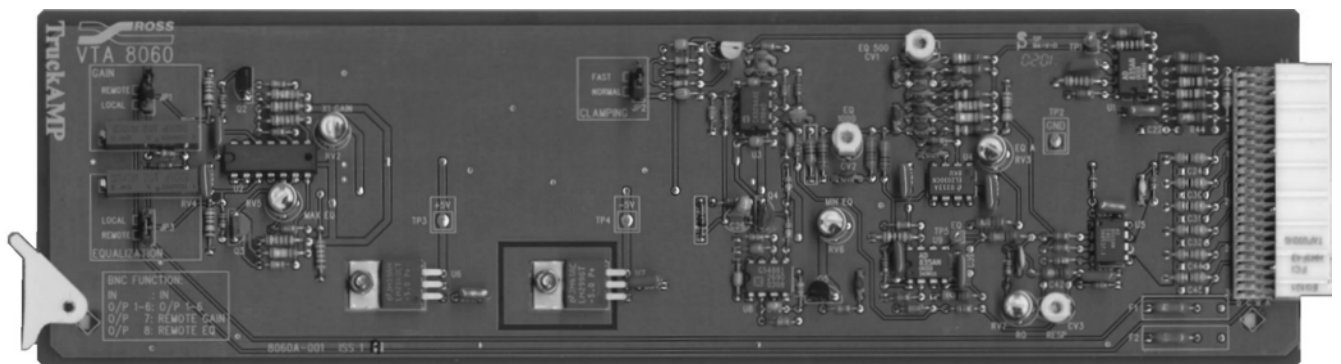


VTA-8060

Video Truck Amplifier

User Manual



Ross Part Number: 8060D-004
Issue: 01A

VTA-8060 • Video Truck Amplifier User Manual

- Ross Part Number: **8060D-004**
- Document Issue: **01A**
- Release Date: November 29, 2005. Printed in Canada.

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Important Regulatory and Safety Notices

Before using this product and any associated equipment, refer to the “Important Safety Instructions” listed below so as to avoid personnel injury and to prevent product damage.

Products may require specific equipment, and /or installation procedures be carried out to satisfy certain regulatory compliance requirements. Notices have been included in this publication to call attention to these Specific requirements.

Symbol Meanings



This symbol on the equipment refers you to important operating and maintenance (servicing) instructions within the Product Manual Documentation. Failure to heed this information may present a major risk of damage or injury to persons or equipment.



Warning

The symbol with the word “**Warning**” within the equipment manual indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.



Caution

The symbol with the word “**Caution**” within the equipment manual indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



Notice

The symbol with the word “**Notice**” within the equipment manual indicates a situation, which if not avoided, may result in major or minor equipment damage or a situation which could place the equipment in a non-compliant operating state.



ESD

Susceptibility

This symbol is used to alert the user that an electrical or electronic device or assembly is susceptible to damage from an ESD event.

Important Safety Instructions



Caution

This product is intended to be a component product of the RossGear 8000 series frame. Refer to the RossGear 8000 series frame User Manual for important safety instructions regarding the proper installation and safe operation of the frame as well as it’s component products.



Warning

Certain parts of this equipment namely the power supply area still present a safety hazard, with the power switch in the OFF position. To avoid electrical shock, disconnect all A/C power cords from the chassis' rear appliance connectors before servicing this area.



Warning

Service barriers within this product are intended to protect the operator and service personnel from hazardous voltages. For continued safety, replace all barriers after any servicing.

This product contains safety critical parts, which if incorrectly replaced may present a risk of fire or electrical shock. Components contained within the product’s power supplies and power supply area, are not intended to be customer serviced and should be returned to the factory for repair.

To reduce the risk of fire, replacement fuses must be the same type and rating.

Only use attachments/accessories specified by the manufacturer.

EMC Notices

US FCC Part 15

This equipment has been tested and found to comply with the limits for a class A Digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case users will be required to correct the interference at their own expense.



Notice

Changes or modifications to this equipment not expressly approved by Ross Video Ltd. could void the user's authority to operate this equipment.

CANADA

This Class "A" digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de classe "A" est conforme à la norme NMB-003 du Canada.

EUROPE

This equipment is in compliance with the essential requirements and other relevant provisions of **CE Directive 93/68/EEC**.

INTERNATIONAL

This equipment has been tested to **CISPR 22:1997** along with amendments **A1:2000** and **A2:2002** and found to comply with the limits for a Class A Digital device.



Notice

This is a Class A product. In domestic environments this product may cause radio interference in which case the user may have to take adequate measures.

Maintenance/User Serviceable Parts

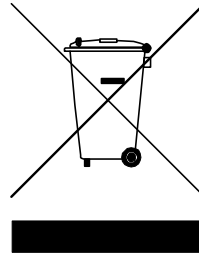
Routine maintenance to this RossGear product is not required. This product contains no user serviceable parts. If the module does not appear to be working properly, please contact Technical Support using the numbers listed under the "Contact Us" section on the last page of this manual. All RossGear products are covered by a generous 5-year warranty and will be repaired without charge for materials or labor within this period. See the "Warranty and Repair Policy" section in this manual for details.

Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.



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Introduction

In This Chapter

This chapter contains the following information sections:

- A Word of Thanks
- Overview
- Functional Block Diagram
- Features
- Documentation Terms

A Word of Thanks

Congratulations on choosing the Ross Video VTA-8060 Video Truck Amplifier. The VTA-8060 is part of a full line of Analog Products within the RossGear Terminal Equipment family of analog and digital products, backed by Ross Video's experience in engineering and design expertise since 1974.

You will be pleased at how easily your new VTA-8060 fits into your overall working environment. Equally pleasing is the product quality, reliability and functionality. Thank you for joining the worldwide group of satisfied Ross Video customers!

Should you have a question pertaining to the installation and operation of your VTA-8060, please contact us at the numbers listed on the back page of this publication. Our technical support staff is always available for consultation, training, or service.

Overview

The Truck Amp is a quick and easy way to alleviate inherent problems that occur naturally when your mobile unit connects to external feeds. The Truck Amp allows you to control Equalization and Gain quickly and easily from the convenience of the equipment rack. The Equalization control allows you to easily set the Truck Amp to compensate for frequency response losses due to the cable length (up to 1000 feet of 8281 or equivalent coax cable) between the mobile unit and the source. The Gain control has two settings; a ± 0.5 dB range for standard feeds, and a ± 6 dB range for non-standard feeds. With a single control, you are assured a flat frequency for a full 10 MHz range. You can solve your feed problems fast.

The VTA-8060 card is designed for use in the RossGear 8000 series video distribution frames. The power to each card is individually fused to prevent failure of any one card from affecting the rest of the cards in the frame. RossGear analog (and digital) cards are also designed to fit into distribution frames of some other manufacturers for installation flexibility.

The VTA-8060 fills a unique role within the full line of RossGear video distribution products, engineered to satisfy the highest quality broadcast standards and the most demanding requirements of your facility.

Features

The Truck Amp provides a heavy-duty solution to the problems that can occur when connecting external video sources to a mobile studio. Most of these problems are a natural result of the need to operate in environments which are technically far less than ideal. In addition, the length of video cable bringing feeds into the mobile varies considerably with each program location

The following features are unique to the VTA-8060 Video Truck Amplifier:

- Remote control of Equalization and Gain from the jackfield location
- Equalization for up to 1000 feet of 8281 coax cable.
- Gain has two ranges; a ± 0.5 dB range for standard feeds, and ± 6 dB range for on-standard feed.
- Clamping for minimization of video disturbances
- Easy to Install
- Fits Ross 8000 Series and Leitch* 6800 Series frame
- Easy to Use
- 5-year transferable warranty

* Leitch is a trademark of Leitch Technology Corporation

Functional Block Diagram

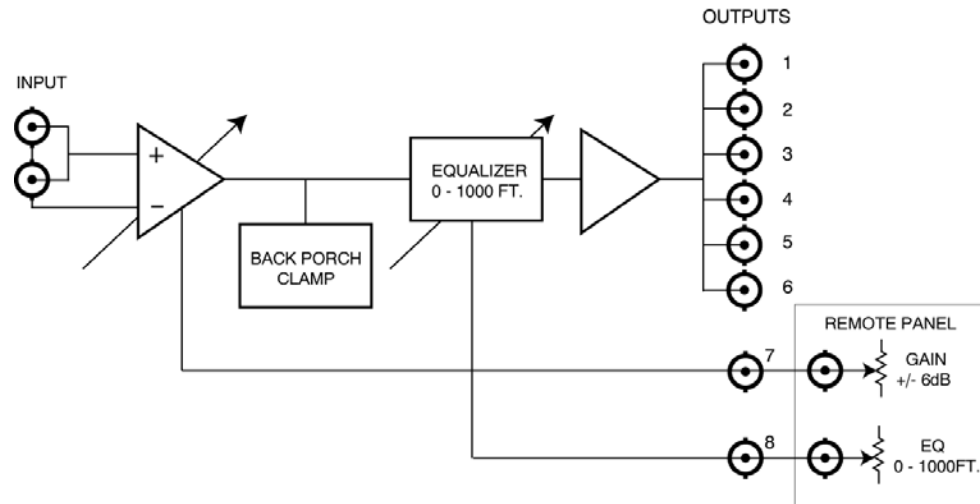


Figure 1. Simplified Block Diagram of VTA-8060 Functions

Documentation Terms

The following terms are used throughout this guide:

- “**Frame**” refers to the **DFR-8104A** and **DFR-8110A** frames that house the **VTA-8060** card.
- “**Operator**” and “**User**” both refer to the person who uses the **VTA-8060** cards.
- “**Board**”, “**Card**”, and “**Module**” all refer to the **VTA-8060** cards, including all components.
- “**System**” and “**Video system**” refers to the mix of interconnected production and terminal equipment in which the **VTA-8060** cards operate.

