Cablecast Server
Setup Guide

©Tightrope Media Systems
For Cablecast version 6.5.2 Build 33

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1 Cablecast Server Setup

Thank you for purchasing a Cablecast server from Tightrope Media Systems! This guide will walk you through setting up your new server.

1.1 Prerequisites

Before beginning the installation, please make sure that you have the following resources available:

- An ethernet network connection

- A keyboard, mouse, and a VGA monitor

- Your existing A/V infrastructure (At least one video monitor, if you're just testing)

1.2 Overview of Setup

There are three parts to setting up your Cablecast server: Physical Setup, Software Setup, and Testing.

Physical Setup : Starting in chapter 2, you'll learn about the physical connections on the Cablecast server, and how to tie it into your existing infrastructure.

Software Setup : Next, in chapter 3, you be taken through the steps necessary to configure the Cablecast software to communicate with your server.

Testing : Finally, in chapter 4, you'll run some simple tests to make sure the Cablecast server is correctly configured and ready to use.

Sound like a plan? Let's get started!

2 Part I: Physical Setup

In this section, we'll be going over the physical setup of the Cablecast server.

2.1 In the box

Your Cablecast server should come with the following items in the box:

AC power cables : Powers the Cablecast server.

Server : The Cablecast server itself.

Adapter cables (Flex 4 only) : Five 1' male HD-BNC to female BNC adapter cables are included with the Flex 4 server. These cables allow you to connect the Flex 4 server into your station's infrastructure. See figure 2.1 for an example of an adapter cable for the Flex 4. The Flex 2 and Flex Lite do not require any adapter cables, as they have standard female BNC connectors on board.

FIGURE 2.1: The Cablecast Flex 4 Adapter Cables.
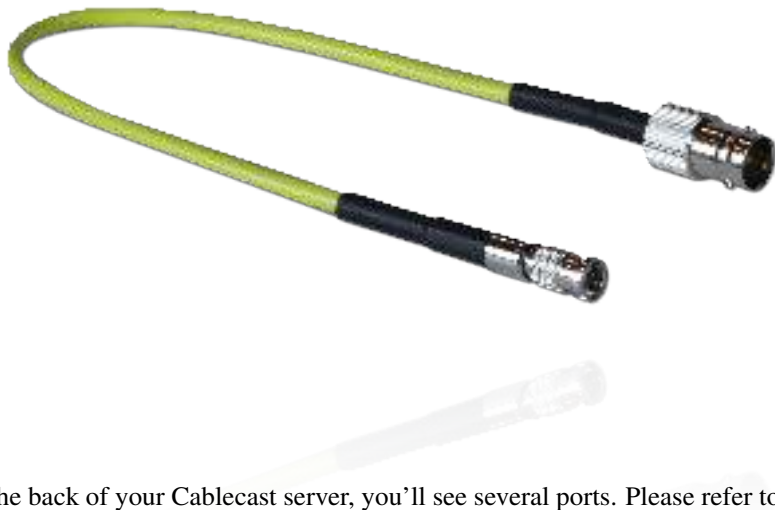
2.2 Physical Connections

On the back of your Cablecast server, you'll see several ports. Please refer to the appropriate section for your server, as the ports are somewhat different.

2.2.1 System Connections

All of the Cablecast servers share some basic system connections:

1. Connect a keyboard and mouse via the USB ports.

2. Connect a monitor. The monitor is required for server setup, and we recommend that it remain connected. All Cablecast servers have at least a VGA port, and this is what we recommend connecting up to the KVM in your rack.

3. Connect the Cablecast server to the network via one of the ethernet network jacks.

4. Connect the Cablecast server's power supply to an AC power source using the provided AC power cables.

2.2.2 AV Connections

Next, you will connect the Cablecast Flex server to your video infrastructure.

Flex Lite

The Flex Lite ships in a 1x1 configuration (one input and one output) from the factory. It can be reconfigured between 1x1 and 0x2 (zero inputs and two outputs) using the **Flex IO Configuration Utility** as covered in 2.2.4.

1. Connect a cable from **Out 1** to an input on your SD/HD-SDI routing switcher.

2. Connect a cable from **Out 2** or **In 1** to an input or output on your SD/HD-SDI routing switcher, based on your needs.

