

D U M P F I L . . . DUMP SCOPE FILES TO TAPE
STORAGE ALLOCATION.

COMPASS - VER 2.

05/07/71 11.31.48.

PAGE 1

ADDRESS LENGTH

BINARY CONTROL CARDS.

0 0

IDENT DUMPFIL

0

END

EXTERNAL SYMBOLS.

DFICLO

DFIOPRO

ECIRSHP

ECICIN

ECIRTRN

NULL	IDENT	DUMPFIL
	MACRO	A,B,C
N1	IFC	NE,**A**
N2	IFC	EQ,**VFD*C*
	VFD	60/P A
N2	ELSE	
	C	A
N2	ENDIF	
N1	ELSE	
N2	IFC	EQ,**VFD*C*
	VFD	60/P B
N2	ELSE	
	C	B
N2	ENDIF	
N1	ENDIF	
NULL	ENDM	
*		
LINEIN	MACRO	W
	SX7	B7
	SA7	SAVEB7
	SB1	W
	SB6	6
	CEJ	BEAD
	SA5	SAVEB7
	SB7	X5
LINEIN	ENDM	
*		
LINEOUT	MACRO	W
	SX7	B7
	SA7	SAVEB7
	SB1	W-2
	SB6	6
	CEJ	BEAD
	SA5	SAVEB7
	SB7	X5
LINEOUT	ENDM	
*		
*		
*		
*		
MESOUT	MACRO	SR,RT,SV
	LOCAL	RETURN
	IFC	NE,**SV*,1
	CEJ	SAVE
	SB1	SR
	NULL	RT,RETURN,SB7
	EQ	TYPEOUT
RETURN	BSS	0
	IFC	NE,**SV*,1
	CEJ	RESTORE
MESOUT	ENDM	
*		
MESIN	MACRO	RT,SV

		LOCAL	RETURN
		IFC	NE,**SV*,1
		CEJ	SAVE
		NULL	RT,RETURN,SB7
		EQ	TYPEIN
	RETURN	BSS	0
		IFC	NE,**SV*,1
		CEJ	RESTORE
	MESIN	ENDM	
0		ORG	0
0		BSSZ	2
2	04251520061114000000	DATA	0LDUMPFIL,0LCLASS
4	000000000000000000002	DATA	2 MAP ENTRIES
5	0000000000000000000024	DATA	20 COMPILED MAP SIZE
6	00000000000000000002217	VFD	60/ENDWORD
7	0000000000000000001161	VFD	60/DUMPFIL ENTRY POINT
10	0000000000000000000062	DATA	50
11	0000000000000000001161	VFD	60/DUMPFIL SIZE OF LOCAL DATA
12	0000000000000000000000	DATA	0,0
14	0000000000000000000000	DATA	0,0 FILE/CM
16	0000000000000000001161	VFD	60/DUMPFIL
17	0000000000000000000000	DATA	0 READ WRITE
20	04251520061114000000	DATA	0LDUMPFIL,0LS
22	0000000000000000001161	VFD	60/DUMPFIL,60/DUMPFIL
23	0000000000000000001161		
24	0000000000000000001036	VFD	60/ENDWORD=DUMPFIL
25	0000000000000000000001	DATA	1
26	7777777777777777777776	VFD	60/-1 END OF MAP SPECIFIERS
27	17200522031400000000	DATA	0LOPERCL,0LOPERATE
31	15012324052200000000	DATA	0LMASTER,0LOPERATE
33	0000000000000000000000	DATA	0 END OF C LIST SPECIFIERS
1	C.READ	EQU	1
3	C.READ	EQU	3
4	C.WRITE	EQU	4
5	C.SENDE	EQU	5
6	C.HANG	EQU	6
16	C.OP	EQU	14
17	C.SELF	EQU	15
33	C.INX	EQU	27
34	C.OUTX	EQU	28
35	C.TAPE	EQU	29
36	C.AREA	EQU	30
	OP	MACRO	XZ,Y,Z
		VFD	1/1,29/=X*XZ,30/C.OP
	T	IFC	NE,**Y*
		VFD	60/Y
	T	IFC	NE,**Z*
		VFD	60/Z
	T	ENDIF	
		ENDM	
34	DADR	BSSZ	1
35	4000000000 X	OP	FCIRTRN
36	000000000000000000003	READ	60/C.READ

