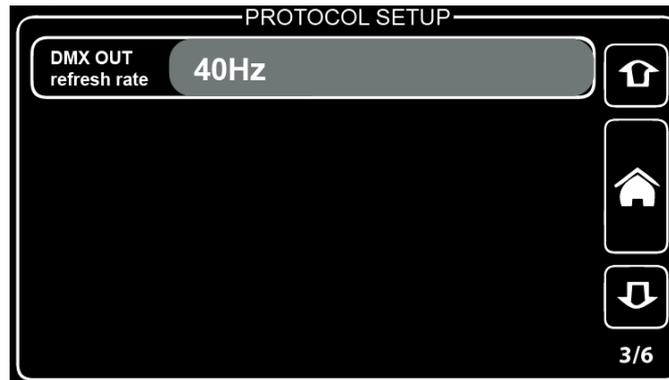
## Source loss timeout:

By pressing the "**Source loss timeout**" section, a new window will pop up.



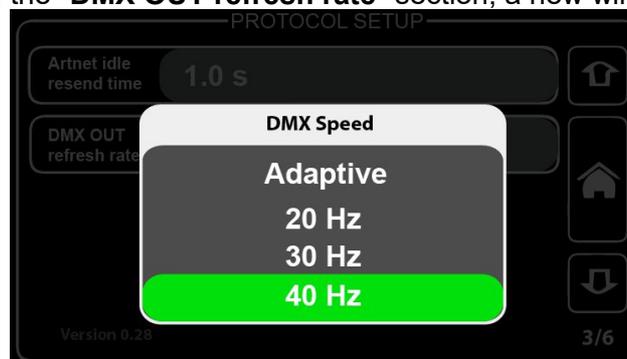
Here you can set the source loss timeout value. This setting will change the time after which the DigiNet will start the blackout or stop DMX output on source loss. You can put a value from 5 to 120, which means from 5 to 120 seconds.

### 3) PROTOCOL SETUP:



#### DMX OUT refresh rate:

By pressing the "DMX OUT refresh rate" section, a new window will pop up.



You can select out of 4 states for "DMX out refresh rate" setting (adaptive, 20hz, 30hz, 40hz).

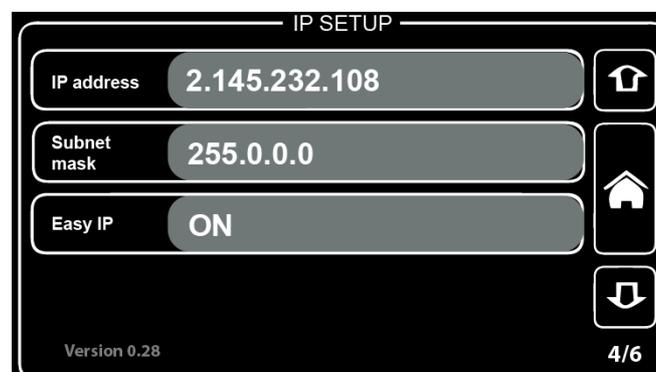
DMX out refresh rate basically defines how many times per second the information (DMX data) is sent. For instance, when this setting is set to 40Hz, the color fades will look more fluid but it will take more resources from the system than 20Hz setting.

Sometimes this setting is called also FPS (frames per second).

#### ***What is "Adaptive" DMX speed setting?!***

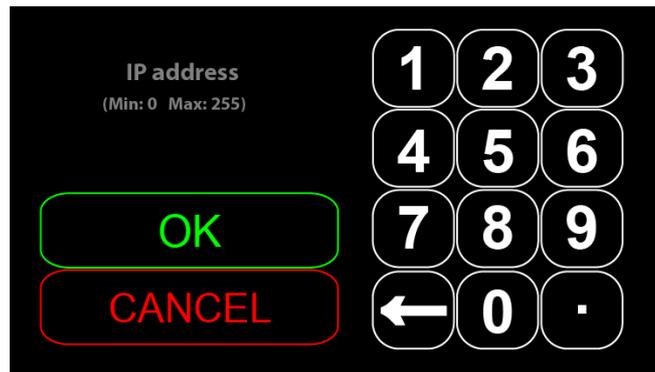
*DMX speed mode that adapts to ArtNet data speed - this is best way to reduce latency and improve response on really fast effects.*