3. Connect house tri-level or analog blackburst to **Ref In**.

FIGURE 2.2: The Cablecast Flex Lite

1. AC Power

2. Service Port (Not Used)

3. USB 2.0

4. USB 3.0

5. Ethernet

6. VGA

7. DVI-I
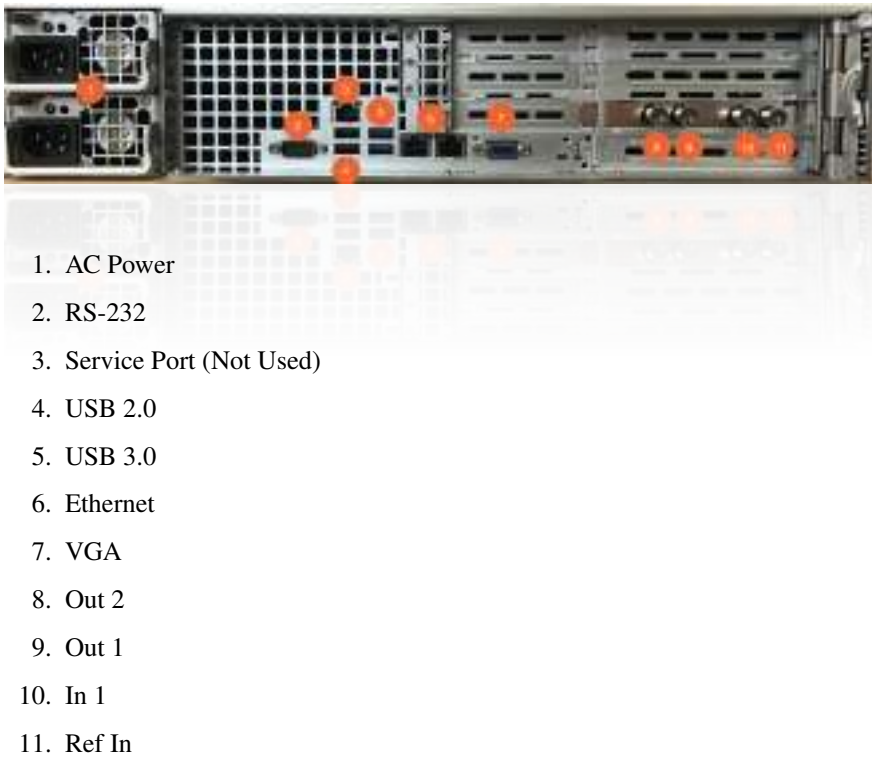
8. DisplayPort

9. Out 2

10. Out 1

11. In 1

12. Ref In

Flex 2

The Flex 2 ships in a 1x1 configuration (one input and one output) from the factory. It can be reconfigured between 1x1 and 0x2 (zero inputs and two outputs) using the **Flex IO Configuration Utility** as covered in 2.2.4.

1. Connect a cable from **Out 1** to an input on your SD/HD-SDI routing switcher.

2. Connect a cable from **Out 2** or **In 1** to an input or output on your SD/HD-SDI routing switcher, based on your needs.

3. Connect house tri-level or analog blackburst to **Ref In**.

FIGURE 2.3: The Cablecast Flex 2

1. AC Power

2. RS-232

3. Service Port (Not Used)

4. USB 2.0

5. USB 3.0

6. Ethernet

7. VGA

8. Out 2

9. Out 1

10. In 1

11. Ref In

Flex 4

> The Flex 4 includes five male HD-BNC to female BNC adapter cables. These can be used to adapt current BNC cables for usage with the Flex 4 server.

The Flex 4 ships in a 1x3 configuration (one input and three outputs) from the factory. It can be reconfigured to 0x4, 1x3, 2x2, 3x1 or 4x0 using the **Flex IO Configuration Utility** as covered in 2.2.4. The applied IO configuration determines whether a connector is an input or an output. Please see figure 2.4 to determine the IO assignments based on the current configuration of the Flex 4.

FIGURE 2.4: Flex 4 IO Mapping Chart. Label column corresponds to connection labels on back of IO card.

1. Connect a cable from **1** to an input or output on your SD/HD-SDI routing switcher, based on your needs.

2. Connect a cable from **2** to an input or output on your SD/HD-SDI routing switcher, based on your needs.

3. Connect a cable from **3** to an input or output on your SD/HD-SDI routing switcher, based on your needs.

4. Connect a cable from **4** to an input or output on your SD/HD-SDI routing switcher, based on your needs.

5. Connect house tri-level or analog blackburst to **Ref In**.

FIGURE 2.5: The Cablecast Flex 4

1. AC Power

2. RS-232

3. Service Port (Not Used)

4. USB 2.0

5. USB 3.0

6. Ethernet

7. VGA

8. IO 4

9. IO 3

10. IO 2

11. IO 1

12. Ref In

2.2.3   Powering On

Once your Cablecast server is connected, power on the server by pressing the power button on the front of the unit. The unit will boot into the Windows desktop, and be ready for both IO configuration (if needed) and Cablecast software setup.

