Closed Captions / Subtitles

This article will show how to use Closed Captions and Subtitles.

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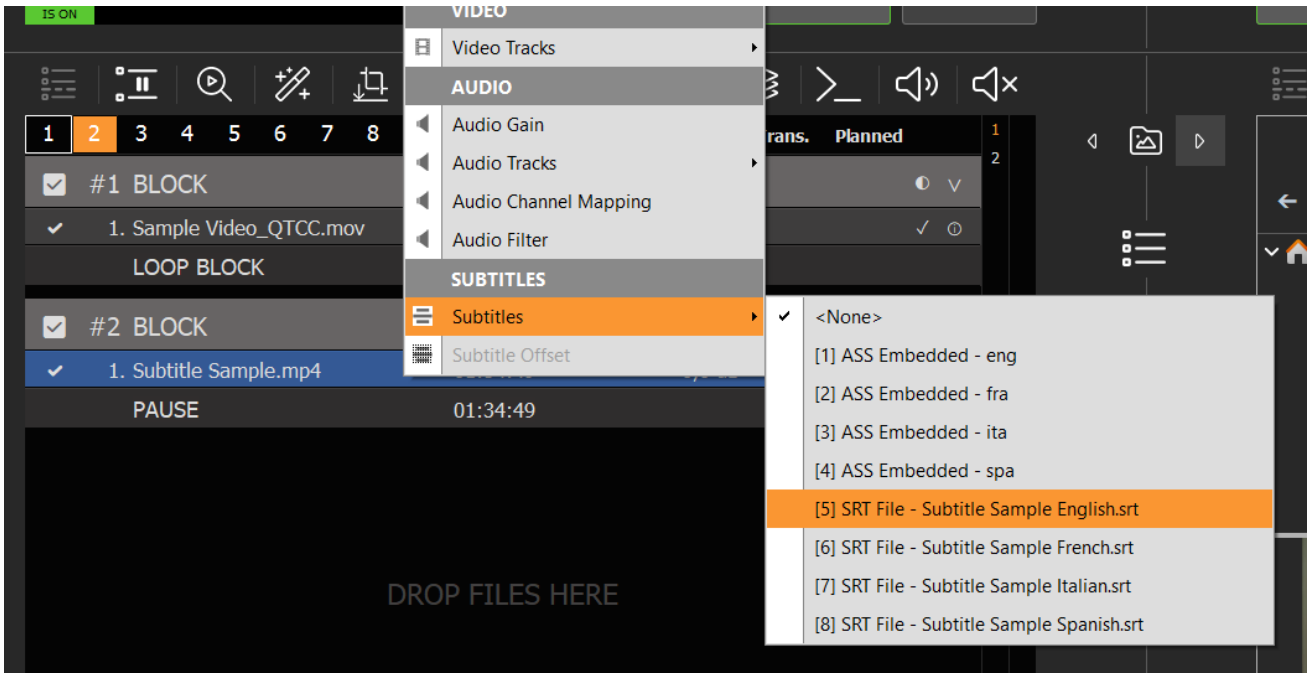
→ Testing
→ Add new CC/Subtitles to Video

Introduction

PLAYDECK supports **Closed Captions** CEA-608 (NTSC) and CEA-708 (digital television) and **Subtitles**.

They work differently in PLAYDECK. Here is how:

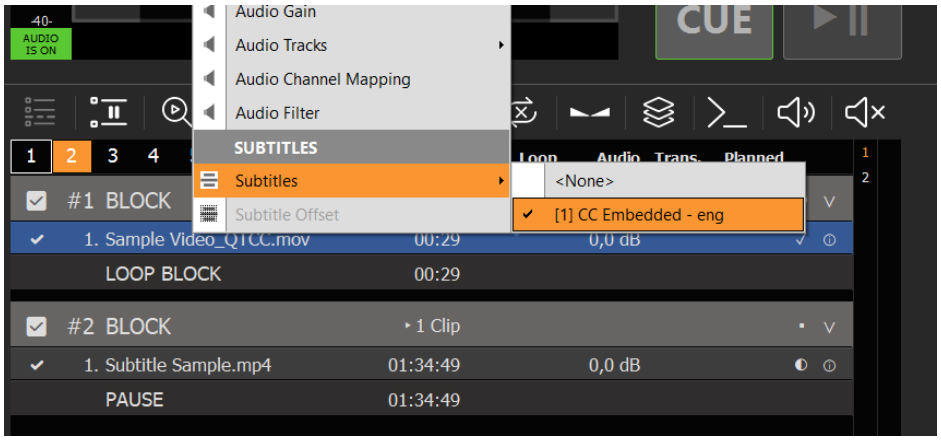
1. Subtitles
They can only be sourced from Video files and are ALWAYS burned onto the picture. You can select them via right-click on the Clip. The Subtitle track is disabled by default:



Subtitles can be embedded into the Clip, they are called “ASS Embedded”. They can also be an external SRT-file. This File must have the same Filename (except the extension .srt). The SRT-file can be in the same folder or in any of the sub-folders “Subs” or “Subtitles”.

If you send your video feed to anywhere (SDI, NDI, Stream), the Subtitles will be rendered in the picture frame. You can change the optics like font type etc. in the settings.

2. Closed Captions
CC can have many different sources and are either **Burn-In** or **Pass-Through only**.
In Video files the CC track can be embedded and is shown as “CC Embedded” when right-click the Clip:



The option to switch between Burn-In and Pass-Through can be found in the settings. Burn-In means, that the CC text will be rendered onto the picture frames, just like Subtitles. If in Pass-Through Mode, the CC Text will only be shown in the Preview, but not on any Output. The task of rendering the CC Text is therefore “passed on” to the next receiver, e.g. YouTube Live Stream.

