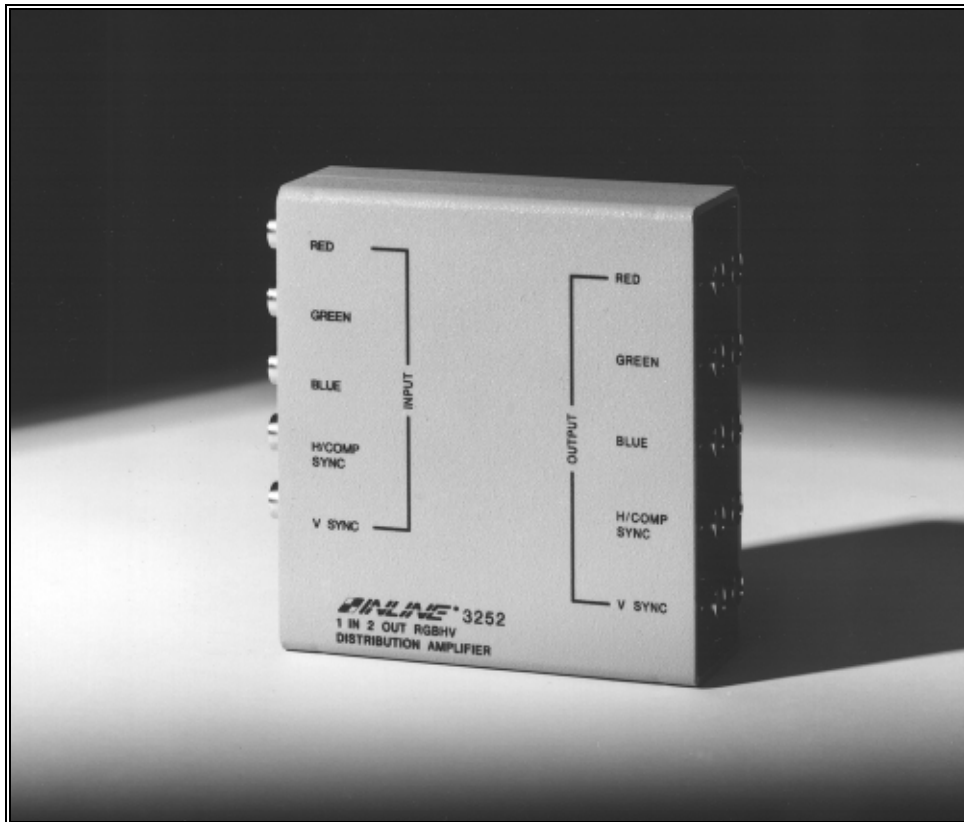


# Operation Manual



**IN3252**

**1 x 2 RGBHV Distribution Amplifier**



## DESCRIPTION

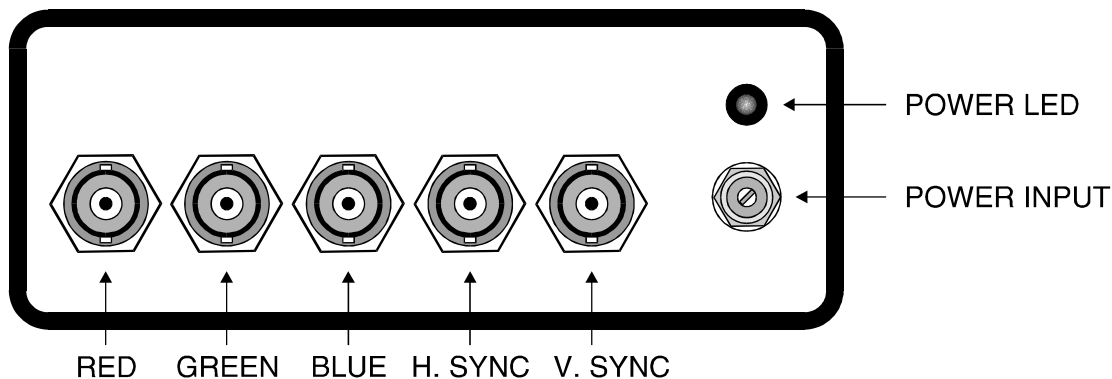
The **IN3252** is a one input, two output RGBHV distribution amplifier designed to split one analog RGB signal to two display devices. The **IN3252** is compatible with a wide variety of signal formats and offers the following features:

- ◆ 300 MHz Bandwidth - High performance for use with virtually any analog video signal
- ◆ Compatibility with RGBHV, RGBS, RGsB, RsGsBs signal formats and Composite Video
- ◆ Internal adjustable gain for RGB levels

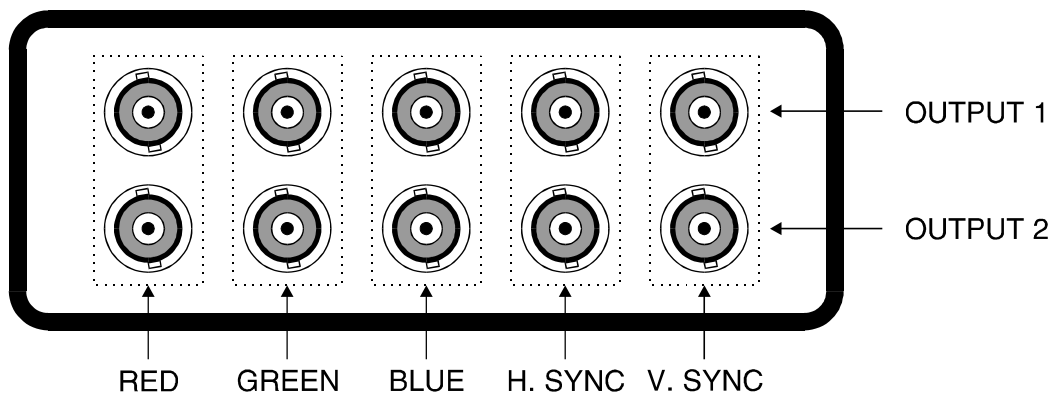
## INSTALLATION

1. Connect the red, green, blue, and sync signals from the source to the input of the **IN3252** (see the **Compatibility** section for details on Sync on Green and Sync on All signals.)
2. Connect output red, green, blue and sync signals to the display devices or other equipment. When distributing higher scan rate signals over long cable lengths, cable choice is very critical to overall system performance. The **IN7000-5 / IN7200-5 / IN7300-5 Series** High Resolution RGBHV cables are available in a variety of lengths and are well suited for this purpose.
3. Connect power by plugging in the power supply.
4. Adjust gain controls if required (see **Operation** section for details.)

## INPUTS



## OUTPUTS



## COMPATIBILITY

The **IN3252** will operate with RGBHV, RGBS, RGsB, and RsGsBs analog video input signals. When amplifying RGsB signals (sync on green) and RsGsBs signals (sync on all) only use the red, green, and blue channels (i.e.: leave the sync channels open). The red, green, and blue channels may also be used to amplify or split composite NTSC video signals.

## OPERATION

The **IN3252** has internal jumpers and gain pots which may be used to customize the **IN3252** for specific needs (see diagram on page 3). While the internal controls need not be changed from the factory default settings for most installations, this section describes how to change the jumper settings for unique applications. For all jumper/gain settings in this section, orient the unit so the RGBHV / POWER input side is facing towards you and the output side is facing away.

### RGB Gain Controls

The **IN3252** features internal gain pots which may be used to adjusted the Red, Green, and Blue output signal voltage over a gain range of 0.7 to 1.2. These controls may be used to calibrate the color balance or to increase the signal voltage, compensating for signal losses due to long cable runs. The following procedure is recommended to adjust the RGB gain pots:

1. Remove power from the unit.
2. Remove the screw from the top of the unit and slide the top cover off.
3. Locate jumpers JMP2, JMP4, & JMP6 and set them to closed (enables gain pots).
4. Apply power to the unit. ***Electric Shock Risk: Avoid touching the circuits.***
5. Identify the gain controls and gently adjust as needed using a small plastic tweaker tool. Turn the control pots counter-clockwise to decrease the gain setting, and clockwise to increase the gain. The entire adjustment range is less than three quarters of a rotation from stop to stop. Take care not to force or over-rotate the controls.
6. Replace the top cover and tighten the case screw.

### Default Jumper Settings

#### Gain Control Enable/Disable

**JMP2**, **JMP4**, and **JMP6** are used to enable or disable the red, green, and blue gain controls. Closed makes the gain controls active and Open disables the gain pots, setting the **IN3252** to unity gain. Factory default is Open (gain pots disabled, unity gain). See **RGB Gain Controls** for more information.