37	0000000000000000000036	READC	VFD	60/C.AREA	
40	000000000000000000000	READA	DATA	0	FILE ADDRESS
41	000000000000000000000	READCM	DATA	0	CM ADDRESS
42	000000000000000000000	COUNTA	DATA	0	WORD COUNT
43	4000000000 X	MOVECAP	OP	ECICIN	
44	0000000000000000000017		VFD	60/C.SELF	
45	000000000000000000000	FROMC	DATA	0	
46	000000000000000000000	TOC	DATA	0	
47	0000000000000000000005	SENDV	VFD	60/C.SENDE	
50	0000000000000000000034		VFD	60/C.OUTX	
51	000000000000000000000	EVENTW	DATA	0	EVENT TO BE SENT
52	0000000000000000000006	GETV	VFD	60/C.HANG	
53	0000000000000000000033		VFD	60/C.INX	
54		FADR	BSSZ	1	
55	0000000000000000000004	WRITE	VFD	60/C.WRITE	
56	0000000000000000000035		VFD	60/C.TAPE	
57	0000000000000000000001		DATA	1	TO BUFFER ADDRESS 1
60	000000000000000000000	WFILEA	DATA	0	CM ADDRESS
61	000000000000000000000	WFILEC	DATA	0	WORD COUNT
62	0000000000000000000004	WCNT	VFD	60/C.WRITE	
63	0000000000000000000035		VFD	60/C.TAPE	
64	000000000000000000000		DATA	0	COUNT TO BUFFER ADDRESS 0
65	00000000000000000001125		VFD	60/TAPECNT	
66	0000000000000000000001		DATA	1	ONE WORD
67		AREA	BSSZ	4	DIRECTORY ENTRY AREA
73		CMBUFF	BSSZ	512	CM BUFFER FOR TAPE FILE
1073		BF	BSSZ	4	ALTERNATE BUFFER AREA
1077	000000000000000000000	ERROR	DATA	0	ERROR DISCOVERED FLAG
1100	000000000000000000000	ERRBIT	DATA	0	ERROR RECOVERY BIT
1101	000000000000000000000	COPY	DATA	0	
1102	02000001565		JP	COPYG	
1103	000000000000000000000	FIRSTF	DATA	0	
1104	000000000000000000000	RECADR	DATA	0	
1105	000000000000000000000	RECBAN	DATA	0	
1106	000000000000000000000	RECLN	DATA	0	
1107	000000000000000000000	SDEVIC	DATA	0	
1110		SHAPE	BSSZ	5	
1115	000000000000000000000	CFILEA	DATA	0	
1116	000000001100100000102	WRITEV	VFD	12/0,12/1,12/513,12/0,12/1028	
1117	000000000000000000000	WORDC	DATA	0	
1120	4000000000 X	READSHF	OP	ECIRSHF	
1121	0000000000000000000036		VFD	60/C.AREA	
1122	0000000000000000001110		VFD	60/SHAPE	
1123	0000000000000000000005		DATA	5	
1124	000000000000000000000	FILEADR	DATA	0	
1125	000000000000000000000	TAPECNT	DATA	0	BYTE COUNT FOR FIRST WORD OF BUFFER
1126		PARAM	BSSZ	6	
1134	0000000000000000001136		VFD	60/TTYBUFF,60/TTYBUFF	
1135	0000000000000000001136				
1136		TTYBUFF	BSSZ	16	
1156	000000000000000000000	SAVEB7	DATA	0	
		XJ	MACRO	WHERE,CNT	
		+	VFD	12/01308,18/WHERE	

-	VFD	30/CNT	
	ENDM		
FILEMARK	MACRO		
	SENDV	15B	
	SENDV	5	CLEAR PARITY BIT
	ENDM		
REPLACE	MACRO		
	SB6	1	
	SB1	AREA	
	SB7	0	
	XJ	CALLBEAD	
	ENDM		
GET	MACRO	A,B	
REG	IF	-REG,A	
	SA1	A.	
	SA2	B.	
REG	ENDIF		
	SB6	MODE	
	SB1	AREA	
	SB7	C,AREA	
	XJ	CALLBEAD	
	ENDM		
MOVE	MACRO	FROM,TO	
	SX6	FROM	
	SX7	C,TO	
	SA6	FROMC	
	SA7	TOC	
	XJ	MOVECAP	
	ENDM		
SENDV	MACRO	EVENT	
	LOCAL	TRY	
TRY	BSS	0	
	SA5	ERRBIT	
	IF	-REG,EVENT	
	SX6	EVENT	
	ELSE		
	BX6	EVENT	
	ENDIF		
	BX6	X6*X5	
	SA6	EVENTW	
	XJ	SENDV	
	XJ	GETV	
	MX6	1	
	BX6	X6*X7	
	SA4	ERRBIT	
	BX6	X4-X5	FLIP ERROR RECOVERY BIT
	SA6	A4	
	LX7	47	GET EXTERNAL REJECT BIT
	NG	X7,TRY	TRY AGAIN
	LX7	60-47	
	LX5	1	
	SX6	X5	
	SA6	ERROR	SET ERROR FLAG

READ	ENDM		
	MACRO	FROM,COUNT,TO,F,CAP	
	IF	REG, FROM	
	BX6	FROM	
	ELSE		
	SX6	FROM	
	ENDIF		
	SX7	COUNT	
	SA6	READA	
	SA7	COUNTA	
	SX6	TO	
	SA6	READCM	
	IFC	EQ,SSCAPS	
	SX6	C.AREA	
	ELSE		
	SX6	C.CAP	
	ENDIF		
	SA6	READC	
	XJ	READ,F	
	ENDM		
WRITET	MACRO	FROM,CNT	
	LOCAL	X,Y,Z	
	SX6	FROM	
	SA6	WFILEA	
	SX7	CNT	
	SA7	WFILEC	
	XJ	WRITE	
	SX6	X7	
	LX6	2	
	IX6	X6*X7	
+	NZ	X6*X+1	
	SX6	4	
	SA6	TAPCNT	
	XJ	WONT	WRITE COUNT INTO ECS BUFFER
Y	SA1	WRITEV	
	SENDV	X1	
	PL	X7,X	SENSE OK WRITE
	AX7	24	
	SX0	2400B	CHECK IF REWRITE IS NEEDED
	BX0	X0*X7	
	ZR	X0,CRAH	SENSE UNKNOWN ERROR
	SENDV	12B	BACKSPACE
	SENDV	16B	
	PL	X7,Z	SENSE SKIP BADSPOT WAS OK
	AX7	24	
	SX0	2400B	
	BX0	X7*X0	
	NZ	X0,BADTAPE	SENSE STILL BAD TAPE SPOT
	JP	CRAH	NO HOPE.. UNKNOWN ERROR
Z	MESOUT	IBSK	
	JP	Y	WRITE AGAIN
X	BSS	0	
	ENDM		

