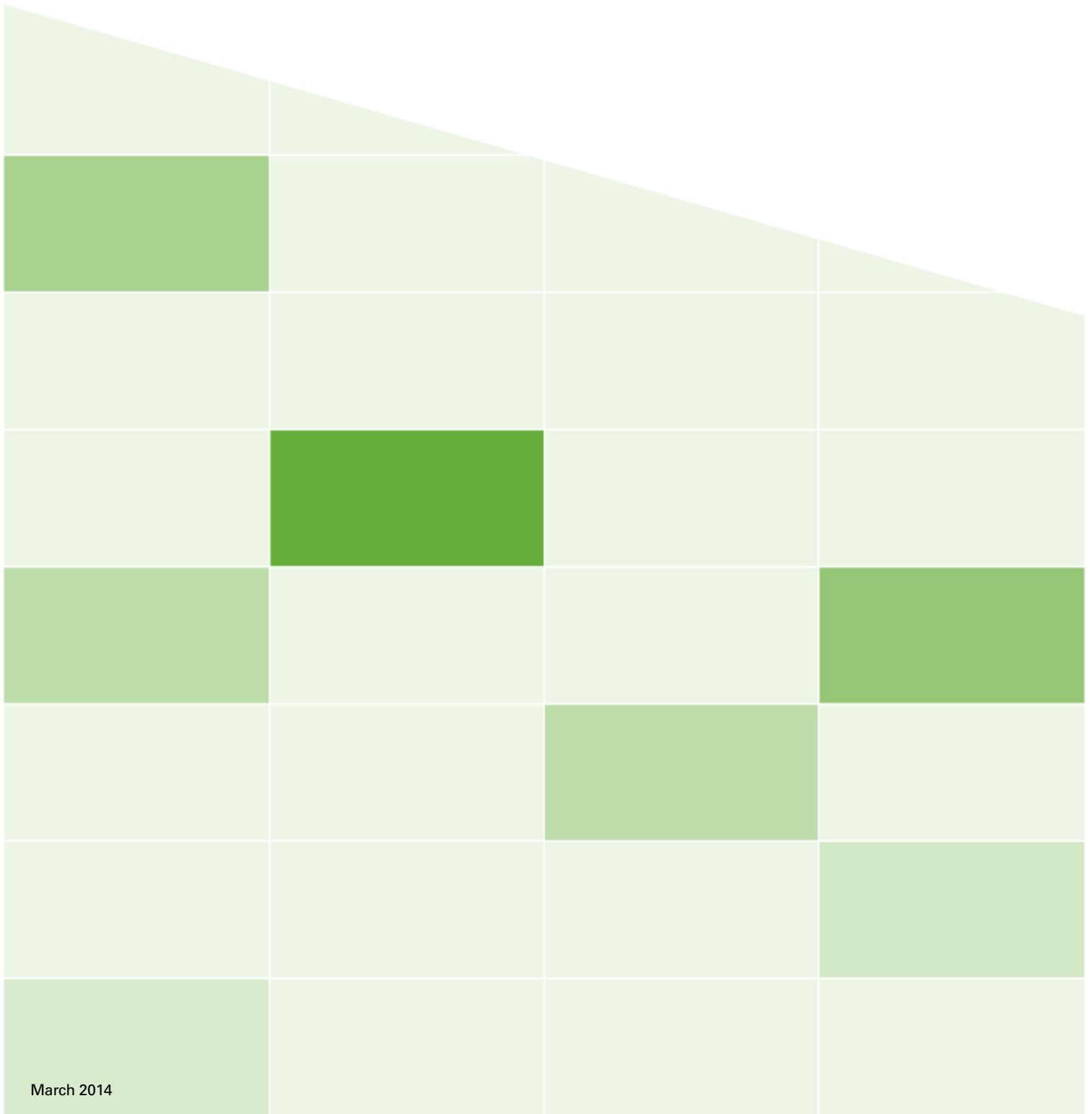




# VBrick Rich Media Studio

VBrick RMS v1.7.27

Admin Guide



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## About VBrick Systems

Founded in 1997, VBrick Systems, an ISO 9001 certified vendor, is a privately held company that has enjoyed rapid growth by helping our customers successfully introduce mission critical video applications across their enterprise networks. Since our founding, VBrick has been setting the standard for quality, performance and innovation in the delivery of live and stored video over IP networks—LANs, WANs and the Internet. With thousands of video appliances installed world-wide, VBrick is the recognized leader in reliable, high-performance, easy-to-use networked video solutions.

VBrick is an active participant in the development of industry standards and continues to play an influential role in the Internet Streaming Media Alliance (ISMA), the MPEG Industry Forum, and Internet2. In 1998 VBrick invented and shipped the world's first MPEG Video Network Appliance designed to provide affordable DVD-quality video across the network. Since then, VBrick's video solutions have grown to include Video on Demand, Management, Security and Access Control, Scheduling, and Rich Media Integration. VBrick solutions are successfully supporting a broad variety of applications including distance learning and training, conferencing and remote office communications, security, process monitoring, traffic monitoring, business and news feeds to the desktop, webcasting, corporate communications, collaboration, command and control, and telemedicine. VBrick serves customers in education, government, healthcare, and financial services markets among others.

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# Rich Media Studio v1.7.27 Admin Guide

## Preface

This document is written for anyone using or evaluating VBrick's Rich Media Studio. The Rich Media Studio is a powerful presentation recording appliance that will enhance the effectiveness and reach of any educational, corporate, or public event communication by capturing and streaming real-time rich media presentations with DVD quality video and high fidelity sound. Rich Media Studio is ideal for use by educational institutions, training organizations, seminar and event organizers, as well as by enterprises. Organizations can deploy Rich Media Studio in meeting and conference rooms or bring it to off-site events to record and stream live and on demand executive briefings, training sessions, product demonstrations, global announcements, marketing communications, and more. Rich Media Studio accepts and synchronizes feeds from any A/V equipment available, including microphones, cameras, VCR/DVD players, document cameras, and other video conferencing equipment. The appliance can capture a computer screen output as a video stream, allowing the presenter to demonstrate any application on their computer.

## Organization

1. Introduction	provides an overview of the Rich Media Studio application and a brief description of how it works.
2. Hardware Installation	explains how to install the hardware including all cables and connectors and how to define audio and video inputs.
3. Configuring Outputs	describes the preconfigured template. It explains how to create your own template. and how to configure for push, pull, multicast, etc.
4. Delivering a Presentation	explains how advanced users can use the Rich Media Studio application to create and deliver customized rich media presentations.
5. Using Session Studio/Builder	describes how to use Studio Touch application to quickly and easily deliver presentations using the preconfigured templates.
6. Viewing Rich Media Streams	explains how to view live and stored Rich Media Studio streams.
7. Maintenance and Upgrade	describes common maintenance tasks and explains how to backup and restore the application.
8. Using 3M MicroTouch	explains how to use proprietary touch screen software on RMS High Definition (Portable) systems only.
9. Streaming to the DME	explains how to configure streams being sent to VBrick's Distributed Media Engine (DME).

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## Getting Help

If you can't find the information you need in this document, or from your reseller, you can contact VBrick Support Services on the [web](#), by [e-mail](#), or by calling 1-203 303-0222. For faster service, be sure to have your VBrick product serial number or support contract number. Support Services can usually answer your technical questions in 24 business hours or less. Note that all VBrick documentation is on the web. For more information about any VBrick product, go to [www.vbrick.com/documentation](http://www.vbrick.com/documentation)

## Font Conventions

**Arial bold** is used to describe dialog boxes and menu choices, for example: **Start > All Programs > VBrick**

`Courier fixed-width font` is used for scripts, code examples, or keyboard commands.

**`Courier bold fixed-width font`** is used for user input in scripts, code examples, or keyboard commands.

**This bold black font** is used to strongly emphasise important words or phrases.

Folder names and user examples in text are displayed in this sans serif font.

User input in text is displayed in this bold sans serif font.

*Italics are used in text* to emphasize specific words or phrases.

## Environmental Goals

At VBrick, we believe that running our company with a "green" conscience is good for the environment and good for business and that environmental awareness is an important part of the value we deliver to our customers. We recognize our responsibilities to our customers, partners, and employees, and also to the communities in which we live and work. We believe that the same ethics and principles that guide our daily business decisions should be applied to the environment as well. We design superior quality, high performance, and energy-efficient products and are continually looking for ways to conserve energy and reduce waste. As a company, we look for ways to be environmentally friendly in designing our products and operating our facilities, and by choosing partners and suppliers who are committed to sustainable development. You can help by recycling batteries and other consumables and by finding new and better ways to protect and preserve our environment. If you have ideas or suggestions that will help to reinforce our commitment to these goals, please let us know.



## Introduction

### Topics in this chapter

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## Overview

VBrick's Rich Media Studio allows organizations to easily deliver live rich media presentations over IP networks and record them for on-demand viewing. It combines video and VGA/DVI capture into one video stream that seamlessly works with VBrick EtherneTV, VBrick reflectors, Windows Media servers, and VBrick's Online Streaming Service (VBoss). Rich Media Studio is the industry's most versatile, scalable, and easy-to-manage solution. Rich Media Studio is the only solution that combines video inputs and VGA/DVI inputs into one video stream. It scales enterprise-wide when used with VBrick reflector appliances and also allows playback on a set top box. It streams desktop capture at native resolution (up to 1024x768) and avoids the common problem of having to manage hundreds of .jpg snapshots. It also provides picture-in-picture so that streams can be delivered to mobile devices.



Figure 1. RMS Standard



Figure 2. RMS High Definition

## Recommended Workflow

The recommended workflow, at a location with multiple RMS units, consists of the following steps. These steps are typically performed by a qualified IT worker who will be configuring the outputs and by an educator or other presenter who will actually be giving the presentation.

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**Note** RMS Standard and RMS Professional use the `default.session` template. RMS High Definition and RMS High Definition Portable use the `defaultHD.session` template.

---

- ▼ To setup, configure, and launch an RMS presentation:
  1. An IT worker will unpack, inspect, and set up the unit, and connect it to your network.
  2. Using the appropriate session template, an IT worker will configure the output streams for each RMS unit at your site using the following steps:
    - a. In RMS Studio/Builder , go to **File > Load Session** and open `default.session` or `defaultHD.session`.
    - b. Open Session Properties and configure Windows Media, Silverlight, H.264, or High Definition outputs as appropriate. Click **OK** on each page.
    - c. When done, go to **File > Save Session As** and save the `session` file with a new name, for example `my_session.session`.
    - d. Repeat these steps for each RMS unit at your site.
  3. An educator or other presenter will actually launch and stream a presentations using these steps:
    - a. In RMS Touch, click the session file you created above (for example: `my_session`). This will launch the Touch interface for this session.
    - b. Click the **Record** button to begin streaming the presentation.
    - c. Deliver your presentation and click on the various presets to change the appearance of the stream.
    - d. Click on the **Record** button again when done. This will stop the stream and archive the recording for future use (if archiving is configured).

**Table 1.** RMS Features and Benefits

Feature	Benefit
Multiple audio and video inputs	<ul style="list-style-type: none"> <li>• Lets the presenter switch between a variety of inputs to create dynamic presentations.</li> <li>• Examples include cameras, VGA/DVI output from a computer, document camera, DVD, etc.</li> </ul>
Output is one video stream	<ul style="list-style-type: none"> <li>• Seamless integration with VEMS (VBrick Enterprise media System).</li> <li>• Seamless integration with VBrick reflectors.</li> <li>• Seamless integration with VBoss (VBrick Online Streaming Services).</li> <li>• Displays stream on set top boxes.</li> <li>• Easy file management</li> </ul>
Preconfigured templates	Allows out-of-box integration with VEMS.
Touch screen interface to easily switch inputs	<ul style="list-style-type: none"> <li>• Creates engaging presentations.</li> <li>• No technical skills required. Presentation can be run by anyone with limited computer skills.</li> </ul>
Easy-to-use presets	Presenter can change inputs with one click.

**Table 2.** Hardware Specification: **RMS Standard Edition/RMS Professional Edition**

Video Input †	Standard	1 S-Video or Composite 1 VGA, analog, D-Sub (female) or DVI-I, analog/digital
	Professional	1 VGA, analog, D-Sub (female) or DVI-I, analog/digital <ul style="list-style-type: none"> <li>• 2 S-Video</li> <li>• 4 Composite video via RCA</li> </ul>

Video Output	<ul style="list-style-type: none"> <li>• 1 DVI</li> <li>• 1 VGA</li> <li>• 1 HDMI</li> </ul>	
Audio Input	Standard	<ul style="list-style-type: none"> <li>• 1 balanced with preamplifier and Phantom Power for microphone via XLR connectors</li> <li>• 1 stereo balanced with attenuator via 2 XLR connectors</li> </ul>
	Professional	<ul style="list-style-type: none"> <li>• 1 balanced with preamplifier and Phantom Power for microphone via XLR connectors</li> <li>• 2 stereo unbalanced via RCA connectors</li> <li>• 1 stereo balanced with attenuator via 2 XLR connectors</li> </ul>
Audio Output	<ul style="list-style-type: none"> <li>• Not enabled on Standard.</li> <li>• 1 Stereo balanced via 2 XLR connectors</li> </ul>	
Connectivity	Front:	<ul style="list-style-type: none"> <li>• 1 USB 2.0</li> <li>• 1 eSATA &amp; USB combo port</li> <li>• 1 MMC/SD/MS Flash Card Reader</li> </ul>
	Back	<ul style="list-style-type: none"> <li>• 8 USB 2.0</li> <li>• 1 eSATA</li> <li>• 1 eSATA Power</li> </ul>
Storage	500 GB	
Optical Drive	22X DVD/CD R/RW	
Dimensions	W x L x H = 8 in. x 13.1 in x 8.5 in (204mm x 333mm x 215mm)	
Weight	25 lbs (11kg)	
Power 500W	Input: 100-240V AC	

† 1600x1200 RGB input is allowed but not recommended. The output will be cropped and the viewing experience will be less than ideal. The maximum recommended RGB input resolutions for full frame rate capture (30fps) are 1024x768 (4:3) and 1280x720 (16:9).

**Table 3.** Hardware Specifications: RMS High Definition/High Definition (Portable)

	RMS High Definition	RMS High Definition (Portable)
Video Input	<ul style="list-style-type: none"> <li>• Analog RGB &amp; DVI</li> <li>• 2 S-Video</li> <li>• 4 Composite video via RCA</li> <li>• 1 to 4 Digital (HD-SDI)</li> </ul> Recommended input resolutions for full frame rate (30fps) are 1024x768 (4:3) or 1280x720 (16:9)	<ul style="list-style-type: none"> <li>• Analog RGB &amp; DVI</li> <li>• 2 S-Video</li> <li>• 4 Composite video via RCA</li> <li>• 1 to 4 Digital (HD-SDI)</li> </ul> Recommended input resolutions for full frame rate (30fps) are 1024x768 (4:3) or 1280x720 (16:9)
Video Output	<ul style="list-style-type: none"> <li>• 1 HDMI</li> <li>• 1 DVI (VGA With adapter)</li> </ul>	<ul style="list-style-type: none"> <li>• 1 HDMI</li> <li>• 1 DVI</li> <li>• 1 VGA,</li> <li>• 1 Display Port</li> </ul>

Audio Input	<ul style="list-style-type: none"> <li>• 1 balanced with Preamp and Phantom Power for Microphone via XLR connectors</li> <li>• 2 Stereo unbalanced via 2 RCA connectors</li> <li>• 1 Stereo balanced with attenuator via 2 XLR connectors</li> </ul>	<ul style="list-style-type: none"> <li>• 1 balanced with Preamp and Phantom Power for Microphone via XLR connectors</li> <li>• 2 Stereo unbalanced via 2 RCA connectors</li> <li>• 1 Stereo balanced with attenuator via 2 XLR connectors</li> </ul>
Audio Output	<ul style="list-style-type: none"> <li>• 1 Stereo balanced via 2 XLR connectors</li> <li>• 1 Headphone</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Stereo balanced via 2 XLR connectors</li> <li>• 1 Headphone</li> </ul>
Connectivity	<ul style="list-style-type: none"> <li>• 1 eSATA</li> <li>• 6 USB 2.0 ports</li> <li>• PS/2 port</li> <li>• Front:</li> <li>• 2 USB 2.0</li> </ul>	<ul style="list-style-type: none"> <li>• 1 eSATA</li> <li>• 4 USB 2.0 ports</li> <li>• 2 USB 3.0 ports</li> </ul> <p>After 11/2014</p> <ul style="list-style-type: none"> <li>• 2 USB 3.0 ports</li> <li>• 4 USB 3.0 ports</li> </ul>
Storage	500 GB	500 GB
Optical Drive	Not available	22X DVD/CD R/RW
Dimensions	W x L x H 8.56" x 14.25" x 3.5" (217mm x 362mm x 89mm)	W x L x H 5.55 in. x 16.8 in x 12.4 in (140mm x 426mm x 315mm)
Weight	11 lbs	15 lbs
Power 500W	Input: 100-240V AC	Input: 100-240V AC

## How It Works

Rich Media Studio is an "all-in-one" device that captures and delivers live presentations and records them for on-demand playback over IP networks. This device has the power and functionality to easily create presentations with convenient audio/video mixers, prebuilt templates and touch screen commands. The Rich Media Studio combines both the video and VGA/DVI captures into one video stream and delivers it live or on-demand.

▼ To deliver a presentation:

1. Create and deliver a presentation as described in this document. During the presentation the Rich Media Studio does a push/pull to a VBrick Reflector or a WM VOD Server.
2. The VBrick Reflector or Windows Media VOD Server streams unicast and/or multicast video. It can also push to other reflectors or VOD servers.
3. The live stream is displayed on the Portal Server "Live Broadcasts" page (or on a set top box or a Windows Media Player).
4. The video and VGA capture are combined into one stream and displayed in a variety of formats, for example side-by-side or "picture-in-picture" as shown in Figure 3.
5. The presentation can be recorded locally on Rich Media Studio's 500 GB hard drive or it can be saved with "push button" recording or a scheduled recording (requires the Scheduler module) on the VBrick Portal Server.



**Figure 3.** Typical Streaming Presentation

## Using the VBrick Template

VBrick provides a fully tested template (with multiple preconfigured outputs) that are ideally suited for a variety of presentation and bandwidth scenarios. See [Configuring Outputs](#) on page 23 for more information.

## Playing a Rich Media Stream

Live RMS presentations are typically streamed live and can be viewed on individual desktop players. RMS outputs Windows Media streams and H.264 streams. Windows Media streams are typically played in a Microsoft Windows Media Player (by pointing to a VBrick Windows Media Reflector or to a Windows Media server). H.264 streams are usually played in StreamPlayer, Quicktime, or VLC (by pointing to a Darwin server or a VBrick DME).

Stored streams can be archived on the RMS machine but they cannot be played and viewed directly from RMS. You can view stored streams from a server or you can view stored streams from VEMS. See [Viewing Rich Media Streams](#) on page 65 for more information.

## Rich Media Studio Versions

As shown in Table 4, Rich Media Studio is available in four versions that run on different hardware platforms (the software, except for the templates, is basically the same). Also, as noted in the documentation, some features (e.g. Scheduling and Events), are not available in the Standard Edition. **Each version uses a different template file.** RMS Standard and RMS Professional use `default.session`. RMS High Definition and RMS High Definition Portable use `defaultHD.session`.

**Table 4.** Available RMS Versions

RMS Version	Operating System	A/V Inputs	Outputs	Records From
RMS Standard	Windows 7	2 video, 2 audio	2 concurrent	Touch only

<b>RMS Version</b>	<b>Operating System</b>	<b>A/V Inputs</b>	<b>Outputs</b>	<b>Records From</b>
RMS Professional	Windows 7	4 video, 4 audio	4 concurrent	Studio and Touch
RMS High Definition	Windows 7	4 video, 4 audio	4 concurrent †	Studio and Touch
RMS High Definition (Portable) ††	Windows 7	4 video, 4 audio	4 concurrent †	Studio and Touch

† Support for four concurrent HD output streams at 720p using a maximum of four SDI ports.

†† Same as RMS High Definition except the unit is self-contained and includes an integrated display monitor for running the management interfaces.

## Hardware Installation

### Topics in this chapter

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### What's in the Box

The Rich Media Studio appliance is a fully-featured PC that ships with a variety of components. Depending on what version of RMS you ordered, your shipment will contain some or all of the following components, cables, and connectors. See Figure 4 for a picture of each. Use the corresponding installation instructions in this topic to install the RMS hardware version you purchased.

**Table 5.** RMS Components

RMS Version	Component
Standard Edition	<ul style="list-style-type: none"> <li>• RMS unit</li> <li>• Keyboard and mouse</li> <li>• AC power cord</li> <li>• DVI to VGA adapter</li> </ul>
Professional Edition	<ul style="list-style-type: none"> <li>• RMS unit</li> <li>• RMS Product CD</li> <li>• Keyboard and mouse</li> <li>• A/V adapter cable</li> <li>• AC power cord</li> <li>• DVI to VGA adapter</li> <li>• DVI Cable (DVI-D)</li> <li>• Microphone</li> <li>• XLR cable (male/female)</li> <li>• Audio adapter cable</li> <li>• VGA cable (HD15 M/M)</li> <li>• VGA splitter cable</li> <li>• USB-to-serial adapter</li> </ul>
High Definition	Same as Professional Edition not including USB-to-serial adapter.
High Definition (Portable)	Same as Professional Edition with VGA cable (DVI-D) also included.

			
Rich Media Studio †	USB Keyboard	USB Optical Mouse	RMS Product CD
			
Microphone	XLR Cable Male/Female	Audio Adapter cable	DVI to VGA Adapter
			
VGA cable (DVI-D)	VGA cable (HD15 M/M)	AC Power cord	DVI Cable (DVI-D)
			
VGA Splitter cable	AV Adapter cable	USB to Serial Adapter	

† The RMS hardware is available in four versions. See [Rich Media Studio Versions](#) on page 5 for details.

**Figure 4.** What's in the Box

## Safety Precautions

There is always a danger present when using electronic equipment. Unexpected high voltages can be present at unusual locations in defective equipment and signal distribution systems. Become familiar with the equipment that you are working with and observe the following safety precautions.

