

OS - INITIATOR

Step	Instruction	Address	Comment	Octal	Step
00	JSBR	I 0037	5/1000 Map Core & Start Task		00
01	- JSBR	- 0500	Recovery Sequence		01
02	JUMP	- 0150	Fetch local file table of 2 files before proceed.		02
03	JSBR	0100	FETCH RESIDENT OVERLAYS		03
04	JSBR	0650	FETCH FILE TABLES		04
05	JSBR	0040	Initialize & increment history counter		05
06	LDA	Z 1715	Core length		06
07	SWAPA				07
10	RSA		} ÷ 1024		10
11	5 RSA				11
12	STA	Z 0177			12
13	JSBR	I2 1765	Core length (K) → DECII		13
14	P ₁ = 0, 0, 1, 4				14
15	P ₂ = 0/0177				15
16	P ₃ = 6/0064 ₂				16
17	LDA	Z 0305	"Nuk K"		17
20	JUMP	0343	Fetch file of version no.		20
21	LDA	Z 0477	System Date		21
22	JSBR	I2 1751	UNPACK DATE		22
23	P ₁ = 6/0067				23
24	JSBR	I2 1653	FLASH "JOB"		24
25	P ₁ = 6/0056				25
26	JUMP	0226	Open Files (Schedule File Request)		26
27	LDA	Z 0051	Max. Task No.		27
30	STA	0036	Counter		30
31	LDA	0036	Task No. → Next Task		31
32	JSBR	I2 1642	Initialize Task		32
33	DECS	0036	Counter		33
34	JUMP	0031	Outs next task		34
35	→ JUMP	I 0077	To Previous Task if		35
36			Counter		36
37			→ Core Map Rtn. 5/1000		37
40	*ENTRY		SET SPOORING ACTIVITY COUNT	BA	40
41	JUMP	0340	Max. Print Q No. + Extension (Job)		41
42	STA	Z 0177	Counter		42
43	LDA	Z 0022	→ Print Q Table Origin		43
44	STA	Z 0176	Pointer		44
45	INSZ	Z 0176		*next Q	45
46	INSZ	Z 0176			46
47	LDA	I2 0176	= 1st record no., this Q		47
50	A = 0				50
51	INSZ	Z 0030	Activity counter (this Q is in use)		51
52	→ DECS	Z 0177	Counter		52
53	JUMP	0045	Outs next Q		53
54	→ JUMP		[JSBR 0120 if O.A.S.]		54
55	JUMP	I 0040	Return.		55
56			BEN CHN		56
57			L 0		57
60			S -		60
61			Version No.		61
62			Serial No.		62
63			Core (K)		63
64			Serial No.		64
65			Core (K)		65
66			Serial No.		66
67			System Date		67
70			System Date		70
71					71
72			Min		72
73			Min		73
74					74
75					75
76			OS Serial No.		76
77			→ Task # Start 2/0600		77

