

# WRITER'S MASTER COPY

## DO NOT REMOVE



**SDS**  
SCIENTIFIC DATA SYSTEMS

**SDS 920/930 FORTRAN II  
4K BASIC SYSTEM**

Technical Manual

SDS 90065C

SDS 920/930 FORTRAN II

4K BASIC SYSTEM

Technical Manual

SCIENTIFIC DATA SYSTEMS

1649 Seventeenth Street, Santa Monica, Calif.

January 1965

## REVISIONS

This publication supersedes the SDS 920 FORTRAN II 4K Basic System Technical Manual, SDS 900065B. The following corrections are included:

Corrections to FORTRAN Loader (G) to make Version H

Corrections to FORTRAN Run-Time (G) to make Version H

The following listings replace those contained in the previous manual:

<u>Subroutine</u>	<u>Page</u>
EXP	3-12 through 3-17
BINBCD (236)	3-79 through 3-85

## CONTENTS

- PART I. Compiler      The Compiler accepts source programs from paper tape and produces object programs which can be run on any 900 Series Computer. Object programs are punched on paper tape, and source programs are listed on the typewriter.
- PART II. Loader      The Loader loads programs compiled by any 900 Series Compiler, as well as library subroutines and subroutines assembled by SYMBOL. The same loader is used in all 900 Series FORTRAN systems; it determines on which machine it is operating and loads accordingly.
- PART III. Library      The Library contains the standard mathematical functions and various system subroutines which can be called, implicitly or explicitly, by an object program. Those routines which will work on any 900 Series Computer are marked "910/920". Those whose symbolic listing is the same but must be assembled separately for the different computers are marked "920/910S". Those which function only on the 920 or 930 Computers are marked "920".
- PART IV. Run-Time System      The Run-Time System contains the floating-point arithmetic subroutines, various Programmed Operators used by object programs, and the FOR-MAT scanning routine.

# **PART I. COMPILER**

		1	*	CORRECTIONS TO FORTRAN COMPILER (F)		
		2	*	TO MAKE VERSION G		
		3	*			
		4	*	MAY 1, 1964		
		5	*			
		6	*			
		7	*			
		06650	8	L6650	BOOL	6650
		00030	9	L30	BOOL	30
00200	C 06	06650	10		PTAP	L6650
00201	C 06	00030	11		PTAP	L30
			12	* FAST LISTING PATCH FOR F COMPILER		
			13	* LIST SPROG TITLE		
00202	C 04	00166	14		PACH	LISTST
00203	C 04	00167	15		PACH	LISTST+1
		00166	16		BORG	166
00166	I 01	05767	17	LISTST	CSF	CARET
00167	C 01	01545	18		BRU	\$62
00170	C 04	00311	19		PACH	BUZ
00171	C 04	00311	20		PACH	BUZ
		00311	21		BORG	311
00311	C 01	00166	22	BUZ	BRU	LISTST
						LIST SPROG TITLE
00312	C 04	00340	23		PACH	BODYSX
00313	C 04	00345	24		PACH	BODYSX+5
		00340	25		BORG	340
			26	* BODY STA XLATE		
00340	I 12	01623	27	BODYSX	JRS	SINIT
						STA INITIALIZE
00341	I 05	01650	28		TRY	LBFLDX
						LBL FIELD XLATE
00342	I 04	01562	29		JAF	ILLINX
						ILLEGAL LINE XLATE
00343	I 05	01611	30		TRY	IBMEND
00344	C 60	00037	31		SKR	LASTST
						LAST STATEMENT TRIG
00345	C 20	00000	32		NOP	
00346	C 04	01735	33		PACH	PRTALN
00347	C 04	02027	34		PACH	\$79
			35	* PRINT A LINE		
		01735	36		BORG	1735
01735	C 76	00006	37	PRTALN	LDA	IICHCT
						INITIAL INPUT CHAR CNT
01736	C 35	00005	38		STA	INCHCT
						INPUT CHAR CNT
01737	I 60	05730	39		PRC	EQUAL

01740	1	10	00015	40		FET	ILINCT	INITIAL LINE CNT
01741	1	12	05070	41		JRS	PR5DEC	PRINT 5 DEC
01742	0	43	05270	42	\$74	BRM	NXINCH	NEXT INPUT CHAR
01743	0	72	06215	43		SKA	CARRFG	CAR RETURN FLAG
01744	0	01	01742	44		BRU	\$74	
01745	0	76	00026	45		LDA	ONES	
01746	0	35	00035	46		STA	NSTTRG	END OF STATEMENT TRIGGER
01747	0	35	00170	47		STA	EOLTRG	END OF LINE TRIGGER
01750	1	10	06255	48		FET	NINE	
01751	0	76	00005	49	\$76	LDA	INCHCT	INPUT CHAR CNT
01752	0	01	01773	50		BRU	\$76A	
01753	0	43	05225	51	\$75	BRM	NXACCH	NEXT ACTIVE CHAR
01754	0	50	05767	52		SKE	CARET	CAR RETURN
01755	0	01	01761	53		BRU	\$75A	
01756	0	76	00005	54		LDA	INCHCT	INPUT CHAR CNT
01757	0	73	00170	55		SKG	EOLTRG	END OF LINE TRIGGER (ADDRESS OF FIRST CAR RET)
01760	0	61	00035	56		MIN	NSTTRG	END OF STATEMENT TRIGGER
01761	0	76	00170	57	\$75A	LDA	EOLTRG	END OF LINE TRIGGER
01762	0	73	00026	58		SKG	ONES	END OF LINE.
01763	0	01	01766	59		BRU	\$75B	.NO
01764	0	75	05767	60		LDB	CARET	CAR RETURN .YES
01765	0	01	01771	61		BRU	\$75C	
01766	0	76	00013	62	\$75B	LDA	LACHCT	LAST ACTIVE CHAR CNT
01767	0	55	00024	63		ADD	ONE	
01770	0	75	00171	64		LDB	FRSTCH	FIRST CHAR READ BY NXACCH
01771	0	36	00004	65	\$75C	STB	CRNTCH	CURRENT CHAR
01772	0	35	00005	66		STA	INCHCT	INPUT CHAR CNT
01773	0	35	00012	67	\$76A	STA	RDSTCT	READ STOP CNT
01774	0	35	06330	68		STA	CTL2	CENTRAL 2
01775	1	60	00004	69		PRC	CRNTCH	CURRENT CHAR
01776	1	44	00022	70		SER	FAILDL	FAIL DATA LIST
01777	1	04	02004	71		JAF	\$77	
02000	1	31	00024	72		BNG	ONE	
02001	1	24	00012	73		MON	ERLIST	ERROR OUTPUT LIST
02002	1	24	00013	74		MON	ERSTLS	ERROR STOP LIST
02003	1	10	00026	75		FET	MINUS1	MINUS ONE
02004	2	61	00000	76	\$77	MIN	WG.2	
02005	0	76	00004	77		LDA	CRNTCH	CURRENT CHAR
02006	0	50	05767	78		SKE	CARET	CAR RETURN

02007	C	01	01753	79		BRU	\$75	
02010	C	76	00005	80		LDA	INCHCT	INPUT CHAR CNT
02011	C	35	00006	81		STA	IICHCT	INITIAL INPUT CHAR CNT
02012	C	61	00015	82		MIN	ILINCT	INITIAL LINE CNT
02013	C	76	00015	83		LDA	ILINCT	INITIAL LINE CNT
02014	C	35	00014	84		STA	LINECT	LINE CNT
02015	C	53	00035	85		SKN	NSTTRG	END OF STATEMENT TRIGGER
02016	C	01	05671	86		BRU	CLR1ET	CLEAR ONE EXIT TRUE
02017	C	01	05665	87		BRU	CLR1EF	CLEAR ONE EXIT FALSE
				88		* EXTRA PART OF NEXT ACTIVE CHAR		
02020	C	72	06322	89	\$213A	SKA	CNCHFG	CONTINUATION CHAR FLAG
02021	C	01	05233	90		BRU	\$208	
02022	C	76	00044	91	\$214	LDA	ACHTPI	ACTIVE CHAR TEMP 1
02023	C	35	00005	92		STA	INCHCT	INPUT CHAR CNT
02024	C	76	05767	93		LDA	CARET	CAR RETURN
02025	C	35	00004	94		STA	CRNTCH	CURRENT CHAR
02026	C	71	06501	95	\$215	LDX	WRK3BT	WORK BOTTOM
02027	C	51	05225	96		BRR	NXACCH	NEXT ACTIVE CHAR
			02027	97	\$79	EQU	*-1	
02030	C	04	05225	98		PACH	NXACCH	
02031	C	04	05267	99		PACH	\$213B	
				100		* NEXT ACTIVE CHAR		
			05225	101		BORG	5225	
05225	C	00	00000	102	NXACCH	HLT		
05226	C	76	00005	103		LDA	INCHCT	INPUT CHAR CNT
05227	C	35	00013	104		STA	LACHCT	LAST ACTIVE CHAR CNT
05230	C	43	05270	105		BRM	NXINCH	NEXT INPUT CHAR
05231	C	35	00171	106		STA	FRSTCH	FIRST CHAR READ BY NXACCH
05232	C	01	05234	107		BRU	\$208A	
05233	C	43	05270	108	\$208	BRM	NXINCH	NEXT INPUT CHAR
05234	C	50	05727	109	\$208A	SKE	SPACE	
05235	C	01	05242	110		BRU	\$209	
05236	C	76	00003	111		LDA	SCANMD	SCAN MODE
05237	C	50	00024	112		SKE	USLKFG	USE BLANKS FLAG
05240	C	01	05233	113		BRU	\$208	
05241	C	76	05727	114		LDA	SPACE	
05242	C	50	05767	115	\$209	SKE	CARET	CAR RETURN
05243	C	01	02026	116		BRU	\$215	
05244	C	53	00170	117		SKN	E6LTRG	END OF LINE TRIGGER



05245	C 01	05250	118		BRU	\$209A	
05246	C 75	00005	119		LDB	INCHCT	INPUT CHAR CNT
05247	C 36	00170	120		STB	EOLTRG	END OF LINE TRIGGER
05250	C 53	00037	121	\$209A	SKN	LASTST	LAST STATEMENT TRIGGER
05251	C 01	02026	122		BRU	\$215	
05252	C 76	00005	123		LDA	INCHCT	INPUT CHAR CNT
05253	C 35	00044	124		STA	ACHTP1	ACTIVE CHAR TEMP 1
05254	C 61	00014	125		MIN	LINECT	LINE CNT
05255	C 43	05270	126	\$211	BRM	NXINCH	NEXT INPUT CHAR
05256	C 72	05215	127		SKA	CARRFG	CAR RETURN FLAG
05257	C 01	05255	128		BRU	\$211	
05260	C 71	06250	129		LDX	FOUR	
05261	C 37	00045	130		STX	ACHTP2	ACTIVE CHAR TEMP 2
05262	C 50	05727	131	\$213	SKE	SPACE	
05263	C 01	02022	132		BRU	\$214	
05264	C 43	05270	133		BRM	NXINCH	NEXT INPUT CHAR
05265	C 60	00045	134		SKR	ACHTP2	ACTIVE CHAR TEMP 2
05266	C 01	05262	135		BRU	\$213	
05267	C 01	02020	136		BRU	\$213A	RAN OUT OF ROOM
		05267	137	\$213B	EQU	*-1	
05270	C 05	00001	138		PNCH	1	
05271	C 05	00001	139		PNCH	1	
05272	C 05	00100	140		PNCH	L100	
05273	C 05	06643	141		PNCH	L6643	
		06643	142	L6643	BOOL	6643	
		00200	143	START	BOOL	200	
05274	C 07	00000	144		STOP		
05275	C 01	00200	145		BRU	START	
			146	* SYMBOL DEFINITIONS			
		00044	147	ACHTP1	BOOL	44	
		00045	148	ACHTP2	BOOL	45	
		05767	149	CARET	BOOL	5767	
		05234	150	CAROL0	BOOL	6234	
		05215	151	CARRFG	BOOL	6215	
		00022	152	CHTSLN	BOOL	22	
		00021	153	CKSMCT	BOOL	21	
		05665	154	CLR1EF	BOOL	5665	
		05671	155	CLR1ET	BOOL	5671	
		05322	156	CNCHFG	BOOL	6322	

00004	157	CRNTCH	BOOL	4
06330	158	CTL2	BOOL	6330
06267	159	EJECT	BOOL	6267
00170	160	EOLTRG	BOOL	170
05730	161	EQUAL	BOOL	5730
00012	162	ERLIST	BOOL	12
00013	163	ERSTLS	BOOL	13
00022	164	FAILDL	BOOL	22
06250	165	FOUR	BOOL	6250
00171	166	FRSTCH	BOOL	171
00072	167	HLDPWD	BOOL	72
01611	168	IBMEND	BOOL	1611
00006	169	IICHCT	BOOL	6
00015	170	ILINCT	BOOL	15
01562	171	ILLINX	BOOL	1562
00005	172	INCHCT	BOOL	5
05433	173	IOFREE	BOOL	5433
01650	174	LBFLDX	BOOL	1650
00100	175	L100	BOOL	100
06361	176	L6361	BOOL	6361
07000	177	L7000	BOOL	7000
00013	178	LACHCT	BOOL	13
00037	179	LASTST	BOOL	37
00014	180	LINECT	BOOL	14
00026	181	MINUS1	BOOL	26
06255	182	NINE	BOOL	6255
00035	183	NSTTRG	BOOL	35
05270	184	NXINCH	BOOL	5270
00024	185	ONE	BOOL	24
00026	186	ONES	BOOL	26
05160	187	PCHC6D	BOOL	5160
05156	188	PCHFIN	BOOL	5156
05070	189	PR5DEC	BOOL	5070
00167	190	PRACTG	BOOL	167
00012	191	RDSTCT	BOOL	12
00003	192	SCANMD	BOOL	3
01623	193	SINIT	BOOL	1623
05727	194	SPACE	BOOL	5727
00024	195	UBLKFG	BOOL	24

END OF LINE TRIGGER

FIRST CHARACTER READ BY NXACCH

1  
Q-

00000	196	WD	BOOL	0	
06501	197	WRKBOT	BOOL	6501	
01545	198	S62	BOOL	1545	
	199	* COMPILER POPS			
	200	BNG	OPD	13100000	
	201	CSF	OPD	10100000	
	202	FET	OPD	11000000	
	203	JAF	OPD	10400000	
	204	JAT	OPD	10300000	
	205	JRS	OPD	11200000	
	206	M0N	OPD	12400000	
	207	PRC	OPD	16000000	
	208	PRQ	OPD	16100000	
	209	SER	OPD	14400000	
	210	TRY	OPD	10500000	
	211	* PRINTER EDM'S/SKS'S			
	212	PLP	OPD	00202060	PRINT, 1 CHARACTER MODE
	213	PRT	OPD	04012060	PRINTER READY TEST
	214	PSCO	OPD	00210460	SKIP TO CHANNEL 0
	215	PSCI	OPD	00211460	SKIP TO CHANNEL 1
	216	TOPP	OPD	00214000	TERMINATE OUTPUT
	217	MIB	OPD	01200000	MEMORY INTO BUFFER
	218	* SPECIAL OPS FOR PROGRAM PATCHER			
	219	PACH	OPD	00400000	
	220	PNCH	OPD	00500000	
	221	PTAP	OPD	00600000	
	222	STOP	OPD	00700000	
00000	223	END			

ACHTP1	00044	ACHTP2	00045	BODYSX	00340	CAROLO	06234
CARRFG	06215	CHTSLN	00022	CKSMCT	00021	CLR1EF	05665
CLR1ET	05671	CNCHFG	06322	CRNTCH	00004	EOLTRG	00170
ERLIST	00012	ERSTLS	00013	FAILDL	00022	FRSTCH	00171
HLDPWD	00072	IBMEND	01611	IICHCT	00006	ILINCT	00015
ILLINX	01562	INCHCT	00005	IOPREE	05433	LACHCT	00013
LASTST	00037	LBFLDX	01650	LINECT	00014	LISTST	00166
MINUS1	00026	NSTTRG	00035	NXACCH	05225	NXINCH	05270
PCHCOD	05160	PCHFIN	05156	PR5DEC	05070	PRACTG	00167
PRT&LN	01735	RDSTCT	00012	SCANMD	00003	UBLKFG	00024
WKKHBT	06501	CARET	05767	EJECT	06267	EQUAL	05730
L6351	06361	L6543	06543	L6650	06650	L7000	07000
\$2084	05234	\$209A	05250	\$213A	02020	\$213B	05267
SINIT	01523	SPACE	05727	START	00200	CTL2	06330
FOUR	06250	L100	00100	NINE	06255	ONES	00026
PACH	05276	PNCH	05276	PSCO	05276	PSC1	05276
PTAP	05276	\$208	05233	\$209	05242	\$211	05255
\$213	05262	\$214	02022	\$215	02026	\$75A	01761
\$75B	01766	\$75C	01771	\$76A	01773	STJP	05276
TOPP	05276	BNG	05276	BUZ	00311	CSF	05276
FET	05276	JAF	05276	JAT	05276	JRS	05276
L30	00030	MIB	05276	MCN	05276	ONE	00024
PLP	05276	PRC	05276	PRQ	05276	PRT	05276
\$62	01545	\$74	01742	\$75	01753	\$76	01751
\$77	02004	\$79	02027	SER	05276	TRY	05276
WU	00000						



```

*          S D S   9 2 0   F O R T R A N   I I   C O M P I L E R          1
*                                                                 2
*          V E R S I O N   F          3
*                                                                 4
*          D E C E M B E R   1 1 .   1 9 6 3          5
*                                                                 6
*                                                                 7
*                                                                 8
*                                                                 9
*                                                                 10
*                                                                 11
*                                                                 12
* PUNCH OUT COMPILER TO FOLLOWING ADDRESS:          13
*   06361   PUNCH2 EQU   LAST          14
*                                                                 15
*                                                                 16
* MEMORY USED BY COMPILER (NOT INCLUDING TABLES):  17
*   06643   USED2 EQU   LSTMEM          18
*                                                                 19
*                                                                 20
*                                                                 21
*                                                                 22
*                                                                 23
00001  0 01 00200   BORG   1          INITIALIZE          24
*                                                                 25
*                                                                 26
*                                                                 27
*                                                                 28
* P R O G R A M M E D   O P E R A T O R   L I N K A G E S          29
*
00100  0 01 04100   BORG   100          30
00101  0 01 04130   BRU    RAMPBP 100          BUILD BY ADDRESS MODE  31
00102  0 01 04777   BRU    CSFPBP 101          CHARACTER SCAN OR FAIL  32
00103  0 01 05003   BRU    CSAPBP 102          CHARACTER SCAN OR ALTEPNATE  33
00104  0 01 05460   BRU    JATPBP 103          JUMP ANSWER TRUE       34
00105  0 01 05455   BRU    JAFPBP 104          JUMP ANSWER FALSE     35
00106  0 01 03777   BRU    TRYPBP 105          TRY                     36
00107  0 01 05025   BRU    QSFPPBP 106          QUOTE SCAN OR FAIL    37
00108  0 01 04753   BRU    STDPBP 107          STORE DOUBLE          38
00109  0 01 04424   BRU    FETPBP 110          FETCH                  39
00110  0 01 04440   BRU    SWTPBP 111          SWITCH                 40
00111  0 01 05467   BRU    JRSPBP 112          JUMP RECURSIVELY TO SUBROUTINE  41
00112  0 01 04153   BRU    BIFPBP 113          BUILD INSTRUCTION AND FILE  42
00113  0 01 04361   BRU    MCBPBP 114          MOVE CENTRAL ON       43
00114  0 01 04734   BRU    SBLPBP 115          SET OUT OF LIMIT     44
00115  0 01 04367   BRU    SBFPBP 116          SET ON FLAG          45
00116  0 01 04510   BRU    RSVPPBP 117          RESERVE               46
00117  0 01 04427   BRU    CNTPBP 120          COUNT                 47
00118  0 01 04523   BRU    RLSPBP 121          RELEASE               48
00119  0 01 04457   BRU    TATPBP 122          TAKE OFF TOP         49
00120  0 01 04247   BRU    FILPBP 123          FILE INSTRUCTION     50

```

00124	0 01 04445	BRU	M8NP8P	124	MOVE 8N	51
00125	0 01 04747	BRU	LDPP8P	125	LOAD DOUBLE	52
00126	0 01 04146	BRU	8LFP8P	126	BUILD LINK AND FILE	53
00127	0 01 04077	BRU	SALP8P	127	SAVE A LIST	54
00130	0 01 04625	BRU	PULP8P	130	PULL	55
00131	0 01 04403	BRU	BNGP8P	131	BRING	56
00132	0 01 04215	BRU	BAFP8P	132	BUILD ABSOLUTE AND FILE	57
00133	0 01 04655	BRU	CARP8P	133	COPY AND RELEASE	58
00134	0 01 04611	BRU	PL8P8P	134	PLEX 8PEN	59
00135	0 01 04671	BRU	CACP8P	135	COPY AND COUNT	60
00136	0 01 04674	BRU	CICP8P	136	COPY INHERIT AND COUNT	61
00137	0 01 04554	BRU	FICP8P	137	FLESH INHERIT AND COUNT	62
00140	0 01 04552	BRU	FACP8P	140	FLESH AND COUNT	63
00141	0 01 04351	BRU	B8PP8P	141	BOTTOM P8INTER	64
00142	0 01 04452	BRU	M8FP8P	142	MOVE 8FF	65
00143	0 01 04425	BRU	SN8P8P	143	SET NOT EMPTY	66
00144	0 01 04253	BRU	SERP8P	144	SEARCH	67
00145	0 01 04464	BRU	LCFP8P	145	LOAD CENTRAL FROM	68
00146	0 01 04544	BRU	FIPP8P	146	FLESH AND INHERIT PLEX	69
00147	0 01 04651	BRU	ADRP8P	147	ADDRESS	70
00150	0 01 04727	BRU	E8SP8P	150	EXCLUSIVE 8R TO STORAGE	71
00151	0 01 05440	BRU	S8BP8P	151	STORE 8N BOTTOM	72
00152	0 01 04374	BRU	S8TP8P	152	SET 8N TEST	73
00153	0 01 04765	BRU	SDPP8P	153	SUBTRACT DOUBLE PRECISION	74
00154	0 01 04757	BRU	ADPP8P	154	ADD DOUBLE PRECISION	75
00155	0 01 04112	BRU	RECP8P	155	RECOVER	76
00156	0 01 04662	BRU	CAFP8P	156	COPY FILE	77
00157	0 01 04467	BRU	LC8P8P	157	LOAD CENTRAL 8FF	78
00160	0 01 05011	BRU	PRCP8P	160	PRINT CHARACTER	79
00161	0 01 05016	BRU	PRQP8P	161	PRINT QUOTE	80
00162	0 01 04773	BRU	S8CP8P	162	SET 8N CHARACTER	81
00163	0 01 04133	BRU	SIMP8P	163	BUILD INSTRUCTION BY MODE	82
00164	0 01 03766	BRU	FEXP8P	164	FAIL EXIT	83
00165	0 00 00000	HLT				84
00166	0 00 00000	HLT				85
00167	0 00 00000	HLT				86
00170	0 00 00000	HLT				87
00171	0 00 00000	HLT				88
	00172	INCYR EQU	*		INCOMING X REGISTER	89
00172	0 00 00000	XITTP1 HLT			EXIT TEMP 1	90
00173	0 00 00000	INCAR HLT			INCOMING A REGISTER	91
00174	0 00 00000	MWPTRG HLT			MINUS WHILE PUNCHING TRIGGER	92
00175	0 00 00000	ITMPCT HLT			INITIAL TEMP COUNT	93
00176	0 00 00000	WIMCH HLT			WIMED CHAR	94
00177	0 00 00000	NTTRIG HLT			END 8F TAPE TRIGGER	95

		PAGE	S T A R T	o F	C O M P I L E R		96
	00200	BARG	200				97
*INITIALIZE						98	
00200	0 76 06317	INITAZ	LDA	T0P18K	T0P 0F 18 K		99
00201	0 75 05755		LDB	MINUSC	MINUS CHAR		100
00202	0 54 06325	\$I	SUB	TW0K	TW0K		101
00203	0 35 06406		STA	NC0RE	END 0F C0RE		102
00204	0 36 46406		STB*	NC0RE	END 0F C0RE		103
00205	0 53 46406		SKN*	NC0RE	END 0F C0RE		104
00206	0 01 00202		BRU	\$I	\$I		105
00207	0 43 03726		BRM	INITLS	INITIALIZE LISTS		106
00210	0 46 00001		CLA				107
00211	0 35 00005		STA	INCHCT	INPUT CHAR CNT		108
00212	0 35 00007		STA	INSTCT	INPUT ST0P CNT		109
00213	0 35 00010		STA	RDCHCT	READ CHAR CNT		110
00214	0 35 00012		STA	RDSTCT	READ ST0P CNT		111
00215	0 76 00026		LDA	MINUS1	MINUS 0NE		112
00216	0 35 00177		STA	NTTRIG	END 0F TAPE TRIGGER		113
00217	1 61 06031		PRQ	SETPQT	SET PAPER QT		114
00220	0 76 06245		LDA	MINUS2	MINUS TW0		115
00221	0 35 00016		STA	LINETP	LINES THIS PAGE		116
*START 0F C0MPILER						117	
00222	1 61 06034	STRCMP	PRO	CRDYQT	C0MPILER READY QT		118
00223	0 00 00000		HLT				119
00224	2 20 00000		N0P	0.2	0		120
00225	0 43 03726		BRM	INITLS	INITIALIZE LISTS		121
00226	0 46 00001		CLA				122
00227	1 51 00021		S0B	XITLS	EXIT LIST		123
00230	0 35 00175		STA	ITMPCT	INITIAL TEMP CBUNT		124
00231	0 35 00030		STA	DMYCNT	DMY CNT		125
00232	0 35 00004		STA	CRNTCH	CRRNT CHAR		126
00233	0 35 00034		STA	MXTPCT	MAX TEMP CNT		127
00234	0 76 00024		LDA	0NE	0NE		128
00235	0 35 00014		STA	LINECT	LINE CNT		129
00236	0 76 00026		LDA	MINUS1	MINUS 0NE		130
00237	0 35 00041		STA	SPTRIG	SPR0G TRIGGER		131
00240	0 35 00036		STA	ACTEST	ACTIVE STA TRIGGER		132
00241	0 35 00037		STA	LASTST	LAST STA TRIGGER		133
00242	0 35 00002		STA	BL0KCT	BL0CK CNT		134
00243	0 35 00021		STA	CKSMCT	CHECK SUM CNT		135



	PAGE				
*JOB CARD XLATE			137		
00244 1 12 01623	JOB CDX	JRS	SINIT	STA INITIALIZE	138
00245 1 02 05771		CSA	ASTRSK	ASTERISK	139
00246 1 04 00252		JAF	NAJBCE	NA JOB CARD ENTRY	140
00247 1 12 01734		JRS	RELPRT	RELEASE AND PRINT	141
00250 0 01 00244		BRU	JOB CDX	JOB CARD XLATE	142
*HEAD STA XLATE					143
00251 1 12 01623	HEAD EX	JRS	SINIT	STA INITIALIZE	144
*NA JOB CARD ENTRY					145
00252 1 05 01650	NAJBCE	TRY	LBFLDX	LBL FIELD XLATE	146
00253 1 04 01542		JAF	ILLINX	ILLEGAL LINE XLATE	147
00254 1 42 00015		M9F	CDLST	CODE LIST	148
00255 1 12 04053		JRS	SVLSDT	SAVE LIST DATA	149
*SUBROUTINE STA XLATE					150
00256 1 64 00265	SUBR EX	FEX	FCTSXL	FUNCTION STA XLATE	151
00257 1 06 06040		OSF	SUBROT	SUBROUTINE QT	152
00260 1 12 02743		JRS	SCLIDS	SCALAR ID SCAN	153
00261 1 12 00312		JRS	SPRGHG	SPRGG HEAD GEN	154
00262 1 02 05752		CSA	LPAREN	L PAREN	155
00263 1 04 00307		JAF	HEAD EX	HEAD EXIT	156
00264 0 01 00272		BRU	DYSOSC	DMY SEQ SCAN	157
*FUNCTION STA XLATE					158
00265 1 64 00325	FCTSXL	FEX	MAINPX	MAIN PROGRAM XLATE	159
00266 1 06 06043		OSF	FNCTQT	FUNCTION QT	160
00267 1 12 02743		JRS	SCLIDS	SCALAP ID SCAN	161
00270 1 12 00312		JRS	SPRGHG	SPRGG HEAD GEN	162
00271 1 01 05752		CSF	LPAREN	L PAREN	163
*DMY SEQ SCAN					164
00272 1 26 00001	DYSOSC	BLF	STLINK	START OF DMYS LINK	165
00273 1 12 02772	\$2	JRS	IDSCAN	ID SCAN	166
00274 1 03 03755		JAT	INCNFA	ID CONFLICT FAIL	167
00275 1 44 00007		SER	GDLIST	GLOBAL DMY LIST	168
00276 1 03 03755		JAT	INCNFA	ID CONFLICT FAIL	169
00277 1 14 00007		MC9	GDLIST	GLOBAL DMY LIST	170
00300 1 12 03617		JRS	DYTPMK	DMY TEMP MAKER	171
00301 1 51 00007		S9B	GDLIST	GLOBAL DMY LIST	172
00302 1 00 00200		BAM	SETUDP	SET UP DMY PBP	173
00303 1 02 06010		CSA	COMMA	COMMA	174
00304 1 03 00273		JAT	\$2	\$1	175
00305 1 01 05772		CSF	RPAREN	R PAREN	176
00306 1 26 00002		BLF	NDYLNK	END OF DMYS LINK	177
*HEAD EXIT					178
00307 1 47 00015	HEAD EX	ADR	CDLST	CODE LIST	179
00310 1 33 00020		CAR	WRKLT	WORK LIST	180
00311 0 01 01532		BRU	IAE8LX	INACTIVE E8L EXIT	181
*SPRGG HEAD GEN					182
00312 2 76 00000	SPRGHG	LDA	WD.2	WD	183
00313 0 35 00032		STA	NAMESP	NAME OF SPRGG PNTR	184
00314 1 23 06226		FIL	SPTITL	SPRGG TITLE	185

00315	1	23	00023		FIL	ZERØ	ZERØ	186
00316	1	14	00015		MCØ	CØDLST	CØDE LIST	187
00317	1	23	06227		FIL	NMARKR	END MARKER	188
00320	1	12	03657		JRS	LBLMAK	LBL MAKER	189
00321	0	35	00042		STA	SPRCLB	START ØF PRØG LBL	190
00322	1	13	00005		BIF	LALLØP	LBL LRP	191
00323	1	23	00023		FIL	HLTØP		192
00324	0	01	05705		BRU	CLRIAE	CLEAR ØNE AND EXIT	193
*MAIN PROGRAM XLATE								
00325	1	21	00023	MAINØX	RLS	SAVELS	SAVE LIST	195
00326	1	23	06225		FIL	MPTITL	MPRØG TITLE	196
00327	1	23	00023		FIL	ZERØ	ZERØ	197
00330	1	23	06233		FIL	ALLDØL	ALL DØLLARS	198
00331	1	23	06233		FIL	ALLDØL	ALL DØLLARS	199
00332	1	23	06227		FIL	NMARKR	END MARKER	200
00333	0	61	00041		MIN	SPTRIG	SPRØG TRIGGER	201
00334	1	47	00015		ADR	CØDLST	CØDE LIST	202
00335	1	33	00020		CAR	WØRKLT	WØRK LIST	203
00336	1	12	05160		JRS	PØHCØD	PUNCH CØDE	204
00337	0	01	00346		BRU	MAINPE	MAIN PRØG ENTRY	205

194

	PAGE			
*BODY STA XLATE				206
00340 1 05 01611	BODY3X	TRY	IRMEND	207
00341 0 60 00037		SKR	LASTST	208
00342 0 20 00000		NSP	LAST STATEMENT TRIG.	209
00343 1 12 01623		JRS	STA INITIALIZE	210
00344 1 05 01650		TRY	LBL FIELD XLATE	211
00345 1 04 01562		JAF	ILLEGAL LINE XLATE	212
*MAIN PRPG ENTRY				213
00346 1 12 04053	MAINPE	JRS	SAVE LIST DATA	214
00347 1 64 00606		FEX	ASSIGNMENT STA XLATE	215
00350 1 02 05744		CSA	G	216
00351 1 03 00543		JAT	GB TO GRBUP	217
00352 1 02 05741		CSA	D	218
00353 1 03 00373		JAT	DB OR DIMENSION	219
*IF STA XLATE				220
00354 1 06 06045	IFSTAX	CSF	IF QT	221
00355 1 02 05752		CSA	L PAREN	222
00356 1 04 04030		JAF	FAIL	223
00357 1 12 02506		JRS	EXP REMEMBER MADE XLATE	224
00360 1 12 02504		JRS	MADE RELEASE	225
00361 1 01 05772		CSF	R PAREN	226
00362 1 12 03074		JRS	LBL COMMA SCAN	227
00363 1 23 06017		FIL	SKA RUN TIME SIGN BIT INST	228
00364 1 13 00002		BIF	BRU MAP	229
00365 1 12 03074		JRS	LBL COMMA SCAN	230
00366 1 23 06020		FIL	SKG RUN TIME ZERO INST	231
*IF STA EXITS				232
00367 1 13 00002	IFSYIT	BIF	BRU MAP	233
00370 1 12 03077		JRS	LBL SCAN	234
00371 1 13 00002		BIF	BRU MAP	235
00372 0 01 01537		BRU	JUMP EOL EXIT	236
*DB OR DIMENSION				237
00373 1 02 05763	DBRDIM	CSA	LETTER B	238
00374 1 04 00452		JAF	DIMENSION STA XLATE	239
*DB STA XLATE				240
00375 1 12 03077	DBSX	JRS	LBL SCAN	241
00376 1 02 06010		CSA	COMMA	242
00377 1 12 02743		JRS	SCALAR ID SCAN	243
00400 1 01 05730		CSF	EQUAL	244
00401 1 12 00404		JRS	DB CONTRBL XLATE	245
00402 1 24 00014		M9N	DB L99PS 9PEN LIST	246
00403 0 01 01537		BRU	JUMP EOL EXIT	247
*DB CONTRBL XLATE				248
00404 1 12 03613	DBCTLX	JRS	MADE SET	249
00405 1 12 02511		JRS	EXP BY MADE XLATE	250
00406 1 01 06010		CSF	COMMA	251
00407 3 10 00000		FET	WD.2	252
00410 1 63 00210		BIM	STARE PAP	253
00411 1 12 03645		JRS	LBL MAKER BRU GEN	254

00412	1	12	03652		JRS	LMLBLG	LBL MAKER LBL GEN	256
00413	3	10	37776		FET	W2.2	W2	257
00414	1	12	02524		JRS	XPSCAN	EXP SCAN	258
00415	1	12	03511		JRS	SCRGEN	SCRIPT GEN	259
00416	1	12	03522		JRS	GRNM0D	GRNTEE ADDRESSABLE BY M0DE GEN	260
00417	1	02	06010		CSA	C0MMA	C0MMA	261
00420	1	03	00431		JAT	\$3	\$1	262
00421	1	12	03604		JRS	ISMDFL	IS M0DE FL	263
00422	1	03	00434		JAT	\$4	\$2	264
00423	3	10	37777		FET	W1.2	W1	265
00424	1	13	00142		BIF	MIN0P	MIN M0P	266
00425	1	12	03305		JRS	YPBYMG	EXP BY M0DE GEN	267
00426	1	23	06015		FIL	RTAFX1	RUN TIME ADD FX 0NE	268
00427	1	13	00156		BIF	SKGM0P	SKG M0P	269
00430	0	01	00440		BRU	\$6	\$4	270
00431	1	12	03522	\$3	JRS	GRNM0D	GRNTEE ADDRESSABLE BY M0DE GEN	271
00432	1	12	02511		JRS	XPMDX	EXP BY M0DE XLATE	272
00433	0	01	00436		BRU	\$5	\$3	273
00434	1	12	03522	\$4	JRS	GRNM0D	GRNTEE ADDRESSABLE BY M0DE GEN	274
00435	1	23	06016		FIL	PTLFL1	RUN TIME LDP FL 0NE	275
00436	1	00	00220	\$5	BAM	DTRP0P	D0 TRAP P0P	276
00437	1	13	00000		BIF	HLM0P	HLT M0P	277
00440	1	12	03645	\$6	JRS	LMERUG	LBL MAKER BRU GEN	278
00441	1	13	00006		BIF	LBL0P	LBL L0P	279
00442	1	13	00002		BIF	BRUM0P	BRU M0P	280
00443	0	60	06475		SKR	M0DB0T	M0DE P0TT0M	281
00444	1	42	00015		M0F	C0DLST	C0DE LIST	282
00445	1	24	00014		M0N	D0LST	D0 L0PPS 0PEN LIST	283
00446	1	42	00015		M0F	C0DLST	C0DE LIST	284
00447	1	24	00014		M0N	D0LST	D0 L0PPS 0PEN LIST	285
00450	1	13	00006		BIF	LBL0P	LBL L0P	286
00451	0	01	05705		BRU	CLR1AE	CLEAR 0NE AND EXIT	287
+DIMENSION STA XLATE								288
00452	1	06	06046	DIMSY	QSF	IMENQT	IMENSION QT	289
00453	1	21	00017		RLS	PLEXLS	PLEX LIST	290
00454	1	17	00012		RSV	DIMLST	DIMENS LIST	291
00455	1	12	02772	\$7	JRS	IDSCAN	ID SCAN	292
00456	1	03	03756		JAT	INCNFA	ID CONFLICT FAIL	293
00457	1	14	00005		M0B	AYLST	ARRAY LIST	294
00460	1	01	05752		CSF	LPAREN	L PAREN	295
00461	1	10	00024		FET	0NE	0NE	296
00462	1	10	00023		FET	ZER0	ZER0	297
00463	1	10	00023		FET	ZER0	ZER0	298
00464	0	01	00467		BRU	\$9	\$3	299
00465	1	12	03704	\$8	JRS	RGFYCS	REGISTER FX CONST	300
00466	1	24	00012		M0N	DIMLST	DIMENS LIST	301
00467	1	12	03204	\$9	JRS	SIGNIS	SIGNED INTEGER SCAN	302
00470	1	02	05776		CSA	VRGULE	VIRGULE	303
00471	1	03	00475		JAT	\$10	\$4	304
00472	1	25	00023		LDP	DP0NE	DP 0NE	305

00473	1 07 00047		STD	DIMTPA	DIMENS TEMP A	306
00474	0 01 00500		BRU	\$11	\$5	307
00475	1 25 06327	\$10	LDP	CTLI	CENTRAL 1	308
00476	1 07 00047		STD	DIMTPA	DIMENS TEMP A	309
00477	1 12 03204		JRS	SIGNIS	SIGNED INTEGER SCAN	310
00500	0 76 00050	\$11	LDA	DIMTPB	DIMENS TEMP B	311
00501	2 64 37776		MPY	W2.2	W2	312
00502	0 66 00001		RSH	1	1	313
00503	3 54 37777		43P	W1.2	W1	314
00504	3 07 37777		STD	W1.2	W1	315
00505	1 15 06316		SBL	MAXASA	MAX ARRAY SIZE ALLOWED	316
00506	1 03 03750		JAT	ILALFA	ILLEGAL ALLOCATION FAIL	317
00507	1 25 06327		LDP	CTLI	CENTRAL 1	318
00510	1 53 00047		SDP	DIMTPA	DIMENS TEMP A	319
00511	0 72 00025		SKA	SIGNBT	SIGN BIT	320
00512	0 01 03750		BRU	ILALFA	ILLEGAL ALLOCATION FAIL	321
00513	1 54 00023		ADP	DPONE	DP ONE	322
00514	1 07 06327		STD	CTLI	CENTRAL 1	323
00515	0 46 00010		CBA			324
00516	2 64 37776		MPY	W2.2	W2	325
00517	0 66 00001		RSH	1	1	326
00520	2 36 37776		STB	W2.2	W2	327
00521	1 15 06316		SBL	MAXASA	MAX ARRAY SIZE ALLOWED	328
00522	1 03 03750		JAT	ILALFA	ILLEGAL ALLOCATION FAIL	329
00523	1 02 06010		CSA	CBMMA	CBMMA	330
00524	1 03 00455		JAT	\$8	\$2	331
00525	1 01 05772		CSF	RPAREN	R PAREN	332
00526	1 24 00005		MSN	AYYLIST	ARRAY LIST	333
00527	0 60 06501		SKR	WRKBOT	WORK BOTTOM	334
00530	1 24 00005		MSN	AYYLIST	ARRAY LIST	335
00531	1 34 06500		PLB	AYDGP	ARRAY DIMENS GROUP PLEX	336
00532	1 35 00012		CAC	DIMLIST	DIMENS LIST	337
00533	1 24 00005		MSN	AYYLIST	ARRAY LIST	338
00534	1 02 06010		CSA	CBMMA	CBMMA	339
00535	1 03 00455		JAT	\$7	\$1	340
00536	1 02 05767		CSA	CARRET	CAR RETURN	341
00537	1 04 00455		JAF	\$7	\$1	342
00540	1 21 00012		RLS	DIMLIST	DIMENS LIST	343
00541	1 17 00017		RSV	PLEXLS	PLEX LIST	344
00542	0 01 01543		BRU	CUABUT	CLEAN UP AND OUTPUT	345
*GB TO GROUP						346
00543	1 06 06050	GBTAGP	OSF	BTBOT	BTB QT	347
00544	1 62 00024		SBC	DIGTFL	DIGIT FLAG	348
00545	1 04 00551		JAF	CBRAGT	COMPUTED OR ASSIGN GB TO	349
*GB TO STA XLATE						350
00546	1 12 03077	GBTAGSX	JRS	LRSCAN	LRL SCAN	351
00547	1 13 00002		BIF	BRUMBP	BRU MPP	352
00550	0 01 01537		BRU	JPEBLE	JUMP EBL EXIT	353
*COMPUTED OR ASSIGN GB TO						354
00551	1 02 05752	CBRAGT	CSA	LPAREN	L PAREN	355

00552	1	04	00573	JAF	AGTBSX	ASSIGN G9 T9 STA XLATE	356
*COMPUTED G9 T9 STA XLATE							357
00553	1	17	00020	CGTBSX	RSV	WRK LIST	358
00554	1	12	03077	\$12	JRS	LBL SCAN	359
00555	1	02	06010		CSA	COMMA	360
00556	1	03	00554		JAT	\$1	361
00557	1	01	05772		CSF	R PAREN	362
00560	1	02	06010		CSA	COMMA	363
00561	1	12	02501		JRS	FXPXL	364
00562	1	26	00006		BLF	CGTLNK	365
00563	1	20	00020		CNT	WRK LIST	366
00564	1	32	00000		BAF	HLT MBP	367
00565	1	22	00020	\$13	T9T	WRK LIST	368
00566	1	04	00571		JAF	\$14	369
00567	1	13	00002		BIF	BRUMBP	370
00570	0	01	00565		BRU	\$2	371
00571	1	21	00020	\$14	RLS	WRK LIST	372
00572	0	01	01537		BRU	JUMP E9L EXIT	373
*ASSIGN G9 T9 STA XLATE							374
00573	1	12	02631	AGTBSX	JRS	VAR SCAN	375
00574	1	12	03511		JRS	SCRIPT GEN	376
00575	1	00	00224		BAM	ASSIGN G9 T9 P9P	377
00576	1	02	06010		CSA	COMMA	378
00577	1	04	01537		JAF	JUMP E9L EXIT	379
00600	1	01	05752		CSF	L PAREN	380
00601	1	12	03077	\$15	JRS	LBL SCAN	381
00602	1	02	06010		CSA	COMMA	382
00603	1	03	00601		JAT	\$1	383
00604	1	01	05772		CSF	R PAREN	384
00605	0	01	01537		BRU	JUMP E9L EXIT	385
*ASSIGNMENT STA XLATE							386
00606	1	64	00621	ASSMSX	FEX	ARITH FUN DEF STA XLATE	387
00607	1	12	02631		JRS	VAR SCAN	388
00610	1	02	05730		CSA	EQUAL	389
00611	1	04	04030		JAF	FAIL	390
00612	1	12	02524		JRS	XPSCAN	391
00613	1	01	05767		CSF	CARET	392
00614	0	40	20400		SKS	20400	393
00615	0	01	01535		BRU	ACEXIT	394
00616	1	12	02507		JRS	SET M9D THEN GEN	395
00617	1	12	03554		JRS	STPRE FORGET M9D GEN	396
00620	0	01	01535		BRU	ACEXIT	397
*ARITH FUN DEF STA XLATE							398
00621	0	53	00036	AFDFSX	SKN	ACTIVE STA TRIGGER	399
00622	0	01	00671		BRU	FORMAT STA XLATE	400
00623	1	64	00671		FEX	FORMAT STA XLATE	401
00624	1	12	02772		JRS	IDSCAN	402
00625	1	03	04030		JAT	FAIL	403
00626	1	02	05752		CSA	L PAREN	404
00627	1	04	04030		JAF	FAIL	405

00630	1	62	06246	SRC	LETRFG	LETTER FLAG	406
00631	1	04	04030	JAF	FAIL	FAIL	407
00632	1	10	00023	FET	ZER0	ZER0	408
00633	1	12	03011	JRS	STDMEV	STANDARD MODE EVAL	409
00634	1	24	00014	M0N	M0DLST	MODE LIST	410
00635	1	14	00010	MC0	L0CSPL	LOCAL SPR0G LIST	411
00636	1	12	03645	JRS	LM0RUG	LBL MAKER BRU GEN	412
00637	1	12	03652	JRS	LMLBLG	LBL MAKER L0L GEN	413
00640	1	51	00010	S0B	L0CSPL	LOCAL SPR0G LIST	414
00641	1	23	00023	FIL	HLT0P	HALT INSTRUCTION	415
00642	1	26	00001	BLF	STLINK	START 0F DMYS LINK	416
00643	1	12	03025	JRS	SYMBSC	SYMBOL SCAN	417
00644	1	44	00011	SER	L0CDML	LOCAL DMY LIST	418
00645	1	03	04030	JAT	FAIL	FAIL	419
00646	1	14	00011	MC0	L0CDML	LOCAL DMY LIST	420
00647	1	12	03617	JRS	DYTPMK	DMY TEMP MAKER	421
00650	1	51	00011	S0B	L0CDML	LOCAL DMY LIST	422
00651	1	00	00200	BAM	SETUDP	SET UP DMY P0P	423
00652	1	02	06010	CSA	C0MMA	C0MMA	424
00653	1	03	00643	JAT	\$16	\$1	425
00654	1	02	05772	CSA	RPAREN	R PAREN	426
00655	1	04	04030	JAF	FAIL	FAIL	427
00656	1	02	05730	CSA	EQUAL	EQUAL	428
00657	1	04	04030	JAF	FAIL	FAIL	429
00660	1	26	00002	BLF	NDYLNK	END 0F DMYS LINK	430
00661	1	12	02511	JRS	YPM0X	EXP BY MODE XLATE	431
00662	1	21	00011	RLS	L0CDML	LOCAL DMY LIST	432
00663	1	13	00122	BIF	BRRM0P	BRR M0P	433
00664	1	13	00006	BIF	LBLL0P	LBL L0P	434
00665	0	60	06475	SKR	M0DB0T	MODE B0TT0M	435
00666	0	76	00035	LDA	TMPCNT	TEMP C0UNT	436
00667	0	35	00175	STA	ITMPCT	INITIAL TEMP C0UNT	437
00670	0	01	01532	BRU	IAE0LX	INACTIVE E0L EXIT	438

\$16

		PAGE			439
*FORMAT	STA XLATE				440
00671	1 64 01032	FBR5XL	FEX	CALLSX	CALL STA XLATE
00672	1 06 06051		QSF	FRMTQT	FORMAT DT
00673	1 01 05752		CSF	LPAREN	L PAREN
00674	1 10 00013		FET	LACHCT	LAST ACTIVE CHAR CNT
00675	1 12 00721		JRS	FLSTSC	FORMAT LIST SCAN
00676	0 76 00015		LDA	ILINCT	INITIAL LINE CNT
00677	0 35 00014		STA	LINECT	LINE CNT
00700	1 12 03645		JRS	LMBRUG	LBL MAKER BRU GEN
00701	2 76 37777		LDA	W1.2	W1
00702	0 62 00005		YMA	INCHCT	INPUT CHAR CNT
00703	2 54 37777		SUB	W1.2	W1
00704	0 55 06250		ADD	F8UR	F8UR
00705	0 66 00002		RSX	?	?
00706	2 35 37777		STA	W1.2	W1
00707	1 51 00020		S8B	W8RKLT	W8RK LIST
00710	1 32 00022		8AF	ABSLOP	ABS L8P
00711	0 01 00714		BRU	\$18	\$2
00712	1 12 03036	\$17	JRS	PAKSTR	PACK STRING
00713	1 51 00015		S8B	C8DLST	C8DE LIST
00714	2 60 37777	\$18	SKR	W1.2	W1
00715	0 01 00712		BRU	\$17	\$1
00716	1 13 00006		BIF	LBLLOP	LBL L8P
00717	0 60 06501		SKR	WRKB8T	W8RK B8TT8M
00720	0 01 01532		BRU	IAEBLX	INACTIVE E8L EXIT
*FORMAT	LIST SCAN				455
	00721	FLSTSC	EDU	*	
00721	1 02 05772	\$19	CSA	RPAREN	R PAREN
00722	1 03 05706		JAT	EXIT	EXIT
00723	1 02 05776	\$20	CSA	VRGULE	VIRGULE
00724	1 03 00730		JAT	\$21	\$3
00725	1 12 00742		JRS	FBASSC	FORMAT BASIC SCAN
00726	1 02 05776		CSA	VRGULE	VIRGULE
00727	1 04 00735		JAF	\$22	\$4
00730	1 02 05776	\$21	CSA	VRGULE	VIRGULE
00731	1 03 00730		JAT	\$21	\$3
00732	1 02 06010		CSA	C8MMA	C8MMA
00733	1 03 00723		JAT	\$20	\$2
00734	0 01 00721		BRU	\$19	\$1
00735	1 02 06010	\$22	CSA	C8MMA	C8MMA
00736	1 03 00723		JAT	\$20	\$2
00737	1 02 05772		CSA	RPAREN	R PAREN
00740	1 04 00723		JAF	\$20	\$2
00741	0 01 05706		BRU	EXIT	EXIT
*FORMAT	BASIC SCAN				484
00742	1 02 05770	FBASSC	CSA	D8LLAR	D8LLAR
00743	1 03 01012		JAT	\$30	\$8
00744	1 02 05755		CSA	MINUS	MINUS
00745	1 03 00750		JAT	\$23	\$1



00746	1	02	05735		CSA	PLUS	PLUS	489
00747	1	04	00753		JAF	\$24	\$2	490
00750	1	12	03215	\$23	JRS	INSCAN	INTEGER SCAN	491
00751	1	01	05764		CSF	P	P	492
00752	0	01	00760		BRU	\$25	\$4	493
00753	1	62	00024	\$24	SBC	DIGTFL	DIGIT FLAG	494
00754	1	04	00772		JAF	\$27	\$5	495
00755	1	12	03215		JRS	INSCAN	INTEGER SCAN	496
00756	1	02	05764		CSA	P	P	497
00757	1	04	00763		JAF	\$26	\$3	498
00760	1	62	00024	\$25	SBC	DIGTFL	DIGIT FLAG	499
00761	1	04	00772		JAF	\$27	\$5	500
00762	1	12	03215		JRS	INSCAN	INTEGER SCAN	501
00763	0	76	06330	\$26	LDA	CTL2	CENTRAL 2	502
00764	0	73	00023		SKG	ZER8	ZER8	503
00765	0	01	03752		BRU	ILNUFA	ILLEGAL NUMBER FAIL	504
00766	1	02	06004		CSA	X	X	505
00767	1	03	01027		JAT	\$33	\$11	506
00770	1	02	05745		CSA	H	H	507
00771	1	03	01023		JAT	\$32	\$10	508
00772	1	02	05742	\$27	CSA	E	E	509
00773	1	03	01004		JAT	\$28	\$6	510
00774	1	02	05743		CSA	F	F	511
00775	1	03	01004		JAT	\$28	\$6	512
00776	1	02	05746		CSA	I	I	513
00777	1	03	03215		JAT	INSCAN	INTEGER SCAN	514
01000	1	02	05736		CSA	A	A	515
01001	1	03	03215		JAT	INSCAN	INTEGER SCAN	516
01002	1	01	05752		CSF	LPAREN	L PAREN	517
01003	0	01	00721		BRU	FLSTSC	FORMAT LIST SCAN	518
01004	1	12	03215	\$28	JRS	INSCAN	INTEGER SCAN	519
01005	1	01	05750		CSF	PERI8D	PERI8D	520
01006	0	01	03215		BRU	INSCAN	INTEGER SCAN	521
01007	0	43	05225	\$29	BPM	NYACCH	NEXT ACTIVE CHAR	522
01010	1	62	06214		SBC	TCR8FG	TAB-CAR RETURN-BACKSPACE FLAG	523
01011	1	03	03761		JAT	ILSYFA	ILLEGAL SYNTAX FAIL	524
01012	1	02	05770	\$30	CSA	D8LLAR	D8LLAR	525
01013	1	04	01007		JAF	\$29	\$7	526
01014	0	01	01027		BRU	\$33	\$11	527
01016	0	76	00024	\$31	LDA	UBLKFG	USE BLANKS FLAG	528
01016	0	35	00003		STA	SCANMD	SCAN M8DE	529
01017	1	62	06214		SBC	TCR8FG	TAB-CAR RETURN-BACKSPACE FLAG	530
01020	1	03	03761		JAT	ILSYFA	ILLEGAL SYNTAX FAIL	531
01021	0	76	00023		LDA	SKBLFG	SKIP BLANKS FLAG	532
01022	0	35	00003		STA	SCANMD	SCAN M8DE	533
01023	0	46	00001	\$32	CLA			534
01024	0	35	00004		STA	CRNTCH	CRRNT CHAR	535
01025	0	60	06330		SKR	CTL2	CENTRAL 2	536
01026	0	01	01015		BRU	\$31	\$9	537
01027	1	62	06254	\$33	SBC	CVR1FG	COMMA-VIRGULE-R PAREN FLAG	538

01030	1 03 05706		JAT	EXIT	EXIT	539
01031	0 01 00742		BRU	FBASSC	FORMAT BASIC SCAN	540
*CALL STA XLATE					541	
01032	1 64 01053	CALLSX	FEX	CNTSXX	CONTINUE STA XLATE	542
01033	1 06 06053		OSF	CALLQT	CALL QT	543
01034	1 12 02772		JRS	IDSCAN	ID SCAN	544
01035	1 04 01041		JAF	\$34	\$1	545
01036	1 52 00600		S8T	GSPIDF	GLOBAL SPRBG ID FLAG	546
01037	1 03 01043		JAT	\$35	\$2	547
01040	0 01 03756		BRU	INCNFA	ID CONFLICT FAIL	548
01041	1 41 00006	\$34	B8P	GLSLST	GLOBAL SPRBG LIST	549
01042	1 14 00006		MC9	GLSLST	GLOBAL SPRBG LIST	550
01043	1 02 05752	\$35	CSA	LPAREN	L PAREN	551
01044	1 04 01051		JAF	\$36	\$4	552
01045	1 12 02514		JRS	SPASQS	SPRBG ARG SEQ SCAN	553
01046	1 01 05772		CSF	RPAREN	R PAREN	554
01047	1 12 03511		JRS	SCRGEN	SCRIPT GEN	555
01050	1 12 03473		JRS	SPASQG	SPRBG ARG SEQ GEN	556
01051	1 13 00107	\$36	BIF	BRM8P	BRM* M8P	557
01052	0 01 01534		BRU	ACE8LE	ACTIVE E8L EXIT	558
*CONTINUE STA XLATE					559	
01053	1 64 01056	CNTSXX	FEX	TYPESX	TYPE STA XLATE	560
01054	1 06 06054		OSF	C8NTQT	CONTINUE QT	561
01055	0 01 01534		BRU	ACE8LE	ACTIVE E8L EXIT	562
*TYPE STA XLATE					563	
01056	1 64 01062	TYPESX	FEX	ACPAIR	ACCEPT PAIR	564
01057	1 06 06056		OSF	TYPEQT	TYPE QT	565
01060	1 26 00014		BLF	TYPESL	TYPE SPRBG LINK	566
01061	0 01 01144		BRU	LCI8LX	LBL COMMA I8L XLATE	567
*ACCEPT PAIR					568	
01062	1 64 01073	ACPAIR	FEX	READGP	READ GR8UP	569
01063	1 06 06057		OSF	AC8PTQ	ACCEPT QT	570
01064	1 62 00024		S8C	DIGTFL	DIGIT FLAG	571
01065	1 04 01070		JAF	ACTSX	ACCEPT TAPE STA XLATE	572
*ACCEPT STA XLATE					573	
01066	1 26 00007	ACCTSX	BLF	ACTSL	ACCEPT SPRBG LINK	574
01067	0 01 01144		BRU	LCI8LX	LBL COMMA I8L XLATE	575
*ACCEPT TAPE STA XLATE					576	
01070	1 06 06061	ACTSX	OSF	TAPEQT	TAPE QT	577
01071	1 26 00010		BLF	AC8TSL	ACCEPT TAPE SPRBG LINK	578
01072	0 01 01144		BRU	LCI8LX	LBL COMMA I8L XLATE	579
*READ GR8UP					580	
01073	1 64 01113	READGP	FEX	WTPAIR	WRITE PAIR	581
01074	1 06 06062		OSF	READQT	READ QT	582
01075	1 62 00024		S8C	DIGTFL	DIGIT FLAG	583
01076	1 04 01101		JAF	READTP	READ TAPE PAIR	584
*READ STA XLATE					585	
01077	1 26 00016	READSX	BLF	READSL	READ SPRBG LINK	586
01100	0 01 01144		BRU	LCI8LX	LBL COMMA I8L XLATE	587
*READ TAPE PAIR					588	

01101	1 02 05746	READTP	CSA	I	I	589
01102	1 03 01107		JAT	RDNTSX	READ INPUT TAPE STA XLATE	590
*READ TAPE STA XLATE						591
01103	1 06 05061	RDTPSX	OSF	TAPEQT	TAPE QT	592
01104	1 12 02501		JRS	FXPXL	FX EXP XLATE	593
01105	1 26 00017		BLF	RDTPSL	READ TAPE SPR0G LINK	594
01106	0 01 01146		BRU	CMIA9LX	COMMA I9L XLATE	595
*READ INPUT TAPE STA XLATE						596
01107	1 06 06064	RDNTSX	OSF	NPTPQT	NPUTTAPE QT	597
01110	1 12 02501		JRS	FXPXL	FX EXP XLATE	598
01111	1 26 00020		BLF	RITPSL	READ INPUT TAPE SPRAG LINK	599
01112	0 01 01126		BRU	CLCI9X	COMMA LBL COMMA I9L XLATE	600
*WRITE PAIR						601
01113	1 64 01130	WTPAIR	FEX	PHPAIR	PUNCH PAIR	602
01114	1 06 06066		OSF	WRITEQ	WRITE QT	603
01115	1 02 05763		CSA	LETER0	LETTER 0	604
01116	1 03 01123		JAT	W0TRSX	WRITE OUTPUT TAPE STA XLATE	605
*WRITE TAPE STA XLATE						606
01117	1 06 06061	WTPSX	OSF	TAPEQT	TAPE QT	607
01120	1 12 02501		JRS	FXPXL	FX EXP XLATE	608
01121	1 26 00021		BLF	WTPSPL	WRITE TAPE SPR0G LINK	609
01122	0 01 01146		BRU	CMIA9LX	COMMA I9L XLATE	610
*WRITE OUTPUT TAPE STA XLATE						611
01123	1 06 06067	W0TRSX	OSF	UTPTPQ	UTPUTTAPE QT	612
01124	1 12 02501		JRS	FXPXL	FX EXP XLATE	613
01125	1 26 00022		BLF	W0TSPL	WRITE OUTPUT TAPE SPR0G LINK	614
*COMMA LBL COMMA I9L XLATE						615
01126	1 01 06010	CLCI9X	OSF	COMMA	COMMA	616
01127	0 01 01144		BRU	LCI9LX	LBL COMMA I9L XLATE	617
*PUNCH PAIR						618
01130	1 64 01141	PHPAIR	FEX	PRNTSX	PRINT STA XLATE	619
01131	1 06 06072		OSF	PUNCHO	PUNCH QT	620
01132	1 62 00024		S0C	DIGTFL	DIGIT FLAG	621
01133	1 04 01136		JAF	PCHTSX	PUNCH TAPE STA XLATE	622
*PUNCH STA XLATE						623
01134	1 26 00012	PCHSX	BLF	PCHSL	PUNCH SPR0G LINK	624
01135	0 01 01144		BRU	LCI9LX	LBL COMMA I9L XLATE	625
*PUNCH TAPE STA XLATE						626
01136	1 06 06061	PCHTSX	OSF	TAPEQT	TAPE QT	627
01137	1 26 00013		BLF	PHTPSL	PUNCH TAPE SPR0G LINK	628
01140	0 01 01144		BRU	LCI9LX	LBL COMMA I9L XLATE	629
*PRINT STA XLATE						630
01141	1 64 01215	PRNTSX	FEX	IFGRUP	IF GR0UP	631
01142	1 06 06073		OSF	PRINTQ	PRINT QT	632
01143	1 26 00011		BLF	PRNTSL	PRINT SPR0G LINK	633
*LBL COMMA I9L XLATE						634
01144	1 12 03077	LCI9LX	JRS	LBSCAN	LBL SCAN	635
01145	1 13 00000		RIF	HLTM0P	HLT M0P	636
*COMMA I9L XLATE						637
01146	1 02 06010	CMIA9LX	CSA	COMMA	COMMA	638

01147	1	04	01151	JAF	I0LEND	I0L END	639
01150	1	12	01153	JRS	I0LXLA	I0L XLATE	640
*I0L END							
01151	1	26	00023	I0LEND	BLF	STBP I-0 LINK	642
01152	0	01	01534	BRU	ACE0LE	ACTIVE 00L EXIT	643
*I0L XLATE							
01153	1	17	00015	I0LXLA	RSV	C0DLST	645
01154	1	02	05752	\$37	CSA	LPAREN	646
01155	1	04	01161	JAF	\$38	\$1	647
01156	1	12	01153	JRS	I0LXLA	I0L XLATE	648
01157	1	01	05772	CSF	RPAREN	R PAREN	649
01160	0	01	01176	BRU	\$41	\$3	650
01161	1	05	02750	\$38	TRY	UNSCRIPTED ARRAY SCAN	651
01162	1	04	01173	JAF	\$39	\$2	652
01163	3	10	00000	FET	W0.2	W0	653
01164	1	00	00230	BAM	FARGP0	FIRST ARG P0P	654
01165	1	30	00020	PUL	W0RKLT	W0RK LIST	655
01166	0	60	06501	SKR	W0RK00T	W0RK P0TT0M	656
01167	1	31	06247	BNG	THREE	THREE	657
01170	1	32	00234	BAF	NEXTAP	NEXT ARG P0P	658
01171	1	26	00033	BLF	I0LUAL	I0L UNSCRIPTED ARRAY LINK	659
01172	0	01	01176	BRU	\$41	\$3	660
01173	1	12	02631	\$39	JRS	VAR SCAN	661
01174	1	12	03511	JRS	SCRGEN	SCRIPT GEN	662
01175	1	00	00240	\$40	BAM	I0 TRAP P0P	663
01176	1	02	06010	\$41	CSA	C0MMA	664
01177	1	04	01210	JAF	\$42	\$7	665
01200	1	05	02743	TRY	SCLIDS	SCALAP ID SCAN	666
01201	1	04	01154	JAF	\$37	\$4	667
01202	1	02	05730	CSA	EQUAL	EQUAL	668
01203	1	04	01175	JAF	\$40	\$5	669
01204	1	47	00014	ADR	D0LST	D0 L00PS 0PEN LIST	670
01205	1	56	00015	C0F	C0DLST	C0DE LIST	671
01206	1	12	00404	JRS	D0CTLX	D0 C0NTR0L XLATE	672
01207	0	01	01212	BRU	\$43	\$6	673
01210	1	47	00014	\$42	ADR	D0 L00PS 0PEN LIST	674
01211	1	56	00015	C0F	C0DLST	C0DE LIST	675
01212	1	47	00015	\$43	ADR	C0DE LIST	676
01213	1	33	00014	CAR	D0LST	D0 L00PS 0PEN LIST	677
01214	0	01	05706	BRU	EXIT	EXIT	678
*IF GR0UP							
01215	1	64	01243	IFGRUP	FEY	ASSNSX	679
01216	1	06	06045	QSF	IF0T	ASSIGN STA XLATE	680
01217	1	02	05752	CSA	LPAREN	IF 0T	681
01220	1	03	01225	JAT	IFSPAR	L PAREN	682
*IF 0VERFL0W STA XLATE							
01221	1	06	06075	IF0V0X	QSF	IF SENSE PAIR	683
01222	1	06	06077	QSF	FL0T	FL0ATING 0T	685
01223	1	47	00024	ADR	0VFL0T	0VERFL0W 0T	686
01224	0	01	01237	BRU	I0VLNK	IF 0VERFL0W LINK	687
					IF0V0X	IF SENSE-0VERFL0W XLATE	688

*IF SENSE PAIR					689	
01225	1 06 06101	IFSPAR	OSF	SENSEQ		SENSE QT
01226	1 02 05777		CSA	S		S
01227	1 04 01233	JAF		IFSLX		IF SENSE LIGHT STA XLATE
*IF SENSE SWITCH STA XLATE					693	
01230	1 06 06103	IFSSSX	OSF	WITCHQ		WITCH QT
01231	1 47 00004		ADR	ISSLNK		IF SENSE SWITCH LINK
01232	0 01 01235	BRU		IFSLSX		IF SENSE LIGHT-SWITCH XLATE
*IF SENSE LIGHT STA XLATE					697	
01233	1 06 06104	IFSLX	OSF	LIGHTQ		LIGHT QT
01234	1 47 00005		ADR	ISLLNK		IF SENSE LIGHT LINK
*IF SENSE LIGHT-SWITCH XLATE					700	
01235	1 12 02501	IFSLSX	JRS	FXPXL		FX EXP XLATE
01236	1 01 05772		CSF	RPAREN		R PAREN
*IF SENSE-BVERFLOW XLATE					703	
01237	3 26 40000	IFSRVX	BLF*	WO.2		WO
01240	0 60 06501		SKR	WRKBOT		WORKBOTTOM
01241	1 12 03074		JRS	LBCOMA		LBL COMMA SCAN
01242	0 01 00367	BRU		IFSXIT		IF STA EXITS
*ASSIGN STA XLATE					708	
01243	1 64 01254	ASSNSX	FEX	SENLSX		SENSE LIGHT STA XLATE
01244	1 06 06106		OSF	ASSGNQ		ASSIGN QT
01245	1 12 03077		JRS	LBSCAN		LBL SCAN
01246	1 06 06111		OSF	TBOT		TB QT
01247	1 12 02631		JRS	VARSCN		VAR SCAN
01250	1 12 03511		JRS	SCRGEN		SCRIPT GEN
01251	1 00 00320		BAM	ASLPBP		ASSIGN LBL PBP
01252	1 13 00002		BIF	BRUMBP		BRU MRP
01253	0 01 01534	BRU		ACE9LE		ACTIVE E9L EXIT
*SENSE LIGHT STA XLATE					718	
01254	1 64 01262	SENLSX	FEX	COMMSX		COMMON STA XLATE
01255	1 06 06101		OSF	SENSEQ		SENSE QT
01256	1 06 06104		OSF	LIGHTQ		LIGHT QT
01257	1 12 02501		JRS	FXPXL		FX EXP XLATE
01260	1 26 00027		BLF	SENLSL		SENSE LIGHT SPRAG LINK
01261	0 01 01534	BRU		ACE9LE		ACTIVE E9L EXIT
*COMMON STA XLATE					725	
01262	1 64 01276	COMMSX	FEX	EQUXLA		EQUIVALENCE STA XLATE
01263	1 06 06110		OSF	COMQNT		COMMON QT
01264	1 12 03025	\$45	JRS	SYMBSC		SYMBOL SCAN
01265	1 44 00012		SER	COMLIST		COMMON LIST
01266	1 03 03750		JAT	ILALFA		ILLEGAL ALLOCATION FAIL
01267	1 47 00013		ADR	ODATLS		EQUIV DATA LIST
01270	1 12 01374		JRS	QLSRCH		EQUIV LIST SEARCH
01271	1 03 03750		JAT	ILALFA		ILLEGAL ALLOCATION FAIL
01272	1 14 00012		MCO	COMLIST		COMMON LIST
01273	1 02 05010		CSA	COMMA		COMMA
01274	1 03 01264		JAT	\$45		\$I
01275	0 01 01532	BRU		IAE9LX		INACTIVE E9L EXIT
*EQUIVALENCE STA XLATE					738	

01276	1	64	01461	EQUXLA	FEX	RTRNSX	RETURN STA XLATE	739
01277	1	06	06112		QSF	EQUIVO	EQUIVALENCÉ QT	740
01300	1	12	01441		JRS	CYEDDT	COPY EQUIV DATA	741
01301	1	17	00015		RSV	QTPLS	EQUIV TEMP LIST	742
01302	1	01	05752	\$44	CSF	LPAREN	L PAREN	743
01303	1	12	01321		JRS	OSEGX	EQUIV SEG XLATE	744
01304	1	01	05772		CSF	RPAREN	R PAREN	745
01305	1	02	06010		CSA	CBMMA	CBMMA	746
01306	1	03	01302		JAT	\$44	\$1	747
01307	1	02	05767		CSA	CARRET	CAR RETURN	748
01310	1	04	01302		JAF	\$44	\$1	749
01311	1	21	00015		RLS	QTPLS	EQUIV TEMP LIST	750
01312	1	21	00013	\$46	RLS	ODATLS	EQUIV DATA LIST	751
01313	1	43	00013		SNE	ODATLS	EQUIV DATA LIST	752
01314	1	03	01312		JAT	\$46	\$2	753
01315	1	47	00013	\$47	ADP	ODATLS	EQUIV DATA LIST	754
01316	1	56	00016		CSF	OHDLs	EQUIV HóLD LIST	755
01317	1	03	01315		JAT	\$47	\$3	756
01320	0	01	01543		BRU	CUA8UT	CLEAN UP AND 8UTPUT	757
*EQUIV	SEG	XLATE					758	
		01321	QSEGx	EQU	*			759
01321	1	12	01365	\$48	JRS	QSCSR	EQUIV SCAN AND SEARCH	760
01322	1	04	01340		JAF	\$52	\$4	761
01323	1	12	01422		JRS	APINSC	APPENDED INTEGER SCAN	762
01324	2	54	00000		SUB	W0.2	W0	763
01325	2	35	00000		STA	W0.2	W0	764
01326	0	01	01334		BRU	\$51	\$3	765
01327	1	12	01365	\$49	JRS	QSCSR	EQUIV SCAN AND SEARCH	766
01330	1	03	03750		JAT	ILALFA	ILLEGAL ALLCATION FAIL	767
01331	1	14	00015	\$50	MCS	QTPLS	EQUIV TEMP LIST	768
01332	1	12	01422		JRS	APINSC	APPENDED INTEGER SCAN	769
01333	1	51	00015		S0B	QTPLS	EQUIV TEMP LIST	770
01334	1	02	06010	\$51	CSA	CBMMA	CBMMA	771
01335	1	03	01327		JAT	\$49	\$2	772
01336	1	10	00023		FET	ZER0	ZER0	773
01337	0	01	01350		BRU	\$53	\$1	774
01340	1	14	00015	\$52	MCS	QTPLS	EQUIV TEMP LIST	775
01341	1	12	01422		JRS	APINSC	APPENDED INTEGER SCAN	776
01342	1	51	00015		S0B	QTPLS	EQUIV TEMP LIST	777
01343	1	02	06010		CSA	CBMMA	CBMMA	778
01344	1	03	01321		JAT	\$48	\$6	779
01345	1	17	00016		RSV	OHDLs	EQUIV HóLD LIST	780
01346	1	10	00023		FET	ZER0	ZER0	781
01347	1	10	00024		FET	SNE	SNE	782
01350	1	57	00015	\$53	LC0	QTPLS	EQUIV TEMP LIST	783
01351	1	04	05704		JAF	CLR2AE	CLEAR TW0 AND EXIT	784
01352	1	14	00016		MCS	OHDLs	EQUIV HóLD LIST	785
01353	1	22	00015		T0T	QTPLS	EQUIV TEMP LIST	786
01354	2	54	37776		SUB	W2.2	W2	787
01355	2	35	00000		STA	W0.2	W0	788

01356	1 24 00016		M&N	OHDL5	EQUIV HOLD LIST	789
01357	1 44 00012		SER	CBLIST	COMMON LIST	790
01360	1 04 01350		JAF	\$53	\$1	791
01361	0 60 06501		SKR	WRK88T	WORK BOTTOM	792
01362	0 60 46501		SKR*	WRK88T	WORK BOTTOM	793
01363	0 01 01350		BRU	\$53	\$1	794
01364	0 01 03750		BRU	ILALFA	ILLEGAL ALLOCATION FAIL	795
*EQUIV SCAN AND SEARCH						
01365	1 12 03025	QSCSP	JRS	SYMBSC	SYMBOL SCAN	797
01366	1 44 00015		SER	OTPLS	EQUIV TEMP LIST	798
01367	1 03 03750		JAT	ILALFA	ILLEGAL ALLOCATION FAIL	799
01370	1 47 00016		ADR	OHDL5	EQUIV HOLD LIST	800
01371	1 12 01374		JRS	QLSRCH	EQUIV LIST SEARCH	801
01372	1 04 05666		JAF	XTF	EXIT FALSE	802
01373	0 01 05672		BRU	EXITRU	EXIT TRUE	803
*EQUIV LIST SEARCH						
01374	1 17 00015	QLSRCH	REV	OTPLS	EQUIV TEMP LIST	805
01375	3 44 40000	\$54	SER*	WD.2	WD	806
01376	1 03 01407		JAT	\$56	\$3	807
01377	1 47 00015		ADR	OTPLS	EQUIV TEMP LIST	808
01400	3 56 77777		C9F*	W1.2	W1	809
01401	1 03 01375		JAT	\$54	\$1	810
01402	3 47 40000	\$55	ADR*	WD.2	WD	811
01403	1 56 00015		C9F	OTPLS	EQUIV TEMP LIST	812
01404	1 03 01402		JAT	\$55	\$2	813
01405	1 21 00015		RLS	OTPLS	EQUIV TEMP LIST	814
01406	0 01 05665		BRU	CLRIF	CLEAR ONE EXIT FALSE	815
01407	1 31 06246	\$56	BNG	TW8	TW8	816
01410	1 47 00014		ADR	QBPTLS	EQUIV BPUT LIST	817
01411	3 56 77776		C9F*	W2.2	W2	818
01412	3 47 77777	\$57	ADR*	W1.2	W1	819
01413	1 56 00015		C9F	OTPLS	EQUIV TEMP LIST	820
01414	1 03 01412		JAT	\$57	\$4	821
01415	1 21 00015		RLS	OTPLS	EQUIV TEMP LIST	822
01416	3 47 77777		ADR*	W1.2	W1	823
01417	1 56 00014		C9F	QBPTLS	EQUIV BPUT LIST	824
01420	3 11 37777		SWT	W1.2	W1	825
01421	0 01 05671		BRU	CLRIF	CLEAR ONE EXIT TRUE	826
*APPENDED INTEGER SCAN						
01422	1 10 00023	APINSC	FET	ZER8	ZER8	828
01423	1 12 03011		JRS	STDMEV	STANDARD MODE EVAL	829
01424	1 02 05752		CSA	LPAREN	L PAREN	830
01425	0 76 00024		LDA	8NE	8NE	831
01426	0 35 06330		STA	CTL2	CENTRAL 2	832
01427	1 04 01434		JAF	\$58	\$1	833
01430	1 12 03215		JRS	INSCAN	INTEGER SCAN	834
01431	1 15 06316		S9L	MAXASA	MAY ARRAY SIZE ALLOWED	835
01432	1 03 03750		JAT	ILALFA	ILLEGAL ALLOCATION FAIL	836
01433	1 01 05772		CSF	RPAREN	R PAREN	837
01434	1 16 06241	\$58	S9F	FLFLAG	FL FLAG	838

01435	0	76	06330	LDA	CTL2	CENTRAL 2	839
01436	1	04	05705	JAF	CLR1AE	CLEAR ONE AND EXIT	840
01437	0	55	06330	ADD	CTL2	CENTRAL 2	841
01440	0	01	05705	BRU	CLR1AE	CLEAR ONE AND EXIT	842
*COPY EQUIV DATA							
01441	0	76	00024	CYEQDT LDA	ONE	ONE	844
01442	0	35	00043	STA	CTC0PY	COUNT OF COPY	845
01443	0	01	01450	BRU	\$60	\$2	846
01444	0	46	00400	\$59 CAX			847
01445	2	76	00000	LDA	0.2	0	848
01446	1	51	00016	S0B	QHDLS	EQUIV HOLD LIST	849
01447	0	61	00043	MIN	CTC0PY	COUNT OF COPY	850
01450	0	76	00043	\$60 LDA	CTC0PY	COUNT OF COPY	851
01451	0	55	06374	ADD	QVDTBS	EQUIV DATA BASE	852
01452	0	73	06474	SKG	QVDB0T	EQUIV DATA 00T0M	853
01453	0	01	01444	BRU	\$59	\$1	854
01454	0	76	06422	LDA	QVDSTR	EQUIV DATA START	855
01455	0	54	06374	SUB	QVDTBS	EQUIV DATA BASE	856
01456	0	63	06425	ADM	QVHSTR	EQUIV HOLD START	857
01457	0	63	06452	ADM	QVHT0P	EQUIV HOLD T0P	858
01460	0	01	05706	BRU	EXIT	EXIT	859
*RETURN STA XLATE							
01461	1	64	01474	RTRNSX FEX	PAUSSX	PAUSE STA XLATE	861
01462	1	06	06115	QSF	RTURNO	RETURN OT	862
01463	0	53	00041	SKN	SPTRIG	SPR0G TRIGGER	863
01464	1	26	00003	BLF	ST0PSL	ST0P SPR0G LINK	864
01465	0	53	00041	SKN	SPTRIG	SPR0G TRIGGER	865
01466	0	01	01537	BRU	JPE0LE	JUMP E0L EXIT	866
01467	1	10	00032	FET	NAMESP	NAME OF SPR0G PNTR	867
01470	1	00	00250	BAM	0KFP0P	0K FETCH 00P	868
01471	1	10	00042	FET	SPRGL0	START OF PR0G LBL	869
01472	1	13	00122	BIF	BRRM0P	BRR M0P	870
01473	0	01	01537	BRU	JPE0LE	JUMP E0L EXIT	871
*PAUSE STA XLATE							
01474	1	64	01506	PAUSSX FEX	ST0PSX	ST0P STA XLATE	872
01475	1	06	06117	QSF	PAUSEQ	PAUSE OT	874
01476	1	23	00023	FIL	HLT0P	HALT INSTRUCTION	875
01477	1	05	03215	TRY	INSCAN	INTEGER SCAN	876
01500	1	04	01504	JAF	\$61	\$1	877
01501	1	10	06330	FET	CTL2	CENTRAL 2	878
01502	1	32	00040	BAF	N0PM0P	N0P M0P	879
01503	0	01	01534	BRU	ACE0LE	ACTIVE E0L EXIT	880
01504	1	23	06226	\$61 FIL	N0PINS	N0P INST	881
01505	0	01	01534	BRU	ACE0LE	ACTIVE E0L EXIT	882
*ST0P STA XLATE							
01506	1	64	01513	ST0PSX FEX	NFILSX	END FILE STA XLATE	883
01507	1	06	06120	QSF	ST0POT	ST0P OT	885
01510	1	05	03215	TRY	INSCAN	INTEGER SCAN	886
01511	1	26	00003	BLF	ST0PSL	ST0P SPR0G LINK	887
01512	0	01	01537	BRU	JPE0LE	JUMP E0L EXIT	888



*END FILE STA XLATE					889		
01513	1 64	01520	NFILSX	FEX	RWNDSX	REWIND STA XLATE	890
01514	1 06	06122		OSF	NFILEQ	ENDFILE QT	891
01515	1 12	02501		JRS	FXPXL	FX EXP XLATE	892
01516	1 26	00026		BLF	NFLSPL	END FILE SPR8G LINK	893
01517	0 01	01534		BRU	ACE0LE	ACTIVE E0L EXIT	894
*REWIND STA XLATE						895	
01520	1 64	01525	RWNDSX	FEX	BKSPSX	BACKSPACE STA XLATE	896
01521	1 06	06124		OSF	RWINDG	REWIND QT	897
01522	1 12	02501		JRS	FXPXL	FX EXP XLATE	898
01523	1 26	00015		BLF	RWINSL	REWIND SPR8G LINK	899
01524	0 01	01534		BRU	ACE0LE	ACTIVE E0L EXIT	900
*BACKSPACE STA XLATE						901	
01525	1 64	01555	BKSPSX	FEX	ILLSX	ILLEGAL STA XLATE	902
01526	1 06	06125		OSF	BKSPQT	BACKSPACE QT	903
01527	1 12	02501		JRS	FXPXL	FX EXP XLATE	904
01530	1 26	00025		BLF	BKSPSL	BACKSPACE SPR8G LINK	905
01531	0 01	01534		BRU	ACE0LE	ACTIVE E0L EXIT	906
*INACTIVE E0L EXIT						907	
01532	1 01	05767	IAERLX	CSF	CARET	CAR RETURN	908
01533	0 01	01543		BRU	CUARUT	CLEAN UP AND BUTPUT	909
*ACTIVE E0L EXIT						910	
01534	1 01	05767	ACE0LE	CSF	CARET	CAR RETURN	911
*ACTIVE EXIT						912	
01535	0 76	00026	ACEXIT	LDA	MINUS1	MINUS 0NE	913
01536	0 01	01541		BRU	JUPACX	JUMP-ACTIVE EXIT	914
*JUMP E0L EXIT						915	
01537	1 01	05767	JPE0LE	CSF	CARET	CAR RETURN	916
01540	0 76	00023		LDA	ZERR	ZERR	917
*JUMP-ACTIVE EXIT						918	
01541	0 35	00040	JUPACX	STA	JPSTRG	JUMP STA TRIGGER	919
01542	0 61	00036		MIN	ACTEST	ACTIVE STA TRIGGER	920
*CLEAN UP AND BUTPUT						921	
01543	0 40	20200	CUARUT	SKS	20200	20200	922
01544	0 01	01550		BRU	ENDFIX		923
01545	1 12	01734	\$62	JRS	RELPRT	RELEASE AND PRINT	924
01546	1 04	01545		JAF	\$62	\$1	925
01547	0 01	01604		BRU	SFINAL	STA FINAL	926
01550	0 76	00014	ENDFIX	LDA	LINECT	LINE COUNT	927
01551	0 35	00015		STA	ILINCT	INITIAL LINE COUNT	928
01552	0 76	00005		LDA	INCHCT	INPUT CHAR COUNT	929
01553	0 35	00006		STA	IICHCT	INIT INPUT CHAR COUNT	930
01554	0 01	01604		BRU	SFINAL	STA FINAL	931

			PAGE		
*ILLEGAL STA XLATE					933
01555	1 43 00022	ILLRX SNE	FAILDL	FAIL DATA LIST	934
01556	1 03 01563	JAT	BPDIAG	OUTPUT DIAGNOSTICS	935
01557	1 64 01563	FEX	RPDIAG	OUTPUT DIAGNOSTICS	936
01560	1 12 02631	JRS	VARSCN	VAR SCAN	937
01561	0 01 03761	BRU	ILSYFA	ILLEGAL SYNTAX FAIL	938
*ILLEGAL LINE XLATE					939
01562	1 12 04053	ILLINX JRS	SVLSDT	SAVE LIST DATA	940
*OUTPUT DIAGNOSTICS					941
01563	1 64 01607	BPDIAG FEX	ENDSX	END STA XLATE	942
01564	1 02 05771	CSA	ASTRSK	ASTERISK	943
01565	1 03 04030	JAT	FAIL	FAIL	944
01566	1 17 00012	RSV	ERLIST	ERROR SPUT LIST	945
01567	1 17 00013	RSV	EPSTLS	ERROR STOP LIST	946
01570	1 12 01735	\$63 JRS	PRTALN	PRINT A LINE	947
01571	1 12 02031	JRS	PRERMK	PRINT ERROR MARKS	948
01572	1 04 01570	JAF	\$63	\$1	949
01573	1 21 00022	RLS	FAILDL	FAIL DATA LIST	950
01574	1 22 00012	\$64 TBT	ERLIST	ERROR SPUT LIST	951
01575	1 04 01602	JAF	\$65	\$2	952
01576	2 61 40000	PRO*	WO.2	WO	953
01577	0 60 06501	SKR	WRKBOT	WORK BOTTOM	954
01600	1 60 05767	PRC	CARET	CAR RETURN	955
01601	0 01 01574	BRU	\$64	\$3	956
01602	1 21 00012	\$65 RLS	ERLIST	ERROR SPUT LIST	957
01603	1 21 00013	RLS	EPSTLS	ERROR STOP LIST	958
*STA FINAL					959
01604	1 12 01710	SFINAL JRS	STACUP	STA CLEAN UP	960
01605	1 12 01726	JRS	RELPCB	RELEASE AND PUNCH	961
01606	0 01 00340	BRU	BDYSX	BODY STA XLATE	962
*END STA XLATE					963
01607	1 64 01616	ENDSX FEX	NBNCDF	NO END CARD FINISH	964
01610	1 01 05771	CSF	ASTRSK	ASTERISK	965
01611	0 61 00037	IBMEND MIN	LASTST	LAST STA TRIGGER	966
01612	1 06 06206	OSF	ENDGT	END GT	967
01613	1 01 05767	CSF	CARET	CARRAIGE RETURN	968
01614	1 12 01734	JRS	RELPRT	RELEASE AND PRINT	969
01615	0 01 01620	BRU	FINC&P	FINISH CODE SPUT	970
*NO END CARD FINISH					971
01616	0 76 00006	NBNCDF LDA	IICHCT	INITIAL INPUT CHAR CNT	972
01617	0 35 00005	STA	INCHCT	INPUT CHAR CNT	973
*FINISH CODE SPUT					974
01620	1 26 00003	FINCAP BLF	STPSL	STOP SPR&G LINK	975
01621	1 12 01726	JRS	RELPCB	RELEASE AND PUNCH	976
01622	0 01 02045	BRU	PRTSUM	PRINT SUMMARY	977

