

*Series*  
*VABX700S*

*September 2001*

## Series VABX700 Specifications

### VIDEO

Video Channels: 2-16, scalable  
Video Format: NTSC, RS-170, RS-250B, PAL, CCIR, and SECAM  
Video Bandwidth: 6 MHz per channel, 8-bit video  
SNR: 60 dB min, typical 64dB  
Intermodulation: 2%  
Signal Level: 1 V peak-to-peak, 75 ohms  
Differential Phase: < 1.3% (10 to 90% APL)  
Differential Gain: < 3% (10 to 90% APL)  
Tilt: < 2.0 %  
Chrominance To  
Luminance: Gain < +/- 4.0%, delay 33 nanoseconds AUDIO

Audio Channels: 2 through 32, scalable  
O/I Levels: 600 Ohms Max.  
Output signal levels: 1.5v Rms Max.  
System Bandwidth: 20 Hz to 24 KHz  
Total Harmonic Distortion: > 1%  
Audio Format: 18-Bit Delta-Sigma A-D with 48 kHz  
sampling rate  
Signal Level: Balanced or unbalanced, 600 Ohms line level

### OPTICAL

Optical Wavelength: VABX700S: 1310/1550 nm  
Max. Attenuation: One-fiber units: 14 dB standard  
Gain Control: Fully automatic (AGC)  
Launch Power: > 200 uW typ.  
Receiver Sensitivity: < 20 uW  
Modulation: TDM and FM operation  
Resulting Data Rate: 1.3 gbps transmitter to receiver

## ELECTRICAL/MECHANICAL

Power Requirements:	0.25A @ 12-16VDC, 5W @ 12-14VAC
Connectors:	Video BNC, Audio: 6 pin mini din Power: Screw terminals Optical: FC/PC
Size:	19" W x12.5"D x 3.18" H
Operating Temperature:	-20°C to 50°C
Storage Temperature:	-40°C to 85°C

### \*\*NOTE\*\*

Dimensions: Units can vary in height, from 1 RU  
(Rack Unit -1.75" H) to 3 RU (5.25"H)

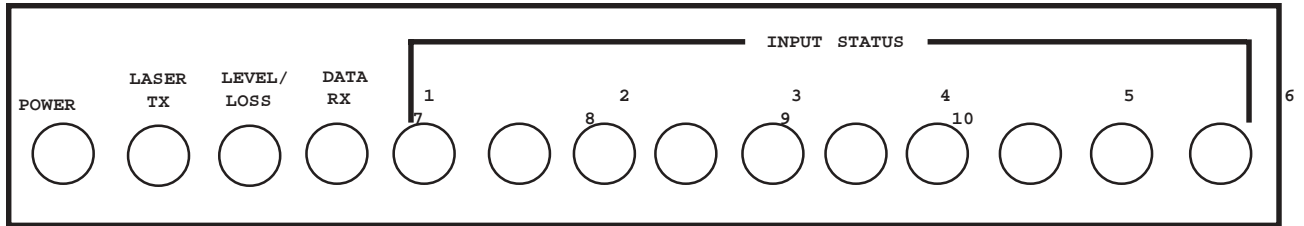
### VAB700 SERIES START-UP PROCEDURE

1. Remove units from the box. Check for power supplies and AC power cords shipped with the units.
2. Audio cards should have the associated terminal block adapter inserted in each header. Consult the manual to ascertain the proper wiring configuration. Wire each audio channel according to the pin designation in the manual. Be sure to observe the (+) and (-) designation for balanced audio.
3. Use a standard 75ohm coax cable terminated in a BNC connector (e.g. RG 59U with a BNC connector) to connect the video. Connect the video source to the Video In BNC connector on the transmitter. Connect the Video Out BNC connector on the receiver to the monitor.
4. Connect the fiber optic cables to the transmitter and receiver. Be sure that the connectors on the cables are properly seated in the adapters on the units.
5. Attached the power supplies (shipped with the units) to the VABX Transmitter and Receiver via the 3 pin terminal bloc pre-wired to the supply. Apply power to the units using the 3 terminal AC Power cord.

