

000.004	54X	DEV.DDA	DS	2	DRIVER ADDRESS
000.006	55X	DEV.FLG	DS	1	FLAG BYTE
000.001	56X	DT.DD	EQU	00000001B	DIRECTORY DEVICE
000.002	57X	DT.CR	EQU	00000010B	CAPABLE OF READ OPERATION
000.004	58X	DT.CW	EQU	00000100B	CAPABLE OF WRITE OPERATION
000.010	59X	DT.RN	EQU	00001000B	Capable of random access /80.02.sc/
000.020	60X	DT.CH	EQU	00010000B	Capable of Character mode /80.02.sc/
	61X				
000.007	62X	DEV.MUM	DS	1	MOUNTED UNIT MASK
000.010	63X	DEV.MNU	DS	1	MAXIMUM NUMBER OF UNITS
000.011	64X	DEV.UNT	DS	2	ADDRESS OF UNIT SPECIFIC DATA TABLE
	65X				
000.013	66X	DEV.DVL	DS	2	DRIVER BYTE LENGTH
000.015	67X	DEV.DVG	DS	1	DRIVER ROUTINE GROUP ADDRESS
	68X				
000.016	69X	DEVELEN	EQU	*	DEVICE TABLE ENTRY LENGTH
	71X	**			UNIT SPECIFIC DEVICE DATA TABLE ENTRIES
	72X				
000.000	73X		ORG	0	
	74X				
000.000	75X	UNT.FLG	DS	1	UNIT SPECIFIC *DEV.FLG*
000.001	76X	UNT.SPG	DS	1	Sectors Per Group /80.04.GC/
000.002	77X	UNT.GRT	DS	2	ADDRESS OF GROUP RESERVATION TABLE (IF DT.DD)
000.004	78X	UNT.GTS	DS	2	GRT SECTOR NUMBER
000.006	79X	UNT.DIS	DS	2	DIRECTORY FIRST SECTOR NUMBER
	80X				
000.010	81X	UNT.SIZ	EQU	*	SIZE OF UNIT SPECIFIC DATA TABLE PER UNIT
000.010	82		XTEXT	DIFDEF	
	84X	**			DIRECTORY FILE FLAGS.
	85X				
000.200	86X	DIF.SYS	EQU	10000000B	SYSTEM FILE
000.100	87X	DIF.LOC	EQU	01000000B	LOCKED FOR CHANGE
000.040	88X	DIF.WP	EQU	00100000B	WRITE PROTECTED
000.020	89X	DIF.CNT	EQU	00010000B	CONTIGUOUS FILE
	90X				
000.010	91		XTEXT	DIRDEF	
	93X	**			DIRECTORY ENTRY FORMAT.
	94X				
000.000	95X		ORG	0	
	96X				
	97X				
000.377	98X	DF.EMP	EQU	377Q	FLAGS ENTRY EMPTY
000.376	99X	DF.CLR	EQU	376Q	FLAGS ENTRY EMPTY, REST OF DIR ALSO CLEAR
	100X				
000.000	101X	DIR.NAM	DS	8	NAME

000.010	102X	DIR.EXT	DS	3	EXTENSION
000.013	103X	DIR.PRO	DS	1	PROJECT
000.014	104X	DIR.VER	DS	1	VERSION
000.015	105X	DIRIDL	EQU	*	FILE IDENTIFICATION LENGTH
	106X				
000.015	107X	DIR.CLU	DS	1	CLUSTER FACTOR
000.016	108X	DIR.FLG	DS	1	FLAGS
000.017	109X		DS	1	RESERVED
000.020	110X	DIR.FGN	DS	1	FIRST GROUP NUMBER
000.021	111X	DIR.LGN	DS	1	LAST GROUP NUMBER
000.022	112X	DIR.LSI	DS	1	LAST SECTOR INDEX (IN LAST GROUP)
000.023	113X	DIR.CRD	DS	2	CREATION DATE
000.025	114X	DIR.ALD	DS	2	LAST ALTERATION DATE
	115X				
000.027	116X	DIRELEN	EQU	*	DIRECTORY ENTRY LENGTH
000.027	117	XTEXT	IOCDEF		
	119X	**			I/O CHANNEL DEFINITIONS.
	120X				
000.000	121X	ORG		0	
	122X				
000.000	123X	IOC.LNK	DS	2	ADDRESS OF NEXT CHANNEL, =0 IF LAST
000.002	124X	IOC.DDA	DS	2	THREAD JUMP TO DEVICE DRIVER (VIA DEV TABLE)
	125X				
000.004	126X	IOC.FLG	DS	1	FILE TYPE FLAGS
000.001	127X	FT.DD	EQU	00000001B	=1 IF DIRECTORY DEVICE
000.002	128X	FT.DR	EQU	00000010B	=1 IF OPEN FOR READ
000.004	129X	FT.DW	EQU	00000100B	=1 IF OPEN FOR WRITE
000.010	130X	FT.DU	EQU	00001000B	=1 IF OPEN FOR UPDATE
000.020	131X	FT.OC	EQU	00010000B	=1 IF OPEN FOR CHARACTER MODE /80.02.GC/
000.003	132X	IOC.SQL	EQU	*-IOC.DDA	LENGTH OF INFO FOR SEQUENTIAL FILE (FROM IOC)
	133X				
000.005	134X	IOC.GRT	DS	2	ADDRESS OF GROUP RESERVATION TABLE
000.007	135X	IOC.SPG	DS	1	SECTORS PER GROUP, THIS DEVICE
000.010	136X	IOC.CGN	DS	1	CURRENT GROUP NUMBER
000.011	137X	IOC.CSI	DS	1	CURRENT SECTOR INDEX (IN CURRENT GROUP)
000.012	138X	IOC.LGN	DS	1	LAST GROUP NUMBER
000.013	139X	IOC.LSI	DS	1	LAST SECTOR INDEX (IN LAST GROUP)
000.010	140X	IOC.DRL	EQU	*-IOC.FLG	LENGTH OF INFO NORMALLY COPIED BACK TO THE CHANNEL TABLE
	141X	*			
000.014	142X	IOC.DTA	DS	2	DEVICE TABLE ADDRESS FOR THIS DEVICE
000.016	143X	IOC.DES	DS	2	SECTOR NUMBER OF DIRECTORY ENTRY
000.020	144X	IOC.DEV	DS	2	DEVICE CODE
000.022	145X	IOC.UNI	DS	1	UNIT NUMBER (0-9)
000.021	146X	IOC.DIL	EQU	*-IOC.DDA	LENGTH OF INFO FOR DIRECTORY FILE (FROM IOC)
	147X				
000.023	148X	IOC.DIR	DS	DIRELEN	DIRECTORY ENTRY
	149X				
000.052	150X	IOCELEN	EQU	*	IOC ENTRY LENGTH
	151X				
000.001	152X	IOCCTD	EQU	1	INDEX OF USER CHANNEL #0 IN CHANTAB (FIRST = 0)
000.052	153	XTEXT	HOSDEF		