Installation and Setup

In This Chapter

This chapter contains the following information sections:

- Static Discharge
- Unpacking
- Jumper Locations
- Clamping
- Gain and Equalization
- Remote Control Installation
- BNC Labels
- Cable Connections
- Board Installation
- VRP-8060 Gain Settings
- VRP-8060 Equalization Settings
- Remote Control by a Voltage Source

Static Discharge

Whenever handling the VTA-8060 cards and other related equipment, please observe all static discharge precautions as described in the following note:



Static discharge can cause serious damage to sensitive semiconductor devices. Avoid handling circuit boards in high static environments such as carpeted areas, and when wearing synthetic fiber clothing. Always exercise proper grounding precautions when working on circuit boards and related equipment.

Unpacking

Unpack each VTA-8060 card you received from the shipping container, and check the contents against the packing list to ensure that all items are included. If any items are missing or damaged, contact your sales representative or Ross Video directly.

Jumper Locations

Use figure 2, the card labeling, and the following discussions to set the card jumpers.

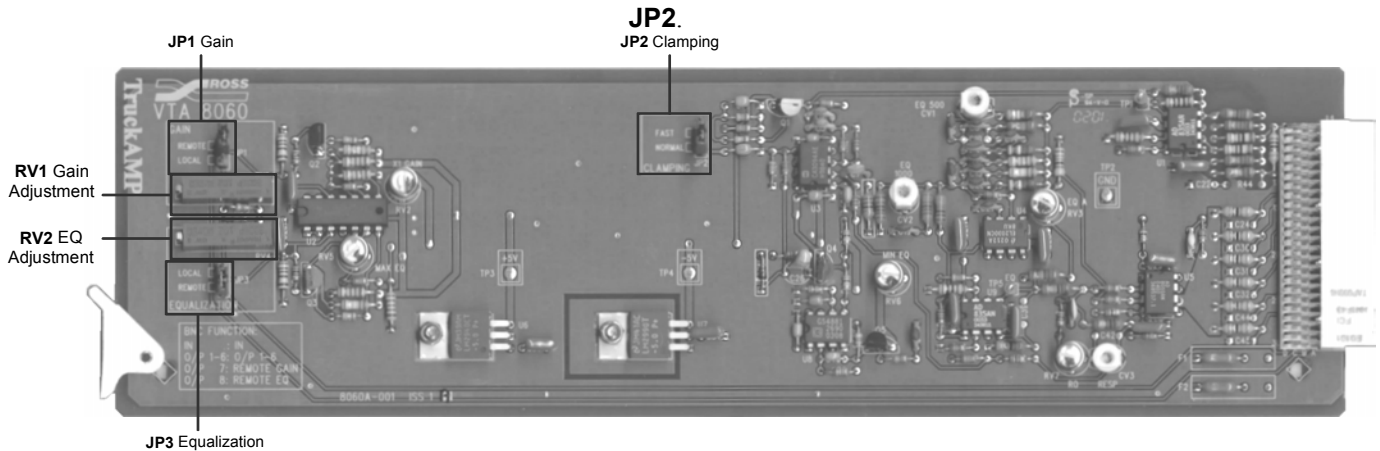


Figure 2. VTA-8060 User Control Locations

Clamping

Use figure 2, the card labeling, and the following discussion to set the Clamping jumper **JP2**.

Select one of the following options for **JP2** to choose the clamping mode:

- **FAST** — the VTA-8060 will clamp unstable video from long cables runs etc.
- **NORMAL** — the VTA-8060 will clamp stable video (default setting).

Gain and Equalization

Use figure 2, the card labeling, and the following discussion to adjust gain and equalization.

The VTA-8060 can be controlled with the card edge gain and equalization potentiometers, or it can be operated with the VRC-7000 remote control gain and equalization knobs as installed in a VRP-7000 remote control panel.

Local Control

If you are using the VTA-8060 card edge controls, set both **JP1** (Gain) and **JP3** (Equalization) jumpers to **LOCAL**. Then set **RV1** (Gain) and **RV2** (Equalization) as required for your system and cable length. Use any suitable test signal that would enable the signal gain and subcarrier level to be correctly set (e.g. pulse and bar or color bar). A sweep signal can be used, but is not normally necessary.

Remote Control

If you are controlling the VTA-8060 with the VRC-7000 and VRP-7000 remote system, set both **JP1** (Gain) and **JP3** (Equalization) jumpers to **REMOTE**. **RV1** (Gain) and **RV2** (Equalization) are disabled and you can continue with the remote control installation instructions provided below.

Remote Control Installation

The VTA-8060 Video Truck Amp card is controlled by the VRC-8060 Remote Control module which itself is installed in the VRP-8060 Panel in the rack with the 8000 frame.

With each VRC-8060 Remote Control module ordered, you receive:

- 1 Remote Control module (see the **Ordering Information** chapter for more detail on this component)
- 2 fiber washers
- 2 lock washers
- 2 nuts
- 2 knobs

With each VRP-8060 panel ordered, you receive:

- 1 panel plate
- 1 Allen wrench
- 42 plastic hole plugs
- 1 Truck Amp Owner's Manual.

There are two stages to installing the Truck Amp. The first stage is installing the control modules. The second stage is installing the Truck Amp card into the rack frame and connecting the inputs and outputs.