2.2.4   Flex IO Configuration Utility

To change the IO configuration of your flex server you will need to run the **Flex IO Configuration Utility**. The utility is located in **C:\TRMS\Control Modules**. Double click the **Flex IO Configuration Utility.exe** to start. With the application open click the desired configuration and follow the prompts.
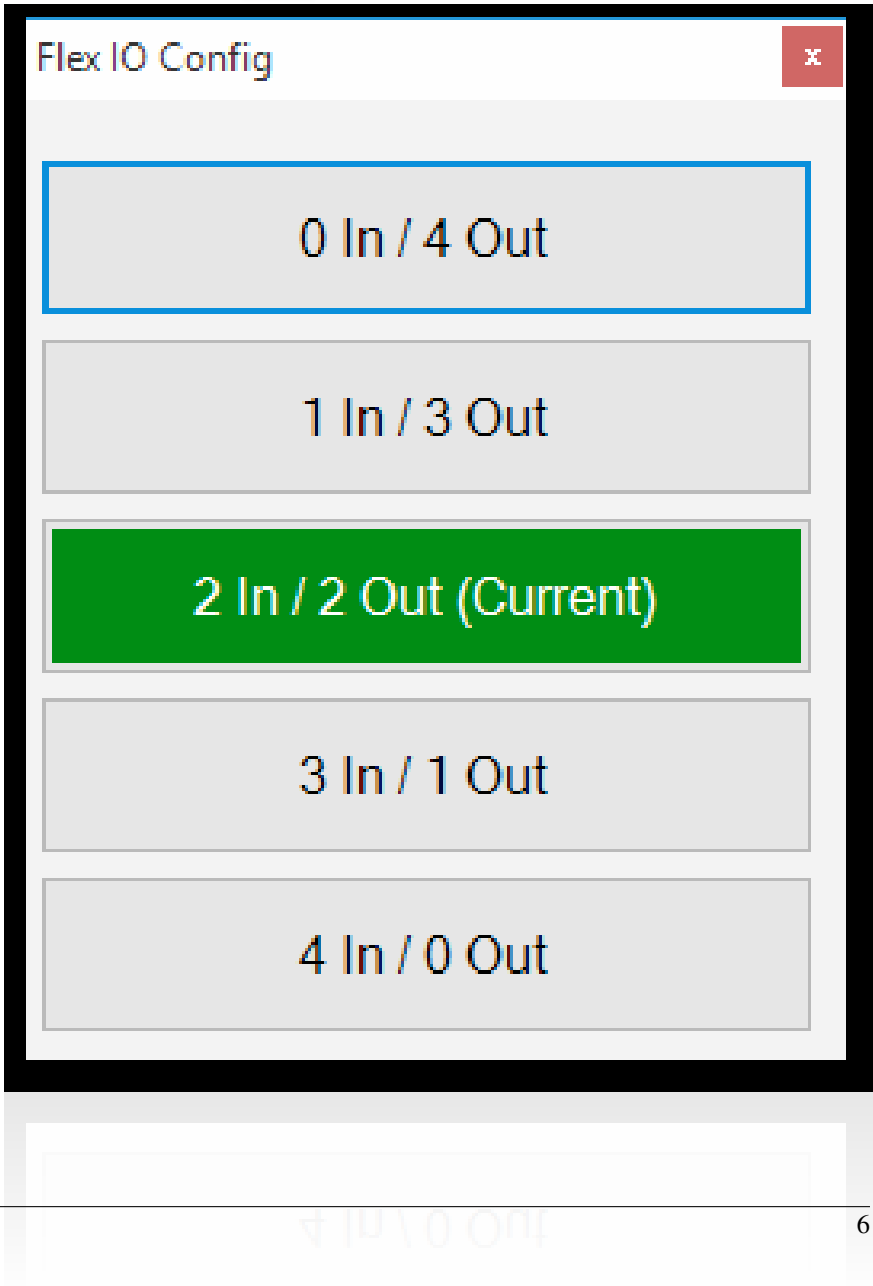
A restart of your Flex Server will be required to change the IO configuration.

FIGURE 2.6: Finding the Flex IO Configuration Utility

FIGURE 2.7: Running the Flex IO Configuration Utility

3 Part II: Software Setup

Now that you've connected your Cablecast server to your AV infrastructure, it's time to configure the Cablecast software. There are four steps involved in software configuration:

1. Servers

2. Control Module Sets

3. Devices

4. Cablecast server Settings

In order to begin the software setup, you must log into the Cablecast Web Interface via FrontDoor. From the desktop of the Cablecast server, open up a web browser, and navigate to "`http://localhost/FrontDoor`"[1]

If you are connecting your Cablecast video server to an existing Cablecast Pro server, you'll need to log into the Cablecast Web Interface that resides on the Cablecast Pro server. In this configuration, the Cablecast server is being controlled by the Cablecast Pro server, so all web-based configuration will take place on the Cablecast Pro server.

By default, FrontDoor ships with an Admin user account with the following credentials:

Username: **Admin**
Password: **trms**

For more information about user accounts and logging into FrontDoor, see the FrontDoor User Manual.

Once you have logged into Cablecast, you will see the Cablecast Main Menu page, as shown in figure 3.1 on the following page.

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[1] You can perform this configuration over the network as well. Just replace "`localhost`" with the IP address of the Cablecast server.

FIGURE 3.1: The Main Menu of
the Cablecast Web Interface.

3.1 Creating Servers

The first step is to inform the Cablecast software of the new Cablecast server. We'll
accomplish this by creating a "Host" for the Control Modules[2].

From the Main Menu, navigate to **Settings: System Settings : Servers**.

Depending on your system setup, there are two ways to configure the Servers
page:

If you're running a standalone Cablecast video server:

> There's a good chance that this Server already exists. If it does, please skip this
> step.

1. Click **New** to create a single Server (if there isn't one already)

2. Enter a Name of "localhost"

3. Enter a Host Address of "localhost"

The screen should look something like figure 3.2. Click the "Save" button.

FIGURE 3.2: Servers screen in a
standalone configuration.

**If you're running a Cablecast video server that is controlled by a Cablecast
Pro server:**

1. Click **New** to create a new **Server**

2. Enter a unique name for the server, like "Flex 4-1" or "Live Stream 1"

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[2] Cablecast's Control Modules are in charge of controlling devices, such as video servers, VTRs, DVD
players, Routing switchers, and more.

3. In the Host Address field, enter the IP address[3] of your Cablecast server

The screen should look something like figure 3.3. Click the "Save" button.

You may have more Servers defined, depending on your specific system setup. For more information about Servers, please see the Cablecast User Manual.

Having informed the Cablecast software of the new Cablecast server, we can continue to the next step; creating a Control Module Set.

3.2 Creating Control Module Sets

Each "Host" defined in the Servers page can be running many different Control Modules, each controlling different devices. In this next section, we'll define a specific "set" of Control Modules that are in charge of controlling the Cablecast server.

From the Main Menu, navigate to **Location Settings**, and click on the **IO** tab.

Another warning screen will appear the first time you select the **IO** tab. Again, in this case we *want* to modify the system settings, so it is safe to dismiss the warning by clicking the "Continue" button.

Once on the **IO** tab, select **Control Module Sets**.

We will be creating two new Control Module Sets for your Cablecast server; one to control playback, and another to control recording. To create the playback Control Module Set (*CMS*, for short):

1. Click the "New" button to create a blank CMS.

2. Give the new CMS a name of "Video Playback"

3. In the **Control Module** dropdown list, select the "SXPlayerCM" that corresponds to the Control Module Host you created in the previous section.

