

**Audio Tray 2RU/10 Module  
Owner's Manual  
AM-7550C**

# **Congratulations!**

You have bought the finest quality product available.

Ross Video Limited is proud to have engineered and manufactured this product. We are confident that you will be equally impressed with the outstanding performance, ease of installation and use, and superior quality.

Enclosed in this data package is information on both frames/trays and power supplies. Data packages are included with the purchase of all distribution products, allowing you to customize your own manual. When received, please add their corresponding data packages to this guide. From the label sheets, peel off the sticky label with the product name and model number, and place on the section divider sheet provided.

Should you have any questions, or require technical assistance on any of our products, our Customer Service Department is always available to help. We are committed to providing the most responsive and professional product support.



## AUDIO TRAY

The design of the mounting tray will more than satisfy the most demanding network considerations. The tray is visually attractive and incorporates advanced ventilation and cooling engineering. The mounting tray holds 10 amplifier modules and two (2) power supplies. Separate power cords are provided for each supply. When operated with two power supplies, there is protection against failure of the power supply module as well as the failure of one AC power source.

The tray door is completely removable to provide convenient access in any rack installation position. Pivot points are provided on the tray near the door bottom to make it easy to install the door. The door is designed to be placed on the pivots and then rotated until the latches click into position.

The tray uses a new, smaller connector block, which has more terminals than previously possible in the space available.

The use of the smaller connector block made it possible to increase the number of amplifier outputs to eight. The availability of eight outputs in turn made it possible to offer a dual four-output Stereo Distribution Amplifier to fit the same tray.

### Features

- ◆ Accommodates 10 audio amplifiers in 2 rack units
- ◆ Individual pluggable audio connectors
- ◆ Rear shelf provides a means of keeping cabling uncluttered and orderly
- ◆ Aluminum construction for increased heat dissipation
- ◆ Removable tray door for accessibility
- ◆ Optional module extender for servicing
- ◆ Power switch and fuse is accessible from front of the rack tray
- ◆ *PowerLock* cord retainer mechanism guards against accidental power loss
- ◆ Universal power supply accommodates all world standards (85 - 250 volts)
- ◆ High capacity power supply is cooler running
- ◆ 5 year transferable warranty
- ◆ Separate power cords for each supply for power redundancy
- ◆ Also accepts GVG\* Audio DA's

GVG\* is a trademark of Tektronix Inc.

## Installation

### 1. Mechanical

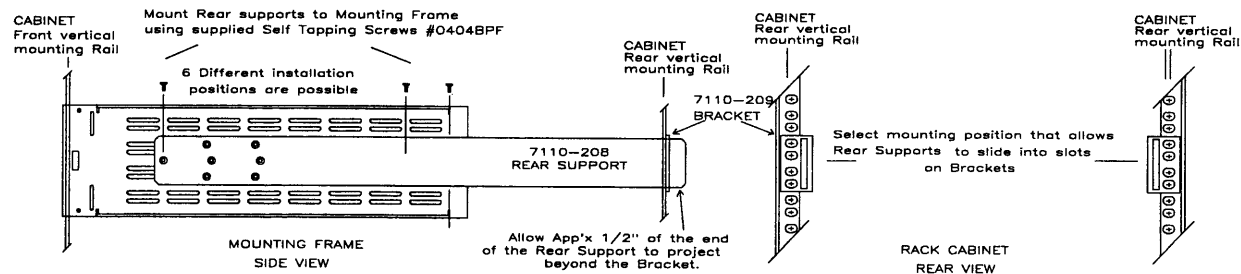
The tray mounts in the rack cabinet by means of four screws through the front mounting flanges. This should normally be sufficient to carry the load, including weight of cables. In some cases, (mobile trucks, etc.) it may be desirable to also support the rear of the tray. Rear support brackets (Ross part # FSB-7110) are available for a nominal cost.

To Install the support brackets (AFR-7550C):

A) The rear support bars can be attached to the Ross tray in six possible positions. See the illustration. Choose the position that suits the cabinet depth and will give approximately a 1/2 inch projection beyond the rear vertical mounting rails. Using four screw per bracket as shown in the illustration, attach both bars.

