Overview Interleaved Video Playback Mode

The LD-V8000's video memory buffer also makes possible ***Interleaved Video Playback*** when used with a series of three commands: the **RG** command to select *Interleaved Video Playback Mode / Frame or Field,* the **RM** command, *Select Frame Interval,* and **IM** command, *Select Playback Field.* ***Interleaved Playback Mode*** of the LD-V8000 allows playback of materials that have been recorded onto video tape in interleaved fashion and then pressed to disc. By placing the video material on the disc in an interleaved fashion, skipping one, two or three frames, the user can effectively double, triple or quadruple the amount of video material on the disc. e.g. Program 1 is placed on every even frame number of the disc, and Program 2 is placed on the odd frame numbers. Play back of Program 1 is achieved by playing the even numbered Frames and displaying each one from memory one Frame count. The player effectively outputs the image two "frame counts", while it skips the odd numbered frame. Audio, however, is output continually.

Note: In *Interleaved Mode*, the player holds the playback frame in memory and outputs the image for the number of frames that it has been instructed to skip. For example, at 30 Frames per second, playing every 60th frame would result in a playback time of 2 seconds per frame, providing a slide-show effect. A maximum of 64 different "slide shows" could be interleaved onto a video tape and mastered to disc, each "slideshow" could be approximately 840 frames in length.

These are the Level III commands that are used to control Interleaved Video Playback:

- **2RG &18 RG — Register G Set** (See page 4-56.)
  2RG sets *Interleaved Video Mode / Frame Mode*.
  18RG sets *Interleaved Video Mode / Field Mode*.

- **RM — Select the Frame Interval**, (See page 4-45.)
  Indicates the number of frames to be skipped during interleaved playback.

- **IM — Selects the Playback Field**, (See page4-46.)
  Indicates the field from which interleaved playback is started.

After reviewing the command descriptions in this section, we strongly recommend that user's read **Appendix H, Interleaved Video Playback.** Examples in Appendix H describe in more detail how Interleaved Video Playback commands are implemented.

43) *SELECT FRAME INTERVAL*

Function:	Selects the number of frames to be skipped during interleaved video playback. **NOTE:** *Interleaved Video Playback* must first be selected with the command 2RG or 18RG.
Format:	Integer R M
Explanation:	This command sets up the number of frames to be skipped to implement the interleaved video playback. Frames 0-64 can be selected. See **Appendix H, Interleaved Video Playback.**
Execution:	* Initial Condition: Memory Control OFF. 2RG 2RM 0IM 1AD 1SE 500PL \<C/R> R \<C/R> * *Interleave Video Playback, Frame Mode* is selected, "Select Frame Interval" **RM**, is set to playback every third frame, "Select Playback Field" **IM**, is set to the first field of every selected frame (See next command description). Audio Channel 1 is ON. Search to Frame 1 (where the specific program materials begins), playback the first field of every third frame to Frame 500.

44) SELECT PLAYBACK FIELD

Function: Selects the field from which interleaved video playback is started.
NOTE: Both the RM and IM commands are used in*Interleaved
Video Playback, Frame Mode,* and *Field Mode.*

Format: Integer   I M

Explanation: This command indicates the field from which interleaved video
playback is started. Integers 0-127 can be selected. See
Appendix H, Interleaved Video Playback, for details.

Execution: * Initial Condition: Memory Control OFF, Frame Mode Selected
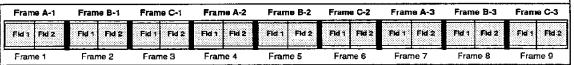
18RG 1RM 2IM 1AD 1SE 500PL <C/R>   R <C/R>

* *Interleaved Video Playback, Field Mode* is selected. Select Frame
Interval is set to play every other Frame. "Select Playback Field" is
set to play back the first field of every second frame, Audio
channel 1 is ON. Search to the beginning of the program material
at Frame 1, play back the first field of every second frame starting
at Frame 2, up to Frame 500.

NOTE: When Field 1 of every other frame of video is played, the player plays Field 1 of
Frame 1, holds that field in it's memory and displays it, then displays it again for a
second field time. Then Field 1 of Frame 3 is held in memory and displayed two field
times, and so forth, through Frame 5,7, 9 etc. This allows the player to play at a
constant rate of 30 frames per second and put out un-interrupted audio from channel 1
or 2 to accompany the interleaved video playback. (The player is actually playing
through the full frame, while holding one field in memory. Audio is output without
interruption.) **NOTE:** One Frame = 1/30th of a second; One Field = 1/60th of a second.

Interleaved Video Playback Program Example

Three different programs are laid down on tape in interleaved fashion and encoded to LaserDisc for
interleaved access using the *Interleaved Mode* control commands.

Frame A-1	Frame B-1	Frame C-1	Frame A-2	Frame B-2	Frame C-2	Frame A-3	Frame B-3	Frame C-3
Fld 1	Fld 2	Fld 1	Fld 2	Fld 1	Fld 2	Fld 1	Fld 2	Fld 1	Fld 2	Fld 1	Fld 2	Fld 1	Fld 2	Fld 1	Fld 2	Fld 1	Fld 2
Frame 1	Frame 2	Frame 3	Frame 4	Frame 5	Frame 6	Frame 7	Frame 8	Frame 9

Here are some sample commands for **Interleaved Playback.** The RM command indicates how many
Frames to skip; the IM command indicates the field on which playback will start.

Frame Mode, playback every frame, skipping no fields:
2RG   0RM 0IM 1SEPL   Plays back A1 B1 C1 A2 B2 C2 A3 B3 C3, etc.

Frame Mode, playback every 2nd frame, skipping 2 fields:
2RG   1RM 2IM 1SEPL   Plays back B1 B1 A2 A2 C2 C2 B3 B3, etc.

Frame Mode, playback every 3rd frame, skipping 4 fields:
2RG   2RM 4IM 1SEPL   Plays back C1 C1 C1 C2 C2 C2 C3 C3 C3 etc.

        Figure 4-R