		PAGE				
*STA INITIALIZE					979	978
01623	0 75 00014	SINIT	LDA	LINECT	LINE CNT	980
01624	0 35 00015		STA	ILINCT	INITIAL LINE CNT	981
01625	0 76 00005	\$66	LDA	INCHCT	INPUT CHAR CNT	982
01626	0 35 00006		STA	IICHCT	INITIAL INPUT CHAR CNT	983
01627	0 35 00012		STA	RDSTCT	READ STOP CNT	984
01630	0 43 05270		BRM	NXINCH	NEXT INPUT CHAR	985
01631	1 02 05767		CSA	CARET	CAR RETURN	986
01632	1 03 01625		JAT	\$66	\$I	987
*COMMENT STA XLATE					988	
01633	1 02 05740	COMTEX	CSA	C	C	989
01634	1 04 05706		JAF	EXIT	EXIT	990
01635	0 40 20200		SKS	20200	20200	991
01636	0 01 01641		BRU	\$67	\$I	992
01637	1 12 01734		JRS	RELPR	RELEASE AND PRINT	993
01640	0 01 01623		BRU	SINIT	STA INITIALIZE	994
01641	0 76 00005	\$67	LDA	INCHCT	INPUT CHAR CNT	995
01642	0 35 00012		STA	RDSTCT	READ STOP CNT	996
01643	0 43 05270		BRM	NXINCH	NEXT INPUT CHAR	997
01644	1 02 05767		CSA	CARET	CAR RETURN	998
01645	1 04 01641		JAF	\$67	\$I	999
01646	0 61 00014		MIN	LINECT	LINE CNT	1000
01647	0 01 01623		BRU	SINIT	STA INITIALIZE	1001
*LBL FIELD XLATE					1002	
01650	1 10 06250	LBLFLDX	FET	FOUR	FOUR	1003
01651	1 12 03225		JRS	DGCVIN	DIGIT CONV INITIAL	1004
01652	0 01 01654		BRU	\$69	\$2	1005
01653	0 43 05270	\$68	BRM	NXINCH	NEXT INPUT CHAR	1006
01654	1 62 00024	\$69	S6C	DIGTFL	DIGIT FLAG	1007
01655	1 04 01660		JAF	\$70	\$3	1008
01656	1 12 03237		JRS	CONVDG	CONV ONE DIGIT	1009
01657	0 01 01661		BRU	\$71	\$5	1010
01660	1 01 05727	\$70	CSF	SPACE	SPACE	1011
01661	2 60 00000	\$71	SKR	WD.2	WD	1012
01662	0 01 01653		BRU	\$68	\$I	1013
01663	0 43 05270		BRM	NXINCH	NEXT INPUT CHAR	1014
01664	1 02 05727		CSA	SPACE	SPACE	1015
01665	1 03 01667		JAT	\$72	\$4	1016
01666	1 01 05715		CSF	NO	NO	1017
01667	0 60 06501	\$72	SKR	WRKBT	WRK BTM	1018
01670	0 76 06330		LDA	CTL2	CENTRAL 2	1019
01671	0 35 00017		STA	STLBPT	STA LBL PTR	1020
01672	0 73 00023		SKG	ZER0	ZER0	1021
01673	0 01 05706		BRU	EXIT	EXIT	1022
01674	1 12 03661		JRS	REGLBL	REGISTER LBL	1023
01675	2 76 00000		LDA	WD.2	WD	1024
01676	0 35 00017		STA	STLBPT	STA LBL PTR	1025
01677	1 51 00020		S6B	WRKLT	WRK LIST	1026
01700	1 13 00006		BIF	LALL0P	LBL LBP	1027

01701	1	12	04414	JRS	PPPNTR	PROCESS PNTR	1028
01702	0	76	40062	LDA*	ADRPT8	ADDRESS POINTED TO	1029
01703	0	72	06240	SKA	PDEFLM	PREVIOUSLY DEF LBL MASK	1030
01704	0	16	00025	MRG	MRYDLM	MULTIPLY DEF LBL MASK	1031
01705	0	16	06240	MRG	PDEFLM	PREVIOUSLY DEF LBL MASK	1032
01706	0	35	40062	STA*	ADRPT8	ADDRESS POINTED TO	1033
01707	0	01	05706	BRU	EXIT	EXIT	1034
*STA CLEAN UP							1035
01710	1	10	00017	STACUP	FET	STA LBL PNTR	1036
01711	0	53	00040		SKN	JUMP STA TRIGGER	1037
01712	0	01	05705		BRU	CLEAR ONE AND EXIT	1038
01713	1	43	00014	\$73	SNE	DO L99PS OPEN LIST	1039
01714	1	04	05705		JAF	CLEAR ONE AND EXIT	1040
01715	2	76	00000		LDA	WO	1041
01716	0	50	46475		SKE*	DO L99PS OPEN BATTSM	1042
01717	0	01	05705		BRU	CLEAR ONE AND EXIT	1043
01720	0	60	06475		SKP	DO L99PS OPEN BATTSM	1044
01721	1	42	00014		M8F	DO L99PS OPEN LIST	1045
01722	1	42	00014		M8F	DA L99PS OPEN LIST	1046
01723	1	24	00015		M9N	CODE LIST	1047
01724	1	24	00015		M9N	CODE LIST	1048
01725	0	01	01713		BRU	\$1	1049
*RELEASE AND PUNCH							1050
01726	1	21	00023	RELPOH	RLS	SAVE LIST	1051
01727	1	21	00022		RLS	FAIL DATA LIST	1052
01730	1	21	00017		RLS	PLEX LIST	1053
01731	1	21	00020		RLS	WORK LIST	1054
01732	1	21	00016		PLS	SCRIPT LIST	1055
01733	0	01	05160		BRU	PUNCH CODE	1056
*RELEASE AND PRINT							1057
01734	1	21	00022	RELPRT	RLS	FAIL DATA LIST	1058
*PRINT A LINE							1059
01735	0	76	00006	PRTALN	LDA	INITIAL INPUT CHAR CNT	1060
01736	0	35	00005		STA	INPUT CHAR CNT	1061
01737	1	10	00015		FET	INITIAL LINE CNT	1062
01740	0	35	00014		STA	LINE CNT	1063
01741	1	60	05730		PRC	EQUAL	1064
01742	1	12	05070		JRS	PRINT S DEC	1065
01743	0	76	00005	\$74	LDA	INPUT CHAR CNT	1066
01744	0	35	00012		STA	READ STOP CNT	1067
01745	0	43	05270		BRM	NEXT INPUT CHAR	1068
01746	1	02	05767		CSA	CAR RETURN	1069
01747	1	03	01743		JAT	\$1	1070
01750	1	10	06255		FET	NINE	1071
01751	0	01	01757		BRU	\$2	1072
01752	1	05	02015	\$75	TRY	END OF STA TEST	1073
01753	1	03	01757		JAT	\$2	1074
01754	1	05	02005		TRY	END OF LINE TEST	1075
01755	1	03	01757		JAT	\$2	1076
01756	0	43	05270		BRM	NEXT INPUT CHAR	1077

01757	0 76 00005	\$76	LDA	INCHCT	INPUT CHAR CNT	1078
01760	0 35 00012		STA	RDSTCT	READ STGP CNT	1079
01761	0 35 06330		STA	CTL2	CENTRAL 2	1080
01762	1 60 00004		PRC	CRNTCH	CRRT CHAR	1081
01763	1 44 00022		SER	FAILDL	FAIL DATA LIST	1082
01764	1 04 01773		JAF	\$77	\$4	1083
01765	1 31 00024		BNG	ONE	ONE	1084
01766	1 24 00012		MAN	ERLIST	ERRBR BPUT LIST	1085
01767	3 10 00000		FET	WO.2	WO	1086
01770	1 24 00013		MAN	ERSTLS	ERRBR STGP LIST	1087
01771	0 76 00026		LDA	MINUS1	MINUS ONE	1088
01772	2 35 00000		STA	WO.2	WO	1089
01773	2 61 00000	\$77	MIN	WO.2	WO	1090
01774	1 02 05767		CSA	CARET	CAR RETURN	1091
01775	1 04 01752		JAF	\$75	\$3	1092
01776	0 76 00005		LDA	INCHCT	INPUT CHAR CNT	1093
01777	0 35 00006		STA	IICHCT	INITIAL INPUT CHAR CNT	1094
02000	0 76 00014		LDA	LINECT	LINE CNT	1095
02001	0 35 00015		STA	ILINCT	INITIAL LINE CNT	1096
02002	0 60 00035		SKP	NSTTRG	END OF STA TRIGGER	1097
02003	0 01 05671		BRU	CLRIET	CLEAR ONE EXIT TRUE	1098
02004	0 01 05665		BRU	CLRIEF	CLEAR ONE EXIT FALSE	1099
*END OF LINE TEST						1100
	02005	NLINTS	EQU	*		1101
02005	0 43 05270	\$78	BRM	NXINCH	NEXT INPUT CHAR	1102
02006	0 72 06215		SKA	CARRFG	CAR RETURN FLAG	1103
02007	0 01 02013		BRU	\$79	\$2	1104
02010	0 50 05727		SKE	SPACE	SPACE	1105
02011	0 01 04030		BRU	FAIL	FAIL	1106
02012	0 01 02005		BRU	\$78	\$1	1107
02013	0 61 00014	\$79	MIN	LINECT	LINE CNT	1108
02014	0 01 05706		BRU	EXIT	EXIT	1109
*END OF STA TEST						1110
02015	0 46 00001	NSTEST	CLA			1111
02016	0 35 00035		STA	NSTTRG	END OF STA TRIGGER	1112
02017	1 10 00014		FET	LINECT	LINE CNT	1113
02020	0 43 05225		BRM	NXACCH	NEXT ACTIVE CHAR	1114
02021	0 50 05767		SKE	CARET	CAR RETURN	1115
02022	0 01 04030		BRU	FAIL	FAIL	1116
02023	2 76 00000		LDA	WO.2	WO	1117
02024	2 31 04013		ADD	TWB	TWB	1118
02025	0 73 00014		SKG	LINECT	LINE CNT	1119
02026	0 01 04030		BRU	FAIL	FAIL	1120
02027	0 61 00035		MIN	NSTTRG	END OF STA TRIGGER	1121
02030	0 01 05705		BRU	CLRIAE	CLEAR ONE AND EXIT	1122
*PRINT ERRBR MARKS						1123
02031	1 43 00013	PRBRMK	SNE	ERSTLS	ERRBR STGP LIST	1124
02032	1 04 05706		JAF	EXIT	EXIT	1125
02033	1 22 00013	\$80	TBT	EPSTLS	ERRBR STGP LIST	1126
02034	1 03 02040		JAT	\$82	\$1	1127

02035	1	60	05767		PRC	CARET	CAR RETURN	1128
02036	0	01	05706		BRU	EXIT	EXIT	1129
02037	1	60	05727	\$81	PRC	SPACE	SPACE	1130
02040	2	60	00000	\$82	SKR	WD.2	WD	1131
02041	0	01	02037		BRU	\$81	\$2	1132
02042	1	60	05774		PRC	ERMRK	ERR9R MARK	1133
02043	0	60	06601		SKR	WRK8BT	WRK BOTTOM	1134
02044	0	01	02033		BRU	\$80	\$3	1135

		PAGE			
*PRINT SUMMARY					
02045	1 43 00014	PRTSUM	SNE	D0LST	DB L00PS 0PEN LIST
02046	1 04 02062		JAF	\$B4	\$2
02047	1 61 06130		PRQ	DANEQT	DB NEST ERRORS DT
02050	1 42 00014	\$B3	M0F	D0LST	DB L00PS 0PEN LIST
02051	1 04 02062		JAF	\$B4	\$2
02052	0 60 06475		SKR	D0LB0M	DB L00PS 0PEN 00TT0M
02053	0 60 06475		SKR	D0LB0M	DB L00PS 0PEN 00TT0M
02054	1 31 00023		BNG	Z0R0	Z0R0
02055	0 14 06315		ETR	ABSATM	ALL 0UT SIGN AND T0R M0SK
02056	2 35 00000		STA	W0.2	W0
02057	1 12 05070		JRS	PR5DEC	PRINT 5 DEC
02060	1 12 02475		JRS	TSE0LP	TEST F0R 00L PRINT
02061	0 01 02050		BRU	\$B3	\$1
02062	1 42 00002	\$B4	M0F	L0LLST	L0L LIST
02063	1 04 02071		JAF	\$B5	\$3
02064	0 72 06240		SKA	P0EFLM	PREVIOUSLY DEF L0L M0SK
02065	0 72 00025		SKA	M0PYDLM	MULTIPLY DEF L0L M0SK
02066	2 10 00000		FET	W0.2	W0
02067	0 60 06501		SKR	WRK00T	WRK 00TT0M
02070	0 01 02062		BRU	\$B4	\$2
02071	1 43 00020	\$B5	SNE	WRK0LT	WRK LIST
02072	1 04 02100		JAF	0PCNST	0UTPUT C0NSTANTS
02073	1 61 06135		PRQ	L0L0RQ	L0BLING ERR0RS DT
02074	1 12 05070	\$B6	JRS	PR5DEC	PRINT 5 DEC
02075	1 12 02475		JRS	TSE0LP	TEST F0R 00L PRINT
02076	1 43 00020		SNE	WRK0LT	WRK LIST
02077	1 03 02074		JAT	\$B6	\$4
*0UTPUT C0NSTANTS					
02100	1 20 00004	0PCNST	CNT	FXCLST	FX C0NST LIST
02101	1 20 00003		CNT	FLCLST	FL C0NST LIST
02102	2 55 37777		ADD	W1.2	W1
02103	1 51 00020		S0B	WRK0LT	WRK LIST
02104	1 32 00022		BAF	ABS0LP	ABS L0P
02105	1 47 00015		ADR	C0DLST	C0DE LIST
02106	1 33 00004		CAR	FXCLST	FX C0NST LIST
02107	1 47 00015		ADR	C0DLST	C0DE LIST
02110	1 32 00003		CAR	FLCLST	FL C0NST LIST
02111	1 12 05160		JRS	P0HC0D	PUNCH C0DE
*0LL0C0TE M0M0RY					
02112	1 10 00023	0LCMEM	FET	Z0R0	Z0R0
02113	0 76 06467		L0A	GLS00T	GL00AL SPR0G 00TT0M
02114	0 54 06367		SUB	GLS0AS	GL00AL SPR0G B0SE
02115	0 66 00001		RSH	I	I
02116	1 51 00020		S0B	WRK0LT	WRK LIST
02117	0 55 00030		ADD	D0YCNT	D0Y CNT
02120	1 51 00020		S0B	WRK0LT	WRK LIST
02121	0 55 00034		ADD	M0TPCT	M0X T0MP CNT
02122	1 51 00020		S0B	WRK0LT	WRK LIST

1137

1136

1138  
1139  
1140  
1141  
1142  
1143  
1144  
1145  
1146  
1147  
1148  
1149  
1150  
1151  
1152  
1153  
1154  
1155  
1156  
1157  
1158  
1159  
1160  
1161  
1162  
1163  
1164

1165

1166  
1167  
1168  
1169  
1170  
1171  
1172  
1173  
1174  
1175

1175

1177  
1178  
1179  
1180  
1181  
1182  
1183  
1184  
1185

02123	0	35	00034		STA	PR0GBK		PROGRAM BREAK	1186
02124	0	46	00001		CLA				1187
02125	0	35	00032		STA	C0MBRK		C0MM0N BREAK	1188
*C0MM0N ALL0CATION									
02126	1	43	00012	C0M0LC	SNE	C0LIST		C0MM0N LIST	1189
02127	1	04	02164		JAF	PR0GAL		PROGRAM ALL0CATION	1191
02130	1	61	06143		PRQ	C0ALQT		C0MM0N ALL0CATION 0T	1192
02131	1	57	00012	\$87	LC0	C0LIST		C0MM0N LIST	1193
02132	1	04	02157		JAF	C0M0VL		C0MM0N 0VERLAY	1194
02133	1	12	02416		JRS	C0MEMR0		CALC MEMORY REQUIRED	1195
02134	2	76	00000		LDA	W0.2		W0	1196
02135	0	63	00032		ADM	C0MBRK		C0MM0N BREAK	1197
02136	0	76	00023		LDA	ZER0		ZER0	1198
02137	0	54	00032		SUB	C0MBRK		C0MM0N BREAK	1199
02140	2	35	00000		STA	W0.2		W0	1200
02141	1	47	00016	\$88	ADR	0HDLS		EQUIV H0LD LIST	1201
02142	1	56	00013		C0F	0DATLS		EQUIV DATA LIST	1202
02143	1	04	02152		JAF	\$89		\$3	1203
02144	1	44	00016		SER	0HDLS		EQUIV H0LD LIST	1204
02145	1	04	02141		JAF	\$88		\$2	1205
02146	1	31	06246		BNG	TW0		TW0	1206
02147	3	10	37777		FET	W1.2		W1	1207
02150	1	47	00030		ADR	MX0VNC		MAX EQUIV IN C0MM0N	1208
02151	1	12	02266		JRS	PR0C0G		PR0CESS EQUIV GR0UP	1209
02152	1	12	02334	\$89	JRS	SETPUB		SET AND PUBLISH	1210
02153	1	47	00013	\$90	ADR	0DATLS		EQUIV DATA LIST	1211
02154	1	56	00016		C0F	0HDLS		EQUIV H0LD LIST	1212
02155	1	03	02153		JAT	\$90		\$4	1213
02156	0	01	02131		BRU	\$87		\$1	1214
*C0MM0N 0VERLAY									
02157	1	10	00024	C0M0VL	FET	0NE		0NE	1215
02160	0	76	00023		LDA	ZER0		ZER0	1217
02161	0	54	00032		SUB	C0MBRK		C0MM0N BREAK	1218
02162	1	51	00020		S0B	W0RKLT		W0RK LIST	1219
02163	1	12	02312		JRS	PR000P		PR0CESS EQUIV 0UTPUT	1220
*PR0GRAM ALL0CATION									
02164	1	61	06150	PR0GAL	PRQ	PR0GQT		PR0GRAM ALL0CATION 0T	1221
02165	1	43	00013	\$91	SNE	0DATLS		EQUIV DATA LIST	1222
02166	1	04	02207		JAF	\$94		\$4	1223
02167	1	17	00016		RSV	0HDLS		EQUIV H0LD LIST	1224
02170	1	10	00025		FET	SIGN			1225
02171	1	57	00013	\$92	LC0	0DATLS		EQUIV DATA LIST	1226
02172	1	04	02202		JAF	\$93		\$2	1227
02173	1	14	00016		M00	0HDLS		EQUIV H0LD LIST	1228
02174	1	22	00013		T0T	0DATLS		EQUIV DATA LIST	1229
02175	1	24	00016		M0N	0HDLS		EQUIV H0LD LIST	1230
02176	2	73	00000		SKG	W0.2		W0	1231
02177	0	01	02171		BRU	\$92		\$1	1232
02200	2	35	00000		STA	W0.2		W0	1233
02201	0	01	02171		BRU	\$92		\$1	1234
									1235



02202	1 10 00034	\$93	FET	PR0GBK	PROGRAM BREAK	1236
02203	1 47 00034		ADR	PR0GBK	PROGRAM BREAK	1237
02204	1 12 02266		JRS	PR0CQG	PROCESS EQUIV GR0UP	1238
02205	1 21 00013		RLS	QDATLS	EQUIV DATA LIST	1239
02206	0 01 02165		BRU	\$91	\$3	1240
02207	1 10 06314	\$94	FET	P0SFSC	P0S FULL SCALE	1241
02210	1 10 00026		FET	NEGFS	NEG FULL SCALE	1242
02211	1 12 02312		JRS	PR0Q0P	PROCESS EQUIV 0UTPUT	1243
02212	1 21 00014		RLS	00PTLS	EQUIV 0PUT LIST	1244
02213	1 23 06227		FIL	NMARKR	END MARKER	1245
*ARRAY ALL0CATION						
	02214		ARAYAL	EQU	*	1247
02214	1 45 00005	\$95	LCF	AYYLST	ARRAY LIST	1248
02215	1 04 02223		JAF	\$96	\$2	1249
02216	1 12 02347		JRS	PUBALC	PUBLISH AND ALL0CATE	1250
02217	1 23 06330		FIL	CTL2	CENTRAL 2	1251
02220	0 76 06251		LDA	FIVE	FIVE	1252
02221	0 63 06441		ADM	ARYT0P	ARRAY T0P	1253
02222	0 01 02214		BRU	\$95	\$1	1254
02223	1 23 06227	\$96	FIL	NMARKR	END MARKER	1255
*SCALAR ALL0CATION						
02224	1 10 00034	SCAL4L	FET	PR0GBK	PROGRAM BREAK	1257
02225	1 47 00001		ADR	FXSLST	FX SCALAR LIST	1258
02226	1 12 02363		JRS	PR0SCA	PROCESS SCALARS	1259
02227	1 23 06227		FIL	NMARKR	END MARKER	1260
02230	1 10 00034		FET	PR0GBK	PROGRAM BREAK	1261
02231	1 47 00000		ADR	FLSLST	FL SCALAR LIST	1262
02232	1 12 02363		JRS	PR0SCA	PROCESS SCALARS	1263
02233	1 23 06227		FIL	NMARKR	END MARKER	1264
02234	1 47 00015		ADR	CDLST	CODE LIST	1265
02235	1 33 00020		CAR	W0RKLT	WORK LIST	1266
02236	1 23 00034		FIL	PR0GBK	PROGRAM BREAK	1267
02237	1 23 00032		FIL	00MBRK	00MMAN BREAK	1268
02240	1 12 05160		JRS	PCH09D	PUNCH 00DE	1269
*PROCESS LINKAGES						
02241	1 43 00006	PR0CLK	SNE	GLSLST	GL0BAL SPR0G LIST	1271
02242	1 04 02255		JAF	TRMCPL	TERMINATE 0MPILE	1272
02243	1 61 06156		PR0	SPREQT	SUBPR0GRAMS REQUIRED 0T	1273
02244	1 57 00006	\$97	LC0	GLSLST	GL0BAL SPR0G LIST	1274
02245	1 04 02255		JAF	TRMCPL	TERMINATE 0MPILE	1275
02246	1 60 05727		PR0	SPACE	SPACE	1276
02247	1 60 05727		PR0	SPACE	SPACE	1277
02250	1 61 06326		PR0	SYMC0N	SYMB0LIC CENTRAL	1278
02251	1 12 02475		JRS	TR09LP	TEST F0R 09L PRINT	1279
02252	1 23 06327		FIL	CTL1	CENTRAL 1	1280
02253	1 23 06330		FIL	CTL2	CENTRAL 2	1281
02254	0 01 02244		BRU	\$97	\$1	1282
*TERMINATE 0MPILE						
02255	1 12 05160	TRMC0L	JRS	PCH09D	PUNCH 00DE	1283
02256	0 53 00021		SKN	CKEMCT	CHECK SUM CNT	1284

02257	1	12	05156		JRS	PCHFIN	PUNCH FINISH	1286
02260	1	61	05204		PRQ	TENDQT	THE END QT	1287
02261	1	60	05767	\$98	PRC	CARET	CAR RETURN	1288
02262	0	76	00016		LDA	LINETP	LINES THIS PAGE	1289
02263	0	50	00023		SKE	ZER9	ZER9	1290
02264	0	01	02261		BRU	\$98	\$1	1291
02265	0	01	00222		BRU	STRCMP	START OF COMPILER	1292
*PROCESS EQUIV GROUP								1293
			02266	PR809G	EQU	*		1294
02266	1	57	00016	\$99	LC9	QHDLS	EQUIV HOLD LIST	1295
02267	1	04	02310		JAF	\$100	\$2	1296
02270	1	22	00016		TGT	QHDLS	EQUIV HOLD LIST	1297
02271	1	12	02416		JRS	CMEMRQ	CALC MEMBRY REQUIRED	1298
02272	2	76	37774		LDA	W4.2	W4	1299
02273	2	55	37773		ADD	W5.2	W5	1300
02274	2	54	37776		SUB	W2.2	W2	1301
02275	2	35	37776		STA	W2.2	W2	1302
02276	2	63	00000		ADM	W0.2	W0	1303
02277	2	76	77775		LDA*	W3.2	W3	1304
02300	2	73	00000		SKG	W0.2	W0	1305
02301	2	76	00000		LDA	W0.2	W0	1306
02302	2	35	77775		STA*	W3.2	W3	1307
02303	3	11	37777		SWT	W1.2	W1	1308
02304	1	24	00014		MAN	08PTLS	EQUIV BPUT LIST	1309
02305	1	24	00014		MAN	08PTLS	EQUIV BPUT LIST	1310
02306	1	24	00014		MAN	08PTLS	EQUIV BPUT LIST	1311
02307	0	01	02266		BRU	\$99	\$1	1312
02310	1	21	00016	\$100	RLS	QHDLS	EQUIV HOLD LIST	1313
02311	0	01	05703		BRU	CLR3AE	CLEAR THREE AND EXIT	1314
*PROCESS EQUIV OUTPUT								1315
			02312	PR809P	EQU	*		1316
02312	1	22	00014	\$101	TGT	08PTLS	EQUIV BPUT LIST	1317
02313	1	04	05704		JAF	CLR2AE	CLEAR TWO AND EXIT	1318
02314	1	57	00014		LC9	08PTLS	EQUIV BPUT LIST	1319
02315	2	76	37776		LDA	W2.2	W2	1320
02316	0	73	06327		SKG	CTL1	CENTRAL 1	1321
02317	0	01	02323		BRU	\$102	\$2	1322
02320	2	76	37777		LDA	W1.2	W1	1323
02321	0	73	06330		SKG	CTL2	CENTRAL 2	1324
02322	0	01	02331		BRU	\$103	\$3	1325
02323	1	60	05727	\$102	PRC	SPACE	SPACE	1326
02324	1	60	05727		PRC	SPACE	SPACE	1327
02325	1	61	06164		PRQ	ERR9RQ	ERR9R QT	1328
02326	1	12	03722		JRS	LDCTL	LOAD CENTRAL	1329
02327	1	12	02471		JRS	PRTSYM	PRINT SYMBOL	1330
02330	0	01	02312		BRU	\$101	\$1	1331
02331	1	10	06330	\$102	FET	CTL2	CENTRAL 2	1332
02332	1	12	02334		JRS	SETPUB	SET AND PUBLISH	1333
02333	0	01	02312		BRU	\$101	\$1	1334
*SET AND PUBLISH								1335

02334	3 10 37777	SETPUB	FET	W1.2	W1	1336
02335	1 12 03722		JRS	LOADCTL	LOAD CENTRAL	1337
02336	3 10 00000		FET	W0.2	W0	1338
02337	1 12 02441		JRS	PUBLISH	PUBLISH	1339
02340	1 04 05704		JAF	CLR2AE	CLEAR TWO AND EXIT	1340
02341	1 12 02377		JRS	CFR0FS	CORRECT FOR OFFSET	1341
02342	1 12 04414	\$104	JRS	PRPNTR	PROCESS PNTR	1342
02343	0 76 06233		LDA	ALLD0L	ALL DALLARS	1343
02344	2 75 00000		LDR	W0.2	W0	1344
02345	1 07 40062		STD*	ADRPT0	ADDRESS POINTED TO	1345
02346	0 01 05705		BRU	CLR1AE	CLEAR ONE AND EXIT	1346
*PUBLISH AND ALLSCATE						
02347	1 10 00034	PUBALC	FET	PR0GBK	PROGRAM BREAK	1347
02350	1 12 02441		JRS	PUBLISH	PUBLISH	1348
02351	1 04 05666		JAF	XTF	EXIT FALSE	1349
02352	1 12 02416		JRS	CMEMRQ	CALC MEMORY REQUIRED	1350
02353	2 76 00000		LDA	W0.2	W0	1351
02354	0 62 00034		XMA	PR0GBK	PROGRAM BREAK	1352
02355	0 63 00034		ADM	PR0GBK	PROGRAM BREAK	1353
02356	2 35 00000		STA	W0.2	W0	1354
02357	1 12 02377		JRS	CFR0FS	CORRECT FOR OFFSET	1355
02360	2 76 37777		LDA	W1.2	W1	1356
02361	0 35 06330		STA	CTL2	CENTRAL 2	1357
02362	0 01 05670		BRU	CLR2ET	CLEAR TWO EXIT TRUE	1358
*PROCESS SCALARS						
	02363	PR0SCA	EQU	*		1359
02363	3 45 40000	\$105	LCF*	W0.2	W0	1360
02364	1 04 05705		JAF	CLR1AE	CLEAR ONE AND EXIT	1361
02365	1 12 02347		JRS	PUBALC	PUBLISH AND ALLSCATE	1362
02366	1 03 02375		JAT	\$106	\$2	1363
02367	2 71 00000		LDX	W0.2	W0	1364
02370	2 76 06434		LDA	T0P.2	T0P	1365
02371	2 54 06361		SUB	BASE.2	BASE	1366
02372	2 66 00000		RSH	0.2	0	1367
02373	1 51 00015		S0B	C0DLST	CODE LIST	1368
02374	1 23 06330		FIL	CTL2	CENTRAL 2	1369
02375	3 57 40000	\$106	LC0*	W0.2	W0	1370
02376	0 01 02363		BRU	\$105	\$1	1371
*CORRECT FOR OFFSET						
02377	3 11 37777	CFR0FS	SWT	W1.2	W1	1372
02400	1 52 00500		S0T	AYIDFG	ARRAY ID FLAG	1373
02401	1 04 05706		JAF	EXIT	EXIT	1374
02402	3 10 00000		FET	W0.2	W0	1375
02403	1 16 06241		S0F	FLFLAG	FL FLAG	1376
02404	1 31 06240		BNG	TW0	TW0	1377
02405	1 04 02407		JAF	\$107	\$1	1378
02406	2 63 00000		ADM	W0.2	W0	1379
02407	2 76 37776	\$107	LDA	W2.2	W2	1380
02410	0 14 00025		ETR	SIGNBT	SIGN BIT	1381
02411	2 62 37776		XMA	W2.2	W2	1382

02412	2	54	00000		SUB	WO.2	WO	1386
02413	0	14	00027		ETR	ADRMSK	ADR MASK	1387
02414	2	63	37776		ADM	W2.2	W2	1388
02415	0	01	05705		BRU	CLR1AE	CLEAR ONE AND EXIT	1389
*CALC MEMORY REQUIRED								1390
02416	1	12	02773	CMEMRD	JRS	IDCLAS	ID CLASSIFY	1391
02417	1	04	02427		JAF	\$108	\$1	1392
02420	1	52	00500		SBT	AYIDFG	ARRAY ID FLAG	1393
02421	1	03	02433		JAT	\$110	\$3	1394
02422	1	16	06237		SBF	SCAIDF	SCALAR ID FLAG	1395
02423	1	03	02430		JAT	\$109	\$2	1396
02424	1	14	00003		MC9	ERSYLS	ERR0R SYMB0L LIST	1397
02425	1	10	00023		FET	ZER0	ZER0	1398
02426	0	01	05706		BRU	EXIT	EXIT	1399
02427	1	12	03671	\$108	JRS	RGSCID	REGISTER SCALAR ID	1400
02430	1	16	06241	\$109	SBF	FLFLAG	FL FLAG	1401
02431	1	10	00024		FET	0NE	0NE	1402
02432	0	01	02436		BRU	\$111	\$4	1403
02433	3	10	00000	\$110	FET	WO.2	WO	1404
02434	1	16	06241		SBF	FLFLAG	FL FLAG	1405
02435	1	31	06247		BNG	THREE	THREE	1406
02436	1	04	05706	\$111	JAF	EXIT	EXIT	1407
02437	2	63	00000		ADM	WO.2	WO	1408
02440	0	01	05706		BRU	EXIT	EXIT	1409
*PUBLISH								1410
02441	0	76	06327	PUBLSH	LDA	CTL1	CENTRAL 1	1411
02442	0	50	06233		SKE	ALLD0L	ALL D0LLARS	1412
02443	0	01	02443		BRU	\$112	\$1	1413
02444	0	01	05665		BRU	CLR1EF	CLEAR ONE EXIT FALSE	1414
02445	1	60	05727	\$112	PRC	SPACE	SPACE	1415
02446	1	60	05727		PRC	SPACE	SPACE	1416
02447	1	44	00007		SER	GDLIST	GL0BAL DMY LIST	1417
02450	1	03	02455		JAT	\$114	\$4	1418
02451	1	44	00003		SER	ERSYLS	ERR0R SYMB0L LIST	1419
02452	1	04	02452		JAF	\$115	\$2	1420
02453	1	61	06164	\$113	PRD	ERR0RQ	ERR0R QT	1421
02454	0	01	02456		BRU	\$115	\$5	1422
02455	1	61	06166	\$114	PRQ	DYDT	DUMMY QT	1423
02456	1	12	02471	\$115	JRS	PRTSYM	PRINT SYMB0L	1424
02457	0	46	00001		CLA			1425
02460	0	35	06330		STA	CTL2	CENTRAL 2	1426
02461	0	01	05664		BRU	CLR2EF	CLEAR TW0 EXIT FALSE	1427
02462	3	10	00000	\$115	FET	WO.2	WO	1428
02463	0	67	00011		LSH	9	11	1429
02464	2	35	00000		STA	WO.2	WO	1430
02465	1	10	06251		FET	FIVE	FIVE	1431
02466	1	12	05112		JRS	P0CTAL	PRINT 0CTAL	1432
02467	1	12	02471		JRS	PRTSYM	PRINT SYMB0L	1433
02470	0	01	05671		BRU	CLR1ET	CLEAR ONE EXIT TRUE	1434
*PRINT SYMB0L								1435

02471	1 60 05727	PRTSYM	PRC	SPACE	SPACE	1436
02472	1 61 06326		PRO	SYMCEN	SYMBOLIC CENTRAL	1437
02473	1 12 02475		JRS	TSE@LP	TEST FOR E@L PRINT	1438
02474	0 01 05706		BRU	EXIT	EXIT	1439
	*TEST FOR E@L PRINT					1440
02475	0 76 06257	TSE@LP	LDA	SIXTY	SIXTY	1441
02476	0 73 00022		SKG	CHT@LN	CHARS THIS LINE	1442
02477	1 60 05767		P@C	CARET	CAR RETURN	1443
02500	0 01 05706		BRU	EXIT	EXIT	1444
	*FX EXP XLATE					1445
02501	1 10 00023	FXPYL	FET	ZER@	ZER@	1446
02502	1 24 00014		M@N	M@DLST	M@DE LIST	1447
02503	1 12 02511		JRS	XPMDX	EXP BY M@DE XLATE	1448
	*M@DE RELEASE					1449
02504	0 60 05475	M@DREL	SKR	M@DB@T	M@DE B@TT@M	1450
02505	0 01 05706		BRU	EXIT	EXIT	1451
	*EXP REMEMBER M@DE XLATE					1452
02506	1 12 02524	EXPYLT	JRS	XPSCAN	EXP SCAN	1453
	*SET M@DE THEN GEN					1454
02507	1 12 03613	SETMTG	JRS	M@DSET	M@DE SET	1455
02510	0 01 02512		BRU	SCAEGE	SCRIPT AND EXP GEN	1456
	*EXP BY M@DE XLATE					1457
02511	1 12 02524	XPMDX	JRS	XPSCAN	EXP SCAN	1458
	*SCRIPT AND EXP GEN					1459
02512	1 12 03511	SCAEGE	JRS	SCRGEN	SCRIPT GEN	1460
02513	0 01 03305		BRU	XPBYMG	EXP BY M@DE GEN	1461

		PAGE			
*SPR9G	ARG SEQ SCAN				1463
02514	1 17 00012	SPASOS	RSV	SPARGL	SPR9G ARGUMENT LIST 1464
02515	1 05 02750	\$117	TRY	UNSCAS	UNSCRIPTED ARRAY SCAN 1465
02516	1 03 02520		JAT	\$118	\$2 1466
02517	1 12 02524		JRS	XPSCAN	EXP SCAN 1467
02520	1 24 00012	\$11A	M8N	SPARGL	SPR9G ARGUMENT LIST 1468
02521	1 02 06010		CSA	CRMMA	CRMMA 1469
02522	1 03 02515		JAT	\$117	\$1 1470
02523	0 01 05706		BRU	EXIT	EXIT 1471
+EXP SCAN					1472
02524	1 17 00012	XPSCAN	RSV	SUMLST	SUM LIST 1473
02525	1 17 00013		RSV	PR9DLS	PR9D LIST 1474
02526	1 12 02556		JRS	MINUFS	MINUS FACT9R SCAN 1475
02527	1 03 02532		JAT	\$119	\$1 1476
02530	1 02 05735		CSA	PLUS	PLUS 1477
02531	1 12 02567		JRS	FACTSC	FACT9R SCAN 1478
02532	1 12 02552	\$119	JRS	PLUSFS	PLUS FACT9R SCAN 1479
02533	1 03 02536		JAT	\$120	\$2 1480
02534	1 12 02556		JRS	MINUFS	MINUS FACT9R SCAN 1481
02535	1 04 02547		JAF	\$122	\$4 1482
02536	3 11 37777	\$120	SWT	W1*2	W1 1483
02537	1 24 00012		M8N	SUMLST	SUM LIST 1484
02540	1 24 00012	\$121	M8N	SUMLST	SUM LIST 1485
02541	1 12 02552		JRS	PLUSFS	PLUS FACT9R SCAN 1486
02542	1 03 02540		JAT	\$121	\$3 1487
02543	1 12 02556		JRS	MINUFS	MINUS FACT9R SCAN 1488
02544	1 03 02540		JAT	\$121	\$3 1489
02545	1 34 07600		PL9	SUMTPX	SUM TERM PLEX 1490
02546	1 36 00012		CIC	SUMLST	SUM LIST 1491
02547	1 21 00012	\$122	RLS	SUMLST	SUM LIST 1492
02550	1 21 00013		RLS	PR9DLS	PR9D LIST 1493
02551	0 01 05706		BRU	EXIT	EXIT 1494
*PLUS FACT9R SCAN					1495
02552	1 02 05735	PLUSFS	CSA	PLUS	PLUS 1496
02553	1 04 05666		JAF	XTF	EXIT FALSE 1497
02554	1 12 02567		JRS	FACTSC	FACT9R SCAN 1498
02555	0 01 05672		BRU	EXITRU	EXIT TRUE 1499
*MINUS FACT9R SCAN					1500
02556	1 02 05755	MINUFS	CSA	MINUS	MINUS 1501
02557	1 04 05666		JAF	XTF	EXIT FALSE 1502
02560	1 12 02567		JRS	FACTSC	FACT9R SCAN 1503
02561	1 16 06211		S9F	ADDRFG	ADDRESSABLE FLAG 1504
02562	1 03 02565		JAT	\$123	\$1 1505
02563	1 37 07701		FIC	MINNAP	MINUS NONADDRESSABLE PLEX 1506
02564	0 01 05672		BRU	EXITRU	EXIT TRUE 1507
02565	1 37 07741	\$123	FIC	MINUAP	MINUS ADDRESSABLE PLEX 1508
02566	0 01 05672		BRU	EXITRU	EXIT TRUE 1509
*FACT9R SCAN					1510
02567	1 12 02640	FACTSC	JRS	ELETSC	ELEMENT SCAN 1511

02570	1	02	05771	\$124	CSA	ASTRSK	ASTERISK	1512
02571	1	04	02613		JAF	\$128	\$5	1513
02572	1	02	05771		CSA	ASTRSK	ASTERISK	1514
02573	1	04	02577		JAF	\$125	\$2	1515
02574	1	12	02640		JRS	ELETSC	ELEMENT SCAN	1516
02575	1	46	07202		FIP	EXPTPX	EXPON TERM PLEX	1517
02576	0	01	02570		BRU	\$124	\$1	1518
02577	1	24	00013	\$125	M8N	PRDLS	PRD LIST	1519
02600	1	12	02640		JRS	ELETSC	ELEMENT SCAN	1520
02601	1	02	05771	\$124	CSA	ASTRSK	ASTERISK	1521
02602	1	04	02610		JAF	\$127	\$4	1522
02603	1	02	05771		CSA	ASTRSK	ASTERISK	1523
02604	1	04	02577		JAF	\$125	\$2	1524
02605	1	12	02640		JRS	ELETSC	ELEMENT SCAN	1525
02606	1	46	07202		FIP	EXPTPX	EXPON TERM PLEX	1526
02607	0	01	02601		BRU	\$126	\$3	1527
02610	1	24	00013	\$127	M8N	PRDLS	PRD LIST	1528
02611	1	34	07500		PLB	PRDTP	PRD TERM PLEX	1529
02612	1	36	00013		CIC	PRDLS	PRD LIST	1530
02613	1	02	05776	\$128	CSA	VRGULE	VIRGULE	1531
02614	1	04	05706		JAF	EXIT	EXIT	1532
02615	1	12	02640		JRS	ELETSC	ELEMENT SCAN	1533
02616	1	02	05771	\$129	CSA	ASTRSK	ASTERISK	1534
02617	1	04	02627		JAF	\$131	\$8	1535
02620	1	02	05771		CSA	ASTRSK	ASTERISK	1536
02621	1	04	02625		JAF	\$130	\$7	1537
02622	1	12	02640		JRS	ELETSC	ELEMENT SCAN	1538
02623	1	46	07202		FIP	EXPTPX	EXPON TERM PLEX	1539
02624	0	01	02616		BRU	\$129	\$6	1540
02625	1	46	07402	\$130	FIP	DIVTPX	DIV TERM PLEX	1541
02626	0	01	02577		BRU	\$125	\$2	1542
02627	1	46	07402	\$131	FIP	DIVTPX	DIV TERM PLEX	1543
02630	0	01	02570		BRU	\$124	\$1	1544
*VAR SCAN								1545
02631	1	12	02772	VARSCN	JRS	IDSCAN	ID SCAN	1546
02632	1	04	03671		JAF	RGSCID	REGISTER SCALAR ID	1547
02633	1	16	06237		SGF	SCAIDF	SCALAR ID FLAG	1548
02634	1	03	05706		JAT	EXIT	EXIT	1549
02635	1	52	00500		S8T	AYIDFG	ARRAY ID FLAG	1550
02636	1	03	02675		JAT	AYSCAN	ARRAY SCAN	1551
02637	0	01	03756		BRU	INCNFA	ID CONFLICT FAIL	1552
*ELEMENT SCAN								1553
02640	1	62	06246	ELETSC	S8C	LETRFG	LETTER FLAG	1554
02641	1	03	02647		JAT	\$132	\$1	1555
02642	1	02	05752		CSA	LPAREN	L PAREN	1556
02643	1	04	03106		JAF	CSTSCN	CONST SCAN	1557
02644	1	12	02524		JRS	XPSCAN	EXP SCAN	1558
02645	1	01	05772		CSF	RPAREN	R PAREN	1559
02646	0	01	05706		BRU	EXIT	EXIT	1560
02647	1	12	02772	\$132	JRS	IDSCAN	ID SCAN	1561

02650	1	03	02661	JAT	\$133	\$3	1562
02651	1	02	05752	CSA	LPAREN	L PAREN	1563
02652	1	04	03671	JAF	RGSCID	REGISTER SCALAR ID	1564
02653	1	41	00006	BBP	GLSLST	GLOBAL SPRBG LIST	1565
02654	1	12	03011	JRS	STIMEV	STANDARD MODE EVAL	1566
02655	1	14	00006	MCR	GLSLST	GLOBAL SPRBG LIST	1567
02656	1	44	00007	SER	GDLIST	GLOBAL DMY LIST	1568
02657	1	03	03756	JAT	INCNFA	ID CONFLICT FAIL	1569
02660	0	01	02666	BRU	FCTSC	FUNCTION SCAN	1570
02661	1	16	06237	\$133	SBF	SCALAR ID FLAG	1571
02662	1	03	05706	JAT	EXIT	EXIT	1572
02663	1	52	00500	SBT	AYIDFG	ARRAY ID FLAG	1573
02664	1	03	02675	JAT	AYSCAN	ARRAY SCAN	1574
02665	1	01	05752	CSF	LPAREN	L PAREN	1575
*FUNCTION SCAN							1576
02666	1	12	02514	FCTSC	JRS	SPASQS	1577
02667	1	01	05772	CSF	RPAREN	R PAREN	1578
02670	1	34	06500	PLB	SPAGPX	SPRBG ARG GROUP PLEX	1579
02671	1	35	00012	CAC	SPARGL	SPRBG ARGUMENT LIST	1580
02672	1	21	00012	RLS	SPARGL	SPRBG ARGUMENT LIST	1581
02673	1	37	07302	FIC	FCTPX	FUNCTION TERM PLEX	1582
02674	0	01	05706	BRU	EXIT	EXIT	1583
*ARRAY SCAN							1584
02675	1	02	05752	AYSCAN	CSA	LPAREN	1585
02676	1	03	02700	JAT	\$134	\$6	1586
02677	0	01	03754	BRU	NUBFSF	NUMBER OF SUBSCRIPTS FAIL	1587
02700	1	17	00012	\$134	RSV	DIMLST	1588
02701	3	10	00000	FET	WD.2	WD	1589
02702	1	31	06250	BNG	FBUR	FBUR	1590
02703	1	30	00012	PUL	DIMLST	DIMENS LIST	1591
02704	1	17	00013	\$135	RSV	SCREXL	1592
02705	1	12	02524	\$135	JRS	XPSCAN	1593
02706	1	24	00013	M8N	SCREXL	SCRIPT EXP LIST	1594
02707	1	02	06010	CSA	CBMMA	CBMMA	1595
02710	1	03	02705	JAT	\$136	\$2	1596
02711	1	01	05772	CSF	RPAREN	R PAREN	1597
02712	1	42	00013	M8F	SCREXL	SCRIPT EXP LIST	1598
02713	1	12	02766	JRS	GRTEFX	GRNTEE FIXED	1599
02714	1	43	00013	\$137	SNE	SCREXL	1600
02715	1	04	02725	JAF	\$138	\$4	1601
02716	1	42	00012	M8F	DIMLST	DIMENS LIST	1602
02717	1	04	03754	JAF	NUBFSF	NUMBER OF SUBSCRIPTS FAIL	1603
02720	1	37	07502	FIC	MPYPLX	MPY PLEX	1604
02721	1	42	00013	M8F	SCREXL	SCRIPT EXP LIST	1605
02722	1	12	02766	JRS	GRTEFX	GRNTEE FIXED	1606
02723	1	37	07602	FIC	ADDPLX	ADD PLEX	1607
02724	0	01	02714	BRU	\$137	\$3	1608
02725	1	43	00012	\$139	SNE	DIMLST	1609
02726	1	03	03754	JAT	NUBFSF	NUMBER OF SUBSCRIPTS FAIL	1610
02727	1	21	00013	RLS	SCREXL	SCRIPT EXP LIST	1611



02730	1	21	00012	RLS	DIMLST	DIMENS LIST	1612
02731	1	52	07701	SRT	MINUSF	MINUS FLAG	1613
02732	1	03	02735	JAT	\$138A		1614
02733	1	16	06211	S9F	ADDRFG	ADDRESSABLE FLAG	1615
02734	1	03	02741	JAT	\$139	\$5	1616
02735	1	24	00016	\$139A	M9N	SCRIPT LIST	1617
02736	1	12	03633	JRS	FXTMKR	FX TEMP MAKER	1618
02737	3	10	00000	FET	WO.2	WO	1619
02740	1	24	00016		M9N	SCRIPT LIST	1620
02741	1	37	06742	\$139	FIC	SINGLY SCRIPTED ARRAY PLEX	1621
02742	0	01	05706	BRU	EXIT	EXIT	1622
*SCALAR ID SCAN							1623
02743	1	12	02772	SCLIDR	JRS	ID SCAN	1624
02744	1	04	03671	JAF	RGSCID	REGISTER SCALAR ID	1625
02745	1	16	06237	S9F	SCAIDF	SCALAR ID FLAG	1626
02746	1	03	05706	JAT	EXIT	EXIT	1627
02747	0	01	03756	BRU	INCNFA	ID CONFLICT FAIL	1628
*UNSCRIPTED ARRAY SCAN							1629
02750	1	62	06246	UNSCAS	S9C	LETTRFG	1630
02751	1	04	04030	JAF	FAIL	FAIL	1631
02752	1	12	02772	JRS	IDSCAN	ID SCAN	1632
02753	1	04	04030	JAF	FAIL	FAIL	1633
02754	1	52	00500	S9T	AYIDFG	ARRAY ID FLAG	1634
02755	1	04	04030	JAF	FAIL	FAIL	1635
02756	1	02	05752	CSA	LPAREN	L PAREN	1636
02757	1	03	04030	JAT	FAIL	FAIL	1637
02760	3	10	00000	FET	WO.2	WO	1638
02761	2	61	00000	MIN	WO.2	WO	1639
02762	1	12	03722	JRS	L8DCTL	LOAD CENTRAL	1640
02763	1	12	03704	JRS	RGFXCS	REGISTER FX CONST	1641
02764	1	37	06742	FIC	SCRAPX	SINGLY SCRIPTED ARRAY PLEX	1642
02765	0	01	05706	BRU	EXIT	EXIT	1643
*GRNTEE FIXED							1644
02766	1	16	06241	GRTEFX	S9F	FLFLAG	1645
02767	1	04	05706	JAF	EXIT	EXIT	1646
02770	1	40	07101	FAC	FIXTPX	FIX TERM PLEX	1647
02771	0	01	05706	BRU	EXIT	EXIT	1648
*ID SCAN							1649
02772	1	12	03025	IDSCAN	JRS	SYMBOL SCAN	1650
*ID CLASSIFY							1651
02773	1	44	00011	IDCLAS	SER	L8CAL DMY LIST	1652
02774	1	03	03007	JAT	\$140	\$2	1653
02775	1	44	00001	SER	FXSLST	FX SCALAR LIST	1654
02776	1	03	05672	JAT	EXITRU	EXIT TRUE	1655
02777	1	44	00000	SER	FLSLST	FL SCALAR LIST	1656
03000	1	03	05672	JAT	EXITRU	EXIT TRUE	1657
03001	1	44	00005	SER	AYYLSL	ARRAY LIST	1658
03002	1	03	03007	JAT	\$140	\$2	1659
03003	1	44	00006	SER	GLSLST	GLBRAL SPRNG LIST	1660
03004	1	03	03007	JAT	\$140	\$2	1661

03005	1 44 00010		SER	L6CSPL	LOCAL SPRNG LIST	1662	
03006	1 04 05666		JAF	XTF	EXIT FALSE	1663	
03007	1 12 03011	\$140	JRS	STDMEV	STANDARD M8DE EVAL	1664	
03010	0 01 05672		BRU	EXITRU	EXIT TRUE	1665	
*STANDARD M8DE EVAL							
03011	0 76 06327		STDMEV	LDA	CTL1	CENTRAL 1	1667
03012	0 64 06324			MPY	PSH18	RIGHT SHIFTER 18	1668
03013	0 14 06272			ETR	CH4MSK	CHAR 4 MASK	1669
03014	0 46 00400			CAX			1670
03015	2 76 05715			LDA	CHTTBL.2	CHAR TRANSL TABLE	1671
03016	0 72 06324			SKA	IJKLMNOP	IJKLMNOP FLAG	1672
03017	0 01 03023			BRU	\$141	\$1	1673
03020	0 76 46501		LDA*	WRK8BT	WRK 8BT8M	1674	
03021	0 16 06241		MRG	M8DEMS	M8DE MASK	1675	
03022	0 35 46501		STA*	WRK8BT	WRK 8BT8M	1676	
03023	0 76 46501	\$141	LDA*	WRK8BT	WRK 8BT8M	1677	
03024	0 01 05706		BRU	EXIT	EXIT	1678	
*SYMBOL SCAN							
03025	1 62 06246		SYMASC	S8C	LETRFG	LETTER FLAG	1680
03026	1 04 03761		JAF	ILSYFA	ILLEGAL SYNTAX FAIL	1681	
03027	1 12 03045		JRS	PAKSYM	PACK SYMB9L	1682	
03030	0 35 06327		STA	CTL1	CENTRAL 1	1683	
03031	1 12 03045		JRS	PAKSYM	PACK SYMB9L	1684	
03032	0 35 06330		STA	CTL2	CENTRAL 2	1685	
03033	1 03 05706	\$142	JAT	EXIT	EXIT	1686	
03034	1 12 03045		JRS	PAKSYM	PACK SYMB9L	1687	
03035	0 01 03033		BRU	\$142	\$1	1688	
*PACK STRING							
03036	0 76 00024		PAKSTR	LDA	UBLKFG	USE BLANKS FLAG	1689
03037	0 35 00003			STA	SCANMD	SCAN M8DE	1691
03040	0 76 06213			LDA	N8TCRF	N8T CAR RETURN FLAG	1692
03041	1 12 03046		JRS	PAKWRD	PACK WRD	1693	
03042	0 75 00023		LDB	SKBLFG	SKIP PLANKS FLAG	1694	
03043	0 36 00003		STB	SCANMD	SCAN M8DE	1695	
03044	0 01 05706		BRU	EXIT	EXIT	1696	
*PACK SYMB9L							
03045	0 76 06250		PAKSYM	LDA	LTRDGF	LETTER 8R DIGIT FLAG	1697
*PACK WRD							
03046	0 35 00051		PAKWRD	STA	PAKTP3	PACK TEMP 3	1700
03047	0 45 00001			CLA			1701
03050	0 35 00047			STA	PAKTP1	PACK TEMP 1	1702
03051	0 35 00050			STA	PAKTP2	PACK TEMP 2	1703
03052	1 62 00051	\$143	S8C	PAKTP3	PACK TEMP 3	1704	
03053	1 04 03070		JAF	\$144	\$2	1705	
03054	0 71 00047		LDX	PAKTP1	PACK TEMP 1	1706	
03055	2 23 06277		XEC	CHARST.2	CHAR SHIFTER TABLE	1707	
03056	2 14 06267		ETR	CHMTBL.2	CHAR MASK TABLE	1708	
03057	0 63 00050		ADM	PAKTP2	PACK TEMP 2	1709	
03060	0 46 00001		CLA			1710	
03061	0 35 00004		STA	CRNTCH	CRNT CHAR	1711	

03062	0 61 00047	MIN	PAKTP1	PACK TEMP 1	1712
03063	0 76 00047	LDA	PAKTP1	PACK TEMP 1	1713
03064	0 50 06250	SKE	F8UR	F8UR	1714
03065	0 01 03052	BRU	\$143	\$1	1715
03066	0 76 00050	LDA	PAKTP2	PACK TEMP 2	1716
03067	0 01 05666	BRU	XTF	EXIT FALSE	1717
03070	0 71 00047	\$144 LDX	PAKTP1	PACK TEMP 1	1718
03071	2 76 06303	LDA	PAKBT8.2	PACK BLANKS TABLE	1719
03072	0 16 00050	MRG	PAKTP2	PACK TEMP 2	1720
03073	0 01 05672	BRU	EXITRU	EXIT TRUE	1721
*LBL CBMMA SCAN				1722	
03074	1 12 03077	LBCAMA JRS	LBSCAN	LBL SCAN	1723
03075	1 01 06010	CSF	CBMMA	CBMMA	1724
03076	0 01 05706	BRU	EXIT	EXIT	1725
*LBL SCAN				1726	
03077	1 12 03215	LBSCAN JRS	INSCAN	INTEGER SCAN	1727
03100	1 15 06311	S9L	MAXLBL	MAX LBL ALLOWED	1728
03101	1 03 03752	JAT	ILNUFA	ILLEGAL NUMBER FAIL	1729
03102	0 76 06330	LDA	CTL2	CENTRAL 2	1730
03103	0 73 00023	SKG	ZER0	ZER0	1731
03104	0 01 03752	BRU	ILNUFA	ILLEGAL NUMBER FAIL	1732
03105	0 01 03661	BRU	REGLBL	REGISTER LBL	1733

		PAGE				
*CONST SCAN					1735	
03106	1 12 03225	CSTSCN	JRS	DGCVIN	DIGIT CONV INITIAL	1736
03107	0 46 30003		CLR			1737
03110	1 07 00051		STD	CHARA	CHARACTERISTIC A	1738
03111	1 62 00024		SBC	DIGTFL	DIGIT FLAG	1739
03112	1 04 03126		JAF	\$145	\$1	1740
03113	1 12 03233		JRS	DGCVSC	DIGIT CONV SCAN	1741
03114	1 25 00053		LDP	DGSCTA	DIGITS SCANED CNT.A	1742
03115	1 07 00051		STD	CHARA	CHARACTERISTIC A	1743
03116	1 02 05750		CSA	PERIOD	PERIOD	1744
03117	1 03 03131		JAT	\$146	\$3	1745
03120	1 02 05742		CSA	E	E	1746
03121	1 03 03133		JAT	\$147	\$4	1747
03122	1 25 06327		LDP	CTL1	CENTRAL 1	1748
03123	1 15 06313		SBL	MAXINT	MAX INTEGER ALLOWED	1749
03124	1 03 03752		JAT	ILNUFA	ILLEGAL NUMBER FAIL	1750
03125	0 01 03704		BRU	RGFXCS	REGISTER FX CONST	1751
03126	1 01 05750	\$145	CSF	PERIOD	PERIOD	1752
03127	1 62 00024		SBC	DIGTFL	DIGIT FLAG	1753
03130	1 04 03761		JAF	ILSYFA	ILLEGAL SYNTAX FAIL	1754
03131	1 12 03233	\$146	JRS	DGCVSC	DIGIT CONV SCAN	1755
03132	1 02 05742		CSA	E	E	1756
03133	1 25 00051	\$147	LDP	CHARA	CHARACTERISTIC A	1757
03134	1 53 00055		SDP	DGUCTA	DIGITS USED CNT A	1758
03135	1 07 00051		STD	CHARA	CHARACTERISTIC A	1759
03136	1 25 06327		LDP	CTL1	CENTRAL 1	1760
03137	1 04 03147		JAF	FLCSTM	FL CONST MAKER	1761
03140	1 07 00047		STD	CNSTPA	CONST TEMP A	1762
03141	1 12 03204		JRS	SIGNIS	SIGNED INTEGER SCAN	1763
03142	1 25 00051		LDP	CHARA	CHARACTERISTIC A	1764
03143	1 54 06327		ADP	CTL1	CENTRAL 1	1765
03144	1 07 00051		STD	CHARA	CHARACTERISTIC A	1766
03145	1 25 00047		LDP	CNSTPA	CONST TEMP A	1767
03146	1 07 06327		STD	CTL1	CENTRAL 1	1768
*FL CONST MAKER					1769	
03147	0 77 00057	FLCSTM	EAX	47	57	1770
03150	0 67 10060		N9D	48	60	1771
03151	1 07 06327		STD	CTL1	CENTRAL 1	1772
03152	0 53 00052	\$148	SKN	CHARB	CHARACTERISTIC B	1773
03153	0 01 03170		BRU	\$150	\$1	1774
03154	0 61 00052		MIN	CHARB	CHARACTERISTIC B	1775
03155	1 25 06262		LDP	TENTH3	ONE TENTH B-3	1776
03156	0 43 03261		BRM	DBFXMU	DOUBLE FX MULT	1777
03157	0 67 10057		N9D	47	57	1778
03160	1 07 06327		STD	CTL1	CENTRAL 1	1779
03161	2 77 37775		EAX	-3.2	-3	1780
03162	0 01 03152		BRU	\$148	\$2	1781
03163	1 25 06264	\$149	LDP	TENB4	TEN B4	1782
03164	0 43 03261		BRM	DBFXMU	DOUBLE FX MULT	1783

03165	0	67	10057		N9D	47	57	1784
03166	1	07	06327		STD	CTL1	CENTRAL 1	1785
03167	2	77	00004		EAX	4.2	4	1786
03170	0	60	00052	\$150	SKR	CHARB	CHARACTERISTIC B	1787
03171	0	01	03163		BRU	\$149	\$3	1788
03172	0	73	00023		SKG	ZER0	ZER0	1789
03173	0	01	03712		BRU	RGFLCS	REGISTER FL C0NST	1790
03174	0	46	00140		LDE			1791
03175	0	36	06330		STB	CTL2	CENTRAL 2	1792
03176	0	46	00200		CXA			1793
03177	0	14	00027		ETR	ADRMSK	ADR MASK	1794
03200	0	73	06307		SKG	CLNEGL	CHARIS LOWER NEG LIMIT	1795
03201	0	73	06310		SKG	CUPBSL	CHARIS UPPER PBS LIMIT	1796
03202	0	01	03712		BRU	RGFLCS	REGISTER FL C0NST	1797
03203	0	01	03752		BRU	ILNUFA	ILLEGAL NUMBER FAIL	1798
*SIGNED INTEGER SCAN								1799
03204	1	02	05755	SIGNIS	CSA	MINUS	MINUS	1800
03205	1	04	03213		JAF	\$151	\$1	1801
03206	1	12	03215		JRS	INSCAN	INTEGER SCAN	1802
03207	0	46	30003		CLR			1803
03210	1	53	06327		SDP	CTL1	CENTRAL 1	1804
03211	1	07	06327		STD	CTL1	CENTRAL 1	1805
03212	0	01	05706		BRU	EXIT	EXIT	1806
03213	1	02	05735	\$151	CSA	PLUS	PLUS	1807
03214	0	01	03215		BRU	INSCAN	INTEGER SCAN	1808
*INTEGER SCAN								1809
03215	1	62	00024	INSCAN	S9C	DIGTFL	DIGIT FLAG	1810
03216	1	04	03761		JAF	ILSYFA	ILLEGAL SYNTAX FAIL	1811
03217	1	12	03225		JRS	DGCVIN	DIGIT CNV INITIAL	1812
03220	1	12	03233		JRS	DGCVSC	DIGIT CNV SCAN	1813
03221	1	25	06327		LDP	CTL1	CENTRAL 1	1814
03222	1	15	06313		SBL	MAXINT	MAX INTEGER ALLOWED	1815
03223	1	03	03752		JAT	ILNUFA	ILLEGAL NUMBER FAIL	1816
03224	0	01	05706		BRU	EXIT	EXIT	1817
*DIGIT CNV INITIAL								1818
03225	0	46	30003	DGCVIN	CLR			1819
03226	1	07	00053		STD	DGSCTA	DIGITS SCANED CNT A	1820
03227	1	07	00055		STD	DGUCTA	DIGITS USED CNT A	1821
03230	1	07	00057		STD	SCDIGA	SCANED DIGIT A	1822
03231	1	07	06327		STD	CTL1	CENTRAL 1	1823
03232	0	01	05706		BRU	EXIT	EXIT	1824
*DIGIT CNV SCAN								1825
			03233	DGCVSC	EQU	*		1826
03233	1	62	00024	\$152	S9C	DIGTFL	DIGIT FLAG	1827
03234	1	04	05706		JAF	EXIT	EXIT	1828
03235	1	12	03237		JRS	CNVIDG	CNV RNE DIGIT	1829
03236	0	01	03233		BRU	\$152	\$1	1830
*CNV RNE DIGIT								1831
03237	0	76	00004	CNVIDG	LDA	CRNTCH	CRRNT CHAR	1832
03240	0	54	06324		MPY	RSH18	RIGHT SHIFTER 18	1833

03241	0 14 06272	ETR	CH4MSK	CHAR 4 MASK	1834
03242	0 35 00060	STA	SCDIG8	SCANED DIGIT B	1835
03243	0 61 00054	MIN	DGSC8B	DIGITS SCANED CNT B	1836
03244	0 46 00001	CLA			1837
03245	0 35 00004	STA	CRNTCH	CRRNT CHAR	1838
03246	1 25 06327	LDP	CTL1	CENTRAL 1	1839
03247	0 72 06230	SKA	TBP5BM	TBP'S BITS MASK	1840
03250	0 01 05706	BRU	EXIT	EXIT	1841
03251	0 67 00004	LSH	4	4	1842
03252	1 07 06327	STD	CTL1	CENTRAL 1	1843
03253	1 25 06231	LDP	TENB4E	TEN B4 EXACT	1844
03254	0 43 03261	BRM	DBFXMU	DOUBLE FX MULT	1845
03255	1 54 00057	ADP	SCDIGA	SCANED DIGIT A	1846
03256	1 07 06327	STD	CTL1	CENTRAL 1	1847
03257	0 61 00056	MIN	DGUCTB	DIGITS USED CNT B	1848
03260	0 01 05706	BRU	EXIT	EXIT	1849
*DOUBLE FX MULT					
03261	0 00 00000	DBFXMU	HLT		1851
03262	1 07 00043	STD	DPMPYA	DP MPY A	1852
03263	0 76 06330	LDA	CTL2	CENTRAL 2	1853
03264	0 46 00002	CLB			1854
03265	0 56 20001	RCY	1	1	1855
03266	0 64 00043	MPY	DPMPYA	DP MPY A	1856
03267	0 66 00027	RSH	23	27	1857
03270	1 07 00045	STD	DPMPYC	DP MPY C	1858
03271	0 76 00044	LDA	DPMPYB	DP MPY B	1859
03272	0 46 00002	CLB			1860
03273	0 66 20001	RCY	1	1	1861
03274	0 64 06327	MPY	CTL1	CENTRAL 1	1862
03275	0 66 00027	RSH	23	27	1863
03276	1 54 00045	ADP	DPMPYC	DP MPY C	1864
03277	1 07 00045	STD	DPMPYC	DP MPY C	1865
03300	0 76 06327	LDA	CTL1	CENTRAL 1	1866
03301	0 64 00043	MPY	DPMPYA	DP MPY A	1867
03302	1 54 00045	ADP	DPMPYC	DP MPY C	1868
03303	0 51 03261	BRR	DBFXMU	DOUBLE FX MULT	1869

1850

			PAGE				
*EXP REMEMBER MADE GEN						1871	1870
03304	1 12 03613	XPREMG	JRS	M0DSET	M0DE SET		1872
*FXP BY M0DE GEN						1873	
03305	1 12 03556	XPBYMG	JRS	ISTMSA	IS TERM SIGNED ADDRESSABLE		1874
03306	1 03 03323	JAT		FASGG	FETCH AND SET SIGN GEN		1875
*SIGNED CMLX BY MADE GEN						1876	
03307	1 12 03606	SIGCMG	JRS	ISMDBK	IS M0DE BK		1877
03310	1 12 03613		JRS	M0DSET	M0DE SET		1878
03311	1 12 03350		JRS	SUMTG	SUM TERM GEN		1879
03312	1 12 03324		JRS	SXPSGG	SET EXP SIGN GEN		1880
03313	1 12 02504		JRS	M0DREL	M0DE RELEASE		1881
03314	1 03 05706		JAT	EXIT	EXIT		1882
*SET EXP M0DE GEN						1883	
03315	1 12 03604	SEXMG	JRS	ISMDFL	IS M0DE FL		1884
03316	1 03 03321		JAT	\$153	\$1		1885
03317	1 26 00031		BLF	FIXSPL	FIX SPR0G LINK		1886
03320	0 01 05706		BRU	EXIT	EXIT		1887
03321	1 26 00032	\$153	BLF	FL0TSL	FL0AT SPR0G LINK		1888
03322	0 01 05706		BRU	EXIT	EXIT		1889
*FETCH AND SET SIGN GEN						1890	
03323	1 63 00244	FASGG	BIM	FTCHP0	FETCH P0P		1891
*SET EXP SIGN GEN						1892	
03324	2 76 00000	SXPSGG	LDA	W0.2	W0		1893
03325	0 50 00024		SKE	NEGTRT	NEGATIVE TRAIT		1894
03326	0 01 05705		BRU	CLRIAE	CLEAR 0NE AND EXIT		1895
03327	0 76 46475		LDA*	M0DB0T	M0DE P0TT0M		1896
03330	0 55 46475		ADD*	M0DB0T	M0DE P0TT0M		1897
03331	0 55 06223		ADD	CGSGIN	CHANGE SIGN INST		1898
03332	1 51 00015		S0B	C0DLST	C0DE LIST		1899
03333	0 01 05705		BRU	CLRIAE	CLEAR 0NE AND EXIT		1900
*TERM BY M0DE GEN						1901	
03334	1 12 03556	TMBYMG	JRS	ISTMSA	IS TERM SIGNED ADDRESSABLE		1902
03335	1 04 03340		JAF	CTBYMG	CMLX TERM BY M0DE GEN		1903
03336	1 63 00244		BIM	FTCHP0	FETCH P0P		1904
03337	0 01 05706		BRU	EXIT	EXIT		1905
*CMLX TERM BY M0DE GEN						1906	
03340	1 12 03606	CTBYMG	JRS	ISMDBK	IS MADE BK		1907
03341	1 03 03350		JAT	SUMTG	SUM TERM GEN		1908
03342	1 16 06241		S0F	FLFLAG	FL FLAG		1909
03343	1 04 03350		JAF	SUMTG	SUM TERM GEN		1910
03344	1 12 03613		JRS	M0DSET	M0DE SET		1911
03345	1 12 03350		JRS	SUMTG	SUM TERM GEN		1912
03346	1 26 00031		BLF	FIXSPL	FIX SPR0G LINK		1913
03347	0 01 02504		BRU	M0DREL	M0DE RELEASE		1914
*SUM TERM GEN						1915	
03350	1 52 07600	SUMTG	S0T	SUMFLG	SUM FLAG		1916
03351	1 04 03366		JAF	PR0DTG	PR0D TERM GEN		1917
03352	1 12 03377		JRS	SUMPSU	SUM-PR0D SET UP		1918
03353	1 42 00013	\$154	M0F	TERMLS	TERM LIST		1919

03354	1	04	03412	JAF	SUMPEX	SUM-PRD EXIT	1920
03355	1	12	03537	JRS	GRSAG	GRNTEE SIGNED ADDRESSABLE GEN	1921
03356	2	76	37777	LDA	W1.2	W1	1922
03357	2	50	37776	SKE	W2.2	W2	1923
03360	0	01	03363	BRU	\$155	\$1	1924
03361	1	63	00254	BIM	ADDF8P	ADD P8P	1925
03362	0	01	03364	BRU	\$156	\$3	1926
03363	1	63	00264	\$155 BIM	SUBP8P	SUB P8P	1927
03364	0	60	06501	\$156 SKR	WPK88T	W8RK B8TT8M	1928
03365	0	01	03353	BRU	\$154	\$2	1929
*PRD TERM GEN							
03366	1	52	07500	PR8DTG S8T	PR8DFG	PR8D FLAG	1930
03367	1	04	03415	JAF	FCTTG	FUNCTION TERM GEN	1931
03370	1	12	03377	JRS	SUMPSU	SUM-PRD SET UP	1932
03371	1	42	00013	\$157 M8F	TERMLS	TERM LIST	1933
03372	1	04	03412	JAF	SUMPEX	SUM-PRD EXIT	1934
03373	1	12	03537	JRS	GRSAG	GRNTEE SIGNED ADDRESSABLE GEN	1935
03374	1	53	00274	BIM	MPYP8P	MPY P8P	1936
03375	3	50	37777	ERS	W1.2	W1	1937
03376	0	01	03371	BRU	\$157	\$5	1938
*SUM-PRD SET UP							
03377	1	17	00013	SUMPSU RSV	TERMLS	TERM LIST	1939
03400	1	30	00013	PUL	TERMLS	TERM LIST	1941
03401	1	17	00020	RSV	W8RKLT	W8RK LIST	1942
03402	1	42	00013	\$158 M8F	TERMLS	TERM LIST	1943
03403	1	04	03406	JAF	\$159	\$2	1944
03404	1	16	06211	S8F	ADDRFG	ADDRESSABLE FLAG	1945
03405	1	03	03402	JAT	\$158	\$1	1946
03406	1	47	00013	\$159 ADR	TERMLS	TERM LIST	1947
03407	1	33	00020	CAR	W8RKLT	W8RK LIST	1948
03410	1	42	00013	M8F	TERMLS	TERM LIST	1949
03411	0	01	03334	BRU	TMBYMG	TERM BY M8DE GEN	1950
*SUM-PRD EXIT							
03412	3	50	37777	SUMPEX ERS	W1.2	W1	1951
03413	1	21	00013	RLS	TERMLS	TERM LIST	1952
03414	0	01	05706	BRU	EXIT	EXIT	1953
*FUNCTION TERM GEN							
03415	1	52	07302	FCTTG S8T	FCTFLG	FUNCTION FLAG	1954
03416	1	04	03436	JAF	DVTHGN	DIV TERM GEN	1955
03417	1	30	00020	PUL	W8RKLT	W8RK LIST	1956
03420	1	17	00012	RSV	SPARGL	SPR8G ARGUMENT LIST	1957
03421	1	30	00012	PUL	SPARGL	SPR8G ARGUMENT LIST	1958
03422	1	12	03473	JRS	SPAS8G	SPR8G ARG SEQ GEN	1959
03423	1	12	03606	JRS	ISMD8K	IS M8DE 8K	1960
03424	1	12	03427	JRS	SPJPGN	SPR8G JUMP GEN	1961
03425	1	04	03315	JAF	SEXMG	SET EXP M8DE GEN	1962
03426	0	01	05706	BRU	EXIT	EXIT	1963
*SPR8G JUMP GEN							
03427	1	52	01000	SPJPGN S8T	LSPIDF	LOCAL SPR8G ID FLAG	1964
03430	1	04	03434	JAF	\$160	\$1	1965
03430	1	04	03434	JAF	\$160	\$1	1966



03431	1 31 06246	BNG	TW8	TW8	1970
03432	1 13 00106	BIF	BRMM8P	BRM M8P	1971
03433	0 01 05706	BRU	EXIT	EXIT	1972
03434	1 13 00107	\$160 BIF	BRM8P	BRM* M8P	1973
03435	0 01 05706	BRU	EXIT	EXIT	1974
+DIV TERM GEN					1975
03436	1 52 07402	DVTMGN S8T	DIVFG	DIV FLAG	1976
03437	1 04 03454	JAF	EXPNTG	EXP8N TERM GEN	1977
03440	1 30 00020	PUL	WRKLT	WRK LIST	1978
03441	1 12 03656	JRS	ISTMSA	IS TERM SIGNED ADDRESSABLE	1979
03442	1 03 03445	JAT	\$161	\$1	1980
03443	1 12 03340	JRS	CTBYMG	CMPLX TERM BY M8DE GEN	1981
03444	1 12 03650	JRS	SNTBMG	STORE IN TEMP BY M8DE GEN	1982
03445	3 11 37776	\$161 SWT	W2.2	W2	1983
03446	1 12 03334	JRS	TMBYMG	TERM BY M8DE GEN	1984
03447	3 50 37777	E8S	W1.2	W1	1985
03450	3 11 37777	SWT	W1.2	W1	1986
03451	1 63 00304	BIM	DIVP8P	DIV P8P	1987
03452	3 50 37777	E8S	W1.2	W1	1988
03453	0 01 05706	BRU	EXIT	EXIT	1989
+EXP8N TERM GEN					1990
03454	1 52 07202	EXPNTG S8T	EXPPG	EXP8N FLAG	1991
03455	1 04 03466	JAF	FIXTGN	FIX TERM GEN	1992
03456	1 30 00020	PUL	WRKLT	WRK LIST	1993
03457	1 12 03522	JRS	GRNM8D	GRNTEE ADDRESSABLE BY M8DE GEN	1994
03460	3 11 37777	SWT	W1.2	W1	1995
03461	1 12 03522	JRS	GRNM8D	GRNTEE ADDRESSABLE BY M8DE GEN	1996
03462	1 00 00230	BAM	FARGP8	FIRST ARG P8P	1997
03463	1 00 00234	BAM	NEXTAP	NEXT ARG P8P	1998
03464	1 26 00030	BLF	EXPSPL	EXP8N SPR8G LINK	1999
03465	0 01 05706	BRU	EXIT	EXIT	2000
+FIX TERM GEN					2001
03466	1 12 03613	FIXTGN JRS	M8DSET	M8DE SET	2002
03467	1 30 00020	PUL	WRKLT	WRK LIST	2003
03470	1 12 03334	JRS	TMBYMG	TERM BY M8DE GEN	2004
03471	3 50 37777	E8S	W1.2	W1	2005
03472	0 01 02504	BRU	M8DREL	M8DE RELEASE	2006
+SPR8G ARG 88N GEN					2007
03473	1 17 00020	SPAS8G R8V	WRKLT	WRK LIST	2008
03474	1 22 00012	\$162 T8T	SPARGL	SPR8G ARGUMENT LIST	2009
03475	1 04 03500	JAF	\$163	\$2	2010
03476	1 12 03517	JRS	GARMGN	GRNTEE ADDRESSABLE 8WN M8DE GEN	2011
03477	0 01 03474	BRU	\$162	\$1	2012
03500	1 21 00012	\$163 RLS	SPARGL	SPR8G ARGUMENT LIST	2013
03501	1 22 00020	T8T	WRKLT	WRK LIST	2014
03502	1 00 00230	BAM	FARGP8	FIRST ARG P8P	2015
03503	1 22 00020	\$164 T8T	WRKLT	WRK LIST	2016
03504	1 04 03507	JAF	\$165	\$4	2017
03505	1 00 00234	BAM	NEXTAP	NEXT ARG P8P	2018
03506	0 01 03503	BRU	\$164	\$3	2019

03507	1	21	00020	\$165	RLS	WRKLT	WORK LIST	2020
03510	0	01	05706		BRU	EXIT	EXIT	2021
*SCRIPT GEN								2022
			03511		SCRGEN	EQU	*	2023
03511	1	22	00016	\$165	TAT	SCRLLST	SCRIPT LIST	2024
03512	1	04	05706		JAF	EXIT	EXIT	2025
03513	1	12	03304		JRS	XPREM	EXP REMEMBER MODE GEN	2026
03514	1	22	00016		TAT	SCRLLST	SCRIPT LIST	2027
03515	1	12	03554		JRS	STFMG	STORE FORGET MODE GEN	2028
03516	0	01	03511		BRU	\$166	\$1	2029
*GRNTEE ADDRESSABLE OWN MODE GEN								2030
03517	1	12	03613		GABMGN	JRS	MODSET	MODE SET
03520	1	12	03522		JRS	GPNM8D	GRNTEE ADDRESSABLE BY MODE GEN	2031
03521	0	01	02504		BRU	MODREL	MODE RELEASE	2032
*GRNTEE ADDRESSABLE BY MODE GEN								2034
03522	1	12	03556		GRNMAD	JRS	ISTMSA	IS TERM SIGNED ADDRESSABLE
03523	1	04	03533		JAF	\$167	\$1	2035
03524	0	76	00023		LDA	P8STRT	POSITIVE TRAIT	2036
03525	2	50	37777		SKE	W1.2	W1	2037
03526	0	01	03535		BRU	\$168	\$2	2038
03527	1	12	03606		JRS	ISMDBK	IS MODE BK	2039
03530	1	04	03535		JAF	\$168	\$2	2040
03531	3	11	37777		SWT	W1.2	W1	2041
03532	0	01	05705		BRU	CLRIAE	CLEAR ONE AND EXIT	2042
03533	1	12	03307	\$167	JRS	SIGCMG	SIGNED CMLX BY MODE GEN	2043
03534	0	01	03550		BRU	SNTBMG	STORE IN TEMP BY MODE GEN	2044
03535	1	12	03323	\$168	JRS	FASSG	FETCH AND SET SIGN GEN	2045
03536	0	01	03550		BRU	SNTBMG	STORE IN TEMP BY MODE GEN	2046
*GRNTEE SIGNED ADDRESSABLE GEN								2048
03537	1	12	03556		GRSAG	JRS	ISTMSA	IS TERM SIGNED ADDRESSABLE
03540	1	03	05706		JAT	EXIT	EXIT	2049
03541	1	12	03550		JRS	SNTBMG	STORE IN TEMP BY MODE GEN	2050
03542	3	11	37777		SWT	W1.2	W1	2051
03543	1	12	03334		JRS	TMBYMG	TERM BY MODE GEN	2052
03544	3	11	37775		SWT	W3.2	W3	2053
03545	3	11	37776		SWT	W2.2	W2	2054
03546	3	50	37775		ERS	W3.2	W3	2055
03547	0	01	05706		BRU	EXIT	EXIT	2056

	PAGE				
*STORE IN TEMP BY MODE GEN				2059	
03550 1 12 03626 SNTMNG JRS TPBMKR			TEMP BY MODE MAKER		2058
03551 3 10 00000 FET W0.2			W0		2060
03552 1 63 00210 BIM STRP0P			STORE PAP		2061
03553 0 01 05706 BRU EXIT			EXIT		2062
*STORE FORGET MADE GEN				2064	
03554 1 63 00210 STFMG BIM STRP0P			STORE PAP		2065
03555 0 01 02504 BRU MDREL			MODE RELEASE		2066
*IS TERM SIGNED ADDRESSABLE				2067	
03556 1 10 00023 ISTMSA FET P0STRT			POSITIVE TRAIT		2068
03557 3 11 37777 SWT W1.2			W1		2069
03560 1 52 07701 \$160 S0T MINUSF			MINUS FLAG		2070
03561 1 04 03566 JAF \$170			\$2		2071
03562 1 30 00020 PUL W0RKL T			WORK LIST		2072
03563 1 10 00024 FET NEGTRT			NEGATIVE TRAIT		2073
03564 3 50 37776 E0S W2.2			W2		2074
03565 0 01 03560 BRU \$169			\$1		2075
03566 1 16 06211 \$170 S0F ADDRFG			ADDRESSABLE FLAG		2076
03567 1 04 05666 JAF XTF			EXIT FALSE		2077
03570 1 12 03606 JRS ISMD0K			IS MODE 0K		2078
03571 1 03 05672 JAT EXITRU			EXIT TRUE		2079
03572 1 52 00400 S0T FXCSTF			FX CONST FLAG		2080
03573 1 04 05672 JAF EXITRU			EXIT TRUE		2081
03574 1 12 03722 JRS L0DCTL			LOAD CENTRAL		2082
03575 0 46 00002 CLB					2083
03576 0 77 00027 EAX 23			27		2084
03577 0 67 10027 N0D 23			27		2085
03600 0 46 00140 LDE					2086
03601 1 07 06327 STD CTL1			CENTRAL 1		2087
03602 1 12 03712 JRS R0FLCS			REGISTER FL CONST		2088
03603 0 01 05672 BRU EXITRU			EXIT TRUE		2089
*IS MADE FL				2090	
03604 0 76 06241 ISMDFL LDA FLFLAG			FL FLAG		2091
03605 0 01 03610 BRU 0KFLTS			0K-FL TEST		2092
*IS MADE 0K				2093	
03606 0 76 46501 ISMD0K LDA* W0KB0T			WORK 0TT0M		2094
03607 0 14 06241 ETR M0DEMS			MODE MASK		2095
*0K-FL TEST				2096	
03610 0 50 46475 0KFLTS SKE* M0DB0T			MODE 0TT0M		2097
03611 0 01 05666 BRU XTF			EXIT FALSE		2098
03612 0 01 05672 BRU EXITRU			EXIT TRUE		2099
*MADE SET				2100	
03613 0 76 46501 M0DSET LDA* W0KB0T			WORK 0TT0M		2101
03614 0 14 06241 ETR M0DEMS			MODE MASK		2102
03615 1 51 00014 S0B M0DLST			MODE LIST		2103
03616 0 01 05706 BRU EXIT			EXIT		2104
*DMY TEMP MAKER				2105	
03617 1 10 06333 DYT0MK FET DYT0CD			DMY PNTR C0DE		2106
03620 0 61 00030 MIN DMYCNT			DMY CNT		2107

03621	0	76	00030	LDA	DMYCNT	DMY CNT	2108
03622	0	61	00030	MIN	DMYCNT	DMY CNT	2109
03623	2	55	00000	ADD	WD.2	WD	2110
03624	2	35	00000	STA	WD.2	WD	2111
03625	0	01	03011	BRU	STDMEV	STANDARD MODE EVAL	2112
*TEMP BY MODE MAKER							2113
03626	1	12	03633	TPBMKR	JRS	FXTMKR	FX TEMP MAKER
03627	0	76	46501	LDA*	WRK9BT	WRK RBT0M	2114
03630	0	16	46475	MRG*	M0DB0T	MODE RBT0M	2115
03631	0	35	46501	STA*	WRK9BT	WRK RBT0M	2116
03632	0	01	05706	BRU	EXIT	EXIT	2117
*FX TEMP MAKER							2119
03633	1	10	06332	FXTMKR	FET	FXTPCD	FX TEMP PNTR CODE
03634	0	61	00035	MIN	TMPCNT	TEMP CNT	2120
03635	0	76	00035	LDA	TMPCNT	TEMP CNT	2121
03636	0	61	00035	MIN	TMPCNT	TEMP CNT	2122
03637	2	63	00000	ADM	WD.2	WD	2123
03640	0	55	00024	ADD	0NE	0NE	2124
03641	0	73	00034	SKG	MYTPCT	MAX TEMP CNT	2125
03642	0	01	05706	BRU	EXIT	EXIT	2126
03643	0	35	00034	STA	MYTPCT	MAX TEMP CNT	2127
03644	0	01	05706	BRU	EXIT	EXIT	2128
*LBL MAKER BRU GEN							2130
03645	1	12	03657	LMBRUG	JRS	LBLMAK	LBL MAKER
03646	3	10	00000	FET	WD.2	WD	2131
03647	1	13	00002	RIF	BRUMBP	BRU MBP	2132
03650	2	76	00000	LDA	WD.2	WD	2133
03651	0	01	05706	BRU	EXIT	EXIT	2134
*LBL MAKER LRL GEN							2135
03652	1	12	03657	LMLBLG	JRS	LBLMAK	LBL MAKER
03653	3	10	00000	FET	WD.2	WD	2137
03654	1	13	00006	RIF	LBLL0P	LBL L0P	2138
03655	2	76	00000	LDA	WD.2	WD	2139
03656	0	01	05706	BRU	EXIT	EXIT	2140
*LBL MAKER							2142
03657	1	10	06314	LBLMAK	FET	MADELB	MADE LBL
03660	0	01	03664	BRU	RGRMLB	REGISTER OR MAKE LBL	2143
*REGISTER LBL							2145
03661	1	44	00002	REGLBL	SER	LBLLST	LBL LIST
03662	1	03	05706	JAT	FET	EXIT	2144
03663	1	10	06330	FET	CTL2	CENTRAL 2	2145
*REGISTER OR MAKE LBL							2149
03664	1	41	00002	RGRMLB	BBP	LBLLST	LBL LIST
03665	3	11	37777	SWT	WI.2	WI	2150
03666	1	24	00002	MBN	LBLLST	LBL LIST	2151
03667	2	76	00000	LDA	WD.2	WD	2152
03670	0	01	05706	BRU	EXIT	EXIT	2153
*REGISTERED SCALAR ID							2155
03671	1	10	00023	RGSCID	FET	ZER0	ZER0
03672	1	12	03011	JRS	STDMEV	STANDARD MODE EVAL	2154

