

Closed Captions / Subtitles

This article will show how to use Closed Captions and Subtitles

In this article:

- Introduction
- Testing
- Add new CC/Subtitles to Video

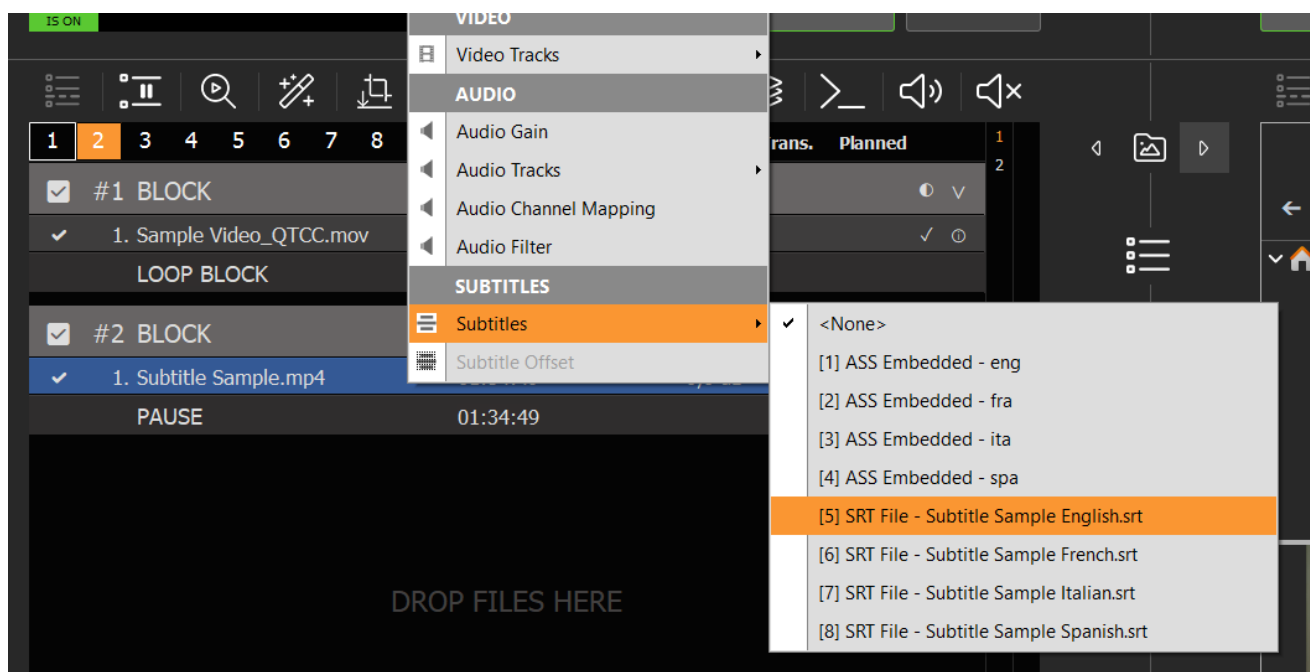
Introduction

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:



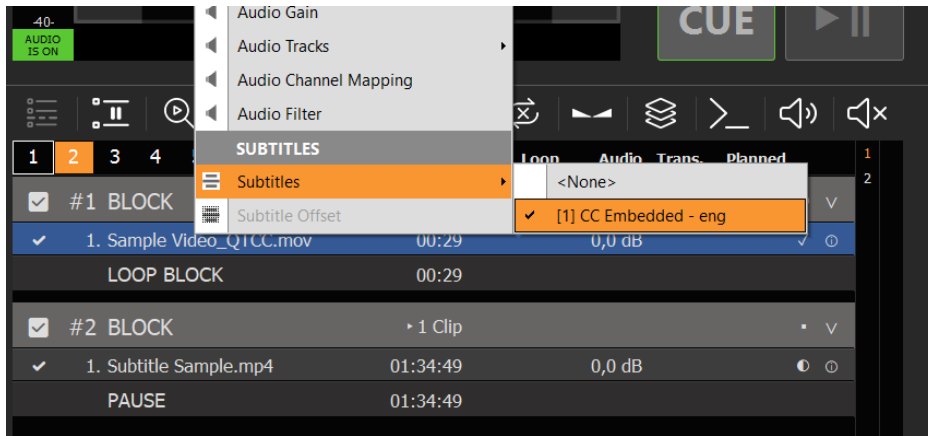
Subtitles can be embedded into the Clip, they are called “ASS Embedded”. They can also be an external SRT-file. This File must have the same Filename (except the extension .srt). The SRT-file can be in the same folder or in any of the sub-folders “Subs” or “Subtitles”.

