Device: OSC (Open Sound Control)

Introduction

The OSC (Open Sound Control) Protocol was originally developed to create an alternative to the widely used MIDI Protocol. OSC has several advantages: It works on the network, has a path based system for commands and allows much greater accuracy in the transmitted values than MIDI.

Since OSC is a very customizable protocol it was never implemented on as many devices as Midi, but it is still found in Visual and Audio FX Software such as Resolume and Max/MSP.

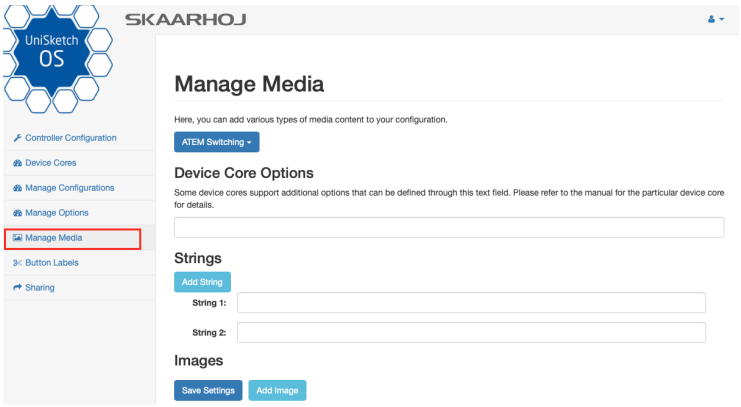
Notice our device core communicates via UPD. Some devices have a different communication port if OSC commands are coming via TCP or UPD.

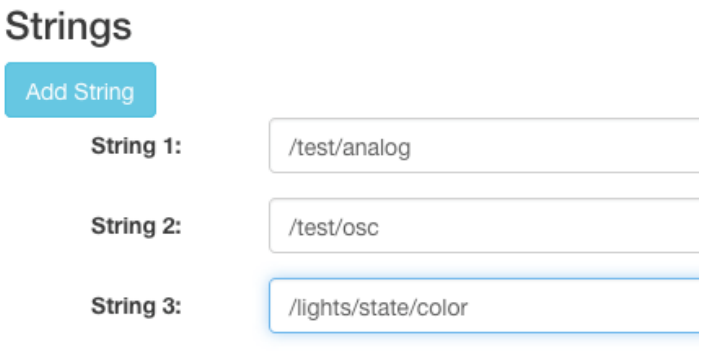
Important Notice

We are still in the process of figuring out how OSC can help you and all our customers in their workflow and how the OSC device core should work on a SKAARHOJ Controller. This implementation is a starting point for us. If you have any Ideas about this topic please let us know at support@skaarhoj.com

Basic usage of the Device Core

Since OSC is a string based protocol all strings needed need to be added to the "Manage Media" on the controllers configuration page. At this point it is not possible to change these strings in the local configuration interface. During the actual configuration you can select a string number using the drop down selectors of the actions. There is a 21 character limit to the strings.





Port

By default the port is set to 8000. This can be changed via a Device Core option. See below

Device Configurations

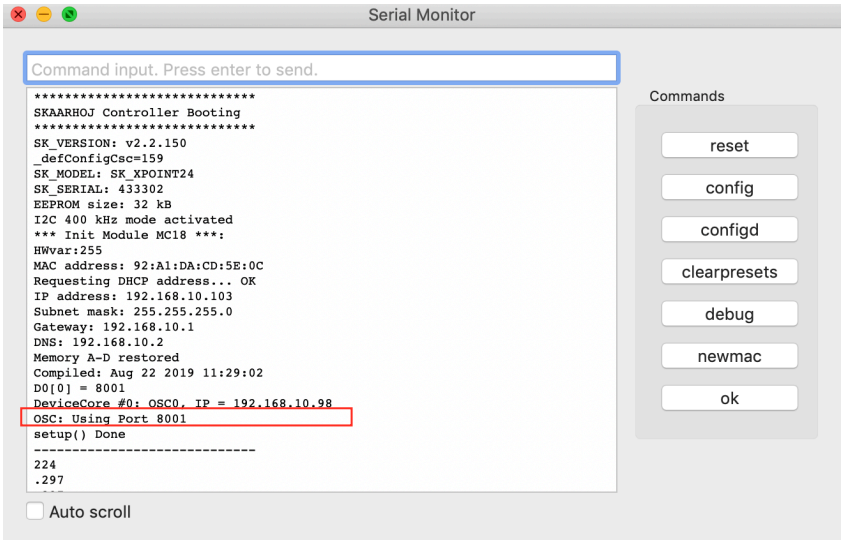
Device configuration options exist:

- Index 0: **Port Selection:** By default port is set to 8000. Use index 0 to set a alternative port