		OPEN	MACRO		
			XJ	OPEN,1000003B	
			EQ	-1	
			VFD	30/*+1,60/0,30/1,30/C,AREA	
		CLOSE	ENDM		
			MACRO		
			XJ	CLOSE	
			ENDM		
		CEJ	MACRO	X,Y	
			XJ	X,Y	
			ENDM		
		MODE	SET	0	ABSOLUTE MODE
	0	DUMPFIL1	EQ	*	
1157	00000000000000000000	PPU.	DATA	0	
1160	00000000000000000000	CODE.	DATA	0	
1161	10644	DUMPFIL	BX6	X4	
	5160001157		SA6	PPU.	
	10655		BX6	X5	
1162	5160001160		SA6	CODE.	
	5110001753		GET	DUMPFIL,S	
1166	0130001737		OPEN		
1172	0130001731		XJ	READSELF	
1173	0130001741		CLOSE		
1174	6160000001		REPLACE		
1177	7160000002		MOVE	2,AREA	MOVE CAP FOR SDVC FILE
1202	7160000001		READ	1,1,SDEVIC	READ SDEVICE CAP ADDRESS
1207	5110001107		SA1	SDEVIC	
	73610		MOVE	X1,TAPE	BUFFER CAP
1213	7261000001		MOVE	X1+1,OUTX	OUT EVENT CHANNEL
1216	7261000002		MOVE	X1+2,INX	INEVENT CHANNEL
		*			
		*			
		*			
			REIND TAPE, GET PROPER ERROR RECOVERY BIT		
1221		TRYREW	SENDV	100	
1231	0337001234		NG	X7,REWOK	
	0347001234		IR	X7,REWOK	
1232	43601		MX6	1	
	5160001100		SA6	ERRBIT	SWITCH ERROR RECOVERY BIT
1233	0200001221		JP	TRYREW	TRY IT AGAIN
1234		REWOK	SENDV	3	SELECT 556 BPI
1244			SENDV	1	SELECT BINARY
	21730		AX7	24	
1254	43060		MX6	60-12	
	15770		BX7	-X0*X7	
	7160000002		SX6	2	
1255	11667		BX6	X6*X7	
	0316001234		NZ	X6,REWOK	SENSE STILL ACTIVE
1256	7160000001		SX6	1	
	11667		BX6	X6*X7	
1257	0306001234		ZR	X6,REWOK	SENSE TAPE STILL BUSY
	7150002001		SX5	2001B	CLEAR PARITY AND BUSY BITS
1260	15775		BX7	-X5*X7	
	7277776653		SX7	X7-1124B	

```

1261 0317001541      NZ      X7,PRECRASH      IF NOT ..
                                     *      END OF OPERATE
                                     *      LOAD POINT
                                     *      WRITE ENABLE
                                     *      556BPI
                                     *
1262 6110001531      ALLCLEAR MESOUT      ENMSG
1264 7160000000      SX6      0
                                     SA6      PARAM
1265 5160001127      SA6      PARAM+1
                                     MESIN      ( )
                                     SA1      PARAM      . GET PARAM 1
1267 5110001126      ZR      X1,ALLCLEAR
                                     BX6      X1
1270 10611      MX5      6
                                     SX1      X1-3REFIN
                                     ZR      X1,ALLDONE
1271 0301001433      LX6      6
1272 20606      BX7      X5*X6
                                     ZR      X7,*
1273 5160001157      SA6      BPU.
                                     SA1      A1+1
1274 0301001276      ZR      X1,ALLZR
1275 20106      LX1      6
                                     BX2      X5*X1
                                     ZR      X2,*
1276 10611      BX6      X1
                                     ALLZR      CODE.      . FILE NAMES SET UP
                                     SA6      PPU, CODE
1277 5110001157      GET      B0
1303 76600      SX6      80
                                     SA6      RECADR
1304 0130001737      OPEN
                                     *
                                     *      COPY THE PPU'S OUT TO TAPE FROM SCOPE SIMULATOR FILES
                                     *
1310 5110001104      SENDPPU SA1      RECADR
                                     SX6      X1+1
1311 5160000054      SA6      FADR
                                     READ      X1,1,RECBAN      READ IN RECORD BANNER
1317 5120001104      SA2      RECADR
                                     SA1      RECBAN
1320 73610      SX6      X1
                                     IX7      X6*X2
                                     SA6      RECLEN
1321 7277000001      SX7      X7+1
                                     SA7      A2
                                     ZR      X6, LASTPPU
1322 0306001406      COPYL SA1      FADR
                                     SA2      RECLEN
1323 5110000054      NG      X2,SENDPPU
                                     SX3      512
1324 0332001310      IX6      X2-X3
1325 37623      PL      X6,**+1
                                     0326001326