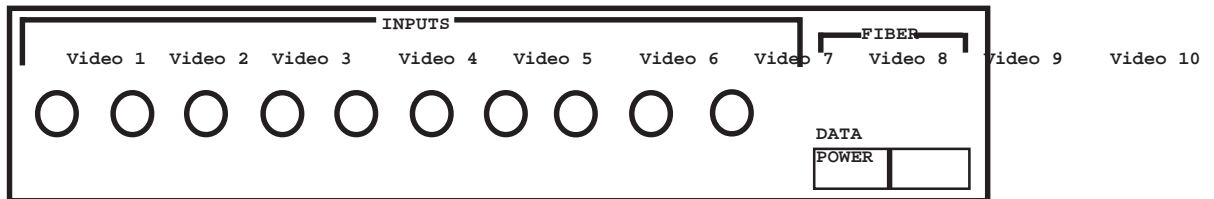
**Note: Apply Power to the Transmitter First. Then apply power to the Receiver. If there is distortion in the Audio, recycle Power to the Receiver. (Due to the crucial timing of digital circuitry, it is necessary to Power the Transmitter first, allowing the Receiver circuitry to synchronize with the Transmitter timing signals.)**

6. Verify all link and Video Presence status LEDs. Adjust all Video and Audio input levels to within specification.

VABX700S-T  
**Front Panel**

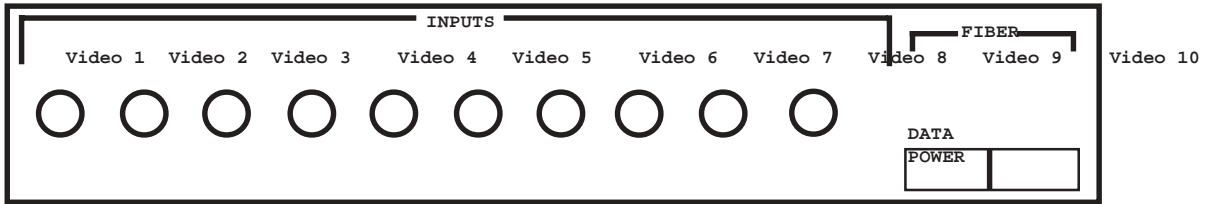


VABX700S-T  
**Rear Panel**



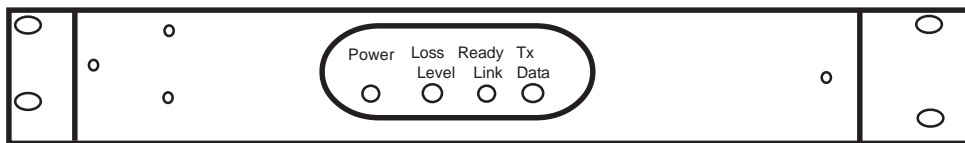
Power	Pin #	Function
	1	(-) Black
	2	GND Shield
	3	(+) Red

VABX700S-R  
**Rear Panel**



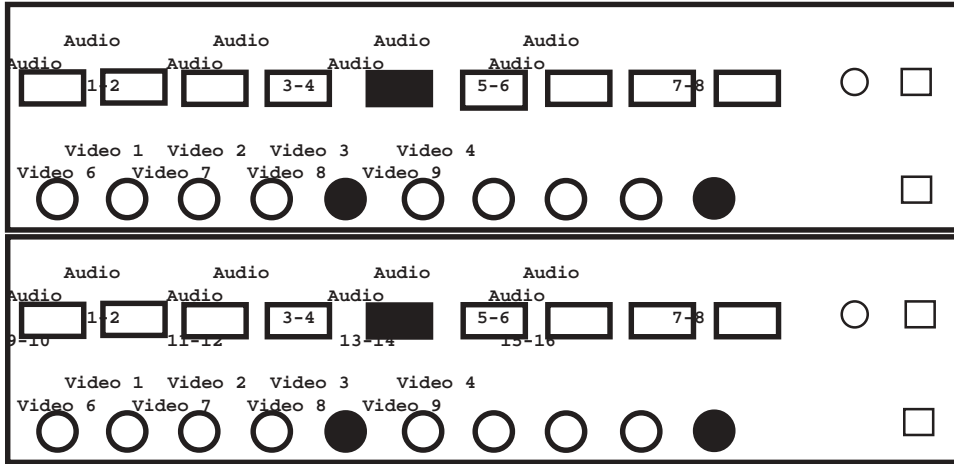
Power	Pin #	Function
1	(-)	Black
2	GND	Shield
3	(+)	Red

