



TECH NOTE

**Super Edit™ Version 8.0 (VPE)
or Version 2.0 (DPE) and later**

ZAXCOM ARRIA DIGITAL MIXER

This document covers Super Edit features and parameters pertaining to the Zaxcom Arria digital mixer protocol (ESAM II -based). More specific Arria set-up is available in the Arria Operations Manual on Zaxcom's website at <http://www.zaxcom.com/downloads/index.shtml>.

This documents covers the basic set-up and operation of the Arria digital mixer in use with Super Edit on a VPE or DPE editing system:

- Physical connections (cabling)
- Router control: Virtual to Logical machine mapping
- Assigning physical devices to faders
- Mix Bus assignments
- Monitoring, previews
- Settings for Editor control
- Store/Recall Timeline and Configuration settings
- SWAP
- PreREAD
- Init page items relevant to the Arria audio mixer

PHYSICAL CONNECTIONS

Note: All connections should be made with Power OFF of the APU and control panel

- Connect analog and/or digital inputs to the rear of the APU (main frame).
- Connect APU to the Control Panel (suggest using the Zaxcom supplied cable)
- Connect power cords to the APU and Control Panel
- Connect RS422 serial cable between Port 1 of the control panel to the Editor Audio port
- Connect black video reference (terminate if not looped thru to another device)

ROUTER SETTINGS

Virtual to Logical machine mapping

Enter the ROUTER menu by selecting ROUTER in the Function Select section of the Arria control panel.

Assign physical devices (plugged into the rear of the APU) to Logical Machines (VTR A, VTR B, VTR C, REC, etc). Note the NUMBER column for the Physical Device ID (Super Edit uses 1 for VTR A, 2 for VTR B, etc. on the audio Crosspoint Assignment page ([Shift][Asgn]) with REC being audio crosspoint 10).

Assigning VTRs to Faders

In the **ROUTER** menu, rotate softknob **F6** to position the cursor beside **VTRA**. Select the **Virtual Source** that is to be **VTRA** by rotating softknob **F7** until the appropriate **Source Name** is displayed. Press the **TAKE** key. **VTRA** should now be on the faders. Continue for other sources.

MIX BUS ASSIGNMENTS

Verify or alter the **Mix Bus assignments** by pressing the **CH** key on the selected fader. Press the **BUS** key on the **Aux Select** section of the control panel. The current **Bus Assignment** for that channel is displayed. Utilizing the softknob **F6**, select a **Bus** and **F1** to set/remove the checkmark for that **Bus**.

MONITORING

With Mix Bus assignments complete, one final setup aspect remains: Monitoring. Being completely independent from the **Mix** setups, the settings in the **Mon Assign** menu only affect how a source is heard when selected directly on the **Monitor Bus** – either manually or via edit system control. The operation of the **Mon Assign** menu is similar to the **Mix Assign** menu, except that the settings in the **Mon Assign** menu are only ON/OFF, as opposed to having gain trims. In the Arria, monitoring level trims are handled by the **APVs**.

Monitoring setup is completely a matter of personal choice, and often changes throughout a session. Some users want single-channel sources to feed all monitor buses; others may prefer to match the **Mon** setups with the **Mix** menu setups. For this part of the tutorial the user should experiment with different monitoring setups and note the interaction and differences between configurations.

NOTE: The MON menu need not be utilized if the MONITORING MODE is set to anything other than "MON."

Bear in mind that where monitoring is concerned, the RVTR is a special case. Audio previews may yield undesirable results if the RVTR's monitoring setup does not suit the application. The following rules apply to the RVTR and preview switching:

- The RVTR's faders must be set to **PREFADE LISTEN (PFL)**.
- Except for **PreRead** events, the RVTR must not feed the Mix Busses. This may be accomplished in by either deselecting Mix Bus Assignments in the **Mix Assign** menu or by setting the **On/Off** key on each RVTR fader to "Off."

SETTINGS FOR EDITOR CONTROL (VPE or DPE)

Switcher-To-Editor Connections (Arria PORT 1 to Editor Audio Control)

The Editor controls the Zaxcom Arria Mixer through a serial RS-422 cable with a 9-pin D connector from the AUDIO CTL Port on the rear of the Editor. The other end of the RS-422 cable connects to PORT 1 on the Arria Control Panel. The Mixer should be set to match the Editor's default settings of 38.4 KBaud, 8 bits, 1 stop bit and ODD parity.

Editor I/F On/Off (EDITOR)

To enable "editor control," enter the Arria EDITOR menu by selecting EDITOR in the Function Select section of the control panel. Press EDITOR/F1 key to enable or disable the entire editor interface. When check-marked, the Arria accepts commands from an edit system and executes them based on the state of (F2) thru (F7). When disabled, all commands from an edit system are ignored.

NOTE: Mixer Enable/Disable

Editor control over the Arria Mixer can be enabled or disabled by pressing [ALT][AUDIO] at the editor. When control is disabled, AMIX-OFF is displayed on the status line of the Super Edit screen. Setting the Editor for AMIX-OFF will disable ALL control of the Arria, including cross-point/source selection and preview switching.

Crosspoint Assignment

The Zaxcom Arria Mixer Crosspoint assignments are Virtual machines. Super Edit can use crosspoints numbered 1 through 99 for Virtual machines (The Arria can mix up to 22 audio input channels; 22 digital inputs [11 BNC connectors] or with the Analog Input Module, 8 analog inputs). The value of 0 is used for silence in the Super Edit audio crosspoints.

