Legend:
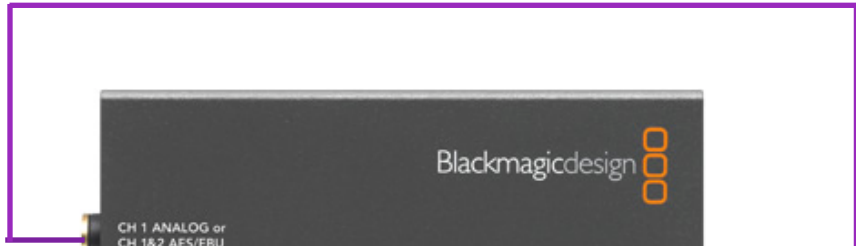- A/V from Live Source
- Audio from Live Source
- A/V from AirBox
- AirBox Video w/ Live Audio
- Final Switchable Output

CH 1&2 AES/EBU Audio

Blackmagicdesign

Mini Converter SDI to Audio

CH 1 ANALOG or CH 1&2 AES/EBU
CH 2 ANALOG or CH 3&4 AES/EBU
CH 3 ANALOG or CH 5&6 AES/EBU
CH 4 ANALOG or CH 7&8 AES/EBU

SDI LOCK
SDI OUT
ALT SDI IN
SDI IN
POWER +12V

Blackmagicdesign

Mini Converter Audio to SDI

CH 1 ANALOG or CH 1&2 AES/EBU