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155X **      HOSDEF - DEFINE HOS PARAMETER.
156X *
157X
158X
000.040     159X VERS    EQU    2*16+0      VERSION 2.0
160X
000.377     161X SYSCALL EQU    377Q        SYSCALL INSTRUCTION
162X
000.000     163X
164X          ORG      0
165X
166X *      RESIDENT FUNCTIONS
167X
000.000     168X .EXIT   DS      1      EXIT (MUST BE FIRST)
000.001     169X .SCIN   DS      1      SCIN
000.002     170X .SCOUT  DS      1      SCOUT
000.003     171X .PRINT  DS      1      PRINT
000.004     172X .READ   DS      1      READ
000.005     173X .WRITE  DS      1      WRITE
000.006     174X .CONSL  DS      1      SET/CLEAR CONSOLE OPTIONS
000.007     175X .CLRCD  DS      1      CLEAR CONSOLE BUFFER
000.010     176X .LOADO  DS      1      LOAD AN OVERLAY
000.011     177X .VERS   DS      1      RETURN HDOS VERSION NUMBER
000.012     178X .SYSRES DS      1      PRECEDING FUNCTIONS ARE RESIDENT
179X
180X
181X *      *HDOSOVLO.SYS* FUNCTIONS
182X
000.040     183X          ORG      40A
184X
000.040     185X .LINK   DS      1      LINK (MUST BE FIRST)
000.041     186X .CTLCD  DS      1      CTL-C
000.042     187X .OPENR  DS      1      OPENR
000.043     188X .OPENW  DS      1      OPENW
000.044     189X .OPENU  DS      1      OPENU
000.045     190X .OPENC  DS      1      OPENC
000.046     191X .CLOSE  DS      1      CLOSE
000.047     192X .POSIT  DS      1      POSITION
000.050     193X .DELET  DS      1      DELETE
000.051     194X .RENAM  DS      1      RENAME
000.052     195X .SETTP  DS      1      SETTOP
000.053     196X .DECODE DS      1      NAME DECODE
000.054     197X .NAME   DS      1      GET FILE NAME FROM CHANNEL
000.055     198X .CLEAR  DS      1      CLEAR CHAN
000.056     199X .CLEARA DS      1      CLEAR ALL CHANS
000.057     200X .ERROR  DS      1      LOOKUP ERROR
000.060     201X .CHFLG  DS      1      CHANGE FLAGS
000.061     202X .DISMT  DS      1      FLAG SYSTEM DISK DISMOUNTED
000.062     203X .LOADD  DS      1      LOAD DEVICE DRIVER
000.063     204X .OPEN   DS      1      Parametrized Open
205X
206X
207X *      *HDOSOVLI.SYS* FUNCTIONS
208X
000.200     209X          ORG      2000
210X

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000.200	211X	.MOUNT	DS	1	MOUNT (MUST BE FIRST)
000.201	212X	.DMOUN	DS	1	DISMOUNT
000.202	213X	.MONMS	DS	1	MOUNT/NO MESSAGE
000.203	214X	.DMNMS	DS	1	DISMOUNT/NO MESSAGE
000.204	215X	.RESET	DS	1	RESET = DISMOUNT/MOUNT OF UNIT
000.205	216X	.CLEAN	DS	1	Clean device
000.206	217X	.DAB	DS	1	Dismount All Disks /80.08.sc/
000.207	218	XTEXT	HOSEQU		

220X ** HDOS SYSTEM EQUIVALENCES.

	221X	*			
	222X				
024.000	223X	S.GRT0	EQU	24000A	SYSTEM AREA FOR GRT0
025.000	224X	S.GRT1	EQU	25000A	SYSTEM AREA FOR GRT1
026.000	225X	S.GRT2	EQU	26000A	SYSTEM AREA FOR GRT2
	226X				
030.000	227X	ROMBOOT	EQU	30000A	ROM BOOT ENTRY
	228X				
040.100	229X		ORG	40100A	FREE SPACE FROM PAM-8
	230X				
040.100	231X		DS	8	JUMP TO SYSTEM EXIT
040.110	232X	D.CON	DS	16	DISK CONSTANTS
040.130	233X	SYDD	EQU	*	SYSTEM DISK ENTRY POINT
040.130	234X	D.VEC	DS	24*3	SYSTEM ROM ENTRY VECTORS
040.240	235X	D.RAM	DS	31	SYSTEM ROM WORK AREA
040.277	236X	S.VAL	DS	36	SYSTEM VALUES
040.343	237X	S.INT	DS	115	SYSTEM INTERNAL WORK AREAS
041.126	238X		DS	16	
041.146	239X	S.SOVR	DS	2	STACK OVERFLOW WARNING
041.150	240X		DS	42200A-*	SYSTEM STACK
001.032	241X	STACKL	EQU	*-S.SOVR	STACK SIZE
	242X				
042.200	243X	STACK	EQU	*	LWA+1 SYSTEM STACK
042.200	244X	USERFWA	EQU	*	USER FWA
042.200	245	XTEXT	ESVAL		

247X ** S.VAL - SYSTEM VALUE DEFINITIONS.

	248X	*			
	249X	*			THESE VALUES ARE SET AND MAINTAINED BY THE SYSTEM.
	250X	*			
	251X	*			THE DECK HOSEQU MUST BE MODIFIED WHEN THIS IS MODIFIED.
	252X				
	253X				
040.277	254X		ORG	S.VAL	
	255X				
040.277	256X	S.DATE	DS	9	SYSTEM DATE (IN ASCII)
040.310	257X	S.DATC	DS	2	CODED DATE
040.312	258X	S.TIME	DS	4	TIME FROM MIDNIGHT (IN TICS)
040.316	259X	S.HIMEM	DS	2	HARDWARE HIGH MEMORY ADDRESS+1
	260X				