OS-INITIATOR

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Step	Instruction	Address	Comment	Octal	Step
00	*ENTRY		FETCH RESIDENT OVERLAYS	←BA→	00
01	LDA	0154	→ Resident Overlay Table		01
02	AND				02
03	JUMP	I 0100	Return - no table.		03
04	→ STA	0112	→ Overlay Number		04
05	LDA	I 0112	= Overlay No. + Next Overlay		05
06	AND				06
07	JUMP	I 0100	Return - end of table		07
10	→ JSBR	IL 1670	FETCH Overlay		10
11	A=100002				11
12	B=✓				12
13	NOOP		(Not found in library)		13
14	INSZ	0112	Table pointer		14
15	JUMP	0105			15
16					16
17					17
20	*ENTRY		On-line security intercept	←BA→	20
21	LDA	Z 0032	→ Control block.		21
22	STA	0144			22
23	LDA/CA	0574	↳ Recovery disc table.		23
24	JORA	0575			24
25	A=0/CA		Was a recovery control set?		25
26	STA	IL 0032	Yes - no no, on-line security.		26
27	→ LDA	Z 1716	Boot/stop Mask.		27
30	DESZ	Z #1	generate OLS discs?		30
31	JUMP	0147	No - bypass		31
32	→ LDA	0166	10,17 } * Generate discs 10+20		32
33	LDB	0170	Copy 17 → 10		33
34	JSBR	0540			34
35	NOOP				35
36	LDA	0167	20,27		36
37	LDB	0170	Copy 27 → 20		37
40	JSBR	0540			40
41	NOOP				41
42	JSBR	IL 1707	generate OLS control block.		42
43	Pi=6/0171				43
44	Pi=✓		→ OLS control block.		44
45	Pi=7 words.				45
46	JSBR	IL 1667	store control Record		46
47	JUMP	I 0120	Return.		47
50	LDA	Z 0402	→ Resident Overlay Table (from 0002)		50
51	STA	0153			51
52	JSBR	IL 1707	DUPLICATE (Resident Overlay Table)		52
53	Pi=✓				53
54	Pi=5/0000				54
55	Pi=24 words				55
56	LDA	IL 0025	→ Feb Table φ		56
57	JSBR	0211	LOAD FILE TABLE φ		57
60	JSBR	IL 1670	FETCH CONTROL RECORD		60
61	Pi=000010				61
62	Pi=0/0201		Record No. 1 -		62
63	Pi=0		(No extraction)		63
64	JUMP	0003			64
65					65
66			10,17	004017	66
67			20,27	010027	67
70			12,952	031230	70
71			No of Discs = 2	000002	71
72			{ Header	000017	72
73	on-line security		{ Slave	000010	73
74	decryption control block.		{ Vector	000000	74
75			{ Header	000027	75
76			{ Slave	000020	76
77			{ Vector	000000	77

OS - DR2 Tape R/w.

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Step	Instruction	Address	Comment	Octal	Step
00	JSBR	0200	* PLAIN PAPER		00
01	P ₁ = 0,037		Standard 66 line loop.	000037	01
02	P ₂ = 5,034			002434	02
03	P ₃ = 5,034			002434	03
04	P ₄ = 0,105			000105	04
05	P ₅ = 4,034			002034	05
06	P ₆ = 5,034			002434	06
07	P ₇ = 5,034			002434	07
10	P ₈ = 5,034			002434	10
11	P ₉ = 5,034			002434	11
12	P ₁₀ = 5,034			002434	12
13	P ₁₁ = 0,105			000105	13
14	P ₁₂ = 4,034			002034	14
15	P ₁₃ = 5,034			002434	15
16	P ₁₄ = 5,4,105			202105	16
17					17
20	JSBR	0200	* BLANK : 66-line		20
21	P ₁ = 0,037			000037	21
22	P ₂ = 5,64,004			240004	22
23			(Hybrid FCB) MAST	201426	23
24			File Table Counter	-	24
25			Pointer	-	25
26	JSBR	J2 1625	SUSPEND (from 0026)	-	26
27	LDA	Z 0025	File Table Counter		27
30	STA	0225	Pointer		30
31	LDA	Z 0204	CFI		31
32	STA	0224	Counter		32
33	LDA	I 0225	File Table Counter	* Next Table	33
34	JSBR	0241	LOAD FILE TABLE		34
35	INVSZ	0225	Table Pointer		35
36	DESZ	0224	Counter		36
37	JUMP	0233	Auto next file		37
40	JUMP	0027	Continue		40
41	*ENTRY		LOAD FILE TABLE	← BA →	41
42	STA	0276	File Table Counter		42
43	LDA	Z 0302	CF64		43
44	STA	0275	Counter		44
45	LDA	I 0276	File Table Counter	* NEXT FILE	45
46	APOS				46
47	JSBR	I 0277	Open File		47
50	STA	I 0276			50
51	LDB	J2 A	← Word		51
52	CFPB	0223	201426, Hybrid FCB?		52
53	JUMP	0260	Yes.		53
54	JNSZ	0276			54
55	DESZ	0275	Counter		55
56	JUMP	0245	Auto next file		56
57	JUMP	I 0241	Refer.		57
60	STA	0274	FCB Counter	* Hybrid/FCB	60
61	LDA	Z 0204	CFI		61
62	STA	0273	FCB Counter		62
63	INVSZ	0274	Pointer	* Next Hybrid	63
64	LDA	I 0274			64
65	APOS				65
66	JSBR	I 0277	Open File		66
67	STA	I 0274			67
70	DESZ	0273	Counter		70
71	JUMP	0263			71
72	JUMP	0254			72
73			FCB Counter		73
74			FCB Counter		74
75			File Table Counter		75
76			File Table Pointer		76
77			→ Open Files etc.	13/0500	77