Besides video files, CC is supported by the following input and output methods, meaning PLAYDECK can read, preview and send CC with:
– SDI Device (If Device supports it)
– Streams with MPG-2 or H.264 Video Codec (any protocol e.g. UDP, RTMP, SRT)
– NDI Device

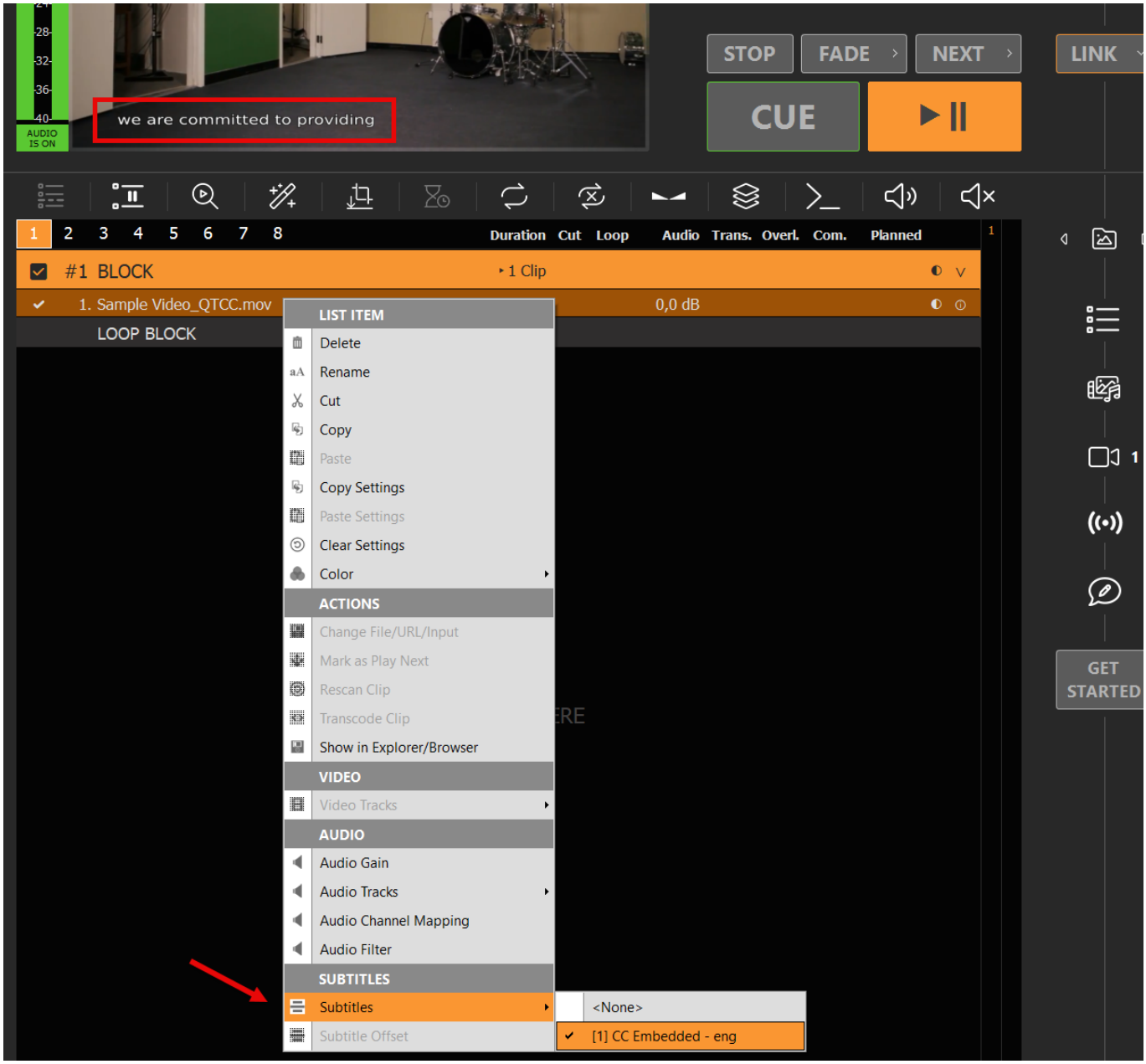
Please note that NDI support for CC is not universal, therefore only PLAYDECK can send and receive CC via NDI (Loops).

Please also note, that CC contains information about text position and animation, which can’t be changed by PLAYDECK for previewing or burn-in. It is hard-coded into the CC Tracks. The animation names typically are “Roll-Up” or “Pop-On”. They may be changed after pass-through by another receiver.