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).

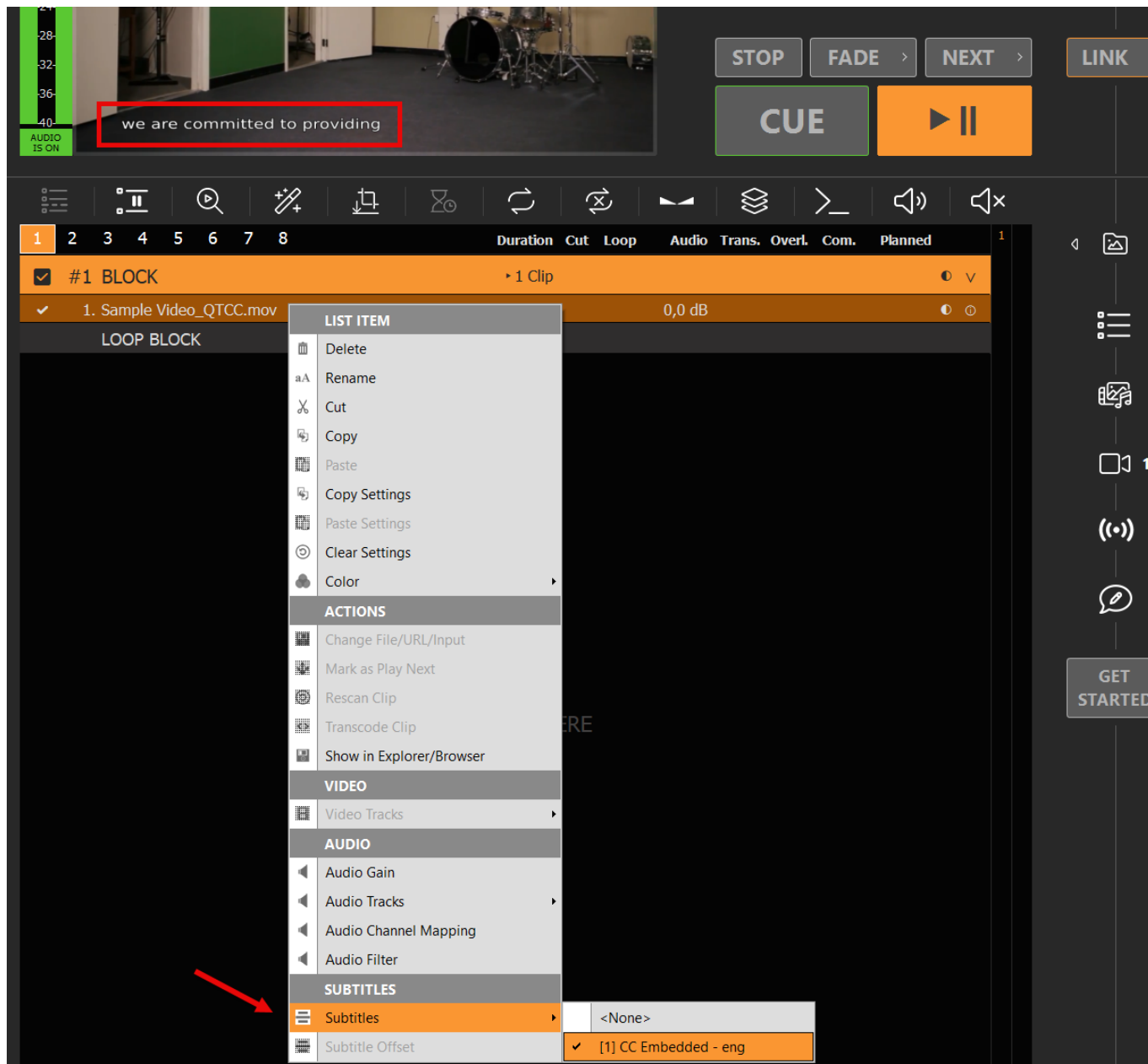
Please also note, that CC contains information about text position and animation, which can’t be changed by PLAYDECK for previewing or burn-in. It is hard-coded into the CC Tracks. The animation names typically are “Roll-Up” or “Pop-On”. They may be changed after pass-through by another receiver.