- Every precaution has been taken in the design of your system to ensure that it is as safe as possible. However, safe operation depends on you.
- Always be sure your equipment is in good working order. Ensure that all points of connection are secure to the chassis and that protective covers are in place.
- Never work alone when working in hazardous conditions. Always have another person close by in case of an accident.
- Always refer to the manual for safe operation. If you have a question about the application or operation call VBrick for assistance.
- Never allow your equipment to be exposed to water or high moisture environments. If exposed to a liquid, remove power safely and send the unit to be serviced by a qualified technician.



## Power

When the Rich Media Studio is turned off by using the power switch, power may still be supplied to the motherboard. To ensure that the appliance is completely shut down, unplug its power cord from its power source. The Rich Media Studio appliance ships with all required components installed. There is no need to open the chassis to add or remove components. Contact VBrick regarding any malfunction or failure of the Rich Media Studio.

---

**Note** To reduce the risk of electric shock, do not open chassis; do not defeat or remove the ground pin of the power cord; and connect only to a properly-grounded AC power outlet. No user-serviceable parts are inside, and if you remove the cover, you will void the warranty. Contact VBrick for service.

---

## Power Cords

The plug on the power supply cords are considered to be the equipment disconnect device and must be approved for the country where it is used. For USA and Canada, the cord set must be UL-approved and CSA-certified. The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A 125V) plug and a EN60320/IEC320 receptacle.

## Electrostatic Discharge

Static electricity can damage disk drives, circuit boards, and other electronic components. Before connecting or disconnecting any device to the Rich Media Studio appliance, we recommend you discharge static electricity by first touching an unpainted metal part of a grounded PC.

## Placement

Use common sense when installing the device. Do not expose the appliance to direct sunlight, high humidity or wet conditions. Do not block the air vents or impede the airflow in any way. And once installed, do not place anything on top of unit.

## Anti-Virus Software

Be aware that the RMS application requires a dedicated platform. *Do not install anti-virus or other software on the RMS computer.*

# RMS Standard Edition/Professional Edition

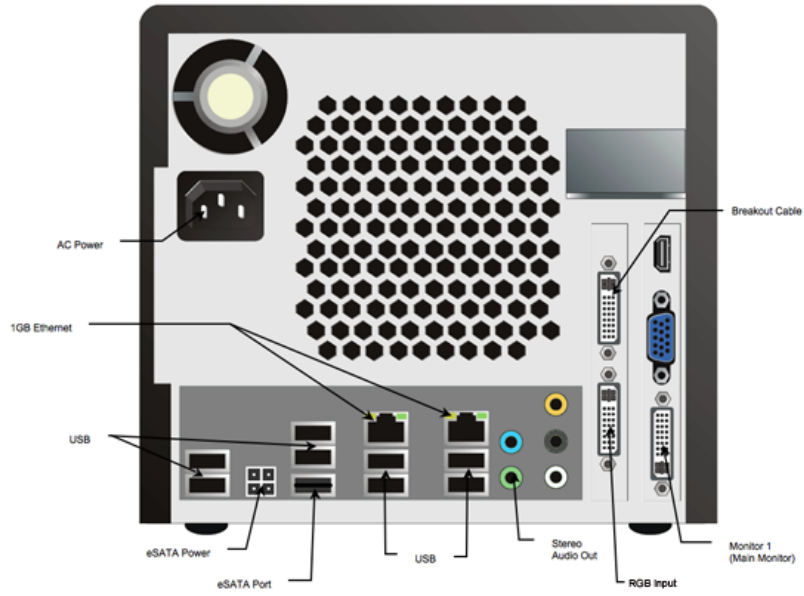
## Overview

The hardware installation instructions for RMS Standard Edition and RMS Professional Edition are the same. (To learn more about the differences between these products, see Table 2 on page 2.) The Rich Media Studio appliance comes preinstalled with all necessary software and does not require additional software installation. The following pages describe how to connect your audio, video, and VGA/DVI (RGB) sources. All required cables, connectors, and adapters (see Table 2 on page 2) are included with the appliance.

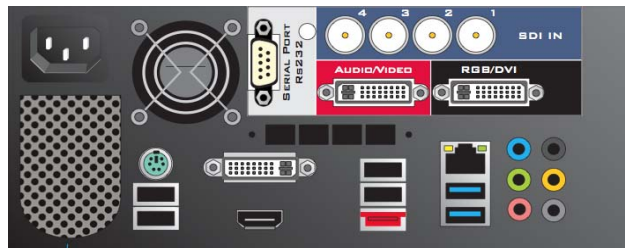
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**Note** The Rich Media Studio contains no user-serviceable parts. If you remove the cover for any reason you will also be voiding the warranty.

---



**Figure 5.** RMS Standard Edition Back Panel (Legacy System)



**Figure 6.** RMS High Definition Back Panel (Current System)

## A/V Adapter Cable

The A/V adapter cable is used to connect audio and video input sources to the Rich Media Studio and audio output from the appliance. Each cable of the A/V adapter is labeled. These labels identify the video and audio sources for proper connection of devices to the appliance. Connect the A/V adapter ("octopus") cable to the upper slot bracket connector as shown in the Figure 7.

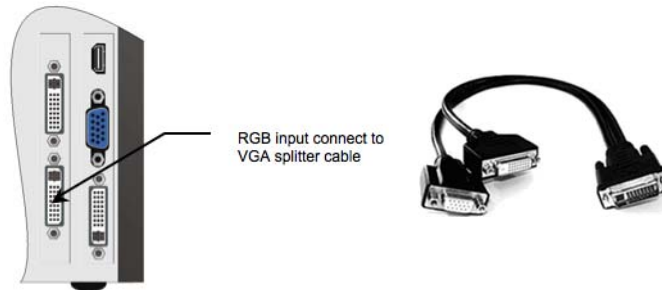


**Figure 7.** A/V Slot bracket connector with A/V Adapter Cable

## VGA Input and Output

### VGA (RGB) Input

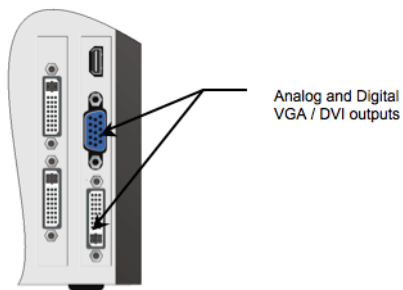
A splitter cable (Figure 8) is used to connect to the VGA output of an additional computer (i.e. presenter's laptop). The splitter cable separates the analog RGB and digital DVI interface signals. This separation improves monitor detection and forces the VGA graphics card of the computer to enable the digital interface at boot time.



**Figure 8.** VGA (RGB) Input with Splitter Cable

### Dual Head VGA Output

The Dual Head VGA output can be used with either one or two VGA output devices (monitors, projectors, etc.). One device is always used to display the Studio console interface. If a second device is used, it displays the audience view, which is controlled via the console interface. Both outputs support the analog VGA interface and also provide a DVI interface, which guarantees a better display quality. Therefore, the DVI interface should be used whenever possible. If no monitor or projector with DVI interface is available, a DVI-I to HD15 adapter is required for connecting to the DVI-I socket.



**Figure 9.** Dual Head VGA Output

The frame rate of the audience view is limited due to the fact that this is the output of the RGB source that has been processed. A VGA splitter can be used to connect the VGA source to the RGB capture card and to the projector to provide the full frame to the audience view.

## Connecting a Video Camera

The Rich Media Studio connects to a variety of video cameras via S-Video or composite video outputs on the camera. We recommend using the S-Video output for best video quality. When using the S-Video output, connect the camera to the **S-Video 1 IN** or **S-Video 2 IN** input. When using the composite output, connect the camera to one of the four video inputs **Video 3 IN** to **Video 6 IN** of the A/V adapter cable.

- 
- Notes**
- The Rich Media Studio uses an nVidia graphics card. When two video output devices are in use, the nVidia graphics card must be set to DualView in order to display the audience view. If it is set to Span, Clone or Single display, the audience view will not be displayed in the second VGA output device. The Rich Media Studio application also has a mechanism for swapping the assignment of the devices. Go to View > Swap Screens to trigger this mechanism. This feature should be used when your operator VGA output device is displaying the audience view and your audience VGA output device is displaying the console interface.
  - The frame rate of the audience view is limited due to the fact that this is the output of the RGB source that has been processed. A VGA splitter can be used to connect the VGA source to the RGB capture card and to the projector to provide the full frame to the audience view.
- 

## Power and Network Connections

Use the power connector (Figure 5) on the rear of the unit to connect to an AC power source using the provided cable. Connect to your local network using the Ethernet connector.

## Audio Connections

### Audio Monitor Output

The Audio monitor output is useful for the operator to preview audio sources or to verify the audio quality of the current live stream (recording or broadcasting). Press on the lower-right corner of the front panel to access the audio monitor connector. *This panel also has additional USB and other connectors (see Table 6).*



**Figure 10.** Front Panel with Audio Monitor Output

**Table 6.** Front Panel Controls and Connectors

DVD-RW	Press to eject. Use the DVD drive to update software or burn presentations to disk— <i>after they have been recorded.</i>
Activity LED	Yellow LED indicates activity on the hard drive.
XX Power	Press XX to power the unit on or off. Blue LED indicates power is on.
Hidden Connector Panel	Press on the lower-right corner of the front panel to access additional connectors (see Figure 10). These include the audio monitor, an SD/MMC/MS reader, an eSATA port, and a USB port.

### Audio Out for Room Sound System

The Audio output of the Rich Media Studio appliance can be used to connect to the room sound system or to a PC speaker set. The A/V adapter cable provides a balanced line-level stereo audio out signal (**Audio R Out**, **Audio L Out**) via XLR connectors. Standard adapter/

cables can be used to interface to unbalanced line-level audio input of the room sound system or to a PC speaker set.



**Figure 11.** Balanced Audio Out XLR (male) connectors

### Phantom Power Microphone

Use a professional balanced audio cable (XLR male and XLR female) to connect the microphone to the **Audio 1 IN (MIC)** input of the A/V adapter cable. It is not necessary to use the microphone with a battery; the Rich Media Studio appliance will apply a 48V Phantom Power Supply to the microphone by default.



**Figure 12.** Balanced Microphone XLR (female) Connector

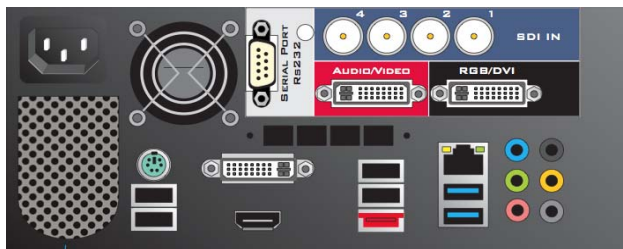
## Mouse and Keyboard

Connect the mouse and keyboard using any available USB ports on the front or rear of the unit.

## RMS High Definition

### Overview

The RMS High Definition system provides high definition output for high definition flat panels or similar display devices. It supports up to four 720p high definition streams using one or more of the four SDI ports. By default only one SDI port is active; the others are available as purchase options.



**Figure 13.** RMS High Definition Back Panel

### A/V Adapter Cable

The A/V adapter cable is used to connect audio and video input sources to RMS. It also provides audio outputs from the appliance. Each cable of the A/V adapter is labeled. These labels identify the video and audio sources for proper connection of devices to the appliance. RMS supports connection of multiple S-Video, Composite, and SDI video sources. When using the S-Video input, connect the camera to the "S-Video 1 IN" or "S-Video 2 IN" input. When using the composite input, connect the camera to one of the four video inputs "Video 3 IN" to "Video 6 IN" of the A/V adapter cable.

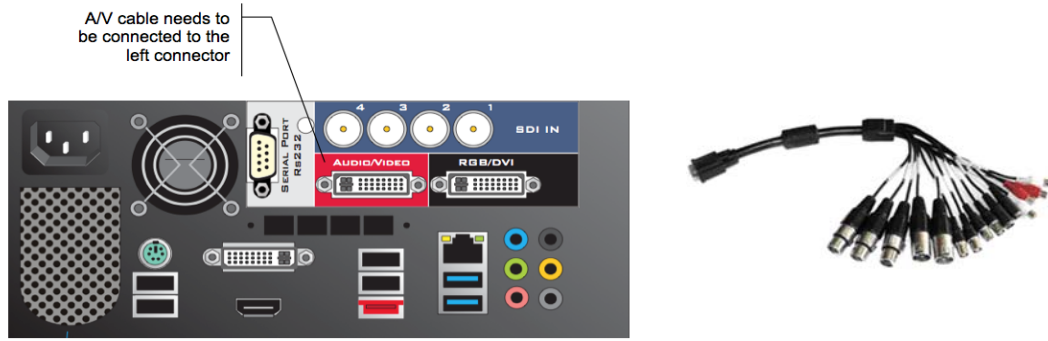


Figure 14. Back Panel with A/V Adapter Cable

### VGA/DVI (RGB) Input

A splitter cable is used to connect the VGA/DVI output of a computer (presenter's laptop for example). The splitter cable separates the digital DVI and the analog VGA interface signals. This separation improves monitor detection.

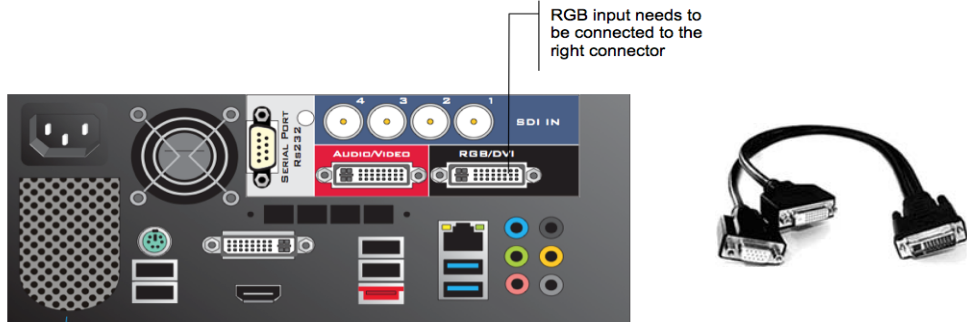


Figure 15. VGA/DVI Inputs with Splitter Cable

### HD SDI Input

The HD SDI input must be connected to the correct BNC port on the left panel. Caps should already be in place to cover the other BNC ports. Beginning with RMS 1.7, audio has been enabled over HD SDI inputs.

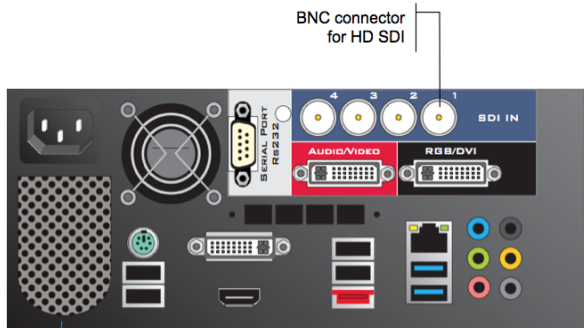


Figure 16. HD SDI Input

## DVI/HDMI Display Output

The DVI/HDMI display outputs can be used to connect either one or two output devices (monitors, projectors, etc.). The secondary display can be used to show a video mix controlled via the RMS software.

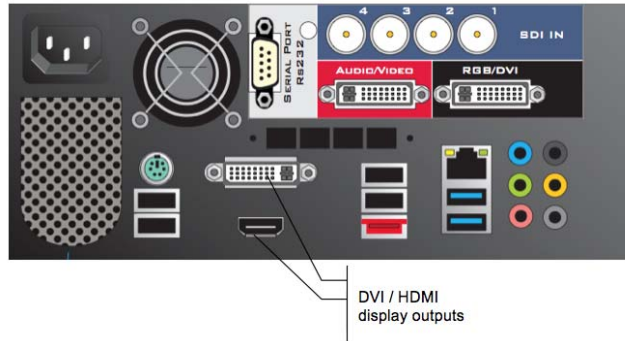


Figure 17. DVI/HDMI Display Outputs

## Audio Connections

### Audio Monitor Output

If you want to use headphones, connect them on the left panel.

### Audio Out for Room Sound System

The Audio output of the Rich Media Studio appliance can be used to connect to the room sound system or to a PC speaker set. The A/V adapter cable provides a balanced line-level stereo audio out signal (**Audio R Out**, **Audio L Out**) via XLR connectors. Standard adapter/cables can be used to interface to unbalanced line-level audio input of the room sound system or to a PC speaker set.



Figure 18. Balanced Audio Out XLR (male) connectors

### Phantom Power Microphone

Use a professional balanced audio cable (XLR male and XLR female) to connect the microphone to the **Audio 1 IN (MIC)** input of the A/V adapter cable. It is not necessary to use the microphone with a battery; the Rich Media Studio appliance will apply a 48V Phantom Power Supply to the microphone by default.



Figure 19. Balanced Microphone XLR (female) Connector

## Mouse and Keyboard

Use the USB ports when connecting the mouse and the keyboard to the RMS appliance. These devices are shipped in their original packaging, manual and installation instructions. For more information and installation instructions, please follow the original manufacturer documentation.



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# RMS High Definition (Portable)

## Overview

The RMS High Definition (Portable) unit is a self-contained device with an integrated monitor. This portable unit supports 3M MicroTouch Software for touch screen operation. See [Using 3M MicroTouch](#) on page 71 for more about this. The left and right panels are shown in Figure 20. The figure contains all of the input interfaces available but may not reflect actual positioning on the hardware device.



Figure 20. RMS High Definition (Portable) Left and Right Panels

## A/V Adapter Cable

The A/V adapter cable is used to connect audio and video input sources to RMS. It also provides audio outputs from the appliance. Each cable of the A/V adapter is labeled. These labels identify the video and audio sources for proper connection of devices to the appliance. RMS supports connection of multiple S-Video, Composite, and SDI video sources. When using the S-Video input, connect the camera to the “S-Video 1 IN” or “S-Video 2 IN” input. When using the composite input, connect the camera to one of the four video inputs “Video 3 IN” to “Video 6 IN” of the A/V adapter cable.



Figure 21. Back Panel with A/V Cable



## VGA/DVI (RGB) Inputs

A splitter cable is used to connect the VGA/DVI output of a computer (presenter's laptop for example). The splitter cable separates the analog VGA and digital DVI interface signals. This separation improves monitor detection.

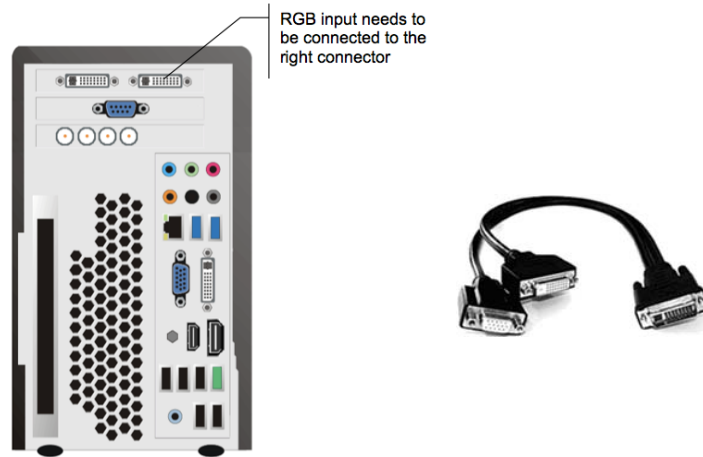


Figure 22. VGA/DVI Input with Splitter Cable

## HD SDI Input

The HD SDI input must be connected to the correct BNC port on the left panel. Caps should already be in place to cover the other BNC ports. Be aware that when using SDI input on High Definition systems, the audio signal is not included with the SDI input. This means you will need to connect the source audio input to the audio input connector on the A/V adapter cable.

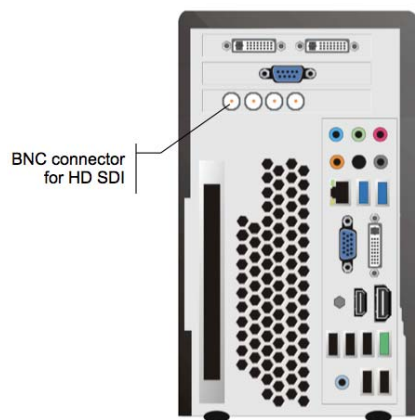


Figure 23. BNC Connector for SDI Input

## VGA/DVI Display Outputs

The VGA/DVI display outputs can be used to connect either one or two output devices (monitors, projectors, etc.). The secondary display can be used to show a video mix controlled via the RMS software.

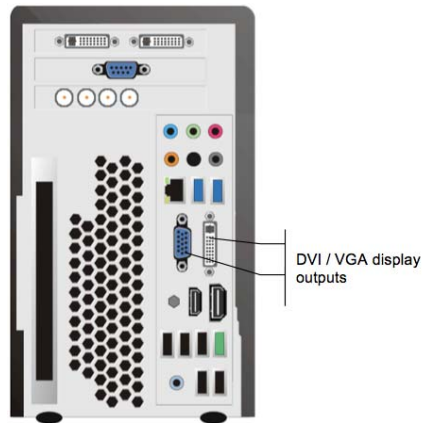


Figure 24. VGA/DVI Display Outputs

## Audio Connections

### Audio Monitor Output

If you want to use headphones, connect them on the left panel.

### Audio Out for Room Sound System

The Audio output of the Rich Media Studio appliance can be used to connect to the room sound system or to a PC speaker set. The A/V adapter cable provides a balanced line-level stereo audio out signal (**Audio R Out**, **Audio L Out**) via XLR connectors. Standard adapter/cables can be used to interface to unbalanced line-level audio input of the room sound system or to a PC speaker set.



Figure 25. Balanced Audio Out XLR (male) connectors

### Phantom Power Microphone

Use a professional balanced audio cable (XLR male and XLR female) to connect the microphone to the **Audio 1 IN (MIC)** input of the A/V adapter cable. It is not necessary to use the microphone with a battery; the Rich Media Studio appliance will apply a 48V Phantom Power Supply to the microphone by default.



Figure 26. Balanced Microphone XLR (female) Connector

## Mouse and Keyboard

Use the USB ports when connecting the mouse and the keyboard to the RMS appliance. These devices are shipped in their original packaging, manual and installation instructions. For more information and installation instructions, please follow the original manufacturer documentation.

## Starting Rich Media Studio

Before you can deliver a presentation you will need to configure both the application and the templates as explained below. In the Rich Media Studio application, you will need to rename the audio and video sources and define a camera input source using the Hardware Configuration Console. Then you will need to configure the template(s) with relevant parameters depending on how you will be delivering your presentations. After you have connected all cables and adapters, power-on the appliance.

