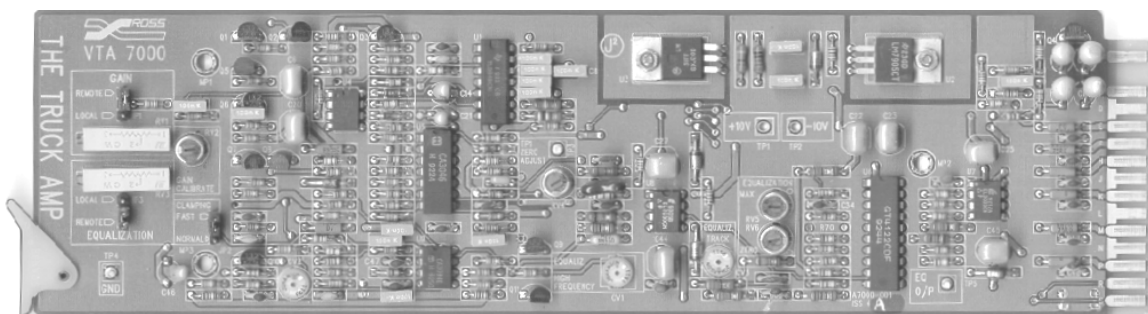


VTA-7000

Precision Video Equalizing Amplifier with Clamping

User Manual



Ross Part Number: 7000D-004
Issue: 05

VTA-7000 • Video Truck Amplifier User Manual

- Ross Part Number: **7000D-004**
- Document Issue: **05**
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Important Regulatory and Safety Notices to Service Personnel

Please review the following material to avoid injury to personnel and to prevent product damage.

- All product servicing should be carried out by qualified service personnel.
- This product may require specific equipment, and/or installation procedures to be carried out to satisfy certain regulatory compliance requirements. The following notices have been included in the manual, to call attention to these specific requirements.

Symbol Meanings



- **Protective Earth** — Protective Earth (PE) terminal. Provided for connection of the protective earth (green or green/yellow) supply system conductor.



- **Caution** — This CAUTION symbol on the equipment refers you to the Product Manual for additional information. This symbol appears next to required information in the manual.



- **WARNING PERSONAL INJURY:** Risk of electrical shock. This symbol warns you of a potential shock hazard where HAZARDOUS LIVE voltages greater than 35V peak or 60Vdc may be accessible. **Failure to comply with these instructions could result in death or serious injury.**

Important Safety Instructions



- Do not use this device near water. Hazardous voltages can occur.
- Clean only with a dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
- Do not defeat the safety purposes of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when not in use for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as: power-supply cord or plug is damaged, objects have fallen into the device, the device has been exposed to rain or moisture, the device does not operate normally or has been dropped.

EMC Notices

- **FCC**

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

- **CE**

This product has been tested and meets the requirements of the European CE marking directive. A copy of the CE Declaration of Conformity can be provided upon request.

Maintenance/User Serviceable Parts

Routine maintenance to this RossGear or GearLite 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.



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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-7000 Video Truck Amplifier. The VTA-7000 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-7000 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-7000, 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.

Back porch clamping is provided to assist in the removal of hum or other signal disturbances. Two clamping speeds are jumper selectable. A differential input gives excellent ground loop rejection. The amplifier input may be AC or DC coupled.

The VTA-7000 card is designed for use in the RossGear 7200 series video, and 7850 series A/V 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-7000 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-7000 Video Truck Amplifier:

- Remote control of Equalization and Gain from the jackfield location
- Equalization for up to one thousand feet of 8281 coax cable.
- Gain has two ranges; a ± 0.5 dB range for standard feeds, and ± 6 dB range for non-standard feed.
- Clamping for minimization of video disturbances
- Complete rejection of up to 11 volts of ground loop hum.
- Superb technical specifications
- Easy to Install
- Easy to Use
- 5-year transferable warranty

Remote Control

The remote controls are compact and designed to be mounted above or below the incoming-feed jackfield. A one-rack unit panel holds up to 22 control modules. Each module has two knobs; Equalization and Gain. This method of remote control removes confusion and makes it easy for operators to set up the truck feed at new sites.

In situations where remote control is not required, jumpers can select local control of equalization and gain on the amplifier module.

Equalization

Advanced circuit design ensures that equalization accuracy is maintained over the full adjustment range from zero to 1000 feet.

Gain

The Gain control has a range of ± 0.5 dB to provide fine trimming of levels. However, to accommodate non-standard feeds, pulling out the Gain knob switches it to a ± 6 dB coarse range.

