



User's Manual

Seneca DA-104 / 208

Revision 1.0.0
(May, 2012)

WARNING

Do not attempt to disassemble your Seneca DA-104 / 208. Doing so may void your warranty. There are no serviceable parts inside. Please refer all servicing to qualified personnel.

TRADEMARKS

All brand and product names are trademarks or registered trademarks of their respective companies.

COPYRIGHT

The information in this manual is subject to change without prior notice. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical for any purpose, without the express written permission of Avitech International Corporation. Avitech International Corporation may have patents, patent applications, trademarks, copyrights or other intellectual property rights covering the subject matter in this document. Except as expressly written by Avitech International Corporation, the furnishing of this document does not give you any license to patents, trademarks, copyrights or other intellectual property of Avitech International Corporation or any of its affiliates.

TECHNICAL SUPPORT

If you have any questions regarding the information provided in this guide, call our technical support help line at 425-885-3863, or our toll free help line at 1-877-AVI-TECH. You can also email us at support@avitechvideo.com



Warranty

Avitech International Corporation (herein after referred to as “Avitech”) warrants to the original purchaser of the products manufactured in its facility (the “Product”), that these products will be free from defects in material and workmanship for a period of one (1) year or fifteen (15) months from the date of shipment of the Product to the purchaser. There is a three (3) month grace period between shipping and installation.

If the Product proves to be defective during the one (1) year warranty period, the purchaser’s exclusive remedy and Avitech’s sole obligation under this warranty is expressly limited, at Avitech’s sole option, to:

- (a) repairing the defective Product without charge for parts and labor; or
- (b) providing a replacement in exchange for the defective Product; or
- (c) if after a reasonable time is unable to correct the defect or provide a replacement Product in good working order, then the purchaser shall be entitled to recover damages subject to the limitation of liability set forth below.

LIMITATION OF LIABILITY: AVITECH’S LIABILITY UNDER THIS WARRANTY SHALL NOT EXCEED THE PURCHASE PRICE PAID FOR THE DEFECTIVE PRODUCT. IN NO EVENT SHALL AVITECH BE LIABLE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOSS OF PROFITS FOR ANY BREACH OF THIS WARRANTY.

If Avitech replaces the defective Product with a replacement Product as provided under the terms of this Warranty, in no event will the term of the warranty on the replacement Product exceed the number of months remaining on the warranty covering the defective Product. Equipment manufactured by other suppliers and supplied by Avitech carries the respective manufacturer’s warranty. Avitech assumes no warranty responsibility either expressed or implied for equipment manufactured by others and supplied by Avitech.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED.

This Hardware Warranty shall not apply to any defect, failure, or damage:

- (a) caused by improper use of the Product or inadequate maintenance and care of the Product;
- (b) resulting from attempts by other than Avitech representatives to install, repair, or service the Product;
- (c) caused by installation of the Product in a hostile operating environment or connection of the Product to incompatible equipment; or
- (d) caused by the modification of the Product or integration with other products when the effect of such modification or integration increases the time or difficulties of servicing the Product.

Any Product which fails under conditions other than those specifically covered by the Hardware Warranty, will be repaired at the price of parts and labor in effect at the time of repair. Such repairs are warranted for a period of ninety (90) days from date of reshipment to customer.

Extended Warranty Options

Avitech offers OPTIONAL Extended Warranty plans that provide continuous coverage for the Product after the expiration of the Warranty Period. Contact an Avitech sales representative for details on the options that are available for your Avitech equipment.

Services and Repairs Outside the Warranty Period

Avitech makes its best offer to repair a product that is outside the warranty period, provided the product has not reached its end of life (EOL). The minimum charge for such repair excluding shipping and handling is \$200 (US dollars).



Regulatory Information

NOTE: Marking labels located on the exterior of your device indicate the regulations that your model complies with. Please check the marking labels on your device and refer to the corresponding statements in this chapter. Some notices apply to specific models only.

