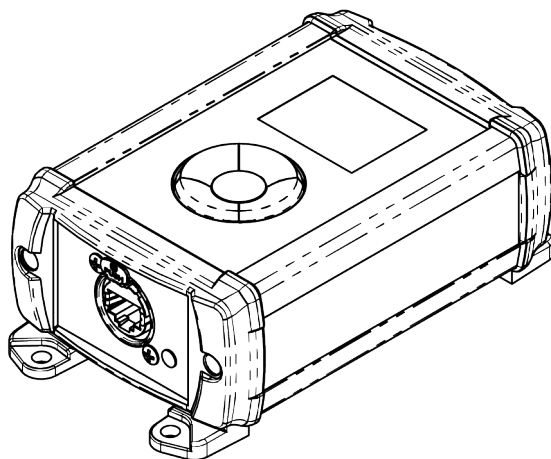# Diginet Micro

Useful information for user manual from Company NA

Dimensions:

Overview:

DMX port 1   DMX port 2

UP

Confirmation button

LEFT   RIGHT

DOWN

DMX port 1 status LED   DMX port 2 status LED

Port 1   RDM   Port 2

ProPlex IQ Micro

LCD screen

Control buttons

Ethernet port

Ethernet port status LED
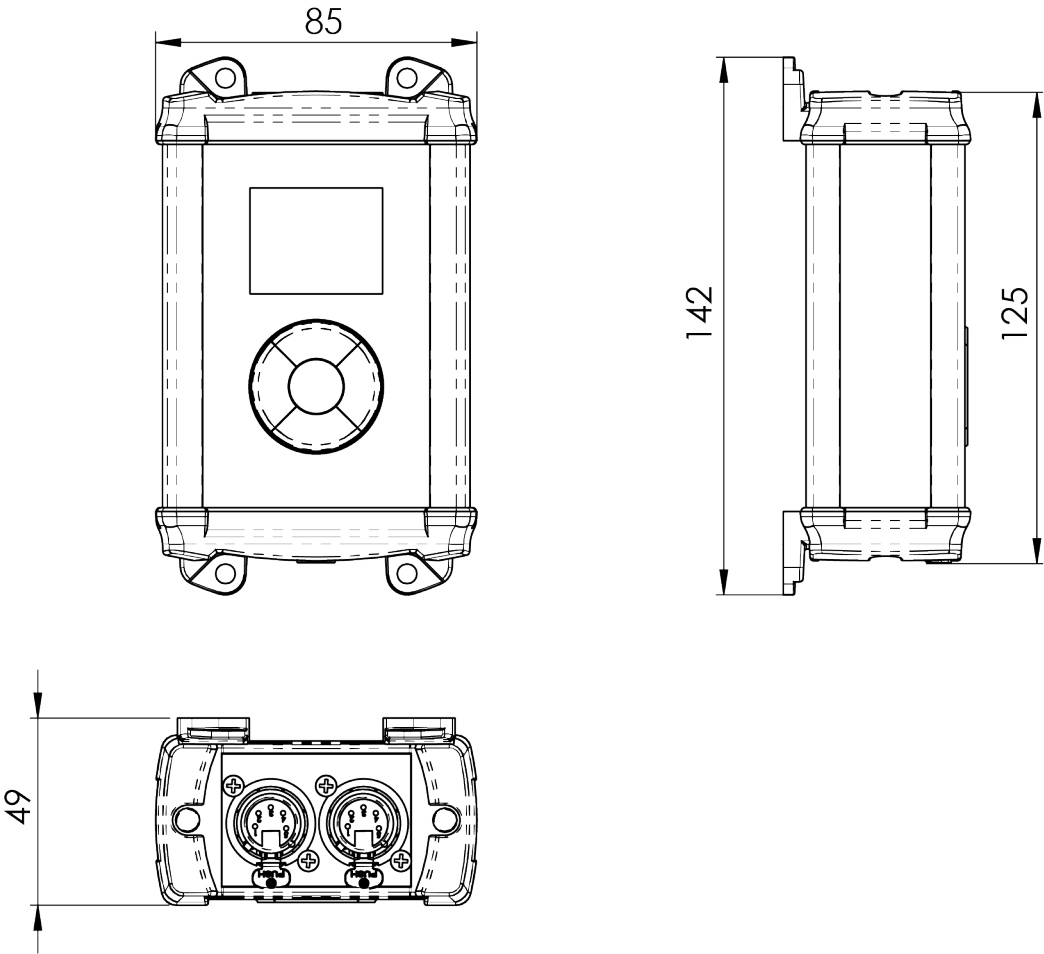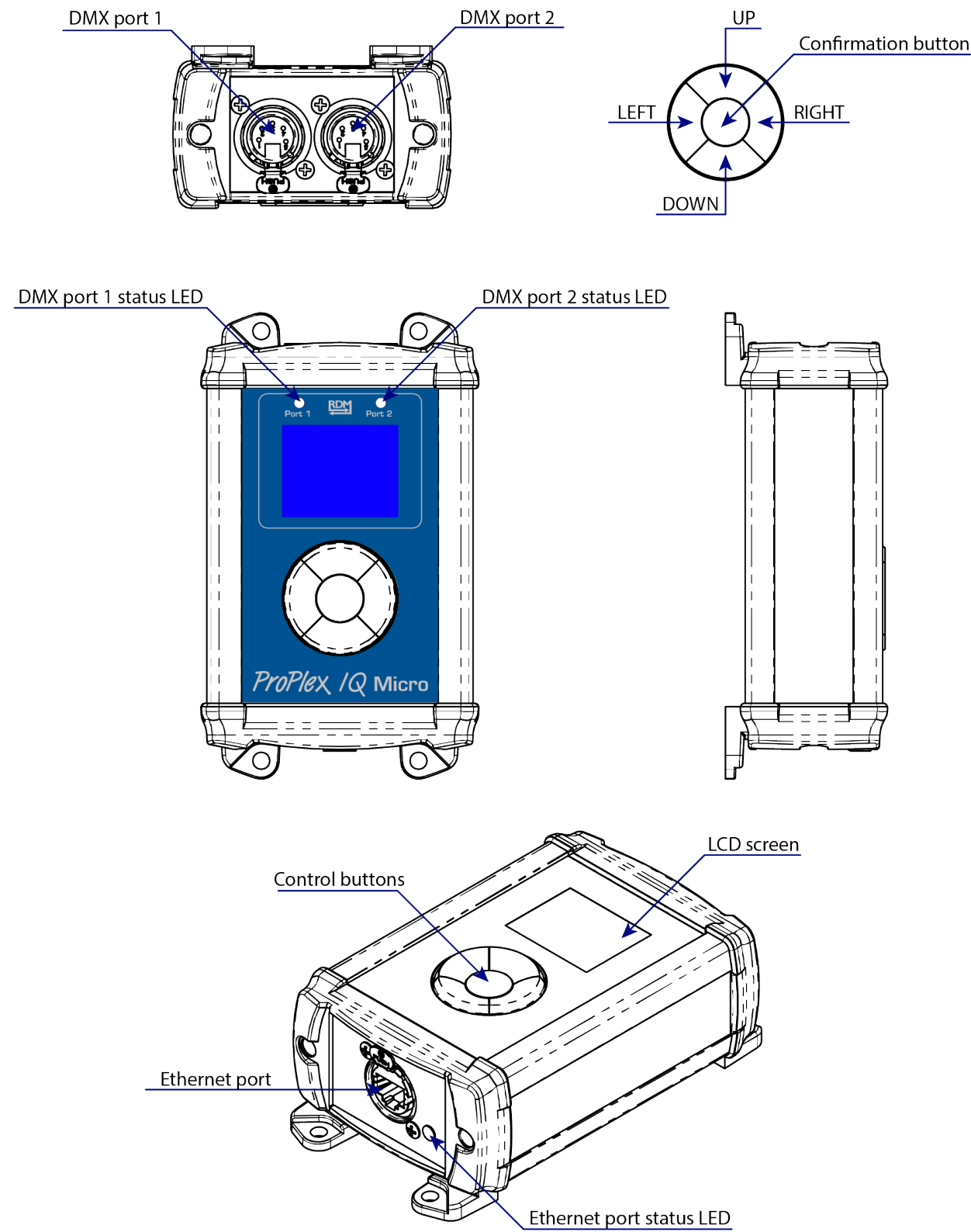
Menu map.

