

## VBH-3BB/RR 75 Ω component video isolator

- Eliminates hum bars caused by ground loops
- Exceptional performance, will not deteriorate picture quality
- Very high ground isolation: 120 dB CMMR typ at 60 Hz
- Precise impedance matching ensures minimal reflection

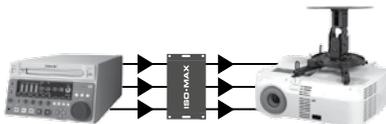


The Iso•Max VBH-3BB is a three channel 75 Ω video isolator for component video that is used to prevent 60 cycle 'hum bars' even where ground voltage differences can be very large such as in ceiling mounted projectors in house of worship, conferences centers and night clubs.

Designed for use with standard RG59 type coaxial cable, the VBH-3BB combines true 75 Ω BNC or RCA connectors with a unique humbucking circuit to deliver an exceptionally linear bandwidth with virtually zero insertion loss, contamination or artifact. Plug and play easy to use, the VBH-3BB features a flanged, electrically isolated housing that is easily mounted on standard 19" rack rails or inside a NEMA enclosure. One simply connects the passive device in series and problems such as ground loops are eliminated, reducing noise by as much as 56 dB at 60 Hz.

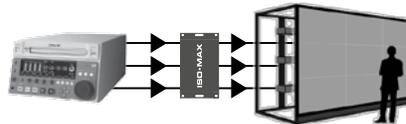
The VBH-3BB is a tremendous time saver as it eliminates excessive troubleshooting when hunting down sporadic problems. Once installed, it often eliminates future service calls that can be attributed to non-related voltage fluctuations caused by cycling refrigeration systems, power transformers or nearby industrial facilities that may be causing power disruptions.

## Applications



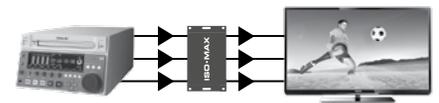
### VBH-3BB/RR with a projector

Often the projector is mounted in the ceiling, where separate circuits supply the projector and the source video player. Isolating the transmission line with the VBH-3BB/RR helps eliminate hum bars and improves the picture quality.



### VBH-3BB/RR in a live show

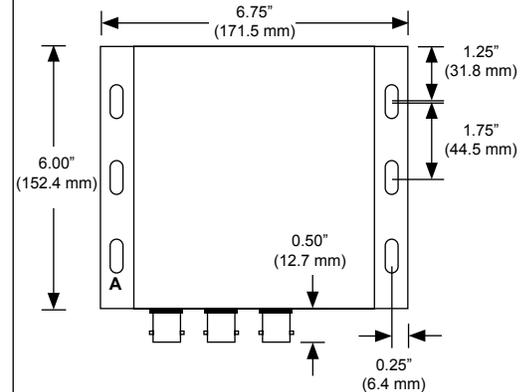
Today, live shows often combine video backdrops and screen projections to the action on stage. The challenge is keeping the video feed clean when the various equipment that surrounds it may be 'polluted' by motors, dimmers, and power transformers. Isolating the video system with the VBH-3BB/RR solves the problem.



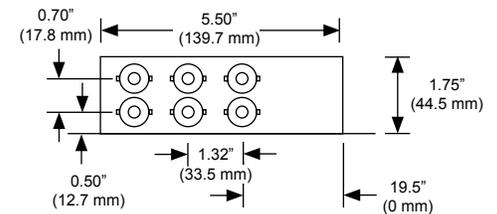
### VBH-3BB/RR with component video

There are still many installed systems that employ component video to distribute the signal. In these installations, hum bars can often appear when certain equipment is activated such as refrigeration systems, air conditioning, motors, or dimmers. One merely inserts the VBH-3BB/RR into the signal path to prevent signal degradation.

## Dimensions



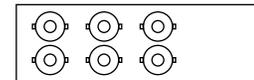
A = 0.20" (5.0 mm) x 0.70" (17.8 mm) Oval Cutout