▼ To start Rich Media Studio:

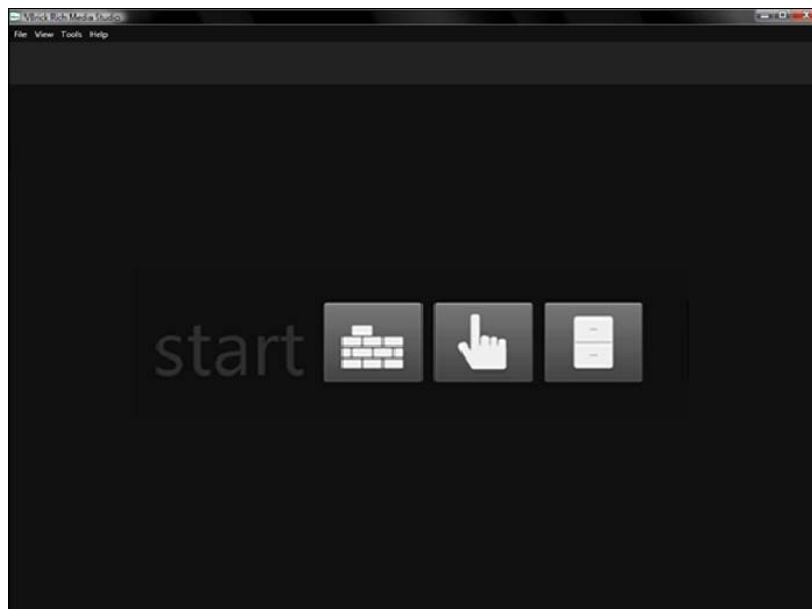
1. Attach AC power cord to power receptacle on rear of unit.
2. Power-on by pressing the power switch. On some models a blue light will illuminate when power is applied.
3. Click on **Work** when prompted to Select a location for the "vbloc" network
4. Click on **Close** when The network location is now Work message is displayed.
5. Click on the VBrick Rich Media Studio icon on the desktop to launch Rich Media Studio. The RMS Splash page shown in either Figure 27 or Figure 28 will be displayed.

At this point you are ready to begin. The next step is to define your audio and video inputs. See [Defining Audio and Video Inputs](#) on page 21. After getting started we highly recommend that you install all critical Microsoft updates; see [Installing Windows Updates](#) on page 67 for more information.

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**Note** If you have logged off from the Start menu, or you need to login using Remote Desktop Connection (RMS High Definition only), the login credentials are administrator and VBrick1234



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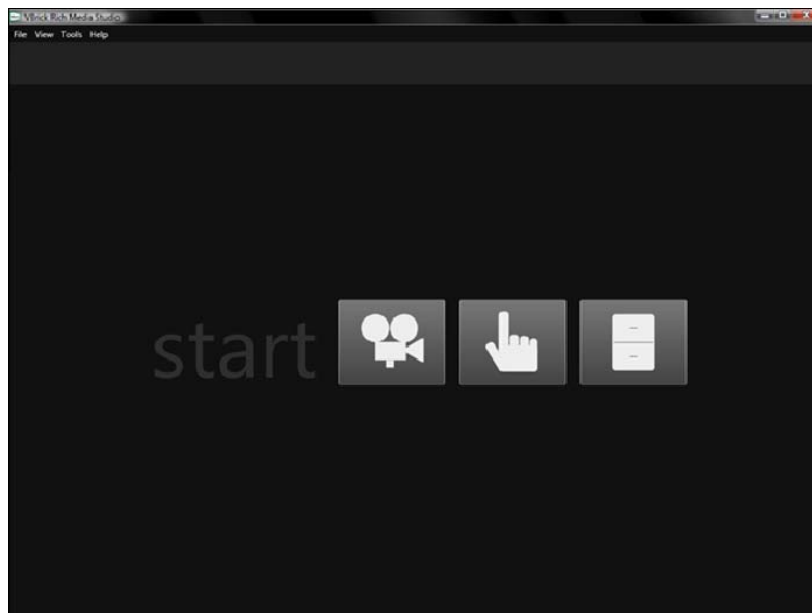


**Figure 27.** Splash Page – RMS Standard Edition






Launch Session Builder to select inputs and define outputs for your audio/video mixes. Session Builder is a subset of Session Studio and has reduced functionality.

	Launch a Touch Session to select a "touch" presentation.
	Go to the Archives folder where recorded presentations are saved.

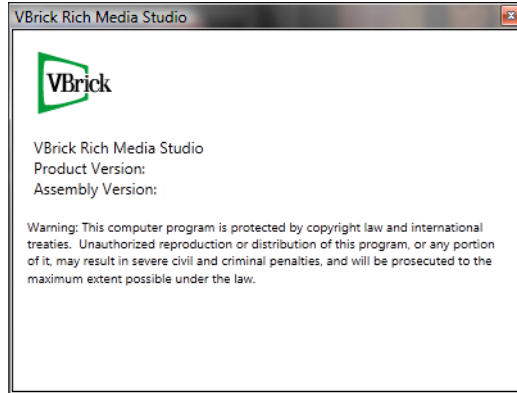


**Figure 28.** Splash Page – RMS Professional Edition/RMS High Definition

	Launch Studio Session to select inputs and define outputs for your audio/video mixes. Studio Session is a superset of Session Builder and has additional functionality.
	Launch a Touch Session to select a "touch" presentation.
	Go to the Archives folder where recorded presentations are saved.

## Checking the Version Number

When requesting support or checking for upgrades, the current version number of the application is shown on the **Help > About** page. Go to <http://www.vbrick.com/support> to inquire about an upgrade.



## Defining Audio and Video Inputs

Before you can configure and use the outputs you will need to define the video input sources as explained below. The Standard Edition has 2 audio inputs and 2 video inputs. The Professional Edition has 4 audio inputs and 4 video inputs. The inputs for the High Definition versions are shown in Table 3 on page 3. To get started, click on the **Session Builder/Studio** icon and then go to **Tools > Hardware Configuration**.

### Defining the Camera Input Sources

After you rename the Audio and Video Source as explained below you will need to associate the possible Video Sources in the tree menu on the left with the physical cable to which the cameras are actually connected (or may be connected). The A/V adapter cable has six video inputs and the **Source** dropdown in the Hardware Configuration Console has six corresponding choices. You must select a **Source** from the dropdown list (Figure 29) that matches the input cable you are actually using for the camera. Note that the first two sources (**vin-1-Y/C** and **vin-2-Y/C**) are for cameras with S-Video connectors. The remaining sources (**vin-3** thru **vin-6**) are for cameras with RCA connectors.

- ▼ To define an input source for your camera
  1. Highlight the **Presenter** video source in the tree control.
  2. From the **Source** dropdown, select the actual input cable to which your camera is connected.
  3. Exit the Hardware Console and you are done. Your changes will be automatically saved.

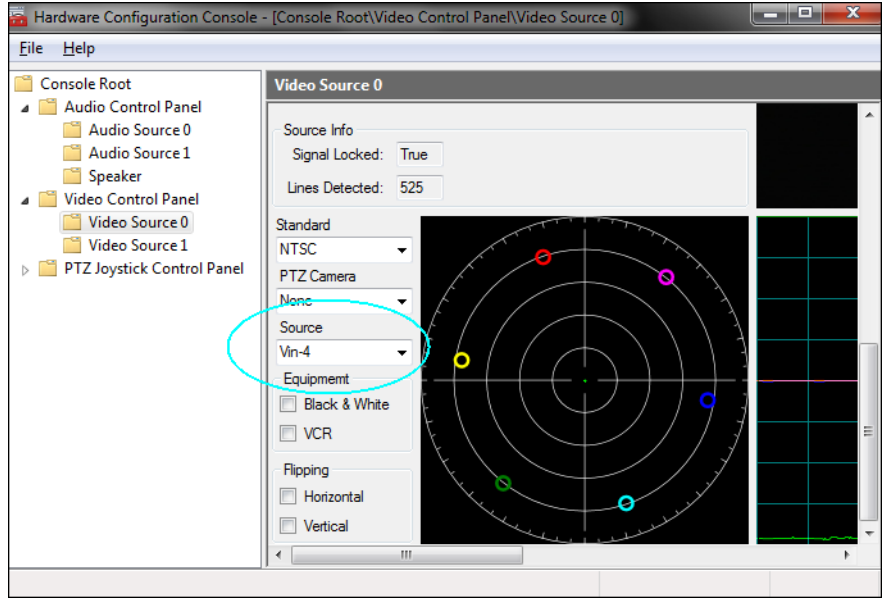


Figure 29. Hardware Configuration Console – Standard Edition

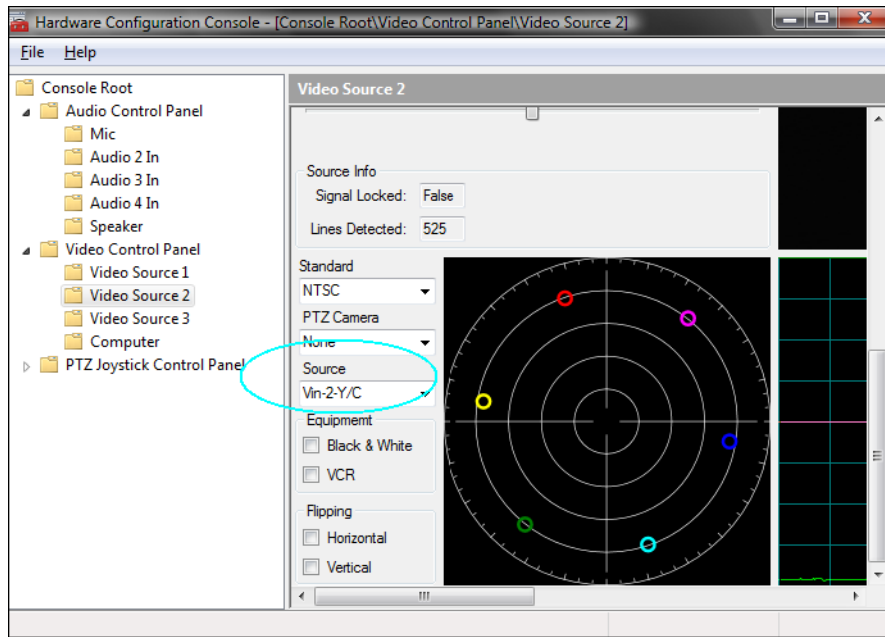


Figure 30. Hardware Configuration Console – Professional Edition

## Configuring Outputs

### Topics in this chapter

Overview .....	23
Using the Template .....	25
Configuring Windows Media Outputs.....	27
Configuring H.264 Outputs.....	33

### Overview

VBrick provides preconfigured templates that, depending on your bandwidth and network environment, will provide the best viewing experience for your viewers. RMS Standard and RMS Professional use the `default.session` template. RMS High Definition and RMS High Definition Portable use the `defaultHD.session` template. The outputs for these templates are shown in Figure 32 and Figure 32. The template is stored locally in the following folder. **It is strongly recommended that you backup the template and save it in a convenient location.**

`C:\Users\RMS\Documents\VBrick\Rich Media Studio\Sessions\`

These templates have been tested and are fully supported by VBrick. They each have multiple outputs defined. The outputs include configurations for Windows Media, Silverlight, and H.264. All have one output that streams VGA output from a desktop to an overhead projector. Each output is configured with standard "presets."

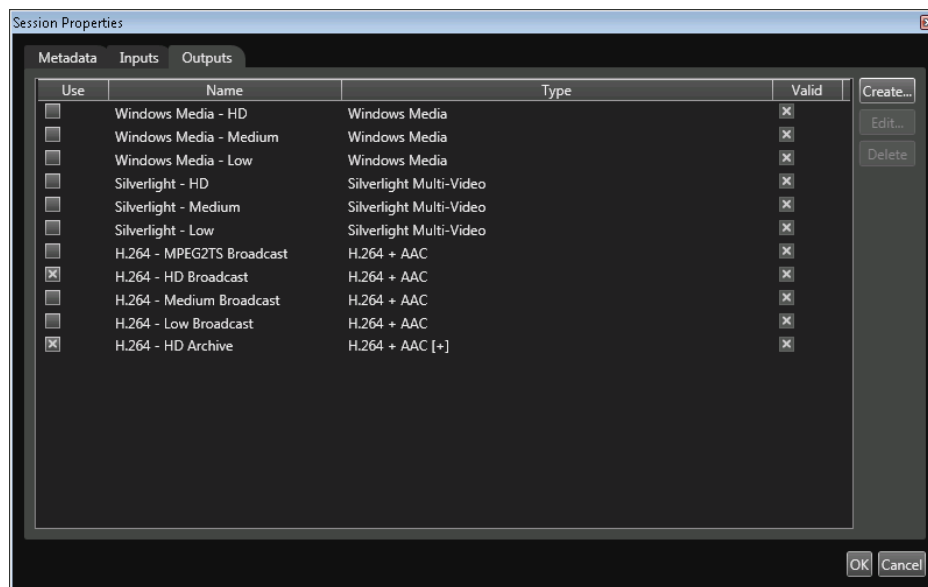
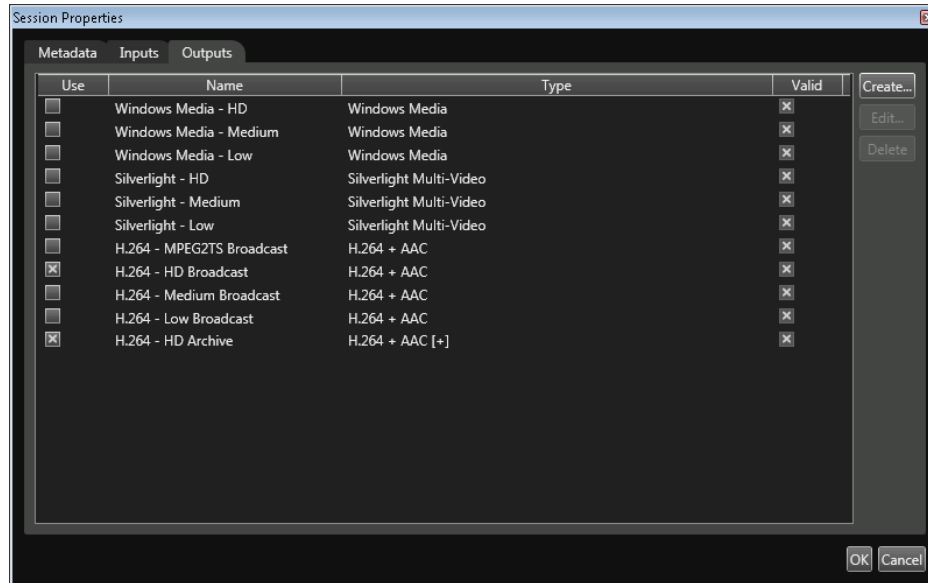


Figure 31. Outputs (RMS Standard/RMS Professional)



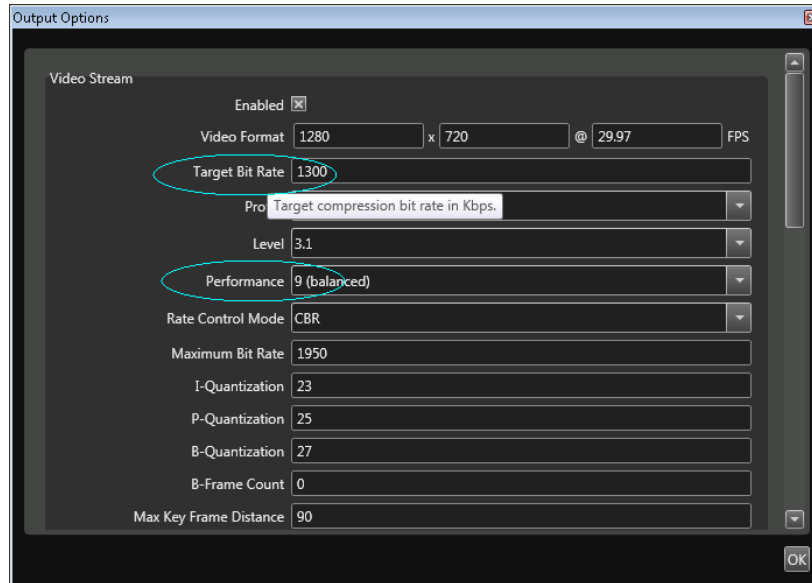
**Figure 32.** Outputs (RMS High Definition/RMS High Definition Portable)

**Note** After closing the Rich Media Studio, you must wait approx. 15 seconds before opening the Studio Touch console, and vice versa. Otherwise you will receive a message stating that an instance of the application is already running.

## Best Practices

When using the preconfigured outputs in `default.session` or in `defaultHD.session`, it is important to remember that these outputs are designed for streaming relatively stable, low-motion content such as that delivered from a classroom or lecture hall. In this environment the template will provide a high-quality viewing experience using a minimal network bandwidth. However, if you will be streaming high motion content and/or flipping slides quickly, you may need to either increase the video bitrate or lower the video resolution. For the best streaming results with your content and in your environment, experiment with different combinations of resolution and bit rate until you get the best possible stream quality given the network and bandwidth constraints at your site. If frames are being dropped in high-motion H.264 streams for example, the most relevant encoding options to modify are **Target Bit Rate** or **Performance** (the options vary depending on the template) (Note: click on the arrow below each section to expand or contract the options; mouseover each option to see a description.)






---

**Note** Be aware that `default.session` and `defaultHD.session` are read-only and cannot be changed. When changing the outputs associated with the template, go to **File > Save Session As** and save the file with a new name, for example `my_session.session`.

---

## Using the Template

RMS provides preconfigured templates that make it easy to get up and running. Table 7 and Table 8 show the configuration values for all template outputs. Some templates are designed for use over the Internet and have lower Video Bit Rates. Others are designed for a High Definition or LAN environment and have higher Bit Rates. Select the template that provides the best viewing experience for your end users. You may have to experiment with different templates but the object is to select the best possible size and frame rate given the bandwidth available at your site. In general, the Low and Medium templates use less bandwidth for (1) uploading the stream to a reflecting service and for (2) downloading the stream to the clients viewing the presentation.

The font sizes used in the presentation, and the rate at which the slides or desktop view changes, combine to determine the viewing experience. For example, if you are streaming an Excel spreadsheet with small fonts, you will need a template that has higher bandwidth and larger frame size. Use the "high" version of the template if you will be flipping slides or presets frequently.

---

**Note** If your presentation uses small fonts, for example 10 pts. or less, you will want to use a higher-bandwidth template with a larger frame size. If your presentation uses larger fonts, you can use a template with less bandwidth and a smaller frame size. VBrick recommends using fonts of 14 pt. or higher.

---

**Table 7.** Template Output Values (RMS Standard, RMS Professional)

Template	Width	Height	Frame Rate	Video Bit Rate	Audio Bit Rate
H.264 - High	1280 (px)	720 (px)	29.97 (fps)	1300 (kbps)	128 (kbps)
H.264 - Medium	1024	576	29.97	1000	64
H.264 - Low	800	450	29.97	500	32
Windows Media - High	1280	720	29.97	1300	128 Low Delay
Windows Media - Medium	1024	576	29.97	1000	64 Low Delay
Windows Media - Low	800	450	29.97	500	64 Low Delay
Silverlight - High	1280	720	29.97	1300	128 Low Delay
Silverlight - Medium	1024	576	29.97	1000	64 Low Delay
Silverlight - Low	800	450	29.97	500	64 Low Delay

**Table 8.** Template Output Values (RMS High Definition, RMS High Definition Portable)

Template	Width	Height	Frame Rate	Video Bit Rate	Audio Bit Rate
Windows Media - HD	1280 (px)	720 (px)	29.97 (fps)	1300 (kbps)	128 Low Delay (kbps)
Windows Media - Medium	1024	576	29.97	1000	64 Low Delay
Windows Media - Low	800	450	29.97	500	64 Low Delay
Silverlight - HD	1280	720	29.97	1300	128 Low Delay
Silverlight - Medium	1024	576	29.97	1000	64 Low Delay
Silverlight - Low	800	450	29.97	500	64 Low Delay
H.264 - MPEG2TS Broadcast	1280	720	29.97	1300	128
H.264 - HD Broadcast	1280	720	29.97	1300	128
H.264 - Medium Broadcast	1024	576	29.97	1000	64
H.264 - Low Broadcast	800	450	29.97	500	32
H.264 - HD Archive †	1440	1080	29.97	3000	128

† This is a high definition "archive" stream. It does not broadcast from the RMS.

In all cases you should select a template that maximizes the viewing experience for end users. As shown above, the templates are designed for output to specific screen sizes. Each of the templates has frame size (width and height) dimensions that determine the size of the encoded window. This encoded window will be played at 100% on the end user player (in a Windows Media Player for example).

Be aware that there is always a finite amount of streaming bandwidth available. *If the data in the encoded stream exceeds the available bandwidth, end users may experience freeze frames or rough transitions between frames.* Larger frame sizes with more detail (for example Excel spreadsheets with tiny fonts) will encode more data and consequently require more bandwidth for smooth transitions. Smaller frame sizes and less detail are ideal for Internet streaming.

**Note** Keep in mind that with smaller frame sizes you will need larger fonts to make your presentation viewable. Smaller fonts will be viewable with larger frame sizes but you will need more bandwidth for smooth transitions.

## Modifying the Template

VBrick encourages you to use the predefined templates but recognizes that in some cases you may want to modify these templates or create your own. While the steps outlined below are relatively easy, it is important to remember that a successful presentation depends on many factors. Chief among them are bandwidth, resolution, and frame rate. If there is an issue with any of these critical factors, the quality of the presentation may be affected and your viewers may experience freeze frames, buffering, or other unexpected results. **For this reason, VBrick recommends that you start with a predefined VBrick template and avoid changing the resolution or frame rate.** For best results create and save a template in advance (with presets). Then use Studio Touch to deliver the presentation. Do not try to run a live presentation directly from Rich Media Studio unless you are thoroughly familiar with the application.

