

ADDRESS	LENGTH	BINARY CONTROL CARDS.	
0	613	INENT	ALLOC
613		END	

## ENTRY POINTS.

GDSKHDR = 0	FDSKPTR = 66	GETDSK = 154
FDSKHDR = 22	GDSKDAT = 107	FREEDSK = 446
GDSKPTR = 44	FDSKDAT = 131	RUSYDSK = 447

## EXTERNAL SYMBOLS.

OPERNL	TEMP2	SETPCNT	TR.DRIV	RELCLAM	M.FRWC	GF.APTL	DA.LOCK
IPLIST	TEMP3	DISKENT	TR.LEVL	RELEASE	M.TRMCC	GF.HSHF	DA.HASH
COMMROF	TEMP4	DISKERR	BLK.SIZ	PRW	M.CLOCC	FHRHASH	DA.SUSP
COMMROL	TEMP5	DISKINT	BLK.DTY	MAKEMAP	M.ACTCC	DARHASH	DA.SRES
COMMRWF	TEMP6	FRWENT	BLK.FLG	LOADBUF	M.TRYCC	GF.HSHL	DA.SOCC
COMMROWI	TEMP7	FRWERR	SW.SW	AUDIT	M.DFILT	GF.TRVF	DA.DRES
HOLDBLK	TEMP8	FRWINT	SW.5DDS	NOQLOCK	M.DOBJS	FHB	DA.DOCC
LOCTAB	TEMP9	ENTER	PG.PG	PROBE	M.NOBJS	FB.LEN	DA.SCHG
LOCTABF	TEMP10	CLKBUF	PG.5DDS	RETCLK	M.BFILE	FB.NAME	DA.DCHG
LOCTABL	TEMP11	DSYSTIM	PG.5TY	SYSERR	M.DDREQ	FB.WD3	DA.TIME
CFT	TEMPA	DSWPNTM	PTR.PTR	FRETURN	M.DDRSP	FB.SHAP	DAR
FLDLFN	TEMPB	DUSRNTM	PTR.5DS	RETURN	M.RBUFS	FB.FUND	LEFTFREE
USERRWF	TEMPC	MYSCRE	PTR.CM	RETPAR	M.WBUFS	FHR	LFHADDR
USERRWL	TEMPD	MYCODE	PTR.DTY	ERRPARM	M.SLOTS	FR.LEN	DARADDR
CATHMAP	TEMPE	MYSUBP	PTR.NUM	ERRFILE	MLOCKS	FR.NAME	PAGESW
TERMRWL	TEMPF	MYEVCH	CREATE	ERRALOC	NLOCKS	FR.WD1	MAPBUF
TERMROF	TEMPG	READCAP	CREBLK	ERRMAP	M.FHRL	FR.WD2	SIZES
TERMRWF	TEMPH	WRITCAP	DELRLK	CALBEAD	M.DARL	FR.WD3	SIZE
CLOSERWF	TEMPV	SAVEREG	OPEN	REGS	M.HASHL	FR.SUSP	NUMRES
CLOSEPWL	TEMPW	RESTREG	ATTACH	O.ENTRY	M.ADDS	FR.LOCK	CREATER
CLOSROF	TEMPX	MAINCL	DETACH	O.FNAME	M.ASUSP	FR.DAR	CREBLKR
READRWF	TEMPY	FILCL	CONVERT	DEBUG1	M.ADISK	FR.OPEN	DELBLKR
READRWL	TEMPZ	SLEEP1	SETUP	DSKLCK	M.SDISK	FR.CAPX	OPENR
READONF	MYIDENT	MYRESP	DECIDE	DEBUG2	M.FDISK	FR.DBSZ	ATTACHR
READONL	MYDAR	RESP	CRELFH	M.AUTH	M.ECLEV	FR.ONEL	DETACHR
HENTRY	MYUNIT	GFILE	OPENAR	M.MKCAP	M.UNAME	FR.FROZ	ZROMAPR
HENTPY	MYSWOCC	BFILE	PRVOPEN	REDSHP	M.USCTR	FR.WRIT	CHMAPRI
ORGADDR	URSIPL	FILECAP	MKPTR	L.MNCLI	M.OPCL	FR.SIZE	CHMAPBI
ORGCLST	INTIPL	CTEMP	DSPTR	M.GFILE	M.IOCTR	FR.SHAP	SETUPR
ORGMAP	HASHIPL	UDSKSCR	CLOSE	M.HFILE	M.TWAIT	FR.FUND	CREATBI
INTDAT	SUSIPL	RFILE	ECLOSE	M.FILCL	M.CLTIM	FR.FLAG	CLOSERL
AP0	DATIPL	DDRSP	DARSPA	M.EMPTY	M.10SEC	FR.ROOT	MOVBLKR
AP1	APTIPL	RBUFS	ZEROMAP	M.RETRY	GF.LEN	FR.CLAM	CREPTR
AP2	REFTPARM	RETRY	CHMAP	M CLOSE	GF.SUSF	FR.MEMB	DORESPR
AP3	REFTERR	SLOTS	CLODAR	M.TVRES	GF.SUSL	FHRADDR	ERRNUMI
AP4	PASSERR	HBR	HASH	M.HELP	GF.IOTF	FILEADR	ERRCLAS
AP5	USRPACK	HBW	DELHASH	M.SWAB	GF.IOTL	DAB	TABADDR
AP6	INTBUF	PBR	EXCLAIM	M.ABFCH	GF.DDSF	DA.LEN	EC.ZRM

DISK ALLOCATOR  
STORAGE ALLOCATION.

COMPASS - VER 2. 03/07/71 05.17.50.