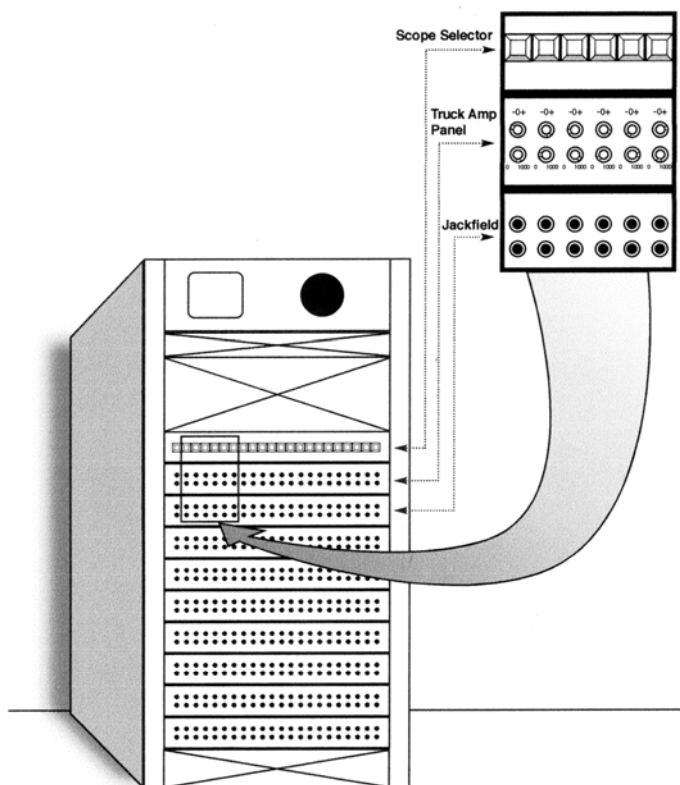


Figure 3. Truck Amp installed in equipment rack

Control Module Installation

Installing the control modules involves attaching the control module PCB to the panel, securing and calibrating the knobs, and attaching the panel to the equipment rack.

Before proceeding with the installation, familiarize yourself with the components of the control module PCB. See Figure 2.

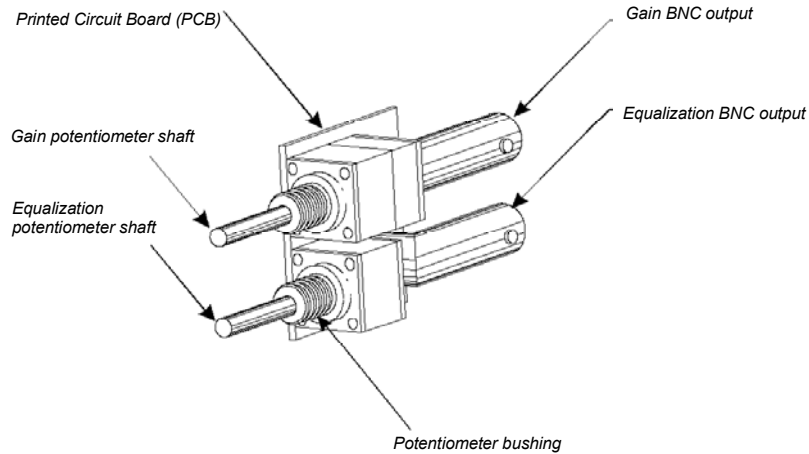


Figure 4. The Control Module PCB

The Truck Amp's remote control panel was engineered to perfectly line up with its associated jackfield. The panel may be installed between the jackfield and scope selector. You won't be guessing which incoming jack is connected to which DA.

1. Install a fiber washer on each potentiometer bushing.
2. Position the control module PCB in the panel ensuring that the "GAIN" potentiometer shaft is inserted in a hole along the "GAIN" row of holes. See Figure 4.
3. Install a lock washer and nut on each control module bushing, to secure the control module PCB to the panel.

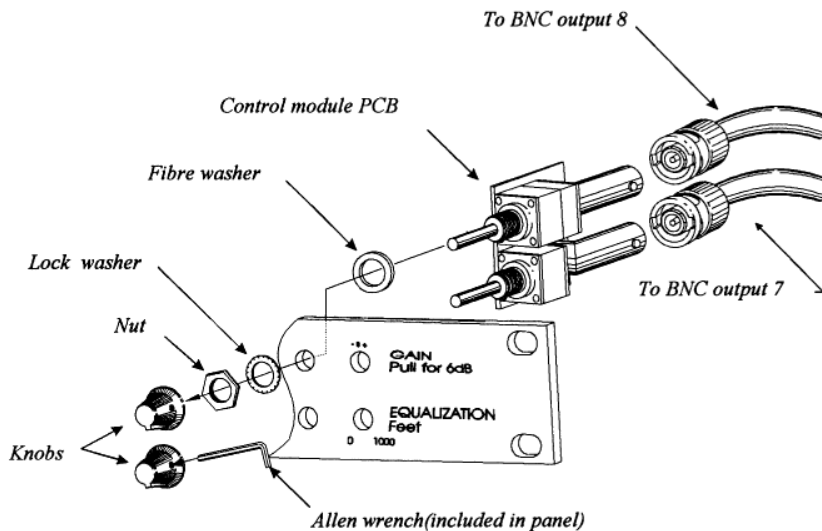


Figure 5. Installing the Control Module

Gain Potentiometer Calibration

To calibrate the Gain potentiometer:

1. Ensure that the Gain potentiometer shaft is pushed in.
2. Rotate the potentiometer shaft until it is at roughly half its range
3. Position a knob onto the potentiometer shaft with its indicator pointing at the "0" on the panel. Press the knob onto the potentiometer shaft until the knob is fully seated.
4. Using the Allen wrench, turn the knob's set screw to secure the knob to potentiometer shaft so that it is tight enough to turn the potentiometer and loose enough to allow the knob to slip turn on the shaft if the knob is turned past the potentiometer's turning limit. **DO NOT TIGHTEN.**
5. Measure the resistance of the Gain potentiometer using a digital ohmmeter. One lead should touch the center gold receptacle; the other, the outer shielding. See Figure 5.

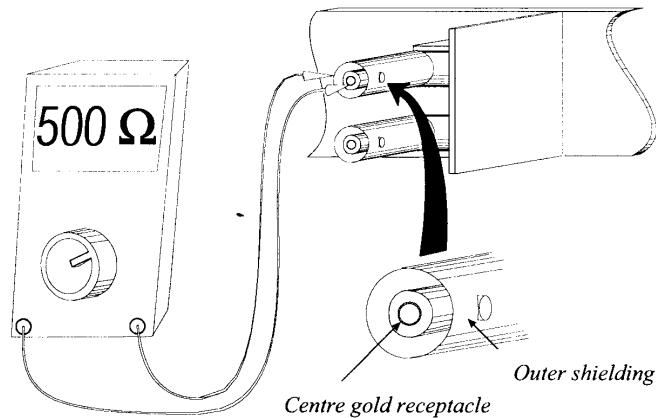


Figure 6. Measuring Resistance Across the Potentiometer

6. Depending whether the output is less or more than 500 ohms, proceed to step a. (less) or step b. (more):
 - a. If the resistance measured is less than 500 ohms, gently turn the knob counterclockwise until the potentiometer shaft is unable to continue turning. Continuing turning the knob, you should be able to feel the knob's hold on the potentiometer shaft "give" and from this point on, the knob will slip turn on the potentiometer shaft. If you do not feel the knob slip turning on the potentiometer shaft, loosen the knob's setscrew with the Allen wrench slightly and try again.
 - b. If the resistance measured is greater than 500 ohms, gently turn knob clockwise until the potentiometer shaft is unable to continue turning. Continue turning the knob, you should be able to feel the knob's hold on the potentiometer shaft "give" and from this point on, the knob will slip turn on the potentiometer shaft. If you do not feel the knob slip turning on the potentiometer shaft, loosen the knob's setscrew with the Allen wrench slightly and try again.
7. Turn the knob so that it points to "0". If the resistance measured is 500 ohms (± 10 ohms), secure knob to the potentiometer shaft using the Allen wrench provided and continue to step 5. If the resistance measured is not 500 ohms, repeat steps 6 and 7.

Equalization Potentiometer Calibration

To calibrate the Equalization potentiometer:

1. Ensure that the Equalization potentiometer shaft is pushed in.
2. Turn the EQUALIZATION potentiometer shaft fully clockwise.
3. Position a knob on the potentiometer shaft with its indicator pointing to just past the 1000 foot mark on the panel. Press the knob onto the potentiometer shaft until fully seated.
4. Using the Allen wrench, turn the knob's set screw to secure the knob to the potentiometer shaft so that it is tight enough to turn the potentiometer and loose enough to allow the knob to slip turn on the shaft if the knob is turned past the potentiometer's turning limit. **DO NOT TIGHTEN.**
5. Rotate the knob fully counterclockwise until the potentiometer reaches its limit. If the knob is in the proper position it will be pointing to just before the zero foot mark on the panel. If the knob indicates a distance of zero feet or greater, gently turn the knob counterclockwise until it points to just before the zero foot mark. The knob will slip turn on the potentiometer shaft.
6. Rotate the knob fully clockwise until the potentiometer reaches its turning limit. If the knob is in the proper position, it will be pointing just past the 1000 foot mark on the panel. If the knob indicates a distance of 1000 feet or less, gently turn the knob clockwise until it points to just past 1000 feet. The knob will slip turn on the potentiometer shaft. See Figure 5.
7. Repeat steps 5 and 6 until the distance the knob starts turning **BEFORE** the zero foot indicator on the panel is equal to the distance it continues to turn **AFTER** the 1000 foot indicator on the panel (in the clockwise direction).
8. Secure knob to shaft using the Allen wrench provided.
9. Repeat steps 1-5 for all additional control module installations.
10. Insert plastic hole plugs (provided with panel) into any vacant holes in the panel. Do not insert plugs into the holes used to secure the panel to the equipment rack.