CH 2 ANALOG or CH 3&4 AES/EBU
CH 3 ANALOG or CH 5&6 AES/EBU
CH 4 ANALOG or CH 7&8 AES/EBU

SDI LOCK
SDI OUT
ALT SDI IN
SDI IN
POWER +12V

Live Source

Not Used

Not Used

Out   In

VGA/DVI

PlayBox

RS-232 cable

RS-232

GENLOCK TERM LOOP   INPUTS   1 2 3 4 5 6 7 8   OUTPUTS 1 2 3 4 5 6 7 8

REMOTE IR

To Viewers

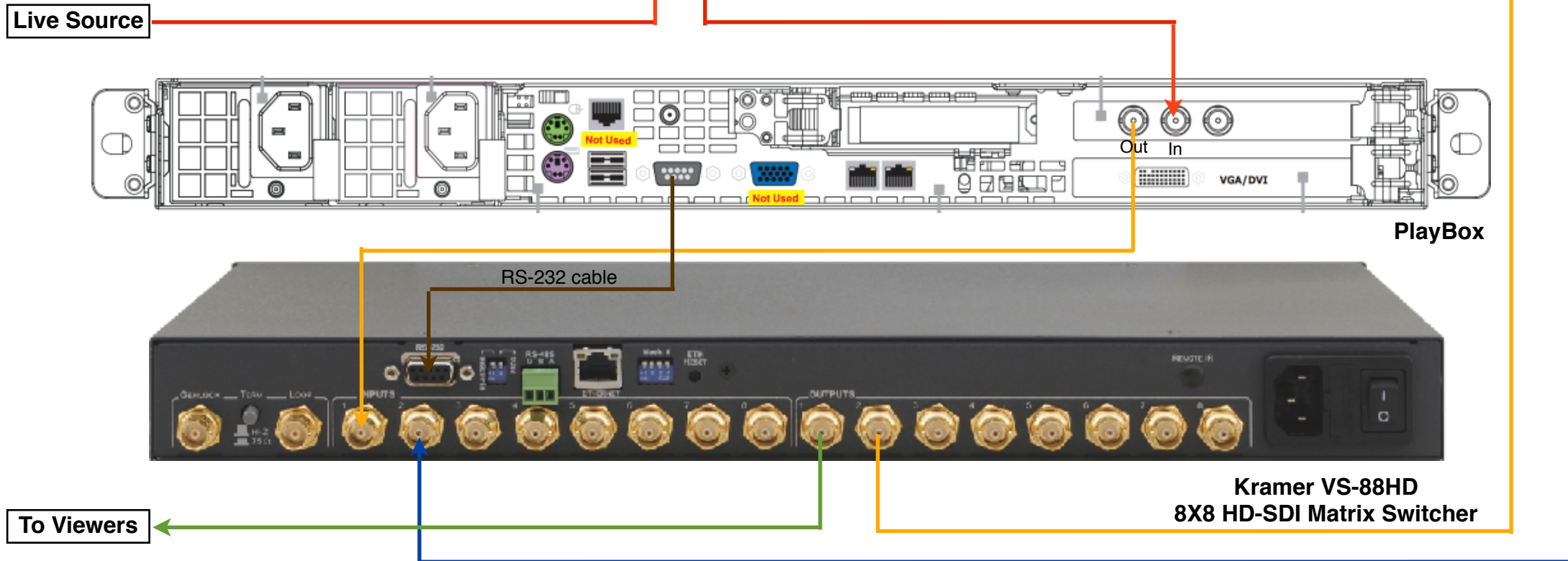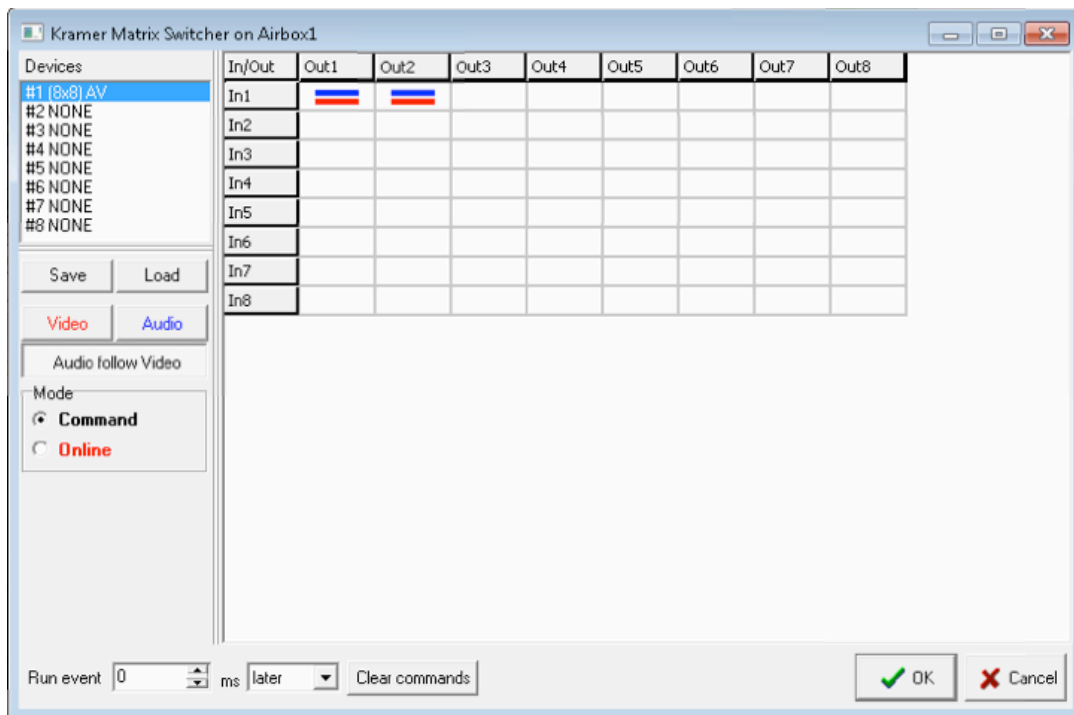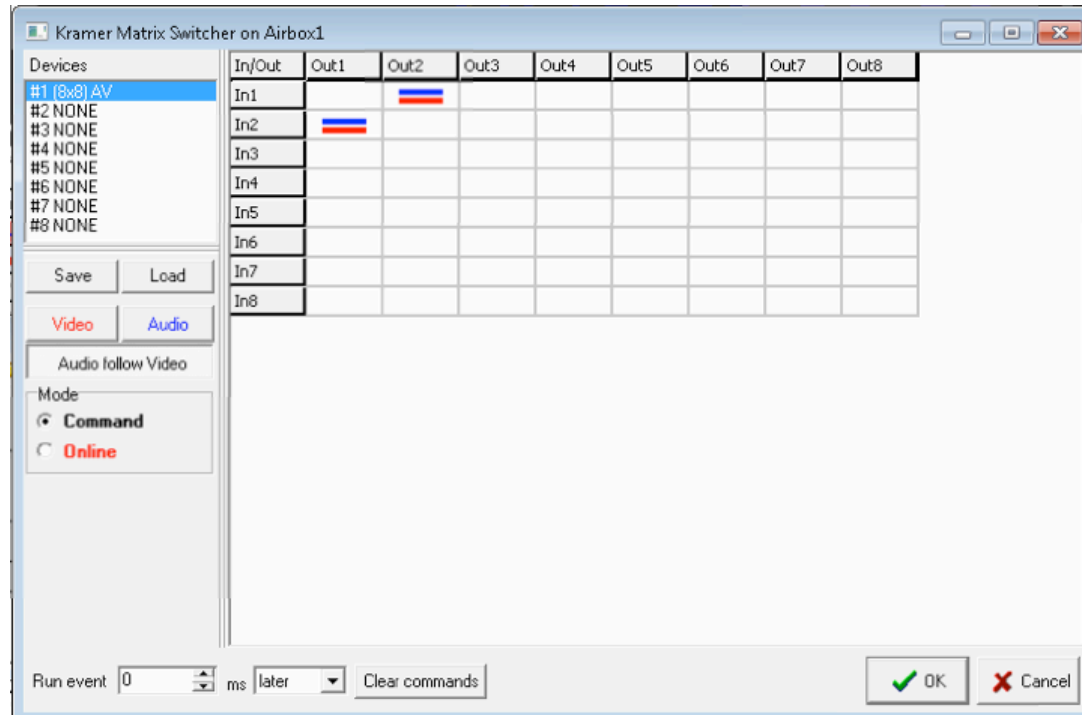**Kramer VS-88HD
8X8 HD-SDI Matrix Switcher**