4. In the **Port/IP/LocalPath** field, enter the path to the content directory on the Cablecast video server. This is the directory where your digital files reside. Typically, "E:\".

Next, create the recording Control Module Set:

1. Click the "New" button to create a blank CMS.

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[3] You may also enter the DNS name of the Cablecast server in place of an IP Address.

2. Give the new CMS a name of "Video Encoder"

3. In the **Control Module** dropdown list, select the "SXEncoderCM" that corresponds to the Control Module Host you created in the previous section.

4. In the **Port/IP/LocalPath** field, enter the path to the content directory on the Cablecast video server. This is the directory where your digital files reside. Typically, "E:\".

When finished, your Control Module Sets should look something like figure 3.4.

FIGURE 3.4: A typical CMS screen after configuring a Cablecast video server.

Regardless of which of the Cablecast video server models you purchased, you will need to create exactly two Control Module Sets per server. You will most likely have several other Control Module Sets configured for the various other devices being controlled by Cablecast.

Now that we have created the Control Module Sets for the Cablecast video server, we need to define the specific playback and recording devices that are controlled by the new Control Module Sets.

3.3 Creating Devices

Each Cablecast video server has a collection of playback and recording devices. You can think of these as inputs and outputs. Specifically, the Flex Lite and Flex 2 each ship configured with one recording input and one playback output. The Flex 4 ships configured with one recording input and three playback outputs. The Flex server IO configurations can be changed by using the **Flex IO Configuration Utility** as covered in 2.2.4. In this section, we'll configure Cablecast to control these input and output devices.

To begin, from the Main Menu, navigate to **Location Settings**, click on the **IO** tab, and enter the **Devices** page.

In the following section, the specified settings must be configured as stated. There are other settings available on each screen, and these extra settings can be configured to suit your station's needs.

3.3.1 Create Playback Devices

1. Click the **New** button to create the first playback device.

2. Click in the newly created device (labeled **New Input**) to enter the Edit Device screen.

3. Enter the following information in the device fields:

> **Name** : "Playback 1"

> **Router Input** : Enter the input number of your routing switcher

> **Device Function** : "Playback Only"

> **Device Type** : "Digital File"

> **Device CMS** : Select the "Video Playback" Control Module Set that you created in section 3.2 on page 9.

> **Device Address** : "0". Device addresses are zero-based, so the first playback device's address is zero.

> **Device End Action** : Select "None"

When finished, your screen should like like figure 3.5. Click **Save** to return to the device list screen.

FIGURE 3.5: Setting up the first playback device.

If your server has additional outputs, you will now create additional playback devices.

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1. Click the **New** button to create the second playback device.

2. Click in the newly created device (labeled **New Input**) to enter the Edit Device screen.

3. Enter the following information in the device fields:

> **Name** : "`Playback 2`" or the number of the playback channel you're adding

> **Router Input** : Enter the input number of your routing switcher

> **Device Function** : "`Playback Only`"

> **Device Type** : "`Digital File`"

> **Device CMS** : Select the "Video Playback" Control Module Set that you created in section 3.2 on page 9.

> **Device Address** : "1". Device addresses are zero-based, so the second playback device's address is one, the third is two, and so on.

> **Device End Action** : Select "`None`"

When finished, your screen should like like figure 3.6. Click **Save** to return to the device list screen.

FIGURE 3.6: Setting up the second playback device.

Next, we'll configure the record device(s).

3.3.2 Create Record Devices

To create the first record device:

1. Once again, click the "New" button on the device list screen to create a new device.

2. Click in the newly created device (labeled **New Input**) to enter the Edit Device screen.

3. Enter the following information in the device fields:

Name : "Record 1"

Device Function : "Record Only"

Device Type : "Digital File"

Device CMS : Select the "Video Encoder" Control Module Set that you created in section 3.2 on page 9.

**Device Address** : "0". Device addresses are zero-based, so the first record device's address is zero, the second is one, and so on.

Device End Action : Select "Stop Record"

Router Output : Enter the output number of your routing switcher that is connected to this record input.

When finished, your screen should like like figure 3.7 on the next page. Click **Save** to return to the device list screen.
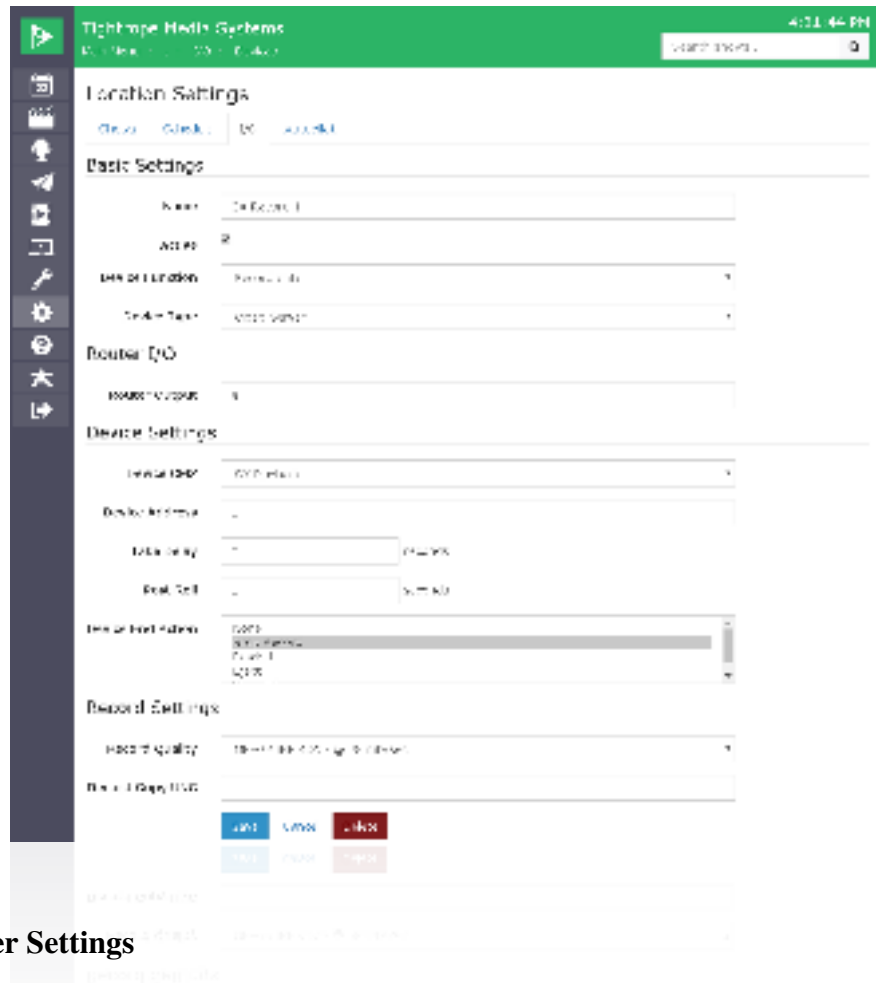
3.4 Cablecast Video Server Settings