Testing

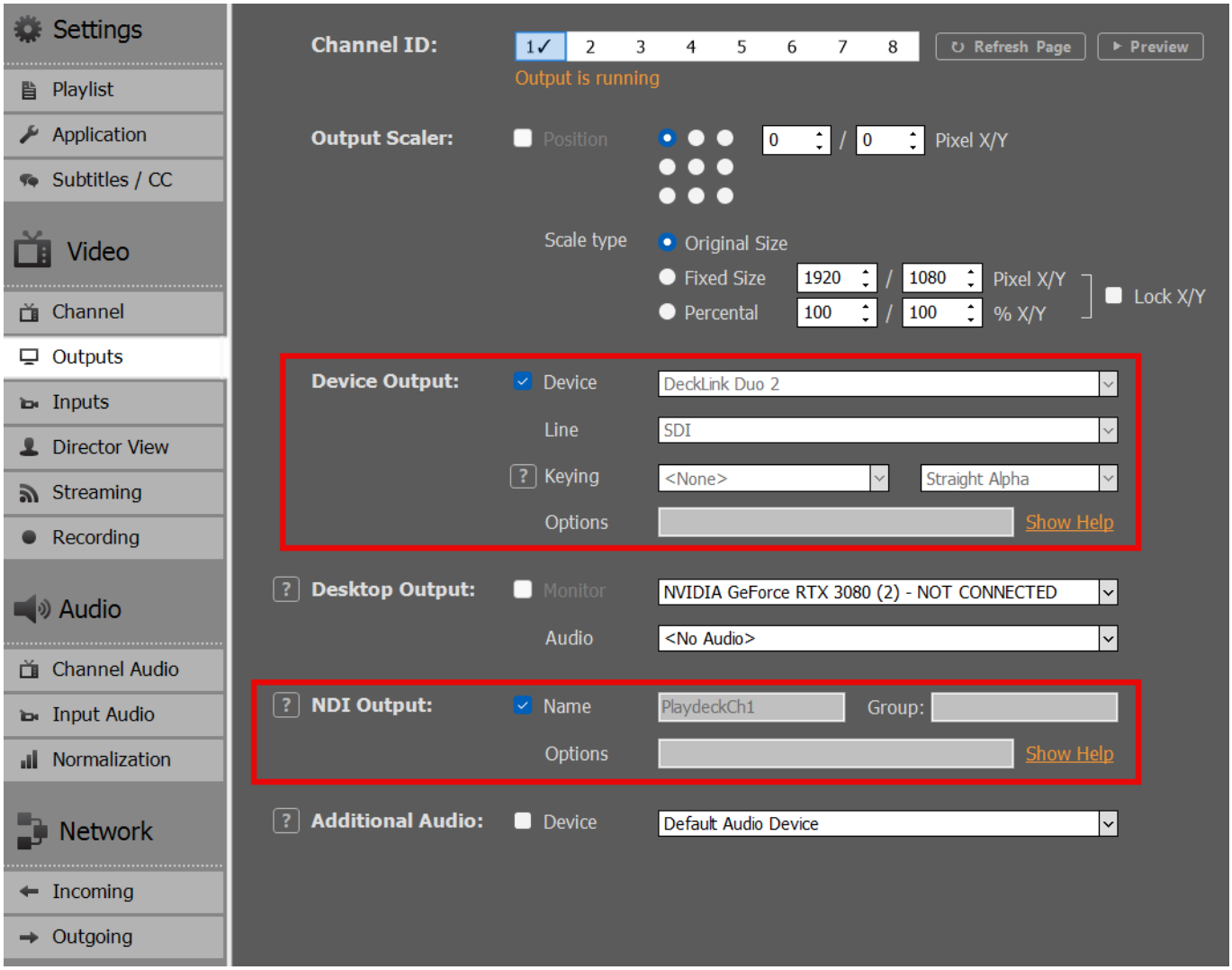
We provide this Sample Clip for, so you can test Closed Captions in action:
https://downloads.playdeck.tv/assets/Sample Video_QTCC.mov

1. Add Clip and select CC Track
Add the Video Clip to Channel 1. Right-click the Clip and select the CC Track. Also set the Block to Loop. You should now be able to see the CC Text in the lower Preview. You can disable the “CHANNEL 1” Overlay by right-clicking the Preview.