## Connector options

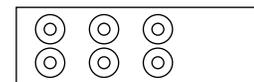
### VBH-3BB

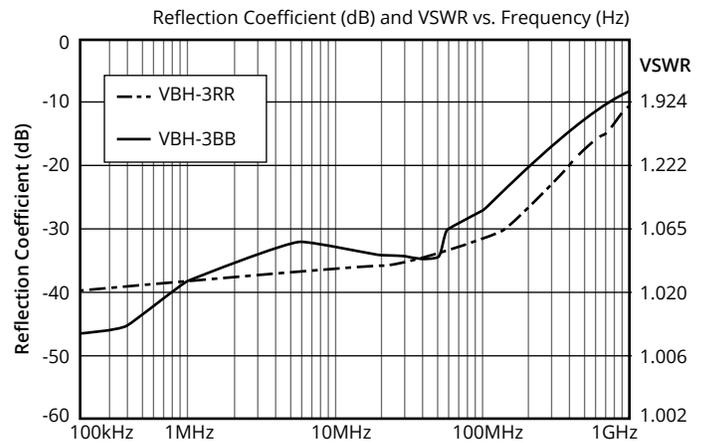
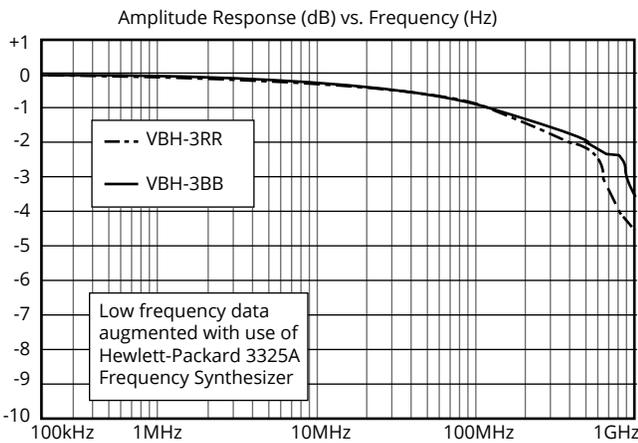
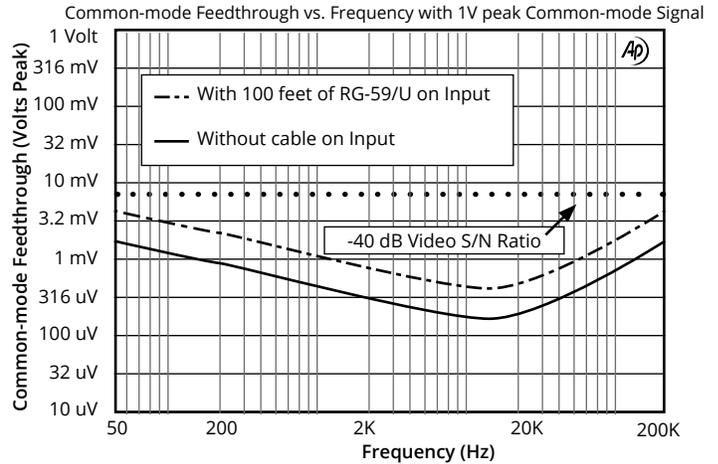
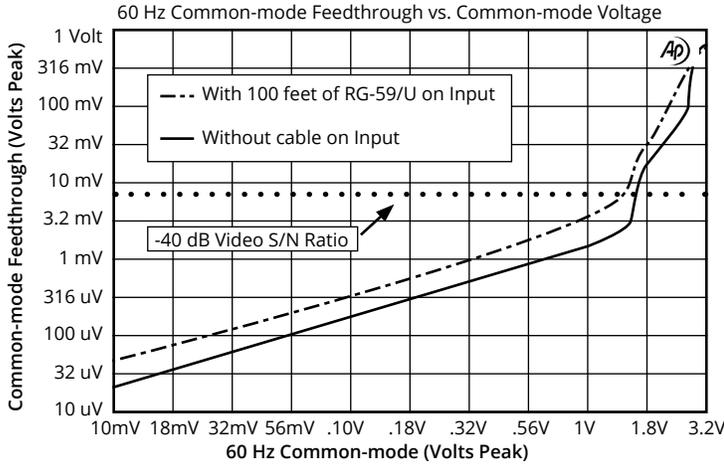
Connectors: BNC  
Bandwidth: DC to 900 Mhz



### VBH-3RR

Connectors: RCA  
Bandwidth: DC to 600 Mhz

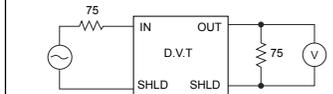




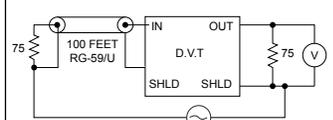
| PARAMETER                           | CONDITIONS  | MINIMUM               | TYPICAL               | MAXIMUM  |
|-------------------------------------|---|-----------------------|-----------------------|----------|
| Input impedance, Z <sub>i</sub>     | 10 kHz, test circuit 1  |                       | 75 Ω                  |          |
| Insertion loss                      | 10 kHz, test circuit 1 (referred to -6.02 dB)                           |                       | -0.05 dB              | -0.10 dB |
|                                     | 100 kHz, test circuit 1 (referred to -6.02 dB)                          |                       | -0.005 dB             |          |
| High Frequency Response, ref 10 kHz | 1 MHz, test circuit 1 (referred to -6.02 dB)                            |                       | -0.005 dB             |          |
|                                     | 3.58 MHz, test circuit 1 (referred to -6.02 dB)                         |                       | -0.10 dB              |          |
|                                     | 10 MHz, test circuit 1 (referred to -6.02 dB)                           |                       | -0.20 dB              |          |
|                                     | 100 MHz, test circuit 1 (referred to -6.02 dB)                          | -1.00 dB              | -0.80 dB              |          |
| Low Frequency Response Ratio        | test circuit 1  |                       | DC                    |          |
|                                     | 60 Hz, test circuit 2, no cable   | 50 dB                 | 56 dB                 |          |
| Common - mode rejection ratio       | 60 Hz, test circuit 2, with 100 feet (30.5 m) of RG-59/U cable at input |                       | 48 dB                 |          |
|                                     | 60 Hz, test circuit 3, 3% THD   | 1.4 V <sub>peak</sub> | 1.7 V <sub>peak</sub> |          |
| Inductance                          | 60 Hz, 500mVrms, shield, input to output                                |                       | 200 mH                |          |
| DC resistances                      | center conductor, input to output                                       |                       | 0.70 Ω                |          |
|                                     | shield, input to output   |                       | 0.20 Ω                |          |
| Capacitances                        | center conductor to shield  |                       | 200 pF                |          |
| Time Delay Skew between channels    |   |                       | 0.1 nS                | 0.5nS    |
| Weight                              |   |                       | 4 lbs.<br>(0.45 kg)   |          |
| Temperature range                   | operation or storage  | 0°C                   |                       | 70°C     |

(source Z - load Z - 75 Ohms, signal level = 1Vpp unless otherwise noted, specifications apply to all 3 independent channels)

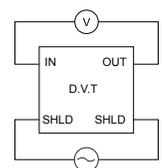
Test Circuit 1:



Test Circuit 2:



Test Circuit 3:



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