



USB Passthrough Version 2  
Video System Configuration  
Step-by-step Setup Guide  
December 9, 2021

In order to use USB Passthrough – with any tested capture device – it is required to manually configure some of the web interface settings for the video endpoint. This document will give you step-by-step instructions. The Version 2 macro will not run if you leave these settings at “Auto”.

Follow these instructions *after* you have installed the USB capture device according to the provided line drawings, and *before* you try running USB Passthrough for the first time.

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**Important notes:** The number of screens above refers to how many HDMI (DVI) outputs on the codec are actually in use.

If you have one HDMI output that is hooked up to an HDMI splitter that is driving 2, 3, or more screens, it is still a *Single Screen* video endpoint. Why? Because you are using *only one HDMI output*. Don't be confused by the total number of projectors or LCD screens in the room. Instead, count the number of HDMI video outputs (including DVI for SX80 and MX700/800) that are actually connected to something, right on the back of the codec.

Be sure to understand before you begin: Is your video device a Single Screen, Dual Screen, or Triple Screen endpoint? Count the number of video outputs that a) have wires connected, and b) do not have wires connected, in order to understand this.

You may need to reference the Administrator Guide for your endpoint to identify video outputs versus video inputs. We are concerned with *outputs*, not *inputs*. Ask for help if you need it.

Next, you must be able to log into the codec's web interface. This is required! Ask for help if you need it.



## Room Kit, Room Kit Plus, Room 55 Single with Single Screen

Step 1: Configure the number of monitors in the web interface (Single)

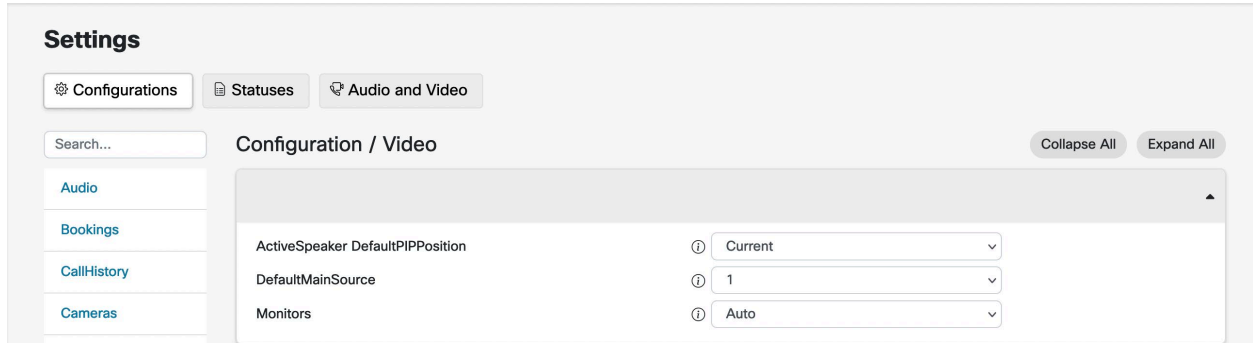


Figure 1: Default settings

By default, Video / Monitors is set for “Auto”. You must change this setting to [Single](#).

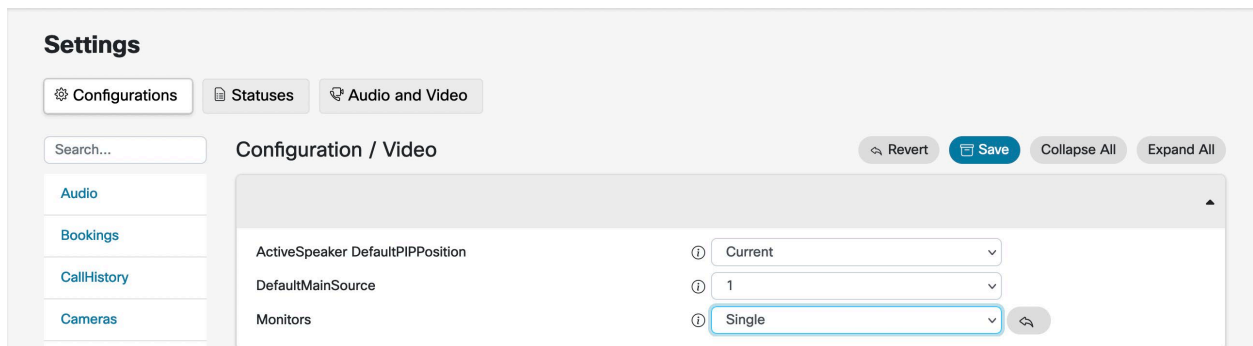


Figure 2: Change the setting to “Single”

As soon as you select [Single](#) from the drop-down list, the [Save](#) button will appear. Make sure to save the setting.