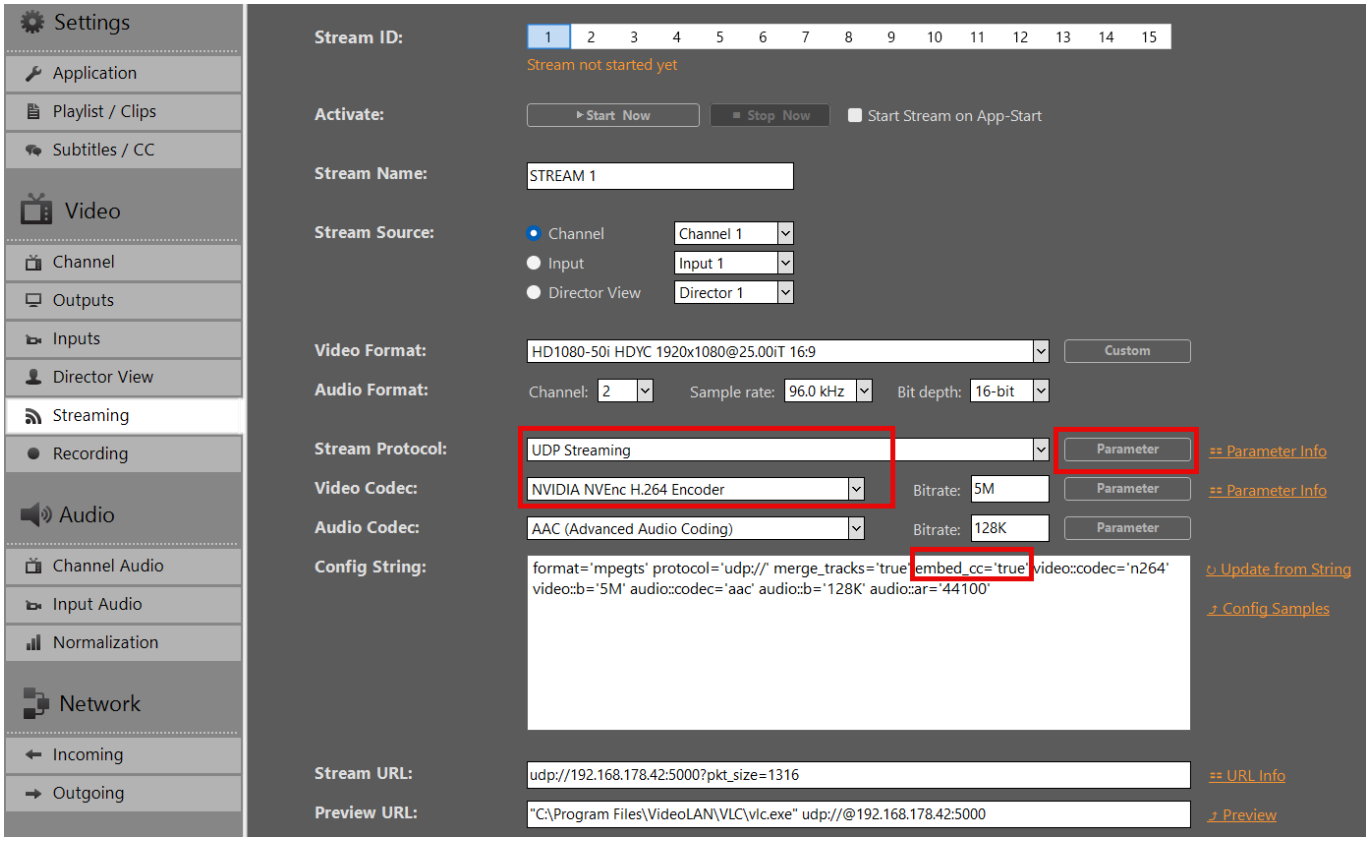
2. Output the Stream via SDI and NDI

Activate any SDI Device and loop the Signal to another SDI Port for testing (if available). Also active NDI with default settings:



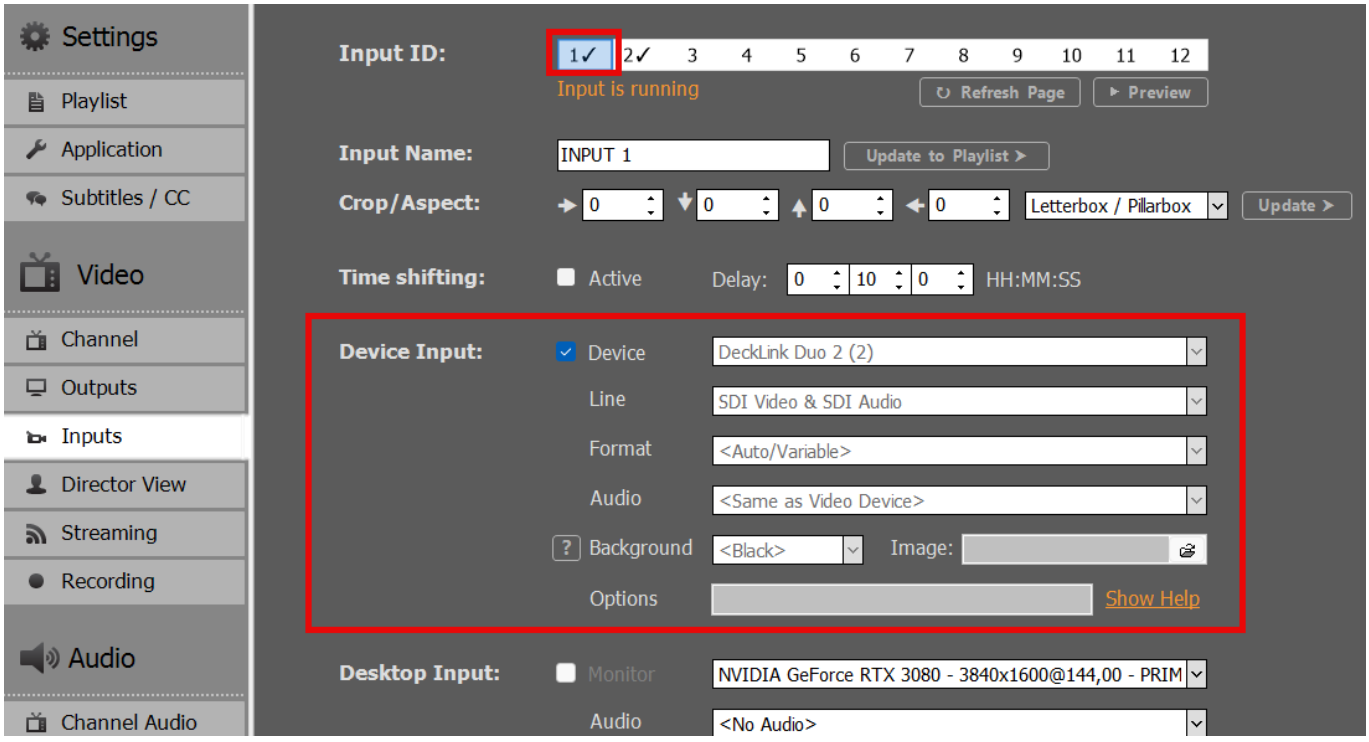
3. Output to UDP Stream

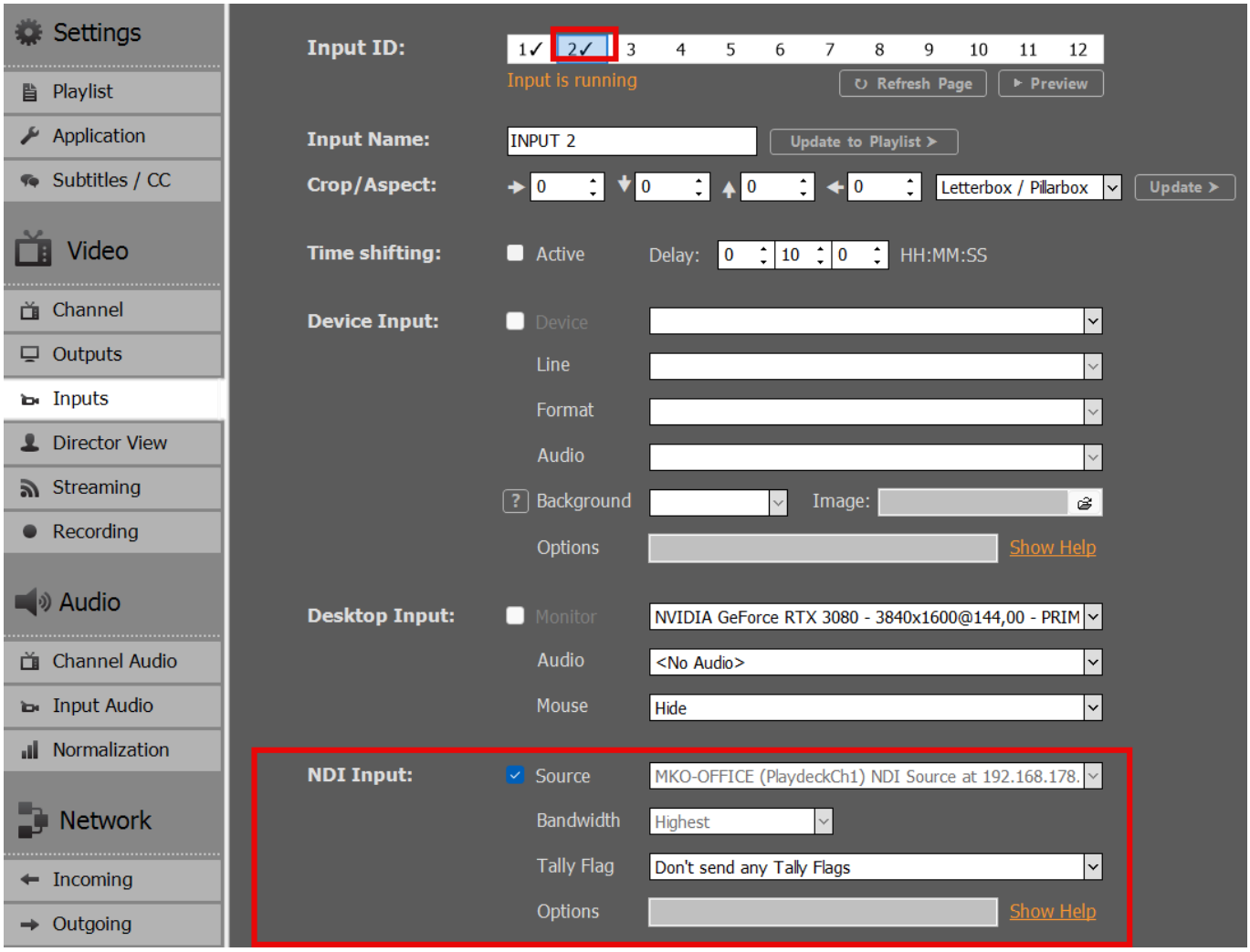
Setup a new local UDP Stream. Make sure the UDP protocol is selected and you use (any) **H.264** Video Codec. The Target URL is your local IP adress: **udp://192.168.178.42:5000?pkt_size=1316**. Click on **Parameter** and activate the **embed_cc** flag.



4. Add SDI and NDI Inputs

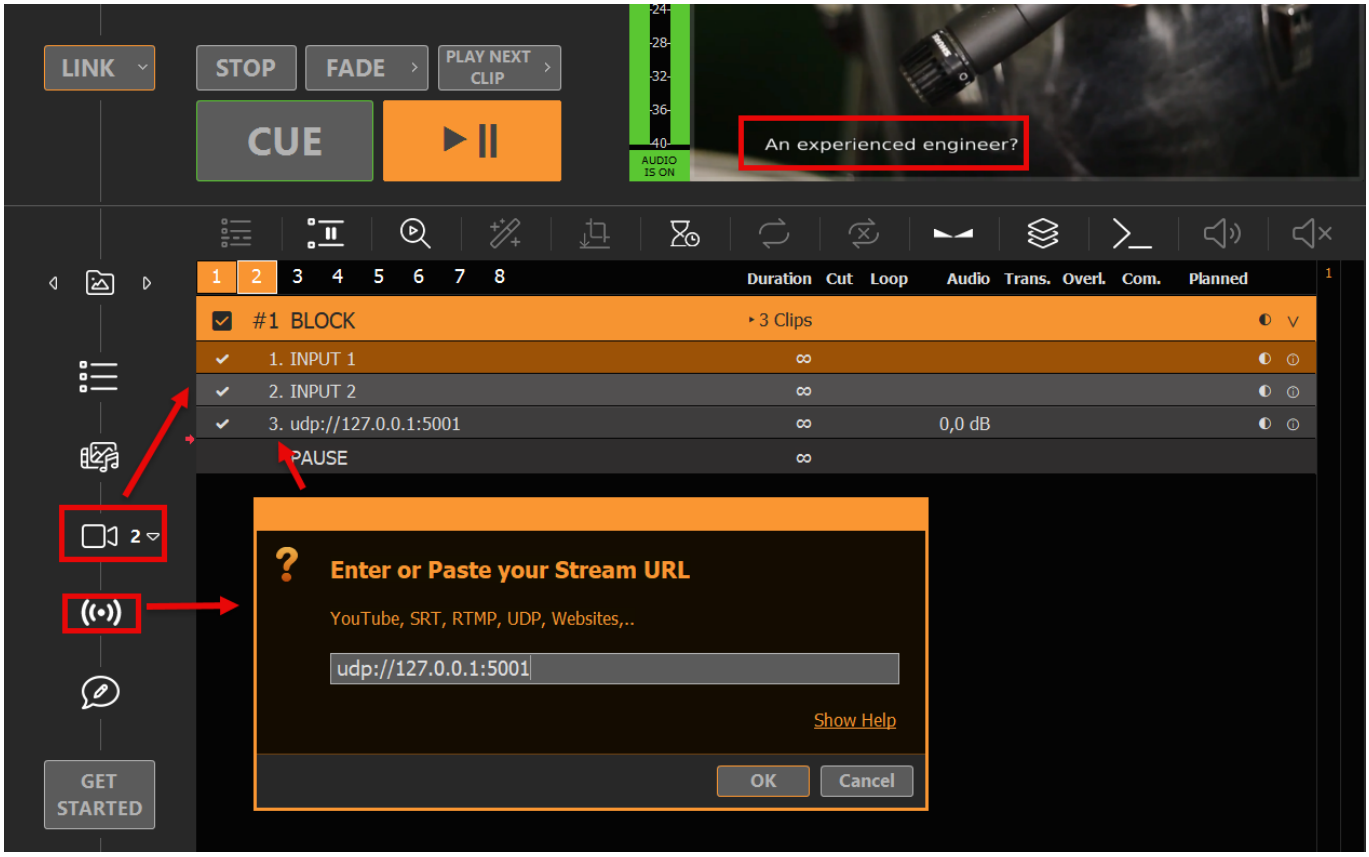
We now loop our outputs to new Inputs in PLAYDECK itself. We use INPUT 1 for SDI and INPUT 2 for NDI.