OS - DRI Tape Punch Routine

Step	Instruction	Address	Comment	Octal	Step
Page:-	6	Col:-	03		
00	*ENTRY		PUNCH DRI TAPE	← BA →	00
01	INT OFF				01
02	ESWRA				02
03	STA	0356	loop Counter		03
04	LDA	0300	→ P ₁	*NEXT LOOP	04
05	STA	0354	Parameter Pointer		05
06	JSBR	0357	Punch Header		06
07	LDA	I 0354	= Next parameter	*Next Parameter	07
10	ANDA	Z 1753	Top Byte		10
11	SWAPA				11
12	AND				12
13	JUMP	0321			13
14	→ STA	0355	Counter		14
15	LDA	Z 0204	"line Feed" code	*Next Line Feed	15
16	JSBR	0366	Punch Line Feed		16
17	DESZ	0355	Counter		17
20	JUMP	0315	Outs next line feed		20
21	→ LDA	I 0354	= Parameter		21
22	ANDA	Z 1752	Bottom Byte		22
23	JSBR	0366	Punch Code		23
24	LDA	I 0354	= Parameter		24
25	INSZ	0354			25
26	ANEG				26
27	JUMP	0307	Outs next parameter		27
30	→ DESZ	0356			30
31	JUMP	0304	Outs next loop		31
32	→ JUMP	I2 0006	To "OP?" utility		32
33					33
34					34
35					35
36					36
37					37
40	LDA	Z 0057	Mac Point Q No.	(Total from 0041)	40
41	ADA	Z 0061	Print Special Q Extension, Control		41
42	JUMP	0042			42
43	JSBR	I2 1775	Spec Byte	(from 0020)	43
44	P ₁ = 6/0066				44
45	LDA	Z 0106	Version ID (OS-11)		45
46	STA	0061			46
47	JSBR	I2 1765	Spec No. → ASCII		47
50	P ₁ = 200104				50
51	P ₂ = 6/0076				51
52	P ₃ = 6/0062				52
53	JUMP	0021			53
54			Parameter Pointer	-	54
55			Line Feed Counter	-	55
56			Loop Counter	-	56
57	*ENTRY		Header Rtn.	← BA →	57
60	LDB	Z 0206	CF6		60
61	LDA	Z 0375	000177 "ML DEL"		61
62	JSBR	0366	Punch Character		62
63	DESZ	Z B			63
64	JUMP	0361	Outs next char		64
65	→ JUMP	I 0357	Return		65
66	*ENTRY		PUNCH CHARACTER	← BA →	66
67	DATOA/START			015433	67
70	DONE			012733	70
71	JUMP	0370			71
72	→ DATI2A			014233	72
73	AND				73
74	JUMP	I 0366	Return - OK		74
75	→ HALT		Stops		75
76	IOP15			013033	76
77	JUMP	I 0366	Return - Ignore Status		77