040.320	261X	S.SYSM	DS	2	FWA RESIDENT SYSTEM
	262X				
040.322	263X	S.USRM	DS	2	LWA USER MEMORY
	264X				
040.324	265X	S.OMAX	DS	2	MAX OVERLAY SIZE FOR SYSTEM
	266X				
	267X				
	268X	**			THE FOLLOWING FIVE CELLS SHOULD BE MODIFIED/READ ONLY VIA THE .CONSL SYSCALL
	269X				
000.200	270X	CSL.ECH	EQU	10000000B	SUPPRESS ECHO
000.004	271X	CSL.RAW	EQU	00000100B	Raw Mode I/O /80.09.sc/
000.002	272X	CSL.WRP	EQU	00000010B	WRAP LINES AT WIDTH
000.001	273X	CSL.CHR	EQU	00000001B	OPERATE IN CHARACTER MODE
	274X				
000.000	275X	I.CSLMD	EQU	0	S.CSLMD IS FIRST BYTE
040.326	276X	S.CSLMD	DS	1	CONSOLE MODE
	277X				
000.200	278X	CTP.BKS	EQU	10000000B	TERMINAL PROCESSES BACKSPACES
000.100	279X	CTP.FF	EQU	01000000B	Terminal Processes Form-Feed /80.09.sc/
000.040	280X	CTP.MLI	EQU	00100000B	MAP LOWER CASE TO UPPER ON INPUT
000.020	281X	CTP.MLO	EQU	00010000B	MAP LOWER CASE TO UPPER ON OUTPUT
000.010	282X	CTP.2SB	EQU	00001000B	TERMINAL NEEDS TWO STOP BITS
000.002	283X	CTP.BKM	EQU	00000010B	MAP BKSP (UPON INPUT) TO RUBOUT
000.001	284X	CTP.TAB	EQU	00000001B	TERMINAL SUPPORTS TAB CHARACTERS
	285X				
000.001	286X	I.CONTY	EQU	1	S.CONTY IS 2ND BYTE
000.000	287X		ERRNZ	*-S.CSLMD-I.CONTY	
040.327	288X	S.CONTY	DS	1	CONSOLE TYPE FLAGS
000.002	289X	I.CUSOR	EQU	2	S.CUSOR IS 3RD BYTE
000.000	290X		ERRNZ	*-S.CSLMD-I.CUSOR	
040.330	291X	S.CUSOR	DS	1	CURRENT CURSOR POSITION
000.003	292X	I.CONWI	EQU	3	S.CONWI IS 4TH BYTE
000.000	293X		ERRNZ	*-S.CSLMD-I.CONWI	
040.331	294X	S.CONWI	DS	1	CONSOLE WIDTH
	295X				
000.001	296X	CD.FLG	EQU	00000001B	CTL-D FLAG
000.200	297X	CS.FLG	EQU	10000000B	CTL-S FLAG
	298X				
000.004	299X	I.CONFL	EQU	4	S.CONFL IS 5TH BYTE
000.000	300X		ERRNZ	*-S.CSLMD-I.CONFL	
040.332	301X	S.CONFL	DS	1	CONSOLE FLAGS
	302X				
040.333	303X	S.CAADR	DS	2	ADDRESS FOR ABORT PROCESSING (>256 IF VALID)
040.335	304X	S.CCTAB	DS	6	ADDR FOR CTL-A, CTL-B, CTL-C PROCESSING
040.343	305		XTEXT	ESINT	
	307X	**			S.INT - SYSTEM INTERNAL WORKAREA DEFINITIONS.
	308X	*			
	309X	*			THESE CELLS ARE REFERENCED BY OVERLAYS AND MAIN CODE, AND
	310X	*			MUST THEREFORE RESIDE IN FIXED LOW MEMORY.
	311X				
	312X				
040.343	313X		ORG		S.INT

	314X				
	315X	**	CONSOLE STATUS FLAGS		
	316X				
040.343	317X	S.CDB	DS	1	CONSOLE DESCRIPTOR BYTE
000.000	318X	CDB.HB5	EQU	0000000B	
000.001	319X	CDB.HB4	EQU	00000001B	=0 IF HB-5, =1 IF HB-4
040.344	320X	S.BAUD	DS	2	[0-14] HB-4 BAUD RATE, =0 IF HB-5
	321X	*			[15] =1 IF BAUD RATE => 2 STOP BITS
	322X				
	323X	**	TABLE ADDRESS WORDS		
	324X				
040.344	325X	S.DLINK	DS	2	ADDRESS OF DATA IN HDOS CODE
040.350	326X	S.DFWA	DS	2	FWA OVERLAY TABLE
040.352	327X	S.CFWA	DS	2	FWA CHANNEL TABLE
040.354	328X	S.DFWA	DS	2	FWA DEVICE TABLE
040.356	329X	S.RFWA	DS	2	FWA RESIDENT HDOS CODE
	330X				
	331X	**	DEVICE DRIVER DELAYED LOAD FLAGS		
	332X				
040.360	333X	S.DDLDA	DS	2	DRIVER LOAD ADDRESS (HIGH BYTE=0 IF NO LOAD PENDING)
040.362	334X	S.DDLEN	DS	2	CODE LENGTH IN BYTES
040.364	335X	S.DDGRP	DS	1	GROUP NUMBER FOR DRIVER
040.365	336X		DS	1	HOLD PLACE
	337X	*S.DDSEC	DS	2	SECTOR NUMBER FOR DRIVER (* OBSOLETE ! *)
040.366	338X	S.DDDTA	DS	2	DEVICE'S ADDRESS IN DEVLST +DEV.RES
040.370	339X	S.DDOPC	DS	1	OPEN OPCODE PENDING
	340X				
	341X	**	OVERLAY MANAGEMENT FLAGS		
	342X				
000.001	343X	OVL.IN	EQU	00000001B	IN MEMORY
000.002	344X	OVL.RES	EQU	00000010B	PERMINANTLY RESIDENT
000.014	345X	OVL.NUM	EQU	00001100B	OVERLAY NUMBER MASK
000.200	346X	OVL.UCS	EQU	1000000B	USER CODE SWAPPED FOR OVERLAY
	347X				
040.371	348X	S.OVLFL	DS	1	OVERLAY FLAG
040.372	349X	S.UCSF	DS	2	FWA SWAPPED USER CODE
040.374	350X	S.UCSL	DS	2	LENGTH SWAPPED USER CODE
040.376	351X	S.OVLS	DS	2	SIZE OF OVERLAY CODE
041.000	352X	S.OVLE	DS	2	ENTRY POINT OF OVERLAY CODE
	353X				
041.002	354X	S.SSN	DS	2	SWAP AREA SECTOR NUMBER
041.004	355X	S.DSN	DS	2	OVERLAY SECTOR NUMBER
	356X				
	357X	*	SYSCALL PROCESSING WORK AREAS		
	358X				
041.006	359X	S.CACC	DS	1	(ACC) UPON SYSCALL
041.007	360X	S.CODE	DS	1	SYSCALL INDEX IN PROGRESS
	361X				
	362X	*	JUMPS TO ROUTINES IN RESIDENT HDOS CODE		
	363X				
041.010	364X	S.JUMPS	DS	0	START OF DUMP VECTORS
041.010	365X	S.SDD	DS	3	JUMP TO STAND-IN DEVICE DRIVER
041.013	366X	S.FASER	DS	3	JUMP TO FATSEERR (FATAL SYSTEM ERROR)
041.016	367X	S.DIREA	DS	3	JUMP TO DIREAD (DISK FILE READ)
041.021	368X	S.FCI	DS	3	JUMP TO FCI (FETCH CHANNEL INFO)
041.024	369X	S.SCI	DS	3	JUMP TO SCI (STORE CHANNEL INFO)

