

ADDRESS	LENGTH	BINARY CONTROL CARDS.	
0	1665	IDENT	TERMIN
1665		END	

ENTRY POINTS.

COMMRWF - 1665 TERMRAW - 240 TERMROF - 240 ENTER - 1652

EXTERNAL SYMBOLS.

OPERCL	TEMP5	DISKINT	BLK.FLG	LOADBUF	M.ABFCH	GF.IOTL	LFTFREE
IPLIST	TEMP6	FRWENT	SW.SW	AUDIT	M.ABFIL	GF.DDSF	LENADDR
COMMRWF	TEMP7	FRWERR	SW.DDS	NOQLOCK	M.ACREQ	GF.DDSL	DARADDR
COMMRWL	TEMP8	FRWINT	PG.PG	PROBE	M.ACRES	GF.DATF	PAGESW
HOLDBLK	TEMP9	CLKBUF	PG.DDS	RETCLK	M.USRCC	GF.DATL	MAPBUF
LOCTAB	TEMP10	DSYSTIM	PG.DTY	SYSERR	M.FRWCC	GF.APTF	SIZES
LOCTABF	TEMP11	DSWPTIM	PTR.PTR	ERETURN	M.TRMCC	GF.APTL	SIZE
LOCTABL	TEMPA	DUSRTIM	PTR.DDS	RETURN	M.CLOCC	GF.HSHF	NUMRESP
LFT	TEMPB	MYSCRE	PTR.CM	RETPAR	M.ACTCC	FR.HASH	CREATER
FLDLEN	TEMPC	MYCODE	PTR.DTY	ERRPARM	M.TRYCC	DARHASH	CREBLKR
USERRWF	TEMPE	MYSUBP	PTR.NUM	ERRFILE	M.DFILT	GF.HSHL	DELBLKR
USERRWL	TEMPE	MYEVCH	CREATE	ERRALOC	M.DOBJJ	GF.TRVF	OPENR
DATMAP	TEMPE	READCAP	CREBLK	ERRMAP	NOBJS	FHB	ATTACHR
TERMRWF	TEMPE	WRITCAP	DELBLK	CALBEAD	M.BFILE	FB.LEN	DETACHR
CLOSRWF	TEMPE	SAVEREG	OPEN	REGS	M.DDREQ	FB.NAME	ZROMAPR
CLOSRWL	TEMPE	RESTREG	ATTACH	D.ENTRY	M.DDRSP	FB.WD3	CHMAPR
CLOSROF	TEMPE	MAINCL	DETACH	D.FNAME	M.RBUFS	FB.SHAP	CHMAPBI
READRWF	TEMPE	FILCL	CONVERT	DBUG1	M.WBUFS	FB.FUND	SETUPR
READRWL	TEMPE	SLEEP	SETUP	DSKLCK	M.SLOTS	FR	CREATBI
READONF	MYIDENT	MYRESP	DECODE	DBUG2	M.LOCKS	FR.LEN	CLOSER
READONL	MYDAR	RESP	CRELEN	M.AUTH	NLOCKS	FR.NAME	MOVBLKR
HENTRY	MYUNIT	GFILE	OPENDAR	M.MKCAP	M.DDSCT	FR.WD1	CREPTRR
DENTRY	MYSWCC	HFILE	PRVOPEN	REDSHP	M.FHRL	FR.WD2	DORESPR
ORGADDR	DDSIPL	FILECAP	MKPTR	GDSKHDR	M.DARL	FR.WD3	ERRNUM
ORGCLST	IOTIPL	CTEMP	DSPTR	FDSKHDR	M.HASHL	FR.SUSP	ERRCLAS
ORGMAP	HASHIPL	UDSKSCR	CLOSE	GDSKPTR	M.ADDS	FR.LOCK	TABADDR
INTDAT	SUSPIPL	BFILE	ECLOSE	FDSKPTR	M.ASUSP	FR.DAR	ECMBLK
AP0	DATIPL	DDRSP	DARSPA	GDSKDAT	M.ADISK	FR.OPEN	ECIBLK
AP1	APTIPL	RBUFS	ZEROMAP	FDSKDAT	M.SDISK	FR.CAPX	ECIZRM
AP2	RETPARM	RETRY	CHMAP	GETDSK	M.FDISK	FR.DBSZ	ECIMRW
AP3	RETERR	SLOTS	CLODAR	FREEDSK	M.FCLEV	FR.ONEL	ECIBLK
AP4	PASSERR	HBR	HASH	BUSYDSK	M.UNAME	FR.FROZ	ECIFIL
AP5	USRPACK	HBW	DELHASH	L.MNCL	M.USCTR	FR.WBIT	ECIBAD
AP6	IOTBUF	PBR	EXCLAIM	M.GFILE	M.OPCL	FR.SIZE	ECIRTRN
AP7	PROCADR	PBW	SHCLAIM	M.HFILE	M.IOCTR	FR.SHAP	SCRCL
AP8	ERRADDR	PBR	LOCK	M.FILCL	M.TWAIT	FR.FUND	ECICOUT
TEMP0	ERRPACK	DBW	UNLOCK	M.EMPTY	M.CLTIM	FR.FLAG	ECISEV
TEMP1	STKBUF	GETRESP	UNLOCKW	M.RETRY	M.IOSEC	FR.ROOT	ECIGEVH
TEMP2	SETPCNT	TR.DRIV	RELCLAM	M.CLOSE	GF.LEN	FR.CLAM	ECICIN
		TR.LEVL	RELEASE	M.TVRES	GF.SUSP	FR.MEMB	

TERMINATOR PROCESS
STORAGE ALLOCATION.

COMPASS - VER 2.

07/17/71 13.22.10.

PAGE 2

TEMP3	DISKENT	BLK.SIZ	FRW	M.HELP	GF.SUSL	FHRADDR
TEMP4	DISKERR	BLK.DTY	MAKEMAP	M.SWAB	GF.IOTF	FILEADR

IDENT TERMIN

*
*
*

0
0
0

```

*
*
PARAMS XTEXT
MACROS XTEXT
SYSCALL XTEXT
*
EXT OPERCL,IPLIST
MACSET OPERCL,IPLIST,ECS
*
*
*

```

* READ/WRITE CELLS USED BY TERMINATOR

* INFO FROM DISK DRIVER RESPONSE

0
1
2
3
4

```

*
RESPONSE BSSZ 1 ENTIRE EVENT
RESULT BSSZ 1
USERID BSSZ 1
BUFFERX BSSZ 1
SLOTX BSSZ 1
*

```

* INFO FROM I/O TABLE ENTRY

5
6

```

*
FILADDR BSSZ 1
PTRADDR BSSZ 1
*

```

* MISC

7
27
30
42
46
47
57
60
72

```

*
DDSPTRS BSSZ 16
PTR BSSZ 1
PTRS BSSZ 10
PBUF BSSZ 1
BUFPTR BSSZ 1
DDSBUF BSSZ 1
NLEVELS BSSZ 1
SHAPENOS BSSZ 10
EVENT BSSZ 1
*