OS - Service Programs Table

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Step	Instruction	Address	Comment	Octal	Step
00	JSGR	0300			00
01			→ Device Type 1 DRI	6/0430	01
02			2 C400	6/0434	02
03			3 BCL	6/0440	03
04			4 CENT	6/0430	04
05			5 EMU	6/0444	05
06			6 DRIF	6/0450	06
07			7 DIAB	6/0464	07
10			8 TYI	6/0470	10
11			9		11
12			10		12
13			11		13
14			12		14
15			13		15
16			14		16
17			15		17
20			16 D1600/D818	6/0450	20
21			17 D800/D400	6/0454	21
22					22
23					23
24					24
25					25
26					26
27					27
30			→ BASE	3/0000	30
31	DRI		No. of Words		000071
32	→ CENT		→ Device Code	0/0172	32
33			Service Offset		000016
34			→ BASE	3/0100	34
35	C400		No. of Words		000062
36			→ Device Code	0/0172	36
37			Service Offset		000022
40			→ BASE	3/0200	40
41	BCL		No. of Words		000074
42			→ Device Code	0/0172	42
43			Service Offset		000020
44			→ BASE	3/0200	44
45	EMU		No. of Words		000074
46			→ Device Code	5/1471	46
47			Service Offset		000020
50			→ BASE	6/1200	50
51	D1600/D818		No. of Words		000170
52			→ Device Code	0/0175	52
53			Service Offset		000012
54			→ BASE	6/1400	54
55	D800/D400		No. of Words		000144
56			→ Device Code	0/0175	56
57			Service Offset		000012
60			→ BASE	10/1400	60
61	DRIF		No. of Words		000125
62			→ Device Code	5/1471	62
63			Service Offset		000047
64			→ BASE	7/1400	64
65	DIAB		No. of Words		000152
66			→ Device Code	5/1471	66
67			Service Offset		000040
70			→ BASE	7/1300	70
71	TYI		No. of Words		000073
72			→ Device Code	10/0172	72
73			Service Offset		000017
74					74
75					75
76					76
77					77

OS - RECOVERY ROUTINE

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Step	Instruction	Address	Comment	Octal	Step
00	*ENTRY		RECOVER from SECURITY	← BA →	00
01	LDA	0574	Phase 1 Source/Target *PHASE 1		01
02	AND				02
03	JUMP	0520	Bypass Phase 1		03
04	→ ANDA	Z 1753	(Leaves Source)		04
05	IORA	Z 0320	000300		05
06	SWAPA		300/Source		06
07	LDB	0576	No. of Sectors, last call		07
10	JSBR	0540	Copy to FIXED		10
11	LDA	0574	Phase 1 Source/Target		11
12	SWAPA				12
13	ANDA	Z 1753	(Leaves Target)		13
14	IORA	Z 0320	000300 (Target/300)		14
15	LDB	0576	No. of Sectors		15
16	JSBR	0540	COPY from FIXED		16
17	NOOP				17
20	LDA	0575	Phase 2 Source/Target *PHASE 2		20
21	AND				21
22	JUMP	I 0500	Return - bypass phase 2.		22
23	→ ANDA	Z 1753	(Leaves Source)		23
24	IORA	Z 0320	000300		24
25	SWAPA		300/Source		25
26	LDB	0577	No. of Sectors of last call.		26
27	JSBR	0540	COPY to FIXED		27
30	LDA	0575	Source/Target		30
31	ANDA	Z 1752	(Leaves Target Disc No.)		31
32	STA	0535			32
33	JSBR	0700	REFORMAT FIXED DISC		33
34	R ₁ = 000300		Old Disc No.		34
35	R ₂ = /		New ..		35
36	R ₃ = 000207		Protection Limit		36
37	JUMP	I 0500	Return.		37
40	*ENTRY		COPY	← BA →	40
41	STA	0600	Master Disc No. (last call byte)		41
42	SWAPP(KSE/mites)				42
43	STA	0602	Copy Disc No. (" ") + 1/10 sectors off.		43
44	JUMP	0643	Save No. of Sectors of last call.		44
45	LDA				45
46	STA	0601	} Sector 4		46
47	STA	0603			47
50	LDA	Z 0240	CF22		50
51	STA	0605	No. of Sectors		51
52	JSBR	1000	COPY Sector 4 → 27		52
53	R = 6/0600				53
54	JUMP	I 0610	Return to flash		54
55	LDA	Z 0241	} Sector 41		55
56	STA	0601			56
57	STA	0603		57	
60	LDA	Z 0207	CF7		60
61	STA	0605	No. of Sectors		61
62	JSBR	1000	COPY Sector 41 → 47		62
63	R = 6/0600				63
64	LDA	Z 0250	} Sector 54		64
65	STA	0601			65
66	STA	0603		66	
67	LDA	0606	} No. of Sectors of last call.		67
70	STA	0605			70
71	JSBR	1000	COPY Sector 54 → end		71
72	R = 6/0600				72
73	JUMP	I 0540	Return.		73
74			PHASE 1 Source/Target	—	74
75	Recovery Disc Table		PHASE 2 Source/Target	—	75
76			PHASE 1 No. of Sectors of last call	—	76
77			PHASE 2	—	77