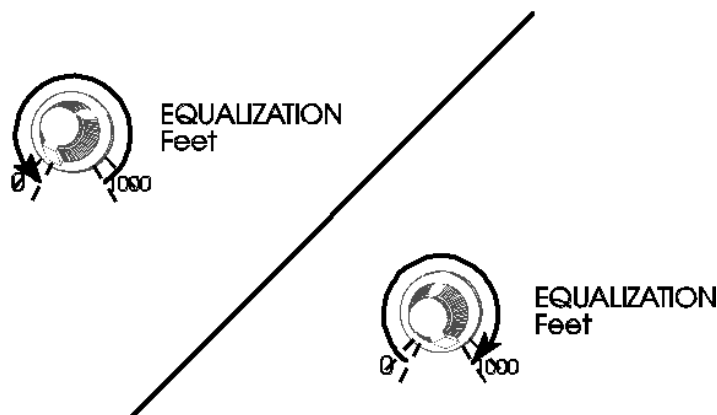


Figure 7. Calibrating the Equalization Potentiometer

Note

As the potentiometer has a larger turning arc than that shown on the panel, the knob will begin indication before zero feet and end indication after 1000 feet.

BNC Labels

Affix the supplied BNC label, as per the included instructions, to the BNC area on the rear of the rack frame.

Cable Connections

The following diagram provides instruction for connecting input and output coax cables to the VTA-8060 when mounted in RossGear 7200 series Video, and 7850 series A/V distribution frames.

It is recommended that all unused outputs be terminated. The specifications in this manual are based on all outputs being terminated.

1. Connect the external video input to be compensated to the appropriate DA rack frame BNC looping input connector. Terminate the unused connector.
2. Connect the output cables that you require to BNC outputs 1-6. Be sure to terminate any unused outputs 1-4. Do not terminate outputs 5 and 6 if not used.
3. Assemble two coax cables long enough to connect the rack frame to the control modules. Prepare enough cables for each Truck Amp installation.
4. Connect coax cables to BNC outputs 7 and 8.
5. Run the coax cables to the equipment rack where the Truck Amp panel will be installed.
6. Connect the coax cable that is connected to the DA rack frame BNC output 8 to the Gain (upper) BNC output of the module. See Figure 4 and 7.
7. Connect the coax cable that is connected to the DA rack frame BNC output 7 to the Equalization (lower) BNC output of the module. See Figure 4 and 7.

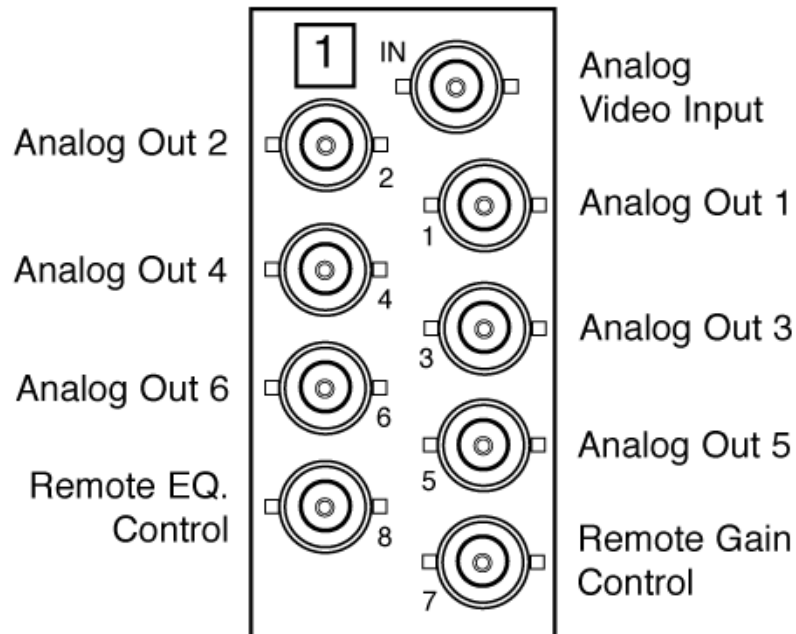


Figure 8. VTA-8060 Cabling Designations for RossGear 7200 and 7850 Series Frames

Board Installation

Use the following steps to install the VTA-8060 cards in a RossGear 7200 series video, or 7850 series A/V distribution frame:

1. Refer to the User Manual of the RossGear frame to ensure that the frame is properly installed according to instructions. If this module is to be installed in any compatible frame other than a Ross Video product, refer to the frame manufacturer's manual for specific instructions.
2. Please note that heat and power distribution requirements within a frame may dictate specific slot placement of cards. Cards with many heat-producing components should be arranged to avoid areas of excess heat build-up, particularly in frames using convectional cooling.
3. After selecting the desired frame installation slot, hold the VTA-8060 card by the edges and carefully align the card edges with the slots in the frame. Then fully insert the card into the frame until the rear connection plug is properly seated.

VRP-8060 Gain Settings

Fine adjustment of the gain control on the VRP-8060 remote panel should now be made to obtain proper white levels (as viewed on a waveform monitor). During normal operation, the $\pm 0.5\text{dB}$ range Gain control will compensate for any small errors that may be present. For non-standard level inputs, pulling the Gain control increases the Gain potentiometer range to $\pm 6\text{dB}$. See Figure 9.