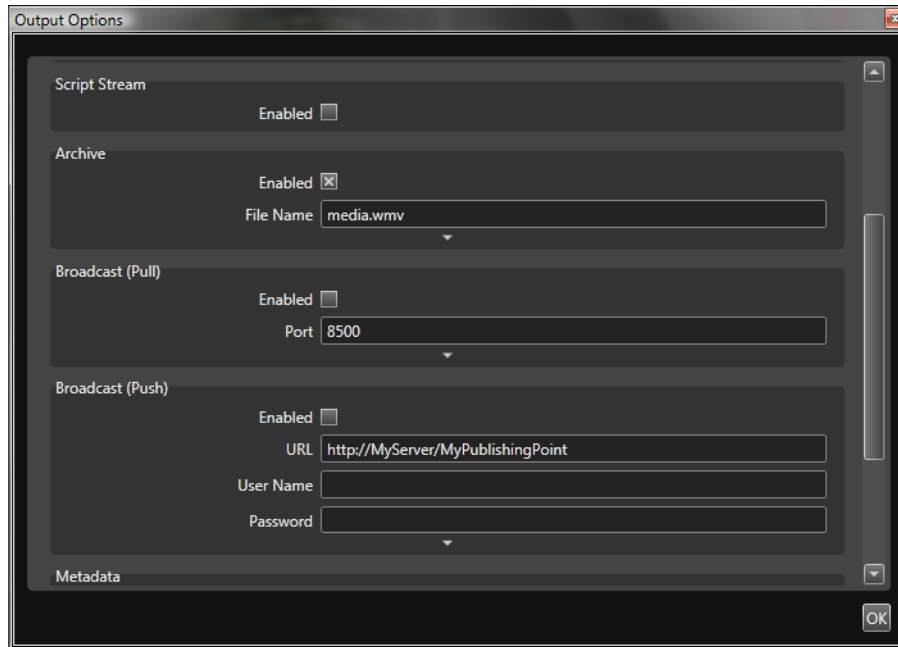
Also be aware that the video and slides you see in the Rich Media Studio application are not what your end users will see. Remote viewers may be affected by bandwidth issues, desktop limitations, and other factors. *It's always a good idea to test your audio, video, and slides locally and remotely before presenting to a live audience.* This can help identify problems in advance and provide your viewers with an optimal viewing experience. There is no substitute for a thorough walk-through that can anticipate and address potential issues—particularly with your network. This will test the presentation on your local network and/or over the public Internet and will provide a real-world test in a simulated production environment.

▼ To create your own template:

1. Begin by selecting the predefined VBrick template. Choose a low bandwidth output if most of your end users will be viewing the presentation over the public Internet. Choose a higher bandwidth output if most of your viewers are on a local network. See [Using the Template](#) on page 25 for recommendations and guidelines.
2. If necessary, define your camera input source(s) using the Hardware Configuration Console. See [Defining Audio and Video Inputs](#) on page 21.
3. Using Rich Media Studio, create a template and define the presets using your available audio and video inputs. See [Using Session Studio/Builder](#) on page 43.
4. Save the template with a new name to a known folder. For best results create a subfolder in the `sessions` directory and use care not to overwrite the original template.

## Configuring Windows Media Outputs

Rich Media Studio has different templates for RMS Standard or Professional and for RMS High Definition. The appropriate template (`default.session` or `defaultHD.session`) can be used to configure multiple WM output streams. Before you can use the preconfigured Windows Media outputs, each one must be configured and saved with "push" and/or "pull" parameters as explained below. In the **Distribution** pane of the Output Editor (see below) one or more of the options must be enabled. *Whenever possible, VBrick recommends configuring the appliance to enable a "pull" from a VBrick Reflector or a Windows Media Server.* When using a pull, the connection will be automatically restored if there is a network disruption.



**Figure 33.** Windows Media Template

Broadcast (Pull)	Pull is recommended whenever possible. Pull enables a reflector or server to "pull" the stream from the specified port (8881 for example) on the appliance. To do this you will need to create a "Pull Receiver" on the reflector and/or a "Pull Publishing Point" on the server (see below).
Broadcast (Push)	Push enables the appliance to "push" the stream to a reflector or server. To do this you will need to create a "Push Receiver" on the VBrick Reflector and/or a "Push Publishing Point" on the server (see below).

## Configuring for Pull

### Configuring a VBrick Reflector for Pull

If the appliance is configured to enable a pull from a reflector, open the Reflector configuration page and set the **Reflector Source** to **Pull Receiver** (Figure 34) and the **Source URL** to `http://<Rich_Media_Studio_IP_Address>:8881`. See the "Configuration: Reflector" topic in the [WM Appliance Admin Guide](#) for details.

The screenshot shows the VBrick Integrated Web Server Administration/Configuration interface. The page title is "INTEGRATED WEB SERVER Administration/Configuration". A navigation bar at the top includes links for CONFIGURATION, STATUS, DIAGNOSTIC, MAINTENANCE, HELP, HOME, and LOGOUT. On the left, a "Configuration" menu lists options: Network, Encoder, Reflector, JPEG, FTP File Transfer, Passthrough, System, and Script Management. The main content area is titled "Configuration: Reflector" and shows a "Source" dropdown menu with "Multicast Announce(SAP) Server Archiver Push" selected. Below this is a "Reflector Receiver" section with a "Reflector Source" dropdown set to "Pull Receiver", a "Source URL" text field containing "http://172.22.2.123:8881/", a "Mode" dropdown set to "Off", and an "Authentication" checkbox that is unchecked. At the bottom, there are four buttons: "END EDIT", "SAVE CONFIG", "APPLY", "REVERT", and "DEFAULTS".

Figure 34. Pull Receiver Configuration

## Configuring a Windows Media Server for Pull

If the Rich Media Studio is configured to enable a pull from a Windows Media Server, create a broadcast publishing point on the server and point the publishing point to the URL of the Rich Media Studio, for example: `http://<Rich_Media_Studio_IP_Address>:8881`. When you start the publishing point it pulls the stream from the Rich Media Studio. You can optionally enable the "Start publishing point when first client connects" feature in the publishing point's general properties to have the server wait for a client to connect before it starts the pull from the appliance.

## Configuring for Push

After starting a presentation that "pushes" the stream to VBrick Reflector or a Windows Media (VOD-WM) Server, it takes 10–15 sec. for the push to actually start on the reflector or server.

## Configuring a VBrick Reflector for Push

Conversely, if you will be "pushing" to a VBrick Reflector, you will need to set the **Reflector Source** to **Push Receiver** (Figure 35) and name a **Publishing Point**. You will also need to enter the push destination URL in the **URL** field in the Rich Media **Broadcast (Push)** pane (see Figure 33) in this format: `http://<VBrick_Reflector_ip_address>:port/<publishing_point>`. (Do not use the **Template URL** field.)

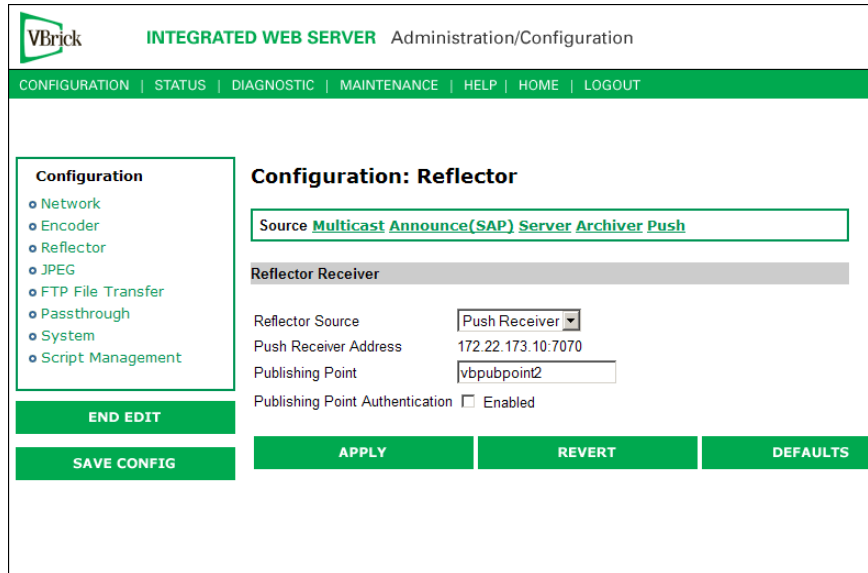


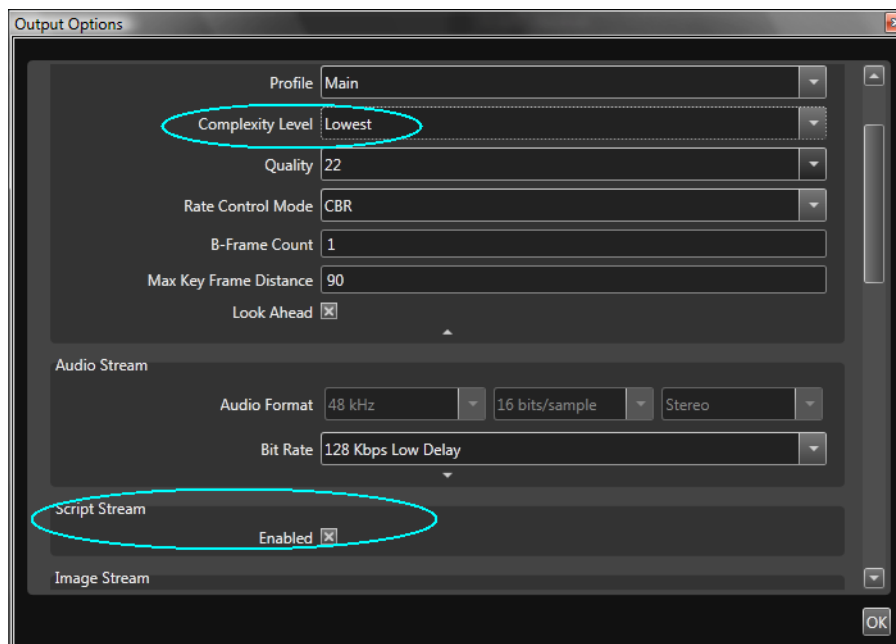
Figure 35. Push Receiver Configuration

## Configuring a Windows Media Server for Push

If the appliance is configured to enable a push to a server, you will need to create a "Push Publishing Point" (authenticated or non-authenticated) on the server. See the "Creating Publishing Points" topic in the *VOD-WM Server Admin Guide* for more information. Refer to the Microsoft [Windows Media Services](#) documentation for complete details.

## Configuring for Silverlight

Silverlight configuration is basically the same as Windows Media with some exceptions. For example you must enable **Script Stream** on Silverlight outputs in order for Silverlight to work with VEMS. You will also need to set the **Complexity Level** to **Lowest** for the Silverlight - High (and Windows Media - High) templates.



---

**Note** The only way to make stored Silverlight presentations available in VEMS is via FTP. See the "Authoring RMS Presentations" topic in the Portal Server User Guide for more information.

---

## Configuring for Multicast

The Rich Media appliance uses unicast to send the stream to a reflector or server from where it can be transmitted via multicast to multiple end users. Multicast is automatically enabled on the VBrick WM Reflector (if **Transmit** is enabled on the **Configuration: Encoder > Multicast** page). Multicast is *not* automatically enabled on a Windows Media Server. *To enable multicast on a Windows Media Server you must run the [Multicast Announcement Wizard](#) when creating Publishing Points.* This will allow you to create and generate .nsc files which point the end user to the multicast stream.

## Configuring for VEMS

To have the reflected stream automatically appear on the **Live Broadcasts** page of the VEMS Portal Server, configure the IWS configuration page for a WM appliance as follows. For more about delivering an RMS presentation, see [Using RMS with VEMS](#) on page 42.

Unicast	Go to the <b>Configuration: Reflector &gt; Server</b> page complete the <b>Announce HTTP and RTSPU Server</b> section
Multicast	Go to the <b>Configuration: Reflector &gt; Multicast</b> page and enter a valid <b>Multicast Destination IP Address</b> .

## Configuring for VBOSS

Use the following steps to send a Windows Media stream to VBOSS (VBrick's Online Streaming Service).

- ▼ To configure for VBOSS:
  1. Open VBOSS (v2.2 or higher) and go to the **Windows Media Settings** page.
  2. In the **Live Webcast Publishing Info** section (see below), note the configured **Server Name** and **Publishing Point**.

Windows Media Settings Adobe Flash Settings

### Live Webcast Publishing Info

Server Name : wlo.dca.1234.edgecastcdn.net  
 Publishing Point : 123456/1234  
 FTP Host : ftp.lax.2D84.edgecastcdn.net  
 FTP Folder Location : /wms/unpublished/  
 FTP Username : ftp\_username  
 FTP Password : ftp\_password

Current Streaming Status : **ON Air**   
ftp\_password

Fields marked with (\*) are mandatory

### Live Webcast Event Info

\*Event Title : webinardemo-WM  
 \*Event Description : webinardemo-WM  
 \*Event Author : webinardemo-WM  
 \*Event Copyrights : webinardemo-WM  
 \*Event Geo Location : East Coast (USA)  
 \*End Date : 12/1/2017 12:00 AM  
 Event Time Zone : US/Eastern

### Alternative Live Stream Settings

Enable Alternative Live Stream Settings

3. Open RMS, go to the **Session Properties** page, and click on the **Outputs** tab.
4. Open any Windows Media output and click on the **Options** tab.
5. Scroll down to the **Broadcast Push** section and open the dropdown menu.
6. In the **URL** field, enter the Server Name and Publishing Point from the VBOSS (Live Webcast Publishing) page in the format: `http://<server_name>/<publishing_point>`

Output Options

Broadcast (Push)

Enabled

URL : http://wlo.dca.1234.edgecastcdn.net/123456/1234

User Name :  
 Password :  
 Template URL :

Auto Destroy

Maximum Packet Size : 0

Metadata

Title : %SessionTitle%  
 Author : %SessionAuthor%  
 Description : %SessionDescription%  
 Keywords : %SessionKeywords%



7. Make sure the Broadcast (Push) is **Enabled** and that **Auto Destroy** is unchecked.
8. Click the **Test** button to verify the connection.
9. If successful click **OK** and **OK** to save and exit. This will make the stream available in VBOSS user interface.

## Configuring H.264 Outputs

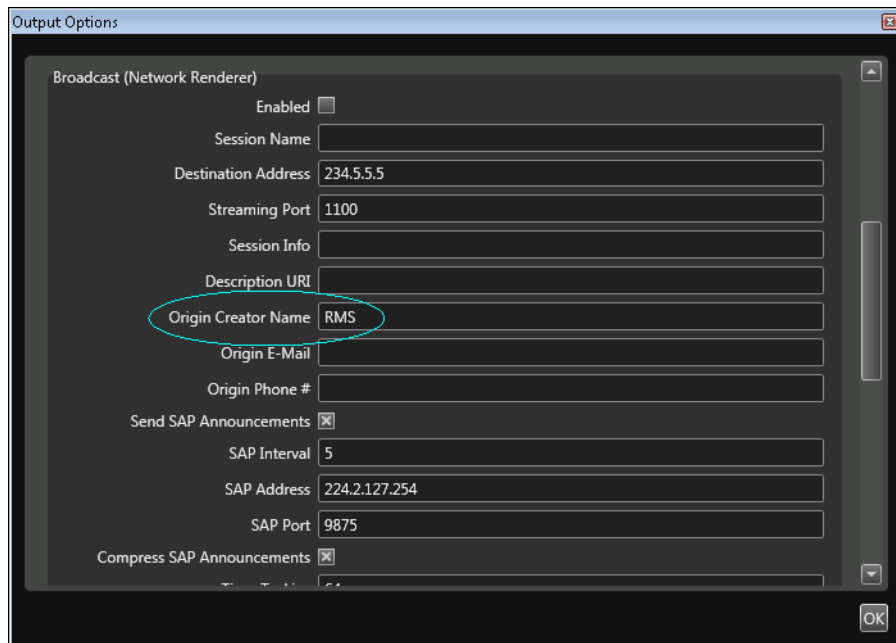
Rich Media Studio has different templates for RMS Standard or Professional and for RMS High Definition. The appropriate template (`default.session` or `defaultHD.session`) can be used to configure multiple H.264 output streams. See Table 4 on page 5 for more about RMS models. See the [H.264 Encoder Admin Guide](#) for more about H.264 encoder configuration.

## Configuring for VEMS

If you will be configuring VEMS to play a live stream from RMS you will need to configure an `.sdp` (session description) file as explained here. The `.sdp` filename identifies the RMS stream that will be displayed on the **Live Media** page in VEMS. The `.sdp` file is dynamically created when you press the "Record" button.

▼ To configure an `.sdp` file:

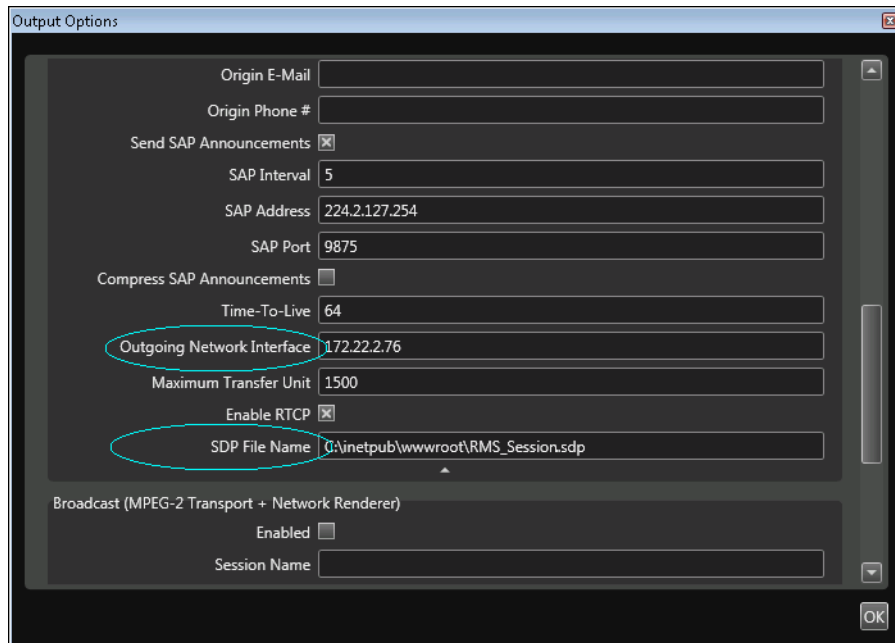
1. Go to the **Start** page and click on the Session Builder.
2. Go to the **Session Properties** page and click on the **Outputs** tab.
3. Then click **Options**, scroll down to the **Broadcast** section, and open the dropdown menu.



**Figure 36.** Broadcast Options (Part 1)

4. Enter a **Session Name**. This name (no special characters or spaces) must match the name of the `.sdp` file (see below) and is the "program name" that will be displayed on the Live Media page in VEMS.
5. Verify that the **Origin Creator Name** is **RMS**:
6. The **Outgoing Network Interface** is auto-populated with the IP address of the RMS unit but you can override as necessary.

7. Scroll to **SDP File Name** and give the .sdp file a unique name that matches the **Session Name** specified in Step 4 above, for example: `C:\inetpub\wwwroot\RMS_Session.sdp`. Do not change anything else in the path.



**Figure 37.** Broadcast Options (Part 2)

8. When done, save your changes and click the "record" button. This will dynamically create the .sdp file.
9. Go to VEMS and the stored stream will be available on the **Live Media** page.

## Configuring for DME

You can use a unicast push or a multicast to send the H.264 output stream from RMS to VBrick's Distributed Media Engine (DME). With both methods you will also need to publish the .sdp file to the DME. You can use any of the H.264 templates shown in Table 8 on page 26 to stream to the DME. As explained below, you will need to perform the following steps to configure a RMS stream for the DME:

- ▼ To configure a stream for a DME:
  1. Enter a destination address on the **Broadcast** page. In the **Destination Address** field (Figure 36) enter a multicast IP address (for example `239.2.127.254`) or the unicast IP address of the DME.
  2. Extract the .sdp file. Once the session is active, the .sdp file is automatically created (in the specified folder) when you "enable" the broadcast and name the file using the **SDP File Name** field (Figure 37).
  3. Verify the .sdp file. When creating an .sdp file, the information in the file is sourced from the **Broadcast** page in RMS. Be aware that any leading spaces (see line 3 below), will cause the .sdp file to fail when published to the DME. For this reason, be sure to delete leading spaces before publishing the .sdp file to the DME.

```
v=0
o=RMS: 116982200100539 87050573017123 IN IP4 172.22.2.89
s= RMS SessionHD0278865491C
c=IN IP4 239.22.119.111/64
b=AS:4000
m=video 1100 RTP/AVP 96
a=rtpmap:96 H264/90000
a=fmtp:96 packetization-mode=1; profile-level-id=42801F; sprop-parameter-sets=Z0KAH5ZS;
a=cliprect:0,0,720,1280
a=control:trackID=1
m=audio 1102 RTP/AVP 99
a=rtpmap:99 mpeg4-generic/48000/2
a=fmtp:99 streamtype=5; profile-level-id=15; mode=AAC-hbr; config=1190; sizeLength=13;
a=control:trackID=2
```

- Publish the .sdp file (via FTP) to the root folder on the DME. After you FTP the file, a live RTP stream will be available in the DME that can be served in a variety of ways (see Figure 38). For example you can reflect the stream as a multicast relay or auto-unicast it to another DME. See the *DME Admin Guide* for more information.