Clamping

The clamping time constant is jumper-selectable. The "Normal" jumper ensures the stability of the internal circuits and provides about 6 dB rejection of imprinted hum. The "Fast" jumper provides rapid correction of transients, with black-level recovery in about seven lines for difficult situations and 38 dB of hum rejection.

Large Ground Hum Rejection

Special attention to the design of the input stage has resulted in the ability to reject a very large amount (11 volts p-p) of common-mode ground loop hum. Typical rejection is about 75 dB at 60 Hz

Superb Specifications

The use of the latest types of video multipliers provides remote control while maintaining excellent frequency response and temperature stability. Remote control is via two coax cables connected between the remote module and the video tray.

Easy to Install

Because the Truck Amp uses industry standards, installation time is minimal. The Truck Amp comprises of two assemblies that install easily. The Truck Amp's main PCB connects to the control panel with two coax cables. The PCB is engineered to plug directly into any Ross or GVG* trays. It's that simple.

Easy to Use

For the first time you can control your incoming feeds at the associated jackfield. The compact control panel is designed to conveniently mount between the incoming jackfield and scope selector. The controls on the panel line up perfectly with their associated jacks (see Figure 1, facing page). No more will you have to suffer through searching for the appropriate amplifier and adjusting by trial and error. You adjust right on the spot.

Functional Block Diagram

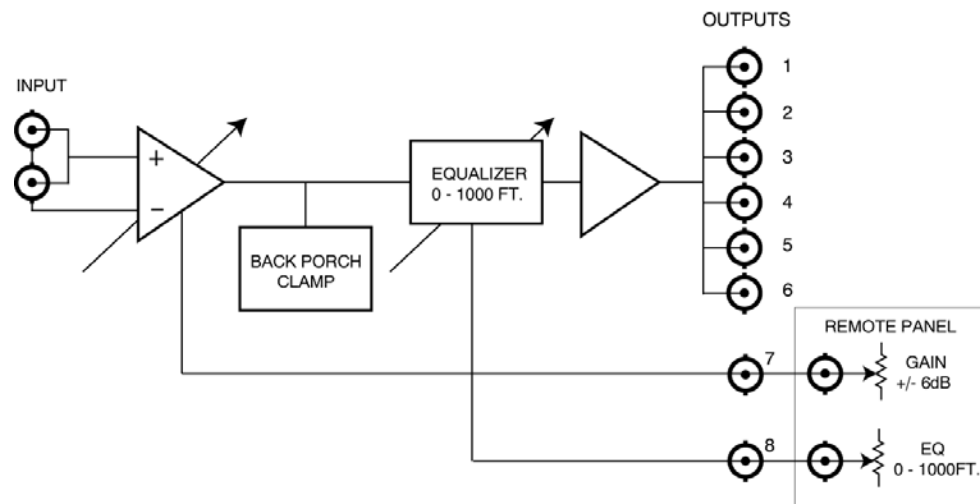


Figure 1. Simplified Block Diagram of VTA-7000 Functions

Documentation Terms

The following terms are used throughout this guide:

- “**Frame**” refers to the **VFR-7214**, **VFR-7210**, **AVFR-7854C**, and **AVFR-7855C** frames that can house the **VTA-7000** cards. See the respective User Manuals for details.
- “**Operator**” and “**User**” both refer to the person who uses the **VTA-7000** cards.
- “**Board**”, “**Card**”, and “**Module**” all refer to the **VTA-7000** cards, including all components.
- “**System**” refers to the mix of interconnected analog production and terminal equipment in which the **VTA-7000** cards operate.

Installation and Setup

In This Chapter

This chapter contains the following information sections:

- Static Discharge
- Unpacking
- Installation
- Cable Connections
- Gain and Equalization Settings
- VRP-7000 Gain Settings
- VRP-7000 Equalization Settings
- Remote Control by a Voltage Source

Static Discharge

Whenever handling the VTA-7000 cards and other related equipment, please observe all static discharge precautions as described in the following note:



Caution

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-7000 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.

Installation

The VTA-7000 Truck Amp card installs in a RossGear 7200 series frame. It is controlled by the VRC-7000 Remote Control module which itself is installed in the VRP-7000 Panel in the rack with the 7200 frame.

With each VRC-7000 Remote Control module ordered, you receive:

- 1 Remote control module (Ross part number A7000-002 - see section 4.6 for more detail on this component)
- 2 fiber washers
- 2 lock washers
- 2 nuts
- 2 knobs

With each VRP-7000 panel ordered, you receive:

- 1 panel plate
- 1 Allen wrench
- 42 plastic hole plugs
- 1 Truck Amp Owner's Manual (D7000-001).

