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TO: LOTUS 740/745 Users

FROM: Publications

DATE: March 4, 1988

SUBJ: ADDENDA TO LOTUS 740/745 DOCUMENT

This addenda to the SpectraLogic SPECTRA 320/310L Product Reference Manual provides information for setting the disk drive configuration switches on the LOTUS 740/745 disk controller and for setting the switches on the disk drives.

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I. SETTING LOTUS 740/745 DISK DRIVE CONFIGURATION SWITCHES

This section provides information for setting the disk drive configuration switches (SW4 and SW5) on the LOTUS 740/745 disk controller. The appropriate settings for these switches vary depending on the version of the drive configuration PROM at location 8AE.

CAUTION

If the PROM is changed, the switch settings will have to be changed.

Table 1 provides corrected switch settings for the drives supported by Rev LD1 PROMS 08AE320LD1 and 08AE310LD1, for the LOTUS 740 and 745, respectively. These PROMs were shipped with the original controllers.

Table 2 provides switch settings for the drives supported by later revisions of the Drive Configuration PROMs, which include the following:

08AE740D3

08AE310LD2

08AE320LD2

08AE310LD3

08AE320LD3

These later revision PROMs include support for the Fujitsu 2344 (690MB) and the Fujitsu 2372 (824MB) drives.

Please note: These drive tables may include drives that are not supported by IRIS or by POINT 4 DISCUTILITY.

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON
KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - AMPEX

SWITCH KEYS	MODEL/	PHYSICAL			LOGICAL			
6 5 4 3 2 1	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
000101	DM940	 32 *40	 5 *5	 411 *633	32 *40	 5 *5	 410 *632	40MB
		 	 	 		 	 	Last cyl is not accessable.
000110	DM980 (AMP80)	32 *40	5 *5	823 *1467 		SAME		80MB

DRIVE MANUFACTURER - BALL

SWITCH KEYS	MODEL/	F	HYSIC	AL I]	LOGICAI	.	COMMENTS
		SEC	HDS	CYL	SEC	I HDS	CYL] !
000110		32 *40	_	823 *1467		SAME		80MB

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - CDC

SWITCH KEYS	MODEL/ I	I	HYSICA	AL .	1	LOGICA	L	COMMENTS
654321	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
000010	9455 (LARK1)	32 *40	4 *4	206 *316		SAME		16MB LMD
· .							1	Seek on hd change: should be out.
000110	9710 (CDC80)	32 *40	5 *5	 823 *1467 		SAME		80MB
101111	 9715-168	32	10	 823 + 3467	 32 *40	 12 *14	 823 *1467	 168MB
	(FUJ168) 	*40 	*12 	*1467 	* 4 0 	~14 	~ 140 / 	Prom allows for 2 extra heads.
 			 	! ! !1		i 	; 	Will function OK
000101	9760	32 *4 0	 5 *5	 411 *633	 32 *40	 5 *5	 410 *632	40MB
		- 420	~5 	"033 		"5 	-032 	Last cyl is not accessable.
000110	9762 (CDC80)	32 *40	5 *5	 823 *1467 		SAME		80MB

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - CENTURY DATA SYSTEMS

SWITCH KEYS	MODEL/	PHYSICAL I			LOGICAL			COMMENTS
654321	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
000110	T82	32 *40	5 *5	 823 *1467 		SAME		 80MB
001000	 T306 (CDC300)	32 *40	19 *23	 823 *1467 		SAME		300MB

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON

KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

SWITCH KEYS	MODEL/ I	PHYSICAL LOGICAL			COMMENTS			
654321	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
 101110 	 2283 (FUJ135) 	32 *40	8 *10 	 823 *1467 		SAME		135MB
1 0 1 1 1 1	2284 (FUJ168) 	32 *40	10 *12	823 *1467 	32 *40	12 *14 * 14	823 *1467 	l 168MB Prom allows for 2 extra heads. Will function OK
101000	2294 (FUJ335)	32 *40	16 *20	 1024 *2000		SAME		330MB
101011	 **2312K (FUJ84) 	32 *40	7 *7	 589 *1115 		SAME		84MB

^{**}See drive switch setting section following the drive tables, for switch settings on these drives.