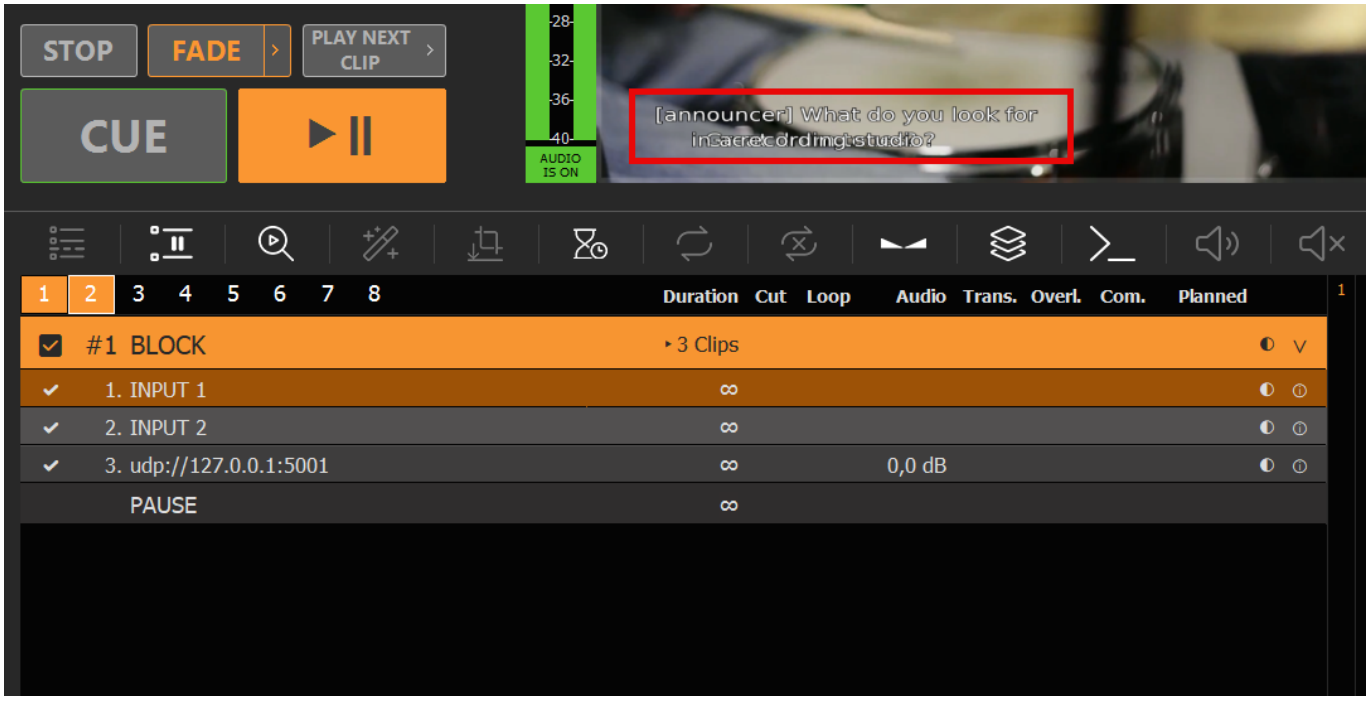
5. Insert Inputs and UDP Stream to Channel 2

We add Input 1 and 2 to the Channel 2 Playlist by Drag Drop of the Input Icon. We then add our UDP Stream by Drag Drop of the Stream Icon. The Stream URL is: udp://127.0.0.1:5001. You can now observe that all 3 new Clips will show their source CC in the Channel 2 Preview area. You have now successfully send and received CC Tracks via SDI, NDI and UDP.