03673	1 16 06241	SOF	FLFLAG	FL FLAG	2158
03674	1 03 03700	JAT	\$171	\$2	2159
03675	1 41 00001	BOP	FXSLST	FX SCALAR LIST	2160
03676	1 14 00001	MCB	FXSLST	FX SCALAR LIST	2161
03677	0 01 03702	BRU	\$172	\$1	2162
03700	1 41 00000	\$171 BOP	FLSLST	FL SCALAR LIST	2163
03701	1 14 00000	MCB	FLSLST	FL SCALAR LIST	2164
03702	3 11 37777	\$172 SWT	WI.2	WI	2165
03703	0 01 05705	BRU	CLR1AE	CLEAR ONE AND EXIT	2166
*REGISTER FX CONST					
03704	1 44 00004	RGFYCS SER	FXCLST	FX CONST LIST	2167
03705	1 03 05706	JAT	EXIT	EXIT	2168
03706	1 41 00004	BOP	FXCLST	FX CONST LIST	2169
03707	0 76 06330	LDA	CTL2	CENTRAL 2	2170
03710	1 51 00004	SAB	FXCLST	FX CONST LIST	2171
03711	0 01 05706	BRU	EXIT	EXIT	2172
*REGISTER FL CONST					
03712	1 25 06327	RGFLCS LDP	CTL1	CENTRAL 1	2173
03713	0 46 00014	XAB			2174
03714	1 07 06327	STD	CTL1	CENTRAL 1	2175
03715	1 44 00003	SER	FLCLST	FL CONST LIST	2176
03716	1 03 05706	JAT	EXIT	EXIT	2177
03717	1 41 00003	BOP	FLCLST	FL CONST LIST	2178
03720	1 14 00003	MCB	FLCLST	FL CONST LIST	2179
03721	0 01 05706	BRU	EXIT	EXIT	2180
*LOAD CENTRAL					
03722	1 12 04414	LBDCTL JRS	PRPNTR	PROCESS PNTR	2181
03723	1 25 40062	LDP*	ADRPTB	ADDRESS POINTED TO	2182
03724	1 07 06327	STD	CTL1	CENTRAL 1	2183
03725	0 01 05706	BRU	EXIT	EXIT	2184
*INITIALIZE LISTS					
03726	0 00 00000	INITLS HLT			2185
03727	0 71 00023	LDX	ZERB	ZERB	2186
03730	0 76 06361	LDA	FLSBAS	FL SCALAR BASE	2187
03731	0 01 03735	BRU	\$174	\$2	2188
03732	0 46 00400	\$173 CAX			2189
03733	0 76 06406	LDA	NCBRE	END OF CORE	2190
03734	2 35 06361	STA	BASE.2	BASE	2191
03735	2 35 06407	\$174 STA	START.2	START	2192
03736	2 35 06434	STA	TBP.2	TBP	2193
03737	2 35 06461	STA	BOTTOM.2	BOTTOM	2194
03740	0 46 00200	CYA			2195
03741	0 14 00027	ETR	ADRMASK	ADR MASK	2196
03742	0 55 00024	ADD	ONE	ONE	2197
03743	0 50 06221	SKE	NBLIST	NUMBER OF LISTS	2198
03744	0 01 03732	BRU	\$173	\$1	2199
03745	0 51 03726	BRU	INITLS	INITIALIZE LISTS	2200
*OVERFLOW FAIL					
03746	1 47 06077	OVFAIL ADR	OVFLQT	OVERFLOW QT	2201
03747	0 01 03757	BRU	SETLSA	SET LAST ACTIVE	2202

*ILLEGAL ALLOCATION FAIL				2209	
03750 1 47 06167	ILALFA	ADR	ALOCAC	ALLOCATION QT	2209
03751 0 01 03757	BRU		SETLSA	SET LAST ACTIVE	2210
*ILLEGAL NUMBER FAIL				2211	
03752 1 47 06172	ILNUMFA	ADR	NUMBOT	NUMBER QT	2212
03753 0 01 03757	BRU		SETLSA	SET LAST ACTIVE	2213
*NUMBER OF SUBSCRIPTS FAIL				2214	
03754 1 47 06201	NUMSF	ADR	SUBSCQ	SUBSCRIPTS QT	2215
03755 0 01 03757	BRU		SETLSA	SET LAST ACTIVE	2216
*ID CONFLICT FAIL				2217	
03756 1 47 06174	INCNFA	ADR	IDECQT	ID DECLARATION QT	2218
*SET LAST ACTIVE				2219	
03757 0 76 00013	SETLSA	LDA	LACHCT	LAST ACTIVE CHAR CNT	2220
03760 0 01 03763	BRU		NOTEF	NOTE FAIL	2221
*ILLEGAL SYNTAX FAIL				2222	
03761 1 47 06177	ILSYFA	ADR	SYTAXQ	SYNTAX QT	2223
03762 0 76 00005	LDA		INCHCT	INPUT CHAR CNT	2224
*NOTE FAIL				2225	
03763 1 51 00022	NOTEF	SOB	FAILDL	FAIL DATA LIST	2226
03764 1 24 00022	M8N		FAILDL	FAIL DATA LIST	2227
03765 0 01 04030	BRU		FAIL	FAIL	2228

		PAGE	PROGRAMMED	OPERATORS	
*FEX PBP					2230
03766 0 43 05502	FEXPBP BRM		PENTRY	PBP ENTRY	2231
03767 0 46 00200			CYA		2232
03770 0 35 46504			STA*	SVBBT	2233
03771 0 76 00175			LDA	ITMPCT	2234
03772 0 35 00035			STA	TMPCNT	2235
03773 0 76 00023			LDA	SKBLFG	2236
03774 0 35 00003			STA	SCANMD	2237
03775 1 17 00017			RSV	PLEXLS	2238
03776 0 01 05706			BRU	EXIT	2239
*TRY PBP					2240
03777 0 43 05502	TRYPBP BRM		PENTRY	PBP ENTRY	2241
04000 0 43 04006			BRM	FEXTYS	2242
04001 0 01 05666			BRU	XTF	2243
04002 3 12 00000			JRS	0.2	2244
04003 0 76 06242			LDA	MINU17	2245
04004 0 63 06504			ADM	SVBBT	2246
04005 0 01 05672			BRU	EXITRU	2247
*FEX-TRY SAVE					2248
04006 0 00 00000	FEXTYS HLT				2249
04007 0 35 00043			STA	SAVET1	2250
04010 1 27 00000			SAL	FLSLST	2251
04011 1 27 00001			SAL	FYSLST	2252
04012 1 27 00020			SAL	WARKLT	2253
04013 1 27 00021			SAL	XITLS	2254
04014 0 76 00014			LDA	LINECT	2255
04015 1 51 00023			SBB	SAVELS	2256
04016 0 76 00005			LDA	INCHCT	2257
04017 1 51 00023			SBB	SAVELS	2258
04020 0 76 00004			LDA	CRNTCH	2259
04021 1 51 00023			SBB	SAVELS	2260
04022 0 76 04006			LDA	FEXTYS	2261
04023 1 51 00023			SBB	SAVELS	2262
04024 1 51 00023			SBB	SAVELS	2263
04025 0 76 00043			LDA	SAVET1	2264
04026 0 51 04006			MIN	FEXTYS	2265
04027 0 51 04006			BRR	FEXTYS	2266
*FAIL					2267
04030 0 71 06504	FAIL LDX		SVBBT	SAVE PBTBOM	2268
04031 2 76 00000			LDA	W0.2	2269
04032 0 54 00024			SUB	ONE	2270
04033 0 35 00044			STA	FAILEX	2271
04034 2 76 37777			LDA	W1.2	2272
04035 0 35 04006			STA	FEXTYS	2273
04036 2 76 37776			LDA	W2.2	2274
04037 0 35 00004			STA	CRPNT CHAR	2275
04040 2 76 37775			LDA	W3.2	2276
04041 0 35 00005			STA	INCHCT	2277
04042 2 76 37774			LDA	W4.2	2278

04043	0 35 00014		STA	LINECT	LINE CNT	2279
04044	0 76 06244		LDA	MINUS5	MINUS FIVE	2280
04045	0 63 06504		ADM	SVBRT	SAVE BOTTOM	2281
04046	1 55 00021		REC	XITLS	EXIT LIST	2282
04047	1 55 00020		REC	WRKLT	WORK LIST	2283
04050	1 55 00001		REC	FXSLST	FX SCALAR LIST	2284
04051	1 55 00000		REC	FLSLST	FL SCALAR LIST	2285
04052	0 51 04006		BRX	FEXTYS	FEX-TRY SAVE	2286
*SAVE LIST DATA						2287
04053	0 76 06246	SVLRDT	LDA	N8FLSV	NUMBER OF FIRST LIST SAVED	2288
04054	0 35 00043		STA	SAVETI	SAVE TEMP 1	2289
04055	0 71 06243		LOX	N8LSVB	NUMBER OF LISTS SAVED BRXER	2290
04056	1 27 40043	\$175	SAL*	SAVETI	SAVE TEMP 1	2291
04057	0 61 00043		MIN	SAVETI	SAVE TEMP 1	2292
04060	0 41 04056		BRX	\$175	\$1	2293
04061	0 43 04006		BRM	FEXTYS	FEX-TRY SAVE	2294
04062	0 01 04064		BRU	RCFAIL	RECOVER FRBM FAIL	2295
04063	0 01 05706		BRU	EXIT	EXIT	2296
*RECOVER FRBM FAIL						2297
04064	0 76 00044	RCFAIL	LDA	FAILEX	FAIL EXIT	2298
04065	0 35 46502		STA*	FYIBBT	EXIT BOTTOM	2299
04066	0 76 06216		LDA	N8LLSV	NUMBER OF LAST LIST SAVED	2300
04067	0 35 00043		STA	SAVETI	SAVE TEMP 1	2301
04070	0 71 06243		LOX	N8LSVB	NUMBER OF LISTS SAVFD BRXER	2302
04071	1 55 40043	\$175	REC*	SAVETI	SAVE TEMP 1	2303
04072	0 60 00043		SKR	SAVETI	SAVE TEMP 1	2304
04073	0 41 04071		BRX	\$176	\$1	2305
04074	0 76 06217		LDA	NPITSV	NUMBER OF ITEMS SAVED	2306
04075	0 63 06504		ADM	SVBRT	SAVE BOTTOM	2307
04076	0 01 05706		BRU	EXIT	EXIT	2308
*SAL PRP						2309
04077	0 43 05473	SALPRP	BRM	N8NESE	N8 NEST ENTRY	2310
04100	2 76 06407		LDA	START.2	START	2311
04101	2 54 06361		SUB	BASE.2	BASE	2312
04102	1 51 00023		S8B	SAVELS	SAVE LIST	2313
04103	2 76 06434		LDA	T8P.2	T8P	2314
04104	2 54 06361		SUB	BASE.2	BASE	2315
04105	1 51 00023		S8B	SAVELS	SAVE LIST	2316
04106	2 76 06461		LDA	B8TT8M.2	B8TT8M	2317
04107	2 54 06361		SUB	BASE.2	BASE	2318
04110	1 51 00023		S8B	SAVELS	SAVE LIST	2319
04111	0 01 05660		BRU	INDEXX	INDEX EXIT	2320
*REC PRP						2321
04112	0 43 05473	RECPAP	BRM	N8NESE	N8 NEST ENTRY	2322
04113	0 76 46504		LDA*	SVBRT	SAVE BOTTOM	2323
04114	2 55 06361		ADD	BASE.2	BASE	2324
04115	2 35 06461		STA	B8TT8M.2	B8TT8M	2325
04116	0 60 06504		SKR	SVBRT	SAVE BOTTOM	2326
04117	0 76 46504		LDA*	SVBRT	SAVE BOTTOM	2327
04120	2 55 06361		ADD	BASE.2	BASE	2328





04176	1	04	04202		JAF	\$180	\$7	2379
04177	2	76	37777	\$179	LDA	WI.2	WI	2380
04200	0	16	00024		MRG	BFINDB	M8P IND HIT	2381
04201	2	35	37777		STA	WI.2	WI	2382
04202	0	76	46501	\$180	LDA*	WRKB8T	WRK B8TT8M	2383
04203	0	64	06324		MPY	RSH18	RIGHT SHIFTER 18	2384
04204	0	64	06266		MPY	KEYVAL	KEY VALUE	2385
04205	0	46	00010		CBA			2386
04206	0	55	46501		ADD*	WRKB8T	WRK B8TT8M	2387
04207	0	54	00024		SUB	8NE	8NE	2388
04210	0	64	06322		MPY	RSH14	RIGHT SHIFTER 14	2389
04211	0	60	06501		SKR	WRKB8T	WRK B8TT8M	2390
04212	0	76	46501		LDA*	WRKB8T	WRK B8TT8M	2391
04213	0	16	06322		MRG	8NEA14	8NE IN 14TH BIT	2392
04214	0	01	04221		BRU	BAFBIF	BAF-BIF	2393
*BAF P8P								2394
04215	0	43	05502	BAFP8P	BRM	P8NTRY	P8P ENTRY	2395
04216	0	76	46501		LDA*	WRKB8T	WRK B8TT8M	2396
04217	0	64	06322		MPY	RSH14	RIGHT SHIFTER 14	2397
04220	0	46	00200		CXA			2398
*BAF-RIF								2399
04221	0	66	00012	BAFBIF	RSH	10	12	2400
04222	0	46	00010		CBA			2401
04223	1	51	00015		S88	C8DLST	C8DE LIST	2402
04224	0	01	05705		BRU	CLRIAE	CLEAR 8NE AND EXIT	2403
*DMY TEST								2404
04225	1	52	01100	DYTEST	S8T	LDYIDF	LOCAL DMY ID FLAG	2405
04226	1	03	04245		JAT	\$181	\$1	2406
04227	0	53	00041		SKN	SPTRIG	SPR8G TRIGGER	2407
04230	0	01	05666		BRU	XTF	EXIT FALSE	2408
04231	3	10	00000		FET	W0.2	W0	2409
04232	1	12	03722		JRS	L8DCTL	L8AD CENTRAL	2410
04233	1	44	00007		SER	GDLIST	GL8BAL DMY LIST	2411
04234	1	04	05666		JAF	XTF	EXIT FALSE	2412
04235	3	11	37777		SWT	WI.2	WI	2413
04236	1	52	00500		S8T	AYIDFG	ARRAY ID FLAG	2414
04237	1	31	06246		RNG	TW8	TW8	2415
04240	0	60	06501		SKR	WRKB8T	WRK B8TT8M	2416
04241	1	04	04245		JAF	\$181	\$1	2417
04242	0	46	01000		CNA			2418
04243	1	51	00020		S88	WARKLT	WARK LIST	2419
04244	1	32	00576		BAF	EAX8PP	EAX+ 8P	2420
04245	1	31	06246	\$181	RNG	TW8	TW8	2421
04246	0	01	05672		BRU	EXITRU	EXIT TRUE	2422
*FIL P8P								2423
04247	0	43	05473	FILP8P	BRM	N8NESE	N8 NEST ENTRY	2424
04250	2	76	00000		LDA	0.2	0	2425
04251	1	51	00015		S88	C8DLST	C8DE LIST	2426
04252	0	01	05654		BRU	B8TEXT	B8TT8M EXIT	2427

*SER	PBP		PAGE		2429	2428
04253	0 43 05502	SER99P	BRM	PENTRY	PBP ENTRY	2430
04254	2 76 06434		LDA	TOP.2	TOP	2431
04255	2 54 06461		SUB	BOTTOM.2	BOTTOM	2432
04256	0 35 00061		STA	SERTP1	SER TEMP 1	2433
04257	0 53 00061		SKN	SERTP1	SER TEMP 1	2434
04260	0 01 05666		BRU	XTF	EXIT FALSE	2435
04261	2 76 06334		LDA	CODE.2	CODE	2436
04262	0 14 06272		ETR	SIZMSK	SIZE MASK	2437
04263	0 54 00024		SUB	ONE	ONE	2438
04264	0 35 00062		STA	SERTP2	SER TEMP 2	2439
04265	0 16 06021		MRG	EAXBP	LIVE EAX+ MBP	2440
04266	0 35 04314		STA	\$183	\$2	2441
04267	0 35 04330		STA	\$187	\$6	2442
04270	2 76 06461		LDA	BOTTOM.2	BOTTOM	2443
04271	0 54 00062		SUB	SERTP2	SER TEMP 2	2444
04272	0 55 00024		ADD	ONE	ONE	2445
04273	0 35 00063		STA	SERTP3	SER TEMP 3	2446
04274	0 16 06026		MRG	SKERP	LIVE SKE+ MBP	2447
04275	0 35 04315		STA	\$184	\$3	2448
04276	0 55 00024		ADD	ONE	ONE	2449
04277	0 35 04320		STA	\$185	\$4	2450
04300	0 14 00027		ETR	ADMSK	ADR MASK	2451
04301	0 54 00024		SUB	ONE	ONE	2452
04302	0 16 06022		MRG	SKMBP	LIVE SKM+ MBP	2453
04303	0 35 04331		STA	\$188	\$7	2454
04304	0 37 00064		STX	SERTP4	SER TEMP 4	2455
04305	2 76 06334		LDA	CODE.2	CODE	2456
04306	0 72 06214		SKA	INTGLM	INTEGER LIST MASK	2457
04307	0 01 04323		BRU	\$186	\$5	2458
04310	0 71 00061		LOX	SERTP1	SER TEMP 1	2459
04311	0 76 06330		LDA	CTL2	CENTRAL 2	2460
04312	0 75 06327		LDB	CTL1	CENTRAL 1	2461
04313	0 46 00014	\$182	XAB			2462
04314	2 77 00000	\$183	EAX	SIZEM1.2	(SIZE-1)	2463
04315	2 50 00000	\$184	SKE	RPTSZ2.2	(BOTTOM-SIZE+2)	2464
04316	0 41 04314		BRX	\$183	\$2	2465
04317	0 46 00014		XAB			2466
04320	2 50 00000	\$185	SKE	RPTSZ3.2	(BOTTOM-SIZE+3)	2467
04321	0 41 04313		BRX	\$182	\$1	2468
04322	0 01 04333		BRU	\$189	\$8	2469
04323	0 71 00061	\$186	LDX	SERTP1	SER TEMP 1	2470
04324	0 75 00026		LDB	ONES		2471
04325	0 72 06323		SKA	LBLSTM	LABEL LIST MASK	2472
04326	0 75 06315		LDB	ARSATM	ALL BUT SIGN AND TAG MASK	2473
04327	0 76 06330		LDA	CTL2	CENTRAL 2	2474
04330	2 77 00000	\$187	EAX	SIZEM1.2	(SIZE-1)	2475
04331	2 70 00000	\$188	SKM	RPTSZ2.2	(BOTTOM-SIZE+2)	2476
04332	0 41 04330		BRX	\$187	\$6	2477

04333	0	46	00200	\$180	CXA				2478
04334	0	14	00027		ETR	ADRMSK	ADR MASK		2479
04335	0	73	00024		SKG	BNE	BNE		2480
04336	0	01	05666		BRU	XTF	EXIT FALSE		2481
04337	0	16	06236		MRG	ARAM	ALL BIT ADR MASK		2482
04340	0	35	00065		STA	SERTP5	SER TEMP 5		2483
04341	0	71	00064		LDX	SERTP4	SER TEMP 4		2484
04342	2	76	06334		LDA	CODE,2	CODE		2485
04343	0	14	06236		ETR	CDMASK	CODE MASK		2486
04344	0	55	00063		ADD	SERTP3	SER TEMP 3		2487
04345	0	55	00065		ADD	SERTP5	SER TEMP 5		2488
04346	2	54	06361		SUB	BASE,2	BASE		2489
04347	1	51	00020		S9B	W9RKL	W9RK LIST		2490
04350	0	01	05672		BRU	EXITRU	EXIT TRUE		2491
*B9P P9P									
04351	0	43	05473	B9PP9P	BRM	N9NESE	N9 NEST ENTRY		2492
04352	2	76	06334		LDA	CODE,2	CODE		2493
04353	0	14	06236		ETR	CDMASK	CODE MASK		2494
04354	2	55	06461		ADD	B9TT9M,2	B9TT9M		2495
04355	2	54	06361		SUB	BASE,2	BASE		2496
04356	0	55	00024		ADD	BNE	BNE		2497
04357	1	51	00020		S9B	W9RKL	W9RK LIST		2498
04360	0	01	05654		BRU	B9TEXT	B9TT9M EXIT		2499
*M9P P9P									
04361	0	43	05473	M9PP9P	BRM	N9NESE	N9 NEST ENTRY		2500
04362	0	76	06327		LDA	CTL1	CENTRAL 1		2501
04363	3	51	00000		S9B	0,2	0		2502
04364	0	76	06330		LDA	CTL2	CENTRAL 2		2503
04365	3	51	00000		S9B	0,2	0		2504
04366	0	01	05654		BRU	B9TEXT	B9TT9M EXIT		2505
*S9F P9P									
04367	0	43	05502	S9FP9P	BRM	P9NTRY	P9P ENTRY		2506
04370	0	76	46501		LDA*	W9KB9T	W9RK B9TT9M		2507
04371	2	72	00000		SKA	0,2	0		2508
04372	0	01	05672		BRU	EXITRU	EXIT TRUE		2509
04373	0	01	05666		BRU	XTF	EXIT FALSE		2510
*S9T P9P									
04374	0	43	05502	S9TP9P	BRM	P9NTRY	P9P ENTRY		2511
04375	0	46	00200		CXA				2512
04376	0	67	00014		LSH	12	14		2513
04377	0	75	06267		LDB	CHIMSK	CHAR 1 MASK		2514
04400	0	70	46501		SKM*	W9KB9T	W9RK B9TT9M		2515
04401	0	01	05666		BRU	XTF	EXIT FALSE		2516
04402	0	01	05672		BRU	EXITRU	EXIT TRUE		2517
*B9G P9P									
04403	0	43	05502	B9GP9P	BRM	P9NTRY	P9P ENTRY		2518
04404	3	10	00000		FET	0,2	0		2519
04405	3	11	37777		SWT	W1,2	W1		2520
04406	1	12	04414		JRS	PRPNTR	PR9CESS PNTR		2521
04407	2	76	00000		LDA	W0,2	W0		2522

04410	0 53 00062	ADM	ADRPT9	ADDRESS POINTED TO	2528
04411	0 76 40062	LDA*	ADRPT9	ADDRESS POINTED TO	2529
04412	0 35 46501	STA*	WRKB9T	WRK B9TT9M	2530
04413	0 01 05706	BRU	EXIT	EXIT	2531
*PROCESS PNTR					
04414	0 76 46501	PRPNTR LDA*	WRKB9T	WRK B9TT9M	2532
04415	0 64 06324	MPY	RSR18	RIGHT SHIFTER 18	2533
04416	0 14 06272	ETR	CH4MSK	CHAR 4 MASK	2534
04417	0 46 00400	CAX			2535
04420	0 76 46501	LDA*	WRKB9T	WRK B9TT9M	2536
04421	0 14 00027	ETR	PNTRAM	PNTR ADR MASK	2537
04422	2 55 06361	ADD	BASE.2	BASE	2538
04423	0 35 00062	STA	ADRPT9	ADDRESS POINTED TO	2539
04424	0 01 05705	BRU	CLR1AE	CLEAR ONE AND EXIT	2540
					2541

		PAGE				
*CME PBP					2543	2542
04425	0 43 04476	SNEPBP	BRM	TSTMTY	TEST FOR EMPTY	2544
04426	0 01 05672		BRU	EXITRU	EXIT TRUE	2545
*CNT PBP					2546	
04427	0 43 05473	CNTPBP	BRM	NENESE	NA NEST ENTRY	2547
04430	2 76 06461		LDA	BATTOM.2	BATTOM	2548
04431	2 54 06434		SUB	TBP.2	TBP	2549
04432	1 51 00020		SAB	WARKLT	WORK LIST	2550
04433	0 01 05654		BRU	BATEXT	BATTOM EXIT	2551
*FET PBP					2552	
04434	0 43 05473	FETPBP	BRM	NENESE	NA NEST ENTRY	2553
04435	2 76 00000		LDA	N.2	0	2554
04436	1 51 00020		SAB	WARKLT	WORK LIST	2555
04437	0 01 05654		BRU	BATEXT	BATTOM EXIT	2556
*SWT PBP					2557	
04440	0 43 05473	SWTPBP	BRM	NENESE	NA NEST ENTRY	2558
04441	2 76 00000		LDA	N.2	0	2559
04442	0 52 46501		XMA*	WRKBT	WORK BATTOM	2560
04443	2 35 00000		STA	N.2	0	2561
04444	0 01 05654		BRU	BATEXT	BATTOM EXIT	2562
*M9N PBP					2563	
04445	0 43 05473	M9NPBP	BRM	NENESE	NA NEST ENTRY	2564
04446	0 76 46501		LDA*	WRKBT	WORK BATTOM	2565
04447	0 60 06501		SKR	WRKBT	WORK BATTOM	2566
04450	3 51 00000		SAB	N.2	0	2567
04451	0 01 05654		BRU	BATEXT	BATTOM EXIT	2568
*MBF PBP					2569	
04452	0 43 04476	MBFPBP	BRM	TSTMTY	TEST FOR EMPTY	2570
04453	2 76 46461		LDA*	BATTOM.2	BATTOM	2571
04454	2 60 06461		SKR	BATTOM.2	BATTOM	2572
04455	1 51 00020		SAB	WARKLT	WORK LIST	2573
04456	0 01 05672		BRU	EXITRU	EXIT TRUE	2574
*TBT PBP					2575	
04457	0 43 04476	TBTBPBP	BRM	TSTMTY	TEST FOR EMPTY	2576
04460	2 61 06434		MIN	TBP.2	TBP	2577
04461	2 76 46434		LDA*	TBP.2	TBP	2578
04462	1 51 00020		SAB	WARKLT	WORK LIST	2579
04463	0 01 05672		BRU	EXITRU	EXIT TRUE	2580
*LCF PBP					2581	
04464	0 43 04476	LCFPBP	BRM	TSTMTY	TEST FOR EMPTY	2582
04465	0 54 00024		SUB	ONE	ONE	2583
04466	0 01 04471		BRU	LCBLCF	LCB-LCF COMMON	2584
*LCB PBP					2585	
04467	0 43 04476	LCBPBP	BRM	TSTMTY	TEST FOR EMPTY	2586
04470	0 55 00024		ADD	ONE	ONE	2587
*LCB-LCF COMMON					2588	
04471	2 62 06434	LCBLCF	XMA	TBP.2	TBP	2589
04472	0 46 00400		CAX			2590
04473	3 25 00001		LDP	1.2	1	2591

		PAGE				
*ERR PBP					2767	
04727	0 43 05502	E0SPBP	BRM	PENTRY	PAP ENTRY	2768
04730	0 76 46501		LDA*	WRKBBT	WARK BOTOM	2769
04731	2 17 00000		EAR	0.2	0	2770
04732	2 35 00000		STA	0.2	0	2771
04733	0 01 05705		BRU	CLR IAE	CLEAR ONE AND EXIT	2772
*SAL PBP					2773	
04734	0 43 05502	S0LPBP	BRM	PENTRY	PBP ENTRY	2774
04735	1 07 00061		STD	FALTPA	FAL TEMP A	2775
04736	0 53 00061		SKN	FALTPA	FAL TEMP A	2776
04737	0 46 30003		CLR			2777
04740	0 53 00061		SKN	FALTPA	FAL TEMP A	2778
04741	1 53 00061		SDP	FALTPA	FAL TEMP A	2779
04742	3 54 00000		ADP	0.2	0	2780
04743	0 72 00025		SKA	SIGNBT	SIGN BIT	2781
04744	0 01 05672		BRU	EXITRU	EXIT TRUE	2782
04745	1 25 00061		LDP	FALTPA	FAL TEMP A	2783
04746	0 01 05666		BRU	XTF	EXIT FALSE	2784
*LDP PBP					2785	
04747	0 43 05473	L0PPBP	BRM	N0NESE	N0 NEST ENTRY	2786
04750	2 76 00000		LDA	0.2	0	2787
04751	2 75 00001		LOS	1.2	1	2788
04752	0 01 05660		BRU	INDEXX	INDEX EXIT	2789
*STD PBP					2790	
04753	0 43 05473	STDPBP	BRM	N0NESE	N0 NEST ENTRY	2791
04754	2 35 00000		STA	0.2	0	2792
04755	2 36 00001		STB	1.2	1	2793
04756	0 01 05660		BRU	INDEXX	INDEX EXIT	2794
*ADP PBP					2795	
04757	0 43 05473	A0PPBP	BRM	N0NESE	NA NEST ENTRY	2796
04760	0 46 00014		XAB			2797
04761	2 55 00001		ADD	1.2	1	2798
04762	0 46 00014		XAB			2799
04763	2 57 00000		ADC	0.2	0	2800
04764	0 01 05660		BRU	INDEXX	INDEX EXIT	2801
*SDP PBP					2802	
04765	0 43 05473	S0PPBP	BRM	N0NESE	NA NEST ENTRY	2803
04766	0 46 00014		XAB			2804
04767	2 54 00001		SUB	1.2	1	2805
04770	0 46 00014		XAB			2806
04771	2 56 00000		SUC	0.2	0	2807
04772	0 01 05660		BRU	INDEXX	INDEX EXIT	2808

04474	1	07	06327	STD	CTLI	CENTRAL 1	2592
04475	0	01	05672	BRU	EXITRU	EXIT TRUE	2593
*TEST FOR EMPTY							
04476	0	00	00000	TSTMTY	HLT		2594
04477	0	43	05502		BRM	PBP ENTRY	2595
04500	2	76	06434		LDA	TBP.2	2596
04501	0	55	00024		ADD	BNE	2597
04502	2	73	06461		SKG	BOTTOM.2	2598
04503	0	51	04476		BRR	TEST FOR EMPTY	2599
04504	2	76	06407		LDA	START.2	2600
04505	2	35	06434		STA	TBP.2	2601
04506	2	35	06461		STA	BOTTOM.2	2602
04507	0	01	05666		BRU	EXIT FALSE	2603
*RSV PBP							
04510	0	43	05473	RSVPBP	BRM	NB NEST ENTRY	2604
04511	2	76	06407		LDA	START	2605
04512	2	54	06361		SUB	BASE.2	2606
04513	3	51	00000		SBB	0.2	2607
04514	2	76	06434		LDA	TBP.2	2608
04515	2	54	06361		SUB	BASE.2	2609
04516	3	51	00000		SBB	0.2	2610
04517	2	76	06461		LDA	BOTTOM.2	2611
04520	2	35	06407		STA	START.2	2612
04521	2	35	06434		STA	TBP.2	2613
04522	0	01	05654		BRU	BTEXT	2614
*RLS PBP							
04523	0	43	05502	RLSPBP	BRM	PBP ENTRY	2615
*RFLEASE LIST							
04524	2	76	06407	RELIST	LDA	START.2	2616
04525	2	35	06434		STA	TBP.2	2617
04526	2	35	06461		STA	BOTTOM.2	2618
04527	2	73	06361		SKG	BASE.2	2619
04530	0	01	05706		BRU	EXIT	2620
04531	2	76	46407		LDA*	START.2	2621
04532	2	55	06361		ADD	BASE.2	2622
04533	2	35	06434		STA	TBP.2	2623
04534	2	60	06407		SKR	START.2	2624
04535	2	76	46407		LDA*	START.2	2625
04536	2	55	06361		ADD	BASE.2	2626
04537	2	60	06407		SKR	START.2	2627
04540	2	75	06407		LDB	START.2	2628
04541	2	35	06407		STA	START.2	2629
04542	2	36	06461		STB	BOTTOM.2	2630
04543	0	01	05706		BRU	EXIT	2631



		PAGE				
*FIP PBP						2637
04544	0 46 00001	FIPBP	CLA			2638
04545	0 43 04557		ERM	FFF	FIC-FAC-FIP	2639
04546	0 76 00044		LDA	MFCOPY	MERG BF COPY	2640
04547	0 16 46501		MRG*	WRKBT	WRK BTTM	2641
04550	0 35 46501		STA*	WRKBT	WRK BTTM	2642
04551	0 01 05706		BRU	EXIT	EXIT	2643
*FAC PBP						2644
04552	0 46 00001	FACBP	CLA			2645
04553	0 01 04555		JUN	FFCQM	FIC-FAC CMMN	2646
*FIC PBP						2647
04554	0 76 06241	FICBP	LDA	MDEMS	MDE MASK	2648
*FIC-FAC CMMN						2649
04555	0 43 04557	FFCQM	ERM	FFF	FIC-FAC-FIP	2650
04556	0 01 05706		BRU	EXIT	EXIT	2651
*FIC-FAC-FIP						2652
04557	0 00 00000	FFF	HLT			2653
04560	0 43 05502		ERM	PENTRY	PBP ENTRY	2654
04561	0 35 00061		STA	FFFTPI	FIC-FAC-FIP TEMP 1	2655
04562	0 35 00044		STA	MFCOPY	MERG BF COPY	2656
04563	3 34 00000		PLB	0.2	0	2657
04564	0 35 00045		STA	CTPLEX	COUNT BF PLEX	2658
04565	0 35 00043		STA	CTCOPY	COUNT BF COPY	2659
04566	0 76 06501	\$190	LDA	WRKBT	WRK BTTM	2660
04567	0 54 00043		SUB	CTCOPY	COUNT BF COPY	2661
04570	0 46 00400		CXA			2662
04571	2 76 00000		LDA	0.2	0	2663
04572	1 51 00017		SSB	PLEXLS	PLEX LIST	2664
04573	0 14 06241		ETR	MDEMS	MDE MASK	2665
04574	0 16 00044		MRG	MFCOPY	MERG BF COPY	2666
04575	0 35 00044		STA	MFCOPY	MERG BF COPY	2667
04576	0 60 00043		SKR	CTCOPY	COUNT BF COPY	2668
04577	0 01 04566		BRU	\$190	\$1	2669
04600	0 76 06501		LDA	WRKBT	WRK BTTM	2670
04601	0 54 00045		SUB	CTPLEX	COUNT BF PLEX	2671
04602	0 35 06501		STA	WRKBT	WRK BTTM	2672
04603	0 76 46501		LDA*	WRKBT	WRK BTTM	2673
04604	0 14 00061		ETR	FFFTPI	FIC-FAC-FIP TEMP 1	2674
04605	0 16 46500		MRG*	PLEXBT	PLEX BTTM	2675
04606	0 35 46501		STA*	WRKBT	WRK BTTM	2676
04607	0 60 06500		SKR	PLEXBT	PLEX BTTM	2677
04610	0 51 04557		BRU	FFF	FIC-FAC-FIP	2678
*PLB PBP						2679
04611	0 43 05473	PLBPBP	ERM	NANSE	NB NEST ENTRY	2680
04612	0 46 00200		CXA			2681
04613	0 67 00014		LSH	12	14	2682
04614	0 14 06236		ETR	CDMASK	CODE MASK	2683
04615	0 55 06500		ADD	PLEXBT	PLEX BTTM	2684
04616	0 54 06400		SUB	PLXBAS	PLEX BASE	2685

04617	0	55	00024		ADD	ONE	ONE	2686
04620	1	51	00020		SAB	WORKLT	WORK LIST	2687
04621	0	46	00200		CXA			2688
04622	0	14	06247		ETP	LAW2BM	LOW 2 BITS MASK	2689
04623	1	51	00017		SAB	PLEXLS	PLEX LIST	2690
04624	0	01	05654		BRU	BATEXT	BOTTOM EXIT	2691
*PUL PBP								
04625	0	43	05502	PULPBP	BRM	PENTRY	PBP ENTRY	2692
04626	0	37	00046		STX	TGTLCY	TARGET LIST OF COPY	2693
04627	0	76	46501		LDA*	WRKBBT	WORK BOTTOM	2694
04630	0	60	06501		SKR	WRKBBT	WORK BOTTOM	2695
04631	0	14	00027		ETR	PNTRAM	PNTR ADR MASK	2696
04632	0	35	00047		STA	STOCXX	SOURCE TSP OF COPY	2697
04633	0	55	06400		ADD	PLXBAS	PLEX BASE	2698
04634	0	46	00400		CAX			2699
04635	2	76	00000		LDA	0.2	0	2700
04636	0	35	00043		STA	CTCOPY	COUNT OF COPY	2701
04637	0	01	04646		BRU	\$192	\$2	2702
04640	0	61	00047	\$191	MIN	STOCXX	SOURCE TSP OF COPY	2703
04641	0	76	00047		LDA	STOCXX	SOURCE TSP OF COPY	2704
04642	0	55	06400		ADD	PLXBAS	PLEX BASE	2705
04643	0	46	00400		CAX			2706
04644	2	76	00000		LDA	0.2	0	2707
04645	1	51	40046		SAB*	TGTLCY	TARGET LIST OF COPY	2708
04646	0	60	00043	\$192	SKR	CTCOPY	COUNT OF COPY	2709
04647	0	01	04640		BRU	\$191	\$1	2710
04650	0	01	05706		BRU	EXIT	EXIT	2711
*ADR PBP								
04651	0	43	05502	ADRPBP	BRM	PENTRY	PBP ENTRY	2712
04652	0	46	00200		CXA			2713
04653	1	51	00020		SAB	WORKLT	WORK LIST	2714
04654	0	01	05706		BRU	EXIT	EXIT	2715
*CAR PBP								
04655	0	76	46501	CARPBP	LDA*	WRKBBT	WORK BOTTOM	2716
04656	0	60	06501		SKR	WRKBBT	WORK BOTTOM	2717
04657	0	43	04710		BRM	CPYLST	COPY LIST	2718
04660	0	71	00050		LGX	RLSTCY	SOURCE LIST OF COPY	2719
04661	0	01	04524		BRU	RELIST	RELEASE LIST	2720
*CBF PBP								
04662	0	43	05502	CBFPBP	BRM	PENTRY	PBP ENTRY	2721
04663	0	37	00061		STX	CBFTPI	CBF TEMP 1	2722
04664	1	43	40061		SNE*	CBFTPI	CBF TEMP 1	2723
04665	1	04	05665		JAF	CLRIF	CLEAR ONE EXIT FALSE	2724
04666	3	17	40000		PSV*	W0.2	W0	2725
04667	1	33	40061		CAR*	CBFTPI	CBF TEMP 1	2726
04670	0	01	05672		BRU	EXITRU	EXIT TRUE	2727
*CAC PBP								
04671	0	76	06024	CACPBP	LDA	LHPLIN	LIVE HLT PLEX LIST INST	2728
04672	0	43	04710		BRM	CPYLST	COPY LIST	2729
04673	0	01	04701		BRU	CICACT	CIC-CAC COUNT	2730

*CIC PBP					2736	
04674	0 76 06024	CICPAP	LDA	LHPLIN	LIVE HLT PLEX LIST INST	2737
04675	0 43 04710		BRM	CPYLST	COPY LIST	2738
04676	0 76 00044		LDA	M8FCPY	MERG BF COPY	2739
04677	0 16 46501		MRG*	WRKBOT	WORK BOTTOM	2740
04700	0 35 46501		STA*	WRKBOT	WORK BOTTOM	2741
*CIC-CAC COUNT					2742	
04701	0 76 46501	CICACT	LDA*	WRKBOT	WORK BOTTOM	2743
04702	0 14 00027		ETR	PNTRAM	PNTR ADR MASK	2744
04703	0 55 06400		ADD	PLXBAS	PLEX BASE	2745
04704	0 35 00052		STA	ADRPT9	ADDRESS PRINTED TO	2746
04705	0 76 00043		LDA	CTCOPY	COUNT OF COPY	2747
04706	0 63 40062		ADM*	ADRPT9	ADDRESS PRINTED TO	2748
04707	0 01 05706		BRU	EXIT	EXIT	2749
*COPY LIST					2750	
04710	0 00 00000	CPYLST	HLT			2751
04711	0 43 05502		BRM	PENTRY	PBP ENTRY	2752
04712	0 35 00046		STA	TGTLCY	TARGET LIST OF COPY	2753
04713	0 37 00050		STX	SLSTCY	SOURCE LIST OF COPY	2754
04714	0 46 00001		CLA			2755
04715	0 35 00043		STA	CTCOPY	COUNT OF COPY	2756
04716	0 35 00044	\$193	STA	M8FCPY	MERG BF COPY	2757
04717	1 22 40050		T9T*	SLSTCY	SOURCE LIST OF COPY	2758
04720	1 04 04726		JAF	\$194	\$2	2759
04721	1 24 40046		M9N*	TGTLCY	TARGET LIST OF COPY	2760
04722	0 61 00043		MIN	CTCOPY	COUNT OF COPY	2761
04723	0 14 06241		ETR	M8DEMS	M8DE MASK	2762
04724	0 16 00044		MRG	M8FCPY	MERG BF COPY	2763
04725	0 01 04716		BRU	\$193	\$1	2764
04726	0 51 04710	\$194	BRR	CPYLST	COPY LIST	2765

		PAGE				2810	2809	
*S0C PBP								
04773	0	43	05214	S0CPBP	BRM	RDYSCH	READY SCAN CHAR	2811
04774	2	72	00000		SKA	0.2	0	2812
04775	0	01	05672		BRU	EXITRU	EXIT TRUE	2813
04776	0	01	05666		BRU	XTF	EXIT FALSE	2814
*CSF PBP								
04777	0	43	05502	CSFPBP	BRM	PENTRY	PBP ENTRY	2815
05000	3	02	00000		CSA	0.2	0	2816
05001	1	03	05706		JAT	EXIT	EXIT	2817
05002	0	01	03761		BRU	ILSYFA	ILLEGAL SYNTAX FAIL	2818
*CSA PBP								
05003	0	43	05214	CSAPBP	BRM	RDYSCH	READY SCAN CHAR	2819
05004	2	50	00000		SKE	0.2	0	2820
05005	0	01	05666		BRU	XTF	EXIT FALSE	2821
05006	0	46	00001		CLA			2822
05007	0	35	00004		STA	CRNTCH	CRRT CHAR	2823
05010	0	01	05672		BRU	EXITRU	EXIT TRUE	2824
*PRC PBP								
05011	0	43	05502	PRCPBP	BRM	PENTRY	PBP ENTRY	2827
05012	2	75	00000		LDB	0.2	0	2828
05013	0	67	00006		LSH	6	6	2829
05014	0	43	05124		BRM	PRINT	PRINT	2830
05015	0	01	05706		BRU	EXIT	EXIT	2831
*PRO PBP								
05016	0	43	05502	PROPPBP	BRM	PENTRY	PBP ENTRY	2833
05017	0	43	05035		BRM	INITQS	INITIALIZE QUOTE SCAN	2834
05020	0	43	05046	\$195	BRM	OSNEXC	QUOTE SCAN NEXT CHAR	2835
05021	0	01	05706		BRU	EXIT	EXIT	2836
05022	0	66	00022		RSH	18	22	2837
05023	0	43	05124		BRM	PRINT	PRINT	2838
05024	0	01	05020		BRU	\$195	\$1	2839
*OSF PBP								
05025	0	43	05214	OSFPBP	BRM	RDYSCH	READY SCAN CHAR	2840
05026	0	43	05035		BRM	INITQS	INITIALIZE QUOTE SCAN	2841
05027	0	43	05046	\$196	BRM	OSNEXC	QUOTE SCAN NEXT CHAR	2842
05030	0	01	05706		BRU	EXIT	EXIT	2843
05031	0	50	00004		SKE	CRNTCH	CRRT CHAR	2844
05032	0	01	04030		BRU	FAIL	FAIL	2845
05033	0	43	05225		BRM	NYACCH	NEXT ACTIVE CHAR	2846
05034	0	01	05027		BRU	\$196	\$1	2847
*INITIALIZE QUOTE SCAN								
05035	0	00	00000		HLT			2848
05036	0	37	00071		STX	OSFWAD	OSF WORD ADR	2849
05037	0	76	06247		LDA	THREE	THREE	2850
05040	0	35	00067		STA	OSFCTR	OSF COUNTER	2851
05041	0	76	40071		LDA*	OSFWAD	OSF WORD ADR	2852
05042	0	35	00070		STA	OSFWRD	OSF WORD	2853
05043	0	43	05046	\$197	BRM	OSNEXC	QUOTE SCAN NEXT CHAR	2854
05044	0	51	05035		BRR	INITQS	INITIALIZE QUOTE SCAN	2855

05045	0 01 05043	BRU	\$197	\$1	2859
*QUOTE	SCAN NEXT CHAR				2860
05046	0 00 00000	OSNEXC	HLT	OSF WORD	2861
05047	0 76 00070	LDA	OSFWRD	OSF WORD	2862
05050	0 75 06247	LDB	CHIMSK	CHAR 1 MASK	2863
05051	0 70 05750	SKM	PERIOD	PERIOD	2864
05052	0 61 05046	MIN	OSNEXC	QUOTE SCAN NEXT CHAR	2865
05053	0 46 20005	ABC			2866
05054	0 67 00006	LSH	6	6	2867
05055	0 36 00070	STB	OSFWRD	OSF WORD	2868
05056	0 46 00400	CAX			2869
05057	0 60 00067	SKR	OSFCTR	OSF COUNTER	2870
05060	0 01 05066	BRU	\$198	\$1	2871
05061	0 61 00071	MIN	OSFWAD	OSF WORD ADR	2872
05062	0 76 40071	LDA*	OSFWAD	OSF WORD ADR	2873
05063	0 35 00070	STA	OSFWRD	OSF WORD	2874
05064	0 76 06247	LDA	THREE	THREE	2875
05065	0 35 00067	STA	OSFCTR	OSF COUNTER	2876
05066	2 76 05715	\$199	LDA	CHTTBL.2	CHAR TRANSL TABLE
05067	0 51 05046	BRR	OSNEXC	QUOTE SCAN NEXT CHAR	2877
*PRINT	5 DEC				2879
05070	1 10 06251	PR5DEC	FET	FIVE	2880
05071	1 10 00023		FET	ZER0	2881
05072	2 76 37776	\$199	LDA	W2.2	2882
05073	0 14 06315		ETR	FIVE DEC MASK	2883
05074	0 64 06256		MPY	TEN	2884
05075	0 65 06261		DIV	ONE MILLION	2885
05076	2 36 37776		STB	W2	2886
05077	0 46 00400		CAX		2887
05100	0 16 46501		MRG*	WRK8BT	WORK BOTTOM
05101	0 35 46501		STA*	WRK8BT	WORK BOTTOM
05102	0 73 00023		SKG	ZER0	2890
05103	0 77 00012		EAX	12	2891
05104	3 60 05715		PRC	CHTTBL.2	CHAR TRANSL TABLE
05105	2 60 37777		SKR	W1.2	2892
05106	0 01 05072		BRU	\$199	\$1
05107	1 60 05727		PRC	SPACE	2895
05110	1 60 05727		PRC	SPACE	2896
05111	0 01 05703		BRU	CLR3AE	CLEAR THREE AND EXIT
*PRINT	8CTAL				2898
05112	0 01 05121	P8CTAL	BRU	\$201	\$1
05113	0 46 00001	\$200	CLA		2900
05114	2 75 37777		LDB	W1.2	2901
05115	0 67 00003		LSH	3	2902
05116	2 36 37777		STB	W1.2	2903
05117	0 46 00400		CAX		2904
05120	3 60 05715		PRC	CHTTBL.2	CHAR TRANSL TABLE
05121	2 60 00000	\$201	SKR	W0.2	2906
05122	0 01 05113		BRU	\$200	\$2
05123	0 01 05704		BRU	CLR2AE	CLEAR TWO AND EXIT

\*PRINT

2909

05124	0 00 00000	PRINT	HLT			2910
05125	0 46 00002		CLB			2911
05126	0 66 00006		RSH	6		2912
05127	0 36 00072		STB	HOLDPWD	HOLD PRINT WORD	2913
05130	0 43 05433		BRM	ISFREE	IS FREE	2914
05131	0 02 02041		ESM	2041	2041	2915
05132	0 12 00072		MIW	HOLDPWD	HOLD PRINT WORD	2916
05133	0 61 00022		MIN	CHTSLN	CHARS THIS LINE	2917
05134	0 76 06234		LDA	CAR9L9	CAR RETURN ZERO L9W	2918
05135	0 50 00072		SKE	HOLDPWD	HOLD PRINT WORD	2919
05136	0 01 05154		BRU	\$204	\$4	2920
05137	0 61 00016		MIN	LINETP	LINES THIS PAGE	2921
05140	0 76 00016		LDA	LINETP	LINES THIS PAGE	2922
05141	0 50 06220		SKE	LINEPP	LINES PER PAGE	2923
05142	0 01 05152		BRU	\$203	\$5	2924
05143	0 46 00001		CLA			2925
05144	0 35 00016		STA	LINETP	LINES THIS PAGE	2926
05145	0 76 06256		LDA	TEN	TEN	2927
05146	0 35 00073		STA	PRTTPI	PRINT TEMP I	2928
05147	0 12 00072	\$202	MIW	HOLDPWD	HOLD PRINT WORD	2929
05150	0 60 00073		SKR	PRTTPI	PRINT TEMP I	2930
05151	0 01 05147		BRU	\$202	\$6	2931
05152	0 46 00001	\$203	CLA			2932
05153	0 35 00022		STA	CHTSLN	CHARS THIS LINE	2933
05154	0 02 14000	\$204	ESM	14000	14000	2934
05155	0 51 05124		BRP	PRINT	PRINT	2935

*PINCH FINISH		PAGE			2937	2936
05156	0 61 00021	PCHFIN	MIN	CKSMCT	CHECK SUM CNT	2938
05157	1 23 00020		FIL	CKSUM	CHECK SUM	2939
*PINCH CBDE					2940	
05160	0 40 20400	PCHCAD	SKS	20400	20400	2941
05161	1 21 00016		RLS	CADLST	CODE LIST	2942
05162	1 43 00015	\$205	SNE	CADLST	CODE LIST	2943
05163	1 04 05706		JAF	EXIT	EXIT	2944
05164	0 43 05433		BRM	ISFREE	IS FREE	2945
05165	0 53 00021		SKN	CKSMCT	CHECK SUM CNT	2946
05166	0 02 02644		EAM	02644	02644	2947
05167	0 53 00021		SKN	CKSMCT	CHECK SUM CNT	2948
05170	0 01 05200		BRU	\$206	\$1	2949
05171	0 02 00644		EAM	00644	00644	2950
05172	0 61 00002		MIN	BLCKCT	BLCK CNT	2951
05173	0 12 00002		MIW	BLCKCT	BLCK CNT	2952
05174	0 76 00002		LDA	BLCKCT	BLCK CNT	2953
05175	0 35 00020		STA	CKSUM	CHECK SUM	2954
05176	0 76 06260		LDA	BLCKLG	BLCK LENGTH	2955
05177	0 35 00021		STA	CKSMCT	CHECK SUM CNT	2956
05200	1 22 00015	\$206	TFT	CADLST	CODE LIST	2957
05201	1 04 05212		JAF	\$207	\$2	2958
05202	0 55 00020		ADD	CKSUM	CHECK SUM	2959
05203	0 57 00023		ADC	ZER8	ZER9	2960
05204	0 35 00020		STA	CKSUM	CHECK SUM	2961
05205	0 12 46501		MIW*	WRK8BT	WRK BBT8M	2962
05206	0 60 06501		SKR	WRK8BT	WRK BBT8M	2963
05207	0 60 00021		SKR	CKSMCT	CHECK SUM CNT	2964
05210	0 01 05200		BRU	\$206	\$1	2965
05211	0 12 00020		MIW	CKSUM	CHECK SUM	2966
05212	0 02 14000	\$207	EAM	14000	14000	2967
05213	0 01 05162		BRU	\$205	\$3	2968
*READY SCAN CHAR					2969	
05214	0 00 00000	RDYSCH	HLT			2970
05215	0 43 05502		BRM	PENTRY	PBP ENTRY	2971
05216	0 76 00004		LDA	CPNTCH	CPNT CHAR	2972
05217	0 50 00023		SKE	ZER8	ZER9	2973
05220	0 51 05214		BRR	RDYSCH	READY SCAN CHAR	2974
05221	0 37 00043		STX	RDYCT1	READY CHAR TEMP 1	2975
05222	0 43 05225		BRM	NXACCH	NEXT ACTIVE CHAR	2976
05223	0 71 00043		LDX	RDYCT1	READY CHAR TEMP 1	2977
05224	0 51 05214		BRR	RDYSCH	READY SCAN CHAR	2978
*NEXT ACTIVE CHAR					2979	
05225	0 00 00000	NXACCH	HLT			2980
05226	0 76 00005		LDA	INCHCT	INPUT CHAR CNT	2981
05227	0 35 00013		STA	LACHCT	LAST ACTIVE CHAR CNT	2982
05230	0 43 05270	\$208	BRM	NXINCH	NEXT INPUT CHAR	2983
05231	0 50 05727		SKE	SFACE	SPACE	2984
05232	0 01 05237		BRU	\$209	\$7	2985

05233	0	76	00003	LDA	SCANMD	SCAN MADE	2986
05234	0	50	00024	SKE	UBLKFG	USE BLANKS FLAG	2987
05235	0	01	05230	BRU	\$208	\$1	2988
05236	0	76	05727	LDA	SPACE	SPACE	2989
05237	0	50	05767	\$209	SKE	CARET	2990
05240	0	01	05266	BRU	\$215	\$9	2991
05241	0	52	00037	SKN	LASTST	LAST STA TRIGGER	2992
05242	0	01	05266	BRU	\$215	\$9	2993
05243	0	76	00005	LDA	INCHCT	INPUT CHAR CNT	2994
05244	0	35	00044	STA	ACHTP1	ACTIVE CHAR TEMP 1	2995
05245	0	61	00014	\$210	MIN	LINE CT	2996
05246	0	43	05270	\$211	BRM	NXINCH	2997
05247	0	72	06215	\$212	SKA	CARRFG	2998
05250	0	01	05246	BRU	\$211	\$8	2999
05251	0	71	06250	LDX	F8UR	F8UR	3000
05252	0	37	00045	STX	ACHTP2	ACTIVE CHAR TEMP 2	3001
05253	0	50	05727	\$213	SKE	SPACE	3002
05254	0	01	05262	BRU	\$214	\$5	3003
05255	0	43	05270	BRM	NXINCH	NEXT INPUT CHAR	3004
05256	0	60	00045	SKR	ACHTP2	ACTIVE CHAR TEMP 2	3005
05257	0	01	05253	BRU	\$213	\$6	3006
05260	0	72	06322	SKA	CNCHFG	CONTINUATION CHAR FLAG	3007
05261	0	01	05230	BRU	\$208	\$1	3008
05262	0	76	00044	\$214	LDA	ACHTP1	ACTIVE CHAR TEMP 1
05263	0	35	00005	STA	INCHCT	INPUT CHAR CNT	3010
05264	0	76	05767	LDA	CARET	CAR RETURN	3011
05265	0	35	00004	STA	CRNTCH	CRRNT CHAR	3012
05266	0	71	06501	\$215	LDX	WRKB8T	3013
05267	0	51	05225	BRR	NYACCH	NEXT ACTIVE CHAR	3014



*NEXT	INPUT	CHAR	PAGE		3015	3015
05270	0 00	00000		HLT		3017
05271	0 76	00005	\$216	LDA	INCHCT	3018
05272	0 50	00007		SKE	INSTCT	3019
05273	0 01	05301		BRU	\$218	3020
05274	0 43	05324	\$217	BRM	READ	3021
05275	0 01	03746		BRU	OVFAIL	3022
05276	0 76	00007		LDA	INSTCT	3023
05277	0 73	00005		SKG	INCHCT	3024
05300	0 01	05274		BRU	\$217	3025
05301	0 61	00005	\$218	MIN	INCHCT	3026
05302	0 76	06247		LDA	THREE	3027
05303	0 54	00005		SUB	INCHCT	3028
05304	0 14	06247		ETR	THREE	3029
05305	0 35	00046		STA	INCHT1	3030
05306	0 76	00005		LDA	INCHCT	3031
05307	0 46	00001		RSH	1	3032
05310	0 46	20005		ABC		3033
05311	0 65	05402		DIV	NPBFLG	3034
05312	0 46	00020		CBX		3035
05313	2 76	06506		LDA	NPBUFF.2	3036
05314	0 71	00046		LOX	INCHT1	3037
05315	2 23	06277		XEC	CHARST.2	3038
05316	0 14	06272		ETR	CH4MSK	3039
05317	0 46	00400		CAX		3040
05320	2 76	05715		LDA	CHTTBL.2	3041
05321	0 35	00004	\$219	STA	CRNTCH	3042
05322	0 71	06501		LUX	WRKBTM	3043
05323	0 51	05270		BRR	NXINCH	3044

		PAGE		3046	3045
*READ					
05324	0 00 00000	READ	HLT		3047
05325	0 76 00012		LDA RDSTCT	READ ST0P CNT	3048
05326	0 55 05403		ADD NBCHCT	IN BUFF CHAR CNT	3049
05327	0 73 00010		SKG RDCHCT	READ CHAR CNT	3050
05330	0 51 05324		BRR READ	READ	3051
05331	0 61 05324		MIN READ	READ	3052
05332	0 43 05433		BRM I0FREE	IR FREE	3053
05333	0 53 00177		SKN NTTRIG	END 0F TAPE TRIGGER	3054
05334	0 00 00000		HLT		3055
05335	2 20 00001		N0P 1.2	1	3056
05336	0 76 00026		LDA MINUS1	MINUS 0NE	3057
05337	0 35 00177		STA NTTRIG	END 0F TAPE TRIGGER	3058
05340	0 02 00004		E0M 4	4	3059
05341	0 32 00176	\$220	WIM WIMCH	WIMED CHAR	3060
05342	0 40 21000		SKS 21000	21000	3061
05343	0 01 05345		BRU \$221	\$5	3062
05344	0 51 05324		BRR READ	READ	3063
05345	0 40 20010	\$221	SKS 20010	20010	3064
05346	0 01 05374		BRU \$225	\$2	3065
05347	0 76 00012		LDA RDSTCT	READ ST0P CNT	3066
05350	0 55 05404		ADD NBCH	IN BUFF CHAR CNT-1	3067
05351	0 73 00010		SKG RDCHCT	READ CHAR CNT	3068
05352	0 02 00000		E0M 0	0	3069
05353	0 76 00176		LDA WIMCH	WIMED CHAR	3070
05354	0 14 06272	\$222	ETR CH4MSK	CHAR 4 MASK	3071
05355	0 46 00400		CAX		3072
05356	2 76 05715		LDA CHTTBL.2	CHAR TRANSL TABLE	3073
05357	0 35 00176		STA WIMCH	WIMED CHAR	3074
05360	0 50 05754		SKE ST0PCD	ST0P CODE	3075
05361	0 01 05365		BRU \$223	\$1	3076
05362	0 02 00000		E0M 0	0	3077
05363	0 61 00177		MIN NTTRIG	END 0F TAPE TRIGGER	3078
05364	0 51 05324		BRR READ	READ	3079
05365	0 72 06321	\$223	SKA DECHFG	DELETE CHAR FLAG	3080
05366	0 01 05371		BRU \$224	\$6	3081
05367	0 43 05405		BRM NTERAC	ENTER A CHAR	3082
05370	0 61 00007		MIN INSTCT	INPUT ST0P CNT	3083
05371	0 40 21000	\$224	SKS 21000	21000	3084
05372	0 01 05341		BRU \$220	\$3	3085
05373	0 51 05324		BRR READ	READ	3086
05374	0 02 00000	\$225	E0M 0	0	3087
05375	0 76 00176		LDA WIMCH	WIMED CHAR	3088
05376	0 14 06272		ETR CH4MSK	CHAR 4 MASK	3089
05377	0 00 00000		HLT		3090
05400	2 20 00002		N0P 2.2	2	3091
05401	0 01 05354		BRU \$222	\$4	3092
05402	0 00 00135	NPBFLG	PZE IBSIZE	INPUT BUFFER LENGTH	3093
05403	0 00 00564	NBCHCT	PZE 4*IBSIZE	INPUT BUFFER CHAR CNT	3094

05404	0 00 00563	NBCH	PZE	4*IBSIZE-1	INPUT BUFFER CHAR CNT-1	3095
*ENTER	A CHAR				3095	
05405	0 00 00000	ENTERAC	HLT			3097
05406	0 61 00010	\$226	MIN	RDCHCT	READ CHAR CNT	3098
05407	0 76 00010		LDA	RDCHCT	READ CHAR CNT	3099
05410	0 14 06247		ETR	THREE	THREE	3100
05411	0 35 00074		STA	ECHTP1	ENTER CHAR TEMP 1	3101
05412	0 76 00010		LDA	RDCHCT	READ CHAR CNT	3102
05413	0 66 00001		RSH	1	1	3103
05414	0 46 20005		ABC			3104
05415	0 65 05402		DIV	NP5FLG	INPUT BUFF LENGTH	3105
05416	0 46 00020		CBX			3106
05417	0 36 00075		STB	ECHTP2	ENTER CHAR TEMP 2	3107
05420	2 76 06506		LDA	NPBUFF.2	INPUT BUFFER	3108
05421	0 71 00074		LDX	ECHTP1	ENTER CHAR TEMP 1	3109
05422	2 14 06273		ETR	NBTCMT.2	NBT CHAR MASK TABLE	3110
05423	0 35 00074		STA	ECHTP1	ENTER CHAR TEMP 1	3111
05424	0 76 00176		LDA	WIMCH	WIMED CHAR	3112
05425	2 23 06277		XEC	CHARST.2	CHAR SHIFTER TABLE	3113
05426	2 14 06267		ETR	CHMTBL.2	CHAR MASK TABLE	3114
05427	0 16 00074		MRG	ECHTP1	ENTER CHAR TEMP 1	3115
05430	0 71 00075		LDX	ECHTP2	ENTER CHAR TEMP 2	3116
05431	2 35 06506		STA	NPBUFF.2	INPUT BUFFER	3117
05432	0 51 05405		BRR	ENTERAC	ENTER A CHAR	3118
*I8 FREE						3119
05433	0 00 00000	I8FREE	HLT			3120
05434	0 40 21000	\$227	SKS	21000	21000	3121
05435	0 01 05434		BRU	\$227	\$1	3122
05436	0 02 20004		E8M	20004	20004	3123
05437	0 51 05433		BRR	I8FREE	I8 FREE	3124

		PAGE				
*SRP PBP						3125
05440	0 35 00173	S8BPBP	STA	INCAR	INCOMING A REGISTER	3126
05441	0 37 00172		STX	INCXR	INCOMING X REGISTER	3127
05442	0 77 40000		EAX*	0	0	3128
05443	2 76 06461		LDA	B8TT8M.2	B8TT8M	3129
05444	2 50 06362		SKL	LIMIT.2	LIMIT	3130
05445	0 01 05450		BRU	\$228	\$1	3131
05446	0 43 05533		BRM	REASGM	REASSIGN MEMORY	3132
05447	2 77 00000		EAX	0.2	0	3133
05450	0 76 00173	\$228	LDA	INCAR	INCOMING A REGISTER	3134
05451	2 61 06461		MIN	B8TT8M.2	B8TT8M	3135
05452	2 35 46461		STA*	B8TT8M.2	B8TT8M	3136
05453	0 71 00172		LDX	INCXR	INCOMING X REGISTER	3137
05454	0 51 00000		BRR	0	0	3138
*JAF PBP						3139
05455	0 35 00172	JAFPBP	STA	XITTP1	EXIT TEMP 1	3140
05456	0 46 00001		CLA			3141
05457	0 01 05462		JUN	JATAFC	JAT-JAF COMMON	3142
*JAT PBP						3143
05460	0 35 00172	JATPBP	STA	XITTP1	EXIT TEMP 1	3144
05461	0 76 06237		LDA	XTRUEM	EXIT TRUE MASK	3145
*JAT-JAF COMMON						3146
05462	0 17 46502	JATAFC	ESR*	EXIB8T	EXIT B8TT8M	3147
05463	0 72 06237		SKA	XTRUEM	EXIT TRUE MASK	3148
05464	0 01 05712		JUN	XT8NZ8	EXIT 8N ZER8	3149
05465	0 77 40000		EAX*	0	0	3150
05466	0 01 05470		JUN	JJJUMP	JRS-JAT-JAF JUMP	3151
*JRS PBP						3152
05467	0 43 05502	JRSPBP	BRM	P8NTRY	P8P ENTRY	3153
*JRS-JAT-JAF JUMP						3154
05470	0 37 00000	JJJUMP	STX	0	0	3155
05471	0 60 00000		SKR	0	0	3156
05472	0 01 05712		JUN	XT8NZ8	EXIT 8N ZER8	3157
						3158

		PAGE			
*N9 NEST ENTRY					3159
05473	0 00 00000		N9NESE HLT		3160
05474	0 37 00076		STX	NNTP1	NN TEMP 1
05475	0 62 00000		XMA	0	0
05476	0 35 00077		STA	NNTP2	NN TEMP 2
05477	0 62 00000		XMA	0	0
05500	0 77 40000		EAX*	0	0
05501	0 51 05473		BRR	N9NESE	N9 NEST ENTRY
*P9P ENTRY					3168
05502	0 00 00000		P9NTRY HLT		
05503	0 35 00172		STA	XITTP1	EXIT TEMP 1
05504	0 76 06502		LDA	EXIB9T	EXIT B9TT9M
05505	0 50 06403		SKE	XLIMIT	EXIT LIMIT
05506	0 01 05511		BRU	\$229	\$2
05507	0 43 05533		BRM	REASGM	REASSIGN MEMORY
05510	0 77 00021		EAX	XITLS	EXIT LIST
05511	0 76 00000	\$229	LDA	0	0
05512	0 14 00027		ETR	ADRMSK	ADR MASK
05513	0 61 06502		MIN	EXIB9T	EXIT P9TT9M
05514	0 35 46502		STA*	EXIB9T	EXIT B9TT9M
05515	0 76 00172		LDA	XITTP1	EXIT TEMP 1
05516	0 20 00000		N9P		(BRM DEBUG)
05517	0 35 00172		STA	XITTP1	EXIT TEMP 1
05520	0 46 00200		CXA		
05521	0 14 00027		ETR	ADRMSK	ADR MASK
05522	0 73 06361		SKG	FLSBAS	FL SCALAR BASE
05523	0 01 05525		BRU	\$230	\$1
05524	0 71 06501		LDX	WRKB9T	WORK B9TT9M
05525	0 77 40000	\$230	EAX*	0	0
05526	0 46 00200		CXA		
05527	0 14 00027		ETR	ADRMSK	ADR MASK
05530	0 46 00400		CAX		
05531	0 76 00172		LDA	XITTP1	EXIT TEMP 1
05532	0 51 05502		BRR	P9NTRY	P9P ENTRY
					3161
					3162
					3163
					3164
					3165
					3166
					3167
					3169
					3170
					3171
					3172
					3173
					3174
					3175
					3176
					3177
					3178
					3179
					3180
					3181
					3182
					3183
					3184
					3185
					3186
					3187
					3188
					3189
					3190
					3191
					3192
					3193

	PAGE					
*REASSIGN MEMORY					3195	3194
05533 0 00 00000	REASGM	HLT				3196
05534 0 37 00064		STX	RSGNT3	REASSIGN TEMP 3		3197
05535 0 76 06362		LDA	FLSLMT	FL SCALAR LIMIT		3198
05536 0 54 06461		SUB	FLSCHT	FL SCALAR BOTTOM		3199
05537 0 73 00024		SKG	ONE	ONE		3200
05540 0 01 05607		BRU	PRESSM	PRESS MEMORY		3201
*MOVE LISTS UP					3202	
05541 0 71 00064	MVLST	LDX	RSGNT3	REASSIGN TEMP 3		3203
05542 0 61 05533		MIN	REASGM	REASSIGN MEMORY		3204
05543 0 23 45533		XEC*	REASGM	REASSIGN MEMORY		3205
05544 0 46 00200		CXA				3206
05545 0 14 00027		ETR	ADRMSK	ADR MASK		3207
05546 0 35 00062		STA	RSGNT1	REASSIGN TEMP 1		3208
05547 0 76 00024		LDA	ONE	ONE		3209
05550 0 01 05603		BRU	\$235	\$5		3210
05551 0 35 00053	\$231	STA	RSGNT2	REASSIGN TEMP 2		3211
05552 0 46 00400		CAX				3212
05553 2 76 06461		LDA	BOTTOM.2	BOTTOM		3213
05554 0 55 00024		ADD	ONE	ONE		3214
05555 0 16 06027		MRG	LIVEL0	LIVE LDA+ 0P		3215
05556 0 35 05576		STA	\$232	\$1		3216
05557 2 76 06461		LDA	BOTTOM.2	BOTTOM		3217
05560 0 54 00024		SUB	ONE	ONE		3218
05561 0 16 06030		MRG	LIVES9	LIVE STA+ 0P		3219
05562 0 35 05577		STA	\$233	\$2		3220
05563 2 76 06361		LDA	BASE.2	BASE		3221
05564 2 54 06461		SUB	BOTTOM.2	BOTTOM		3222
05565 0 54 00024		SUB	ONE	ONE		3223
05566 0 35 00065		STA	RSGNT4	REASSIGN TEMP 4		3224
05567 0 76 06245		LDA	MINUS2	MINUS TWO		3225
05570 2 63 06361		ADM	BASE.2	BASE		3226
05571 2 63 06407		ADM	START.2	START		3227
05572 2 63 06434		ADM	T0P.2	T0P		3228
05573 2 63 06461		ADM	BOTTOM.2	BOTTOM		3229
05574 0 71 00065		LDX	RSGNT4	REASSIGN TEMP 4		3230
05575 0 01 05600		BRU	\$234	\$3		3231
05576 2 76 00000	\$232	LDA	B0TP1.2	(BOTTOM+1)		3232
05577 2 35 00000	\$233	STA	B0TM1.2	(BOTTOM-1)		3233
05600 0 41 05576	\$234	BRX	\$232	\$1		3234
05601 0 76 00063		LDA	RSGNT2	REASSIGN TEMP 2		3235
05602 0 55 00024		ADD	ONE	ONE		3236
05603 0 73 00062	\$235	SKG	RSGNT1	REASSIGN TEMP 1		3237
05604 0 01 05551		BRU	\$231	\$4		3238
05605 0 71 00064		LDX	RSGNT3	REASSIGN TEMP 3		3239
05606 0 51 05533		BRR	REASGM	REASSIGN MEMORY		3240
*PRESS MEMORY					3241	
05607 0 76 06222	PRESSM	LDA	N6LASL	N0 0F LAST LIST		3242
05610 0 35 00062		STA	RSGNT1	REASSIGN TEMP 1		3243

05611	0 71 00062	\$236	LDX	RSGNT1	REASSIGN TEMP 1	3244
05612	2 76 06362		LDA	LIMIT.2	LIMIT	3245
05613	0 35 00063		STA	RSGNT2	REASSIGN TEMP 2	3246
05614	2 62 06461		XMA	BOTTOM.2	BOTTOM	3247
05615	0 35 00065		STA	RSGNT4	REASSIGN TEMP 4	3248
05616	2 54 06461		SUB	BOTTOM.2	BOTTOM	3249
05617	0 46 01000		CNA			3250
05620	2 63 06407		ADM	START.2	START	3251
05621	2 63 06434		ADM	TOP.2	TOP	3252
05622	2 55 06361		ADD	BASE.2	BASE	3253
05623	2 35 06361		STA	BASE.2	BASE	3254
05624	2 54 06461		SUB	BOTTOM.2	BOTTOM	3255
05625	0 54 00024		SUB	BNE	BNE	3256
05626	0 46 00400		CAX			3257
05627	0 01 05634		BRU	\$238	\$5	3258
05630	0 76 40065	\$237	LDA*	RSGNT4	REASSIGN TEMP 4	3259
05631	0 35 40063		STA*	RSGNT2	REASSIGN TEMP 2	3260
05632	0 60 00065		SKR	RSGNT4	REASSIGN TEMP 4	3261
05633	0 60 00063		SKR	RSGNT2	REASSIGN TEMP 2	3262
05634	0 41 05630	\$23A	BRX	\$237	\$3	3263
05635	0 60 00062	\$239	SKR	RSGNT1	REASSIGN TEMP 1	3264
05636	0 76 00062		LDA	RSGNT1	REASSIGN TEMP 1	3265
05637	0 50 00023		SKE	ZERO	ZERO	3266
05640	0 01 05611		BRU	\$236	\$1	3267
05641	0 76 06461		LDA	FLSCBT	FL SCALAR BOTTOM	3268
05642	0 54 06362		SUB	FLSLMT	FL SCALAR LIMIT	3269
05643	0 73 06245		SKG	MINUS2	MINUS TWO	3270
05644	0 01 05541		BRU	MVLST	MOVE LISTS UP	3271
*MEMBERY RVERFLOW						
05645	0 43 03726	MEMBRVF	BRM	INITLS	INITIALIZE LISTS	3273
05646	0 53 00037		SKN	LASTST	LAST STA TRIGGER	3274
05647	0 01 05652		BRU	\$240	\$1	3275
05650	1 12 01734		JRS	RELPRY	RELEASE AND PRINT	3276
05651	1 60 05767		PRC	CARET	CAR RETURN	3277
05652	1 61 06077	\$240	PRQ	BVFLQT	BVERFLOW QUOTE	3278
05653	0 01 02255		BRU	TRMCPL	TERMINATE CBMPLE	3279

3272

		PAGE				
*BOTTOM EXIT					3281	
05654	0 71 00077	BOTEXT	LDX	NNTP2	NN TEMP 2	3282
05655	0 37 00000		STX	0	0	3283
05656	0 71 06501		LDX	WRKBOT	WORK BOTTOM	3284
05657	0 51 00000		BRR	0	0	3285
*INDEX EXIT					3285	
05660	0 71 00077	INDEX	LDX	NNTP2	NN TEMP 2	3287
05661	0 37 00000		STX	0	0	3288
05662	0 71 00076		LDX	NNTP1	NN TEMP 1	3289
05663	0 51 00000		BRR	0	0	3290
*CLEAR TWO EXIT FALSE					3291	
05664	0 60 06501	CLR2EF	SKR	WRKBOT	WORK BOTTOM	3292
*CLEAR ONE EXIT FALSE					3293	
05665	0 60 06501	CLR1EF	SKR	WRKBOT	WORK BOTTOM	3294
*EXIT FALSE					3295	
05666	0 77 00023	XTF	EAX	ZERO	ZERO	3296
05667	0 01 05673		JUN	XTRXF	EXIT TRUE OR EXIT FALSE	3297
*CLEAR TWO EXIT TRUE					3298	
05670	0 60 06501	CLR2ET	SKR	WRKBOT	WORK BOTTOM	3299
*CLEAR ONE EXIT TRUE					3300	
05671	0 60 06501	CLR1ET	SKR	WRKBOT	WORK BOTTOM	3301
*EXIT TRUE					3302	
05672	0 77 06237	EXITRU	EAX	XTRUEM	EXIT TRUE MASK	3303
*EXIT TRUE OR EXIT FALSE					3304	
05673	0 35 00172	XTRXF	STA	XITTP1	EXIT TEMP 1	3305
05674	2 76 00000		LDA	0.2	0	3306
05675	0 71 06502		LDX	EXIBOT	EXIT BOTTOM	3307
05676	2 55 37777		ADD	W1.2	W1	3308
05677	0 14 06235		ETR	TESTNM	TEST NODE MASK	3309
05700	2 63 37777		ADM	W1.2	W1	3310
05701	0 01 05707		JUN	XANLST	EXIT ON LIST	3311
*CLEAR FOUR AND EXIT					3312	
05702	0 60 06501	CLR4AE	SKR	WRKBOT	WORK BOTTOM	3313
*CLEAR THREE AND EXIT					3314	
05703	0 60 06501	CLR3AE	SKR	WRKBOT	WORK BOTTOM	3315
*CLEAR TWO AND EXIT					3316	
05704	0 60 06501	CLR2AE	SKR	WRKBOT	WORK BOTTOM	3317
*CLEAR ONE AND EXIT					3318	
05705	0 60 06501	CLR1AE	SKR	WRKBOT	WORK BOTTOM	3319
*EXIT					3320	
05706	0 35 00172	EXIT	STA	XITTP1	EXIT TEMP 1	3321
*EXIT ON LIST					3322	
05707	0 76 46502	XANLST	LDA+	EXIBOT	EXIT BOTTOM	3323
05710	0 60 06502		SKR	EXIBOT	EXIT BOTTOM	3324
05711	0 35 00000		STA	0	0	3325
*EXIT ON ZERO					3326	
05712	0 76 00172	XTONZB	LDA	XITTP1	EXIT TEMP 1	3327
05713	0 71 06501		LDX	WRKBOT	WORK BOTTOM	3328
05714	0 51 00000		BRR	0	0	3329



*CHAR		TRANSL	TABLE	PAGE		3331	3330
	05715	CHTTBL	EQU	*			3332
05715	00002205	N0	ECT	00002205	N0		3333
05716	01003205	N1	ECT	01003205	N1		3334
05717	02003205	N2	ECT	02003205	N2		3335
05720	03003205	N3	ECT	03003205	N3		3336
05721	04003205	N4	ECT	04003205	N4		3337
05722	05003205	N5	ECT	05003205	N5		3338
05723	06003205	N6	ECT	06003205	N6		3339
05724	07003205	N7	ECT	07003205	N7		3340
05725	10003205	N8	ECT	10003205	N8		3341
05726	11003205	N9	ECT	11003205	N9		3342
05727	12002600	SPACE	ECT	12002600	SPACE		3343
	05730	EQUAL	EQU	*			3344
05730	13003200	EQSNCH	ECT	13003200	EQUAL SIGN CHAR		3345
05731	14003200	PRIME	ECT	14003200	PRIME		3346
05732	15003200	C0LAN	ECT	15003200	C0L9N		3347
05733	16003200	GRTHAN	ECT	16003200	GREATER THAN		3348
05734	17003200	TAPEMK	ECT	17003200	TAPE MARK		3349
	05735	PLUS	EQU	*			3350
05735	20003200	PLUSCH	ECT	20003200	PLUS CHAR		3351
05736	21003206	A	ECT	21003206	A		3352
05737	22003206	B	ECT	22003206	B		3353
05740	23003206	C	ECT	23003206	C		3354
05741	24003206	D	ECT	24003206	D		3355
05742	25003206	E	ECT	25003206	E		3356
05743	26003206	F	ECT	26003206	F		3357
05744	27003206	G	ECT	27003206	G		3358
05745	30003206	H	ECT	30003206	H		3359
05746	31003246	I	ECT	31003246	I		3360
05747	32002300	BACKSP	ECT	32002300	BACKSPACE		3361
05750	33003200	PERIAD	ECT	33003200	PERIAD		3362
05751	55003200	R024	ECT	55003200	024R		3363
	05752	LPAREN	EQU	*			3364
05752	35003200	LBRAKT	ECT	35003200	L BRACKET		3365
05753	36003200	LESSTH	ECT	36003200	LESS THAN		3366
	05754	GRMARK	EQU	*			3367
05754	37003200	STAPCD	ECT	37003200	STOP CODE		3368
	05755	MINUS	EQU	*			3369
05755	40003200	MINUSC	ECT	40003200	MINUS CHAR		3370
05756	41003246	J	ECT	41003246	J		3371
05757	42003246	K	ECT	42003246	K		3372
05760	43003246	L	ECT	43003246	L		3373
05761	44003246	M	ECT	44003246	M		3374
05762	45003246	N	ECT	45003246	N		3375
05763	46003206	LETFR8	ECT	46003206	LETTER 8		3376
05764	47003206	P	ECT	47003206	P		3377
05765	50003206	Q	ECT	50003206	Q		3378
05766	51003206	R	ECT	51003206	R		3379

	05767	CARRET EQU	*	CAR RET	3380
05767	52000320	CARET 9CT	52000320	CAR RETURN	3381
05770	53003200	DOLLAR 9CT	53003200	DOLLAR	3382
	05771	ASTPSK EQU	*	ASTERISK	3383
05771	54003200	ASTRCH 9CT	54003200	ASTERISK CHAR	3384
	05772	RPAREN EQU	*	R PAREN	3385
05772	55003210	RBRACK 9CT	55003210	R BRACKET	3386
05773	56003200	SEMIC9 9CT	56003200	SEMI COLON	3387
	05774	M8DECG EQU	*	M8DE CHANGE	3388
05774	57003200	ERM RK 9CT	57003200	ERR9R MARK	3389
05775	12002600	BLANK 9CT	12002600	BLANK	3390
	05776	VRGULE EQU	*	VIRGULE	3391
05776	61003210	SLASHC 9CT	61003210	SLASH CHAR	3392
05777	62003206	S 9CT	62003206	S	3393
06000	63003206	T 9CT	63003206	T	3394
06001	64003206	U 9CT	64003206	U	3395
06002	65003206	V 9CT	65003206	V	3396
06003	66003206	W 9CT	66003206	W	3397
06004	67003206	X 9CT	67003206	X	3398
06005	70003206	Y 9CT	70003206	Y	3399
06006	71003206	Z 9CT	71003206	Z	3400
06007	72002700	TAB 9CT	72002700	TAB	3401
	06010	C8MMA EQU	*	C8MMA	3402
06010	73003210	C8MACH 9CT	73003210	C8MMA CHAR	3403
06011	35003200	LO26 9CT	35003200	O26L	3404
06012	75003200	SCRPTM 9CT	75003200	SCRIPT M	3405
06013	76003200	BKWDVR 9CT	76003200	BACKWARDS VIRGULE	3406
06014	77006000	DELETE 9CT	77006000	DELETE	3407
	*				3408
	*				3409
	*				3410
	*				3411
	*				3412
	*				3413
	*				3414
	*				3415
	*				3416
	*				3417
	*				3418
	*RUN TIME ADD FX 9NE				
06015	0 55 00024	RTAFXI ADD	RNTFXI	RUN TIME FX 9NE	3419
	*RUN TIME LDP FL 9NE				3420
06016	1 25 00076	RTLFLI LDP	RNTFLI	RUN TIME FL 9NE	3421
	*SKA RUN TIME SIGN BIT INST				3422
06017	0 72 00025	SKARI SKA	RNTSBT	RUN TIME SIGN BIT	3423
	*SKG RUN TIME ZERO INST				3424
06020	0 73 00023	SKGR7I SKG	RUNTM9	RUN TIME ZERO	3425
	*LIVE EAX+ M8P				3426
06021	2 77 00000	EAX9P EAX	0.2	0	3427
	*LIVE SKM+ M8P				3428
06022	2 70 00000	SKMAP SKM	0.2	0	3429

06023	0 20 00000	NBPAP	NBP		LIVE NBP M9P		3430
*LIVE	HLT PLEX LIST	INST				3431	
06024	0 00 00017	LHPLIN	HLT	PLEXLS	PLEX LIST		3432
*LIVE	BRU M9P					3433	
06025	0 01 00000	BRUPP	BRU	0	0		3434
*LIVE	SKE+ M9P					3435	
06026	2 50 00000	SKEAP	SKE	0.2	0		3436
*LIVE	LDA+ 9P					3437	
06027	2 76 00000	LIVEL9	LDA	0.2	0		3438
*LIVE	STA+ 9P					3439	
06030	2 35 00000	LIVE99	STA	0.2	0		3440

06031	33526225	SETPQT	BCI	33526225	SET PAPER QT	3441
06032	63124721		BCI	1.T PA		3442
06033	47255152		BCI	47255152		3443
06034	33234644	CRDYQT	BCI	3..COMPIER RE	COMPIER READY QT	3444
06037	21247052		BCI	21247052		3445
06040	52336264	SUBRQT	BCI	52336264	SUBROUTINE QT	3446
06041	22514664		BCI	1.BR0U		3447
06042	62314525		BCI	1.TINE		3448
06043	33266445	FUNCTQT	BCI	1..FUN	FUNCTION QT	3449
06044	23633146		BCI	1.CT10		3450
06045	45333126	IFQT	BCI	1.N.IF	IF QT	3451
06046	33314425	IMENQT	BCI	1..IME	IMENSION QT	3452
06047	45623146		BCI	1.NSI0		3453
06050	45334663	0T0QT	BCI	1.N.0T	0T0 QT	3454
06051	46332646	FRMTQT	BCI	1.0.F0	FORMAT QT	3455
06052	51442163		BCI	1.RMAT		3456
06053	33232143	CALLQT	BCI	1..CAL	CALL QT	3457
06054	43332346	CRNTQT	BCI	1.L.C0	CONTINUE QT	3458
06055	45633145		BCI	1.NTIN		3459
06056	64253363	TYPEQT	BCI	1.UE.T	TYPE QT	3460
06057	70472533	ACCPQT	BCI	1.YPE.	ACCEPT QT	3461
06060	21232325		BCI	1.ACCE		3462
06061	47633363	TAPEQT	BCI	1.PT.T	TAPE QT	3463
06062	21472533	READQT	BCI	1.APE.	READ QT	3464
06063	51252124		BCI	1.READ		3465
06064	33454764	NPTPQT	BCI	1..NPU	NPUTTAPE QT	3466
06065	63632147		BCI	1.TTAP		3467
06066	25336651	WRITED	BCI	1.E.WR	WRITE QT	3468
06067	31632533	UTPTPQ	BCI	1.ITE.	UTPUTTAPE QT	3469
06070	64634764		BCI	1.UTPU		3470
06071	63632147		BCI	1.TTAP		3471
06072	25334764	PUNCHO	BCI	1.E.PU	PUNCH QT	3472
06073	45233033	PRINTQ	BCI	1.NCH.	PRINT QT	3473
06074	47513145		BCI	1.PRIN		3474
06075	63332643	FLQT	BCI	1.T.FL	FLGATING QT	3475
06076	46216331		BCI	1.0ATI		3476
06077	45273346	0VFIQT	BCI	1.NG.0	0VERFLOW QT	3477
06100	65255126		BCI	1.VERF		3478
06101	43466633	SENSEQ	BCI	1.LAW.	SENSE QT	3479
06102	62254562		BCI	1.SENS		3480
06103	25336631	WITCHQ	BCI	1.E.WI	WITCH QT	3481
06104	63233033	LIGHTQ	BCI	1.TCH.	LIGHT QT	3482
06105	43312730		BCI	1.LIGH		3483
06106	63332162	ASSGNQ	BCI	1.T.AS	ASSIGN QT	3484
06107	62312745		BCI	1.SIGN		3485
06110	33234644	CMANQT	BCI	1..C0M	CBMM0N QT	3486
06111	44464533	T0QT	BCI	1.M0N.	T0 QT	3487
06112	63463325	EQUIVQ	BCI	1.T0.E	EQUIVALENCE QT	3488
06113	50643165		BCI	1.QUIV		3489