Timeline Control

The Arria uses a derivative of **ESAM II** protocol. Although ESAM II is designed for traditional **PGM/PST** operations, the Arria converts the available data into its **TIMELINE** equivalent. There are several prerequisites for comprehensive editor control of the Arria:

- 1) All items in the Arria **EDITOR** menu must be enabled.
- 2) One of the standardized setups should be selected in the APV menu.
- 3) The operational mode of the Arria must be **EDIT MODE**.
- 4) As a starting-point, the editing system's Audio Crosspoint table should correspond to :

BLK = 00
AVTR = 01
BVTR = 02
CVTR = 03
DVTR = 04
EVTR = 05
FVTR = 06
GVTR = 07
RVTR = 10

Audio Preview under Editor Control

Zaxcom Arria Audio Mixers are capable of providing Audio previews. A Super Edit program built with E-E Preview will have INIT# 44 enabled (Aux Bus or Preview Switcher preview Super Edits will not have this INIT). INIT# 44 should be toggled to "MIXER AUD PVW" to enable Zaxcom audio previews through the mixer. Toggle INIT# 44 to "RVTR AUD PVW" to have the E-E RVTR switch preview audio.

Memory Store and Recall On/Off

Check mark the STORE RCL (F2 key) to enable or disable the Memory Store and Recall feature. When enabled, Arria Timeline and Configuration data may be transferred to and from the edit system. When disabled, remote memory register commands are ignored.

SWAP

A **SWAP** command from an edit system instructs the mixer to re-map all of the current **RVTR CHANNELS** with respect to all of a particular source VTR's **CHANNELS**. A number of operations are accomplished during a **SWAP**:

- The **CHANNEL NUMBERS** are appropriately reassigned.
- The fader levels of the new source VTR (former **RVTR**) are set to match those of the previous **RVTR**.
- If one or more **CHANNELS** of the original source VTR were set to **FULLTIME LIVE**, all **CHANNELS** of the new source VTR (former **RVTR**) are set to **FTL**.
- All **FADER SUBPANELS** involved in the **SWAP** will temporarily display the word "SWAP" to alert the user to the change in setup.

SWAP interchanges **CHANNEL NUMBERS**, *not* **CHANNEL LABELS**. Except for the momentary indication of "SWAP" in a **FADER**'s display, none of the **FADER LABELS** will be altered.

HINT: FOR THE MOST VISUAL FEEDBACK, SET THE ARRIA TO "SHOW CH#" (IN THE CH MENU) WHILE LEARNING HOW TO USE SWAP.

For consistent Editor/Arria operations, the following rules must be followed:

- The edit system's Audio Crosspoint Table must contain unique entries (do not assign the same crosspoint number to more than one source).
- The edit system must be capable of downloading its table to the DMX (on GVG *SUPER EDIT* systems, this is accomplished with the keystrokes: <SHIFT><RESET>).
- Do not **SWAP** if the **EDITOR INTERFACE** is disabled.
- Any changes to the editor's Audio Crosspoint Table must be followed by a download to the DMX.
- A recall of a new **DMX CONFIGURATION FILE** must be followed by a download of the editor's Audio Crosspoint Table.

Pre-READ

Pre-read Crosspoint and Fader Assignment

Editor Setup

The operator must decide which of the available "mark table" sources can be assigned with an audio mixer crosspoint of **20**. Typically, an **AUX** source is used for this purpose. By assigning a **SOURCE** this special crosspoint value, selection of that source on the edit system opens the RVTR's faders.

- For this example, set the **AUX** audio crosspoint to **20**.
- Set-up a **PREREAD** edit that dissolves from **AUX** to the **AVTR** in **30 frames**.

Arria Setup

For a seamless **PREREAD** match-in, the **RVTR's FADERS** must be set-up as follows:

IF THE RVTR IS ASSIGNED TO FADERS

- Physical position of the faders must be at 0.0db (unity).
- Each RVTR channel must be **PANNED** to itself. This is easily accomplished with the **PREREAD INIT** feature in the **REC** menu.

IF THE RVTR IS NOT ASSIGNED TO FADERS

- Depress the **REC** key and check the **RVTR's** pseudofader levels. If they are not at 0.0dB, press **<UNY><ENT>**.
- To ensure that each RVTR channel is **PANNED** to itself, press the **PREREAD INIT** softkey in the **REC** menu.

Using either of the above procedures sets-up the RVTR for a seamless **PREREAD** match-frame edit. Also ensure that the RVTR's faders (hardware or pseudo) are set to **EDIT MODE** (as opposed to **FULLTIME LIVE**).

When Pre-read is NOT active, selection of the RVTR causes selection of SILENT (Virtual machine 0) in the mixer and RVTR in the Preview Selection section. When Pre-read IS active (status line indicates "PRE-READ" either thru a Pre-Read preview or edit or [Shift][YES] to force Pre-read ON), selection of the RVTR selects the Virtual machine number identified in the audio crosspoint field.

ADDITIONAL EDITOR INIT PAGE SETTINGS

INIT# 045: "SWAP ON/OFF"

Swap can be set to ON or OFF. (See above description of Swap)

INIT# 049: "AUD 3,4 map to 1,2 ON/OFF" With this INIT Set ON, edits with channels 3,4 audio will be mapped to channels 1,2 of the mixer.

INIT# 108: "MIX PreREAD XPT" The default is 020.

INIT# 109: "PreREAD ON/OFF" This can be set to ON or OFF. When OFF, PreREAD edits are not performed.