

Configuration

Matrix configuration procedures are dependent upon how the matrix fits within its resident system and how that system is controlled. If you are using a Series 7000 Control System you will generally need to follow the instructions for matrix configuration found in the *Series 7000 Configuration Manual*. In some cases, however, you must use 7500-specific settings. This section highlights those distinctions.

7500NB Configuration

The 7500NB matrices can be controlled by the Series 7000 Control System.

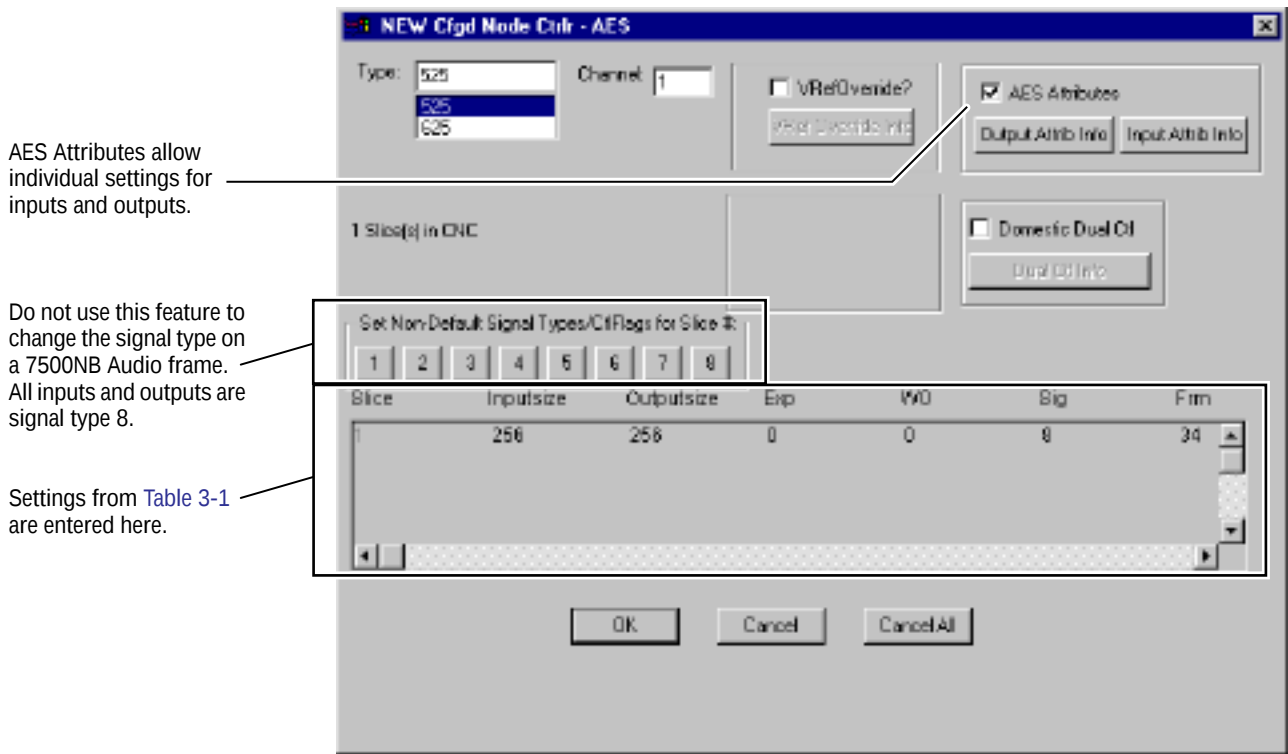
Series 7000 Control of 7500NB

The Matrix Controller in the 7500NB matrix communicates with the MCPU in the Series 7000 Control System. The configuration of the Matrix Controller is handled by the Series 7000 Configuration Editor GUI. The 7500NB-specific settings for the Matrix Controller are applied during the Configured Node Controller (CNC) and Physical Matrix procedures. A separate Configured Node Controller record is required for each 7500NB matrix in the system. In a single system, that has multiple 7500NB matrices, all of the CNCs for the 7500NB matrices must be combined into a single Physical Matrix. For example, a system that contains a 7500 NB 256x256 (1 matrix frame) would be configured with 1 CNC and 1 Physical Matrix. A system that contains a 7500 NB 1024x1024 (8 matrix frames) would be configured with 8 CNCs and 1 Physical Matrix.