06114	21432545		BCI	1.ALEN		3491
06115	23253351	RTURNQ	BCI	1.CE.R	RETURN QT	3492
06116	25636451		BCI	1.ETUR		3493
06117	45334721	PAUSEQ	BCI	1.N.PA	PAUSE QT	3494
06120	64622533	STBPQT	BCI	1.USE.	STBP QT	3495
06121	62634647		BCI	1.STBP		3496
06122	33254524	NFILEQ	BCI	1..END	ENDFILE QT	3497
06123	26314325		BCI	1.FILE		3498
06124	33512566	RWINDQ	BCI	1..REW	REWIND QT	3499
06125	31452433	BKSPQT	BCI	1.IND.	BACKSPACE QT	3500
06126	22212342		BCI	1.BACK		3501
06127	62472123		BCI	1.SPAC		3502
06130	25331252	DONEQT	ACT	25331252	DB NEST ERRORS QT	3503
06131	52244612		ACT	52244612		3504
06132	45256263		BCI	1.NEST		3505
06133	12255151		BCI	1. ERR		3506
06134	46516252		ACT	46516252		3507
06135	52335252	LBLFRQ	ACT	52335252	LABLING ERRORS QT	3508
06136	43212225		BCI	4.LABELING ERRORS		3509
06142	12125252		ACT	12125252		3510
06143	33525223	CMALQT	ACT	33525223	COMMON ALLOCATION QT	3511
06144	46444446		BCI	1.OMM0		3512
06145	45122143		BCI	1.N AL		3513
06146	43462321		BCI	1.LOCA		3514
06147	63314645		BCI	1.TI0N		3515
06150	52523352	PR0GQT	ACT	52523352	PROGRAM ALLOCATION QT	3516
06151	52475146		ACT	52475146		3517
06152	27512144		BCI	1.GRAM		3518
06153	12214343		BCI	1. ALL		3519
06154	46232153		BCI	1.OCAT		3520
06155	31464552		ACT	31464552		3521
06156	52335252	SBRFQT	ACT	52335252	SUBPROGRAMS REQUIRED QT	3522
06157	62642247		BCI	1.SUBP		3523
06160	51462751		BCI	1.P0GR		3524
06161	21446212		BCI	1.AMS		3525
06162	51255064		BCI	1.REQU		3526
06163	31512524		BCI	1.IPED		3527
06164	52523325	ERRPRQ	ACT	52523325	ERRPR QT	3528
06165	51514651		BCI	1.RPRR		3529
06166	33246444	DYQT	BCI	1..DUM	DUMMY QT	3530
06167	44703321	AL0CAG	BCI	1.MY.A	ALLOCATION QT	3531
06170	43434623		BCI	1.LL0C		3532
06171	21633146		BCI	1.ATI0		3533
06172	45334564	NUMPRQ	BCI	1.N.NU	NUMBER QT	3534
06173	44222551		BCI	1.MBER		3535
06174	33312412	IDECQT	BCI	1..ID	ID DECLARATION QT	3536
06175	24252343		BCI	1.DECL		3537
06176	21512163		BCI	1.APAT		3538
06177	31464533	SYTAXQ	BCI	1.I0N.	SYNTAX QT	3539
06200	62704563		BCI	1.SYNT		3540

06201	21673362	SUBSCQ	BCI	1.AX.S	SUMSCRIPTS QT	3541
06202	64226223		BCI	1.URSC		3542
06203	51314763		BCI	1.RIPT		3543
06204	62335252	TENDQT	BCI	62335252	THE END QT	3544
06205	62302512		BCI	1.THE		3545
06206	25452433	ENDQT	BCI	1.END.	END QT	3546
06207	25452433		BCI	1.END.		3547

		PAGE					
06210	00100000		PTIDFG	8CT	00100000	PART ID FLAG	3548
06211	00400000		ADDRFG	8CT	00400000	ADDRESSABLE FLAG	3549
	06212		8PTAG9	EQU	*	M8P TAG BIT	3550
06212	00000400		TRBR9F	8CT	400	TAB 8R BLANK 8R SPACE FLAG	3551
06213	00002000		N8T0PF	8CT	2000	TAB 8R BLANK 8R SPACE FLAG	3552
	06214		INTGLM	EQU	*	N8T CAR RETURN FLAG	3553
06214	00000100		TCR8FG	8CT	100	INTEGER LIST MASK	3554
06215	00000020		CARRFG	8CT	20	TAB-CAR RETURN-BACKSPACE FLAG	3555
06216	00000017		N8LLSV	8CT	17	CAR RETURN FLAG	3556
06217	00000073		N8IT9V	DEC	59	NUMBER 8F LAST LIST SAVED	3557
06220	00000067		LIN9PP	DEC	55	NUMBER 8F ITEMS SAVED	3558
06221	00000025		N8LIST	DEC	21	LINES PER PAGE	3559
06222	00000024		N8LASL	DEC	20	NUMBER 8F LISTS	3560
06223	14600000		CG9GIN	8CT	14600000	N8 8F LAST LIST	3561
06224	77777774		ABL2MK	8CT	77777774	CHANGE SIGN INST	3562
06225	04000000		MPTITL	8CT	04000000	ALL BUT L8W 2 MASK	3563
	06226		SPTITL	EQU	*	MPR8G TITLE	3564
06226	02000000		N8PINS	8CT	02000000	SPR8G TITLE	3565
06227	00600000		NMARKR	8CT	00600000	N8P INST	3566
06230	76000000		T8P99M	8CT	76000000	END MARKER	3567
06231	24000000		TEN84E	8CT	24000000	T8P 5 BITS MASK	3568
06232	00000000			8CT	00000000	TEN 84 EXACT	3569
06233	59595353		ALL08L	8CI	1.5555	ALL 08LLARS	3570
06234	52000000		CAR8LA	8CT	52000000	CAR RETURN ZER8 L9W	3571
06235	77600000		TESTNM	8CT	77600000	TEST N8DE MASK	3572
	06236		88AM	EQU	*	ALL BUT ADR MASK	3573
06236	77740000		CDMASK	8CT	77740000	C8DE MASK	3574
	06237		SCAIDF	EQU	*	SCALAR ID FLAG	3575
06237	00200000		XTRU8M	8CT	00200000	EXIT TRUE MASK	3576
	06240		P8EFLM	EQU	*	PREVIOUSLY DEF LBL MASK	3577
06240	20000000		TAG8IT	8CT	20000000	TAG 8IT	3578
	06241		FLFLAG	EQU	*	FL FLAG	3579
06241	00040000		M8DEMS	8CT	00040000	M8DE MASK	3580
06242	77777757		MINU17	DEC	-17	M8DE MASK	3581
06243	77777762		N8LSV8	DEC	-14	MINUS SEVENTEEN	3582
06244	77777773		MINU95	DEC	-5	NUMBER 8F LISTS SAVED 8RYER	3583
06245	77777776		MINU92	DEC	-2	MINUS FIVE	3584
	06246		N8FLSV	EQU	*	MINUS TW8	3585
	06246		LDTPFG	EQU	*	NUMBER 8F FIRST LIST SAVED	3586
	06246		TYBYWF	EQU	*	LOAD TAPE FLAG	3587
	06246		LETRFG	EQU	*	TYPING 8Y W FLAG	3588
06246	00000002		TW8	DEC	2	LETTER FLAG	3589
	06247		L8W29M	EQU	*	TW8	3590
06247	00000003		THRE8	DEC	3	L8W 2 BITS MASK	3591
	06250		LTR8GF	EQU	*	THRE8	3592
06250	00000004		F8UR	DEC	4	LETTER 8R DIGIT FLAG	3593
06251	00000005		FIVE	DEC	5	F8UR	3594
06252	00000006		SIX	DEC	6	FIVE	3595
	06253		SEVEN	EQU	*	SIX	3596
						SEVEN	3597

06253	00000007	8CTDMS	DEC	7	8CT DIGIT MASK	3598
	06254	EIGHT	EQU	*	EIGHT	3599
06254	00000010	CVRIFG	8CT	00000010	COMMA-VIRGULE-R PAREN FLAG	3600
06255	00000011	NINE	DEC	9	NINE	3601
06256	00000012	TEN	DEC	10	TEN	3602
06257	00000074	SIXTY	DEC	60	SIXTY	3603
06260	00000132	BL0KLG	DEC	90	BLACK LENGTH	3604
06261	03641100	8NEMIL	DEC	1000000	8NE MILLION	3605
06262	31463146	TENTH3	8CT	31463146	8NE TENTH 8-3	3606
06263	31463160		8CT	31463160		3607
06264	24000000	TENR4	8CT	24000000	TEN B4	3608
06265	00000010		8CT	00000010		3609
06266	00001616	KEYVAL	DEC	910	KEY VALUE	3610
	06267	CHMTBL	EQU	*	CHAR MASK TABLE	3611
06267	77000000	CH1MSK	8CT	77000000	CHAR 1 MASK	3612
06270	00770000	CH2MSK	8CT	00770000	CHAR 2 MASK	3613
06271	00007700	CH3MSK	8CT	00007700	CHAR 3 MASK	3614
	06272	SIZMSK	EQU	*	SIZE MASK	3615
	06272	KYCMSK	EQU	*	KEY CODE MASK	3616
06272	00000077	CH4MSK	8CT	00000077	CHAR 4 MASK	3617
06273	00777777	N8TCMT	8CT	00777777	N8T CHAR MASK TABLE	3618
06274	77007777		8CT	77007777		3619
06275	77770077		8CT	77770077		3620
06276	77777700		8CT	77777700		3621
06277	0 20 00000	CHARST	N8P		CHAR SHIFTER TABLE	3622
06300	0 64 06320		MPY	RSH6	RIGHT SHIFTER 6	3623
06301	0 64 06321		MPY	RSH12	RIGHT SHIFTER 12	3624
06302	0 64 06324		MPY	RSH18	RIGHT SHIFTER 18	3625
	06303	PAK8TB	EQU	*	PACK BLANKS TABLE	3626
06303	12121212	ALL8WD	8CT	12121212	ALL BLANKS WORD	3627
06304	00121212		8CT	00121212		3628
06305	00001212		8CT	00001212		3629
06306	00000012		8CT	00000012		3630
06307	00037377	CLNEGL	8CT	00037377	CHARIS LOWER NEG LIMIT	3631
	06310	CUPRSL	EQU	*	CHARIS UPPER P8S LIMIT	3632
06310	00000377	TREMSK	8CT	00000377	TREE FIELD MASK	3633
06311	00000000	MAXLBL	DEC	0	MAX LBL ALLOWED	3634
06312	00303240		DEC	100000		3635
06313	00000000	MAXINT	8CT	00000000	MAX INTEGER ALLOWED	3636
	06314	MADELB	EQU	*	MADE LBL	3637
	06314	ALBUTS	EQU	*	ALL BUT S	3638
	06314	ABSM	EQU	*	ALL BUT SIGN MASK	3639
06314	37777777	P8SFSC	8CT	37777777	P8S FULL SCALE	3640
	06315	FIVMSK	EQU	*	FIVE DEC MASK	3641
06315	17777777	ABSATM	8CT	17777777	ALL BUT SIGN AND TAG MASK	3642
06316	00000000	MAXASA	8CT	00000000	MAX APRAY SIZE ALLOWED	3643
06317	00043776	T8PIBK	8CT	43776		3644
06320	00400000	RSH6	8CT	00400000	RIGHT SHIFTER 6	3645
	06321	RSH12	EQU	*	RIGHT SHIFTER 12	3646
06321	00004000	DECHFG	8CT	00004000	DELETE CHAR FLAG	3647



	06322	CNCHFG EQU	*	CONTINUATION CHAR FLAG	3648
	06322	ONEA14 EQU	*	ONE IN 14TH BIT	3649
06322	00001000	RSH14 8CT	00001000	RIGHT SHIFTER 14	3650
	06323	LBLSTM EQU	*	LABEL LIST MASK	3651
	06323	ST8FLK EQU	*	START OF LINKS	3652
06323	00000200	RSH16 8CT	00000200	RIGHT SHIFTER 16	3653
	06324	IJKLMNOP EQU	*	IJKLMNOP FLAG	3654
06324	00000040	RSH18 8CT	00000040	RIGHT SHIFTER 18	3655
06325	00004000	TW8K 8CT	00004000	TW8K	3656
06326	12121233	SYMCEN BCI	1. .	SYMBOLIC CENTRAL	3657
06327	0 00 00000	CTL1 HLT		CENTRAL 1	3658
06330	0 00 00000	CTL2 HLT		CENTRAL 2	3659
06331	33121212	BCI	1..		3660
06332	07600000	FXTPOD 8CT	07600000	FX TEMP PNTR CODE	3661
06333	10400000	DYPTOD 8CT	10400000	DMY PNTR CODE	3662
06334	00740002	CODE 8CT	00740002	CODE	3663
06335	01700002	8CT	01700002		3664
06336	02400301	8CT	02400301	LABEL LIST CODE	3665
06337	03440002	8CT	03440002		3666
06340	04400101	8CT	04400101		3667
06341	05500005	8CT	05500005		3668
06342	06500002	8CT	06500002		3669
06343	07000003	8CT	07000003		3670
06344	10500003	8CT	10500003		3671
06345	11700003	8CT	11700003		3672
06346	12000002	8CT	12000002		3673
06347	13000003	8CT	13000003		3674
06350	14000101	8CT	14000101		3675
06351	15000003	8CT	15000003		3676
06352	16000003	8CT	16000003		3677
06353	17000101	8CT	17000101		3678
06354	20000101	8CT	20000101		3679
06355	21000101	8CT	21000101		3680
06356	22000102	8CT	22000102		3681
06357	23000101	8CT	23000101		3682
06360	24000101	8CT	24000101		3683
*					3684
*					3685
	06361	BASE EQU	*	BASE	3686
*FL SCALAR BASE					3687
06361	0 00 06643	FLSRAS HLT	LSTMEM	LIST MEMORY	3688
*					3689
*	MEMORY USED FOR CODE:				3690
	06361	LAST EQU	*-1	PUNCH OUT COMPILER TO HERE	3691

			PAGE	T E M P O R A R Y	S T O R A G E	
	06362	FLSLMT	EQU	*	FL SCALAR LIMIT	3692
	06362	LIMIT	EQU	*	LIMIT	3693
						3694
	*FY SCALAR BASE					
	06362	0 00	15530	FXSRA	HLT	7000
	06363	0 00	16350		HLT	7400
	06364	0 00	16660		HLT	7600
	06365	0 00	17024		HLT	7700
	06366	0 00	17036		HLT	7710
	*GLOBAL SPRBG BASE					
	06367	0 00	17050	GLSRAS	HLT	7720
	06370	0 00	17062		HLT	7730
	06371	0 00	17074		HLT	7740
	06372	0 00	17106		HLT	7750
	06373	0 00	17120		HLT	7760
	*EQUIV DATA BASE					
	06374	0 00	17132	QVDTBS	HLT	7770
	06375	0 00	17141		HLT	7777
	*CRDE BASE					
	06376	0 00	17141	CDBASE	HLT	7777
	06377	0 00	17141		HLT	7777
	*PLEX BASE					
	06400	0 00	17141	PLXRAS	HLT	7777
	*WRK BASE					
	06401	0 00	17141	WRKRAS	HLT	7777
	*EXIT BASE					
	06402	0 00	17141	XBASE	HLT	7777
	*EXIT LIMIT					
	06403	0 00	17141	XLIMIT	HLT	7777
	06404	0 00	17141		HLT	7777
		06405		SVLIMI	EQU	*
	*PUNCH BASE					
	06405	0 00	17141	PCHRAS	HLT	7777
	*END OF CORE					
	06406	0 00	17141	NCORE	HLT	7777

			PAGE			
06407	0 00 00000	START	HLT	START		3727
06410	0 00 00000		HLT			3728
06411	0 00 00000		HLT			3729
06412	0 00 00000		HLT			3730
06413	0 00 00000		HLT			3731
06414	0 00 00000		HLT			3732
06415	0 00 00000		HLT			3733
06416	0 00 00000		HLT			3734
06417	0 00 00000		HLT			3735
06420	0 00 00000		HLT			3736
06421	0 00 00000		HLT			3737
06422	0 00 00000	QVQSTR	HLT	EQUIV DATA START		3738
06423	0 00 00000		HLT			3739
06424	0 00 00000		HLT			3740
06425	0 00 00000	QVHSTR	HLT	EQUIV HOLD START		3741
06426	0 00 00000		HLT			3742
06427	0 00 00000		HLT			3743
06430	0 00 00000		HLT			3744
06431	0 00 00000		HLT			3745
06432	0 00 00000		HLT			3746
06433	0 00 00000	PCHSTR	HLT	PUNCH START		3747
06434	0 00 00000	TBP	HLT	TBP		3748
06435	0 00 00000		HLT			3749
06436	0 00 00000		HLT			3750
06437	0 00 00000		HLT			3751
06440	0 00 00000		HLT			3752
06441	0 00 00000	ARYTAP	HLT	ARRAY TAP		3753
06442	0 00 00000		HLT			3754
06443	0 00 00000		HLT			3755
06444	0 00 00000		HLT			3756
06445	0 00 00000		HLT			3757
06446	0 00 00000		HLT			3758
06447	0 00 00000		HLT			3759
06450	0 00 00000		HLT			3760
06451	0 00 00000	CBDTAP	HLT	CBDE TAP		3761
06452	0 00 00000	QVHTAP	HLT	EQUIV HOLD TAP		3762
06453	0 00 00000		HLT			3763
06454	0 00 00000		HLT			3764
06455	0 00 00000		HLT			3765
06456	0 00 00000		HLT			3766
06457	0 00 00000		HLT			3767
06460	0 00 00000	PCHTAP	HLT	PUNCH TAP		3768
	06461	BATTAP	EQU	BOTTAP		3769
06461	0 00 00000	FLSCAT	HLT	FL SCALAR BOTTAP		3770
06462	0 00 00000	FXSPAT	HLT	FX SCALAR BOTTAP		3771
06463	0 00 00000		HLT			3772
06464	0 00 00000		HLT			3773
06465	0 00 00000		HLT			3774
06466	0 00 00000		HLT			3775
						3776

06467	0 00 00000	GLSRAT HLT		GLOBAL SPRBG BBTBM	3777
06470	0 00 00000	HLT			3778
06471	0 00 00000	HLT			3779
06472	0 00 00000	HLT			3780
06473	0 00 00000	HLT			3781
06474	0 00 00000	QVDRAT HLT		EQUIV DATA BBTBM	3782
	06475	D9LRAM EQU	*	D9 LRAPS OPEN BBTBM	3783
06475	0 00 00000	MEDRAT HLT		MODE BBTBM	3784
06476	0 00 00000	CGDRAT HLT		CODE BBTBM	3785
06477	0 00 00000	HLT			3786
06500	0 00 00000	PLEYAT HLT		PLFX BBTBM	3787
06501	0 00 00000	WRKRAT HLT		WRK BBTBM	3788
06502	0 00 00000	EXIRAT HLT		EXIT BBTBM	3789
06503	0 00 00000	HLT			3790
06504	0 00 00000	SVBRAT HLT		SAVE BBTBM	3791
06505	0 00 00000	PNCRAT HLT		PUNCH BBTBM	3792
	00003	NCARDS EQU	3	NUMBER OF CONTINUATION CARDS	3793
	00135	IBSIZE EQU	73*NCARDS/4+39	INPUT BUFFER SIZE	3794
06506	00135	NPBUFF ASS	IBSIZE	INPUT BUFFER	3795
*					3796
*	TOTAL MEMORY USED, NOT INCLUDING TABLES:				3797
06643	0 00 00000	LSTMEM HLT		LIST MEMORY	3798



	00034	MYTPCT	B99L	34		3849
*END OF STA TRIGGER					3850	
	00035	NSTTRG	B99L	35	TEMP CNT	3851
	00035	TMPONT	B99L	35		3852
	00036	ACTEST	B99L	36	ACTIVE STA TRIGGER	3853
	00037	LASTST	B99L	37	LAST STA TRIGGER	3854
	00040	JPSTRG	B99L	40	JUMP STA TRIGGER	3855
	00041	SPTRIG	B99L	41	SPRGG TRIGGER	3856
	00042	SPRGLR	B99L	42	START OF PRGG LBL	3857
*DP MPY A					3858	
*SAVE TEMP 1					3859	
*READY CHAR TEMP 1					3860	
	00043	DPMPYA	B99L	43	COUNT OF COPY	3861
	00043	SAVET1	B99L	43		3862
	00043	RDYCT1	B99L	43		3863
	00043	CTCOPY	B99L	43		3864
*DP MPY B					3865	
*FAIL EXIT					3865	
*ACTIVE CHAR TEMP 1					3867	
	00044	DPMPYB	B99L	44	MERG OF COPY	3868
	00044	FAILEX	B99L	44		3869
	00044	ACHTP1	B99L	44		3870
	00044	M9FCPY	B99L	44		3871
*DP MPY C					3872	
*ACTIVE CHAR TEMP 2					3873	
	00045	DPMPYC	B99L	45	COUNT OF PLEX	3874
	00045	ACHTP2	B99L	45		3875
	00045	CTPLEX	B99L	45		3876
*DP MPY D					3877	
*INPUT CHAR TEMP 1					3878	
	00046	DPMPYD	B99L	46	TARGET LIST OF COPY	3879
	00046	INCHT1	B99L	46		3880
	00046	TGTLCY	B99L	46		3881
*CONST TEMP A					3882	
*DIMENS TEMP A					3883	
*PACK TEMP 1					3884	
	00047	CNSTPA	B99L	47	SOURCE TRP OF COPY	3885
	00047	DIMTPA	B99L	47		3886
	00047	PAKTP1	B99L	47		3887
	00047	STACXX	B99L	47		3888
*CONST TEMP B					3889	
*PACK TEMP 2					3890	
*DIMENS TEMP B					3891	
	00050	CNSTPB	B99L	50	SOURCE LIST OF COPY	3892
	00050	PAKTP2	B99L	50		3893
	00050	DIMTPB	B99L	50		3894
	00050	SLSTCY	B99L	50		3895
*PACK TEMP 3					3896	
	00051	PAKTP3	B99L	51	CHARACTERISTIC A	3897
	00051	CHARA	B99L	51		3898

00052	CHARB	B99L	52	CHARACTERISTIC B	3899
00053	DGSCTA	B99L	53	DIGITS SCANED CNT A	3900
00054	DGSCTB	B99L	54	DIGITS SCANED CNT B	3901
00055	DGUCTA	B99L	55	DIGITS USED CNT A	3902
00056	DGUCTB	B99L	56	DIGITS USED CNT B	3903
00057	SCDIGA	B99L	57	SCANED DIGIT A	3904
00060	SCDIGB	B99L	60	SCANED DIGIT B	3905
*FBL TEMP A					3906
*BIM-RAM TEMP 1					3907
*CRF TEMP 1					3908
*FIC-FAC-FIP TEMP 1					3909
00061	FBLTPA	B99L	61	SER TEMP 1	3910
00061	BIAMTI	B99L	61		3911
00061	CBFTP1	B99L	61		3912
00061	FFFTP1	B99L	61		3913
00061	SERTP1	B99L	61		3914
*REASSIGN TEMP 1					3915
*FBL TEMP B					3916
*ADDRESS POINTED TO					3917
00062	RSGNT1	B99L	62	SER TEMP 2	3918
00062	FBLTMB	B99L	62		3919
00062	ADRPYA	B99L	62		3920
00062	SERTP2	B99L	62		3921
*REASSIGN TEMP 2					3922
*OP TEMP 1					3923
00063	RSGNT2	B99L	63	SER TEMP 3	3924
00063	UPTP1	B99L	63		3925
00063	SERTP3	B99L	63		3926
*REASSIGN TEMP 3					3927
00064	RSGNT3	B99L	64	SER TEMP 4	3928
00064	SERTP4	B99L	64		3929
*REASSIGN TEMP 4					3930
00065	RSGNT4	B99L	65	SER TEMP 5	3931
00065	SERTP5	B99L	65		3932
00066	RSGNT5	B99L	66	REASSIGN TEMP 5	3933
00067	QSFCTR	B99L	67	QSF COUNTER	3934
00070	QSFWRD	B99L	70	QSF WORD	3935
00071	QSFWAD	B99L	71	QSF WORD ADR	3936
00072	HLDPWD	B99L	72	HOLD PRINT WORD	3937
00073	PRTP1	B99L	73	PRINT TEMP 1	3938
00074	ECHTP1	B99L	74	ENTER CHAR TEMP 1	3939
00075	ECHTP2	B99L	75	ENTER CHAR TEMP 2	3940
00076	NNTP1	B99L	76	NN TEMP 1	3941
00076	RNTFL1	B99L	76	RUN TIME FL ONE	3942
00077	NNTP2	B99L	77	NN TEMP 2	3943

		PAGE	L I S T	D E F I N I T I O N S		
	00000	FLSLST 888L	0	FL SCALAR LIST		3944
	00001	FXSLST 888L	1	FX SCALAR LIST		3945
	00002	LBLST 888L	2	LBL LIST		3946
*FL CONST LIST					3948	
	00003	FLCLST 888L	3	ERRR SYMBL LIST		3949
	00003	EPYLS 888L	3			3950
	00004	FXCLST 888L	4	FX CONST LIST		3951
	00005	AYYLS 888L	5	ARRAY LIST		3952
	00006	GLSLST 888L	6	GLOBAL SPRG LIST		3953
	00007	GDLIST 888L	7	GLOBAL DMY LIST		3954
	00010	LBCSPL 888L	10	LOCAL SPRG LIST		3955
	00011	LBCDML 888L	11	LOCAL DMY LIST		3956
*COMMON LIST					3957	
*SPRG ARGUMENT LIST					3958	
*DIMENS LIST					3959	
*ERRR RPUT LIST					3960	
	00012	CSLIST 888L	12	SUM LIST		3961
	00012	SPAPGL 888L	12			3962
	00012	DIMLST 888L	12			3963
	00012	ERLIST 888L	12			3964
	00012	SUMLST 888L	12			3965
*EQUIV DATA LIST					3966	
*PRD LIST					3967	
*TERM LIST					3968	
*SCRIPT EXP LIST					3969	
	00013	QDATLS 888L	13	ERRR STOP LIST		3970
	00013	PRDLS 888L	13			3971
	00013	TERMLS 888L	13			3972
	00013	SCRFYL 888L	13			3973
	00013	ERSTLS 888L	13			3974
*DR LABPS APEN LIST					3975	
*EQUIV RPUT LIST					3976	
	00014	DALST 888L	14	MODE LIST		3977
	00014	QAPTLS 888L	14			3978
	00014	MADLST 888L	14			3979
*CADE LIST					3980	
	00015	CADLST 888L	15	EQUIV TEMP LIST		3981
	00015	QTPLS 888L	15			3982
*SCRIPT LIST					3983	
	00016	SCRLET 888L	16	EQUIV HOLD LIST		3984
	00016	QHDLA 888L	16			3985
	00017	PLEXLS 888L	17	PLEX LIST		3986
	00020	WRKLT 888L	20	WRK LIST		3987
	00021	XITLS 888L	21	EXIT LIST		3988
	00022	FAILDL 888L	22	FAIL DATA LIST		3989
	00023	SAVFLS 888L	23	SAVE LIST		3990
	00024	PUNCHL 888L	24	PUNCH LIST		3991



	PAGE	PBP, LBP, AND MBP DEFINITIONS (DOUBLED)		
00200	SETUPP B99L	200	SET UP DMY PBP	3992
00210	STRPBP B99L	210	STARE PBP	3993
00220	DTRPBP B99L	220	DB TRAP PBP	3994
00224	AGTPBP B99L	224	ASSIGN G8 T8 PBP	3995
00230	FARGPB B99L	230	FIRST ARG PBP	3996
00234	NEXTAP B99L	234	NEXT ARG PBP	3997
00240	IBTPBP B99L	240	IA TRAP PBP	3998
00244	FTCHPB B99L	244	FETCH PBP	3999
00250	BKFPBP B99L	250	BK FETCH PBP	4000
00254	ADDPBP B99L	254	ADD PBP	4001
00264	SUSPBP B99L	264	SUB PBP	4002
00274	MPYPBP B99L	274	MPY PBP	4003
00304	DIVPBP B99L	304	DIV PBP	4004
00314	CHSPBP B99L	314	CHS PBP	4005
00320	ASLPBP B99L	320	ASSIGN LBL PBP	4006
00006	LBLBP B99L	6	LBL LBP	4007
00010	DELLBP B99L	10	DEL LBP	4008
00012	SYSLBP B99L	12	SYS LBP	4009
00022	ABSLBP B99L	22	ABS LBP	4010
00002	BRUMBP B99L	2	BRU MBP	4011
00122	BRRMBP B99L	122	BRR MBP	4012
00132	ADDMBP B99L	132	ADD MBP	4013
00166	SKGMBP B99L	166	SKG MBP	4014
00000	HLTMBP B99L	0	HLT MBP	4015
00107	BRMBP B99L	107	BRM* MBP	4016
00106	BRMMBP B99L	106	BRM MBP	4017
00040	NBPMBP B99L	40	NBP MBP	4018
00162	LDXMBP B99L	162	LDX MBP	4019
00576	EAXMBP B99L	576	EAX* MBP	4020
00142	MINBP B99L	142	MIN MBP	4021
				4022

	PAGE	RUN-TIME LINK DEFINITIONS		
00001	STLINK 898L	1	START OF DMYS LINK	4023
00002	NDYLNK 898L	2	END OF DMYS LINK	4024
00003	STPSSL 898L	3	STOP SPRBG LINK	4025
00004	ISSLNK 898L	4	IF SENSE SWITCH LINK	4026
00005	ISLLNK 898L	5	IF SENSE LIGHT LINK	4027
00006	CGTLNK 898L	6	COMPUTED GO TO LINK	4028
00007	ACTSL 898L	7	ACCEPT SPRBG LINK	4029
00010	ACCTSL 898L	10	ACCEPT TAPE SPRBG LINK	4030
00011	PRNTSL 898L	11	PRINT SPRBG LINK	4031
00012	PUNCHL 898L	12	PUNCH SPRBG LINK	4032
00013	PHTPSL 898L	13	PUNCH TAPE SPRBG LINK	4033
00014	TYPSSL 898L	14	TYPE SPRBG LINK	4034
00015	RWINSL 898L	15	REWIND SPRBG LINK	4035
00016	READSL 898L	16	READ SPRBG LINK	4036
00017	RDTPSL 898L	17	READ TAPE SPRBG LINK	4037
00020	RITPSL 898L	20	READ INPUT TAPE SPRBG LINK	4038
00021	WTPSSL 898L	21	WRITE TAPE SPRBG LINK	4039
00022	WBTSSL 898L	22	WRITE OUTPUT TAPE SPRBG LINK	4040
00023	STPIAL 898L	23	STOP I-O LINK	4041
00024	IAVLNK 898L	24	IF OVERFLOW LINK	4042
00025	BKSPSL 898L	25	BACKSPACE SPRBG LINK	4043
00026	NFLSPL 898L	26	END FILE SPRBG LINK	4044
00027	SENLSL 898L	27	SENSE LIGHT SPRBG LINK	4045
00030	EXPSPL 898L	30	EXPON SPRBG LINK	4046
00031	FIXSPL 898L	31	FIX SPRBG LINK	4047
00032	FLBTSL 898L	32	FLGAT SPRBG LINK	4048
00033	I@LUAL 898L	33	I@L UNSCRIPTED ARRAY LINK	4049
				4050

	PAGE	FLAG AND PLEX DEFINITIONS	
00000	FLSIDF B99L	0000	FL SCALAR ID FLAG 4051
00100	FXSIDF B99L	0100	FX SCALAR ID FLAG 4052
00400	FXCSTF B99L	0400	FX CONST FLAG 4053
00500	AYIDFG B99L	0500	ARRAY ID FLAG 4054
00600	GSPIDF B99L	0600	GLOBAL SPRG ID FLAG 4055
01000	LSPIDF B99L	1000	LOCAL SPRG ID FLAG 4056
01100	LDYIDF B99L	1100	LOCAL DMY ID FLAG 4057
07741	MINIAP B99L	7741	MINUS ADDRESSABLE PLEX 4058
*MINUS NONADDRESSABLE PLEX			4059
07701	MINNAP B99L	7701	MINUS FLAG 4060
07701	MINUSF B99L	7701	4061
*SUM TERM PLEX			4062
07600	SUMTPX B99L	7600	SUM FLAG 4063
07600	SUMFLG B99L	7600	4064
07602	ADDPLX B99L	7602	ADD PLEX 4065
*PRD TERM PLEX			4066
07500	PRDTP B99L	7500	PRD FLAG 4067
07500	PRDFG B99L	7500	4068
07502	MPYPLX B99L	7502	MPY PLEX 4069
*DIV TERM PLEX			4070
07402	DIVTPX B99L	7402	DIV FLAG 4071
07402	DIVFG B99L	7402	4072
07302	FCTFLG B99L	7302	FUNCTION FLAG 4073
07302	FCTTPX B99L	7302	FUNCTION TERM PLEX 4074
*EXP8N TERM PLEX			4075
07202	EXPTPX B99L	7202	EXP8N FLAG 4076
07202	EXPEG B99L	7202	4077
07101	FIXTPX B99L	7101	FIX TERM PLEX 4078
*SINGLY SCRIPTED ARRAY PLEX			4079
06742	SCRAPX B99L	6742	SINGLY SCRIPTED ARRAY FLAG 4080
06742	SCRAFG B99L	6742	4081
*SPEC SCRIPTED ARRAY PLEX			4082
06643	SPSAPX B99L	6643	SPEC SCRIPTED ARRAY FLAG 4083
06643	SPSAFG B99L	6643	4084
*ARRAY DIMENS GROUP PLEX			4085
06500	AYDGP B99L	6500	SPRG ARG GROUP PLEX 4086
06500	SPAGPX B99L	6500	4087
			4088

		PAGE		EFFECTIVE ADDRESS DEFINITIONS	
00000	W0	B00L	0	W0	4089
77777	VJW1	B00L	-1	W1	4090
77776	VJW2	B00L	-2	W2	4091
77775	VJW3	B00L	-3	W3	4092
77774	VJW4	B00L	-4	W4	4093
77773	VJW5	B00L	-5	W5	4094
77772	VJW6	B00L	-6	W6	4095
00000	B0TS72	B00L	0	(B0TT0M-SIZE+2)	4096
00000	B0TS73	B00L	0	(B0TT0M-SIZE+3)	4097
00000	SIZE-1	B00L	0	(SIZE-1)	4098
00000	B0T0+1	B00L	0	(B0TT0M+1)	4099
00000	B0TM-1	B00L	0	(B0TT0M-1)	4100
					4101

	PAGE	PROGRAMMED OPERATOR DEFINITIONS	
BAM	OPD	10000000	4102
CSF	OPD	10100000	4103
CSA	OPD	10200000	4104
JAT	OPD	10300000	4105
JAF	OPD	10400000	4106
TRY	OPD	10500000	4107
GSF	OPD	10600000	4108
STD	OPD	10700000	4109
FET	OPD	11000000	4110
SWT	OPD	11100000	4111
JRS	OPD	11200000	4112
BIF	OPD	11300000	4113
MCB	OPD	11400000	4114
SBL	OPD	11500000	4115
SBF	OPD	11600000	4116
RSV	OPD	11700000	4117
CNT	OPD	12000000	4118
RLS	OPD	12100000	4119
TBT	OPD	12200000	4120
FIL	OPD	12300000	4121
MEN	OPD	12400000	4122
LDP	OPD	12500000	4123
BLF	OPD	12600000	4124
SAL	OPD	12700000	4125
PUL	OPD	13000000	4126
BNG	OPD	13100000	4127
BAF	OPD	13200000	4128
CAR	OPD	13300000	4129
PLB	OPD	13400000	4130
CAC	OPD	13500000	4131
CIC	OPD	13600000	4132
FIC	OPD	13700000	4133
FAC	OPD	14000000	4134
BAP	OPD	14100000	4135
MBF	OPD	14200000	4136
SNE	OPD	14300000	4137
SER	OPD	14400000	4138
LCF	OPD	14500000	4139
FIP	OPD	14600000	4140
ADR	OPD	14700000	4141
EBS	OPD	15000000	4142
SBB	OPD	15100000	4143
SBT	OPD	15200000	4144
SDP	OPD	15300000	4145
ADP	OPD	15400000	4146
REC	OPD	15500000	4147
CBF	OPD	15600000	4148
LCB	OPD	15700000	4149
PRC	OPD	16000000	4150
			4151

	PAGE	RUN-TIME PRP DEFINITIONS	
SFX	8PD	10000000	4167
SFL	8PD	10100000	4168
AFX	8PD	10200000	4169
AFL	8PD	10300000	4170
FXS	8PD	10400000	4171
FAS	8PD	10500000	4172
DBX	8PD	11000000	4173
DBF	8PD	11100000	4174
AGT	8PD	11200000	4175
ASN	8PD	11300000	4176
XFA	8PD	11400000	4177
FFA	8PD	11500000	4178
XNA	8PD	11600000	4179
FNA	8PD	11700000	4180
XIO	8PD	12000000	4181
FIS	8PD	12100000	4182
LFL	8PD	12200000	4183
LFX	8PD	12300000	4184
FLA	8PD	12600000	4185
FAD	8PD	13100000	4186
FLS	8PD	13200000	4187
FSU	8PD	13500000	4188
FLM	8PD	13600000	4189
XYP	8PD	14000000	4190
FMP	8PD	14100000	4191
FLD	8PD	14200000	4192
XDV	8PD	14400000	4193
FUV	8PD	14500000	4194
FSC	8PD	14700000	4195
			4196
			4197
		ADDRALL 8P DEFINITIONS	4198
JUN	8PD	00100000	4199
XXA	8PD	04600600	4200
CAX	8PD	04600020	4201
CXB	8PD	04600040	4202
XXB	8PD	04600060	4203
LDE	8PD	04600140	4204
XEE	8PD	04600160	4205
XEC	8PD	02300000	4206
EXQ	8PD	02300000	4207
MPY	8PD	06400000	4208
00000	END		

P60	APD	16100000	4152
S8C	APD	16200000	4153
B1M	APD	16300000	4154
FEX	APD	16400000	4155
P65	APD	16500000	4156
P66	APD	16600000	4157
P67	APD	16700000	4158
P70	APD	17000000	4159
P71	APD	17100000	4160
P72	APD	17200000	4161
P73	APD	17300000	4162
P74	APD	17400000	4163
P75	APD	17500000	4164
P76	APD	17600000	4165
P77	APD	17700000	4166



## **PART II. LOADER**



		1	*	CORRECTIONS TO FORTRAN LOADER (G)		
		2	*			
		3	*	TO MAKE VERSION H		
		4	*			
		5	*	SEPT 1, 1964		
		6	*			
00200	0 06 03000	7		PTAP	L3000	
00201	0 06 00030	8		PTAP	L30	
00202	0 04 00346	9		PACH	D3A	
00203	0 04 00346	10		PACH	D3A	
	00346	11		BORG	346	
00346	0 76 00275	12	D3A	LDA	MEMSIZ	
00347	0 04 02062	13		PACH	LDSYS	
00350	0 04 02062	14		PACH	LDSYS	
	02062	15		BORG	2062	
02062	0 61 00072	16	LDSYS	MIN	EOSIZE	
02063	0 04 00714	17		PACH	D29A	
02064	0 04 00714	18		PACH	D29A	
	00714	19		BORG	714	
00714	0 01 02462	20	D29A	BRU	SAVBK	SAVE LOCATION OF BREAK
00715	0 04 00756	21		PACH	D35	
00716	0 04 00756	22		PACH	D35	
	00756	23		BORG	756	
00756	0 76 02466	24	D35	LDA	L0CBK	LOCATION OF BREAK
00757	0 04 02462	25		PACH	SAVBK	
00760	0 04 02466	26		PACH	L0CBK	
	02462	27		BORG	2462	
02462	0 76 00043	28	SAVBK	LDA	BREAK	BREAK
02463	0 35 02466	29		STA	L0CBK	LOCATION OF BREAK
02464	0 76 00055	30		LDA	1STIAD	FIRST INST ADR
02465	0 01 00715	31		BRU	D29A+1	
02466	0 00 00000	32	L0CBK	PZF		
	02466	33	LAST	EQU	*-1	
02467	0 05 00001	34		PNCH	1	
02470	0 05 00001	35		PNCH	1	
02471	0 05 00300	36		PNCH	L300	
02472	0 05 02466	37		PNCH	LAST	
02473	0 07 00000	38		STOP		
02474	0 01 00300	39		BRU	L300	

2-2

	40	*		
00043	41	BREAK	BOOL	43
00055	42	1STIAD	BOOL	55
00072	43	EOSIZE	BOOL	72
00275	44	MEMSIZ	BOOL	275
00030	45	L30	BOOL	30
00300	46	L300	BOOL	300
03000	47	L3000	BOOL	3000
	48	*		
	49	PACH	OPD	00400000
	50	PNCH	OPD	00500000
	51	PTAP	OPD	00600000
	52	STOP	OPD	00700000
00000	53		END	

1STIAD	00055	EOSIZE	00072	MEMSIZ	00275	BREAK	00043
L3000	03000	LDSYS	02062	L0CBK	02466	SAVRK	02462
D29A	00714	L300	00300	LAST	02466	PACH	02475
PNCH	02475	PTAP	02475	ST0P	02475	D35	00756
D3A	00346	L30	00030				



CORRECTIONS TO FORTRAN LOADER (F)  
TO MAKE VERSION G

MAY 1, 1964

			1	*					
			2	*					
			3	*					
			4	*					
			5	*					
			6	*					
			7	*					
00200	C 06	03000	8		PTAP	L3000			
00201	C 06	00030	9		PTAP	L30			
00202	C 04	00317	10		PACH	BRU930			
00203	C 04	00317	11		PACH	BRU930			
		00317	12		BORG	317			
00317	C 01	02450	13		BRU930 BRU	PCH930		PATCH FOR 930	
			14	*					
00320	C 04	00743	15		PACH	L743			
00321	C 04	00743	16		PACH	L743			
		00743	17		BORG	743			
00743	C 35	02457	18		L743 STA	SAVDEL		SAVE DEL LOP	
			19	*					
00744	C 04	00747	20		PACH	L747			
00745	C 04	00747	21		PACH	L747			
		00747	22		BORG	747			
00747	C 55	02457	23		L747 ADD	SAVDEL		SAVE DEL LOP	
			24	*					
00750	C 04	02450	25		PACH	PCH930			
00751	C 04	02461	26		PACH	LAST			
		02450	27		BORG	2450			
02450	C 76	02460	28		PCH930 LDA	BIG			
02451	C 75	02451	29		LDB	LITTLE			
02452	C 66	20062	30		RCY	50		NO-OP ON 930. SHIFT RIGHT 2 ON 910/20	
			31	*					
02453	C 35	02302	32		STA	LRGECB		LARGE COUNT DOWN	
02454	C 36	02301	33		STB	SMALCB		SMALL COUNT DOWN	
02455	C 76	00273	34		LDA	TOPMEM		LAST ADDR OF MEMORY	
02456	C 01	00320	35		BRU	BRU930+1			
02457	C 00	00000	36		SAVDEL HLT			SAVE DEL LOP	
02460	C11	1740	37		BIG DEC	300000			
02461	C00	13560	38		LITTLE DEC	6000			
		02461	39		LAST ECU	*-1			

			40	*			
02462	C	05	00001	41		PNCH	1
02463	C	05	00001	42		PNCH	1
02464	C	05	00300	43		PNCH	L300
02465	C	05	02461	44		PNCH	LAST
02466	C	07	00000	45		STOP	
02467	C	01	00300	46		BRU	L300
			47	*			
		02302	48	LRGEC	B00L	2302	
		02301	49	SMALCD	B00L	2301	
		00273	50	TOPMEM	B00L	273	
		00030	51	L30	B00L	30	
		00300	52	L300	B00L	300	
		03000	53	L3000	B00L	3000	
			54	PACH	OPD	00400000	
			55	PNCH	OPD	00500000	
			56	PTAP	OPD	00600000	
			57	STOP	OPD	00700000	
		00000	58	END			

BRU930	00317	LITTLE	02461	LRGECB	02302	PCH930	02450
SAVDEL	02457	SMALCD	02301	TOPMEM	00273	L3000	03000
L300	00300	L743	00743	L747	00747	LAST	02461
PACH	02470	PNCH	02470	PTAP	02470	STOP	02470
BIG	02460	L30	00030				





		1	*							1
		2	*							2
		3	*							3
		4	*							4
		5	*							5
		6	*							6
		7	*							7
		8	*							8
		9	*							9
		10	*							10
		11	*							11
		12	*							12
		13	*							13
		14	*							14
		15	*							15
		16	*							16
		17	*							17
		18	*							18
		19	*							19
		20	*							20
		21	*							21
		22	*							22
		23	*							23
		24	*							24
		25	*							25
		26	*							26
		27	*							27
		28	*							28
		29	*							29
		30	*							30
		31	*							31
		32	*							32
		33	*							33
		34	*							34
		35	*							35
		36	*							36
		37	*							37
		38	*							38
		39	*							39
		40	*							40
		41	*							41
		42	*							42
		43	*							43
		44	*							44
		45	*							45
		46	*							46
		47	*							47
		48	*							48
		49	*							49
		50	*							50

S D S F O R T R A N I I L O A D E R  
D E C E M B E R 9 . 1 9 6 3

PUNCH OUT LOADER FROM 1 TO 1  
AND FROM 300 TO FOLLOWING ADDRESS:

		02304	PUNCH2	EQU	LAST		
		00001	BORG	1			
00001	0 01	00300	BRU	INITZE		INITIALIZE	
		00300	BORG	300			
			*INITIALIZE				
00300	0 76	02266	INITZE	LDA	18KM2	18K-2	
00301	0 75	00025		LDB	SIGN	SIGN	
00302	0 54	02267	\$2	SUB	2K	2K	
00303	0 35	00273		STA	T0PMEM	LAST ADR 0F MEMORY	
00304	0 36	40273		STB*	T0PMEM	LAST ADR 0F MEMORY	
00305	0 53	40273		SKN*	T0PMEM	LAST ADR 0F MEMORY	
00306	0 01	00302		BRU	\$2	\$1	
00307	0 55	00024		ADD	0NE	0NE	
00310	0 35	00275		STA	MEMRIZ	SIZE 0F MACHINE	
00311	0 16	02275		MRG	TAGBIT	TAG BIT	
00312	0 35	02312		STA	B0TLT	B0TT0M LINK TBL	
00313	0 54	00024		SUB	0NE	0NE	
00314	0 35	02311		STA	B0TLT1	B0TT0M LINK TBL-1	
00315	0 54	00024		SUB	0NE	0NE	
00316	0 35	02310		STA	B0TLT2	B0TT0M LINK TBL-2	
00317	0 76	00273		LDA	T0PMEM	LAST ADR 0F MEMORY	
00320	0 55	02271		ADD	LBLKEY	LBL KEY	
00321	0 35	00274		STA	TPMPLK	LAST ADR 0F MEMORY + LBL KEY	
00322	0 76	02226		LDA	MSIX	MINUS SIX	
00323	0 35	00250		STA	MS0PSZ	MINUS SPEC 0P TABLE SIZE	
00324	0 60	00250		SKR	MS0PSZ	MINUS SPEC 0P TABLE SIZE	
00325	0 60	00250		SKR	MS0PSZ	MINUS SPEC 0P TABLE SIZE	
00326	0 76	02227		LDA	MTWELV	MINUS TWELVE	
00327	0 54	00250		SUB	MS0PSZ	MINUS SPEC 0P TABLE SIZE	
00330	0 35	00250		STA	MS0PSZ	MINUS SPEC 0P TABLE SIZE	
00331	0 76	02302		LDA	LRGECN	LARGE COUNT DOWN	
00332	0 35	00253		STA	CTDNST	COUNT DOWN START	
00333	0 43	02156		BRM	LOADMP	LOAD MAIN PROGRAM	
00334	0 76	00025		LDA	SIGNBT	SIGN BIT	
00335	0 35	00271		STA	MULSR	MINUS UNLESS LOAD SYSTEM REQ	

00336	0	46	30003	51	CLR			51
00337	0	71	02233	52	LDX	MABSLS	MINUS ABS LINK SIZE	52
00340	2	35	00250	53	\$3 STA	ENDABS.2	END ABS LINK TABLE	53
00341	0	41	00340	54	BRX	\$3	\$2	54
00342	0	35	00040	55	STA	LINKX	LINK X	55
00343	0	35	00041	56	STA	MIFMPI	MINUS IF MAIN PRG IN	56
00344	0	35	00261	57	STA	WINBUF	WORDS LEFT IN BUFFER	57
00345	0	35	00276	58	STA	MIRMTE	MINUS IF READING MACH TO END	58
00346	0	76	00273	59	LDA	TAPMEM	LAST ADR OF MEMORY	59
00347	0	35	00042	60	STA	LOWCAM	LOWEST COMMON ADR	60
00350	0	36	00043	61	STB	BRFAK	BREAK	61
00351	0	76	02235	62	LDA	ST920	920 HEAD START	62
00352	0	60	00043	63	SKR	BREAK	BREAK	63
00353	0	76	02234	64	LDA	ST910	910 HEAD START	64
00354	0	35	02305	65	STA	MPRHST	MAIN PRG HEAD START	65
00355	0	35	00043	66	STA	BREAK	BREAK	66
00356	0	35	00061	67	STA	LBXLES	LABEL X LEAST	67
				68	+READ NEXT PROGRAM BLOCK			68
00357	0	76	00275	69	RNXPLX LDA	MEMSIZ	SIZE OF MACHINE	69
00350	0	54	00061	70	SUB	LBXLES	LABEL X LEAST	70
00361	0	55	00040	71	ADD	LINKX	LINK X	71
00362	0	35	00057	72	STA	TEMP1	TEMP 1	72
00363	0	46	30003	73	CLR			73
00364	0	01	00367	74	RRU	\$5	\$11	74
00365	0	35	40061	75	\$4 STA+	LBXLES	LABEL X LEAST	75
00366	0	61	00061	76	MIN	LBXLES	LABEL X LEAST	76
00367	0	60	00057	77	\$5 SKR	TEMP1	TEMP 1	77
00370	0	20	00000	78	NOP			78
00371	0	53	00057	79	SKN	TEMP1	TEMP 1	79
00372	0	01	00365	80	BRU	\$4	\$10	80
00373	0	43	01512	81	BRM	NXWRD	NEXT WORD	81
00374	0	35	00044	82	STA	PRTYPE	PRG TYPE	82
00375	0	75	00026	83	LDB	ONES	ONES	83
00376	0	53	00041	84	SKN	MIFMPI	MINUS IF MAIN PRG IN	84
00377	0	01	00403	85	BRU	\$6	\$3	85
00400	0	70	02242	86	SKM	MPRTYP	MAIN PRG TYPE	86
00401	0	01	00407	87	BRU	\$7	\$4	87
00402	0	01	02170	88	BRU	ILLTAP	ILLEGAL TAPE	88
00403	0	70	02242	89	\$6 SKM	MPRTYP	MAIN PRG TYPE	89
00404	0	01	02170	90	BRU	ILLTAP	ILLEGAL TAPE	90
00405	0	76	00025	91	LDA	SIGNBT	SIGN BIT	91
00406	0	35	00041	92	STA	MIFMPI	MINUS IF MAIN PRG IN	92
00407	0	35	00045	93	\$7 STA	MIFPRR	MINUS IF PROGRAM REQUIRED	93
00410	0	76	00040	94	LDA	LINKX	LINK X	94
00411	0	35	00046	95	STA	HOLDLX	HOLD LINK X	95
00412	0	76	00043	96	LDA	BREAK	BREAK	96
00413	0	35	00047	97	STA	PRSTRT	PRG START	97
00414	0	43	01512	98	BRM	NXWRD	NEXT WORD	98
00415	0	35	00050	99	STA	ENT	ENT	99
00416	0	72	02303	100	SKA	TAGPBP	TAG PBP BITS	100

00417	0	01	00427	101	BRU	\$8	\$9	101
00420	0	43	01512	102	BRM	NXWORD	NEXT WORD	102
00421	0	35	00051	103	STA	NAME1	NAME 1	103
00422	0	71	00043	104	LDX	BREAK	BREAK	104
00423	2	35	00001	105	STA	1.2	1	105
00424	0	43	01512	106	BRM	NXWORD	NEXT WORD	106
00425	0	35	00052	107	STA	NAME2	NAME 2	107
00426	2	35	00002	108	STA	2.2	2	108
00427	0	76	00043	109	LDA	BREAK	BREAK	109
00430	0	55	02230	110	ADD	EIGHT	EIGHT	110
00431	0	35	00043	111	STA	BREAK	BREAK	111
00432	0	54	00273	112	SUB	T9PMEM	LAST ADR OF MEMORY	112
00433	0	35	02306	113	STA	LNKXMN	LINK X MIN	113
00434	0	76	00044	114	LDA	PRTYPE	PR9G TYPE	114
00435	0	75	00026	115	LDB	9NES	9NES	115
00436	0	70	02251	116	SKM	MAPTYP	MACH PR9G TYPE	116
00437	0	01	00444	117	BRU	\$10	\$5	117
00440	0	01	00441	118	BRU	\$9	\$6	118
00441	0	76	02223	119	LDA	MSEVEN	MINUS SEVEN	119
00442	0	55	00043	120	ADD	BREAK	BREAK	120
00443	0	35	00043	121	STA	BREAK	BREAK	121
00444	0	76	00043	122	LDA	BREAK	BREAK	122
00445	0	35	00055	123	STA	1STIAD	FIRST INST ADR	123
00446	0	35	00060	124	STA	L9CNT	L9C COUNTER	124
00447	0	43	01265	125	BRM	SERHLT	SERCH LINK TABLE	125
00450	0	43	01512	126	BRM	NXWORD	NEXT WORD	126
00451	0	75	02240	127	LDB	8BIT9P	8 BIT 9P MARK	127
00452	0	70	02252	128	SKM	BLKL9P	BLK L9P	128
00453	0	01	00455	129	BRU	\$13	\$1	129
00454	0	01	00502	130	BRU	RDTEXT	READ TEXT	130
00455	0	35	00050	131	STA	ENT	ENT	131
00456	0	72	02276	132	SKA	INDBIT	IND BIT	132
00457	0	01	00467	133	BRU	\$14	\$7	133
00460	0	72	02303	134	SKA	TAG99P	TAG 99P BITS	134
00461	0	01	00447	135	BRU	\$11	\$2	135
00462	0	43	01512	136	BRM	NXWORD	NEXT WORD	136
00463	0	35	00051	137	STA	NAME1	NAME 1	137
00464	0	43	01512	138	BRM	NXWORD	NEXT WORD	138
00465	0	35	00052	139	STA	NAME2	NAME 2	139
00466	0	01	00447	140	BRU	\$11	\$2	140
00467	0	14	02240	141	ETR	8BIT9P	8 BIT 9P MARK	141
00470	0	66	00017	142	PSH	15	17	142
00471	0	53	00045	143	SKN	MIF99R	MINUS IF PROGRAM REQUIRED	143
00472	0	01	00450	144	BRU	\$12	\$8	144
00473	0	35	00057	145	STA	TEMP1	TEMP 1	145
00474	0	75	02265	146	LDB	REQRIT	REQUIRED BIT	146
00475	0	76	00024	147	LDA	9NE	9NE	147
00476	0	73	40057	148	SKG*	TEMP1	TEMP 1	148
00477	0	01	00450	149	BRU	\$12	\$8	149
00500	0	36	40057	150	STB*	TEMP1	TEMP 1	150

00501	0 01 00450	151	BRU	\$12	\$8	151
		152	*			152
		153	*			153
		154	*READ TEXT			154
00502	0 14 00027	155	RDTEXT ETR	ADRMSK	ADR MASK	155
00503	0 35 00270	156	STA	MLKKT5	MACH LINK TAL SIZE	156
00504	0 53 00045	157	SKN	MIFPRR	MINUS IF PROGRAM REQUIRED	157
00505	0 01 01727	158	BRU	RDENDP	READ TO END OF PROGRAM	158
00506	0 76 00044	159	LDA	PRTYPE	PRBG TYPE	159
00507	0 75 00026	160	LDB	GNES	GNES	160
00510	0 70 02251	161	SKM	MAPTYP	MACH PRBG TYPE	161
00511	0 01 00513	162	BRU	\$15	\$1	162
00512	0 01 01747	163	BRU	RDMACH	READ MACH TEXT	163
00513	0 76 00273	164	LDA	T8PMEM	LAST ADR OF MEMORY	164
00514	0 55 00040	165	ADD	LINKX	LINK X	165
00515	0 35 00061	166	STA	LBXLES	LABEL X LEAST	166
00516	0 43 01512	167	BRM	NXWFRD	NEXT WORD	167
00517	0 75 02241	168	LDB	8PMASK	8P MASK	168
00520	0 71 00250	169	LDX	MS8PSZ	MINUS SPEC 8P TABLE SIZE	169
00521	2 70 02260	170	SKM	8PTAB1.2	8P TABLE 1	170
00522	0 01 00525	171	BRU	\$18	\$3	171
00523	0 14 02243	172	ETR	N8PMSK	N8T 8P MASK	172
00524	2 16 02265	173	MRG	8PTAB2.2	8P TABLE 2	173
00525	0 41 00521	174	BRX	\$17	\$2	174
00526	0 35 00053	175	STA	WORD	WORD	175
00527	0 70 02244	176	SKM	LBLLOP	LBL LOP	176
00530	0 01 00551	177	BRU	\$19	\$5	177
00531	0 14 00027	178	ETR	ADRMSK	ADR MASK	178
00532	0 53 00053	179	SKN	WORD	WORD	179
00533	0 55 02271	180	ADD	LBLKEY	LBL KEY	180
00534	0 54 00274	181	SUB	TPMPLK	LAST ADR OF MEMORY + LBL KEY	181
00535	0 17 00026	182	88P	GNES	GNES	182
00536	0 55 00024	183	ADD	8NE	8NE	183
00537	0 55 00040	184	ADD	LINKX	LINK X	184
00540	0 73 00061	185	SKG	LBXLES	LABEL X LEAST	185
00541	0 35 00061	186	STA	LBXLES	LABEL X LEAST	186
00542	0 35 00054	187	STA	LABELX	LABEL X	187
00543	0 76 00061	188	LDA	LBXLES	LABEL X LEAST	188
00544	0 73 00043	189	SKG	BREAK	BREAK	189
00545	0 01 02127	190	BRU	PR2BIG	PROGRAM T88 BIG	190
00546	0 76 00060	191	LDA	L8CNT	L8C COUNTER	191
00547	0 35 40054	192	STA*	LABELX	LABEL X	192
00550	0 01 00516	193	BRU	\$16	\$4	193
00551	0 70 02245	194	SKM	ABSLOP	ABS LOP	194
00552	0 01 00571	195	BRU	\$22	\$6	195
00553	0 35 40043	196	STA*	BREAK	BREAK	196
00554	0 14 00027	197	ETR	ADRMSK	ADR MASK	197
00555	0 35 00056	198	STA	ABS CNT	ABS COUNT	198
00556	0 43 01220	199	BRM	INCRBK	INCR BREAK	199
00557	0 01 00564	200	BRU	\$21	\$7	200

00560	0	61	00060	201	\$20	MIN	LACCNT	L9C COUNTER	201
00561	0	43	01512	202		BRM	NXWARD	NEXT WORD	202
00562	0	35	40043	203		STA*	BREAK	BREAK	203
00563	0	43	01220	204		BRM	INCRBK	INCR BREAK	204
00564	0	60	00056	205	\$21	SKR	ABSCNT	ABS COUNT	205
00565	0	20	00000	206		NBP			206
00566	0	53	00056	207		SKN	ABSCNT	ABS COUNT	207
00567	0	01	00560	208		BRU	\$20	\$8	208
00570	0	01	00516	209		BRU	\$16	\$4	209
00571	0	70	02246	210	\$22	SKM	DELL9P	DEL L9P	210
00572	0	01	00574	211		BRU	\$23	\$9	211
00573	0	01	00616	212		BRU	\$27	\$10	212
00574	0	70	02247	213	\$23	SKM	SYSL9P	SYS L9P	213
00575	0	01	00612	214		BRU	\$25	\$11	214
00576	0	14	02243	215		ETR	N9PMSK	N9T 9P MASK	215
00577	0	16	02250	216		MRG	BRMIND	BRM+ M9P	216
00600	0	35	40043	217		STA*	BREAK	BREAK	217
00601	0	14	00027	218		ETR	ADRMASK	ADR MASK	218
00602	0	35	00057	219		STA	TEMP1	TEMP 1	219
00603	0	76	40057	220		LDA*	TEMP1	TEMP 1	220
00604	0	72	00026	221		SKA	9NES	9NES	221
00605	0	01	00610	222		BRU	\$24	\$14	222
00606	0	16	02265	223		MRG	REQBIT	REQUIRED BIT	223
00607	0	35	40057	224		STA*	TEMP1	TEMP 1	224
00610	0	61	00060	225	\$24	MIN	L9CCNT	L9C COUNTER	225
00611	0	01	00617	226		BRU	\$28	\$12	226
00612	0	70	02252	227	\$25	SKM	BLKL9P	BLK L9P	227
00613	0	01	00615	228		BRU	\$26	\$13	228
00614	0	01	00621	229		BRU	RDTAIL	READ TAIL	229
00615	0	61	00060	230	\$26	MIN	L9CCNT	L9C COUNTER	230
00616	0	35	40043	231	\$27	STA*	BREAK	BREAK	231
00617	0	43	01220	232	\$28	BRM	INCRBK	INCR BREAK	232
00620	0	01	00516	233		BRU	\$16	\$4	233
			234	*					234
			235	*					235
			236	*READ TAIL					236
00621	0	76	00060	237		RDTAIL LDA	L9CCNT	L9C COUNTER	237
00622	0	35	00015	238		STA	TVSTRT	TV START	238
00623	0	76	00043	239		LDA	BREAK	BREAK	239
00624	0	35	00016	240		STA	AYTBST	ARRAY TABLE START	240
00625	0	43	01226	241		BRM	STBRK	STORE TO BRK	241
00626	0	76	00043	242		LDA	BREAK	BREAK	242
00627	0	35	00017	243		STA	FXSPST	FX SPEC START	243
00630	0	43	01226	244		BRM	STBRK	STORE TO BRK	244
00631	0	76	00043	245		LDA	BREAK	BREAK	245
00632	0	35	00020	246		STA	FLSPST	FL SPEC START	246
00633	0	43	01226	247		BRM	STBRK	STORE TO BRK	247
00634	0	76	00043	248		LDA	BREAK	BREAK	248
00635	0	35	00021	249		STA	FLSPND	FL SPEC END	249
00636	0	71	00047	250		LDX	PRSTRT	PR9G START	250

00637	0 43 01512	251	BRM	NXWARD	NEXT WORD	251
00640	0 35 00057	252	STA	TEMP1	TEMP 1	252
00641	0 43 01512	253	BRM	NXWARD	NEXT WORD	253
00642	0 17 00026	254	EOR	ONES	ONES	254
00643	0 55 00024	255	ADD	ONE	ONE	255
00644	0 55 00015	256	ADD	TVSTRT	TV START	256
00645	0 35 00022	257	STA	STFLC0	START FL C0N	257
00646	0 54 00057	258	SUB	TEMP1	TEMP 1	258
00647	0 35 00062	259	STA	STFXC0	START FX C0N	259
00650	0 43 01512	260	BRM	NXWARD	NEXT WORD	260
00651	0 55 00015	261	ADD	TVSTRT	TV START	261
00652	0 35 00015	262	STA	TVSTRT	TV START	262
00653	2 35 00003	263	STA	3.2	3	263
00654	0 43 01512	264	BRM	NXWARD	NEXT WORD	264
00655	0 55 00015	265	ADD	TVSTRT	TV START	265
00656	0 35 00063	266	STA	STDUM	START 0F DUMMYS	266
00657	2 35 00004	267	STA	4.2	4	267
00660	0 43 01512	268	BRM	NXWARD	NEXT WORD	268
00661	0 55 00015	269	ADD	TVSTRT	TV START	269
00662	0 35 00064	270	STA	STTEMP	START 0F TEMP	270
00663	0 43 01512	271	BRM	NXWARD	NEXT WORD	271
00664	0 55 00015	272	ADD	TVSTRT	TV START	272
00665	2 35 00005	273	STA	5.2	5	273
00666	0 43 01512	274	BRM	NXWARD	NEXT WORD	274
00667	0 55 00015	275	ADD	TVSTRT	TV START	275
00670	0 35 00065	276	STA	STXSCA	START 0F FX SCALARS	276
00671	2 35 00006	277	STA	6.2	6	277
00672	0 43 01512	278	BRM	NXWARD	NEXT WORD	278
00673	0 55 00015	279	ADD	TVSTRT	TV START	279
00674	0 35 00066	280	STA	STFSCA	START 0F FL SCALARS	280
00675	2 35 00007	281	STA	7.2	7	281
00676	0 43 01512	282	BRM	NXWARD	NEXT WORD	282
00677	0 55 00015	283	ADD	TVSTRT	TV START	283
00700	0 35 00067	284	STA	STNXPR	START 0F NEXT PR0G	284
00701	0 55 00044	285	ADD	PRTYPE	PR0G TYPE	285
00702	2 35 00000	286	STA	0.2	0	286
00703	0 43 01512	287	BRM	NXWARD	NEXT WORD	287
00704	0 17 00026	288	EOR	ONES	ONES	288
00705	0 55 00024	289	ADD	ONE	ONE	289
00706	0 55 00275	290	ADD	MEMSIZ	SIZE 0F MACHINE	290
00707	0 73 00042	291	SKG	LOWC0M	LOWEST C0MMAN ADR	291
00710	0 35 00042	292	STA	LOWCRM	LOWEST C0MMAN ADR	292

			293		PAGE		293
			294		*SECOND PASS		294
00711	0 76 00042		295	2NDPAS	LDA L0WC0M	LOWEST COMMON ADR	295
00712	0 73 00067		296		SKG STNXPR	START OF NEXT PR0G	296
00713	0 01 02127		297		BRU PR2BIG	PROGRAM TOO BIG	297
00714	0 76 00055		298		LDA 1STIAD	FIRST INST ADR	298
00715	0 35 00060		299		STA L0CCNT	L0C C0UNTER	299
00716	0 35 00043		300		STA BREAK	BREAK	300
00717	0 43 01000		301	\$29	BRM NXWDP2	NEXT WORD PASS 2	301
00720	0 01 00756		302		BRU \$35	\$5	302
00721	0 75 02241		303		LDB 0PMASK	0P MASK	303
00722	0 70 02245		304		SKM ABSL0P	ABS L0P	304
00723	0 01 00740		305		BRU \$32	\$1	305
00724	0 14 00027		306		ETR ADRMSK	ADR MASK	306
00725	0 35 00056		307		STA ABSCNT	ABS C0UNT	307
00726	0 01 00733		308		BRU \$31	\$2	308
00727	0 43 01000		309	\$30	BRM NXWDP2	NEXT WORD PASS 2	309
00730	0 01 02170		310		BRU ILLTAP	ILLEGAL TAPE	310
00731	0 35 40060		311		STA* L0CCNT	L0C C0UNTER	311
00732	0 61 00060		312		MIN L0CCNT	L0C C0UNTER	312
00733	0 60 00056		313	\$31	SKR ABSCNT	ABS C0UNT	313
00734	0 20 00000		314		N0P		314
00735	0 53 00056		315		SKN ABSCNT	ABS C0UNT	315
00736	0 01 00727		316		BRU \$30	\$3	316
00737	0 01 00717		317		BRU \$29	\$4	317
00740	0 70 02246		318	\$32	SKM DELL0P	DEL L0P	318
00741	0 01 00754		319		BRU \$34	\$6	319
00742	0 14 00027		320		ETR ADRMSK	ADR MASK	320
00743	0 35 00057		321		STA TEMP1	TEMP 1	321
00744	0 43 01000		322		BRM NXWDP2	NEXT WORD PASS 2	322
00745	0 01 02170		323		BRU ILLTAP	ILLEGAL TAPE	323
00746	0 43 01010		324		BRM C0NV	C0NV	324
00747	0 55 00057		325		ADD TEMP1	TEMP 1	325
00750	0 14 02304		326		ETR NIND0T	N0T IND BIT	326
00751	0 35 40060		327	\$33	STA* L0CCNT	L0C C0UNTER	327
00752	0 61 00060		328		MIN L0CCNT	L0C C0UNTER	328
00753	0 01 00717		329		BRU \$29	\$4	329
00754	0 43 01010		330	\$34	BRM C0NV	C0NV	330
00755	0 01 00751		331		BRU \$33	\$7	331
00756	0 76 00067		332	\$35	LDA STNXPR	START OF NEXT PR0G	332
00757	0 54 00060		333		SUB L0CCNT	L0C C0UNTER	333
00760	0 35 00057		334		STA TEMP1	TEMP 1	334
00761	0 46 30003		335		CLR		335
00762	0 35 40060		336	\$36	STA* L0CCNT	L0C C0UNTER	336
00763	0 61 00060		337		MIN L0CCNT	L0C C0UNTER	337
00764	0 60 00057		338		SKR TEMP1	TEMP 1	338
00765	0 20 00000		339		N0P		339
00766	0 53 00057		340		SKN TEMP1	TEMP 1	340
00767	0 01 00762		341		BRU \$36	\$9	341
00770	0 76 00067		342		LDA STNXPR	START OF NEXT PR0G	342

00771	0 54 00273	343	SUB	T0PMEM	LAST ADR 0F MEMBRY	343
00772	0 35 02306	344	STA	LNKXMN	LINK X MIN	344
00773	0 75 00015	345	LDB	TVSTRT	TV START	345
00774	0 76 00063	346	LDA	STDUM	START 0F DUMMYS	346
00775	0 54 00015	347	SUB	TVSTRT	TV START	347
00776	0 43 01237	348	BRM	TRAVEC	PROCESS TRA VECT	348
00777	0 01 01374	349	BRU	CKALPG	CHECK FOR ALL PRGS IN	349
		350	*			350
		351	*			351
		352	*NEXT WORD PASS 2			352
01000	0 00 00000	353	NXWDP2	HLT		353
01001	0 76 00016	354	LDA	AYTBST	ARRAY TABLE START	354
01002	0 73 00043	355	SKG	BREAK	BREAK	355
01003	0 51 01000	356	BRR	NXWDP2	NEXT WORD PASS 2	356
01004	0 76 40043	357	LDA*	BREAK	BREAK	357
01005	0 61 00043	358	MIN	BREAK	BREAK	358
01006	0 61 01000	359	MIN	NXWDP2	NEXT WORD PASS 2	359
01007	0 51 01000	360	BRR	NXWDP2	NEXT WORD PASS 2	360
		361	*			361
		362	*			362
		363	*CONV			363
01010	0 00 00000	364	CONV	HLT		364
01011	0 72 00025	365	SKA	SIGNBT	SIGN BIT	365
01012	0 01 01014	366	BRU	\$37	\$1	366
01013	0 51 01010	367	BRR	CONV	CONV	367
01014	0 35 00251	368	\$37	STA	CONV HOLD WORD	368
01015	0 14 00027	369	ETR	ADRMSK	ADR MASK	369
01016	0 54 02272	370	SUB	DUMKEL	DUMMY KEY	370
01017	0 72 00025	371	SKA	SIGNBT	SIGN BIT	371
01020	0 01 01023	372	BRU	\$38	\$2	372
01021	0 55 00063	373	ADD	STDUM	START 0F DUMMYS	373
01022	0 01 01140	374	BRU	\$48	\$3	374
01023	0 55 02270	375	\$38	ADD	DUMTKY	375
01024	0 72 00025	376	SKA	SIGNBT	SIGN BIT	376
01025	0 01 01030	377	BRU	\$39	\$4	377
01026	0 55 00064	378	ADD	STTEMP	START 0F TEMP	378
01027	0 01 01140	379	BRU	\$48	\$3	379
01030	0 55 02270	380	\$39	ADD	TMPLKY	380
01031	0 72 00025	381	SKA	SIGNBT	SIGN BIT	381
01032	0 01 01036	382	BRU	\$40	\$5	382
01033	0 66 00001	383	RSH	1	1	383
01034	0 55 00015	384	ADD	TVSTRT	TV START	384
01035	0 01 01140	385	BRU	\$48	\$3	385
01036	0 55 02270	386	\$40	ADD	LNKARK	386
01037	0 72 00025	387	SKA	SIGNBT	SIGN BIT	387
01040	0 01 01061	388	BRU	\$41	\$6	388
01041	0 35 00057	389	STA	TEMP1	TEMP 1	389
01042	0 55 00057	390	ADD	TEMP1	TEMP 1	390
01043	0 55 00057	391	ADD	TEMP1	TEMP 1	391
01044	0 35 00057	392	STA	TEMP1	TEMP 1	392



01045	0	66	00004	393		RSH	4	4	393
01046	0	55	00057	394		ADD	TEMP1	TEMP 1	394
01047	0	66	00004	395		RSH	4	4	395
01050	0	55	00057	396		ADD	TEMP1	TEMP 1	396
01051	0	55	02230	397		ADD	EIGHT	EIGHT	397
01052	0	66	00004	398		RSH	4	4	398
01053	0	55	00016	399		ADD	AYTRST	ARRAY TABLE START	399
01054	0	35	00057	400		STA	TEMP1	TEMP 1	400
01055	0	71	00057	401		LDX	TEMP1	TEMP 1	401
01056	2	76	00000	402		LDA	0.2	0	402
01057	0	43	01145	403		BRM	ADJCAM	ADJUST FOR COMMON	403
01060	0	01	01140	404		BRU	\$48	\$3	404
01061	0	55	02270	405	\$41	ADD	APFYCK	ARRAY-FX CONST KEY	405
01062	0	72	00025	406		SKA	SIGNBT	SIGN BIT	406
01063	0	01	01066	407		BRU	\$42	\$7	407
01064	0	55	00062	408		ADD	STFYC9	START FX C9N	408
01065	0	01	01140	409		BRU	\$48	\$3	409
01066	0	55	02270	410	\$42	ADD	XLCKKY	FX CONST-FL CONST KEY	410
01067	0	72	00025	411		SKA	SIGNBT	SIGN BIT	411
01070	0	01	01107	412		BRU	\$43	\$8	412
01071	0	55	00022	413		ADD	STFLC9	START FL C9N	413
01072	0	01	01140	414		BRU	\$48	\$3	414
01073	0	55	02270	415	\$44	ADD	XSCKKY	FL CONST-FX SCALAR KEY	415
01074	0	72	00025	416		SKA	SIGNBT	SIGN BIT	416
01075	0	01	01130	417		BRU	\$47	\$10	417
01076	0	66	00001	418		RSH	1	1	418
01077	0	35	00253	419		STA	CNVHSH	C9NV H9LD SERCH W9RD	419
01100	0	76	00024	420		LDA	9NE	9NE	420
01101	0	35	00252	421		STA	19RTW9	9NE 9R TW9	421
01102	0	71	00065	422		LDX	STXSCA	START 9F FX SCALARS	422
01103	0	75	00017	423		LDB	FXSPST	FX SPEC START	423
01104	0	76	00020	424		LDA	FLSPST	FL SPEC START	424
01105	0	43	01156	425		BRM	SRCHST	SEARCH SCALAR TABLE	425
01106	0	01	01140	426		BRU	\$48	\$3	426
01107	0	55	02270	427	\$43	ADD	XSCKKY	FX SCALAR-LBL KEY	427
01110	0	72	00025	428		SKA	SIGNBT	SIGN BIT	428
01111	0	01	01073	429		BRU	\$44	\$9	429
01112	0	17	00026	430		99R	9NES	9NES	430
01113	0	55	00024	431		ADD	9NE	9NE	431
01114	0	55	00273	432		ADD	T9PMEM	LAST ADR 9F MEM9RY	432
01115	0	55	00040	433		ADD	LINKX	LINK X	433
01116	0	35	00057	434		STA	TEMP1	TEMP 1	434
01117	0	76	00061	435		LDA	LBXLES	LABEL X LEAST	435
01120	0	73	00057	436		SKG	TEMP1	TEMP 1	436
01121	0	01	01124	437		BRU	\$46	\$11	437
01122	0	76	02231	438	\$45	LDA	UNDLAD	UNDEFINED LABEL ADR	438
01123	0	01	01140	439		BRU	\$48	\$3	439
01124	0	76	40057	440	\$46	LDA*	TEMP1	TEMP 1	440
01125	0	72	00026	441		SKA	9NES	9NES	441
01126	0	01	01140	442		BRU	\$48	\$3	442

01127	0 01 01122	443	BRU	\$45	\$12	443
01130	0 55 02270	444	ADD	FXSKEY	FX SCALAR KEY	444
01131	0 35 00253	445	STA	CNVH5W	C0NV H0LD SERCH W0RD	445
01132	0 76 02224	446	LDA	TW0	TW0	446
01133	0 35 00252	447	STA	10RTW0	0NE 0R TW0	447
01134	0 71 00066	448	LDX	STFCA	START 0F FL SCALARS	448
01135	0 75 00020	449	LDB	FLSP0T	FL SPEC STAPT	449
01136	0 76 00021	450	LDA	FLSPND	FL SPEC END	450
01137	0 43 01156	451	BRM	SRCHST	SEARCH SCALAR TABLE	451
01140	0 35 00057	452	STA	TEMP1	TEMP 1	452
01141	0 76 00251	453	LDA	CNVHWD	C0NV H0LD W0RD	453
01142	0 14 02273	454	ETR	ALBADR	ALL BUT ADR MASK	454
01143	0 55 00057	455	ADD	TEMP1	TEMP 1	455
01144	0 51 01010	456	BRR	C0NV	C0NV	456
		457	*			457
		458	*			458
		459	*ADJUST FOR COMMON			459
01145	0 00 00000	460	ADJCOM	HLT		460
01146	0 72 00025	461	SKA	SIGNBT	SIGN HIT	461
01147	0 01 01152	462	BRU	\$49	\$1	462
01150	0 55 00015	463	ADD	TVSTRT	TV START	463
01151	0 01 01154	464	RRU	\$50	\$2	464
01152	0 55 00275	465	ADD	MEMRIZ	SIZE 0F MACHINE	465
01153	0 55 00024	466	ADD	0NE	0NE	466
01154	0 14 00027	467	ETR	ADRMSK	ADR MASK	467
01155	0 51 01145	468	BRR	ADJCOM	ADJUST FOR COMMON	468
		469	*			469
		470	*			470
		471	*SEARCH SCALAR TABLE			471
01156	0 00 00000	472	SRCHST	HLT		472
01157	0 37 00254	473	STX	STSCAL	START 0F FX 0R FL SCALARS	473
01160	0 36 00255	474	STB	SCALTB	SCAL TABLE ADR	474
01161	0 54 00255	475	SUB	SCALTB	SCAL TABLE ADR	475
01162	0 66 00001	476	RSH	1	1	476
01163	0 35 00256	477	STA	TABLCT	TABLE COUNT	477
01164	0 46 30003	478	CLR			478
01165	0 35 00257	479	STA	HITCNT	HIT COUNT	479
01166	0 01 01204	480	RRU	\$55	\$1	480
01167	0 76 40255	481	LDA*	SCALTB	SCAL TABLE ADR	481
01170	0 73 00253	482	SKG	CNVH5W	C0NV H0LD SERCH W0RD	482
01171	0 01 01173	483	BRU	\$52	\$2	483
01172	0 01 01202	484	BRU	\$54	\$3	484
01173	0 75 00026	485	LDB	0NES	0NES	485
01174	0 70 00253	486	SKM	CNVH5W	C0NV H0LD SERCH W0RD	486
01175	0 01 01177	487	BRU	\$53	\$4	487
01176	0 01 01214	488	BRU	\$56	\$5	488
01177	0 76 00252	489	LDA	10RTW0	0NE 0R TW0	489
01200	0 55 00257	490	ADD	HITCNT	HIT COUNT	490
01201	0 35 00257	491	STA	HITCNT	HIT COUNT	491
01202	0 61 00255	492	MIN	SCALTB	SCAL TABLE ADR	492

01203	0	61	00255	493		MIN	SCALTB	SCAL TABLE ADR	493
01204	0	60	00256	494	\$55	SKR	TABLCT	TABLE COUNT	494
01205	0	20	00000	495		N8P			495
01206	0	59	00256	496		SKN	TABLCT	TABLE COUNT	496
01207	0	01	01167	497		BRU	\$51	\$6	497
01210	0	76	00263	498		LDA	CNVH5W	C8NV H8LD SERCH W8RD	498
01211	0	54	00257	499		SUB	HITCNT	HIT COUNT	499
01212	0	55	00254	500		ADD	STSCAL	START 8F FX 8R FL SCALARS	500
01213	0	51	01156	501		BRR	SRCHST	SEARCH SCALAR TABLE	501
01214	0	61	00255	502	\$56	MIN	SCALTB	SCAL TABLE ADR	502
01215	0	76	40255	503		LDA*	SCALTB	SCAL TABLE ADR	503
01216	0	49	01145	504		BRM	ADJC8M	ADJUST F8R C8MM8N	504
01217	0	51	01156	505		BRR	SRCHST	SEARCH SCALAR TABLE	505
				506		*INCR	BREAK		506
01220	0	00	00000	507		INCBRK	HLT		507
01221	0	61	00043	508		MIN	BREAK	BREAK	508
01222	0	76	00061	509		LDA	LBXLES	LABEL X LEAST	509
01223	0	73	00043	510		SKG	BREAK	BREAK	510
01224	0	01	02127	511		BRU	PR2BIG	PR8GRAM T88 BIG	511
01225	0	51	01220	512		BRR	INCBRK	INCR BREAK	512
				513		*ST8RE	T8 BRK		513
01226	0	00	00000	514		ST8RK	HLT		514
01227	0	43	01512	515	\$57	BRM	NXWARD	NEXT W8RD	515
01230	0	75	02241	516		LDB	8PMASK	8P MASK	516
01231	0	70	02252	517		SKM	BLKLAP	HLK L8P	517
01232	0	01	01234	518		BRU	\$58	\$1	518
01233	0	51	01226	519		BRR	ST8PK	ST8RE T8 BRK	519
01234	0	35	40043	520	\$58	STA*	BREAK	BREAK	520
01235	0	43	01220	521		BRM	INCBRK	INCR BREAK	521
01236	0	01	01227	522		BRU	\$57	\$2	522

			523	PAGE		523
			524	*PROCESS TRA VECT		524
01237	0 00 00000		525	TRAVEC HLT		525
01240	0 36 00256		526	STB VECADR	VECT ADR	526
01241	0 35 00257		527	STA VECCNT	VECT CBUNT	527
01242	0 01 01260		528	BRU \$61	\$1	528
01243	0 43 01512		529	\$59 BRM NXWORD	NEXT WORD	529
01244	0 35 00051		530	STA NAME1	NAME 1	530
01245	0 43 01512		531	BRM NXWORD	NEXT WORD	531
01246	0 35 00052		532	STA NAME2	NAME 2	532
01247	0 43 01324		533	BRM SRCHRP	SEARCH LINKS RETURN PNTR	533
01250	0 35 40256		534	STA+ VECADR	VECT ADR	534
01251	0 35 00062		535	STA LNKPTR	LINK PNTR	535
01252	0 76 40062		536	LDA+ LNKPTR	LINK PNTR	536
01253	0 72 00026		537	SKA 0NES	0NES	537
01254	0 01 01257		538	BRU \$60	\$3	538
01255	0 76 02265		539	LDA REQBIT	REQUIRED BIT	539
01256	0 35 40062		540	STA+ LNKPTR	LINK PNTR	540
01257	0 61 00256		541	\$60 MIN VECADR	VECT ADR	541
01260	0 60 00257		542	\$61 SKR VECCNT	VECT CBUNT	542
01261	0 20 00000		543	NBP		543
01262	0 53 00257		544	SKN VECCNT	VECT CBUNT	544
01263	0 01 01243		545	BRU \$59	\$2	545
01264	0 51 01237		546	BRR TRAVEC	PROCESS TRA VECT	546
			547	*SERCH LINK TABLE		547
01265	0 00 00000		548	SERHLT HLT		548
01266	0 76 00050		549	LDA ENT	ENT	549
01267	0 14 00027		550	ETR ADRMSK	ADR MASK	550
01270	0 55 00055		551	ADD 1STIAD	FIRST INST ADR	551
01271	0 16 02232		552	MRG BRUM0P	BRU M0P	552
01272	0 35 00260		553	STA C0RENT	C0RRECTED ENT	553
01273	0 76 00050		554	LDA ENT	ENT	554
01274	0 72 02303		555	SKA TAGP0P	TAG P0P BITS	555
01275	0 01 01300		556	BRU \$62	\$2	556
01276	0 43 01324		557	BRM SRCHRP	SEARCH LINKS RETURN PNTR	557
01277	0 01 01302		558	BRU \$63	\$1	558
01300	0 14 02240		559	\$62 ETR 0M1T0P	0 BIT 0P MASK	559
01301	0 66 00017		560	RSH 15	17	560
01302	0 43 01304		561	\$63 BRM CKPRAD	CHECK PNTR ADR	561
01303	0 51 01265		562	BRR SERHLT	SERCH LINK TABLE	562
			563	*CHECK PNTR ADR		563
01304	0 00 00000		564	CKPRAD HLT		564
01305	0 35 00062		565	STA LNKPTR	LINK PNTR	565
01306	0 76 40062		566	LDA+ LNKPTR	LINK PNTR	566
01307	0 72 02265		567	SKA REQBIT	REQUIRED BIT	567
01310	0 01 01317		568	BRU \$64	\$1	568
01311	0 72 00026		569	SKA 0NES	0NES	569
01312	0 51 01304		570	BRR CKPRAD	CHECK PNTR ADR	570
01313	0 76 00050		571	LDA ENT	ENT	571
01314	0 72 02303		572	SKA TAGP0P	TAG P0P BITS	572