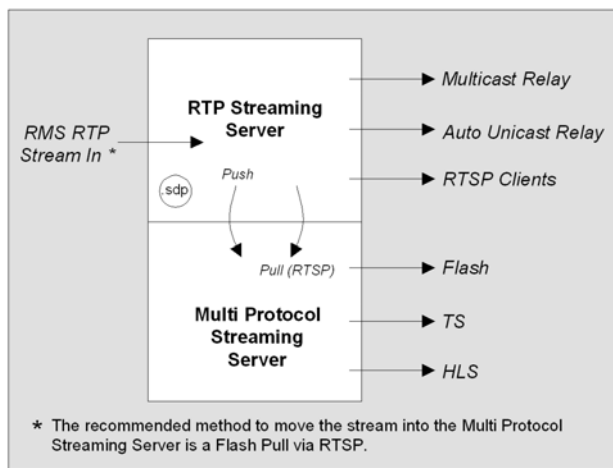


Figure 38. RMS/DME Integration



## Delivering a Presentation

### Topics in this chapter

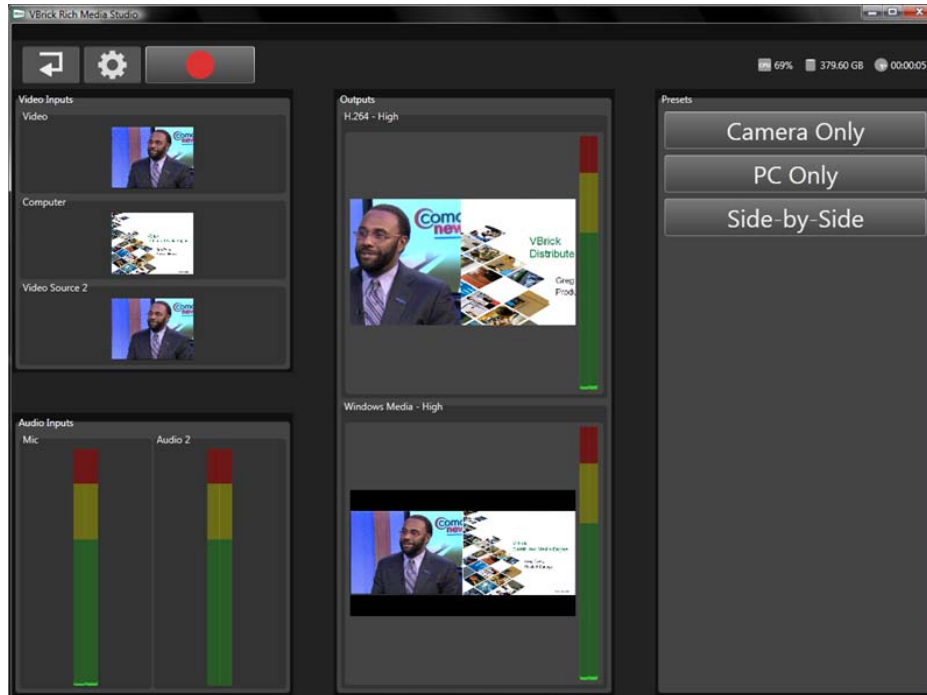
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### Touch Session Basics

Studio Touch is a simplified interface which includes only the functionality a presenter requires to start a recording and switch among defined presets created in Rich Media Studio's Session Studio/Builder interface. RMS Touch was designed for the presenter and enables the presenter to easily create a recording without having to configure and manage audio and video presets. To use Studio Touch, the latest templates must be present in the [Sessions](#) folder. See [Configuring Outputs](#) on page 23 for more information.

- 
- Notes**
- You cannot run two instances of Rich Media Studio at the same time. An error message will indicate that one of these applications is already running.
  - PowerPoint is not installed on the Rich Media platform. If you will be delivering PowerPoint presentations, PowerPoint must be installed on your laptop.
  - The RMS High Definition (Portable) unit supports 3M MicroTouch Software for touch screen operation. See [Using 3M MicroTouch](#) on page 71 for more about this.
- 

In many cases, and depending on your familiarity with the application, you may wish to have a second person help with the presentation. For example, if you will be switching presets and/or changing PowerPoint slides frequently, it helps to have a second person flip the slides so you can focus on the presentation. It also helps to keep in mind the simple things that help make an effective and persuasive presentation. For example, use as much light as possible. All video looks better and more professional when it is well lit and you use a good quality camera. And most importantly, look at the camera as much as possible. Unless you have a local audience, always speak directly to the camera.



**Figure 39.** Recording in Progress

When the red button begins to flash your presentation is live. You can start talking and using the presets to switch between audio and video outputs and change the camera position. To stop a recording, simply click the **Record** button again. (The Rich Media Studio has a 500 GB hard drive and at some point you may need to create disk space for new recordings. See [Managing Disk Space](#) on page 67 for more about this.) As noted, you use the presets to switch between available outputs views. There are different presets associated with each template. When you click a preset, the preset "view" is encoded and streamed to viewers. For example, during a presentation you can switch back and forth between the views as necessary—or this can be done by an assistant.

## Using the Presets

Each template is associated with fixed "preset" outputs. During a presentation you simply click on the preset to change the "view" that is streamed to viewers. For example when speaking directly to the audience you might want to stream a **Camera Only** view; when discussing a PowerPoint slide, you might want to go to **PC Only**. If you have two output streams, as shown in Figure 42, the presets will change the output for both streams.

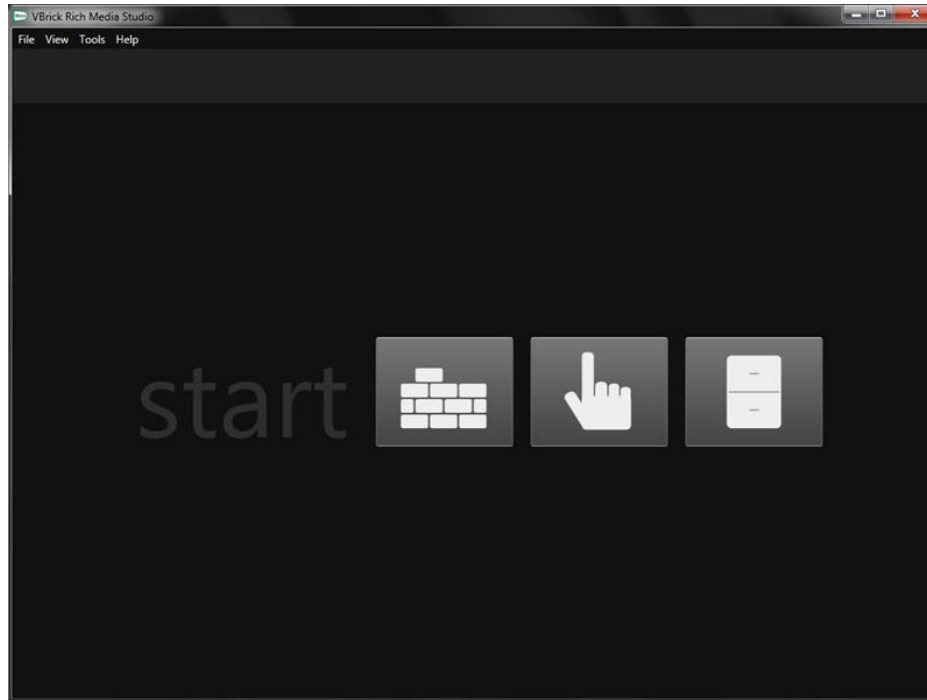
**Camera Only****PC Only****Camera and PC****PC and Camera****Side-by-Side**

## Delivering a Touch Presentation

The Session Builder in the Standard Edition interface is where you select inputs and define outputs for your audio-video mixes (Studio Session is the Professional Edition interface). Session configurations are saved in the Session Builder so they can be launched in the Studio Touch interface. The following steps show the typical steps you will follow to deliver a presentation. The steps are basically the same for Standard Edition and Professional Edition. The workflow assumes that the session has been configured (i.e. that all inputs and outputs have been defined) and the presenter is ready to deliver a presentation.

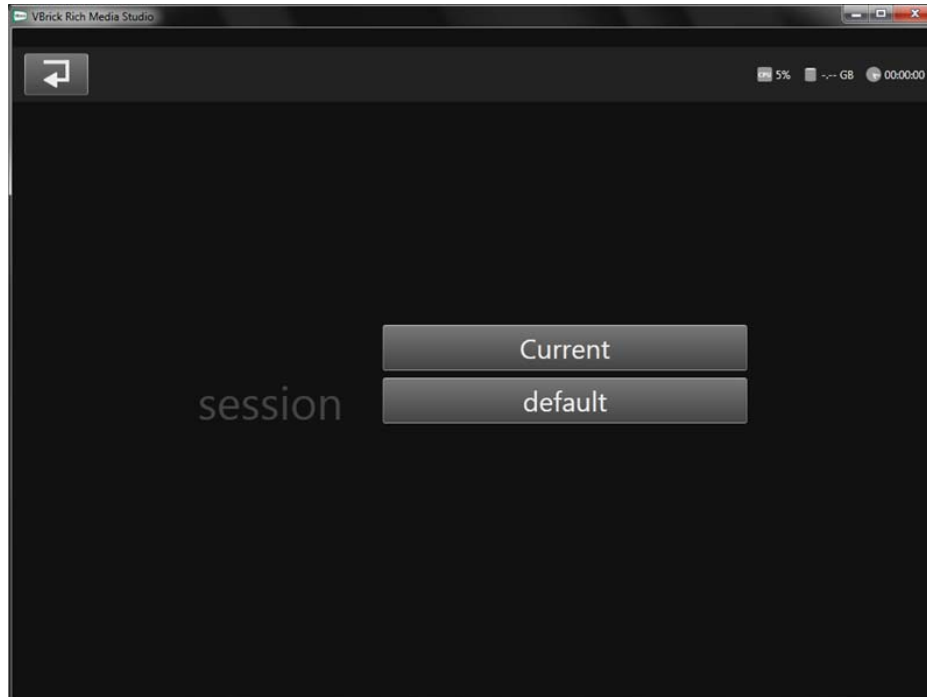
▼ To deliver an RMS presentation:

1. Click on the desktop icon to launch Rich Media Studio.



**Figure 40.** Start Page

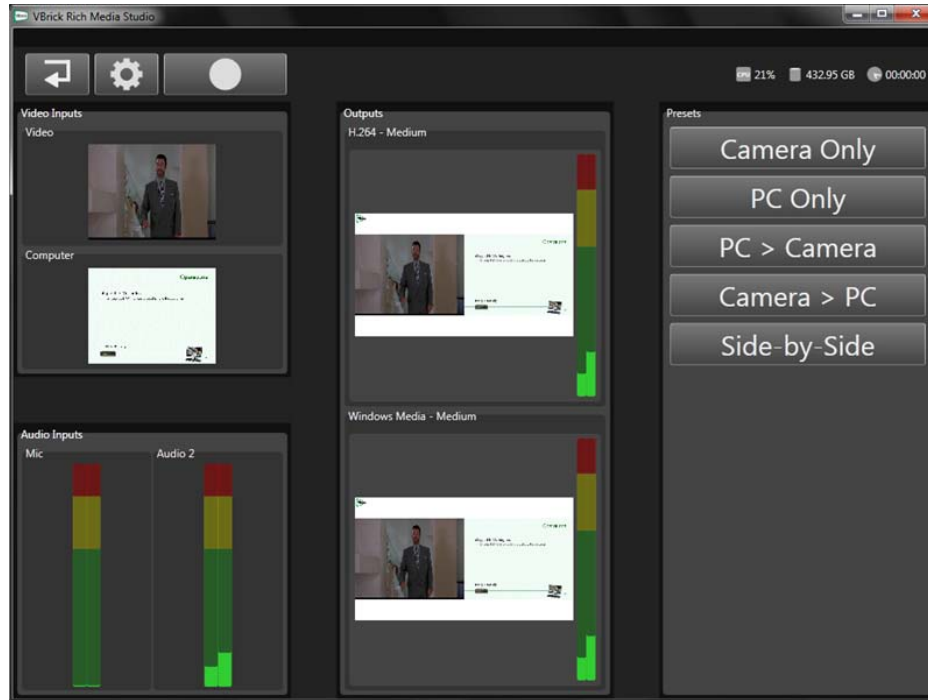
2. When the **Start** page (Figure 40) is displayed, click on the Touch icon. This will display the **Session** page with the Touch menu.



**Figure 41.** Touch Menu

3. Click on a predefined template to open the Session Builder. Click on **Current** to launch the last configuration that was used for a presentation.





**Figure 42.** Session Builder

4. When you are ready to deliver the presentation, click on the **Record** button to start streaming audio and video. The **Record** button blinks in red to indicate that the presentation is live and a recording is in process. If the template is not enabled for recording, the button will still flash but the presentation will not be recorded. See [Archives](#) on page 46 for more about archiving.
5. Use the presets on the right to change the way your output is displayed. If you have two output streams, as shown in Figure 42, the presets will change the output for both streams.
6. When you are finished delivering the presentation, click on the **Record** button again.
7. After a few moments (depending on the length of the recording) a Windows Explorer window (Figure 43) will open showing where the recorded files(s) are archived. In this example there are archives for two streams. Drill down into the folder to see the actual H.264 (.mp4) and Windows Media (.wmv) files.

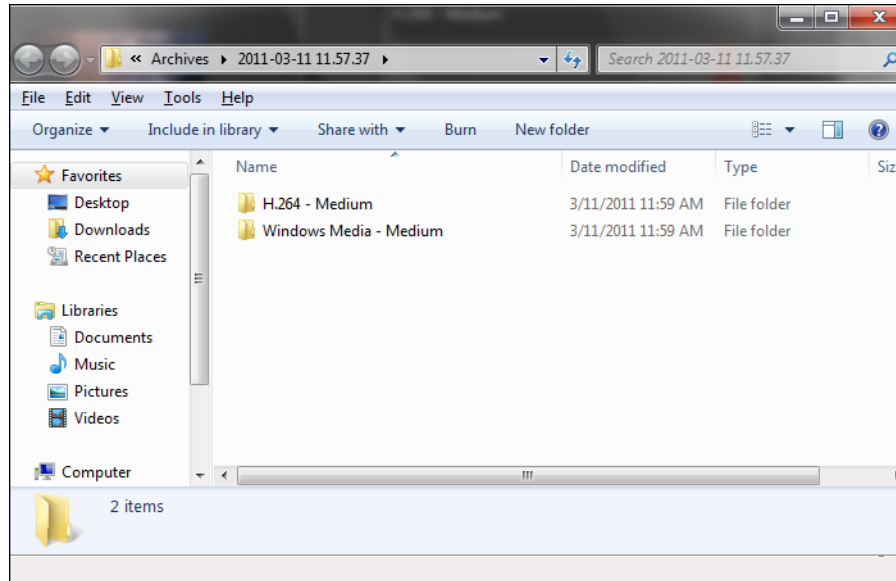


Figure 43. Archive Folder Window

## Using RMS with VEMS

RMS presentations are authored and delivered in two places: on the VEMS server and on the RMS platform. When the live RMS presentation is complete, it can be saved (i.e. FTPed) to a virtual directory on the VEMS server from where it can be published to the **Media Library**. For details, see "Configuring for Presentations" in the [Portal Server Admin Guide](#). See also "Authoring RMS Presentations" in the [Portal Server User Guide](#).

## Using Session Studio/Builder

**VBrick strongly recommends using the preconfigured templates provided with the RMS application.** These templates are designed to provide an optimal viewing experience for your users and have carefully selected values (see [Table 8](#) on page 26) for bandwidth, frame rate, and resolution. **The Rich Media Studio functionality described in this chapter is designed for advanced users who wish to build additional, customized templates.** Use this functionality with care. This added flexibility means you can also create templates that will produce poor or unacceptable results given the bandwidth available to your viewers. See [Touch Session Basics](#) on page 37 for recommendations and guidelines.

---

**Note** Session Builder for RMS Standard (and Session Studio for RMS Professional) denote the interfaces used to create mixes of different input and output deliverables and to define presets. Session Builder cannot record a presentation.

---

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## Overview

Rich Media Studio consists of two interfaces: the Session Studio/Builder interface and the Touch Session interface. The Session Studio interface, described in this chapter, is used to create mixes of different input and output deliverables and to define presets that will be used for delivering a presentation. Different configurations can be saved for each individual presenter or situation. The Touch interface (see [Touch Session Basics](#) on page 37) is a simplified interface with specific presets for each template. It provides all the functionality needed to deliver a presentation and switch between presets. The selections on the menu bar are explained below:

---




File	<ul style="list-style-type: none"><li>• Load Session – load a previously saved session (i.e. a template).</li><li>• Save Session As – saves the current session. Modified session properties are not saved until you save the session.</li><li>• Archives – go to the folder where archived (i.e. saved) recordings are stored.</li></ul>
View	Go to fullscreen or cancel fullscreen.

---

Session	<ul style="list-style-type: none"> <li>• Properties – launches the Session Properties page from which you can choose Metadata, Inputs, or Outputs for the current session.</li> <li>• Record – start or stop a recording.</li> </ul>
Tools	<ul style="list-style-type: none"> <li>• Hardware Configuration – launches the Hardware Configuration Console which is used to define audio and video inputs.</li> <li>• Scheduler – launches the <a href="#">Scheduler</a>.</li> </ul>
Help	<ul style="list-style-type: none"> <li>• Product Website – opens the VBrick website.</li> <li>• Online Help – displays the online help system.</li> <li>• Check for Updates – opens a VBrick <a href="#">Support Services</a> page.</li> <li>• About – shows the version number of the current build.</li> </ul>



**Figure 44.** Studio Session Interface

	Exit to Start menu.
	Open the Properties page for this session.
	Record   Stop Record. Turns red and blinks when a recording is in progress (not available in Session Builder for Standard Edition).

## Tools

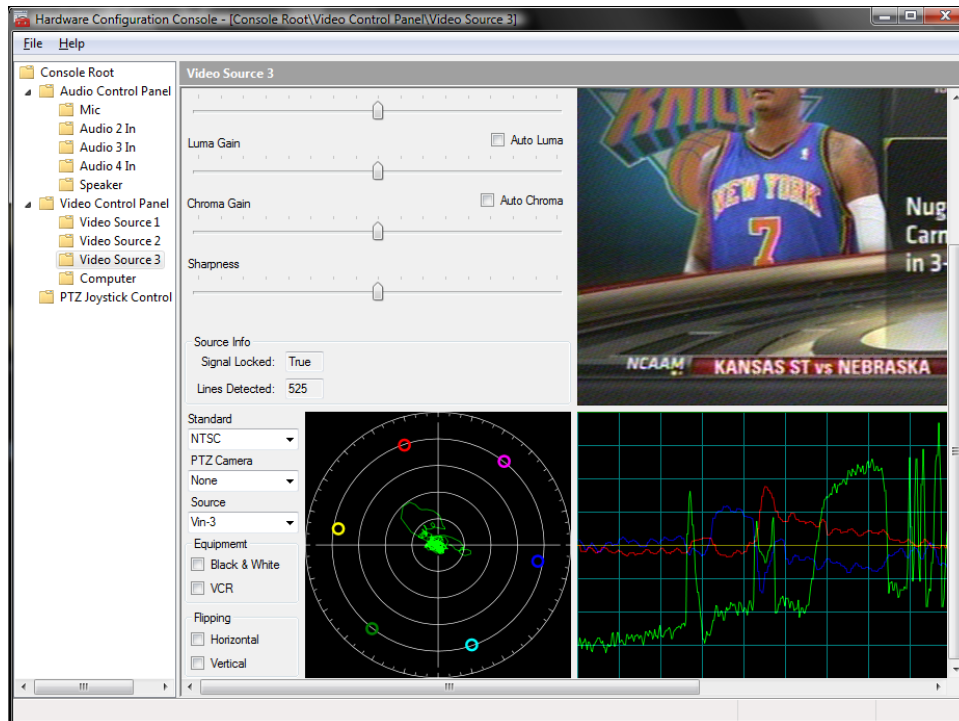
The following options are available from the **Tools** menu.

Hardware Configuration	This option is used to configure the audio and video inputs. See <a href="#">Defining Audio and Video Inputs</a> on page 21 for details.
------------------------	--

Scheduler	Launches the Scheduler (not available in Session Builder for Standard Edition).
Options	Use this page to set various configuration options such as the default path for archived recordings.

## Hardware Configuration

Before you can configure and use the templates you will need to rename the audio and video sources and define the camera input sources. [Defining Audio and Video Inputs](#) on page 21 explains how to use this page.

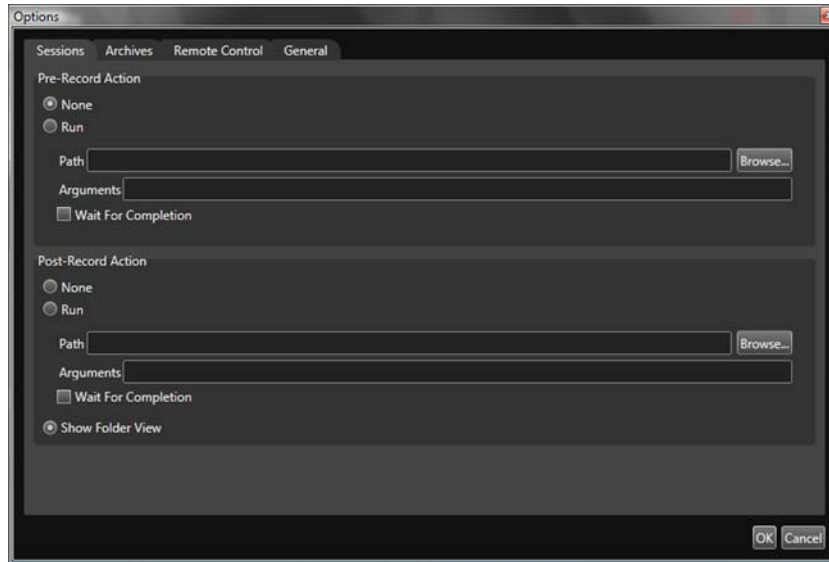


## Options

Use this page to set various configuration options such as the default path for archived recordings.

## Sessions

Use this page to configure **Pre-Record** and **Post-Record** Actions as desired. For example you can use the **Path** field to point to a script or an application that will FTP the recorded file to a Video on Demand server using the specified **Arguments**.