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.

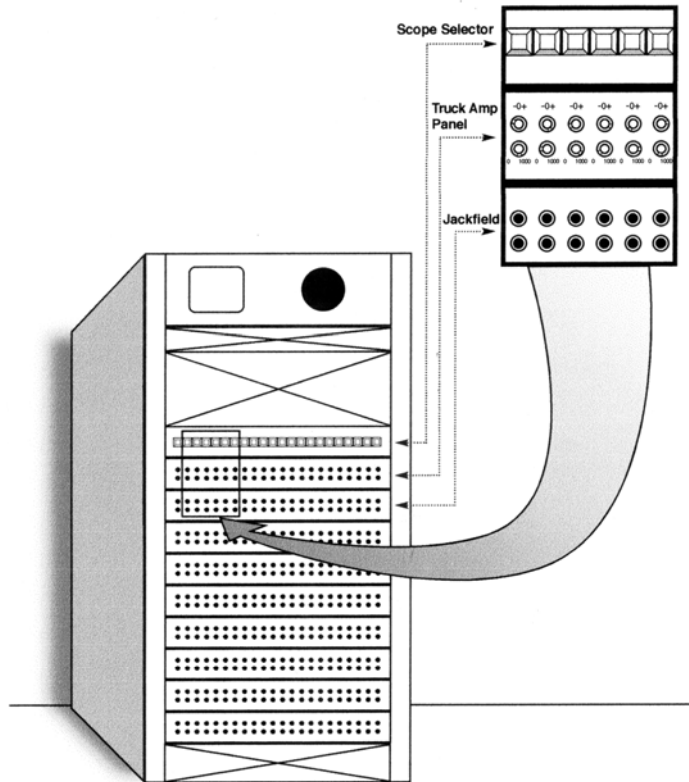


Figure 2. Truck Amp installed in equipment rack

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.

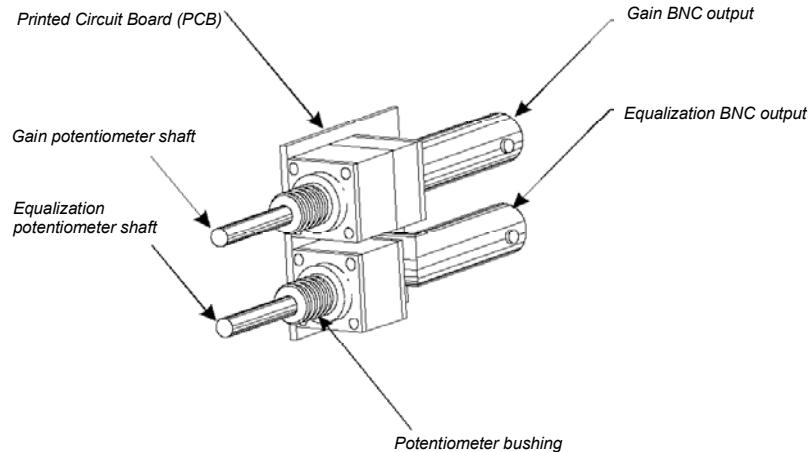


Figure 3. The Control Module PCB

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.

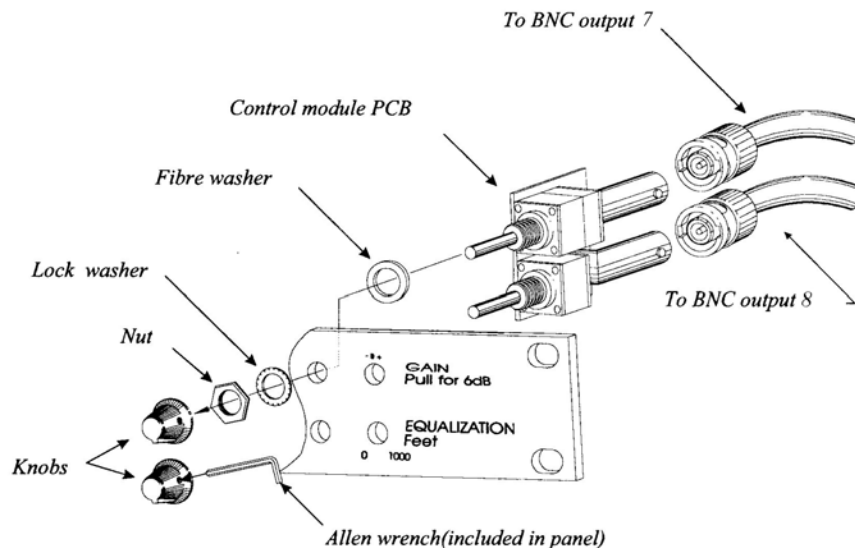


Figure 4. Installing the Control Module

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.