01315	0	51	01304	573	BRR	CKPRAD	CHECK PNTR ADR	573	
01316	0	01	01321	574	BRU	\$65	\$2	574	
01317	0	76	00025	575	\$64	LDA	SIGN BIT	575	
01320	0	35	00045	576	STA	MIFPRR	MINUS IF PROGRAM REQUIRED	576	
01321	0	76	00260	577	\$65	LDA	CORRECT ENT	577	
01322	0	35	40062	578	STA*	LNKPTR	LINK PNTR	578	
01323	0	51	01304	579	BRR	CKPRAD	CHECK PNTR ADR	579	
				580	*			580	
				581	*			581	
				582	*SEARCH LINKS RETURN PNTR			582	
01324	0	00	00000	583	SRCHRP	HLT		583	
01325	0	76	00040	584	LDA	LINKX	LINK X	584	
01326	0	72	00026	585	SKA	ONES	ONES	585	
01327	0	01	01331	586	BRU	\$66	\$4	586	
01330	0	01	01350	587	BRU	\$70	\$3	587	
01331	0	71	00040	588	\$66	LDX	LINKX	LINK X	588
01332	0	75	00026	589	LDB	ONES	ONES	589	
01333	0	76	00051	590	\$67	LDA	NAME 1	NAME 1	590
01334	2	77	00002	591	\$68	EAX	2	2	591
01335	0	70	42310	592	SKM*	B0TLT2	B0TT0M LINK TBL-2	592	
01336	0	41	01334	593	BRX	\$68	\$2	593	
01337	0	76	00052	594	LDA	NAME2	NAME 2	594	
01340	0	70	42311	595	SKM*	B0TLT1	B0TT0M LINK TBL-1	595	
01341	0	41	01333	596	BRX	\$67	\$1	596	
01342	0	37	00057	597	\$69	STX	TEMP 1	TEMP 1	597
01343	0	76	00057	598	LDA	TEMP 1	TEMP 1	598	
01344	0	14	00027	599	ETR	ADRMSK	ADR MASK	599	
01345	0	73	00024	600	SKG	ONE	ONE	600	
01346	0	01	01350	601	BRU	\$70	\$3	601	
01347	0	01	01367	602	BRU	\$71	\$8	602	
01350	0	76	00040	603	\$70	LDA	LINKX	LINK X	603
01351	0	54	02225	604	SUB	THREE	THREE	604	
01352	0	35	00040	605	STA	LINKX	LINK X	605	
01353	0	73	02306	606	SKG	LNKXMN	LINK X MIN	606	
01354	0	01	02127	607	BRU	PR2BIG	PROGRAM T00 BIG	607	
01355	0	35	00057	608	STA	TEMP 1	TEMP 1	608	
01356	0	71	00057	609	LDX	TEMP 1	TEMP 1	609	
01357	2	77	00002	610	EAX	2.2	2	610	
01360	0	76	00051	611	LDA	NAME 1	NAME 1	611	
01361	0	35	42310	612	STA*	B0TLT2	B0TT0M LINK TBL-2	612	
01362	0	76	00052	613	LDA	NAME 2	NAME 2	613	
01363	0	35	42311	614	STA*	B0TLT1	B0TT0M LINK TBL-1	614	
01364	0	46	30003	615	CLR			615	
01365	0	35	42312	616	STA*	B0TLT	B0TT0M LINK TBL	616	
01366	0	01	01342	617	BRU	\$69	\$7	617	
01367	0	77	42312	618	\$71	EAX*	B0TLT	B0TT0M LINK TBL	618
01370	0	37	00057	619	STX	TEMP 1	TEMP 1	619	
01371	0	76	00057	620	LDA	TEMP 1	TEMP 1	620	
01372	0	14	00027	621	ETR	ADRMSK	ADR MASK	621	
01373	0	51	01324	622	BRR	SRCHRP	SEARCH LINKS RETURN PNTR	622	

01374	0	71	00040	623	PAGE		623
01375	0	76	02265	624	*CHECK FOR ALL PRGGS IN		624
01376	2	77	00002	625	CKALPG LDX LINKX	LINK X	625
01377	0	72	42312	626	LDA REQHIT	REQUIRED BIT	626
01400	0	01	01507	627	\$72 EAX 2.2	2	627
01401	0	41	01376	628	SKA* B0TLT	B0TT0M LINK TBL	628
01402	0	71	02233	629	BRU NDPR0G	NEED MORE PRGGS	629
01403	2	72	00250	630	BRX \$72	\$1	630
01404	0	01	01507	631	LDX MABSLS	MINUS ABS LINK SIZE	631
01405	0	41	01403	632	\$73 SKA ENDA8S.2	END ABS LINK TABLE	632
01406	0	01	01407	633	BRU NDPR0G	NEED MORE PRGGS	633
				634	BRX \$73	\$2	634
				635	BRU ALPRIN	ALL PRGGS IN	635
				636	*ALL PRGGS IN		636
01407	0	76	02305	637	ALPRIN LDA MPRHST	MAIN PR0G HEAD START	637
01410	0	35	00063	638	\$74 STA HEADST	HEAD START	638
01411	2	76	40063	639	LDA* HEADST	HEAD START	639
01412	0	72	00026	640	SKA 0NES	0NES	640
01413	0	01	01415	641	BRU \$75	\$1	641
01414	0	01	01453	642	BRU STUPE0	SET UP E0	642
01415	0	72	02251	643	\$75 SKA MAPTYP	MACH PR0G TYPE	643
01416	0	01	01426	644	BRU \$77	\$2	644
01417	0	71	00063	645	LDX HEADST	HEAD START	645
01420	2	76	00004	646	LDA 4.2	4	646
01421	2	54	00003	647	SUB 3.2	3	647
01422	2	75	00003	648	LDB 3.2	3	648
01423	0	43	01436	649	\$76 BRM PVECLT	PR0CESS VECT LAST TIME	649
01424	0	76	40063	650	LDA* HEADST	HEAD START	650
01425	0	01	01410	651	BRU \$74	\$3	651
01426	0	76	00063	652	\$77 LDA HEADST	HEAD START	652
01427	0	55	00024	653	ADD 0NE	0NE	653
01430	0	35	00057	654	STA TEMPI	TEMP I	654
01431	0	76	40063	655	LDA* HEADST	HEAD START	655
01432	0	14	02274	656	ETR 6BIT0P	6 BIT 0P MASK	656
01433	0	66	00017	657	RSH 15	17	657
01434	0	75	00057	658	LDB TEMPI	TEMP I	658
01435	0	01	01423	659	BRU \$76	\$4	659

			660	PAGE		660
			661	*PRCESS VECT LAST TIME		661
01436	0 00 00000		662	PVECLT HLT		662
01437	0 36 00064		663	STB VADR	V ADR	663
01440	0 35 00065		664	STA VCBUNT	V CBUNT	664
01441	0 01 01446		665	BRU \$79	\$1	665
01442	0 71 40064		666	\$78 LDX+ VADP	V ADR	666
01443	2 76 00000		667	LDA 0.2	0	667
01444	0 35 40064		668	STA+ VADR	V ADR	668
01445	0 61 00064		669	MIN VADP	V ADR	669
01446	0 60 00065		670	\$79 SKR VCBUNT	V CBUNT	670
01447	0 20 00000		671	NBP		671
01450	0 53 00065		672	SKN VCBUNT	V CBUNT	672
01451	0 01 01442		673	BRU \$78	\$2	673
01452	0 51 01436		674	BRR PVECLT	PRCESS VECT LAST TIME	674
			675	*SET UP EO		675
01453	0 76 00063		676	STUPES LDA HEADST	HEAD START	676
01454	0 14 00027		677	ETR ADRMSK	ADR MASK	677
01455	0 35 00071		678	STA EOADR	71	678
01456	0 16 02275		679	MRG TAGBIT	TAG BIT	679
01457	0 35 00073		680	STA EOTAG	73	680
01460	0 76 00071		681	LDA EOADR	71	681
01461	0 16 02276		682	MRG INDRIT	IND BIT	682
01462	0 35 00074		683	STA EOIND	74	683
01463	0 76 00042		684	LDA LOWC9M	LOWEST COMMON ADDRESS	684
01464	0 73 00071		685	SKG EOADR	71	685
01465	0 01 02127		686	BRU PR2BIG	PROGRAM T88 BIG	686
01466	0 54 00071		687	SUB EOADR	71	687
01467	0 35 00072		688	STA EOSIZE	72	688
01470	0 76 00273		689	LDA T8PMEM	LAST ADR 8F MEM8RY	689
01471	0 55 00024		690	ADD 8NE		690
01472	0 35 00076		691	STA RUNT8P	RUN-TIME T8P MEM8RY	691
01473	0 54 00071		692	SUB EOADR	71	692
01474	0 35 00066		693	STA C8UNT	C8UNT	693
01475	0 76 00071		694	LDA EOADR	71	694
01476	0 35 00057		695	STA TEMP1	TEMP 1	695
01477	0 46 30003		696	CLR		696
01500	0 35 40057		697	\$80 STA+ TEMP1	TEMP 1	697
01501	0 61 00057		698	MIN TEMP1	TEMP 1	698
01502	0 60 00066		699	SKR C8UNT	C8UNT	699
01503	0 20 00000		700	NBP		700
01504	0 53 00066		701	SKN C8UNT	C8UNT	701
01505	0 01 01500		702	BRU \$80	\$1	702
01506	0 01 02062		703	BRU LDSYS	LOAD SYSTEM	703
			704	*NEED M8RE PR8GS		704
01507	0 76 00067		705	NDPR8G LDA STNYPR	START 8F NEXT PR8G	705
01510	0 35 00043		706	STA BREAK	BREAK	706
01511	0 01 00357		707	BRU RNXPLK	READ NEXT PR8GRAM BL8CK	707

			708	PAGE		708
			709	*NEXT WORD		709
01512	0 00 00000		710	NXWORD HLT		710
01513	0 60 00261		711	\$81 SKR WINBUF	WORDS LEFT IN BUFFER	711
01514	0 20 00000		712	NBP		712
01515	0 53 00261		713	SKN WINBUF	WORDS LEFT IN BUFFER	713
01516	0 01 01521		714	BRU \$82	\$1	714
01517	0 43 01524		715	BRM FILBUF	FILL BUFFER	715
01520	0 01 01513		716	BRU \$81	\$2	716
01521	0 76 40262		717	\$82 LDA* BFWADR	BUFFER WORD ADR	717
01522	0 61 00262		718	MIN BFWADR	BUFFER WORD ADR	718
01523	0 51 01512		719	BRR NXWORD	NEXT WORD	719
			720	*		720
			721	*		721
			722	*FILL BUFFER		722
01524	0 00 00000		723	FILBUF HLT		723
			724	*CHECK SUM ERROR RETURN		724
		01525	725	CKSMER ECU *		725
01525	0 76 00263		726	\$83 LDA CTDNST	COUNT DOWN START	726
01526	0 35 00264		727	STA CTDAWN	COUNT DOWN	727
01527	0 02 20002		728	E9M 20002	20002	728
01530	0 76 01552		729	LDA \$88	\$1	729
01531	0 35 00031		730	STA LAC31	31	730
01532	0 76 01553		731	LDA \$89	\$2	731
01533	0 35 00033		732	STA LAC33	33	732
01534	0 76 02300		733	\$84 LDA BUFBT	BUFFER START	733
01535	0 35 00262		734	STA BFWADR	BUFFER WORD ADR	734
01536	0 76 02277		735	LDA MAXBUF	MAX BUFFER SIZE	735
01537	0 35 00265		736	STA BUFCNT	BUFFER COUNT	736
01540	0 02 00604		737	E9M 604	604	737
01541	0 60 00264		738	\$85 SKR CTDAWN	COUNT DOWN	738
01542	0 20 01550		739	\$86 NBP \$87	\$6	739
01543	0 53 00264		740	SKN CTDAWN	COUNT DOWN	740
01544	0 01 01541		741	BRU \$85	\$4	741
01545	0 02 00000		742	E9M 0	0	742
01546	0 02 20004		743	E9M 20004	20004	743
01547	0 01 41542		744	BRU* \$86	\$5	744
01550	0 43 02107		745	\$87 BRM LANGLD	LONG LEADER	745
01551	0 01 01525		746	BRU \$83	\$7	745
01552	0 43 01554		747	\$88 BRM CHINT	CHAR INTERRUPT	747
01553	0 43 01577		748	\$89 BRM FDCHIR	FEED CHAR INTERRUPT	748



			749	PAGE		749
			750	*CHAR INTERRUPT		750
01554	0 00 00000		751	CHINT HLT		751
01555	0 32 40262		752	WIM* BFWADR	BUFFER WORD ADR	752
01556	0 61 00262		753	MIN BFWADR	BUFFER WORD ADR	753
01557	0 53 00276		754	SKN MIRMTE	MINUS IF READING MACH TO END	754
01560	0 01 01564		755	BRU \$90	\$2	755
01561	0 76 02300		756	LDA BUFST	BUFFER START	756
01562	0 55 02225		757	ADD THREE	THREE	757
01563	0 73 00262		758	SKG BFWADR	BUFFER WORD ADR	758
01564	0 60 00262		759	SKR BFWADR	BUFFER WORD ADR	759
01565	0 01 41576		760	BRU* \$92	\$3	760
01566	0 50 00265		761	\$90 SKR BUFCNT	BUFFER COUNT	761
01567	0 20 00000		762	NBP		762
01570	0 53 00265		763	SKN BUFCNT	BUFFER COUNT	763
01571	0 01 41576		764	BRU* \$92	\$3	764
01572	0 02 00000		765	E9M 0	0	765
01573	0 02 20004		766	E9M 20004	20004	766
01574	0 01 41575		767	BRU* \$91	\$1	767
01575	0 01 02170		768	\$91 BRU ILLTAP	ILLEGAL TAPP	768
01576	0 01 01576		769	\$92 BRU \$92	\$3	769
			770	*		770
			771	*		771
			772	*FEED CHAR INTERRUPT		772
01577	0 00 00000		773	FDCHIR HLT		773
01600	0 32 00267		774	WIM LASTWD	LAST WORD	774
01601	0 02 20004		775	E9M 20004	20004	775
01602	0 76 02301		776	LDA SMALLCD	SMALL COUNT DOWN	776
01603	0 35 00263		777	STA CTDNST	COUNT DOWN START	777
01604	0 01 41605		778	BRU* \$93	\$1	778
01605	0 20 01606		779	\$93 NBP \$94	\$2	779
01606	0 40 20010		780	\$94 BETW		780
01607	0 01 01745		781	BRU BADCKS	BAD CHECKSUM	781
01610	0 76 00267		782	LDA LASTWD	LAST WORD	782
01611	0 72 00026		783	SKA 9NES		783
01612	0 01 01745		784	BRU BADCKS	BAD CHECKSUM	784
01613	0 76 42300		785	LDA* BUFST	BUFFER START	785
01614	0 35 00267		786	STA 1WDPRL	FIRST WORD OF BLOCK	786
01615	0 53 00276		787	SKN MIRMTE	MINUS IF READING MACH TO END	787
01616	0 01 01620		788	BRU \$95	\$11	788
01617	0 01 01721		789	BRU \$104	\$5	789
01620	0 75 00026		790	\$95 LDB 9NES	9NES	790
01621	0 70 00026		791	SKM 9NES	9NES	791
01622	0 01 01652		792	BRU \$96	\$12	792
01623	0 53 00271		793	SKN MJLGR	MINUS UNLESS LOAD SYSTEM REQ	793
01624	0 01 02103		794	BRU READIS	READ IN SYSTEM	794
			795	*MISSING TYPEAUT		795
01625	0 71 00040		796	MISING LDX LINKX	LINK X	796
01626	2 77 00002		797	\$95A EAX 2.2		797
01627	0 76 02265		798	\$95B LDA REQBIT	REQUIRED BIT	798

01630	0 72 42312	799	SKA*	B@TLT	B@TT@M LINK TAL	799
01631	0 01 01634	800	BRU	\$95C		800
01632	0 41 01626	801	BRX	\$95A		801
01633	0 01 01647	802	BRU	\$95F		802
01634	0 76 42310	803	\$95C LDA*	B@TLT2	B@TT@M LINK TAL-2	803
01635	0 35 01643	804	STA	\$95D		804
01636	0 76 42311	805	LDA*	B@TLT1	B@TT@M LINK TAL-1	805
01637	0 35 01644	806	STA	\$95E		806
01640	0 43 02202	807	BRM	PRINT	PRINT	807
01641	44316262	808	BCI	2.MISSING		808
01642	31452712					808
01643	0 00 00000	809	\$95D HLT		NAME OF MISSING	809
01644	0 00 00000	810	\$95E HLT		SUB-PROGRAM	810
01645	12121252	811	ECT	12121252		811
01646	2 77 00002	812	EAX	2.2		812
01647	0 41 01627	813	\$95F BRX	\$95A		813
01650	0 43 02107	814	BRM	LANGLD	LONG LEADER	814
01651	0 01 01507	815	BRU	NDPPRG	NEED MORE PP@GS	815
01652	0 70 02251	816	\$96 SKM	MAPTYP	MACH PR@G TYPE	816
01653	0 01 01655	817	BRU	\$97	\$6	817
01654	0 01 01721	818	BRU	\$104	\$5	818
01655	0 60 00262	819	\$97 SKR	BFWADR	BUFFER WORD ADR	819
01656	0 76 00262	820	LDA	BFWADR	BUFFER WORD ADR	820
01657	0 54 02300	821	SUB	BUF@T	BUFFER START	821
01660	0 35 00265	822	STA	BUFCNT	BUFFER C@UNT	822
01661	0 54 00024	823	SUB	@NE	@NE	823
01662	0 35 00261	824	STA	WINRUF	WORDS LEFT IN BUFFER	824
01663	0 76 40262	825	LDA*	BFWADR	BUFFER WORD ADR	825
01664	0 35 00266	826	STA	CHKSUM	CHECKSUM	826
01665	0 76 02300	827	LDA	BUF@T	BUFFER START	827
01666	0 35 00262	828	STA	BFWADR	BUFFER WORD ADR	828
01667	0 46 30003	829	CLR			829
01670	0 01 01706	830	BRU	\$103	\$3	830
01671	0 35 00014	831	\$98 STA	TEMP2	TEMP 2	831
01672	0 55 40262	832	ADD*	BFWADR	BUFFER WORD ADR	832
01673	0 72 00025	833	SKA	SIGN	SIGN	833
01674	0 01 01700	834	BRU	\$99	\$7	834
01675	0 53 00014	835	SKN	TEMP2	TEMP 2	835
01676	0 01 01702	836	BRU	\$100	\$8	836
01677	0 01 01704	837	BRU	\$101	\$9	837
01700	0 53 00014	838	\$99 SKN	TEMP2	TEMP 2	838
01701	0 01 01705	839	BRU	\$102	\$10	839
01702	0 53 40262	840	\$100 SKN*	BFWADR	BUFFER WORD ADR	840
01703	0 01 01705	841	BRU	\$102	\$10	841
01704	0 55 00024	842	\$101 ADD	@NE	@NE	842
01705	0 61 00262	843	\$102 MIN	BFWADR	BUFFER WORD ADR	843
01706	0 60 00265	844	\$103 SKR	BUFCNT	BUFFER C@UNT	844
01707	0 20 00000	845	N@P			845
01710	0 53 00265	846	SKN	BUFCNT	BUFFER C@UNT	846
01711	0 01 01671	847	BRU	\$98	\$4	847

01712	0	75	00026	848	LDB	ONES	ONES	848
01713	0	70	00266	849	SKM	CHKSUM	CHECKSUM	849
01714	0	01	01745	850	BRU	BADCKS	BAD CHECK SUM	850
01715	0	76	02300	851	LDA	BUFST	BUFFER START	851
01716	0	55	00024	852	ADD	ONE	ONE	852
01717	0	35	00262	853	STA	BFWADR	BUFFER WORD ADR	853
01720	0	51	01524	854	PRR	FILBUF	FILL BUFFER	854
01721	0	76	00262	855	\$104 LDA	BFWADR	BUFFER WORD ADR	855
01722	0	54	02300	856	SUB	BUFST	BUFFER START	856
01723	0	35	00261	857	STA	WINBUF	WORDS LEFT IN BUFFER	857
01724	0	76	02300	858	LDA	BUFST	BUFFER START	858
01725	0	35	00262	859	STA	BFWADR	BUFFER WORD ADR	859
01726	0	51	01524	860	BRR	FILBUF	FILL BUFFER	860

			861	PAGE		861
			862	*READ TO END OF PROGRAM		862
01727	0 76 00046		863	RDENUP LDA HOLDLY	HOLD LINK X	863
01730	0 35 00040		864	STA LINKX	LINK X	864
01731	0 76 00044		865	LDA PRYTYPE	PRG TYPE	865
01732	0 75 00026		866	LDB SNES	SNES	866
01733	0 70 02251		867	SKM MPTYP	MACH PRG TYPE	867
01734	0 01 01737		868	BRU \$111	\$1	868
01735	0 43 02047		869	BRM RDNENDM	READ TO END MACH PRG	869
01736	0 01 01507		870	BRU NDPRG	NEED MORE PRGS	870
01737	0 43 01524		871	\$111 BRM FILBUF	FILL BUFFER	871
01740	0 76 00267		872	LDA IWDABL	FIRST WORD OF BLOCK	872
01741	0 75 00027		873	LDB ADRMSK	ADR MASK	873
01742	0 70 00023		874	SKM ZER0	ZER0	874
01743	0 01 01737		875	BRU \$111	\$1	875
01744	0 01 01507		876	BRU NDPRG	NEED MORE PRGS	876
			877	*BAD CHECK SUM		877
01745	0 43 02136		878	BADCKS BRM PTRERR	PRINT TAPE READ ERROR	878
01746	0 01 01525		879	BRU CKSMER	CHECK SUM ERROR RETURN	879
			880	*READ MACH TEXT		880
01747	0 76 00270		881	RDMACH LDA MLKKT5	MACH LINK TBL SIZE	881
01750	0 55 00055		882	ADD 1STIAD	FIRST INST ADR	882
01751	0 54 00273		883	SUB TAPMEM	LAST ADR OF MEMORY	883
01752	0 35 02306		884	STA LNXYMN	LINK X MIN	884
01753	0 76 00270		885	LDA MLKKT5	MACH LINK TBL SIZE	885
01754	0 75 00055		886	LDB 1STIAD	FIRST INST ADR	886
01755	0 43 01237		887	BRM TRAVEC	PROCESS TRA VECT	887
01756	0 02 20004		888	ERM 20004	20004	888
01757	0 76 00055		889	LDA 1STIAD	FIRST INST ADR	889
01760	0 35 02307		890	STA BLKSTL		890
01761	0 35 02014		891	AGAIN STA STXLAC		891
01762	0 02 02604		892	RDBLK RPTW 1.4	TURN ON READER	892
01763	0 32 00021		893	WIM FLAG	DISCARD FIRST WORD	893
01764	0 76 02014		894	LDA STXLAC	LOCATION	894
01765	0 32 00021		895	WIM FLAG		895
01766	0 55 00021		896	ADD FLAG	ADD INCREMENT. IF ANY	896
01767	0 14 00027		897	ETR ADRMSK		897
01770	0 16 02236		898	MRG STXM8P		898
01771	0 35 02014		899	STA STXLAC	SET UP STX IN LOOP	899
01772	0 16 02237		900	MRG EAXTAG		900
01773	0 35 02007		901	STA EAXLAC	SET UP EAX IN LOOP	901
01774	0 76 00275		902	LDA MEMSIZ	SIZE OF MACHINE	902
01775	0 55 00040		903	ADD LINKX	LINK X	903
01776	0 16 02236		904	MRG STXM8P	STX M8P	904
01777	0 32 00022		905	LOOP WIM RW8RD		905
02000	0 40 21000		906	RPTW	TEST IF GAP	906
02001	0 01 02006		907	BRU N8TGAP	N8	907
02002	0 76 02014		908	GAP LDA STXLAC	YES	908
02003	0 14 00027		909	ETR ADRMSK		909
02004	0 35 02014		910	STA STXLAC	SAVE LOCATION	910

			1047	PAGE			1047
			1048	*PRINT			1048
02202	0 00	00000	1049	PRINT	HLT		1049
02203	0 76	02222	1050		LDA	FIVE	1050
02204	0 35	00272	1051		STA	PRINTC	1051
02205	0 02	20004	1052		ESM	20004	1052
02206	0 02	02641	1053		ESM	2641	1053
02207	0 01	02212	1054		BRU	\$115	1054
02210	0 61	02202	1055	\$114	MIN	PRINT	1055
02211	0 12	42202	1056		MIW*	PRINT	1056
02212	0 60	00272	1057	\$115	SKR	PRINTC	1057
02213	0 20	00000	1058		N9P		1058
02214	0 53	00272	1059		SKN	PRINTC	1059
02215	0 01	02210	1060		BRU	\$114	1060
02216	0 02	14000	1061		ESM	14000	1061
02217	0 40	21000	1062	\$116	SKS	21000	1062
02220	0 01	02217	1063		BRU	\$115	1063
02221	0 51	02202	1064		BRR	PRINT	1064

02273	77740000	1115	ALBADR	8CT	77740000	ALL BUT ADR MASK	1115
02274	07700000	1116	6BIT8P	8CT	07700000	6 BIT 8P MASK	1116
	02275	1117	TAGBIT	EQU	*	TAG BIT	1117
02275	2 00 00000	1118	NLSTBL	HLT	0.2	NOT LAST BLACK BIT	1118
02276	0 00 40000	1119	INDBIT	HLT*		IND BIT	1119
02277	00000135	1120	MAXBUF	DEC	93	MAX BUFFER SIZE	1120
		1121	*BUFFER	START			1121
02300	0 00 02313	1122	BUFST	HLT	STBUF	START OF BUF	1122
02301	00002734	1123	SMALCD	DEC	1500	SMALL COUNT DOWN	1123
02302	00222370	1124	LRGEC	DEC	75000	LARGE COUNT DOWN	1124
02303	30000000	1125	TAGP8P	8CT	30000000	TAG P8P BITS	1125
02304	77737777	1126	NINDBT	8CT	77737777	NOT IND BIT	1126
	02304	1127	* M E M O R Y	U S E D	F O R	C O D E	1127
		1128	LAST	EQU	*-1		1128
		1129	*				1129
		1130	*				1130
		1131	*				1131
		1132	*		T E M P O R A R Y	S T O R A G E	1132
02305	0 00 00000	1133	MPRHST	HLT		HEAD START OF MAIN PROGRAM	1133
02306	0 00 00000	1134	LNKXMN	HLT		LINK X MIN	1134
02307	0 00 00000	1135	BLKSTL	HLT		BLACK START LOCATION	1135
02310	0 00 00000	1136	B8TLT2	HLT		BOTTOM LINK TBL-2	1136
02311	0 00 00000	1137	B8TLT1	HLT		BOTTOM LINK TBL-1	1137
02312	0 00 00000	1138	B8TLT	HLT		BOTTOM LINK TBL	1138
02313	00135	1139	STBUF	BSS	93	START OF BUF	1139
	02314	1140	2NDWD	EQU	STBUF+1		1140
		1141	*				1141
		1142	*		TOTAL MEMORY USED BY LOADER:		1142
	02450	1143	USEDM	EQU	*	TOTAL MEMORY USED BY LOADER:	1143

02005	0	01	02025	911	BRU	ERCHK			911
02006	0	71	00022	912	NBTGAP	LDX	RWORD		912
02007	2	77	00000	913	EAXLBC	EAX	0.2	RELOCATED	913
02010	0	53	00021	914	SKN	FLAG		TEST IF REL BLACK	914
02011	0	01	02013	915	BRU	ABS		N9. ABSOLUTE	915
02012	0	53	00022	916	SKN	RWORD		TEST IF REL WORD	916
02013	0	71	00022	917	ABS	LDX	RWORD	N9. UNRELOCATE	917
02014	0	37	00000	918	STXLBC	STX	0	STORE WORD	918
02015	0	61	02007	919		MIN	EAXLAC		919
02016	0	61	02014	920		MIN	STXLAC	INCREMENT LOCATION	920
02017	0	73	02014	921		SKG	STXLAC		921
02020	0	01	02127	922		BRU	PR2BIG	PROGRAM TOO BIG	922
02021	0	01	01777	923		BRU	LBP	NEXT WORD	923
02022	0	43	02136	924	RESET	BRM	PTREPR	PRINT TAPE READ ERROR	924
02023	0	76	02307	925		LDA	BLKSTL	RESET TO ORIGINAL LBC	925
02024	0	01	01761	926		BRU	AGAIN		926
02025	0	40	20010	927	ERCHK	BETW		TEST BUFFER ERROR	927
02026	0	01	02022	928		BRU	RESET	YES	928
02027	0	76	00022	929		LDA	RWORD		929
02030	0	72	00026	930		SKA	ONES	TEST NON-MULTIPLE OF 4	930
02031	0	01	02022	931		BRU	RESET	YES	931
02032	0	76	02275	932		LDA	TAGBIT		932
02033	0	72	00021	933		SKA	FLAG	TEST IF LAST BLOCK	933
02034	0	01	01762	934		BRU	RDBLK	N9. READ NEXT BLOCK	934
02035	0	71	02014	935		LDX	STXLBC	YES. PICK UP LOCATION	935
02036	0	37	00057	936		STX	TEMP1	TEMP 1	936
02037	0	37	00067	937		STX	STNXPR	START OF NEXT PRG	937
02040	0	46	30003	938		CLR			938
02041	0	76	00270	939		LDA	MLKKT5	MACH LINK TBL SIZE	939
02042	0	67	00017	940		LSH	15	17	940
02043	0	16	02251	941		MRG	MAPTYP	MACH PRG TYPE	941
02044	0	16	00057	942		MRG	TEMP1	TEMP 1	942
02045	0	35	40047	943		STA*	PRSTRT	PRG START	943
02046	0	01	01374	944		BRU	CKALPG	CHECK FOR ALL PRGS IN	944
				945	*READ TO END MACH PRG				945
02047	0	00	00000	946	RDENDM	HLT			946
02050	0	76	00025	947		LDA	SIGNBT	SIGN BIT	947
02051	0	35	00276	948		STA	MIRMT	MINUS IF READING MACH TO END	948
02052	0	43	01524	949	\$112	BRM	FILBUF	FILL BUFFER	949
02053	0	76	02314	950		LDA	2NDWD	SECOND WORD OF BLACK	950
02054	0	72	02275	951		SKA	NLSTBL	N9. LAST BLACK BIT	951
02055	0	01	02052	952		BRU	\$112	\$1	952
02056	0	46	30003	953		CLR			953
02057	0	35	00261	954		STA	WINBUF	WORDS LEFT IN BUFFER	954
02060	0	35	00276	955		STA	MIRMT	MINUS IF READING MACH TO END	955
02061	0	51	02047	956		BRR	RDENDM	READ TO END MACH PRG	956

		957	PAGE		957
		958	*LOAD SYSTEM		958
02062	0 46 30003	959	LDSYS CLR		959
02063	0 35 00271	960	STA MJLBR	MINUS UNLESS LOAD SYSTEM REQ	960
02064	0 43 01524	961	\$113 BRM FILBUF	FILL BUFFER	961
02065	0 76 00267	962	LDA 1,DRBL	FIRST WORD OF BLOCK	962
02066	0 75 00026	963	LDB ENER	ONES	963
02067	0 70 02251	964	SKM MARYTP	MACH PRBG TYPE	964
02070	0 01 02064	965	BRU \$113	\$1	965
02071	0 43 02047	966	BRM RDEADM	READ TO END MACH PRBG	966
02072	0 01 02064	967	BRU \$113	\$1	967
		968	*PRINT LOAD SYSTEM		968
02073	0 43 02202	969	PLDSYS BRM PRINT	PRINT	969
02074	43462124	970	BCI 1,LOAD		970
02075	12627062	971	BCT 12627062		971
02076	63254412	972	BCT 63254412		972
02077	12121212	973	BCT 12121212		973
02100	12121252	974	BCT 12121252		974
02101	0 00 00000	975	HLT		975
02102	2 20 01000	976	NBP 512.2	1000	976
		977	*READ IN SYSTEM		977
02103	0 71 02223	978	READIS LDX M\$EVEN	MINUS SEVEN	978
02104	0 02 00604	979	EQM 604	604	979
02105	0 32 00002	980	WIM 2	2	980
02106	0 01 00002	981	BRU 2	2	981
		982	*LANG LEADER		982
02107	0 00 00000	983	LANGLD HLT		983
02110	0 76 02302	984	LDA LRGFCD	LARGE COUNT DOWN	984
02111	0 35 00263	985	STA CTDNST	COUNT DOWN START	985
02112	0 53 00271	986	SKN MJLBR	MINUS UNLESS LOAD SYSTEM REQ	986
02113	0 01 02073	987	BRU PLDSYS	PRINT LOAD SYSTEM	987
02114	0 53 00041	988	SKN MIFMPI	MINUS IF MAIN PRBG IN	988
02115	0 01 00300	989	BRU INITZF	INITIALIZE	989
02116	0 43 02202	990	BRM PRINT	PRINT	990
02117	43462124	991	BCI 1,LOAD		991
02120	12626422	992	BCT 12626422		992
02121	47514627	993	BCI 1,PRBG		993
02122	51214462	994	BCI 1,RAMS		994
02123	12121252	995	BCT 12121252		995
02124	0 00 00000	996	HLT		996
02125	2 20 01001	997	NBP 513.2	1001	997
02126	0 51 02107	998	BRR LANGLD	LANG LEADER	998



		999	PAGE		999
		1000	*PROGRAM T08 BIG		1000
02127	0 43 02202	1001	PR2BIG BRM	PRINT	1001
02130	47514627	1002	BCI	1,PRAG	1002
02131	51214412	1003	BCT	51214412	1003
02132	63464612	1004	BCT	63464612	1004
02133	22312712	1005	BCT	22312712	1005
02134	12121252	1006	BCT	12121252	1006
02135	0 01 00300	1007	BRU	INIT7E	INITIALIZE
		1008	*PRINT TAPE READ ERROR		1008
02136	0 00 00000	1009	PTRERR HLT		1009
02137	0 43 02202	1010	BRM	PRINT	PRINT
02140	63214725	1011	BCI	1,TAPE	1011
02141	12512521	1012	ACT	12512521	1012
02142	24122551	1013	BCT	24122551	1013
02143	51465112	1014	ACT	51465112	1014
02144	22212342	1015	BCI	1,BACK	1015
02145	0 43 02202	1016	BRM	PRINT	PRINT
02146	64471263	1017	BCT	64471263	1017
02147	21472512	1018	BCT	21472512	1018
02150	63461227	1019	BCT	63461227	1019
02151	21471212	1020	ACT	21471212	1020
02152	12121252	1021	ACT	12121252	1021
02153	0 00 00000	1022	HLT		1022
02154	2 20 01002	1023	NBP	514.2	1002
02155	0 51 02136	1024	BRR	PTRERR	PRINT TAPE READ ERROR
		1025	*LOAD MAIN PROGRAM		1025
02156	0 00 00000	1026	LOADMP HLT		1026
02157	0 43 02202	1027	BRM	PRINT	PRINT
02160	43462124	1028	BCI	1,LOAD	1028
02161	12442131	1029	BCT	12442131	1029
02162	45124751	1030	BCT	45124751	1030
02163	46275121	1031	BCI	1,8GRA	1031
02164	44121252	1032	BCT	44121252	1032
02165	0 00 00000	1033	HLT		1033
02166	2 20 01003	1034	NBP	515.2	1003
02167	0 51 02156	1035	BRR	LOADMP	LOAD MAIN PROGRAM
		1036	*ILLEGAL TAPE		1036
02170	0 43 02202	1037	ILLTAP BRM	PRINT	PRINT
02171	21434325	1038	BCI	1,ILLE	1038
02172	27214312	1039	BCT	27214312	1039
02173	63214725	1040	BCI	1,TAPE	1040
02174	12121212	1041	BCT	12121212	1041
02175	12121252	1042	BCT	12121252	1042
02176	0 46 30003	1043	CLR		1043
02177	0 35 00261	1044	STA	WINBUF	WORDS LEFT IN BUFFER
02200	0 43 02107	1045	BRM	LANGLD	LONG LEADER
02201	0 01 00357	1046	ARU	RNXPLK	READ NEXT PROGRAM BLOCK

		1045	PAGE	C O N S T A N T S	1065
02222	00000005	1046	FIVE DEC	5	FIVE
02223	77777771	1047	MSEVEN DEC	-7	MINUS SEVEN
02224	00000002	1068	TWO DEC	2	TWO
02225	00000003	1069	THREE DEC	3	THREE
02226	77777772	1070	SIX DEC	-6	MINUS SIX
02227	77777764	1071	TWELV DEC	-12	MINUS TWELVE
02230	00000010	1072	EIGHT DEC	8	EIGHT
02231	00000270	1073	UNDLAD ACT	270	UNDEFINED LABEL ADR
02232	0 01 00000	1074	BRUM8P BRU	0	BRU M8P
02233	77777630	1075	MABSLS BCT	77777630	MINUS ABS LINK SIZE
02234	00003470	1076	ST910 ACT	3470	910 HEAD START
02235	00002720	1077	ST920 ACT	2720	
02236	0 37 00000	1078	STXM8P STX	0	
02237	2 77 00000	1079	EAXTAG FAX	0.2	
02240	37700000	1080	8BIT8P BCT	37700000	8 BIT 8P MASK
02241	17700000	1081	8PMASK BCT	17700000	8P MASK
02242	04000000	1082	MPRTYP ACT	04000000	MAIN PR8G TYPE
02243	60077777	1083	N8PMSK BCT	60077777	N8T 8P MASK
02244	00300000	1084	L8LL8P BCT	00300000	L8L L8P
02245	01100000	1085	ABS8LP ACT	01100000	ABS L8P
02246	00400000	1086	DELL8P BCT	00400000	DEL L8P
02247	00500000	1087	SYS8LP BCT	00500000	SYS L8P
02250	0 43 40000	1088	BRMIND BRM*	0	BRM* M8P
02251	10000000	1089	M8PTYP ACT	10000000	MACH PR8G TYPE
02252	00600000	1090	BLKL8P BCT	00600000	BLK L8P
02253	14600000	1091	BCT	14600000	
02254	10600000	1092	BCT	10600000	
02255	12400000	1093	BCT	12400000	
02256	13000000	1094	BCT	13000000	
02257	13400000	1095	BCT	13400000	
02260	0 46 01000	1096	8PTAB1 CNA		8P TABLE 1
02261	0 35 00000	1097	STA	0	
02262	0 76 00000	1098	LDA	0	
02263	0 55 00000	1099	ADD	0	
02264	0 54 00000	1100	SUB	0	
	02265	1101	8PTAB2 EQU	*	8P TABLE 2
02265	10000000	1102	REORIT ACT	10000000	REQUIRED BIT
02266	00043776	1103	18KM2 ACT	43776	
02267	00004000	1104	2K BCT	4000	2K
	02270	1105	FXSKEY EQU	*	FX SCALAR KEY
	02270	1106	ARFXCK EQU	*	ARRAY-FX CONST KEY
	02270	1107	XLC8KY EQU	*	FX CONST-FL CONST KEY
	02270	1108	XSLCKY EQU	*	FL CONST-FX SCALAR KEY
	02270	1109	XSLBKY EQU	*	FX SCALAR-L8L KEY
	02270	1110	LNKARK EQU	*	LINKAGE-ARRAY KEY
	02270	1111	TMPLKY EQU	*	TEMP-LINKAGE KEY
02270	00003434	1112	DUMTKY DEC	1820	DUMMY-TEMP KEY
02271	00007070	1113	L8LKEY DEC	3640	L8L KEY
02272	00034340	1114	DUMKEL DEC	14560	DUMMY KEY

				A R R L	D E F I N I T I O N S	
	1144	PAGE				1144
00014	1145	TEMP2 B00L	14		TEMP 2	1145
00015	1146	TVSTRT B00L	15		TV START	1146
00016	1147	AYTBST B00L	16		ARRAY TABLE START	1147
00017	1148	FXSPST B00L	17		FX SPEC START	1148
00020	1149	FLSPST B00L	20		FL SPEC START	1149
00021	1150	FLSPND B00L	21		FL SPEC END	1150
00021	1151	FLAG B00L	21			1151
00022	1152	RWORD B00L	22			1152
00022	1153	STFLCB B00L	22		START FL CBN	1153
00023	1154	ZERO B00L	23		ZERO	1154
00024	1155	ONE B00L	24		ONE	1155
00025	1156	SIGN B00L	25		SIGN	1156
00025	1157	SIGNBT B00L	25		SIGN HIT	1157
00026	1158	ONES B00L	26		ONES	1158
00027	1159	ADMSK B00L	27		ADR MASK	1159
00031	1160	L0C31 B00L	31		31	1160
00033	1161	L0C33 B00L	33		33	1161
00040	1162	LINKX B00L	40		LINK X	1162
00041	1163	MIFMPI B00L	41		MINUS IF MAIN PR0G IN	1163
00042	1164	LOWCOM B00L	42		LOWEST COMMON ADR	1164
00043	1165	BREAK B00L	43		BREAK	1165
00044	1166	PRTYPE B00L	44		PR0G TYPE	1166
00045	1167	MIFPKR B00L	45		MINUS IF PR0GRAM REQUIRED	1167
00046	1168	H0LDLX B00L	46		H0LD LINK X	1168
00047	1169	PRSTRT B00L	47		PR0G START	1169
00050	1170	ENT B00L	50		ENT	1170
00051	1171	NAME1 B00L	51		NAME 1	1171
00052	1172	NAME2 B00L	52		NAME 2	1172
00053	1173	WORD B00L	53		WORD	1173
00054	1174	LARELX B00L	54		LABEL X	1174
00055	1175	ISTIAD B00L	55		FIRST INST ADR	1175
00056	1176	ABSCNT B00L	56		ABS COUNT	1176
00057	1177	TEMP1 B00L	57		TEMP 1	1177
00060	1178	L0CCNT B00L	60		L0C COUNTER	1178
00061	1179	LBXLES B00L	61		LABEL X LEAST	1179
00062	1180	STFYCB B00L	62		START FX CBN	1180
00062	1181	LNKPTR B00L	62		LINK PTR	1181
00063	1182	STDUM B00L	63		START 0F DUMMYS	1182
00063	1183	HEADST B00L	63		HEAD START	1183
00064	1184	STEMP B00L	64		START 0F TEMP	1184
00064	1185	VADR B00L	64		V ADR	1185
00065	1186	STXSCA B00L	65		START 0F FX SCALARS	1186
00065	1187	VCRUNT B00L	65		V COUNT	1187
00066	1188	STFSCA B00L	66		START 0F FL SCALARS	1188
00066	1189	COUNT B00L	66		COUNT	1189
00067	1190	STNXPR B00L	67		START 0F NEXT PR0G	1190
00071	1191	EQADR B00L	71			1191
00072	1192	EOSIZE B00L	72			1192
00073	1193	EOTAG B00L	73			1193

00074	1194	EOIND	BBBL	74			1194
00076	1195	RUNTOP	BBBL	76	RUN-TIME TOP MEMORY		1195
00250	1196	ENDABS	BBBL	250	END ABS LINK TABLE		1196
00250	1197	MSAPSZ	BBBL	250	MINUS SPEC OP TABLE SIZE		1197
00251	1198	CNVHWD	BBBL	251	CENV HOLD WORD		1198
00252	1199	IBRTWR	BBBL	252	ONE OR TWO		1199
00253	1200	CNVHSW	BBBL	253	CENV HOLD SERCH WORD		1200
00254	1201	STSCAL	BBBL	254	START OF FX OR FL SCALARS		1201
00255	1202	SCALTR	BBBL	255	SCAL TABLE ADR		1202
00256	1203	TABLCT	BBBL	256	TABLE CRUNT		1203
00256	1204	VECADR	BBBL	256	VECT ADR		1204
00257	1205	HITCNT	BBBL	257	HIT COUNT		1205
00257	1206	VECCNT	BBBL	257	VECT COUNT		1206
00260	1207	CORRENT	BBBL	260	CORRECTED ENT		1207
00261	1208	WINBUF	BBBL	261	WORDS LEFT IN BUFFER		1208
00262	1209	BFWADR	BBBL	262	BUFFER WORD ADR		1209
00263	1210	CTDNST	BBBL	263	CBUNT DWN START		1210
00264	1211	CTDWN	BBBL	264	CBUNT DWN		1211
00265	1212	BUFCNT	BBBL	265	BUFFER CBUNT		1212
00266	1213	CHKSUM	BBBL	266	CHECKSUM		1213
00267	1214	LASTWD	BBBL	267	LAST WORD		1214
00267	1215	IWDDBL	BBBL	267	FIRST WORD OF BLOCK		1215
00270	1216	MLKKT5	BBBL	270	MACH LINK TBL SIZE		1216
00271	1217	MULSR	BBBL	271	MINUS UNLESS LOAD SYSTEM REQ		1217
00272	1218	PRINTC	BBBL	272	PRINT COUNT		1218
00273	1219	TOPMEM	BBBL	273	LAST ADR OF MEMORY		1219
00274	1220	TPMPLK	BBBL	274	LAST ADR OF MEMORY + LBL KEY		1220
00275	1221	MEMSIZ	BBBL	275	SIZE OF MACHINE		1221
00276	1222	MIRMTE	BBBL	276	MINUS IF READING MACH TO END		1222
00000	1223	END					1223

1ARTW8	00252	1STIAD	00055	1WD88L	00267	2NDPAS	00711	68IT8P	02274	88IT8P	02240
ABSCNT	00056	ABSL9P	02245	ADJCSM	01145	ADRMSK	00027	ALRADR	02273	ALPRIN	01407
ARFXCK	02270	AYTRST	00016	BADCKS	01745	BFWADR	00262	BLKL8P	02252	BLKSTL	02307
B8TLT1	02311	B8TLT2	02310	BRMIND	02250	BRUM8P	02232	RUF CNT	00265	CHKSUM	00266
CKALPG	01374	CKPRAD	01304	CKSMER	01525	CNVHSH	00253	CNVHWD	00251	C8RENT	00260
CTDNST	00263	CTD8WN	00264	DELL8P	02246	DUMKEL	02272	DUMTKY	02270	EOSIZE	00072
EAXL8C	02007	EAXTAG	02237	ENDARS	00250	FDCHIR	01577	FILBUF	01524	FLSPND	00021
FLSPST	00020	FXSKEY	02270	FXSPST	00017	HEADST	00063	HITCNT	00257	H8LDLX	00046
ILLTAP	02170	INCR8K	01220	INDBIT	02276	INITZE	00300	LABELX	00054	LASTWD	00267
LBLKEY	02271	LBLL8P	02244	L8XLES	00061	LNKARK	02270	LNKPTR	00062	LNKXMN	02306
LRADMP	02156	LBCCNT	00060	L8NGLD	02107	L8WC8M	00042	LRG8CD	02302	M8BSLS	02233
MAPTYP	02251	MAXRUF	02277	MEMSIZ	00275	MIFMPI	00041	MIFPRR	00045	MIRMTE	00276
MISING	01625	MLKKT8	00270	MPRHST	02305	MPRTYP	02242	MSEVEN	02223	MS8PSZ	00250
MTWELV	02227	NDPP8G	01507	NINDBT	02304	NLST8L	02275	N8PMSK	02243	N8TGAP	02006
NXWDP2	01000	NXWARD	01512	8PMARK	02241	8PTAB1	02260	8PTAB2	02265	PLDSYS	02073
PR2BIG	02127	PRINTC	00272	PRSTRT	00047	PRTYPE	00044	PTRERR	02136	PVECLT	01436
RDENDM	02047	RDENDP	01727	RDMACH	01747	RDTAIL	00621	RDTXT	00502	READIS	02103
RE8BIT	02265	RNXPLK	00357	RUNT8P	00076	SCALTB	00255	SERHLT	01265	SIGN8T	00025
SMALCD	02301	SRCHRP	01324	SRCHST	01156	STFLC8	00022	STFSCA	00066	STFXC8	00062
STNXPR	00067	STSCAL	00254	STTEMP	00064	STUPE8	01453	STXL8C	02014	STXM8P	02236
STXS8A	00065	SYSL8P	02247	TABLCT	00256	TAGBIT	02275	TAGP8P	02303	TMPLKY	02270
T8PMEM	00273	TPMPLK	00274	TRAVEC	01237	TVSTRT	00015	UNDLAD	02231	VC8UNT	00065
VECADR	00256	VECCNT	00257	WINBUF	00261	XLC8KY	02270	XSLBKY	02270	XSLCKY	02270
JAKM2	02266	2NDWD	02314	AGAIN	01761	88TLT	02312	BREAK	00043	BUFST	02300
CHINT	01554	C8UNT	00066	EOADR	00071	EOIND	00074	EOTAG	00073	EIGHT	02230
EPCHK	02025	LDSYS	02062	LINKX	00040	L8C31	00031	L8C33	00033	MULSR	00271
NAME1	00051	NAME2	00052	PRINT	02202	RDBLK	01762	RESET	02022	RW8RD	00022
ST910	02234	ST920	02235	STBRK	01226	STBUF	02313	STDUM	00063	TEMP1	00057
TEMP2	00014	THREE	02225	USEDM	02450	C8NV	01010	FIVE	02222	FLAG	00021
LAST	02304	L88P	01777	MSIX	02226	8NES	00026	\$100	01702	\$101	01704
\$102	01705	\$103	01706	\$104	01721	\$111	01737	\$112	02052	\$113	02064
\$114	02210	\$115	02212	\$116	02217	\$95A	01626	\$95B	01627	\$95C	01634
\$95D	01643	\$95E	01644	\$95F	01647	SIGN	00025	VADR	00064	W8RD	00053
ZERR	00023	ABS	02013	ENT	00050	GAP	02002	8NE	00024	\$10	00444
\$11	00447	\$12	00450	\$13	00455	\$14	00467	\$15	00513	\$16	00516
\$17	00521	\$18	00525	\$19	00551	\$20	00560	\$21	00564	\$22	00571
\$23	00574	\$24	00610	\$25	00612	\$26	00615	\$27	00616	\$28	00617
\$29	00717	\$30	00727	\$31	00733	\$32	00740	\$33	00751	\$34	00754
\$35	00756	\$36	00762	\$37	01014	\$38	01023	\$39	01030	\$40	01036
\$41	01061	\$42	01066	\$43	01107	\$44	01073	\$45	01122	\$46	01124
\$47	01130	\$48	01140	\$49	01152	\$50	01154	\$51	01167	\$52	01173
\$53	01177	\$54	01202	\$55	01204	\$56	01214	\$57	01227	\$58	01234
\$59	01243	\$60	01257	\$61	01260	\$62	01300	\$63	01302	\$64	01317
\$65	01321	\$66	01331	\$67	01333	\$68	01334	\$69	01342	\$70	01350
\$71	01367	\$72	01376	\$73	01403	\$74	01410	\$75	01415	\$76	01423
\$77	01426	\$78	01442	\$79	01446	\$80	01500	\$81	01513	\$82	01521
\$83	01525	\$84	01534	\$85	01541	\$86	01542	\$87	01550	\$88	01552
\$89	01553	\$90	01566	\$91	01575	\$92	01576	\$93	01605	\$94	01606
\$95	01620	\$96	01652	\$97	01655	\$98	01671	\$99	01700	TW8	02224
2K	02267	\$2	00302	\$3	00340	\$4	00365	\$5	00367	\$6	00403

\$7

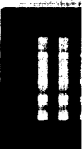
00407

\$8

00427

\$9

00441



## **PART III. LIBRARY**

## CONTENTS OF PART III - LIBRARY

<u>Subroutine</u>	<u>Page</u>	<u>Subroutine</u>	<u>Page</u>
POWER (230)	3-2	COMPGO (206)	3-54
ALOG	3-8	ACCEPT (207)	3-55
EXP	3-12	ACCTAP (210)	3-56
SIN/COS	3-18	PNCHTP (213)	3-57
SQRT	3-25	TYPE (214)	3-58
ATAN	3-27	REWIND (215)	3-59
ABS	3-33	READ (216)	3-60
IABS	3-34	READTP (217)	3-62
FLOAT	3-35	READIT (220)	3-63
IFIX	3-36	WRITAP (221)	3-65
SIGN	3-37	WRITOT (222)	3-66
ISIGN	3-38	ENDIOL (223)	3-68
AMOD	3-39	IFOVFL (224)	3-69
MOD	3-40	BKSPAC (225)	3-70
AMIN, MIN, AMAX, MAX	3-41	ENFILE (226)	3-72
DIM	3-44	SENSLT (227)	3-73
IDIM	3-45	FIX (231)	3-74
LOCF	3-46	FLOAT (232)	3-75
IF	3-47	IOLUSA (233)	3-76
EXIT	3-48	INITFS (235)	3-77
STRTDM (201)	3-49	BINBCD (236)	3-79
ENDDMY (202)	3-50	REWRTP (241)	3-86
STOP (203)	3-51	SETIOT (242)	3-92
IFSNSW (204)	3-52	TSTWRT (243)	3-94
IFSNLT (205)	3-53	TREADY (244)	3-97



920 POWER(\*\*) - 230

108 words

000000	100000000	1	FORT		POWER %230Π
		2	OCT	100000000	
		3	L230	OPD	230000000
000001	2 30 000002	4	L230	POWER	
000002	0 06 000002	5	BLK	2	
000003	25434627	6	BCI	2, ELOGF	
000004	26121212				
000005	25674726	7	BCI	2, EXPF	
000006	12121212				
	000000	8	ORG	0	
000000	000002	9	ELOGF	BSS	2
	000001	10	EXPf	EQU	ELOGF&1
000002	0 00 000000	11	POWER	HLT	
000003	4 37 00143	12		STX	TX, 4
000004	0 71 00071	13		LDX	E0ADR
000005	2 76 40001	14		LDA*	1, 2
000006	0 75 40071	15		LDB*	E0ADR
000007	0 52 00254	16		SKB	FLTIND
000010	4 01 00035	17		BRU	FLT, 4
000011	0 75 40074	18		LDB*	E0IND
000012	0 73 00023	19		SKG	ZERO
000013	4 01 00010	20		BRU	NZERO, 4
000014	0 46 01000	21	NPOS	CNA	
000015	0 46 00410	22		RCH	410
000016	4 01 00002	23		BRU	MULT, 4
000017	1 40 40074	24		XMP*	E0IND
000020	4 41 37777	25	MULT	BRX	*-1, 4
000021	4 71 00125	26	EXIT	LDX	TX, 4
000022	4 51 37760	27		BRR	POWER, 4
000023	0 72 00026	28	NZERO	SKA	ONES
000024	4 01 00005	29		BRU	NNEG, 4
000025	0 76 00024	30		LDA	ONE
000026	0 52 00026	31		SKB	ONES
000027	4 01 37772	32		BRU	EXIT, 4
000030	4 01 00060	33		BRU	ERROR, 4
000031	0 46 00412	34	NNEG	RCH	412
000032	0 50 00026	35	IMI	SKE	ONES
000033	4 01 00002	36		BRU	11, 4
000034	4 01 37764	37		BRU	MULT, 4
000035	0 50 00024	38	I1	SKE	ONE
000036	4 01 00002	39		BRU	IZERO, 4
000037	4 01 37762	40		BRU	EXIT, 4
000040	0 46 00014	41	IZERO	XAB	
000041	0 52 00026	42		SKB	ONES
000042	4 01 37757	43		BRU	EXIT, 4
000043	4 76 00102	44		LDA	MAX, 4
000044	4 01 00044	45		BRU	ERROR, 4
000045	2 71 00001	46	FLT	LDX	1, 2
000046	2 75 00001	47		LDB	1, 2
000047	0 71 40071	48		LDB*	E0ADR

SAVE INDEX  
 SECOND ARG IN  
 FIRST ARG MOD  
 TEST 1ST ARG  
 I INTO A  
 TEST N>0  
 NEGATE N  
 -N INTO X, R#  
 MULTIPLY R BY  
 TEST IF %N-1Π  
 REPLACE INDEX  
 TEST N#0  
 R#1  
 TEST I#0  
 EXIT: I\*\*0  
 ERROR: 0\*\*0  
 N TO X, 0 TO  
 TEST I#-1  
 %-1Π \*\* %-NΠ  
 TEST I # 1  
 EXIT: I\*\*%-NΠ  
 R#0, I INTO B  
 TEST I # 0  
 EXIT: I \*\* %-  
 R # MAXIMUM I  
 ERROR: 0 \*\* %  
 QH INTO B

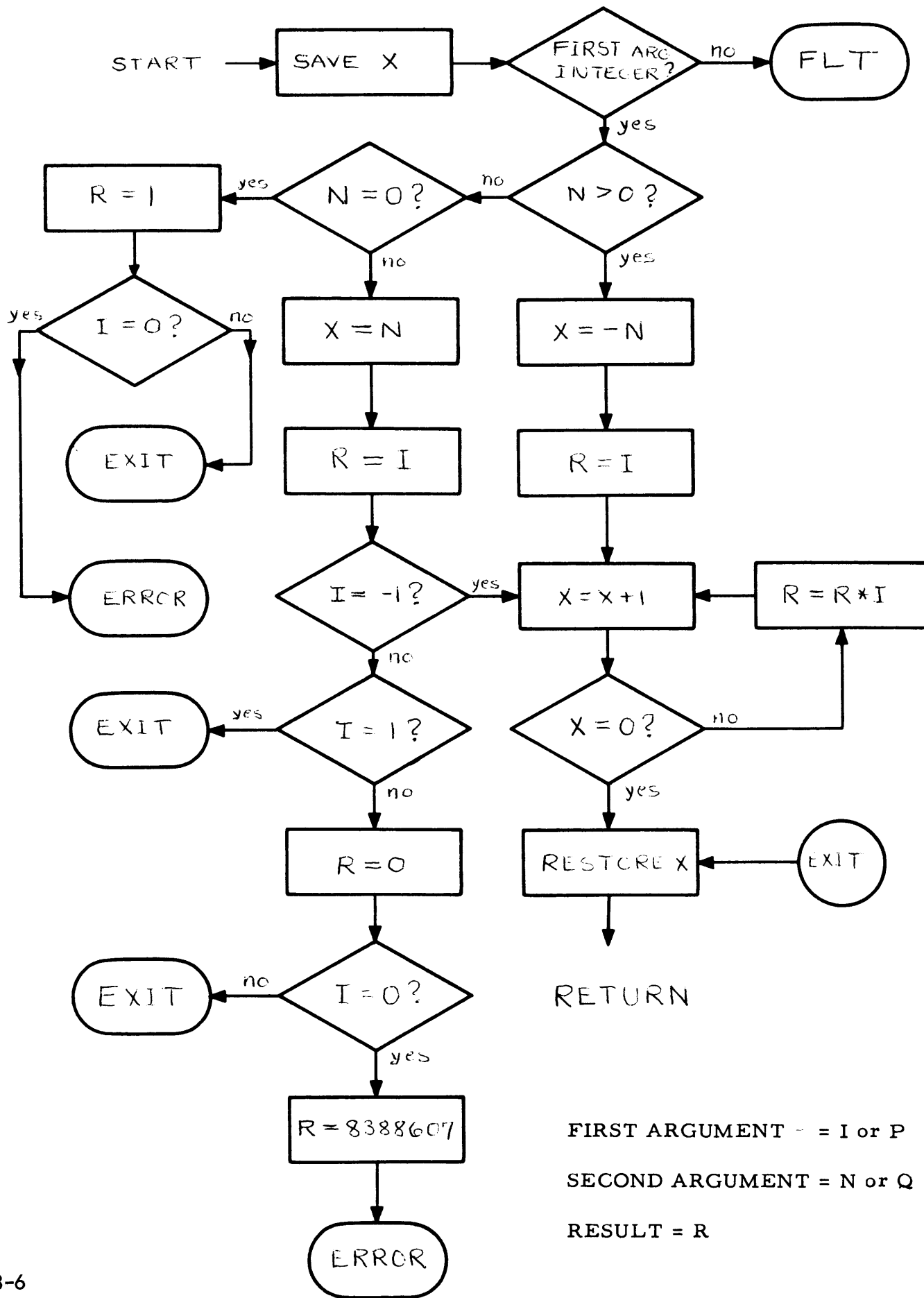
00050	4	52	00071	49	SKB	TWOH,4	TEST QH FOR 2
00051	4	01	00007	50	BRU	NOT2,4	
00052	4	50	00066	51	SKE	TWOL,4	TEST QL FRO 2
00053	4	01	00005	52	BRU	NOT2,4	
00054	2	76	00001	53	LDA	1,2	PH INTO A
00055	2	75	00000	54	LDB	0,2	PL INTO B
00056	1	41	40074	55	FLM*	E0IND	MULTIPLY BY P
00057	4	01	37742	56	BRU	EXIT,4	EXIT: P ** 2
00060	4	36	00073	57	NOT2	STB	QTEMP&1,4
00061	4	35	00071	58	STA	QTEMP,4	SAVE QH
00062	2	76	00001	59	LDA	1,2	SAVE QL
00063	0	73	00023	60	SKG	ZERO	PH INTO A
00064	4	01	00015	61	BRU	PZERO,4	TEST P > 0.0
00065	2	75	00000	62	LDB	0,2	PL INTO B
00066	5	07	00062	63	LOGP	STD	
00067	5	15	00061	64	FFA	PTEMP,4	
00070	4	43	77710	65	BRM*	ELOGF,4	LOG OF P
00071	5	41	00061	66	FLM	QTEMP,4	MULTIPLY BY Q
00072	5	07	00056	67	STD	PTEMP,4	
00073	5	15	00055	68	FFA	PTEMP,4	
00074	4	43	77705	69	BRM*	EXPF,4	R # EXP%Q * L
00075	4	41	00002	70	BRX	NEGR,4	
00076	4	01	37723	71	BRU	EXIT,4	EXIT: P ** Q
00077	1	47	00000	72	NEGR	FLN	NEGATE RESULT
00100	4	01	37721	73	BRU	EXIT,4	%-PI ** %ODD
00101	0	50	00023	74	PZERO	SKE	TEST P # 0.0
00102	4	01	00013	75	BRU	PNEG,4	
00103	4	52	00040	76	SKB	FLONE&1,4	TEST 0 NEG OR
00104	4	01	00007	77	BRU	QPOS,4	
00105	0	52	00026	78	SKB	ONES	TEST Q # 0.0
00106	5	25	00036	79	LDP	MAXFL,4	R # MAXIMUM F
00107	5	31	00033	80	FLA	FLONE,4	R # MAX OR 1.
00110	0	43	00401	81	ERROR	BRM	ERROR: 0**%0
00111	0	54	5445	82	BCI	1,0**N	
00112	4	01	37707	83	BRU	EXIT,4	EXIT
00113	0	46	00004	84	QPOS	CAB	R # 0.0
00114	4	01	37705	85	BRU	EXIT,4	EXIT: 0.0 **
00115	5	25	00035	86	PNEG	LDP	Q INTO A,B
00116	0	43	40266	87	BRM*	FIXL	TRUNCATE Q TO
00117	4	35	00030	88	STA	TRUNQ,4	
00120	0	43	40267	89	BRM*	FLOATL	RECONVERT TO
00121	5	35	00031	90	FLS	QTEMP,4	
00122	0	72	00026	91	SKA	ONES	TEST Q#INTEGE
00123	4	01	00010	92	BRU	ERNEG,4	
00124	2	76	00001	93	LDA	1,2	PH INTO A
00125	4	75	00022	94	LDB	TRUNQ,4	
00126	0	52	00024	95	SKB	ONE	TEST Q EVEN
00127	4	71	00010	96	LDX	NEGX,4	
00130	0	75	40074	97	LDB*	E0IND	PL INTO B
00131	1	47	00000	98	NEGP	FLN	

00132	4 01 37734	99		BRU	LOGP,4
00133	1 25 40074	100	ERNEG	LDP*	E0IND
134	0 43 00401	101		BRM	RTERR
00135	45545426	102		BCI	1,N**F
00136	4 01 37773	103		BRU	NEGP,4
00137	00040000	104	NEGX	OCT	40000
00140	00000002	105	TWOL	OCT	00000002
00141	57777777	106	TWOH	OCT	57777777
00142	00000001	107	FLONE	DED	1.0
00143	20000000				
00144	77777377	108	MAXFL	OCT	77777377
00145	37777777	109	MAX	OCT	37777777
00146	00000001	110	TX	OCT	1
00147	00000001	111	TRUNQ	OCT	1
00150	00000000	112	PTEMP	OCT	
00151	00000000	113		OCT	
00152	00000000	114	QTEMP	OCT	
00153	00000000	115		OCT	
	00023	116	ZERO	BOOL	23
	00024	117	ONE	BOOL	24
	00025	118	SIGN	BOOL	25
	00026	119	ONES	BOOL	26
	00071	120	E0ADR	BOOL	71
	00074	121	E0IND	BOOL	74
	00254	122	FLTIND	BOOL	254
	00266	123	FIXL	BOOL	266
	00267	124	FLOATL	BOOL	267
	00401	125	RTERR	BOOL	401
	00000	126		END	

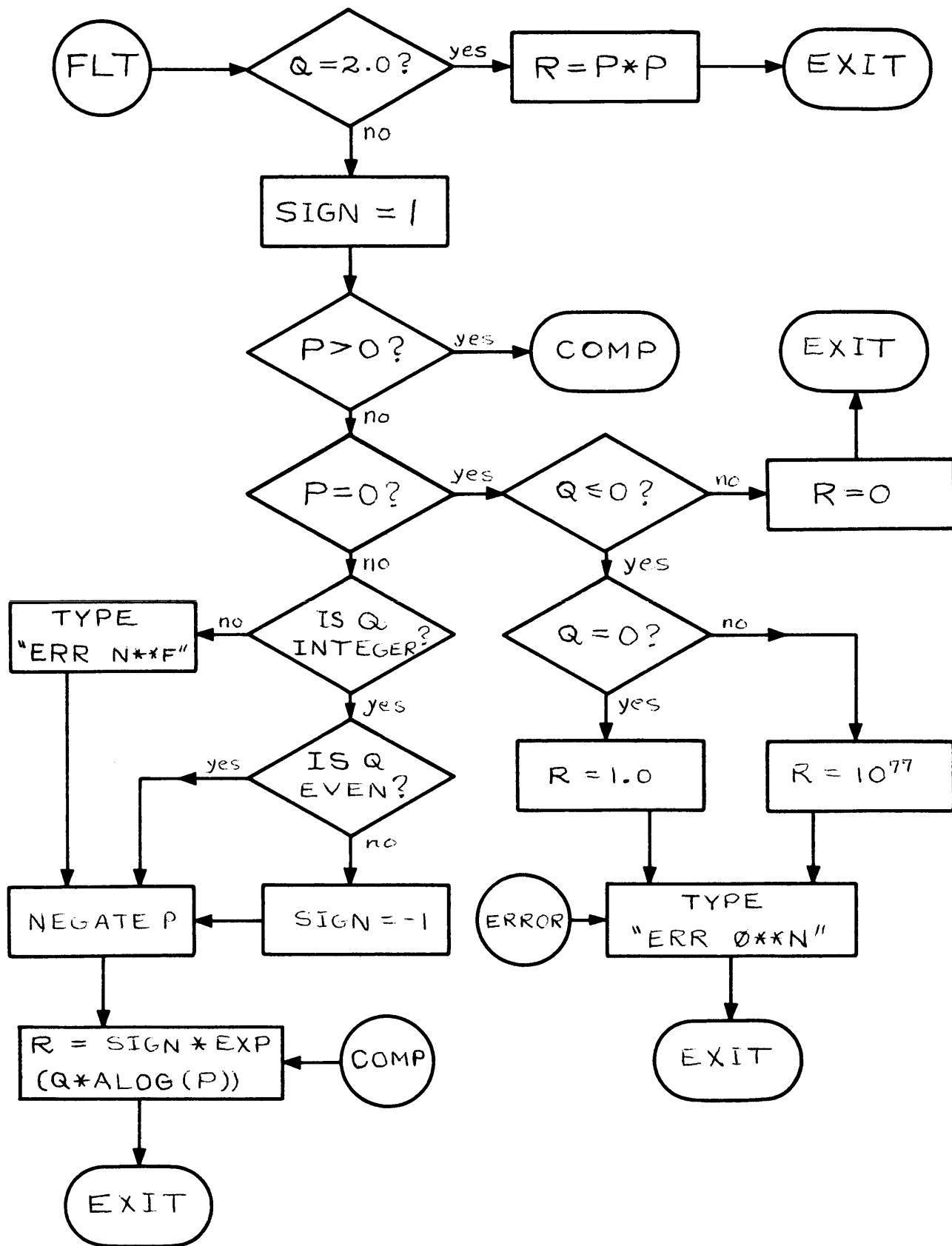
P INTO A,B  
 ERROR: %-PI \*

FLOATL	00267	FLTIND	00254	E0ADR	00071	E0IND	00074
ELOGF	00000	ERNEG	00133	ERROR	00110	FLONE	00142
IZERO	00040	MAXFL	00144	NZERO	00023	POWER	00002
EMP	00150	PZERO	00101	QTEMP	00152	RTERR	00401
TRUNQ	00147	EXIT	00021	EXPF	00001	FIXL	00266
L230	00001	LOGP	00066	MULT	00020	NEGP	00131
NEGR	00077	NEGX	00137	NNEG	00031	NOT2	00060
NPOS	00014	ONES	00026	PNEG	00115	QPOS	00113
SIGN	00025	TWOH	00141	TWOL	00140	ZERO	00023
FLT	00045	IM1	00032	MAX	00145	ONE	00024

DONE PASS 2



FIRST ARGUMENT = I or P  
SECOND ARGUMENT = N or Q  
RESULT = R



ω 920

			FORT	ALOG	
		1			
		2	*	NATURAL LOGARITHM - FLOATING DOUBLE PRECISION - 920	
		3	*		
00000	1 00 00000	4	PZE	0,1	
00001	0 00 00000	5	PZE	ALOG	
00002	21434627	6	BCI	2,ALOG	
00003	12121212				
00004	0 00 00000	7	PZE	ALOG	
00005	21434627	8	BCI	2,ALOGF	
00006	26121212				
00007	0 00 00000	9	PZE	ALOG	
00010	25434627	10	BCI	2,ELOG	
00011	12121212				
00012	0 00 00000	11	PZE	ALOG	
00013	25434627	12	BCI	2,ELOGF	
00014	26121212				
00015	0 06 00000	13	BLK	0	
	00000	14	ORG	0	
00000	0 00 00000	15	ALOG HLT	0	
00001	4 37 00204	16	STX	TX,4	
00002	0 77 40074	17	EAX*	EOIND	
00003	2 76 00001	18	LDA	1,2	
00004	2 75 00000	19	LDB	0,2	
00005	0 73 00023	20	SKG	ZERO	
00006	4 01 00112	21	BRU	ALARM,4	
00007	0 46 00122	22	STE		EXTRACT EXPONENT
00010	4 35 00177	23	STA	ARG+1,4	
00011	4 36 00175	24	STB	ARG,4	
00012	0 46 00202	25	RCH	202	CXA + CLB
00013	0 77 00026	26	EAX	22	FLOAT EXPONENT
00014	0 67 10026	27	NOD	22	
00015	4 35 00166	28	STA	CHAR,4	SAVE CHARACTERISTIC
00016	4 37 00166	29	STX	SHIFT,4	SAVE SHIFT COUNT
00017	0 46 30003	30	CLR		PRESET CORRECTIVE SUM
00020	4 35 00171	31	STA	SUM+1,4	
00021	4 36 00167	32	STB	SUM,4	
00022	4 76 00165	33	LDA	ARG+1,4	
00023	4 73 00111	34	LOOP SKG	LOWER,4	TEST FOR RANGE

00024	0 72	00025	35	SKA	SIGN	
00025	4 01	00022	36	BRU	EVAL,4	IN RANGE
00026	0 46	00002	37	CLB		OUT OF RANGE
00027	0 67	20005	38	LCY	5	LOCATE SUBINTERVAL
00030	0 46	00020	39	CBX		
00031	6 71	00063	40	LDX	LIST1-8,6	GET A(K) ADDRESS
00032	4 76	00156	41	LDA	SUM,4	
00033	2 54	00002	42	SUB	2,2	
00034	4 35	00154	43	STA	SUM,4	
00035	4 76	00154	44	LDA	SUM+1,4	
00036	2 56	00003	45	SUC	3,2	
00037	4 35	00152	46	STA	SUM+1,4	
00040	4 76	00147	47	LDA	ARG+1,4	
00041	4 75	00145	48	LDB	ARG,4	
00042	3 55	00000	49	DPM	0,2	FORM ARG*A(K)
00043	0 67	20001	50	LCY	1	SCALE AT 0
00044	4 35	00143	51	STA	ARG+1,4	
00045	4 36	00141	52	STB	ARG,4	
00046	4 01	37755	53	BRU	LOOP,4	
00047	0 17	00025	54	EVAL	EOR	
00050	4 35	00137	55	STA	ARG+1,4	
00051	4 75	00135	56	LDB	ARG,4	
00052	5 55	00065	57	DPM	C4,4	C4*ARG AT -1
00053	0 46	00014	58	XAB		ADD C3 AT -1
00054	4 55	00061	59	ADD	C3,4	
00055	0 46	00014	60	XAB		
00056	4 57	00060	61	ADC	C3+1,4	
00057	5 55	00127	62	DPM	ARG,4	
00060	0 66	00001	63	RSH	1	SCALE AT 0
00061	0 46	00014	64	XAB		
00062	4 55	00055	65	ADD	C2,4	ADD C2 AT 0
00063	0 46	00014	66	XAB		
00064	4 57	00054	67	ADC	C2+1,4	
00065	5 55	00121	68	DPM	ARG,4	
00066	0 66	00001	69	RSH	1	SCALE AT 1
00067	0 46	00014	70	XAB		
00070	4 54	00047	71	SUB	C1,4	ADD C1 AT 1
00071	0 46	00014	72	XAB		
00072	4 56	00046	73	SUC	C1+1,4	



00073	5 55	00113	74		DPM	ARG,4	
00074	0 46	00014	75		XAB		ADD CORRECTIVE SUM
00075	4 55	00113	76		ADD	SUM,4	
00076	0 46	00014	77		XAB		
00077	4 57	00112	78		ADC	SUM+1,4	
00100	4 71	00104	79		LDX	SHIFT,4	
00101	2 66	00000	80		RSH	0,2	SCALE RESULT
00102	4 55	00101	81		ADD	CHAR,4	ADD CHARACTERISTIC
00103	0 40	20001	82		OV		TEST OVERFLOW
00104	4 01	00010	83		BRU	OVFL0,4	GO CORRECT
00105	0 67	10060	84	NORM	NOD	48	
00106	4 41	00001	85		BRX	*+1,4	FORM NEW EXPONENT
00107	5 55	00072	86		DPM	BASEE,4	
00110	0 67	10002	87		NOD	2	
00111	0 46	00140	88		LDE		
00112	4 71	00073	89		LDX	TX,4	RESTORE X
00113	4 51	37665	90	OUT	BRR	ALOG,4	
00114	0 66	00001	91	OVFL0	RSH	1	RESCALE
00115	0 17	00025	92		EOR	SIGN	CHANGE SIGN
00116	4 41	37767	93		BRX	NORM,4	INCREMENT EXPONENT
00117	4 01	37766	94		BRU	NORM,4	
00120	0 43	00401	95	ALARM	BRM	ERROR	
00121	43462712		96		BCI	1,LOG	
00122	0 46	30003	97		CLR		
00123	4 01	37767	98		BRU	OUT-1,4	
00124	4 00	00015	99	LIST1	HLT	A[1],4	MULTIPLIER ADDRESSES
00125	4 00	00020	100		HLT	A[2],4	
00126	4 00	00023	101		HLT	A[3],4	
00127	4 00	00026	102		HLT	A[4],4	
00130	4 00	00031	103		HLT	A[5],4	
00131	4 00	00034	104		HLT	A[6],4	
00132	4 00	00037	105		HLT	A[7],4	
00133	4 00	00042	106		HLT	A[8],4	
00134	37453004		107	LOWER	DEC	.98780	
00135	34164004		108	C3	DED	.4808983469638-1	
00136	36616047						
00137	32650744		109	C4	DED	-.36067376022228-1	
00140	50725342						
00141	14631460		110	A[1]	DED	1.8B1	MULTIPLIER TABLE

00142	34631463				
00143	64227550	111		DED	.84799690655B1
00144	15442624				
00145	36560500	112	A[2]	DED	1.62B1
00146	31727024				
00147	50460636	113		DED	.69599381311B1
00150	13105451				
00151	70243650	114	A[3]	DED	1.47B1
00152	27412172				
00153	73022367	115		DED	.5558161550616B1
00154	10711175				
00155	31463140	116	A[4]	DED	1.35B1
00156	25463146				
00157	27727700	117		DED	.4329594072761B1
00160	06732633				
00161	75341214	118	A[5]	DED	1.24B1
00162	23656050				
00163	63625225	119		DED	.3103401206121B1
00164	04756234				
00165	46314624	120	A[6]	DED	1.15B1
00166	22314631				
00167	55357523	121		DED	.2016338611696B1
00170	03163621				
00171	24365600	122	A[7]	DED	1.08B1
00172	21217270				
00173	04761244	123		DED	.1110313123887B1
00174	01615443				
00175	71666206	124	A[8]	DED	1.026B1
00176	20324773				
00177	11113304	125		DED	.037030730945B1
00200	00457266				
00201	76764324	126	BASEE	DED	.69314718056B0
00202	26134413				
00203	00000000	127	CHAR	0CT	
00204	00000000	128	SHIFT	0CT	
00205	00000000	129	TX	0CT	
00206	00000000	130	ARG	0CT	
00207	00000000	131		0CT	
00210	00000000	132	SUM	0CT	

00211	00000000	133		0CT	
	00023	134	ZER0	EQU	19
	00024	135	0NE	EQU	20
	00025	136	SIGN	EQU	21
	00027	137	ADDR	EQU	23
	00074	138	EOIND	BO0L	74
	00401	139	ERR0R	BO0L	401
	00137	140	C1	EQU	C4
	00137	141	C2	EQU	C4
	00000	142		END	

ALARM	00120	BASEE	00201	EOIND	00074	ERROR	00401
LIST1	00124	LOWER	00134	OVFL0	00114	SHIFT	00204
ADDR	00027	A[1]	00141	A[2]	00145	A[3]	00151
A[4]	00155	A[5]	00161	A[6]	00165	A[7]	00171
A[8]	00175	AL0G	00000	CHAR	00203	EVAL	00047
LOOP	00023	N0RM	00105	SIGN	00025	ZER0	00023
ARG	00206	0NE	00024	0UT	00113	SUM	00210
C1	00137	C2	00137	C3	00135	C4	00137
TX	00205						

		1	FORT	EXP	
		2	*		
		3	*	EXPONENTIAL - FLOATING DOUBLE PRECISION - 920	
		4	*		
00003	1 00 00000	5	PZE	0.1	
00001	C 00 00000	6	PZE	EXP	
00002	25674712	7	BCI	2.EXP	
00003	12121212				
00004	C 00 00000	8	PZE	EXP	
00005	25674726	9	BCI	2.EXPF	
00006	12121212				
00007	C 06 00000	10	BLK	0	
	00000	11	ORG	0	
00000	C 00 00000	12	EXP	HLT	0
00001	4 37 00215	13	STX	TX.4	
00002	C 77 40074	14	EAX*	EOIND	
00003	2 76 00001	15	LDA	1.2	
00004	2 75 00000	16	LDB	0.2	
00005	0 46 00122	17	STE		EXTRACT EXPONENT
00006	4 37 00205	18	STX	E.4	SAVE
00007	5 55 00140	19	DPM	LOGE.4	
00010	4 62 00203	20	XMA	E.4	
00011	4 55 00127	21	ADD	P2.4	ADD 2 TO EXPONENT
00012	4 71 00201	22	LDX	E.4	
00013	C 73 00026	23	ETEST	ONES	
00014	4 01 00110	24	BRU	RIGHT.4	SHIFT RIGHT TO FIX
00015	4 73 00124	25	SKG	P16.4	
00016	4 01 00002	26	BRU	*+2.4	
00017	4 76 00122	27	LDA	P16.4	
00020	C 46 00600	28	XXA		SHIFT LEFT TO FIX
00021	4 35 00177	29	STA	ARG+1.4	
00022	4 36 00175	30	STB	ARG.4	
00023	C 64 00024	31	MUL	ONE	
00024	2 67 00000	32	LSH	0.2	FORM NEW EXPONENT
00025	4 35 00167	33	STA	S.4	
00026	4 76 00172	34	LDA	ARG+1.4	
00027	4 75 00170	35	LDB	ARG.4	
00030	2 57 00000	36	LSH	0.2	GET FRACTION
00031	C 02 20001	37	ROV		

00032	4	14	00110	38	ETR	MASK.4	MAKE ARG POSITIVE
00033	4	36	00164	39	STB	ARG.4	
00034	4	35	00164	40	SET STA	ARG+1.4	
00035	4	76	00101	41	LDA	K1.4	SET ANSWER TO 1
00036	C	46	00002	42	CLB		
00037	4	35	00163	43	STA	R+1.4	
00040	4	36	00161	44	STB	R.4	
00041	4	76	00100	45	LDA	P16.4	SET COUNT TO 17
00042	4	35	00163	46	STA	CNTR.4	
00043	4	71	00074	47	LDX	K2.4	
00044	4	76	00154	48	LDA	ARG+1.4	
00045	4	75	00152	49	LDB	ARG.4	
00046	6	73	00102	50	LOOP SKG	TABLE-1.6	COMPARE KTH FACTOR
00047	4	01	00022	51	BRU	TEST.4	
00050	C	46	00014	52	XAF		SUBT KTH FACTOR
00051	6	54	00120	53	SUB	TABLE+16.6	
00052	C	46	00014	54	XAB		
00053	6	56	00075	55	SUC	TABLE-1.6	
00054	4	35	00144	56	STA	ARG+1.4	
00055	4	36	00142	57	STB	ARG.4	
00056	4	76	00144	58	LDA	R+1.4	
00057	4	75	00142	59	LDB	R.4	
00060	2	66	00000	60	RSH	0.2	
00061	C	46	00014	61	XAB		
00062	4	55	00137	62	ADD	R.4	
00063	C	46	00014	63	XAB		
00064	4	57	00136	64	ADC	R+1.4	
00065	4	35	00135	65	STA	R+1.4	
00066	4	36	00133	66	STR	R.4	
00067	4	76	00131	67	LDA	ARG+1.4	
00070	4	75	00127	68	LDB	ARG.4	
00071	4	60	00124	69	TEST SKR	CNTR.4	TEST FOR 17TH TIME
00072	4	41	37754	70	BRX	LOOP.4	
00073	5	55	00050	71	DPM	C1.4	COMPUTE 2**F
00074	4	55	00042	72	ADD	C0.4	
00075	6	55	00124	73	DPM	R.4	
00076	4	62	00116	74	XMA	S.4	RECALL NEW EXPON
00077	4	55	00041	75	ADD	P2.4	
00100	C	46	00400	76	CAX		

00101	4 76 00113	77		LDA	S.4	
00102	C 67 10002	78		NOD	2	NORMALIZE RESULT
00103	C 46 00600	79		XXA		
00104	4 73 00041	80		SKG	P255.4	TEST FOR EXPON OVFLD
00105	4 73 00041	81		SKG	M257.4	
00106	4 01 00005	82		BRU	OUT+1.4	OVFLD
00107	C 46 00600	83		XXA		
00110	C 46 00140	84		LDE		PACK EXPONENT
00111	4 71 00105	85		LDX	TX.4	
00112	4 51 37666	86	OUT	BRR	EXP.4	
00113	C 72 00025	87		SKA	SIGN	SET OVFLD IF GTR 255
00114	4 01 00006	88		BRU	UNDER.4	
00115	4 76 00025	89		LDA	MASK.4	
00116	4 75 00030	90		LDB	M257.4	
00117	C 43 00401	91		BRM	ERROR	
00120	25674712	92		BCI	1.EXP	
00121	4 01 37770	93		BRU	OUT-1.4	
00122	C 46 30003	94	UNDER	CLR		
00123	4 01 37766	95		BRU	OUT-1.4	
00124	C 46 01000	96	RIGHT	CNA		MAKE POSITIVE
00125	C 46 00600	97		XXA		
00126	2 66 00000	98		RSH	0.2	FIX ARGUMENT
00127	4 36 00070	99		STB	ARG.4	
00130	C 46 00002	100		CLR		
00131	C 72 00025	101		SKA	SIGN	
00132	C 75 00026	102		LDB	ONES	
00133	4 36 00061	103		STB	S.4	FORM NEW EXPONENT
00134	4 14 00006	104		ETR	MASK.4	MAKE ARG POSITIVE
00135	4 01 37677	105		BRU	SET.4	CONTINUE
00136	20000000	106	K1	DEC	181	
00137	C0040001	107	K2	OCT	40001	
00140	C0000002	108	P2	DEC	2	
00141	C0000020	109	P16	DEC	16	
00142	37777777	110	MASK	OCT	37777777	
00143	77374536	111	C1	DED	.69314718057831	
00144	13056205					
00145	C0000377	112	P255	DEC	255	
00146	77777377	113	M257	DEC	-257	
00147	62453374	114	LOGE	DED	1.44269504086982	

00150	13425216					
00151	22560015	115	TABLE	OCT	22560015	LOG TABLE--MSH
00152	12232360	116		OCT	12232360	
00153	05340032	117		OCT	5340032	
00154	02630773	118		OCT	2630773	
00155	01327264	119		OCT	1327264	
00156	00556362	120		OCT	556362	
00157	00267745	121		OCT	267745	
00160	00134116	122		OCT	134116	
00161	00056076	123		OCT	56076	
00162	00027044	124		OCT	27044	
00163	00013423	125		OCT	13423	
00164	00005612	126		OCT	5612	
00165	00002705	127		OCT	2705	
00166	00001342	128		OCT	1342	
00167	00000561	129		OCT	561	
00170	00000270	130		OCT	270	
00171	00000134	131		OCT	134	
00172	07176750	132		OCT	07176750	LOG TABLE--LSH
00173	45715062	133		OCT	45715062	
00174	16375721	134		OCT	16375721	
00175	37262205	135		OCT	37262205	
00176	67261667	136		OCT	67261667	
00177	64134120	137		OCT	64134120	
00200	02667347	138		OCT	02667347	
00201	10666317	139		OCT	10666317	
00202	03776033	140		OCT	03776033	
00203	62467170	141		OCT	62467170	
00204	65427550	142		OCT	65427550	
00205	21660521	143		OCT	21660521	
00206	16542177	144		OCT	16542177	
00207	50623543	145		OCT	50623543	
00210	24602400	146		OCT	24602400	
00211	52357324	147		OCT	52357324	
00212	25203177	148		OCT	25203177	
00213	00000000	149	E	OCT		
00214	00000000	150	S	OCT		
00215	00000000	151	CNTR	OCT		
00216	00000000	152	TX	OCT		



00217	C0000000	153	ARG	OCT	
00220	C0000000	154		OCT	
00221	C0000000	155	R	OCT	
00222	C0000000	156		OCT	
	00023	157	ZERO	EQU	19
	00024	158	ONE	EQU	20
	00025	159	SIGN	EQU	21
	00026	160	ONES	EQU	22
	00027	161	ADDR	EQU	23
	00074	162	EOIND	BOOL	74
	00401	163	ERROR	BOOL	401
	00136	164	CO	EQU	K1
	00000	165	END		