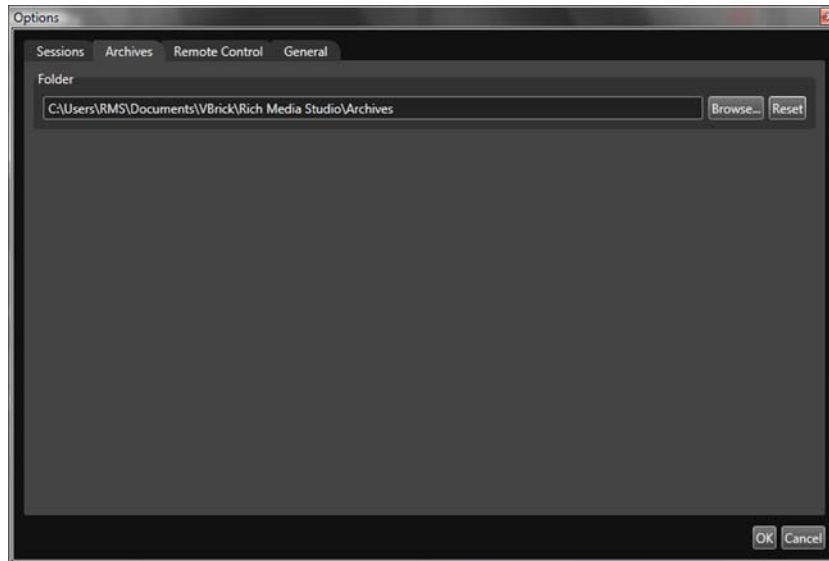
**Figure 45.** Sessions

Pre-Record Action	<p>Pre-Record Actions are actions initiated when a recording begins such as running an executable to perform a task when a recording begins.</p> <ul style="list-style-type: none"> <li>• None – performs no action when stopping a recording.</li> <li>• Run – performs the task specified in the Path field when stopping a recording.</li> <li>• Arguments – passes optional parameters to the executed task when stopping a recording.</li> <li>• Wait for Completion – stops the recording after completion of the task specified in Run. Leaving this unchecked will immediately stop the recording, even if the specified Run task is still running.</li> </ul>
Post-Record Action	<p>Post-Record Actions are actions initiated when a recording is stopped.</p> <ul style="list-style-type: none"> <li>• None – performs no action when a recording is started. This is the default option.</li> <li>• Run – performs the task specified in the Path field when starting a recording.</li> <li>• Arguments – passes optional parameters to the executed task when starting a recording.</li> <li>• Wait for Completion – begins recording after completion of the task specified in Run. Leaving this unchecked will immediately start the recording, even if the specified Run task is still running.</li> <li>• Show Folder View – opens the directory in which the recordings are archived in an Explorer window. This is the default option.</li> </ul>

## Archives

This page sets the path to the folder where presentation recordings (i.e. archives) will be saved.

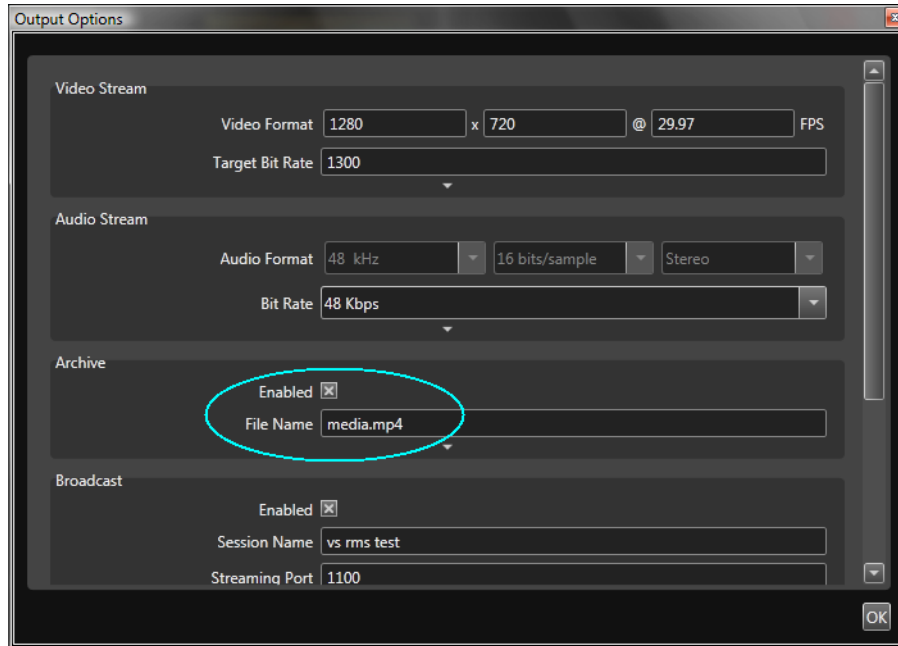
C:\Users\RMS\Documents\VBrick\Rich Media Studio\Archives



All templates are configured by default to enable recording. Click the **Record** button once to start a recording and once again to end a recording. After a few moments the output folder will open showing the recording you just made. The recording is saved with the template name you used when making the recording. To change the default recording path, go to **Tools > Options > Archive**. You may wish to disable recording entirely if, for example, you will be recording a presentation on the VBrick Portal Server.

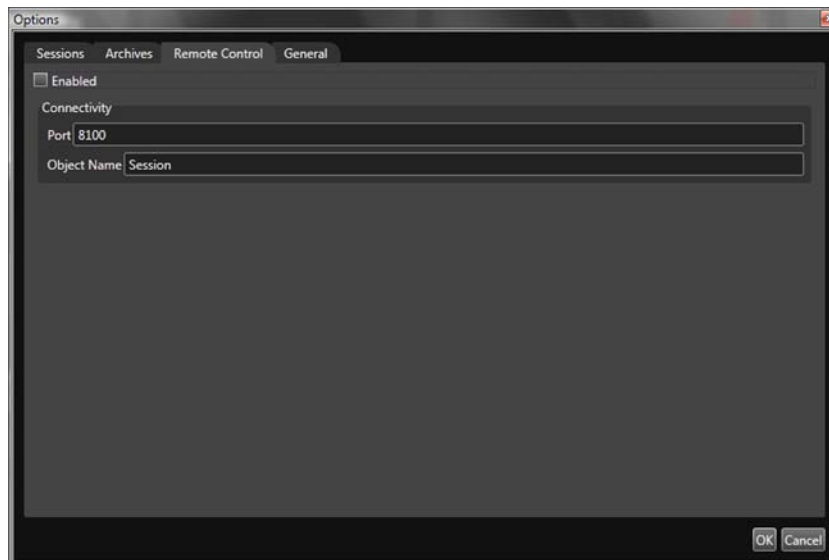
▼ To enable/disable recording.

1. Launch the Rich Media Studio.
1. Go to **Session > Properties > Outputs**.
2. Select an output and click **Edit** and **Options**.
3. Check to enable/disable archiving as appropriate.
4. Scroll down tho the Archive section and enable or disable as appropriate.
5. Click **OK** when done.



## Remote Control

If enabled, the Remote Control option lets you control the RMS remotely via API.

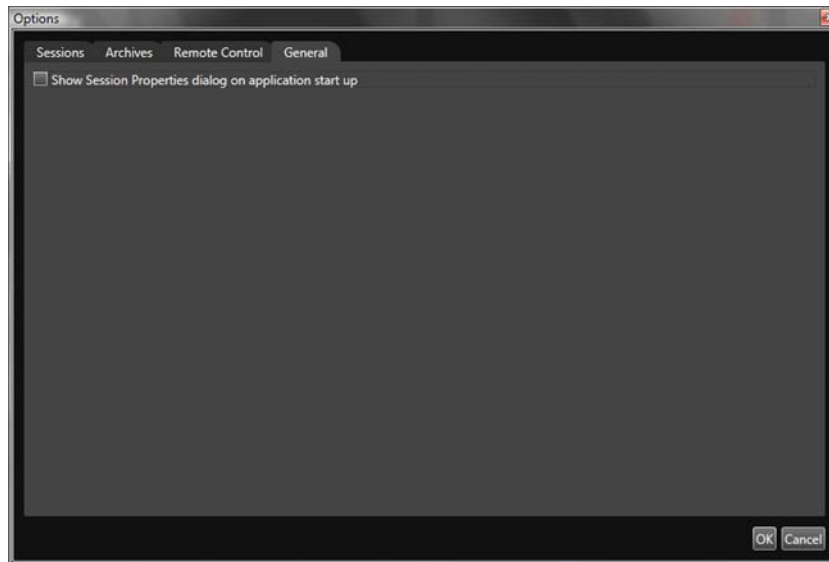


Port	Specifies the port through which the remote API will communicate.
Object Name	Specifies the name of the object that will be used to communicate with the API.



## General

This option determines whether the Session Properties page will display when the application starts.

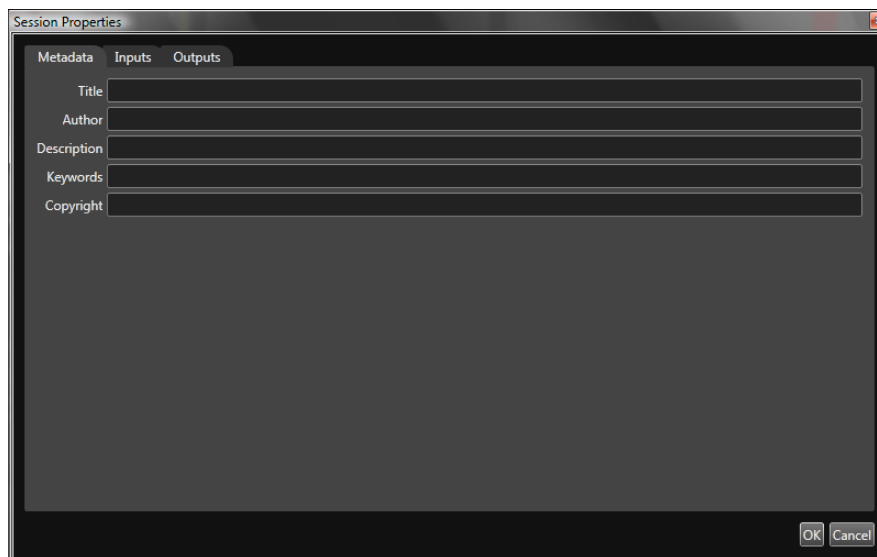


## Launching a Session

After the Rich Media Studio hardware is configured, you can begin creating mixes for your presentations. Launch the Rich Media Studio console interface by double-clicking the Rich Media Studio shortcut on your Windows desktop.

## Session Properties

By default, the Rich Media Studio console interface will launch and the Session Properties window will appear which includes tabs for **Metadata**, **Inputs**, and **Outputs**. The default display of the Properties page is enabled or disabled on the [General](#) tab of the Options page.



**Figure 46.** Session Properties Window

---

## Metadata

Metadata is the information about a Rich Media Studio configuration. It contains information describing a session's Title, Author, Copyright, Rating, Credits, Description and Keywords and is used to facilitate the understanding, characteristics, and management usage of data. The Title field is populated with the template name if you opened a template.

## Inputs

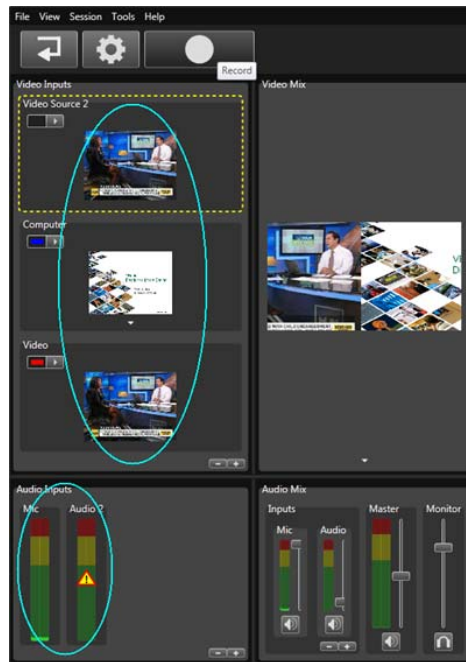
Audio and video input devices connected to the Rich Media Studio are displayed under the **Inputs** tab. Some typical inputs include: By checking the devices under the **Use** column, selected devices will appear in the Rich Media Studio console interface as available inputs that can be captured in a presentation.



Figure 47. Session Inputs

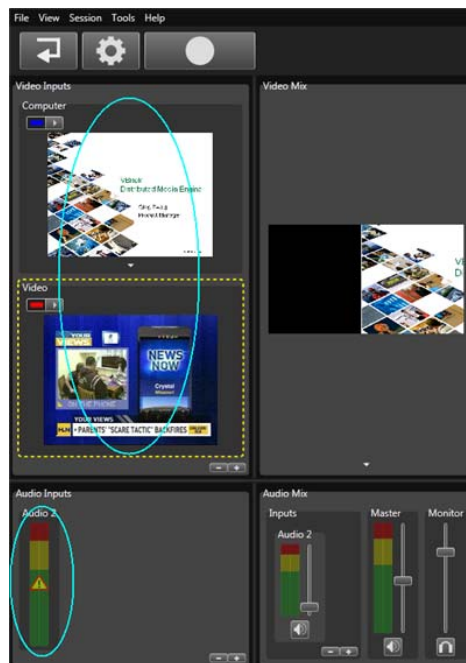
In the example on the right, there are five inputs: three video sources (including a laptop), and two audio sources. The Rich Media Studio console interface (right) displays the three video inputs and both audio inputs.

Use	Name	
<input checked="" type="checkbox"/>	Video	Video Device
<input checked="" type="checkbox"/>	Computer	RGB Device
<input checked="" type="checkbox"/>	Mic	Audio Device
<input checked="" type="checkbox"/>	Audio 2	Audio Device
<input checked="" type="checkbox"/>	Video Source 2	Video Device
<input type="checkbox"/>	Audio 3 In	Audio Device
<input type="checkbox"/>	Video Source 3	Video Device



In the example on the right, one of the video sources and one of the audio sources have been removed. The Rich Media Studio console interface (right) no longer displays the unchecked video and audio sources as available inputs.

Use	Name	
<input checked="" type="checkbox"/>	Video	Video Device
<input checked="" type="checkbox"/>	Computer	RGB Device
<input checked="" type="checkbox"/>	Mic	Audio Device
<input type="checkbox"/>	Audio 2	Audio Device
<input type="checkbox"/>	Video Source 2	Video Device
<input type="checkbox"/>	Audio 3 In	Audio Device
<input type="checkbox"/>	Video Source 3	Video Device

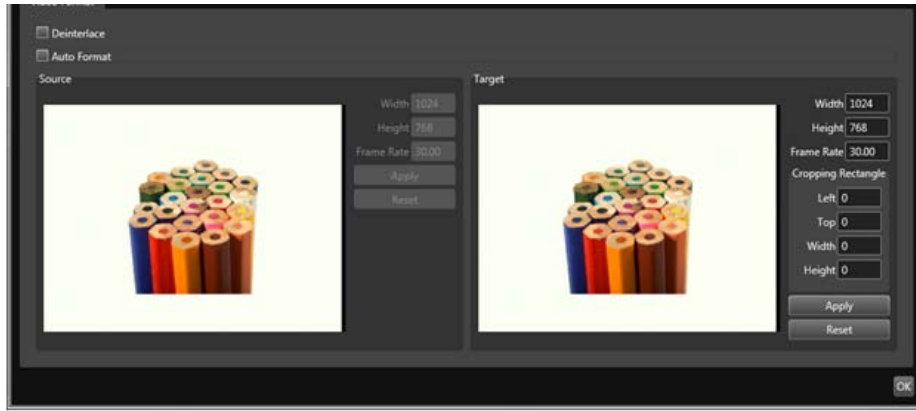


**Figure 48.** Available Input Devices

### Advanced Input Editor

Advanced editing options allow you to crop and scale RMS device inputs. The parameters in the Target panel in the Advanced Input Editor allow you to scale video to account for anamorphic video inputs (i.e. images with unequal magnifications).

- ▼ To edit an input:
  1. Select a Video Input on the Session Properties page and click the **Edit** button.
  2. Click on the **Advanced** button to display the Advanced Input Editor window with two video preview panes (Source and Target).
  3. Adjust the parameters as necessary and click **Apply** to save your changes.



Deinterlace	Check this box to get optimum quality when displaying TV-like material (for example DVDs) on a computer.
Auto Format	Check this box to let RMS auto format the output stream.
Source	Indicates the width, height and frame rate of the video source.
Target	Lets you modify the width, height and frame rate of the output and lets you define a cropping rectangle to crop your video outputs.

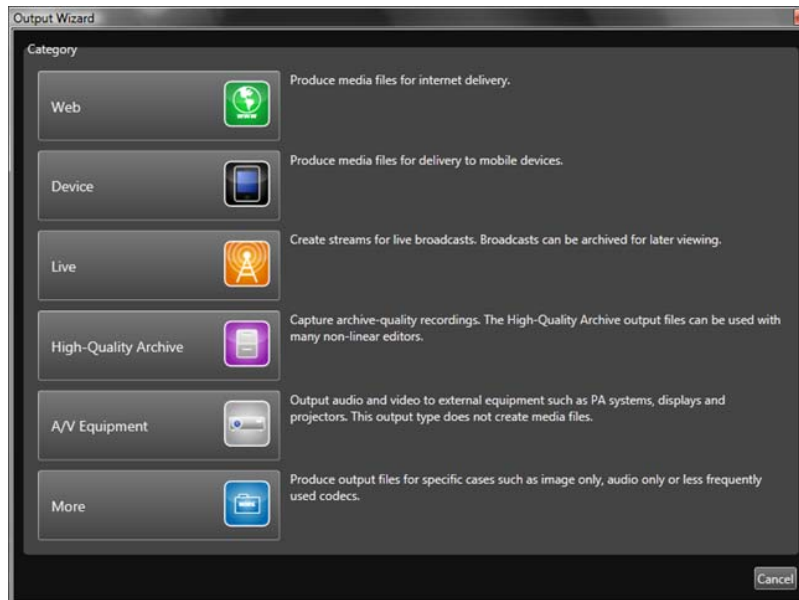
## Outputs

Under the **Outputs** tab are the possible output Types. The selected outputs will determine what deliverables (for example streams for the web, Windows Mobile, or iPhone) will be created for the end user when a recording is completed. With Rich Media Studio, all output types are created simultaneously and are available immediately after completing a recording.



**Figure 49.** Session Outputs

You can also click the **Create** button to launch the output wizard. This wizard will let you create custom outputs for a wide variety of applications. The available custom outputs are shown below.



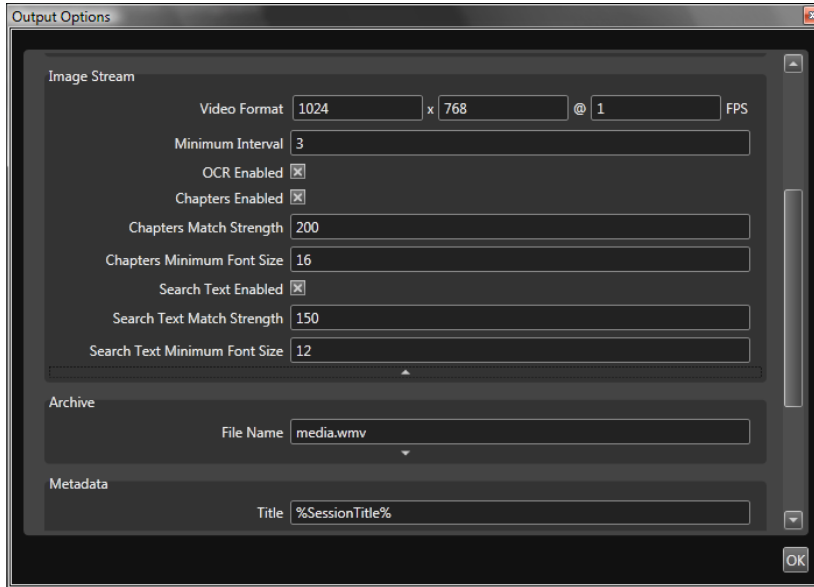
**Figure 50.** Custom Output Wizard

Web	Produce media files for Internet delivery.
Device	Produce media files for delivery to mobile devices.
Live	Create streams for live broadcasts. Broadcasts can be archived for later viewing.
High-Quality Archive	Capture archive-quality recordings. The High-Quality Archive output files can be used with many non-linear editors.

A/V Equipment	Output audio and video to external equipment such as PA systems, displays and projectors. This output type does not create media files.
More	Produce output for specific cases such as image only, audio only, or less frequently used codecs.

## Optical Character Recognition

Enabling OCR (Optical Character Recognition) allows you to translate scanned images of handwritten, typewritten or printed text into machine-encoded text. OCR systems require calibration to read a text.



OCR is most effective using large, black text on a white background. OCR sensitivity will largely depend on the amount of change that occurs between slides. You should test the OCR output with the medium you will be capturing (e.g. PowerPoint or a document camera) and adjust the OCR settings accordingly. For example, the following recommendations are for PowerPoint slides:

Background color	light (e.g. white or light grey)
Text color	black
Text font size	32 pt
Title font size	44 – 46 pt
Sensitivity	0.2

## Creating a Mix

This topic explains how to create and deliver an RMS presentation. RMS creates live video presentations sourced from VBrick Windows Media or H.264 encoders. After all inputs have been selected and outputs have been created, you can prepare your recording in Rich Media Studio's console interface.

Windows Media	WM presentations are <i>pulled</i> by a reflector or server or <i>pushed</i> to a reflector or server (see <a href="#">Configuring for Pull</a> or <a href="#">Configuring for Push</a> for more details).
H.264	H.264 presentations are typically streams to VEMS.

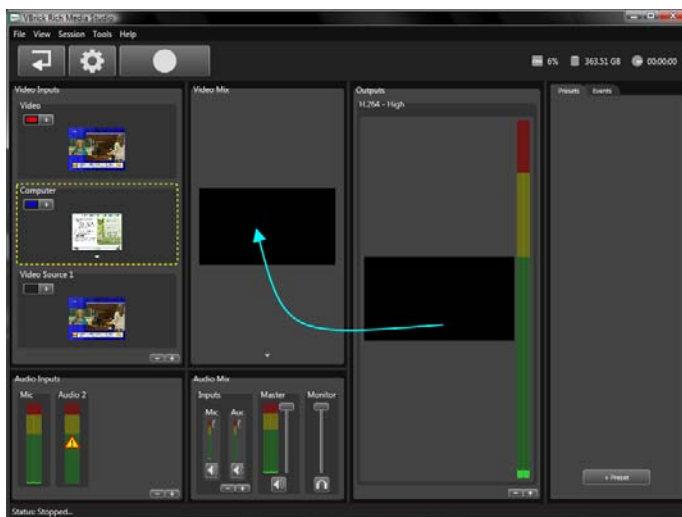
**Note** If you will be creating a presentation that will be saved and hosted on the VEMS Portal Server, see "Authoring RMS Presentations" in the *Portal Server User Guide*.

## Creating an Output

Follow the steps below to define the different outputs as you wish them to appear in the presentation.



1. Start by connecting your audio and video inputs as described earlier and launch the application.
2. The available Video Inputs and Audio Inputs are shown on the left. In this example there are three video inputs and two audio inputs.