041.027	370X	S.GUP	DS	3	JUMP TO GUP (GET UNIT POINTER)
	371X				
041.032	372X	S.MOUNT	DS	1	<>0 IF THE SYSTEM DISK IS MOUNTED
041.033	373X	S.DCS	DS	1	DEFAULT CLUSTER SIZE-1
	374X				
041.034	375X	S.BOOTF	DS	1	BOOT FLAGS
000.001	376X	BOOT.P	EQU	00000001B	EXECUTE PROLOGUE UPON BOOTUP
	377X				
	378X	*			STACK VALUE SAVED FOR OVERLAY SYSCALLS
	379X				
041.035	380X	S.OVSTK	DS	2	VALUE OF SP UPON SYSCALLS USING OVERLAY
	381X				
041.037	382X		DS	1	RESERVED
	384X	**			ACTIVE I/O AREA.
	385X	*			
	386X	*			THE AIO.XXX AREA CONTAINS INFORMATION ABOUT THE I/O OPERATION
	387X	*			CURRENTLY BEING PERFORMED. THE INFORMATION IS OBTAINED FROM
	388X	*			THE CHANNEL TABLE, AND WILL BE RESTORED THERE WHEN DONE.
	389X	*			
	390X	*			NORMALLY, THE AIO.XXX INFORMATION WOULD BE OBTAINED DIRECTLY
	391X	*			FROM VARIOUS SYSTEM TABLES VIA POINTER REGISTERS. SINCE THE
	392X	*			8080 HAS NO GOOD INDEXED ADDRESSING, THE DATA IS MANUALLY
	393X	*			COPIED INTO THE AIO.XXX CELLS BEFORE PROCESSING, AND
	394X	*			BACKDATED AFTER PROCESSING.
	395X				
041.040	396X	AIO.VEC	DS	3	JUMP INSTRUCTION
041.041	397X	AIO.DDA	EQU	*-2	DEVICE DRIVER ADDRESS
041.043	398X	AIO.FLG	DS	1	FLAG BYTE
041.044	399X	AIO.GRT	DS	2	ADDRESS OF GROUP RESERV TABLE
041.046	400X	AIO.SPG	DS	1	SECTORS PER GROUP
041.047	401X	AIO.CGN	DS	1	CURRENT GROUP NUMBER
041.050	402X	AIO.CSI	DS	1	CURRENT SECTOR INDEX
041.051	403X	AIO.LGN	DS	1	LAST GROUP NUMBER
041.052	404X	AIO.LSI	DS	1	LAST SECTOR INDEX
041.053	405X	AIO.DTA	DS	2	DEVICE TABLE ADDRESS
041.055	406X	AIO.DES	DS	2	DIRECTORY SECTOR
041.057	407X	AIO.DEV	DS	2	DEVICE CODE
041.061	408X	AIO.UNI	DS	1	UNIT NUMBER (0-9)
	409X				
041.062	410X	AIO.DIR	DS	DIRELEN	DIRECTORY ENTRY
	411X				
041.111	412X	AIO.CNT	DS	1	SECTOR COUNT
041.112	413X	AIO.EOM	DS	1	END OF MEDIA FLAG
041.113	414X	AIO.EOF	DS	1	END OF FILE FLAG
041.114	415X	AIO.TFP	DS	2	TEMP FILE POINTERS
041.116	416X	AIO.CHA	DS	2	ADDRESS OF CHANNEL BLOCK (IOC.DDA)

041.120	418X	S.BDA	DS	1	Root Device Address (Setup by ROM) /B0.09.sc/
041.121	419X	S.SCR	DS	2	SYSTEM SCRATCH AREA ADDRESS
041.123	420		XTEXT	ECDEF	

422X ** ERROR CODE DEFINITIONS.

	423X				
000.000	424X		ORG	0	
000.000	425X		DS	1	NO ERROR #0
000.001	426X	EC.EOF	DS	1	END OF FILE
000.002	427X	EC.EDM	DS	1	END OF MEDIA
000.003	428X	EC.ILC	DS	1	ILLEGAL SYSCALL CODE
000.004	429X	EC.CNA	DS	1	CHANNEL NOT AVAILABLE
000.005	430X	EC.DNS	DS	1	DEVICE NOT SUITABLE
000.006	431X	EC.IDN	DS	1	ILLEGAL DEVICE NAME
000.007	432X	EC.IFN	DS	1	ILLEGAL FILE NAME
000.010	433X	EC.NRD	DS	1	NO ROOM FOR DEVICE DRIVER
000.011	434X	EC.FNO	DS	1	CHANNEL NOT OPEN
000.012	435X	EC.ILR	DS	1	ILLEGAL REQUEST
000.013	436X	EC.FUC	DS	1	FILE USAGE CONFLICT
000.014	437X	EC.FNE	DS	1	FILE NAME NOT FOUND
000.015	438X	EC.UND	DS	1	UNKNOWN DEVICE
000.016	439X	EC.ICM	DS	1	ILLEGAL CHANNEL NUMBER
000.017	440X	EC.DIF	DS	1	DIRECTORY FULL
000.020	441X	EC.IFC	DS	1	ILLEGAL FILE CONTENTS
000.021	442X	EC.NEM	DS	1	NOT ENOUGH MEMORY
000.022	443X	EC.RF	DS	1	READ FAILURE
000.023	444X	EC.WF	DS	1	WRITE FAILURE
000.024	445X	EC.WPV	DS	1	WRITE PROTECTION VIOLATION
000.025	446X	EC.WP	DS	1	DISK WRITE PROTECTED
000.026	447X	EC.FAP	DS	1	FILE ALREADY PRESENT
000.027	448X	EC.DDA	DS	1	DEVICE DRIVER ABORT
000.030	449X	EC.FL	DS	1	FILE LOCKED
000.031	450X	EC.FAO	DS	1	FILE ALREADY OPEN
000.032	451X	EC.IS	DS	1	ILLEGAL SWITCH
000.033	452X	EC.UUN	DS	1	UNKNOWN UNIT NUMBER
000.034	453X	EC.FNR	DS	1	FILE NAME REQUIRED
000.035	454X	EC.DIW	DS	1	DEVICE IS NOT WRITABLE (OR WRITE LOCKED)
000.036	455X	EC.UNA	DS	1	UNIT NOT AVAILABLE
000.037	456X	EC.ILV	DS	1	ILLEGAL VALUE
000.040	457X	EC.ILO	DS	1	ILLEGAL OPTION
000.041	458X	EC.VPM	DS	1	VOLUME PRESENTLY MOUNTED ON DEVICE
000.042	459X	EC.NVM	DS	1	NO VOLUME PRESENTLY MOUNTED
000.043	460X	EC.FOD	DS	1	FILE OPEN ON DEVICE
000.044	461X	EC.NPM	DS	1	NO PROVISIONS MADE FOR REMOUNTING MORE DISKS
000.045	462X	EC.DNI	DS	1	DISK NOT INITIALIZED
000.046	463X	EC.DNR	DS	1	DISK IS NOT READABLE
000.047	464X	EC.DSC	DS	1	DISK STRUCTURE IS CORRUPT
000.050	465X	EC.NCV	DS	1	NOT CORRECT VERSION OF HDOS
000.051	466X	EC.NOS	DS	1	NO OPERATING SYSTEM MOUNTED
000.052	467X	EC.IOI	DS	1	ILLEGAL OVERLAY INDEX
000.053	468X	EC.OTL	DS	1	OVERLAY TOO LARGE
000.054	469		XTEXT	FILDEF	

471X ** FILDEF - FILE TYPE DEFINITIONS.

	472X *				
	473X *	DB	377Q,FT.XXX		
	474X				
	475X				
000.000	476X	FT.ABS	EQU	0	ABSOLUTE BINARY
000.001	477X	FT.PIC	EQU	1	POSITION INDEPENDANT CODE
000.002	478X	FT.REL	EQU	2	RELOCATABLE CODE
000.003	479X	FT.BAC	EQU	3	COMPILED BASIC CODE
000.054	480	XTEXT	ABSDEF		

482X ** ABS FORMAT EQUIVALENCES.

