

# USER MANUAL

**Model:**

**CVG-21RCA**

*2x1 Audio/Video/Component Switcher*



**For maximum results, use Comprehensive Brand Premium High Resolution cables and connectors.**



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## 1 Introduction

Congratulations on purchasing the **CVG-21RCA 2x1 Audio/Video/Component Switcher**.

This product is ideal for:

- Broadcast, presentation and production facilities
- Home cinema switching
- Ultra high bandwidth signal switching

The package includes the following items:

- **CVG-21RCA 2x1 Audio/Video/Component Switcher**
- This user manual

## 2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

## 3 Overview

Your high resolution **CVG-21RCA 2x1 Audio/Video/Component Switcher** is a versatile mechanical switcher that can be used for many different types of signals. In particular, the **CVG-21RCA**:

- Switches 3 identical channels simultaneously, so it may be used for composite video with 2 audio channels; for 3 independent composite video channels; for one composite and one Y/C channel; for component video (YUV or RGB), SDI, HDTV or for any other combination
- Uses an “RF” PCB design with 3 ultra high bandwidth channels, providing bandwidth exceeding 1000 MHz (1 GHz), and is therefore suitable for use with almost any common signal
- Is housed in a desktop enclosure and can be used in “reverse” as well – functioning as a 1x2 switcher (toggling one source between two acceptors)
- Provides a simple solution for many switching needs and as the design is passive, it does not need power, thus increasing its versatility

Achieving the best performance means:

- Connecting only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoiding interference from neighboring electrical appliances that may adversely influence signal quality and positioning your **CVG-21RCA** in a location free from moisture and away from excessive sunlight and dust

## 4 Your CVG-21RCA 2x1 Audio/Video/Component Switcher

Figure 1 and Tables 1 and 2 define the **CVG-21RCA 2x1 Audio/Video/Component Switcher**.

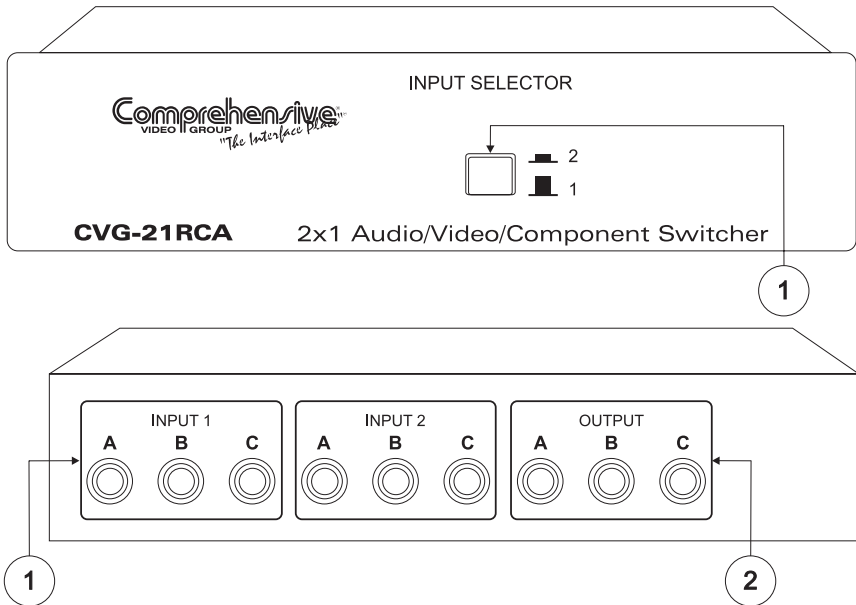


Figure 1: CVG-21RCA 2x1 Audio/Video/Component Switcher

Table 1: Front Panel CVG-21RCA 2x1 Audio/Video/Component Switcher Features

#	Feature	Function
1	INPUT SELECTOR Switch	Push in to select input 2; release to select input 1

Table 2: Rear Panel CVG-21RCA 2x1 Audio/Video/Component Switcher Features

#	Feature	Function
1	Set of 3 channel INPUT RCA Connectors	Connects to the source(s) from 1 to 2
2	Set of 3 channel OUTPUT RCA Connectors	Connects to the acceptor(s)