#### AC/DC Coupling

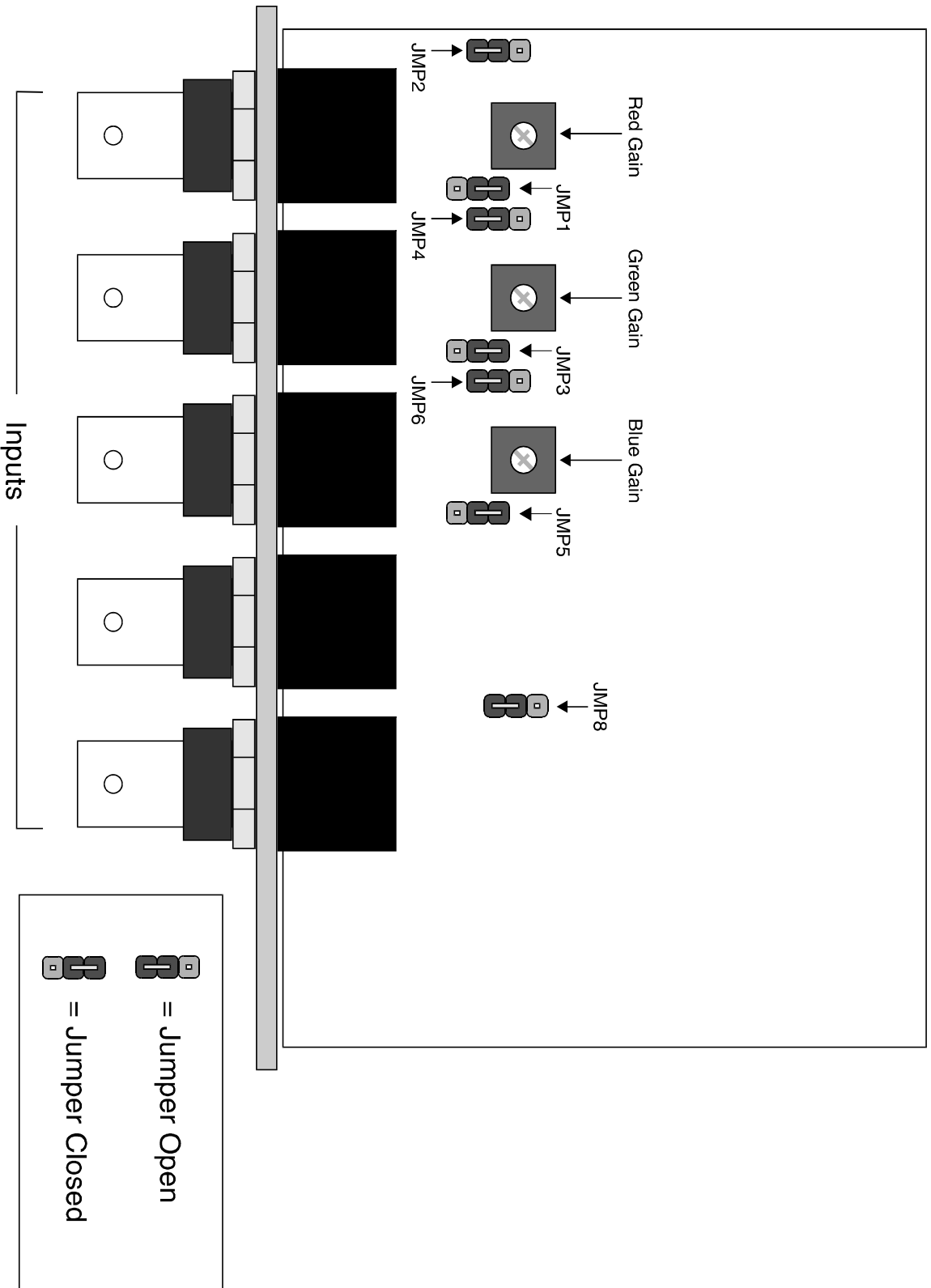
**JMP1**, **JMP3**, and **JMP5** are used to set the red, green and blue channels for AC or DC coupling. Closed is AC coupled and open is DC coupled. Factory setting is closed (AC coupled).

#### Sync Level Select

**JMP8** is to set the horizontal and vertical sync output level to 1 volt or 5 volts. Open is 5 volts and closed is 1 volt. Factory default is open (5 volt output for H and V syncs).