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON

KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description MNEMONIC = mnemonic entry in discutility * = Octal numbers

SWITCH KEYS	MODEL/	·	PHYSICAL LOGICAL		LOGICAL		COMMENTS	
1 6 5 4 3 2 1	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
1 0 1 1 1 1	**2322K (F168. 8IN) 	32 *40	10 *12 	823 *1467 	32 *40 	 12 *14 -	 823 *1467 	l 168MB Prom allows for 2 extra heads. Will function OK
110001	**2333K (FUJ337) 		10 *12	823 *1467 	32 *40 	20 *24 	823 *1467 	337MB MAPPED: 1 PHYS HD= 2 LOG HDS within the same drive.

^{**}See drive switch setting section following the drive tables, for switch settings on these drives.

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON
KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - OKIDATA

SWITCH KEYS	MODEL/ (MNE	P	HYSIC	AL		LOGICAI	.	COMMENTS
654321	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
110111	3306 (OKI80)	32 *40	12 *14	339 *523		SAME		80MB

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - PRIAM

MODEL/ SWITCH KEYS (MNE]	PHYSICAL			LOGICA	COMMENTS	
6 5 4 3 2 1		SEC	I HDS	CYL	SEC	HDS	CYL	
100110	807 	32 *40 	 11 *13 	1552 *3020 		 11 *13 	 1546 *3012 	334MB Last 6 cylinders not available.

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON
KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - NONSPECIFIC

	DS CYL	
0 0 0 0 0 0	ME	1024 CYL, 32 HD, UNMAPPED DRIVE

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - AMPEX

 SWITCH KEYS	MODEL/ (MNE	. PH	YSICAL	LOGICAL	 COMMENTS
654321	MONIC)	SEC 1	HDS CY	L SEC HDS CYL	<u> </u>
001001	DM940 (AMP40)	32 *40	5 41 *5 *63	· · ·	40MB
001001	DM980 (AMP80)	32 *40	5 82 *5 *14		 80MB
001001	 DM9160 (AMP160)	32 *40	5 16 *5 *31	 40 SAME 50	 160MB
010010	 DM9300 (AMP300) 	32 *40 	19 81 *23 *14	- •	300MB

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON
KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - BALL

 SWITCH KEYS	MODEL/	PHYSICAL			LOGICAL	COMMENTS
654321	MONIC)	SEC	HDS	CYL	SEC HDS CYL	
001001	 BD80 (CDC80)	32 *40	 5 *5	 823 *1467 	SAME	80MB
001001	BD100	32 *40	 5 *5	 1024 *2000	SAME	100MB
001001	 BD160 	32 *40	 5 *5	 1645 *3155 	SAME	160MB

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description MNEMONIC = mnemonic entry in discutility * = Octal numbers

DRIVE MANUFACTURER - CDC

SWITCH KEYS	MODEL/	PHYSICAL LC			LOGICAL	i comments i
6 5 4 3 2 1	MONIC)	SEC	HDS	CYL	SEC HDS CYL	
000111	9455 (LARK1)	32 *40	4 *4	206 *316 	SAME	16MB LMD
001001	 9760 (CDC40)	32 *40	5 * 5	 411 *633	SAME	40MB
 0 0 0 1 1 1 	 9457 (LARK2) 	32 *40	4 *4	 624 *1160 	SAME	50MB
 0 0 1 0 0 1 	I 9762 I (CDC80)	32 *40 	5 *5 	 823 *1467 	SAME	
 0 0 1 0 0 1 	 9710 (CDC80)	 32 *40	5 *5 	 823 *1467 	SAME	80MB
001101	 9715- 168 (FUJ168)	32 *40	10 *12	823 *1467 	SAME	168MB FSD

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON
KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description MNEMONIC = mnemonic entry in discutility * = Octal numbers

DRIVE MANUFACTURER - CDC

SWITCH KEYS	MODEL/ I	PHYSICAL LOGICAL			L !	COMMENTS		
654321	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
010010	9766 (CDC300)	32 *40	19 *23	 823 *1467 		SAME		300MB
010011	9715- 340	32 *40	24 *30	 711 *1307 	SAME			340MB FSD
010110	9720	48 *60	10 *12	 1216 *2300 	24 *30	 20 *24	 1216 *2300 	
011010	9715- 500	48 *60	24 *30 	 711 *1307	24 24 1422 *30 *30 *2616			500MB FSD Contiguous sectors
011011	9 715- 500	48 *60	24 *30	 711 *1307 	24 *30	24 *30 	 1422 *2616 	500MB FSD Interleaved sectors
010101	9775	32 *40	40 *50	843 *1513	32 *40	20 * 24	1 1686 *3226	

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON

KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description MNEMONIC = mnemonic entry in discutility * = Octal numbers