EOIND	00074	ERROR	00401	ETEST	00013	RIGHT	00124
TABLE	00151	UNDER	00122	ADDR	00027	CNTR	00215
LOGE	00147	LOOP	00046	M257	00146	MASK	00142
ONES	00026	P255	00145	SIGN	00025	TEST	00071
ZERO	00023	ARG	00217	EXP	00000	ONE	00024
OUT	00112	P16	00141	SET	00034	CO	00136
CI	00143	K1	00136	K2	00137	P2	00140
TX	00216	E	00213	R	00221	S	00214

		1	FORT	SIN/COS	
		2	*		
		3	*	SINE AND COSINE - FLOATING DOUBLE PRECISION - 920	
		4	*		
00000	1 00 00000	5	PZE	0.1	
00001	0 00 00000	6	PZE	COS	
00002	23466212	7	BCI	2.COS	
00003	12121212				
00004	0 00 00000	8	PZE	COS	
00005	23466226	9	BCI	2.COSF	
00006	12121212				
00007	0 00 00021	10	PZE	SIN	
00010	62314512	11	BCI	2.SIN	
00011	12121212				
00012	0 00 00021	12	PZE	SIN	
00013	62314526	13	BCI	2.SINF	
00014	12121212				
00015	0 06 00000	14	BLK	0	
	00000	15	ORG	0	
00000	0 00 00000	16	COS HLT	0	
00001	4 37 00306	17	STX	TX.4	
00002	0 77 40074	18	EAX*	EOIND	
00003	2 76 00001	19	LDA	1.2	
00004	2 75 00000	20	LDB	0.2	
00005	5 45 00246	21	FLD	TWOPI.4	
00006	0 74 00026	22	SKD	ONES	
00007	4 01 00004	23	BRU	**4.4	
00010	0 46 00102	24	CLE		CLEAR EXPONENT
00011	2 66 00000	25	RSH	0.2	SCALE RIGHT
00012	4 01 00003	26	BRU	**3.4	
00013	0 46 00102	27	CLE		
00014	2 67 00000	28	LSH	0.2	SCALE LEFT
00015	4 55 00235	29	ADD	P90.4	ADD 90 DEGREES
00016	0 71 00026	30	LDX	ONES	SET EXPONENT
00017	0 46 00140	31	LDE		
00020	4 01 00012	32	BRU	COM.4	
00021	0 00 00000	33	SIN HLT	0	
00022	4 37 00265	34	STX	TX.4	
00023	0 77 40074	35	EAX*	EOIND	

00024	4	76	37775	36	LDA	SIN.4	
00025	4	35	37753	37	STA	COS.4	
00026	2	76	00001	38	LDA	1.2	
00027	2	75	00000	39	LDB	0.2	
00030	5	45	00223	40	FLD	TWOPI.4	
00031	0	46	00120	41	RCH	120	EXTRACT EXPONENT
00032	4	37	00254	42	COM STX	EX.4	
00033	0	74	00026	43	SKD	ONES	UNFLOAT ARG
00034	4	01	00016	44	BRU	LEFT.4	GO SCALE LEFT
00035	0	46	00102	45	CLE		CLEAR EXPONENT
00036	4	62	00250	46	XMA	EX.4	
00037	4	55	00212	47	ADD	P3.4	
00040	4	62	00246	48	XMA	EX.4	
00041	4	35	00250	49	STA	ARG+1.4	
00042	4	36	00246	50	STB	ARG.4	
00043	2	66	00000	51	RSH	0.2	SCALE RIGHT
00044	4	35	00246	52	SAVE STA	TA.4	
00045	0	46	00022	53	RCH	22	CBX + CLB
00046	0	67	20003	54	LCY	3	LOCATE SUBINTERVAL
00047	0	46	00060	55	XXB		
00050	4	76	00242	56	LDA	TA.4	
00051	6	23	00010	57	EXU	TABLE.6	GO TO PROPER SUBR.
00052	0	46	00102	58	LEFT CLE		CLEAR EXPONENT
00053	2	67	00000	59	LSH	0.2	SCALE LEFT
00054	4	35	00235	60	STA	ARG+1.4	
00055	4	36	00233	61	STB	ARG.4	
00056	4	71	00172	62	LDX	P2.4	SET EXPONENT TO 2
00057	4	37	00227	63	STX	EX.4	
00060	4	01	37764	64	BRU	SAVE.4	
00061	4	01	00034	65	TABLE BRU	INT3.4	BRANCH TABLE
00062	4	01	00122	66	BRU	INT4.4	
00063	4	01	00121	67	BRU	INT4.4	
00064	4	01	00005	68	BRU	INT1.4	
00065	4	01	00004	69	BRU	INT1.4	
00066	4	01	00012	70	BRU	INT2.4	
00067	4	01	00011	71	BRU	INT2.4	
00070	4	01	00025	72	BRU	INT3.4	
00071	0	46	00014	73	INT1 XAB		SUBTRACT 180 DEG.
00072	0	17	00026	74	EOR	ONES	NEGATE

00073	0	55	00024	75	ADD	ONE	
00074	0	46	00014	76	XAB		
00075	4	17	00162	77	EOR	K1.4	
00076	0	57	00023	78	ADC	ZERO	
00077	4	01	00020	79	BRU	INT3+2.4	EXIT THRU SINE LINK
00100	4	55	00162	80	INT2 ADD	P90.4	ADD 90 DEGREES
00101	4	43	00106	81	BRR	COSIN.4	
00102	0	46	00014	82	XAB		NEGATE
00103	0	46	01000	83	CNA		
00104	0	46	00014	84	XAB		
00105	0	52	00026	85	SKB	ONES	
00106	0	55	00024	86	ADD	ONE	
00107	0	46	01000	87	CNA		
00110	0	71	00024	88	LDX	ONE	
00111	0	67	10040	89	NOD	32	NORMALIZE RESULT
00112	0	46	00140	90	LDE		
00113	4	71	00174	91	LDX	TX.4	
00114	4	51	37664	92	BRR	COS.4	
00115	4	76	00174	93	INT3 LDA	ARG+1.4	
00116	4	75	00172	94	LDB	ARG.4	
00117	4	71	00167	95	LDX	EX.4	
00120	0	67	10030	96	NOD	24	NORMALIZE
00121	0	46	00600	97	XXA		
00122	0	73	00023	98	SKG	ZERO	TEST EXP GTR 0
00123	4	01	00005	99	BRU	SINE.4	GO COMPUTE SINE
00124	4	76	00132	100	LDA	ANS+1.4	SET TO SQRT HALF
00125	4	75	00130	101	LDB	ANS.4	
00126	4	71	00161	102	LDX	TX.4	
00127	4	51	37651	103	BRR	COS.4	
00130	0	46	00600	104	SINE XXA		
00131	4	35	00160	105	STA	ARG+1.4	
00132	4	36	00156	106	STB	ARG.4	
00133	4	37	00153	107	STX	EX.4	
00134	0	46	00200	108	CXA		
00135	4	55	00151	109	ADD	EX.4	
00136	0	46	01000	110	CNA		
00137	0	46	00400	111	CAX		SCALE TO X
00140	4	76	00151	112	LDA	ARG+1.4	
00141	5	55	00147	113	DPM	ARG.4	

00142	0	73	00025	114	SKG	SIGN	TEST DPM OVFLD
00143	0	52	00026	115	SKB	ONES	
00144	4	01	00003	116	BRU	STORE.4	
00145	0	17	00026	117	EOR	ONES	
00146	0	75	00026	118	LDB	ONES	
00147	4	35	00144	119	STORE STA	ARGSQ+1.4	
00150	4	36	00142	120	STB	ARGSQ.4	
00151	5	55	00131	121	DPM	C9.4	EVAL POLYNOMIAL
00152	2	66	00000	122	RSH	0.2	
00153	0	46	00014	123	XAB		
00154	4	55	00122	124	ADD	C7.4	
00155	0	46	00014	125	XAB		
00156	4	57	00121	126	ADC	C7+1.4	
00157	5	55	00133	127	DPM	ARGSQ.4	
00160	2	66	00000	128	RSH	0.2	
00161	0	46	00014	129	XAB		
00162	4	55	00110	130	ADD	C5.4	
00163	0	46	00014	131	XAB		
00164	4	57	00107	132	ADC	C5+1.4	
00165	5	55	00125	133	DPM	ARGSQ.4	
00166	2	66	00000	134	RSH	0.2	
00167	0	46	00014	135	XAB		
00170	4	55	00076	136	ADD	C3.4	
00171	0	46	00014	137	XAB		
00172	4	57	00075	138	ADC	C3+1.4	
00173	5	55	00117	139	DPM	ARGSQ.4	
00174	2	66	00000	140	RSH	0.2	
00175	0	46	00014	141	XAB		
00176	4	55	00064	142	ADD	C1.4	
00177	0	46	00014	143	XAB		
00200	4	57	00063	144	ADC	C1+1.4	
00201	5	55	00107	145	DPM	ARG.4	
00202	4	71	00104	146	LDX	EX.4	
00203	4	01	37706	147	BRU	INT2+9.4	FLOAT AND EXIT
00204	4	54	00046	148	INT4 SUB	P90.4	SUBTRACT 90 DEGREES
00205	4	43	00002	149	BRM	COSIN.4	
00206	4	01	37702	150	BRU	INT2+8.4	FLOAT AND EXIT
00207	0	00	00000	151	COSIN PZE		
00210	0	67	00001	152	LSH	1	

00211	4	35	00100	153	STA	ARG+1.4
00212	4	36	00076	154	STB	ARG.4
00213	5	55	00075	155	DPM	ARG.4
00214	4	35	00077	156	STA	ARGSQ+1.4
00215	4	36	00075	157	STB	ARGSQ.4
00216	5	55	00066	158	DPM	C10.4
00217	0	46	00014	159	XAB	
00220	4	55	00060	160	ADD	C8.4
00221	0	46	00014	161	XAB	
00222	4	57	00057	162	ADC	C3+1.4
00223	5	55	00067	163	DPM	ARGSQ.4
00224	0	46	00014	164	XAB	
00225	4	55	00047	165	ADD	C6.4
00226	0	46	00014	166	XAB	
00227	4	57	00046	167	ADC	C6+1.4
00230	5	55	00062	168	DPM	ARGSQ.4
00231	0	46	00014	169	XAB	
00232	4	55	00036	170	ADD	C4.4
00233	0	46	00014	171	XAB	
00234	4	57	00035	172	ADC	C4+1.4
00235	5	55	00055	173	DPM	ARGSQ.4
00236	0	46	00014	174	XAB	
00237	4	55	00025	175	ADD	C2.4
00240	0	46	00014	176	XAB	
00241	4	57	00024	177	ADC	C2+1.4
00242	5	55	00050	178	DPM	ARGSQ.4
00243	0	46	00014	179	XAB	
00244	4	55	00014	180	ADD	C0.4
00245	0	46	00014	181	XAB	
00246	4	57	00013	182	ADC	C0+1.4
00247	4	51	37740	183	BRR	COSIN.4
00250	00000002		184	P2	DEC	2
00251	00000003		185	P3	DEC	3
00252	20000000		186	P90	DEC	181
00253	24210003		187	TWOPI	DED	6.2831853071796
00254	31103755					
00255	46377000	188	ANS	DED		.707106781187
00256	26501171					
00257	37777777	189	K1	ECT		37777777

EVAL POLYNOMIAL

COSINE AT 1

00260	77777656	190	C0	DED	.9999999999999999
00261	17777777				
00262	24203170	191	C1	DED	.78539816337980
00263	31103755				
00264	66205516	192	C2	DED	-.308425137538-1
00265	54205414				
00266	43335126	193	C3	DED	-.08074551181580
00267	75325041				
00270	01644414	194	C4	DED	.0158543441968-3
00271	04036037				
00272	73217644	195	C5	DED	.00249039247880
00273	00050632				
00274	21370073	196	C6	DED	-.00032599168578-5
00275	77525054				
00276	15675341	197	C7	DED	-.00003657141780
00277	77777315				
00300	17301301	198	C8	DED	.00000359047238-7
00301	00007417				
00302	45521115	199	C9	DED	.00000030856380
00303	00000002				
00304	61565705	200	C10	DED	-.00000002426638-9
00305	77777627				
00306	00000000	201	EX	OCT	
00307	00000000	202	TX	OCT	
00310	00000000	203	ARG	OCT	
00311	00000000	204		OCT	
00312	00000000	205	ARGSU	OCT	
00313	00000000	206		OCT	
	00312	207	TA	EQU	ARGSU
	00023	208	ZERO	EQU	19
	00024	209	ONE	EQU	20
	00025	210	SIGN	EQU	21
	00026	211	ONES	EQU	22
	00074	212	EOIND	BOOL	74
		213	CLE	OPD	4600102
	00000	214		END	



ARGSU	00312	COSIN	00207	ECIND	00074	STORE	J0147
TABLE	00061	TWAPI	00253	INT1	00071	INT2	J0100
INT3	00115	INT4	00204	LEFT	00052	ONES	J0026
SAVE	00044	SIGN	00025	SINE	00130	ZERO	J0023
ANS	00255	ARG	00310	C10	00304	CLE	J0314
COM	00032	CBS	00000	ONE	00024	P96	J0252
SIN	00021	CU	00260	C1	00262	C2	J0264
C3	00266	C4	00270	C5	00272	C6	J0274
C7	00276	CH	00300	C9	00302	EX	J0306
K1	00257	P2	00250	P3	00251	TA	J0312
TX	00307						

920

p. 1 of 2

920  
920

83 words

FART SORT

\* \* SQUARE PART - FLOATING DOUBLE PRECISION - 920

00000	1 00 00000	P75	0.1	
00001	0 00 00000	P75	0.1	0.1
00002	62505163	R01	2.50RT	2.50RT
00003	12121212			
00004	0 00 00000	P75	0.1	0.1
00005	62505163	R01	2.50RT	2.50RT
00006	26121212			
00007	0 06 00000	BLK	0	0
	00000	RR3	0	0
00000	0 00 00000	HLT	0	0
00001	4 37 00121	STX	TV.4	TV.4
00002	0 77 40074	FAX*	0.1	0.1
00003	2 76 00001	LDA	1.2	1.2
00004	2 75 00000	LDB	0.2	0.2
00005	0 50 00023	SKE	10	10
00006	4 01 00002	SRU	**2.4	**2.4
00007	4 01 00041	SRU	0.1	0.1
00010	0 72 00025	SKA	21	21
00011	4 01 00041	SRU	0.1	0.1
00012	4 35 00106	STA	0.4	0.4
00013	4 36 00104	STB	0.4	0.4
00014	0 46 00414	RCH	414	414
00015	0 67 20004	LCY	4	4
00016	4 14 00040	ETR	MC.4	MC.4
00017	0 46 00600	XXA		
00020	6 64 00053	MUL	C3.6	C3.6
00021	6 55 00046	ADD	C2.6	C2.6
00022	4 64 00076	MUL	0.4	0.4
00023	6 55 00040	ADD	C1.6	C1.6
00024	4 64 00074	MUL	0.4	0.4
00025	6 55 00032	ADD	C0.5	C0.5
00026	4 62 00071	XMO	0.4	0.4
00027	0 46 00500	RCH	500	500
00030	4 41 00001	RRX	**1.4	**1.4
00031	0 46 00600	XXA		
00032	0 66 00001	RSH	1	1
00033	4 75 00065	LDA	0.4	0.4
00034	0 46 00450	RCH	450	450
00035	0 52 00024	SKA	20	20
00036	0 66 00001	RSH	1	1
00037	0 66 00002	RSH	2	2
00040	4 65 00057	DIV	0.4	0.4
00041	4 35 00060	STA	0.4	0.4
00042	0 46 10012	SAC		
00043	4 65 00054	DIV	0.4	0.4
00044	0 64 00024	MUL	20	20

CAX.X4B

PERFORM CUBIC FIT

AE + 1

RE EQU IAE + 11/2

CAX.CXB.CBA  
TEST AE EVEN  
AE ADD

RIGHT SHIFT 23 PLACES

p. 2 of 4  
SORT

00045	4	55	00054	ADD	C.4	
00046	4	55	00051	ADD	AL.4	
00047	0	46	00140	LDE		
00050	4	71	00052	SORT1	TX.4	
00051	4	51	37727	222	SORT.4	
00052	0	43	00401	SORT3	ERRR	
00053	4	2505163		RCI	1.50RT	
00054	1	47	00000	FLN		
00055	4	01	37735	221	SORT2.4	
00056	00000023		MC	ACT	23	
00057	03571347		CO	ACT	3571347	C40
00060	04105632			ACT	4105632	C41
00061	04377337			ACT	4377337	C42
00062	04653532			ACT	4653532	C43
00063	24035556		C1	ACT	24035556	C50
00064	22100301			ACT	22100301	C51
00065	20524702			ACT	20524702	C52
00066	17404074			ACT	17404074	C53
00067	64040313		C2	ACT	64040313	C60
00070	67137522			ACT	67137522	C61
00071	71114033			ACT	71114033	C62
00072	72364432			ACT	72364432	C63
00073	04201570		C3	ACT	4201570	C70
00074	0242454			ACT	242454	C71
00075	01540204			ACT	1540204	C72
00076	01133522			ACT	1133522	C73
00077	02511007			ACT	2511007	C00
00100	02731406			ACT	2731406	C01
00101	03134614			ACT	3134614	C02
00102	03326443			ACT	3326443	C03
00103	16135622			ACT	16135622	C10
00104	14642160			ACT	14642160	C11
00105	13621520			ACT	13621520	C12
00106	12756406			ACT	12756406	C13
00107	67436343			ACT	67436343	C20
00110	71611227			ACT	71611227	C21
00111	73117403			ACT	73117403	C22
00112	74060542			ACT	74060542	C23
00113	03003710			ACT	3003710	C30
00114	01641433			ACT	1641433	C31
00115	01143077			ACT	1143077	C32
00116	00652664			ACT	652664	C33
00117	00000000		AL	ACT		
00120	00000000		4H	ACT		
00121	00000000		0	ACT		
00122	00000000		TX	ACT		
	00074	ENIND	299L		74	
	00401	ERRR	99AL		401	
	00000	FND				

920

p. 1 of 6

ATAN[F], ATQA

256 words

		F8PT	ATAN	
* * ARC TANGENT FUNCTION, QUADRANT ALLOCATING *				
00000	1 00 00000	PZE	0.1	
00001	0 00 00000	PZE	ATF	
00002	21632145	BCI	2.ATAN	
00003	12121212			
00004	0 00 00000	PZE	ATF	
00005	21632145	BCI	2.ATANF	
00006	25121212			
00007	0 00 00000	PZE	ATF	
00010	21635021	BCI	2.ATQA	
00011	12121212			
00012	0 05 00000	RLK	0	
	00000	RRG	0	
00030	0 00 00000	ATF	HLT	
00001	4 37 00374	STX	TX.4	SAVE INDEX
00002	0 71 40071	LOX+	FOADR	
00003	2 76 00001	LDA	1.2	LOAD ORDINATE
00004	2 75 00000	LDB	0.2	
00005	4 35 00372	STA	YS.4	SAVE SIGN OF Y
00006	0 72 00025	SKA	SIGN	
00007	1 47 00000	FLM		GET POSITIVE
00010	4 35 00320	STA	RS.4	
00011	4 35 00363	STA	Y+1.4	
00012	4 36 00361	STB	Y.4	
00013	0 76 00015	LDA	EADR1	
00014	0 54 00024	SUB	RNE	
00015	0 50 00071	SKE	FOADR	
00016	4 01 00003	BRJ	++3.4	COMPUTE ATAN (Y/X)
00017	4 77 00313	EAX	FLANE.4	COMPUTE ATAN (Y)
00020	4 01 00003	BRJ	++3.4	
00021	0 46 00400	CAX		
00022	2 71 00000	LDX	0.2	
00023	4 76 00305	LDA	RS.4	
00024	0 50 00023	SKE	ZERR	TEST Y FOR 0
00025	4 01 00006	BRJ	++6.4	
00026	2 53 00001	SKN	1.2	TEST SIGN OF X
00027	4 01 00143	BRJ	LRAD+1.4	
00030	4 76 00335	LDA	PI+1.4	SET ANSWER TO -PI
00031	4 75 00333	LDB	PI.4	
00032	4 01 00135	BRJ	LRAD-2.4	LOAD EXPAN AND EXIT
00033	2 76 00001	LDA	1.2	LOAD X
00034	2 75 00000	LDB	0.2	
00035	4 35 00341	STA	YS.4	
00036	4 17 00341	EBP	YS.4	
00037	4 35 00271	STA	RS.4	
00040	2 76 00001	LDA	1.2	RECALL MSH OF X
00041	0 72 00025	SKA	SIGN	GET ABSV(X)

00042	1	47	00000	FLM		
00043	0	50	00023	SKE	7ERR	TFST Y FOR 0
00044	4	01	00006	BRU	++6.4	
00045	4	76	00320	LDA	PI+1.4	SET ANSWER TO -PI/2
00046	4	75	00316	LDB	PI.4	
00047	1	47	00000	FLM		
00050	0	77	00001	EAX	1	SET EXPONENT TO 1
00051	4	01	00120	BRU	LEAD.4	LOAD EXPON AND EXIT
00052	4	74	00321	SKD	Y.4	FIND LARGER ELEMENT
00053	4	01	00223	BRU	YCHNG.4	
00054	0	71	00026	LDY	ONES	Y GREATER
00055	4	37	00322	SET	STY	FLAG.4
00056	5	45	00315	FLD	Y.4	FROM X/Y OR Y/X
00057	0	46	00122	STE		EXTRACT EXPONENT
00060	4	35	00310	STA	ARG+1.4	RESULT = U
00061	4	36	00306	STB	ARG.4	
00062	4	37	00242	STY	EXP.4	SAVE EXPONENT OF U
00063	0	46	00600	XYA		
00064	0	73	00023	SKG	7ERR	SCALE U AT 1
00065	4	01	00003	BRU	++3.4	
00066	0	46	00600	XYA		
00067	4	01	00003	BRU	++3.4	
00070	0	46	00600	XYA		
00071	4	43	00174	BRM	SHIFT.4	
00072	4	35	00300	STA	ARGSQ+1.4	SAVE SCALED ARG
00073	4	36	00276	STR	ARGSQ.4	
00074	4	71	00224	LDX	1B9.4	LOCATE INTERVAL
00075	4	54	00221	SUB	1B5.4	
00076	0	72	00025	SKA	SIGN	
00077	4	01	00100	BRU	ATF1.4	SMALL ARG CASE
00100	4	54	00213	SUB	1B4.4	
00101	0	72	00025	SKA	SIGN	
00102	4	01	00003	BRU	++3.4	
00103	4	41	00001	BRX	++1.4	
00104	4	41	37774	BRX	+-4.4	
00105	4	76	00265	LDA	ARGSQ+1.4	RECALL SCALED ARG
00106	4	37	00220	STX	INTRVL.4	SAVE INTERVAL
00107	4	36	00260	STR	ARG.4	SAVE LSH OF U
00110	4	64	00203	MUL	TABLE+1.6	
00111	4	62	00256	YMA	ARG.4	RECALL LSH OF ARG
00112	4	36	00256	STR	ARG+1.4	
00113	0	66	20001	RCY	1	MAKE POSITIVE
00114	4	64	00177	MUL	TABLE+1.6	
00115	0	67	20001	LCY	1	
00116	4	55	00252	ADD	ARG+1.4	
00117	0	46	20005	ABC		
00120	4	57	00247	ADC	ARG.4	
00121	4	55	00200	ADD	1B2.4	1+U*X(I)
00122	0	77	00002	EAX	2	
00123	0	67	10001	NRD	1	FLOAT RESULT

ATAN

00124	0	46	00140	LDE			
00125	4	62	00245	YMA	ARGSD+1.4		
00126	0	46	00014	XAR			
00127	4	62	00242	XMA	ARGSD.4		
00130	4	71	00176	LDX	INTRVL.4		
00131	0	46	00014	XAR			
00132	4	54	00161	SUB	TABLE+1.6		
00133	0	71	00024	LDX	RNE		
00134	0	67	10050	NRD	40	FLRAT U-X(I)	
00135	0	46	00140	LDE			
00136	5	45	00233	FLD	ARGSD.4		[U-X(I)]/[1+U*X(I)]
00137	0	46	00122	STE			
00140	0	46	00600	XXA			
00141	4	43	00063	RRM	ATF2.4		
00142	4	43	00123	RRM	SHIFT.4		
00143	4	71	00163	LDX	INTRVL.4		
00144	0	46	00014	XAR			
00145	4	55	00157	ADD	ATN.6		ADD ATN (X(I))
00146	0	46	00014	XAR			
00147	5	57	00165	ADC	ATN+1.6		
00150	4	53	00227	TESTF	FLAG.4		
00151	4	01	00007	RRU	++7.4		
00152	0	46	00014	XAR			
00153	4	55	00211	ADD	PI.4		GET ARCCOTANGENT
00154	0	46	01000	CNA			
00155	0	46	00014	XAR			
00156	4	57	00207	ADC	PI+1.4		
00157	0	17	00026	ERR	RNES		
00160	0	66	00001	RSH	1		SCALE AT 2
00161	4	53	00215	TESTXS	XS.4		
00162	4	01	00005	RRU	++5.4		PUT IN 3RD QUAD.
00163	0	46	00014	XAR			
00164	4	55	00200	ADD	PI.4		
00165	0	46	00014	XAR			
00166	4	57	00177	ADC	PI+1.4		
00167	0	77	00002	EAY	2		
00170	0	67	10014	NRD	12		
00171	0	46	00140	LRADE	LDX	TX.4	
00172	4	71	00203	LRADE	LDX	PS.4	
00173	4	53	00135	SKN	RSP	ATF.4	AFFIX SIGN TO RESULT
00174	4	51	37604	RSP			
00175	1	47	00000	FLN			PUT IN RIGHT QUAD.
00176	4	51	37602	RRR	ATF.4		
00177	4	76	00125	ATF1	EXP.4		
00200	4	75	00167	LDR	ARG.4		
00201	4	71	00167	LDX	ARG+1.4		
00202	4	43	00012	RRM	ATF2.4		GET ARCTAN
00203	4	53	00174	SKN	FLAG.4		
00204	4	01	00003	RRU	++3.4		
00205	4	43	00060	RRM	SHIFT.4		

p.4 of 6  
AT&T

00205	4	01	37744	BRU	TESTF+2.4	EXIT THRU MAIN LINK
00207	4	53	00167	SKN	YS.4	
00210	4	01	37761	BRU	LADE.4	
00211	4	43	00054	BRM	SHIFT.4	
00212	0	66	00001	RSH	1	
00213	4	01	37750	BRU	TESTXS+2.4	EXIT THRU MAIN LINK
00214	0	00	00000	4TFS		
00215	4	73	00105	SKG	M20.4	
00215	4	01	00045	BRU	RETURN.4	EXIT IF ARG SMALL
00217	0	46	00600	YXA		
00220	0	66	00001	RSH	1	
00221	4	41	00001	BRX	+1.4	
00222	4	37	00102	STX	FYS.4	
00223	4	35	00145	STA	ARG+1.4	
00224	4	36	00143	STA	ARG.4	
00225	0	46	00200	CXA		
00226	4	55	00076	ADD	FYP.4	
00227	0	46	01000	CNA		
00230	0	46	00400	CAY		
00231	4	76	00137	LDA	ARG+1.4	
00232	5	55	00135	DPM	ARG.4	SQUARE ARGUMENT
00233	4	35	00137	STA	ARGSQ+1.4	
00234	4	36	00135	STA	ARGSQ.4	
00235	5	55	00125	DPM	C7.4	EVAL POLYNOMIAL
00236	2	66	00000	RSH	0.2	
00237	0	46	00014	XAB		
00240	4	55	00120	ADD	C5.4	
00241	0	46	00014	XAB		
00242	4	57	00117	ADC	C5+1.4	
00243	5	55	00126	DPM	ARGSQ.4	
00244	2	66	00000	RSH	0.2	
00245	0	46	00014	XAB		
00246	4	55	00110	ADD	C3.4	
00247	0	46	00014	XAB		
00250	4	57	00107	ANC	C3+1.4	
00251	5	55	00120	DPM	ARGSQ.4	
00252	2	66	00000	RSH	0.2	
00253	0	46	00014	XAB		
00254	4	55	00100	ADD	C1.4	
00255	0	46	00014	XAB		
00256	4	57	00077	ADC	C1+1.4	
00257	5	55	00110	DPM	ARG.4	
00250	4	71	00044	LDX	FYP.4	
00261	0	67	10003	NQD	3	
00262	4	51	27732	RPR	ATF2.4	
00263	0	46	00600	RETURN	XXA	
00264	4	51	37730	BRP	ATF2.4	
00265	0	00	00000	SHIFT	HLT	
00266	0	46	00600	XXA		
00267	0	46	01000	CNA		

00270	4	73	00076		SKG	KLUDGE.4		CORRECT SHIFT FLUKE
00271	4	01	00002		BRU	++2.4		
00272	2	46	00003		RCH	3.2		
00273	0	46	00500		XXA			
00274	2	66	00001		RSH	1.2		
00275	4	51	37770		RRR	SHIFT.4		
00276	0	46	00600	XCHNG	XXA			
00277	4	72	00015		SKA	RP377.4		
00300	4	01	00011		BRU	ATF3.4		X LARGER
00301	0	46	00600		XXA			
00302	4	73	00072		SKG	Y+1.4		
00303	4	01	37551		BRU	SET-1.4		Y STILL LARGER
00304	4	62	00070		XMA	Y+1.4		EXCHANGE X AND Y
00305	0	46	00014		XAB			
00306	4	62	00065		XMA	Y.4		
00307	2	46	00014		RCH	14.2		SET FLAG POSITIVE
00310	4	01	37545		BRU	SET.4		
00311	0	46	00600	ATF3	XXA			
00312	4	01	37772	TABLE	BRU	+ -6.4		
00313	0	1777777		1B4	DEC	.125B1		
00314	0	00000377		BP377	BCT	377		
00315	0	3777777			DEC	.25B1		
00316	0	1000000	1B5		DEC	1B5		
00317	0	5777777			DEC	.375B1		
00320	0	0040000	1B9		DEC	1B9		
00321	1	0000000	1B2		DEC	.5B1		
00322	7	7777754	M20		DEC	-20		
00323	1	1777777			DEC	.625B1		
00324	0	0000000	EXP		BCT			
00325	1	3777777			DEC	.75B1		
00326	0	0000000	INTRVL		BCT			
00327	1	5777777			DEC	.875B1		
00330	0	0000000	RS		BCT			
00331	2	0000000			DEC	1B1		
00332	0	0000001	FLONE		DED	1.0		
00333	2	0000000						
00334	6	1525433	ATN		DED	.124354994547B1		
00335	0	1772556						
00336	7	7113107			DED	.244978653127B1		
00337	0	3726672						
00340	2	0362367			DED	.358770670271B1		
00341	0	5573031						
00342	0	1250705			DED	.463647609001B1		
00343	0	7326147						
00344	2	5737027			DED	.558599315344B1		
00345	1	0740027						
00346	2	1446445			DED	.643501108793B1		
00347	1	2227437						
00350	4	2570236			DED	.718829999522B1		
00351	1	3400517						



ATAN

00352	52104060		DED	.78539816330781
00353	14441766			
00354	77777534	C1	DED	.99999999999999
00355	27777777			
00356	25252502	C3	DED	-.33333333333333
00357	65252525			
00360	46314632	C5	DED	.280
00361	06314631			
00362	33333354	C7	DED	-.14285714285790
00363	73333333			
00364	53567464	P1	DED	-2.1415926535932
00365	46674022			
00366	00000076	KLUDGE	ACT	76
00367	00000000	ARG	ACT	
00370	00000000		ACT	
00371	00000000	ARG69	ACT	
00372	00000000		ACT	
00373	00000000	Y	ACT	
00374	00000000		ACT	
00375	00000000	TX	ACT	
00376	00000000	XS	ACT	
00377	00000000	YS	ACT	
	00377	FLAG	EGU	YS
	00015	EADP1	BA9L	15
	00023	ZEP8	BA9L	23
	00024	RNE	BA9L	24
	00025	SIGN	BA9L	25
	00026	ONES	BA9L	26
	00071	EOADR	BA9L	71
	00074	EOIND	BA9L	74
	00000		END	

910/920

ABS[F]

13 words

```

*   ABS - FLOATING ABSOLUTE VALUE ROUTINE.   DAVE SWENS
      FART
00000 1 00 00000      PZF      0.1
00001 0 00 00000      PZF      ABS
00002 21226212      BCI      2. ABS
00003 12121212
00004 0 00 00000      PZF      ABS
00005 21226226      BCI      2. ABSF
00006 12121212
00007 0 06 00000      BLK
      00000      OPS      0
00000 0 00 00000      ABS
00001 0 75 40074      HLT
      F0IND
00002 0 76 40071      LDR*
      E0ADR
00003 0 72 00264      SKA
      FLTIND
00004 4 01 00004      BRU
      FLT.4
00005 0 46 00014      YAR
00006 0 43 40267      BRM*
      FLBATL
00007 4 01 00003      BRU
      TEST.4
00010 0 51 40071      MIN*
      FLT
00011 0 76 40074      LDR*
      F0IND
00012 0 73 00026      SKG
      TEST
00013 1 47 00000      FLN
      BNES
00014 4 51 37764      BRP
      ABS.4
      26
00026 00026      BNES
00071 00071      E0ADR
      71
00074 00074      F0IND
      74
00264 00264      FLTIND
      264
00267 00267      FLBATL
      267
00000
      END
ARGUMENT
MADE INDICATOR
TEST MADE OF ARGUMENT
SK. FLOATING
INTEGER. COPY INT9 4
FLOAT ARGUMENT
PROCEED AS IF ARGUMENT F
MNST SIGNIFICANT
ARGND
NR. NEGATE
YES. EXIT

```

920

920 IABS[F]

FORT

IABS - 920

\* IABS - INTEGER ABSOLUTE VALUE ROUTINE - 920

00000	1 00 00000	PZE	0.1	
00001	0 00 00000	PZE	IABS	IABS LABEL FOR SUBROUTINE
00002	31212262	BCI	2.IABS	
00003	12121212			
00004	0 00 00000	PZE	IABS	
00005	31212262	BCI	2.IABSF	ALTERNATE LABEL. IABSF
00006	26121212			
00007	0 06 00000	BLK		
	00000	BRG	0	
00000	0 00 00000	IABS	HLT	
00001	0 76 40074	LDA*	EOIND	ARGUMENT
00002	0 75 40071	LDB*	EOADR	MODE INDICATOR
00003	0 52 00254	SKB	FLTIND	TEST MADE OF ARGUMENT
00004	4 01 00004	BRU	FIXARG.4	FLOATING
00005	0 73 00026	INTEGR SKG	9NES	INTEGER>0
00006	0 46 01000	CNA		NR. NEGATE
00007	4 51 37771	BRP	IABS.4	EXIT
00010	0 61 40071	FIXARG MIN*	EOADR	
00011	0 75 40074	LDB*	EOIND	MOST SIGNIFICANT PART
00012	0 46 00014	XAB		
00013	0 43 40266	BRM*	FIXL	CONVERT TO INTEGER
00014	4 01 37771	BRU	INTEGR.4	PROCEED AS IF ARGUMENT I
	00026	9NES	888L	26
	00071	EOADR	888L	71
	00074	EOIND	888L	74
	00254	FLTIND	888L	254
	00266	FIXL	888L	266
	00000	END		

910/920

FL0AT[F]

		F0RT	FL9AT - 910/920	
*		FL9AT FUNCTION	DAVE SWENS	
00000	1 00 00000	PZE	0.1	
00001	0 00 00000	PZE	FL9AT	LABEL: FL9AT
00002	26434621	BCI	2.FL9AT	
00003	63121212			
00004	0 00 00000	PZE	FL9AT	
00005	26434621	BCI	2.FL9ATF	ALTERNATE LABEL: FL9ATI
00006	63261212			
00007	0 06 00000	BLK		
	00000	ORG	0	
00000	0 00 00000	FL9AT HLT		
00001	0 76 40074	LDA*	EOIND	ARGUMENT INTO A
00002	0 43 40267	BRM*	FL9ATL	RUN-TIME FL9AT RBUTINE
00003	4 51 37775	BRR	FL9AT.4	EXIT
	00074	EOIND	BRRL	74
	00267	FL9ATL	BRRL	267
	00000	FND		

910/920

IFIX[F], INT[F], AINT[F]

8 words

		FORTRAN		IFIX - 910/920	
*	IFIX, INT, AND AINT FUNCTIONS	DAVE SWENS			
00000	1 00 00000	PZE	0.1		
00001	0 00 00000	PZE	IFIX	LABELS:	
00002	21263167	BCI	2,IFIX	IFIX	
00003	12121212				
00004	0 00 00000	PZE	IFIX		
00005	21263167	BCI	2,IFIX*	IFIX*	
00006	26121212				
00007	0 00 00000	PZE	IFIX		
00010	21456312	BCI	2,INT	INT	
00011	12121212				
00012	0 00 00000	PZE	IFIX		
00013	21456326	BCI	2,INT*	INT*	
00014	12121212				
00015	0 00 00004	PZE	IFIX+4		
00016	21314563	BCI	2,AINT	AINT	
00017	12121212				
00020	0 00 00004	PZE	IFIX+4		
00021	21314563	BCI	2,AINT*	AINT*	
00022	26121212				
00023	0 06 00000	BLK			
	00000	RRR	0		
00000	0 00 00000	IFIX	HLT		
00001	1 25 40074		LDP*	EOIND	ARGUMENT INTS 4
00002	0 43 40266		BRM*	FIXL	FIX ARGUMENT
00003	4 51 37775		RRR	IFIX,4	EXIT
00004	0 00 00000	AINT	HLT		
00005	4 43 37773		BRM	IFIX,4	OBTAIN AND FIX ARGUMENT
00006	0 43 40267		BRM*	FLBATL	FLBAT ARGUMENT
00007	4 51 37775		RRR	AINT,4	EXIT
	00074	EOIND	BBBL	74	
	00266	FIXL	BBBL	266	
	00267	FLBATL	BBBL	267	
	00000	END			

910/920

SIGN [F]

21 words

		PART		SIGN - 910/920	
*	SIGN	FUNCTION	DAVE	OWENS	
00000	1 00	00000	PZE	0.1	
00001	0 00	00000	PZE	SIGN	LABEL: SIGN
00002	62312745		BCI	2.SIGN	
00003	12121212				
00004	0 00	00000	PZE	SIGN	
00005	62312745		BCI	2.SIGNF	ALTERNATE LABEL: SIGNF
00006	25121212				
00007	0 06	00000	BLK		
		00000	BRG	0	
00000	0 00	00000	SIGN	HLT	
00001	4 37	00023	STX	TX.4	SAVE INDEX
00002	0 71	00071	LDX	EQADR	
00003	2 76	00001	LDA	1.2	Q MADE INDICATOR
00004	0 72	00254	SKA	FLTIND	TEST Q FIXED
00005	2 51	00001	MIN	1.2	NO. INCREMENT 21
00006	2 76	00000	LDA	0.2	P MADE INDICATOR
00007	0 72	00254	SKA	FLTIND	TEST P FIXED
00010	4 01	00004	BRU	FLT.4	NO. FLOATING
00011	2 76	40000	LDA*	0.2	YES. P INTO A
00012	0 43	40267	BRM*	FLBRTL	FLBRT P
00013	4 01	00002	BRU	**2.4	
00014	1 25	40074	FLT	LDP*	EQIND
00015	0 72	00025	SKA	MINUS	P INTO A.8
00016	1 47	00000	FLN		TEST P POSITIVE
00017	2 53	40001	SKN*	1.2	MAKE P POSITIVE
00020	4 01	00002	BRU	EXIT.4	TEST Q NEGATIVE
00021	1 47	00000	FLN		BOTH POSITIVE. EXIT
00022	4 71	00002	EXIT	LDX	NEGATE P
00023	4 51	37755	BRR	SIGN.4	REPLACE INDEX
00024	0 00	00000	TX	PZE	EXIT
		00025	MINUS	BRAL	25
		00071	EQADR	BRAL	71
		00074	EQIND	BRAL	74
		00254	FLTIND	BRAL	254
		00267	FLBRTL	BRAL	267
		00000	END		

920/910S

ISIGN[F]  
20 words

ISIGN - 910/920

FORT ISIGN FUNCTION HAVE SWMS

00000 1 00 00000  
00001 0 00 00000  
00002 2 1629127  
00003 4 5121212  
00004 0 00 00000  
00005 2 1629127  
00006 4 5261212  
00007 0 06 00000

PZE C.1  
PZE ISIGN  
PCI 2.ISIGN

PZE ISIGN  
PCI 2.ISIGNF

ALTERNATE: ISIGNF

ALK  
PMS 0

00000 0 00 00000 ISIGN  
00001 4 37 00022  
00002 0 71 00071  
00003 0 76 00254  
00004 2 72 00001  
00005 2 61 00001  
00006 2 72 00000  
00007 4 01 00011  
00010 2 76 40000  
00011 0 72 00025 TEST  
00012 0 46 01000  
00013 2 53 40001  
00014 4 01 00002  
00015 0 46 01000

SAVE INDEX

TEST J FIXED  
NR. INCREMENT 51

TEST I FIXED  
NR. FLOATING

YFS. I INTO A  
TEST I POSITIVE

MAKE I POSITIVE  
TEST Y NEGATIVE

BATH POSITIVE.EXIT  
NEGATE I

REPLACE INDEX  
EXIT

I INTO A.5  
FIX I

TX.4  
ISIGN.4

EXIT  
FININD  
FIXL  
TEST.4

ARM\*  
BPU  
PZE

TX  
MINUS  
EQADR  
EQIND  
FLTIND  
FIXL

ARM\*  
BPU  
PZE  
R99L 25  
R99L 71  
R99L 74  
R99L 254  
R99L 266  
END

			1	FORT		AM0D - 910/920
			2	*	AM0D FUNCTION	DAVE SWENS
00000	1 00 00000		3	PZE	0.1	LABEL:AM00
00001	0 00 00000		4	PZE	AM00	
00002	21444624		5	BCI	2.AM00	
00003	12121212					
00004	0 00 00000		6	PZE	AM00	
00005	21444624		7	BCI	2.AM00F	ALTERNATE:AM00F
00006	26121212					
00007	0 06 00000		8	BLK		
	00000		9	ORG	0	
00000	0 00 00000		10	AM0D HLT		
00001	0 76 00074		11	LDA	EOIND	LOCATION OF P
00002	4 35 00012		12	STA	QL0C.4	
00003	4 61 00011		13	MIN	QL0C.4	LOCATION OF Q
00004	1 25 40074		14	LDP*	EOIND	P INTO A.B
00005	5 45 40007		15	FLD*	QL0C.4	
00006	0 43 40266		16	BRM*	FIXL	TRUNCATE TO INTEGER
00007	0 43 40267		17	BRM*	FL0ATL	FL0AT INTEGER
00010	5 41 40004		18	FLM*	QL0C.4	
00011	1 35 40074		19	FLS*	EOIND	
00012	1 47 00000		20	FLN		
00013	4 51 37766		21	BRR	AM00.4	EXIT
00014	0 00 00000		22	QL0C PZE		
	00074		23	EOIND BO0L	74	
	00266		24	FIXL BO0L	266	
	00267		25	FL0ATL BO0L	267	
	00000		26	END		

FL0ATL	00267	EOIND	00074	AM0D	00000	FIXL	00266
QL0C	00014						



910/920

MOD

9 words

F8RT

MOD - 910/920

*	MOD	FUNCTION	DAVE	AWENS	
00000	1 00	00000	PZE	0.1	
00001	0 00	00000	PZE	MOD	LABEL: MOD
00002	44462412		BCI	2.MOD	
00003	12121212				
00004	0 06	00000	BLK		
		00000	BRG	0	
00000	0 00	00000	MOD	HLT	
00001	4 37	00007	STX	TX.4	SAVE INDEX
00002	0 71	00071	LDX	ENADR	
00003	2 76	40000	LDA*	0.2	I INTO A
00004	3 44	40001	XDV*	1.2	DIVIDE BY J
00005	0 46	00014	XAB		REMAINDER INTO A
00006	4 71	00002	LDX	TX.4	REPLACE INDEX
00007	4 51	37771	BPP	MOD.4	EXIT
00010	0 00	00000	TX	PZE	
			XDV	RPD	14400000
		00071	ENADR	B88L	71
		00000	FMD		INTEGFR DIVIDE P8P

<u>910/920</u>		1	FORT	AMAX - 910/920
		2	*	AMAX, MAX, AMIN, MIN FUNCTIONS DAVE OWENS
00000	1 00 00000	3	PZE	0,1
00001	0 00 00000	4	PZE	AMAX
00002	21442167	5	BCI	2, AMAX
00003	12121212			AMAX
00004	0 00 00000	6	PZE	AMAX
00005	21442167	7	BCI	2, AMAXO
00006	00121212			AMAXO
00007	0 00 00000	8	PZE	AMAX
00010	21442167	9	BCI	2, AMAX1
00011	01121212			AMAX1
00012	0 00 00005	10	PZE	MAX
00013	44216712	11	BCI	2, MAX
00014	12121212			MAX
00015	0 00 00005	12	PZE	MAX
00016	44216700	13	BCI	2, MAXO
00017	12121212			MAXO
00020	0 00 00005	14	PZE	MAX
00021	44216701	15	BCI	2, MAX1
00022	12121212			MAX1
00023	0 00 00011	16	PZE	AMIN
00024	21443145	17	BCI	2, AMIN
00025	12121212			AMIN
00026	0 00 00011	18	PZE	AMIN
00027	21443145	19	BCI	2, AMINO
00030	00121212			AMINO
00031	0 00 00011	20	PZE	AMIN
00032	21443145	21	BCI	2, AMIN1
00033	01121212			AMIN1
00034	0 00 00016	22	PZE	MIN
00035	44314512	23	BCI	2, MIN
00036	12121212			MIN
00037	0 00 00016	24	PZE	MIN
00040	44314500	25	BCI	2, MINO
00041	12121212			MINO
00042	0 00 00016	26	PZE	MIN
00043	44314501	27	BCI	2, MIN1
00044	12121212			MIN1

00045	0	06	00000	28		BLK		
			00000	29		ORG	0	
00000	0	00	00000	30	AMAX	HLT		
00001	0	76	00025	31		LDA	SMALL	SET UP TO
00002	4	75	00063	32		LDB	SKG,4	FIND MAXIMUM
00003	4	43	00017	33		BRM	MAXMIN,4	
00004	4	51	37774	34		BRR	AMAX,4	EXIT
00005	0	00	00000	35	MAX	HLT		
00006	4	43	37772	36		BRM	AMAX,4	OBTAIN MAXIMUM
00007	0	43	40266	37		BRM*	FIXL	FIX RESULT
00010	4	51	37775	38		BRR	MAX,4	EXIT
00011	0	00	00000	39	AMIN	HLT		
00012	0	76	00354	40		LDA	LARGE	SET UP TO
00013	4	75	00053	41		LDB	SKN,4	FIND MINIMUM
00014	4	43	00006	42		BRM	MAXMIN,4	
00015	4	51	37774	43		BRR	AMIN,4	EXIT
00016	0	00	00000	44	MIN	HLT		
00017	4	43	37772	45		BRM	AMIN,4	OBTAIN MINIMUM
00020	0	43	40266	46		BRM*	FIXL	FIX RESULT
00021	4	51	37775	47		BRR	MIN,4	EXIT
00022	0	00	00000	48	MAXMIN	HLT		
00023	4	35	00051	49		STA	RESULT+1,4	INITIAL MANTISSA
00024	4	36	00031	50		STB	COMPAR,4	MAX-MIN CONTROL
00025	4	37	00050	51		STX	TX,4	SAVE INDEX
00026	4	76	00041	52		LDA	EXP,4	MAXIMUM EXPONENT
00027	4	35	00044	53		STA	RESULT,4	INITIAL EXPONENT
00030	0	76	00015	54		LDA	EADR1	LOC OF LAST ARG
00031	0	55	00077	55		ADD	TAGBIT	
00032	4	35	00044	56		STA	E1TAG,4	
00033	4	55	00035	57		ADD	INDBIT,4	INDIRECT BIT
00034	4	35	00043	58		STA	E1TIND,4	
00035	0	76	00071	59		LDA	EOADR	LOC OF FIRST ARG
00036	0	54	00015	60		SUB	EADR1	LOC OF LAST ARG
00037	4	35	00041	61		STA	TEMP,4	
00040	4	71	00040	62		LDX	TEMP,4	-(NUMBER OF ARGS)
00041	4	76	40035	63	LOOP	LDA*	E1TAG,4	ARG MODE
00042	0	72	00254	64		SKA	FLTIND	TEST ARG FIXED
00043	4	01	00004	65		BRU	FLT,4	NO
00044	4	76	40033	66		LDA*	E1TIND,4	YES, ARG INTO A

00045	0 43 40267	67	BRM*	FL0ATL	FL0AT ARG
00046	4 01 00004	68	BRU	ST0RE,4	
00047	4 75 40030	69	FLT	LDB*	QL INTO B
00050	4 61 40026	70	MIN*	E1TAG,4	
00051	4 76 40026	71	LDA*	E1TIND,4	QH INTO A
00052	5 07 00017	72	ST0RE	STD	ST0RE ARG
00053	5 35 00020	73		FLS	
00054	4 35 00024	74		STA	
00055	0 00 00000	75	COMPAR	HLT	TEST NEW MAX OR MIN
00056	4 01 00003	76		BRU	NO, CONTINUE
00057	5 25 00012	77		LDP	YES
00060	5 07 00013	78		STD	MAX OR MIN = ARG
00061	4 41 37760	79	TEST	BRX	TEST MORE ARGS
00062	5 25 00011	80		LDP	NO, MAX-MIN INTO A,B
00063	4 71 00012	81		LDX	REPLACE INDEX
00064	4 51 37736	82		BRR	EXIT
00065	0 73 00023	83	SKG	SKG	MAX COMPARE
00066	4 53 00012	84	SKN	SKN	MIN COMPARE
00067	77777377	85	EXP	0CT	
00070	0004C000	86	INDBIT	0CT	40000
00071	0000C000	87	ARG	0CT	
00072	0000C000	88		0CT	
00073	0000C000	89	RESULT	0CT	
00074	0000C000	90		0CT	
00075	0000C000	91	TX	0CT	
00076	0000C000	92	E1TAG	0CT	
00077	0000C000	93	E1TIND	0CT	
00100	0000C000	94	TEMP	0CT	
	00015	95	EADR1	B00L	15
	00023	96	ZER0	B00L	23
	00025	97	SMALL	B00L	25
	00027	98	ADRMSK	B00L	27
	00071	99	E0ADR	B00L	71
	00077	100	TAGBIT	B00L	77
	00254	101	FLTIND	B00L	254
	00266	102	FIXL	B00L	266
	00267	103	FL0ATL	B00L	267
	00354	104	LARGE	B00L	354
	00000	105	END		

<u>910/920</u>			FORT		DIM - 910/920
		1			DAVE OWENS
		2	*	DIM FUNCTION	
00000	1 00 00000	3		PZE 0,1	
00001	0 00 00000	4		PZE DIM	LABEL: DIM
00002	24314412	5		BCI 2,DIM	
00003	12121212				
00004	0 00 00000	6		PZE DIM	
00005	24314426	7		BCI 2,DIMF	ALTERNATE: DIMF
00006	12121212				
00007	0 06 00000	8		BLK	
	00000	9		ORG 0	
00000	0 00 00000	10	DIM	HLT	
00001	0 76 00074	11		LDA EOIND	LOCATION OF P
00002	4 35 00007	12		STA QL0C,4	
00003	4 61 00006	13		MIN QL0C,4	LOCATION OF Q
00004	1 25 40074	14		LDP* EOIND	P INTO A,B
00005	5 35 40004	15		FLS* QL0C,4	
00006	0 72 00025	16		SKA SIGN	TEST P > Q
00007	0 46 30003	17		CLR	NO, RESULT = 0.0
00010	4 51 37770	18		BRR DIM,4	YES, RESULT=P-Q, EXIT
00011	0 00 00000	19	QL0C	PZE	
	00074	20	EOIND	BOOL 74	
	00025	21	SIGN	BOOL 25	
	00000	22		END	

<u>910/920</u>			FORT	IDIM - 910/920
		1		DAVE OWENS
		2	*	
		3	IDIM FUNCTION - 910/920	
00000	1 00 00000	3	PZE 0,1	
00001	0 00 00000	4	PZE IDIM	
00002	31243144	5	BCI 2, IDIM	
00003	12121212			
00004	0 00 00000	6	PZE IDIM	
00005	31243144	7	BCI 2, IDIMF	
00006	26121212			
00007	0 06 00000	8	BLK	
	00000	9	ORG 0	
00000	0 00 00000	10	IDIM HLT	
00001	4 37 00010	11	STX TX,4	SAVE INDEX REGISTER
00002	0 71 00071	12	LDX EOADR	
00003	2 76 40000	13	LDA* 0,2	I INTO A
00004	2 54 40001	14	SUB* 1,2	SUBTRACT J
00005	0 72 00025	15	SKA SIGN	TEST I > J
00006	0 46 30003	16	CLR	NO, RESULT = 0
00007	4 71 00002	17	LDX TX,4	YES, REPLACE INDEX
00010	4 51 37770	18	BRR IDIM,4	EXIT
00011	0 00 00000	19	TX PZE	
	00025	20	SIGN BOOL 25	
	00071	21	EOADR BOOL 71	
	00000	22	END	

910/920

LOCF

4 words

			FRT			LOCF - 910/920
00000	1	00 00000	PZE	0.1		
00001	0	00 00000	PZE	LOCF		
00002	43462326		BCI	2.LOCF		LABEL: LOCF
00003	12121212					
00004	0 06 00000		BLK			
		00000	ARG	0		
00000	0 00 00000	LOCF	HLT			
00001	0 76 40071		LDA*	EOADR		LAC 9F ARG INTO A
00002	0 14 00027		ETP	ADRMSK		EXTRACT 899 BERNARD
00003	4 51 37775		BRR	LOCF.4		
		00027	ADRMSK	B99L	27	
		00071	EOADR	B99L	71	
		00000	END			

920

CIF  
25 words

IF - 920

\* \* \* IF FUNCTION TO SIMULATE DECIMAL MACHINES - 920

Address	Op	Arg 1	Arg 2	Arg 3	Arg 4	Label
00000	L	00	00000	PZF	0.1	
00001	0	00	00000	PZE	IF	
00002	3	125	1212	RDI	2,IF	LABEL: IF
00003	1	212	1212	SLK		
00004	0	06	00000	RPG	0	
00000	0	00	00000	HLT		
00001	4	37	00026	STX	TX.4	SAVE INDEX
00002	0	76	00015	LDA	EADPI	LAST ARG + 1
00003	0	55	00027	ADD	ADRMSK	IND BIT - 1
00004	4	35	00024	STA	EIND.4	LAST ARG INDIRECT
00005	0	50	00074	SKE	EIND	TEST PNE ARG
00006	4	01	00014	BRU	TWRARG.4	NR. TWR ARGS
00007	1	25	40074	LDP*	EIND	YES. ARG INTO A,B
00010	0	71	00023	LDX	7ERR	
00011	4	37	00017	CMPEX	STX	STORE EXP 9F P
00012	0	46	00120	RCH	120	EXP 9F 0 INTO X
00013	0	44	00204	RCH	204	X INTO A, A INTO B
00014	4	55	00012	ADD	DEC35.4	ADD 35
00015	4	73	00013	SKG	PXP.4	TEST AEXP < 35
00016	0	75	00023	LDR	7ERR	NR. P = 0
00017	0	46	00014	XAR		YES. P = P-0
00020	4	71	00007	LDX	TX.4	REPLACE INDEX
00021	4	51	37757	RXP	IF.4	EXIT
00022	1	25	40074	TWRARG	LDP*	P INTO A,B
00023	0	46	00120	RCH	120	EXP INTO X
00024	5	35	40004	FLS*	EIND.4	
00025	4	01	37754	RPU	CMPEX.4	
00026	0	00	00043	DEC35	PZE	35
00027	0	00	00000	TX		
00030	0	00	00000	EIND	PZE	
00030	PEXP	EQU	00030	EQU	EIND	
00015	EADPI	888L	00015	888L	15	
00023	ZERR	888L	00023	888L	23	
00027	ADRMSK	888L	00027	888L	27	
00074	EIND	888L	00074	888L	74	
00000	END		00000	END		



910/920

EXIT  
10 words

SYSTEM TAPE EXIT

	FBPT		
00000	1 00 00000	PZE	C.1
00001	0 00 00000	PZE	EXIT
00002	25673163	BCI	2.EXIT
00003	12121212		
00004	0 06 00000	BLK	
		APG	0
00000	0 00 00000	HLT	
00001	0 02 02641	TYPW	1.4
00002	4 12 00005	MIW	TYPE1.4
00003	4 12 00006	MIW	TYPE2.4
00004	0 02 14000	TOPW	
00005	0 40 21000	ERTW	
00006	4 01 37777	SEU	*-1.4
00007	0 01 00001	SPU	MINST
00010	52542567	TYPE1	1. *EX
00011	31535453	TYPE2	1. IT*
	00001	MINST	1
	00000	END	

910/920

STRTDM-201

4 words

			PART	STRDM
00000	10000000		BCT	10000000
00001	20100000		BCT	20100000
00002	0 06 00000		BLK	
	00000		BRG	0
00000	0 00 00000	STRDM	HLT	
00001	0 76 00071		LDA	EADR
00002	0 35 00016		STA	EADR2
00003	4 51 37775		BRP	STRDM.4
	00071	EADR	BRPL	71
	00016	EADR2	BRPL	16
	00000		END	

920/910S

ENDDMY-202

8 words

			FAPT	ENDDMY
00000	10000000		ACT	10000000
00001	20200000		ACT	20200000
00002	0 05 00000		BLK	
	00000		BRG	0
00000	0 00 00000	ENDDMY	HLT	
00001	0 76 00016		LDA	EADR2
00002	0 50 00015		SKE	EADR1
00003	4 01 00002		BRU	E1.4
00004	4 51 37774		BRR	ENDDMY.4
00005	0 43 00401	E1	BRM	ERRR2
00006	21512745		BCI	1.ARGV
00007	4 51 37771		BRR	ENDDMY.4
	00015	EADR1	BRBL	15
	00016	EADR2	BRBL	16
	00401	ERRR2	BRBL	401
	00000		END	

910/920

		1		F0RT		STOP
00000	10000000	2		OCT	10000000	
00001	20300000	3		OCT	20300000	
00002	0 06 00000	4		BLK		
	00000	5		ORG	0	
00000	0 00 00000	6	STOP	HLT		
00001	0 02 02641	7		COM	2641	
00002	4 12 00005	8		MIW	TYPE1.4	
00003	4 12 00005	9		MIW	TYPE2.4	
00004	0 02 14000	10		COM	14000	
00005	0 00 00000	11		HLT		
00006	4 01 07773	12		BRU	STOP+1.4	
00007	52546253	13	TYPE1	OCT	52546253	CR AND *ST
00010	46475452	14	TYPE2	OCT	46475452	OP* AND CR
	00000	15	RTSTOP	BRU	0	
	00000	15		END		

RTSTOP 00000      TYPE1 00007      TYPE2 00010      STOP. 00000

00000	1 00 00000	1	F0RT	
00001	20400000	2	PZE	0,1
00002	0 06 00000	3	0CT	20400000
	00000	4	BLK	
00000	0 00 00000	5	0RG	0
00001	0 37 00014	6	IFSNSW HLT	
00002	0 73 00251	7	STX	TX
00003	0 73 00023	8	SKG	F0UR
00004	4 01 00013	9	SKG	ZER0
00005	0 46 00400	10	BRU	C2,4
00006	0 76 00252	11	CAX	
00007	2 66 00000	12	LDA	S14BIT
00010	0 16 00253	13	RSH	0,2
00011	4 35 00002	14	MRG	SKSM0P
00012	0 71 00014	15	STA	C1,4
00013	0 40 00000	16	LDX	TX
00014	4 51 37764	17	C1 SKS	0
00015	4 61 37763	18	BRR	IFSNSW,4
00016	4 51 37762	19	0FF MIN	IFSNSW,4
00017	0 43 00401	20	BRR	IFSNSW,4
00020	31266262	21	C2 BRM	ERR0R
00021	0 71 00014	22	BCI	1,IFSS
00022	4 01 37773	23	LDX	TX
	00014	24	BRU	0FF,4
	00023	25	TX B00L	14
	00251	26	ZER0 B00L	23
	00252	27	F0UR B00L	251
	00253	28	S14BIT B00L	252
	00401	29	SKSM0P B00L	253
	00000	30	ERR0R B00L	401
		31	END	

IFSNSW

920/910 S

920/910 S

IFSNLT-205

21 words

			FAPT	IFSNLT
00000	10000000		ACT	10000000
00001	20500000		ACT	20500000
00002	0 06 00000		BLK	
	00000		BRG	0
00000	0 00 00000	IFSNLT	HLT	
00001	0 37 00014		STX	TX
00002	0 73 00250		SKG	DEC24
00003	0 73 00023		SKG	7EPR
00004	4 01 00014		BRU	01.4
00005	0 46 00400		CAX	
00006	0 76 00025		LDA	SIGN
00007	0 75 00025		LDR	SIGN
00010	2 67 20000		LCY	0.2
00011	0 71 00014		LDY	TX
00012	0 70 00075		SKM	SENWRD
00013	4 61 37765		MIN	IFSNLT.4
00014	0 17 00026		ERR	ONES
00015	0 14 00075		ETR	SENWRD
00016	0 35 00075		STA	SENWRD
00017	4 51 37761		BRR	IFSNLT.4
00020	0 43 00401	D1	BRM	ERRAR
00021	31266243		BCI	1. IFSL
00022	4 61 37756		MIN	IFSNLT.4
00023	0 71 00014		LDY	TX
00024	4 51 37754		BRR	IFSNLT.4
	00014	TX	899L	14
	00023	ZERR	899L	23
	00025	SIGN	899L	25
	00026	ONES	899L	26
	00075	SENWRD	899L	75
	00250	DEC24	899L	250
	00401	ERRAR	899L	401
	00000		END	

920/910S

COMPGR-206  
11 words

	COMP38			COMP38
00000	10000000	ACT		10000000
00001	20600000	HCT		20600000
00002	0 05 00000	BLK		
	00000	PPG		0
00000	0 00 00000	HLT		
00001	4 61 37777	MIN		COMPGR.4
00002	4 73 77774	SKG*		COMPGR.6
00003	0 73 00023	SKG		7ERR
00004	4 01 00004	RYU		FERRR.4
00005	0 59 00024	SIA		RNE
00006	4 62 37772	ADM		COMPGR.4
00007	4 51 37771	HXP		COMPGR.4
00010	0 43 00401	RRB		PTERR
00011	29276346	ACT		1.0GT9
00012	4 51 37765	APP		COMPGR.4
	00023	ZERR		23
	00024	RNE		24
	00401	PTERR		401
	00000	SVD		

410/970

ACCEPT-207

21 words

ACCEPT

F3PT

00000	1 00 00000		0.1	
00001	20700000	ACT	207000000	
00002	23540000	ACT	235400000	
00003	0 06 00000	BLK		
	00000	095	0	
00000	0 00 00000	ACCFPT	HLT	
00001	4 75 37777	LDR	ACCEPT.4	
00002	4 76 00000	LDA	ACCPUA.4	
00003	0 14 00027	STR	ADRWSK	
00004	0 01 00235	SRU	INITFS	
00005	4 00 00001	ACCPJA	HLT	ACCEPTIC.4
00006	0 00 00000	ACCPIC	HLT	
00007	0 02 00001	ENM	1	
00010	0 32 00021	WIM	CHAR	
00011	0 75 00256	LDR	CHAR4M	
00012	0 76 00256	LDA	CHAR4M	
00013	0 70 00021	SKM	CHAR	
00014	4 51 37772	ARR	ACCPIC.4	
00015	0 02 02041	ENM	2041	
00016	0 12 00255	WIV	CARRET	
00017	0 02 14000	ENM	14000	
00020	0 40 21000	SKS	21000	
00021	4 01 37777	RRU	+1.4	
00022	0 46 30003	CLP		
00023	0 25 00047	STA	RSCANX	
00024	4 51 37752	RRR	ACCPIC.4	
	00021	CHAP	RRAL	21
	00027	ADRWSK	RRAL	27
	00047	RSCANX	RRAL	47
	00235	INITFS	RRAL	235
	00255	CARRET	RRAL	255
	00256	CHAR4M	RRAL	256
	00000	END		



910/920

ACCTAP-210  
15 words

			FBST		ACCTAP
00000	1 00 00000		37E	0.1	
00001	21000000		ACT	21000000	
00002	23540000		ACT	23540000	
00003	0 06 00000		BLK		
	00000		BRG	0	
00000	0 00 00000	ACCTAP	HLT		
00001	4 75 37777		LDB	ACCTAP.4	
00002	4 76 00003		LDA	ACTPU4.4	
00003	0 14 00027		ETR	ADRMSK	
00004	0 01 00235		BRU	INITFS	
00005	4 00 00001	ACTPU4	HLT	ACTPIC.4	
00006	0 00 00000	ACTPIC	HLT		
00007	0 40 21000		SKS	21000	
00010	4 01 00004		BRU	WIM.4	
00011	4 71 00005		LDY	DM2500.4	
00012	4 41 00000	DELAY	BRX	DELAY.4	20 MS. DELAY
00013	0 02 00004		FSM	4	
00014	0 32 00021	WIN	WIM	CHAR	
00015	4 51 37771		BRP	ACTPIC.4	
00016	77773074	DM2500	DEC	-2500	
	00027	ADRMSK	B99L	27	
	00235	INITFS	B99L	235	
	00021	CHAR	B99L	21	
	00000		END		

910/920

PNCHTP-213

9 words

	E9PT		PNCHTP
00000	100000000	ACT	100000000
00001	212000000	ACT	212000000
00002	212000000	ACT	212000000
00003	235400000	ACT	235400000
00004	0 04 00000	ALK	
	00000	876	0
00000	0 00 00000	PNCHTP HLT	
00001	4 75 37777	LDR	PNCHTP,4
00002	4 75 00003	LDA	PNCHTP,4
00003	0 16 00026	M49	SIGN
00004	0 01 00235	BRJ	INITFS
00005	4 00 00001	PNCHTA HLT	PNCHTA,4
00006	0 00 00000	PNCHTC HLT	PNCHTC,4
00007	0 02 02044	E9M	2044
00010	4 51 37776	BRP	PNCHTC,4
	00025	SIGN	25
	00235	INITFS	235
	00000	END	

910/920

TYPE-214

(also substitutes  
for PRINT-211)

9 words

			FORMAT		TYPE
00000	1 00 00000		PZE	0.1	
00001	21400000		RCT	21400000	
00002	21100000		RCT	21100000	PRINT ENTRY
00003	23540000		RCT	23540000	REQUIRE INIT FORMAT
00004	0 06 00000		BLK		
	00000		RRS	0	
00000	0 00 00000	TYPE	HLT		
00001	4 75 37777		LDR	TYPE.4	
00002	4 76 00003		LDA	TYPEUA.4	
00003	0 16 00025		MRS	SIGN	
00004	0 01 00235		BRU	INITFS	
00005	4 00 00001	TYPEUA	HLT	TYPEIC.4	
00006	0 00 00000	TYPEIC	HLT		
00007	0 02 02041		ESM	2041	
00010	4 51 37776		RPR	TYPEIC.4	
	00025	SIGN	BRAL	25	
	00235	INITFS	BRAL	235	
	00000		END		

910/920

REWIND-215  
6 words

Address	Count	Value	Label	Address	Count	Value	Label
00000	1	000000		00000	1	000000	REWIND
			FPRT				
			BZE			0.1	
		L215	SPR			21500000	
		L242	SPR			24200000	
		L244	SPR			24400000	
00001	2	15 00000	L215			REWIND	
00002	2	42 40000	L242*				REQUIRE SET IN TABLE
00003	2	44 40000	L244*				REQUIRE TREADY
00004	0	06 00000	BLK				
		00000	SPG			0	
00000	0	00 00000	REWIND			HLT	
00001	0	43 40242				STISTL	
00002	0	43 40244				TRENYL	
00003	2	23 00014				EXU	12.2
00004	0	71 00041				LDY	MSAVEX
00005	4	51 27773				BRZ	REWIND.4
		00242	STISTL			BRZL	242
		00244	TRENYL			BRZL	244
		00041	MSAVEX			BRZL	41
		00000				END	

00000	1	00	00000	1		F0RT		READ (216)	10-23-63
				2		PZE	0.1		
				3	L216	OPD	21600000		
				4	L235	OPD	23500000		
00001	2	16	00000	5		L216			
00002	2	35	40000	6		L235*		REQUIRE INITFS	
00003	0	06	00000	7		BLK			
			00000	8		ORG	0		
00000	0	00	00000	9	READ	HLT			
00001	4	75	37777	10		LDP	READ.4		
00002	4	76	00003	11		LDA	READUA.4		
00003	0	14	00027	12		ETR	ADRMSK		
00004	0	01	00235	13		BRU	INITFS		
00005	4	00	00001	14	READUA	HLT	READIC.4		
00006	0	00	00000	15	READIC	HLT			
00007	4	76	00034	16		LDA	TIME15.4	TO TIME 15 SEC.	
00010	0	40	12006	17	CRTW	CRTW	1	TEST CARD READER RDY	
00011	4	01	00024	18		BRU	TIME.4	NO. START TIMING	
00012	0	02	02606	19		RCDW	1.4	TURN ON CARD READER	
00013	0	71	00257	20		LDX	DM20		
00014	2	32	00324	21	WIM	WIM	ENDSBF.2		
00015	0	40	21000	22		BRTW		TEST BUFFER READY TOO SOON	
00016	4	01	00011	23		BRU	COUNT.4	NO	
00017	2	77	00022	24		EAX	18.2	YES	
00020	4	41	00004	25		BRX	ERCARD.4	BRANCH IF NO COLUMNS READ	
00021	0	43	40265	26	ERLCRD	BRM*	ERRLNK	LAST CARD READ IN ERROR	
00022	4	32	35124	27		BCI	1.LCRD	TYPE ERR LCRD	
00023	4	01	37764	28		BRU	READIC+1.4	TRY AGAIN	
00024	0	43	40265	29	ERCARD	BRM*	ERRLNK	FEED OR READ CHECK	
00025	2	32	35124	30		BCI	1.CARD	TYPE ERR CARD	
00026	4	01	37761	31		BRU	READIC+1.4	TRY AGAIN	
00027	4	41	37765	32	COUNT	BRX	WIM.4	TEST 20 WORDS READ	
00030	0	40	20010	33		BETW		YES. TEST ERROR	
00031	4	01	37770	34		BRU	ERLCRD.4	YES	
00032	0	75	00260	35		LDB	CRTLOW	NO	
00033	0	36	00021	36		STB	CHAR	INSERT CAR. RETURN	
00034	4	51	37762	37		BRR	READIC.4		
00035	0	54	00351	38	TIME	SUB	THREE		
00036	0	72	00026	39		SKA	ONES	TEST 15 SEC WAITED	

00037	4 01 37751	40	BRU	CRTW.4
00040	C 43 00401	41	BRM	ERR0R
00041	23512462	42	BCI	1.CRDS
00042	4 01 37746	43	BRU	CRTW.4
00043	C 30 41353	44	TIME15 YIM*	755
	00021	45	CHAR	BOOL
	00026	46	ONES	BOOL
	00027	47	ADRMSK	BOOL
	00235	48	INITFS	BOOL
	00257	49	DM20	BOOL
	00260	50	CRTLOW	BOOL
	00265	51	ERRLNK	BOOL
	00324	52	ENDSBF	BOOL
	00351	53	THREE	BOOL
	00401	54	ERR0R	BOOL
	0000C	55	END	

NO CONTINUE WAITING  
YES TYPE ERR CRDS

WAIT 5 MIN 30 SEC

910/920

READTP-217  
5 words

*		READ TAP	PORT		READTP
00000	1	00 00000	RZE	0.1	
			L217	880	21700000
			L241	880	24100000
			L242	880	24200000
			L244	880	24400000
00001	2	17 00000	L217	READTP	
00002	2	41 40000	L241*		REQUIRE REWRTP
00003	2	42 40000	L242*		REQUIRE SETIOT
00004	2	44 40000	L244*		REQUIRE TREADY
00005	0	06 00000	BLK		
		00000	RRS	0	
00000	0	00 00000	READTP	HLT	
00001	0	43 40242	RRM*	STIOTL	
00002	4	75 37776	LDR	READTP.4	
00003	0	76 00023	LDA	ZERR	
00004	0	01 00241	BRU	REWRTL	
		00242	STIOTL	RABL	242
		00023	ZERR	RRBL	23
		00241	REWRTL	RRBL	241
		00000	END		

920/910S

READIT-220

74 words

			FRST		READIT
00000	1	00 00000	PZE	0.1	
			L220 RRD	22000000	
			L235 RRD	23500000	
			L242 RRD	24200000	
			L244 RRD	24400000	
00001	2	20 00000	L220	READIT	
00002	2	35 40000	L235*		REQUIRE INITFS
00003	2	42 40000	L242*		REQUIRE SETIST
00004	2	44 40000	L244*		REQUIRE TREADY
00005	0	06 00000	RLK		
		00000	RRG	0	
00000	0	00 00000	READIT HLT		
00001	0	43 40242	BRM*	STIBTL	
00002	4	75 37776	LOR	READIT.4	
00003	4	76 00005	LDA	RDITUA.4	
00004	0	14 00027	ETP	ADRMSK	REMOVE SIGN-INPUT
00005	0	15 00254	MRS	LNGBLK	132 CHAR BLOCK FLAG
00006	0	71 00041	LDX	MSAVEX	
00007	0	01 00235	BRU	INITFS	
00010	4	00 00001	RDITUA HLT	RDITIC.4	
00011	0	00 00000	RDITIC HLT		
00012	4	36 37777	STR	RDITIC.4	
00013	0	44 30003	CLR		
00014	0	35 00047	STA	RFCANY	
00015	4	71 00060	LDX	DECM33.4	
00016	4	76 00064	LDA	IBLNKS.4	
00017	2	35 00361	A1 STA	ENDBUF.2	
00020	4	41 37777	BRX	A1.4	
00021	4	76 00062	LDA	NINE.4	
00022	4	35 00062	STA	RDCNT.4	
00023	0	43 40244	A11 BRM*	TREDYL	
00024	2	23 00004	EXU	4.2	ETTW
00025	4	01 00066	BRU	A2.4	END SF TAPE
00026	0	43 40244	A7 BRM*	TPEDYL	
00027	2	23 00011	EXU	3.2	RTDW N.4
00030	4	71 00051	LDX	DECM33.4	
00031	2	22 00341	A3 WIM	ENDBUF.2	
00032	0	40 21000	BPTW		TEST FOR EARLY GAP
00033	4	41 37776	BRX	A3.4	
00034	4	37 00051	STX	TEMP.4	
00035	4	76 00044	LDA	DECM33.4	
00036	0	75 00026	LOR	RNES	
00037	0	71 00002	LDX	IATBLL	
00040	4	70 00045	SKM	TEMP.4	
00041	4	01 00021	BRU	A4.4	
00042	0	76 00300	LDA	STRBUF	1.2 BR 3 CHAR RECSR1
00043	4	70 00043	SKM	ERRWRD.4	
00044	4	01 00006	BRU	A5.4	
00045	4	76 00042	LDA	ERRERR.4	END FILE





910/920

			1	FORT		WRITAP
			2	*	WRITE TAPE	
00000	1	00	00000	3	PZE	0.1
			4	L221	OPD	22100000
			5	L241	OPD	24100000
			6	L242	OPD	24200000
			7	L243	OPD	24300000
			8	L244	OPD	24400000
00001	2	21	00000	9	L221	WRITAP
00002	2	41	40000	10	L241*	REQUIRE REWRTP
00003	2	42	40000	11	L242*	REQUIRE SETIOT
00004	2	43	40000	12	L243*	REQUIRE TSTWRT
00005	2	44	40000	13	L244*	REQUIRE TREADY
00006	0	06	00000	14	BLK	
			00000	15	ORG	0
00000	0	00	00000	16	WRITAP HLT	
00001	0	43	40242	17	BRM*	STIOTL
00002	4	75	37776	18	LDB	WRITAP,4
00003	0	76	00025	19	LDA	SIGN
00004	0	01	00241	20	BRU	REWRTL
			00242	21	STIOTL BOOL	242
			00025	22	SIGN BOOL	25
			00241	23	REWRTL BOOL	241
			00000	24	END	

720/910 S

			1	F0RT	WRIT0T	
			2	*	WRITE OUTPUT TAPE	
00000	1 00	00000	3	PZE	0,1	
			4	L222	0PD	22200000
			5	L235	0PD	23500000
			6	L242	0PD	24200000
			7	L243	0PD	24300000
			8	L244	0PD	24400000
00001	2 22	00000	9	L222	WRIT0T	
00002	2 35	40000	10	L235*		REQUIRE INITFS
00003	2 42	40000	11	L242*		REQUIRE SETI0T
00004	2 43	40000	12	L243*		REQUIRE TSTWRT
00005	2 44	40000	13	L244*		REQUIRE TREADY
00006	0 06	00000	14	BLK		
		00000	15	0RG	0	
00000	0 00	00000	16	WRIT0T	HLT	
00001	0 43	40242	17	BRM*	STI0TL	SET I0 TABLE LINK
00002	4 75	37776	18	LDB	WRIT0T,4	
00003	4 76	00004	19	LDA	WR0TUA,4	
00004	0 16	00254	20	MRG	LNGBLK	132 CHAR BLOCK FLAG
00005	0 71	00041	21	LDX	MSAVEX	
00006	0 01	00235	22	BRU	INITFS	
00007	4 00	00001	23	WR0TUA	HLT	WR0T1C,4
00010	0 00	00000	24	WR0T1C	HLT	
00011	4 36	37777	25	STB	WR0T1C,4	
00012	0 46	30003	26	CLR		
00013	0 35	00063	27	STA	0UTFSZ	
00014	4 76	00052	28	LDA	DEC132,4	
00015	0 35	00064	29	STA	RSCNLF	
00016	0 43	40275	30	BRM*	STIF0K	BLANK REST OF BUFFER
00017	0 76	00251	31	A6	LDA	FOUR
00020	4 35	00044	32	STA	WRTCNT,4	
00021	0 43	40243	33	BRM*	TSTWRL	TEST WRITE
00022	0 71	00002	34	A1	LDX	I0TBLL
00023	0 43	40244	35	BRM*	TREDYL	
00024	2 23	00006	36	EXU	6,2	WTDW N,4
00025	4 71	00040	37	LDX	DECM33,4	
00026	2 12	00341	38	A2	ENDBUF,2	
00027	4 41	37777	39	BRX	A2,4	

00030	0	02	14000	40		T0PW		
00031	0	40	20010	41		BETW		
00032	4	01	00006	42		BRU	A3,4	
00033	0	46	30003	43		CLR		
00034	0	35	00047	44		STA	RSCANX	
00035	0	40	21000	45		BRTW		
00036	4	01	37777	46		BRU	*-1,4	
00037	4	51	37751	47		BRR	WR0T1C,4	
00040	0	43	40244	48	A3	BRM*	TREDYL	
00041	2	23	00013	49		EXU	11,2	SRDW
00042	4	32	00025	50		WIM	TEMP,4	BACKSPACE OVER ERROR
00043	2	23	00003	51		EXU	3,2	BTTW
00044	0	43	40243	52		BRM*	TSTWRL	MAKE BT LEADER
00045	0	43	40244	53		BRM*	TREDYL	
00046	2	23	00007	54		EXU	7,2	ETW
00047	4	71	00016	55		LDX	DECM33,4	
00050	0	12	00000	56	A4	MIW	0	ERASE TAPE
00051	4	41	37777	57		BRX	A4,4	
00052	0	02	14000	58		T0PW		
00053	4	60	00011	59		SKR	WRTCNT,4	TRY WRITE 5 TIMES
00054	4	01	37746	60		BRU	A1,4	
00055	4	76	00013	61		LDA	WRTErr,4	FAILED WRITE 5 TIMES
00056	0	71	00002	62		LDX	I0TBLL	
00057	2	16	00015	63		MRG	13,2	TAPE NUMBER
00060	4	35	00002	64		STA	A5,4	
00061	0	43	40265	65		BRM*	ERRLNK	
00062	0	00	00000	66	A5	HLT		
00063	4	01	37734	67		BRU	A6,4	
00064	0	00	00000	68		WRTCNT	PZE	
00065	7	77777	737	69		DECM33	DEC	-33
00066	0	0000	0204	70		DEC132	0CT	204
00067	0	0000	0000	71		TEMP	0CT	
00070	6	6516	300	72		WRTErr	BCI	1,WRTO
		0000	2	73		I0TBLL	B00L	2
		0004	1	74		MSAVEX	B00L	41
		0004	7	75		RSCANX	B00L	47
		0006	3	76		0UTFSZ	B00L	63
		0006	4	77		RSCNLF	B00L	64
		0023	5	78		INITFS	B00L	235

00242	79	STIOTL	BOOL	242
00243	80	TSTWRL	BOOL	243
00244	81	TREDYL	BOOL	244
00251	82	FOUR	BOOL	251
00254	83	LNGBLK	BOOL	254
00265	84	ERRLNK	BOOL	265
00275	85	STIFOK	BOOL	275
00341	86	ENDBUF	BOOL	341
00000	87		END	

DEC132	00066	DECM33	00065	ENDBUF	00341	ERRLNK	00265
INITFS	00235	IOTBLL	00002	LNGBLK	00254	MSAVEX	00041
OUTFSZ	00063	RSCANX	00047	RSCNLF	00064	STIFOK	00275
STIOTL	00242	TREDYL	00244	TSTWRL	00243	WRITOT	00000
WROTIC	00010	WROTUA	00007	WRTCNT	00064	WRERR	00070
FOUR	00251	L222	00001	L235	00001	L242	00001
L243	00001	L244	00001	TEMP	00067	A1	00022
A2	00026	A3	00040	A4	00050	A5	00062
A6	00017						

910/920

ENDIOL-223

7 words

00000	1	00	00000	1	FRT				ENDIOL
00001	2	22300000		2	P7E	0.1			
00002	3	0 06 00000		3	PCT	22300000			
	4		00000	4	PLK				
00000	5	0 00 00000		5	APG	0			
00001	6	0 37 00041		6	ENDIOL	HLT			
00002	7	4 76 27776		7	STX	MSAVEY			
00003	8	0 35 00042		8	LDA	ENDIOL.4			
00004	9	0 46 30003		9	STA	MSAVAD			
00005	10	0 35 00054		10	CLR				
00006	11	0 01 30273		11	STA	PLSEFLS			
	12		00041	12	APU	CNTSTL			COUNT TEST LINK
	13		00042	13	MSAVEY	RRRL	41		
	14		00054	14	MSAVAD	RRRL	42		
	15		00273	15	PLSEFLS	RRRL	54		
	16		00000	16	CNTSTL	RRRL	273		
	17			17	END				

00000	10000000	1	F0RT	
00001	22400000	2	0CT	10000000
00002	0 06 00000	3	0CT	22400000
	00000	4	BLK	
00000	0 00 00000	5	0RG	0
00001	0 53 00017	6	IF0VFL HLT	
00002	4 61 37776	7	SKN	0VFLID
00003	0 46 30003	8	MIN	IF0VFL,4
00004	0 35 00017	9	CLR	
00005	4 51 37773	10	STA	0VFLID
	00017	11	BRR	IF0VFL,4
	00000	12	0VFLID B00L	17
		13	END	

IF0VFL

910/920



BKSPAC-22AE

46 words

920/910S

BACKSPACE MAGNETIC TAPE POSITIVE  
0.1  
22500000  
24200000  
24400000  
BKSPAC

PORT  
PTE  
APP  
APP  
APP  
L225  
L242\*  
L244\*

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50

00000 1 00 00000

00001 2 25 00000

00002 2 42 40000

00003 2 44 40000

00004 0 05 00000

00000 0 00 00000

00001 0 43 40244

00002 4 76 00047

00003 4 35 00047

00004 0 43 40244

00005 2 29 00002

00006 4 01 00021

00007 4 53 00041

00010 4 01 00013

00011 5 23 00012

00012 4 32 00041

00013 4 76 00040

00014 4 75 00032

00015 0 70 00023

16 4 01 00013

00017 4 75 00035

00020 4 70 00034

00021 4 01 37751

00022 4 01 00005

00023 2 23 00013

00024 4 32 00027

00025 0 40 20010

00026 4 01 00002

00027 0 71 00041

00030 4 51 37750

00031 4 50 00021

00032 4 01 00007

00033 4 76 00022

00034 2 16 00015

00035 4 35 00002

00036 0 43 40265

00037 0 00 00000

00040 4 01 37767

00041 4 76 00007

00042 0 17 00026

00043 4 35 00005

00044 0 43 40244

00045 2 23 00010

00046 4 01 37736

REQUIRE SETTOT  
REQUIRE TREADY

RTTW N

SPBW N.4

SRDW N.4

TAPE NUMBER

PTBW N.4

00047	77770000	51	07777	ACT	77770000
00050	00000000	52	M9DEF	ACT	
00051	00000011	53	NINE	DEC	0
00052	00000000	54	PDCNT	ACT	
00053	00000000	55	WAPD	ACT	
00054	00000077	56	FRSTMS	ACT	77
00055	22426200	57	BACKER	ACI	1.8K50
	00023	58	7EPP	BBBL	23
	00025	59	BNES	BBBL	25
	00041	60	MSAVEX	BBBL	41
	00242	61	STSTL	BBBL	242
	00244	62	TRFDYL	BBBL	244
	00265	63	ERRLNK	BBBL	265
	00000	64		END	

<u>910/920</u>		1	FORT	ENFILE
		2	*	END FILE
00000	1 00 00000	3	PZE	0,1
		4	L226 0PD	22600000
		5	L242 0PD	24200000
		6	L243 0PD	24300000
		7	L244 0PD	24400000
00001	2 26 00000	8	L226	ENFILE
00002	2 42 40000	9	L242*	REQUIRE SETIOT
00003	2 43 40000	10	L243*	REQUIRE TSTWRT
00004	2 44 40000	11	L244*	REQUIRE TREADY
00005	0 06 00000	12	BLK	
	00000	13	ORG	0
00000	0 00 00000	14	ENFILE HLT	
00001	0 43 40242	15	BRM*	STIOTL
00002	0 43 40243	16	A3 BRM*	TSTWRL
00003	2 23 00007	17	EXU	7,2
00004	4 71 00023	18	LDX	DCM150,4
00005	0 12 00000	19	A1 MIW	0
00006	4 41 37777	20	BRX	A1,4
00007	0 02 14000	21	T0PW	
00010	0 43 40244	22	BRM*	TREDYL
00011	2 23 00000	23	EXU	0,2
00012	4 12 00016	24	MIW	E0FCAR,4
00013	0 02 14000	25	T0PW	
00014	0 43 40244	26	BRM*	TREDYL
00015	0 40 20010	27	BETW	
00016	4 01 00003	28	BRU	A2,4
00017	0 71 00041	29	LDX	MSAVEX
00020	4 51 37760	30	BRR	ENFILE,4
00021	4 76 00010	31	A2 LDA	WE0FER,4
00022	2 16 00015	32	MRG	13,2
00023	4 35 00002	33	STA	A4,4
00024	0 43 40265	34	BRM*	ERRLNK
00025	0 00 00000	35	A4 HLT	
00026	4 01 37754	36	BRU	A3,4
00027	77777552	37	DCM150 DEC	-150
00030	17000000	38	E0FCAR 0CT	17000000
00031	66252600	39	WE0FER BCI	1,WEFO