The last set of software settings allow you to modify specific playback and record parameters of the Cablecast video server. All of these settings are configured via the **SX Configuration** system tray utility that is installed on the Cablecast video server, and cannot be configured via the Cablecast Web Interface. To access the SX Configuration utility, double-click on the icon in the system tray.

> The SX Configuration utility looks like a green circle with the letters **SX** in the middle (see figure 3.8 on the following page).

3.4.1 Playback Tab

The **Playback** tab (seen in figure 3.9 on the next page) allows you to configure two options for each output:

         Component output : This option is only available on output 0 (and output 2 on the SX-4) of the SD SX servers (SX-LE, SX-2, and SX-4), and is not officially supported by Tightrope Media Systems. When this option is enabled, the composite cable for the output (labeled **Y/CVBS Out A** is transformed into the "Y" part of the three component cables. Disabling this option returns the **Y/CVBS Out A** cable to carrying composite video.

         Audio level : Allows you to configure the audio level for this

FIGURE 3.8: The SX Configuration utility.

FIGURE 3.9: Playback tab for a SX-4.
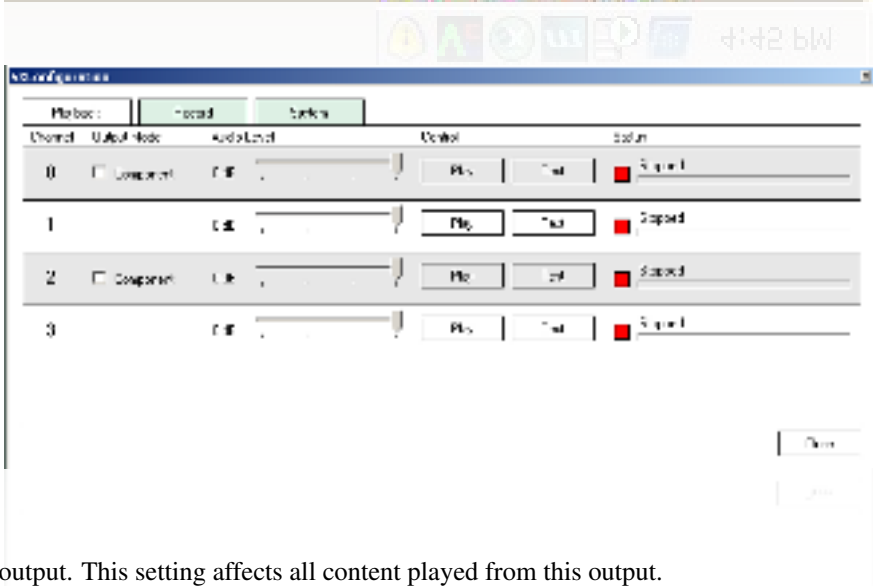
output. This setting affects all content played from this output.

> Changing the values of the playback controls will apply your changes in real-time. It may not be a good idea to alter these settings while your video server is on-air.

> SDI output is always enabled. Video will be played back on both the SDI output and the Composite outputs, depending on which is selected. Audio will be played back on all audio outputs.

> The component video output is not supported on the Cablecast SX servers. While you may choose to use it, Tightrope Media Systems will not be able to provide help or support for this configuration.

On this tab, you'll also see a status column that reports the current state of the output. As a file is playing, a progress bar will display how far into the file the
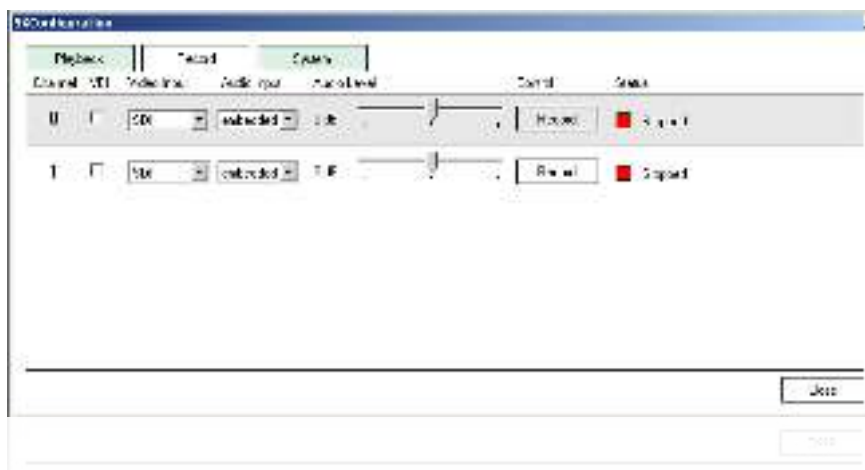
playback has progressed.