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B 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 the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Avitech is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Union CE Marking and Compliance Notices

Statements of Compliance

English

This product follows the provisions of the European Directive 1999/5/EC.

Dansk (Danish)

Dette produkt er i overensstemmelse med det europæiske direktiv 1999/5/EC.

Nederlands (Dutch)

Dit product is in navolging van de bepalingen van Europees Directief 1999/5/EC.

Suomi (Finnish)

Tämä tuote noudattaa EU-direktiivin 1999/5/EC määräyksiä.

Français (French)

Ce produit est conforme aux exigences de la Directive Européenne 1999/5/EC.

Deutsch (German)

Dieses Produkt entspricht den Bestimmungen der Europäischen Richtlinie 1999/5/EC.

Ελληνικά (Greek)

Το προϊόν αυτό πληροί τις προβλέψεις της Ευρωπαϊκής Οδηγίας 1999/5/EC.

Íslenska (Icelandic)

Þessi vara stent reglugerð Evrópska Efnahags Bandalagsins númer 1999/5/EC.

Italiano (Italian)

Questo prodotto è conforme alla Direttiva Europea 1999/5/EC.

Norsk (Norwegian)

Dette produktet er i henhold til bestemmelsene i det europeiske direktivet 1999/5/EC.

Português (Portuguese)

Este produto cumpre com as normas da Diretiva Europeia 1999/5/EC.

Español (Spanish)

Este producto cumple con las normas del Directivo Europeo 1999/5/EC.

Svenska (Swedish)

Denna produkt har tillverkats i enlighet med EG-direktiv 1999/5/EC.

Australia and New Zealand C-Tick Marking and Compliance Notice

Statement of Compliance

This product complies with Australia and New Zealand's standards for radio interference.



Preface

Welcome

Congratulations on purchasing this Avitech Seneca DA-104 / 208 3G / HD / SD-SDI re-clocking distribution amplifier.

The new Avitech family of Seneca distribution amplifiers gives you the confidence of absolute compatibility with existing Avitech products while providing the capability of integration within a larger installation. Seneca distribution amplifiers are a simple, robust and cost-effective way of organizing and working with multiple video formats. Seneca distribution amplifiers are a powerful supplement to Avitech multiviewers.

About this Manual

This manual contains comprehensive information about your Avitech Seneca DA-104 / 208 re-clocking distribution amplifier to help you operate the device.

Throughout the manual the following conventions are used to distinguish elements of text.

NOTE: provides additional hints or information that requires special attention.

CAUTION: identifies important information which, if not followed, may result in loss of data or damage to your device.

Any name of a menu, command, icon or button that you can see on the screen is shown in a bold typeset. For example:

On the **Start** menu select **Settings**.

A

Getting Started

The Seneca DA-104 / 208 is a miniature, low-cost $1 \times 4 / 2 \times 8$ 3G, HD, and SD-SDI re-clocking distribution amplifier. Featuring four / eight separately buffered SDI outputs, the Seneca DA-104 / 208 provides automatic input detection, re-clocking and cable equalization.

This chapter introduces you to the features and specifications as well as the external components of your Avitech Seneca DA-104 / 208. It also guides you through the process of setting up your Seneca for use.

NOTE: Depending on the model you purchased the cabinet color and the look of the accessories may be different from the ones shown in this manual.

A.1 Package Contents

After unpacking the shipping carton you should find these standard items:



Avitech Seneca DA-104 / 208



5 V DC Power Adapter



USA-to-Euro adapter plug (optional)



USA-to-Australia adapter plug (optional)



Magnetic Foot Stand with Screws (4 pieces)