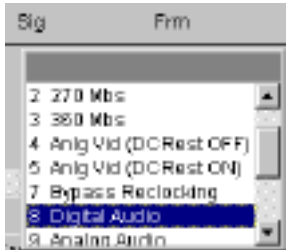
New AES Configured Node Controller Settings

Note 7500 Narrow Band matrices must have separate configured Node Controller (CNC) templates for each set of 256 Outputs. Do not configure a single CNC with multiple slices.

Figure 3-1. Cfgd Node Ctrlr Window With AES Settings



Sig = Signal type. All 7500NB matrices use selection 8, Digital Audio.



Frm = Frame type. All 7500NB matrices use selection 34, AES Nx256.



In the multi-column window, click the gray area immediately beneath a column heading and enter settings as indicated in Table 3-1.

Table 3-1. 7500 Narrow Band Series Matrix Settings

Matrix Size	CNC	Multiple Column Headings						
		Slice	Inputs	OutSize	Exp ^a	WO ^a	Sig	Frm
256x256	MC1	1	256	256	0	0	8	34
512x512	MC1	1	512	256	0	0	8	34
	MC2	1	512	256	0	0	8	34
768x512	MC1	1	768	256	0	0	8	34
	MC2	1	768	256	0	0	8	34
	MC3	1	768	0	0	0	8	34
1024x512	MC1	1	1024	256	0	0	8	34
	MC2	1	1024	256	0	0	8	34
	MC3	1	1024	0	0	0	8	34
	MC4	1	1024	0	0	0	8	34

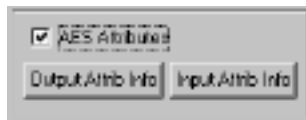
Table 3-1. 7500 Narrow Band Series Matrix Settings - (continued)

Matrix Size	CNC	Multiple Column Headings						
		Slice	Inputs	OutSize	Exp ^a	WO ^a	Sig	Frm
1024x1024	MC1	1	1024	256	0	0	8	34
	MC2	1	1024	256	0	0	8	34
	MC3	1	1024	0	0	0	8	34
	MC4	1	1024	0	0	0	8	34
	MC5	1	1024	256	0	0	8	34
	MC6	1	1024	256	0	0	8	34
	MC7	1	1024	0	0	0	8	34
	MC8	1	1024	0	0	0	8	34

^a Settings for **Exp** and **WO** must always be set to 0 (zero).

AES Attributes

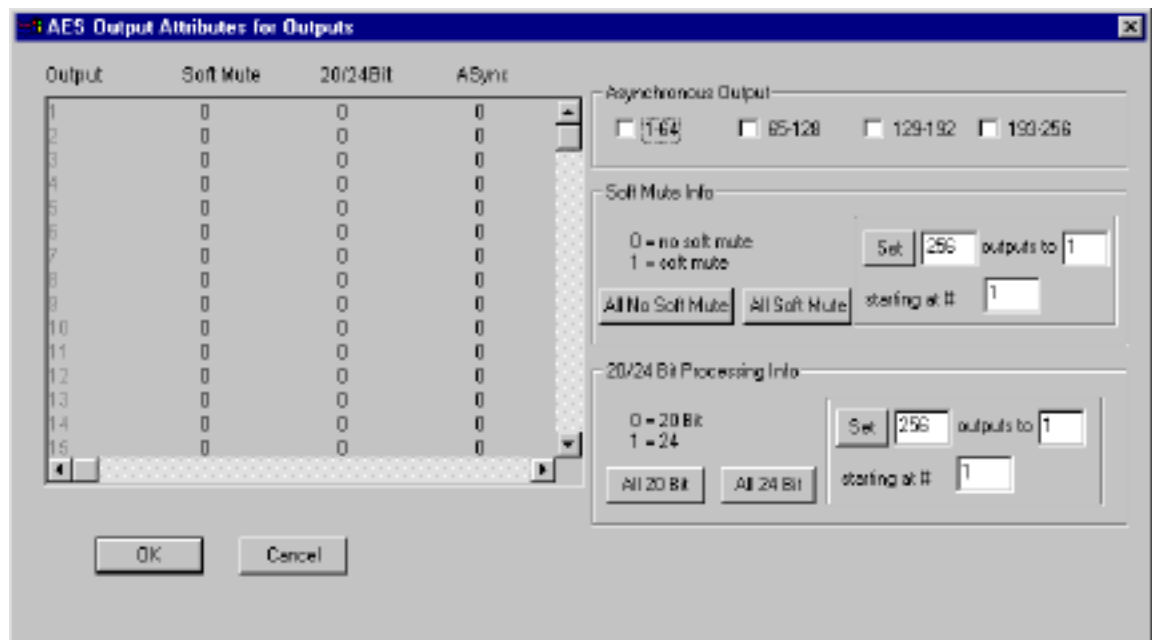
This option in the Cfgd Node Ctrlr Window is used to apply AES Audio attributes to Inputs and Outputs in the 7500NB matrices.