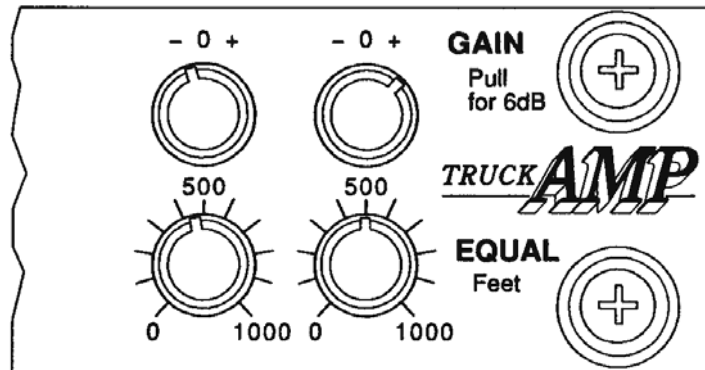


Figure 9. VRP-8060 Gain and Equalization Knobs

VRP-8060 Equalization Settings

The following adjustments are made by turning the Equalization control on the VRP-700 remote panel. See Figure 9.

Cable Length

Adjust the equalization control to reflect the cable length you are using. Remember to include the entire cable length, both internal and external.

Fine adjustment of the equalization control to achieve the proper chrominance to luminance ratio is now required. Adjusting the equalization may be accomplished with either a 75% color bar source signal, or a pulse and bar source signal. If neither are available, the sync and burst may be used.

75% Color Bar

Turn the equalization control so that the top of the color bar's yellow chrominance is flush with the top of the white bar.

Pulse and Bar

Turn the equalization control until the bottom of the 12 T pulse is flat.

Sync and Burst

Turn equalization control until the peak-to-peak amplitude of the sync pulse is equal to the peak-to-peak amplitude of the burst.

Once the equalization adjustments have been completed, you will have achieved proper cable equalization and the frequency response will automatically be flat to 10 MHz without the necessity of using a sweep signal.

Remote Control by a Voltage Source

In some situations, it may be desirable to control the Truck Amp without using the remote panel. It has been successfully used in several installations where remote control was provided by a computer with a digital to analog interface.

To assist in the design of such systems, the following are the approximate ranges of DC control voltages required as measured on a typical unit.

Gain

Unity Gain.....	+ 0.500 V
-6 dB	+ 0.239 V
+6 dB.....	+ 1.157 V

Equalization

0 ft of 8281 cable.....	0.000 V
1000 ft of 8281 cable.....	+ 0.970 V

Specifications

In This Chapter

This chapter contains the VTA-8060 Technical Specifications table.

VTA-8060 Technical Specifications

Table1. Technical Specifications

Category	Parameter	Specification
Input	Video Input Level	1V p-p nominal
	Input Impedance	75Ω terminated
	Input Return Loss	48dB to 5MHz
	Max DC on Input	± 5V
	Max Common Mode Signal	4.5V p-p
	Common Mode Rejection	59dB @ 60Hz
Output	Number of Outputs	6
	Output Impedance	75Ω
	Output Return Loss	45dB to 5MHz
	Output Isolation	38dB to 5MHz
	DC Offset	< 30mV
	Output Loading (per termination at 10MHz)	0.005dB
Performance (all outputs loaded)	Gain Range, Fine	± 0.5dB
	Gain Stability	< 0.25% per 10 °C
	Frequency Response	± 0.02dB to 10MHz typically -0.3dB at 20 MHz
	Line Rate Window Tilt	< 0.2%
	Field Rate Window Tilt	< 0.2%
	50/60Hz Square Wave Tilt	< 0.3%
	Bounce (black to white)	< 0.3%
	Differential Gain (10%-90% APL)	< 0.15%
	Differential Phase (10%-90% APL) 4 outputs	< 0.15°
	Differential Phase (10%-90%) 6 outputs	< 0.25°
	RMS Noise 0-5 MHz (unweighted)	62dB
	Chrominance/Luminance Delay	< 2.0ns
	K Rating 1 T	0.4%
Equalization	Response Accuracy	± 0.1dB to 10MHz (0 - 1000') (0 - 305m)
Clamping	Recovery Time, fast mode	7 lines
	Hum Rejection - Normal Mode	6dB
	Hum Rejection - Fast Mode	38dB
Power	Total Consumption	1.34W

Specifications are subject to change without notification.

Service Information

In This Chapter

This chapter contains the following sections:

- Troubleshooting Checklist
- Warranty and Repair Policy

Troubleshooting Checklist

Routine maintenance to this RossGear product is not required. In the event of problems with your VTA-8060, the following basic troubleshooting checklist may help identify the source of the problem. If the module still does not appear to be working properly after checking all possible causes, please contact your Ross Video products distributor, or the Ross Video Technical Support department at the numbers listed under the “Contact Us” section at the end of this manual.