Level 1	Level 2	Level 3	Level 4	Explanation
DMX port 1 menu				
DMX port 2 menu				
	Universe			
		VALUE		Set the universe value (0 - 32767)
			Confirm	
			Back	
	Direction			DMX Port 2 direction
			IN	
			OUT	
	RDM			Port 2 RDM settings
			Enabled	
			Disabled	
	Priority			Set the Art-Net priority.
		VALUE		Set the value (0-200)
			Confirm	
			Back	
Setup menu				
	Protocol setup	Protocol		Choose out of the 2 possible data processing protocols.
			Art-Net	Art-Net protocol
			sACN	sACN protocol
	Easy priority			
			ON	
			OFF	
	Source loss action			
			Hold values	
			Blackout	
			Disable DMX	
	Source loss timeout	VALUE		Set the source loss timeout value (5 - 120 seconds)
			Confirm	
			Back	
	DMX rate			
			Adaptive	
			20 Hz	
			30 Hz	
			40 Hz	

ArtNet Idle resend			
		0.5s	
		1.0s	
		2.0s	
		4.0s	
ArtNet Idle resend			
		Base16	
		Hex	
		Decimal	
		ABC	
Network setup			Set the IP address of IQ
	IP address		
		VALUE	
	Mask		Set the subnet mask of IQ
		VALUE	
	Easy IP		This setting will ensure that software will search for all masks, not only for a specified subnet mask
		VALUE	
Node setup			
	Info		Information about the node
	LCD/ LED brightness		Adjust LCD and LED brightness settings for your needs.
		Off	
		Dimmed	
		Full	
Configuration			
	User cfg. 1 (node name)		User configuration profile 1
	Load		Button for loading the configuration settings
		Confirm	
		Back	
	Record		Button for recording the configuration settings
		Confirm	
		Back	
	Delete		Button for deleting the configuration settings
		Confirm	
		Back	
	User cfg. 2 (node name)		User configuration profile 2
	Load		Button for loading the configuration settings

	Confirm		
	Back		
Record			Button for recording the configuration settings
	Confirm		
	Back		
Delete			Button for deleting the configuration settings
	Confirm		
	Back		
Defaults			
Port defaults			This setting will restore port defaults
Load			
	Confirm		
	Back		
Protocol defaults			This setting will restore protocol defaults
Load			
	Confirm		
	Back		
Reset all settings			This setting will restore factory defaults (will reset ALL settings)
Reset			
	Confirm		
	Back		

Main menu overview.

When device is powered ON, this will show up as main menu:
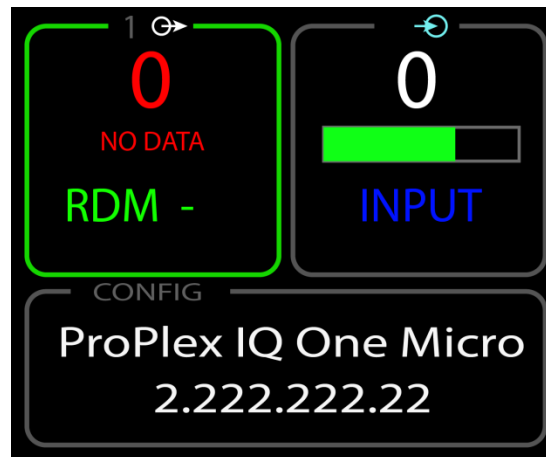
At the left side window user can see:
Port 1 **direction** (output in example);
Data activity status (no data in example)
Universe number (0 in example);
RDM status (ON in example)

At the right side window user can see:
Port 2 **direction** (input in example);
Data activity status (data input with above 50% activity);

At the bottom window user can see:
The name of the device and assigned IP address.

DMX port activity LED overview:

The Diginet Micro has RGBW activity LEDs at each output port.

Explanation of each color:

If the DMX port status LED is red, then then there is no DMX signal from network incoming.
If the DMX port status LED is orange (full power) then the port is configured as DMX output and DMX signal is active.
If the DMX port status LED is orange (dim) then the port is configured as DMX output and there is no active DMX signal.
If the DMX port status LED is blue (full power) then the port is configured as DMX input and DMX signal is active.
If the DMX port status LED is blue (dim) then the port is configured as DMX input and there is no active DMX signal.
If the DMX port status LED is green (periodically), then the port has active RDM packets.

