

DDP-116/516/H316  
FORTRAN IV COMPILER LISTING  
FRTN, Doc. No. 180463000

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**Honeywell**  
COMPUTER CONTROL  
DIVISION

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\* COMPUTER, DDP-116,516

\* PROGRAM CATEGORY- COMPILER

\* PROGRAM TITLE, FRTN  
EXPANDED FORTRAN IV COMPILER  
FOR DDP-116,516

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APPROVAL

DATE

PROG- James J. Power      12/12/67

SUPR- J. P. James      12/12/67

QUAL- James J. Egan      12/18/67

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*
*       REVISIONS
*
* REV, D   ECO 5249
* REV, C   ECO 3824      10-31-66
* REV, B   ECO 3476      09-19-66
* REV, A                   06-08-66
*
* AUTHOR
*
*   HONEYWELL, INC. - COMPUTER CONTROL DIVISION
*
* PURPOSE
*
*   THIS PROGRAM IS DESIGNED TO COMPILE ASA STANDARD FORTRAN IV
*   PROGRAMS IN ONE PASS, GENERATING OPTIMUM OBJECT CODE FOR THE
*   DDP-116 OR DDP-516.
*
* RESTRICTIONS
*
*   MINIMUM 8K CORE STORAGE
*
* STORAGE
*
*   6682 (DECIMAL)
*   15034 (OCTAL)
*
* USE
*
*
* *****
*
*   *FORTRAN-IV OPERATING PROCEDURE*

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0186	*	0000000000000000	0186
0187	*	00NNNNNNNNNNNNNN	0187
0188	*	I = INITIAL VALUE/OR RPL	0188
0189	*	T = TERMINAL VALUE	0189
0190	*	X = INDEX	0190
0191	*	U = INCREMENT	0191
0192	*	N = STATEMENT NUMBER	0192
0193	*		0193
0194	*	3, THE EXPRESSION TABLE (AOI TABLE) 'FLOATS' ON TOP	0194
0195	*	THE DO TABLE AND CONSISTS OF 2 WORD ENTRIES.	0195
0196	*		0196
0197	*	N0000000011111111,....,DP(I+1)	0197
0198	*	00AAAAAAAAAAAAAAAAAA,....,DP(I)	0198
0199	*	N = NEGATION INDICATOR	0199
0200	*	O = OPERATOR	0200
0201	*	I = INDEX (OPERATOR LEVEL)	0201
0202	*	A = ASSIGNMENT TABLE REFERENCE	0202
0203	*	4, THE TRIAD TABLE IS USED TO OPTIMIZE EXPRESSIONS AND	0203
0204	*	IS AT THE END OF MEMORY EXTENDING DOWN TOWARDS THE	0204
0205	*	COMPILER. EACH ENTRY IS THREE WORDS LONG.	0205
0206	*		0206
0207	*	S000000000PPPPP,....,DP(L+2)	0207
0208	*	0011111111111111,....,DP(L+1)	0208
0209	*	00222222222222,....,DP(L)	0209
0210	*	S = TEMP STORAGE INDICATOR	0210
0211	*	P = OPERATOR	0211
0212	*	1 = FIRST OPERAND ADDRESS	0212
0213	*	2 = SECOND OPERAND ADDRESS	0213
0214	*	ABS	0214
0215	*	ORG '100	0215
0216	*		0216
0217	*	*****	0217
0218	*	* DIRECTORY OF FORTRAN IV COMPILER *	0218
0219	*	*****	0219
0220	*		0220
0221	*		0221
0222	*		0222

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0223			*.....ENTRANCE GROUP			0223
0224	00100	0 011101	DAC A3	(ENG1)	COMPILER ENTRANCE/INITIALIZE	0224
0225	00101	0 015400	DAC DP		DATA POOL START	0225
0226			*			0226
0227			*.....INPUT GROUP			0227
0228	00102	0 001066	DAC IC00	(IPG1)	INPUT COLUMN	0228
0229	00103	0 001251	DAC UC00	(IPG2)	UNINPUT COLUMN	0229
0230	00104	0 001256	DAC CH00	(IPG3)	INPUT CHARACTER	0230
0231	00105	0 001342	DAC ID00	(IPG4)	INPUT DIGIT	0231
0232	00106	0 001355	DAC IA00	(IPG5)	INPUT (A) CHARACTERS	0232
0233	00107	0 001412	DAC FN00	(IPG6)	FINISH OPERATOR	0233
0234	00110	0 001521	DAC DN00	(IPG7)	INPUT DNA	0234
0235	00111	0 002354	DAC II00	(IPG8)	INPUT ITEM	0235
0236	00112	0 002363	DAC OP00	(IPG9)	INPUT OPERAND	0236
0237	00113	0 002373	DAC NA00	(IPG10)	INPUT NAME	0237
0238	00114	0 002404	DAC IG00	(IPG11)	INPUT INTEGER	0238
0239	00115	0 002432	DAC IV00	(IPG12)	INPUT INTEGER VARIABLE/CONSTANT	0239
0240	00116	0 002437	DAC IR00	(IPG13)	INPUT INTEGER VARIABLE	0240
0241	00117	0 002443	DAC IS00	(IPG14)	INPUT STATEMENT NUMBER	0241
0242	00120	0 002525	DAC XN00	(IPG15)	EXAMINE NEXT CHARACTER	0242
0243	00121	0 002520	DAC SY00		INPUT SYMBOL	0243
0244			*			0244
0245			*.....TEST GROUP			0245
0246	00122	0 002547	DAC TS00	(TSG1)	ALL CHARACTER TEST (EXCEPT C/R)	0246
0247	00123	0 002555	DAC IP00	(TSG2)	)-INPUT OPERATOR	0247
0248	00124	0 004266	DAC A1	(TSG3)	C/R TEST	0248
0249	00125	0 002567	DAC B1	(TSG4)	, OR C/R TEST	0249
0250	00126	0 002603	DAC NU00	(TSG5)	NO USAGE TEST	0250
0251	00127	0 002611	DAC NC00	(TSG6)	NON CONSTANT TEST	0251
0252	00130	0 002617	DAC NS00	(TSG7)	NON SUBPROGRAM TEST	0252
0253	00131	0 002626	DAC AT00	(TSG8)	ARRAY TEST	0253
0254	00132	0 002635	DAC IT00	(TSG9)	INTEGER TEST	0254
0255	00133	0 002574	DAC NR00	(TSG10)	NON REL TEST	0255
0256			*			0256
0257			*.....ASSIGNMENT GROUP			0257
0258	00134	0 003241	DAC AS00	(ASG1)	ASSIGN ITEM	0258
0259	00135	0 003465	DAC TG00	(ASG2)	TAG SUBPROGRAM	0259