VABX700S-R  
**Front Panel**



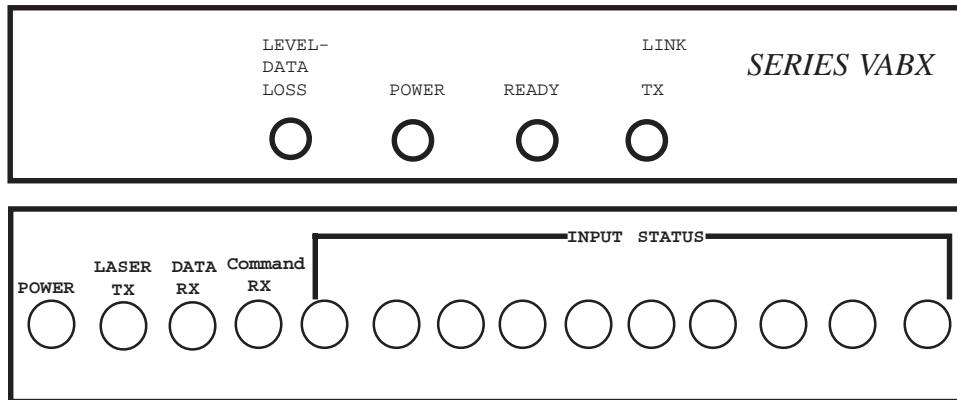
VABX700816S

REAR



VABX700816S

FRONT



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**POSSIBLE CAUSE**

No (or low) primary power.

Blown fuse.

No A/V signal into transmitter.

Optical output failure of transmitter.

Thermal shutdown.

Insufficient channel optical power from next uplink repeater.

Internal optical jumper or FC bulkhead connector is damaged.

Corrupted optical signal.

**ACTION**

Check for proper primary input power.

Check and replace fuse as required.

Check LED on front panel. If not lit, check signal from camera. If lit, replace video board.

Check video channel optical output power. If below spec, check and/or replace FC bulkhead connector. If problem persists, contact Radiant Tech Support.board.

Verify ambient temperature is within operating spec. Thermal shutdown does not result in permanent damage.

Check video channel optical input power from next uplink transmitter.

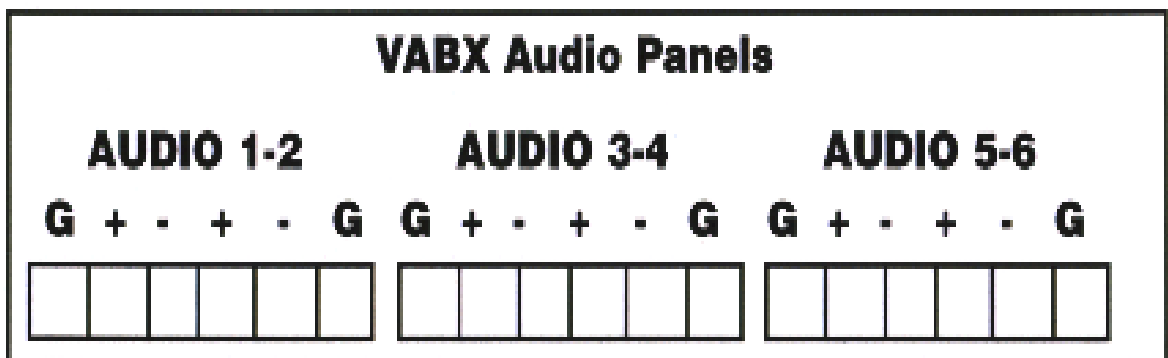
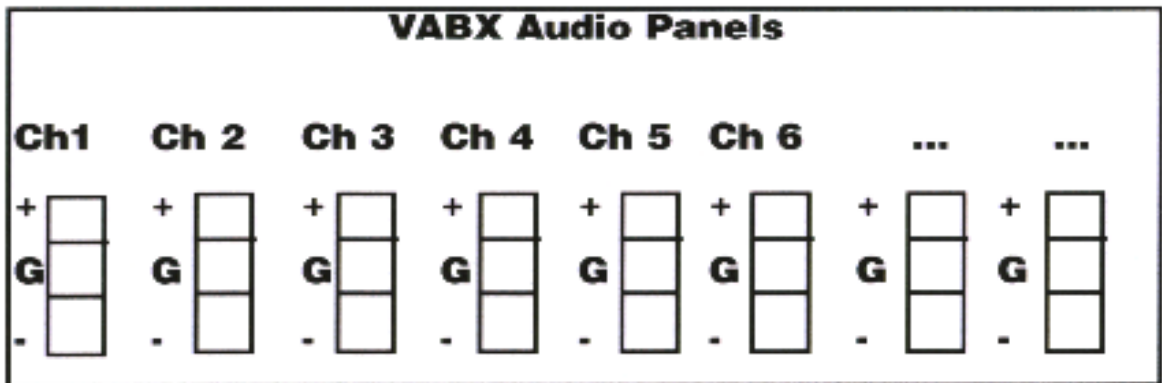
Check if LEVEL/LOSS LED is green on front panel. If not, replace connector and/or jumper. If problem persists, replace receive board.

Check LINK READY LED on front panel. If green and LEVEL/LOSS LED is green, then the video channel optical signal is corrupted. Clean all fiber interconnects and replace any suspect terminations in the video optical fiber path.