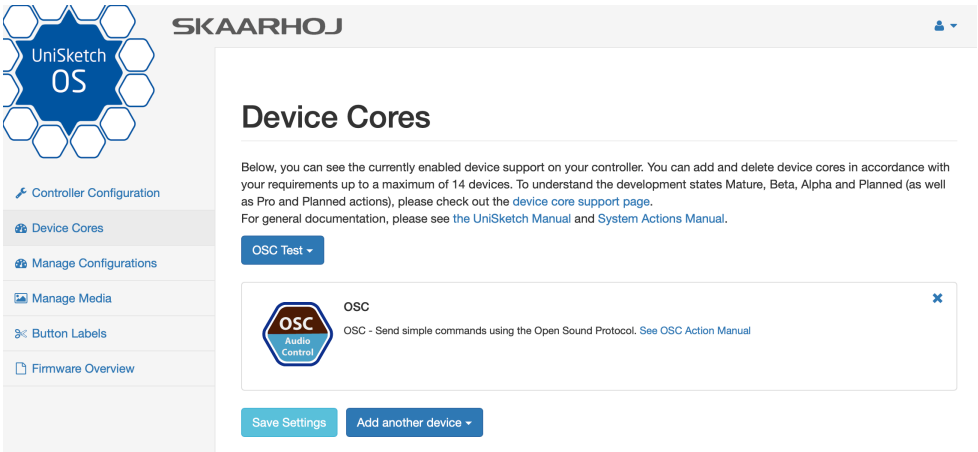
Example I:

Enabling "Port Selection" could look like this device configuration code: "D0:0=8001" where the general form would be "Dx:y=z" where "x" is the number of the device core as installed on the controller (starting with zero for the first device core), "y" the index number and "z" the value for that index.

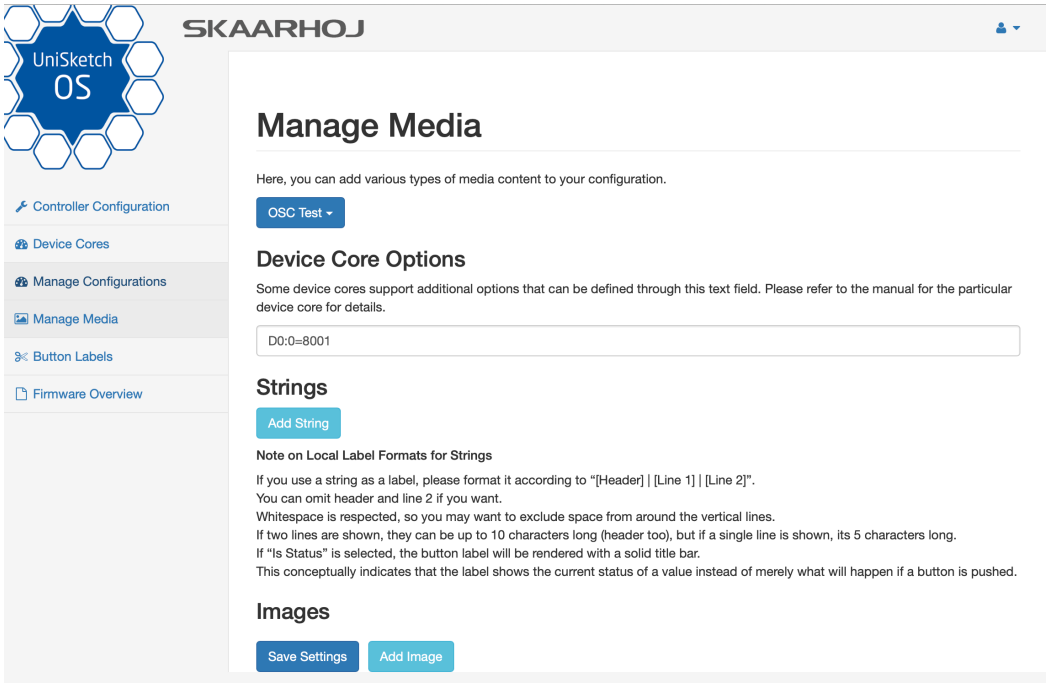
To confirm that a device configuration is in fact detected by the controller, please check it out on the serial monitor where it will be mentioned:



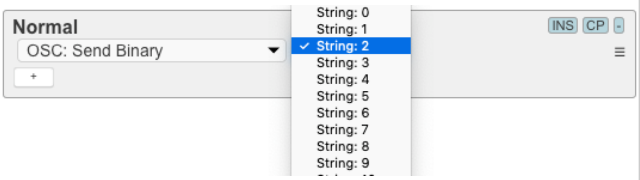
If the OSC device core is the first like below:



Then setting the “Port Selection” would be set by this configuration under “Manage Media” on your configuration page for your controller on cores.skaarhoj.com



DeviceCore Actions

Send Binary 	Send a binary command to the path specified in the string on a button press. When the button gets pushed down it sends a 1 (integer) and when it gets released it sends a 0 (integer)
Send Encoder 	Send the actions of an encoder to the path specified in the string. When the encoder turns left it sends 1 (integer) and when it gets turned right it sends a -1 (integer) Pressing on the encoder sends a 0 (integer) Long pressing on the encoder sends first a 0 (integer) (because of the short press action) and after 1 second sends a 2 (integer)
Send String 	Send a binary command to the path specified in the string on a button press. When the button gets pushed down it sends a 1 (integer) and when it gets released it sends a 0 (integer)
Send Absolute 	Send an analog value command to the path specified in the string on the move of an analog input like a fader. When the fader gets moved its value is sent in a normalised floating point value. The minimum value is therefore 0.00 and the maximum value is 1.00