Configuration menu:
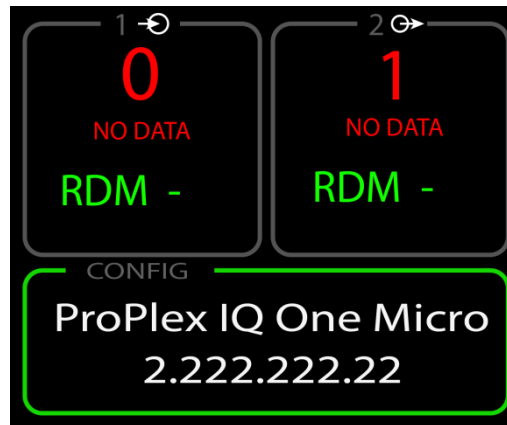
By pressing **<OK>** button while "Config" windows selection is selected, configuration setup submenu will open:
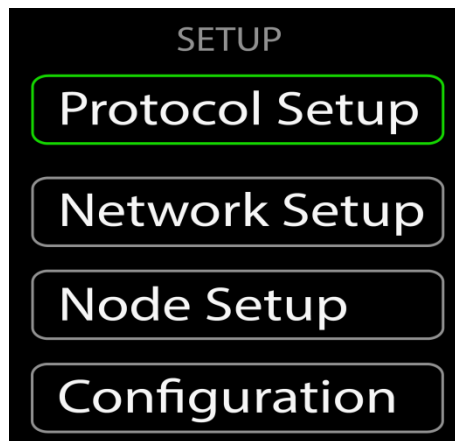
Using the **<UP>** and **<DOWN>** buttons, the selection will move up and down.
By pressing the **<OK> or <RIGHT>** button, a selected sub-menu will open.
By pressing the **<LEFT>** button, previous menu will open.

There are 4 pages of setup options.

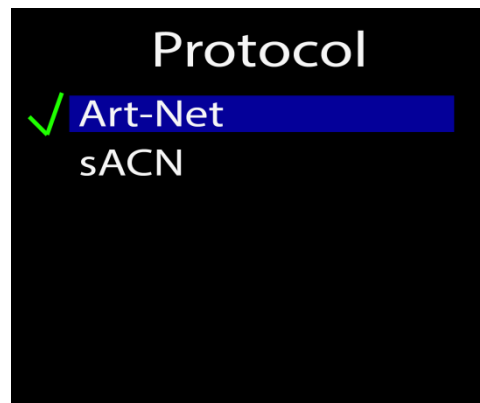*Protocol setup;*
Network setup;
Node setup;
Configuration;

1) PROTOCOL SETUP:

Protocol menu overview.

Protocol: By pressing the "**Protocol**" button, a new window will pop up.

You can select **Art-Net** or **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 Art-Net in many aspects. An advantage of sACN is the multicast option allowing very easy and efficient network and DMX universe configuration. Streaming ACN (sACN) is a popular protocol to control large numbers of universes and RGB dmx devices.*

Both Art-Net and Streaming ACN are Ethernet based DMX protocols designed to transport DMX universes over a network. Art-Net allows the RDM protocol to be transported within the Art-Net Protocol. Streaming ACN is currently finishing their addition of the RDM Protocol, however it is not finished, so RDM over sACN is currently not supported. When the sACN is ratified to include the RDM protocol, a simple software update of your Diginet Micro Node will add this functionality. The sACN protocol does not allow a universe "0", therefore the first selectable sACN universe is universe "1".

MERGING

What happens with more than one source of DMX, Art-Net or Streaming ACN?

The IQ series of nodes can merge multiple instance of the same universe number coming from multiple sources.

The IQ Micro will automatically merge HTP, any universes coming from multiple sources that have the same priority. Art-Net sources, by default have the same priority so they will be merged HTP unless Easy Priority is set to ON. Streaming ACN has priority built into the protocol by default. If the priority of two or more sources is the same, HTP merging will occur unless Easy Priority is set to ON. DMX inputs have a "Port Priority" setting which can assign priority to DMX ports in INPUT mode. If two or more ports have the same INPUT priority, HTP merging will occur.