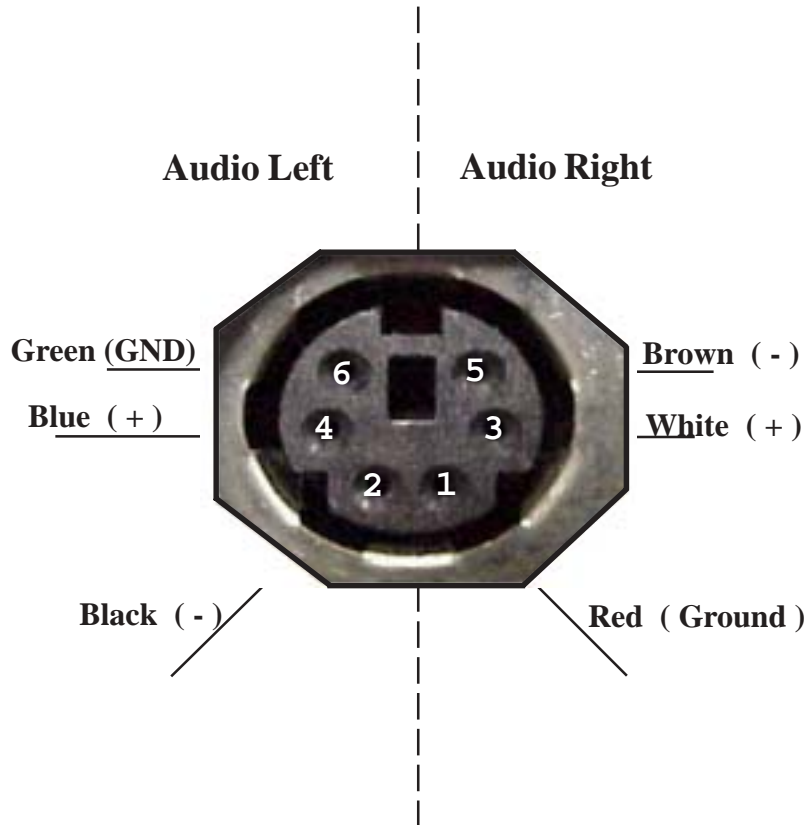
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<p>Noisy A/V on any or all channels.</p>	<p>Insufficient optical power between one or more repeaters and/or Receiver.</p> <p>Corrupted optical signal.</p>	<p>Check optical power at input and output from each transmitter and input to Receiver. If any transmitter outputs are found to be below spec, check bulkhead connector is set properly. If problem persists, contact Radiant Technical Support.</p>
<p><b>RECEIVER UNIT SYMPTOM</b></p> <p>System not operating, dead, fan</p>	<p><b>POSSIBLE CAUSE</b></p> <p>No (or low) primary power.</p>	<p>Clean off all optical fiber interconnects and replace any suspect terminations.</p> <p><b>ACTION</b></p>
<p>Missing or poor quality A/V.</p>	<p>Blown fuse.</p> <p>Corrupted video channel signal.</p>	<p>Check for proper primary input power.</p> <p>Check and replace fuse.</p> <p>Clean all video channel optical fiber interconnects and place any suspect terminations and/or FC bulkhead connector.</p>

## AUDIO FOR VABX700S



**OLD STYLE ADAPTER  
PINOOTS - AUDIO FOR VABX700S**



## USER NOTES

## Warranty

Radiant Communications Corporation warrants that at the time of shipment the products manufactured by Radiant Communications Corporation will be free from defects in material and workmanship and will conform to the specifications furnished by or approved by Radiant Communications Corporation.

Should any defects appear within one year from date of shipment, Radiant Communications Corporation shall, at its sole discretion repair or replace the defective material. Such material shall not be accepted for return or repair without prior notification of Radiant Communications Corporation.

Return shipments to Radiant Communications Corporation shall be at the buyer's expense. Radiant Communications Corporation will return said equipment prepaid via the best way.

The foregoing warranty is in lieu of and excludes any and all other expressed or implied warranties of merchantability or fitness, or otherwise. Items manufactured by any supplier other than Radiant Communications Corporation assumes no responsibility for the performance or reliability of the product.

Radiant Communications Corporation will not be liable for any special or consequential damages, or for loss, damages, or expense directly or indirectly arising from the use of the products or any inability to use them either separately or in combination with any other equipment or material or from any other cause.

This warranty does not extend to any product manufactured by Radiant Communications Corporation that has been subject to misuse, neglect, accident, improper installation, act of God, or an violation of the instructions furnished by Radiant Communications.