```

73
74
240

0000000000000000000074 +

```

*****
CRUDPTR VFD 60/CRUDBUF
CRUDBUF BSS 100
CRUDEND BSS 0
*****

```

REMEMBER LAST 25 CRUDDY DISK XFERS

20 *[Signature]*

A →

240

TERMRWL BSS 0

END OF TERMIN READ/WRITE AREA

240		TERMROF	BSS	0	START OF TERMIN READ-ONLY AREA
240	5110000000 X 7160000000 X	BEGIN	SA1 CAPIN	MYUNIT MAINCL,X1+M,BFILE,BFILE	
247	7160000000 X		CAPIN	MAINCL,X1+M,DDRSP,DDRSP	
256	7160000000 X		CAPIN	MAINCL,X1+M,SLOTS,SLOTS	
265	20102 7211000000 X		LX1 SX1	2 X1+M,RBUFS	
266	7160000000 X		CAPIN	MAINCL,X1,RBUFS	
275	7160000000 X		CAPIN	MAINCL,X1+1,RBUFS+1	
304	7160000000 X		CAPIN	MAINCL,X1+2,RBUFS+2	
313	7160000000 X		CAPIN	MAINCL,X1+3,RBUFS+3	
322	7160000000 X		CAPIN	MAINCL,M,RETRY,RETRY	
331	7160000000 X		CAPIN	MAINCL,M,HFILE,HFILE	
340	7160000000 X		CAPIN	MAINCL,M,HFILE+1,HFILE+1	
347	7160000000 X		CAPIN	MAINCL,M,HFILE+2,HFILE+2	
* * * FIND OUT MY IDENTITY (SUSP WD INDEX) *					
356	7160000000 X		GETEVH	(MAINCL,M,ASUSP)	
364	0317000365 ± 0100000000 X		NZ RJ	X7,BEGIN1 HERE COMES THE TWIST SYSERR I DONT EXIST -BONZO DOG BAND	
365	5170000000 X 73170	BEGIN1	SA7 SX1	MYIDENT REMEMBER WHO I AM X7	
366	7160000000 X		RESUSP	X1,TEMP1	
377	5120000000 X 7160000000 X		SA2 SENDEV	TEMP1 **X2 RELEASE SUSPENSE ALLOCATION LOCK	
406	7160000000 X		CAPIN	SLEEP,X1,MYEVCH	
415	7160000000 X		CAPOUT	=XSCRCL,X1,MYSCRF	
424	13600 5160000000 X		BX6 SA6	X0-X0 ONLY UNIT = 0 FOR NOW MYUNIT	
425	0200000455 +		JP	YYY *** TEMPORARY TO COEXIST WITH DISK,S ***	
426	0200000427 +		JP	GETWORK	

```
*  
* MACRO TO DISSECT AN EVENT IN X7  
*  
FIELD      MACRO      BITS.WHERE  
           LX7        BITS  
           MX6        60-BITS  
           BX6        X6*X7  
           SA6        WHERE  
           ENDM       FIELD  
*  
*
```

*
* DISK I/O TERMINATOR PROCESS .. MAIN LOOP
*

427

GETWORK BSS 0

*** THE FOLLOWING KLUDGE ALLOWS COEXISTENCE WITH DISK.S.
*** SEE ALLIO FOR REST OF KLUDGE
*

427	7160000000	X		GETEVH	(MAINCL,M.IOCTR)	
435	7247777776			SX4	X7-1	
			7160000000	SENDEV	**X4	
444	0314000466	+		NZ	X4,ZZZ	JUMP IF REQ IN DISK DRIVER .NE. 0
			7160000000	SENDEV	DSKLCK,B0,XXX	RELEASE HOWARDS LOCK
454	0200000455	+	XXX	JP	YYY	
455	7160000000	X	YYY	GETEVH	(MAINCL,M.TWAIT)	WAIT FOR ALLIO WAKEUP
463	0307000466	+		ZR	X7,ZZZ	EVENT = 0 MEANS WORK TO DO
464	0130000465	+		RETURN		EVENT NONZERO MEANS SUICIDE
466			ZZZ	BSS	0	

466	0100000000	X		BKPT	GETWORK *****	RKPT *** GETWORK *****
470	7160000000	X		GETEVH	DDRSP	GET DISK DRIVER RESPONSE
475	5170000000	+		SA7	RESPONSE	SAVE EVENT AS IS

			20703	LX7	3	
			20724	FIELD	20,RESULT	
477	20724			FIELD	20,USERID	
			20710	FIELD	8,BUFFERX	
			20711	FIELD	9,SLOTX	
503	5140000000	X		SA4	MYUNIT	
			5150000004	SA5	SLOTX	

504	20411			LX4	0	
			12545	BX5	X4+X5	
			20501	LX5	1	
505	7160000000	X		REIOT	X5,IOTBUF	READ I/O TABLE ENTRY
517	5140000000	X		SA4	IOTBUF	WORD 1 OF IOT ENTRY
			63540	SB5	X4	REQUEST TYPE
			73640	SX6	X4	

520	13646			BX6	X4-X6	CLEAR REQ FIELD
			5140000001	SA4	IOTBUF+1	
			73740	SX7	X4	DDS ADDR OF FAULTED PTR
521	5170000006	+		SA7	PTRADDR	
			12667	BX6	X6+X7	
522	5160000072	+		SA6	EVENT	STORE EVENT W/ DDS PTR ADDR
			21622	AX6	18	
523	5160000005	+		SA6	FILADDR	
			21422	AX4	18	
			73640	SX6	X4	DDS ADDR OF FILE-HEADER-RECORD

524	5160000000	X		SA6	EHRADDR	
			0750001646	NG	B5,ERROR04	
525	6140000007			SB4	NTPES-1	

526	0250000527	+		GT	B5, B4, ERROR04
				JP	B5+XXXTERM
527			XXXTERM	BSS	0
527	0200001645	+	+	JP	ERROR03
530	0200000571	+	+	JP	HBRTERM
531	0200001014	+	+	JP	HBWTERM
532	0200001032	+	+	JP	DBRTERM
533	0200001152	+	+	JP	DBWTERM
534	0200001225	+	+	JP	DBRTERM
535	0200001422	+	+	JP	DBWTERM
536	0200001475	+	+	JP	ZAPTERM
537				BSS	0
				EQU	0
		10	NTYPES		0+XXXTERM

NUMBER OF I/O REQUEST TYPES


```

* CHECKIO.. CHECKS FOR I/O ERROR IN READ/WRITE
*
537 515000001 +          CHECKIO  SA5      RESULT
      20570              LX5      60-4
      43470              MX4      60-4
540 15554                BX5      -X4*X5
      0315000542 +      NZ       X5,CHKIOI
541 0270000000          JP       B7
542 5150000072 +          CHKIOI  SA5      EVENT
      73650              SX6      X5
      13556              BX5      X5-X6
543 43621                MX6      17
      20622              LX6      18
      12665              BX6      X6+X5
      54650              SA6      A5
***** STORE EVENT *****
544 5140000073 +          SA5      CRUDDPTR
      53640              SA6      X4      REMEMBER CRUDDY EVENT
*
545 5150000000 X          SA5      IOTBUF
      10655              BX6      Y5
546 5264000001          SA6      CRUDBUF X4+1      WD 1 OF CRUDDY IOT
*
547 10655                SA5      IOTBUF+1
      5264000002          BX6      X5
      SA6      X4+2      WD 2 OF CRUDDY IOT
*
550 5150000000 +          SA5      RESPONSE
      10655              BX6      X5
551 5264000003          SA6      X4+3 X4+4 CRUDDY DISK RESPONSE
*
      CRUDBUF X4+4 X4+5 ADVANCE CRUD POINTER
552 7246777537          SX4      X6=CRUDEND
      0314000554 +      NZ       X4,TLAB      JUMP IF STILL ROOM
553 7160000074 +          SX6      CRUDBUF      WRAP AROUND
554 5160000073 +          TLAB   SA6      CRUDDPTR      UPDATE CRUD POINTER
*****
      JP       B7-1      ERROR RETURN
*
* LOCALEV.. SENDS EVENT TO WAITING LOCAL DISK SUBPROCESS
*
555 5140000002 +          LOCALEV SA4      USERID
      73440              SX4      X4
556 5150000072 +          SA5      EVENT
      7160000000 X      SENDEV  (RESP,X4),(,X5)
570 0200000427 +          JP       GETWORK