## Step 2: Configure the Connector 1 MonitorRole in the web interface

Configuration / Video Collapse All Expand All

Output

Connector 1

CEC Mode	<span>i</span> On
MonitorRole	<span>i</span> Auto
Resolution	<span>i</span> Auto
RGBQuantizationRange	<span>i</span> Full

Location

Figure 3: MonitorRole default

In the Configuration Video menus – where you are already working – scroll way down to the **Output** section. For the Room Kit and Room Kit Plus, Output Connector 1 MonitorRole is set for “Auto”. **You must change this to *First*.**

Configuration / Video Revert Save Collapse All Expand All

Output

Connector 1

CEC Mode	<span>i</span> On
MonitorRole	<span>i</span> First
Resolution	<span>i</span> Auto
RGBQuantizationRange	<span>i</span> Full

Location

Figure 4: Change the setting to “First”

As soon as you select *First* from the drop-down list, the *Save* button will appear. Make sure to save the setting.

**Room 55 Single** – your web interface is different. You can skip Step 2 entirely.



### Step 3: Set your Default Presentation Source

Below the Output section, you will see a Presentation section. For a Room Kit, you should select “2”. But for a Room Kit Plus or a Room 55 you can choose “2” or “3”. This number corresponds to the physical HDMI input that you are using for the laptop. Make sure to select the correct number. You will test this later, and you can change it at that time if it is not correct.

Presentation	
DefaultPIPPosition	1
DefaultSource	2
Priority	Equal

Figure 5: Default Presentation Source

### Step 4: Name your Default Presentation Source

[Click on this link](#) to proceed.

### Step 5: (Optional) Set your Selfview defaults

You can, if you wish, set the defaults that your system will use whenever you want to use Selfview. If you want to set this now, [click on this link](#).

### Step 6: Test your PC or Laptop Computer

[Click on this link](#) to proceed.

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## Room Kit, Room Kit Plus, Room 55 Single with Two Screens

### Step 1: Configure the number of monitors in the web interface (Dual or DualPresentationOnly)

Settings		
Configurations	Statuses	Audio and Video
Search...		
Configuration / Video		
ActiveSpeaker DefaultPIPPosition	Current	
DefaultMainSource	1	
Monitors	Auto	

Figure 6: Default settings



By default, Video / Monitors is set for “Auto”. You must change this setting to *Dual* or *DualPresentationOnly*.

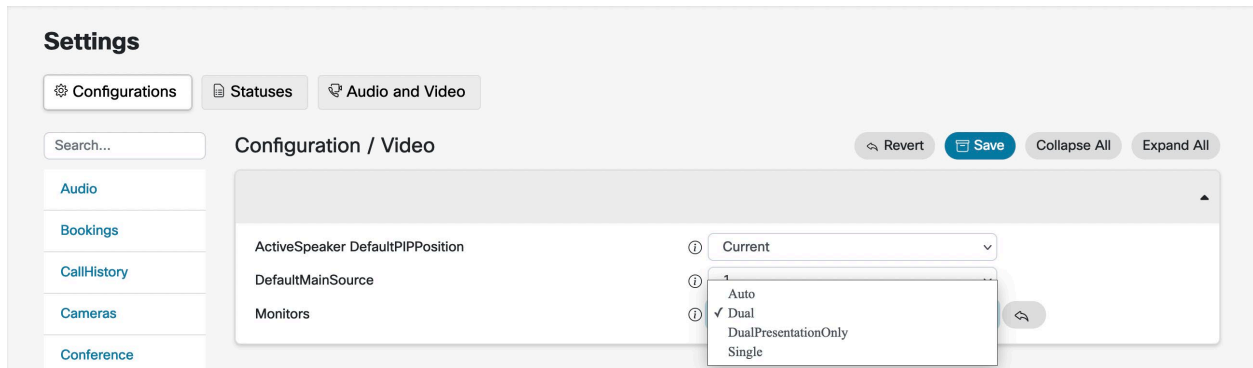


Figure 7: Change the setting to “Dual” or “DualPresentationOnly”

As soon as you select *Dual* or *DualPresentationOnly* from the drop-down list, the *Save* button will appear. Make sure to save the setting.