### 4) IP SETUP:



**IP address:**

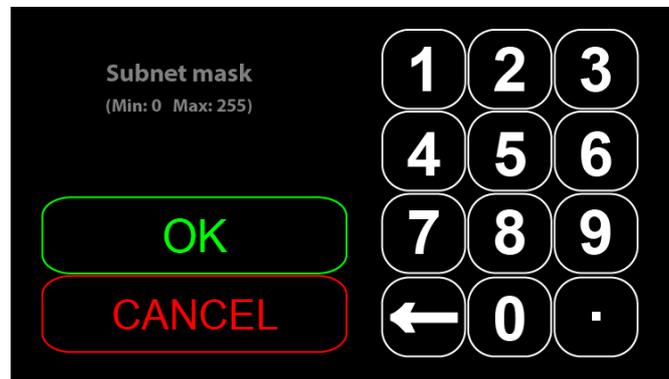
By pressing the "IP setup" section, a new window will pop up.



Here you can set the IP address for the DigiNet fixture.

**Subnet mask:**

By pressing the "Subnet mask" section, a new windows will pop up.



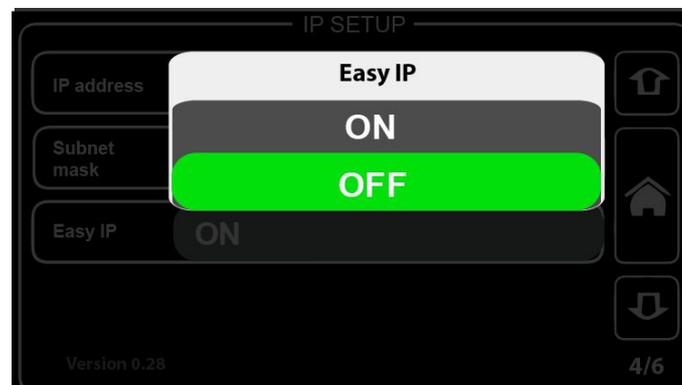
Here you can set the Subnet mask of the DigiNet.

To exchange assigned subnetwork mask, replace the current network subnet mask to your desired mask.

**NOTE:** In case when Easy IP setting is ON you will not be able to change the mask settings to custom ones.

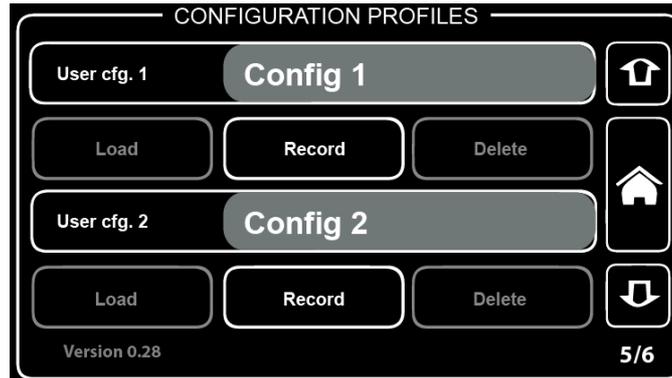
**Easy IP:**

By pressing the "Easy IP" section, a new window will pop up.



This setting will ensure that software will search for all masks, not only for a specified one. In case the Easy IP setting is turned ON, you will not be able to change the subnet mask.

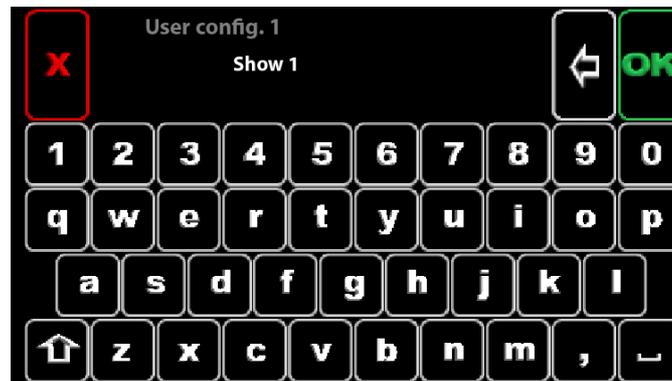
## 5) CONFIGURATION PROFILES:



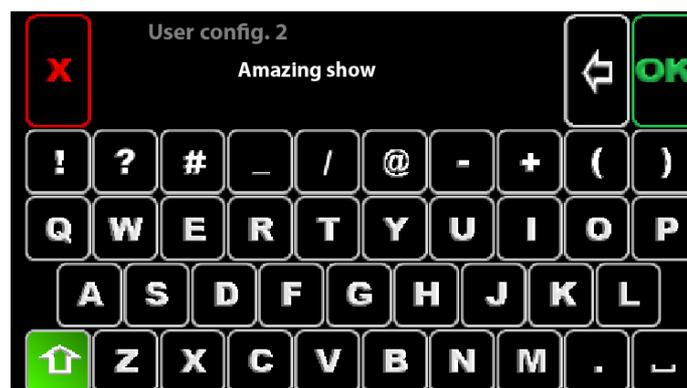
In case you want to save the current configuration that you have made, you have to name your configuration.

