



TECH NOTE

Super Edit™ Version 8.3B and later

Grass Valley M2100 Digital Master Control Switcher

This document covers Super Edit features and parameters pertaining to the Grass Valley M2100 Master Control Digital Switcher used in a production environment. Please consult the Super Edit operations manual for more detailed information on Super Edit functions and the Grass Valley M2100 Switcher Operations manual for more detailed information on the switcher.

Super Edit can be configured with the M2100 as the Video Switcher and any other supported Audio Mixer for audio. Super Edit can alternatively be configured for Audio-Follow-Video (AFV) operation using the M2100 as both the Video and Audio Switchers.

AUX-Bus preview is supported for both Video-only and AFV configurations. For all AFV configurations, since the M2100 AUX-bus does not support Audio-Video Breakaway, previews of Split Edits will not switch at the split point. The recording, however, will be correct.

Interface

Switcher-To-Editor Connections

The Editor controls the M2100 Switcher through a serial RS422 cable with a 9-pin D connector from the VIDEO CTL Port on the rear of the Editor to the Automation port on the back of the switcher electronics Frame Control Module (FCM). The editor controls the M2100 through the automation interface.

The M2100 default parity is NONE. This should be changed using the M2100 configuration program to match the Super Edit default parity of ODD . The other defaults (38.4 Kbaud, 8 bits, 1 stop bit) are correct.

Switcher Setup For Editor Control

Editor Enable/Disable

On the switcher panel (MCP), in the Multi-channel Subpanel, ensure that the yellow Automation Enable button is lit. If the M2100 is not equipped with the Multi-channel Subpanel, automation should always be enabled. When the button is lit, editor control of the

M2100 Switcher is enabled. Once enabled, press **[SHIFT][RESET]** on the editor keyboard to establish communications with the switcher.

Switcher Enable/Disable

Crosspoint control of the M2100 Switcher from Super Edit can be enabled or disabled by pressing **[ALT][VIDEO]** at the editor. While crosspoint control is disabled, PEGS commands to the switcher are still enabled. When crosspoint control is disabled, VSWR-OFF is displayed on the status line of the edit screen.

Crosspoint Assignment

The M2100 Switcher begins crosspoint assignments with **one (1)**.

Since the Fade-To-Black functionality is *not* available to the editor via the automation protocol, digital black (and digital silence if AFV configuration) will need to be supplied in order to be able to select Black/Silent as a source and for BVB and VBV previews. This Black/Silent is usually assigned to the first crosspoint, crosspoint 1.

NOTE: The “audio only” crosspoints 16 through 19 are not supported even in the AFV configuration.

Transition, Memory, and GPI Trigger Delay Adjustments

The following INIT items in Super Edit are pre-set, and should not require changing. Should the need arise, Transition Delay Adjustments for the M2100 Switcher are made in the following Super Edit INIT page items, and are stored with a configuration file when created:

Transition Start =	INIT # 64
GPI =	INIT # 66

Editor/Switcher Control Operations

[SHIFT][RESET – [ALLSTOP] Sequence

The ALLSTOP Sequence is a string of commands sent to wake up the M2100 Switcher and/or put it into a fixed known state. This occurs with a **[SHIFT][RESET]**, anytime **[ALLSTOP]** is pressed at the end of an edit, and after completion of data initialization through the INIT Pages or Configuration dialogs. Depending on previous conditions, the result of sending this string of commands select background as the transition mode and the Mix pushbutton as the transition type. Any keys on-air are taken off-air.

AUX Bus / Preview Switcher / E-E Previewing

Editor - AUX Bus Selection

There are 4 AUX Buses available for use as a preview switcher. Selection is made through INIT # 73 of the editor. Choices are as follows:

- 0 = Disable previewing on the AUX Bus and enable default preview mode (E-E or Performer / 8465 / 8466 previewing)
- 1-4 = AUX Bus to be controlled

Editor – R-VTR Selection

Assigning the desired R-VTR crosspoint in the Super Edit Assignment Page, selects the R-VTR crosspoint to be used during AUX BUS previewing.

Editor – Switcher Program Selection

AUX-bus preview on the M2100 requires that the program (or clean-feed if it is desired to not show the keys) be externally routed to an input so the AUX-bus can select it. Select this crosspoint through INIT # 74 of the editor.

AUX Bus & E-E / GV Performer / 8465-8466 Previewing

When enabled, previewing video on the AUX Bus of the M2100 Switcher replaces the Super Edit type of previewing. Audio previewing continues to take place at the Audio Mixer through the interface built into the program (e.g., AMX-170, Graham-Patten, Zaxcom, Yamaha, etc.)

Because the user can disable previewing on the AUX Bus, subsequent previews would be handled by whichever method is built into the program. Super Edit with E-E previewing and GV Performer and 8465/8466 Previewing are discussed below.

Super Edit & E-E Previewing

Video E-E video previewing is disabled when previewing on the AUX Bus. If Audio previewing is through an Audio Mixer (INIT #44, discussed below) the output of the R-VTR remains locked to “reference” input during green key (source) selection on the Editor. If Audio previewing is E-E through the R-VTR (INIT #44) then the R-VTR will still be switched to incoming video reference.

When AUX Bus previewing is disabled, green key selection forces the R-VTR into the E-E preview mode and the video output can be seen on the Line monitor.

For AFV configurations, when AUX Bus previewing is enabled, if the user selects MIXER AUD PVW in INIT # 44 the Audio Preview will also be through the AUX-bus. If INIT #44 is set to R-VTR AUD PVW, the Audio Preview will still be through the R-VTR.

Preview Pre-Selection

Changing the record machine to a different source machine is accomplished either on the Assignment Page or with the **SWAP** function of the Editor. The crosspoint selection and AUX Bus Previewing will follow the SWAP automatically.

AUX Bus Control Green Key Selection

Selecting the R-VTR (green key) on the Editor switches the AUX Bus to the crosspoint assigned to that VTR. Selecting any other green key except the R-VTR switches the AUX Bus to the PGM OUT button. The actual crosspoint associated with any given green key is switched on the program bus.

Programming Auto-Transitions & Transitions

PEGS

To specify transitions on the M2100 Switcher other than those made with the standard editor transition dialog, specify **FUNCTION = X** in the **PEGS** dialog. A single PEGS function is available; AutoTrans. The code is **50**. The AutoTrans will occur per the current NEXT TRANSITION selection, background, key or both.

Since there is no automation port access to FTB there is no PEGS command for FTB.

Keys

The M2100 Keyer has dedicated inputs for both the “hole cutter” and the fill video. Thus the selection of key Foreground in Super Edit key dialog is not effective.

Only Keyer 1 is supported in the keyer dialog. The operator is responsible for setting up the key parameters on the M2100 MCP. Keyer dialog for Key Fades works correctly if a black source is available for the BLACK video crosspoint.

Wipes

The M2100 automation protocol does not support selection of which of the four available wipes is selected, nor does it support selection of wipe direction. If the M2100 is software authorized for Wipes, Super Edit wipe dialog is able to select wipe mode and start the wipe transition, but on the MCP the operator must select the wipe to be used.