

8920MUX

AUDIO/VIDEO MULTIPLEXER MODULE

Release Notes

SOFTWARE VERSION 4.2.0

071809105
APRIL 2004

the most watched worldwide

Contacting Grass Valley

Region	Voice	Fax	Address	Web Site
North America	(800) 547-8949 Support: 530-478-4148	Sales: (530) 478-3347 Support: (530) 478-3181	Grass Valley P.O. Box 599000 Nevada City, CA 95959-7900 USA	www.thomsongrassvalley.com
Pacific Operations	+852-2585-6688 Support: 852-2585-6579	+852-2802-2996		
U.K., Asia, Middle East	+44 1753 218 777	+44 1753 218 757		
France	+33 1 45 29 73 00			
Germany, Europe	+49 6150 104 782	+49 6150 104 223		

Copyright © Thomson Broadcast and Media Solutions All rights reserved.

Grass Valley Web Site

The www.thomsongrassvalley.com web site offers the following:

Online User Documentation — Current versions of product catalogs, brochures, data sheets, ordering guides, planning guides, manuals, and release notes in .pdf format can be downloaded.

FAQ Database — Solutions to problems and troubleshooting efforts can be found by searching our Frequently Asked Questions (FAQ) database.

Software Downloads — Software updates, drivers, and patches can be downloaded.

Version **4.2.0**

8920MUX Release Notes

This document provides information on the latest software release for the 8920MUX Video/Audio Multiplexer module. Read this document completely before attempting to upgrade to the latest software.

CAUTION These notes contain critical information concerning the download process. Do not update software without completely reading [Software Updating on page 9](#).

This documents details:

- 8900NET Software Requirement,
- Version 4.2.0 Software features and operation,
- System and 8900NET requirements,
- Hardware modifications required (Field Modification Notes),
- Previous version 4.0 and later software release overviews,
- Software updating information for the 8900NET and 8920MUX, and
- Accessing reference documentation.

8900NET Software Requirement

This release of 8920MUX version 4.2.0 software requires that the software running on the 8900NET module in the Gecko 8900 frame be at least version 3.2.0 or later. 8900NET software upgrades can be obtained on the Grass Valley web site, free of charge. Refer to [8900NET Software on page 9](#).

Version 4.2.0 Software Release

The version 4.2.0 (and interim version 4.1.0) software release offers the following enhancements and improvements for 8920MUX operation:

- Module now supports Newton Control Panel interface (with 8900NET module in frame running version 3.2.0 software or later).
- Intermittent muting problem in multiplexed audio has been resolved.
- Occasional audio lock up producing silent output has been resolved.
- Interaction between AES inputs in asynchronous mode is reduced when one input is removed.
- Resolved audio mux latch up condition (no mux) when an AES audio input was physically removed.
- Feed forward EDH bits are now set to 0 resolving dropping of audio on embedded feeds to some types of devices (DVCPro machines).
- AES channel input status bits are now passed in synchronous AES mode and corrected to default values (Professional/No emphasis/48 kHz sample rate/20 or 24 bit resolution follows web page) in sync matrix and asynchronous AES mode to prevent random status bits from occurring.
- A condition where Async AES mode would create a one sample phase difference between channels on an AES stream when an Async input was present was resolved.
- Auto Save, Configuration Save, and Recall/Save User Settings operation has been improved for all signal conditions (valid/not valid).
- Audio matrix selections made in Matrix mode will now be saved in Recall/Save settings function.
- Slot memory now applies the correct configuration to the module.
- The user interface was improved for consistency between local on-board controls and web page and Newton Control Panel remote controls.

Complete operating instructions for this version of software are provided in the *8920MUX Instruction Manual* (071-8037-04) available in hard copy or on-line in PDF format on the Grass Valley web site.

Known Software Issues

Any existing software or operating issues or defects still present in this release are reported in [Table 1](#).

Table 1. Known Software and Operating Issues

Area	Issue	ID
Embedded Audio	When trying to embed an audio group into video with a gap between EAV and ADF, the group will be dropped. The new group will go after the old group but Group 1 will be deleted. This type of non-standard video ANC data does not comply with SMPTE standards and will not work correctly on this module.	42704
Input Sample Rates	Input sample rates of 44.1 k will be reported by the module as 48 k. This module should only be used with 48 kHz sample rates in Professional mode.	43152

System Requirements

For remote control and monitoring capability, the module must be installed in a 8900TFN frame equipped with an 8900NET module. 8900TX frames must be upgraded to a TFN version (with fans) to utilize the 8900NET module. For more information on 8900 frames and the 8900NET module refer to the following reference documents:

- 8900NET Network Interface Instruction Manual
- 8900 Frames Instruction Manual

8900NET Software

For correct operation and full functionality of the 8920MUX module (new features and Newton Control Panel and NetConfig) version 3.2.0 or later must be running on the 8900NET module in the Gecko 8900 frame. Refer to [8900NET Software on page 9](#).

Hardware Modifications

Hardware modifications may be necessary on some versions of the module to enable updating or to be compatible with the latest software. Modification instructions are given in the form of Field Modification Notes (FMN) available on-line or in hard copy from Grass Valley (see [Accessing Reference Documents](#) on page 10).