```


1326	54620	73320	SX3	X2	
	36731		SA6	A2	
	54710		IX7	X3+X1	
	10611		SA7	A1	
1334	7160000073		READ	X1,X3,CMBUFF	
1405	0200001323		WRITET	CMBUFF,X3	WRITE RECORD ONTO TAPE
1406			JP	COPYL	
1426	0130001741	LASTPPU	FILEMARK		WRITE FILE MARK
1427	6160000001		CLOSE		
1432	0400001262		REPLACE		
1433			EQ	ALLCLEAR	. LOOP TILL FIN
1453		ALLDONE	FILEMARK		
1473			FILEMARK		
1513			SENDV	118	REWIND / UNLOAD THE TAPE
1523	6110001526		MESOUT	ALLOK	
1525	0130000035		XJ	RETURN	
			LIST	L,R	
			LIST	L,R	
1526	06111405235523250303	ALLOK	DIS		,SFILES SUCCESSFULLY DUMPEDS
1531	05162405225570061601	FNMSG	DIS		,SENER ↑FNAME↑,↑UNAME↑ OR ↑FIN↑S
1535	24012005550425152055	UNSUC	DIS		,STAPE DUMP ABORTED .. TAPE DRIVE ERRORS
1541	6110001544	PRECRASH	MESOUT	NOTROY	
1543	0130000035		XJ	RETURN	
1544	24012005551617245522	NOTROY	DIS		,STAPE NOT READIED PROPERLYS
1547	24012005550201042320	TBSK	DIS		,STAPE BADSPOT SKIPPEDS
1552	6110001555	BADTAPE	MESOUT	TBNSK	
1554	0130000035		XJ	RETURN	
1555	24012005550201042320	TBNSK	DIS		,STAPE BADSPOT UNSKIPPABLES
1560	5170000010	CRASH	SA7	108	
	6110001535		MESOUT	UNSUC	
1562	6160000004		SB6	4	
1563	0130001736		XJ	CALLBEAD	
1564	0130000035		XJ	RETURN	
1565	76600	COPYG	SX6	B0	
	5160001115		SA6	CEILEA	
1566	5110001115	COPYGL	SA1	CEILEA	
	5120000072		SA2	ABEA+3	
1567	7160001000		SX6	512	
	36616		IX6	X1+X6	
	43036		MX0	30	
1570	15220		BX2	-X0+X2	
	37326		IX3	X2-X6	
	0333001650		NS	X3+LASTREAD	
1571	54610		SA6	A1	
	10611		READ	X1,512,CMBUFF	
1576	7160000073		WRITET	CMBUFF,512	
1647	0200001566		JP	COPYGL	
1650	37621	LASTREAD	IX6	X2-X1	
	5160001117		SA6	WORDC	
	73260		SX2	X6	
1651	10611		READ	X1,X2,CMBUFF	
1656	5110001117		SA1	WORDC	

```

      7160000073
1730 0200001101      WRITET  CMBUFF,X1
1731 000000000000000000003  READSELF VFD  COPY      RETURN
1732 000000000000000000036  VFD  60/C.READ
1733 000000000000000000000  VFD  60/C.AREA
      VFD  60/0,60/0
1734 000000000000000000000
1735 000000000000000001157  VFD  60/DUMPFIL1  WORD COUNT
1736 000000000000000000001  CALLBEAD VFD  60/C.BEAD
1737 4000000000 X  OPEN  OP  DF!OPRO,C.AREA
1741 4000000000 X  CLOSE OP  DF!CLO,C.AREA
1743 041123130000000000000  DIRECT VFD  42/0LDISK,18/0
1744 230000000000000000000  DATA  0LS
1745  BSSZ  2
1747 230317200500000000005  VFD  42/0LScope,18/5
1750 031401232335000000000  DATA  0LCLASS2
1751  BSSZ  2
1753  BSS  0
      EQU  *-DIRECT
1753 04251520061114000000  SDIRECT EQU  *-DIRECT
1754 230000000000000000000  DUMPFIL. DATA  0LDUMPFIL
1755 150123240522000000000  S. DATA  0LS
1756 172005220124050000000  SELF. DATA  0LMASTER
      OPER. DATA  0LOPERATE

```

*
*
*
*
*
*
*
*
*
*
*
*TYPEOUT TRANSLATES A LINE OF DISPLAY CODE (UP TO A 0 CHARACTER)
AND PRINTS IT ON THE TTYPARAMETERS: B1 = SOURCE
B7 = RETURN

USES: ALL B REG,X0,X1=A1,X2=A2,X6=A6,TTYBUFF

1757	43066	59110	6126777765	TYPEOUT	MX0	54	. MASK
					SA1	B1	. FIRST WORD
					SB2	-10	. DISPLAY CODE CHARACTER COUNT
1760	66420	6130777767	13666		SB4	B2	. OUTPUT WORD COUNTER
					SB3	-8	. ASCII CHARACTER COUNT
					BX6	X6-X6	. ZERO OUTPUT REGISTER
1761	20106	15210	0302001772	TYPEOUT1	LX1	6	. POSITION INPUT CHARACTER
					BX2	-X0*X1	. GET CHARACTER
					ZR	X2,TYPEOUT3	. DONE
1762	5222002057	20236	21255		SA2	TRANSB*X2	. GET TABLE ENTRY
					LX2	30	
					AX2	45	. ZAP EXTRA BITS
1763	20607	12662	6122000001		LX6	7	. MAKE ROOM IN OUTPUT WORD
					BX6	X6+X2	. ADD CHARACTER TO OUTPUT
					SB2	B2+1	. BUMP DISPLAY CODE CHARACTER COUNT
1764	0720001766	5011000001			LT	B2,B0,TYPEOUT2	. JUMP IF SOME LEFT
					SA1	A1+1	. GET NEXT INPUT WORD IF NOT
1765	6120777765				SB2	-10	. AND RESET COUNTER
1766	6133000061	0730001761		TYPEOUT2	SB3	B3+1	. BUMP ASCII CHARACTER COUNT
					LT	B3,B0,TYPEOUT1	. LOOP IF ROOM LEFT
1767	5164001150	6136777767			SA6	TTYBUFF+10+B4	. ELSE STORE OUTPUT WORD
					SB3	-8	. RESET COUNTER
1770	6144000001	7160000000			SB4	B4+1	. AND BUMP WORD COUNT
					SX6	0	. DONT FORGET TO ZERO OUTPUT
1771	0740001761				LT	B4,B0,TYPEOUT1	. THEN LOOP IF ROOM LEFT
1772	7120000155	20667	12662	TYPEOUT3	SX2	155B	. ASCII CARRIAGE RETURN
					LX6	7	
					BX6	X6+X2	. ADD IT TO OUTPUT
1773	6133000001	0730001772			SB3	B3+1	. BUMP CHARACTER COUNT
					LT	B3,B0,TYPEOUT3	. AND LOOP TILL LEFT JUSTIFIED
1774	5164001150	7160001136			SA6	TTYBUFF+10+B4	. STORE OUTPUT WORD
					SX6	TTYBUFF	
1775	5266777775	7160000144			SA6	X6-2	
					SX6	100	
1776	5066000001	76770			SA6	A6+1	
					LINEOUT	TTYBUFF	. PRINT LINE (SAVE B7)
2003	0270000000				JP	B7	. RETURN