Kramer Matrix Switcher Output Module

Normal Play Out External Command
(AirBox Video & Audio)

Switched Play Out External Command
(AirBox Video with Live Audio)

Equipment Needed

1 - **BlackMagic SDI to Audio** Mini Converter

1 - **BlackMagic Audio to SDI** Mini Converter

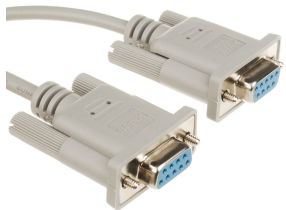1 - **Kramer VS-88HD** 8X8 HD-SDI Matrix Switcher

Cables Needed
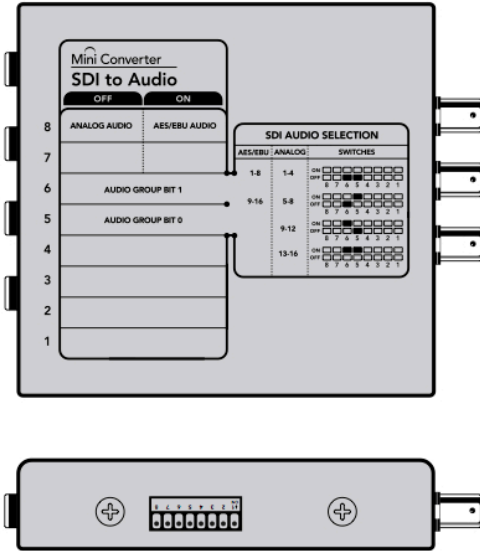
1 - **TRS** Cable

6 - **SDI** Cables

1 - **RS 232** Cable

Settings

Change your converter's internal settings by adjusting the mini switches using the tip of a pen.

SDI to Audio

Switch 8 - on
Switch 6 - off
Switch 5 - off

Mini Switches

Mini Converter SDI to Audio's mini switches provide the following settings:

Switch 8 - Analog Audio, AES/EBU Audio

Set switch 8 to OFF to select balanced analog audio, or to ON for digital AES/EBU audio output.

Switch 6 - Audio Group Bit 1

Switches 6 and 5 are grouped together to provide four ON/OFF combinations. This allows up to 4 quadruplets of analog audio channels, or 2 sets of 8 AES/EBU audio channels, to be de-embedded from your SDI input.