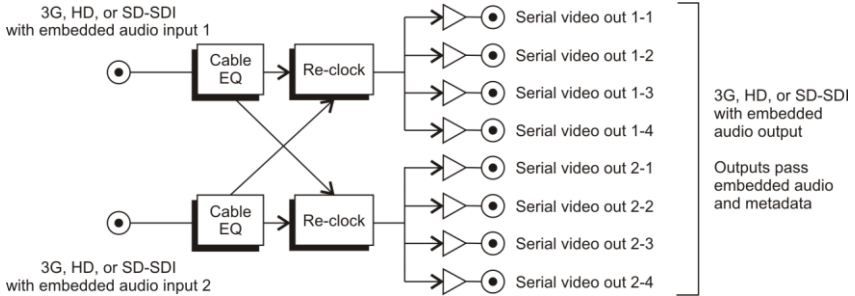
A.2 Product Features

- SD-SDI / HD / 3G distribution
- Four / eight separately buffered outputs
- Small form factor
- 100 meter 3G cable equalization (1694a coax)
- 3G, HD, or SD-SDI input, auto-sensing
- Transmits all ancillary data
- +5 V DC power supply (power supply sold separately)

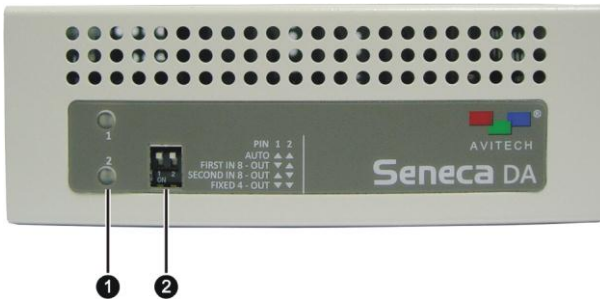
Specifications

Parts		Specifications
Input		1 or 2 3G, HD, SD-SDI (SMPTE 259 / 292 / 296 / 424) 1 × BNC (Seneca DA-104), or 2 × BNC (Seneca DA-208)
Format		3 GB, 1.5 GB, 270 MB automatic select
Output		3G, HD, SD-SDI 4 × BNC (Seneca DA-104), or 8 × BNC (Seneca DA-208) Equalizing and re-clocking
Cable equalization		270 MB, 400 m 1.5 GB, 200 m 3 GB, 100 m (1694a coax)
Power supply		+5 V DC
Power consumption		4.5 watt (maximum)
Dimension (L×W×H)		104×110×40 mm (4.1×4.3×1.6 inch) NOTE: Does not include the BNC connector portion.
Weight		340 gram (0.7496 lb)
Environment	Temperature	Operating: 0 °C (32 °F) to 40 °C (104 °F) Storage: -10 °C (-4 °F) to 50 °C (122 °F)
	Humidity	0 % to 80 % relative, non-condensing
Safety regulations		FCC / CE / C-Tick / Class B
Accessories		5 V DC power adapter 4 × magnetic foot stands with corresponding screws