		TYPEIN	GETS A LINE FROM THE TTY, AND TRANSLATES IT INTO DISPLAY CODE AT PARAM TO PARAM+5. BREAKS ON ↑, ↓, ALLOWS UP TO 10 CHARS/PARAMETER, AND UP TO 6 PARAMETERS.	
		USED	ALL B-REG,X0,X1-A1,X2-A2,X3,X6-A6	
		CALLED WITH	B7 = RETURN	
2004	76770	TYPEIN	LINEIN	TTYBUFF
2010	43065	TYPEIN.	MX0	60-7
	5110001136		SA1	TTYBUFF
	20104		LX1	4
2011	6110777765		SB1	-10
	6120777767		SB2	-8
2012	6130777771		SB3	-6
	7160000000		SX6	0
2013	20107	TYPEIN1	LX1	7
	15210		BX2	-X0*X1
	7232777763		SX3	X2-14B
2014	0303002026		ZR	X3,TYPEIN3
	7232777622		SX3	X2-155B
2015	0303002036		ZR	X3,TYPEIN4
	7232777604		SX3	X2-173B
2016	0303002041		ZR	X3,TYPEIN5
	7232777637		SX3	X2-140B
2017	0333002020	+	NG	X3,*+1
	7120000000		SX2	0
2020	0610002047		GE	B1,B0,TYPEIN6
	5222002057		SA2	TRANSB*X2
2021	20255		LX2	45
	21255		AX2	45
	20666		LX6	6
	12662		BX6	X6*X2
2022	6111000001		SB1	B1+1
2023	6122000001	TYPEIN2	SB2	B2+1
	0720002013		LT	B2,B0,TYPEIN1
2024	5011000001		SA1	A1+1
	20104		LX1	4
2025	6120777767		SB2	-8
	0400002013		EQ	TYPEIN1
2026	6110777765	TYPEIN3	SB1	-10
	5163001134		SA6	PARAM+6+B3
2027	7160000000		SX6	0
	6133000001		SB3	B3+1
2030	0730002023		LT	B3,B0,TYPEIN2
	6110002051		SB1	TYPEINA
2031	76670		SX6	B7
2032	5160001150	TYPEIN31	SA6	TTYBUFF+10

```

        6170002034          SB7      TYPEIN32 . RETURN
2033  0400001757          EQ      TYPEOUT
        *
2034  5110001150          TYPEIN32 SA1  TTYBUFF+10
        63710          SB7      X1
2035  0400002004          EQ      . RESTORE RETURN
        *          TYPEIN      . RETRY
2036  5163001134          TYPEIN4 SA6  PARAM*6+B3      . STORE LAST PARAMETER
        7160000000          SX6      0
2037  6133000001          SB3      B3+1
        0603002036          LE      B3,B0,TYPEIN4      . ZERO PARAM BUFFER
2040  0270000000          JP      B7      . AND RETURN
        *
2041  6122000001          TYPEIN5 SB2  B2+1      . BUMP INPUT CHARACTER COUNT
        0602002043          LE      B2,B0,TYPEIN51      . SOME LEFT, JUMP
2042  54110          SA1      A1      . ELSE GET NEXT INPUT WORD
        20104          LX1      4
        6126777767          SB2      -8
2043  20107          TYPEIN51 LX1      7
        15210          BX2      -X0*X1      . GET CHARACTER
        63121          SB1      B1*X2      . ADD TO PARAMETER CHARACTER COUNT
2044  0610002047          GE      B1,B0,TYPEIN6      . TOO MANY CHARACTERS
        7130000055          SX3      558      . BLANK
2045  20606          TYPEIN52 LX6      6
        12663          BX6      X6*X3
        7222777776          SX2      X2-1
2046  0312002045          NZ      X2,TYPEIN52      . OUTPUT BLANKS
        0400002023          EQ      TYPEIN2      . CONTINUE WHEN DONE
2047  6110002054          TYPEIN6 SB1  TYPEIN8      . TOO MANY CHARACTERS MESSAGE
        76670          SX6      B7
2050  0400002032          EQ      TYPEIN31 . DO ERROR THING
        *
2051  24171755150118315520 TYPEINA DIS  ;*TOO MANY PARAMETERS*
2054  20012201150524052255 TYPEINB DIS  ;*PARAMETER > 10 CHARACTERS*

```

3

```
*
*
*
MACRO      =,XX,BCD,DIS,ASCII,DISA,EXC
BASE      0
IFC      EQ,**EXC*
VFD      17/BCD,17/1R,DIS,17/ASCII,17/1R,DISA
ELSE
VFD      17/BCD,17/DIS,17/ASCII,17/DISA
ENDIF
BASE      *
ENDM

*
*
2057      TRANSTB EQU *
*
*
*INDEX      EQU      BCD,DISPLAY(FR BCD),ASCII,DISPLAY(FR ASCII)
*
2057      00016000630000500055      00      =      16,I,5,( )
2060      00061000340004100063      01      =      61,1,41,( )
2061      00062000350004200071      02      =      62,2,42,+
2062      00063000360004300060      03      =      63,3,43,E
2063      00064000370004400053      04      =      64,4,44,S
2064      00065000400004500000      05      =      65,40,45,0,X
2065      00066000410004600057      06      =      66,6,46,^
2066      00067000420004700064      07      =      67,42,47,64,EXC
2067      00070000430005000051      10      =      70,43,50,51,EXC
2070      00071000440005100052      11      =      71,9,51,( )
2071      00041000330005200047      12      =      41,0,52,*
2072      00042000540005300045      13      =      42,=,53,+
2073      00043000540005400056      14      =      43,=,54,( )
2074      00044000630005500046      15      =      44,I,55,-
2075      00045000600005600057      16      =      45,0,56,57,X
2076      00046000610005700050      17      =      46,I,57,/
2077      00047000550006000033      20      =      47,( ),60,0
2100      00050000500006100034      21      =      50,/61,1
2101      00051000230006200035      22      =      51,S,62,2
2102      00022000240006300036      23      =      22,T,63,3
2103      00023000250006400037      24      =      23,U,64,4
2104      00024000260006500040      25      =      24,V,65,5
2105      00025000270006600041      26      =      25,W,66,6
2106      00026000300006700042      27      =      26,X,67,7
2107      00027000310007000043      30      =      27,Y,70,8
2110      00030000320007100044      31      =      30,Z,71,9
2111      00031000620007200063      32      =      31,I,72,1
2112      00012000550002000077      33      =      12,56,20,77,X
2113      00001000510002100072      34      =      1,51,21,72,EXC
2114      00002000650002200054      35      =      2,65,22,54,EXC
2115      00003000600002300073      36      =      3,E,23,>
2116      00004000670002400075      37      =      04,^,24,2
2117      00005000460002500066      40      =      05,-,25,v
```