0260	00136	0	003642	DAC	TV00	(ASG3)	TAG VARIABLE	0260
0261	00137	0	003656	DAC	FA00	(ASG4)	FETCH ASSIGN	0261
0262	00140	0	003770	DAC	FL00	(ASG5)	FETCH LINK	0262
0263	00141	0	004005	DAC	KT00	(ASG6)	D(0)* SIZE OF ARRAY DEFLECTION	0263
0264	00142	0	004026	DAC	DM00	(ASG7)	DEFINE IM	0264
0265	00143	0	004041	DAC	DA00	(ASG8)	DEFINE AF	0265
0266	00144	0	004214	DAC	AF00	(ASG9)	DEFINE AFT	0266
0267	00145	0	004233	DAC	LO00	(ASG10)	DEFINE LOCATION	0267
0268	00146	0	004241	DAC	AI00	(ASG11)	ASSIGN INTEGER CONSTANT	0268
0269	00147	0	004252	DAC	AA00	(ASG12)	ASSIGN SPECIAL	0269
0270	00150	0	004062	DAC	NXT		GET NEXT ENTRY FROM ASSGN TABLE	0270
0271	00151	0	004142	DAC	BUD		BUILD ASSIGNMENT TABLE ENTRY	0271
0272								0272
0273								0273
0274	00152	0	004262	DAC	B6	(CNG1)	JUMP	0274
0275	00153	0	004264	DAC	C5		ILL TERM	0275
0276	00154	0	004271	DAC	C6	(CNG2)	CONTINUE	0276
0277	00155	0	004353	DAC	C7	(CNG3)	STATEMENT INPUT	0277
0278	00156	0	004456	DAC	C8	(CNG4)	STATEMENT SCAN	0278
0279	00157	0	004602	DAC	A9	(CNG5)	STATEMENT IDENTIFICATION	0279
0280	00160	0	005074	DAC	NP00	(CNG6)	FIRST NON-SPEC CHECK	0280
0281								0281
0282								0282
0283	00161	0	010624	DAC	EL00	(SPG1)	EXCHANGE LINKS	0283
0284	00162	0	010650	DAC	NM00	(SPG2)	NON COMMON TEST	0284
0285	00163	0	010657	DAC	ND00	(SPG3)	NON DUMMY OR SUBPROGRAM TEST	0285
0286	00164	0	010672	DAC	SC00	(SPG4)	INPUT SUBSCRIPT	0286
0287	00165	0	010761	DAC	IL00	(SPG5)	INPUT LIST ELEMENT	0287
0288	00166	0	011042	DAC	R1	(SPG6)	FUNCTION	0288
0289	00167	0	011044	DAC	R2		SUBROUTINE	0289
0290	00170	0	011101	DAC	A3	(SPG7)	INTEGER	0290
0291	00171	0	011103	DAC	A4		REAL	0291
0292	00172	0	011105	DAC	A5		DOUBLE PRECISION	0292
0293	00173	0	011107	DAC	A6		COMPLEX	0293
0294	00174	0	011111	DAC	A7		LOGICAL	0294
0295	00175	0	011145	DAC	B2	(SPG8)	EXTERNAL	0295
0296	00176	0	011154	DAC	B3	(SPG9)	DIMENSION	0296

0297	00177	0	011246	DAC	B7		INPUT DIMENSION	0297
0298	00200	0	011253	DAC	B4	(SPG10)	COMMON	0298
0299	00201	0	011335	DAC	B5	(SPG11)	EQUIVALENCE	0299
0300	00202	0	011375	DAC	C2	(SPG12)	RELATE COMMON ITEMS	0300
0301	00203	0	011442	DAC	C3	(SPG13)	GROUP EQUIVALENCE	0301
0302	00204	0	011715	DAC	C4	(SPG14)	ASSIGN SPECIFICATIONS	0302
0303	00205	0	011762	DAC	W4	(SPG15)	DATA	0303
0304	00206	0	012303	DAC	R3	(SPG16)	BLOCK DATA	0304
0305	00207	0	012313	DAC	TRAC	(SPG17)	TRACE	0305
0306								0306
0307								0307
				*				
				*.....	PROCESSOR GROUP			
0308	00210	0	005210	DAC	V3	(PRG1)	IF	0308
0309	00211	0	005334	DAC	R7	(PRG2)	GO TO	0309
0310	00212	0	005414	DAC	IB00		INPUT BRANCH LIST	0310
0311	00213	0	005443	DAC	W3	(PRG3)	ASSIGN	0311
0312	00214	0	005510	DAC	C9	(PRG5)	DO	0312
0313	00215	0	005533	DAC	V7	(PRG6)	END FILE	0313
0314	00216	0	005526	DAC	V6		BACKSPACE	0314
0315	00217	0	005535	DAC	V8		REWIND	0315
0316	00220	0	005543	DAC	V5	(PRG7)	READ	0316
0317	00221	0	005552	DAC	V4		WRITE	0317
0318	00222	0	005771	DAC	V2	(PRG8)	FORMAT	0318
0319	00223	0	006160	DAC	SI00		INPUT FORMAT STRING	0319
0320	00224	0	006153	DAC	IN00		INPUT NUMERIC FORMAT STRING	0320
0321	00225	0	006145	DAC	NZ00		NON ZERO STRING TEST	0321
0322	00226	0	006274	DAC	W8	(PRG9)	PAUSE	0322
0323	00227	0	006233	DAC	W7		STOP	0323
0324	00230	0	006301	DAC	R8	(PRG10)	CALL	0324
0325	00231	0	006321	DAC	G2		ASSIGNMENT STATEMENT	0325
0326	00232	0	006330	DAC	R9	(PRG11)	RETURN	0326
0327	00233	0	006367	DAC	G1	(PRG12)	STATEMENT FUNCTION	0327
0328	00234	0	006444	DAC	W5	(PRG13)	END	0328
0329								0329
0330								0330
				*				
				*.....	PROCESSOR SUBROUTINES GROUP			
0331	00235	0	006660	DAC	P000	(PSG1)	INPUT CHAR AND OUTPUT PACK	0331
0332	00236	0	006664	DAC	HS00	(PSG2)	TRANSMIT HOLLERITH STRING	0332
0333	00237	0	006702	DAC	DP00	(PSG3)	DO INPUT	0333

