

1.3.2 Layout For System Industries Disks



A System Industries (S.I.) drive utilizes one fixed and one removable disk pack of equal length. The packs contain sixteen sectors per track. Each pack contains 816 tracks (408 cylinders) for a total of 13,056 (base 10 or 31400 base 8) sectors (blocks). Since each sector contains 256 12-bit words (512 characters), there is a total of 3,342,336 12-bit words (6,684,672 6-bit characters) on one disk pack. The transfer rate for this disk is 2.50 million bits per second. The rotational speed is 2400 RPM and the average latency is 12.5 MS. The ETOS software supports up to two System Industries drives, each containing one fixed and one removable cartridge. The industry designation for the removable top-loading cartridge is a "2340" pack.

ETOS is distributed on a removable pack and copied onto the fixed pack in port 0 for operation of the system. After this copy, the fixed disk has a dual identity in the sense that it can be used in both OS/8 single-user mode and ETOS mode. The ETOS monitor is loaded and executed via the R command of OS/8; that is, ETOS.SV is an executable program from OS/8. The fixed pack is therefore booted with the standard OS/8 System Industries bootstrap (see 2.3).

The ETOS cartridge is logically different from standard System Industries cartridges in the following ways.

1. The OS/8 single user monitor has device handlers built into it which are unique to the ETOS system. This monitor should not be copied onto standard OS/8 packs.

Copies of the resources (RES/E) for both the real OS/8 and the virtual OS/8 are provided in Table 1-5. In real OS/8, the SYS and DSK handlers are modified System Industries system handlers and the remaining handlers are the standard OS/8 device handlers. In virtual OS/8, all device handlers have been modified for maximum efficiency under ETOS.

If the device handlers for your peripherals are not enabled, you must run BUILD under OS/8 and ETOS to enable them (see 6.4.1). The peripherals currently enabled under OS/8 are the fixed and removable packs in port 0, RK05J drive 0, console terminal, low-speed paper tape reader/punch, RX01 floppy disk drives 0 and 1, line printer and card reader. The peripherals currently enabled under ETOS OS/8 are the write-protected system area, channels 2-5, TD8E DECTape drive 0, RX01 floppy disk drives 0 and 1, user terminals, low speed paper tape reader/punch, line printer, spooler and card reader.

2. In virtual OS/8 the OS/8 CUSPs (Commonly Used System Programs) have been modified use under ETOS. For this reason, the standard OS/8 cusps should never replace these programs. The differences between standard OS/8 cusps and their ETOS versions are presented in 4.3, System User's Guide.
3. Standard OS/8 logically divides a System Industries disk into four devices. The fixed pack in port 0 has available devices DSK0, DSK1, DSK2 and DSK3; the removable pack in port 0 has available devices DSK4, DSK5, DSK6 and DSK 7. Each System Industries pack has 32054 (base 8) or 13,056 (base 10) sectors (blocks). The disk allocation for standard OS/8 is shown in Table 1-6.

The ETOS disk allocation (see Table 1-7) differs in that there is no single user accessibility beyond block 1177 (base 8). In single user mode, the ETOS disk appears to the user to have 1200 (base 8) blocks, all allocated as the logical system device (SYS).

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Table 1-5
System Industries Resources

Real OS/8

<u>.RESOURCES ETOSOS.SY/E</u>										
#	NAME	TYPE	MODE	SIZ	BLK	KIND	U	V	ENT	USER
01	SYS	40	RWF		SYS		0	B	07	
02	DSK	40	RWF		SYS		0	B	07	
03	RKB0	RK8E	RWF	3248	16	RK05	0	A	21	
04	RKA1	RK8E	RWF	3248	16	RK05	1	A	22	
05	RKB1	RK8E	RWF	3248	16	RK05	1	A	23	
06	RXA0	RX8E	RWF	494	17			E	30	
07	RXA1	RX8E	RWF	494	17			E	34	
10	DTA0	TD8E	RWF	737	20+	TD8A	0	D	10	
11	CDR	CR8E	R		21+	029		C	00	
12	HSP	PTP	W		22	PT8E		A	00	
13	HSR	PTR	R		22	PT8E		A	112	
14	TTY	TTY	RW		23+	KL8E		E	176	
15	PTP	PTP	W		24	KS33		A	00	
16	PTP	PTP	R		24	KS33		A	110	
17	LPT	LPT	W		25	LPSV		C	05	

FREE DEVICE SLOTS: NONE, FREE BLOCK SLOTS: NONE
 OS/8 V3Q

VIRTUAL OS/8

<u>.RESOURCES ETOSSET.SY/E</u>										
#	NAME	TYPE	MODE	SIZ	BLK	KIND	U	V	ENT	USER
01	SYS	40	RWF		SYS		0	D	07	
02	DSK	42	RWF		SYS		1		11	
03	CHN2	42	RWF		SYS		1		11	
04	CHN3	43	RWF		SYS		1		12	
05	CHN4	44	RWF		SYS		1		13	
06	CHN5	45	RWF		SYS		1		14	
07	RXA0	RX8E	RWF	494	16			C	30	
10	RXA1	RX8E	RWF	494	16			C	34	
11	DTA0	TD8E	RWF	737	17+	TD8A	0	B	10	
12	LPT	LPTR	W		20	LPSV		B	03	
13	PTP	PTP	W		21	KS33		A	00	
14	PTR	PTR	R		21	KS33		A	106	
15	QLP	LPTR	W		22+	LQP		B	00	
16	TTY	TTY	RW		23+	KL8E		E	176	
17	CDR	CR8E	R		24+	029		C	00	

FREE DEVICE SLOTS: NONE, FREE BLOCK SLOTS: 01
 OS/8 V3Q

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Table 1-6
OS/8 S.I. System Disk Allocation

<u>Blocks</u>	<u>Use</u>
0	Bootstrap
1-6	Directory of DSK0 (SYS)
7-70	OS/8 monitor
71-6257	DSK0 file storage [3192 (base 10) blocks]
6260-6277	Unused
6300	Unused
6301-6306	Directory of DSK1
6307-14557	DSK1 file storage [3241 (base 10) blocks]
14560-14577	Unused
14600	Unused
14601-14606	Directory of DSK2
14607-23057	DSK2 file storage [3241 (base 10) blocks]
23060-23077	Unused
23100	Unused
23101-23106	Directory of DSK3
23107-31357	DSK3 file storage [3241 (base 10) blocks]
31360-31377	Unused