	483X				
000.000	484X	ORG	0		
	485X				
000.000	486X	ABS.ID	DS	1	377Q = BINARY FILE FLAG
000.001	487X		DS	1	FILE TYPE (FT.ABS)
000.002	488X	ABS.LDA	DS	2	LOAD ADDRESS
000.004	489X	ABS.LEN	DS	2	LENGTH OF ENTIRE RECORD
000.006	490X	ABS.ENT	DS	2	ENTRY POINT
	491X				
000.010	492X	ABS.COD	DS	0	CODE STARTS HERE

```

042.170          495      ORG      USERFWA-ABS.COD
042.170      377 000      496      DB      377Q,FT,ABS
042.172      200 042      497      DW      USERFWA      LOAD ADDRESS
042.174      255 003      498      DW      MEML-USERFWA  LOAD SIZE
042.176      200 042      499      DW      ENTRY      ENTRY POINT
500
501
502      **      FLAGS - MAIN ENTRY POINT.
503
042.200          504      ENTRY  EQU      *
042.200      315 267 043  505      CALL  PRS      PRESET PROGRAM      /79.12.6C/
042.203      315 372 043  506      CALL  QUI      OFFER USER INSTRUCTIONS
507
508      *      RESTART ADDRESS
509
042.206      257          510      RESTART XRA  A
042.207      377 055      511      DB      SYSCALL,.CLEAR  CLEAR CHANNEL 0
512
513
042.211      315 136 031  514      FLAGS1 CALL  $TYPTX
042.214      012 106 151  515      DB      NL,'File Name?','+200Q
042.230      041 155 046  516      LXI  H,LINE
042.233      315 351 045  517      CALL  $RTL.      READ LINE IN UPPER CASE
042.236      332 264 043  518      JC      EXIT      NONE
042.241      021 047 046  519      LXI  D,DEFAULT
042.244      001 065 047  520      LXI  B,FLAGA
042.247      377 053      521      DB      SYSCALL,.DECODE  DECODE DEV INFO
042.251      332 220 043  522      JC      ERROR      NO GOOD
042.254      072 065 047  523      LDA  FLAGA+0      (A) = DEVICE TYPE
042.257      346 001      524      ANI  DT,DD
042.261      076 005      525      MVI  A,EC.DNS
042.263      312 220 043  526      JZ      ERROR      NOT DIRECTORY DEVICE
042.266      021 047 046  527      LXI  D,DEFAULT
042.271      041 155 046  528      LXI  H,LINE
042.274      257          529      XRA  A
042.275      377 042      530      DB      SYSCALL,.OPENR  OPEN FOR READ
042.277      332 220 043  531      JC      ERROR
042.302      052 352 040  532      LHLD  S,CFWA
000.000          533      ERRNZ IOCCTD-1      ASSUME LINK 1 TO USER CHAN #0
042.305      315 211 030  534      CALL  $HLIHL
042.310      315 234 030  535      CALL  $INDL
042.313      041 000      536      DW      IOC,DIR+DIR,FLG
042.315      315 136 031  537      CALL  $TYPTX
042.320      103 165 162  538      DB      'Current Flags =','+200Q
042.340      173          539      MOV  A,E      (A) = FLAGS
042.341      365          540      PUSH PSW      SAVE FLAGS
042.342      315 251 045  541      CALL  TFF      TYPE FILE FLAGS
042.345      257          542      XRA  A
042.346      377 046      543      DB      SYSCALL,.CLOSE  CLOSE FILE
042.350      361          544      POP  PSW      (A) = FLAGS
042.351      346 100      545      ANI  DIF.LOC
042.353      312 050 043  546      JZ      FLAGS2
000.001          547      IF      DEBUG
548      JMP      FLAGS2      * * DEBUG * *
549      ENDIF
550

```

```

551 *      LOCKED. CANNOT CHANGE
552
042.356 315 136 031 553      CALL      $TYPTX
042.361 007 012 124 554      DB        BELL,NL,'This file is locked; its flags cannot be changed.',ENL
043.045 303 211 042 555      JMP        FLAGS1
556
043.050 315 136 031 557  FLAGS2  CALL      $TYPTX
043.053 012 040 116 558      DB        NL,' New flags:','+2000
043.070 041 321 046 559      LXI      H,LINE2
043.073 315 351 045 560      CALL      $RTL.      READ UPPER CASE
043.076 332 264 043 561      JC        EXIT      EOF
562
563 *      CODE NEW FLAGS
564
043.101 006 000 565      MVI      B,0      (B) = FLAG ACCUM
043.103 176 566  FLAGS3  MOV      A,M
043.104 247 567      ANA      A
043.105 345 568      PUSH     H      SAVE LINE ADDRESS
043.106 312 171 043 569      JZ      FLAGS5      END OF LINE
043.111 041 211 043 570      LXI      H,FLAGB
043.114 315 301 045 571      CALL     $TBLS      FIND FLAG
043.117 312 161 043 572      JE      FLAGS4      GOT FLAG
573
574 *      ILLEGAL FLAG
575
043.122 315 136 031 576      CALL     $TYPTX
043.125 007 012 111 577      DB      BELL,NL,'Illegal flag -','+2000
043.146 341 578      POP      H
043.147 176 579      MOV      A,M      (A) = BAD FLAG
043.150 315 340 045 580      CALL     $WCHAR
043.153 315 343 045 581      CALL     $CRLF
043.156 303 050 043 582      JMP      FLAGS2      GET NEW FLAGS
583
043.161 176 584  FLAGS4  MOV      A,M
043.162 260 585      ORA     B      ACCUMULATE FLAGS
043.163 107 586      MOV      B,A
043.164 341 587      POP      H
043.165 043 588      INX     H      MOVE TO NEXXT FLAG
043.166 303 103 043 589      JMP      FLAGS3
590
591 *      GOT ALL THE FLAGS. SETEM
592
043.171 016 377 593  FLAGS5  MVI      C,3770      (C) = MASK
043.173 021 047 046 594      LXI      D,DEFAULT
043.176 041 155 046 595      LXI      H,LINE
043.201 377 060 596      DB      SYSCALL,.CHFLG
043.203 332 220 043 597      JC      ERROR
043.206 303 211 042 598      JMP      FLAGS1
599
043.211 127 040 600  FLAGB  DB      'W',DIF,WP
043.213 123 200 601      DB      'S',DIF,SYS
043.215 114 100 602      DB      'L',DIF,LOC
043.217 000 603      DB      0

```

.....
 ERROR

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```

        605 **      ERROR - ERROR ENCOUNTERED.
        606 *
        607
        608
043.220      609 ERROR EQU *
043.220 315 226 043 610 CALL ERROR.
043.223 303 206 042 611 JMP RESTART
        612
043.226 365      613 ERROR. PUSH PSW
043.227 315 136 031 614 CALL $TYPTX
043.232 012 007 105 615 DB NL,BELL,'ERROR - ','+2000
043.244 361      616 POP PSW
043.245 046 012 617 MVI H,NL
043.247 377 057 618 DB SYSCALL,.ERROR LOOKUP ERROR
043.251 311      619 RET
    
```

```

        621 **      CCHIT - HERE IF CTL-C HIT.
        622 *
        623
        624
043.252 315 136 031 625 CCHIT CALL $TYPTX
043.255 136 303 626 DB NL,BELL,'C'+2000
043.257 377 007 627 DB SYSCALL,.CLRCD CLEAR CONSOLE
043.261 303 206 042 628 JMP RESTART
    
```

```

        630 **      EXIT - EXIT TO OS.
        631
        632
043.264 257      633 EXIT XRA A
043.265 377 000 634 DB SYSCALL,.EXIT
    