**What is the difference between “Dual” and “DualPresentationOnly”?** The short answer is that with “Dual”, remote participants will appear across both screens until someone starts a presentation. With “DualPresentationOnly”, video participants will appear only on the first screen. The other screen will show presentation, but will be blank if there is no presentation (although you can show Selfview). For detailed information on screen layouts, visit this website:

<https://help.webex.com/en-US/article/zp1dhab/Webex-Rooms-I-Video-Stream-Layouts>



## Step 2: Configure MonitorRoles in the web interface

Configuration / Video Collapse All Expand All

Output

**Connector 1**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="Auto"/>	
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="0"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

**Connector 2**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="Auto"/>	
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="1"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

Figure 8: MonitorRole defaults

In the Configuration Video menus – where you are already working – scroll way down to the Output section. For the Room Kit and Room Kit Plus, both Output Connector 1 and 2 MonitorRole are set for “Auto”. **You must change this.**

Refer to Step 1. If you set *Monitors: Dual*, then use these settings:

Connector 1 MonitorRole: *First*

Connector 2 MonitorRole: *Second*



If you set Monitors: [DualPresentationOnly](#), then use these settings:

Connector 1 MonitorRole: [First](#)

Connector 2 MonitorRole: [PresentationOnly](#)

Configuration / Video Revert Save Collapse All Expand All

Output

**Connector 1**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="First"/>	
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="0"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

**Connector 2**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="PresentationOnly"/>	
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="1"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

Figure 9: MonitorRole settings for DualPresentationOnly

Be sure to save your settings.

*Advanced Users:* If you have a projector and an LCD screen, you might want to reverse MonitorRoles and have Connector 1 be [PresentationOnly](#), with Connector 2 set for MonitorRole: [First](#).

The point is – don't leave any of these settings at "Auto". You must set them manually.



**Room 55 Single** – your web interface is different. You cannot change the MonitorRole on Connector 1. It is permanently set for MonitorRole: First. However, you should set Connector 2 for the appropriate MonitorRole as described above.

### Step 3: Set your Default Presentation Source

Below the Output section, you will see a Presentation section. For a Room Kit, you should select “2”. But for a Room Kit Plus or a Room 55 you can choose “2” or “3”. This number corresponds to the physical HDMI input that you are using for the laptop. Make sure to select the correct number. You will test this later, and you can change it at that time if it is not correct.

Presentation	
DefaultPIPPosition	<span>(i)</span> <input type="text"/>
DefaultSource	<span>(i)</span> <div>1 2 ✓ 3</div>
Priority	<span>(i)</span> <div>Equal</div>

Figure 10: Default Presentation Source

### Step 4: Name your Default Presentation Source

[Click on this link](#) to proceed.

### Step 5: (Optional) Set your Selfview defaults

You can, if you wish, set the defaults that your system will use whenever you want to use Selfview. If you want to set this now, [click on this link](#).

### Step 6: Test your PC or Laptop Computer

[Click on this link](#) to proceed.



## Room Kit Pro, SX80, MX800 Single with Single Screen

### Step 1: Configure the number of monitors in the web interface (Single)

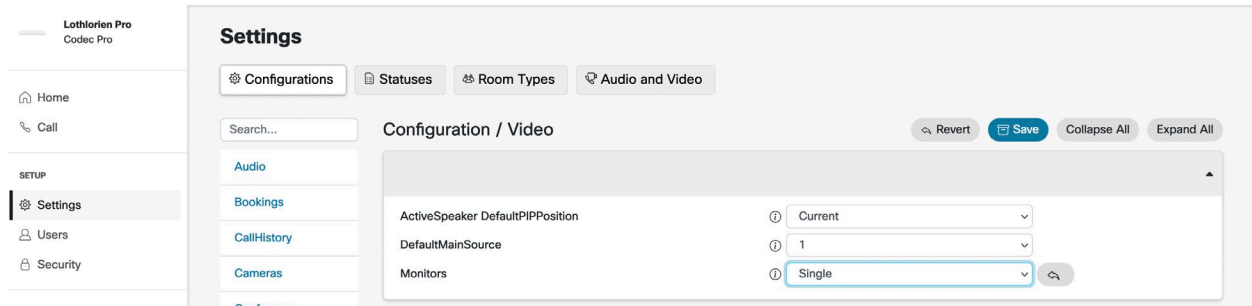


Figure 11: Change the setting to “Single”

As soon as you select *Single* from the drop-down list, the *Save* button will appear. Make sure to save the setting.