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0334	00240	0	006747	DAC	DS00	(PSG4)	DO INITIALIZE	0334
0335	00241	0	006773	DAC	DQ00	(PSG5)	DO TERMINATION	0335
0336	00242	0	007041	DAC	EX00	(PSG6)	EXPRESSION	0336
0337	00243	0	010040	DAC	CA00	(PSG7)	SCAN	0337
0338	00244	0	010335	DAC	ST00		TRIAD SEARCH	0338
0339	00245	0	010404	DAC	TC00		TEMP STORE CHECK	0339
0340	00246	0	010436	DAC	ET00	(PSG8)	ENTER TRIAD	0340
0341	00247	0	010525	DAC	GE00	(PSG9)	GENERATE SUBPROGRAM ENTRANCE	0341
0342								0342
0343								0343
*.....OUTPUT GROUP								
0344	00250	0	012330	DAC	OL00	(OPG1)	OUTPUT OBJECT LINK	0344
0345	00251	0	012337	DAC	OI00	(OPG2)	OUTPUT I/O LINK	0345
0346	00252	0	012363	DAC	CN00	(OPG3)	CALL NAME	0346
0347	00253	0	012437	DAC	OK00	(OPG4)	OUTPUT PACK	0347
0348	00254	0	012467	DAC	OB00	(OPG5)	OUTPUT OA	0348
0349	00255	0	012700	DAC	OT00	(OPG6)	OUTPUT TRIADS	0349
0350	00256	0	013147	DAC	OM00	(OPG7)	OUTPUT ITEM	0350
0351	00257	0	013773	DAC	OR00	(OPG8)	OUTPUT REL	0351
0352	00260	0	014127	DAC	OA00		OUTPUT ABS	0352
0353	00261	0	014135	DAC	OS00		OUTPUT STRING	0353
0354	00262	0	014365	DAC	OW00	(OPG9)	OUTPUT WORD	0354
0355	00263	0	014465	DAC	PU00		PICKUP	0355
0356	00264	0	014523	DAC	FS00	(OPG10)	FLUSH	0356
0357	00265	0	013663	DAC	TRSE	(OPG11)	OUTPUT TRACE COUPLING	0357
0358	00266	0	014301	DAC	PRSP		SET BUFFER TO SPACES	0358
0359								0359
0360								0360
*.....MISC. GROUP								
0361	00267	0	002653	DAC	AD3		ADD TWO 3 WORD INTEGERS	0361
0362	00270	0	002703	DAC	IM00		MULTIPLY (A) BY (B)	0362
0363	00271	0	002672	DAC	STXA		SET A INTO INDEX	0363
0364	00272	0	002676	DAC	STXI		SET I INTO INDEX	0364
0365	00273	0	002722	DAC	NF00		SET FS INTO NAME	0365
0366	00274	0	002741	DAC	BLNK		SET AREA TO ZEROS	0366
0367	00275	0	002754	DAC	MOV3		MOVE 3 WORDS TO TEMP STORAGE	0367
0368	00276	0	002764	DAC	CIB		COMPARE IBUF TO A CONSTANT	0368
0369	00277	0	003007	DAC	SAV		SAVE INDEX IN PUSH-DOWN STACK	0369
0370	00300	0	003016	DAC	RST		RESET INDEX FROM PUSH-DOWN STACK	0370

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0371	00301	0	003055	DAC	PACK				0371
0372	00302	0	003116	DAC	ER00		ERROR OUTPUT		0372
0373	00303	0	003157	DAC	SRT		SHIFT RIGHT 1 (TRIPLE PRES.)		0373
0374	00304	0	003202	DAC	SFT		SHIFT LEFT 1 (TRIPLE PRES.)		0374
0375	00305	0	003227	DAC	LIST				0375
0376				*					0376
0377				*					0377
0378				*					0378
0379				*					0379
0380				*					0380
0381				*					0381
0382		000000		XR	EQU	0	INDEX REGISTER		0382
0383				*					0383
0384				*			THE FOLLOWING 62 VARIABLES ARE SET TO ZERO DURING PROGRAM INITIALIZATION		0384
0385		000040		A	EQU	A+0	ASSIGNMENT TABLE INDEX		0385
0386		000041		I	EQU	A+1	EXPRESSION TABLE INDEX		0386
0387		000042		C	EQU	A+2			0387
0388		000043		ASAV	EQU	A+3			0388
0389		000044		L	EQU	A+4			0389
0390		000045		MFL	EQU	A+5	MODE FLAG		0390
0391		000046		SFF	EQU	A+6	FUNCTION FLAG		0391
0392		000047		SBF	EQU	A+7	SUBFUNCTION FLAG		0392
0393		000050		SXF	EQU	A+8	POSSIBLE CPX FLAG		0393
0394		000051		SPF	EQU	A+9	PEC, FLAG		0394
0395		000052		TCF	EQU	A+10	TEMP STORE COUNT		0395
0396		000053		IFF	EQU	A+11			0396
0397		000054		ABAR	EQU	A+12	BASE OF ASSIGN TABLE		0397
0398		000055		XST	EQU	A+13	FIRST EXECUTABLE STMT,		0398
0399		000056		CFL	EQU	A+14	MON FLAG		0399
0400		000057		D	EQU	A+15	DO INDEX		0400
0401		000060		RPL	EQU	A+16	RELATE PROGRAM LOCATION		0401
0402		000061		BDF	EQU	A+17	LOCK DATA FLAG		0402
0403		000062		SLST	EQU	A+18	SOURCE LIST		0403
0404		000063		OBL5	EQU	A+19	OUTPUT BINARY LIST		0404
0405		000064		BNOT	EQU	A+20	BINARY OUTPUT FLAG		0405
0406		000065		TRF	EQU	A+21	TRACE FLAG (END TRACE STATEMENT NO.)		0406
0407		000066		TRFA	EQU	A+22	POINTER TO FIRST VAR. OR ARRAY NAME IN		0407