3. Select an empty output in the Outputs column and drag it into the Video Mix pane. This will ensure that the Video Mix pane has the right aspect ratio.
4. The Video Mix pane is where you will arrange, scale, and modify the settings for the video layout of each output.




5. Drag and drop a Video Input into the Video Mix window.
6. To scale the video input up or down, use the scroll (wheel) button on your mouse.
7. To move the video around in the window, right-click and drag the image.



8. After resizing and positioning the image, drag and drop the Video Mix you want to present or record into the Outputs window.
9. You have now created an output mix that can be associated with a preset or saved as a template.

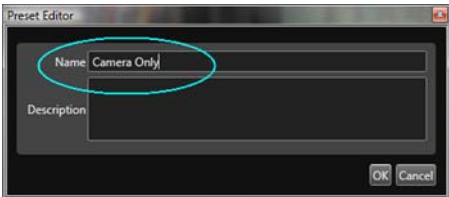




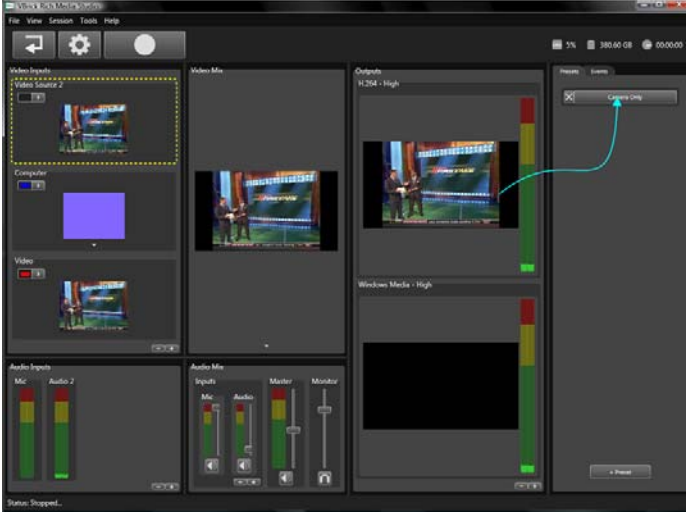
10. Adjust the audio mix as necessary. Then drag and drop the Audio Mix to the output by dragging the Master VU meter from the Audio Mix window into the VU meter for the appropriate output.

11. Each output can have a different audio mix.

---



12. The last thing to do is to create a preset. Start by clicking the Preset button in the lower right corner of the application and entering a name for the Preset in the popup.



13. Then drag the output window to the preset. This will associate the output window "view" with the named preset.

14. When done, repeat all of these steps for each output type you wish to configure.

**Figure 51.** Basic Steps for Creating an Output

## Adjusting Settings and Mix Templates

### Selected Input Settings

To configure your input, you can also use the **Selected Input Settings** section. This section allows you to make changes to the input:

- Size

- Position
- Transparency
- Brightness and Contrast
- Border width and color

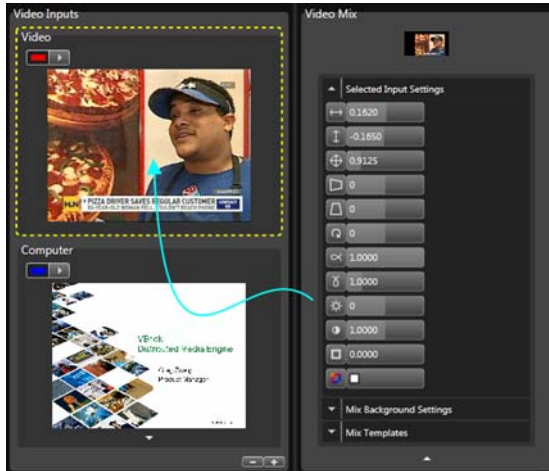



Figure 52. Selected Input Settings

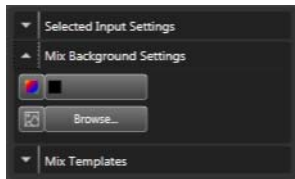
Table 9. Selected Input Settings

Image	Title	Description
	Horizontal Offset	Sets the horizontal offset from the center of the video mix (Range: -5.0000 – 5.0000)
	Vertical Offset	Defines the vertical offset from the center of the video mix (Range: -5.0000 – 5.0000)
	Scale	Sets the size of the video input as it will appear in the Video Mix (Range: 0.0000 – 5.0000)
	Yaw	Sets the yaw of the video input relative to the center of the video input (Range: 0.0000 – 5.0000)
	Pitch	Sets the pitch or vertical "tilt" of the video input relative to the center of the video input (Range: 0.0000 – 5.0000)
	Roll	Sets the roll or rotation of the video input relative to the center of the video input (Range: 0.0000 – 5.0000)
	Alpha	Sets the alpha or transparency of the video input (Range: 0.0000 – 1.0000)
	Gamma	Adjusts the gamma or gray levels between black and white are displayed for the video input (Range: 0.0000 – 5.0000)
	Brightness	Adjusts the overall brightness of the video input. (Range: -1.0000 – 1.0000)
	Contrast	Adjusts the overall contrast of the video input (Range: 0.0000 – 2.0000)
	Border Thickness	Controls the size of the video input's border (Range: 0.0000 – 10.0000)

Image	Title	Description
	Border Color	Determines the color of the selected video input's border (Values: hexadecimal value or common color name. i.e. "red")

## Mix Background Settings

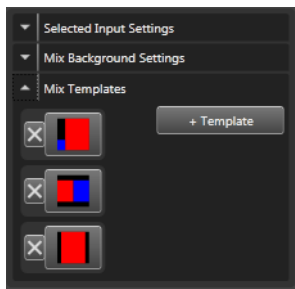
You can specify a color or import an image for the background of a mix in the **Mix Background Settings** section.



**Figure 53.** Mix Background Settings

## Mix Templates

After a mix is created, it can be saved as a template for future mixes.

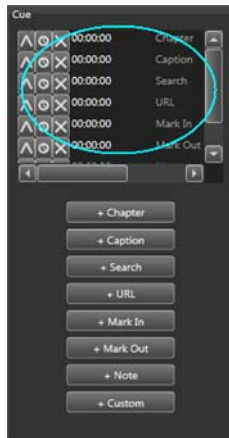


**Figure 54.** Colors Defining a Mix Template

The colors correspond to the various inputs.

## Events

*Professional Edition only.* Events can enhance a presentation with the ability to add meaningful data during a recording. A presenter can create a chapter point in any part of a presentation, insert captions which will appear in the close captioning area of the interface, or insert search terms into any point in a recording allowing the user to search on a keyword to locate a specific portion of a presentation. A presenter can also add post-production Events to signify to the video editor, including specific notes for the editor as well as segments of the video to be removed via Rich Media Studio's **Mark In/Out** feature. The Events feature is only accessible in the Rich Media Studio console interface and appears on the right window column under the **Events** tab.



1. Under the **Cue** pane, click on an Event button (Chapter, Caption, Search, URL, Mark In, Mark Out, Note, Custom).
2. Enter the appropriate text in the field provided.
3. Specify a time for the event or click the "timer" button to set the current time of the recording.



4. Click on the "up" button to apply it to the time line. The Event should appear in the **Monitor** pane.
5. To remove an event, click on the "down" button in the **Monitor** pane and it will come down into the **Cue** pane.
6. Click the "cancel" button to cancel the Event completely.

**Figure 55.** Adding and Managing Events

The following list describes each of the **Events** that can be added during a recording.

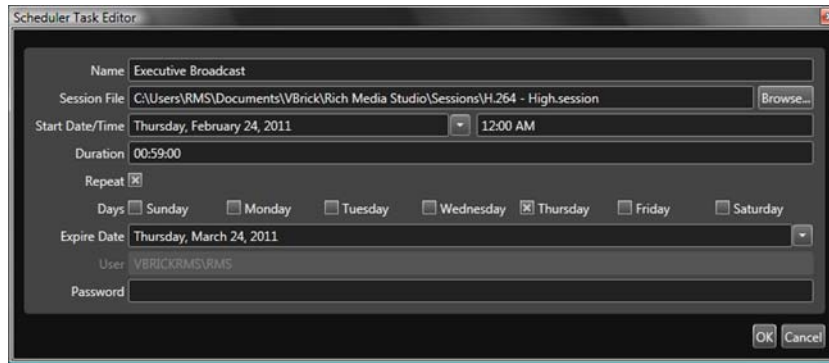
**Table 10.** RMS Events

Chapter	<p>A <b>Chapter</b> can be added to specify areas in a recording a presenter may wish to identify as a key segment in a discussion. By adding a title, a chapter is created with the title the presenter has specified. Note that these Chapters are created in parallel with the chapters created by Rich Media Studio's OCR.</p> <p><i>Example</i> A presenter may discuss a single image at length that contains no recognizable text for OCR. The presenter could send Chapter events during the discussion of that image to create chapters so the audience can navigate to a specific portion of the discussion.</p>
---------	--

Caption	A <b>Caption</b> can be added to a recording by sending a Captions event. These captions appear in the closed captioning area typically occupied with closed captioning text that appear when the CC button in the Rich Media Player is pushed.
	<i>Example</i> A presenter can take advantage of this feature by adding captioning notes to display to the audience. This could be useful to display text to highlight key concepts or to display a mathematical formula.
Search	<b>Search</b> terms can be added to a recording to make any segment of a presentation searchable.
	<i>Example</i> A presenter with a speech-only discussion will not have automatic chapter creation or searchable text. The presenter may wish to insert searchable keywords pertaining to various segments of the discussion so the viewer can search for that portion of the presentation.
URL	A <b>URL</b> event can be sent during the recording if a presenter wishes to add a URL as a resource during a presentation.
	<i>Example</i> A presenter may have a web resource available not available in a presentation slide. To make this URL available to the viewer, the presenter can send a URL Event to provide a link of the online resource to the viewer.
Mark In   Mark Out	The <b>Mark In</b> and <b>Mark Out</b> events are used for post production of a recording. Sending these events during a recording will mark the timeline with "In" and "Out." If the presentation requires editing, an editor can view the timeline for these In and Out marks and remove portions of the video accordingly.
	<i>Example</i> A presenter may discuss a topic outside the course curriculum and may elect to remove that segment of the recording. For this situation, the presenter can send a Mark In event, marking the beginning of the section to be removed. The presenter can then send a Mark Out event to mark the end of the section to be removed, after which the presenter can continue with regular course discussion.
Note	The <b>Note</b> event is used to provide notes for a video editor for post production of a recording if any is required.
	<i>Example</i> The presenter can send a Note event during a recording which signifies to the editor about a particular portion of the video.
Custom	The <b>Custom</b> event is a free field used to add any custom information to a presentation.
	<i>Example</i> Some organizations may require recordings to be categorized or grouped. The Custom Event can send any text to identify a recording as belonging to a particular group.

## Scheduler

*Not available in Standard Edition.* The Scheduler allows you to schedule recordings in advance. Scheduled recordings can be configured to repeat based on a day of the week and time. This is useful for recording regularly scheduled events such as classroom lectures.



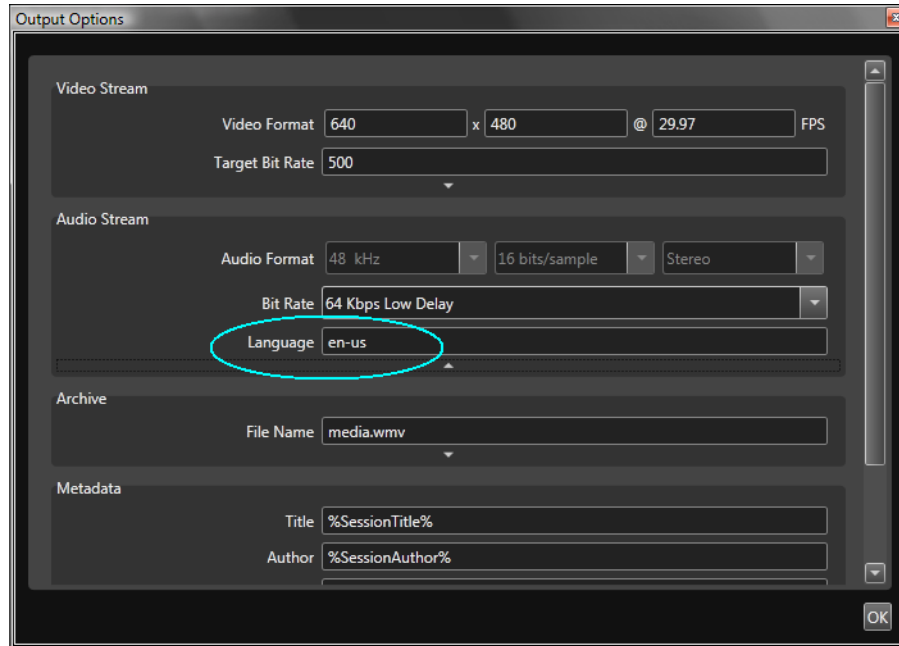
**Figure 56.** Scheduler

- ▼ To create a new scheduled recording:
1. From the Scheduler dialog, click the **Create** button to launch the Scheduler Task Editor.
  2. In the Scheduler Task Editor, enter a **Name** for the scheduled recording.
  3. Select the appropriate **Session File** for the scheduled recording.
  4. Specify the **Start Date/Time** for when the recording is to start. A calendar will appear when you click on the white arrow next to the Date field for easy date selection.
  5. Specify the **Duration** for which the recording should last in `hh:mm:ss` format.
  6. Check the **Repeat** checkbox if the recording is to occur regularly.
  7. If Repeat is checked, specify which **Days** of the week the recording should occur.
  8. For repeating recordings, specify the **Expire Date** for the recording. The Expire Date is the date after which the recording will no longer occur and will be removed from the Scheduler.
  9. Enter the password for the Windows user account that is scheduling the recording. The Windows user name appears in the user box above the **Password** field.

- 
- Notes**
- Only a user with Administrative privileges can access the scheduling features.
  - Scheduling a recording requires a password. If a user account is created under which scheduled recordings will run, a password is required for that user. the scheduler will not work on a profile (Administrator/User) without a password.
  - Scheduled tasks will only run on the Windows account that created the scheduled recording. If recordings were scheduled under the Administrator account, you must be logged into the Administrator account for those recordings to run.
  - When scheduling a recording, be sure that the recording does not overlap a previously scheduled recording.
- 

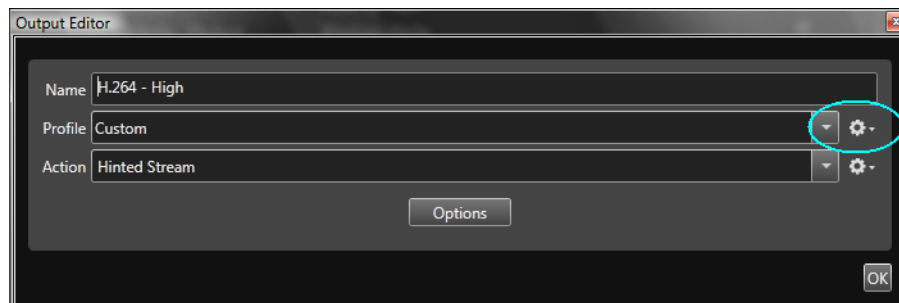
## Changing the Language

The RMS software is available in English, Spanish, French and Japanese. If want to use RMS in a language other than English, you must change the language in Windows on the **Control Panel > Regional and Language Options** page. If you do not, the OCR (Optical Characters Recognition) functionality will be available only in English. You will also will need to set the language for all outputs with Audio Stream in the output options window. By default, the language is set `en-us`.



## Saving a Session

When working in a session, click the **OK** button when navigating through different pages to *temporarily* save your changes. To permanently save the session, go to **File > Save Session As**. This will overwrite the template associated with that session and is not recommended. An alternate method is to use the Output Editor page shown below to create a **Profile**. A profile is an .xml file that is a subset of a session template. You can load or save a profile using the icon on the right side of the pane. If you create a "profile" of your session changes, you will not need to overwrite the template. Profiles are saved as .xml files in `C:\Users\RMS\Documents`







## Viewing Rich Media Streams

### Topics in this chapter

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Viewing Stored Streams.....	66

### Overview

RMS presentations are typically delivered as live streams and they can also be recorded and saved as stored (VOD) files. Live streams can be played and viewed directly from the RMS or from VEMS (if a VBrick Portal Server is present). From VEMS, live or stored streams can be viewed using a Portal Server desktop client and/or the stream can be sent to local set top boxes. Stored streams can be played from a Windows Media Server (.wmv files) or a Darwin server (.mp4 files), or they can be played from VEMS. Stored streams cannot be played directly from the RMS.

### Viewing Live Streams

#### Viewing Live Streams from RMS

Live RMS presentations are typically streamed live and can be viewed on individual desktop players. RMS outputs Windows Media streams and H.264 streams. Windows Media streams are typically played in a Microsoft Windows Media Player (by pointing to a VBrick Windows Media Reflector or to a Windows Media server). H.264 streams are usually played in StreamPlayer, Quicktime, or VLC (by pointing to a Darwin server or a VBrick DME). In both cases the RMS streams can be configured for "push" or "pull" as appropriate.

#### Viewing Live Streams from VEMS

There are two basic ways to view live RMS streams in VEMS:

- By viewing a live VEMS presentation (created with the VEMS Presentation tool) to which you have been invited. VEMS presentations are interactive and you can ask questions, respond to polls, and view reference material. In this scenario the presentation is authored in VEMS and in RMS and is shown on the **Live Media** page in VEMS. This scenario is described in detail in the "Authoring RMS Presentations" topic in the [Portal Server User Guide](#).
- By viewing a live stream from VEMS (v5.4 or higher) which has been (1) configured in VEMS as a URL for a live video stream or (2) has been auto-discovered by a SAP announcement from RMS (H.264 streams only). In this scenario the stream is not interactive and all you can do is watch.

---

## Viewing Stored Streams

Stored streams can be archived on the RMS machine but they cannot be played and viewed directly from RMS. You will need to use one of the following methods to view stored RMS streams.

### Viewing Stored Streams from a Server

- Windows Media files can be FTPed to a Windows Media Server and played using a properly formatted URL.
- H.264 files can be FTPed to a Darwin server or a VBrick DME (which acts as a VOD server) and played using a properly formatted URL.

### Viewing Stored Streams from VEMS

There are two basic ways to view stored RMS files in VEMS:

- By viewing a stored VEMS presentation (created with the VEMS Presentation tool) which has been FTPed from RMS and published to the **Media Library** in VEMS. *This is the only way to make stored Silverlight presentations available in VEMS.* See the "Authoring RMS Presentations" topic in the [Portal Server User Guide](#) for more information.
- By opening a VEMS client on the RMS machine and using the VEMS "Add Video" feature to copy files to a VEMS VOD server.

## Maintenance and Upgrade

### Topics in this chapter

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## System Maintenance

### Installing Windows Updates

The Rich Media appliance shipped with "Automatic Updates" for Windows set to **Notify me but don't automatically download them**. To avoid impacting performance, install updates only when the system is idle. Also, be sure to install "high" and "critical" updates only. Do not update any drivers except as directed by VBrick.

---

**Note** Be aware that the RMS application requires a dedicated platform. Do not install anti-virus or other software on the RMS computer.

---

### Managing Disk Space

All Studio Touch templates are configured to record each presentation, and since the Rich Media Studio is configured with a 500 GB hard drive, you will need to manage disk resources accordingly. There will be no indication that the drive is getting full. However if the computer performance is noticeably slower or common tasks like deleting files take longer than usual, you may want to check the disk. If you have less than 25 GB of **Free space** remaining, you should probably move some recorded presentations to another location or server.

- ▼ To view available disk space
  1. Open **Windows Explorer** and click on **My Computer**.
  2. Right-click on the C: drive and select **Properties**.

## Backup and Restore

**IMPORTANT** This section explains how to restore the Rich Media Studio to its original settings using the Acronis system restore image that was installed prior to shipment. Before performing a restore, please save all relevant data (such as session templates and archives) and be sure you have the Windows Operating System (located on a sticker attached to the bottom of the unit). If you cannot find the Windows Operating System key, please contact VBrick Support Services before proceeding.

- ▼ To restore the Rich Media Studio:
  1. Reboot the Rich Media Studio appliance.
  2. At boot up, press **F11** once when the message "Starting Acronis Loader... Press F11 to ..." is displayed.

3. Verify that the Acronis software page actually loads. If it does not, reboot the appliance and start again.
4. On the Acronis software page, select **Restore** and follow the instructions.
5. After completion of the restoration process, the system should reboot and enter the Windows mini-setup (default values may apply). You will need to enter the Windows OS key when prompted.
6. After completion of the mini-setup, you will be able to login. You may need to activate the Windows Operating System key by calling Microsoft since it needs to be reactivated (activation by phone option).
7. Perform Windows updates (see above [Installing Windows Updates](#)) and apply any relevant VBrick software upgrade.

## Software Upgrade

The following procedures explain how to upgrade RMS versions 1.0/1.2/1.3 to RMS 1.7.27. Be aware that RMS Professional Edition and High Definition have support for additional audio and video inputs (see [Rich Media Studio Versions](#) on page 5). When creating inputs and outputs, use `default.session` for RMS v1.0 or v1.2 units. Use `defaultHD.session` for RMS 1.3/1.7.x units. Be sure to save all `.session` files **before** an upgrade. Be sure to replace any `.sdp` files on web servers (e.g. VEMS, DME) **after** an upgrade. As shown in Table 11 there are multiple components (in addition to the 1.7.27 application software) required for this upgrade. These upgrade components are bundled into a zip file and can be downloaded from [www.vbrick.com/support/downloads.asp](http://www.vbrick.com/support/downloads.asp) *You will need to download this zip file before you begin the upgrade.*

**Table 11.** Contents of RMS\_1.7.27\_Upgrade.zip

Software	File Name	Description
Application Software	VBrick_RMS_1.7.x.msi	Application software for version 1.7.x
Session Configurations	default_v1.7.x.zip	This folder has the default session templates.
Players	Actions_v1.7.x.zip	These software components are required for all installations.
Videum Drivers	WnvAvs_3_6_866_usa_QA.exe	This folder has the hardware drivers.