Choose which configuration you want to save (**User cfg. 1** or **User cfg. 2**).

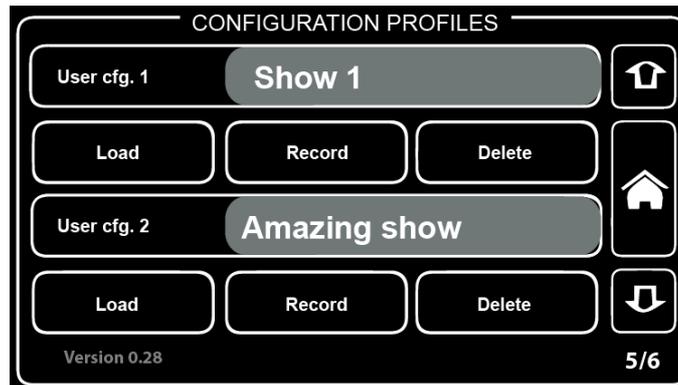
For example, we will name the User config. 1 as "**Show 1**":



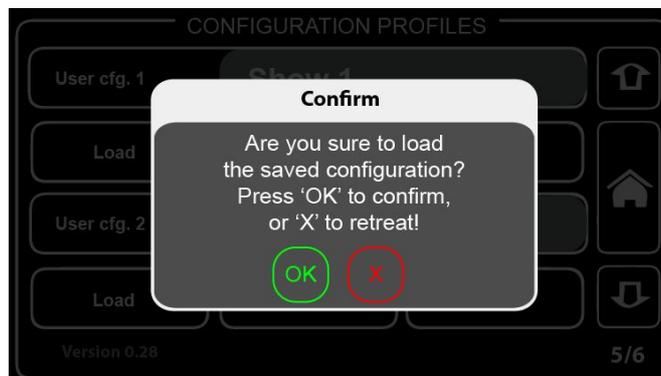
And User config. 2 as "**Amazing show**":



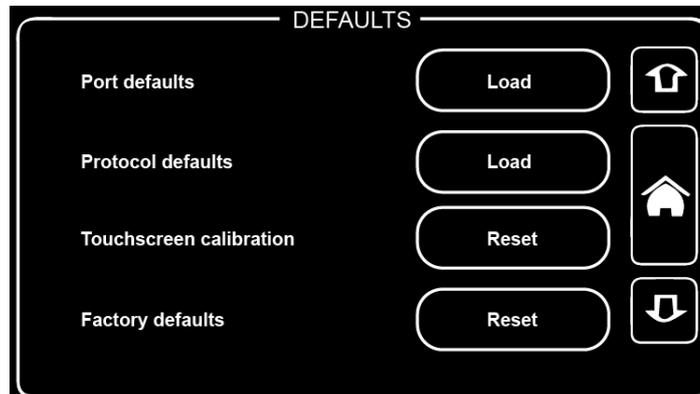
Now press "**Record**" button in order to record the current configuration. You will be returned to previous menu.



Now you can either **load** or **delete** the configuration you saved.  
 If you will press the "**Load**", "**Record**" or "**Delete**" button, a confirmation window will appear where you will need to press "**OK**" to confirm your choice or "**X**" to retreat.



## 6) DEFAULTS:

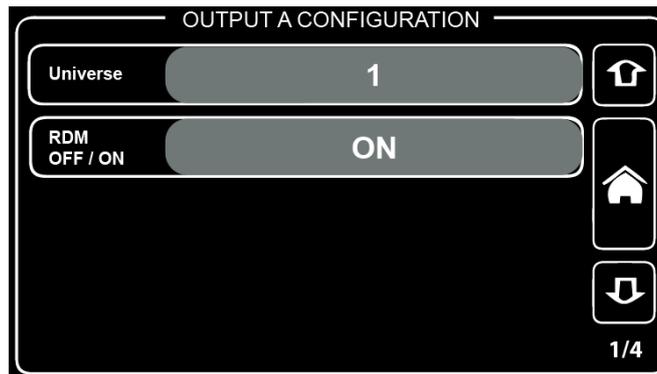


Within this menu you can load defaults:

- Port defaults** will reset all DMX port related settings (configuration as IN/OUT/ RDM settings/ etc)
- Protocol defaults** will reset all protocol related settings (sACN/ ArtNet settings)
- Touch screen calibration** will open touch screen calibration menu
- Factory defaults** will reset all settings and restart the system.