1. **Visual Review** – Performing a quick visual check may reveal many problems, such as connectors not properly seated or loose cables. Check the module, the frame, and any associated peripheral equipment for signs of trouble.
2. **Power Check** – Check the power indicator LED on the distribution frame front panel for the presence of power. If the power LED is not illuminated, verify that the power cable is connected to a power source and that power is available at the power main. Confirm that the power supplies are fully seated in their slots. If the power LED is still not illuminated, replace the power supply with one that is verified to work.
3. **Reseat the Card in the Frame** – Eject the card and reinsert it in the frame.
4. **Check Control Settings** – Refer to the Installation and Operation sections of the manual and verify all user-components.
5. **Input Signal Status** – Verify that source equipment is operating correctly and that a valid signal is being supplied.
6. **Output Signal Path** – Verify that destination equipment is operating correctly and receiving a valid signal.
7. **Module Exchange** – Exchanging a suspect module with a module that is known to be working correctly is an efficient method for localizing problems to individual modules.

Warranty and Repair Policy

The RossGear VTA-8060 is warranted to be free of any defect with respect to performance, quality, reliability, and workmanship for a period of FIVE (5) years from the date of shipment from our factory. In the event that your RossGear VTA-8060 proves to be defective in any way during this warranty period, Ross Video Limited reserves the right to repair or replace this piece of equipment with a unit of equal or superior performance characteristics.

Should you find that this RossGear VTA-8060 has failed after your warranty period has expired, we will repair your defective product for as long as suitable replacement components are available. You, the owner, will bear any labor and/or component costs incurred in the repair or refurbishment of said equipment beyond the FIVE (5) year warranty period.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profits) incurred by the use of this product. Implied warranties are expressly limited to the duration of this warranty.

This RossGear VTA-8060 Precision Video Equalizing Amplifier User Manual of our Analog Video Products line provides all pertinent information for the safe installation and operation of your RossGear Product. Ross Video policy dictates that all repairs to the RossGear VTA-8060 are to be conducted only by an authorized Ross Video Limited factory representative. Therefore, any unauthorized attempt to repair this product, by anyone other than an authorized Ross Video Limited factory representative, will automatically void the warranty. Please contact Ross Video Technical Support for more information.

In Case of Problems

Should any problem arise with your RossGear VTA-8060, please contact the Ross Video Technical Support Department. (Contact information is supplied at the end of this publication.)

A Return Material Authorization number (RMA) will be issued to you, as well as specific shipping instructions, should you wish our factory to repair your RossGear VTA-8060. A temporary replacement module, if required, will be made available at a nominal charge. Any shipping costs incurred, will be the responsibility of you, the customer. All products shipped to you from Ross Video Limited, will be shipped collect.

The Ross Video Technical Support department will continue to provide advice on any product manufactured by Ross Video Limited, beyond the warranty period without charge, for the life of this equipment.

Ordering Information

In This Chapter

This chapter contains ordering information for the VTA-8060 and related products.

VTA-8060 Video DA and Related Products

Standard Equipment

- **VTA-8060** Precision Video Equalizing Amplifier

Optional Equipment

- **8060D-004** Precision Video Equalizing Amplifier User Manual (User Manual, provided with every 5 cards purchased)
- **VRC-7000** Video Truck Amp. Remote Control Module (mounts in VRP-7000 Remote Control Panel)
- **VRP-7000** Video Truck Amp. Remote Control Panel (1RU, holds up to 22 VRC-7000 modules)
- **DFR-8104A** Digital Products Frame and Power Supply (PS-8102) (1RU, holds 4 modules, includes 1 power supply)
- **DFR-8104A-C** Digital Products Frame with Cooling Fan Module and Power Supply (PS-8102) (1RU, holds 4 modules, includes 1 power supply)
- **DFR-8110A** Digital Products Frame and Power Supply (PS-8102) (2RU, holds 10 modules, includes 1 power supply)
- **DFR-8110A-C** Digital Products Frame with Cooling Fan Module and Power Supply (PS-8102) (2RU, holds 10 modules, includes 1 power supply)

Your **VTA-8060 Video Equalizing Amplifier** is part of the RossGear family of products. Ross Video offers a full line of RossGear terminal equipment including distribution, conversion, monitoring, synchronizers, encoders, decoders, keyers, switchers, as well as analog audio and video products.

Contact Us

Contact our friendly and professional support representatives for the following:

- Name and address of your local dealer
- Product information and pricing
- Technical support
- Upcoming trade show information

PHONE	General Business Office and Technical Support	613 • 652 • 4886
	After-hours Emergency	613 • 652 • 4886 ext. 333
	Fax	613 • 652 • 4425
E-MAIL	General Information	solutions@rossvideo.com
	Technical Support	techsupport@rossvideo.com
POSTAL SERVICE	Ross Video Limited	8 John Street, Iroquois, Ontario, Canada K0E 1K0
	Ross Video Incorporated	P.O. Box 880, Ogdensburg, New York, USA 13669-0880

Visit Us

Please visit us at our website for:

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- Related products and full product lines
- On-line catalog
- Trade show information
- News
- Testimonials

www.rossvideo.com