### Upgrading from RMS 1.0/1.2/1.3 to 1.7.27

- ▼ To upgrade your existing RMS 1.0/1.2/1.3 software to RMS v1.7.27:
  1. Install any high priority Windows updates.
  2. Reboot.
  3. Download all required files from the VBrick website as explained above.
  4. On Windows 2008 or Windows 7 (not Windows 2003):
    - a. Launch a Command Prompt window.
    - b. Enter the following command: `bcdedit /set increaseuseriva 2304`
  5. Uninstall existing 1.0/1.2/1.3 software from your system completely using Windows **Programs and Features**.
  6. Launch the Videum drivers installer (`WnvAvs_3_6_866_usa_QA.exe`) and follow the prompts using the defaults. Be sure to select Reboot before install.

7. Reboot.
8. Complete the installation. Proceed through the dialogs using the defaults.
9. Reboot/shutdown may be required.
10. Launch the 1.7.x installer (`vBrick_RMS_1.7.x.msi`) and proceed through the dialogs.
11. Windows 2003 go to: `C:\Documents and Settings\All Users\Application Data`
12. Windows 2008 or Windows 7 go to: `C:\ProgramData`
13. Go to the installation folder folder.
14. Unzip the Actions/Players file (`Actions_v1.7.x.zip`) and copy the content into the Actions folder.



## Using 3M MicroTouch

### Topics in this chapter

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Touch Settings .....	73
Edge Adjustment Tab .....	75
Troubleshooting .....	75

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**Note** The 3M™ MicroTouch™ MT 7 software is available on RMS High Definition (Portable) systems only.

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### MicroTouch Software Overview

The 3M MicroTouch MT 7 software (available on RMS HD Portable systems only) allows users to select, launch, and drag objects using the sensor. MT 7 provides support for MicroTouch sensor operation for all RMS operations. You can use the MT 7 control panel to set your preferences for the sensor. For example, you can define the following preferences:

- Whether the touch action occurs when you touch the sensor or when you lift your finger (or stylus) off the sensor.
- Whether you hear a sound when you touch the sensor.
- Define a frame around the active touch area in which the cursor moves closer to the edges of the sensor.
- You can also use the MT 7 control panel to calibrate the touch sensor and run optional programs. The Calibration Tool enables you to calibrate your touch sensor without launching the control panel.

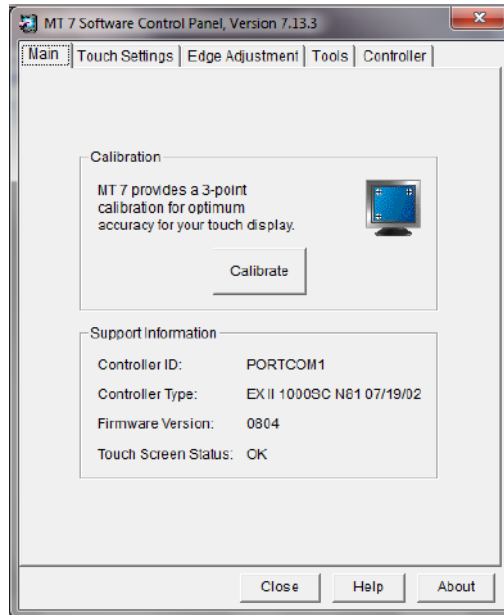
### MicroTouch Control Panel

The MT 7 software control panel consists of tabs that allow you to determine the best settings for your touch system configuration.

- Use the Main tab to run a three-point calibration routine for optimum accuracy of your sensor.
- Use the Touch Settings tab to define the touch actions that equate to mouse actions and add right-click functionality to the touch sensor.
- Use the Edge Adjustment tab to define a frame around the active touch area in which the cursor moves closer to the edges of the sensor.
- Use the Tools tab to restore hardware or software defaults, reset controller, run Draw Test from the desktop, and to enable Advanced Options for your touch sensor.

▼ To open the MT 7 control panel:

1. Go to **Start > All Programs > MicroTouch MT 7 > Control Panel**.



## Calibration

The calibration process aligns the sensor with the underlying video. Specifically, calibration defines the dimensions of the active area of the sensor and locates the center of the sensor. If the sensor is not calibrated, the active area of the sensor may not be aligned properly or may be unnecessarily small. You should calibrate the sensor in the following cases:

- Any time you change the size and position of the video image by adjusting the horizontal and vertical controls on your display.
  - Any time the cursor does not follow the movement of your finger, or does not reach the edges of the sensor. If you continue to need additional accuracy along the edges, use the Edge Adjustment tab.
- ▼ To calibrate the sensor:
1. Select the **Main** tab.
  2. Click the **Calibrate** button.
  3. A calibration target appears in the lower left corner of the sensor.

---

**Note** If you press Esc or do not touch the sensor within twenty seconds, the system automatically cancels the calibration process with no change to the current settings.

---

4. Touch the sensor positioning your fingertip to completely cover the green target. This position is calculated upon liftoff and when you remove your finger, the target should turn red. When touching the calibration target, make sure to:
  - a. Face the display directly.
  - b. Perform the calibration in the position (sitting or standing) you expect to normally use the sensor.
  - c. Touch the calibration target firmly and precisely with your fingertip. During Calibration, be careful to keep your fingernails and other fingers away from the sensor as you touch the target.
5. Repeat these instructions for additional calibration targets.



- Once you have calibrated the sensor, a dialog box will appear to ask if you wish to test, accept or cancel this calibration.

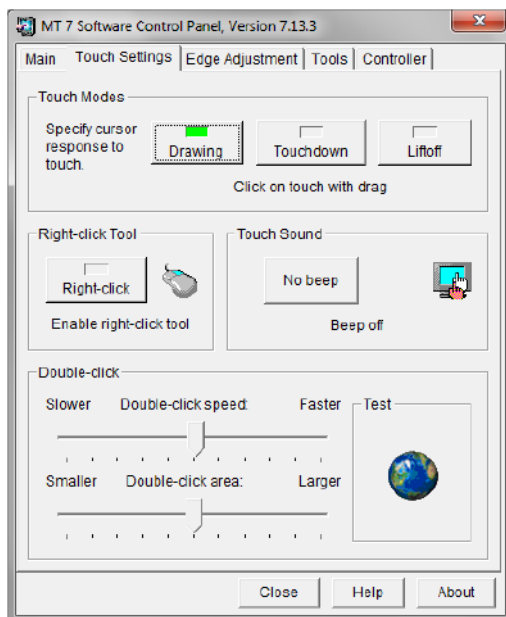
## Testing the Calibration

If you accidentally liftoff from the sensor in the wrong place during calibration, you will distort the sensor calibration. Test by touching several points on the sensor to make sure you are satisfied with the calibration results. The cursor should be located underneath your finger or pen when you touch the sensor. Repeat the Calibration process until you are satisfied. Recalibrate the sensor if any of the following tests fail. Touch random points on the sensor. The cursor should be located underneath your finger or pen when you touch the sensor.

- Drag your finger across the sensor and check that the cursor follows your movements.
- Touch each corner and along the edges of the sensor. Verify that the cursor reaches the full image area of the sensor. Be sure you can touch and activate all icons and menus across the entire sensor.
- If you are using a pen stylus, be sure to perform the calibration procedure using the pen.
- If you need to recalibrate the sensor, make sure to touch the targets carefully. It is possible that one of your touches did not register properly or you accidentally touched the sensor in the wrong place during calibration. For example, if you touch beyond the targets or into the non-image area, you will distort the sensor calibration.

## Touch Settings

The Touch Settings tab enables you to customize the response of your sensor. You can change the way the system responds to your touch, add a right-click tool to your desktop, tell your system to beep on touch, and define the double-click speed and area of your touch.



## Touchdown Mode

Touchdown Mode enables you to create an immediate button action as soon as you touch the sensor. In Touchdown Mode, you cause a button down at the cursor location, with a

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short pause and then a button up. You can leave your finger on the sensor but only a single touch is registered until you lift your finger off the sensor and touch down again. Touching the sensor is equivalent to pressing and releasing the mouse button. The action occurs as soon as you touch the sensor. This mode is best for button-based applications (like a calculator). Drawing or dragging is not supported in this mode.

## Liftoff Mode

Liftoff Mode enables you to position the cursor where you want before creating a button action. In Liftoff Mode, the cursor will follow your finger for a more accurate touch. When you want to select an item, lifting your finger off the sensor will cause a button down, short pause, and then a button up to occur. Touching the sensor is equivalent to moving the mouse position. The button down/button up action occurs when you remove your finger from the sensor. This mode is useful for applications requiring greater accuracy because it lets you carefully position the cursor before acting on it. Drawing or dragging is not supported in this mode.

## Right-Click Tool

This option places an icon on the desktop (always on top of your application) that allows you to select which mouse button to activate on touch. This icon can be dragged anywhere on the screen. In the image you will see that either the right-click or left-click mouse button is green. This is the active button. Note that this works for the next click action only. After you have selected the right-click option and then touched the screen causing the right-click menu to appear, the mouse will automatically revert back to its original left-click state. You can position this icon anywhere on your desktop by selecting it, pausing until the four-pointed arrow appears, and dragging it wherever you want. Left button is typically used for normal select and normal drag. Right button is typically used for applet properties such as context menu and special drag. For Windows 7 (when used with the touch digitizer option) press and hold your finger down on the screen. A ring will appear around the point at which you are touching and upon liftoff the right-click menu will appear.

## Touch Sound

Select audible beep on touchdown, liftoff, or no beep at all. Click on the Beep button to select the appropriate option for your application. The default setting is no beep on touch (Beep off).

## Double-Click Speed

Double-click speed defines how quickly you must touch the sensor for the system to interpret your actions as a double-click. Set the double-click speed in the slow to medium range for optimum performance with a touch sensor. Touch the globe twice to test the double-click speed and area settings. If the globe begins to spin, the sensor recognized your touch as a double-click. Note: Changing this setting will affect the double-click setting of the mouse.

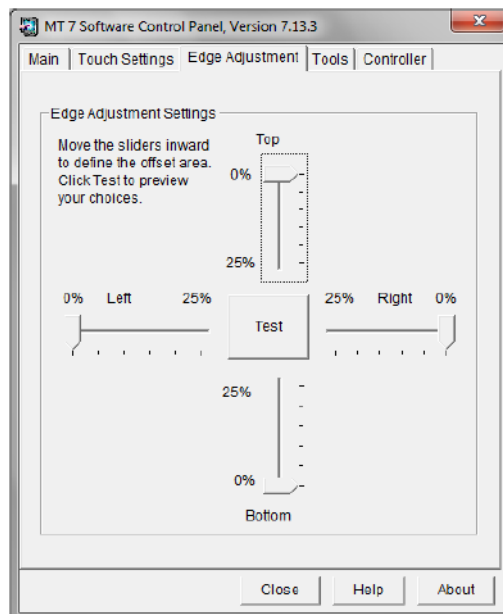
## Double-Click Area

Double-click area defines the space in which you must touch the sensor for the system to interpret your actions as a double-click. Set the double-click area in the medium to high range for optimum performance with a sensor. Touch the globe twice to test the double-click speed

and area settings. If the globe begins to spin, the sensor recognized your touch as a double-click. Note: Changing this setting will affect the double-click setting of the mouse.

## Edge Adjustment Tab

Once you calibrate the sensor, the cursor should be located directly beneath your finger when you touch the sensor. However, this may make it difficult to touch items at the very edges of the sensor. The Edge Adjustment tab enables you to define an offset area in which the cursor moves closer to the edges of the sensor so you can easily and more precisely select small items, such as single words, the Windows **Start** button, check boxes, or radio buttons. For example, if you have a row of buttons along the left edge of your sensor, you may want to set an edge adjustment to enable users to easily activate these buttons. Because each edge is independent of the other, you only need to adjust the left margin to accommodate this row of buttons.



To set the Edge Adjustment, move the sliders inward to define the offset area. These changes take effect immediately. Click **Test** to preview your choices. The area you have defined appears as a colored area as shown below. Within this colored area, the cursor will automatically move ahead of your finger so you can more easily touch items closer to the edge. Determine if the area you have defined is sufficient for your needs. Can you touch into the corners and along the edges of the sensor? Click Esc, End Test, or Return to go back to the Edge Adjustment tab. If you are satisfied with the selections you have made you are done. If not, adjust the sliders to better accommodate your needs.

## Troubleshooting

### Cursor Does Not Reach Edges of Display

Try calibrating the touch sensor. When calibrating the sensor, be sure you touch the center of each target firmly and precisely. If additional tuning is necessary, use the Edge Adjustment Tab to enable greater ability to touch into corners and edges of the sensor.

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### **Cursor is Jittery**

You need to adjust the Sensor Frequency. Choose Sensor Frequency from the Controller tab. Any time you adjust the frequency you should test how the sensor is working and verify you are satisfied with the operation of the sensor.

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### **Cursor Jumps or Bounces Suddenly Across the Display**

You are most likely touching the sensor in more than one spot at the same time. Be sure to point and touch with one finger only. Keep your other fingers away from the touch sensor. Do not rest your other hand on the display or bezel at the same time.

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### **Double-Click Doesn't Work**

Use the Touch Settings tab to adjust the double-click speed and area. The double-click *speed* defines how quickly you must touch the sensor for the system to interpret your actions as a double-click. Set the double-click speed in the slow to medium range for optimum performance with a sensor. The double-click area defines the space in which you must touch the sensor for the system to interpret your actions as a double-click. Set the double-click area in the medium to high range for optimum performance with a sensor. Click on the globe to test the double-click speed and area settings. If globe begins to spin, the sensor recognized your touch as a double-click. Note: Changing this setting will affect the double-click setting of the mouse.

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## Streaming to the DME

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### Streaming to the DME with RTP Auto-Unicast

This topic explains how to configure an RMS-to-DME stream using RTP Auto-Unicast push. This interface is more stable and user-friendly than the previous RMS-to-DME interface.

- ▼ To configure an RTP Auto-Unicast stream to a DME:
  1. Open RMS and enter a destination address on the Broadcast page. In the **Destination Address** field (Figure 35) enter the unicast IP address of the DME.
  2. Change the source port to a legal port number that is unused on the source RMS.

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**Note** When entering metadata (e.g. Session Info, Origin E-Mail, etc.) be sure to remove any leading spaces.

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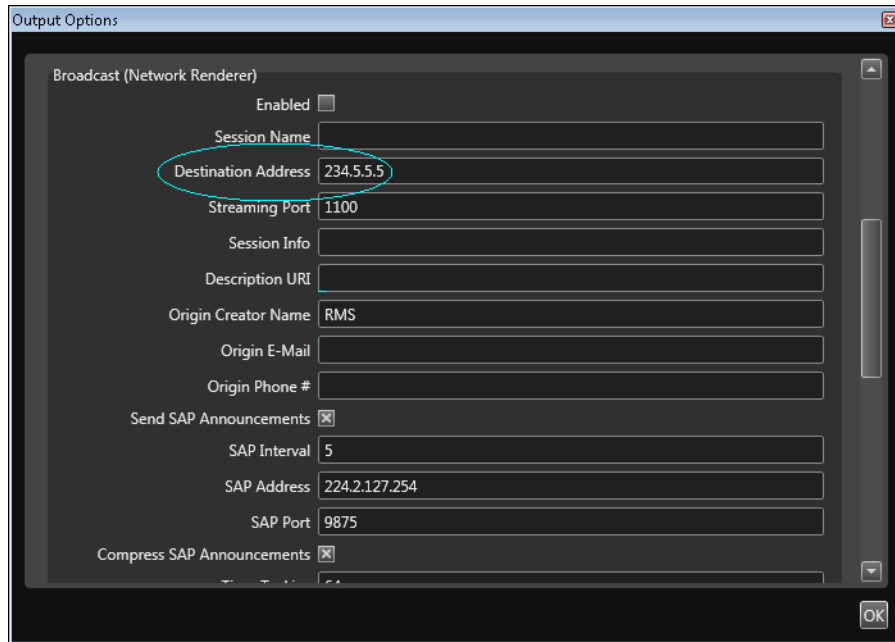
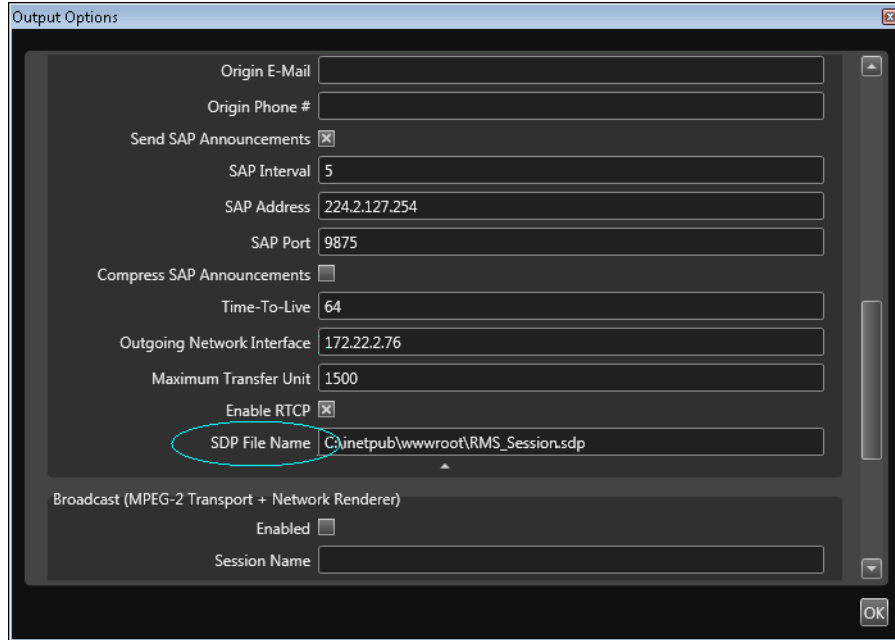
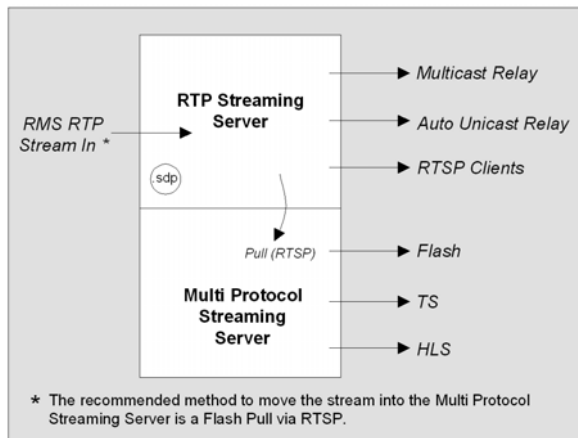


Figure 57. RMS Broadcast Options (Part 1)



**Figure 58.** RMS Broadcast Options (Part 2)

3. Enter the DME IP Address as the RTSP Address. Enter the DME Auto Unicast destination port as the RTSP port. You can indicate use of the Auto Unicast listener on either the RTP server or the Multi Protocol server by designating the appropriate DME port. The Multi Protocol server is recommended. If password security is enabled the RTSP Username and Password must be entered. Enter an **SDP File Name**. This name will be the stream name for stream redistribution.
4. After starting the session, a live RTP stream will be available in the DME that can be served in a number of ways (see Figure 37). For example, you can reflect the stream as a multicast relay or auto-unicast it to another DME.



**Figure 59.** RMS/DME Integration

## Playback Examples

VEMS Mystro (Live Entered URL)	<code>vbrtsp://172.1.1.1/vbStream1S1</code> <code>vbhttp://172.1.1.1/vbStream1T1.sdp</code>
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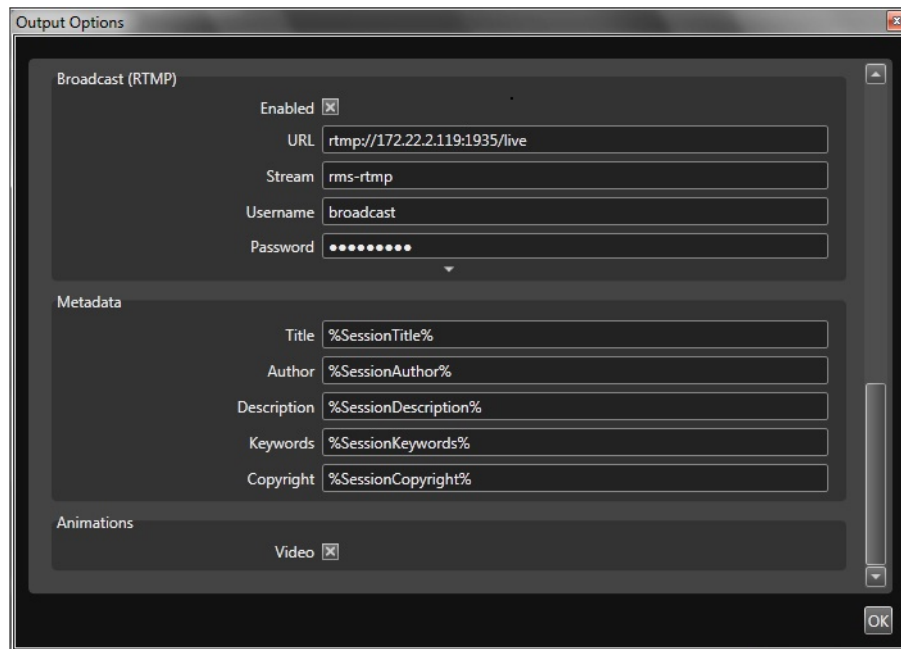
iOS	<code>http://&lt;dme_ip_address&gt;/HLS/&lt;stream_name&gt;/playlist.m3u8</code>
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## Streaming to the DME with RTMP Push

This topic explains how to configure an RMS-to-DME stream using an RTMP Push output. This is an alternate improved interface (that requires DME 3.1.1 or higher).

▼ To configure an RTMP Push to a DME:

1. Go to the **Session Properties** page and then click **Outputs** and **Create**.
2. Click on the **Live** icon, highlight **H.264 for Flash**, and click **Next**.
3. Click on the **Options** button, scroll down to **Broadcast (RTMP)**, and expand the pane.



4. Configure the **URL**, **Stream** name, and credentials as follows:

URL	DME IP address in this format: <code>rtmp://&lt;DME_IP_Addr&gt;:1935/live</code>
Stream	User configurable stream name that will be shown on Monitor > Multi Protocol Connections page and used in a Flash player.
Username	DME user name from User Configuration > Stream Input Authentication page.
Password	DME user name from User Configuration > Stream Input Authentication page.

5. When done click **OK** and **Finish** and the **H.264 for Flash** option will be added to the **Outputs** menu as a selectable output option.