A.3 Block Diagram

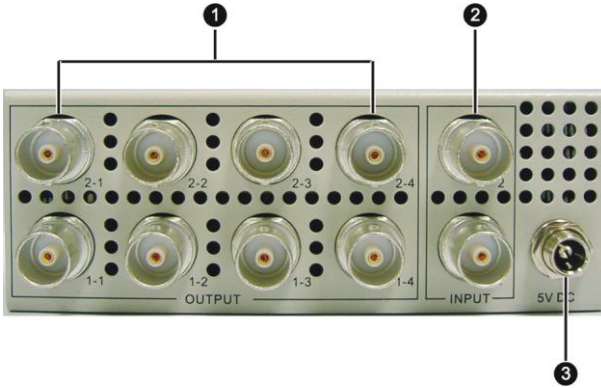


A.4 Identifying the Front Components



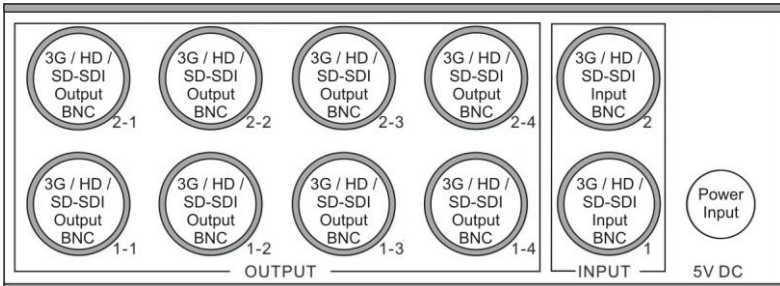
Ref	Component	Description	
1	Device indicators	Shows the current status of the Sequoia devices.	
		1 (lower)	Glows amber when no signal is present in the INPUT 1 connector (Standby state).
			Glows green when signal is present in INPUT 1 connector.
		2 (upper)	Glows amber when no signal is present in the INPUT 2 connector (Standby state).
		Glows green when signal is present in INPUT 2 connector.	
		NOTE: Device indicator 2 will not glow for Seneca DA-104 model.	
2	Dip switches	Sets the video routing configuration.	

A.5 Identifying the Rear Components



Ref	Label / Component	Description
1	OUTPUT 1-1 / 1-2 / 1-3 / 1-4 / 2-1 / 2-2 / 2-3 / 2-4 connectors	BNC connectors support 3G / HD / SD-SDI signal for long distance output to monitor display. NOTE: BNC connectors 2-1, 2-2, 2-3, and 2-4 are not available for Seneca DA-104 model.
2	INPUT 1 / 2	BNC connector for 3G / HD / SD-SDI video input sources. NOTE: BNC connector 2 is not available for Seneca DA-104 model.
3	Power connector	Connects to the power adapter.

A.6 Input / Output Connectors (Rear Panel)



A.7 Application Diagram

The following figure shows a sample rear connection diagram for the Seneca DA-208.



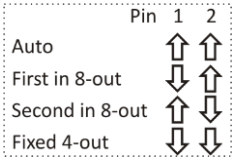
A.8 Getting Your Seneca Ready for Use

Typically, the Seneca DA-104 / 208 installation consists of the following:

1. Connect video equipment to the BNC connector(s).
2. Apply +5 V DC power to the Seneca.
3. For DA-208 only
Use the following dip switch settings to effect the following video routing configuration –

IMPORTANT: Step 3 is not applicable for Seneca DA-104. Setting the pin-2 dip switch to ON (↓) while pin-1 dip switch is OFF (↑) would cause no video output.

Video Routing	Dip Switch Pin Position	
	Pin 1	Pin 2
Automatic routing	OFF (↑)	OFF (↑)
First input to eight (8) outputs	ON (↓)	OFF (↑)
Second input to eight (8) outputs	OFF (↑)	ON (↓)
Fixed one (1) input to four (4) outputs	ON (↓)	ON (↓)



- For automatic video routing, both pin 1 and pin 2 must be in the default position (OFF, OFF).

Possible scenarios:

If only **INPUT 1** port has input signal, then its signal will output to **OUTPUT 1-1, 1-2, 1-3, 1-4** ports only.

If only **INPUT 2** port has input signal, then its signal will output to **OUTPUT 2-1, 2-2, 2-3, 2-4** ports only.

If both **INPUT 1** and **INPUT 2** ports has input signal, then **INPUT 1**'s signal will output to **OUTPUT 1-1, 1-2, 1-3, 1-4** ports and; **INPUT 2**'s signal will output to **OUTPUT 2-1, 2-2, 2-3, 2-4** ports.

- To allow the **INPUT 1** signal to output to all the eight (8) output ports (**OUTPUT 1-1, 1-2, 1-3, 1-4, 2-1, 2-2, 2-3, 2-4**), then pin 1 must be ON and pin 2 must be OFF.
- To allow the **INPUT 2** signal to output to all the eight (8) output ports (**OUTPUT 1-1, 1-2, 1-3, 1-4, 2-1, 2-2, 2-3, 2-4**), then pin 1 must be OFF and pin 2 must be ON.
- For the fixed one (1) input to four (4) outputs (**INPUT 1** to **OUTPUT 1-1, 1-2, 1-3, 1-4** and **INPUT 2** to **OUTPUT 2-1, 2-2, 2-3, 2-4**) configuration, both pin 1 and pin 2 must be ON (ON, ON).