PAGE

2

AP7	POOCADR	PBW	SHC AIM	M.ABFIL	GF.DDSL	DA.LOG	EC:CMRW
AP8	ERRADDR	DBR	LOCK	M.ACREQ	GF.DATF	DA.ABNO	EC:READ
TEMP0	ERRPACK	DBW	UNLOCK	M.ACRES	GF.DATL	DA.FTLS	EC:SEV
TEMPI	S7KBUF	GETRESP	UNLOCKW	M.USRCC	GF.APTF	DA.FREE	EC:GEVH

	IENT	ALLOC
0	XTEXT	
0	XTEXT	
0	XTEXT	
*		
	EXT	OPERCL, IPLIST
	MACSET	OPERCL, IPLIST, ECS

\*\*\*\*\*  
\* MACROS \*  
\*\*\*\*\*

WORD	MACRO	XREG,BITS
	LOCAL	OK
	Mx7	60-BITS
	Bx7	x7*xreg
	Zr	x7*OK
OK	RJ	SYSERR
	BSS	0
	ENDM	

\*\*\*\*\*  
\* CHECKSUM MACRO  
C<sub>y</sub>1 XREG  
M<sub>y</sub>7 60-3  
B<sub>x</sub>1 =X7\*X1  
L<sub>y</sub>1 21  
B<sub>x</sub>XREG XREG\*X1  
ENDM

\*\*\*\*\*  
\* EXTRACT MACRO  
LOCAL XOUT,XIN,BITS,POSITION  
NBITS NBITS,NPOS  
NPOS EQU BITS  
EQU POSITION  
MXOUT 60-NBITS-NPOS  
BXOUT =XOUT-XIN  
AXOUT POSITION  
ENDM

\*\*\*\*\*  
\* FRONT END ROUTINES \*  
\*\*\*\*\*

\* GET FIXED DISK SPACE FOR HEADER BLOCK

0 7160000000 X	GDSKHDR	GETEVH	(MAINCL,M,FDISK)	GET FREE FIXED SECTOR COUNTER
6 37374		IX3	X7-X4	DECR BY NO OF SECTORS
0323000010 *		PL	X3,GDH1	JUMP IF SUFFICIENT FIXED SECTORS
7 6160000010 +		S86	GDH1	ELSE RECLAIM FIXED SECTORS
0200000600 +		JB	GETFX	
10 7160000000 X	GDH1	SENDEV	(MAINCL,M,FDISK), (,X3)	RELEASE SECTOR COUNTER
21 66670		S86	R7	RETURN LINK
0200000154 +		JB	GETDSK	FIND AND ALLOCATE SECTORS

\* FREE FIXED DISK SPACE FOR HEADER BLOCK

22 6160000024 +	FDSKHDR	S86	EDH1	RELEASE THE SECTORS
0200000446 +		JP	FREEDSK	
23 0270777774			R7-I	
24 7160000000 X	EDH1	GETEVH	(MAINCL,M,FDISK)	GET FIXED SECTOR MARGIN COUNTER
32 36374		IX3	X7-X4	INCR BY NO. OF SECTORS FREED
7160000000 X		SENDEV	(MAINCL,M,FDISK), (,X3)	RELEASE MARGIN COUNTER

\* GET SWAPPED DISK SPACE FOR POINTER BLOCK

44 7160000000 X	GDSKPTR	GETEVH	(MAINCL,M,SDISK)	GET SWAPPED SECTOR MARGIN COUNTER
52 43373		MX3	59	
36373		IX3	X7-X3	DECR BY 1
0323000054 *		PL	X3,GDP1	JUMP IF SUFFICIENT SWAPPED SECTORS
53 6160000054 +		S86	GDP1	ELSE RECLAIM SWAPPED SECTORS
0200000601 +		JB	GETSW	
54 7160000000 X	GDP1	SENDEV	(MAINCL,M,SDISK), (,X3)	RELEASE SECTOR COUNTER
65 0270000000		JB	R7	RETURN

\* FREE SWAPPED DISK SPACE FOR POINTER BLOCK

66 7160000000 X	FDSKPTR	GETEVH	(MAINCL,M,SDISK)	
74 7130000001		SK3	I	
36373		IX3	X7-X3	
75 7160000000 X		SENDEV	(MAINCL,M,SDISK), (,X3)	
106 0270000000		JB	R7	

\* GET SWAPPED DISK SPACE FOR DATA BLOCK

107 7160000000 X	GDSKHAT	GETEVH	(MAINCL,M,SDISK)	
115 37374		IX3	X7-X4	DECR BY NO. OF SECTORS
0323000117 *		PL	X3,GDD1	
116 6160000117 +		S86	GDD1	
0200000601 +		JB	GETSW	
117 7160000000 X	GDD1	SENDEV	(MAINCL,M,SDISK), (,X3)	RELEASE COUNTER
130 0270000000		JB	R7	RETURN

## # FREE SWAPPED DISK SPACE FOR DATA BLOCK

131	6160000133 +	FDSKDAT	SR6	FDD1	
	0200000446 +		JB	FREEDSK	
132	027077777A			87-1	
133	7160000006 X	FDD1	GTEVH	(MAINCL,M,SDISK)	ALLOCATION ERROR
141	36374		Iv3	X7*X4	
	7160000000 X		SPNDEV	(MAINCL,M,SDISK),(.X.)	
153	0270000000		JB	87	

#

#

\*\*\*\*\*  
\* MAIN ROUTINES \*  
\*\*\*\*\*

\* GETDSK--FIND AND ALLOCATE A BLOCK OF DISK SECTORS

ON ENTRY: X4=NO OF SECTORS REQUESTED (1,2,4,OR 7)  
R6=RETURN (86=1 IF NO BLOCK FOUND)  
ON EXIT: X6=DISK ADDRESS OF OBTAINED BLOCK  
USES ALL REGISTERS

X1 = SCRATCH	B1 = CURRENT SECTOR
X2 = BIT MASK	B2 = REMAINING SECTORS
X3 = CURRENT UNIT	B3 = REMAINING UNITS
X4 = CURRENT ARMP0S	B4 = REMAINING ARM POSITIONS
X5 = CURRENT HD GP	B5 = REMAINING HD GPS
X6 = STORE SCRATCH	B6 = RETURN LINK
X7 = DAT ADDR	B7 = OUTER RETURN LINK

154 5130000001	GETDSK	S43	N66385	TOTAL DISK UNITS IN SYSTEM
		WIDTH	X4,3	CONSISTENCY CHECK
156 10644		Bx6	X4	SAVE NO OF SECTORS
		S46	TEMPV	
5160000000 X		GETDSK2	S42	(UNIT LOOP STARTS HERE)
157 6120000160 *			JP	X2=SECTOR MASK
0200000602 *				

\* RESERVE UNIT AND NOTE SUGGESTIONS LEFT BY PREVIOUS ALLOCATOR

160 5130000000 X	GETDSK3	S43	MYUNIT	MY FAVORITE 6638
7160000000 X		GP>EVH	(MAINCL,X3+M,ADISK)	GET ALLOCATION LOCK
167 5170000000 X		S47	TEMPW	SAVE IT
63170		S41	X7	SUGGESTED SECTOR
21722		Ax7	X8	
170 73570		Sx5	X7	SUGGESTED HD GP
21722		Ax7	X8	LAST KNOWN ARM DESTINATION
10177		Bx1	X7	