2120	00006000120002600001	41	=	06,J,26,A
2121	00007000130002700002	42	=	07,K,27,B
2122	00010000140003000003	43	=	10,L,30,C
2123	00011000150003100004	44	=	11,M,31,D
2124	00060000160001300005	45	=	60,N,13,E
2125	00040000170001500006	46	=	40,O,15,F
2126	00054000200001200007	47	=	54,P,12,G
2127	00021000210001700010	50	=	21,Q,17,H
2130	00034000220001000011	51	=	34,R,10,I
2131	00074000740001100012	52	=	74,S,11,J
2132	00053000530000400013	53	=	53,S,4,K
2133	00013000470003500014	54	=	13,T,35,L
2134	00020000700000000015	55	=	20,U,0,M
2135	00033000710001400016	56	=	33,U,14,N
2136	00073000730001600017	57	=	73,V,16,O
2137	00036000450000300020	60	=	36,W,03,P
2140	00017000010007300021	61	=	17,X,73,Q
2141	00032000020007500022	62	=	32,Y,75,R
2142	00000000030003200023	63	=	00,Z,32,S
2143	00014000040000700024	64	=	14,0,07,T
2144	00035000050007700025	65	=	35,0,77,U
2145	00052000060007400026	66	=	52,0,74,V
2146	00037000070000600027	67	=	37,0,06,W
2147	00055000100007600030	70	=	55,H,76,X
2150	00056000110000200031	71	=	56,I,02,Y
2151	00072000720003400032	72	=	72,K,34,Z
2152	000570000570003600061	73	=	57,L,36,[
2153	00015000520000100074	74	=	15,M,01,S
2154	00075000750003700062	75	=	75,N,37,I
2155	000760000600004000070	76	=	76,V,40,A
2156	00077000770003300065	77	=	77,77,33,65,EXC
2157	00000000000000000064	100	=	0,0,0,64,EXC
2160	00000000330000000001	101	=	0,0,0,A
2161	00000000330000000002	102	=	0,0,0,B
2162	00000000330000000003	103	=	0,0,0,C
2163	00000000330000000004	104	=	0,0,0,D
2164	00000000330000000005	105	=	0,0,0,E
2165	00000000330000000006	106	=	0,0,0,F
2166	00000000330000000007	107	=	0,0,0,G
2167	00000000330000000010	110	=	0,0,0,H
2170	00000000330000000011	111	=	0,0,0,I
2171	00000000330000000012	112	=	0,0,0,J
2172	00000000330000000013	113	=	0,0,0,K
2173	00000000330000000014	114	=	0,0,0,L
2174	00000000330000000015	115	=	0,0,0,M
2175	00000000330000000016	116	=	0,0,0,N
2176	00000000330000000017	117	=	0,0,0,O
2177	00000000330000000020	120	=	0,0,0,P
2200	00000000330000000021	121	=	0,0,0,Q
2201	00000000330000000022	122	=	0,0,0,R
2202	00000000330000000023	123	=	0,0,0,S
2203	00000000330000000024	124	=	0,0,0,T
2204	00000000330000000025	125	=	0,0,0,U

2205	00000000330000000026	126	=	0*0,0,V
2206	00000000330000000027	127	=	0*0,0,W
2207	00000000330000000030	130	=	0*0,0,X
2210	00000000330000000031	131	=	0*0,0,Y
2211	00000000330000000032	132	=	0*0,0,Z
2212	00000000330000000055	133	=	0*0,0,(
2213	00000000330000000055	134	=	0*0,0,()
2214	00000000330000000052	135	=	0*0,0,)
2215	00000000330000000055	136	=	0*0,0,()
2216	00000000330000000055	137	=	0*0,0,()