## 5 Using the CVG-21RCA 2x1 Audio/Video/Component Switcher

You can use your versatile **CVG-21RCA 2x1 Audio/Video/Component Switcher** as a:

- 2x1 Composite video switcher with 2 audio channels (see Figure 2)
- 1x2 Composite video switcher<sup>1</sup> with 2 audio channels (see Figure 3)
- 2x1 Component video switcher (see Figure 4)
- 1x2 Component video switcher<sup>1</sup>

You can also use your **CVG-21RCA 2x1 Audio/Video/Component Switcher** as a switcher that includes the following<sup>2</sup> combinations:

- One composite channel and one Y/C channel
- 3 independent composite video channels
- 2 composite video channels and a channel for unbalanced mono audio
- 3 unbalanced mono audio channels
- SDI
- HDTV

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<sup>1</sup> Due to its passive signal path, the CVG-21RCA can also operate in the opposite direction

<sup>2</sup> Or any other appropriate combination

## 5.1 Connecting the CVG-21RCA as a 2x1 Composite Video/Audio Switcher

To use your **CVG-21RCA** as a 2x1 composite video/audio switcher, connect the **CVG-21RCA** as the example in Figure 2 illustrates:

1. Connect a composite source (for example, a VCR “Composite Source 1”) to the three INPUT 1 channels, as follows:
  - Connect the composite video channel to RCA connector A
  - Connect the left stereo channel to RCA connector B
  - Connect the right stereo channel to RCA connector C
2. Connect a second composite source (for example, a VCR “Composite Source 2”) to the three INPUT 2 channels, as follows:
  - Connect the composite video channel to RCA connector A
  - Connect the left stereo channel to RCA connector B
  - Connect the right stereo channel to RCA connector C
3. Connect the three OUTPUT channels to a composite acceptor (for example, a monitor), as follows:
  - Connect the composite video channel to RCA connector A
  - Connect the left stereo channel to RCA connector B
  - Connect the right stereo channel to RCA connector C
4. Push in the front panel *INPUT SELECTOR* switch to route input 2, or release it to route input 1.

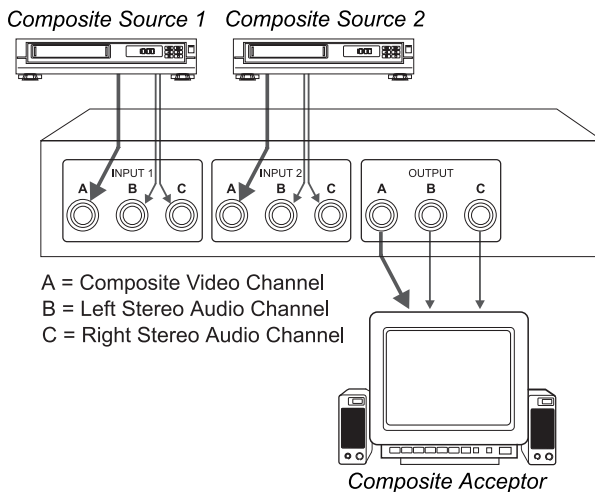


Figure 2: Connecting the CVG-21RCA as a 2x1 Composite Video/Audio Switcher

## 5.2 Connecting the CVG-21RCA as a 1x2 Composite Video/Audio Switcher

To use your **CVG-21RCA** as a 1x2 composite video/audio switcher, connect the **CVG-21RCA** as the example in Figure 3 illustrates:

1. Connect a composite source (for example, a VCR “Composite Source”) to the three OUTPUT<sup>1</sup> channels, as follows:
  - Connect the composite video channel to RCA connector A
  - Connect the left stereo channel to RCA connector B
  - Connect the right stereo channel to RCA connector C
2. Connect the three INPUT<sup>2</sup> 1 channels to a composite video acceptor (for example, a monitor “Composite Acceptor 1”), as follows:
  - Connect the composite video channel to RCA connector A
  - Connect the left stereo channel to RCA connector B
  - Connect the right stereo channel to RCA connector C
3. Connect the three INPUT<sup>2</sup> 2 channels to a composite video acceptor (for example, a monitor “Composite Acceptor 2”), as follows:
  - Connect the composite video channel to RCA connector A
  - Connect the left stereo channel to RCA connector B
  - Connect the right stereo channel to RCA connector C
4. Push in the front panel INPUT SELECTOR switch to route the source to Acceptor 2, or release it to route the source to Acceptor 1.