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0408		*			AN EXPRESSION (FOR USE BY TRACE),	0408
0409	000067	SOF	EQU	A+23	SUBSCRIPT CONSTANT FLAG (NON-ZERO IF SET)	0409
0410	000070	LIF	EQU	A+24	LOGICAL IF FLAG	0410
0411	000071	LSTN	EQU	A+25	LAST STATEMENT NO.	0411
0412	000072	LSTF	EQU	A+26	LAST STATEMENT FLAG	0412
0413	000073	LSTP	EQU	A+27	LAST STATEMENT STOP	0413
0414	000074	SDSW	EQU	A+28	STATEMENT IO SWITCH	0414
0415		*				0415
0416	000570	NAMF	EQU	'570	NAME FUNCTION	0416
0417	000571	ND	EQU	NAMF+1	NO OF DIMENSIONS	0417
0418	000572	NS	EQU	'572	NO OF SUBSCRIPTS	0418
0419	000573	NT	EQU	NS+1	NAME TAG	0419
0420	000574	NTF	EQU	NS+2	NAME TAG FLAG	0420
0421	000575	NTID	EQU	NS+3	NO. WORDS IN TID	0421
0422	000576	O1	EQU	NS+4	OPERATOR 1	0422
0423	000577	O2	EQU	NS+5	OPERATOR 2	0423
0424	000600	P	EQU	NS+6		0424
0425	000601	PCNT	EQU	NS+7		0425
0426	000602	OCNT	EQU	NS+8	OUTPUT COUNT	0426
0427	000603	SO	EQU	NS+9		0427
0428	000604	S1	EQU	NS+10	SUBSCRIPT NO.1	0428
0429	000605	S2	EQU	NS+11	SUBSCRIPT NO.2	0429
0430	000606	S3	EQU	NS+12	SUBSCRIPT NO.3	0430
0431	000607	TC	EQU	NS+13	TERMINAL CHAR	0431
0432	000610	TT	EQU	NS+14		0432
0433	000611	TYPE	EQU	NS+15		0433
0434	000612	X	EQU	NS+16	ARRAY INDICES	0434
0435	000613	X1	EQU	NS+17		0435
0436	000614	X2	EQU	NS+18		0436
0437	000615	X3	EQU	NS+19		0437
0438	000616	X4	EQU	NS+20		0438
0439	000617	NTA	EQU	NS+21	UNPACKED ASSIGNMENT ITEMS	0439
0440	000620	ATA	EQU	NS+22		0440
0441	000621	IMA	EQU	NS+23		0441
0442	000622	CLA	EQU	NS+24		0442
0443	000623	IUA	EQU	NS+25		0443
0444	000624	DTA	EQU	NS+26		0444

0445	000625	TTA EQU	NS+27		0445	
0446		*.....	ADJUST THIS ORG IF THE SIZE OF THE CONSTANT POOL IS MODIFIED		0446	
0447		ORG	'630		0447	
0448	00630	0 00 00000	AF PZE	0	ADDRESS FIELD	0448
0449		000630	GF EQU	AF		0449
0450	00631	0 00 00000	AT PZE	0	ADDRESS TYPE	0450
0451	00632	0 00 00000	CODE PZE	0	OUTPUT CODE	0451
0452	00633	0 00 00000	D0 PZE	0	DIMENSIONS	0452
0453	00634	0 00 00000	D1 PZE	0		0453
0454	00635	0 00 00000	D2 PZE	0		0454
0455	00636	0 00 00000	D3 PZE	0		0455
0456	00637	0 00 00000	D4 PZE	0		0456
0457	00640	0 00 00000	DF PZE	0	DATA FLAG	0457
0458	00641	0 00 00000	NF PZE	0		0458
0459	00642	0 00 00000	B PZE	0		0459
0460	00643	0 00 00000	DFL PZE	0	DELIMITER FLAG	0460
0461	00644	000000	E OCT	0	EQUIVALENCE INDEX	0461
0462	00645	0 00 00000	EP PZE	0	E-PRIME	0462
0463	00646	0 00 00000	EO PZE	0	E-ZERO	0463
0464	00647	0 00 00000	FTOP PZE	0	OUTPUT COMMAND	0464
0465	00650	0 00 00000	GFA PZE	0		0465
0466	00651	0 00 00001	ICSW PZE	1	INPUT CONTROL SWITCH	0466
0467	00652	0 00 00000	IFLG PZE	0	I-FLAG	0467
0468	00653	0 00 00000	IM PZE	0	ITEM MODE	0468
0469	00654	0 00 00000	IOF PZE	0	I-O FLAG	0469
0470	00655	0 00 00000	IU PZE	0	ITEM USAGE	0470
0471	00656	0 00 00000	KBAR PZE	0	TEM STORE	0471
0472	00657	0 00 00000	KPRM PZE	0	TEM STORE	0472
0473	00660	177777	EBAR OCT	-1	E-BAR	0473
0474	00661	000017	DO OCT	17	DO TABLE INDEX(FLOATS ABOVE ASSIGNMENT)	0474
0475	00662	0 00 00111	CC PZE	'111	CARD COLUMN COUNTER	0475
0476	00663	0 00 00000	DCT PZE	0	DUMMY ARGUMENT COUNT	0476
0477	00664	0 00 00000	F PZE	0	TRIAD TABLE INDEX	0477
0478	00665	0 00 00000	CL PZE	0	ASSIGNMENT ITEMS UNPACKED	0478
0479	00666	0 00 00000	DT PZE	0		0479
0480	00667	0 00 00000	FLT1 PZE	0	FETCH LINK CL POINTER LOCATION	0480
0481	00670	0 00 00000	LIBF PZE	0	SPECIAL LIBRARY FLAG (NON-ZERO) IF SET	0481

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0482			*.....CONSTANTS USED BY THE COMPILER		0482
0483	00671	000251	K4    OCT    251	0)	0483
0484	00672	000254	K5    OCT    254	0,	0484
0485	00673	000240	K8    OCT    240	0-SPACE	0485
0486	00674	000257	K9    OCT    257	0/	0486
0487	00675	000256	K10   OCT    256	0.	0487
0488	00676	000255	K12   OCT    255	0-	0488
0489	00677	000253	K13   OCT    253	0+	0489
0490	00700	000244	K15   OCT    244	0\$	0490
0491	00701	000016	K16X  OCT    16		0491
0492	00702	000250	K17   OCT    250	0(	0492
0493	00703	000275	K18   OCT    275	0=	0493
0494	00704	142317	K19   BCI    1,DO	DO	0494
0495	00705	000324	K34   OCT    324	OT	0495
0496	00706	000317	K35   OCT    317	OO	0496
0497	00707	153716	K40   BCI    1,WN		0497
0498	00710	151316	K41   BCI    1,RN	RN	0498
0499	00711	141702	K42   BCI    1,CB		0499
0500	00712	000311	K43   OCT    311	OI	0500
0501	00713	000321	K44   OCT    321	OO	0501
0502		000705	K45   EQU    K34	OT	0502
0503	00714	000252	K57   OCT    252	0*	0503
0504	00715	000260	K60   OCT    260	OO (BCI ZERO)	0504
0505	00716	000271	K61   OCT    271	09	0505
0506		000704	K68   EQU    K19		0506
0507	00717	000001	K101  OCT    1		0507
0508	00720	000002	K102  OCT    2		0508
0509	00721	000003	K103  OCT    3		0509
0510	00722	000004	K104  OCT    4		0510
0511	00723	000005	K105  OCT    5		0511
0512	00724	000006	K106  OCT    6		0512
0513	00725	000007	K107  OCT    7		0513
0514	00726	000020	K109  DEC    16		0514
0515	00727	000377	K100  OCT    377		0515
0516	00730	037777	K111  OCT    37777		0516
0517	00731	177757	K110  DEC    -17		0517
0518	00732	170777	K115  OCT    170777		0518