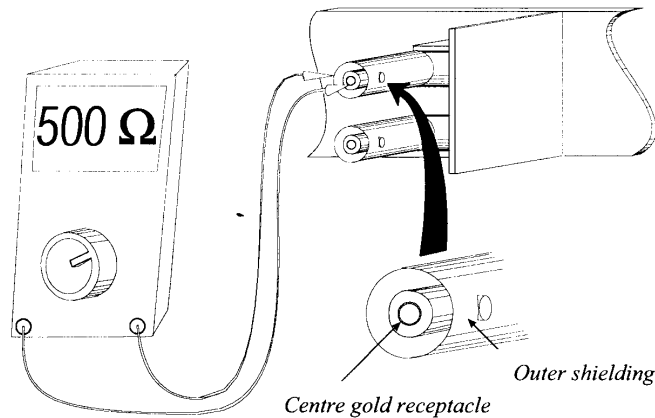


Figure 5. Measuring Resistance Across the Potentiometer

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 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.

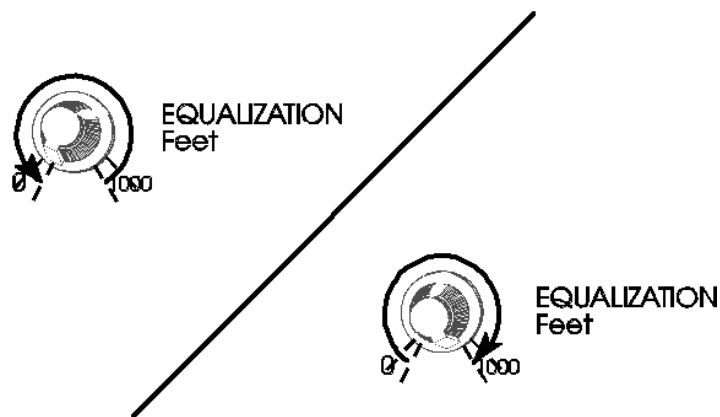


Figure 6. Calibrating the Equalization Potentiometer

Note

As the pot 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.

Board Installation

Use the following steps to install the VTA-7000 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-7000 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.

Cable Connections

The following diagram provides instruction for connecting input and output coax cables to the VTA-7000 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.

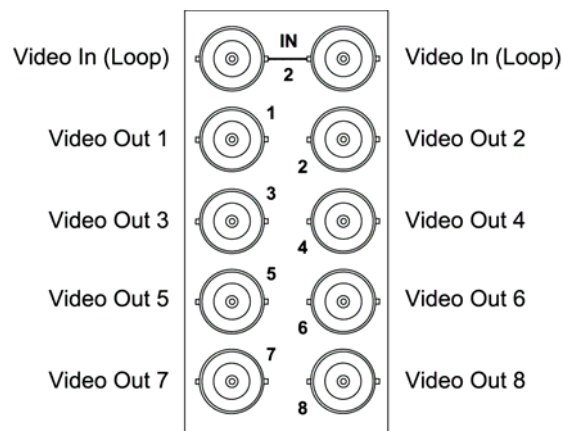


Figure 7. VTA-7000 Cabling Designations for RossGear 7200 and 7850 Series Frames

Gain and Equalization Setting

Use figure 8, the card labeling, and the following discussion to adjust gain and equalization.