Easy priority: By pressing the "**Easy priority**" button, a new window will pop up.
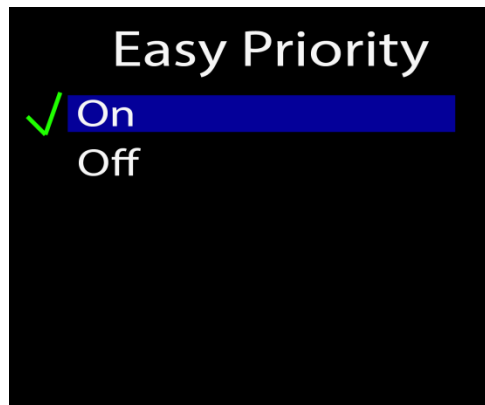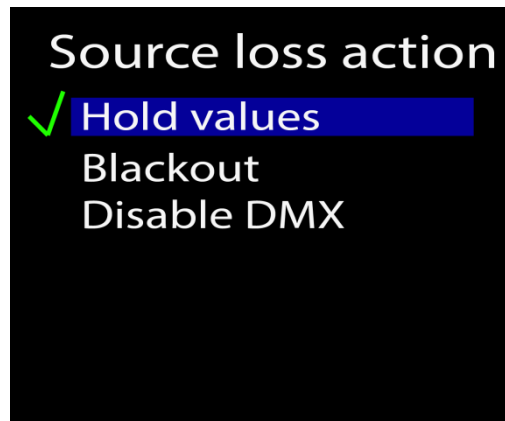

You can turn the Easy Priority **ON** or **OFF**.

What is Easy Priority?

When easy priority is ON, when two or more of the same Art-Net/ sACN universes are coming into the Diginet Micro node, the console with the higher channel 512 on a universe value will have control over that universe.

**Source loss action:** By pressing the "**Source loss action**" button, a new window will pop up.

When the "**Hold values**" setting is chosen, after the source DMX is lost, the IQ Micro holds the last DMX values it has recieved and continues to output these values until incoming DMX has been restored.

When the "**Blackout**" setting is chosen, after the source DMX is lost, all DMX values will change to 0 and be held at this value until incoming DMX is restored.

When the "**Stop DMX**" setting is chosen, afterthe source DMX is lost, the IQ Micro will stop outputting any DMX. When the DMX source is restored, the IQ Micro will continue outputting the source dmx.

Source loss timeout:

By pressing the "**Source loss timeout**" button, a new window will pop up.
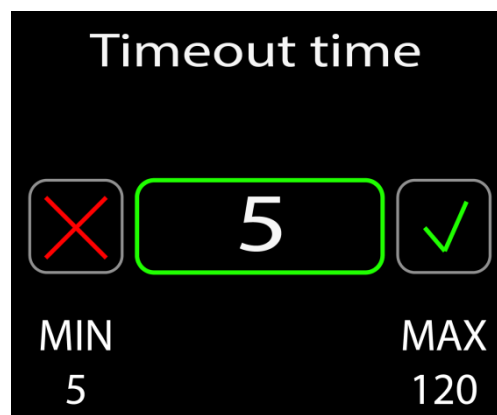
This setting determines how long the IQ Micro will wait before using the **Source Loss** setting. This time is set in seconds. (5-120). Once the source loss timeout time has been reached, the IQ Micro will revert to the Source Loss timeout setting.

DMX rate:

By pressing the "**DMX rate**" button, a new window will pop up.
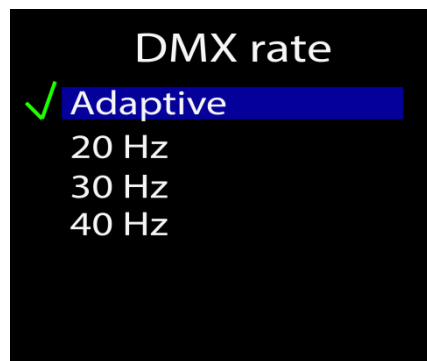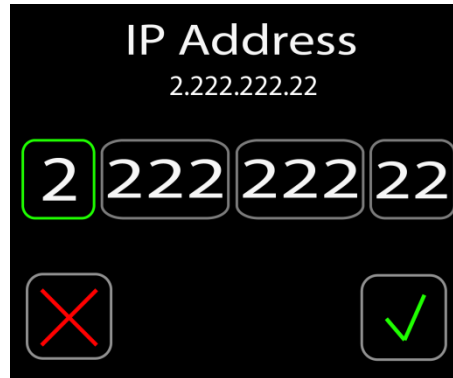
You can select one of 4 options for **DMX out refresh rate**.
(Adaptive, 20hz, 30hz, 40hz).