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0519	00733	177400	K116	OCT	177400		0519
0520	00734	177745	K117	DEC	-27		0520
0521	00735	000777	K118	OCT	777		0521
0522	00736	177000	K119	OCT	177000		0522
0523	00737	177761	K120	DEC	-15		0523
0524	00740	040000	K122	OCT	040000		0524
0525	00741	177777	K123	DEC	-1		0525
0526	00742	000011	K124	DEC	9		0526
0527	00743	000010	K125	DEC	8		0527
0528	00744	000012	K126	DEC	10		0528
0529	00745	000013	K127	DEC	11		0529
0530	00746	000014	K128	DEC	12		0530
0531	00747	000015	K129	DEC	13		0531
0532	00750	177762	K131	DEC	-14		0532
0533	00751	000022	K132	OCT	22		0533
0534	00752	000017	K134	OCT	17		0534
0535	00753	024002	K137	OCT	24002		0535
0536	00754	000025	K138	OCT	25		0536
0537	00755	000024	K139	OCT	24		0537
0538	00756	000215	CRET	OCT	215	0 C/R	0538
0539	00757	000000	ZERO	OCT	0		0539
0540	00760	140000	HBIT	OCT	140000	HIGH BITS FOR ALPHA DATA	0540
0541	00761	142721	KAEQ	BCI	1,EQ	EQUIVALENC E ERROR MESSAGE ATTACHMENT	0541
0542	00762	177776	MIN2	DEC	-2	-2	0542
0543	00763	000340	HC2	OCT	340		0543
0544	00764	000357	K357	OCT	357		0544
0545			*				0545
0546			*				0546
0547	015400		DP	EQU	'15400	DUMMY START OF DATA POOL (ACTUALLY SET	0547
0548			*			BY THE FORTRAN IOS SUBROUTINE,)	0548
0549	000113		LO	EQU	'113	DUMMY END OF DATA POOL (MINUS 3 WORDS)	0549
0550			*			THE FOLLOWING INSTRUCTIONS CAUSE THE LOADER	0550
0551			*			TO ASSIGN ALL REFERENCES TO THE DATA POOL IN WORDS	0551
0552			*			100 TO 112 OF THE ZERO SECTOR, FORTRAN IOS WILL	0552
0553			*			CAUSE THESE CELLS TO BE SET TO THE ACTUAL DATA POOL	0553
0554			*			LOCATIONS WHICH WILL BE DETERMINED BY COMPUTER	0554
0555			*			CONFIGURATION.	0555



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0556                                     ORG '1000
0557 01000 1 00 15374 PZE DP-4,1 (100)
0558 01001 1 00 15375 PZE DP-3,1 (101) DATA POOL REFERENCES
0559 01002 1 00 15376 PZE DP-2,1 (102)
0560 01003 1 00 15377 PZE DP-1,1 (103)
0561 01004 1 00 15400 PZE DP,1 (104)
0562 01005 1 00 15401 PZE DP+1,1 (105)
0563 01006 1 00 15402 PZE DP+2,1 (106)
0564 01007 1 00 15403 PZE DP+3,1 (107)
0565 01010 1 00 15404 PZE DP+4,1 (110)
0566 01011 1 00 15405 PZE DP+5,1 (111)
0567 01012 1 00 15406 PZE DP+6,1 (112)
0568 01013 0 00 15407 PZE DP+7 (113) NO WDS IN DATA POOL SET BY IOS
0569
0570
0571                                     ORG 1
0572 00001 0 10 03116 JST EROO THIS INSTRUCTION REACHED ONLY IF THE
0573 00002 141707 BCI 1,CG COMPILER JUMPED TO ZERO BY MISTAKE.
0574
0575
0576
0577
0578                                     *****
0579                                     *START OF COMPILER*
0580                                     *****
0581
0582                                     ORG '1000
0583
0584
0585
0586                                     - AD COMP ENT EMPTY BUFFERS
0587 01000 0400 61 LRL 15
0588 01001 0 04 00670 STA LIBF SET SPECIAL LIBRARY FLAG
0589 01002 0410 61 LLL 15 (BIT 1 ON INHIBITS CERTAIN ERROR CHECKS)
0590 01003 0 10 00000 AD CALL F4$INT INITIALIZE I/O DEVICES
0591 01004 0 02 01153 LDA K108
0592 01005 0 04 00662 STA CC CC = 73

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0593	01006	0 10 01066	JST	IC00	INPUT COLUMN	0593
0594	01007	0 02 01063	A051 LDA	A090		0594
0595	01010	0 04 00000	STA	XR		0595
0596	01011	0 02 01065	LDA	A092	LOC. OF INDEX PUSH-DOWN BUFFER	0596
0597	01012	0 04 03030	STA	SAV9	INITIALIZE PUSH-DOWN BUF.	0597
0598	01013	140040	CRA			0598
0599	01014	1 04 00076	STA	A+M,1	SET M VARIABLES TO ZERO	0599
0600	01015	1 04 00626	STA	NAMF+M,1		0600
0601	01016	0 12 00000	IRS	XR		0601
0602	01017	0 01 01014	JMP	*-3		0602
0603	01020	0 04 00652	STA	IFLG		0603
0604	01021	0 04 12435	STA	PKF		0604
0605	01022	0 10 14523	JST	FS00	INITIALIZE OUTPUT BUFFER	0605
0606	01023	140401	CMA			0606
0607	01024	0 04 00072	STA	LSTF	LSTF NOT EQ 0	0607
0608	01025	0 04 00073	STA	LSTP	LSTP NOT EQ 0	0608
0609	01026	0 04 00660	STA	EBAR	EBAR SET NEGATIVE	0609
0610	01027	0 02 00113	LDA	L0		0610
0611	01030	0 04 00651	STA	ICSW		0611
0612	01031	0 04 00646	STA	EO	INITIALIZE EQUIVALENCE TABLE	0612
0613	01032	0 04 00044	STA	L	INITIALIZE TRIAD TABLE POINTER	0613
0614	01033	0 10 14301	JST	PRSP	SET PRINT BUFFER TO SPACES	0614
0615	01034	0 02 00752	LDA	K134		0615
0616	01035	0 04 00661	STA	DO	INITIALIZE DO TABLE POINTER	0616
0617	01036	0 07 00754	SUB	K138		0617
0618	01037	0 04 01064	STA	A091		0618
0619	01040	140040	CRA			0619
0620	01041	0 04 01475	STA	ID		0620
0621	01042	0 12 01475	A055 IRS	ID	ESTABLISH CONSTANTS	0621
0622	01043	0 10 04241	JST	AI00		0622
0623	01044	0 12 01064	IRS	A091		0623
0624	01045	0 01 01042	JMP	A055		0624
0625	01046	0 02 02731	LDA	K81		0625
0626	01047	0 04 01475	STA	ID		0626
0627	01050	0 04 01476	STA	ID+1		0627
0628	01051	0 04 01477	STA	ID+2		0628
0629	01052	140040	CRA			0629