00041	40	MSAVEX	BOOL	41
00242	41	STIOTL	BOOL	242
00243	42	TSTWRL	BOOL	243
00244	43	TREDYL	BOOL	244
00265	44	ERRLNK	BOOL	265
00000	45		END	

3-72B

DCM150	00027	ENFILE	00000	E0FCAR	00030	ERRLNK	00265
MSAVEX	00041	ST10TL	00242	TREDYL	00244	TSTWRL	00243
WE0FER	00031	L226	00001	L242	00001	L243	00001
L244	00001	A1	00005	A2	00021	A3	00002
A4	00025						



910/920

FIX - 231

3 words

			1		FBPT		FIX
00000	1	00	00000	2	PZE	0.1	
00001	2	3100000	3		PCT	23100000	
00002	0	06	00000	4	BLK		
			00000	5	PRG	0	
00000	0	00	00000	6	FIX	HLT	
00001	0	43	40264	7	RRM*	FIXLNK	
00002	4	51	37774	8	RRR	FIX.4	
			00264	9	FIXLNK	RRBL	264
			00000	10	END		

910/920

FLB AT - 232

3 words

			1		FRPT		FLB AT
00000	1	00	00000	2	R7E	0.1	
00001	2	32	00000	3	RCT	23200000	
00002	0	06	00000	4	PLK		
			00000	5	RRG	0	
00000	0	00	00000	6	FLB AT	HLT	
00001	0	43	40267	7	RRM*	FLTINK	
00002	4	51	37776	8	RRR	FLB AT.4	
			00267	9	FLTINK	RRSL	267
			00000	10	END		





				FORT	
00000	1 00 00000	2		PZE	0.1
00001	23500000	3		0CT	23500000
00002	23640000	4		0CI	23640000
00003	0 06 00000	5		BLK	
	00000	6		0RG	0
00000	0 36 00042	7	INITFS	STB	MRTNAD
00001	0 35 00040	8		STA	UNIT
00002	0 37 00041	9		STX	MSAVEX
00003	0 76 00277	10		LDA	COUNTL
00004	0 35 00273	11		STA	COUNTV
00005	0 61 00042	12		MIN	MRTNAD
00006	0 75 00261	13		LDB	DEC79
00007	0 76 00254	14		LDA	LNGBLK
00010	0 72 00040	15		SKA	UNIT
00011	0 75 00262	16		LDB	DEC131
00012	0 36 00043	17		STB	RSCNXL
00013	0 71 40042	18		LDX*	MRTNAD
00014	2 76 00000	19		LDA	0.2
00015	0 72 00263	20		SKA	BRUM0P
00016	4 01 00003	21		BRU	A1.4
00017	0 43 40265	22		BRM*	ERRLNK
00020	26465144	23		BCI	1.F0RM
00021	0 76 40042	24	A1	LDA*	MRTNAD
00022	0 14 00027	25		ETR	ADRMSK
00023	0 55 00274	26		ADD	0NETAG
00024	0 35 00044	27		STA	FTAGST
00025	0 02 20004	28		DIR	
00026	0 53 00040	29		SKN	UNIT
00027	0 43 40264	30		BRM*	LININ0
00030	0 46 30003	31		CLR	
00031	0 35 00053	32		STA	N0ARGF
00032	0 35 00045	33		STA	COUNT
00033	0 35 00046	34		STA	FSCANX
00034	0 35 00047	35		STA	RSCANX
00035	0 35 00050	36		STA	PEXPSV
00036	0 35 00051	37		STA	PMINFL
00037	0 76 00026	38		LDA	0NES
00040	0 35 00052	39		STA	PARNCT

INITFS

910/920

00041	0	35	00054	40	STA	PLSELS
00042	0	71	00041	41	LDX	MSAVEX
00043	0	51	00042	42	BRR	MRTNAD
			00042	43	MRTNAD B00L	42
			00040	44	UNIT B00L	40
			00041	45	MSAVEX B00L	41
			00277	46	C0UNT1 B00L	277
			00273	47	C0UNTV B00L	273
			00261	48	DEC79 B00L	261
			00254	49	LNGBLK B00L	254
			00262	50	DEC131 B00L	262
			00263	51	BRUM0P B00L	263
			00043	52	RSCNXL B00L	43
			00265	53	ERRLNK B00L	265
			00027	54	ADRMSK B00L	27
			00044	55	FTAGST B00L	44
			00264	56	LININ0 B00L	264
			00045	57	C0UNT B00L	45
			00046	58	FSCANX B00L	46
			00047	59	RSCANX B00L	47
			00050	60	PEXPSV B00L	50
			00051	61	PMINFL B00L	51
			00026	62	0NES B00L	26
			00052	63	PARNCT B00L	52
			00053	64	N0ARGF B00L	53
			00054	65	PLSELS B00L	54
			00274	66	0NETAG B00L	274
			00000	67	END	



00046	4	51	37732	55		BRR	BINBCD.4
00047	C	00	00000	56	CONV3W	HLT	
00050	C	46	00003	57		CLR	
00051	C	35	00341	58		STA	CHARIS
00052	1	25	00344	59		LDP	INWRD1
00053	C	46	00122	60		STE	
00054	1	07	00347	61		STD	CENRL1
00055	C	16	00347	62		MRG	CENRL1
00056	C	72	00026	63		SKA	ONES
00057	4	01	00002	64		BRU	B4.4
00050	4	51	37767	65		BRR	CONV3W.4
00061	C	53	00350	66	B4	SKN	CENRL2
00062	4	01	00012	67		BRU	B3.4
00063	C	46	00003	68		CLR	
00064	1	53	00347	69		DPS	CENRL1
00065	C	50	00025	70		SKE	SIGN
00066	4	01	00005	71		BRU	B5.4
00067	C	52	00026	72		SKB	ONES
00070	4	01	00003	73		BRU	B5.4
00071	C	76	00077	74		LDA	HALF
00072	2	77	00001	75		EAX	1.2
00073	1	07	00347	76	B5	STD	CENRL1
00074	4	43	00066	77	B3	BRM	TESTXP.4
00075	4	01	00003	78		BRU	B1.4
00076	4	01	00004	79		BRU	B2.4
00077	4	51	37750	80		BRR	CONV3W.4
00100	4	43	00216	81	B1	BRM	TIME10.4
00101	4	01	37773	82		BRU	B3.4
00102	4	43	00204	83	B2	BRM	XTENTH.4
00103	4	01	37771	84		BRU	B3.4
00104	C	00	00000	85	RNDOUT	HLT	
00105	1	25	00347	86		LDP	CENRL1
00106	C	66	00001	87		RSH	1
00107	1	07	00010	88		STD	CENRL3
00110	C	72	00026	89		SKA	ONES
00111	4	01	00002	90		BRU	C9.4
00112	4	51	37772	91		BRR	RNDOUT.4
00113	2	77	00001	92	C9	EAX	1.2
00114	4	37	00213	93		STX	B2BSVX.4
00115	C	76	00341	94		LDA	CHARIS
00116	4	35	00212	95		STA	SVCHR9.4
00117	C	55	00067	96		ADD	PEXP
00120	C	55	00024	97		ADD	ONE
00121	C	53	00066	98		SKN	DECPNT
00122	C	55	00066	99		ADD	DECPNT
00123	4	35	00206	100		STA	DOUTM1.4
00124	4	73	00207	101		SKG	DEC99.4
00125	4	01	00003	102		BRU	C8.4
00126	C	43	40265	103		BRM*	ERRLNK
00127	31456444			104		BCI	1,INUM
00130	5	25	00204	105	C8	LDP	FIVEDB.4
00131	C	71	00351	106		LDX	THREE
00132	1	07	00347	107		STD	CENRL1
00133	4	01	00002	108		BRU	C6.4

00134	4	43	00152	109	C7	BRM	XTENTH.4
00135	4	60	00174	110	C6	SKP	DOUTM1.4
00136	4	01	37776	111		BRU	C7.4
00137	C	46	00200	112		CXA	
00140	C	46	01000	113		CNA	
00141	4	55	00166	114		ADD	B2BSVX.4
00142	4	73	00170	115		SKG	D48.4
00143	4	01	00002	116		BRU	**2.4
00144	4	75	00166	117		LDA	D48.4
00145	C	46	00400	118		CAX	
00146	1	25	00347	119		LDP	CENRL1
00147	2	66	00000	120		RSH	0.2
00150	1	64	00010	121		DPA	CENRL3
00151	4	71	00156	122		LDX	B2BSVX.4
00152	C	67	10001	123		NOD	1
00153	1	07	00347	124		STD	CENRL1
00154	4	76	00154	125		LDA	SVCHRS.4
00155	C	35	00341	126		STA	CHARIS
00156	4	43	00004	127		BRM	TESTXP.4
00167	C	20	00000	128		NOP	
00160	4	43	00126	129		BRM	XTENTH.4
00161	4	51	37723	130		BRR	RNDOUT.4
00162	C	00	00000	131	TESTXP	HLT	
00163	C	46	00200	132		CXA	
00164	C	14	00027	133		ETR	ADRMSK
00165	C	72	00026	134		SKA	ONES
00166	4	72	00150	135		SKA	ADRSGN.4
00167	4	51	37773	136		BRR	TESTXP.4
00170	C	50	00251	137		SKE	FOUR
00171	4	01	00005	138		BRU	D1.4
00172	4	75	00145	139		LDB	S2AND3.4
00173	C	52	00350	140		SKB	CENRL2
00174	4	01	00004	141		BRU	D3.4
00175	4	01	00002	142		BRU	D2.4
00176	C	73	00251	143	D1	SKG	FOUR
00177	4	61	37763	144	D2	MIN	TESTXP.4
00200	4	61	37762	145	D3	MIN	TESTXP.4
00201	4	51	37761	146		BRR	TESTXP.4
00202	C	00	00000	147	PUTOTD	HLT	
00203	C	46	00040	148		CXB	
00204	4	52	00132	149		SKB	ADRSGN.4
00205	4	01	00002	150		BRU	E3.4
00206	4	01	00004	151		BRU	E1.4
00207	C	46	00003	152	E3	CLR	
00210	C	43	40275	153		BRM*	STIFOK
00211	4	01	00015	154		BRU	E2.4
00212	C	46	00003	155	E1	CLR	
00213	C	75	00350	156		LDB	CENRL2
00214	2	67	00001	157		LSH	1,2
00215	C	75	00023	158		LDB	ZERO
00216	C	66	00006	159		RSH	6
00217	C	46	00014	160		XAB	
00220	C	43	40275	161		BRM*	STIFOK
00221	1	25	00347	162		LDP	CENRL1

CORRECT SHIFT FLUKE

00222	2	67	00000	163		LSH	0.2
00223	0	14	00354	164		ETR	NOTSGN
00224	1	07	00347	165		STD	CENRL1
00225	0	71	00023	166		LDX	ZERO
00226	4	43	00070	167	E2	BRM	TIME10.4
00227	4	51	37753	168		BRR	PUTOTD.4
00230	0	00	00000	169	FLCMAK	HLT	
00231	0	76	00347	170		LDA	CENRL1
00232	0	16	00350	171		MRG	CENRL2
00233	0	72	00026	172		SKA	ONES
00234	4	01	00002	173		BRU	F4.4
00235	4	51	37773	174		BRR	FLCMAK.4
00236	1	25	00347	175	F4	LDP	CENRL1
00237	0	77	00057	176		EAX	OCT57
00240	0	67	10057	177		NOD	OCT57
00241	1	07	00347	178		STD	CENRL1
00242	0	53	00341	179	F2	SKN	CHARIS
00243	4	01	00007	180		BRU	F1.4
00244	0	76	00341	181		LDA	CHARIS
00245	4	73	00073	182		SKG	DECM99.4
00246	4	01	00033	183		BRU	F6.4
00247	4	43	00037	184		BRM	XTENTH.4
00250	4	01	37772	185		BRU	F2.4
00251	4	43	00045	186	F3	BRM	TIME10.4
00252	0	76	00341	187	F1	LDA	CHARIS
00253	4	73	00060	188		SKG	DEC99.4
00254	4	01	00002	189		BRU	F7.4
00255	4	01	00024	190		BRU	F6.4
00256	0	72	00026	191	F7	SKA	ONES
00257	4	01	37772	192		BRU	F3.4
00250	1	25	00347	193		LDP	CENRL1
00251	0	73	00023	194		SKG	ZERO
00252	4	51	37746	195		BRR	FLCMAK.4
00253	0	53	00055	196		SKN	INWRDS
00254	4	01	00004	197		BRU	F5.4
00255	0	46	00003	198		CLR	
00256	0	75	00355	199		LDB	HILIMT
00257	1	53	00347	200		DPS	CENRL1
00270	0	67	10001	201	F5	NOD	1
00271	0	46	00140	202		LDE	
00272	1	07	00347	203		STD	CENRL1
00273	1	07	00347	204		STD	CENRL1
00274	0	46	00200	205		CXA	
00275	0	14	00027	206		ETR	ADRMSK
00276	4	73	00043	207		SKG	LOLIMT.4
00277	0	73	00355	208		SKG	HILIMT
00300	4	51	37730	209		BRR	FLCMAK.4
00301	0	43	40265	210	F6	BRM*	ERRLNK
00302	31	456	444	211		BCI	1.INUM
00303	0	46	00003	212		CLR	
00304	1	07	00347	213		STD	CENRL1
00305	4	51	37723	214		BRR	FLCMAK.4
00306	0	00	00000	215	XTENTH	HLT	
00307	5	25	00033	216		LDP	TENTH.4

COUNTERACT EXPONENT B

00310	0 43 40276	217	BRM*	DBLMUL
00311	0 61 30341	218	MIN	CHARIS
00312	0 67 10057	219	N&D	0CTS7
00313	1 07 30347	220	STD	CENRL1
00314	2 77 37775	221	EAX	0CTM3.2
00315	4 51 37771	222	BRR	XTENTH.4
00316	0 00 30000	223	TIME10	HLT
00317	5 26 30026	224	LDP	TENB4.4
00320	0 43 40276	225	BRM*	DBLMUL
00321	0 60 30341	226	SKR	CHARIS
00322	0 20 30000	227	N&P	
00323	0 67 10057	228	N&D	0CTS7
00324	1 07 30347	229	STD	CENRL1
00325	2 77 30004	230	EAX	4.2
00326	4 51 37770	231	BRR	TIME10.4
00327	0 00 30000	232	B28SVX	PZE
00330	0 00 30000	233	SVCHRS	PZE
00331	0 00 30000	234	00UTM1	PZE
00332	00000050	235	048	DEC 48
00333	00000143	236	DEC99	DEC 99
00334	00000000	237	FIVEDB	0CT 0
00335	24000000	238		0CT 24000000
00336	00020000	239	ADRSGN	0CT 20000
00337	14000000	240	S2AND3	0CT 14000000
00340	77777635	241	DECM99	DEC -99
00341	00037377	242	L0LIMT	0CT 37377
00342	31463160	243	TENTH	0CT 31463160
00343	31463146	244		0CT 31463146
00344	00000010	245	TENB4	0CT 00000010
00345	24000000	246		0CT 24000000
	00024	247	ONE	000L 24
	00067	248	PEXP	000L 67
	00341	249	CHARIS	000L 341
	00026	250	SIGN	000L 26
	00351	251	THREE	000L 351
	00066	252	DECPNT	000L 66
	00063	253	0UTFSZ	000L 63
	00342	254	WDTH	000L 342
	00343	255	4IFE0T	000L 343
	00047	256	R0CANX	000L 47
	00064	257	R0CNXL	000L 64
	00344	258	INWRD1	000L 344
	00345	259	INWRD2	000L 345
	00352	260	BLANK	000L 352
	00275	261	STIF0K	000L 275
	00353	262	PERIOD	000L 353
	00026	263	0NES	000L 26
	00346	264	ENDFFL	000L 346
	00347	265	CENRL1	000L 347
	00350	266	CENRL2	000L 350
	00023	267	ZER0	000L 23
	00077	268	HALF	000L 77
	00010	269	CENRL3	000L 10
	00011	270	CENRL4	000L 11



00265	271	ERRLNK	BOOL	265
00027	272	ADRMSK	BOOL	27
00251	273	FOUR	BOOL	251
00354	274	NOTSGM	BOOL	354
00057	275	OCT57	BOOL	57
00055	276	INWKDS	BOOL	55
00355	277	HILIMT	BOOL	355
00276	278	DBLMUL	BOOL	276
37775	279	OCTM3	BOOL	37775
00000	280		END	

4IFE8T	00343	ADRMSK	00027	ADRSGN	00336	B2BSVX	00327
BINBCD	00000	CENRL1	00347	CENRL2	00350	CENRL3	00010
CENRL4	00011	CHARIS	00341	CONV3W	00047	DRLMUL	00276
DECM99	00340	DECPNT	00066	DBUTM1	00331	ENDFFL	00346
ERRLNK	00265	FIVED6	00334	FLCMAK	00230	HILIMT	00355
INWRD1	00344	INWRD2	00345	INWRD5	00055	L6LIMT	00341
NBTSGN	00354	OUTFSZ	00063	PERI6D	00353	PUT6TD	00202
RND6UT	00104	R5CANX	00047	R5CNXL	00064	S2AND3	00337
STIF6K	00275	SVCHRS	00330	TESTXP	00162	TIME10	00316
XTENTH	00306	BLANK	00352	DEC99	00333	6CT57	00057
6CTM3	37775	TEN64	00344	TENTH	00342	THREE	00351
ADPR	00001	FOUR	00251	HALF	00077	L236	00001
L237	00001	L240	00001	LDPR	00001	6NES	00026
PEXP	00067	SDPR	00001	SIGN	00025	STDP	00001
W6TH	00342	ZERO	00023	D48	00332	6NE	00024
A1	00027	A2	00032	A3	00043	A4	00040
A5	00033	B1	00100	B2	00102	B3	00074
B4	00061	B5	00073	C6	00135	C7	00134
C6	00130	C9	00113	D1	00176	D2	00177
D3	00200	E1	00212	E2	00226	E3	00207
F1	00252	F2	00242	F3	00251	F4	00236
F5	00270	F6	00301	F7	00256		

920/910 S

			1	FORT	REW RTP	
			2	*	READ AND WRITE TAPE - BINARY	
00000	1 00	00000	3	PZE	0.1	
			4	L241	OPD	24100000
			5	L242	OPD	24200000
			6	L243	OPD	24300000
			7	L244	OPD	24400000
00001	2 41	00000	8	L241	REW RTP	
00002	2 42	40000	9	L242*		REQUIRE SETIOT
00003	2 43	40000	10	L243*		REQUIRE TSTWRP
00004	2 44	40000	11	L244*		REQUIRE TREADY
00005	0 06	00000	12	BLK		
		00000	13	ORG	0	
00000	0 36	00042	14	REW RTP	STB	MRINAD
00001	0 35	00040	15		STA	I0FLAG
00002	4 76	00022	16		LDA	RWENTR,4
00003	0 35	00273	17		STA	CNTLNK
00004	4 76	00304	18		LDA	STBA,4
00005	0 14	00027	19		ETR	ADRMSK
00006	4 35	00303	20		STA	BSTRWD,4
00007	4 35	00303	21		STA	WRDADR,4
00010	4 35	00303	22		STA	LSWADR,4
00011	4 55	00303	23		ADD	DEC129,4
00012	4 35	00303	24		STA	ENDBUF,4
00013	0 53	00040	25		SKN	I0FLAG
00014	4 01	00003	26		BRU	**3,4
00015	4 75	00301	27		LDB	FRSTBM,4
00016	4 43	00146	28		BRM	STBWRD,4
00017	0 76	00025	29		LDA	SIGN
00020	0 35	00054	30		STA	PLSELS
00021	0 53	00040	31		SKN	I0FLAG
00022	4 35	40267	32		STA*	BSTRWD,4
00023	4 01	00014	33		BRU	A2,4
00024	4 01	00001	34	RWENTR	BRU	STRT,4
00025	0 53	00040	35	STRT	SKN	I0FLAG
00026	4 01	00020	36		BRU	READ,4
00027	0 53	00054	37		SKN	PLSELS
00030	4 01	00011	38		BRU	A1,4

WRITE IF MINUS

00031	4	43	00133	39		BRM	STBWRD,4
00032	0	75	00345	40		LDB	INWRD2
00033	0	76	00053	41		LDA	EDBLE4
00034	0	73	00251	42		SKG	FOUR
00035	4	01	00002	43		BRU	A2,4
00036	4	43	00126	44		BRM	STBWRD,4
00037	0	71	00041	45	A2	LDX	MSAVEX
00040	0	51	00042	46		BRR	MRTNAD
00041	4	76	00256	47	A1	LDA	LSTBM,4
00042	4	16	40247	48		MRG*	BSTRWD,4
00043	4	35	40246	49		STA*	BSTRWD,4
00044	4	43	00135	50		BRM	OUTBLK,4
00045	4	01	37772	51		BRU	A2,4
00046	0	53	00054	52	READ	SKN	PLSELS
00047	4	01	00014	53		BRU	A3,4
00050	4	43	00016	54		BRM	LDBNWD,4
00051	4	43	00226	55		BRM	ERR,4
00052	0	36	40356	56		STB*	MARGAD
00053	0	76	00053	57		LDA	EDBLE4
00054	0	73	00251	58		SKG	FOUR
00055	4	01	37762	59		BRU	A2,4
00056	4	43	00010	60		BRM	LDBNWD,4
00057	4	43	00220	61		BRM	ERR,4
00060	0	61	00356	62		MIN	MARGAD
00061	0	36	40356	63		STB*	MARGAD
00062	4	01	37755	64		BRU	A2,4
00063	4	43	00003	65	A3	BRM	LDBNWD,4
00064	4	01	37753	66		BRU	A2,4
00065	4	01	37776	67		BRU	A3,4
00066	0	00	00000	68	LDBNWD	HLT	
00067	4	76	00224	69	A9	LDA	LSWADR,4
00070	4	73	00222	70		SKG	WRDADR,4
00071	4	01	00005	71		BRU	A4,4
00072	4	75	40220	72		LDB*	WRDADR,4
00073	4	61	00217	73		MIN	WRDADR,4
00074	4	61	37772	74		MIN	LDBNWD,4
00075	4	51	37771	75		BRR	LDBNWD,4
00076	4	75	00221	76	A4	LDB	LBMSK,4

00077	4	76	00220	77	LDA	LSTBM,4	
00100	4	70	40211	78	SKM*	BSTRWD,4	
00101	4	01	00002	79	BRU	A5,4	
00102	4	51	37764	80	BRR	LDBNWD,4	
00103	4	76	00215	81	A5 LDA	NINE,4	
00104	4	35	00215	82	STA	RDCNT,4	
00105	4	76	00204	83	LDA	BSTRWD,4	
00106	0	55	00024	84	ADD	ONE	
00107	4	35	00203	85	STA	WRDADR,4	
00110	0	43	40244	86	BRM*	TREDYL	
00111	2	23	00004	87	EXU	4,2	ETTW
00112	4	01	00061	88	BRU	ETER,4	
00113	4	76	00176	89	A12 LDA	BSTRWD,4	
00114	4	35	00177	90	STA	LSWADR,4	
00115	0	43	40244	91	BRM*	TREDYL	
00116	2	23	00010	92	EXU	8,2	RTBW N,4
00117	4	32	40174	93	A8 WIM*	LSWADR,4	
00120	0	40	21000	94	BRTW		
00121	4	01	00015	95	BRU	A6,4	
00122	4	76	00171	96	LDA	LSWADR,4	
00123	4	50	00166	97	SKE	BSTRWD,4	
00124	4	01	00016	98	BRU	A7,4	
00125	4	76	40166	99	LDA*	LSWADR,4	
00126	4	50	00174	100	SKE	E0FWRD,4	
00127	4	01	00023	101	BRU	A11,4	
00130	4	76	00173	102	LDA	E0FERR,4	
00131	2	16	00015	103	MRG	13,2	
00132	4	35	00002	104	STA	A10,4	
00133	0	43	40265	105	BRM*	ERRLNK	
00134	0	00	00000	106	A10 HLT		
00135	4	01	00015	107	BRU	A11,4	
00136	4	61	00155	108	A6 MIN	LSWADR,4	
00137	4	76	00154	109	LDA	LSWADR,4	
00140	4	73	00155	110	SKG	ENDBUF,4	
00141	4	01	37756	111	BRU	A8,4	
00142	4	60	00151	112	A7 SKR	LSWADR,4	
00143	0	43	40244	113	BRM*	TREDYL	
00144	4	43	00112	114	BRM	CALCKS,4	
00145	4	50	40146	115	SKE*	LSWADR,4	

00146	4	01	00002	116	BRU	**2,4	
00147	4	01	37720	117	BRU	A9,4	CHECK SUM OK
00150	2	23	00012	118	EXU	10,2	
00151	4	32	00153	119	WIM	TEMP,4	
00152	4	60	00147	120	A11 SKR	RDCNT,4	
00153	0	20	00000	121	NOP		
00154	4	53	00145	122	SKN	RDCNT,4	
00155	4	01	37736	123	BRU	A12,4	
00156	4	76	00147	124	LDA	RDERR,4	
00157	2	16	00015	125	MRG	13,2	
00160	4	35	00002	126	STA	A13,4	
00161	0	43	40265	127	BRM*	ERRLNK	
00162	0	00	00000	128	A13 HLT		
00163	4	01	37704	129	BRU	A9,4	
00164	0	00	00000	130	STBWRD HLT		
00165	4	36	40126	131	STB*	LSWADR,4	
00166	4	61	00125	132	MIN	LSWADR,4	
00167	4	76	00126	133	LDA	ENDBUF,4	
00170	4	73	00123	134	SKG	LSWADR,4	
00171	4	43	00010	135	BRM	OUTBLK,4	
00172	4	51	37772	136	BRR	STBWRD,4	
00173	4	76	00133	137	ETER LDA	ENTER,4	
00174	2	16	00015	138	MRG	13,2	
00175	4	35	00002	139	STA	ET,4	
00176	0	43	40265	140	BRM*	ERRLNK	
00177	0	00	00000	141	ET HLT		
00200	4	01	37713	142	BRU	A12,4	
00201	0	00	00000	143	OUTBLK HLT		
00202	4	43	00054	144	BRM	CALCKS,4	
00203	4	35	40110	145	STA*	LSWADR,4	
00204	0	76	00251	146	LDA	FOUR	
00205	4	35	00114	147	STA	RDCNT,4	
00206	0	43	40243	148	BRM*	TSTWRL	
00207	0	43	40244	149	B8 BRM*	TREDYL	
00210	4	76	00101	150	LDA	BSTRWD,4	
00211	4	35	00101	151	STA	WRDADR,4	
00212	4	76	00101	152	LDA	LSWADR,4	
00213	2	23	00005	153	EXU	5,2	WTBW N,4

00214	4	12	40076	154	B1	MIW*	WRDADR,4	
00215	4	73	00075	155		SKG	WRDADR,4	
00216	4	01	00003	156		BRU	B2,4	
00217	4	61	00073	157		MIN	WRDADR,4	
00220	4	01	37774	158		BRU	B1,4	
00221	0	02	14000	159	B2	T0PW		
00222	0	43	40244	160		BRM*	TREDYL	
00223	0	40	20010	161		BETW		
00224	4	01	00007	162		BRU	B3,4	
00225	4	76	00064	163	B5	LDA	BSTRWD,4	
00226	4	35	00065	164		STA	LSWADR,4	
00227	0	46	30003	165		CLR		
00230	4	35	40063	166		STA*	LSWADR,4	
00231	4	61	00062	167		MIN	LSWADR,4	
00232	4	51	37747	168		BRR	0UTBLK,4	
00233	4	60	00066	169	B3	SKR	RDCNT,4	
00234	4	01	00007	170		BRU	B6,4	
00235	4	76	00072	171		LDA	WRERR,4	
00236	2	16	00015	172		MRG	13,2	
00237	4	35	00002	173		STA	B4,4	
00240	0	43	40265	174		BRM*	ERRLNK	
00241	0	00	00000	175	B4	HLT		
00242	4	01	37763	176		BRU	B5,4	
00243	2	23	00012	177	B6	EXU	10,2	SRBW N,4
00244	4	32	00060	178		WIM	TEMP,4	
00245	2	23	00003	179		EXU	3,2	BTTW
00246	0	43	40243	180		BRM*	TSTWRL	
00247	0	43	40244	181		BRM*	TREDYL	
00250	2	23	00007	182		EXU	7,2	ETW
00251	4	71	00057	183		LDX	DCM129,4	
00252	0	12	00000	184	B7	MIW	0	
00253	4	41	37777	185		BRX	B7,4	
00254	0	02	14000	186		T0PW		
00255	4	01	37732	187		BRU	B8,4	
00256	0	00	00000	188	CALCKS	HLT		
00257	4	76	00032	189		LDA	BSTRWD,4	
00260	4	35	00051	190		STA	CKWADR,4	
00261	0	46	30003	191		CLR		
00262	0	02	20001	192	C1	E0M	20001	

00263	4	55	40046	193		ADD*	CKWADR,4
00264	0	40	20001	194		SKS	20001
00265	0	55	00024	195		ADD	ONE
00266	0	46	20005	196		ABC	
00267	4	61	00042	197		MIN	CKWADR,4
00270	4	76	00023	198		LDA	LSWADR,4
00271	4	73	00040	199		SKG	CKWADR,4
00272	4	01	00003	200		BRU	C2,4
00273	0	46	10012	201		BAC	
00274	4	01	37766	202		BRU	C1,4
00275	0	46	10012	203	C2	BAC	
00276	4	51	37760	204		BRR	CALCKS,4
00277	0	00	00000	205	ERR	HLT	
00300	4	76	00032	206		LDA	LNGRER,4
00301	0	71	00002	207		LDX	IOTBLL
00302	2	16	00015	208		MRG	13,2
00303	4	35	00002	209		STA	E1,4
00304	0	43	40265	210		BRM*	ERRLNK
00305	0	00	00000	211	E1	HLT	
00306	0	46	30003	212		CLK	
00307	4	51	37770	213		BRR	ERR,4
00310	4	00	00023	214	STBA	HLT	STBAA,4
00311	0	00	00000	215	BSTRWD	PZE	
00312	0	00	00000	216	WRDADR	PZE	
00313	0	00	00000	217	LSWADR	PZE	
00314	00000	201		218	DEC129	DEC	129
00315	00000	000		219	ENDBUF	ECT	
00316	77000	000		220	FRSTBM	ECT	77000000
00317	00770	000		221	LSTBM	ECT	00770000
		00317		222	LBMSK	EQU	LSTEM
00320	00000	011		223	NINE	DEC	9
00321	00000	000		224	RDCNT	ECT	
00322	17170	000		225	E0FWRD	ECT	17170000
00323	25462	600		226	E0FERR	BCI	1,E0FO
00324	00000	000		227	TEMP	ECT	
00325	51246	300		228	RDERR	BCI	1,RDTO
00326	25635	100		229	ENTER	BCI	1,ETRO
00327	66516	300		230	WRERR	BCI	1,WRTO
00330	77777	577		231	DCM129	DEC	-129



00331	0000C000	232	CKWADR	0CT	
00332	43515100	233	LNGRER	BCI	1,LRRO
00333	00202	234	STBAA	BSS	130
	00002	235	I0TBLL	B00L	2
	00024	236	0NE	B00L	24
	00025	237	SIGN	B00L	25
	00027	238	ADRMSK	B00L	27
	00040	239	I0FLAG	B00L	40
	00041	240	MSAVEX	B00L	41
	00042	241	MRTNAD	B00L	42
	00053	242	EDBLE4	B00L	53
	00054	243	PLSELS	B00L	54
	00243	244	TSTWRL	B00L	243
	00244	245	TREDYL	B00L	244
	00251	246	F0UR	B00L	251
	00265	247	ERRLNK	B00L	265
	00273	248	CNTLNK	B00L	273
	00345	249	INWRD2	B00L	345
	00356	250	MARGAD	B00L	356
	00000	251		END	

ADRMSK	00027	BSTRWD	00311	CALCKS	00256	CKWADR	00331
CNTLNK	00273	DCM129	00330	DEC129	00314	EDBLE4	00053
ENDBUF	00315	E0FERR	00323	E0FWRD	00322	ERRLNK	00265
FRSTBM	00316	INWRD2	00345	I0FLAG	00040	I0TBLL	00002
LDBNWD	00066	LNGREK	00332	LSWADR	00313	MARGAD	00356
MRTNAD	00042	MSAVEX	00041	0UTBLK	00201	PLSELS	00054
REWRTP	00000	RWENTR	00024	STBWRD	00164	TREDYL	00244
TSTWRL	00243	WRDADR	00312	ENTER	00326	LBMSK	00317
LSTBM	00317	RDCNT	00321	RDERR	00325	STBAA	00333
WRERR	00327	ETER	00173	FOUR	00251	L241	00001
L242	00001	L243	00001	L244	00001	NINE	00320
READ	00046	SIGN	00025	STBA	00310	STRT	00025
TEMP	00324	A10	00134	A11	00152	A12	00113
A13	00162	ERR	00277	0NE	00024	A1	00041
A2	00037	A3	00063	A4	00076	A5	00103
A6	00136	A7	00142	A8	00117	A9	00067
B1	00214	B2	00221	B3	00233	B4	00241
B5	00225	B6	00243	B7	00252	B8	00207
C1	00262	C2	00275	E1	00305	ET	00177

910/920

p. 1 of 2

# SETIOT-242

57 words

SETIOT (242) 10-24-63

1000	1 00 00000	1	FRT	0.1
1001	2 42 00000	2	PZE	24200000
1002	0 06 00000	3	RPD	SETIOT
1003	0 00 00000	4	L242	
1004	0 00 00000	5	RLK	
1005	0 00 00000	6	APG	0
1006	0 00 00000	7	SETIOT	HLT
1007	0 37 00041	8	STX	MSAVEX
1008	4 73 00066	9	SKG	SEVFN.4
1009	0 73 00026	10	SKG	ANFS
1010	0 01 00057	11	APU	ERR.4
1011	0 75 00026	12	LDB	ANES
1012	4 70 00054	13	SKM	TUNIT.4
1013	4 01 00002	14	APU	DIFF.4
1014	4 01 00007	15	APU	EXIT.4
1015	4 35 00051	16	STA	TUNIT.4
1016	4 71 00055	17	LNX	MTAL37.4
1017	6 76 00027	18	LDA	INST.6
1018	4 16 00046	19	MPG	TUNIT.4
1019	6 35 00045	20	STA	IATL.5
1020	4 41 37775	21	PRX	AI.4
1021	4 71 00023	22	LNX	IATL.4
1022	0 37 00002	23	STX	IATL
1023	0 02 20004	24	DIR	
1024	4 51 37756	25	RRR	SETIOT.4
1025	0 0023	26	CANTAB	EQU *
1026	0 40 13610	27	TFTW	0
1027	0 40 16610	28	RTSW	0
1028	0 02 02050	29	WTDW	0.1
1029	0 40 10410	30	TFTW	0
1030	0 40 14010	31	FPTW	0
1031	0 40 12010	32	RTTW	0
1032	0 40 11010	33	ETTW	0
1033	0 02 03650	34	WTBW	0.4
1034	0 02 02650	35	WTDW	0.4
1035	0 02 03670	36	ETW	0.4
1036	0 02 03610	37	RTAW	0.4
1037	0 02 02610	38	PTDW	0.4
1038	0 02 07630	39	SPRW	0.4
1039	0 02 06630	40	SPDW	0.4
1040	0 02 14010	41	SEW	0
1041	0 0042	42	INST	EQU *
1042	4 00 00003	43	IATL	SEF.4
1043	0 40 13610	44	TFTW	0
1044	0 40 16610	45	RTSW	0
1045	0 02 02050	46	WTDW	0.1
1046	0 40 10410	47	TFTW	0
1047	0 40 14010	48	FPTW	0
1048	0 40 12010	49	RTTW	0
1049	0 40 11010	50	ETTW	0

DIFFERENT TAPE NUMBER  
SAME. DON'T BOTHER TO  
SET UP TABLE.

TABLE 9F CONSTANTS

-2
-1
0 ESF
1
2
3
4
5
6
7
8
9
10
11
12

TABLE 10 SE SET JP

-2
-1
0 ESF
1
2
3
4

p. 2 of 2  
SETIOT-042

00052	0 02 03650	51	WTBW	0.4	5
00053	0 02 02650	52	WTON	0.4	6
00054	0 02 03670	53	FTW	0.4	7
00055	0 02 03610	54	PTBW	0.4	8
00056	0 02 02610	55	PTON	0.4	9
00057	0 02 07630	56	SPBW	0.4	10
00058	0 02 06630	57	SPON	0.4	11
00061	0 02 14010	58	RFWW	0	12
00062	00062	59	F00	*	
00062	0 00 00000	60	IATBL		
00063	0 43 20265	61	TUNIT		
00064	63474546	62	FVP	ERRLNK	13 TAPE NUMBER
00065	4 14 00003	63	ACI	1.TPNA	
00066	4 01 37720	64	ETR	SEVEN.4	
00067	77777761	65	APU	A2.4	
00070	00000007	66	NFC	-15	
		66	NFC	7	
		67	ERRLNK	26E	
		68	IATALL	2	
		69	MSAVEY	41	
		70	9MFS	26	
		71	END		

910/920

			1	FORMT	TSTWRT (243) 10-24-63
			2	* TEST TO SEE IF OK TO WRITE MAG TAPE, WRITE LEADER	
00000	1 00 00000		3	PZF	0.1
			4	L243 OPD	24300000
			5	L244 OPD	24400000
00001	2 43 00000		6	L243	TSTWRT
00002	2 44 40000		7	L244*	REQUIRE TREADY
00003	0 06 00000		8	BLK	
			9	ORG	0
00000	0 00 00000		10	TSTWRT HLT	
00001	0 43 40244		11	A2 BRM*	TREDYL
00002	2 23 00002		12	EXU	2.2
00003	4 01 00034		13	BRU	FP.4
00004	2 23 00003		14	EXU	3.2
00005	4 01 00004		15	BRU	BT.4
00006	2 23 00004		16	EXU	4.2
00007	4 01 00032		17	BRU	ET.4
00010	4 51 37770		18	BRR	TSTWRT.4
00011	4 75 00041		19	BT LDB	DM7200.4
00012	4 76 00037		20	LDA	K7143
00013	4 35 00035		21	STA	DELAY
00014	4 61 00034		22	MIN	DELAY
00015	4 53 00033		23	SKN	DELAY
00016	4 01 00002		24	BRU	**2
00017	4 01 37775		25	BRU	**3
00020	2 23 00014		26	EXU	12.2
00021	2 23 00001		27	EXU	1.2
00022	4 01 00003		28	BRU	PHOTO.4
00023	0 43 40244		29	NO PHOT BRM*	TREDYL
00024	4 01 00004		30	BRU	ERASE.4
00025	4 75 00027		31	PHOTO LDB	DM150.4
00026	2 23 37777		32	EXU	-1.2
00027	4 75 00024		33	LDB	DM417.4
00030	4 36 00017		34	ERASE STP	X.4
00031	2 23 00007		35	EXU	7.2
00032	4 71 00015		36	LDB	X.4
00033	0 12 00023		37	MIW	ZERO
00034	4 41 37777		38	BRX	MIW.4
00035	0 02 14000		39	TBPW	

00036	4 01 37743	40		BRU	A2.4
00037	4 76 00017	41	FP	LDA	FPTERR.4
00040	4 01 00002	42		BRU	A5.4
00041	4 76 00014	43	ET	LDA	ETERR.4
00042	2 16 00015	44	A5	MRG	13.2
00043	4 35 00002	45		STA	A6.4
00044	0 43 40265	46		BRM*	ERRLNK
00045	0 00 00000	47	A6	HLT	
00046	4 01 37733	48		BRU	A2.4
00047	0 00 00000	49	X	HLT	
00050	0 00 00000	50	DELAY	FZE	
00051	77762031	51	K7143	DEC	-7143
00052	77761740	52	DM7200	DEC	-7200
00053	77777137	53	DM417	DEC	-417
00054	77777552	54	DM150	DEC	-150
00055	25636600	55	ETERR	BCI	1.ETW0
00056	26476300	56	FPTERR	BCI	1.FPT0
	00265	57	ERRLNK	BOOL	265
	00244	58	TREDYL	BOOL	244
	00023	59	ZERO	BOOL	23
	00000	60		END	

TAPE NUMBER

DM7200	00052	ERRLNK	00265	ETTER	00055	FPTEK	J0056
NBPHOT	00023	TREDYL	00244	TSTWRT	00000	DELAY	J0050
DM150	00054	DM417	00053	ERASE	00030	K7143	J0051
PHOTO	00025	L243	00001	L244	00001	ZERO	00023
MIW	00033	A2	00001	NS	00042	A6	00045
BT	00011	ET	00041	FP	00037	X	J0047





# **PART IV. RUN-TIME SYSTEM**



```

1      *      CORRECTIONS TO FORTRAN RUNTIME (G)
2      *
3      *      TO MAKE VERSION H
4      *
5      *      SEPT 1, 1964
6      *
00200  0 06 02720  7      PTAP  L2720
00201  0 06 00030  8      PTAP  L3C
00202  0 04 00104  9      PACH  A1
00203  0 04 00105  10     PACH  B1
11     *      A FEW POP LINKAGES
12     BORG  104
00104  0 01 01014  13     BRU   XSTPOP  104     FIX AND STORE
00105  0 01 01017  14     BRU   FSTPOP  105     FLOAT AND STORE
15     A1   EQU   *-2
16     B1   EQU   *-1
00106  0 04 00131  17     PACH  A2
00107  0 04 00132  18     PACH  B2
19     BORG  131
00131  0 01 00574  20     BRU   FLAPOP  131     FLOATING ADD
00132  0 01 01125  21     BRU   FTSPOP  132     FLOAT THEN SUBTRACT
22     A2   EQU   *-2
23     B2   EQU   *-1
00133  0 04 00135  24     PACH  A3
00134  0 04 00136  25     PACH  R3
26     BORG  135
00135  0 01 00571  27     BRU   FLSPOP  135     FLOATING SUBTRACT
00136  0 01 01115  28     BRU   FTMPOP  136     FLOAT THEN MULTIPLY
29     A3   EQU   *-2
30     B3   EQU   *-1
00137  0 04 00142  31     PACH  B4
00140  0 04 00142  32     PACH  B4
33     BORG  142
00142  0 01 01130  34     BRU   FTDPOP  142     FLOAT THEN DIVIDE
35     B4   EQU   *-1
36     *
00143  0 04 00423  37     PACH  D5A
00144  0 04 00424  38     PACH  B5
39     BORG  423

```

00423	0	35	00577	40	D5A	STA	FLAG		
00424	0	37	02700	41		STX	XREG		
			00424	42	B5	EQU	*-1		
00425	0	04	00571	43		PACH	FLSP0P		
00426	0	04	00576	44		PACH	B6		
			00571	45		BORG	571		
00571	0	35	00012	46	FLSP0P	STA	TEMPA		
00572	0	76	00026	47		LDA	ONES		
00573	0	01	00423	48		BRU	D5A		
00574	0	35	00012	49	FLAP0P	STA	TEMPA		
00575	0	46	00001	50		CLA			
00576	0	01	00423	51		BRU	D5A		
			00576	52	B6	EQU	*-1		
00577	0	04	01014	53		PACH	XSTP0P		
00600	0	04	01026	54		PACH	B7		
			01014	55		BORG	1014		
				56	* XST P0P (104) FIX AND STORE				
01014	0	43	01031	57	XSTP0P	BRM	FXBND A	FIX B AND A	
01015	0	35	40000	58		STA*	0		
01016	0	51	00000	59		BRR	0		
				60	* FST P0P (105) FLOAT AND STORE				
01017	0	43	01075	61	FSTP0P	BRM	FL0ATA	FL0AT A	
01020	0	01	00107	62		BRU	STDP0P	STORE DOUBLE P0P	
				63	* NEW PARTS OF FIX B AND A				
01021	0	46	00102	64	Q31	RCH	102	CLFAR EXPONENT	
01022	2	67	00000	65		LSH	0.2		
01023	0	01	01046	66		BRU	Q32		
01024	0	55	00024	67	Q32A	ADD	0NF	ADD 1 TO TRUNCATED	
01025	0	71	00061	68	Q33	LDX	FXBAXR	NEGATIVE INTEGER	
01026	0	51	01031	69		BRR	FXBND A	EXIT	
			01026	70	B7	EQU	*-1		
01027	0	04	01031	71		PACH	FXBND A		
01030	0	04	01051	72		PACH	R8		
			01031	73		BORG	1031		
				74	* PATCH TO FIX FIXED FIX				
				75	* FIX B AND A				
01031	0	00	00000	76	FXBND A	HLT			
01032	0	37	00061	77		STX	FXBAXR	SAVE X	
01033	0	52	02672	78		SKR	EMASK	SKIP IF -1 < EXP0N < 64	

01034	0	46	30003	79	CLR		OTHERWISE INTEGER = 0
01035	0	35	02714	80	STA	FIXTP2	RECORD SIGN
01036	0	74	02663	81	SKD	0CT27	COMPUTE SHIFT AND DIRECTION
01037	0	01	01021	82	BRU	Q31	EXPON > 22
01040	0	46	00102	83	RCH	102	EXPON < 23 SO CLEAR EXPON
01041	0	36	00005	84	STP	FIXTMP	SAVE FRACTION
01042	2	66	00000	85	RSH	0.2	
01043	0	46	00014	86	XAR		
01044	0	16	00005	87	MRG	FIXTMP	MERGE FRACTION
01045	0	46	00014	88	XAR		
01046	0	52	00026	89	Q32	SKR	ONES
01047	0	53	02714	90	SKN	FIXTP2	SKIP IF FRACTION = 0
01050	0	01	01025	91	BRU	Q33	CHECK SIGN
01051	0	01	01024	92	BRU	Q32A	DO NOT ADD ONE
			01051	93	B8	EQU	DO ADD ONE
			01051	93		*-1	
01052	0	04	01115	94	PACH	FTMP0P	
01053	0	04	01146	95	PACH	B9	
			01115	96	BORG	1115	
				97	* PATCH TO SPEED UP FTS AND FTD POPS 37 CYCLES		
				98	* FTM POP (136) FLOAT THEN MULTIPLY		
01115	0	36	00035	99	FTMP0P	STR	PART1
01116	0	35	00036	100	STA		PART2
01117	0	76	00000	101	LDA		0
01120	0	35	00063	102	STA		EXIT
01121	0	76	40000	103	LDA*		0
01122	0	43	01075	104	BRM	FL0ATA	FL0AT A
01123	1	41	00035	105	FLM		PART1
01124	0	51	00063	106	BRR		EXIT
				107	* FTS POP (132) FLOAT THEN SUBTRACT		
01125	0	43	01133	108	FTSP0P	BRM	FTS0RD
01126	1	35	00055	109	FLS		FLTEMP
01127	0	51	00063	110	BRR		EXIT
				111	* FTD POP (142) FLOAT THEN DIVIDE		
01130	0	43	01133	112	FTDP0P	BRM	FTS0RD
01131	1	45	00055	113	FLD		FLTEMP
01132	0	51	00063	114	BRR		EXIT
				115	* FTS OR FTD (COMMON PART)		
01133	0	00	00000	116	FTS0RD	HLT	
01134	0	36	00035	117	STR		PART1

01135	0	35	00036	118	STA	PART2	
01136	0	76	00000	119	LDA	0	
01137	0	35	00063	120	STA	EXIT	
01140	0	76	40000	121	LDA*	0	
01141	0	43	01075	122	BRM	FLDATA	
01142	0	35	00056	123	STA	FLTEMP+1	
01143	0	36	00055	124	STR	FLTEMP	
01144	0	76	00036	125	LDA	PART2	
01145	0	75	00035	126	LDR	PART1	
01146	0	51	01133	127	BRR	FTSORD	
			01146	128	EQU	*-1	
				129	*		
				130	FLD	OPD	14500000
				131	FLS	OPD	13500000
				132	FLM	OPD	14100000
		01075		133	FLDATA	BOOL	1075
		00107		134	STDPDP	BOOL	107
		00024		135	ONE	BOOL	24
		00061		136	FXBAXP	BOOL	61
		02714		137	FIXTP2	BOOL	2714
		02663		138	ACT27	BOOL	2663
		00005		139	FIXTMP	BOOL	5
		00035		140	PART1	BOOL	35
		00036		141	PART2	BOOL	36
		00063		142	EXIT	BOOL	63
		00055		143	FLTEMP	BOOL	55
		02672		144	EMASK	BOOL	2672
		00012		145	TEMPA	BOOL	12
		00026		146	ONES	BOOL	26
		00577		147	FLAG	BOOL	577
		02700		148	XREG	BOOL	2700
01147	0	05	00001	149	PNCH	1	PUNCH 1 TO 1
01150	0	05	00001	150	PNCH	1	
01151	0	05	00076	151	PNCH	L76	76 TO 157
01152	0	05	00157	152	PNCH	L157	
01153	0	05	00250	153	PNCH	L250	250 TO 277
01154	0	05	00277	154	PNCH	L277	
01155	0	05	00341	155	PNCH	L341	341 TO 2717
01156	0	05	02717	156	PNCH	L2717	

01157	0 07	00000	157		STOP	
01160	0 01	00001	158		RRU	1
		00030	159	L30	BOOL	30
		00076	160	L76	BOOL	76
		00157	161	L157	BOOL	157
		00250	162	L250	BOOL	250
		00277	163	L277	BOOL	277
		00341	164	L341	BOOL	341
		02717	165	L2717	BOOL	2717
		02720	166	L2720	BOOL	2720
			167	PACH	OPD	00400000
			168	PNCH	OPD	00500000
			169	PTAP	OPD	00600000
			170	STOP	OPD	00700000
		00000	171		END	

FIXTMP	00005	FIXTP2	02714	FLAP0P	00574	FL0ATA	01075
FLSP0P	00571	FLTEMP	00055	FSTP0P	01017	FTDP0P	01130
FTMP0P	01115	FTS0RD	01133	FTSP0P	01125	FXBAXF	00061
FXRND4	01031	STD0P0P	00107	XSTP0P	01014	EMASK	02672
L2717	02717	L2720	02720	0CT27	02663	PART1	00035
PART2	00036	TEMPA	00012	EXIT	00063	FLAG	00577
L157	00157	L250	00250	L277	00277	L341	00341
0NES	00026	PACH	01161	PNCH	01161	PTAP	01161
Q32A	01024	ST0P	01161	XREG	02700	05A	00423
FLD	01147	FLM	01147	FLS	01147	L30	00030
L76	00076	0NE	00024	Q31	01021	Q32	01046
Q33	01025	A1	00104	A2	00131	A3	00135
B1	00105	B2	00132	B3	00136	B4	00142
B5	00424	B6	00576	B7	01026	B8	01051
B9	01146						

			1	*					
			2	*					
			3	*					
			4	*					
			5	*					
			6	*					
			7	*					
		03000	8		L3000	BOOL	3000		
00200	C 06	03000	9			PTAP	L3000		
00201	C 06	00030	10			PTAP	L30		
			11						
			12						
			13						
00202	C 04	01031	13			PACH	FXBND A		
00203	C 04	01051	14			PACH	LXBND A		
		01031	15			BORG	1031		
01031	C 00	00000	16		FXBND A	HLT	0		
01032	C 37	00061	17			STX	FXBAXR		SAVE X
01033	C 52	02672	18			SKB	EMASK		SKIPS IF 0 LE EXP LE 63
01034	C 46	00003	19			CLR			OTHERWISE INTEGER=0
01035	C 35	02714	20			STA	FIXTP2		RECORD SIGN
01036	C 74	02663	21			SKD	OCT27		COMPUTE SHIFT AND DIRECTION
01037	C 01	01042	22			BRU	\$31		EXP GE 23
01040	2 66	00000	23			RSH	0.2		EXP LT 23
01041	C 01	01044	24			BRU	\$32		
01042	C 46	00102	25		\$31	RCH	102		CLEAR EXPONENT
01043	2 67	00000	26			LSH	0.2		
01044	C 52	02673	27		\$32	SKB	MLONES		SKIP IF FRACTIONAL PORTION=0
01045	C 53	02714	28			SKN	FIXTP2		ADD 1 TO TRUNCATED NEGATIVE INTEGER
01046	C 01	01050	29			BRU	\$33		
01047	C 55	00024	30			ADD	ONE		
01050	C 71	00061	31		\$33	LDX	FXBAXR		EXIT
01051	C 51	01031	32			BRR	FXBND A		
		01051	33		LXBND A	EQU	*-1		
			34		*	PATCH COMMA	PROBLEM IN RUNTIME		MARCH 4, 1964
		02376	35		\$97	BOOL	2376		
		02402	36		\$98	BOOL	2402		
		02407	37		\$99A	BOOL	2407		
		02715	38		\$97A	BOOL	2715		
01052	C 04	02377	39			PACH	\$97+1		



01053	C 04	02401	40	PACH	\$97+3	
		02377	41	BORG	\$97+1	
02377	C 53	02677	42	SKN	NOCOMA	NO COMMA FLAG
02400	C 01	02407	43	BRU	\$99A	
02401	C 01	02715	44	BRU	\$97A	
02402	C 04	02715	45	PACH	\$97A	
02403	C 04	02717	46	PACH	\$97A+2	
		02715	47	BORG	\$97A	
02715	C 50	00024	48	SKE	ONE	
02716	C 01	02402	49	BRU	\$98	
02717	C 01	02376	50	BRU	\$97	
02720	C 05	00001	51	PNCH	1	PUNCH 1 TO 1
02721	C 05	00001	52	PNCH	1	
02722	C 05	00076	53	PNCH	L76	76 TO 157
02723	C 05	00157	54	PNCH	L157	
02724	C 05	00250	55	PNCH	L250	250 TO 277
02725	C 05	00277	56	PNCH	L277	
02726	C 05	00341	57	PNCH	L341	341 TO 2717
02727	C 05	02717	58	PNCH	\$97A+2	
02730	C 07	00000	59	STOP		
02731	C 01	00001	60	BRU	1	
		02672	61	EMASK	BOOL	2672
		02662	62	EXB78	BOOL	2662
		02714	63	FIXTP2	BOOL	2714
		00005	64	FIXTMP	BOOL	5
		00061	65	FXBAXR	BOOL	61
		00076	66	L76	BOOL	76
		00157	67	L157	BOOL	157
		00250	68	L250	BOOL	250
		00277	69	L277	BOOL	277
		00341	70	L341	BOOL	341
		02673	71	MLONES	BOOL	2673
		02661	72	NEGBEX	BOOL	2661
		02677	73	NOCOMA	BOOL	2677
		02663	74	OCT27	BOOL	2663
		00024	75	ONE	BOOL	24
		00025	76	SIGN	BOOL	25
		02664	77	SMALNG	BOOL	2664
		00030	78	L30	BOOL	30

	79	PACH	OPD	00400000
	80	PNCH	OPD	00500000
	81	PTAP	OPD	00600000
	82	STOP	OPD	00700000
00000	83		END	

FIXTMP	00005	FIXTP2	02714	FXBAXR	00061	FXBNDA	01031
LXBNDA	01051	MLONES	02673	NEGBEX	02661	NOCOMA	02677
SMALNG	02664	EMASK	02672	EXB78	02662	L3000	03000
QCT27	02663	L157	00157	L250	00250	L277	00277
L341	00341	PACH	02732	PNCH	02732	PTAP	02732
\$97A	02715	\$99A	02407	SIGN	00025	STGP	02732
L30	00030	L76	00076	ONE	00024	\$31	01042
\$32	01044	\$33	01050	\$97	02376	\$93	02402

```

1 * SUBS PER TRAIN ID RUNTIME 1
2 * 2
3 * DECEMBER 9, 1963 3
4 * 4
5 * 5
6 * PUNCH OUT RUN-TIME FROM 1 TO 1.75 TO 157. 6
7 * AND FROM 250 TO FOLLOWING ADDRESS: 7
8 PUNCH2 EQU LAST 8
9 * 9
10 * 10
11 * 11
12 00001 00001 50RG 1 12
13 00001 0 01 00065 13 BRU SYSINI SYSTEM INITIALIZE 13
14 00076 00000001 00076 14 B5PG 75 14
15 00077 00000000 15 FRONE DEC 1 TAG BIT 15
16 * 16
17 * PROGRAMMED OPERATORS 17
18 * 18
19 00100 0 01 01212 19 BRU XSDP9P 100 FIXED SET UP DUMMY 19
20 00101 0 01 01214 20 BRU FSDP9P 101 FLOATING SET UP DUMMY 20
21 00102 0 01 00102 21 BRU * 102 (SKR - 910) 21
22 00103 0 01 00103 22 BRU * 103 (SKE - 910) 22
23 00104 0 01 01014 23 BRU XSTP9P 104 FIX AND STORPE 23
24 00105 0 01 01023 24 BRU FSTP9P 105 FLOAT AND STORE 24
25 00106 0 01 00104 25 BRU * 106 (XMA - 910) 25
26 00107 0 01 01373 26 BRU STDP9P 107 STORE DOUBLE PRECISION 26
27 00110 0 01 01151 27 BRU D9XP9P 110 D9 FIXED 27
28 00111 0 01 01167 28 BRU D9FP9P 111 D9 FLOATING 28
29 00112 0 01 01316 29 BRU AGXP9P 112 ASSIGNED GO TO FIXED 29
30 00113 0 01 01314 30 BRU AGFP9P 113 ASSIGNED GO TO FLOATING 30
31 00114 0 01 01237 31 BRU XFAP9P 114 FIXED FIRST ARGUMENT 31
32 00115 0 01 01234 32 BRU FFAP9P 115 FLOATING FIRST ARGUMENT 32
33 00116 0 01 01255 33 BRU XNAP9P 116 FIXED NEXT ARGUMENT 33
34 00117 0 01 01252 34 BRU FNAP9P 117 FLOATING NEXT ARGUMENT 34
35 00120 0 01 01332 35 BRU XI9P9P 120 FIXED INPUT/OUTPUT 35
36 00121 0 01 01334 36 BRU FI9P9P 121 FLOATING INPUT/OUTPUT 36
37 00122 0 01 01072 37 BRU LTFP9P 122 LOAD THEN FLOAT 37
38 00123 0 01 01000 38 BRU LTXP9P 123 LOAD THEN FIX 38
39 00124 0 01 00124 39 BRU * 124 (MUL - 910) 39
40 00125 0 01 01362 40 BRU LDPP9P 125 LOAD DOUBLE PRECISION 40
41 00126 0 01 01105 41 BRU FTAP9P 126 FLOAT THEN ADD 41
42 00127 0 01 00127 42 BRU * 127 (DIV - 910) 42
43 00130 0 01 00130 43 BRU * 130 (SKB - 910) 43
44 00131 0 01 00423 44 BRU FLAP9P 131 FLOATING ADD 44
45 00132 0 01 01115 45 BRU FTSP9P 132 FLOAT THEN SUBTRACT 45
46 00133 0 01 00133 46 BRU * 133 (ADM - 910) 46
47 00134 0 01 00134 47 BRU * 134 (CAX - 910) 47
48 00135 0 01 00571 48 BRU FLSP9P 135 FLOATING SUBTRACT 48
49 00136 0 01 01127 49 BRU FTMP9P 136 FLOAT THEN MULTIPLY 49
50 00137 0 01 00137 50 BRU * 137 (CXA - 910) 50

```

00140	0 01 01005	51	BRU	XMPPSP	140	FIXED MULTIPLY	51
00141	0 01 00600	52	BRU	FLMPPSP	141	FLOATING MULTIPLY	52
00142	0 01 01137	53	BRU	FTDPPSP	142	FLOAT THEN DIVIDE	53
00143	0 01 00143	54	BRU	*	143	(STE - 910)	54
00144	0 01 01011	55	BRU	XDVPSP	144	FIXED DIVIDE	55
00145	0 01 00647	56	BRU	FLDPPSP	145	FLOATING DIVIDE	56
00146	0 01 00146	57	BRU	*	146	(CNA - 910)	57
00147	0 01 00714	58	BRU	FLNPPSP	147	FLOATING NEGATE	58
00150	0 01 01305	59	BRU	ALXPPSP	150	ASSIGN LABEL TO FIXED	59
00151	0 01 01303	60	BRU	ALFPPSP	151	ASSIGN LABEL TO FLOATING	60
00152	0 01 00152	61	BRU	*	152	(LDE - 910)	61
00153	0 01 01416	62	BRU	DPSPSP	153	DOUBLE PRECISION SUBTRACT	62
00154	0 01 01406	63	BRU	DPAPSP	154	DOUBLE PRECISION ADD	63
00155	0 01 00747	64	BRU	DPMPSP	155	DOUBLE PRECISION MULTIPLY	64
00156	0 01 00156	65	BRU	*	156	(CBX - 910)	65
00157	0 01 00157	66	BRU	*	157	(CXB - 910)	66

		67	PAGE			67
	00250	68	RBRG	250		68
		69	*DEC 24			69
00250	00000030	70	DEC24 DEC	24		70
		71	*F8UR			71
00251	00000004	72	F8UR DEC	4		72
		73	*S 14 BIT			73
00252	00001000	74	S14BIT 8CT	1000		74
		75	*LIVE SKS M8P			75
00253	0 40 20000	76	SKSM8P SKS	20000	20000	76
		77	*FL8AT IND			77
00254	01000000	78	FLIND 8CT	1000000		78
		79	*END FIELD CHAR			79
	00255	80	ENDFLD EDU	*		80
		81	*CAR RETURN			81
00255	52000000	82	CARRET 8CT	52000000		82
		83	*CHAR 4 MASK			83
00256	00000077	84	CH4MSK 8CT	77		84
00257	77777754	85	DEC	-20		85
00260	00000052	86	ACT	00000052		86
		87	*DEC 79			87
00261	00000117	88	DEC79 DEC	79		88
00262	00000203	89	DEC	131		89
		90	*LIVE BRU M8P			90
00263	0 01 00000	91	BRUM8P BRU	0		91
00264	0 00 02220	92	HLT	LNIRR	LINE IN/OUT AND RETURN	92
		93	*ERR8R LINK			93
00265	0 00 00401	94	ERRLNK HLT	ERR8R	ERR8R	94
		95	*FIX SPR8G LINK			95
00266	0 00 01031	96	FIXL HLT	FX8NDA	FIX BANDA	96
		97	*FL8AT SPR8G LINK			97
00267	0 00 01075	98	FL8ATL HLT	FL8ATA	FL8AT A	98
		99	*UNDEFINED LABEL			99
00270	0 43 40265	100	UNDEF BRM*	ERRLNK	ERR8R LINK	100
00271	43212243	101	BCI	1.LABL		101
00272	0 01 00270	102	BRU	UNDEF	UNDEFINED LABEL	102
		103	*CBUNT TEST LINK			103
00273	0 00 00000	104	CNTTLN HLT			104
		105	*8NE AND TAG BIT			105
00274	20000001	106	TAG8NE 8CT	20000001		106
00275	0 00 02167	107	HLT	STIF8K	ST8 I8 CHAR IF 8K	107
00276	0 00 02452	108	HLT	DBLXMP	DOUBLE FIXED MULT	108
00277	0 01 01535	109	BRU	CNTTST	CBUNT TEST	109
		110	*I8 BUFFER			110
00300	00041	111	I8BUF BSS	33		111
		112	*END BUFFER			112
	00341	113	ENDBUF EDU	*		113
		114	*CHARACTERISTIC			114
00341	0 00 00000	115	CHARIS HLT			115
		116	*WDTH			116

00342	0 00 00000	117	WDTH HLT	117
		118	*4 IF E OUT	118
00343	0 00 00000	119	*IF E OUT HLT	119
		120	*INPUT WORD 1	120
00344	0 00 00000	121	INWRD1 HLT	121
		122	*INPUT WORD 2	122
00345	0 00 00000	123	INWRD2 HLT	123
		124	*END FIELD FLAG	124
00346	0 00 00000	125	ENDFFL HLT	125
		126	*CENTRAL 1	126
00347	0 00 00000	127	CENRL1 HLT	127
		128	*CENTRAL 2	128
00350	0 00 00000	129	CENRL2 HLT	129
		130	*THREE	130
00351	00000003	131	THREE DEC 3	131
		132	*BLANK	132
00352	12000000	133	BLANK OCT 12000000	133
		134	*PERIOD	134
00353	33000000	135	PERIOD BCI 1.000	135
		136	*LARGEST P9S MANTISSA	136
	00354	137	BIGPM EQU *	137
		138	*ALL BUT S	138
00354	37777777	139	ALBUTS OCT 37777777	139
		140	*CHARIS UPPER P9S LIMIT	140
	00365	141	OCT377 EQU *	141
		142	*P9S LIMIT	142
00355	00000377	143	OCT 00000377	143
		144	*M ARG ADR	144
00356	0 00 00000	145	MARGAD HLT	145
		146	*MINUS 5	146
00357	77777773	147	MINUSS OCT 77777773	147
00360	43462124	148	BCI 1. LRAD	148
00361	31452712	149	OCT 31452712	149
00362	23464447	150	BCI 1. COMP	150
00363	43256325	151	BCI 1. LETE	151
00364	12121252	152	OCT 12121252	152

			153							153
			154	*SYSTEM INITIALIZE						154
00365	0 46 00001		155	SYSINI CLA						155
00366	0 35 00075		156	STA	SENELW			SENSE LIGHT WORD		156
00367	0 35 00017		157	STA	8VFIND			8VERFLOW IND		157
00370	0 02 20004		158	DIR				20004		158
00371	0 02 02641		159	TYPW	1.4			E8M 2641		159
00372	0 71 00357		160	LDX	MINUS5			MINUS 5		160
00373	2 12 00365		161	\$1 MIW	SYSINI.2			SYSTEM INITIALIZE		161
00374	0 41 00373		162	BRX	\$1			\$1		162
00375	0 02 14000		163	T8PW				14000		163
00376	0 00 00000		164	HLT						164
00377	2 20 10000		165	N8P	4096.2			10000		165
00400	0 01 02730		166	BRU	MNPRST			MAIN PR8G START		166
			167	*ERR8R						167
00401	0 00 00000		168	ERR8R HLT						168
00402	0 35 00415		169	STA	\$2			\$1		169
00403	0 76 02661		170	LDA	NEGBEX			NEG EXP BIT		170
00404	0 72 40401		171	SKA*	ERR8R			ERR8R		171
00405	0 76 02615		172	LDA	N8PM8P			LIV N8P M8P		172
00406	0 62 00415		173	XMA	\$2			\$1		173
00407	0 61 00401		174	MIN	ERR8R			ERR8R		174
00410	0 02 02641		175	TYPW	1.4			E8M 2641		175
00411	0 12 00421		176	MIW	\$4			\$3		176
00412	0 12 40401		177	MIW*	ERR8R			ERR8R		177
00413	0 12 00422		178	MIW	\$5			\$4		178
00414	0 02 14000		179	T8PW				14000		179
00415	0 00 00000		180	\$2 HLT						180
00416	0 40 21000		181	\$3 BRTW				21000		181
00417	0 01 00416		182	BRU	\$3			\$2		182
00420	0 51 00401		183	BRR	ERR8R			ERR8R		183
00421	25515112		184	\$4 BCI	1.ERR					184
00422	12121252		185	\$5 8CT	12121252					185
00423	0 37 02700		186	FLAP8P STX	XREG					186
00424	0 35 00012		187	STA	TEMPA			A,B NON ZERO		187
00425	0 46 00200		188	CXA						188
00426	0 36 00021		189	STB	ZM			B		189
00427	0 46 00122		190	STE						190
00430	0 37 00010		191	STX	ZE			SIGN EXTENDED EXP(A,B)		191
00431	0 55 02700		192	ADD	XREG			DOUBLE X		192
00432	0 46 00401		193	AXC						193
00433	0 77 40000		194	EAX*	0			PR8CURE ARGUMENT ADDRESS		194
00434	2 50 00001		195	SKE	1.2					195
00435	0 01 00440		196	BRU	\$5B					196
00436	0 46 30003		197	CLR				M=ZERO		197
00437	0 01 00525		198	BRU	FLAD					198
00440	0 50 00012		199	\$5B SKE	TEMPA					199
00441	0 01 00444		200	BRU	\$5A					200
00442	0 46 30003		201	CLR				A,B=ZERO		201
00443	0 01 00461		202	BRU	FLAC					202



00444	0	46	00200	203	SSA	CXA		M NBN ZERO	203
00445	2	75	00000	204		LDB	0.2		204
00446	0	46	00122	205		STE		EXTEND SIGN OF EXP (M)	205
00447	0	46	00600	206		XXA			206
00450	0	54	00010	207		SUB	ZE	EXP (M)-EXP(A)	207
00451	0	73	00026	208		SKG	ONES		208
00452	0	01	00516	209		BRU	FLAGM	/A/ .GR. /M/	209
00453	0	72	02645	210		SKA	M779	/A/ .LE. /M/	210
00454	0	76	02644	211		LDA	39D	MAX SHIFT =39	211
00455	0	62	00012	212		XMA	TEMPA		212
00456	0	75	00021	213		LDB	ZM		213
00457	0	66	40012	214		RSH+	TEMPA	ALIGN FRACTIONS	214
00460	0	46	00014	215		XAB			215
00461	0	53	00577	216	FLAC	SKN	FLAG	FLAG NEGATIVE IFF FLS	216
00462	0	01	00471	217		BRU	SSC	FLA	217
00463	0	16	02665	218		MRG	9777	FLS	218
00464	2	54	00000	219		SUB	0.2		219
00465	0	17	02665	220		EOR	9777		220
00466	0	46	00014	221		XAB			221
00467	2	56	00001	222		SUC	1.2		222
00470	0	01	00475	223		BRU	FLAF		223
00471	0	46	00101	224	SSC	RCH	101	CLA(E)	224
00472	2	55	00000	225		ADD	0.2		225
00473	0	46	00014	226		XAB			226
00474	2	57	00001	227		ADC	1.2		227
00475	0	46	00122	228	FLAF	STE			228
00476	0	40	20001	229	FLABVT	AVT			229
00477	0	01	00543	230		BRU	9FSET	RIGHT NORMALIZE	230
00500	0	67	10046	231		N9D	39	LEFT NORMALIZE	231
00501	0	72	00026	232		SKA	ONES		232
00502	0	01	00504	233		BRU	FLANZ	IF FRACTION ZERO, THEN CLEAR EXPONENT	233
00503	2	46	00000	234		CLX			234
00504	0	46	00600	235	FLANZ	XXA			235
00505	0	73	02664	236		SKG	M257D	TEST FOR EXPONENT UNDERFLOW	236
00506	4	51	00506	237	FLABF	BRR	FLAPF.4		237
00507	0	46	00600	238	FLABK	XXA			238
00510	2	46	00140	239	FLAX	LDE	0.2	LDE.CLX	239
00511	0	37	00577	240		STX	FLAG	RESET FLA/FLS FLAG	240
00512	0	71	02700	241		LDX	XREG		241
00513	0	40	20001	242		AVT			242
00514	0	01	00555	243		BRU	9FL9	OVER/UNDERFLOW	243
00515	0	51	00000	244		BRR	0		244
00516	0	46	01000	245	FLAGM	CNA		FORCE EXP DIFF POSITIVE	245
00517	0	72	02645	246		SKA	M779	SKIP IF LESS THAN 64	246
00520	0	76	02644	247		LDA	39D		247
00521	2	71	00001	248		LDX	1.2		248
00522	0	46	00600	249		XXA			249
00523	2	66	00000	250		RSH	0.2	ALIGN FRACTIONS	250
00524	0	46	00102	251		RCH	102		251
00525	0	53	00577	252	FLAD	SKN	FLAG		252

00526	0	01	00536	253	BRU	SSD	FLA	253	
00527	0	62	00012	254	XMA	TEMPA	FLS	254	
00530	0	46	00014	255	XAB			255	
00531	0	62	00021	256	XMA	ZM		256	
00532	0	54	00021	257	SUB	ZM		257	
00533	0	46	00014	258	XAB			258	
00534	0	56	00012	259	SUC	TEMPA		259	
00535	0	01	00475	260	BRU	FLAF		260	
00536	0	46	00014	261	SSD	XAB	FLA	261	
00537	0	55	00021	262	ADD	ZM		262	
00540	0	46	00014	263	XAB			263	
00541	0	57	00012	264	ADC	TEMPA		264	
00542	0	01	00475	265	BRU	FLAF		265	
00543	0	66	00001	266	BFSET	RSH	RIGHT NORMALIZE	266	
00544	0	17	00025	267	EOR	MINUS		267	
00545	0	41	00510	268	BRX	FLAY		268	
00546	0	46	00600	269	XXA			269	
00547	0	73	00355	270	SKG	255D	CHECK FOR OVERFLOW	270	
00550	0	01	00507	271	BRU	FLARK		271	
00551	0	51	00506	272	RRR	FLARF		272	
00552	0	76	00012	273	DIVBF	LDA	TEMPA	273	
00553	2	17	00001	274	EOR		DETERMINE SIGN OF QUOTIENT	274	
00554	0	01	00562	275	BRU	SSD	OVERFLOW	275	
00555	0	46	00122	276	BFLO	STE		276	
00556	0	41	00562	277	BRX	SSD	OVERFLOW	277	
00557	0	46	30003	278	CLR		UNDERFLOW	278	
00560	0	71	02700	279	LDX	XREG		279	
00561	0	51	00000	280	BRR	0		280	
00562	0	71	00025	281	SSD	LDX	SET OVERFLOW INDICATOR	281	
00563	0	37	00017	282	STX	OFFLAG		282	
00564	0	17	00025	283	EOR	MINUS		283	
00565	0	66	00047	284	RSH	39		284	
00566	0	17	00025	285	EOR	MINUS		285	
00567	0	77	00377	286	EAX	255		286	
00570	0	01	00510	287	BRU	FLAY		287	
00571	0	35	00577	288	FLSPBP	STA	FLAG	288	
00572	0	72	00025	289		SKA	MINUS	289	
00573	0	01	00423	290	BRU	FLAPBP		290	
00574	0	17	00026	291	EOR	ONES		291	
00575	0	62	00577	292	XMA	FLAG		292	
00576	0	01	00423	293	BRU	FLAPBP		293	
00577	0	00	00000	294	FLAG	PZE	0	294	
00600	0	37	02700	295	FLMPBP	STX	XREG	295	
00601	0	35	00012	296		STA	TEMPA	296	
00602	0	46	00200	297		CXA		297	
00603	0	46	00122	298		STE	EXTEND EXP (A,B)	298	
00604	0	37	00010	299		STX	ZE	299	
00605	0	46	00022	300		BYC		300	
00606	0	67	20001	301		LCY	1	DOUBLE X	301
00607	0	46	00600	302		XXA		302	

00610	0	77	40000	303	FAX*	0			303
00611	0	66	24002	304	LGR	2		FORCE +	304
00612	2	64	00001	305	MUL	1.2			305
00613	0	35	00021	306	STA	ZM		AL * MH	306
00614	2	76	00000	307	LDA	0.2			307
00615	0	46	00040	308	CYB				308
00616	0	46	00501	309	AXC(E)				309
00617	0	46	00600	310	YXA			EXTEND EXP (M)	310
00620	0	63	00010	311	ADM	ZE		AE+ME = EXP (RESULT)	311
00621	0	46	00222	312	BXAC			CXA, BXC	312
00622	0	66	24002	313	LGR	2		FORCE +	313
00623	0	64	00012	314	MUL	TEMPA		AH * ML	314
00624	0	55	00021	315	ADD	ZM		AH * ML + AL * MH	315
00625	0	64	02630	316	MUL	TWR		SCALE	316
00626	0	36	00021	317	STB	ZM			317
00627	0	62	00012	318	XMA	TEMPA			318
00630	2	64	00001	319	MUL	1.2		AH * MH	319
00631	0	46	00014	320	XAB				320
00632	0	55	00021	321	ADD	ZM			321
00633	0	46	00014	322	XAE				322
00634	0	57	00012	323	ADC	TEMPA			323
00635	0	71	00010	324	LDX	ZE		EXP (RESULT)	324
00636	0	72	00354	325	SKA	MAXPOS			325
00637	0	01	00730	326	BRU	FLCAM		ALL RIGHT TO NORMALIZE	326
00640	0	52	02673	327	SKB	MLONES			327
00641	0	01	00730	328	BRU	FLCAM		NAT -1 OR 0	328
00642	0	50	00025	329	SKE	MINUS		SEPARATE -1 FROM 0	329
00643	0	01	00737	330	BRU	FLMY		0. EXIT	330
00644	0	66	20001	331	RCY	1		-1. RIGHT NORMALIZE	331
00645	0	41	00730	332	BRX	FLCAM			332
00646	0	01	00730	333	BRU	FLCAM			333
00647	0	37	02700	334	FLDPP	STX			334
00650	0	35	00012	335	STA	TEMPA			335
00651	0	46	00200	336	CXA				336
00652	0	46	00122	337	STE			EXTEND EXP (A.R)	337
00653	0	37	00010	338	STX	ZE			338
00654	0	46	00022	339	BXC				339
00655	0	67	20001	340	LCY	1		(AH+AL)/(MH+ML)=	340
00656	0	75	00012	341	LDB	TEMPA		((AH+AL)/MH)*(1-ML/MH)=	341
00657	0	46	00450	342	AXBA			(Q+R/MH)*(1-ML/MH)=	342
00660	0	77	40000	343	EAX*	0		Q+(R-Q*ML)/MH	343
00661	0	66	00002	344	RSH	2			344
00662	2	65	00001	345	DIV	1.2			345
00663	0	40	20001	346	AVT				346
00664	0	01	00552	347	BRU	DIVRF		OVERFLOW IFF DIVISOR =0	347
00665	0	35	00021	348	STA	ZM		SINGLE PRECISION QUARTIENT=Q	348
00666	0	46	10012	349	BAC				349
00667	0	66	00001	350	RSH	1			350
00670	0	35	00012	351	STA	TEMPA		REMAINDER = R	351
00671	2	75	00000	352	LDB	0.2			352

00672	0 46 00200	353	CXA				353
00673	0 46 00122	354	STE		EXTEND EXP (M)		354
00674	0 46 00600	355	XXA				355
00675	0 46 01000	356	CNA		EXP(RESULT)=EXP(A)+2-EXP(M)		356
00676	0 55 02630	357	ADD	TW8			357
00677	0 63 00010	358	ADM	ZE			358
00700	0 46 10012	359	BAC				359
00701	0 66 20002	360	RCY	2			360
00702	0 46 01000	361	CNA		-ML		361
00703	0 64 00021	362	MUL	ZM	0		362
00704	0 55 00012	363	ADD	TEMPA	R= Q*ML		363
00705	2 65 00001	364	DIV	1.2	(R-Q*ML)/MH		364
00706	0 64 02630	365	MUL	TW8	SCALE		365
00707	0 55 00021	366	ADD	ZM	Q+(R-Q*ML)/MH		366
00710	0 71 00010	367	LDX	ZE	EXP(RESULT)		367
00711	0 72 00026	368	SKA	8NES			368
00712	0 01 00730	369	BRU	FLCAM			369
00713	0 01 00737	370	BRU	FLMX			370
00714	0 37 02700	371	FLNBPB STX	XREG			371
00715	0 52 02673	372	SKB	ML8NES			372
00716	0 01 00741	373	BRU	FLNA	LESS SIG. HALF N9N ZER8		373
00717	0 46 01000	374	CNA		LESS SIG. HALF =0		374
00720	0 50 00023	375	SKB	ZERR			375
00721	0 72 02675	376	SKA	ODIS			376
00722	0 51 00000	377	BRR	0			377
00723	0 46 00122	378	STE		ARG = 60000000 OR 40000000		378
00724	0 50 00025	379	SKB	MINUS	PLACE SIGN BIT IN B		379
00725	0 01 00730	380	BRU	FLCAM			380
00726	0 66 20001	381	RCY	1	SIGN BIT TO A		381
00727	0 41 00731	382	BRX	\$5F			382
00730	0 67 10004	383	FLCAM N8D	4	NORMALIZE RESULT		383
00731	0 46 00600	384	\$5F XXA				384
00732	0 73 00355	385	SKG	255D	CHECK FOR EXPONENT		385
00733	0 73 02664	386	SKG	M257D	OVERFLOW/UNDERFLOW		386
00734	0 01 00506	387	BRU	FLA9F			387
00735	0 46 00600	388	XXA		RESULT WITHIN RANGE		388
00736	0 46 00140	389	FLNR LDE				389
00737	0 71 02700	390	FLMX LDX	XREG			390
00740	0 51 00000	391	BRR	0			391
00741	0 46 00122	392	FLNA STE				392
00742	0 46 00014	393	XAB				393
00743	0 46 01000	394	CNA				394
00744	0 46 00014	395	XAB				395
00745	0 17 00026	396	E8R	8NES			396
00746	0 01 00736	397	BRU	FLNR			397
		398	*DPM P8P				398
00747	0 37 02700	399	DPMP8P STX	XREG	XREG		399
00750	0 77 40000	400	EAX*	0	0		400
00751	0 35 00011	401	STA	XM	XM		401
00752	0 46 10012	402	BAC				402

00753	0 66 20002	403	RCY	2	2	403
00754	2 64 00001	404	MUL	1.2	1	404
00755	0 35 00021	405	STA	ZM	ZM	405
00756	2 76 00000	406	LDA	0.2	0	406
00757	0 66 24002	407	RCY	2050	4002	407
00760	0 64 00011	408	MUL	XM	XM	408
00761	0 55 00021	409	ADD	ZM	ZM	409
00762	0 64 02630	410	MUL	TW8	TW8	410
00763	0 36 00021	411	STB	ZM	ZM	411
00764	0 62 00011	412	XMA	XM	XM	412
00765	2 64 00001	413	MUL	1.2	1	413
00766	0 46 00014	414	XAB			414
00767	0 55 00021	415	ADD	ZM	ZM	415
00770	0 46 00014	416	XAB			416
00771	0 57 00011	417	ADC	XM	XM	417
00772	0 71 02700	418	LDX	XREG	XREG	418
00773	0 73 00025	419	SKG	MINUS	MINUS	419
00774	0 52 00026	420	\$28 SKB	ONES		420
00775	0 51 00000	421	BRR	0	0	421
00776	0 51 00777	422	BRR	\$29	\$2	422
00777	4 00 00774	423	\$29 HLT	\$28.4	\$1	423
		424	*LTX PBP			424
01000	0 76 00000	425	LTXPBP LDA	0		425
01001	0 35 00063	426	STA	EXIT		426
01002	1 25 40063	427	LDP*	EXIT		427
01003	0 43 01031	428	BRM	FXBND A	FIX BANDA	428
01004	0 51 00063	429	BRR	EXIT		429
		430	*XMP PBP			430
01005	0 64 40000	431	XMPBP MUL*	0	0	431
01006	0 66 00001	432	RSH	1	1	432
01007	0 46 00014	433	\$30 XAB			433
01010	0 51 00000	434	BRR	0	0	434
		435	*XDV PBP			435
01011	0 64 00024	436	XDVPBP MUL	RTSH23	RT SHIFTER 23	436
01012	0 65 40000	437	DIV*	0	0	437
01013	0 51 00000	438	BRR	0	0	438
		439	*XST PBP			439
01014	0 37 00062	440	XSTBP STX	REG		440
01015	0 71 00000	441	LDX	0	0	441
01016	0 37 00063	442	STX	EXIT		442
01017	0 43 01031	443	BRM	FXBND A	FIX BANDA	443
01020	0 71 00062	444	LDX	REG		444
01021	0 35 40063	445	STA*	EXIT		445
01022	0 51 00063	446	BPR	EXIT		446
		447	*FST PBP			447
01023	0 75 00000	448	FSTBP LDB	0		448
01024	0 36 00063	449	STB	EXIT		449
01025	0 46 00002	450	CLB			450
01026	0 43 01075	451	BRM	FLBATA	FLBAT A	451
01027	1 07 40063	452	STD*	EXIT		452

01030	0	51	00063	453	BRR	EXIT		453	
				454	*FIX BANDA			454	
01031	0	00	00000	455	FXBNDATA	HLT		455	
01032	0	37	00061	456	STX	FXBAXR	FIX BANDA XREG	456	
01033	0	35	02714	457	STA	FIXTP2	FIX TEMP 2	457	
01034	0	71	00000	458	LDX	0	0	458	
01035	0	72	00025	459	SKA	SIGN	SIGN	459	
01036	1	47	00000	460	FLN			460	
01037	0	37	00000	461	STX	0	0	461	
01040	0	52	02661	462	SKB	NEGREX	NEG EXP BIT	462	
01041	0	01	01057	463	BRU	\$31	\$1	463	
01042	0	52	02662	464	SKB	EXB7B	EXP BITS 7ANDB	464	
01043	0	01	01057	465	BRU	\$31	\$1	465	
01044	0	46	00122	466	STE			466	
01045	0	35	00005	467	STA	FIXTMP	FIX TEMP	467	
01046	0	46	00200	468	CXA			468	
01047	0	46	01000	469	CNA			469	
01050	0	55	02663	470	ADD	8CT27	8CT27	470	
01051	0	73	02664	471	SKG	SMALNG	SMALLEST NEGATIVE	471	
01052	0	01	01061	472	BRU	\$32	\$3	472	
01053	0	46	00400	473	CAX			473	
01054	0	76	00005	474	LDA	FIXTMP	FIX TEMP	474	
01055	2	66	00000	475	RSH	0.2	0	475	
01056	0	01	01065	476	BRU	\$33	\$4	476	
01057	0	46	30003	477	\$31	CLR		477	
01060	0	01	01065	478	BRU	\$33	\$4	478	
01061	0	46	01000	479	\$32	CNA		479	
01062	0	46	00400	480	CAX			480	
01063	0	76	00005	481	LDA	FIXTMP	FIX TEMP	481	
01064	2	67	00000	482	LSH	0.2	0	482	
01065	0	53	02714	483	\$33	SKN	FIXTP2	483	
01066	0	01	01070	484	BRU	\$34	\$5	484	
01067	0	46	01000	485	CNA			485	
01070	0	71	00061	486	\$34	LDX	FXBAXR	FIX BANDA XREG	486
01071	0	51	01031	487	BRR	FXBNDATA	FIX BANDA	487	
				488	*LTF P8P			488	
01072	0	76	40000	489	LTFP8P	LDA*	0	489	
01073	0	43	01075	490	BRM	FLBATA	FLBATA A	490	
01074	0	51	00000	491	BRR	0	0	491	
				492	*FLBATA A			492	
01075	0	00	00000	493	FLBATA	HLT		493	
01076	0	37	00061	494	STX	FLAXRG	FLBATA A XREG	494	
01077	0	46	00002	495	CLB			495	
01100	0	77	00027	496	EAX	23	27	496	
01101	0	67	10027	497	N8D	23	27	497	
01102	0	46	00140	498	LDE			498	
01103	0	71	00061	499	LDX	FLAXRG	FLBATA A XREG	499	
01104	0	51	01075	500	BRR	FLBATA	FLBATA A	500	
				501	*FTA P8P			501	
01105	0	36	00035	502	FTAP8P	STB	PART1	502	