If the frame you're configuring supports AES and this box is checked the **Output Attrib Info** and **Input Attrib Info** buttons are activated.

1. Click the **Output Attrib Info** button to bring up the AES Output Attributes for Outputs window.

Figure 3-2. AES Output Attributes for Outputs Window



This window allows the outputs to be set individually or in groups. If you were configuring a matrix that contained Asynchronous Output modules then you would use the check boxes under **Asynchronous Output**

to set groups of 64 outputs to Asynchronous. If you were configuring a system that had some Asynchronous Input modules (one or just a few) and wanted to assign a few Outputs on a Synchronous Output module to pass asynchronous signals, then use the individual settings under the **ASync** column.

Outputs can be assigned **Soft Mute/No Soft Mute** and **20/24 Bit Processing** individually, in groups, or by using the **All** buttons.

Soft Mute/No Soft Mute

The **Soft Mute/No Soft Mute** attribute is a soft mute or alignment of one signal's amplitude to another signal's amplitude at switching. This soft mute prevents a crack or pop at switching.

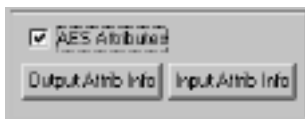
20/24 Bit

The **20/24 Bit** attribute determines how the signal bits are processed. A signal has 24 bits with the last four bits designated as auxiliary (AUX) bits.

In **20 bit** mode the four AUX bits pass through the router unaffected by any processing. If left and right channels are swapped, the four AUX bits stay in the same place. If the signal is muted, the four AUX bits are not muted.

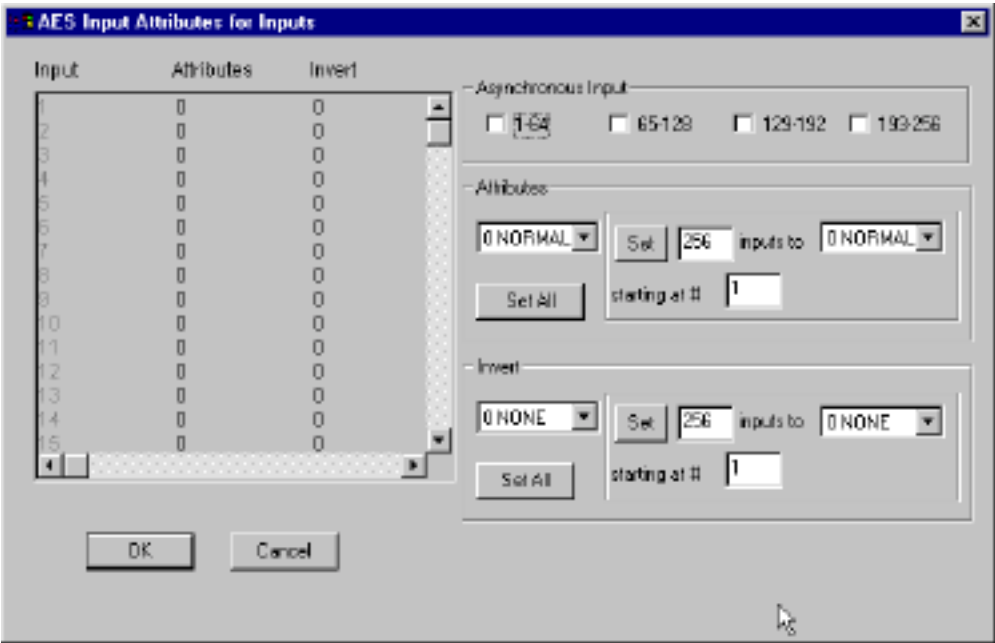
In **24 bit** mode the router will treat the four AUX bits as though they are part of the audio data. If left and right channels are swapped, the four AUX bits will swap locations. If the audio is muted, the four AUX bits will be muted.