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0630	01053	0400 40	LRL	32	(B)=0	IM=NO USAGE	0630
0631	01054	0 02 00717	LDA	K101	(A)=1	IU=SUBR	0631
0632	01055	0 10 04252	JST	AA00	ASSIGN (SPECIAL)		0632
0633	01056	0 10 02672	JST	STXA	SET POINTER A INTO INDEX AND (A)		0633
0634	01057	0 04 00056	STA	CFL	CFL=A (LOCATION OF FIRST COMMON BLOCK)		0634
0635	01060	0 06 00740	ADD	K122	= '40000 (IU=SUBR)		0635
0636	01061	1 04 15401	STA	DP+1,1	GF(A)=A (IN CASE NO BLANK COMMON IS SPECIFI		0636
0637	01062	0 01 04353	JMP	C7	GO TO STMT INPUT		0637
0638		000036	M EQU	30			0638
0639	01063	-1 177742	A090 DAC*	-M,1			0639
0640	01064	0 00 00000	A091 PZE	0			0640
0641	01065	0 003031	A092 DAC	SAVX	START OF INDEX PUSH-DOWN BUFFER		0641
0642		*					0642
0643		*					0643
0644		*					0644
0645		*					0645
0646		*					0646
0647		*					0647
0648		*					0648
0649		*					0649
0650		*					0650
0651		*					0651
0652		*					0652
0653		*					0653
0654		*					0654
0655	01066	0 000000	IC00 DAC	**	LINK STORE		0655
0656	01067	0 10 03007	JST	SAV	SAVE INDEX		0656
0657	01070	0 02 00662	LDA	CC	IF CC = 73, GO TO IC 10		0657
0658	01071	0 07 01153	SUB	K108			0658
0659	01072	100040	SZE				0659
0660	01073	0 01 01125	JMP	IC19	ELSE, GO TO IC		0660
0661	01074	0 02 00651	IC10 LDA	ICSW	IF ICSW, GO TO IC12		0661
0662	01075	101040	SNZ				0662
0663	01076	0 01 01141	JMP	IC24	ELSE, GO TO IC24		0663
0664	01077	0 10 00000	IC12 CALL	F4\$IN	INPUT SYMBOLIC CARD IMAGE		0664
0665	01100	0 001155	DAC	CI			0665
0666	01101	0 02 01155	LDA	CI			0666

H O N E Y W E L L      C O M P U T E R   C O N T R O L   D I V I S I O N      P R O G R A M   D O C U M E N T A T I O N

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0667	01102	0404 70	LGR	8		GO TO IC 14	0667
0668	01103	0 11 01152	CAS	K16		=(C)	0668
0669	01104	0 01 01106	JMP	**2			0669
0670	01105	0 01 01150	JMP	IC30		COMMENT CARD (IGNORE)	0670
0671	01106	0 07 00700	SUB	K15		=(S)	0671
0672	01107	101040	SNZ				0672
0673	01110	0 01 01116	JMP	IC18		CONTROL CARD (IGNORE COLUMN 6)	0673
0674	01111	0 02 00764	LDA	K357		IF CARD COL, SIX IS	0674
0675	01112	0 03 01157	ANA	CI+2		ZERO OR BLANK, GO TO IC18	0675
0676	01113	0 07 00673	SUB	K8			0676
0677	01114	100040	SZE				0677
0678	01115	0 01 01144	JMP	IC26		ELSE, GO TO IC26	0678
0679	01116	0 04 00662 IC18	STA	CC		CC = 0,	0679
0680	01117	0 02 01157	LDA	CI+2		CI(6) = SPECIAL	0680
0681	01120	0 03 00733	ANA	K116			0681
0682	01121	0 06 00763	ADD	HC2		=1340	0682
0683	01122	0 04 01157	STA	CI+2			0683
0684	01123	0 02 00756	LDA	CRET			0684
0685	01124	0 01 01135	JMP	IC20		TC = C.R.	0685
0686	01125	0 02 00662 IC19	LDA	CC		TC = CI(CC)	0686
0687	01126	0 07 00717	SUB	K101			0687
0688	01127	0404 77	LGR	1			0688
0689	01130	0 04 00000	STA	XR			0689
0690	01131	1 02 01155	LDA	CI,1			0690
0691	01132	101001	SSC				0691
0692	01133	0404 70	LGR	8			0692
0693	01134	0 03 00727	ANA	K100			0693
0694	01135	0 04 00607 IC20	STA	TC			0694
0695	01136	0 12 00662	IRS	CC		CC = CC+1	0695
0696	01137	0 10 03016 IC22	JST	RST		RESTORE INDEX	0696
0697	01140	-0 01 01066	JMP*	IC00		RETURN	0697
0698	01141	0 02 00674 IC24	LDA	K9		TC = /, END OF LINE - STATEMENT SCAN	0698
0699	01142	0 04 00607	STA	TC			0699
0700	01143	0 01 01137	JMP	IC22		GO TO IC22	0700
0701	01144	0 10 03227 IC26	JST	LIST		LIST, CONTINUATION CARD	0701
0702	01145	0 02 00725	LDA	K107		CC = 7, IGNORE STATEMENT NO,	0702
0703	01146	0 04 00662	STA	CC			0703