\* READ ARM INFO FROM DISK DRIVER

171 7160000000 X	READ	(MAINCL,X3+M,FILE),0,TEMPX,1,GETDSK20		
203 5140000000 X		S44	TEMPX	
21423		Ax4	X8+1	
73440		Sx4	X4	
204 13141		Bx1	X6-X1	COMPARE WITH LAST KNOWN
0301000230 *		Z8	X1,GETDSK5	SAME DESTINATION

\* START ALLOCATION SEQUENCE AT NEW ARM DESTINATION

205 10733	13555	Bx5	X5-X5	START AT HD GP 0
20705		Bx7	X3	
12774		Lx7	5	
		Bx7	X7+X4	ADDR OF ARM POS TABLE ENTRY

206	7160000000 X		RFAPT	X7,TEMPY	READ OPTIMAL STARTING SECTOR	
220	5110000000 X		S <sub>A1</sub>	TEMPY		
	63110		S <sub>B1</sub>	X1		
221	7170000001	36717	S <sub>X7</sub>	1		
222	7217777634	0311000224 +	I <sub>X7</sub>	X1+X7	INCR. OPTIMAL STARTING SECTOR	
223	43152		S <sub>X1</sub>	X7-100	TEST FOR WRAP-AROUND	
	11771		N <sub>7</sub>	X1,GETDSK4		
224	5170000000 X	7160000000 X	M <sub>X1</sub>	60-18		
		GETDSK4	B <sub>X7</sub>	X7*X1	WRAP., SET SECTOR = 0	
			S <sub>A7</sub>	TEMPY		
			WRAPT	*,*	UPDATE TABLE ENTRY	
* DEVELOP DAT ADDRESS						
230	43770		GETDSK5	W <sub>IDTH</sub>	X3,4	CONSISTENCY CHECK
232	43767			W <sub>IDTH</sub>	X4,5	CONSISTENCY CHECK
234	43767			W <sub>IDTH</sub>	X5,6	CONSISTENCY CHECK
236	10733			B <sub>X7</sub>	X3	UNIT NO.
	20705			L <sub>X7</sub>	5	
	12774			B <sub>X7</sub>	X7+X4	
	20705			L <sub>X7</sub>	5	
237	12775	20707		S <sub>X7</sub>	X7*X5	INSERT HD GP. NO.
				L <sub>X7</sub>	1	EACH ENTRY IS 2 WORDS
				S <sub>B2</sub>	0	
240	0612000242 +	6120000062		G <sub>E</sub>	81,82,GETDSK6	IS SECTOR .GE. 50
	22212			L <sub>X2</sub>	81,X2	NO..START WITH DAT WORD 1
241	0200000244 +			J <sub>B</sub>	GETDSK7	
242	7277000001	6121777715	GETDSK6	S <sub>X7</sub>	X7+1	YES..START WITH DAT WORD 2
				S <sub>B2</sub>	B1-50	
243	22222			L <sub>X2</sub>	B2,X2	
244	6140000040		GETDSK7	S <sub>E4</sub>	32	FOR EACH UNIT, DO 32 ARM POSITIONS
245	10133	20105	GETDSK8	B <sub>X1</sub>	X3	CONSTRUCT APT
		12114		L <sub>X1</sub>	X1+X4	ADDRESS
246	7160000000 X			B <sub>X1</sub>	81,TEMPY	READ APT ENTRY
260	5110000000 X	21122		S <sub>A1</sub>	TEMPY	
261	6120000001	0301000403 +		A <sub>X1</sub>	18	POSITION AVAILI SECTOR COUNT
262	6120000144	43666		S <sub>B2</sub>	X1,GETDSK16	JICK
		11167		Z <sub>D</sub>	100	JUMP IF NO SPACE AT THIS ARM POS
263	63570	7160000000 X		S <sub>E2</sub>	60-6	ELSE SCAN 100 SECTORS
				M <sub>X6</sub>	X6*X7	
				S <sub>X1</sub>	X7	
				S <sub>B5</sub>	UGH	
				CHGMAPRW	MYSUBP,DENTRY,(MAINCL,M,FILE),X1+GF,DATE,DATA,MAP,64,	
301	76750		(MAINCL,M,FILE)	S <sub>X7</sub>	35	UGH
302	6150000040		GETDSK9	S <sub>E5</sub>	32	FOR EACH SECTOR, DO 32 HEAD GROUPS
* TEST FOR POSSIBLE FREE BLOCK						

303 43666  
 15674  
 5216000000 X  
 304 11612  
 0316000371 +

\* GETDSK10 Mx6  
 BX6  
 SA1  
 BX6  
 NZ  
 X6,GETDSK13

60-6  
 -X6\*X7  
 X6+DATMAP  
 X1\*X2  
 X6,GETDSK13

HD GP/SECTOR FROM DAT ADDR  
 TEST FOR FREE BLOCK  
 BLOCK NOT FREE

\* POSSIBLE FREE BLOCK .. TEST FOR SECTOR 49 WRAP-AROUND

43612  
 305 11662  
 0306000313 +  
 21662  
 306 5011000001  
 11116  
 307 0311000371 +

MX6  
 BX6  
 ZP  
 AX6  
 SA1  
 BX7  
 NZ

10  
 X6\*X2  
 X6,GETDSK11  
 50  
 A1+1  
 X1\*X6  
 X1,GETDSK13

TEST FOR MASK WRAP  
 NO...ENTIRE BLOCK FREE  
 YES...POSITION AS PARTIAL MASK

\* TEST REMAINDER OF BLOCK  
 ENTIRE BLOCK NOT FREE

\* ALLOCATE BLOCK WITH SECTOR 49 WRAP-AROUND

54110  
 12616  
 310 54610  
 43615  
 15626  
 311 501177774  
 12616  
 54610  
 312 0200000314 +