```

SA5 RESULT
AX5
MX4
BX5
NZ
60-2
-X4*X5
X5,PUTCRUD

PUTCRUD GETEVH (MAINCL, M. CRUD)
X7
EVENT
X5
CRUDBUF
* SA5
BX6
SA6

SA5 SLOTX
READ (MAINCL, M.GFILE), X5+GF.I
TEMPZ, I, FRET
SA5 TEMPZ
BX6 X5
SA6 X4+3

WRITE CRUDBUF (MAINCL, M.GFILE), CRUDBUF, CR

SX4 X4+CRUDQ
SX6 GF.CRDL
BX6 X6-X4
NZ X6, GOCRUD
SX4 GF.CRDF

GOCRUD SENDEV *,X4

```

*
* HBRTERM..
*
* CENTRAL TERMINATION OF HEADER-BLOCK READ.
*
* SETS UP FHB FIELDS AND MOVES ROOT..
*
* ..INTO ECS INCARN IF FILE IS ONE-LEVEL
*
* ..INTO DDS PAGES IF FILE IS MULTI-LEVEL
*
571 6170000605 + HBRTERM SB7 HBRT1
*
* 5150000003 + SAS BUFFERX ADDR TO GET BUFFER CTL WORD
572 7160000000 X READ BFILE,X5,BUFPTR,1,FRET
*
* CALLX CHECKIO,B7,HBRT1
603 6170000605 + JP HBRT30 ERROR RETURN FROM CHECKIO
604 0200000772 + *
605 5150000000 X HBRT1 SAS FHRADDR NORMAL RETURN FROM CHECKIO
*
* 7160000000 X REDDS X5,FHB,FR.LEN READ FHR INTO CORE
620 5150000046 + SAS BUFPTR PICK UP BUFFER PTR
*
* 7160000000 X READ BFILE,X5,FHB,FB.LEN,FRET
631 5140000000 X SA4 FB.NAME
*
* 5150000000 X SA5 FR.NAME
632 13645 BX6 X4-X5 COMPARE UNIQUE NAMES
*
* 0306000636 + ZR X6,HBRT2 JUMP IF O.K.
633 5150000072 + SAS EVENT PICK UP EVENT
*
* 73650 SX6 X5 CLEAR PTR ADDR FROM EVENT
*
* 13556 BX5 X5-X6
634 7160777775 SX6 =2
*
* 49752 MX7 60-18 MASK IN IBBIT INDICATOR
*
* 15667 BX6 =X7*X6
635 12665 BX6 X6+X5
*
* 54650 SA6 A5
636 13600 0200000772 + HBRT2 JP HBRT30 FINISH UP
*
* 5160000000 X SA6 FR.CLAM CLEAR CLAIM WORD
637 5150000000 X SA8 FB.FUND ACCTG BLOCK NO/MEMB NAME
*
* 10655 BX6 X5
640 5160000000 X SA6 FR.FUND PUT IN FHR
*
* 5150000000 X SA5 FB.WD3 MISC FIELDS
641 10655 BX6 X5
*
* 5160000000 X SA6 FR.WD3 PUT IN FHR
642 5150000000 X SA5 FB.SHAP SHAPE WORD
*
* 10655 BX6 X5
643 5160000000 X SA6 FR.SHAP PUT IN FHR
*
* 20512 LX5 I0
*
* 43762 MX7 60-10
644 15757 BX7 =X7*X5
*
* 5170000060 + SA7 SHAPENOS STORE S0
*
* 20506 LX5 6
645 43766 MX7 60-6
*
* 15757 BX7 =X7*X5
*
* 63170 SB1 X7
*
* 66200 SB2 B0 B2 COUNTS ADDR BITS
646 66300 SB3 B0 B3 COUNTS LEVELS
*
* 43570 MX5 60-4
    
```

* CONVERT SHAPE-WORD TO ECS FORMAT SHAPE-LIST

647	6133000001		HBRT4	S83	B3+1	
		0412000653 +		E0	B1,B2,HBRT5	ALL ADDR BITS ACCOUNTED FOR
650	15765			BX7	X5*X6	IF NOT, GET NEXT SHAPE NO
		20670		LX6	60-4	
		63470		S84	X7	
		66224		S82	B2+B4	
651	7170000001			SX7	I	
		22747		LX7	X7,B4	S(I) = 2**I(I)
652	5173000060			SA7	B3+SHAPENOS	
		0200000647 +		JP	HBRT4	

* CREATE ECS INCARNATION

653	76630		HBRT5	SX6	B3	
		5160000057 +		SA6	NLEVELS	
		10566		BX5	X6	
654	7160000000	X		CRFILE	(MAINCL,M.SWAB),FILECAP,X5,SHAPENOS	
665	5140000000	X		SA4	FR,CAPX	
		42655		MX6	60-15	
		15446		BX4	X6*X4	
666	7160000000	X		CAPOUT	FILCL,X4,FILECAP	
675	5150000046			SA5	BUFPTR	
		7215000000 X		SX1	X5+FB.LEN	X1=START OF ROOT IN BUFFER

* TEST FOR ONE-LEVEL FILE

676	5150000000	X		SA5	FR,ONEL	
		0335000704 +		NG	X5,HBRT10	JUMP IF ONE-LEVEL
677	13200			BX2	X0-X0	PATTERN = 0
		5150000060 +		SA5	SHAPENOS	
		63550		S85	X5	NUMBER OF POINTERS
700	6160000702			S86	HBRT6	RETURN LINK
		0200000000 X		JP	MKPTR	MAKE EMPTY ROOT PTR BLOCK
701	0100000000	X		RJ	SYSERR	DDS SHOULD BE RESERVED IN
						↑OPNCLO↑
702	5160000000	X	HBRT6	SA6	FR,ROOT	STORE ROOT PTR IN FHR
		21630		AX6	X4	
		73260		SX2	X6	PAGE SWITCH ADDR
703	6170000755			S87	HBRT20	JUMP RETURN
		0200001510 +		JP	UNPACKP	UNPACK ROOT PTR BLOCK

* MOVE ROOT OF ONE-LEVEL FILE INTO ECS INCARNATION

704	7160000000	X	HBRT10	CRBLK	FILECAP,0	
712	5150000060			SA5	SHAPENOS	DATA BLOCK SIZE
		7160000000 X		INMAPRW	MYSUBP,HENTRY,FILECAP,0,HOLDBLK,X5	
724	7160000000	X		READ	RFILE,X1,HOLDBLK,X5,FRET	
735	7160000000	X		ZRMAP	MYSUBP,HENTRY,FILECAP	
744	7160000000	X		TSTBLK	FILECAP,0	

				TYPE AND STATUS
752	7160000002		SX6	T.DATA+S.IN.FX
	20610		LX6	A
753	7266000001		SX6	X6+1
	20660		LX6	24+24
754	5160000000	X	SA6	FR.ROOT
				ATTACH CT = 1
				BOTH DISK ADDRS = NULL
				STORE ROOT PTR IN FHR
				* UPDATE FHR IN DDS
				*
755	5150000000	X	HBRT20	SA5
	7160000000	X	WRDDS	FHRADDR
770	0100000000	X	BKPT	X5,FHR,FR.LEN
				FHRW
				* RELEASE REQUEST SLOT
				*
772	5140000004	+	HBRT30	SA4
	7160000000	X	SENDEV	SLOTX
				SLOTS,X4
				* RELEASE DISK BUFFER
				*
1002	5140000046	+	SA4	BUFPTR
	21422		AX4	IS
1003	5150000003	+	SA5	BUFFERX
	7160000000	X	SENDEV	X4+RBUFS,X5
1013	0200000555	+	JP	LOCALEV
				WAKE UP USER AND GET NEW WORK