```

PRS - PRESET CONSOLE

PRS

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```

638 ** PRS - PRESET CONSOLE.
639 *
640
641
043.267 642 PRS EQU *
643
043.267 377 011 644 DB SYSCALL,.VERS /79.12.GC/
043.271 332 362 043 645 JC PRSERR1 PROBABLY NO .VERS SYSCALL /79.12.GC/
043.274 376 040 646 CPI VERS
043.276 302 362 043 647 JNZ PRSERR1 NOT CORRECT VERSION OF HDOS /79.12.GC/
648
043.301 257 649 XRA A
043.302 062 326 040 650 STA S,CSLMD
043.305 041 252 043 651 LXI H,CCHIT
043.310 076 003 652 MVI A,CTLC
043.312 377 041 653 DB SYSCALL,.CTLC
043.314 076 377 654 MVI A,3770
043.316 377 046 655 DB SYSCALL,.CLOSE CLOSE OVERLAY CHANNEL
043.320 041 231 047 656 LXI H,RMEML
043.323 377 052 657 DB SYSCALL,.SETIP SET RUN MEMORY LIMIT
043.325 315 136 031 658 CALL $TYPTX
043.330 012 106 114 659 DB NL,'FLAGS Issue #50.06.00.',NL,ENL
043.361 311 660 RET
661
043.362 076 050 662 PRSERR1 MVI A,EC.NCV NOT CORRECT VERSION OF HDOS /79.12.GC/
663
043.364 315 226 043 664 PRSERR CALL ERROR, /79.12.GC/
043.367 303 264 043 665 JMP EXIT /79.12.GC/

667 ** OUI - OFFER USER INSTRUCTIONS.
668 *
669 * ENTRY NONE
670 * EXIT NONE
671 * USES ALL
672
673
043.372 315 136 031 674 OUI CALL $TYPTX
043.375 111 156 163 675 DB 'Instructions (Yes/No) <No>?',,'42000
044.031 041 155 046 676 LXI H,LINE
044.034 315 351 045 677 CALL $RTL.
044.037 332 264 043 678 JC EXIT EOF
044.042 176 679 MOV A,M
044.043 247 680 ANA A
044.044 310 681 RZ DEFAULT, NO
044.045 376 116 682 CPI 'N'
044.047 310 683 RE NO
044.050 376 131 684 CPI 'Y'
044.052 302 372 043 685 JNE OUI KEEP TRYING TILL THE BOZO GETS IT RIGHT
044.055 315 136 031 686 CALL $TYPTX
044.060 012 106 114 687 DB NL,'FLAGS is used to set and/or clear the file flags. When
044.147 012 160 162 688 DB NL,'prompted for the new flags, specify ALL the flags that are'
044.242 012 164 157 689 DB NL,'to be set. Note that if you set the 'L' flag, you will'
044.331 012 156 157 690 DB NL,'not be able to clear it again. The legal flags are:'
    
```

.....
 FLAGS - SET/CLEAR FILE FLAGS

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PRS - PRESET CONSOLE

QUI

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.....
 045.015 012 691 DB NL
 045.016 012 127 011 692 DB NL,'W Write protect file. May not be renamed, replaced, or deleted.
 045.116 012 123 011 693 DB NL,'S Suppress normal listing or copying of file.
 045.174 012 114 011 694 DB NL,'L Lock the file from further flag changes.
 045.247 212 695 DB ENL
 045.250 311 696 RET

.....
 698 ** TFF - TYPE FILE FLAGS.

699 *
 700 * TYPE THE CURRENT FLAGS ON THE CONSOLE.

701 *
 702 * ENTRY (A) = FLAGS
 703 * EXIT CURSOR LEFT AFTER LAST FLAG
 704 * USES A,F,H,L

.....
 045.251 041 271 045 707 TFF LXI H,TFFA (HL) = FLAG TABLE FWA

045.254 207 708 TFF4 ADD A
 045.255 365 709 PUSH PSW SAVE FLAGS

045.256 176 710 MOV A,M
 045.257 334 340 045 711 CC \$WCHAR TYPE CHARACTER IF FLAG SET
 045.262 043 712 INX H POINT TO NEXT FLAG CHARACTER
 045.263 361 713 POP PSW RESTORE FLAGS

045.264 247 714 ANA A
 045.265 302 254 045 715 JNZ TFF4 MORE FLAGS SET
 045.270 311 716 RET EXIT

.....
 045.271 123 114 127 718 TFFA DB 'SLW'
 045.274 000 719 DB 0 IGNORE THE CONTIGUOUS FLAG /79.12.GC/

045.275 061 062 063 720 DB '1234' CODES
 000.000 721 ERRNZ DIF.SYS-200Q
 000.000 722 ERRNZ DIF.LOC-100Q
 000.000 723 ERRNZ DIF.WP-40Q
 000.000 724 ERRNZ DIF.CNT-20Q

045.301 727 XTEXT TBL5

```

729X ** $TBL5 - TABLE SEARCH
730X *
731X * TABLE FORMAT
732X *
733X * DB KEY1,VAL1,
734X * .
735X * .
736X * DB KEYN,VALN
737X * DB 0
738X *
739X * ENTRY (A) = PATTERN
740X * (H,L) = TABLE FWA
741X * EXIT (A) = PATTERN IF FOUND
742X * 'Z' SET IF FOUND
743X * 'Z' CLEAR IF NOT FOUND OR PATTERN=0 /78.10.GC/
744X * USES A,F,H,L
745X
746X

```

```

045.301 305 747X $TBL5 PUSH B
045.302 376 000 748X CPI 0 /78.10.GC/
045.304 312 326 045 749X JZ TBL2 /78.10.GC/
045.307 107 750X MOV B,A
045.310 176 751X TBL1 MOV A,M (A) = CHARACTER
045.311 043 752X INX H
045.312 270 753X CMP B
045.313 312 330 045 754X JZ TBL3 IF MATCH
045.316 247 755X ANA A
045.317 043 756X INX H SKIP PAST
045.320 302 310 045 757X JNZ TBL1 IF NOT END OF TABLE
045.323 053 758X DCX H
045.324 053 759X DCX H
045.325 257 760X XRA A SET TO ZERO FOR OLD USERS /78.10.GC/
045.326 376 001 761X TBL2 CPI 1 CLEAR ZERO /78.10.GC/
762X
763X * DONE
764X
045.330 301 765X TBL3 POP B
045.331 311 766X RET
045.332 767 XTEXT HLIHL

```

```

769X ** $HLIHL - LOAD HL INDIRECT THROUGH HL.
770X *
771X * (HL) = ((HL))
772X *
773X * ENTRY NONE
774X * EXIT NONE
775X * USES A,H,L
776X

```


COMMON DECKS

\$HLIHL

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030.211
045.332

777X \$HLIHL EQU 30211A IN H17 ROM
778 XTEXT INDL

780X ** \$INDL - INDEXED LOAD.
781X *
782X * \$INDL LOADS DE WITH THE TWO BYTES AT (HL)+DISPLACEMENT
783X *
784X * THIS ACTS AS AN INDEXED FULL WORD LOAD.
785X *
786X * (DE) = ((HL) + DISPLACEMENT)
787X *
788X * ENTRY ((RET)) = DISPLACEMENT (FULL WORD)
789X * (HL) = TABLE ADDRESS
790X * EXIT TO (RET+2)
791X * USES A,F,D,E
792X
793X

030.234
045.332

794X \$INDL EQU 30234A IN H17 ROM
795 XTEXT RCHAR

797X ** \$RCHAR - READ SINGLE CHARACTER FROM CONSOLE.
798X *
799X * ENTRY NONE
800X * EXIT (A) = CHARACTER
801X * USES A,F
802X
803X