OS.

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Step	Instruction	Address	Comment	Octal	Step
00			MUSTER Dec No.	-	00
01			Start Sector	-	01
02			COPY Dec No.	-	02
03			Start Sector	-	03
04			→ buffer 5/0000	-	04
05			No. of Sectors	-	05
06			No. of Sectors of (end code)	-	06
07			Default	031230	07
10	JSBR	IL 1653	FINISH "COPYING" (from 0554)		10
11	A= 6/0613				11
12	JUMP	0555			12
13			CAN L		13
14			O S		14
15			SP SP		15
16			R E		16
17			C O		17
20			V E		20
21			R Y		21
22			SP SO		22
23			C O		23
24			P Y		24
25			I V		25
26			G SI		26
27			ML		27
30					30
31					31
32					32
33					33
34					34
35					35
36					36
37					37
40					40
41					41
42					42
43			(from 0544)		43
44	(BNØ LDB	0607			44
45	→ STB	0606			45
46	JUMP	0545			46
47			Counter	-	47
50	* ENTRY		FETCH FILE TABLES	← DA →	50
51	LDA	0670	→ System Table		51
52	(ANØ JUMP	I 0650	Return - No system table		52
53	→ STA	Z 0014	→ System Table		53
54	LDA	Z 0204	CF4		54
55	STA	0647	Counter		55
56	LDA	Z 0025	→ File Table Table		56
57	STA	0677	Table Points		57
60	LDA	I 0670	= System No. * Next Table		60
61	(ANØ JUMP	0672	Bypass this table		61
62	→ LDA	I 0677	→ File Table		62
63	STA	0671			63
64	JSBR	IL 1670	FETCH File Table		64
65	P=000305				65
66	P= /		→ System No.		66
67	P= /		→ File Table		67
70	INSZ	0670	System Points		70
71	INSZ	0677	Table Points		71
72	DESZ	0647	Counter		72
73	(JUMP	0661	auto next table		73
74	→ JUMP	I 0650	return		74
75			Table Points		75
76					76
77					77

OS - Relabel / COPY SUBROUTINE

Page:- 06 Col:- 07-13

Step	Instruction	Address	Comment	Octal	Step
00					00
01			Col. 07 as per Systems Overlay		01
02			Module 006 (col 25) (buffer 5/0000)		02
03			Cols 10 & 11 as per Systems		03
04			Overlay Module 005.		04
05					05
06			als 12 & 13 Buffer for reliability		06
07			disc!		07
10					10
11					11
12					12
13					13
14					14
15					15
16					16
17					17
20					20
21					21
22					22
23					23
24					24
25					25
26					26
27					27
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74					74
75					75
76					76
77					77