B) Mount the Ross tray to the front rails of the rack cabinet using rack screws.

C) At the rear of the cabinet, slide the bracket slots over the rear of the support bars and secure to the cabinet rear rails with rack screws.



### 2. Ventilation

This tray has been specially engineered to minimize internal heat buildup and thus improve module reliability. However, for improved air flow, it is best not to stack more than two frames without a blank panel above and below the pair.

### 3. Power Supply PS-7558 and Power Cables

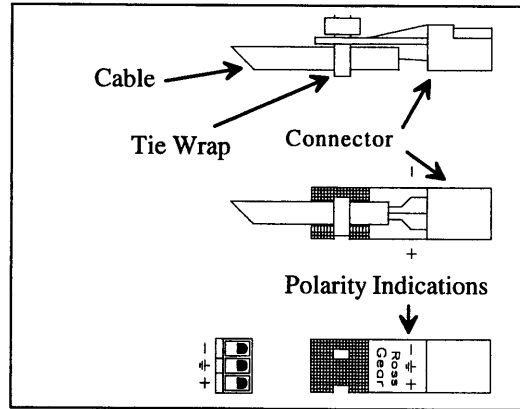
We recommend that two supplies be used in the AFR-7550C tray, if the equipment is used in a critical signal path. Each supply should be connected to a separate power source. This provides "double-redundancy" for protection against failure of the supply or power. Reliability will also be improved because each supply will run at only half load.

Turning the power supply off before inserting or removing it from the tray will ensure long connector life.

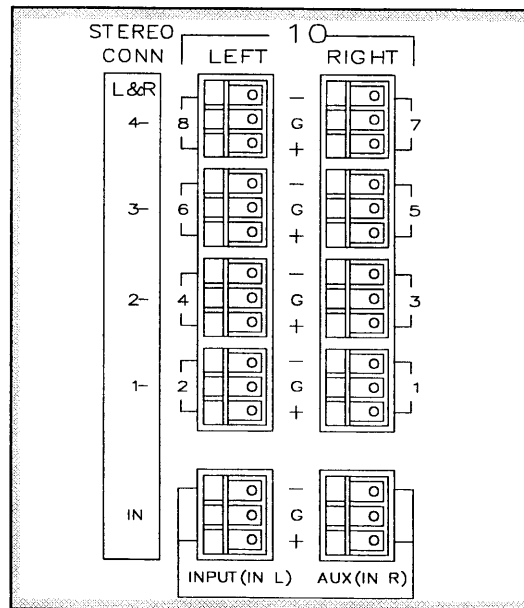
#### 4. Audio Input and Output Cables

The tray uses a new, three-pin, pluggable audio connector. This connector allows each individual audio input and output connection to be wired prior to connection to the frame.

Wire the external cables to the pluggable terminal block connectors as outline in the diagram below. Please note that standard practice dictates cable grounds generally should be connected only to output plugs to avoid ground loop problems.



Once the cables have been wired, install the connectors according to the illustration below. The frame's mating terminals are marked for both the 8-output mono and the 4-output stereo amplifiers.



Finally, this tray includes a rear shelf to support the weight of the audio cables and remove any stress on the wires and connectors. Use tie-wraps as appropriate to secure the cables to the shelf using pairs of the holes provided.

## 5. PCB Designation Label

A PCB Designation Label Sheet with adhesive backing has been inserted inside the back cover of each of the tray binders. Use scissors or a sharp knife to cut out two strips from the page. For all occupied tray slots write the amplifier type, signal source or function and amplifier number if applicable. Peel off the backing paper and stick the label to the tray according to the sketch on the label sheet.

(Please Note - The PCB label insert sheet at the back of the manual information package may be used as a template to be copied, so that you may have a copy on file in the event that the PCB Label insert is lost.)

