

Application Note

#179 -- 1/21/91

LD-V8000 Level 2 Memory Control Commands

(Added with Version Upgrade: EPROMs DYW-1119 and DYW-1120)

Four memory control commands have been added to the Level II command protocol of the LD-V8000. These commands are included in the upgraded version of the player which contains EPROMs DYW-1119 and DYW-1120. These EPROMs are available for \$25 in the LD-V8000 EPROM Upgrade Kit.

These commands can be used in the LD-V8000 because it has a frame memory capacity and can independently control two fields within memory. These commands cannot be used with the LD-V6000A because they require the hardware capability of the LD-V8000.

1. SMS (Set Memory Control Switch)

This command sets the player's video memory control. It enables the user to control the following three switches by argument.

	Argument	Mnemonic	Hex	RCU Button
	Integer	SMS	84	Play, 8, 4
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Switch 1: Memory Control On/Off Switch

This switches the player's memory control mode. When "OFF" is selected, the user cannot access memory control. When "ON" is selected, the user can control the player's memory. The memory control commands are set after this command is enabled and they are explained below.

Switch 2: Memory Select Switch

This switch determines whether video memory is used as Field memory (one field) or Frame memory (two fields). "ON" selects *Field Mode*, "OFF" selects *Frame Mode*. The LD-V8000 has a two field memory. When *Frame Mode* is selected, the player stores two fields in memory as one frame. *Field Mode* allows the user to store two fields from two separate images and display each as a still image. Field Mode should be selected for freezing fast action.

Switch 3: Auto Memory On/Off Switch

This switch selects the video output of the player during a search. "ON" is Squelch Video Output, providing a blue or black screen during a search. "OFF" is Memory Video Output, providing a still frame held in memory.

See chart on reverse side for arguments to be used to achieve various combinations of switch settings.

Argument	Memory Control	Memory Selection	Auto Memory
0	Off	Frame	On
1	On	Frame	On
16	Off	Field	On
17	On	Field	\mathbf{On}
32	Off	Frame	Off
33	On	Frame	Off
48	Off	Field	Off
49	On	Field	Off

Caution: Arguments other than those listed in the chart above must not be used, as they may cause the player to maifunction.

2. SRM (Select Read Memory)

	Argument	Mnemonic	Hex	RCU Button
	Integer	SRM	85	Play, 8, 5
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The player sends video output to the screen from the memory option selected by this command. The usable arguments are 0 and 1 for each field in *Field Mode*. When *Frame Mode* is selected, however, 0 and 1 indicate the exact same memory. The player will accept the command, but actually there is no difference.

3. MWE (Memory Write Enable)

Argument	Mnemonic	Hex	RCU Button
Integer	MWE	86	Play, 8, 6

This command permits you to write the video over the memory selected by the argument. The result is "captured" still video, buffered in memory. The next command "Memory Write Disable" (MWD) returns the player to normal motion video. The usable arguments are 0 and 1. Other arguments must not be used. When *Frame Mode* is selected, argument 0 and 1 indicate the same memory, so there is no difference between the two.

4. MWD (Memory Write Disable)

	Argument	Mnemonic	Hex	RCU Button
	Integer	MWD	87	Play, 8, 7
333		1021-30-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		

This command prohibits you from writing video over the memory selected by the argument. The usable arguments are only 0 and 1. No other argument may be used. When *Frame Mode* is selected, argument 0 and 1 indicate the same memory, so there is no difference between the two.