045.332 377 001
045.334 332 332 045
045.337 311

804X \$RCHAR DB SYSCALL, SCIN
805X JC \$RCHAR NOT READY
806X RET
807X

045.340 377 002
045.342 311
045.343

808X \$WCHAR DB SYSCALL, SCOUT
809X RET
810 XTEXT CRLF

812X ** \$CRLF - TYPE CARRIAGE RETURN/ LINE FEED
813X *
814X * \$CRLF IS USED TO GENERATE PADDED CRLF'S.
815X *
816X * ENTRY NONE
817X * EXIT (A) = 0
818X * USES A,F
819X
820X

045.343 076 012
045.345 377 002
045.347 257

821X \$CRLF MVI A,NL
822X DB SYSCALL, SCOUT
823X XRA A

045.350 311
045.351

824X RET
825 XTEXT RTL

827X ** \$RTL - READ TEXT LINE.
828X *
829X * \$RTL READS A LINE FROM THE TERMINAL.
830X *
831X * CHARACTER ARE ACCEPTED FROM THE TERMINAL, RUBOUT AND BACKSPACE
832X * CHARACTERS ARE PROCESSED. WHEN A CARRIAGE RETURN IS ENTERED;
833X * \$RTL RETURNS.
834X *
835X * ENTRY (HL) = BUFFER FWA
836X * EXIT 'C' CLEAR IF OK
837X * DATA IN BUFFER
838X * (A) = TEXT LENGTH
839X * 'C' SET IF CTL-D STRUCK
840X * USES A,F

045.351 315 360 045
045.354 330
045.355 303 027 046

841X
842X
843X \$RTL CALL \$RTL \$RTL IN UPPER CASE
844X RC CTL-D
845X JMP \$MLU MAP LINE TO UPPER CASE
846X

045.360
045.360 345
045.361 315 332 045
045.364 376 004
045.366 312 013 046
045.371 167
045.372 043
045.373 376 012
045.375 302 361 045
046.000 053
046.001 066 000
046.003 043

847X \$RTL EQU *
848X PUSH H SAVE FWA
849X \$RTL1 CALL \$RCHAR
850X CPI CTLD
851X JE \$RTL2 CTL-D STRUCK
852X MOV M,A
853X INX H
854X CPI NL
855X JNE \$RTL1
856X DCX H
857X MVI M,0
858X INX H
859X

860X * ALL DONE. COMPUTE LENGTH

046.004 353
046.005 343
046.006 173
046.007 225
046.010 247
046.011 321
046.012 311

861X
862X XCHG (DE) = LWA+1
863X XTHL (HL) = FWA
864X MOV A,E
865X SUB L (A) = LENGTH
866X ANA A CLEAR CARRY
867X POP D RESTORE (DE)
868X RET
869X

870X * CTL-D STRUCK

046.013 341
046.014 067
046.015 311
046.016

871X
872X \$RTL2 POP H (HL) = FWA
873X STC
874X RET
875 XTEXT MCU

```

877X **   MCU - MAP LOWER CASE TO UPPER CASE.
878X *
879X *   MCU MAPS A LOWER CASE ALPHABETIC TO UPPER
880X *   CASE.
881X *
882X *   ENTRY (A) = CHARACTER
883X *   EXIT (A) = CHARACTER RESULT
884X *   USES A,F
885X
886X
046.016 376 141 887X $MCU  CPI 'a'
046.020 330      888X      RC                               NOT LOWER CASE
046.021 376 173 889X      CPI 'z'+1
046.023 320      890X      RNC                               NOT LOWER CASE
046.024 326 040 891X      SUI 'a'-'A'
046.026 311      892X      RET
046.027          893      XTEXT  MLU
    
```

```

895X **   MLU - MAP LOWER CASE LINE TO UPPER CASE.
896X *
897X *   MLU MAPS THE LOWER CASE ALPHABETICS IN A LINE TO UPPER CASE.
898X *
899X *   ENTRY (HL) = LINE FWA
900X *   EXIT NONE
901X *   USES NONE
902X
903X
046.027 365      904X $MLU  PUSH  PSW          SAVE (PSW)
046.030 345      905X      PUSH  H           SAVE FWA
046.031 053      906X      DCX   H           ANTICIPATE INX H
046.032 043      907X $MLU1 INX   H
046.033 176      908X      MOV   A,M        (A)= CHARACTER
046.034 315 016 046 909X      CALL $MCU     MAP CHAR TO UPPER
046.037 167      910X      MOV   M,A
046.040 247      911X      ANA   A
046.041 302 032 046 912X      JNZ  $MLU1     MORE TO GO
046.044 341      913X      POP   H           RESTORE (HL)
046.045 361      914X      POP   PSW        RESTORE (PSW)
046.046 311      915X      RET
046.047          916      XTEXT  TYPTX
    
```

```

918X **   $TYPTX - TYPE TEXT.
919X *
920X *   $TYPTX IS CALLED TO TYPE A BLOCK OF TEXT ON THE SYSTEM CONSOLE.
921X *
922X *   IMBEDDED ZERO BYTES INDICATE A CARRIAGE RETURN LINE FEED,
923X *   A BYTE WITH THE 200Q BIT SET IS THE LAST BYTE IN THE MESSAGE.
924X *
925X *   ENTRY (RET) = TEXT
926X *   EXIT TO (RET+LENGTH)
    
```

COMMON DECKS

\$TYPTX

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	927X *	USES	A,F	
	928X			
	929X			
031.136	930X \$TYPTX	EQU	31136A	IN H17 ROM
	931X			
031.144	932X \$TYPTX	EQU	31144A	IN H17 ROM

046.047	123 131 060	935	DEFALT	DB	'SYO',0,0,0	DEFAULTS
		936				
046.055		937	MEML	EQU	*	LOAD MEML
		938				
046.055		939	PATCH	DS	64	PATCH AREA
		940				
046.155		941	LINE	DS	100	LINE BUFFER
046.321		942	LINE2	DS	100	FLAGS BUFFER
047.065		943	FLAGA	DS	100	DECODE BUFFER
047.231		944	RMEML	EQU	*	RUN MEML
		945				
047.231		946		END		