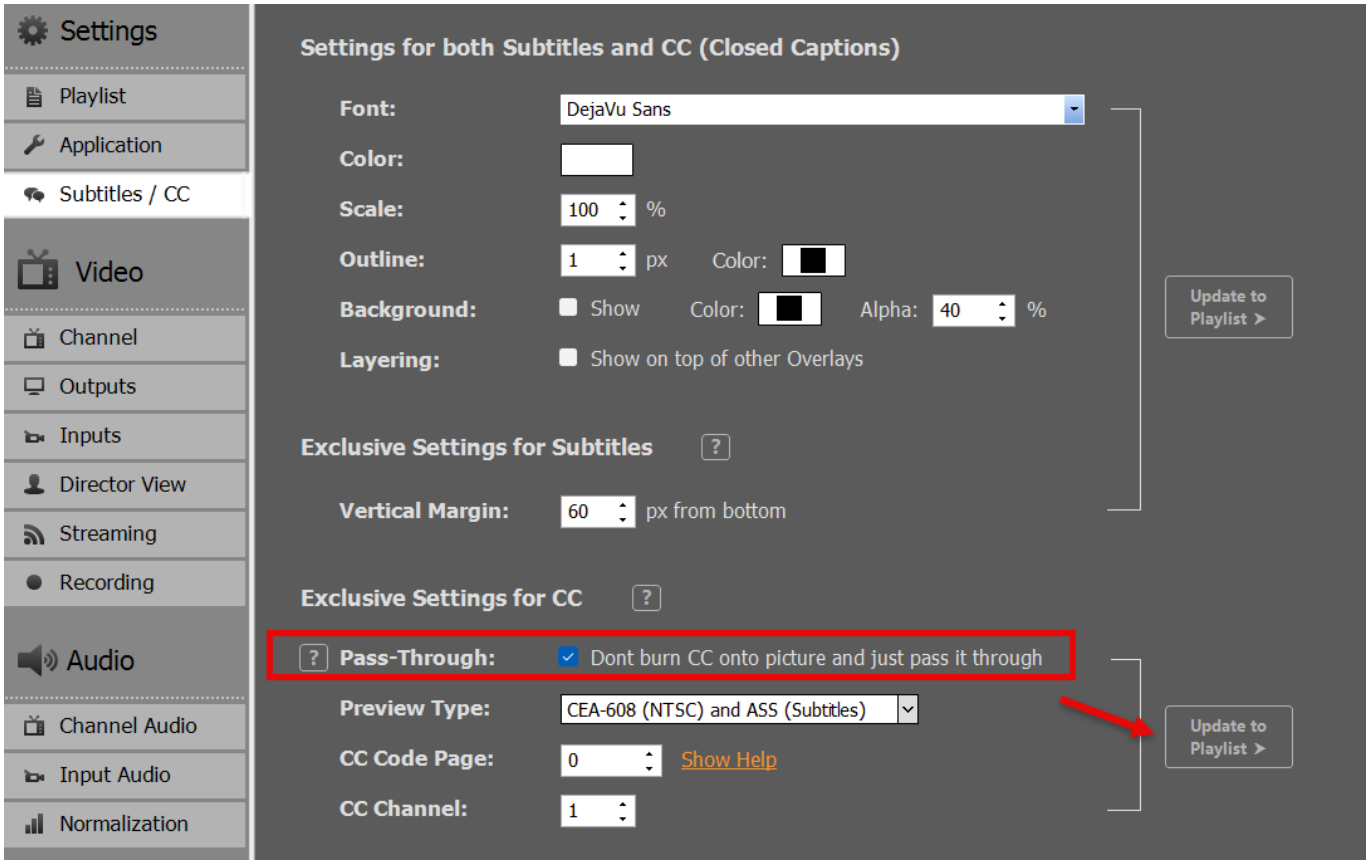
6. Explaining Burn-in and Pass-Through

While playing any Clip on Channel 2, we observe double Text in the PLAYDECK Preview area of Channel 2. This is because Channel 1 is burning the CC onto the picture by default (rendering the Text on all Frames). In addition, Channel 2 detects a CC Track in the Input, that is being “passed through” from the Input. Channel 2 then shows the CC Tracks as Preview in the Channel 2 Preview area. We therefore have 2 CC Texts overlapping each other: One already in the input video feed and another from the CC Track that is passed-through:



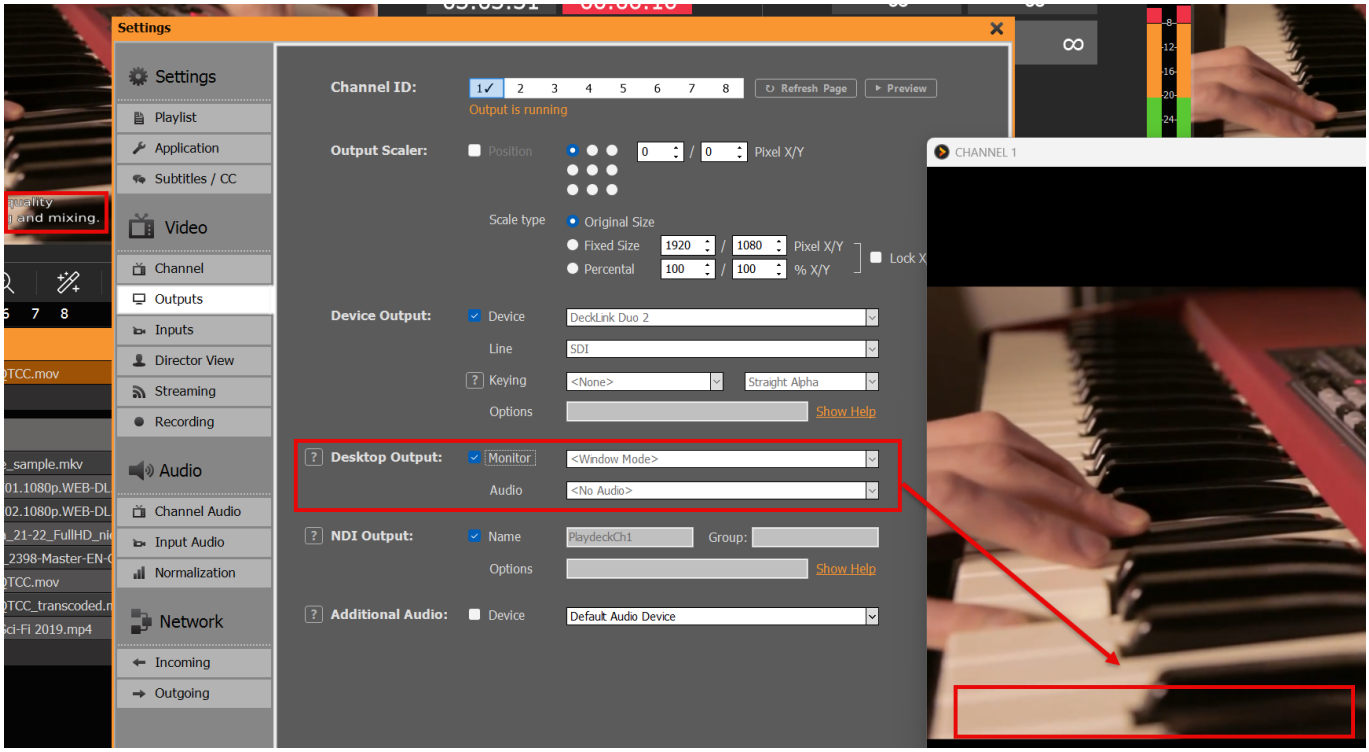
7. Switching off Burn-in

As observed in the last paragraph, Closed Caption are burned onto the Picture and then send to SDI, NDI and Streams. We want to change this behavior to just pass-through the CC and have PLAYDECK render the CC in the Preview Area. We therefore activate the checkbox “Pass-Through” in the CC settings. After clicking “Update to Playlist”, we don’t observe double texts anymore on the Channel 2 preview.



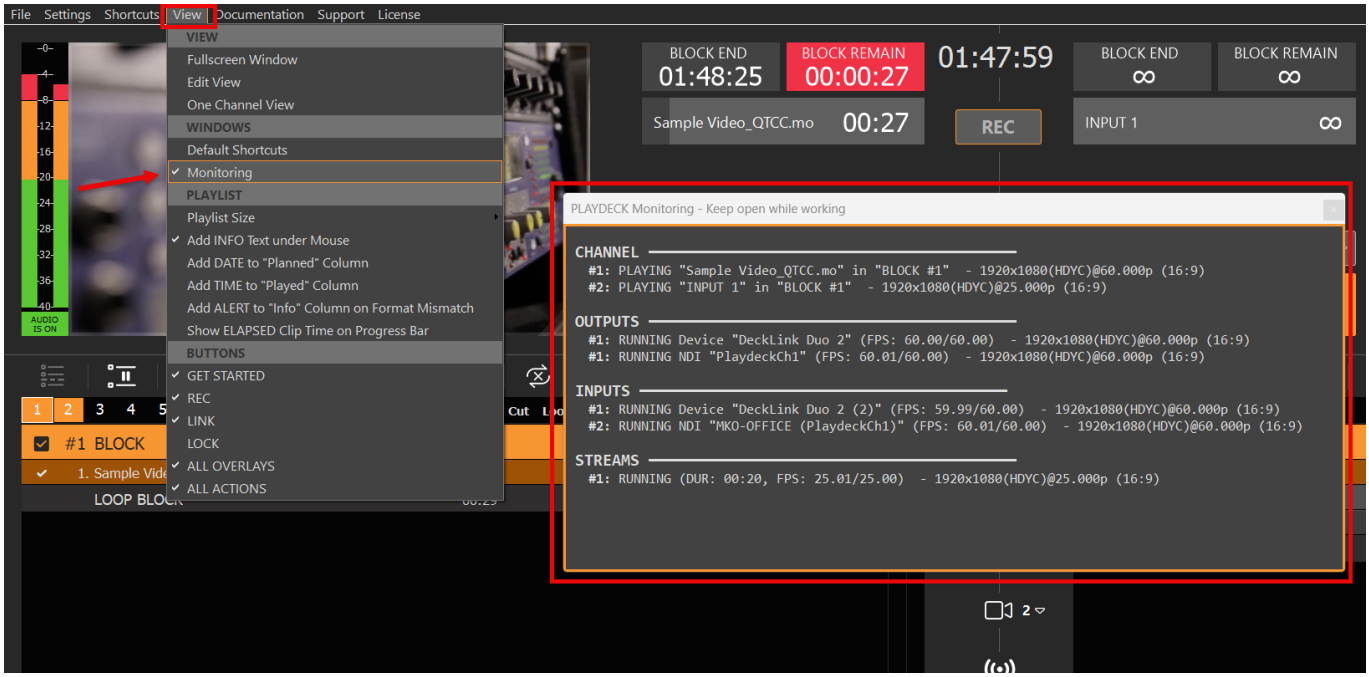
8. Controlling with Desktop Output

To check, if the CC is burned into the picture or not, we activate a Desktop Output in “Window Mode”. This always represents, how the video feed is send to devices and streams:



9. Monitoring

You can check the status of your input and output video feeds by enabling the MONITORING window:



Add new CC/Subtitles to Video

PLAYDECK has no tools to add CC/Subtitles manually (by entering text) into videos or video feeds. But there are many tools available in the internet to add CC/Subtitles, e.g.
https://www.veed.io/
https://studio.youtube.com/