OS - JUMMY D818/D1600 SERVICE

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Step	Instruction	Address	Comment	Octal	Step
00			→ COMPLETION ADDRESS (next 9/10xx)	-	00
01			STATUS	-	01
02			TRY AGAIN COUNTER	-	02
03			ADDRESS of LOAD VECTOR	-	03
04			"DATA START" of "DATA/IO/PS" of "NOOP"	-	04
05			DRIVE CODE	-	05
06	Data corrupted flag		SECTOR NUMBER	-	06
07	"Start Channel Program"		CORE ADDRESS	-	07
10	rotate		SECTOR COUNT (low end)	-	10
11			FAULT INDICATOR	-	11
12	*ENTRY		DISC SERVICE (D818/D1600)	← BA →	12
13	JUMP	I 0014	Resume Channel Program		13
14	*ENTRY		WAIT (next */002I)	← BA →	14
15	JUMP	I 0012	Dismiss Interrupt		15
16	INT OFF		*Start of CHANNEL PROGRAM	000005	16
17	LDA	I 0000			17
20	CASA		} Previous Channel Program may leave completion pending.		20
21	STA	I 0000			
22	LDA	0005	Drive Code		22
23	DAT03A			014600	23
24	JSBR	0076	Test Status & Clear Device		24
25	JUMP	0062	Abort transfer (Status present)		25
26	LDA	0004	Read, Write or No-operation		26
27	AND				27
30	JUMP	0047	Bypass transfers		30
31	→ STA	0143			31
32	JSBR	0125	Transfer (up to Sector) *NEXT transfer		32
33	LDA	0010	Sector Count (low end)		33
34	SFA	Z 0210	CF8		34
35	APOS				35
36	JUMP	0046	All transfers completed		36
37	→ STA	0010	Sector Count		37
40	LDA	0006			40
41	ADA	Z 0210	CF8 } Sector Number		41
42	STA	0006			42
43	DAT12B		} Core Address	010200	43
44	STB	0007			44
45	JUMP	0032	auto next transfer		45
46	CAA				46
47	JSBR	0104	Indicate Completion * Completed		47
50	JSBR	0113	Set & Test Monitor * Monitor for "Fault"		50
51	SKIP				51
52	→ JUMP	0057	Fault already present (Bypass monitor)		52
53	START		Start Monitor	011000	53
54	CAA				54
55	STA	0011	Clear Fault Indicator		55
56	JSBR	0014	WAIT for "Fault Present" interrupt		56
57	JSBR	0076	Test Status & Clear Device		57
60	SKIP				60
61	JUMP	0050	No status present (Specious interrupt)		61
62	→ JSBR	0104	Indicate Completion * Abort		62
63	JSBR	0113	Set & Test Monitor * Monitor for "Clear"		63
64	JUMP	0071	No fault to wait for (Bypass monitor)		64
65	→ START		Start Monitor	011000	65
66	LDA	Z 0201	CF1		66
67	STA	0011	Fault Indicator to be odd		67
70	JSBR	0014	WAIT for "Fault Cleared" interrupt		70
71	JSBR	0076	Test Status & Clear Device		71
72	JUMP	0063	Status present (specious interrupt)		72
73	→ JUMP	0047	Indicate completion, then monitor for fault.		73
74			MASK (Status Bits)	000777	74
75			Fault Interrupt	000402	75
76	*ENTRY		Test Status & Clear Device	← BA →	76
77	DAT13A/STOP			016300	77

OS - Dummy D818/D1600 Service (continued)