0704	01147	0 01 01125	JMP	IC19	GO TO IC19	0704
0705	01150	0 10 03227	IC30 JST	LIST	PRINT CARD IMAGE	0705
0706	01151	0 01 01077	JMP	IC12	READ IN NEW CARD	0706
0707	01152	000303	K16 OCT	303	OC	0707
0708	01153	000111	K108 DEC	73		0708
0709	01154	120240	KASP BCI	1,	(SP)(SP) MUST PRECEDE CARD IMAGE BUFFER	0709
0710	01155		CI BSS	40		0710
0711	01225	120240	BCI	20,		0711
	01226	120240				
	01227	120240				
	01230	120240				
	01231	120240				
	01232	120240				
	01233	120240				
	01234	120240				
	01235	120240				
	01236	120240				
	01237	120240				
	01240	120240				
	01241	120240				
	01242	120240				
	01243	120240				
	01244	120240				
	01245	120240				
	01246	120240				
	01247	120240				
	01250	120240				
0712			*			0712
0713			*			0713
0714			*			0714
0715			*	*****		0715
0716			*	*UNINPUT COLUMN*		0716
0717			*	*****		0717
0718			*	BACK UP ONE COLUMN		0718
0719			*			0719
0720	01251	0 000000	UC00 DAC	==		0720
0721	01252	0 13 00662	IMA	CC	CC= CC-1	0721

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0722	01253	0 07 00717	SUB	K101	RETAIN (A)	0722
0723	01254	0 13 00662	IMA	CC		0723
0724	01255	-0 01 01251	JMP*	UC00		0724
0725			*			0725
0726			*			0726
0727			*			0727
0728			*		*****	0728
0729			*		*INPUT CHARACTER*	0729
0730			*		*****	0730
0731			*		INPUT ONE CHARACTER FROM EITHER	0731
0732			*		1, INPUT BUFFER (EBAR POSITIVE) OR	0732
0733			*		2, EQUIVALENCÉ BUFFER (EBAR NEGATIVE)	0733
0734	01256	0 000000	CH00	DAC	**	0734
0735	01257	0 02 00660	LDA	EBAR	IF EBAR 7 0,	0735
0736	01260	101400	SMI			0736
0737	01261	0 01 01314	JMP	CH10	GO TO CH10	0737
0738	01262	0 10 01066	CH03	JST	IC00	0738
0739	01263	0 07 00673	SUB	K8	IF BLANK, REPEAT	0739
0740	01264	101040	SNZ			0740
0741	01265	0 01 01262	JMP	CH03		0741
0742	01266	0 02 00607	LDA	TC	ELSE,	0742
0743			*			0743
0744	01267	0 11 01341	CH04	CAS	CH13	'301
0745	01270	101000	NOP			0744
0746	01271	0 01 01306	JMP	CH06		0745
0747	01272	0 11 00716	CAS	K61	'271	0746
0748	01273	0 01 01303	JMP	CH05		0747
0749	01274	101000	NOP			0748
0750	01275	0 11 00700	CAS	K15	'244	0749
0751	01276	0 01 01300	JMP	**2		0750
0752	01277	0 01 01302	JMP	CH05-1		0751
0753	01300	0 11 00715	CAS	K60	'260	0752
0754	01301	101000	NOP			0753
0755	01302	140040	CRA		ALPHA NUMERIC CHARACTER	0754
0756	01303	0 04 00643	CH05	STA	DFL	0755
0757	01304	0 02 00607	LDA	TC	DELIMITER ENTRY	0756
0758	01305	-0 01 01256	JMP*	CH00	EXIT WITH TC IN A	0757
						0758

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0759	01306	0 11 01340	CH06	CAS	K63	=1332	0759
0760	01307	0 01 01303		JMP	CH05		0760
0761	01310	101000		NOB			0761
0762	01311	0 01 01302		JMP	CH05-1		0762
0763	01312	0 04 00643	CH08	STA	DFL		0763
0764	01313	-0 01 01256		JMP*	CH00		0764
0765	01314	0 02 00644	CH10	LDA	E	IF E = EBAR	0765
0766	01315	0 11 00660		CAS	EBAR		0766
0767	01316	0 01 01320		JMP	**2		0767
0768	01317	0 01 01335		JMP	CH12	GO TO CH12	0768
0769	01320	0 04 00000		STA	0	SET E INTO INDEX	0769
0770	01321	0410 60		LLL	16	SET (B) TO ZERO	0770
0771	01322	1 02 15400		LDA	DP,1	CURRENT CHARACTER WORD	0771
0772	01323	0412 70		LLR	8		0772
0773	01324	1 04 15400		STA	DP,1	SAVE REMAINING CHARACTER IF ANY	0773
0774	01325	000201		IAB			0774
0775	01326	0 04 00607		STA	TC	TC=LEFTMOST CHARACTER	0775
0776	01327	100040		SZE		SKIP IF NEW CHARACTER WORD NEEDED	0776
0777	01330	0 01 01267		JMP	CH04		0777
0778	01331	0 02 00644		LDA	E	E=E-1	0778
0779	01332	0 07 00717		SUB	K101	*1	0779
0780	01333	0 04 00644		STA	E		0780
0781	01334	0 01 01314		JMP	CH10	PICK UP NEXT CHARACTER WORD	0781
0782	01335	140500	CH12	SSM		MAKE E MINUS	0782
0783	01336	0 04 00660		STA	EBAR		0783
0784	01337	0 01 11715		JMP	C4	GO TO ASSIGN SPEC	0784
0785	01340	000332	K63	OCT	332	OZ	0785
0786	01341	000301	CH13	OCT	301		0786
0787			*				0787
0788			*				0788
0789			*				0789
0790			*				0790
0791			*				0791
0792			*				0792
0793			*				0793
0794	01342	0 000000	ID00	DAC	**	INPUT DIGIT	0794
0795	01343	0 10 01256		JST	CH00	INPUT A CHAR	0795

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0796	01344	0 11 00716	CAS	K61	= '271 (9)	0796
0797	01345	-0 01 01342	JMP*	ID00	(A) = TC	0797
0798	01346	0 01 01353	JMP	ID10	ELSE, (A) = 0	0798
0799	01347	0 11 00715	CAS	K60	RETURN	0799
0800	01350	101000	NOP			0800
0801	01351	0 01 01353	JMP	**2		0801
0802	01352	-0 01 01342	JMP*	ID00		0802
0803	01353	140040	ID10	CRA		0803
0804	01354	-0 01 01342	JMP*	ID00		0804
0805		*				0805
0806		*				0806
0807		*				0807
0808		*				0808
0809		*				0809
0810		*				0810
0811		*				0811
0812		*				0812
0813		*				0813
0814	01355	0 000000	IA00	DAC	**	0814
0815	01356	140407	TCA		SET COUNTER	0815
0816	01357	0 04 01411	STA	IA99		0816
0817	01360	0 10 01374	JST	IA50	EXCHANGE IBUF AND ID	0817
0818	01361	140040	CRA			0818
0819	01362	0 04 00575	STA	NTID	NTID = 0	0819
0820	01363	0 10 01256	IA10	JST	CH00	0820
0821	01364	0 10 03055	JST	PACK	INPUT A CHARACTER	0821
0822	01365	0 02 00643	LDA	DFL	IF DFL NOT ZERO,	0822
0823	01366	100040	SZE		CONTINUE	0823
0824	01367	0 01 01372	JMP	IA20	ELSE,	0824
0825	01370	0 12 01411	IRS	IA99	TEST COUNTER	0825
0826	01371	0 01 01363	JMP	IA10	MORE CHARACTERS TO INPUT	0826
0827	01372	0 10 01374	IA20	JST	IA50	0827
0828	01373	-0 01 01355	JMP*	IA00	EXCHANGE ID AND IBUF	0828
0829	01374	0 000000	IA50	DAC	RETURN	0829
0830	01375	0 10 03007	JST	SAV	EXCHANGE IBUF AND ID	0830
0831	01376	0 02 01410	LDA	IA90	SAVE INDEX	0831
0832	01377	0 04 00000	STA	XR		0832