DRIVE MANUFACTURER - CENTURY DATA SYSTEMS

SWITCH KEYS	MODEL/	I	PHYSIC	AL	LOGICAL	COMMENTS
1 6 5 4 3 2 1	MONIC)	SEC	HDS	CYL	SEC HDS CYL	
 0 0 1 0 1 0 	 M80 	32 *40	 6 *6	 569 *1071 	SAME	80MB
001001	 T82 (T82)	32 *40	5 *5	 815 *1457 	SAME	80MB
001001	 T82RM (CDC80)	32 *40	5 *5	 823 *1467 	SAME	80MB
010010	T302	32 *40	19 *23	 815 *1457 	SAME	300MB
010010	T306 (T306)	32 *40	19 *23	 823 *1467 	SAME	300MB

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON

KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

SWITCH KEYS	MODEL/ PHYSICAL (MNE			AL I	LOGICAL	COMMENTS
654321	MONIC)	SEC	HDS	CYL	SEC HDS CYL	<u> </u>
001011	** 2312K (FUJ84)	32 *40	7 *7	 589 *1115 	SAME	84MB
0.01100	 2283 (FUJ135). 	32 *40	8 *10	 823 *1467 	SAME	135MB
001101	 2284 (FUJ168)	32 *40	10 *12	 823 *1467 	SAME	168MB
001101	** 2322K (FUJ168)	32 *40	10 *12	 823 *1467	SAME	168MB
010001	 2294 (FUJ335) 	32 *40	16 *20	 1024 *2000 	SAME	335MB

^{**}See drive switch setting section following the drive tables, for switch settings on these disc drives.

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON
KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description MNEMONIC = mnemonic entry in discutility * = Octal numbers

SWITCH KEYS	MODEL/	·	HYSIC	AL	I	LOGICAL		COMMENTS
6 5 4 3 2 1	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
011100	** 2333K (FUJ337)	64 *100	10 *12	 823 *1467 	32 *40	20 *24 	 823 *1467 	337MB MAPPED: l phys Hd= 2 log Hds within the same drive.
011110	** 2344K (FUJ690)	64 *100	27 *33	624 *1160 	32 *40	27 *33 	1248 *2340 	
011101	2361K	64 *100	20 *24	842 *1512 	32 *40	20 *24 	1684 *3224 	

^{**}See drive switch setting section following the drive tables, for switch settings on these disc drives.

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON
KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

SWITCH KEYS	MODEL/		PHYSICAL			LOGICA	L	COMMENTS
654321	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
011110	** 2372K (FUJ824)	64	27 *33	 745 *1351	32 *40	27 *33	 1490 *2722	
				1	i !	 	1	MAPPED: 1 phys cyl= 2 log cyl
	i i			1		 	1	within the same drive.
	ii			ii		i	İ	

^{**}See drive switch setting section following the drive tables, for switch settings on these disc drives.

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description MNEMONIC = mnemonic entry in discutility * = Octal numbers

DRIVE MANUFACTURER - OKIDATA

ľ	SWITCH KEYS	MODEL/	. PI	HYSICAL	LOGICAL	COMMENTS
i	6 5 4 3 2 1		SEC	HDS CYL	SEC HDS CYL	
1	001111			12 339 *14 *523	SAME	80MB
1		ll				

The switch settings described here are for the Disc Drive Configuration Switches, SW4 and SW5, on the disc controller.

SWITCH KEYS: 0=OFF, 1=ON

KEY 7 IS ALWAYS OFF.

MODEL = Manufacturers model description
MNEMONIC = mnemonic entry in discutility
* = Octal numbers

DRIVE MANUFACTURER - PRIAM

SWITCH KEYS	MODEL/ I	. I	PHYSIC	AL I		LOGICAL	ا	COMMENTS
654321	MONIC)	SEC	HDS	CYL	SEC	HDS	CYL	
000110	3350 3350 (PRIAM34	32 *40	3 *3	 561 *1061		SAME		34MB
000010		22 *26	5 *5	 525 *1015 		SAME		 35MB
000110	 6650 (PRIAM68	32 *40	 3 *3 	 1121 *2141 	SAME			 68MB
 0 0 0 0 1 0 	7050 7050 (PRIAM70	22 *26	 5 *5	 1049 *2031 				70MB
001011		32 *40	7 *7	 1121 *2141 				 158MB
001110	807 807 PRIAM344	32 *40	11 *13	 1552 *3020 		SAME		334MB.