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Step	Instruction	Address	Comment	Octal	Step
00	ANDA	0074	000777 (Leaves Status bits)		00
01	AND				01
02	INSH	0076	(Skips if status is clear)		02
03	JUMP	I 0076	Return		03
04	*ENTRY		INDICATE COMPLETION	← BA →	04
05	STA	0001	Status		05
06	LDA	I 0000	} Set Completion Indicator		06
07	CISA/COMPSA				
10	STA	I 0000			10
11	JSBR	0014	WAIT for "Resume Channel Program"		11
12	JUMP	I 0104	Return.		12
13	*ENTRY		SET & TEST MONITOR	← LA →	13
14	LDA	0005	Drive Code		14
15	IORA	Z 0332	Bit 10 (Monitor)		15
16	DATO3A			014600	16
17	DATI3A			014300	17
20	STA	0001	Status		20
21	ANDA	Z 0332	Bit 10		21
22	A=0				22
23	INSH	0113	(Skips if Monitor bit set)		23
24	JUMP	I 0113	Return.		24
25	*ENTRY		TRANSFER (up to 8 sectors)	← BA →	25
26	LDA	Z 0203	CF2 *Restart		26
27	STA	0002	Try again counter		27
30	LDA	0010	Sector Count *Try again		30
31	CHPA	Z 0207	CF7		31
32	NOOP		} Establishes no. of Sectors for this transfer		32
33	SKNGT				
34	LDA	Z 0207	CF7		34
35	SLLA(10)		Shift to bits 11-13	001712	35
36	IORA	0005	Drive Code		36
37	DATO3A			014600	37
40	LDA	0006	Sector Number		40
41	LDB	0007	Cyl Address		41
42	DATO2B			010500	42
43	DATO1A/STATUS/IORES			/	43
44	JSBR	0014	WAIT for "Done"		44
45	JSBR	0076	Test Status & Clear Device		45
46	JUMP	0151	Fault		46
47	STA	0011	Clear Fault Indicator		47
50	JUMP	I 0125	Return.		50
51	STA	0001	Status		51
52	ANDA	Z 0214	Bits 3 & 4 (Temporary Fault Mask)		52
53	H=0				53
54	JUMP	0062	About transfer (temporary fault)		54
55	DESZ	0002	Try again counter		55
56	JUMP	0130	Try again		56
57	LDA	0011	*COUNT FAIL		57
60	ADA	0075	} Fault indicator non-zero and even.		60
61	STA	0011			
62	JSBR	0014	WAIT for "Resume Channel Program"		62
63	ESWRA				63
64	CHPA	Z 0347	BIT 13		64
65	CHP/STEP				65
66	JUMP	0126	Restart		66
67	JUMP	0147	Bypass		67
70					70
71					71
72					72
73					73
74					74
75					75
76					76
77					77