*
* HBWTERM..
* CENTRAL TERMINATION OF HEADER-BLOCK WRITE.
*

1014	6170001021	+	HBWTERM	S87	HBWT1	
1015	0100000000	X		BKPT	HBWT	***** BKPT *** HBWT *****
1017	0200000537	+		JP	CHECKIO	
1020	0200001021	+	+	JP	HBWT1	ERROR RETURN FROM CHECKIO
1021	5140000004	+	HBWT1	SA4	SLOTX	
	7160000000	X		SENDEV	SLOTS.X4	
1031	0200000555	+		JP	LOCALEV	SEND RESPONSE TO USER PROCESS

```

*
* PBRTERM.
*
* CENTRAL TERMINATION OF POINTER_BLOCK READ.
* UNPACKS POINTER_BLOCK INTO DDS AND UPDATES
* THE FAULTED POINTER
*
1032 5140000000 X PBRTERM SA4 FHRADDR
1033 0100000000 X BKPT PBRT
1035 6160001036 * SB6 PBRT1
      0200000000 X JP LOCK LOCK THE FILE
1036 5140000006 + PBRT1 SA4 PTRADDR
      7160000000 X REDDS X4, PTR, 1 READ IN THE POINTER
*
1051 5150000003 * SA5 BUFFERX
      7160000000 X READ BFILE, X5, BUFPTR, 1, FRET
*
1062 7130000001 SX3 S.FOO IN CASE OF I/O ERROR
      6170001065 + CALLX CHECKIO, B7, PBRT2 CHECK FOR I/O ERROR
1064 0200001107 * JP PBRT4 ERROR RETURN FROM CHECKIO
1065 5110000046 + PBRT2 SA1 BUFPTR
      7160000000 X READ BFILE, X1, TEMPA, 1, FRET
1076 5140000000 X SA4 TEMPA MEMBERSHIP NUMBER IN BLOCK
      5150000000 X SA5 FR.MEMB MEMBERSHIP NUMBER IN PHR
1077 13645 BX6 X4-X5 COMPARE
      21632 AX6 60-34 (IGNORE LO-ORDER BITS)
      0305001103 + ZR X6, PBRT3 JUMP IF O.K.
1100 5150000072 * SA5 EVENT PICK UP EVENT
      73650 SX6 X5 CLEAR PTR ADDR FROM EVENT
      13556 BX5 X5-X6
1101 7160777775 SX6 2
      43752 MX7 60-18
      15667 BX6 X7*X6
1102 12665 BX6 X6+X5
      54650 SA6 AS STORE EVENT W/ INDICATOR
      0200001107 + JP PBRT4
*
* UNPACK POINTER BLOCK FROM DISK BUFFER TO DDS PAGES
*
1103 5120000027 * PBRT3 SA2 BTR
      21230 AX2 24
      73220 SX2 X2 PAGE SWITCH ADDR
1104 7211000001 SX1 X1+1 SKIP MEMB WORD IN BUFFER
      6170001106 + SB7 PBRT3A RETURN LINK
1105 0200001510 * JP UNPACKP UNPACK POINTER BLOCK
1106 7130000002 PBRT3A SX3 S.IN.FX NEW STATUS = IN (FROM FIXED)
*
* UPDATE POINTER
*
1107 5140000027 * PBRT4 SA4 BTR PICK UP POINTER
      20404 LX4 4
      43671 MX6 60-3 CLEAR OLD STATUS
1110 11664 BX6 X6*X4 INSERT NEW STATUS
      12663 BX6 X6+X3
    
```

	20670		LX6	60-4	RESTORE POSITION
	54640		SA6	A4	UPDATE POINTER IN CORE
1111	5140000006 +		SA7	PTRADDR	
	7160000000 X		WRDDS	X4, PTR, 1	UPDATE POINTER IN DDS
1124	0100000000 X		BKPT	PTRW	
		*			
		*			RELEASE REQUEST SLOT
		*			
1126	5140000004 +		SA4	SLOTX	
	7160000000 X		SENDEV	SLOTS, X4	
		*			
		*			RELEASE DISK BUFFER
		*			
1136	5140000046 +		SA4	RUFPTR	
	21422		AX4	T0	
1137	5150000003 +		SA5	RUFFERX	
	7160000000 X		SENDEV	X4+RBUFS, X5	
1147	6160001150 +		SB6	PBRT5	
	0200000000 X		JP	INLOCK	INLOCK FILE AND WAKE SUSP LIST
		*			
		*			SEND WAKEUP TO USER PROCESS IF REQUESTED
		*			
1150	5150000002 +	PBRT5	SA5	USERID	
	20550		LX5	60-20	
1151	0335000555 +		NG	X5, LOCALEV	
	0200000427 +		JP	GETWORK	

```

*
* PBWTERM..
*      TERMINATION OF POINTER-BLOCK WRITE.
*
*
*
1152  0100000000 X      PBWTERM  BKPT      PBWT      ***** BKPT *** PBWT *****
1154  6170001156 +      CALLX    CHECKIO,B7,PBWT2
*
1155  0200001213 +      JP        PBWT3      ERROR RETURN FROM CHECKIO
*
* UPDATE POINTER IF NECESSARY
*
1156  5130000006 +      PBWT2    SA3      PTRADDR
          0300001202 +      ZR      X3,PBWT2A
1157  5140000000 X      SA4      FHRADDR
          6160001161 +      CALLX   LOCK,B6
*
1161  7160000000 X      REDDS    X3,PTR,1
*
1173  5140000027 +      SA4      PTR
          204000      LX4      4
          43671      MX6      60-3
1174  11664      BX6      X6*X4
          7130000000      SX3      S,OUT
          12663      BX6      X6*X3
1175  20670      LX6      60-4
          54640      SA6      A4
          INSERT NEW STATUS
          RESTORE POSITION
          UPDATE IN CM
          7160000000 X      WRDDS    ****
          UPDATE IN DDS
1201  6160001202 +      CALLX    UNLOCK,B6
          UNLOCK THE FILE
1202  5140000004 +      PBWT2A  SA4      SLOTX
          7160000000 X      SENDEV   SLOTS,X4
          RELEASE REQUEST SLOT
*
1212  0200000555 +      JP        LOCALEV
*
1213  5140000000 +      PBWT3    SA4      RESPONSE
          7160000000 X      SENDEV   RETRY,X4
1223  0100000000 X      RJ      SYSERB
1224  0200000427 +      JP      GETWORK      ***TEMPORARY DISASTER
  
```



```

*
* DBRTERM..
*
* CENTRAL TERMINATION OF DATA-BLOCK READ.
* PUTS DATA-BLOCK INTO ECS-INCARNATION AND
* UPDATES POINTER IN LAST-LEVEL POINTER BLOCK
*
1225 5140000000 X DBRTERM SA4 FHRADDR
1226 0100000000 X BKPT DBRT ***** BKPT *** DBRT *****
1230 6160001231 + SB6 DBRT1
      0200000000 X JP LOCK LOCK THE FILE
1231 5140000006 + DBRT1 SA4 BTRADDR
      7160000000 X REDDS X4, PTR, 1 READ IN THE POINTER
*
1244 5150000003 + SA5 BUFFERX
      7160000000 X READ BFILE, X5, BUFPTR, 1, FRET
*
1255 7130000001 SA3 S, F00 INCASE OF I/O ERROR
      6170001260 + CALLX CHECKIO, B7, DBRT2 CHECK FOR I/O ERROR
1257 0200001365 + JP DBRT4 ERROR RETURN FROM CHECKIO
1260 5110000046 + DBRT2 SA1 BUFPTR PICK UP BUFFER PTR
      7160000000 X READ BFILE, X1, TEMPA, 1, FRET
1271 5140000000 X SA4 TEMPA PICK UP CHECKWORD FROM BLOCK
      5150000000 X SA5 FR, MEMB PICK UP CHECKWORD FROM FHR
1272 13645 BX6 X4-X5 COMPARE
      21632 BX6 00-34 (IGNORE LO-ORDER BITS)
      0300001276 + BR X6, DBRT3 JUMP IF O.K.
1273 5150000072 + SA5 EVENT
      71650 X5
      13556 BX5 X5-X6
1274 7160777775 SA6 X7
      43752 X7 00-18
      15667 BX6 X7-X6
1275 12665 BX6 X6-X5
      54450 SA6 AS
      0200001355 + JP DBRT4
*
* SET UP TO MOVE BLOCK INTO ECS INCARNATION VIA HOLDING FILE
*
1276 5150000000 X DBRT3 SA5 BYIDENT
      5140000000 X SA4 FR, OBSZ BLOCK SIZE CODE
1277 20403 LX4 3
      43772 MX7 00-2
      15447 BX4 X7-X4
1300 0304001647 + ZR X4, ERROR05 CONSISTENCY CHECK
      63440 SB4 X4 HOLDING ADDRESS =
      20506 LX5 6 PROCESS INDEX *
1301 22545 LX5 B4, X5 2**(BLOCK SIZE CODE+6)
      5144001637 + SA4 B4+BSIZES BLOCK SIZE
*
* MOVE DATA FROM BUFFER TO HOLDING FILE TO ECS INCARNATION
*
1302 7160000000 X CRBLK R4+HFILE-1, (, X5)
1310 7160000000 X INMAPRW MYSUBP, HENTRY, B4+HFILE-1, (, X5), HOLDBLK, X4
    
```