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:

Settings

Playlist

Application

Subtitles / CC

Video

Channel

Outputs

Inputs

Director View

Streaming

Recording

Audio

Channel Audio

Input Audio

Normalization

Network

Incoming

Outgoing

Channel ID:

1✓2345678

Refresh Page

Preview

Output is running

Output Scaler:

☐ Position

0

/

0

Pixel X/Y

☒ Original Size

1920

/

1080

Pixel X/Y

☐ Fixed Size

100

/

100

% X/Y

☐ Lock X/Y

Device Output:

☒ Device

DeckLink Duo 2

Line

SDI

Keying

<None>

Straight Alpha

Options

Show Help

Desktop Output:

☐ Monitor

NVIDIA GeForce RTX 3080 (2) - NOT CONNECTED

Audio

<No Audio>

NDI Output:

☒ Name

PlaydeckCh1

Group:

Options

Show Help

Additional Audio:

☐ Device

Default Audio Device

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: `udp://127.0.0.1:5001`

Settings

Playlist

Application

Subtitles / CC

Video

Channel

Outputs

Inputs

Director View

Streaming

Recording

Audio

Channel Audio

Input Audio

Normalization

Network

Stream ID:

1✓

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Stream is running

Refresh Page

Preview

Activate:

Start Now

Stop Now

Stream is always active

Stream Source:

Channel

Channel 1

Input

Input 1

Director View

Director 1

Stream Protocol:

UDP Streaming

Options

Show Help

Stream URL:

udp://127.0.0.1:5001

Show Help

Preview URL:

Video Format:

HD1080-25p HDYC 1920x1080@25.00p 16:9

Custom

Video Codec:

NVIDIA NVEnc H.264 Encoder

Bitrate: 5 Mb/s

Options

Show Help

Audio Format:

Channel: 2

Sample rate: 96.0 kHz

Bit depth: 16-bit

Audio Codec:

AAC (Advanced Audio Coding)

Bitrate: 128 kb/s

Options

Show Help

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.

Settings

Playlist

Application

Subtitles / CC

Video

Channel

Outputs

Inputs

Director View

Streaming

Recording

Audio

Channel Audio

Input ID:

1✓

2✓

3

4

5

6

7

8

9

10

11

12

Input is running

Refresh Page

Preview

Input Name:

INPUT 1

Update to Playlist

Crop/Aspect:

0

0

0

0

Letterbox / Pillarbox

Update

Time shifting:

Active

Delay: 0 10 0 HH:MM:SS

Device Input:

Device

DeckLink Duo 2 (2)

Line

SDI Video & SDI Audio

Format

<Auto/Variable>

Audio

<Same as Video Device>

Background

<Black>

Image:

Options

Show Help

Desktop Input:

Monitor

NVIDIA GeForce RTX 3080 - 3840x1600@144,00 - PRIM

Audio

<No Audio>

Settings

Playlist

Application

Subtitles / CC

Video

Channel

Outputs

Inputs

Director View

Streaming

Recording

Audio

Channel Audio

Input Audio

Normalization

Network

Incoming

Outgoing

Input ID:

1 ✓

2 ✓

3

4

5

6

7

8

9

10

11

12

Input is running

Refresh Page

Preview

Input Name:

INPUT 2

Update to Playlist >

Crop/Aspect:

→ 0

↓ 0

↑ 0

← 0

Letterbox / Pillarbox

Update >

Time shifting:

Active

Delay:

0

10

0

HH:MM:SS

Device Input:

Device

Line

Format

Audio

Background

Image:

Options

Show Help

Desktop Input:

Monitor

NVIDIA GeForce RTX 3080 - 3840x1600@144,00 - PRIM

Audio

<No Audio>

Mouse

Hide

NDI Input:

Source

MKO-OFFICE (PlaydeckCh1) NDI Source at 192.168.178.