OS - JIMMY D800/D400 SERVICE

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Step	Instruction	Address	Comment	Octal	Step
00			→ COMPLETION ADDRESS (psect 2/10xx)	-	00
01			STATUS	-	01
02			TRAY AGAIN COUNTER	-	02
03			ADDRESS of LOAD VECTOR	-	03
04			"DATO1A/START" & "DATO1A/IDDS" & "NOOP"	-	04
05			DRIVE CODE	-	05
06	Data inserted by		SECTOR NUMBER	-	06
07	"Set Channel Prog"		CORE ADDRESS	-	07
10	Positive		SECTOR COUNT (less one)	-	10
11			FAULT INDICATOR	-	11
12	*ENTRY		DISC SERVICE (D800/D400)	← BA →	12
13	JUMP	I 0014	Resume Channel Program		13
14	*ENTRY		WAIT (psect 4/0012 I)	← BA →	14
15	JUMP	I 0012	Delayed Interrupt		15
16	INT OFF		& Start of Channel Program	000005	16
17	LDA	I 0000			17
20	CHSA		} Previous Channel Program may have completion pending		20
21	STA	I 0000			
22	JSBR		Test Status & Clear Decis		22
23	JUMP		Status - Abort Transfer		23
24	LDA		Read, Write & No-operation		24
25	AND				25
26	JUMP		Bypass transfer		26
27	→ STA				27
30	INSZ		Sector Count		30
31	JSBR		TRANSFER one sector & Next Sector		31
32	INSZ		Sector Number		32
33	LDA				33
34	ADA	Z 0316	128 words } Transfer Core Address		34
35	STA				35
36	DESZ		Sector Count		36
37	JUMP		into next sector		37
40	→ CIA				40
41	JSBR		Indicate Completion		41
42	CHA				42
43	STA		Clear Fault Indicator		43
44	DATO3B/START			011600	44
45	DATI3A			014300	45
46	AND				46
47	JSBR		WAIT for "Fault" interrupt		47
50	→ JSBR		Test Status & Clear Decis		50
51	SHIP		Indicate Completion & Transfer for "Clear"		51
52	JUMP		No status - Suspends interrupt		52
53	→ JSBR		Indicate Completion & ABORT		53
54	DATO3B/START			011600	54
55	DATI3A			014300	55
56	ANDA	Z 0214	Bits 3&4		56
57	A=0				57
60	JSBR		Temporary Fault		60
61	→ JSBR		Test Status & Clear Decis		61
62	JUMP		Status present - Suspends interrupt		62
63	JUMP		Indicate completion & Wait for "Fault"		63
64	*ENTRY		Temporary Fault	← BA →	64
65	LDA	Z 0201	Bit 1		65
66	STA		Fault Indicator to be valid.		66
67	JSBR		WAIT for "Clear"		67
70	JUMP	I 0064	Return.		70
71	*ENTRY		INDICATE COMPLETED	← BA →	71
72	STA		Status		72
73	LDA	I 0000			73
74	ESH/CHSA		} Set Completion Zeros		74
75	STA	I 0000			75
76	JSBR		WAIT for "Resume Channel Program"		76
77	JUMP	I 0071	Return.		77

OS - Jimmy D800/D400 Service (continued)

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Step	Instruction	Address	Comment	Octal	Step
00	*ENTRY		Test Status & Clear Device	← BA →	00
01	DATA3/STOP			016300	01
02	AND				02
03	INSZ	0100	(Skip if No Status)		03
04	JUMP	I 0100	Return.		04
05			FAULT INCREMENT	001002	05
06	*ENTRY		TRANSFER over Secta	← BA →	06
07	LDA	Z 0203	CF3	*Restart	07
10	STA	0002	Try again Count		10
11	LDA	0005	Drive Count	* Try Again	11
12	APOS				12
13	LDA	Z 0355	hd 15 (Drive 1) (Assumes 2 Drive Pack)		13
14	JORA	0006	Secta No.		14
15	LDB	0007	Core Address		15
16	DATA2B			010500	16
17	DATA1/START/STOP			-	17
20	JSBR	0014	WAIT for "Done"		20
21	JSBR	0100	Test Status & Clear Device		21
22	JUMP	0125	fault		22
23	STA	0011	Clear Fault Indicators		23
24	JUMP	I 0106	Return.		24
25	STA	0001	Status		25
26	ANDA	Z 0214	bits 3&4 (Temporary Fault Mask)		26
27	A=0				27
30	JUMP	0053	Abort Transfer (Temporary Fault)		30
31	DESZ	0002	Try Again Count		31
32	JUMP	0111	Try Again		32
33	LDA	0011		* Best Fail	33
34	ADA	0105	Fault Ind. } Fault Ind. Non-yes and		34
35	STA	0011		envy.	35
36	JSBR	0014	WAIT for "Machine Element Program"		36
37	ESWAR				37
40	CPA	Z 0347	Ref 13		40
41	CR/STOP				41
42	JUMP	0107	Restart		42
43	JUMP	0123	Bypass		43
44					44
45					45
46					46
47					47
50					50
51					51
52					52
53					53
54					54
55					55
56					56
57					57
60					60
61					61
62					62
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66					66
67					67
70					70
71					71
72					72
73					73
74					74
75					75
76					76
77					77