> The status column updates approximately once every five seconds, it is not a real-time status monitor of your video server.

3.4.2 Record Tab

FIGURE 3.10: Record tab for an SX-4.

The **Record** tab (seen in figure 3.10) allows you to configure several options for encoding video on your video server:

VBI : When checked, VBI data (V-chip, closed captioning) will be encoded if available. The VBI data stream will be automatically saved as a separate file next to the video file, with a file name of "vbi_<filename>.avi".

Video Input : Selects which of the video inputs will be used to record video. Choices are **Composite**, **Component** (not supported), **S-Video**, **SDI**, and **Bars**.

Audio Input : Selects which of the audio inputs will be used to record audio. Choices are **Analog**, **Embedded**[4], **AES/EBU**, and **Tone**.

> Changing the values of the record controls will apply your changes in real-time. It may not be a good idea to alter these settings while your video server is actively encoding.

> The component video input and the AES/EBU audio input are not supported on the Cablecast SX servers. While you may choose to use them, Tightrope Media Systems will not be able to provide help or support for these configurations.

3.4.3 System Tab

In the **System** tab (shown in figure 3.11 on the next page), you can configure various other settings and features of your video server. The first setting (in the **Resolution** section) allows you to adjust the video resolution that the SX server uses. Choices include **480i SD**, **480i Widescreen**, or **576i SD PAL**, HD servers also support **720p 1280x720** and **1080i 1920x1080**.

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[4] available only when SDI is selected as the video input

FIGURE 3.11: The Server Options
dialog box

The **Resolution** setting applies to *both* playback and recording.

The second setting (in the **Genlock** section) allows you to define if the server should sync to an external genlock source, which should be connected to the **Ref In** connector on the video server. If this setting is checked, the video server will sync to the provided genlock source. If it is unchecked, internal genlock will be used. The current Genlock Status is shown, if you are using External Genlock the status should be **Locked**. If you are using Internal Genlock, the status should be **Free Running**. The next setting (in the **Maintenance** section) controls how the video server performs maintenance required for the system's media storage. You can use the check box to enable or disable the maintenance completely (disabling it is not recommended). When it is enabled it will perform storage maintenance at the specified time every day.

Maintenance may interrupt playback or encoding on your server so you should choose a time that the system is not busy. The default is 3:00AM, but can be changed to any time that suits your environment.

The final area of the **Server** tab (**Version Information**) lists version numbers for each component of the video server system. If you require support from Tightrope Media Systems on your server, please have these version numbers handy. Your server will confirm that the correct Matrox drivers are installed and warn you if there is a mismatch.

4 Part III: Testing

Now that you've hooked up and configured your Cablecast server, it's time to run some simple tests to ensure that playback and recording are working as you expect.

4.1 Prepare to Test

You will need to have a few items available before beginning your testing:

- At least one compatible video file to play back (see section 6.1 on page 28)

- A video and audio source to test recording

- An NTSC or SDI video monitor and an audio monitor (if your Cablecast video server is already connected to your existing AV infrastructure, you may route the server outputs to your monitoring equipment via your routing switcher)

4.2 Test Playback

To begin, we'll test audio and video playback. On the Cablecast video server, perform the following steps for each of your video outputs.

1. Double-click the SX Configuration utility and select the **Playback** tab.

2. Click the **Play** button on an output.

3. In the **Open File** dialog box that appears, select your test video file and click **Open**.

4. After a moment, the file should begin playing on the chosen output. Check that both audio and video are played back.

5. When finished, click the **Stop** button for the same output.

6. The file should stop playing.

If your file doesn't play back:

- Are you monitoring the correct output?

- Does your file meet the server playback requirements (outlined in section 6.1 on page 28)?

- Are you connected to the correct video server BNC connectors?

If everything appears correct, you may need to go back and double check your software configuration.

4.3   Test Recording

Next, we'll test audio and video recording. On the Cablecast video server, perform the following steps for your configured video input or inputs.

1. Connect valid video and audio sources to the record input.

2. Double-click the SX Configuration utility and select the **Record** tab.

3. Click the **Record** button on an input.

4. In the **Save As** dialog box that appears, navigate to a directory, enter a name for your video file and click **Save**.

5. The Cablecast video server should begin recording to the file you selected.

6. After recording for about a minute or so, click the **Stop** button for the input.

7. The Cablecast video server will stop recording.

8. Repeat the playback tests (from section 4.2 on the preceding page) with the newly recorded file to make sure that both audio and video were correctly recorded.

> If your file doesn't play back and you suspect it wasn't recorded correctly:
>
> - Are you connected to the correct video server BNC connectors?
>
> - Double check your video/audio source. Does it display correctly if plugged in directly to a monitor?
>
> If everything appears correct, you may need to go back and double check your software configuration.

4.4   Note On Passthrough

It is not possible to test passthrough using **SX Configuration**. However if a passthrough is active the **Playback** tab will display that it is actively passing through video from an encoder on the system. Stopping the output channel will stop the active passthrough.

FIGURE 4.1: SX Configuration monitoring a passthrough.

5 Legacy SX Servers

This chapter goes over the details of legacy Cablecast SX servers.

5.1 In the box

The Cablecast SX server should come with the following items in the box:

AC power cables : Powers the Cablecast SX server.