### Step 2: Configure the Connector 1 MonitorRole in the web interface

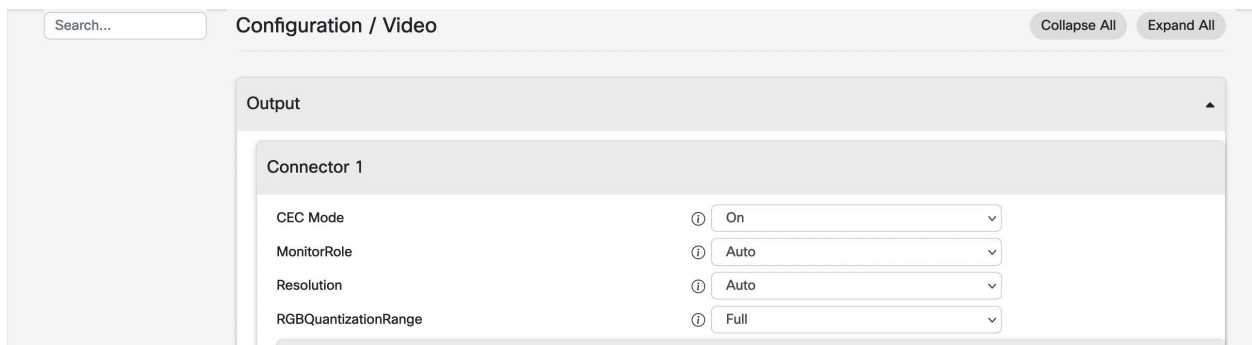


Figure 12: MonitorRole default

In the Configuration Video menus – where you are already working – scroll way down to the **Output** section. For the Room Kit and Room Kit Plus, Output Connector 1 MonitorRole is set for “Auto”. **You must change this to *First*.**

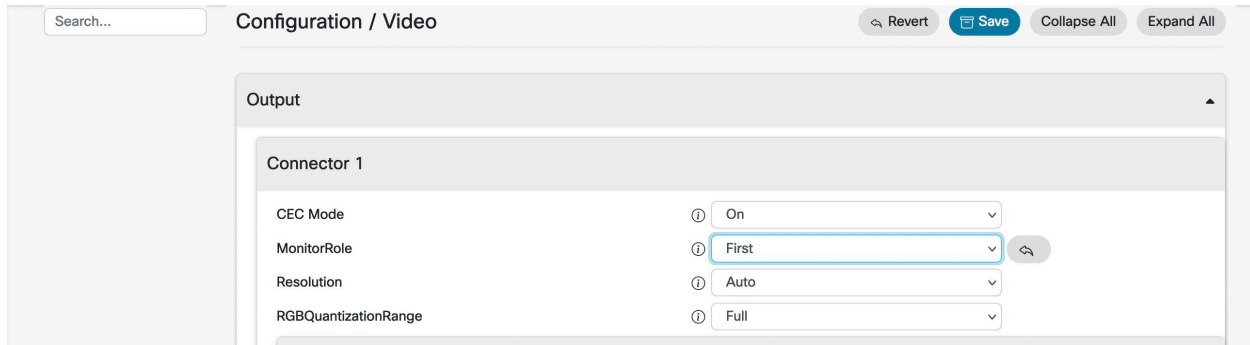


Figure 13: Change the setting to “First”

As soon as you select *First* from the drop-down list, the *Save* button will appear. Make sure to save the setting.

### Step 3: Set your Default Presentation Source

Below the Output section, you will see a Presentation section. There will be 5 or 6 choices to set the Default Source. This number corresponds to the physical HDMI (DVI / SDI) input that you are using for the laptop. Make sure to select the correct number; typically it will be 3, 4, or 5. You will test this later, and you can change it at that time if it is not correct.

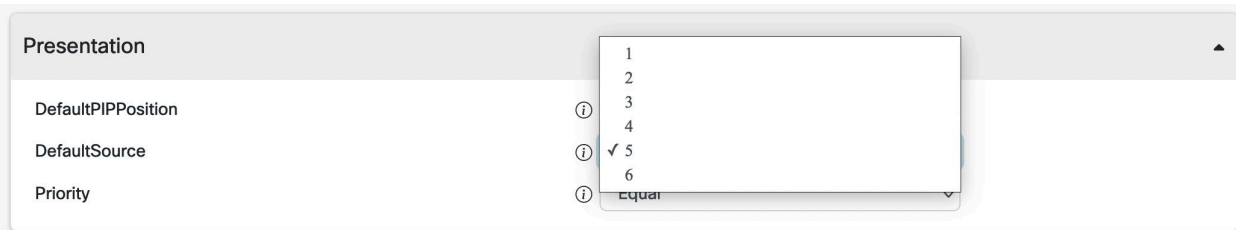


Figure 14: Default Presentation Source

### Step 4: Name your Default Presentation Source

[Click on this link](#) to proceed.