01106	0 35 00036	503	STA	PART2		503
01107	0 76 00000	504	LDA	0	0	504
01110	0 35 00063	505	STA	EXIT		505
01111	0 76 40000	506	LDA*	0	0	506
01112	0 43 01075	507	BRM	FLBATA	FLBAT A	507
01113	1 31 00035	508	FLA	PART1		508
01114	0 51 00063	509	BRR	EXIT		509
		510	*FTS PBP			510
01115	0 36 00035	511	FTSPBP STB	PART1		511
01116	0 35 00036	512	STA	PART2		512
01117	0 76 00000	513	LDA	0	0	513
01120	0 35 00063	514	STA	EXIT		514
01121	0 76 40000	515	LDA*	0	0	515
01122	0 43 01075	516	BRM	FLBATA	FLBAT A	516
01123	1 07 00055	517	STD	FLTEMP		517
01124	1 25 00035	518	LDP	PART1		518
01125	1 35 00055	519	FLS	FLTEMP		519
01126	0 51 00063	520	BRR	EXIT		520
		521	*FTM PBP			521
01127	0 36 00035	522	FTMPBP STB	PART1		522
01130	0 35 00036	523	STA	PART2		523
01131	0 76 00000	524	LDA	0	0	524
01132	0 35 00063	525	STA	EXIT		525
01133	0 76 40000	526	LDA*	0	0	526
01134	0 43 01075	527	BRM	FLBATA	FLBAT A	527
01135	1 41 00035	528	FLM	PART1		528
01136	0 51 00063	529	BRR	EXIT		529
		530	*FTD PBP			530
01137	0 36 00035	531	FTDPBP STB	PART1		531
01140	0 35 00036	532	STA	PART2		532
01141	0 76 00000	533	LDA	0	0	533
01142	0 35 00063	534	STA	EXIT		534
01143	0 76 40000	535	LDA*	0	0	535
01144	0 43 01075	536	BRM	FLBATA	FLBAT A	536
01145	1 07 00055	537	STD	FLTEMP		537
01146	1 25 00035	538	LDP	PART1		538
01147	1 45 00055	539	FLD	FLTEMP		539
01150	0 51 00063	540	BRR	EXIT		540
		541	*D8X PBP			541
01151	0 75 00000	542	D8XPBP LDB	0	0	542
01152	0 36 00037	543	STB	D8XTEM	D8X TEMP	543
01153	0 61 00000	544	MIN	0	0	544
01154	0 63 40000	545	ADM*	0	0	545
01155	0 72 00025	546	SKA	SIGNBT	SIGN BIT	546
01156	0 01 01163	547	BRU	\$35	\$1	547
01157	0 76 40000	548	LDA*	0	0	548
01160	0 73 40037	549	SKG*	D8XTEM	D8X TEMP	549
01161	0 61 00000	550	MIN	0	0	550
01162	0 51 00000	551	BRR	0	0	551
01163	0 76 40037	552	\$35 LDA*	D8XTEM	D8X TEMP	552

01164	0 73 40000	553	SKG*	0	0	553
01165	0 61 00000	554	MIN	0	0	554
01166	0 51 00000	555	BRR	0	0	555
		556	*D0F P0P			556
01167	0 35 00037	557	D0FP0P STA	D0FTEM	D0F TEMP	557
01170	0 76 00000	558	LDA	0	0	558
01171	0 35 00004	559	STA	D0FTAD	D0F TEMP ADR	559
01172	0 55 00024	560	ADD	0NE	0NE	560
01173	0 35 00060	561	STA	D0FXIT	D0F EXIT	561
01174	0 76 00037	562	LDA	D0FTEM	D0F TEMP	562
01175	1 31 40060	563	FLA*	D0FXIT	D0F EXIT	563
01176	1 07 40060	564	STD*	D0FXIT	D0F EXIT	564
01177	0 53 00037	565	SKN	D0FTEM	D0F TEMP	565
01200	0 01 01206	566	BRU	\$36	\$1	566
01201	1 25 40004	567	LDP*	D0FTAD	D0F TEMP ADR	567
01202	1 35 40060	568	FLS*	D0FXIT	D0F EXIT	568
01203	0 73 00023	569	SKG	ZER0	ZER0	569
01204	0 61 00060	570	MIN	D0FXIT	D0F EXIT	570
01205	0 51 00060	571	BRR	D0FXIT	D0F EXIT	571
01206	1 35 40004	572	\$36 FLS*	D0FTAD	D0F TEMP ADR	572
01207	0 73 00023	573	SKG	ZER0	ZER0	573
01210	0 61 00060	574	MIN	D0FXIT	D0F EXIT	574
01211	0 51 00060	575	BRR	D0FXIT	D0F EXIT	575
		576	*XSD P0P			576
01212	0 46 00001	577	XSDP0P CLA			577
01213	0 01 01215	578	BRU	\$37	\$1	578
		579	*FSD P0P			579
01214	0 76 00254	580	FSDP0P LDA	FLIND	FL0AT IND	580
01215	0 75 00254	581	\$37 LDB	FLIND	FL0AT IND	581
01216	0 37 02700	582	STX	XREG	XREG	582
01217	0 77 40000	583	EAX*	0	0	583
01220	0 70 40016	584	SKM*	EADR2	EADR 2	584
01221	0 01 01231	585	BRU	\$39	\$2	585
01222	0 16 40016	586	\$38 MRG*	EADR2	EADR 2	586
01223	0 61 00016	587	MIN	EADR2	EADR 2	587
01224	2 35 00000	588	STA	0.2	0	588
01225	0 16 00077	589	MRG	TAGBIT	TAG BIT	589
01226	2 35 00001	590	STA	1.2	1	590
01227	0 71 02700	591	LDX	XREG	XREG	591
01230	0 51 00000	592	BRR	0	0	592
01231	0 43 40265	593	\$39 BRM*	ERRLNK	ERR0R LINK	593
01232	21512744	594	BCI	1.APGM		594
01233	0 01 01222	595	BRU	\$38	\$3	595
		596	*FFA P0P			596
01234	0 43 01273	597	FFAP0P BRM	DBLXRG	DOUBLE XREG	597
01235	0 76 00254	598	LDA	FLIND	FL0AT IND	598
01236	0 01 01241	599	BRU	\$40	\$1	599
		600	*XFA P0P			600
01237	0 46 00001	601	XFAP0P CLA			601
01240	0 37 02700	602	STX	XREG	XREG	602



01241	0 75 00071	603	\$40	LDB	E0ADR	E0 ADR	603
01242	0 36 00015	604		STB	EADR1	EADR 1	604
01243	0 75 00072	605		LDB	E0SIZE	E0 SIZE	605
01244	0 36 00034	606		STB	E0SIZT	E0 SIZE TEMP	606
01245	0 60 00034	607		SKR	E0SIZT	E0 SIZE TEMP	607
01246	0 01 01257	608		BRU	\$41	\$2	608
01247	0 43 40265	609		BRM*	ERRLNK	ERROR LINK	609
01250	62317125	610		BCI	1,SIZE		610
01251	0 01 01257	611		BRU	\$41	\$2	611
		612	*FNA PBP				612
01252	0 43 01273	613	FNAPBP	BRM	DBLYRG	DOUBLE XREG	613
01253	0 76 00254	614		LDA	FLIND	FLGAT IND	614
01254	0 01 01257	615		BRU	\$41	\$2	615
		616	*XNA PBP				616
01255	0 46 00001	617	XNAPBP	CLA			617
01256	0 37 02700	618		STX	XREG	XREG	618
01257	0 35 40015	619	\$41	STA*	EADR1	EADR 1	619
01260	0 77 40000	620		EAX*	0	0	620
01261	0 46 00200	621		CXA			621
01262	0 14 00027	622		ETR	ADRMSK	ADR MASK	622
01263	0 63 40015	623		ADM*	EADR1	EADR 1	623
01264	0 61 00015	624		MIN	EADR1	EADR 1	624
01265	0 71 02700	625		LDX	XREG	XREG	625
01266	0 60 00034	626		SKR	E0SIZT	E0 SIZE TEMP	626
01267	0 51 00000	627		BRR	0	0	627
01270	0 43 40265	628		BRM*	ERRLNK	ERROR LINK	628
01271	62317125	629		BCI	1,SIZE		629
01272	0 51 00000	630		BRR	0	0	630
		631	*DOUBLE XREG				631
01273	0 00 00000	632	DBLYRG	HLT			632
01274	0 37 02700	633		STX	XREG	XREG	633
01275	0 35 00012	634		STA	TEMPA	TEMPA	634
01276	0 46 00061	635		RCH	61	XXB*CLA	635
01277	0 67 20001	636		LCY	1		636
01300	0 46 00060	637		XXB			637
01301	0 76 00012	638		LDA	TEMPA	TEMPA	638
01302	0 51 01273	639		BRR	DBLYRG	DOUBLE XREG	639
		640	*ALF PBP				640
01303	0 43 01273	641	ALFPBP	BRM	DBLYRG	DOUBLE XREG	641
01304	0 01 01306	642		BRU	\$42	\$1	642
		643	*ALX PBP				643
01305	0 37 02700	644	ALXPBP	STX	XREG	XREG	644
01306	0 76 00000	645		LDA	0	0	645
01307	0 14 00027	646	\$42	ETR	ADRMSK	ADR MASK	646
01310	0 35 40000	647		STA*	0	0	647
01311	0 71 02700	648		LDX	XREG	XREG	648
01312	0 61 00000	649		MIN	0	0	649
01313	0 51 00000	650		BRR	0	0	650
		651	*AGF PBP				651
01314	0 43 01273	652	AGFPBP	BRM	DBLYRG	DOUBLE XREG	652

01315	0 01 01317	653	BRU	\$43	\$3	653
		654	*AGX PBP			654
01316	0 37 02700	655	AGXPBP STX	XREG	XREG	655
01317	0 71 40000	656	\$43 LDX*	0	0	656
01320	2 76 00000	657	LDA	0.2	0	657
01321	0 75 02666	658	LDB	PBPADR	PBP ADR MASK	658
01322	0 70 02667	659	SKM	APBPCD	ASN PBP CODE	659
01323	0 01 01327	660	BRU	\$45	\$1	660
01324	0 37 00064	661	\$44 STX	AGTTP1	AGT TEMP 1	661
01325	0 71 02700	662	LDX	XREG	XREG	662
01326	0 51 00064	663	BRR	AGTTP1	AGT TEMP 1	663
01327	0 43 40265	664	\$45 BRM*	ERRLNK	ERRR LINK	664
01330	21276346	665	BCI	1.AGTB		665
01331	0 01 01324	666	BRU	\$44	\$2	666
		667	*XIA PBP			667
01332	0 75 00251	668	XIBPBP LDB	F8UR	F8UR	668
01333	0 01 01335	669	BRU	\$45	\$1	669
		670	*FIB PBP			670
01334	0 75 02643	671	FIBPBP LDB	EIGHT	EIGHT	671
01335	0 36 00053	672	\$46 STB	BRR4	B IF DOUBLE ELSE 4	672
01336	0 37 00041	673	STX	M\$AVEX	M SAVE XR	673
01337	0 76 00000	674	LDA	0	0	674
01340	0 35 00042	675	STA	MRETAD	M RETURN ADR	675
01341	0 76 02630	676	LDA	TWR	TWR	676
01342	0 16 02713	677	MFG	N\$ARGF	N\$ ARG FLAG	677
01343	0 35 02713	678	STA	N\$ARGF	N\$ ARG FLAG	678
01344	0 37 00356	679	STX	MARGAD	M ARG ADR	679
01345	0 46 00200	680	CXA			680
01346	0 55 00356	681	ADD	MARGAD	M ARG ADR	681
01347	0 46 00014	682	YAB			682
01350	0 73 00251	683	SKG	F8UR	F8UR	683
01351	0 75 00356	684	LDB	MARGAD	M ARG ADR	684
01352	0 46 00020	685	CBX			685
01353	0 77 40000	686	EAX*	0	0	686
01354	0 46 00200	687	CXA			687
01355	0 14 00027	688	ETR	ADRMSK	ADR MASK	688
01356	0 35 00356	689	STA	MARGAD	M ARG ADR	689
01357	1 25 40356	690	LDP*	MARGAD	M ARG ADR	690
01360	1 07 00344	691	STD	INWRD1	INPUT WSRD 1	691
01361	0 01 00273	692	BRU	CNTTLN	COUNT TEST LINK	692
		693	*LDP PBP			693
01362	0 37 00014	694	LDPPBP STX	DPTMP1		694
01363	0 46 00200	695	CXA			695
01364	0 55 00014	696	ADD	DPTMP1		696
01365	0 46 00400	697	CAX			697
01366	0 77 40000	698	EAX*	0	0	698
01367	2 76 00001	699	LDA	1.2	1	699
01370	2 75 00000	700	LDB	0.2	0	700
01371	0 71 00014	701	LDX	DPTMP1		701
01372	0 51 00000	702	BRR	0	0	702

01373	0	37	00014	703	*STD PBP				703
01374	0	35	00022	704	STDPBP	STX	DPTMP1		704
01375	0	46	00200	705		STA	STDT2	STD TEMP 2	705
01376	0	55	00014	706		CXA			706
01377	0	46	00400	707		ADD	DPTMP1		707
01400	0	76	00022	708		CAX			708
01401	0	77	40000	709		LDA	STDT2	STD TEMP 2	709
01402	2	35	00001	710		EAX+	0	0	710
01403	2	36	00000	711		STA	1.2	1	711
01404	0	71	00014	712		STB	0.2	0	712
01405	0	51	00000	713		LDX	DPTMP1		713
				714		BRR	0	0	714
				715	*DPA PBP				715
01406	0	37	00014	716	DPAPBP	STX	DPTMP1		716
01407	0	77	40000	717		EAX+	0	0	717
01410	0	46	00014	718		XAB			718
01411	2	55	00000	719		ADD	0.2	0	719
01412	0	46	00014	720		XAB			720
01413	2	57	00001	721		ADC	1.2	1	721
01414	0	71	00014	722		LDX	DPTMP1		722
01415	0	51	00000	723		BRR	0	0	723
				724	*DPS PBP				724
01416	0	37	00014	725	DPSPBP	STX	DPTMP1		725
01417	0	77	40000	726		EAX+	0	0	726
01420	0	46	00014	727		XAB			727
01421	2	54	00000	728		SUB	0.2	0	728
01422	0	46	00014	729		XAB			729
01423	2	56	00001	730		SUC	1.2	1	730
01424	0	71	00014	731		LDX	DPTMP1		731
01425	0	51	00000	732		BRR	0	0	732

			733	PAGE			733		
			734	*NEXT CHAR			734		
01426	0	43	02442	735	NXCHAR BRM	INSCAN	INT SCAN	735	
01427	0	36	00045	736	STB	COUNT	COUNT	736	
01430	0	60	00045	737	SKR	COUNT	COUNT	737	
01431	0	20	00000	738	NBP			738	
01432	0	71	02640	739	LDX	M14	MINUS 14	739	
01433	0	76	00021	740	LDA	CHAR	CHAR	740	
01434	2	50	02615	741	\$47	SKR	CHTABL.2	CHAR TABLE	741
01435	0	41	01434	742	BRX	\$47	\$1		742
01436	0	37	02706	743	STX	CHXSAV	CHAR INDEX SAVE		743
01437	2	01	02574	744	BRU	BRUITB.2	BRUI TABLE		744
			745	*HAVE L PAREN					745
01440	0	76	00045	746	HAVELP LDA	COUNT	COUNT		746
01441	0	35	02707	747	STA	GROUPC	GROUP COUNT		747
01442	0	61	00052	748	MIN	PARENC	PAREN COUNT		748
01443	0	76	00052	749	LDA	PARENC	PAREN COUNT		749
01444	0	72	02630	750	SKA	TW0	TW0		750
01445	0	01	02574	751	BRU	BRUITB	BRUI TABLE		751
01446	0	35	02711	752	STA	PRENCS	PAREN COUNT SAVE		752
01447	0	76	00046	753	LDA	FSCANX	F SCAN X		753
01450	0	35	02710	754	STA	SCANXS	SCAN X SAVE		754
01451	0	01	01426	755	BRU	NXCHAR	NEXT CHAR		755
			756	*HAVE P					756
01452	0	36	00050	757	HAVEP STB	PEXPSV	P EXP SAVE		757
01453	0	53	00051	758	SKN	PMINFG	P MINUS FLAG		758
01454	0	01	01426	759	BRU	NXCHAR	NEXT CHAR		759
01455	0	46	00001	760	CLA				760
01456	0	35	00051	761	STA	PMINFG	P MINUS FLAG		761
01457	0	54	00050	762	SUB	PEXPSV	P EXP SAVE		762
01460	0	35	00050	763	STA	PEXPSV	P EXP SAVE		763
01461	0	01	01426	764	BRU	NXCHAR	NEXT CHAR		764
			765	*HAVE R PAREN					765
01462	0	60	02707	766	HAVERP SKR	GROUPC	GROUP COUNT		766
01463	0	01	01465	767	BRU	\$48	\$3		767
01464	0	01	01470	768	BRU	\$49	\$2		768
01465	0	76	02710	769	\$48	LDA	SCANXS	SCAN X SAVE	769
01466	0	35	00046	770	STA	FSCANX	F SCAN X		770
01467	0	01	01426	771	BRU	NXCHAR	NEXT CHAR		771
01470	0	60	00052	772	\$49	SKR	PARENC	PAREN COUNT	772
01471	0	01	01426	773	BRU	NXCHAR	NEXT CHAR		773
01472	0	76	02713	774	LDA	NRARGF	NR ARG FLAG		774
01473	0	50	02630	775	SKR	TW0	TW0		775
01474	0	01	01477	776	BRU	\$50	\$4		776
01475	0	43	40265	777	BRM*	ERRLNK	ERROR LINK		777
01476	25263121			778	BCI	I.EFIA			778
01477	0	53	00054	779	\$50	SKN	PIFEND	PLUS IF END LIST	779
01500	0	01	02477	780	BRU	LASTLN	LAST LINE BUT		780
01501	0	43	02220	781	BRM	LNIRR	LINE IN/BUT AND RETURN		781
01502	0	76	02711	782	LDA	PRENCS	PAREN COUNT SAVE		782

01503	0	35	00052	783	STA	PARFNC	PAREN COUNT	783
01504	0	01	01465	784	BRU	\$48	\$3	784
				785	*HAVE EFIA9G			785
01505	0	76	00024	786	HAVEEF LDA	ONE	ONE	786
01506	0	16	02713	787	MRG	NSARGF	NS ARG FLAG	787
01507	0	35	02713	788	STA	NSAPGF	NS ARG FLAG	788
01510	0	43	02442	789	BRM	INSCAN	INT SCAN	789
01511	0	36	00342	790	STB	WDTH	WDTH	790
01512	0	46	00001	791	CLA			791
01513	0	35	00066	792	STA	DECPNT	DEC PNT	792
01514	0	35	00067	793	STA	PEXP	P EXP	793
01515	0	35	00343	794	STA	4IFERT	4 IF E BUT	794
01516	0	35	00051	795	STA	PMINFG	P MINUS FLAG	795
01517	0	76	00021	796	LDA	CHAR	CHAR	796
01520	0	50	00353	797	SKE	PERIOD	PERIOD	797
01521	0	01	01526	798	BRU	\$51	\$4	798
01522	0	43	02442	799	BRM	INSCAN	INT SCAN	799
01523	0	36	00066	800	STB	DECPNT	DEC PNT	800
01524	0	76	00050	801	LDA	PEXPSV	P EXP SAVE	801
01525	0	35	00067	802	STA	PEXP	P EXP	802
01526	0	60	00046	803	\$51 SKR	FSCANX	F SCAN X	803
				804	*I0 TEST			804
01527	0	71	02706	805	I0TEST LDX	CHXSAV	CHAR INDEX SAVE	805
01530	0	53	00040	806	SKN	I0FLAG	I0 FLAG	806
01531	2	77	37770	807	EAX	-8.2	-10	807
01532	0	37	02706	808	STX	CHXSAV	CHAR INDEX SAVE	808
01533	0	37	02677	809	STX	NSCMA	NS COMMA FLAG	809
01534	2	01	02556	810	BRU	BRU2TB.2	BRU2 TABLE	810
				811	*CRUNT TEST			811
01535	0	76	00025	812	CNTTST LDA	SIGNBT	SIGN BIT	812
01536	0	35	02677	813	STA	NSCMA	NS COMMA FLAG	813
				814	*COUNT TEST N0	SET		814
01537	0	71	02706	815	CNTTNS LDX	CHXSAV	CHAR INDEX SAVE	815
01540	0	60	00045	816	SKR	CSUNT	CSUNT	816
01541	2	01	02556	817	BRU	BRU2TB.2	BRU2 TABLE	817
01542	0	01	01426	818	BRU	NXCHAR	NEXT CHAR	818
				819	*HAVE MINUS			819
01543	0	76	00025	820	HAVEMI LDA	SIGNBT	SIGN BIT	820
01544	0	35	00051	821	STA	PMINFG	P MINUS FLAG	821
01545	0	01	01426	822	BRU	NXCHAR	NEXT CHAR	822

			823	PAGE			823		
			824	*DLR IN			824		
01546	0	43	02053	825	DLRIN BRM	GNFCIB	GET NEXT F0R CHAR INCL BLNK	825	
01547	0	50	02613	826		SKE	DLR	826	
01550	0	01	01552	827		BRU	\$52	827	
01551	0	01	01426	828		BRU	NXCHAR	NEXT CHAR	828
01552	0	60	00046	829	\$52	SKR	FSCANX	F SCAN X	829
01553	0	43	02110	830		BRM	GNICIC	GET NEXT I0 CHAR INCL C0MMA	830
01554	0	50	02613	831		SKE	DLR	DLR	831
01555	0	01	01557	832		BRU	\$53	\$2	832
01556	0	76	00352	833		LDA	BLANK	BLANK	833
01557	0	43	02144	834	\$53	BRM	ST0FCH	ST0 F0R CHAR	834
01560	0	01	01546	835		BRU	DLRIN	DLR IN	835
				836	*DLR 0UT				836
01561	0	43	02053	837	DLR0UT BRM	GNFCIB	GET NEXT F0R CHAR INCL BLNK	837	
01562	0	50	02613	838		SKE	DLR	DLR	838
01563	0	01	01565	839		BRU	\$54	\$1	839
01564	0	01	01426	840		BRU	NXCHAR	NEXT CHAR	840
01565	0	43	02151	841	\$54	BRM	ST0ICH	ST0 I0 CHAR	841
01566	0	01	01561	842		BRU	DLR0UT	DLR 0UT	842
				843	*X IN				843
01567	0	43	02110	844	XIN BRM	GNICIC	GET NEXT I0 CHAR INCL C0MMA	844	
01570	0	01	01537	845		BRU	CNTTNS	C0UNT TEST N0 SET	845
				846	*X 0UT				846
01571	0	76	00352	847	X0UT LDA	BLANK	BLANK	847	
01572	0	43	02151	848		BRM	ST0ICH	ST0 I0 CHAR	848
01573	0	01	01537	849		BRU	CNTTNS	C0UNT TEST N0 SET	849
				850	*H IN				850
01574	0	43	02110	851	HIN BRM	GNICIC	GET NEXT I0 CHAR INCL C0MMA	851	
01575	0	43	02144	852		BRM	ST0FCH	ST0 F0R CHAR	852
01576	0	01	01537	853		BRU	CNTTNS	C0UNT TEST N0 SET	853
				854	*H 0UT				854
01577	0	43	02053	855	H0UT BRM	GNFCIB	GET NEXT F0R CHAR INCL BLNK	855	
01600	0	43	02151	856		BRM	ST0ICH	ST0 I0 CHAR	856
01601	0	01	01537	857		BRU	CNTTNS	C0UNT TEST N0 SET	857
				858	*A 0UT				858
01602	0	53	00054	859	A0UT SKN	PIFEND	PLUS IF END LIST	859	
01603	0	01	02477	860		BRU	LASTLN	LAST LINE 0UT	860
01604	0	76	00342	861		LDA	WDTH	WDTH	861
01605	0	73	00053	862		SKG	00R4	0 IF 00UBLE ELSE 4	862
01606	0	01	01610	863		BRU	\$55	\$1	863
01607	0	76	00053	864		LDA	00R4	0 IF 00UBLE ELSE 4	864
01610	0	35	00063	865	\$55	STA	0UTF0Z	0UTPUT FIELD SIZE	865
01611	0	76	00342	866		LDA	WDTH	WDTH	866
01612	0	55	00047	867		ADD	RSCANX	R SCAN X	867
01613	0	35	00064	868		STA	RSCANXF	R SCAN X LIMIT FIELD	868
01614	1	25	00344	869		LDP	INWRD1	INPUT W0RD 1	869
01615	0	67	20022	870		LCY	10	22	870
01616	1	07	00347	871		STD	CENPL1	CENTRAL 1	871
01617	1	25	00347	872	\$56	LDP	CENPL1	CENTRAL 1	872

01620	0	67	20006	873		LCY	6		6	873
01621	1	07	00347	874		STD	CENRL1		CENTRAL 1	874
01622	0	43	02167	875		BRM	STIFBK		STB IS CHAR IF BK	875
01623	0	53	00346	876		SKN	ENDFFL		END FIELD FLAG	876
01624	0	01	01617	877		BRU	\$56		\$2	877
01625	0	01	02503	878		BRU	RETMPR		RETURN TO MAIN PRPG	878
				879	*A IN					879
01626	0	53	00054	880	AIN	SKN	PIFEND		PLUS IF END LIST	880
01627	0	01	02503	881		BRU	RETMPR		RETURN TO MAIN PRPG	881
01630	0	76	00053	882		LDA	88R4		8 IF DOUBLE ELSE 4	882
01631	0	35	00004	883		STA	AINTP1		A IN TEMP 1	883
01632	0	73	00342	884		SKG	WDTH		WDTH	884
01633	0	01	01635	885		BRU	\$57		\$1	885
01634	0	76	00342	886		LDA	WDTH		WDTH	886
01635	0	35	00005	887	\$57	STA	AINTP2		A IN TEMP 2	887
01636	0	76	00342	888		LDA	WDTH		WDTH	888
01637	0	54	00053	889		SUB	88R4		8 IF DOUBLE ELSE 4	889
01640	0	72	00025	890		SKA	SIGNBT		SIGN BIT	890
01641	0	46	00001	891		CLA				891
01642	0	63	00047	892		ADM	RSCANX		R SCAN X	892
01643	0	01	01660	893		BRU	\$60		\$3	893
01644	0	76	00352	894	\$58	LDA	BLANK		BLANK	894
01645	0	60	00005	895		SKR	AINTP2		A IN TEMP 2	895
01646	0	43	02110	896		BRM	GNICIC		GET NEXT IS CHAR INCL COMMA	896
01647	0	50	00255	897		SKE	CARRET		CAR RETURN	897
01650	0	01	01652	898		BRU	\$59		\$2	898
01651	0	76	00352	899		LDA	BLANK		BLANK	899
01652	0	35	00006	900	\$59	STA	AINTP3		A IN TEMP 3	900
01653	1	25	00347	901		LDP	CENPL1		CENTRAL 1	901
01654	0	14	02632	902		ETR	CH234		CHAR234 MASK	902
01655	0	16	00006	903		MRG	AINTP3		A IN TEMP 3	903
01656	0	67	20006	904		LCY	6		6	904
01657	1	07	00347	905		STD	CENRL1		CENTRAL 1	905
01660	0	60	00004	906	\$60	SKR	AINTP1		A IN TEMP 1	906
01661	0	01	01644	907		BRU	\$58		\$4	907
01662	0	71	00356	908		LDX	MARGAD		M ARG ADR	908
01663	2	36	00000	909		STB	0.2		0	909
01664	0	46	00004	910		CAB				910
01665	0	76	02435	911		LDA	FIVE		FIVE	911
01666	0	73	00053	912		SKG	88R4		8 IF DOUBLE ELSE 4	912
01667	0	01	01671	913		BRU	\$61		\$5	913
01670	0	01	02503	914		BRU	RETMPR		RETURN TO MAIN PRPG	914
01671	0	46	00010	915	\$61	CBA				915
01672	2	62	00000	916		XMA	0.2		0	916
01673	2	35	00001	917		STA	1.2		1	917
01674	0	01	02503	918		BRU	RETMPR		RETURN TO MAIN PRPG	918
				919	*EFG IN					919
01675	0	53	00054	920	EFGIN	SKN	PIFEND		PLUS IF END LIST	920
01676	0	01	02503	921		PRU	RETMPR		RETURN TO MAIN PRPG	921
01677	0	43	02274	922		BRM	CNSCN		CNST SCAN	922

01700	0 43 40237	923		BRM*	FLCMKL	FL CONST MAKER LINK	923
01701	0 71 00356	924		LDX	MARGAD	M ARG ADR	924
01702	1 25 00347	925		LDP	CENPL1	CENTRAL 1	925
01703	1 07 40356	926		STD*	MARGAD	M ARG ADR	926
01704	0 01 02503	927		BRU	RETMPR	RETURN TO MAIN PRBG	927
		928		*I IN			928
01705	0 53 00054	929		IIN	SKN	PIFEND	PLUS IF END LIST
01706	0 01 02503	930			BRU	RETMPR	RETURN TO MAIN PRBG
01707	0 43 02274	931			BRM	C9N9CN	C9NST SCAN
01710	0 43 40237	932			BRM*	FLCMKL	FL CONST MAKER LINK
01711	0 43 02531	933			BRM	FIX	FIX
01712	0 71 00356	934			LDX	MARGAD	M ARG ADR
01713	2 35 00000	935			STA	0.2	0
01714	0 01 02503	936			BRU	RETMPR	RETURN TO MAIN PRBG
		937		*I BUT			937
01715	0 53 00054	938		I8UT	SKN	PIFEND	PLUS IF END LIST
01716	0 01 02477	939			BRU	LASTLN	LAST LINE BUT
01717	0 76 00344	940			LDA	INWRD1	INPUT WORD 1
01720	0 43 40267	941			BRM*	FL9ATL	FL9AT SPR9G LINK
01721	1 07 00344	942			STD	INWRD1	INPUT WORD 1
01722	0 76 00026	943			LDA	MINUS1	MINUS 9NE
01723	0 35 00066	944			STA	DECPNT	DEC PNT
		945		*F BUT			945
01724	0 53 00054	946		F8UT	SKN	PIFEND	PLUS IF END LIST
01725	0 01 02477	947			BRU	LASTLN	LAST LINE BUT
01726	0 43 40240	948			BRM*	C9NV3W	C9NV T9 3 W9RDS LINK
01727	0 43 40236	949			BRM*	BCDLNK	BIN T9 BCD C9NV LINK
01730	0 01 02503	950			BRU	RETMPR	RETURN TO MAIN PRBG
		951		*E BUT			951
01731	0 53 00054	952		E9UT	SKN	PIFEND	PLUS IF END LIST
01732	0 01 02477	953			BRU	LASTLN	LAST LINE BUT
01733	0 43 40240	954			BRM*	C9NV3W	C9NV T9 3 W9RDS LINK
01734	0 76 00251	955			LDA	F9UR	F9UR
01735	0 35 00343	956			STA	4IF9BT	4 IF E BUT
01736	0 76 00347	957			LDA	CENPL1	CENTRAL 1
01737	0 16 00350	958			M9G	CENRL2	CENTRAL 2
01740	0 50 00023	959			SKE	Z9R9	Z9R9
01741	0 01 01743	960			BRU	\$62	\$5
01742	0 01 01746	961			BRU	\$63	\$6
01743	0 76 00341	962			\$62	LDA	CHARIS
01744	0 54 00067	963				SUB	P EXP
01745	0 55 00024	964				ADD	9NE
01746	0 35 02704	965			\$63	STA	E EXP
01747	0 76 00026	966				LDA	MINUS1
01750	0 35 00341	967				STA	CHARIS
01751	0 43 40236	968			BRM*	BCDLNK	BIN T9 BCD C9NV LINK
01752	0 76 00251	969			LDA	F9UR	F9UR
01753	0 35 00063	970			STA	9UTFSZ	9UTPUT FIELD SIZE
01754	0 63 00064	971			ADM	R9CNXF	R SCAN X LIMIT FIELD
01755	0 76 02605	972			LDA	E	E



01756	0	43	02167	973	BRM	STIFBK	STB I8 CHAR IF BK	973
01757	0	76	00352	974	LDA	BLANK	BLANK	974
01760	0	53	02704	975	SKN	EEXP	E EXP	975
01761	0	01	01766	976	BRU	\$64	\$1	976
01762	0	76	02704	977	LDA	EEXP	E EXP	977
01763	0	46	01000	978	CNA			978
01764	0	35	02704	979	STA	EEXP	E EXP	979
01765	0	76	00025	980	LDA	MINUS	MINUS	980
01766	0	43	02167	981	BRM	STIFBK	STB I8 CHAR IF BK	981
01767	0	76	02704	982	LDA	EEXP	E EXP	982
01770	0	73	02633	983	SKG	NINE	NINE	983
01771	0	01	02000	984	BRU	\$65	\$2	984
01772	0	73	02634	985	SKG	DEC99	DEC 99	985
01773	0	01	02002	986	BRU	\$66	\$3	986
01774	0	43	00401	987	BRM	EPRBR		987
01775	46256747			988	BCI	1.8EXP		988
01776	0	46	00001	989	CLA			989
01777	0	01	02002	990	BRU	\$66	\$3	990
02000	0	46	00001	991	CLA			991
02001	0	01	02007	992	BRU	\$67	\$4	992
02002	0	46	20005	993	ABC			993
02003	0	67	00001	994	LSH	1	1	994
02004	0	65	02636	995	DIV	TEN	TEN	995
02005	0	36	02704	996	STB	EEXP	E EXP	996
02006	0	67	00022	997	LSH	18	22	997
02007	0	43	02167	998	BRM	STIFBK	STB I8 CHAR IF BK	998
02010	0	76	02704	999	LDA	EEXP	E EXP	999
02011	0	67	00022	1000	LSH	18	22	1000
02012	0	43	02167	1001	BRM	STIFBK	STB I8 CHAR IF BK	1001
02013	0	01	02503	1002	BRU	RETMPR	RETURN TO MAIN PRG	1002

			1003	PAGE			1003
			1004	*GET NEXT CHAR			1004
			1005	GNCHAR HLT			1005
02014	0 00 00000		1006	STX	SAVE X	SAVE X	1006
02015	0 37 02702		1007	LDA*	SCANX	SCAN X	1007
02016	0 76 40065		1008	SKG*	SCANXL	SCAN X LIMIT	1008
02017	0 73 42703		1009	BRU	\$68	\$1	1009
02020	0 01 02024		1010	LDA	ENDFLD	END FIELD CHAR	1010
02021	0 76 00255		1011	STA	CHAR	CHAR	1011
02022	0 35 00021		1012	BRR	GNCHAR	GET NEXT CHAR	1012
02023	0 51 02014		1013	\$68	RCY	2	1013
02024	0 66 20002		1014	AXC		401	1014
02025	0 46 00401		1015	LCY	2	2	1015
02026	0 67 20002		1016	MUL	THREE	THREE	1016
02027	0 64 00351		1017	LDA*	TAGST	TAGGED START ADR	1017
02030	0 76 42701		1018	CBX			1018
02031	0 46 00020		1019	LSH	0.2	0	1019
02032	2 67 00000		1020	ETP	CHMSK	CHAR MASK	1020
02033	0 14 02631		1021	SKE	IBMPLN	IBM BLANK	1021
02034	0 50 02656		1022	BRU	\$69	\$2	1022
02035	0 01 02037		1023	LDA	BLANK	BLANK	1023
02036	0 76 00352		1024	\$69	STA	CHAR	1024
02037	0 35 00021		1025	MIN*	SCANX	SCAN X	1025
02040	0 61 40065		1026	LDX	SAVE X	SAVE X	1026
02041	0 71 02702		1027	SKE	CARRET	CAR RETURN	1027
02042	0 50 00255		1028	BRR	GNCHAR	GET NEXT CHAR	1028
02043	0 51 02014		1029	SKR*	SCANX	SCAN X	1029
02044	0 60 40065		1030	BRR	GNCHAR	GET NEXT CHAR	1030
02045	0 51 02014		1031	*GET NEXT FOR CHAR			1031
			1032	GNFRCH HLT			1032
02046	0 00 00000		1033	\$70	BRM	GNFCIB	GET NEXT FOR CHAR INCL BLNK
02047	0 43 02053		1034	SKE	BLANK	BLANK	1033
02050	0 50 00352		1035	BRR	GNFRCH	GET NEXT FOR CHAR	1034
02051	0 51 02046		1036	BRU	\$70	\$1	1035
02052	0 01 02047		1037	*GET NEXT FOR CHAR INCL BLNK			1036
			1038	GNFCIB HLT			1037
02053	0 00 00000		1039	CLB			1038
02054	0 46 00002		1040	BRM	INITSC	INITIALIZE SCANS	1039
02055	0 43 02507		1041	BRM	GNCHAR	GET NEXT CHAR	1040
02056	0 43 02014		1042	BRR	GNFCIB	GET NEXT FOR CHAR INCL BLNK	1041
02057	0 51 02053		1043	*GET NEXT IS CHAR INCL BLNK			1042
			1044	GNICIB HLT			1043
02060	0 00 00000		1045	\$71	LDA	ENDFLD	END FIELD CHAR
02061	0 76 00255		1046	STA	CHAR	CHAR	1045
02062	0 35 00021		1047	SKN	N9C0MA	N9 COMMA FLAG	1046
02063	0 53 02677		1048	BRR	GNICIB	GET NEXT IS CHAR INCL BLNK	1047
02064	0 51 02060		1049	BRM	GNICIB	GET NEXT IS CHAR INCL COMMA	1048
02065	0 43 02110		1050	SKE	COMMA	COMMA	1049
02066	0 50 02602		1051	BRR	GNICIB	GET NEXT IS CHAR INCL BLNK	1050
02067	0 51 02060		1052	CLA			1051
02070	0 46 00001						1052

02071	0 35 02677	1053	STA	N8CRMA	N8 C8MMA FLAG	1053
02072	0 01 02061	1054	BRU	\$71	\$1	1054
		1055	*GET NEXT I8	CHAR		1055
02073	0 00 00000	1056	GNI8CH	HLT		1056
02074	0 76 00064	1057	LDA	RSCNXF	R SCAN X LIMIT FIELD	1057
02075	0 73 00047	1058	SKG	RSCANX	R SCAN X	1058
02076	0 01 02100	1059	BRU	\$72	\$1	1059
02077	0 01 02102	1060	BRU	\$73	\$2	1060
02100	0 76 00255	1061	\$72	LDA	ENDFLD	END FIELD CHAR
02101	0 01 02106	1062	BRU	\$74	\$3	1062
02102	0 43 02060	1063	\$73	BRM	GNICIB	GET NEXT I8 CHAR INCL BLNK
02103	0 50 00352	1064	SKE	BLANK	BLANK	1064
02104	0 51 02073	1065	BRR	GNI8CH	GET NEXT I8 CHAR	1065
02105	0 76 00024	1066	LDA	8NE	8NE	1066
02106	0 35 00021	1067	\$74	STA	CHAR	CHAR
02107	0 51 02073	1068	BRR	GNI8CH	GET NEXT I8 CHAR	1068
		1069	*GET NEXT I8	CHAR INCL C8MMA		1069
02110	0 00 00000	1070	GNICIC	HLT		1070
02111	0 75 00351	1071	LDB	THREE	THREE	1071
02112	0 43 02507	1072	BRM	INITSC	INITIALIZE SCANS	1072
02113	0 43 02014	1073	BRM	GNCHAR	GET NEXT CHAR	1073
02114	0 51 02110	1074	BRR	GNICIC	GET NEXT I8 CHAR INCL C8MMA	1074

			1075	PAGE		1075
			1076	*STB CHAR		1076
02115	0 00 00000		1077	STBCH HLT		1077
02116	0 35 00034		1078	STA ARGSAV	ARG SAVE	1078
02117	0 37 02702		1079	STX SAVEX	SAVE X	1079
02120	0 76 40065		1080	LDA* SCANX	SCAN X	1080
02121	0 73 42703		1081	SKG* SCANXL	SCAN X LIMIT	1081
02122	0 01 02124		1082	BRU \$75	\$1	1082
02123	0 01 02141		1083	BRU \$76	\$2	1083
02124	0 66 20002		1084	\$75 RCY 2	2	1084
02125	0 46 00401		1085	AXC	401	1085
02126	0 67 20002		1086	LCY 2	2	1086
02127	0 64 00351		1087	MUL THREE	THREE	1087
02130	0 76 42701		1088	LDA* TAGST	TAGGED START ADR	1088
02131	0 37 00035		1089	STX SCHT1	STB CHAR TEMP 1	1089
02132	0 46 00020		1090	CBX		1090
02133	2 67 20000		1091	LCY 0.2	0	1091
02134	0 14 02432		1092	ETR CH234	CHAR234 MASK	1092
02135	0 16 00034		1093	MRG ARGSAV	ARG SAVE	1093
02136	2 66 20000		1094	RCY 0.2	0	1094
02137	0 71 00035		1095	LDX SCHT1	STB CHAR TEMP 1	1095
02140	0 35 42701		1096	STA* TAGST	TAGGED START ADR	1096
02141	0 61 40065		1097	\$76 MIN* SCANX	SCAN X	1097
02142	0 71 02702		1098	LDX SAVEX	SAVE X	1098
02143	0 51 02115		1099	BRR STBCH	STB CHAR	1099
			1100	*STB F9R CHAR		1100
02144	0 00 00000		1101	STBFCH HLT		1101
02145	0 46 00002		1102	CLB		1102
02146	0 43 02507		1103	BRM INITSC	INITIALIZE SCANS	1103
02147	0 43 02115		1104	BRM STBCH	STB CHAR	1104
02150	0 51 02144		1105	BRR STBFCH	STB F9R CHAR	1105
			1106	*STB I9 CHAR		1106
02151	0 00 00000		1107	STBICH HLT		1107
02152	0 75 00351		1108	LDB THREE	THREE	1108
02153	0 43 02507		1109	BRM INITSC	INITIALIZE SCANS	1109
02154	0 14 02531		1110	ETR CHIMSK	CHAR1 MASK	1110
02155	0 50 00352		1111	SKE BLANK	BLANK	1111
02156	0 01 02165		1112	BRU \$78	\$1	1112
02157	0 76 00043		1113	LDA RSCNXL	R SCAN X LIMIT	1113
02160	0 73 00261		1114	SKG DEC79	DEC 79	1114
02161	0 01 02164		1115	BRU \$77	\$2	1115
02162	0 76 02456		1116	LDA IBMBLN	IBM BLANK	1116
02163	0 01 02165		1117	BRU \$78	\$1	1117
02164	0 76 00352		1118	\$77 LDA BLANK	BLANK	1118
02165	0 43 02115		1119	\$78 BRM STBCH	STB CHAR	1119
02166	0 51 02151		1120	BRR STBICH	STB I9 CHAR	1120
			1121	*STB I9 CHAR IF 9K		1121
02167	0 00 00000		1122	STIF9K HLT		1122
02170	0 35 02712		1123	STA SIF9K1	STB IF 9K TEMP 1	1123
02171	0 46 00001		1124	CLA		1124

02172	0	35	00346	1125		STA	ENDFFL	END FIELD FLAG	1125
02173	0	76	00047	1126	\$79	LDA	RSCANX	R SCAN X	1126
02174	0	55	00024	1127		ADD	ONE	ONE	1127
02175	0	73	00064	1128		SKG	RSCN XF	R SCAN X LIMIT FIELD	1128
02176	0	01	02202	1129		BRU	\$80	\$1	1129
02177	0	76	00025	1130		LDA	SIGNBT	SIGN BIT	1130
02200	0	35	00346	1131		STA	ENDFFL	END FIELD FLAG	1131
02201	0	51	02167	1132		BRR	STIFBK	STB I8 CHAR IF BK	1132
02202	0	76	00047	1133	\$80	LDA	RSCANX	R SCAN X	1133
02203	0	55	00063	1134		ADD	OUTFSZ	OUTPUT FIELD SIZE	1134
02204	0	54	00064	1135		SUB	RSCN XF	R SCAN X LIMIT FIELD	1135
02205	0	72	00025	1136		SKA	SIGNBT	SIGN BIT	1136
02206	0	01	02215	1137		BRU	\$81	\$2	1137
02207	0	60	00063	1138		SKR	OUTFSZ	OUTPUT FIELD SIZE	1138
02210	0	50	00023	1139		SKE	ZERB	ZERB	1139
02211	0	51	02167	1140		BRR	STIFBK	STB I8 CHAR IF BK	1140
02212	0	76	02712	1141		LDA	SIFPKI	STB IF BK TEMP I	1141
02213	0	43	02151	1142		BRM	STBICH	STB I8 CHAR	1142
02214	0	51	02167	1143		BRR	STIFBK	STB I8 CHAR IF BK	1143
02215	0	76	00352	1144	\$81	LDA	BLANK	BLANK	1144
02216	0	43	02151	1145		BRM	STBICH	STB I8 CHAR	1145
02217	0	01	02173	1146		BRU	\$79	\$3	1146

THROW A

FILL LE

			1147	PAGE		1147
			1148	*LINE IN/OUT AND RETURN		1148
02220	0 00 00000		1149	LNISR HLT		1149
02221	0 75 02220		1150	LDB LNISR	LINE IN/OUT AND RETURN	1150
02222	0 76 00261		1151	LDA DEC79	DEC 79	1151
02223	0 50 00043		1152	SKE RSCANX	R SCAN X LIMIT	1152
02224	0 43 40040		1153	BRM+ UNITAD	UNIT ADR	1153
02225	0 76 00255		1154	LDA CARPET	CAR RETURN	1154
02226	0 43 02151		1155	BPM STBICH	STB IB CHAR	1155
02227	0 46 00001		1156	CLA		1156
02230	0 35 00047		1157	STA RSCANX	R SCAN X	1157
02231	0 53 00040		1158	SKN ISFLAG	IB FLAG	1158
02232	0 01 02250		1159	BRU \$95	\$3	1159
02233	0 43 40040		1160	BRM+ UNITAD	UNIT ADR	1160
02234	0 43 02014	\$82	1161	BPM GNCHAR	GET NEXT CHAR	1161
02235	0 12 00021		1162	MIW CHAR	CHAR	1162
02236	0 76 00021		1163	LDA CHAR	CHAR	1163
02237	0 50 00255		1164	SKE CARRET	CAR RETURN	1164
02240	0 01 02234		1165	BRU \$82	\$1	1165
02241	0 02 14000		1166	TBPW	14000	1166
02242	0 40 21000	\$83	1167	BRTW	21000	1167
02243	0 01 02242		1168	BRU \$83	\$4	1168
02244	0 01 02265		1169	BRU \$89	\$2	1169
02245	0 50 02631	\$84	1170	SKE CADDEL	CODE DELETE	1170
02246	0 43 02115		1171	BRM STBCH	STB CHAR	1171
02247	0 01 02254		1172	BRU \$87	\$7	1172
02250	0 71 02655	\$85	1173	LDX DEC33	DEC -33	1173
02251	0 76 02657		1174	LDA BLANKS	ALL BLANKS	1174
02252	2 35 00341	\$86	1175	STA ENDRUF.2	END BUFFER	1175
02253	0 41 02252		1176	BRX \$86	\$5	1176
02254	0 43 40040	\$87	1177	BRM+ UNITAD	UNIT ADR	1177
02255	0 40 20010		1178	BETW	29910	1178
02256	0 01 02270		1179	BRU \$90	\$8	1179
02257	0 75 00021	\$88	1180	LDB CHAR	CHAR	1180
02260	0 46 00001		1181	CLA		1181
02261	0 66 20006		1182	RCY 6	6	1182
02262	0 50 00255		1183	SKE CARPET	CAR RETURN	1183
02263	0 01 02245		1184	BRU \$84	\$6	1184
02264	0 02 00000		1185	DISW	0	1185
02265	0 46 00001	\$89	1186	CLA		1186
02266	0 35 00047		1187	STA RSCANX	R SCAN X	1187
02267	0 51 02220		1188	RRR LNISR	LINE IN/OUT AND RETURN	1188
02270	0 02 00000	\$90	1189	DISW	0	1189
02271	0 43 40265		1190	BRM+ ERRLNK	ERROR LINK	1190
02272	47516370		1191	BCI 1,PTY		1191
02273	0 01 02257		1192	BRU \$88	\$9	1192

			1193	PAGE		1193
			1194	*CONST SCAN		1194
02274	0	00	00000	C0NSCN HLT		1195
02275	0	76	00047	LDA RSCANX	R SCAN X	1196
02276	0	55	00342	ADD WDTN	WDTH	1197
02277	0	35	00064	STA RSCNXF	R SCAN X LIMIT FIELD	1198
02300	0	43	02365	BRM DIGCVI	DIGIT C0NV INITIAL	1199
02301	0	46	00001	CLA		1200
02302	0	35	00341	STA CHARIS	CHARACTERISTIC	1201
02303	0	35	00037	STA PERFLG	PERI0D FLAG	1202
02304	0	43	02375	BRM TSSIGN	TEST SIGN	1203
02305	0	35	00055	STA INPTWS	INPUT W0RD SIGN	1204
02306	0	43	02411	BRM DIGCVS	DIGIT C0NV SCAN	1205
02307	0	76	00036	LDA DIGSCT	DIGITS SCANNED CNT	1206
02310	0	35	00341	STA CHARIS	CHARACTERISTIC	1207
02311	0	76	00021	LDA CHAR	CHAR	1208
02312	0	50	00353	SKE PERI0D	PERI0D	1209
02313	0	01	02316	BRU \$91	\$1	1210
02314	0	35	00037	STA PERFLG	PERI0D FLAG	1211
02315	0	43	02411	BRM DIGCVS	DIGIT C0NV SCAN	1212
02316	0	46	00001	\$91 CLA		1213
02317	0	50	00037	SKE PERFLG	PERI0D FLAG	1214
02320	0	01	02322	BRU \$92	\$3	1215
02321	0	54	00066	SUB DECPNT	DEC PNT	1216
02322	0	55	00341	\$92 ADD CHARIS	CHARACTERISTIC	1217
02323	0	54	00067	SUB PEXP	P EXP	1218
02324	0	54	00020	SUB DIGUCT	DIGITS USED CNT	1219
02325	0	35	00341	STA CHARIS	CHARACTERISTIC	1220
02326	0	76	00021	LDA CHAR	CHAR	1221
02327	0	50	00255	SKE ENDFLD	END FIELD CHAR	1222
02330	0	01	02332	BRU \$93	\$2	1223
02331	0	51	02274	BRR C0NSCN	C0NST SCAN	1224
02332	1	25	00347	\$93 LDP CENPL1	CENTRAL 1	1225
02333	1	07	00010	STD CENPL3	CENTRAL 3	1226
02334	0	76	00021	LDA CHAR	CHAR	1227
02335	0	50	02605	SKE E	E	1228
02336	0	60	00047	SKR RSCANX	R SCAN X	1229
02337	0	43	02375	BRM TSSIGN	TEST SIGN	1230
02340	0	35	00057	STA MXPRFG	MINUS XP0N FLAG	1231
02341	0	43	02365	BRM DIGCVI	DIGIT C0NV INITIAL	1232
02342	0	43	02411	BRM DIGCVS	DIGIT C0NV SCAN	1233
02343	0	46	30003	CLR		1234
02344	0	53	00057	SKN MXPRFG	MINUS XP0N FLAG	1235
02345	0	01	02350	BRU \$94	\$6	1236
02346	1	53	00347	DPS CENPL1	CENTRAL 1	1237
02347	0	36	00347	STB CENPL1	CENTRAL 1	1238
02350	0	76	00347	\$94 LDA CENPL1	CENTRAL 1	1239
02351	0	55	00341	\$95 ADD CHARIS	CHARACTERISTIC	1240
02352	0	55	00067	ADD PEXP	P EXP	1241
02353	0	35	00341	STA CHARIS	CHARACTERISTIC	1242

02354	1	25	00010	1243	LDP	CENPL3	CENTRAL 3	1243	
02355	1	07	00347	1244	STD	CENPL1	CENTRAL 1	1244	
02356	0	76	00021	1245	LDA	CHAR	CHAR	1245	
02357	0	50	00255	1246	SKE	ENDFLD	END FIELD CHAR	1246	
02360	0	01	02362	1247	BRU	\$96	\$8	1247	
02361	0	51	02274	1248	BRR	CANSCN	CNST SCAN	1248	
02362	0	43	40265	1249	\$96	BRM*	ERRLNK	1249	
02363	3	1233051	1250	BCI	1,ICHR			1250	
02364	0	51	02274	1251	BRR	CANSCN	CNST SCAN	1251	
				1252	*DIGIT CNV	INITIAL		1252	
02365	0	00	00000	1253	DIGCVI	HLT		1253	
02366	0	46	30003	1254	CLR			1254	
02367	0	35	00036	1255	STA	DIGUCT	DIGITS SCANNED CNT	1255	
02370	0	35	00020	1256	STA	DIGUCT	DIGITS USED CNT	1256	
02371	1	07	00347	1257	STD	CENPL1	CENTRAL 1	1257	
02372	0	76	02623	1258	LDA	GNICHA	GET NEXT I8 CHAR ADP	1258	
02373	0	35	00062	1259	STA	GETFR	GET F BR R CHAR	1259	
02374	0	51	02365	1260	BRR	DIGCVI	DIGIT CNV INITIAL	1260	
				1261	*TEST SIGN			1261	
02375	0	00	00000	1262	TSSIGN	HLT		1262	
02376	0	43	02073	1263	\$97	BRM	GNIACH	GET NEXT I8 CHAR	1263
02377	0	50	00024	1264	SKE	\$9E	(MEANS BLANK)	1264	
02400	0	01	02402	1265	BRU	\$98	\$2	1265	
02401	0	01	02376	1266	BRU	\$97	\$1	1266	
02402	0	50	00025	1267	\$98	SKE	MINUS	1267	
02403	0	01	02405	1268	BPU	\$99	\$3	1268	
02404	0	51	02375	1269	BRR	TSSIGN	TEST SIGN	1269	
02405	0	50	02577	1270	\$99	SKE	PLUS	1270	
02406	0	60	00047	1271	SKR	RSCANX	R SCAN X	1271	
02407	0	46	00001	1272	CLA			1272	
02410	0	51	02375	1273	BRR	TSSIGN	TEST SIGN	1273	
				1274	*DIGIT CNV	SCAN		1274	
02411	0	00	00000	1275	DIGCVS	HLT		1275	
02412	0	43	02433	1276	\$100	BRM	TSDIG	TEST DIGIT	1276
02413	0	51	02411	1277	BRR	DIGCVS	DIGIT CNV SCAN	1277	
02414	0	64	02624	1278	MUL	RTSH18	RIGHT SHIFTER I8	1278	
02415	0	14	00256	1279	ETR	CH4MSK	CHAR 4 MASK	1279	
02416	0	35	02670	1280	STA	DGCVTI	DIGIT CNV TEMP 1	1280	
02417	0	61	00036	1281	MIN	DIGUCT	DIGITS SCANNED CNT	1281	
02420	1	25	00347	1282	LDP	CENPL1	CENTRAL 1	1282	
02421	0	72	02625	1283	SKA	TSPERR	TSP 5 BITS ONE	1283	
02422	0	01	02412	1284	BRU	\$100	\$1	1284	
02423	0	67	00004	1285	LSH	4	4	1285	
02424	1	07	00347	1286	STD	CENPL1	CENTRAL 1	1286	
02425	1	25	02621	1287	LDP	TENR4	TEN B4 EXACT	1287	
02426	0	43	02452	1288	BRM	DBLYMP	DOUBLE FIXED MULT	1288	
02427	1	54	02470	1289	DPA	DGCVTI	DIGIT CNV TEMP 1	1289	
02430	1	07	00347	1290	STD	CENPL1	CENTRAL 1	1290	
02431	0	61	00020	1291	MIN	DIGUCT	DIGITS USED CNT	1291	
02432	0	01	02412	1292	BRU	\$100	\$1	1292	



			1293	*TEST DIGIT			1293
02433	0 00 00000		1294	TSDIG HLT			1294
02434	0 43 40062		1295	BRM*	GETFR	GET F BR R CHAR	1295
02435	0 72 00025		1296	SKA	SIGNAT	SIGN BIT	1296
02436	0 51 02433		1297	RRR	TSDIG	TEST DIGIT	1297
02437	0 73 02637		1298	SKG	NINEAT	NINE AT T9P	1298
02440	0 61 02433		1299	MIN	TSDIG	TEST DIGIT	1299
02441	0 51 02433		1300	BRR	TSDIG	TEST DIGIT	1300
			1301	*INT SCAN			1301
02442	0 00 00000		1302	INSCAN HLT			1302
02443	0 75 02627		1303	LDA	GNFCHA	GET NEXT FBR CHAR ADR	1303
02444	0 35 00062		1304	STA	GETFR	GET F BR R CHAR	1304
02445	0 46 30003		1305	CLR			1305
02446	1 07 00347		1306	STD	CENRL1	CENTRAL 1	1306
02447	0 43 02411		1307	BRM	DIGCVS	DIGIT CONV SCAN	1307
02450	1 25 00347		1308	LDP	CENRL1	CENTRAL 1	1308
02451	0 51 02442		1309	BRR	INSCAN	INT SCAN	1309
			1310	*DOUBLE FIXED MULT			1310
02452	0 00 00000		1311	DBLXMP HLT			1311
02453	1 07 00004		1312	STD	DFMPT1	DBL FX MPY TEMP 1	1312
02454	0 76 00347		1313	LDA	CENRL1	CENTRAL 1	1313
02455	0 46 00002		1314	CLB			1314
02456	0 66 20001		1315	RCY	1	1	1315
02457	0 64 00005		1316	MUL	DFMPT2	DBL FX MPY TEMP 2	1316
02460	0 66 00027		1317	RSH	23	27	1317
02461	1 07 00006		1318	STD	DFMPT3	DBL FX MPY TEMP 3	1318
02462	0 76 00004		1319	LDA	DFMPT1	DBL FX MPY TEMP 1	1319
02463	0 46 00002		1320	CLB			1320
02464	0 66 20001		1321	RCY	1	1	1321
02465	0 64 00350		1322	MUL	CENRL2	CENTRAL 2	1322
02466	0 66 00027		1323	RSH	23	27	1323
02467	1 54 00006		1324	DPA	DFMPT3	DBL FX MPY TEMP 3	1324
02470	1 07 00006		1325	STD	DFMPT3	DBL FX MPY TEMP 3	1325
02471	0 76 00350		1326	LDA	CENRL2	CENTRAL 2	1326
02472	0 64 00005		1327	MUL	DFMPT2	DBL FIX MPY TEMP 2	1327
02473	1 54 00006		1328	DPA	DFMPT3	DBL FIX MPY TEMP 3	1328
02474	0 51 02452		1329	BRR	DBLYMP	DOUBLE FIXED MULT	1329

			1390	PAGE			1330
			1391	*LINE IN/OUT			1331
02475	0	43	02220	LNIR BRM LNIR		LINE IN/OUT AND RETURN	1332
02476	0	01	01535	BRU CNTTST		COUNT TEST	1333
			1394	*LAST LINE OUT			1334
02477	0	53	00040	LASTLN SKN I9FLAG		I9 FLAG	1335
02500	0	01	02503	BRU RETMPR		RETURN TO MAIN PRPG	1336
02501	0	43	02220	BRM LNIR		LINE IN/OUT AND RETURN	1337
02502	0	01	02503	BRU RETMPR		RETURN TO MAIN PRPG	1338
			1339	*RETURN TO MAIN PRPG			1339
02503	0	40	20001	RETMPR OVT		20001	1340
02504	0	20	00000	N9P			1341
02505	0	71	00041	LDX MSAVEX		M SAVE XR	1342
02506	0	51	00042	BRR MRETAD		M RETURN ADP	1343
			1344	*INITIALIZE SCANS			1344
02507	0	00	00000	INITSC HLT			1345
02510	0	35	00034	STA ARGSAV		ARG SAVE	1346
02511	0	46	10012	BAC			1347
02512	0	73	00024	SKG 9NE		9NE	1348
02513	0	01	02521	ARU \$101		\$1	1349
02514	0	76	02651	LDA RSCNYA		R SCAN X ADR	1350
02515	0	35	00065	STA SCANX		SCAN X	1351
02516	0	76	02652	LDA RTAGST		R TAGGED START ADR	1352
02517	0	75	02653	LDB RQCXLA		Q SCAN X LIMIT ADR	1353
02520	0	01	02525	BRU \$102		\$2	1354
02521	0	76	02647	\$101 LDA FSCNXA		F SCAN X ADP	1355
02522	0	35	00065	STA SCANX		SCAN X	1356
02523	0	76	00044	LDA FTAGST		F TAGGED START ADR	1357
02524	0	75	02650	LDB FSXLMA		F SCAN X LIMIT ADR	1358
02525	0	35	02701	\$102 STA TAGST		TAGGED START ADR	1359
02526	0	36	02703	STB SCANXL		SCAN X LIMIT	1360
02527	0	76	00034	LDA ARGSAV		ARG SAVE	1361
02530	0	51	02507	BRR INITSC		INITIALIZE SCANS	1362
			1363	*FIX			1363
02531	0	00	00000	FIX HLT			1364
02532	1	25	00347	LDP CENRL1		CENTRAL 1	1365
02533	0	43	01031	BRM FXBND4		FIX BANDA	1366
02534	0	35	00347	STA CENRL1		CENTRAL 1	1367
02535	0	51	02531	BRR FIX		FIX	1368



02612	61000000	1419		BCI	1.7000		1419
		1420	*DLR				1420
02613	53000000	1421	DLR	BCI	1.5000		1421
02614	21000000	1422		BCI	1.0000		1422
		1423	*CHAR TABLE				1423
	02615	1424	CHTABL EQU	*			1424

		1425	PAGE		1425
		1426	*LIVE N8P M8P		1426
02615	2 20 00000	1427	N8PM8P N8P	0.2	1427
		1428	*DEC 22		1428
02616	00000026	1429	DEC22 DEC	22	1429
		1430	*DEC 23		1430
	02617	1431	DEC23 EQU	*	1431
		1432	*TWENTYTHREE		1432
02617	00000027	1433	DEC	23	1433
		1434	*IND BIT		1434
02620	0 00 40000	1435	INDBIT HLT*		1435
		1436	*TEN B4 EXACT		1436
02621	00000000	1437	TENB4 BCT	00000000	1437
02622	24000000	1438	BCT	24000000	1438
		1439	*GET NEXT I8 CHAR ADR		1439
02623	0 00 02073	1440	GNICHA HLT	GNICAH	1440
		1441	*RIGHT SHIFTER 18		1441
02624	00000040	1442	RTSH18 BCT	00000040	1442
		1443	*T8P 5 BITS 8NE		1443
02625	76000000	1444	T8P5B8 BCT	76000000	1444
		1445	*8NE TENTH FULL SCALE		1445
02626	02314630	1446	1TENTH BCT	02314630	1446
		1447	*GET NEXT F8R CHAR ADR		1447
02627	0 00 02046	1448	GNFCHA HLT	GNFRCH	1448
		1449	*TW8		1449
02630	00000002	1450	TW8 DEC	2	1450
		1451	*CODE DELETE		1451
	02631	1452	C8DDEL EQU	*	1452
		1453	*CHAR1 MASK		1453
02631	77000000	1454	CH1MSK BCT	77000000	1454
		1455	*CHAR234 MASK		1455
02632	00777777	1456	CH234 BCT	00777777	1456
		1457	*NINE		1457
02633	00000011	1458	NINE DEC	9	1458
		1459	*DEC 99		1459
02634	00000143	1460	DEC99 DEC	99	1460
		1461	*FIVE		1461
02635	00000005	1462	FIVE DEC	5	1462
		1463	*TEN		1463
02636	00000012	1464	TEN DEC	10	1464
		1465	*NINE AT T8P		1465
02637	11000000	1466	NINEAT BCT	11000000	1466
		1467	*MINUS 14		1467
02640	77777762	1468	M14 DEC	-14	1468
		1469	*8NE HALF DBUBLE		1469
02641	00000000	1470	HALFDB BCT	0	1470
02642	20000000	1471	BCT	20000000	1471
		1472	*EIGHT		1472
02643	00000010	1473	EIGHT DEC	8	1473
02644	00000047	1474	39D DEC	39	1474

GET NEXT I8 CHAR

GET NEXT F8R CHAR

02645	77777700	1475	M778	ACT	77777700		1475
02646	00001000	1476	LSB	9CT	1000		1476
		1477	*F	SCAN X ADR			1477
02647	0 00 00046	1478	FSCNXA	HLT	FSCANX	F SCAN X ADR	1478
		1479	*F	SCAN X LIMIT ADR			1479
02650	0 00 02654	1480	FSXLMA	HLT	FSXLIM	F SCAN X LIMIT	1480
		1481	*R	SCAN X ADR			1481
02651	0 00 00047	1482	RSCNXA	HLT	RSCANX	R SCAN X	1482
		1483	*R	TAGGED START ADR			1483
02652	2 00 00300	1484	RTAGST	HLT	IPBUF.2	IG BUFFER	1484
		1485	*R	SCAN X LIMIT ADR			1485
02653	0 00 00043	1486	RSCXLA	HLT	RSCNXL	R SCAN X LIMIT	1486
		1487	*F	SCAN X LIMIT			1487
02654	00165140	1488	FSXLIM	DEC	60000		1488
		1489	*DEC	-33			1489
02655	77777737	1490	DECM33	DEC	-33		1490
		1491	*IBM	BLANK			1491
02656	60000000	1492	IBMBLN	9CT	60000000		1492
		1493	*ALL	BLANKS			1493
02657	12121212	1494	BLANKS	9CT	12121212		1494
		1495	*TAG	BIT AND FLRAT IND			1495
02660	21000000	1496	TAGFLI	9CT	21000000		1496
		1497	*NEG	EXP BIT			1497
02661	00000400	1498	NEG9EX	9CT	400		1498
		1499	*EXP	BITS 7AND8			1499
02662	00000300	1500	EXB78	9CT	300		1500
		1501	*9CT	27			1501
02663	00000027	1502	9CT27	ACT	27		1502
		1503	*SMALLEST	NEGATIVE			1503
	02664	1504	SMALNG	EQU	*		1504
		1505	*NEG	LIMIT			1505
02664	77777377	1506	NEGLIM	9CT	77777377		1506
		1507	*LOW	9 BITS			1507
02665	00000777	1508	LBW9	9CT	777		1508
		1509	*PBP	ADR MASK			1509
02666	17600000	1510	PBPADR	9CT	17600000		1510
		1511	*ASN	PBP CODE			1511
02667	15000000	1512	APBP0D	9CT	15000000		1512
		1513	*DIGIT	CONV TEMP 1			1513
02670	0 00 00000	1514	DGCVT1	HLT			1514
		1515	*DIGIT	CONV TEMP 2			1515
02671	00000000	1516	DGCVT2	DEC	0	MUST STAY ZERO	1516
		1517	*EMASK				1517
02672	00000700	1518	EMASK	ACT	700		1518
		1519	*ML8NES				1519
02673	77777000	1520	ML8NES	9CT	77777000		1520
		1521	*NEG	EXP LIMIT			1521
02674	77777400	1522	NEGEXL	ACT	77777400		1522
		1523	*ALL	BUT S1			1523
02675	17777777	1524	AL8TS1	9CT	17777777		1524

		1525	*	MEMORY USED FOR CODE:	1525
	02675	1526	LAST EQU	*-1	1526
		1527	*		1527
		1528	*		1528
		1529	*		1529
		1530	*	T E M P O R A R Y S T O R A G E	1530
		1531	*ERROR SAVE A		1531
02676	0 00 00000	1532	ERSAVA HLT		1532
		1533	*NB COMMA FLAG		1533
02677	0 00 00000	1534	NBCOMA HLT		1534
		1535	*XREG		1535
02700	0 00 00000	1536	XREG HLT		1536
		1537	*TAGGED START ADR		1537
02701	0 00 00000	1538	TAGST HLT		1538
		1539	*SAVE X		1539
02702	0 00 00000	1540	SAVE X HLT		1540
		1541	*SCAN X LIMIT		1541
02703	0 00 00000	1542	SCANXL HLT		1542
		1543	*E EXP		1543
02704	0 00 00000	1544	EEXP HLT		1544
		1545	*NUMBER DIGITS OUT -1		1545
02705	0 00 00000	1546	NDIGM1 HLT		1546
		1547	*CHAR INDEX SAVE		1547
02706	0 00 00000	1548	CHXSAV HLT		1548
		1549	*GROUP COUNT		1549
02707	0 00 00000	1550	GROUPC HLT		1550
		1551	*SCAN X SAVE		1551
02710	0 00 00000	1552	SCANXS HLT		1552
		1553	*PAREN COUNT SAVE		1553
02711	0 00 00000	1554	PRENCS HLT		1554
		1555	*ST9 IF 9K TEMP 1		1555
02712	0 00 00000	1556	SIF9K1 HLT		1556
		1557	*NB ARG FLAG		1557
02713	0 00 00000	1558	NBARGF HLT		1558
		1559	*FIX TEMP 2		1559
02714	0 00 00000	1560	FIXTP2 HLT		1560
		1561	*		1561
		1562	*	TOTAL MEMORY USED BY RUN-TIME	1562
	02715	1563	USEDM EQU	*	1563
	02734	1564	XXX EQU	*+15	1564
	02730	1565	MNPRST EQU	XXX/8*8	1565

	1546	PAGE	9	8	0	L	D	E	F	I	N	I	T	I	O	N	S	1566
	1547	*IBTBLL																1567
00002	1548	IBTBLL	BBBL	2														1568
	1549	*FIX TEMP 1																1569
00003	1570	FIXTP1	BBBL	3														1570
	1571	*D9F TEMP ADR																1571
00004	1572	D9FTAD	BBBL	4														1572
	1573	*A IN TEMP 1																1573
00004	1574	AINTP1	BBBL	4														1574
	1575	*DBL FX MPY TEMP 1																1575
00004	1576	DFMPT1	BBBL	4														1576
	1577	*FIX TEMP																1577
00005	1578	FIXTMP	BBBL	5														1578
	1579	*A IN TEMP 2																1579
00005	1580	AINTP2	BBBL	5														1580
	1581	*DBL FX MPY TEMP 2																1581
00005	1582	DFMPT2	BBBL	5														1582
	1583	*XE																1583
00006	1584	XE	BBBL	6														1584
	1585	*DBL FX MPY TEMP 3																1585
00006	1586	DFMPT3	BBBL	6														1586
	1587	*A IN TEMP 3																1587
00006	1588	AINTP3	BBBL	6														1588
	1589	*YE																1589
00007	1590	YE	BBBL	7														1590
	1591	*DBL FX MPY TEMP 4																1591
00007	1592	DFMPT4	BBBL	7														1592
	1593	*ZE																1593
00010	1594	ZE	BBBL	10														1594
	1595	*CENTRAL 3																1595
00010	1596	CENRL3	BBBL	10														1596
	1597	*XM																1597
00011	1598	XM	BBBL	11														1598
	1599	*CENTRAL 4																1599
00011	1600	CENRL4	BBBL	11														1600
	1601	*TEMPA																1601
00012	1602	TEMPA	BBBL	12														1602
00014	1603	DPTMP1	BBBL	14														1603
	1604	*EADR 1																1604
00015	1605	EADR1	BBBL	15														1605
	1606	*EADR 2																1606
00016	1607	EADR2	BBBL	16														1607
	1608	*OVERFLOW IND																1608
00017	1609	OVFIND	BBBL	17														1609
	1610	*YM																1610
00020	1611	YM	BBBL	20														1611
	1612	*DIGITS USED CNT																1612
00020	1613	DIGUCT	BBBL	20														1613
	1614	*ZM																1614
00021	1615	ZM	BBBL	21														1615

DP TEMP 1



	1616	*CHAR			1616
00021	1617	CHAR	B00L	21	1617
00022	1618	STDT2	B00L	22	1618
00023	1619	ZER0	B00L	23	1619
00024	1620	RNE	B00L	24	1620
00024	1621	RTSH23	B00L	24	1621
00025	1622	SIGN	B00L	25	1622
00025	1623	SIGNBT	B00L	25	1623
00025	1624	NEGS0N	B00L	25	1624
00025	1625	MINUS	B00L	25	1625
00026	1626	0NES	B00L	26	1626
00026	1627	MINUS1	B00L	26	1627
00027	1628	ADRMSK	B00L	27	1628
	1629	*EO SIZE TEMP			1629
00034	1630	EOSIZT	B00L	34	1630
	1631	*ARG SAVE			1631
00034	1632	ARGSAV	B00L	34	1632
00035	1633	PART1	B00L	35	1633
	1634	*ST0 CHAR TEMP 1			1634
00035	1635	SCHT1	B00L	35	1635
00036	1635	PART2	B00L	35	1636
	1637	*DIGITS SCANNED CNT			1637
00036	1638	DIGSCT	B00L	35	1638
	1639	*DBF TEMP			1639
00037	1640	DBFTEM	B00L	37	1640
	1641	*D0X TEMP			1641
00037	1642	D0XTEM	B00L	37	1642
	1643	*PERIOD FLAG			1643
00037	1644	PERFLG	B00L	37	1644
	1645	*I0 FLAG			1645
00040	1646	I0FLAG	B00L	40	1646
	1647	*UNIT ADR			1647
00040	1648	UNITAD	B00L	40	1648
	1649	*M SAVE XR			1649
00041	1650	MSAVEX	B00L	41	1650
	1651	*M RETURN ADR			1651
00042	1652	MRETAD	B00L	42	1652
	1653	*R SCAN X LIMIT			1653
00043	1654	RSCNXL	B00L	43	1654
	1655	*F TAGGED START ADR			1655
00044	1656	FTAGST	B00L	44	1656
	1657	*COUNT			1657
00045	1658	CAUNT	B00L	45	1658
	1659	*F SCAN X			1659
00046	1660	FSCANX	B00L	46	1660
	1661	*R SCAN X			1661
00047	1662	RSCANX	B00L	47	1662
	1663	*P EXP SAVE			1663
00050	1664	PEXPSV	B00L	50	1664
	1665	*P MINUS FLAG			1665

STD TEMP 2

RT SHIFTER 23

SIGN BIT  
NEG SIGNALL 0NES  
MINUS 0NE  
ADR MASK

00051	1666	*MINFG B00L	51		1666
	1667	*PAREN COUNT			1667
00052	1668	PARENQ B00L	52		1668
	1669	*@ IF DRUBLE ELSE	4		1669
00053	1670	B0R4 B00L	53		1670
	1671	*PLUS IF END LIST			1671
00054	1672	PIFEND B00L	54		1672
00055	1673	FLTEMP B00L	55		1673
	1674	*INPUT WORD SIGN			1674
00055	1675	INPTWS B00L	55		1675
	1676	*MINUS XP0N FLAG			1676
00057	1677	MXP0FG B00L	57		1677
	1678	*D0F EXIT			1678
00060	1679	D0FXIT B00L	60		1679
	1680	*FL0AT A XREG			1680
00061	1681	FLAXRG B00L	61		1681
	1682	*FIX BANDA XREG			1682
00061	1683	FXBAXR B00L	61		1683
00062	1684	REG B00L	62		1684
	1685	*GET F 0R R CHAR			1685
00062	1686	GETFR B00L	62		1686
00063	1687	EXIT B00L	63		1687
	1688	*0UTPUT FIELD SIZE			1688
00063	1689	0UTFSZ B00L	63		1689
	1690	*AGT TEMP 1			1690
00064	1691	AGTTP1 B00L	64		1691
	1692	*R SCAN X LIMIT FIELD			1692
00064	1693	RSCNXF B00L	64		1693
	1694	*SCAN X			1694
00065	1695	SCANX B00L	65		1695
	1696	*DEC PNT			1696
00066	1697	DECPNT B00L	66		1697
	1698	*P EXP			1698
00067	1699	PEXP B00L	67		1699
00071	1700	EOADR B00L	71	EO ADR	1700
00072	1701	EO SIZE B00L	72	EO SIZE	1701
00073	1702	EOTAG B00L	73	EO+ ADR	1702
00074	1703	EOIND B00L	74	EO+ ADR	1703
	1704	*SENSE LIGHT WORD			1704
00075	1705	SENSLW B00L	75		1705
00076	1706	RUNTOP B00L	76		1706
	1707	*BIN TO BCD CONV LINK		RUN-TIME TOP MEMORY	1706
00236	1708	BCDLNK B00L	236		1707
	1709	*FL CONST MAKER LINK			1708
00237	1710	FLCMKL B00L	237		1709
	1711	*CONV TO 3 WORDS LINK			1710
00240	1712	CONV3W B00L	240		1711
00354	1713	MAXP0S EQU	ALBUTS		1712
02675	1714	001S EQU	ALBTS1		1713
00355	1715	255D EQU	BCT377		1714
					1715

02664	1716	M257D	EQU	NEGLIM	1716
00017	1717	9FFLAG	EQU	8VFINO	1717
02665	1718	8777	EQU	L9W9	1718
	1719	AXC	8PD	04600401	1719
	1720	BXC	8PD	04600022	1720
	1721	LGR	8PD	04624000	1721
	1722	AXC(E)	8PD	04600501	1722
	1723	8XAC	8PD	04600222	1723
	1724	AXBA	8PD	04600450	1724
	1725	CNA(E)	8PD	04601100	1725
	1726	CLX	8PD	24600000	1726
00000	1727		END		1727

ITENTH	02626	4IFERT	00343	ADRMASK	00027	AGFP9P	01314	AGTTP1	00064	AGXP9P	01316
AINTP1	00004	AINTP2	00005	AINTP3	00006	ALBTSI	02675	ALBUTS	00354	ALFP9P	01303
ALXP9P	01305	AP9PCD	02667	ARGSAV	00034	AXC(E)	02715	BCDLNK	00236	BLANKS	02657
BRUITB	02574	BRUPTB	02555	BRUM9P	00263	CARRET	00255	CENRL1	00347	CENRL2	00350
CENRL3	00010	CENRL4	00011	CHIMSK	02631	CH4MSK	00256	CHARIS	00341	CHTABL	02615
CHXSAV	02706	CNA(E)	02715	CNTTLN	00273	CNTTNS	01537	CNTTST	01535	C8DDEL	02631
CRNSCN	02274	C6NV3W	00240	DBLXMP	02452	DBLXRG	01273	DECM33	02655	DECPNT	00066
DFMPT1	00004	DFMPT2	00005	DFMPT3	00006	DFMPT4	00007	DGCVT1	02670	DGCVT2	02671
DIGCVI	02365	DIGCVS	02411	DIGSCT	00036	DIGUCT	00020	DLR9UT	01551	D9FP9P	01167
DRFTAD	00004	D9FTEM	00037	D9FXIT	00060	D9XP9P	01151	D9XTEM	00037	DPAP9P	01406
DPMP9P	00747	DPSP9P	01416	DPTMPI	00014	EOSIZE	00072	EOSIZT	00034	ENDBUF	00341
ENDFFL	00346	ENDFLD	00255	ERRLNK	00265	ERSAVA	02676	FFAP9P	01234	FIB9P9	01334
FIXTMP	00005	FIXTP1	00003	FIXTP2	02714	FLA9VT	00476	FLAP9P	00423	FLAXRG	00061
FLCMKL	00237	FLDP9P	00647	FLMP9P	00600	FLNP9P	00714	FL9ATA	01075	FL9ATL	00267
FLSP9P	00571	FLTEMP	00055	FNAP9P	01252	FSCANX	00046	FSCNXA	02647	FSDP9P	01214
FSTP9P	01023	FSXLIM	02654	FSXLMA	02650	FTAGST	00044	FTAP9P	01105	FTDP9P	01137
FTMP9P	01127	FTSP9P	01115	FXBAXR	00061	FXBND4	01031	GNCHAR	02014	GNFCHA	02627
GNFCIB	02053	GNFRCH	02046	GNICHA	02623	GNICIB	02060	GNICIC	02110	GNIBCH	00273
GR9UPC	02707	HALFDB	02641	HAVEEF	01505	HAVELP	01440	HAVEMI	01543	HAVERP	01462
IRMBLN	02656	INDRIT	02620	INITSC	02507	INPTWS	00055	INSCAN	02442	INWR01	00344
INWRD2	00345	I9FLAG	00040	I9TBLL	00002	I9TEST	01527	LASTLN	02477	LDPP9P	01362
LTFP9P	01072	LTXP9P	01000	MARGAD	00356	MAXP9S	00354	MINUS1	00026	MINUSS	00357
ML9NES	02673	MNPRST	02730	MRETAD	00042	MSAVEX	00041	MXP9FG	00057	NDIGM1	02705
NEGBEX	02661	NEGEYL	02674	NEGLIM	02664	NEGSGN	00025	NINEAT	02637	N9ARGF	02713
NAC9MA	02677	N9PM9P	02615	NXCHAR	01426	9CT377	00355	9FFLAG	00017	9UTF9Z	00063
RVFIND	00017	PARENC	00052	PERFLG	00037	PERI9D	00353	PEXPSV	00050	PIFEND	00054
PMINFG	00051	P9PADR	02666	PRENCS	02711	RETPMR	02503	RSCANX	00047	RSCNXA	02651
RSCNXF	00064	RSCNYL	00043	RSCXLA	02653	RTAGST	02652	RTSH18	02624	RTSH23	00024
RUNT9P	00076	SIARIT	00252	SCANXL	02703	SCANXS	02710	SENSLW	00073	SIF9K1	02712
SIGNBT	00025	SKSM9P	00253	SMALNG	02664	STDP9P	01373	STIF9K	02167	ST9FCH	02144
ST9ICH	02151	SYSINI	00363	TAGBIT	00077	TAGFLI	02650	TAG9NE	00274	T9P599	02625
TSSIGN	02375	UNITAD	00040	XDVP9P	01011	XFAP9P	01237	XI9P9P	01332	XMPP9P	01005
XNAP9P	01255	XSDP9P	01212	XSTP9P	01014	HIGPM	00354	BLANK	00352	CH234	02632
CRMA	02602	CBUNT	00045	DEC22	02616	DEC23	02617	DEC24	00250	DEC79	00261
DEC99	02634	DIV9F	00552	DLRIN	01546	EADR	00071	E9IND	00074	EOTAG	00073
EADR1	00015	EADR2	00016	EFGIN	01675	EIGHT	02643	EMASK	02672	ERR9R	00401
EXB7B	02662	FLAGM	00516	FLANZ	00504	FLA9F	00506	FLA9K	00507	FLC9M	00730
FLIND	00254	GETFR	00062	HAVEP	01452	I9RIJF	00300	LNI9R	02220	M257D	02664
MINUS	00025	9CT27	02663	9FSET	00543	PART1	00035	PART2	00036	SAVEX	02702
SCANX	00065	SCHT1	00035	STDT2	00022	ST9CH	02115	TAGST	02701	TEMPA	00012
TENB4	02621	THREE	00351	T9DIG	02433	UNDEF	00270	USEDM	02715	ODIS	02675
255D	00355	99R4	00053	99UT	01602	AX8A	02715	BXAC	02715	CHAR	00021
EEXP	02704	99UT	01731	EXIT	00063	FIVE	00235	FIXL	00266	FLAC	00461
FLAD	00525	FLAF	00475	FLAG	00577	FLAX	00510	FLMX	00737	FLNA	00741
FLNR	00736	F9UR	00251	F9UT	01724	H9UT	01577	I9UT	01715	LAST	02675
LNI9	02475	L9W9	02665	M77A	02645	NINE	02633	9777	02665	9FL9	00555
9NES	00026	PEXP	00067	PLUS	02577	S100	02412	S101	02521	S102	02525
SIGN	00025	WDTH	00342	X9UT	01571	XREG	02700	ZER9	00023	39D	02444
AIN	01626	AXC	02715	9XC	02715	CLX	02715	DLP	02613	FIX	02531
HIN	01574	IIN	01705	LGR	02715	LSR	02646	M14	02640	9NE	00024

REG	00062	\$28	00774	\$29	00777	\$30	01007	\$31	01057	\$32	01061
\$23	01065	\$34	01070	\$35	01163	\$36	01206	\$37	01215	\$38	01222
\$39	01231	\$40	01241	\$41	01257	\$42	01306	\$43	01317	\$44	01324
\$45	01327	\$46	01335	\$47	01434	\$48	01465	\$49	01470	\$50	01477
\$51	01526	\$52	01552	\$53	01557	\$54	01565	\$55	01610	\$56	01517
\$57	01635	\$58	01644	\$59	01652	\$5A	00444	\$5B	00440	\$5C	00471
\$5D	00536	\$5E	00562	\$5F	00731	\$60	01660	\$61	01671	\$62	01743
\$63	01746	\$64	01766	\$65	02000	\$66	02002	\$67	02007	\$68	02024
\$69	02037	\$70	02047	\$71	02061	\$72	02100	\$73	02102	\$74	02106
\$75	02124	\$76	02141	\$77	02164	\$78	02165	\$79	02173	\$80	02202
\$81	02215	\$82	02234	\$83	02242	\$84	02245	\$85	02250	\$86	02252
\$87	02254	\$88	02257	\$89	02265	\$90	02270	\$91	02316	\$92	02322
\$93	02332	\$94	02350	\$95	02351	\$96	02362	\$97	02376	\$98	02402
\$99	02405	TEN	02636	TW8	02630	XIN	01567	XXX	02734	\$1	00373
\$2	00415	\$3	00416	\$4	00421	\$5	00422	XE	00006	XM	00011
YE	00007	YM	00020	ZE	00010	ZM	00021	E	02605		