

Rackmount Breakout Box

User Manual

Visual Circuits Corporation

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CONTENTS

Introduction	1
Specifications	2
Dimensions	2
Weight	2
Connectors	2
Pinout Table	3
Installation	7
Installation Safety Guidelines	7
Cable Installation	7
Index	9

INTRODUCTION

The Rackmount Breakout Box is a passive device requiring no power. The metal enclosure houses a series of surface mounted PCB connectors, which distribute the audio and video signals of all Visual Circuits MPEG 2 decoder boards. This breakout box serves the same purpose as the Universal Cable, supplying Composite, S-video or RGB video with stereo audio outputs as well as video and audio inputs when using Genlocking options. The Rackmount Breakout box supports up to 4 independent channels of audio and video and is connected to the decoder board via a twisted ribbon cable. This ribbon cable attaches to the breakout box and then connects to the 25-pin female D Sub of the decoder board via a 25-pin male D Sub adapter. The breakout box provides no audio or video amplification or signal splitting. (Visual Circuits decoder boards provide stereo CD quality sound. The audio signals are not balanced and are not amplified.)

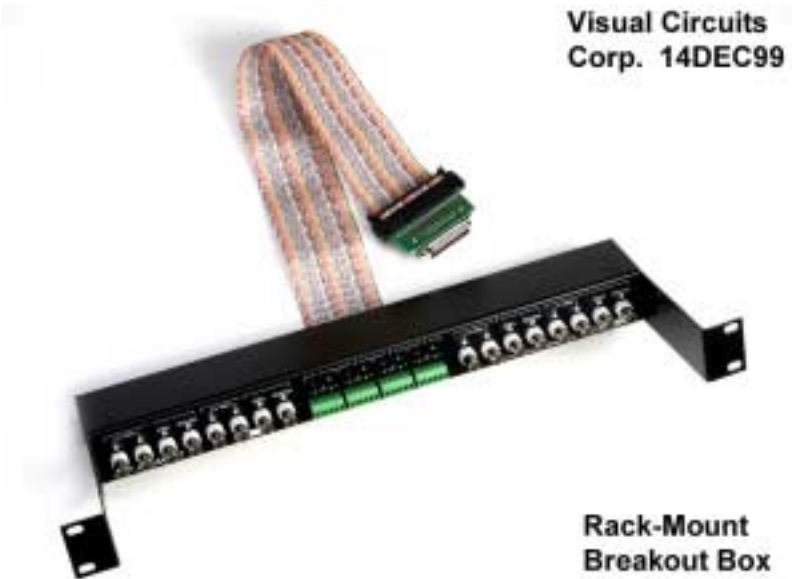


Figure 1. Rackmount Breakout Box

Specifications

Dimensions

1.75" (4.45 cm) (1RU) tall x 19" (48.26 cm) wide x 6.25" (15.88 cm) deep. Depth measured from the outside edge of bracket to back of the enclosure. Ribbon cable connector is centered and recessed in to the back of the enclosure.

Weight

5 pounds (2.3 kg)

Connectors

The video connectors are female BNC. The audio connectors are terminal post or "Phoenix" type connectors, centered and labeled in the middle of the enclosure.

NOTE

Despite the current markings, there is no balanced audio support on the Rackmount Breakout Box.

The video connectors are labeled according to channel number with the following markings indicating video output type:

- ❑ "C" & "Y" for S-video (Chrominance/Luminance)
- ❑ "Video" for Composite video
- ❑ "R", "G", "B" & "S" for RGB (Red, Green, Blue and Combined H/V Sync)

Software configurations can be made to select Composite/S-video or RGB for each individual channel. These two modes however, are not available simultaneously for any one channel.

When using genlock supported decoder boards, the composite video input for each channel connector corresponds to the “S” or RGB sync connector.

NOTE

Whenever "switching" genlock is utilized, where an external video switch is used and passed through the decoder board to the displays, only composite video output is available.

The audio outputs correspond to the labels above the terminal posts. Note that balanced audio is not currently supported on the breakout box but will be a future development.

Pinout Table

The following table indicates the pinout assignment for the 25-pin D Sub of each board. This table may be used as a reference when determining which connector of the breakout box corresponds to the required genlock input. Note that audio inputs are shared with video output (BNC) connectors and adapters will likely be required when routing these audio signals.