1322	7160000000	X		READ	RFILE,X1+1,HOLDBLK,X4,FRET	
1333	7160000000	X		ZRMAP	MYSUBP,HENTRY,B4+HFILE-1	
1342	7160000000	X		TSTBLK	B4+HFILE-1,(X5)	TURN OFF DIRTY BIT
1350	5120000000	X	43655	SA2	FR,CAPX	C-LIST INDEX OF ECS-INCARN
			15226	MX6	60-15	
1351	5140000005	X	7160000000	BX2	X6*X2	
				SA4	FILADDR	
1364	7130000002	X		MVBLK	B4+HFILE-1,(X5),(FILCL*X2),(X4),FRET	
				SX3	S.IN.FX	ASSUME CAME FROM FIXED ADDRESS
* UPDATE POINTER						
1365	5140000027	X	20404	DBRT4	SA4 PTR	PICK UP POINTER
			43671	LX4	4	POSITION STATUS
				MX6	60-3	
1366	15746	X		BX7	X6*X4	EXTRACT OLD STATUS
	11446	X		BX4	X4*X6	CLEAR OLD STATUS
	7253777776	X		SX5	X3-S.FOO	TEST FOR ERROR
1367	0305001371	X		ZR	X5,DBRT5	JP IF ERROR
	7277777771	X		SX7	X7-S.COM.FX	TEST IF REALLY CAME FROM FIXED ADDR
1370	0307001371	X		ZR	X7,DBRT5	JUMP IF SO
	7130000003	X		SX3	S.IN.SW	ELSE NEW STATUS = IN FROM SWAPPED ADDR
1371	12643	X		DBRT5	BX6 X4+X3	INSERT NEW STATUS
	20670	X		LX6	60-4	RESTORE POSITION
	54640	X		SA4	44	UPDATE PTR IN CORE
1372	7160000000	X		WRD05	***	UPDATE PTR IN DDS
* RELEASE DISK REQUEST SLOT						
1375	5140000004	X	7160000000	SA4	SLOTX	
				SENDEV	SLOTS,X4	
* RELEASE DISK BUFFER						
1405	5140000046	X	21422	DBRT20	SA4	BUFPTR
				AX4	18	BUFFER SIZE CODE
1406	5150000003	X	7160000000	SA5	BUFFERX	BUFFER ALLOCATION EVENT
				SENDEV	X4+RBUFS,X5	
* UNLOCK THE FILE						
1416	5140000000	X		SA4	EHRADDR	
	6160001420	X		SB6	DBRT22	
1417	0200000000	X		JP	UNLOCK	UNLOCK FILE AND WAKE UP SUSP LIST
* WAKE UP USER PROCESS IF WAKEUP FLAG SET						
1420	5150000002	X	20550	DBRT22	SA5	USERID
				LX5	60-20	DISK DRIVER USER ID FIELD
1421	0335000555	X	0200000427	NO	X5,LOCALEV	POSITION NOTIFICATION-FLAG
				JP	GETWORK	TEST NOTIFICATION-FLAG

*
 * DBWTERM.
 * TERMINATION OF DATA-BLOCK WRITE
 *

1422	6170001427	+	DBWTERM	SB7	DBWT1	
1423	0100000000	X		BKPT	DBWT	***** BKPT ***** DBWT *****
1425	0200000537	+		JP	CHECKIO	
1426	0200001463	+		JP	DBWT3	ERROR RETURN FROM CHECKIO
1427	5140000000	X	DBWT1	SA4	FHRADDR	NORMAL RETURN FROM CHECKIO
				SB6	DBWT2	
1430	0200000000	X		JP	LOCK	LOCK THE FILE

* UPDATE POINTER

1431	5140000006	+	DBWT2	SA4	STRADDR	
	7160000000	X		REDDS	X4, PTR, 1	READ IN THE PTR
1444	5140000027	+		SA4	PTR	PICK UP PTR
	20404			LX4	4	POSITION STATUS
	43371			MX3	0-3	
1445	11443			BX4	X4+X3	CLEAR OLD STATUS
	7130000000			SX3	S.OUT	NEW STATUS = OUT
	12643			BX6	X4+X3	INSERT NEW STATUS
1446	20670			LX6	0-4	RESTORE POSITION
	54640			SA6	4	UPDATE PTR IN CORE
	7160000000	X		WRDDS	***	UPDATE PTR IN DDS

* RELEASE DISK REQUEST SLOT

1452	5140000004	+		SA4	SLOTX	SLOT INDEX
	7160000000	X		SENDEV	SLOTS, X4	FREE REQUEST SOLT
1462	6160000427	+		SB6	GETWORK	JUMP RETURN
	0200000000	X		JP	UNLOCK	UNLOCK FILE

* RETRY BAD WRITE

1463	5140000000	+	DBWT3	SA4	RESPONSE	PICK UP EVENT VERBATIM
	7160000000	X		SENDEV	RETRY, X4	SEND TO FIXER-UPPER
1473	0100000000	X		RJ	SYSERR	** TEMPORARY DISASTER**
1474	0200000427	+		JP	GETWORK	

*
* ZAPTERM.. TERMINATION OF HEADER-BLOCK SMASH
*

1475	6170001477	+	ZAPTERM	SB7	ZAPT1
	0200000537	+		JP	CHECKIO
1476	0200001477	+		JP	ZAPT1
1477	5140000004	±	ZAPT1	SA4	SLOTX
	7160000000	X		SENDEV	SLOTS.X4
1507	0200000555	+		JP	LOCALEV

```

*
* UNPACKP.. UNPACKS POINTER BLOCK FROM DISK BUFFER INTO DDS
* INPUT..X1=ADDR OF POINTER BLOCK IN DISK BUFFER FILE
* X2 = ADDR OF PAGE SWITCH IN DDS
* B7 = RETURN LINK
* USES...ALL REGISTERS
*
1510 7160000000 x UNPACKP REDDS X2,DDSPTRS,8 READ IN PAGE SWITCH
1522 6110000007 SB1 7
1523 5141000007 + 6120000016 UNPKP1 SA4 R1+DDSPTRS LOOP UNPACKS PAGE ADDRESSES
43536 MX5 30
1524 20436 15645 BX6 -X5*X4
15745 LX4 30
15745 BX7 -X5*X4
1525 5172000010 + 5162000007 SA6 R2+DDSPTRS
1526 6122777775 + 6111777776 SA7 R2+DDSPTRS+1
SB1 R1-1
SB5 R2-2
PL R1,UNPKP1
*
* GET CONTROL WORD FROM POINTER BLOCK IN BUFFER
*
1527 7160000000 x READ RFILE,X1,PBUF,1,FRET
1540 7211000001 SX1 X1+1
1541 43201 5150000042 + SA5 PBUF
11225 MX2 1
1542 20370 7130000000 BX2 X2*X5 EXTRACT TYPE FIELD
12223 SX3 S.OUT STATUS FIELD FOR EXISTING PTRS
63150 LX3 60-4 POSITION STATUS
BX2 X2+X3 TYPE AND STATUS FOR PTRS
SB1 X5 NUMBER OF PTRS
*
* SET UP FOR UNPACKING LOOP
*
1543 66200 UNPKP2 SB2 B0
66300 SB3 B0
1544 6160000011 6140000007 SB4 7
0200001611 + SB6 9
JP GET10 READ 1ST 10 PTRS
*
* UNPACKING LOOP
*
1545 5155000030 + GET10RET SA5 R5+PTRS
12625 BX6 X2+X5 FORM PTR
1546 0315001550 + NZ X5,UNPKP2A IF DISK ADDR NOT NULL PTR DONE
43581 MX5 1
1547 7150000005 11665 BX6 X6*X5 ELSE EXTRACT TYPE IFLED
20570 SX5 S.NONEXT SET STATUS = NON-EXISTENT
12665 LX5 60-4 POSITION STATUS
UNPKP2A BX6 X6+X5 FINISH PTR TO NON-EXISTENT BLOCK
1550 5163000047 + SA6 B3+DDSBUF STORE FINISHED PTR
6111777776 SB1 R1-1 DECR PTR COUNT
1551 0410001555 + ZR R1,UNPKP3 JUMP IF ALL DONE