SA1  
 BX6  
 SA6  
 MX6  
 BX6  
 SA1  
 BX6  
 SA6  
 JP

A1  
 X1\*X6  
 A1  
 10  
 -X6\*X2  
 A1=1  
 X1\*X6  
 A1  
 GETDSK12

ALLOCATE 2ND PIECE OF BLOCK  
 NON-WRAPPED BITS OF MASK  
 ALLOCATE 1ST PIECE OF BLOCK  
 GO DEVELOP DISK ADDRESS

\* ALLOCATE BLOCK WITHOUT WRAP-AROUND

313 12612  
 54618

GETDSK11 BX6  
 SA6

X1\*X2  
 A1

ALLOCATE THE BLOCK

\* DEVELOP DISK ADDRESS OF THE ALLOCATED BLOCK IN X6

314 76110  
 21707  
 20707  
 12671  
 315 47166  
 6160000000 X  
 317 7160000000 X

GETDSK12 SK1  
 AY7  
 LY7  
 BX6  
 CHECKSUM  
 SA6  
 TEMPW  
 ZMAP

S1  
 1  
 7  
 X7\*X1  
 X6  
 TEMPV

SECTOR NO  
 REMOVE LO-ORDER BIT  
 POSITION REST OF DAT ADDRESS  
 INSERT SECTOR NO.  
 CONSISTENCY CHECK  
 SAVE DISK ADDR  
 MYSUBP, DENTRY, (MAINCL, M, GFILE) DROP DAT FROM MAP

\* DEC AVAIL SECTOR COUNTER IN APT ENTRY

327 10733  
 20705  
 12774  
 330 7160000000 X  
 342 5110000000 X  
 10711  
 343 5110000000 X

BX7  
 LY7  
 BX7  
 REAPT  
 SA1  
 BX7  
 SA1

X3  
 5  
 X7\*X4  
 87+TEMPY  
 TEMPY  
 X1  
 TEMPV

CONSTRUCT  
 APT  
 ADDRESS  
 READ APT ENTRY  
 PICK UP APT ENTRY  
 PICK UP NO OF SECTORS

20122  
37771  
344 5170000000 X  
7160000000 X

Lx1  
Iy7  
Sa7  
Wrapt  
18  
X7-X1  
Tempy  
\*,\*

DECR AVAIL SECTORS  
UPDATE APT ENTRY

\* LEAVE SUGGESTIONS FOR NEXT ALLOCATOR

350 5110000000 X  
73111  
351 7211000007  
7271777633  
352 0337000353 +  
10177  
353 7255000001  
7275777737  
354 0307000355 +  
20522  
355 20444  
12115  
12114

Sa1  
Sx1  
Sx1  
Sy7  
N6  
Bx1  
Sx5  
Sx7  
Z6  
Lx6  
Bx1  
Lx4  
Bx1  
TEMPV  
X1+B1  
X1+1  
X1-100  
X7, GETDSK12A  
X7  
X5+1  
X5-32  
X7, GETDSK12B  
18  
X1+X5  
36  
X1+X4

NO. SECTORS REQUESTED  
ADD TO LOC OF GOTEN BLOCK  
ALLOW FOR DISK DRIVER LAG  
TEST FOR WRAP AROUND  
WRAP AROUND  
INCR HD GP NO.  
TEST FOR WRAP AROUND  
WRAP AROUND  
INSERT HD GP  
INSERT ARM POS. NO.

\* RELEASE THE ALLOCATION LOCK ON THE UNIT AND RETURN

367 5110000000 X  
10611  
370 0260000000

SENDEV  
Sa1  
By6  
Jp

(MAINCL, X3+M, ADISK), (,X1)  
TEMPW  
X1

RESTORE DISK ADDR

\* TRY NEXT HEAD GROUP

371 7277000002  
7255000001  
372 7265777737  
0316000374 +  
373 7277777677  
76500  
374 6155777776  
0650000303 +

GETDSK13  
Sx7  
Sx5  
Sx6  
N7  
Sy7  
Sy5  
S95  
Nz  
X7+2  
X5+1  
X5-32  
X6, GETDSK14  
X7-32+2  
B0  
B5-1  
B5, GETDSK10

NEXT DAT ENTRY  
INCR HD GP NO.  
TEST FOR WRAP AROUND  
NO... PROCEDE  
YES... WRAP TO HD GP 0

ANY MORE HD GPS?  
YES... GO DO NEXT HD GP  
NO... MOVE TO NEW SECTOR

\* TRY NEXT SECTOR

375 20201  
6111000001  
376 7161777715  
0306000402 +  
377 7161777633  
0316000403 +  
400 66100  
7277777776  
21262  
401 0200000403 +  
402 7277000001

Lx2  
Sa1  
Sy6  
Z6  
N7  
Sy7  
Ax2  
Jp  
1  
B1+1  
B1-50  
X6, GETDSK15  
B1-100  
X6, GETDSK16  
B0  
X7-1  
B0  
GETDSK16  
X7+1

SHIFT MASK ONE SECTOR  
INCR SECTOR NO.  
TEST FOR SECTOR 49 WRAP=AROUND  
YES... JUMP  
NO... TEST FOR SECTOR 99 WRAP=AROUND  
NO... PROCEDE  
YES... WRAP TO SECTOR 0  
STEP BACK 1 WORD IN DAT  
RESET MASK FOR WRAP

21262		AY2	50	RESET MASK FOR WRAP
403 6122777776	GETDSK16	S62	R2-1	ANY MORE SECTORS
0520000302 +		N7	R2,GETDSK9	YES..GO DO NEXT SECTOR
* TRY NEXT ARM POS				NO...MOVE TO NEW ARM POS
404 5110000000 X		S41	TEMpx	TEST DIRECTION OF ARM
0331000411 +		N4	X1,GETDSK17	MOVEMENT
405 7244000001		Sx4	X4+1	ARM MOVING POS, INCR POSITION
7277000100		Sx7	X7+32*2	INCR DAT ADDRESS
406 7214777737		Sx1	X4-32	TEST FOR WRAP-AROUND
0311000414 +		N7	X1,GETDSK18	WRAP TO ARM POS 0
407 76400		Sx4	R0	
7277773777		Sx7	X7-DAT6638	
410 0200000414 +		JP	GETDSK18	
411 7244777776	GETDSK17	Sx4	X4-1	ARM MOVING NEG,DECR POSITION
7277777677		Sx7	X7-32*2	DECRI DAT ADDR
412 0324000414 +		P1	X4,GETDSK18	TEST FOR WRAP-AROUND
7140000037		Sx4	31	WRAP TO ARM POS 31
413 7277004000		Sx7	X7+DAT6638	
414 6144777776	GETDSK18	S84	R4-1	ANY MORE ARM POSITIONS
0540000245 +		N7	R4,GETDSK8	YES..GO DO NEXT ARM POS
* TRY NEXT UNIT				NO...MOVE TO NEW UNIT
415 7160000000 X		ZMAP	MYSUBP,DENTRY,(MAINCL,M,GFILE)	DROP DAT FROM MAP
425 5140000000 X		S4	TEMPW	EVENT AS RECEIVED
7160000000 X		SPNDEV	(MAINCL,X3+M,ADISK),,(X4)	SEND IT BACK
437 5140000000 X		S4	MYUNIT	FULL UNIT FALLS
7264000001		Sy6	X4+1	OUT OF FAVORI
440 7276777776		Sy7	X6-N6638S	
0317000442 +		N7	X7,GETDSK19	
441 76600		Sy6	R0	
442 5160000000 X	GETDSK19	S46	MYUNIT	
5140000000 X		S4	TEMPV	RECALL! NO SECTORS NEEDED
443 6133777776		S83	B3-1	ANY MORE UNITS
0530000157 +		N7	R3,GETDSK2	YES..GO DO NEXT UNIT
* ALL UNITS FULL (NEVER HAPPENS)				NO...GO BUY SOME MORE
444 0260777776		J6	R6-1	ERROR RETURN
* RETURN ON DISK DRIVER FILE				
445 0100000000 X	GETDSK20	RJ	SYSERR	