### Step 5: (Optional) Set your Selfview defaults

You can, if you wish, set the defaults that your system will use whenever you want to use Selfview. If you want to set this now, [click on this link](#).

### Step 6: Test your PC or Laptop Computer

[Click on this link](#) to proceed.

## Room Kit Pro, SX80, MX700, MX800 Dual with Two Screens

Step 1: Configure the number of monitors in the web interface (Dual or DualPresentationOnly)

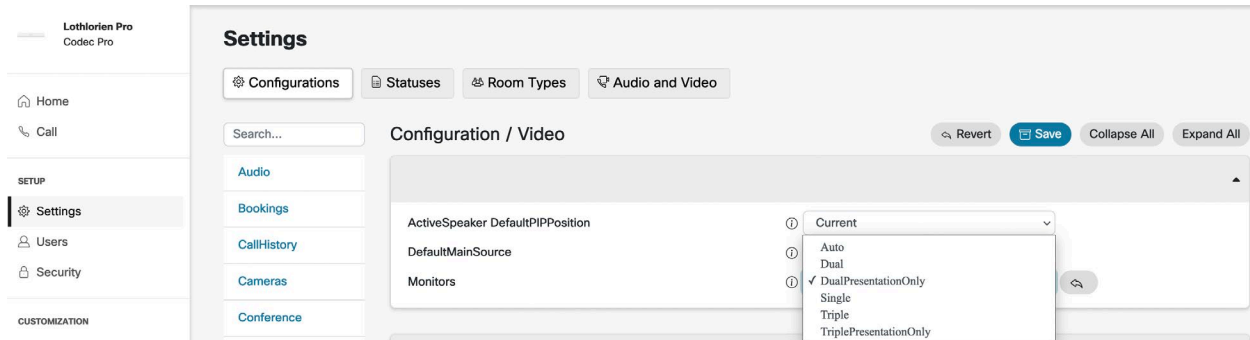


Figure 15: Change the setting to “Dual” or “DualPresentationOnly”

As soon as you select [Dual](#) or [DualPresentationOnly](#) from the drop-down list, the [Save](#) button will appear. Make sure to save the setting.

**What is the difference between “Dual” and “DualPresentationOnly”?** The short answer is that with “Dual”, remote participants will appear across both screens until someone starts a presentation. With “DualPresentationOnly”, video participants will appear only on the first screen. The other screen will show presentation, but will be blank if there is no presentation (although you can show Selfview).

For detailed information on screen layouts, visit this website:

<https://help.webex.com/en-US/article/zp1dhab/Webex-Rooms-l-Video-Stream-Layouts>



## Step 2: Configure MonitorRoles in the web interface

Configuration / Video Collapse All Expand All

Output

**Connector 1**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="Auto"/>	
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="0"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

**Connector 2**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="Auto"/>	
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="1"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

Figure 16: MonitorRole defaults

In the Configuration Video menus – where you are already working – scroll way down to the Output section. For the Room Kit Pro, SX80, and MX700/800, Output Connectors 1 and 2 MonitorRole are set for “Auto”. **You must change these.**

Refer to Step 1. If you set [Monitors: Dual](#), then use these settings:

Connector 1 MonitorRole: [First](#)

Connector 2 MonitorRole: [Second](#)



If you set Monitors: DualPresentationOnly, then use these settings:

Connector 1 MonitorRole: *First*

Connector 2 MonitorRole: *PresentationOnly*

Configuration / Video Revert Save Collapse All Expand All

Output

**Connector 1**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="First"/>	<span>↩</span>
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="0"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

**Connector 2**

CEC Mode	<input type="text" value="On"/>	
MonitorRole	<input type="text" value="PresentationOnly"/>	<span>↩</span>
Resolution	<input type="text" value="Auto"/>	
RGBQuantizationRange	<input type="text" value="Full"/>	

**Location**

HorizontalOffset	<input type="text" value="1"/>	(1 to 12 characters)
VerticalOffset	<input type="text" value="0"/>	(1 to 12 characters)

Figure 17: MonitorRole settings for DualPresentationOnly

Be sure to save your settings.

*Advanced Users:* If you have a projector and an LCD screen, you might want to reverse MonitorRoles and have Connector 1 be *PresentationOnly*, with Connector 2 set for MonitorRole: *First*.

The point is – don't leave any of these settings at "Auto". You must set them manually.