```

```

0434001574 +
1552 6133000001 EQ R3,B4,PUT8 WRITE DDS BUFFER
1553 0456001611 + PUT8RET SB3 R3+1
EQ R5,B6,GET10 READ MORE PACKED PTRS
1554 0200001545 + 6155000001 SB5 R5+1
JP GET10RET
* FINISH UP UNPACKED POINTER BLOCK
1555 7160000000 UNPKP3 SX6 0
1556 0434001560 UNPKP4 EQ R3,B4,UNPKP5
SB3 R3+1
1557 5163000047 + 0200001556 + SA6 R3+DDSBUF CLEAR REST OF LAST PAGE
JP UNPKP4
1560 5152000007 + UNPKP5 SA5 R2+DDSPTRS
ZR X5,ERROR03
WRDDS X5,DDSBUF,8 WRITE LAST PAGE
1561 7160000000 X JP R7
1573 0270000000
*
* PUT8.. WRITES 8 POINTERS TO DDS
*
1574 5152000007 + PUT8 SA5 R2+DDSPTRS
0305001645 + ZR X5,ERROR03
WRDDS X5,DDSBUF,8 WRITE PAGE
1575 7160000000 X SB2 R2+1
1607 6122000001 SB3 0
1610 0200001553 + JP PUT8RET
*
* GET10.. READS 10 POINTERS AND UNPACKS INTO 10 WORD BUFFER
*
1611 7160000000 X GET10 READ RFILE,X1,PBUF,4,FRET
1622 7211000004 SX1 X1+4
SB5 10
1623 43744 MX7 60-24
5140000044 + SA4 PBUF+2
1624 5054000001 GET10A SA5 A4+1
SB5 R5-5
1625 15347 BX3 X7*X4 SAVE HALF OF FOLDED PTR
20430 LX4 24
15647 BX6 X7*X4
1626 5165000030 + SA6 R5+PTRS
20430 LX4 24
15647 BX6 X7*X4
1627 5165000031 + SA6 R5+PTRS+1
11475 BX4 X7*X5 SAVE HALF OF FOLDED PTR
15657 BX6 X7*X5
1630 5165000034 + SA6 R5+PTRS+4
20544 LX5 24+12
15657 BX6 X7*X5
1631 5165000033 + SA6 R5+PTRS+3
12634 BX6 X3+X4
20614 LX6 12 UNFOLD FOLDED PTR
1632 15667 BX6 X7*X6
516500002 + SA6 R5+PTRS+2
1633 5044777775 SA4 A4-2

```

TERMINATOR PROCESS
UNPACK A POINTER BLOCK

COMPASS - VER 2.

07/17/71 13.22.30.

PAGE 23

055001624 +
1634 0200001545 +

NZ
JP

B5,GET10A
GET10RET

```
*  
* CONSTANTS  
*  
1635 000000000000000000000000 NULLIOT DATA 0:0  
1637 0000000000000000000000100 BSIZES DATA 64,128,256,512  
*  
*  
1643 01000000000 X ERROR01 RJ SYSERR ZERO-LEVEL FILE ERROR  
1644 01000000000 X ERROR02 RJ SYSERR ODS ALLOCATION ERROR  
1645 01000000000 X ERROR03 RJ SYSERR ATTEMPT TO USE EMPTY IOT ENTRY  
1646 01000000000 X ERROR04 RJ SYSERR ATTEMPT TO USE INVALID IOT ENTRY  
1647 01000000000 X ERROR05 RJ SYSERR DBRTERM FOUND 64 WORD DATA-BLOCK  
1650 01000000000 X FRET RJ SYSERR FRETURN ON SYSTEM FILE  
*  
1651 01000000000 X DDSHELP RJ SYSERR TEMPORARY DISASTER  
*  
*
```


1652 7110000000 X
14211
1653 7160000000 X

1664 0200000240 *

1665
1665

1665
1665
1665

*
* ENTER HERE TO SET UP MAP AND INITIALIZE SCRATCH FILE
*
*

ENTER SX1 TERMRF
BX2 -X1
READ MYCODF,XI,XI,TERMRL,X2,FRET

*
* JP BEGIN

* TERMROL BSS 0 END OF TERMIN READ-ONLY AREA
* COMMRWF BSS 0 START OF COMMON MODULE READ/WRITE AREA

* SYMBOLS XTEXT
* OPSYMS XTEXT
* END

43165 STORAGE USED 4868 STATEMENTS 568 SYMBOLS 000046 INVENTED SYMBOLS
6600 ASSEMBLY 25.537 SECONDS 1014 REFERENCES

TERMINATOR PROCESS
SYMBOLIC REFERENCE TABLE.

APTIPL	0	EXTERNAL*								
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*								
BEGIN	240	PROGRAM*	5/03 L	25/11						
BEGINI	365	PROGRAM*	5/22	5/25 L						
BFILE	0	EXTERNAL*	5/05	10/19	14/16	17/16	18/02	22/30		
			10/12	11/52	14/22	17/22	21/25			
BLK.DTY	0	EXTERNAL*								
BLK.FLG	0	EXTERNAL*								
BLK.SIZ	0	EXTERNAL*								
BSIZES	1637	PROGRAM*	17/48	24/05 L						
BUFFERX	3	PROGRAM*	4/23 L	7/31 S	10/10	12/22	14/14	15/16	17/14	18/37
BUFPTR	46	PROGRAM*	4/37 L	10/17	12/20	14/20	17/16	18/35		
			10/12	11/25	14/16	15/14	17/20			
BUSYDSK	0	EXTERNAL*								
CALBEAD	0	EXTERNAL*								
CHCKIOI	542	PROGRAM*	9/08	9/10 L						
CHECKIO	537	PROGRAM*	9/04 L	10/14	13/07	14/19	16/08	17/19	19/07	20/06
CHMAP	0	EXTERNAL*								
CHMAPB1	0	EXTERNAL*								
CHMAPR	0	EXTERNAL*								
CLKBUF	0	EXTERNAL*								
CLODAR	0	EXTERNAL*								
CLOSE	0	EXTERNAL*								
CLOSER	0	EXTERNAL*								
CLOSROF	0	EXTERNAL*								
CLOSROW	0	EXTERNAL*								
CLOSROWL	0	EXTERNAL*								
COMMROF	0	EXTERNAL*								
COMMROW	0	EXTERNAL*								
COMMRWF	1665	PROGRAM*	25/74 L							
COMMRWL	0	EXTERNAL*								
CONVERT	0	EXTERNAL*								
CREATB1	0	EXTERNAL*								
CREATE	0	EXTERNAL*								
CREATER	0	EXTERNAL*								
CREBLK	0	EXTERNAL*								
CREBLKR	0	EXTERNAL*								
CRELFH	0	EXTERNAL*								
CREPTRR	0	EXTERNAL*								
CRUDBUF	74	PROGRAM*	4/43	4/44 L	9/36					
CRUDEND	240	PROGRAM*	4/45 L	9/34						
CRUDPTR	73	PROGRAM*	4/43 L	9/18	9/37 S					

TERMINATOR PROCESS
SYMBOLIC REFERENCE TABLE.