To determine the assembly number and version of the module, locate the 671-6290-XX silkscreen at the top edge of the component side of the circuit board. Note the inked dash and letter version in the adjacent box to the right (-00L1 for example).

Refer to [Table 2](#) below for an overview of the module assembly number versions and any necessary modifications.

Table 2. Hardware Modifications

Assembly Number	Field Modification Note	Comments
671-6290-00	N/A	Not upgradeable. Contact Customer Service.
671-6290-01 L1 and earlier	075071800	Modification includes a trace cut and jumper wire to fix a lock-up condition when video is removed then reapplied to the module.
671-6290-01 R1 and earlier	075074600	Modification includes replacing surface mount components on circuit board to correct phase locked loop jitter condition.
671-6290-01 U3 and earlier	075075400	Modification includes removal of a capacitor tack-on (if present) and removal and replacement of surface mount resistors.

Previous Version 4.0 Software Releases

To identify the software version you are running, refer to the Status page on the remote control web display. (Modules running version 1.0 will not report the software version in the Status display.) The latest software release will also include the updates from earlier software versions described in this section.

CAUTION Software versions 3.0.1A or later can not be loaded on -00 versions of the 8920MUX module. Only -01 or later version of the module will accept this upgrade.

Version 4.1.0 Software Release

Software version 4.1.0 was an interim release from the factory. Details about this release are included in the version 4.2.0 description.

Version 4.0.2 Software Release

The version 4.0.2 software update for the 8920MUX is intended for modules with assembly number 671-6290-01, letter version L and earlier. Modules with a letter version of -01M or later have already been updated with this version software.

This software release corrects a lock-up condition on the 8920MUX module when the video input is removed then reapplied. A hardware modification is also necessary on the module in addition to the software update. Refer to [Table 2 on page 6](#) for details.

Version 4.0.1A Software Release



The following features were provided in the version 4.0.1A software.

- An operation mode was added to provide switching of the audio channel components of the input AES audio group before insertion into the Serial Digital (SD) stream. This mode can be selected using the on-board switch (Switch D – Bank 1) or the remote control GUI ([Figure 1 on page 8](#)).

In this mode, the user can use the remote control GUI to select any combination of the four input audio channels contained in one AES group, for insertion in the SD stream.

Note In Sync Matrix mode, Delete and Replace functions are not available. The incoming signal must already have space available in the ancillary data for the AES audio group insertion.

Figure 1. Audio Matrix Display

 **Audio Matrix** 

Model: [8920MUX](#) Description: [SDI/AES Multiplexer](#)
Frame Location: [Bay 9 - QA Frame](#) , Slot: 10

	Output:	Output:	Output:	Output:
	AES1 A:	AES1 B:	AES2 A:	AES2 B:
Input AES1 A:	---X---	---0---	---0---	---0---
Input AES1 B:	---0---	---X---	---0---	---0---
Input AES2 A:	---0---	---0---	---X---	---0---
Input AES2 B:	---0---	---0---	---0---	---X---

	selection	current setting
AES1A Out:	<input type="button" value="AES1A"/>	AES1A
AES1B Out:	<input type="button" value="AES1B"/>	AES1B
AES2A Out:	<input type="button" value="AES2A"/>	AES2A
AES2B Out:	<input type="button" value="AES2B"/>	AES2B

AES1A
AES1B
AES2A
AES2B

Software Updating

8900NET Software

The 8900NET module in the frame must be updated to version 3.2.0 or later for proper operation of the 8920MUX module and interface to the Newton Control Panel and the NetConfig Network Configuration application.

The latest version of 8900NET software is available from the Grass Valley web site free of charge.

To access the software upgrade, do the following:

1. Go to www.thomsomgrassvalley.com.
2. Click on the Support link and select Parts/Software.
3. Select the Software Search and Download Tool link.
4. Click on Modular Products and find the 8900NET Network Interface Module.
5. Select the 8900NET link and find the download file for the 8900NET version 3.2.0 or later.
6. Follow the instructions given in the ReadMe file and in the 8900NET Instruction Manual available on the web site in PDF format. Refer to [Accessing Reference Documents on page 10](#).

8920MUX Software

Currently, the only recommended method of software updating is done with a software kit (8900-FLOAD-CBL) that includes a CD-ROM with the current software files and a serial cable assembly available from Grass Valley.

Refer to the *8900-FLOAD-CBL Software Upgrade Instruction Manual* in pdf format on the CD-ROM for complete updating instructions and the required software files for the 8920MUX.

Note that components required for hardware modifications in the Field Modification Notes must be ordered from Grass Valley Customer Service using the Field Modification number.

Accessing Reference Documents

For on-line access to any of the reference documents referred to in these Release Notes, navigate to the following URL:

<http://www.thomsongrassvalley.com/docs>

Select the **Modular Products** link and scroll through the available documents. All of the documents referred to may also be ordered in hard copy from any Grass Valley Sales or Customer Service source. Refer to *Contacting Grass Valley* at the front of this document.