### Step 3: Set your Default Presentation Source

Below the Output section, you will see a Presentation section. There will be 5 or 6 choices to set the Default Source. This number corresponds to the physical HDMI (DVI / SDI) input that you are using for the laptop. Make sure to select the correct number; typically it will be 3, 4, or 5. You will test this later, and you can change it at that time if it is not correct.

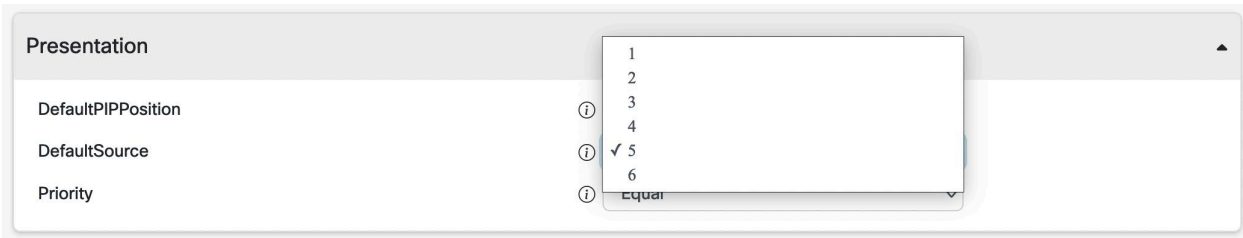


Figure 18: Default Presentation Source

### Step 4: Name your Default Presentation Source

[Click on this link](#) to proceed.

### Step 5: (Optional) Set your Selfview defaults

You can, if you wish, set the defaults that your system will use whenever you want to use Selfview. If you want to set this now, [click on this link](#).

### Step 6: Test your PC or Laptop Computer

[Click on this link](#) to proceed.

## Room Kit Pro, SX80, MX700, MX800 Dual with Three Screens

Step 1: Configure the number of monitors in the web interface (Triple or TriplePresentationOnly)

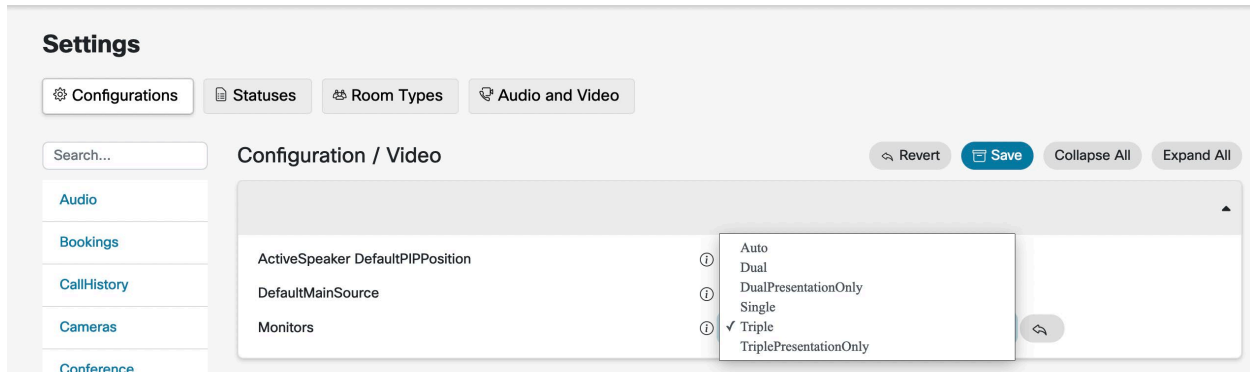


Figure 19: Change the setting to “Triple” or “TriplePresentationOnly”

As soon as you select *Triple* or *TriplePresentationOnly* from the drop-down list, the *Save* button will appear. Make sure to save the setting.

**What is the difference between “Triple” and “TriplePresentationOnly”?** The short answer is “they aren’t very different”. In a video call, remote participants will be visible across the first two screens, and any shared presentation will be on the third screen. There may be some advanced scenarios (i.e., using MultiSite on-prem) where it will make a difference if you have the third screen set for PresentationOnly. For detailed information on screen layouts, visit this website:

<https://help.webex.com/en-US/article/zp1dhab/Webex-Rooms-I-Video-Stream-Layouts>



## Step 2: Configure MonitorRoles in the web interface

Configuration / Video

Collapse All

Expand All

Output

Connector 1

CEC Mode

MonitorRole

Resolution

RGBQuantizationRange

On

Auto

Auto

Full

Location

HorizontalOffset

VerticalOffset

-1

0

(1 to 12 characters)

(1 to 12 characters)