Bandwidth

Highest

Tally Flag

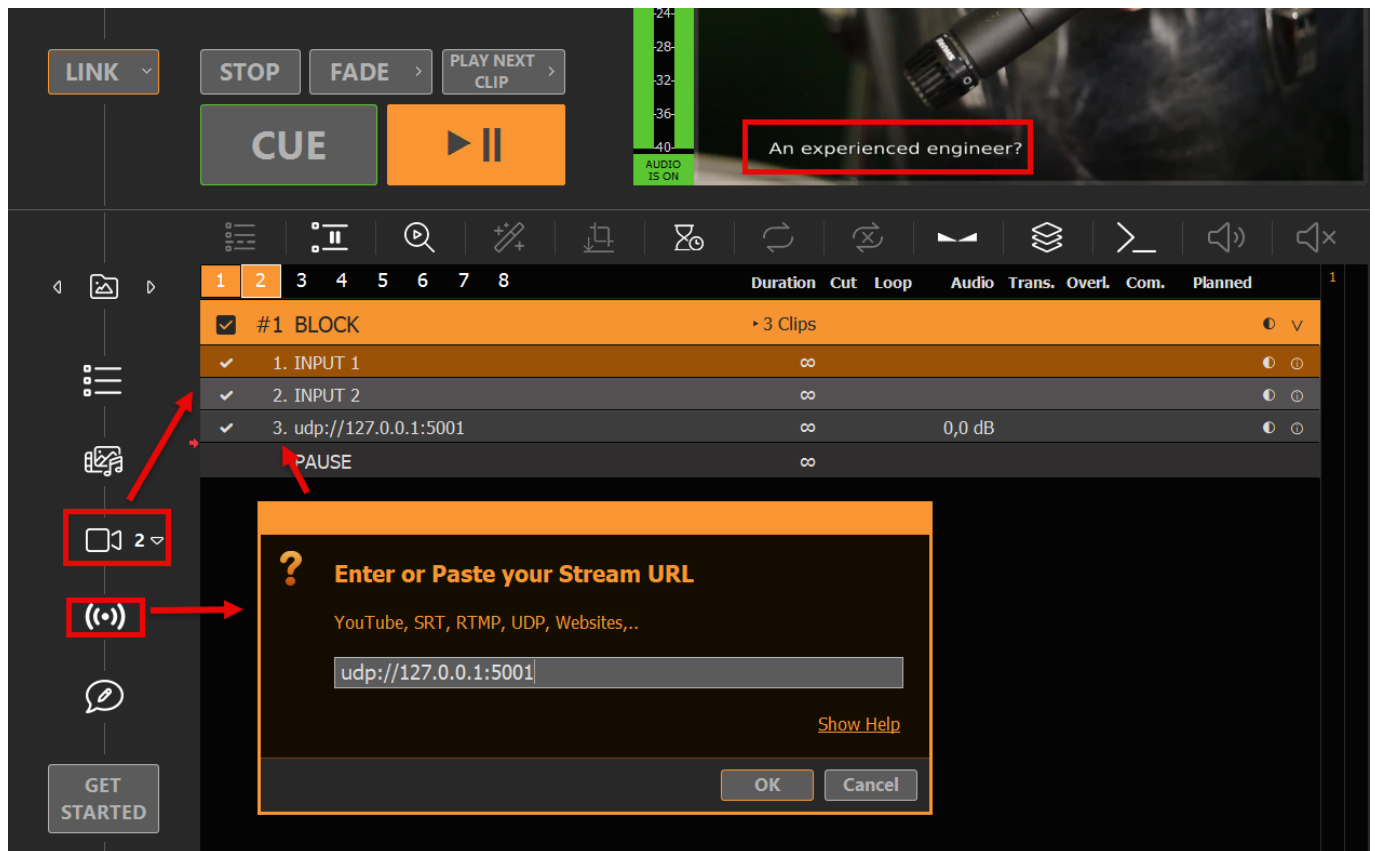
Don't send any Tally Flags

Options

Show Help