## TOGGLE STATUS OF A BLOCK OF DISK SECTORS

ON ENTRY: X4=NO. OF SECTORS  
X5=DISK ADDRESS

RETURNS	RESULTANT STATUS	RETURNS TO
X4	ALL FREE ALL BUSY MIXED	B6 B6-1 SYSERR

446 63140 0200000450 +	FREEISK	S1	X4 TOGGLE	INDICATE AVAIL SECTOR INCR
447 63140 47107	BUZYISK	S1	X4 -S1	INDICATE AVAIL SECTOR DECR
450 43647	TOGGLE	SIMCHECK	X5	TEST DISK ADDR CHECKSUM
454 10744 \$170000000 X		Bx7	X4	SAVE NO. OF SECTORS
455 6120000454 + 0200000602 +		S17	TEMPV	
456 43347 15354 21321	TOGLI	S2	TOGLI	X2=SECTOR MASK
		Jb	MASKX2	CLEAR CHECK SUM
457 7160000000 X		Mx3	60-21	
465 5170000000 X		Bx3	-X3*X5	
		Ax3	17	UNIT NO. IN X3
		GETEVH	(MAINCL,X3*M,ADISK)	
		S17	TEMPW	SAVE ALLOCATION LOCK

## ADJUST FREE SECTOR COUNTER IN APT

43747 7160000000 X	EXTRACT	X7,X5,4+5,5+7	EXTRACT UNIT AND ARMPoS
500 5110000000 X 76710 20722	REAPT	X7,TEMPY	READ APT ENTRY
501 36717 54716 7160000000 X	S1	TEMPY	AVAIL SECTOR ADJUSTMENT
	Sx7	S1	
	Lx7	18	
	Iy7	X1+X7	ADJUST AVAIL SECTOR COUNT
	S17	A1	
	WRAPT	*,*	

505 43747 20701	EXTRACT	X7,X5,4+5+5,7	EXTRACT UNIT,ARMPoS AND HDGP
506 43165 15151 63110	Lx7	1	DAT ADDRESS IN X7
507 6120000062 0712000511 +	My1	60-7	
	Bx1	-X1*X5	
	S1	X1	SECTOR NO.
	S2	50	
	L1	B1,B2,TOGL2	
510 6111777715	S1	B1-50	



561	6166777776	0520000562 +	N7	R2, TOGGLE6	
			S86	R6-1	BOOTH PIECES RUSY., DECR RETURN ADDR
562	7160000000 X	TOGGLE6	W8DAT	6,*,*	
565	5110000000 X		S81	TEMPW	
	7160000000 X		S8NDEV	(MAINCL,X3+M,ADISK),(,X1)	
577	5140000000 X		S84	TEMPV	
	0260000000		J8	R6	

\* SUBROUTINE RECLAIMS FIXED SECTORS

600 0260000000

GETFX J0 R6 INTFRIM NO-OP

\* SUBROUTINE RECLAIMS SWAPPED SECTORS

601 0260000000

GETSW J0 R6 INTFRIM NO-OP

\* SUBROUTINE FORMS SECTOR BIT MASK IN X2

MASK	MACRO	N
	IFC	FQ,N/SYSERR/
*	RJ	SYSERR
*	ENDIF	
*	IFC	NE,N/SYSERR/
*	MY2	40-N
*	BY2	X2
*	JB	R2
*	ENDIF	
*	ENDM	MASK

602 63140

0210000603 \*

MASKX2	S1	X4
	JB	R1+MASKX2A
603 0100000000 X	MASK	SYSERR
604 43273	MASK	1
605 43272	MASK	2
606 0100000000 X	MASK	SYSERR
607 43270	MASK	4
610 0100000000 X	MASK	SYSERR
611 0100000000 X	MASK	SYSERR
612 43265	MASK	7

ILLEGAL	
64 WORD BLOCK	
128 WORD BLOCK	
ILLEGAL	
257 WORD BLOCK	
ILLEGAL	
ILLEGAL	
513 WORD BLOCK	

613

613

613

SYMBOLS	XTEXT
OPSYMS	XTEXT
0 X DATBUF	EQU
	END

TEMPZ

42536 STORAGE USER  
6600 ASSEMBLY

3264 STATEMENTS  
20.334 SECONDS

490 SYMBOLS 000030 INVENTED SYMBOLS  
433 REFERENCES

DISK ALLOCATOR  
SYMBOLIC REFERENCE TABLE.