II. SETTING THE DISK DRIVE SWITCHES

This section contains information for setting switches on the various disk drives supported by POINT 4, which include

- o Fujitsu 2312K (84MB)
- o Fujitsu 2322K (168MB)
- o Fujitsu 2333K (337MB)
- o Fujitsu 2344K (690MB)
- o Fujitsu 2372K (824MB)*
- *Note: IRIS support of the full capacity of this drive will be available in Rev 9.2; under 9.1.2, it can be configured and used like the 690MB.

2.1 SWITCH SETTINGS ON THE FUJITSU 2312K (84MB)

0 = OFF 1 = ON

SW1 (FEATURES)

KEY	1		DRIVE UNIT LSb
	2		DRIVE UNIT
	3		DRIVE UNIT MSb
	4	0	Not used
	5	0	No Tag 4 & 5
	6	0	Hard sectoring
KEY	7	0	Write inhibit off

HARD SECTORING, 32 SECTORS, 640 BYTES/SECTOR

	SV	¥2.		SV	13
KEY	1	1	KEY	1	0
٠.	2	1		2	0
	3	1	•	3	1
	4	1	•	4	0
	5	1		5	0
	6	1		6	0
KEY	7	1	KEY	7	0

2.2 SWITCH SETTINGS ON THE FUJITSU 2322K (168MB)

0 = OFF 1 = ON

SW1 (FEATURES)

KEY	1		DRIVE UNIT LSb
	2		DRIVE UNIT
	3		DRIVE UNIT MSb
	4	1	168MB
	5	0	No Tag 4 & 5
	6	0	Hard sectoring
KEY	7	0	Write inhibit off
KEY	8	0	Drive not on end (not all drives will have key 8)

HARD SECTORING, 32 SECTORS, 640 BYTES/SECTOR

SW2				<u>swa</u>				
KEY	1	ı			KEY	1	0	
	2	1				2	0	
	3	1		:		3	1	
	4	1				4	0	
	5	1				5	0	
	6	1				6	0	
KEY	7	1			KEY	7	0	

2.3 SWITCH SETTINGS ON THE FUJITSU 2333K (337MB)

0 = OFF 1 = ON

SW1 (FEATURES)

KEY	1		DRIVE UNIT LSb
	2		DRIVE UNIT
	3		DRIVE UNIT MSb
	4	0	For 337MB
	5	1	For 337MB
	6	1	For 337MB
	7	1	For 337MB
	8	0	No Tag 4 & 5
	9	0	Write inhibit off
KEY	10	0	Drive not mounted on side

HARD SECTORING, 64 SECTORS, 640 BYTES/SECTOR

SW2			SW3			
KEY	1	1	KEY	1	0	
	2	1		2	1	
	3	1		3	0	
	4	1		4	0	
	5	1		5	0	
	6	1		6	0	
KEY	7	0	KEY	7	0	

2.4 SWITCH SETTINGS ON THE FUJITSU 2344K (690MB)

NOTE: This drive is not supported by the 08AE230LD1 drive prom. The 08AE320LD2 drive prom is required on the controller.

0 = OFF 1 = ON

	SW1	(FEATURES)			SW	2	
KEY	2 3 4 5 6 7	DRI DRI 0 No 0 Wri 0 690 0 Har		MSb 5 bit off	KEY	1 2 3 4	0 0 0	No calibration seek Drive not on end Drive not on side Not used

HARD SECTORING, 64 SECTORS, 640 BYTES/SECTOR

SW3			SW4			
KEY	1	1	KEY	1	0	
	2	1		2	1	
	3	ī		3	0	
	4	ī		4	0	
	5	ī		5	Ŏ	
	6	ī		6	Ŏ	
KEY	7	Ō	KEY	7	Ŏ	

2.5 SWITCH SETTINGS ON THE FUJITSU 2372K (824MB)

NOTE: This drive is not supported by the 08AE230LDl drive prom. The 08AE320LD2 drive prom is required on the controller.

0 = OFF 1 = ON

	SWl	(FEATURES)			SW	2	
KEY	2 3 4 5 6 7	DRIVE DRIVE 0 No tag 0 Write 0 823MB	UNIT MSb g 4 & 5 inhibit off sectoring	KEY	1 2 3 4	0 0 0 0	No calibration seek Drive not on end Drive not on side Not used

HARD SECTORING, 64 SECTORS, 640 BYTES/SECTOR

SW3				SW4			
KEY	1	1	KEY	1	0		
	2	1	·	2	1		
	3	1		3	0		
	4	1		4	0		
	5	ī		5	0		
	6	ī		6	0		
KEY	7	0	KEY	7	0		

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