FRWERR	0	EXTERNAL*								
FRWINT	0	EXTERNAL*								
FR.CAPX	0	EXTERNAL*	11/21	18/04						
FR.CLAM	0	EXTERNAL*	10/33 S							
FR.DAR	0	EXTERNAL*								
FR.DBSZ	0	EXTERNAL*	17/40							
FR.FLAG	0	EXTERNAL*								
FR.FROZ	0	EXTERNAL*								
FR.FUND	0	EXTERNAL*	10/36 S							
FR.LEN	0	EXTERNAL*	10/17	12/11						
FR.LOCK	0	EXTERNAL*								
FR.MEMB	0	EXTERNAL*	14/23	17/23						
FR.NAME	0	EXTERNAL*	10/20							
FR.ONEL	0	EXTERNAL*	11/30							
FR.OPEN	0	EXTERNAL*								
FR.ROOT	0	EXTERNAL*	11/40 S	12/05 S						
FR.SHAP	0	EXTERNAL*	10/42 S							
FR.SIZE	0	EXTERNAL*								
FR.SUSP	0	EXTERNAL*								
FR.WD1	0	EXTERNAL*								
FR.WD2	0	EXTERNAL*								
FR.WD3	0	EXTERNAL*	10/39 S							
FR.WRIT	0	EXTERNAL*								
GDSKDAT	0	EXTERNAL*								
GDSKHDR	0	EXTERNAL*								
GDSKPTR	0	EXTERNAL*								
GETDSK	0	EXTERNAL*								
GETRESP	0	EXTERNAL*								
GETWORK	427	PROGRAM*	5/37	7/08 L	9/47	15/26	16/41	18/51	19/31	19/39
GET10	1611	PROGRAM*	21/40	22/03	22/29 L					
GET10A	1624	PROGRAM*	22/34 L	23/01						
GET10RET	1545	PROGRAM*	21/43 L	22/05	23/02					
GFILE	0	EXTERNAL*								
GF.APIF	0	EXTERNAL*								
GF.APIL	0	EXTERNAL*								
GF.DATF	0	EXTERNAL*								
GF.DATL	0	EXTERNAL*								
GF.DDSF	0	EXTERNAL*	10/17	14/13	16/19	19/17	22/16			
			12/11	15/05	17/13	21/09	22/23			
GF.DDSL	0	EXTERNAL*	10/17	14/13	16/19	19/17	22/16			
			12/11	15/05	17/13	21/09	22/23			
GF.HSHF	0	EXTERNAL*								
GF.HSHL	0	EXTERNAL*								
GF.IOTF	0	EXTERNAL*	7/38	7/38						
GF.IOTL	0	EXTERNAL*	7/38							
GF.LEN	0	EXTERNAL*								
GF.SUSF	0	EXTERNAL*	5/28							
GF.SUSL	0	EXTERNAL*	5/28							
GF.TRVF	0	EXTERNAL*								
HASH	0	EXTERNAL*								
HASHIPL	0	EXTERNAL*								
HBR	0	EXTERNAL*								
HBRTERM	571	PROGRAM*	8/06	10/08 L						

TERMINATOR PROCESS
SYMBOLIC REFERENCE TABLE.

HBRT1	605	PROGRAM*	10/08	10/13	10/15 L					
HBRT10	704	PROGRAM*	11/31	11/48 L						
HBRT2	636	PROGRAM*	10/22	10/32 L						
HBRT20	755	PROGRAM*	11/43	12/09 L						
HBRT30	772	PROGRAM*	10/14	10/31	12/15 L					
HBRT4	647	PROGRAM*	11/04 L	11/13						
HBRT5	653	PROGRAM*	11/05	11/17 L						
HBRT6	702	PROGRAM*	11/35	11/40 L						
HBW	0	EXTERNAL*								
HBWTERM	1014	PROGRAM*	8/07	13/05 L						
HBWT1	1021	PROGRAM*	13/05	13/08	13/09 L					
HENTRY	0	EXTERNAL*	11/51	11/53	18/01	18/03				
HFILE	0	EXTERNAL*	5/15	5/16	5/17	17/53	18/01	18/03	18/04	18/09
HOLOBLK	0	EXTERNAL*	11/51	11/52	18/01	18/02				
INTDAT	0	EXTERNAL*								
IOTBUF	0	EXTERNAL*	7/38	7/38	7/42	9/27	9/25			
IOTIPL	0	EXTERNAL*	7/38 S	7/38 S	7/38 S	7/38				
IPLIST	0	EXTERNAL*	4/08							
IPIILIST	0	EXTERNAL*	4/08 D	5/13 S	5/32 S	10/19 S	11/53 S	15/18 S	18/01 S	19/31
			5/05 S	5/13	5/32 S	10/19	11/53	15/18 S	18/01	19/38 S
			5/05 S	5/14 S	5/32 S	11/21 S	12/01 S	15/18 S	18/02 S	19/38 S
			5/05 S	5/14 S	5/32	11/21 S	12/01 S	15/18	18/02 S	19/38 S
			5/05 S	5/14 S	7/14 S	11/21 S	12/01 S	16/35 S	18/02 S	19/38
			5/05 S	5/14 S	7/14 S	11/21 S	12/01	16/35 S	18/02 S	20/11 S
			5/05 S	5/14	7/14	11/21 S	12/17 S	16/35 S	18/02 S	20/11 S
			5/06 S	5/15 S	7/16 S	11/21	12/17 S	16/35	18/02	20/11 S
			5/06 S	5/15 S	7/16 S	11/25 S	12/17 S	16/40 S	18/03 S	20/11
			5/06 S	5/15 S	7/16	11/25 S	12/17	16/40 S	18/03 S	21/25 S
			5/06 S	5/15 S	7/18 S	11/25 S	12/24 S	16/40 S	18/03 S	21/25 S
			5/07 S	5/15	7/18 S	11/25 S	12/24 S	16/40	18/03 S	21/25 S
			5/07 S	5/16 S	7/18 S	11/25	12/24 S	17/16 S	18/03	21/25 S
			5/07 S	5/16 S	7/18	11/49 S	12/24	17/16 S	18/04 S	21/25 S
			5/07 S	5/16 S	7/20 S	11/49 S	13/11 S	17/16 S	18/04 S	21/25 S
			5/07 S	5/16 S	7/20 S	11/49 S	13/11 S	17/16 S	18/04 S	22/30 S
			5/10 S	5/16	7/20	11/49	13/11 S	17/16 S	18/04	22/30 S
			5/10 S	5/17 S	7/26 S	11/51 S	13/11	17/16	18/09 S	22/30 S
			5/10 S	5/17 S	7/26 S	11/51 S	14/16 S	17/22 S	18/09 S	22/30 S
			5/10 S	5/17 S	7/26	11/51 S	14/16 S	17/22 S	18/09 S	22/30 S
			5/10 S	5/17 S	9/47 S	11/51 S	14/16 S	17/22 S	18/09 S	22/30 S
			5/11 S	5/17	9/47 S	11/51 S	14/16 S	17/22 S	18/09 S	25/09 S
			5/11 S	5/22 S	9/47 S	11/51 S	14/16 S	17/22 S	18/09	25/09 S
			5/11 S	5/22 S	9/47	11/51 S	14/16	17/22	18/32 S	25/09 S
			5/11 S	5/22	10/12 S	11/51	14/22 S	17/53 S	18/32 S	25/09 S
			5/11 S	5/30 S	10/12 S	11/52 S	14/22 S	17/53 S	18/32 S	25/09 S
			5/12 S	5/30 S	10/12 S	11/52 S	14/22 S	17/53 S	18/32	25/09
			5/12 S	5/30	10/12 S	11/52 S	14/22 S	17/53	18/39 S	
			5/12 S	5/31 S	10/12 S	11/52 S	14/22 S	18/01 S	18/39 S	
			5/12 S	5/31 S	10/12	11/52 S	14/22	18/01 S	18/39 S	
			5/12 S	5/31 S	10/19 S	11/52	15/11 S	18/01 S	18/39	
			5/13 S	5/31 S	10/19 S	11/53 S	15/11 S	18/01 S	19/31 S	
			5/13 S	5/31	10/19 S	11/53 S	15/11 S	18/01 S	19/31 S	
			5/13 S	5/32 S	10/19 S	11/53 S	15/11	18/01 S	19/31 S	

TERMINATOR PROCESS
SYMBOLIC REFERENCE TABLE.