**Note: Power must be removed from the unit before making any jumper changes.**

# IN3252 Default Jumper / Gain Settings



## SPECIFICATIONS

<b>IN3252</b> <b>1 X 2 RGBHV Distribution Amplifier</b>	
<b>Input</b>	
Connector type	5 BNC connectors
RGB Signals	RGB Analog, 0.5 to 1.2V p-p, 75 ohm impedance
Horizontal / Vertical Sync	0.5 to 5V p-p
<b>Output</b>	
Connector Type	2 sets of 5 BNC connectors
RGB Signals	Analog Video, 75 ohm impedance
Sync Signals	Selectable output level: 1V or 5V
Bandwidth	300 MHz @ -3 dB
Rise and Fall Times	1.8 nano seconds
Gain	Adjustable: 0.7 to 1.2
<b>Dimensions</b>	
Size	1.7" High x 4.7" Wide x 3.7" Deep
Weight	1 lb.
<b>Power</b>	
Power Supply	9V 500mA
Consumption	4 Watts

## ACCESSORIES INCLUDED

Gain Adjustment Tool  
 9V 500 mA Power Supply  
 Operations Manual

## OPTIONAL ACCESSORIES

**IN7000-5 Series Cables**      5 - BNC Cable available in a variety of lengths from 6' to 100'  
**IN7100-5 Series Cables**      5 - BNC High Resolution Cable, available in lengths from 6' to 100'  
**IN7200-5 Series Cables**      5 - BNC Ultra High Resolution Cables, lengths from 6' to 100'

The cables above are available in longer lengths by custom order and may also be purchased in bulk quantities along with BNC connectors and crimp tools.

## TROUBLESHOOTING

### **There is no image displayed on the projector. The output of the IN3252 doesn't seem to work.**

1. Verify that the signal from the graphics source is compatible with the projection device by connecting them directly (bypass the **IN3252**).
2. Check to make sure the sync cables are good. Try sending the sync signals on different cables.
3. Check the power supply. If the power supply is receiving power and working properly it should feel slightly warm to the touch after it has been plugged in for half an hour. If the power supply feels cool to the touch you may have either a faulty A/C power source or a bad power supply.

### **One of the colors is completely missing from the projected image.**

Verify that the input and output cables are good. Bypass the missing color signal around the **IN3252**, joining the input and output cable for that one color together with a BNC barrel. If the problem goes away, the **IN3252** may be faulty. If the problem persists, one of the input/output cables or the graphics source is faulty.

### **The colors are not displayed properly on the projector/monitor.**

1. Verify that all RGB connections are correct and that none of the colors are swapped.
2. The **IN3252** gain pots may be misadjusted. Begin by setting the three gain pots to a similar position.
3. Bypass the **IN3252**. If the problem persists, the data projector may have the video drive levels on the CRTs misadjusted. Re-calibrate the Red, Green, and Blue drive levels.

### **The projected image is far too "hot", appearing excessively white and washed-out.**

1. Bypass the **IN3252**. If the image looks better, the **IN3252** RGB gain pots may be set too high. Reinstall the **IN3252** into the signal path and reset the gain pots to a lower level. If the problem persists after the **IN3252** is removed try steps #2 and #3.
2. Check the termination switches on the monitor or video projector. The termination switches should be set to "75 Ohm Termination" unless the signal is being looped to another display device.
3. Check the brightness and contrast settings on the projector or monitor. Many CRT type devices look best when the contrast is set towards the upper end of the adjustment range (80% - 95%) and the brightness is set in the middle of the adjustment range (40 - 65%).

### **The IN3252 is being used to drive / split five separate composite video signals. The three signals on the Red, Green, and Blue are working well, but the H & V Sync connectors don't seem to pass the other two video signals.**

While it is perfectly fine to use the Red, Green, and Blue channels to drive or split composite video signals, the Sync channels are designed to work with digital sync signals and will not properly amplify analog video signals.

## WARRANTY

- ◆ Inline warrants the equipment it manufactures to be free from defects in materials and workmanship.
- ◆ If equipment fails because of such defects and INLINE is notified within two (2) years from the date of shipment, INLINE will, at its option, repair or replace the equipment at its plant, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications.
- ◆ Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of re-shipment to the Buyer.
- ◆ **This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.**

The information in this manual has been carefully checked and is believed to be accurate. However, Inline, Inc. assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Inline, Inc. be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding IN3252 features and specifications is subject to change without notice.

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