Connector 2

CEC Mode

MonitorRole

Resolution

RGBQuantizationRange

On

Auto

Auto

Full

Location

HorizontalOffset

VerticalOffset

0

0

(1 to 12 characters)

(1 to 12 characters)

Connector 3

CEC Mode

MonitorRole

Resolution

RGBQuantizationRange

On

Auto

3840\_2160\_30

Full

Location

Figure 20: MonitorRole defaults

In the Configuration Video menus – where you are already working – scroll way down to the Output section. For the Room Kit Pro, SX80, and MX700/800, Output Connectors 1, 2 and 3 MonitorRole are set for “Auto”. **You must change these.**





Refer to Step 1. If you set *Monitors: Triple*, then use these settings:

Connector 1 MonitorRole: *First*

Connector 2 MonitorRole: *Second*

Connector 2 MonitorRole: *Third*

If you set Monitors: *TriplePresentationOnly*, then use these settings:

Connector 1 MonitorRole: *First*

Connector 2 MonitorRole: *Second*

Connector 3 MonitorRole: *PresentationOnly*



Configuration / Video

Revert Save Collapse All Expand All

Output

Connector 1

CEC Mode

On

MonitorRole

First

Resolution

Auto

RGBQuantizationRange

Full

Location

HorizontalOffset

-1

(1 to 12 characters)

VerticalOffset

0

(1 to 12 characters)

Connector 2

CEC Mode

On

MonitorRole

Second

Resolution

Auto

RGBQuantizationRange

Full

Location

HorizontalOffset

0

(1 to 12 characters)

VerticalOffset

0

(1 to 12 characters)

Connector 3

CEC Mode

On

MonitorRole

Third

Resolution

3840\_2160\_30

RGBQuantizationRange

Full

Location

HorizontalOffset

1

(1 to 12 characters)

Figure 21: MonitorRole settings for Triple

Be sure to save your settings.

*Advanced Users:* If you have a projector and two LCD screens, you might want to set the projector output for “[PresentationOnly](#)”.

The point is – don’t leave any of these settings at “Auto”. You must set them manually.



### Step 3: Set your Default Presentation Source

Below the Output section, you will see a Presentation section. There will be 5 or 6 choices to set the Default Source. This number corresponds to the physical HDMI (DVI / SDI) input that you are using for the laptop. Make sure to select the correct number; typically it will be 3, 4, or 5. You will test this later, and you can change it at that time if it is not correct.



Figure 22: Default Presentation Source

### Step 4: Name your Default Presentation Source

[Click on this link](#) to proceed.

### Step 5: (Optional) Set your Selfview defaults

You can, if you wish, set the defaults that your system will use whenever you want to use Selfview. If you want to set this now, [click on this link](#).

### Step 6: Test your PC or Laptop Computer

[Click on this link](#) to proceed.



All endpoints: Follow steps four, five, and six.

#### Step 4: Name your Default Presentation Source

Scroll back up in the web interface to the Configuration / Video / Input section. You will see Connector 1, Connector 2, and if you have an advanced codec, you will even see Connectors 3, 4, 5 and 6.

In the previous step you set your Default Presentation Source, with a number between 2 and 5. Go to the Connector number that matches your Default Presentation Source.

- Set “Input Source Type” to *PC*
- Type in a Name that will make it easy to find this source. This name will actually be used in the Share tray on the Navigator / Touch 10 interface, so it should be a name that makes sense. For example, you could name it “*Shared Laptop*” or “*USB Laptop*”. Feel free to use your local language.
- Set PresentationSelection to either *Manual* or *OnConnect*.
- Other settings: Set Quality to *Sharpness*, and set Threshold60fps to *Never*.

Configuration / Video Revert Save Collapse All Expand All

### Connector 3

CEC Mode	<input type="text" value="On"/>	
HDCP Mode	<input type="text" value="Off"/>	
InputSourceType	<input type="text" value="PC"/>	
Name	<input type="text" value="USB Ordinateur"/>	<input type="button" value="↺"/> (0 to 50 characters)
PreferredResolution	<input type="text" value="3840_2160_30"/>	<input type="button" value="↺"/>
PresentationSelection	<input type="text" value="Manual"/>	<input type="button" value="↺"/>
Quality	<input type="text" value="Sharpness"/>	
RGBQuantizationRange	<input type="text" value="Auto"/>	
Visibility	<input type="text" value="IfSignal"/>	