Server : The Cablecast SX server itself.

SX breakout cables : These breakout cables allow you to connect the SX server into your station's infrastructure. See figure 5.1 on the next page for an example of SD breakout cables for the SX-LE, SX-2, and SX-4. figure 5.2 on the following page shows an example of the HD breakout cables for the SX2-HD. The SXLE-HD does not require any breakout cables.

> The SX-LE and SX-2 come with one set of two breakout cables (one video and one audio), and the SX-4 comes with two sets of video and audio cables (two video, two audio). The SX2-HD also has one set of two breakout cables (one video and one audio) but they carry SDI video and AES/EBU audio.

FIGURE 5.1: The Cablecast SX
SD Breakout Cables.

FIGURE 5.2: The Cablecast SX
HD Breakout Cables.

5.2   Physical Connections

On the back of your Cablecast SX server, you'll see several ports. Please refer to the appropriate section for your server, as the ports are somewhat different.

5.2.1   System Connections

All of the Cablecast SX servers share some basic system connections:

1. Connect a keyboard and mouse. One PS/2 port is provided, and can be used for either a keyboard or mouse. USB keyboards and mice are suggested if possible.

2. Connect a monitor. The monitor is required for server setup, and we recommend that it remain connected. The Cablecast SXLE-HD has a single VGA port, whereas the other server have a DisplayPort and DVI-I port. A DVI to VGA adapter is included.

3. Connect the Cablecast SX server to the network via one of the ethernet network jacks.

4. Connect the Cablecast SX server's power supply to an AC power source using the provided AC power cables.

5.2.2   AV Connections

Next, you will connect the Cablecast SX server to your video infrastructure.

> The SX breakout cables are "keyed" so that they can only fit in the appropriate port on the back of the SX server. Do not force the SX breakout cables into the port!

SX-LE and SX-2

The video and audio connections on the Cablecast SX-LE and Cablecast SX-2 are identical.

FIGURE 5.3: The Cablecast SX-LE

1. AC Power
2. PS2
3. USB 2.0
4. RS-232
5. Ethernet
6. USB 3.0

7. DVI-I and DisplayPort

8. AUIDIO

9. VIDEO

FIGURE 5.4: The Cablecast SX2

1. AC Power

2. PS2

3. USB 2.0

4. RS-232

5. Ethernet

6. USB 3.0

7. DVI-I and DisplayPort

8. AUDIO

9. VIDEO

1. Connect the video breakout cable to the **VIDEO** port.

2. Connect the audio breakout cable to the **AUDIO** port.

See section 5.2.4 for an explanation of the connectors on each breakout cable.

SX-4

1. Connect a video breakout cable to the **VIDEO** port labeled **AV I/O 1**.

2. Connect a video breakout cable to the **VIDEO** port labeled **AV I/O 2**.

3. Connect a audio breakout cable to the **AUDIO** port labeled **AV I/O 1**.

4. Connect a audio breakout cable to the **AUDIO** port labeled **AV I/O 2**.

1. AC Power

2. PS2

3. USB 2.0

4. RS-232
5. Ethernet
6. USB 3.0
7. DVI-I and DisplayPort
8. VIDEO 1
9. AUDIO 1
10. VIDEO 2
11. AUDIO 2

See section 5.2.4 for an explanation of the connectors on each breakout cable.

SXLE-HD

The Cablecast SXLE-HD does not require any breakout cables.

1. Connect a cable from **Out 1** to an input on your SD/HD-SDI routing switcher.
2. Connect a cable from an output of your SD/HD-SDI routing switcher to **In 1**.
3. Connect house tri-level or analog blackburst to **Ref In**.

FIGURE 5.6: The Cablecast SXLE-HD

1. AC power
2. PS2
3. USB 2.0
4. RS-232
5. Ethernet
6. USB 3.0
7. VGA
8. OUT 1

9. IN 1

10. REF IN

SX2-HD

1. Connect the video breakout cable to the large 8-coaxial pin connector. These outputs also have embedded audio.

2. Connect the audio breakout cable to the keyed 26-pin connector labeled **A** if you plan to use AES/EBU audio.

FIGURE 5.7: The Cablecast SX2-HD

1. AC power

2. PS2

3. USB 2.0

4. RS-232

5. Ethernet

6. USB 3.0

7. DVI-I and DisplayPort

8. AUDIO

9. VIDEO

See section 5.2.5 for an explanation of the connectors on each breakout cable.

5.2.3   Final Connections

Next, connect the SX breakout cables to your existing AV infrastructure as needed. Each individual cable on the SX breakout "bundle" is labeled as described in section 5.2.4 for the SX-LE, SX-2, and SX-4. See section 5.2.5 for the SX2-HD breakout cables.

Once your Cablecast SX server is connected, power on the server by pressing the power button on the front of the computer.

5.2.4 SD SX AV Connections

Each SD SX video breakout cable has the following connections:

CVBS In : Encoder composite video input

Y In : Not used

U/Y In : Not used

V/C In : Not used

AES In : Encoder AES/EBU input

SDI In : Encoder SDI input

Ref In : Genlock input

Y/CVBS Out A : Playback channel 1 composite output

U/Y Out : Not used

V/C Out : Not used

AES Out 1/2 : Playback channel 1 AES/EBU output

SDI Out A : Playback channel 1 SDI output

CVBS Out B : Playback channel 2 composite output

AES Out 3/4 : Playback channel 2 AES/EBU output

SDI Out B : Playback channel 2 SDI output

Each SD SX audio breakout cable has the following connections:

In 1 : Encoder audio input (Left)

In 2 : Encoder audio input (Right)

Out 1 : Playback channel 1 audio output (Left)

Out 2 : Playback channel 1 audio output (Right)

Out 3 : Playback channel 2 audio output (Left)

Out 4 : Playback channel 2 audio output (Right)

> The audio connections on the Cablecast SX servers are *balanced*. If your AV infrastructure requires unbalanced audio, you will need to use proper converting equipment to convert to unbalanced.