COMPASS - VER 2. 03/07/71 05.17.59. PAGE 16

APTIPL	0	EXTERNAL*	P/02 S	8/02	8/38 S	8/38	9/51 S	10/05	12/37 S	12/43
			R/02 S	8/12 S	8/38 S	9/51 S	9/51	12/37 S	12/37	
			R/02 S	8/12	8/38 S	9/51 S	10/05 S	12/37 S	12/43 S	
AP0	0	EXTERNAL*								
AP1	0	EXTERNAL*								
AP2	0	EXTERNAL*								
AP3	0	EXTERNAL*								
AP4	0	EXTERNAL*								
AP5	0	EXTERNAL*								
AP6	0	EXTERNAL*								
AP7	0	EXTERNAL*								
AP8	0	EXTERNAL*								
ATTACH	0	EXTERNAL*								
ATTACHR	0	EXTERNAL*								
AUDIT	0	EXTERNAL*								
BFILE	0	EXTERNAL*								
BLK.DTY	0	EXTERNAL*								
BLK.FLG	0	EXTERNAL*								
BLK.SIZ	0	EXTERNAL*								
BUSYDSK	447	PROGRAM*								
CALBEAD	0	EXTERNAL*								
CHMAP	0	EXTERNAL*								
CHMAPR1	0	EXTERNAL*								
CHMAPR	0	EXTERNAL*								
CLKBUF	0	EXTERNAL*								
CLODAR	0	EXTERNAL*								
CLOSE	0	EXTERNAL*								
CLOSER	0	EXTERNAL*								
CLOSROF	0	EXTERNAL*								
CLOSRWF	0	EXTERNAL*								
CLOSRLW	0	EXTERNAL*								
COMMRF	0	EXTERNAL*								
COMMRL	0	EXTERNAL*								
COMMRFW	0	EXTERNAL*								
COMMRLW	0	EXTERNAL*								
CONVERT	0	EXTERNAL*								
CREATB1	0	EXTERNAL*								
CREATE	0	EXTERNAL*								
CREATER	0	EXTERNAL*								
CREBLK	0	EXTERNAL*								
CREBLKR	0	EXTERNAL*								
CRELFW	0	EXTERNAL*								
CREPTRR	0	EXTERNAL*								
CTEMP	0	EXTERNAL*								
DAB	0	EXTERNAL*								
DAR	0	EXTERNAL*								
DARADDR	0	EXTERNAL*								
DARHASH	0	EXTERNAL*								
DARSPA	0	EXTERNAL*								
DATBUF	0	EXTERNAL*	13/10	13/10	13/28	13/28	13/37	15/41 D		
DATIPL	0	EXTERNAL*	13/10 S	13/10 S	13/10	13/28 S	13/28 S	14/05 S		
			13/10 S	13/10 S	13/28 S	13/28 S	13/28	14/05		
DATMAP	0	EXTERNAL*	8/48	9/04						

## DISK ALLOCATOR SYMBOLIC REFERENCE TABLE

COMPASS - VER 2. 03/07/71 05.17.59.

PAGE 17

DISK ALLOCATOR  
SYMBOLIC REFERENCE TABLE.

COMPASS - VER 2. 03/07/71 05.17.59.

PAGE 18

ERRNUM	0	EXTERNAL*			
ERRPACK	0	EXTERNAL*			
ERRPARM	0	EXTERNAL*			
EXCLAIM	0	EXTERNAL*			
FR.FUND	0	EXTERNAL*			
FR.LEN	0	EXTERNAL*			
FR.NAME	0	EXTERNAL*			
FR.SHAP	0	EXTERNAL*			
FR.WD3	0	EXTERNAL*			
FDD1	133	PROGRAM*	6/04	6/08 L	
FDH1	24	PROGRAM*	5/18	5/22 L	
FDSKDAT	131	PROGRAM*	6/04	L	
FDSKHDR	22	PROGRAM*	5/18	L	
FDSKPTR	66	PROGRAM*	5/39	L	
FHR	0	EXTERNAL*			
FHR	0	EXTERNAL*			
FHRADDR	0	EXTERNAL*			
FHRHASH	0	EXTERNAL*			
FILCL	0	EXTERNAL*			
FILEADR	0	EXTERNAL*			
FILECAP	0	EXTERNAL*			
FLDLEN	0	EXTERNAL*			
FREEDSK	446	PROGRAM*	5/19	6/05	12/15 L
FRETURN	0	EXTERNAL*			
FRW	0	EXTERNAL*			
FRWENT	0	EXTERNAL*			
FRWERR	0	EXTERNAL*			
FRWINT	0	EXTERNAL*			
FR.CAPX	0	EXTERNAL*			
FR.CLAM	0	EXTERNAL*			
FR.DAR	0	EXTERNAL*			
FR.DBSZ	0	EXTERNAL*			
FR.FLAG	0	EXTERNAL*			
FR.FROZ	0	EXTERNAL*			
FR.FUND	0	EXTERNAL*			
FR.LEN	0	EXTERNAL*			
FR.LOCK	0	EXTERNAL*			
FR.MEMB	0	EXTERNAL*			
FR.NAME	0	EXTERNAL*			
FR.ONEL	0	EXTERNAL*			
FR.OPEN	0	EXTERNAL*			
FR.ROOT	0	EXTERNAL*			
FR.SHAP	0	EXTERNAL*			
FR.SIZE	0	EXTERNAL*			
FR.SUSP	0	EXTERNAL*			
FR.WD1	0	EXTERNAL*			
FR.WD2	0	EXTERNAL*			
FR.WD3	0	EXTERNAL*			
FR.WRIT	0	EXTERNAL*			
GDD1	117	PROGRAM*	5/49	5/50	5/52 L
GDH1	10	PROGRAM*	5/09	5/10	5/12 L
GDP1	54	PROGRAM*	5/31	5/32	5/34 L
GDSKDAT	107	PROGRAM*	5/47	L	

DISK ALLOCATOR  
SYMBOLIC REFERENCE TABLE.

COMPASS - VER 2. 03/07/71 05.17.59.

PAGE 19

GDSKHDR	0	PROGRAM*	5/07 L			
GDSKPTR	44	PROGRAM*	5/28 L			
GETDSK	154	PROGRAM*	5/14	7/21 L		
GETDSK10	363	PROGRAM*	9/02 L	10/39		
GETDSK11	313	PROGRAM*	9/12	9/32 L		
GETDSK12	314	PROGRAM*	9/28	9/37 L		
GETDSK13	371	PROGRAM*	9/06	9/16	10/32 L	
GETDSK14	374	PROGRAM*	10/35	10/38 L		
GETDSK15	402	PROGRAM*	10/46	10/53 L		
GETDSK16	403	PROGRAM*	8/41	10/48	10/52	11/02 L
GETDSK17	411	PROGRAM*	11/08	11/16 L		
GETDSK18	414	PROGRAM*	11/12	11/15	11/18	11/21 L
GETDSK19	442	PROGRAM*	12/33	11/35 L		
GETDSK2	157	PROGRAM*	7/25 L	11/38		
GETDSK20	445	PROGRAM*	7/42	11/46 L		
GETDSK3	160	PROGRAM*	7/25	7/30 L		
GETDSK4	224	PROGRAM*	8/07	8/10 L		
GETDSK5	230	PROGRAM*	7/46	8/15 L		
GETDSK6	242	PROGRAM*	8/25	8/28 L		
GETDSK7	244	PROGRAM*	8/27	8/32 L		
GETDSK8	245	PROGRAM*	8/34 L	11/22		
GETDSK9	362	PROGRAM*	8/50 L	11/03		
GETFX	600	PROGRAM*	5/11	15/04 L		
GETRESP	0	EXTERNAL*				
GETSW	601	PROGRAM*	5/03	5/51	15/08 L	
GFILE	0	EXTERNAL*				
GF.APTF	0	EXTERNAL*	8/02	8/38	9/51	12/37
GF.APTL	0	EXTERNAL*	8/02	8/38	9/51	12/37
GF.DATF	0	EXTERNAL*	8/48	13/10	13/10	13/28
GF.DATL	0	EXTERNAL*	13/10	13/28		
GF.ODSF	0	EXTERNAL*				
GF.OOSL	0	EXTERNAL*				
GF.HSHF	0	EXTERNAL*				
GF.HSHL	0	EXTERNAL*				
GF.IOTF	0	EXTERNAL*				
GF.IOTL	0	EXTERNAL*				
GF.LEN	0	EXTERNAL*				
GF.SUSF	0	EXTERNAL*				
GF.SUSL	0	EXTERNAL*				
GF.TRVE	0	EXTERNAL*				
GTDSK12A	353	PROGRAM*	10/12	10/14 L		
GTDSK12B	355	PROGRAM*	10/16	10/19 L		
HASH	0	EXTERNAL*				
HASHIPL	0	EXTERNAL*				
HRR	0	EXTERNAL*				
HRW	0	EXTERNAL*				
HENTRY	0	EXTERNAL*				
HFILE	0	EXTERNAL*				
HOLDBLK	0	EXTERNAL*				
INTDAT	0	EXTERNAL*				
TOTBUF	0	EXTERNAL*				
TOTIPL	0	EXTERNAL*				
TPLIST	0	EXTERNAL*	3/07			