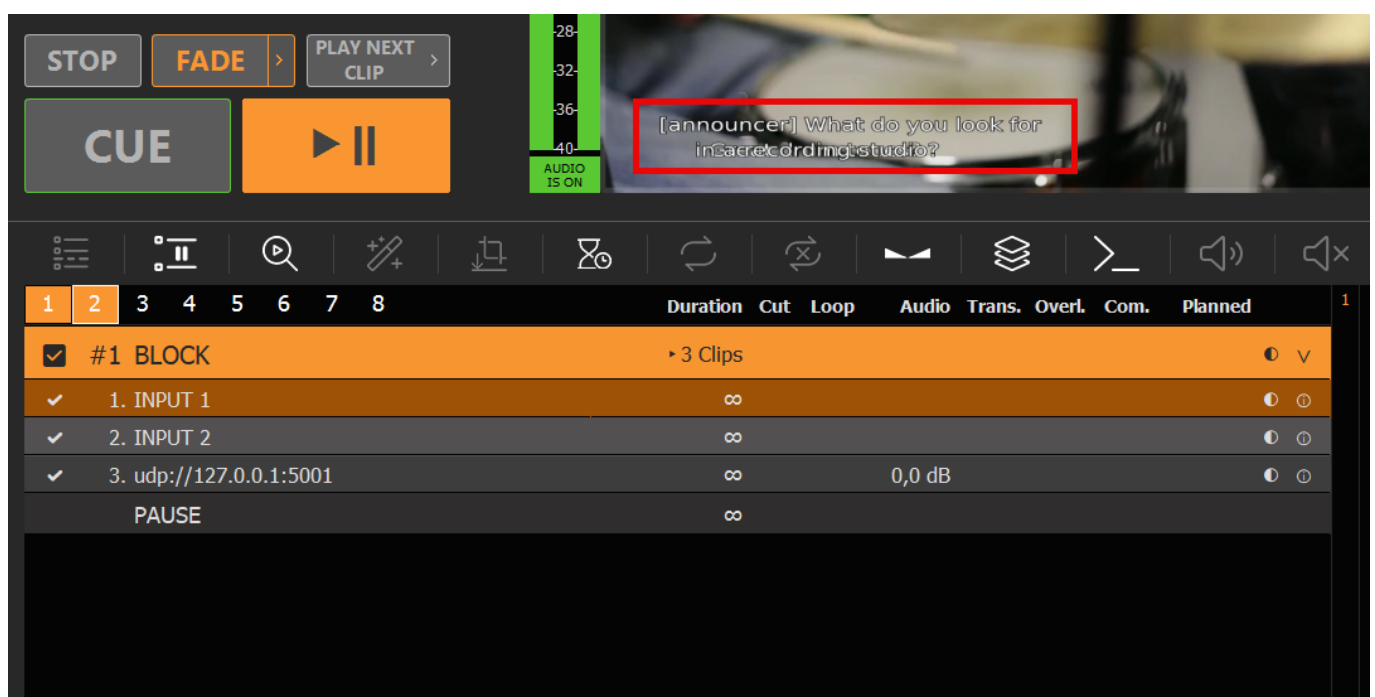
5. Insert Inputs and UDP Stream to Channel 2

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.