*

2217		ENDWORD	BSS	0
	1736	BEAD	EQU	CALLBEAD
0		END		

35375	STORAGE USED	1977 STATEMENTS	150 SYMBOLS	000039 INVENTED SYMBOLS
	6600 ASSEMBLY	10.752 SECONDS	480 REFERENCES	

3 TYPE ERROR
OCCURRED ON PAGES

DUPLICATE MACRO DEFINITION. NEW ONE OVERRIDES.
14

ALLCLEAR	1262	8/07 L	8/13	9/11					
ALLDONE	1433	8/17	9/12 L						
ALLOK	1526	9/16	9/20 L						
ALLZR	1276	8/23	8/27 L						
AREA	67	4/25 L	7/21	7/25	8/30	9/11	9/38		
BADTAPE	1552	9/07	9/27 L	9/48	10/02				
BEAD	1736	11/49	12/14	16/14 D					
BF	1073	4/27 L							
CALLBEAD	1736	7/21	7/25	8/30	9/11	9/33	10/08 L	16/14	
CFILEA	1115	4/38 L	9/36 S	9/37					
CLOSE	1741	7/23	9/09	10/10 L					
CMBUFF	73	4/26 L	9/06	9/06	9/47	9/47	9/53	10/01	
CODE.	1160	7/15 L	7/19 S	8/28 S	8/30				
COPY	1101	4/30 L	10/02						
COPYG	1565	4/31	9/35 L						
COPYGL	1566	9/37 L	9/48						
COPYL	1323	8/48 L	9/07						
COUNTA	42	4/04 L	7/27 S	8/40 S	9/06 S	9/47 S	9/53 S		
CRASH	1560	9/07	9/07	9/30 L	9/48	9/48	10/02	10/02	
C.AREA	36	3/42 D	4/42	7/22	7/27	8/33	9/06	9/53	10/10
		4/01	7/21	7/26	8/30	8/40	9/47	10/04	10/11
C.BEAD	1	3/32 D	10/08						
C.HANG	6	3/36 D	4/12						
C.INX	33	3/39 D	4/13	7/31					
C.OP	16	3/37 D	3/53	4/06	4/42	10/10	10/11		
C.OUTX	34	3/40 D	4/10	7/30					
C.READ	3	3/33 D	3/53	10/03					
C.SELF	17	3/38 D	4/06						
C.SENDE	5	3/35 D	4/09						
C.TAPE	36	3/41 D	4/16	4/21	7/29				
C.WRITE	4	3/34 D	4/15	4/20					
DADR	34	3/51 L							
DFICLO	0	EXTERNAL*	10/10						
DFIOPRO	0	EXTERNAL*	10/09						
DIRECT	1743	10/11 L	10/18						
DUMPFIL	1161	3/16	3/18	3/21	3/24	3/25	3/26	7/16 L	
DUMPFIL1	1157	7/13 D	10/07						
DUMPFIL.	1753	7/20	10/19 L						
ECICIN	0	EXTERNAL*	4/05						
ECIRSHF	0	EXTERNAL*	4/41						
ECIRTRN	0	EXTERNAL*	3/52						
ENDWORD	2217	3/15	3/26	16/13 L					
ERRBIT	1100	4/29 L	7/42	9/07	9/13	9/14	9/16	9/48	10/02
		7/35	7/42	9/07	9/13	9/14	9/16	9/48	10/02
		7/35	9/07	9/09	9/13	9/15	9/48	10/02	
		7/38 S	9/07	9/09	9/13	9/15	9/48	10/02	
		7/41	9/07	9/09	9/14	9/15	9/48	10/02	
		7/41	9/07	9/09	9/14	9/15	9/48	10/02	
ERROR	1077	4/28 L	7/42 S	9/07 S	9/13 S	9/14 S	9/16 S	9/48 S	10/02 S
		7/35 S	9/07 S	9/09 S	9/13 S	9/15 S	9/48 S	10/02 S	
		7/41 S	9/07 S	9/09 S	9/14 S	9/15 S	9/48 S	10/02 S	

EVENTW	51	4/11 L	7/42 S	9/07 S	9/13 S	9/14 S	9/16 S	9/48 S	10/02 S
		7/35 S	9/07 S	9/09 S	9/13 S	9/15 S	9/48 S	10/02 S	
		7/41 S	9/07 S	9/09 S	9/14 S	9/15 S	9/48 S	10/02 S	
FADR	54	4/14 L	8/38 S	8/48					
FILEADR	1124	4/45 L							
FIRSTF	1103	4/32 L							
FNMSG	1531	8/07	9/21 L						
FROMC	45	4/07 L	7/26 S	7/29 S	7/30 S	7/31 S			
GETV	52	4/12 L	7/42	9/07	9/13	9/14	9/16	9/48	10/02
		7/35	9/07	9/09	9/13	9/15	9/48	10/02	
		7/41	9/07	9/09	9/14	9/15	9/48	10/02	
		8/47	9/08 L						
LASTPPU	1406	9/44	9/49 L						
LASTREAD	1650	7/12 D	7/21	8/30					
MODE	0	4/05 L	7/26	7/29	7/30	7/31			
MOVECAP	43	9/23	9/25 L						
NOTRDY	1544	7/21	8/32	10/09 L					
OPEN	1737	10/22 L							
OPER.	1756	4/47 L	8/09 S	8/10 S	8/12	12/47 S	13/08 S		
PARAM	1126	7/14 L	7/17 S	8/21 S	8/29				
PPU.	1157	8/01	9/23 L						
PRECRASH	1541	3/53 L	7/27	8/40	9/06	9/47	9/53		
READ	36	4/02 L	7/27 S	8/40 S	9/06 S	9/47 S	9/53 S		
READA	40	4/01 L	7/27 S	8/40 S	9/06 S	9/47 S	9/53 S		
READC	37	4/03 L	7/27 S	8/40 S	9/06 S	9/47 S	9/53 S		
READCM	41	7/22	10/03 L						
READSELF	1731	4/41 L							
READSHP	1120	4/33 L	8/31 S	8/36	8/40				
RECADR	1104	4/34 L	8/40	8/41					
RECBAN	1105	4/35 L	8/44 S	8/49					
RECLEN	1106	3/52 L	9/17	9/24	9/28	9/34			
RETURN	35	7/35	7/36	7/40 L	7/47	7/50			
REWOK	1234	4/51 L	11/49 S	11/49	12/14 S	12/14			
SAVEB7	1156	4/36 L	7/27	7/27					
SDEVIC	1107	10/18 D							
SDIRECT	10	10/21 L							
SELF.	1755	8/36 L	8/50						
SENDPPU	1310	4/09 L	7/42	9/07	9/13	9/14	9/16	9/48	10/02
SENDV	47	7/35	9/07	9/09	9/13	9/15	9/48	10/02	
		7/41	9/07	9/09	9/14	9/15	9/48	10/02	
		4/37 L	4/43						
SHAPE	1110	7/21	10/20 L						
S.	1754	4/23	4/46 L	9/07 S	9/48 S	10/02 S			
TAPECNT	1125	9/27	9/29 L						
TBNSK	1555	9/07	9/26 L	9/48	10/02				
TBSK	1547	4/08 L	7/26 S	7/29 S	7/30 S	7/31 S			
TOC	46	11/22	12/33	14/15 D					
TRANSTB	2057	7/34 L	7/39						
TRYREW	1221	4/48	4/50 L	11/43 S	11/49	12/15	13/04		
TTYBUFF	1136	4/49	11/33 S	11/44	12/14	12/53 S			
TYPEIN	2004	8/12	12/13 L	13/06					
TYPEINA	2051	12/51	13/34 L						
TYPEINB	2054	13/29	13/35 L						

D U M P F I L . . . DUMP SCOPE FILES TO TAPE
SYMBOLIC REFERENCE TABLE.