5.2.5 HD SX AV Connections

The SX2-HD video breakout cable has the following connections:

SDI In A : Encoder SDI video Input

SDI In B/Key : Not used

Analog Ref In : Reference signal input (tri-level or blackburst)

SDI Out A : Playback channel 1 SDI output

SDI Out B : Not used

SDI Out C/Key : Playback channel 2 SDI output

SDI Out D/Key : Not used

Analog Ref Loop Out : Reference signal loop output

The SX2-HD audio breakout cable has the following connections:

AES In 1/2 : Encoder AES/EBU input

AES In 3/4 : Not used

AES In 5/6 : Not used

AES In 7/8 : Not used

AES Out 1/2 : Playback channel 1 AES/EBU output

AES Out 3/4 : Not used

AES Out 5/6 : Playback channel 2 AES/EBU output

AES Out 7/8 : Not used

AES Out 9/10 : Not used

AES Out 11/12 : Not used

AES Out 13/14 : Not used

AES Out 15/16 : Not used

6   Additional Information

6.1   Codec Compatibility List

Cablecast video servers are designed to play back several video formats. A complete list can be found in figure

6.2   Help and Support

For critical support issues, our technical support team is available via email and phone. Send requests to support@trms.com or call us toll-free at 1-866-866-4118 ex. 250.

SX VIDEO SERVER FORMATS

Codec and format support is subject to change. Please check to make sure you have the latest version of this document: trms.com/support/documentation

SD SERVERS - SXLE, SX2, SX4

Supported Codecs	File Extension	Profile	Level	Frame Size (w x h)	Frame Rate (frames per second)	Audio Codec	PCM Audio Bits Per Sample	Audio Sample Rate
MPEG2	.mpg .mpeg	Main (420), 422	Main	720x480	29.97	MP2 (MPEG 1 Layer 2), PCM	16, 24, 32	44.1Khz, 48Khz
DVCAM	.avi .mov .mp4			720x480	29.97	PCM	16, 24, 32	48Khz
DVCPRO	.avi .mov .mp4			720x480	29.97	PCM	16, 24, 32	48Khz
DV50	.avi .mov .mp4			720x480	29.97	PCM	16, 24, 32	48Khz
H.264	.mov .mp4	Main, High, High 10, High 422		720x480	29.97	AAC-LC		48Khz
XDCAM SD	.mov			720x480	29.97	PCM	16, 24, 32	48Khz
IMX	.avi .mov			720x480	29.97	PCM	16, 24, 32	48Khz

SX2HD-OUTPUT 480i / 1080i

Supported Codecs	File Extension	Profile	Level	Frame Size (w x h)	Frame Rate (frames per second)	Audio Codec	PCM Audio Bits Per Sample	Audio Sample Rate
MPEG2	.mpg .mpeg	Main (420), 422	Main, High-1440, High	720x480 1440x1080 1920x1080	29.97	MP2 (MPEG 1 Layer 2), PCM	16, 24, 32	44.1Khz, 48Khz
DVCAM	.avi .mov .mp4			720x480	29.97	PCM	16, 24, 32	48Khz
DVCPRO	.avi .mov .mp4			720x480	29.97	PCM	16, 24, 32	48Khz
DVCPRO HD	.avi .mov .mp4			1280x1080	29.97	PCM	16, 24, 32	48Khz
DV50	.avi .mov .mp4			720x480	29.97	PCM	16, 24, 32	48Khz
H.264	.mov .mp4	Main, High, High 10, High 422		720x480 1920x1080	29.97	AAC-LC		48Khz
XDCAM SD	.mov			720x480	29.97	PCM	16, 24, 32	48Khz
XDCAM HD	.mov	Main (420)	High-1440, High	1440x1080 1920x1080	29.97	PCM	16, 24, 32	48Khz
XDCAM HD 422	.mov	422	High	1920x1080	29.97	PCM	16, 24, 32	48Khz
XDCAM EX	.mov .mp4	422	High	1920x1080	29.97	PCM	16, 24, 32	48Khz
IMX	.avi .mov			720x480	29.97	PCM	16, 24, 32	48Khz
Apple ProRes	.mov	422, 422HQ, 422LT, 422Proxy		720x480 1920x1080	29.97	PCM	16, 24, 32	48Khz

SX2HD-OUTPUT 720p

Supported Codecs	File Extension	Profile	Level	Frame Size (w x h)	Frame Rate (frames per second)	Audio Codec	PCM Audio Bits Per Sample	Audio Sample Rate
MPEG2	.mpg .mpeg	Main, 422	High	1280x720	59.94	MP2 (MPEG 1 Layer 2), PCM	16, 24, 32	44.1Khz, 48Khz
DVCPROHD	.avi .mov .mp4			960x720	59.94	PCM	16, 24, 32	48Khz
H.264	.mov .mp4	Main, High, High 10, High 422		1280x720	59.94	AAC-LC		48Khz
XDCAM HD 422	.mov	422	High	1280x720	59.94	PCM	16, 24, 32	48Khz
XDCAM EX	.mov .mp4	422	High	1280x720	59.94	PCM	16, 24, 32	48Khz
Apple ProRes	.mov	422, 422HQ, 422LT,		1280x720	59.94	PCM	16, 24, 32	48Khz

FIGURE 6.1: Supported video formats