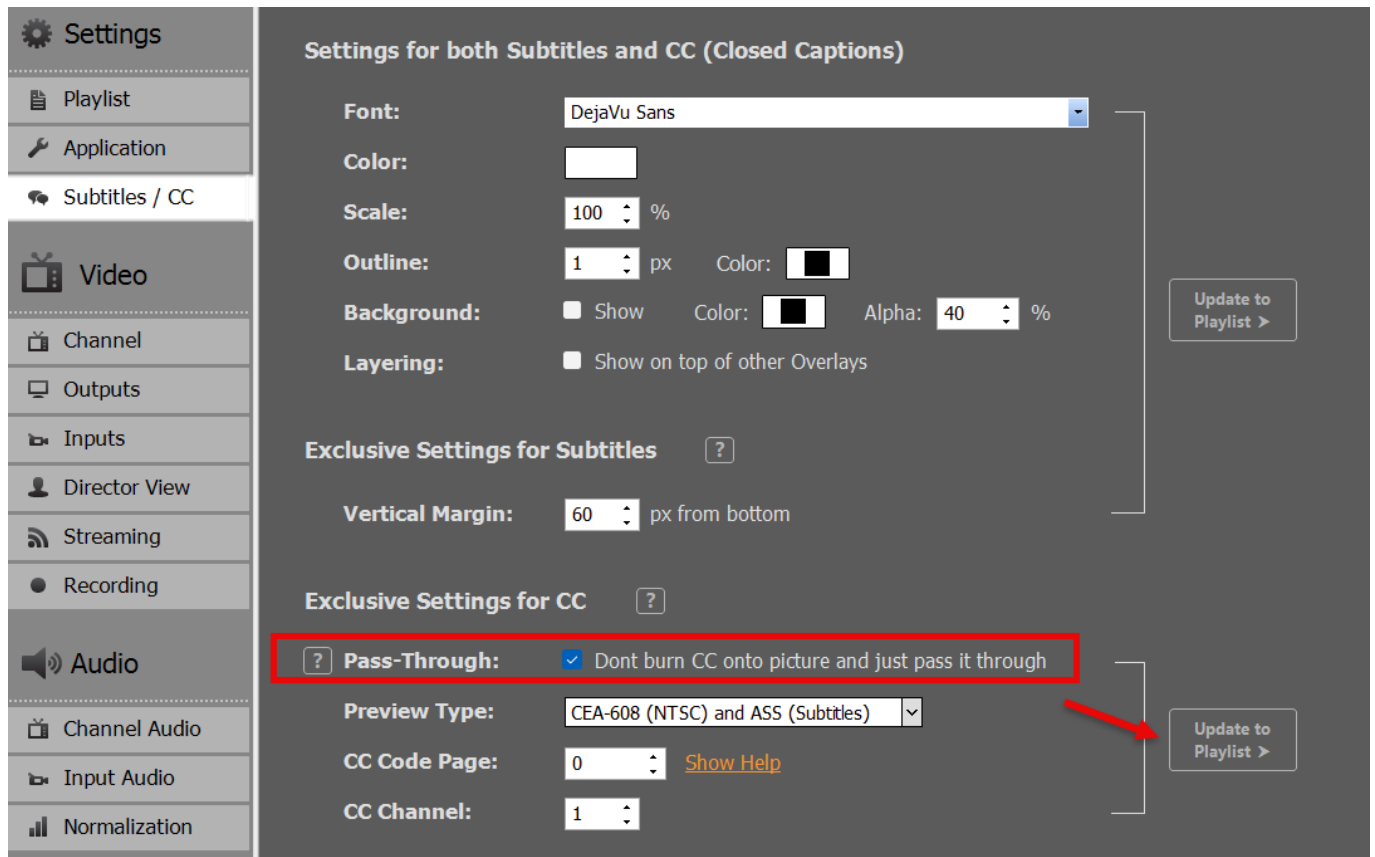
6. Explaining Burn-in and Pass-Through

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:



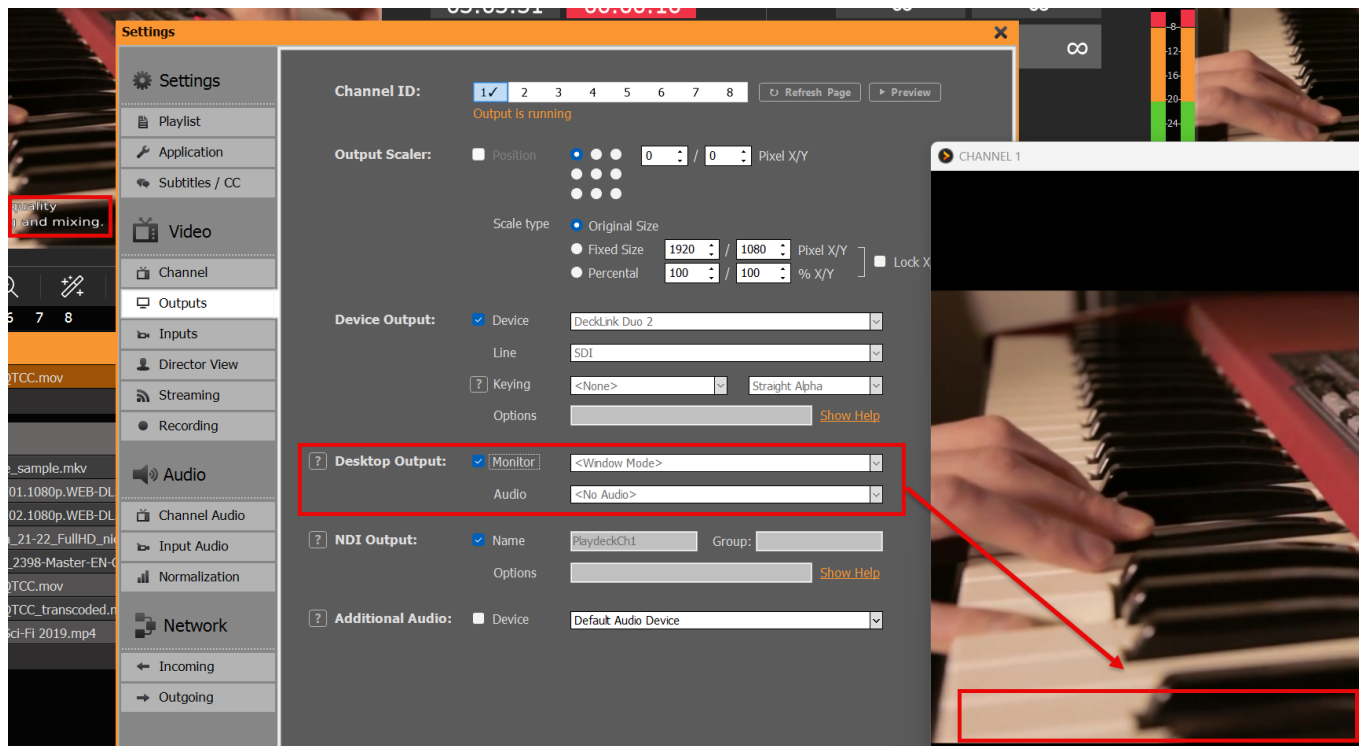
7. Switching off Burn-in

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.



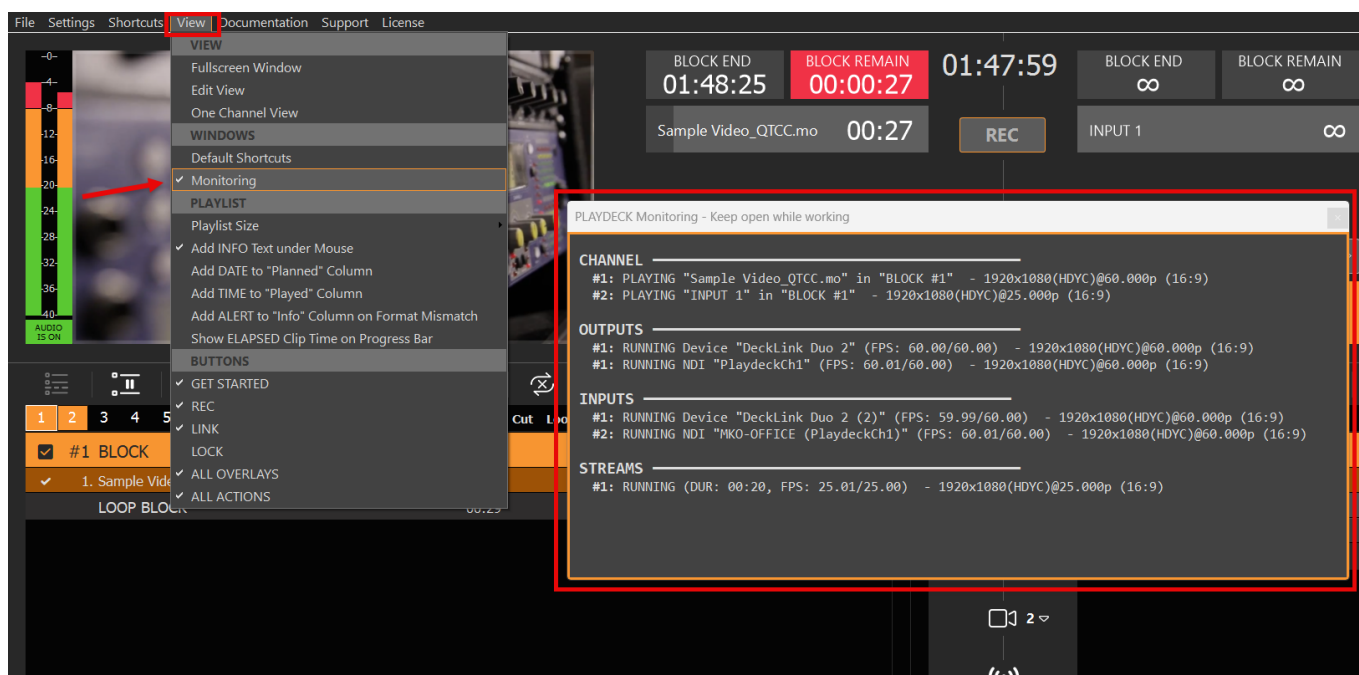
8. Controlling with Desktop Output

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/>