The DMX refresh rate setting controls how many times per second the
IQ Micro outputs DMX over 5 pin XLR connectors. Some DMX
devices work better using different refresh rate settings.
In the cases of high speed devices like LED walls and displays, using
the "Adaptive" option can improve response time by matching the
incoming refresh rate of dmx coming from the source.

2) NETWORK SETUP:

IP address:
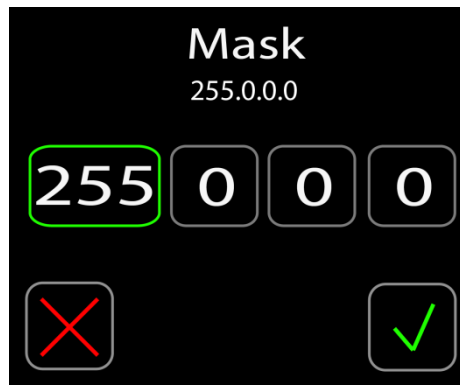
By pressing the "**IP setup**" button, a new window will pop up.

Here you can set the IP address for the Diginet Micro.

Subnet mask:

By pressing the "**Subnet mask**" button, a new window will pop up.

Here you can set the Subnet mask of the Diginet Micro. To change the assigned subnet mask, replace the current network subnet mask with the desired network subnet mask.
NOTE: In case when Easy IP setting is set as "ON", you will not be able to change the subnet mask settings.

Easy IP:

By pressing the "**Easy IP**" button, a new window will pop up.
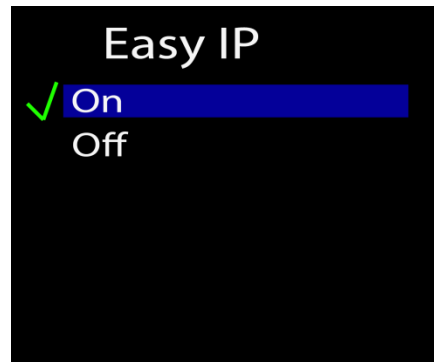
This setting will ensure that software will search for all masks, not only for a specified one.
In the case the Easy IP setting is turned ON, you will not be able to change the subnet mask.

Easy IP is very useful for most networking situations where subnet filtering isn't required. The IQ Micro will automatically find and output Art-Net and sACN information regardless of IP or Subnet Mask settings. Turning off Easy IP is usefull when using subnet filtering to help separate different areas of a network when used in conjunction with a managed switch network. An example of this would be multiple TV studios having independant networks all attached to one console.
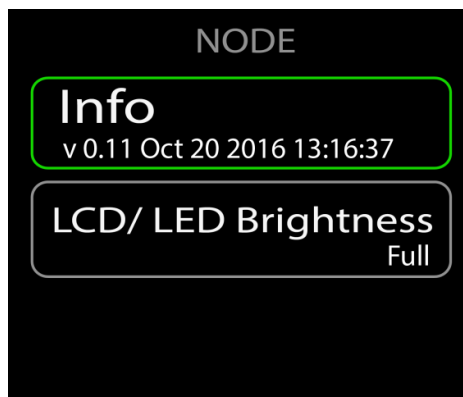
Universe format:

By pressing the "**Universe format**" button, a new window will pop up.
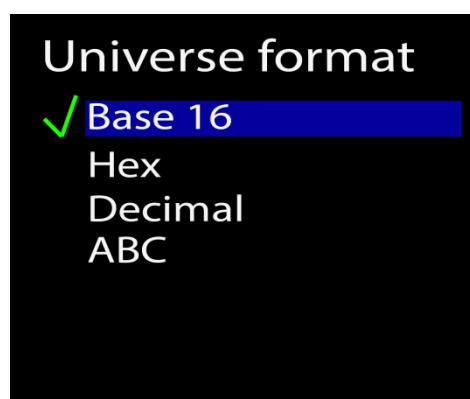
In this window you can choose the universe format. By default, the universe format is set at Hex (hexadecimal) but you can change it to Base 16, incremental decimal counting system or alphanumeric counting system.

3) NODE SETUP:

Info:

By pressing the "**Info**" button, a new window will pop up.