## **DTSK ALLOCATOR SYMBOLIC PREFERENCE TABLE**

COMPASS - VER 2. 03/07/71 05.17.59.

03/07/71 05.17.59,

PAGE

20

DISK ALLOCATOR  
SYMBOLIC REFERENCE TABLE.

COMPASS - VER 2. 03/07/71 05.17.59.

PAGE 21

M.DDRSP	0	EXTERNAL*							
M.DFILT	0	EXTERNAL*							
M.DOBJS	0	EXTERNAL*							
M.EMPTY	0	EXTERNAL*							
M.FCLEV	0	EXTERNAL*							
M.FDISK	0	EXTERNAL*	5/68	5/13	5/23	5/25			
M.FHRL	0	EXTERNAL*							
M.FILCL	0	EXTERNAL*							
M.FRWCC	0	EXTERNAL*							
M.GFILE	0	EXTERNAL*	8/48	8/48	9/44	11/26			
M.HASHL	0	EXTERNAL*							
M.HELP	0	EXTERNAL*							
M.HFILE	0	EXTERNAL*							
M.IOCTR	0	EXTERNAL*							
M.LOCKS	0	EXTERNAL*							
M.MKCAP	0	EXTERNAL*							
M.OPCL	0	EXTERNAL*							
M.RRUFFS	0	EXTERNAL*							
M.RETRY	0	EXTERNAL*							
M.SDISK	0	EXTERNAL*	5/29	5/35	5/40	5/43	5/48	5/53	6/09
M.SLOTS	0	EXTERNAL*							6/11
M.SWAB	0	EXTERNAL*							
M.TRMCC	0	EXTERNAL*							
M.TRYCC	0	EXTERNAL*							
M.TVRES	0	EXTERNAL*							
M.TWAIT	0	EXTERNAL*							
M.UNAME	0	EXTERNAL*							
M.USCIR	0	EXTERNAL*							
M.USRCC	0	EXTERNAL*							
M.WBUFS	0	EXTERNAL*							
M.10SEC	0	EXTERNAL*							
NLOCKS	0	EXTERNAL*							
NOBJS	0	EXTERNAL*							
NOQLOCK	0	EXTERNAL*							
NUMRESP	0	EXTERNAL*							
N663BS	1			7/21	11/32				
OPEN	0	EXTERNAL*							
OPENDAR	0	EXTERNAL*							
OPENR	0	EXTERNAL*							
OPERCL	0	EXTERNAL*	3/07						
OP:EE:CL	0	EXTERNAL*	3/07 0	5/22	5/34	5/47	6/10	8/46	11/27
			5/07	5/24	5/39	5/52	7/31	9/43	11/29
			5/12	5/28	5/42	6/08	7/41	10/24	12/29
ORGADDR	0	EXTERNAL*							
ORGCLST	0	EXTERNAL*							
ORGMAP	0	EXTERNAL*							
PAGESW	0	EXTERNAL*							
PASSERR	0	EXTERNAL*							
PBR	0	EXTERNAL*							
PBW	0	EXTERNAL*							
PG.DDS	0	EXTERNAL*							
PG.DTY	0	EXTERNAL*							
PG.PG	0	EXTERNAL*							

DISK ALLOCATOR  
SYMBOLIC REFERENCE TABLE.

COMBASS - VER 2. 03/07/71 05.18.00.

PAGE 22

PROBE	0	EXTERNAL*							
PROCADR	0	EXTERNAL*							
PRVOPEN	0	EXTERNAL*							
PTR.CM	0	EXTERNAL*							
PTR.DDS	0	EXTERNAL*							
PTR.DTY	0	EXTERNAL*							
PTR.NUM	0	EXTERNAL*							
PTR.PTR	0	EXTERNAL*							
PRUFS	0	EXTERNAL*							
READCAP	0	EXTERNAL*	8/61	8/37	9/50	12/36	13/09	13/27	
READONF	0	EXTERNAL*							
READONL	0	EXTERNAL*							
READRWF	0	EXTERNAL*							
READRWL	0	EXTERNAL*							
REDSHP	0	EXTERNAL*							
REGS	0	EXTERNAL*							
RELCLAM	0	EXTERNAL*							
RELEASE	0	EXTERNAL*							
RFSP	0	EXTERNAL*							
RESTREG	0	EXTERNAL*							
RETCLK	0	EXTERNAL*							
PETERR	0	EXTERNAL*							
RETPAR	0	EXTERNAL*							
RETPARM	0	EXTERNAL*							
RETRY	0	EXTERNAL*							
RETURN	0	EXTERNAL*							
SAVEREG	0	EXTERNAL*							
SETPCNT	0	EXTERNAL*							
SETUP	0	EXTERNAL*							
SETUPR	0	EXTERNAL*							
SHCLAIM	0	EXTERNAL*							
SIZE	0	EXTERNAL*							
SIZES	0	EXTERNAL*							
SLEEP	0	EXTERNAL*							
SLOTS	0	EXTERNAL*							
STKBUF	0	EXTERNAL*							
SUSIPL	0	EXTERNAL*							
SW.DDS	0	EXTERNAL*							
SW.SW	0	EXTERNAL*							
SYSERR	0	EXTERNAL*	5/13	7/23	8/17	9/51	12/22	13/10	13/48
			5/25	8/02	8/16	9/51	12/37	13/10	13/51
			5/35	8/02	8/38	10/05	12/37	13/19	14/05
			5/43	8/02	8/38	10/25	12/37	13/28	14/07
			5/53	8/12	8/38	11/30	12/43	13/28	15/29
			6/11	8/16	9/51	11/46	13/10	13/28	15/32
TABADDR	0	EXTERNAL*							
TEMPA	0	EXTERNAL*							
TEMPB	0	EXTERNAL*							
TEMPC	0	EXTERNAL*							
TEMPD	0	EXTERNAL*							
TEMPE	0	EXTERNAL*							
TEMPF	0	EXTERNAL*							
TEMPG	0	EXTERNAL*							