LFT	0	EXTERNAL*								
LFTFREE	0	EXTERNAL*								
LOADBUF	0	EXTERNAL*								
LOCALEV	555	PROGRAM*	9/43 L	12/24	13/11	15/25	16/36	18/50	20/11	
LOCK	0	EXTERNAL*	14/10	16/17	17/10	19/11				
LOCTAB	0	EXTERNAL*								
LOCTABF	0	EXTERNAL*								
LOCTABL	0	EXTERNAL*								
L.MNCL	0	EXTERNAL*								
MAINCL	0	EXTERNAL*	5/05	5/07	5/11	5/13	5/15	5/17	7/14	11/21
			5/06	5/10	5/12	5/14	5/16	5/22	7/20	
MAKEMAP	0	EXTERNAL*								
MAPBUF	0	EXTERNAL*								
MKPTR	0	EXTERNAL*	11/36							
MOVBLKR	0	EXTERNAL*								
MYCODF	0	EXTERNAL*	25/09							
MYDAR	0	EXTERNAL*								
MYEVCH	0	EXTERNAL*	5/31							
MYIDENT	0	EXTERNAL*	5/25 S	17/39						
MYRESP	0	EXTERNAL*								
MYSCRF	0	EXTERNAL*	5/32							
MYSUB	0	EXTERNAL*	11/51	11/53	18/01	18/03				
MYSWCC	0	EXTERNAL*								
MYUNIT	0	EXTERNAL*	5/03	5/34 S	7/32					
M.ABFCH	0	EXTERNAL*								
M.ABFIL	0	EXTERNAL*								
M.ACREQ	0	EXTERNAL*								
M.ACRES	0	EXTERNAL*								
M.ACTCC	0	EXTERNAL*								
M.ADDS	0	EXTERNAL*								
M.ADISK	0	EXTERNAL*								
M.ASUSP	0	EXTERNAL*	5/22							
M.AUTH	0	EXTERNAL*								
M.BFILE	0	EXTERNAL*	5/05							
M.CLOCC	0	EXTERNAL*								
M.CLOSE	0	EXTERNAL*								
M.CLTIM	0	EXTERNAL*								
M.DARL	0	EXTERNAL*								
M.DDREQ	0	EXTERNAL*								
M.DDRSP	0	EXTERNAL*	5/06							
M.DDSCT	0	EXTERNAL*								
M.DFILT	0	EXTERNAL*								
M.DOBJ	0	EXTERNAL*								
M.EMPTY	0	EXTERNAL*								
M.FCLEV	0	EXTERNAL*								
M.FDISK	0	EXTERNAL*								
M.FHRL	0	EXTERNAL*								
M.FILCL	0	EXTERNAL*								
M.FRWCC	0	EXTERNAL*								
M.GFILE	0	EXTERNAL*								
M.HASHL	0	EXTERNAL*								
M.HELP	0	EXTERNAL*								
M.HFILE	0	EXTERNAL*	5/15	5/16	5/17					

TERMINATOR PROCESS
SYMBOLIC REFERENCE TABLE.

STKBUF	0	EXTERNAL*								
SUSPIPL	0	EXTERNAL*	5/28 S	5/28 S	5/28 S	5/28				
SW.DDS	0	EXTERNAL*								
SW.SW	0	EXTERNAL*								
SYSERR	0	EXTERNAL*	5/23	9/47	12/24	15/18	17/13	19/31	22/16	24/13
			5/28	10/17	13/11	16/19	17/13	19/38	22/23	24/15
			5/28	10/17	14/13	16/19	18/27	19/38	22/23	
			5/28	10/17	14/13	16/19	18/32	20/11	22/23	
			5/30	11/38	14/13	16/30	18/39	21/09	24/08	
			7/16	12/11	15/05	16/35	19/17	21/09	24/09	
			7/38	12/11	15/05	16/40	19/17	21/09	24/10	
			7/38	12/11	15/05	16/40	19/17	22/16	24/11	
			7/38	12/17	15/11	17/13	19/26	22/16	24/12	
S.COM.FX	6		18/20							
S.FOO	1		14/17	17/17	18/18					
S.IN.FX	2		12/01	14/45	18/09					
S.IN.SW	3		18/22							
S.NONEXT	5		21/48							
S.OUT	0		16/24	19/21	21/29					
TABADDR	0	EXTERNAL*								
TEMPA	0	EXTERNAL*	14/22	14/22	17/22	17/22				
TEMPB	0	EXTERNAL*								
TEMPC	0	EXTERNAL*								
TEMPO	0	EXTERNAL*								
TEMPE	0	EXTERNAL*								
TEMPF	0	EXTERNAL*								
TEMPG	0	EXTERNAL*								
TEMPI	0	EXTERNAL*								
TEMPJ	0	EXTERNAL*								
TEMPK	0	EXTERNAL*								
TEMPL	0	EXTERNAL*								
TEMPM	0	EXTERNAL*								
TEMPN	0	EXTERNAL*								
TEMPO	0	EXTERNAL*								
TEMP1	0	EXTERNAL*	5/28	5/28						
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	240	PROGRAM*	5/01 L							
TERMR0L	1665	PROGRAM*	25/13 L							
TERMR0W	0	EXTERNAL*	25/06							
TERMR0L	240	PROGRAM*	4/52 L	25/09						
TLAB	554	PROGRAM*	9/35	9/37 L						
TR.DRIV	0	EXTERNAL*								
TR.LEVL	0	EXTERNAL*								
T.DATA	0		12/01							

TERMINATOR PROCESS
SYMBOLIC REFERENCE TABLE.

UDSKSCR	0	EXTERNAL*							
UNLOCK	0	EXTERNAL*	15/19	16/32	18/44	19/32			
UNLOCKW	0	EXTERNAL*							
UNPACKP	1510	PROGRAM*	11/44	14/44	21/08 L				
UNPKP1	1523	PROGRAM*	21/11 L	21/20					
UNPKP2	1543	PROGRAM*	21/36 L						
UNPKP2A	1550	PROGRAM*	21/45	21/51 L					
UNPKP3	1555	PROGRAM*	21/53	22/08 L					
UNPKP4	1556	PROGRAM*	22/09 L	22/12					
UNPKP5	1560	PROGRAM*	22/09	22/13 L					
USERID	2	PROGRAM*	4/22 L	7/30 S	9/43	15/23	18/48		
USERRWF	0	EXTERNAL*							
USERRWL	0	EXTERNAL*							
USRPACK	0	EXTERNAL*							
WRITCAP	0	EXTERNAL*	12/10	15/04	16/29	18/26	19/25	22/15	22/22
XXX	454	PROGRAM*	7/18	7/18 L					
XXXTERM	527	PROGRAM*	8/02	8/04 L	8/14				
YYY	455	PROGRAM*	5/36	7/18	7/19 L				
ZAPTERM	1475	PROGRAM*	8/12	20/05 L					
ZAPT1	1477	PROGRAM*	20/05	20/08	20/09 L				
ZEROMAP	0	EXTERNAL*							
ZROMAPR	0	EXTERNAL*							
ZZZ	466	PROGRAM*	7/16	7/20	7/22 L				

13.20.27.07/17/71 TSS SCOPE 32A
13.20.31.S: CM= 6144/014000R AT CP= 0 SEC
13.20.31.RFL,46000
13.20.33.S: CM=19456/046000R AT CP= 0 SEC
13.20.46.NOMPASS,I=TERMIN,S=0
13.22.42.ASSEMBLY COMPLETE.
13.22.48.END
13.22.52.FILE,UPDATE
13.22.54.RFL,20000
13.22.55.S: CM= 8192/020000R AT CP= 29 SEC
13.22.55.REWIND,LGO
13.22.59.END
13.23.00.REWIND,BINARY
13.23.03.END
13.23.04.REWIND,TBIN
13.23.10.END
13.23.12.COPYL,BINARY,LGO,TBIN
13.23.18.COPYL DID NOT FIND --- TERMIN
13.23.18.COPYL DONE
13.23.20.END
13.23.22.REWIND,TBIN
13.23.25.END
13.23.26.REWIND,BINARY
13.23.29.END
13.23.30.COPY,TBIN,BINARY
13.23.32.S: CM= 1344/002500R AT CP= 29 SEC
13.23.33. 1 FILE(S) COPIED
13.23.35.S: CM= 8192/020000R AT CP= 29 SEC
13.23.37.END
13.23.38.REWIND,LGO
13.23.41.END
13.23.42.FIN
13.23.42.S: USER CPU - 29.287 SEC
13.23.42.S: SCOPE CPU - 13.483 SEC
13.23.42.S: SCOPE ECS - 33.280 SEC
13.23.42.S: SCOPE SWAP - 10.403 SEC
13.23.43.S: DISK CPU - .000 SEC
13.23.43.S: DISK ECS - .002 SEC
13.23.43.S: DISK SWAP - .000 SEC
13.23.43.S: SYSTEXT - 1480 LINES
13.23.44.S: CM= 512/001000R AT CP= 29 SEC

END OF FILE