This is basic informative window where information about device can be seen.
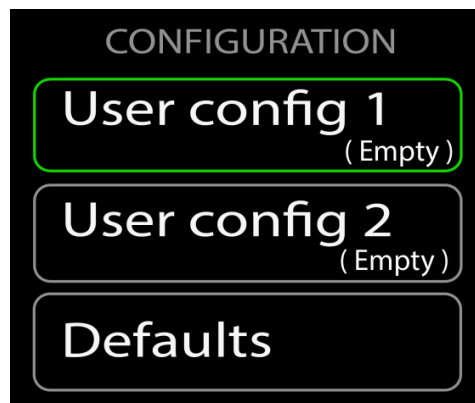
LCD/ LED brightness:

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

You can select one of 3 settings: (**OFF**, **Dimmed** and **Full**.)

4) CONFIGURATION:

In this menu you can load the system defaults and reset system settings:
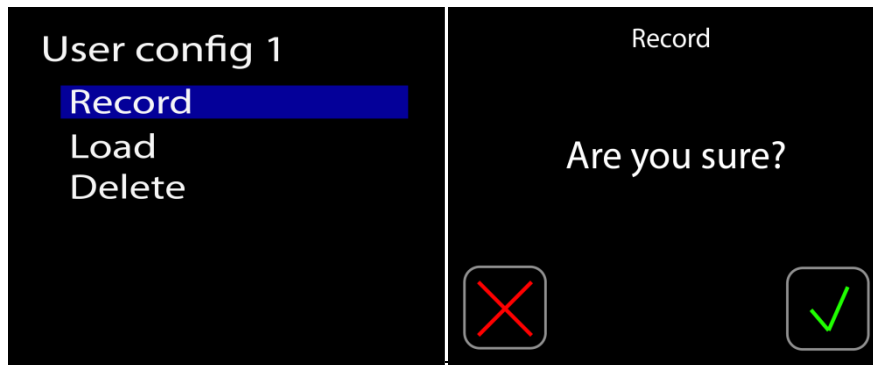
Port defaults will reset all DMX port related settings
Protocol defaults will reset all protocol related settings (sACN/ Art-Net settings)
Reset all settings will reset all settings and restart the system.

After pressing the **Load/ Reset** buttons, there will be a new confirmation window: Where you will need to press **"OK"** to confirm your choice or **"X"** to return the to previous screen.

User config:

By pressing "**User config 1**" or "**User config 2**" button, a new window will pop up:

There are 3 options available:

Record will record all the configuration settings on the device except DMX data.

Load will load the saved settings recorded with "**Record**" button.

Delete will delete the recorded setting.

If you will press the "**Load**", "**Record**" or "**Delete**" button, a confirmation window will appear where you will need to press "✓" to confirm your choice or "**X**" to return to the menu.

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);
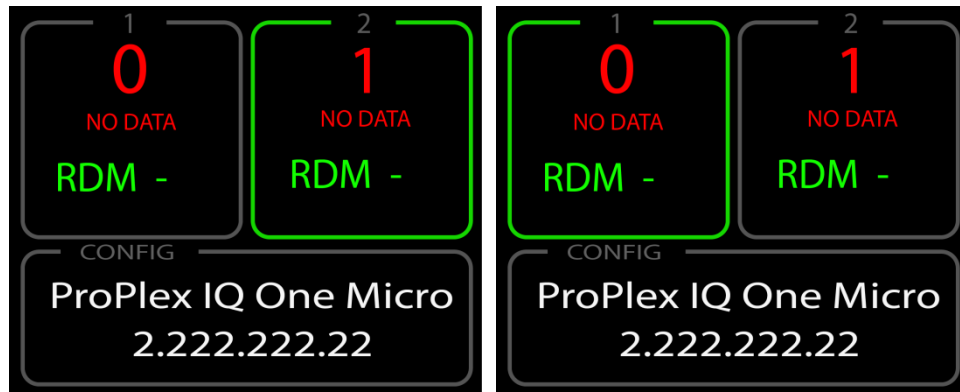
Reset all settings will reset all settings and restart the system.
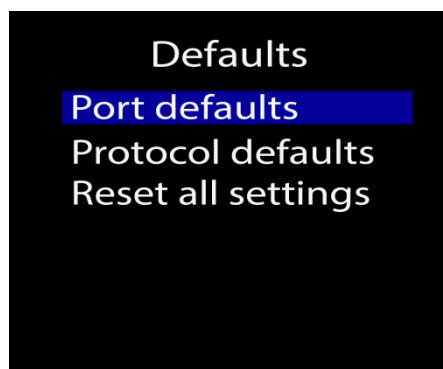
After pressing **<OK>** button, there will be a confirmation window:
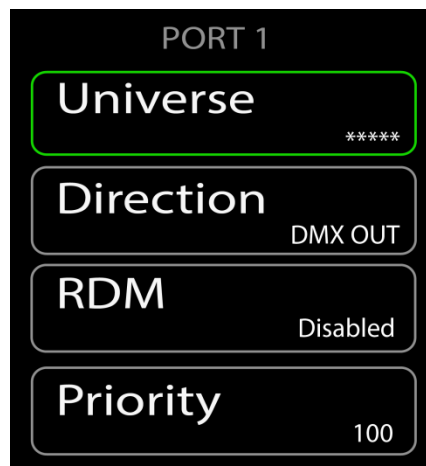
Where you will need to press "✓" to confirm your choice or "**X**" to return to the menu.