Pin No.	*MPEG Plus	RT Daughter	Composite & S-video	4ReelTime RGB	~HD Focus
1	GROUND	GROUND	GROUND	GROUND	GROUND
2	**AUDIO IN L	AUDIO OUT L/4	AUDIO L/4	AUDIO L/4	
3		COMP OUT 4	COMP 4	BLUE 4	
4		AUDIO IN R/4	LUM 4	GRN 4	
5	-BAL RIGHT	AUDIO OUT L/3	AUDIO L/3	AUDIO L/3	AUDIO SUB WOOFER
6	VERT SYNC	COMP OUT 3	COMP 3	BLUE 3	
7		AUDIO IN L/3	LUM 3	GRN 3	

Introduction

Pin No.	*MPEG Plus	RT Daughter	Composite & S-video	4ReelTime RGB	~HD Focus
8	-BAL LEFT	AUDIO OUT L/2	AUDIO L/2	AUDIO L/2	AUDIO LEFT REAR
9	H SYNC	COMP OUT 2	COMP 2	BLUE 2	V SYNC
10		AUDIO IN I/2	LUM 2	GRN 2	
11	AUDIO OUT L	AUDIO OUT L/1	AUDIO L/1	AUDIO L/1	AUDIO LEFT FRONT
12	COMP/ BLUE	COMP OUT 1	COMP 1	BLUE 1	BLUE/Pb
13	LUM/GRN *AUDIO IN L/1	AUDIO IN L/1	LUM 1	GRN 1	GREEN/Y
14		COMP IN 4		SYNC 4	
15	**AUDIO IN R	AUDIO OUT R/4	AUDIO R/4	AUDIO R/4	
16		AUDIO IN L/4	CHROMA 4	RED 4	
17		COMP IN 3		SYNC 3	
18	+BAL RIGHT	AUDIO OUT R/3	AUDIO R/3	AUDIO R/3	AUDIO CENTER
19		AUDIO IN R/3	CHROMA 3	RED 3	
20	COMP SYNC	COMP IN 2		SYNC 2	
21	+BAL LEFT	AUDIO OUT R/2	AUDIO R/2	AUDIO R/2	AUDIO RIGHT REAR
22		AUDIO IN R/2	CHROMA 2	RED 2	
23	*COMP IN	COMP IN 1		SYNC 1	H SYNC
24	AUDIO OUT R	AUDIO OUT R/1	AUDIO OUT R/1	AUDIO R/1	AUDIO RIGHT FRONT
25	CHROMA/ RED/ *AUDIO IN R/1	AUDIO IN R/1	CRHOMA 1	RED 1	RED/Pr

* Consult with your Visual Circuits Representative for Genlock switching options for the MPEG Plus board.


** Audio switching with S-video/RGB video output is supported by the MPEG Plus Mod A board.

NOTE

Only Composite video switching support is available on all Visual Circuits' genlock products.

INSTALLATION

Installation Safety Guidelines

 **CAUTION**

Be sure all safety guidelines in accordance with any electrical equipment attached to the video server or in close proximity to the Rackmount Breakout Box are followed carefully.

The Rackmount Breakout Box itself is a passive device requiring no power, but safety should be considered when installing and attaching any cables. Ensure that no electrical cables or other devices come in contact with the enclosure or attached cables.

Cable Installation

1. Back the set-screws off fully before attaching the twisted cable 25-pin adapter. Do not use the attaching screws to “pull” the cable onto the female D Sub connector of the board.
2. Orient the D Sub on the cable properly and apply slight even pressure while connecting the D Subs.
3. Secure the 25-pin D Sub adapter (connector) in place with the two screws.
4. Be sure that both ends of the twisted cable are secured (one in the breakout box enclosure and the other to the 25-pin adapter, which attaches to the board).

5. Close the “keepers” or clasps on each end of the ribbon cable connectors, securing the ends in place.

NOTE

Apply strain relief as required when attaching patch cables. The breakout box mounting brackets will easily support the weight of the enclosure, but strain on the corresponding patch cables may break the surface mount connectors loose from the circuit board and damage the breakout box.

- ❑ All specifications are subject to change without notice.

INDEX

A

audio

switching 5

C

connectors 2

D

D Sub 7

dimensions 2

M

MPEG 2 1

P

pinout 3

S

set-screws 7

signal splitting 1

U

universal cable 1

V

video

composite 1

connectors 2

RGB 1

S-video 1

W

weight 2

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