## OUTPUT configuration menu:



Here you can change settings for outputs.  
For each port you can assign:  
**Universe;**  
**RDM (ON or OFF).**



You can change setting for 4 output groups (change the universe, port direction, RDM status and port priority setting).

By pressing arrow up, you will switch to the next port settings (for example, if currently you are editing port "1" settings, by pressing this button you will be switched to port "2").

By pressing arrow down, you will switch to the previous port settings (for example, if currently you are editing port "2" settings, by pressing this button you will be switched to port "1").

By pressing the button marked with green (home button), you will return to the main menu.

Arrow up    Arrow down

### Universe:

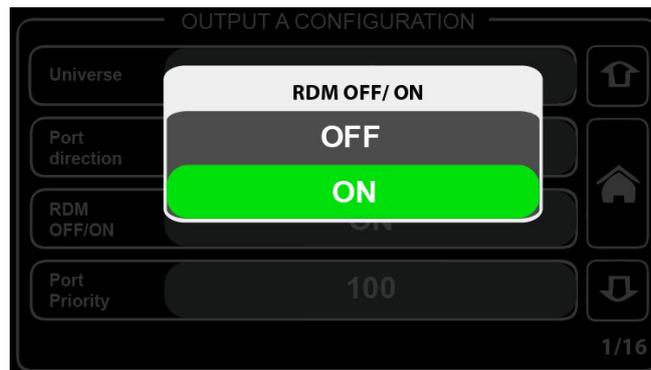
Here you can assign the universe for selected DMX port.  
By pressing this section, a new window will pop up



Here you can set the universe (from 0 to 32767) for the selected DMX port.

## RDM OFF/ON:

Here you can set the RDM settings for selected DMX port.



### **What is RDM?**

Remote Device Management or RDM is a protocol enhancement to [DMX512](#) that allows [bi-directional communication](#) between a [lighting or system controller](#) and attached RDM compliant devices over a standard DMX line. This [protocol](#) will allow configuration, status monitoring, and management of these devices in such a way that does not disturb the normal operation of standard DMX512 devices that do not recognize the RDM protocol.

(source: <http://www.rdmprotocol.org/>)

### **NOTE:**

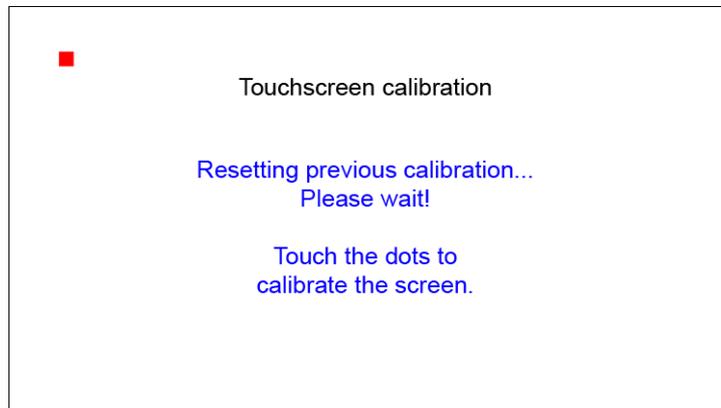
You can not use the RDM when you are using the sACN protocol because the sACN protocol doesn't support it.

In case when you are using the sACN and want to the RDM functionality, you will need to switch to the Art-net for the moment when you want to use the RDM.

## Touch screen calibration

There are 2 possible ways to open the touch screen calibration menu:

- 1) When device is turning on, press anywhere on the "Company NA DigiNet 416" illustration;
- 2) Open device defaults settings where "touchscreen calibration" reset setting can be seen.



Now you have to press the red dots in order to calibrate the touch screen. There will be 4 dots in total- each dot in all 4 corners.

Calibration has been completed when you see this message.

## Unlocking the screen

By default the DigiNet 416 automatically locks the screen after 60 seconds of idle.

To unlock the screen, press and hold key symbol for 4 seconds to unlock the screen.