COMPASS - VER 2.

05/07/71 11.32.12.

PAGE 20

TYPEIN1	2013	12/21 L	12/40	12/44		
TYPEIN2	2023	12/39 L	12/50	13/28		
TYPEIN3	2026	12/24	12/46 L			
TYPEIN31	2032	12/53 L	13/31			
TYPEIN32	2034	13/01	13/04 L			
TYPEIN4	2036	12/26	13/08 L	13/11		
TYPEIN5	2041	12/28	13/14 L			
TYPEIN51	2043	13/15	13/19 L			
TYPEIN52	2045	13/24 L	13/27			
TYPEIN6	2047	12/32	13/22	13/29 L		
TYPEIN.	2010	12/14 L				
TYPEOUT	1757	8/08	9/17	9/28	9/48	11/13 L
		9/07	9/24	9/32	10/02	13/02
TYPEOUT1	1761	11/19 L	11/32	11/37		
TYPEOUT2	1766	11/28	11/31 L			
TYPEOUT3	1772	11/21	11/38 L	11/42		
UNSUC	1535	9/22 L	9/31			
WCNT	62	4/20 L	9/07	9/48	10/02	
WFILEA	60	4/18 L	9/07 S	9/48 S	10/02 S	
WFILEC	61	4/19 L	9/07 S	9/48 S	10/02 S	
WORDC	1117	4/40 L	9/50 S	9/53		
WRITE	55	4/15 L	9/07	9/48	10/02	
WRITEV	1116	4/39 L	9/07	9/48	10/02	

DMPX.

S-REGS	B-REGS	A-REGS	X-REGISTERS
000405	000000	003536	0000 0000 0000 0000 0000
026377	000001	000062	0000 0000 0000 0000 0000
051400	004526	003032	0000 0005 1604 0000 0000
070000	002623	003033	0000 0000 0000 0000 0000
000000	002053	006571	0000 0011 0405 1624 1624
000000	002761	000001	1234 1000 0000 0000 0000
022465	004552	000001	0000 0005 1604 0000 0000
000000	000000	000120	0002 0600 0000 0000 0000

000000	00000	00000	00000	00000	05160	40000	00000	00000	17252	42025	24000	00120	17252	42025	24000	03030
000004	23000	00000	00000	00054	33000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
000010	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
*																
000030	04251	52005	11140	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
000034	06000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
000040	00000	00000	00000	00000	00000	00000	00000	00000	05160	45503	01220	45515	11232	31116	07570	00000
000044	00000	00000	00000	00000	57554	24256	42425	65556	65000	00000	00000	00000	11115	20000	00000	00000
000050	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	33000	00000	00000	00000
000054	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000
*																
000064	00000	00000	00000	00004	00000	00000	00000	22647	00000	00000	00000	00000	00000	00000	00000	00000
000070	00000	00000	00000	00001	14071	70000	00000	00003	00000	00000	00000	00000	00000	00000	00000	00000
000074	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000

000344	55555	55555	55555	55523	30415	55555	55555	55502	42000	00000	00000	00000	55555	55555	55555	55515
000350	21555	55555	55555	55524	31200	51116	36345	55557	55041	75505	22221	72255	24101	11607	00000	00000
000354	47000	00000	00000	00000	47000	00000	00000	00000	24312	00511	16015	55504	11235	55555	55555	55556
000360	47241	71755	15011	63155	20012	20115	05240	52223	47000	00000	00000	00000	24312	00511	16025	55504
000364	11235	55555	55555	55556	47200	12201	15052	40522	55735	53433	55031	00122	01032	40522	23470	00000
000370	55555	55555	55555	55555	24112	41405	55555	55555	15012	32405	22552	42201	16231	40124	11171	65524
000374	01021	40500	00000	00000	47000	00000	00000	00000	47000	00000	00000	00000	47000	00000	00000	00000
000400	55555	55555	55555	55555	15010	32217	55555	55555	54563	03056	02030	45604	11235	60123	03111	15604
000404	11230	15605	30030	00000	55555	55555	55555	55555	02012	30555	55555	55555	17000	00000	00000	00000
000410	55555	55555	55555	55555	11060	35555	55555	55555	05215	64747	05300	34755	00000	00000	00000	00000
000414	45555	55555	55555	55555	26060	45555	55555	55555	34425	00203	04563	44250	34226	50411	23563	44250
000420	01230	31111	56344	25034	22650	41123	01000	00000	55555	55555	55555	55555	05142	30500	00000	00000
000424	45555	55555	55555	55555	26060	45555	55555	55555	34425	00203	04563	44250	04112	35634	42500	12303
000430	11115	63442	50041	12301	00000	00000	00000	00000	55555	55555	55555	55555	05160	41106	00000	00000
000434	55555	55555	55555	55555	02012	30555	55555	55555	47000	00000	00000	00000	55555	55555	55555	55555
000440	05160	41500	00000	00000	47000	00000	00000	00000	47000	00000	00000	00000	24220	11623	24025	55565