### Specifications

<b>Power Supplies</b>	Input Voltage 85-250 V, 50/60 Hz
	Input Power 60 VA max.
	Output Voltage $\pm 16.0$ V
	Output Current 1.4 A
	Output power 45 W
	Line Regulation 350 mV change over full input range
	Output ripple < 60 mV pp
<i>For safety reasons, Ross power supplies do not fit into rack frames of other manufacturers.</i>	
<b>Rack Tray Mechanical (AFR-7550C)</b>	Height 3½" (88 mm)
	Width 19" (483 mm)
	Depth 13" (407 mm)
	Weight, average for all amplifiers installed: approx. 12.5 lbs. (5.7 kg)
<b>Environmental</b>	Equipment is designed to operate in ambient temperature ranges from 0° C to 50° C
	Humidity < 95% non-condensing

Specifications are subject to change without notification

## Ordering Information

AFR-7550C	Audio Tray -2 RU, Holds 10 modules (Note: the tray does include one power supply)
PS-7558	Universal Power Supply (85-250 volts)
EXT-7511	Extender Board
FSB-7110	Rear Support Brackets
CRB-7110	Card Retaining Bracket

AFR-7550C Audio Tray 2RU/10 Module

AFR-7550C  
Bill of Materials

AFR-7550C 2R/U 10 CARD D/A AUDIO FRAME PCB Revised: May 19, 1998