Audio Selection Tables

Analog Audio Channels	Switch 6	Switch 5	Switch Diagram
1 to 4	OFF	OFF	
5 to 8	OFF	ON	
9 to 12	ON	OFF	
13 to 16	ON	ON	

AES/EBU Channels	Switch 6	Switch 5	Switch Diagram
1 to 8	OFF	OFF	
9 to 16	OFF	ON	

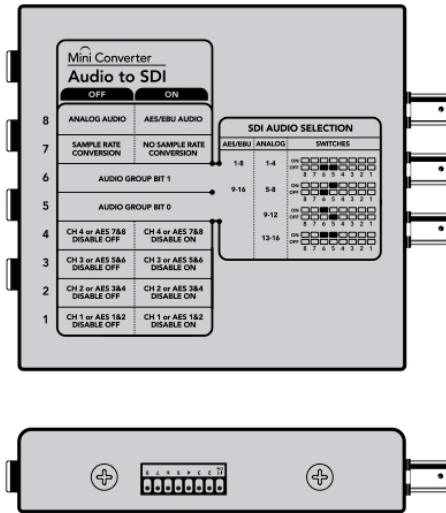### Switch 5 - Audio Group Bit 0

See switch 6 description.

Mini Switch Settings Example: Try experimenting with the mini switches. Select analog audio channels 1 to 4 by setting switches 8, 6 and 5 to the OFF position.

Change your converter's internal settings by adjusting the mini switches using the tip of a pen.

Mini Switches

Mini Converter Audio to SDI's mini switches provide the following settings:

Switch 8 - Analog Audio, AES/EBU Audio

Set switch 8 to OFF to select balanced analog audio, or to ON for digital AES/EBU audio input.

Switch 7 - Sample Rate Conversion, No Sample Rate Conversion

Set switch 7 to OFF to enable sample rate conversion, or ON to disable sample rate conversion. This switch should almost always be set to OFF to ensure audio is embedded at the correct sample rate for television.

When switch 7 is set to OFF this setting converts the sample rate of your analog or AES/EBU audio and embeds audio into the SDI output at a sample rate of 48 kHz. When switch 7 is set to ON, sample rate conversion is disabled and audio is output at the original sample rate of your input audio.

Switch 6 - Audio Group Bit 1

Switches 6 and 5 are grouped together to provide four ON/OFF combinations. Having four different combinations allows up to four analog audio channels, or eight AES/EBU audio channels to be embedded in your SDI output.

Audio Selection Tables

Analog Audio Channels	Switch 6	Switch 5	Switch Diagram
1 to 4	OFF	OFF	
5 to 8	OFF	ON	
9 to 12	ON	OFF	
13 to 16	ON	ON	

AES/EBU Channels	Switch 6	Switch 5	Switch Diagram
1 to 8	OFF	OFF	
9 to 16	OFF	ON	

Department: TV support
Full Name: Frank
Email: scoanvideos@gmail.com
Your Question: Hello, we want to use a Kramer Matrix Switcher and some BlackMagic converters to mix and match the PlayBox video with our Live feed's audio.
Staff: Plamen Cankov