#### CameraControl

CameraId	<input type="text" value="3"/>	
Mode	<input type="text" value="Off"/>	

#### OptimalDefinition

Profile	<input type="text" value="High"/>	
Threshold60fps	<input type="text" value="Never"/>	<input type="button" value="↺"/>

Figure 23: Example settings for France



## Step 5: (Optional) Set your Selfview defaults

The screenshot shows the 'Selfview' configuration window. It has a title bar 'Selfview' with an expand/collapse arrow. Below is a 'Default' section with four settings: 'FullscreenMode' (Current), 'Mode' (Current), 'OnMonitorRole' (Current), and 'PIPPosition' (Current). Each setting has an information icon (i) and a dropdown arrow. Below the 'Default' section is an 'OnCall' section with two settings: 'Duration' (10, with a range '(1 to 60)') and 'Mode' (Off). Each setting in the 'OnCall' section also has an information icon (i).

Figure 24: Selfview defaults

These settings adjust how Selfview appears when you first activate it. If you know that you always want to see Selfview in a PIP on the Lower Left, for example, you can change it as follows:

This screenshot shows the same 'Selfview' configuration window, but with customized settings. In the 'Default' section, 'FullscreenMode' is set to 'Off' and 'PIPPosition' is set to 'LowerLeft'. Both of these dropdowns have a lock icon to their right, indicating they are locked. The other settings ('Mode', 'OnMonitorRole') remain 'Current'. In the 'OnCall' section, 'Duration' is still '10' and 'Mode' is still 'Off'.

Figure 25: Selfview defaults

As mentioned, this step is optional. Remember that during a call, you can use the Touch 10 / Navigator to move the Selfview image around, make it fullscreen, turn it on and off, etc. This section merely sets



the default behavior. The word “Current” simply means to leave Selfview the way it was when you last used it.

## Step 6: Test Your PC or Laptop for Presentation

**This step is important.** Do not run “USB Mode” yet.

- Make sure the computer or laptop you are using has the correct HDMI cable hooked up: this is the video cable used for Presentation. It may have HDMI extenders; there may be a video switcher in an advanced audiovisual integration, but it must connect into an HDMI input on the video endpoint you are using.
- If your computer has only a USB-C connection, you must use an adapter that has both HDMI and USB-A connections.

**NOTE: If your Windows laptop has only USB-C, you will need one of these adapters for HDMI and USB-A**



**Startech 3-IN-1 MULTIPORT  
ADAPTER p/n CDP2H DUACP2**

Figure 26: USB-C adapter for Windows laptops

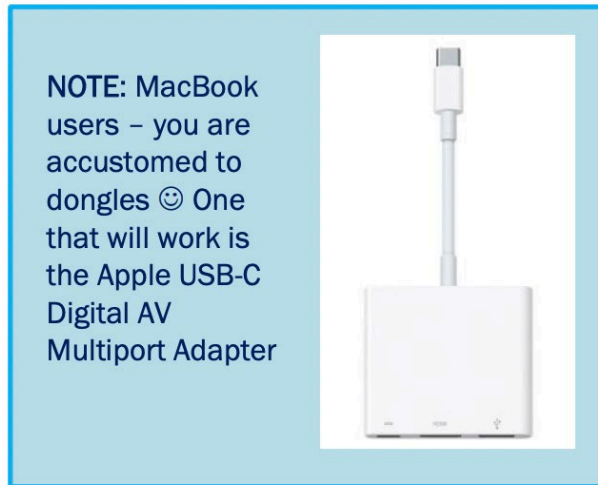


Figure 27: USB-C adapter for Macbook laptops

- Remember Step 3 “Set your default presentation source”? This is where you test to make sure you have this setting correct, and this is where you test for both video and audio.
- Using the Touch 10 or Navigator, select the “Share” or “Share screen” button, and then select the presentation source you just named.
- You should see your computer screen mirrored on the big screen(s). It should match exactly what you see on your laptop or computer screen; it should *not* be an extended desktop or second screen.
  - If necessary, adjust your computer settings so that what you see on the big screen mirrors what you see on your computer.
- Test audio. Play a video clip with music, or use a music app. It is important to verify that the audio from your computer is being sent to the video codec. You should hear the sound from whichever speaker system your Room Kit / SX80 / MX is using. For example, if you are using a Room Kit, you should hear the sound from the speaker bar. If you have a Quad Camera, you should hear the sound from the Quad Camera speakers. If you have an external sound system, you should hear the sound from those speakers. *The sound source should be the same as when you are in a regular video call.*

When you have verified that you can see and hear your computer, using a standard presentation cable, you have completed the video system setup. You can now proceed with testing USB Passthrough.

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