DMX PORT SETUP:

By using the **<UP>**, **<DOWN>, <LEFT>, <RIGHT>** buttons, select the DMX port you want to select.
By pressing the **<OK>** button, a DMX port setup menu will open:

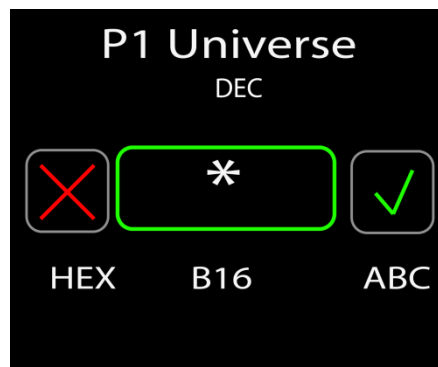There are 4 pages of setup options.

Universe;
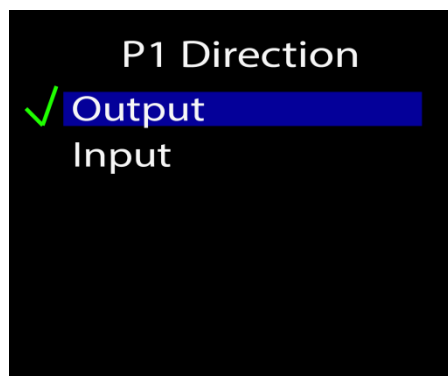*Direction;*
RDM;
Priority.

Universe:

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

Here the user can set the universe (from 0 to 32767) for the selected DMX port. (example shows "Decimal" as the Universe Format).
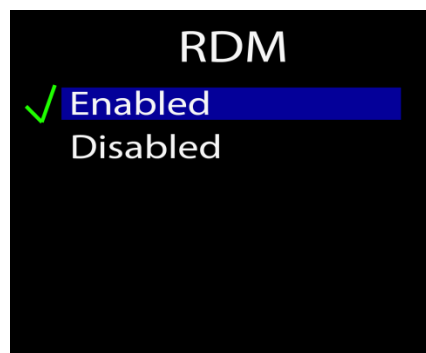
Direction:

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

Here the user can set the DMX port direction whether it is an input or output.

RDM OFF/ON:

Here the user can set the RDM settings for selected Ethernet to DMX universe. (this applies to all connectors that have been switched to this universe)

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.
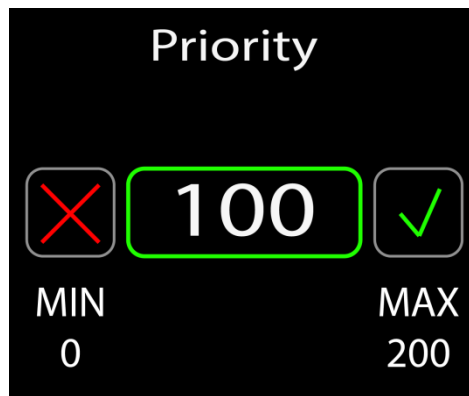*(source: http://www.rdmprotocol.org/)*

NOTE:
You can not use RDM when you are using the sACN protocol because the sACN protocol (E1.31) doesn't currently support RDM officially. Once ratified, this will be a simple software update for the IQ nodes.

Priority:

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

Here you can set the port priority (values from 0 - 200).
When signal is lost for the highest priority port, the DMX signal will be taken from the port that has the next highest priority.