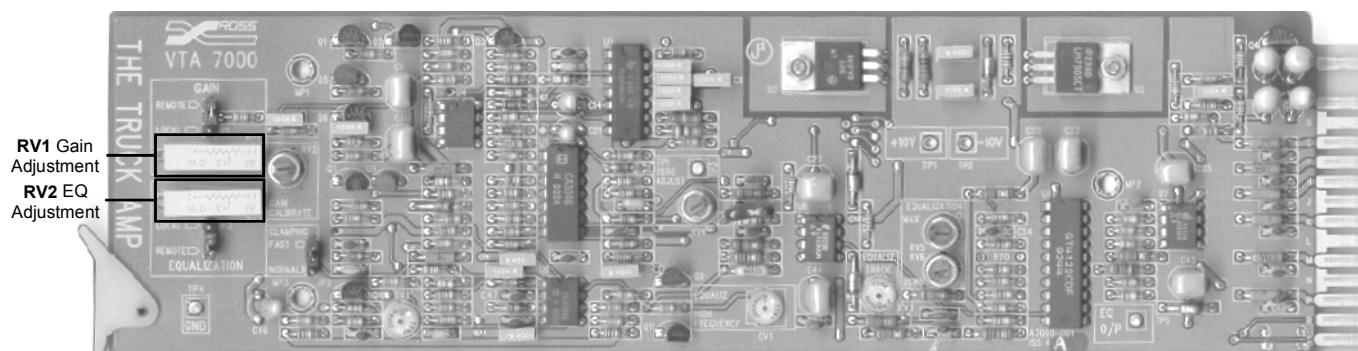


Figure 8. VTA-7000 Jumper Locations

Set **RV1** (Gain) and **RV2** (EQ) 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.

VRP-7000 Gain Settings

Fine adjustment of the gain control on the VRP-7000 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.

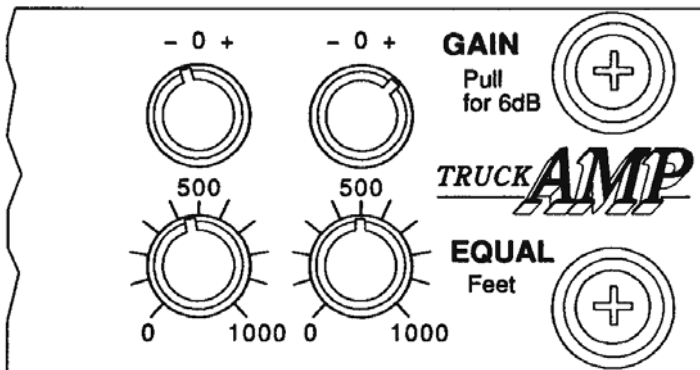


Figure 9. VRP-7000 Gain and Equalization Knobs

VRP-7000 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 bar's 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-7000 Technical Specifications table.

VTA-7000 Technical Specifications

Category	Parameter	Specification
Input	Number of Inputs	1 looped
	Video Input Level	1V p-p
	Input Impedance	75Ω bridging
	Input Return Loss	46dB to 5MHz
	Max DC on Input	± 11V
	Max Common Mode Signal	11V p-p
	Common Mode Rejection	75dB @ 60Hz
Output	Number of Outputs	8
	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
	Bandwidth	-3dB @ 36MHz
	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)	< 0.25°
	RMS Noise 0-5 MHz (unweighted)	67dB
	Chrominance/Luminance Delay	< 2.0ns
	K Rating 1 T	0.4%
Equalization	Response Accuracy	±0.05dB 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	4 W

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-7000, 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. Ross Video Ltd. is committed to providing a superior customer experience; please contact us with any questions you may have about your VTA-7000.

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.**
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-7000 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-7000 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-7000 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-7000 Precision Video Equalizing Amplifier with Clamping 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-7000 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-7000, 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-7000. 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-7000 and related products.

VTA-7000 Video DA and Related Products

Standard Equipment

- **VTA-7000** Precision Video Equalizing Amplifier with Clamping

Optional Equipment

- **7000D-004** Precision Video Equalizing Amplifier with Clamping User Manual (User Manual, provided with every 5 cards purchased)
- **VFR-7214** Video Products Frame and Power Supply (PS-7103) (1 RU, holds 4 modules, includes 1 power supply)
- **VFR-7210** Video Products Frame and Power Supply (PS-7103) (2 RU, holds 10 modules, includes 1 power supply)
- **AVFR-7854C** Analog Products Frame and Power Supply (PS-7103) (1RU, holds 2 audio and 2 video modules, includes 1 power supply)
- **AVFR-7855C** Analog Products Frame and Power Supply (PS-7103) (2RU, holds 5 audio and 5 video modules, includes 1 power supply)
- **PS-7103** Power Supply (85-250 Volts)
- **EXT-7200** Extender Board (module servicing extension)
- **FSB-7110** Frame Support Bracket (module servicing extension)

Your **VTA-7000 Video Equalizing Amplifier** is part of the RossGear family of products. Ross Video Limited offers a full line of RossGear terminal equipment including distribution, conversion, monitoring, synchronizers, encoders, decoders, AES, keyers, control 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

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Visit Us

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- EFD-compliant product information (Engineer Friendly Documentation)



(EFD is a project promoted by SBE to provide a web-based platform for the open sharing of technical specifications between manufacturers and engineers, using an XML formatted set of suggested templates, to make it easier for engineers to find the technical information they need to plan a smooth project. Ross Video Limited is proud to support our broadcast industry engineers by participating in this important initiative.)

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