7550A-011 Revision: 01

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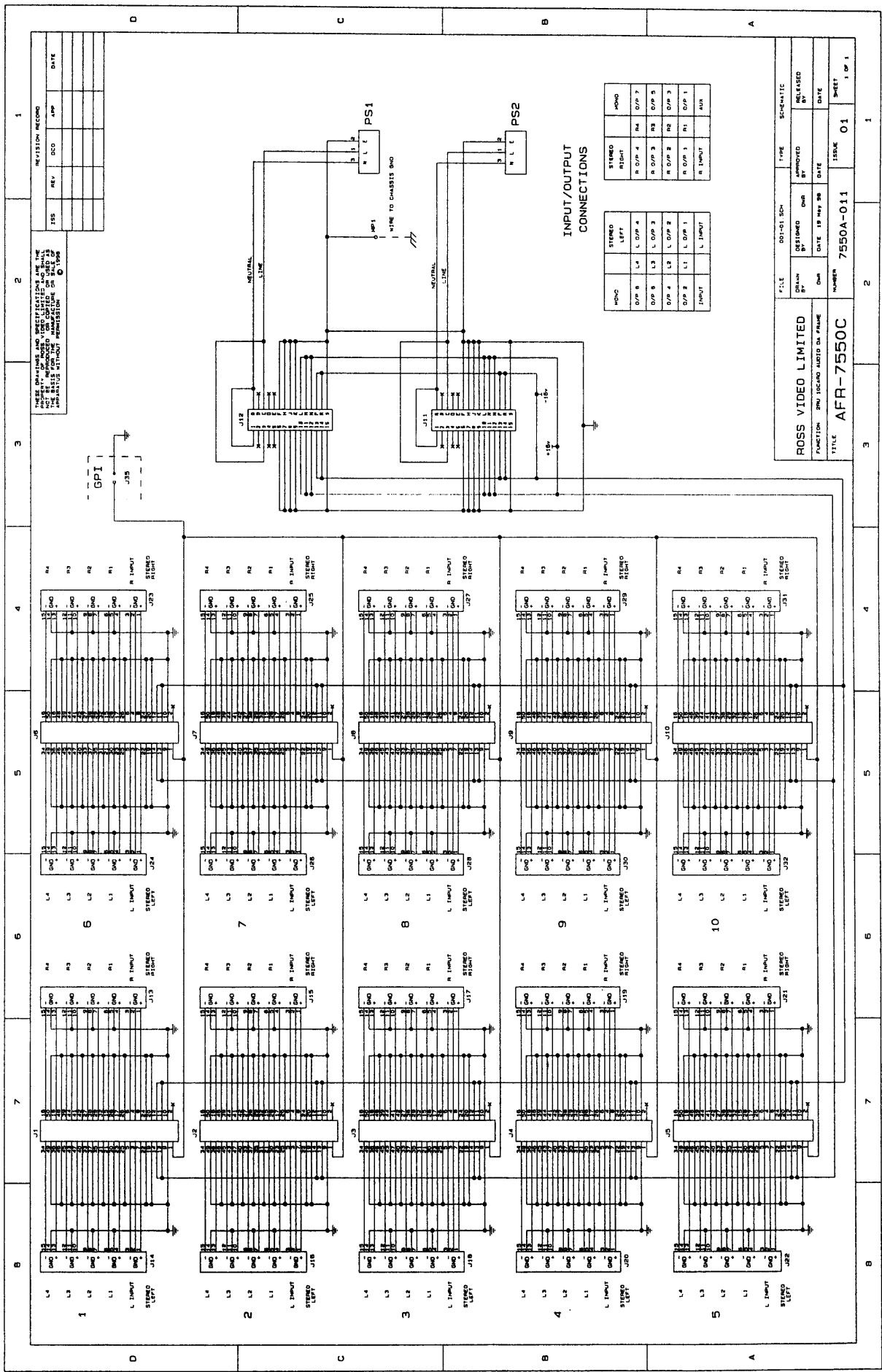
Item	Quantity	Reference	Part	DESCRIPTION	PART NUMBER
1	1	J35	NVCON 2P	NO VALUE, CONN, 2P, 3.5mm, 45DEG, TERM	THL -----
2	1	MP1	NVTP	NO VALUE, TEST POINT	THL -----
3	2	J33, J34	311-023	CONN, 3P, PCB MNT, AC	THL 311-023
4	2	J11, J12	311-032	CONN, 24P, PCB MNT, 30P MOD	THL 311-032
5	10	J1, J2, J3, J4, J5, J6, J7, J8, J9, J10	311-036	CONN, 2X25P, PCB MNT, PRESS FIT	THL 311-036
6	100	J13, J14, J15, J16, J17, J18, J19, J20, J21, J22, J23, J24, J25, J26, J27, J28, J29, J30, J31, J32	311-051	CONN, 3P, 3.5MM, TERM STRIP	THL 311-05
7	1	PCB	7550-011-01	AUDIO 2R/U 10 CARD MOTHER -----	PCB 7550-011-01
8	1	REAR PANEL	7550F-003	AUDIO 2R/U 10 CARD MOTHER ----- R	PNL 7550F-003
9	2	AC CLIP1, AC CLIP2	842-003	RETAINER, LINE/CORD A/C	842-003
10	1	MP1GNDLUG	910-007	TERMINAL, SOLDER LUG #4	910-007
11	4	WASHER1, WASHER2, WASHER3, WASHER4	960-032	WASHER, FIBRE, 1/8ID, 5/16OD, 1/16T	960-032
12	1	MP1WIRE	970-017	WIRE, 18AWG, STRANDED CSA	970-017