DISK ALLOCATOR  
SYMBOLIC REFERENCE TABLE.

COMPASS - VER 2. 03/07/71 05.18.00.

PAGE 23

TEMPH	0	EXTERNAL*						
TEMPV	0	EXTERNAL*	7/24 S	9/53	10/08	11/36	12/23 S	14/07
TEMPW	0	EXTERNAL*	7/32 S	9/42 S	10/25	11/28	12/30 S	14/05
TEMPX	0	EXTERNAL*	7/42	7/42	11/07			
TEMPY	0	EXTERNAL*	8/02	8/10 S	8/38	9/51	12/37	
			8/02	8/38	9/51	10/03 S	12/37	
TEMPZ	0	EXTERNAL*	15/41					
TEMP0	0	EXTERNAL*						
TEMP1	0	EXTERNAL*						
TEMP10	0	EXTERNAL*						
TEMP11	0	EXTERNAL*						
TEMP2	0	EXTERNAL*						
TEMP3	0	EXTERNAL*						
TEMP4	0	EXTERNAL*						
TEMP5	0	EXTERNAL*						
TEMP6	0	EXTERNAL*						
TEMP7	0	EXTERNAL*						
TEMP8	0	EXTERNAL*						
TEMP9	0	EXTERNAL*						
TERMR0F	0	EXTERNAL*						
TERMRWF	0	EXTERNAL*						
TERMRWL	0	EXTERNAL*						
TOGGLE	450	PROGRAM*	12/16	12/21 L				
TOGGL1	456	PROGRAM*	12/24	12/26 L				
TOGGL2	511	PROGRAM*	12/32	13/02 L				
TOGGL3	531	PROGRAM*	12/35	13/23 L				
TOGGL4	551	PROGRAM*	12/38	13/35	13/37 L			
TOGGL4A	555	PROGRAM*	12/41	13/44	13/47 L			
TOGGL5	556	PROGRAM*	12/47	13/49 L				
TOGGL5A	560	PROGRAM*	12/50	13/53 L				
TOGGL6	562	PROGRAM*	12/14	13/17	14/01	14/06 L		
TR.DRIV	0	EXTERNAL*						
TR.LEVL	0	EXTERNAL*						
UDSKSCR	0	EXTERNAL*						
UNLOCK	0	EXTERNAL*						
UNLOCKW	0	EXTERNAL*						
USERRW	0	EXTERNAL*						
USERRWL	0	EXTERNAL*						
USRPACK	0	EXTERNAL*						
WRITCAP	0	EXTERNAL*	8/11	10/04	12/42	14/04		
ZEROMAP	0	EXTERNAL*						
ZROMAPR	0	EXTERNAL*						

05.16.59. 03/07/71 TSS SCORE 3.0  
05.17.01.CPU = 000 SEC : CM = 014000  
05.17.04.GET,XTEXT,DISKSYS  
05.17.20.GET,ALLOC,DISKSYS  
05.17.24.FILE,XTEXT  
05.17.24.RFL,50000  
05.17.24.CPU = 000 SEC : CM = 050000  
05.17.24.TEXT,OUTPUT  
05.17.24.GET,SYSSUBP,MACROS,,RO  
05.17.24.GET,MACROS,DISKSYS,,RO  
05.17.24.GET,SYMBOLS,DISKSYS,,RO  
05.17.25.GET,PARAMS,DISKSYS,,RO  
05.17.25.GET,DSKOPS,OPERS,,RO  
05.17.25.GET,OBBITS,DISKSYS,,RO  
05.17.25.GET,TYPES,DISKSYS,,RO  
05.17.25.GET,ERRORS,DISKSYS,,RO  
05.17.25.GET,DSKOPR,DISKSYS,,RO  
05.17.25.GET,SYSCALL,MACROS,,RO  
05.17.29.NOMPASS,I=ALLOC,Sz0  
05.17.30.ASSEMBLING ALLOC  
05.17.51.ASSEMBLING ALLOC  
05.18.00. ASSEMBLY COMPLETE.  
05.18.02.END  
05.18.04.FIN  
05.18.04.CPU TIME: 022.941 SECONDS  
05.18.04.SYS TIME: 005.599 SECONDS  
05.18.04.SYSTEXT: 1091 LINES

05.18.23. 03/07/71 TSS SCOPE 3.0  
05.18.25.CPU = 000 SEC : CM = 014000  
05.18.28.GET,UPDATE,DISKSYS  
05.18.31.FILE,UPDATE  
05.18.31.RFL,20000  
05.18.31.CPU = 000 SEC : CM = 020000  
05.18.31.TEXT,OUTPUT  
05.18.32.GET,BINARY,DISKSYS  
05.18.32.REWIND,LGO  
05.18.32.END  
05.18.32.REWIND,BINARY  
05.18.33.END  
05.18.33.REWIND,TBIN  
05.18.33.END  
05.18.33.COPYL,BINARY,LGO,TBIN  
05.18.37.ALLOC UPDATED  
05.18.39.COPYL DONE  
05.18.39.END  
05.18.39.REWIND,TBIN  
05.18.39.END  
05.18.39.REWIND,BINARY  
05.18.39.END  
05.18.40.COPYF,TBIN,BINARY  
05.18.44.END  
05.18.44.REWIND,LGO  
05.18.44.END  
05.18.49.FIN  
05.18.49.CPU TIME : 001.001 SECONDS  
05.18.49.SYS TIME : 016.409 SECONDS  
05.18.49.SYSTEM TEXT : 029 LINES

END OF FILE