ASSEMBLY COMPLETE
 946 STATEMENTS
 0 ERRORS DETECTED
 12876 BYTES FREE

..... CROSS REFERENCE TABLE

AIO.CGN	041047	401L			
AIO.CHA	041116	416L			
AIO.CNT	041111	412L			
AIO.CSI	041050	402L			
AIO.DDA	041041	397E			
AIO.DES	041055	406L			
AIO.DEV	041057	407L			
AIO.DIR	041062	410L			
AIO.DTA	041053	405L			
AIO.EOF	041113	414L			
AIO.EOM	041112	413L			
AIO.FLG	041043	398L			
AIO.GRT	041044	399L			
AIO.LGN	041051	403L			
AIO.LSI	041052	404L			
AIO.SPG	041046	400L			
AIO.TFP	041114	415L			
AIO.UNI	041061	408L			
AIO.VEC	041040	396L			
BELL	000007	19E	554	577	615
BKSP	000010	21E			
BOOT.P	000001	376E			
C.STX	000002	23E			
C.SYN	000026	22E			
CCHIT	043252	625L	651		
CDB.HB4	000001	319E			
CDB.HB5	000000	318E			
CO.FLG	000001	296E			
CR	000015	15E			
CS.FLG	000200	297E			
CSL.CHR	000001	273E			
CSL.ECH	000200	270E			
CSL.RAW	000004	271E			
CSL.WRP	000002	272E			
CTLA	000001	30E			
CTLB	000002	31E			
CTLC	000003	32E	652		
CTLD	000004	33E	850		
CTLO	000017	34E			
CTLP	000020	35E			
CTLQ	000021	36E			
CTLS	000023	37E			
CTLZ	000032	38E			
CTP.2SB	000010	282E			
CTP.BKM	000002	283E			
CTP.BKS	000200	278E			
CTP.FF	000100	279E			
CTP.MLI	000040	280E			
CTP.MLO	000020	281E			
CTP.TAB	000001	284E			
D.CON	040110	232L			
D.RAM	040240	235L			
D.VEC	040130	234L			
DEBUG	000001	2E	547		
DEFAULT	046047	519	527	594	935L
DEV.DBA	000004	54L			
DEV.DVG	000015	67L			
DEV.DVL	000013	66L			

..... CROSS REFERENCE TABLE

DEV.FLG	000006	55L			
DEV.JMP	000003	53L			
DEV.MNU	000010	63L			
DEV.MUM	000007	62L			
DEV.NAM	000000	45L			
DEV.RES	000002	49L			
DEV.UNT	000011	64L			
DEVELEN	000016	69E			
DF.CLR	000376	99E			
DF.EMP	000377	98E			
DIF.CNT	000020	89E	724		
DIF.LOC	000100	87E	545	602	722
DIF.SYS	000200	86E	601	721	
DIF.WP	000040	88E	600	723	
DIR.ALD	000025	114L			
DIR.CLU	000015	107L			
DIR.CRD	000023	113L			
DIR.EXT	000010	102L			
DIR.FGN	000020	110L			
DIR.FLG	000016	108L	536		
DIR.LGN	000021	111L			
DIR.LSI	000022	112L			
DIR.NAM	000000	101L			
DIR.PRO	000013	103L			
DIR.VER	000014	104L			
DIRELEN	000027	116E	148	410	
BIRIDL	000015	105E			
DR.IM	000001	50E			
DR.PR	000002	51E			
DT.CH	000020	60E			
DT.CR	000002	57E			
DT.CW	000004	58E			
DT.DD	000001	56E	524		
DT.RN	000010	59E			
DV.EL	000000	46E			
DV.NU	000001	47E			
EC.CNA	000004	429L			
EC.BDA	000027	448L			
EC.DIF	000017	440L			
EC.DIW	000035	454L			
EC.DNI	000045	462L			
EC.DNR	000046	463L			
EC.DNS	000005	430L	525		
EC.DSE	000047	464L			
EC.EOF	000001	426L			
EC.EOM	000002	427L			
EC.FAD	000031	450L			
EC.FAP	000026	447L			
EC.FL	000030	449L			
EC.FNF	000014	437L			
EC.FNO	000011	434L			
EC.FNR	000034	453L			
EC.FOD	000043	460L			
EC.FUC	000013	436L			
EC.ICN	000016	439L			
EC.IDN	000006	431L			
EC.IFC	000020	441L			
EC.IFN	000007	432L			

..... FLAGS - SET/CLEAR FILE FLAGS

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..... CROSS-REFERENCE TABLE

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EC.ILC	000003	428L				
EC.ILO	000040	457L				
EC.ILR	000012	435L				
EC.ILV	000037	456L				
EC.IOI	000052	467L				
EC.IS	000032	451L				
EC.NCV	000050	465L	662			
EC.NEM	000021	442L				
EC.NOS	000051	466L				
EC.NPM	000044	461L				
EC.NRD	000010	433L				
EC.NVM	000042	459L				
EC.OTL	000053	468L				
EC.RF	000022	443L				
EC.UNA	000036	455L				
EC.UND	000015	438L				
EC.UUN	000033	452L				
EC.VPM	000041	458L				
EC.WF	000023	444L				
EC.WP	000025	446L				
EC.WPV	000024	445L				
ENL	000212	28E	554	659	695	
ENTRY	042200	499	504E			
ERROR	043220	522	526	531	597	609E
ERROR.	043226	610	613L	664		
ESC	000033	26E				
EXIT	043264	518	561	633L	665	678
FF	000014	29E				
FLAGA	047065	520	523	943L		
FLAGB	043211	570	600L			
FLAGS1	042211	514L	555	598		
FLAGS2	043050	546	557L	582		
FLAGS3	043103	566L	589			
FLAGS4	043161	572	584L			
FLAGS5	043171	569	593L			
FT.ABS	000000	476E	496			
FT.BAC	000003	479E				
FT.ID	000001	127E				
FT.OC	000020	131E				
FT.OR	000002	128E				
FT.OU	000010	130E				
FT.OW	000004	129E				
FT.PIC	000001	477E				
FT.REL	000002	478E				
I.CONFL	000004	299E	300			
I.CONTY	000001	286E	287			
I.CONWI	000003	292E	293			
I.CSLMD	000000	275E				
I.CUSDR	000002	289E	290			
IOC.CGN	000010	136L				
IOC.CSI	000011	137L				
IOC.DDA	000002	124L	132	146		
IOC.DES	000016	143L				
IOC.DEV	000020	144L				
IOC.DIL	000021	146E				
IOC.BIR	000023	148L	536			
IOC.DRL	000010	140E				
IOC.DTA	000014	142L				

..... FLAGS - SET/CLEAR FILE FLAGS

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..... CROSS REFERENCE TABLE

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S.FCI	041021	368L																
S.GRT0	024000	223E																
S.GRT1	025000	224E																
S.GRT2	026000	225E																
S.GUP	041027	370L																
S.HIMEM	040316	259L																
S.INT	040343	237L	313															
S.JUMPS	041010	364L																
S.MOUNT	041032	372L																
S.OPWA	040350	328L																
S.OMAX	040324	265L																
S.OSN	041004	355L																
S.OVLE	041000	352L																
S.OVLFL	040371	348L																
S.OVLS	040376	351L																
S.OVSTK	041035	380L																
S.RFWA	040356	329L																
S.SCI	041024	369L																
S.SCR	041121	419L																
S.SDD	041010	365L																
S.SOVR	041146	239L	241															
S.SSN	041002	354L																
S.SYSM	040320	261L																
S.TIME	040312	258L																
S.UCSF	040372	349L																
S.UCSL	040374	350L																
S.USRM	040322	263L																
S.VAL	040277	236L	254															
STACK	042200	243E																
STACKL	001032	241E																
SYDD	040130	233E																
SYSCALL	000377	161E	511	521	530	543	596	618	627	634	644	653	655					
		657	804	808	822													
TAB	000011	25E																
TBL1	045310	751L	757															
TBL2	045326	749	761L															
TBL3	045330	754	765L															
TFF	045251	541	707L															
TFF4	045254	708L	715															
TFFA	045271	707	718L															
UNT.DIS	000006	79L																
UNT.FLG	000000	75L																
UNT.GRT	000002	77L																
UNT.GTS	000004	78L																
UNT.SIZ	000010	81E																
UNT.SPG	000001	76L																
USERFWA	042200	244E	495	497	498													
VERS	000040	159E	646															

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