20:53 **Your Question: Hello, we want to use a Kramer Matrix Switcher and some BlackMagic converters to mix and match the PlayBox video with our Live feed's audio.**
20:53 **Please wait, an operator will be with you shortly.**
20:53 **You are now chatting with Plamen Cankov - TV support**
20:53 Plamen Cankov: Hello!
20:53 Plamen Cankov: May I have your WibuKey number so I can open your account please?
20:55 Frank: 10-10621563 version 4.2.2 build 1113
20:55 Plamen Cankov: Thank you
20:55 Plamen Cankov: Just a second please.
20:57 Plamen Cankov: Yes, basically if you have the Kramer switcher connected to the AirBox software you can simply route the inputs and outputs of the switches.
20:58 Plamen Cankov: Firstly, you need to activate the Kramer switcher output.
20:59 Frank: Okay, I have drawn up one diagram of how we planed it should work please take a look at it at this link http://emmanuel.tv/images/playboxdiagram.pdf and give us your input.
21:01 Plamen Cankov: Just a second please.
21:01 Frank: Okay
21:05 Plamen Cankov: You need to activate the Kramer switcher from the Settings -> Modules -> Remote control tab.
21:06 Frank: Yes, I am aware of that.
21:06 Frank: Did you see the diagram?
21:07 Plamen Cankov: Yes. Did you make any configurations already?
21:07 Frank: No this is just on paper. I wanted to confirm if it is correct before we get the hardware.
21:09 Plamen Cankov: The thing is that the Kramer hardware is not supported by us. We support only the communication between Kramer and AirBox, I am afraid.
21:10 Plamen Cankov: However, I can escalate this inquiry to our engineers for a second opinion if you wish.
21:10 Plamen Cankov: And tomorrow we will send you an email with the reply.
21:11 Frank: Okay, please help me to do that. They can send an email to scoanvideos@gmail.com
21:12 Plamen Cankov: I will do that.
21:12 Plamen Cankov: May I include the .pdf file in the escalation?
21:12 Plamen Cankov: I mean, can I use the URL to the file?
21:12 Frank: Yes
21:13 Frank: go ahead
21:13 Frank: Thank you, but you can a least confirm that the Kramer switcher will work with the PlayBox correct?
21:13 Plamen Cankov: I will make the escalation right away.
21:13 Frank: Okay thanks
21:14 Plamen Cankov: You are welcome!

Support Center: https://support.playbox.tv/

This is the conversation that we had with PlayBox. We when we showed them a copy of the diagram. Their engineers reviewed it and confirmed that the setup will work for what we are trying to do.

Department: TV support
Full Name: Frank
Email: scoanvideos@gmail.com
Your Question: Are there any engineers available to help us with ticket #RYJ-833-98467
Staff: Yavor Hristov

14:27 **Your Question: Are there any engineers available to help us with ticket #RYJ-833-98467**
14:27 **Please wait, an operator will be with you shortly.**
14:27 **You are now chatting with Yavor Hristov (Support Engineer) - TV support**
14:27 Yavor Hristov: Hello,how can we help you?
14:27 Yavor Hristov: Please give us a moment to check please
14:28 Frank: Thank you
14:30 Yavor Hristov: Attempting to transfer the chat to "Ivaylo Zhekov"
14:32 Ivaylo Zhekov: We can confirm that this Kramer Matrix switcher is fully supported but in this configuration it is possible to have audio delay because of the processing (In→Out) of Live video signal in PlayBox server and in BlackMagic "Audio to SDI" embedder device. Please, provide us details about work flow which you need to implement so we can give you proper advice how to make it working in s
14:39 Frank: During our live transmissions we want to play a clip in the AirBox which will be used as a 'Please Standby' screen. We will show this clip any time we don't want our viewers to see something such arranging camera's etc. What we are trying to accomplish is that we want our viewers to be hearing the audio from our live event while this 'Please Standby' screen is showing.
14:41 Ivaylo Zhekov: so you are not looking for synch between AirBox output video and Live audio?
14:47 Frank: While the 'Please Standby' screen is showing viewers will not be seeing the video of the live event so I am not sure how important the audio sync would be, but we would like a smooth transmission. When we switch back to the live event the audio and video must be in sync.
14:53 Frank: Is the delay of the input on the PlayBox adjustable?
15:01 Ivaylo Zhekov: so in AirBox you play some video file as "Please standby" - it is not some live signal going through AirBox as live event?
15:01 Ivaylo Zhekov: delay on AirBox input is not addjustable
15:04 Frank: Yes the video file for the "Please Standby" will be played from the AirBox playlist. The live event will also be in the playlist and we will be switching between the two.
15:05 Ivaylo Zhekov: ok, it is clear now - so there is only some frames delay during embedding or de-embedding. It looks fine
15:07 Ivaylo Zhekov: It will not have this big delay going through playout server - it just switching
15:07 Ivaylo Zhekov: Attempting to transfer the chat to "Yavor Hristov"
15:08 Yavor Hristov: Hi again
15:08 Frank: That sounds great! Thank you

Support Center: https://support.playbox.tv/