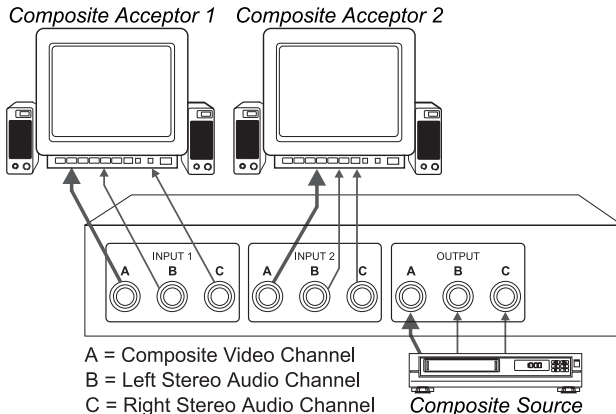


Figure 3: Connecting the CVG-21RCA as a 1x2 Composite Video/Audio Switcher

1 Serve as the INPUT channels when operating in the opposite direction

2 Serve as the OUTPUT connectors when operating in the opposite direction

### 5.3 Connecting the CVG-21RCA as a 2x1 Component Video Switcher

To use the **CVG-21RCA** as a component video (Y, B-Y, R-Y, sometimes called YUV or Y, P<sub>b</sub>, P<sub>r</sub>) switcher, connect the **CVG-21RCA** as the example in Figure 4 illustrates:

1. Connect a component video source (for example, a BETACAM VCR “Component Source 1”) to the three INPUT 1 channels, as follows:
  - Connect the Y component video channel to RCA connector A
  - Connect the B-Y component video channel to RCA connector B
  - Connect the R-Y component video channel to RCA connector C
2. Connect a second component video source (for example, a BETACAM VCR “Component Source 2”) to the three INPUT 2 channels, as follows:
  - Connect the Y component video channel to RCA connector A
  - Connect the B-Y component video channel to RCA connector B
  - Connect the R-Y component video channel to RCA connector C
3. Connect the three OUTPUT channels to a component video acceptor (for example, a component video monitor), as follows:
  - Connect the Y component video channel to RCA connector A
  - Connect the B-Y component video channel to RCA connector B
  - Connect the R-Y component video channel to RCA connector C
4. Push in the front panel *INPUT SELECTOR* switch to route input 2, or release it to route input 1.

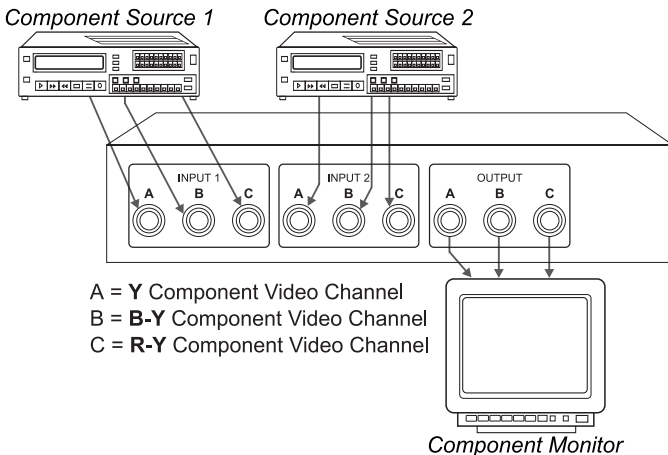


Figure 4: Connecting the CVG-21RCA as a 2x1 Component Video Switcher

## 6 Technical Specifications

Table 3 includes the technical specifications:

*Table 3: Technical Specifications<sup>1</sup> of the CVG-21RCA*

INPUTS:	2 sets consisting of 3 channels, on RCA connectors
OUTPUT:	1 set consisting of 3 channels, on RCA connectors
BANDWIDTH (-3dB):	>1000 MHz (1 GHz)
DIMENSIONS:	18.8 cm x 10.2 cm x 4.4 cm (7.4" x 4" x 1.7"), W, D, H
WEIGHT:	0.64 kg. (1.4 lbs.) approx.

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<sup>1</sup> Specifications are subject to change without notice