2. After the Output attributes are assigned click **Ok** to return to the New Cfgd Node Ctrlr window.



3. Click the **Input Attrib Info** button to bring up the AES Input Attributes for Inputs window.

Figure 3-3. AES Inputs Attributes for Inputs Window



This window allows the inputs to be set individually or in groups. If you were configuring a matrix that contained Asynchronous Input modules then you would use the check boxes under **Asynchronous Input** to set groups of 64 inputs to Asynchronous.

Inputs can be assigned Attribute and Invert options, individually, in groups, or by using the **All** buttons.

Attributes affect the way the signal is routed through the matrix. [Figure 3-4](#) and [Figure 3-5](#), show how a signal is routed. [Table 3-2](#) shows how it is affected by the attribute settings.

Figure 3-4. Audio Signal Splitting

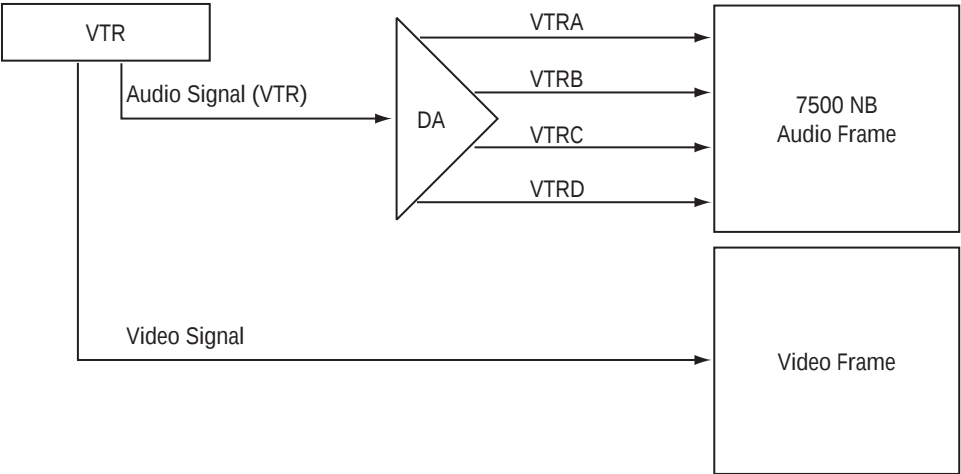


Figure 3-5. Signal Flow



Table 3-2. Attribute Options



Attribute	Definition	100 Hz (Right)	1000 Hz (Left)
Normal	Defaults are assigned to all Inputs.	100 Hz	1000 Hz
Right Only	Right Channel Audio will be routed to the assigned Input.	100 Hz	100 Hz
Left Only	Left Channel Audio will be routed to the assigned Input.	1000 Hz	1000 Hz
Sum	Frequencies of the Right and left Channel are added together.	1100 Hz (R+L)	1100 Hz (R+L)
Swap	Left and Right Channels are swapped.	1000 Hz	100 Hz
Async	Asynchronous signals are routed.		

Invert options assign the invert (opposite logic state) of the signal to an Input using the settings in [Table 3-3](#).

Table 3-3. Invert Options



Attribute	Definition
None	Signal is not changed.
Invert Channel A	Channel A audio is inverted.
Invert Channel B	Channel B audio is inverted.
Both A & B	Channel A and Channel B audio is inverted.
Async	Asynchronous signals are routed.

4. After the Input attributes are assigned click **OK** to return to the NEW Cfgd Node Ctrlr window.

Physical Matrix

When configuring this, *remember that the 7500 NB Series must have one Physical Matrix that includes all of the 7500 NB matrices in the system.* For example, a system that contains a 7500 NB 256x256 (1 matrix frame) would be configured with 1 CNC and 1 Physical Matrix. A system that contains a 7500 NB 1024x1024 (8 matrix frames) would be configured with 8 CNCs and 1 Physical Matrix.