AFR-7550C MOUNTING FRAME ASSEMBLY Revised: May 19, 1999

7550A-110 Revision: 01

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Item	Quantity	Reference	Part	DESCRIPTION	PART NUMBER
1	2	O13, O14	312-063	LATCH, SLIDE	312-063
2	4	O15, O16, O17, O18	398-006	GUIDE, PCB, 9" (GLUE TYPE)	398-006
3	24	O19, O20, O21, O22, O23, O24, O25, O26, O27, O28, O29, O30, O31, O32, O33, O34, O35, O36, O37, O38, O39, O40, O41, O42	398-008	GUIDE, PCB, 9" (GLUE TYPE)	398-008
4	2	O43, O44	466-017	LENS, REFLECTIVE, CLEAR	466-017
5	1	O45	613-016-01	LABEL, SERIAL#	613-016-01
6	2	O46, O47	650-005	NUT, HEX, KEPS, 4-40	650-005
7	2	O1, O2	7110-201-03	SIDE, CHASSIS, 2RU	7110-201-03
8	1	O3	7110-202-03	DOOR, CHASSIS, 2RU	7110-202-03
9	1	O4	7110-203-05	TOP, CHASSIS, 2RU	7110-203-05
10	1	O7	7110-210-01	SPACER, CHASSIS, 2RU	7110-210-01
11	1	O8	7114-186-01	LABEL, WARNING	7114-186-01
12	1	O10	7550A-011-01	2R/U 10 CARD MOTHER ----- PCB ASY	7550A-011-01
13	1	O11	7550-084-01	LABEL, POWER SUPPLY TYPE (BLACK)	7550-084-01
14	1	O5	7812-204-04	BOTTOM, CHASSIS, 2RU	7812-204-04
15	2	O95, O6	8110-206-04	SHIELD PLATE, CHASSIS. 2RU	8110-206-04
16	1	O48	850-008	SCREW, 4-40, 3/8, FLAT	850-008
17	26	O49, O51, O52, O53, O54, O55, O56, O57, O58, O59, O60, O61, O62, O63, O64, O65, O66, O67, O68, O69, O70, O71, O72, O73, O74, O75	850-038	SCREW, 4-40, S/S, U-CUT	850-038
18	20	O50, O76, O77, O78, O79, O80, O81, O82, O83, O84, O85, O86, O87, O88, O89, O90, O91, O92, O93, O94	957-003	TAPE, ADHESIVE, 3M/4920	957-003



**INPUT/OUTPUT CONNECTIONS**

MONO	STEREO LEFT	STEREO RIGHT
R D/P 4	L D/P 4	R D/P 4
R D/P 3	L D/P 3	R D/P 3
R D/P 2	L D/P 2	R D/P 2
R D/P 1	L D/P 1	R D/P 1
R INPUT	L INPUT	R INPUT

**REVISION RECORD**

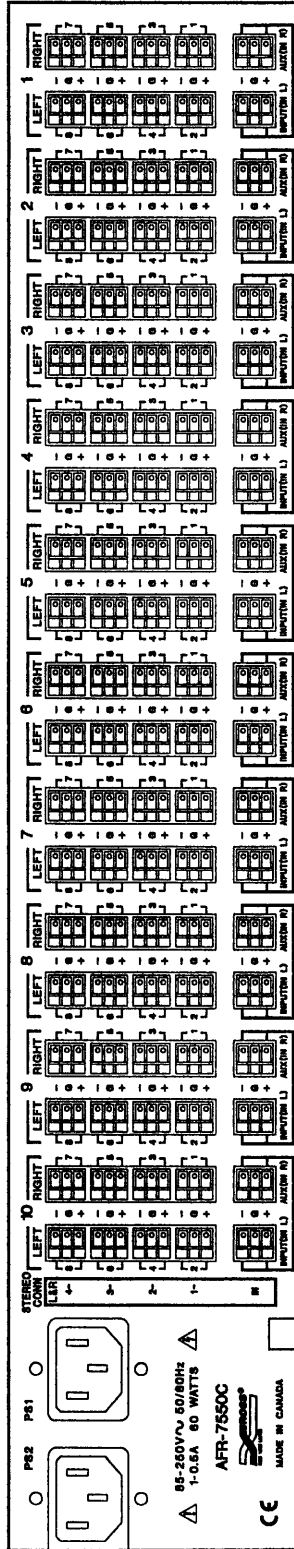
ISS	REV	DCD	APP	DATE

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 FUNCTION: STEREO VIDEO DA. NAME: AFR-7550C  
 FILE: 00-01 SCH. TYPE: SCHEMATIC  
 DESIGNED BY: DATE: APPROVED BY: DATE: RELEASED BY: DATE:  
 TITLE: AFR-7550C NUMBER: 7550A-011 ISSUE: 01 SHEET: 1 OF 1




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DESIGNED BY		B. V. R.		APPROVED BY		J. V. R.	
DATE		19 May 79		DATE			
FUNCTION		AFR-7550C		DRAWN BY		CAM	
TITLE		LAYOUT ASSEMBLY		PART NO.		7550-011	
				ISSUE		01	
				SHEET		1 of 1	



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Ross Video Limited  
8 John Street  
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