

## Setting up Digital VTRs for Dolby E and Dolby Digital Compatibility

- In all cases, any audio channels used for recording either Dolby E or Dolby Digital must be in unity gain mode. Depending on the VTR, proper unity gain mode requires either selecting unity in the setup menu or physically “pressing in” the audio level knobs. Manually adjusting audio level controls to set unity gain will not work.
- Editing of Dolby E requires “cut” edits. Cross fading will cause Dolby E frames to be corrupted at the edit point.
- Editing of Dolby Digital is not supported in any mode and can cause muting.

### Sony HDCAM HDW-F500

Dolby E Compatible	Yes (HDW-F500 machines only)
Dolby Digital Compatible	Yes (with upgraded hardware and firmware)
Channel Bit Depth	20bit
Sample Rate Conversion	Yes, but offers a “data mode” for Dolby E/Dolby Digital
Audio Advance Function	Yes (can only be disabled on output)
24 Frame Compatible	Yes (Dolby Tri-Level Sync Adaptor required for Dolby E)

The menu settings that apply are for disabling sample rate conversion, enabling valid edits with Dolby E, selecting Dolby E or Dolby Digital compatibility, and selecting the appropriate audio advance parameter according to the application.

#### To access the Setup Menu:

1. Press “SETUP” key
2. Press “F6” (VTR SETUP)
3. Scroll to menu number

#### **#819 “Burst / Continuous” Mode**

“Burst” mode is required for encoding Dolby E. “Continuous” mode is required for encoding Dolby Digital. This mode is only available in newer or updated models. Models without this mode only support Dolby E recording and do not support Dolby Digital recording. This selection will be grayed out or missing if it is unavailable on your machine.

#### **#820 “Non-Audio” Mode**

Selecting a “Mode” enables/disables audio inputs and sample rate conversion for those indicated audio channels. Selecting an “SDI” mode disables the audio input connectors on the indicated audio channels, and indicates to the HDCam to expect embedded audio. The appropriate mode for Dolby E and Dolby Digital is “AES” for those channels containing Dolby E or Dolby Digital.

Non-Audio Channel modes

Mode 1 - SDI Channels 1&amp;2

Mode 2 - SDI Channels 3&amp;4

Mode 3 - SDI Channels All

Mode 4 - AES Channels 1&amp;2

Mode 5 - AES Channels 3&amp;4

Mode 6 - AES Channels All

**#821 “Audio Advance Mode”**

This mode only effects the output of the VTR. Recording Dolby E such that the Dolby E data will be in sync with picture on tape requires external adjustment of the audio signal to account for the one-frame period Dolby E processing delay.

Turning Audio Advance “On” allows audio to be played out of the VTR one frame ahead of picture (fig.1). Turning Audio Advance “OFF” will preserve the audio/video sync relationship that is present on the videotape at the output of the VTR.

*Note: When recording Dolby E to tape, the audio advance function is disabled. Audio advance will only effect the playback of Dolby E from tape, not E-to-E.*

**HDW-F500 Application examples:**

1. When duplicating or “cloning” an HDCam tape containing Dolby E, turning Audio Advance “OFF” will maintain the same audio/video sync relationship from the master to the copy.
2. When Dolby E is in sync with video on tape, turning Audio Advance “ON” will result in the decoded audio (decoded via the DP572 Dolby E Decoder) being in sync with video due to the one frame decoding delay within the DP572.
3. When Dolby E is advanced one frame on tape with respect to video, turning Audio Advance “OFF” will result in the decoded audio (decoded via the DP572 Dolby E Decoder) being in sync with video.

**#317 “Edit” Mode**

Selects cut or crossfade edits. Cut is the correct mode for Dolby E).

**To change the frame rate:**

1. Push the Maintenance Button - Located near the bottom left corner of the display screen (with a pen tip or similar device).
2. Hold “SFT” (shift) key & press “F8” key (MAINT/EXEC)
3. Press “F9” key (OTHERS/CHECK)
4. Press “F9” key (SYSTEMS MENU)
5. Press “F2” key to cycle through selections of frame rates
6. Press “F9” key (EXECUTE)
7. The system will reboot automatically