7500WB Configuration

The 7500WB matrices can be controlled by the Series 7000 Control System.

Series 7000 Control of 7500WB

The Matrix Controller in the 7500WB matrix communicates with the MCPU in the Series 7000 Control System. The configuration of the Matrix Controller is handled by the Series 7000 Configuration Editor GUI. The 7500WB-specific settings for the Matrix Controller are applied during the Configured Node Controller (CNC) procedures.

The 7500WB matrix can have a second Video Reference.

New 7500WB Configured Node Controller Settings

Figure 3-6. Cfgd Node Ctrlr Window With AES Settings

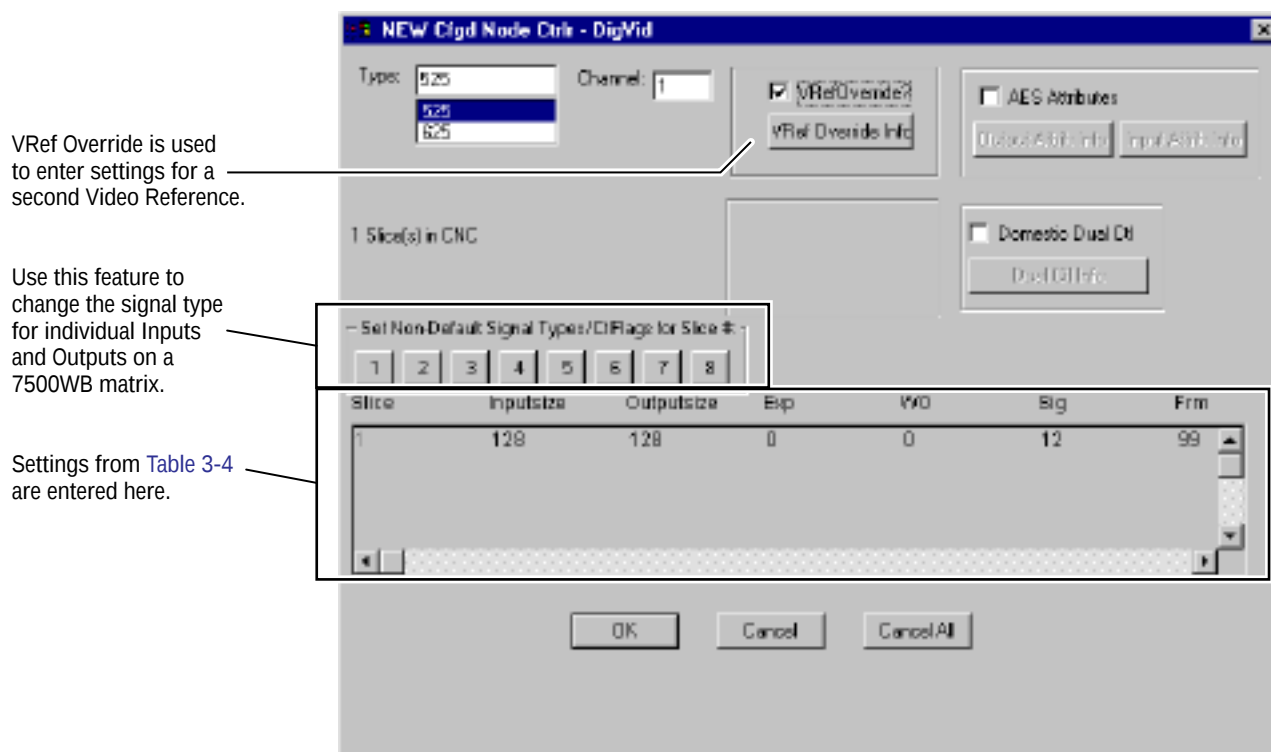


Table 3-4. 7500 Wide Band Series Matrix Settings

Matrix Size	Multiple Column Headings						
	Slice	Inputs	OutSize	Exp ^a	WO ^a	Sig ^b	Frm
128x128	1	128	128	0	0	12	98
256x256	1	256	256	0	0	12	99

^a Settings for **Exp** and **WO** must always be set to 0 (zero).

^b Any Digital Video Signal type may be used