0833	01400	1 02 01504	LDA	IBUF+3,1		0833
0834	01401	1 13 01500	IMA	ID+3,1		0834
0835	01402	1 04 01504	STA	IBUF+3,1		0835
0836	01403	0 12 00000	IRS	XR		0836
0837	01404	0 01 01400	JMP	**4		0837
0838	01405	0 10 03016	JST	RST	RESTORE INDEX	0838
0839	01406	0 02 00575	LDA	NTID		0839
0840	01407	-0 01 01374	JMP*	IA50		0840
0841	01410	177775	IA90	OCT	-3	0841
0842	01411	0 00 00000	IA99	PZE	0	0842
0843			*			0843
0844			*			0844
0845			*	*****		0845
0846			*	*FINISH OPERATOR*		0846
0847			*	*****		0847
0848			*	WRAP UP LOGICAL/RELATIONAL OPERATORS		0848
0849			*			0849
0850	01412	0 000000	FN00	DAC	**	0850
0851	01413	0 02 00643	LDA	DFL	IF DFL NOT , ,	0851
0852	01414	0 04 01501	STA	IBUF		0852
0853	01415	0 07 00675	SUB	K10		0853
0854	01416	100040	SZE			0854
0855	01417	0 01 01422	JMP	FN05	GO TO FN05	0855
0856	01420	0 02 00722	LDA	K104		0856
0857	01421	0 10 01355	JST	IA00		0857
0858	01422	0 02 00731	FN05	LDA	K110	0858
0859	01423	0 04 00000	STA	XR	USE TABLE TO CONVERT OPERATOR	0859
0860	01424	1 02 01460	FN10	LDA	FN90+17,1	0860
0861	01425	0 11 01501	CAS	IBUF		0861
0862	01426	0 01 01430	JMP	**2		0862
0863	01427	0 01 01434	JMP	FN20		0863
0864	01430	0 12 00000	IRS	XR		0864
0865	01431	0 01 01424	JMP	FN10		0865
0866	01432	0 02 00607	LDA	TC		0866
0867	01433	-0 01 01412	JMP*	FN00		0867
0868	01434	1 02 01477	FN20	LDA	FN91+17,1	0868
0869	01435	0 04 00607	STA	TC	FOUND A LOGICAL OPERATOR SET INTO TC	0869

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0870	01436	-0 01 01412	JMP*	FN00					
0871	01437	000253	FN90	OCT	253,255,252,257	+-*/			0870
	01440	000255							0871
	01441	000252							
	01442	000257							
0872	01443	147317	BCI		9,NOANORLTLEEGEGTNE				0872
	01444	140716							
	01445	147722							
	01446	146324							
	01447	146305							
	01450	142721							
	01451	143705							
	01452	143724							
	01453	147305							
0873	01454	000275	OCT		275,254	*			0873
	01455	000254							
0874	01456	000001	FN91	OCT	1,2,3,4,5,6,7,10,11,12,13,14,15,16,17				0874
	01457	000002							
	01460	000003							
	01461	000004							
	01462	000005							
	01463	000006							
	01464	000007							
	01465	000010							
	01466	000011							
	01467	000012							
	01470	000013							
	01471	000014							
	01472	000015							
	01473	000016							
	01474	000017							
0875			*						0875
0876			*						0876
0877			*						0877
0878			*		*****				0878
0879			*		*INPUT DNA*				0879
0880			*		*****				0880
			*		BASIC INPUT ROUTINE, HANDLES FOLLOWING -				

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0881		*		CONSTANT CONVERSION		0681
0882		*		MODE TYPING (CONSTANTS, IMPLIED/VARIABLES)		0882
0883		*		ALL OPERATORS (TERMINATE ITEM)		0683
0884		*				0884
0885	01475	ID	BSS	4		0885
0886	001475	TID	EQU	ID	TEMP STORE FOR ID	0886
0887	01501	IBUF	BSS	3	3-WORD BUF	0887
0888	01504	0 00 00000	TIDN	PZE	0	0888
0889	01505	177727	K155	OCT	177727	0889
0890	01506	024000	K156	OCT	024000	0890
0891	01507	007777	K157	OCT	007777	0891
0892	01510	074000	K158	OCT	074000	0892
0893	01511	0 00 00000	F1	PZE	0	0893
0894	01512	0 00 00000	F2	PZE	0	0894
0895	01513	0 00 00000	F3	PZE	0	0895
0896	01514	0 00 00000	F4	PZE	0	0896
0897	01515	0 00 00000	F5	PZE	0	0897
0898	01516	0 00 00000	F6	PZE	0	0898
0899	01517	0 00 00000	L4	PZE	0	0899
0900	01520	0 00 00000	HOLF	PZE	0	0900
0901	01521	0 000000	DN00	DAC	**	0901
0902	01522	140040	DN01	CRA		0902
0903	01523	0 04 01520	STA	HOLF	SET HOLF = 0	0903
0904	01524	0 04 01514	STA	F4	F4 = 0	0904
0905	01525	0 04 00655	STA	IU		0905
0906	01526	0 04 00573	STA	NT	IU=NT=NTID=0	0906
0907	01527	0 04 00575	STA	NTID		0907
0908	01530	0 10 02741	JST	BLNK	CLEAR OUT TID = ID	0908
0909	01531	0 001475	DAC	TID		0909
0910	01532	0 10 02741	JST	BLNK		0910
0911	01533	0 001511	DAC	F1	F1,F2,F3 = 0	0911
0912	01534	140040	DN06	CRA		0912
0913	01535	0 04 00653	STA	IM		0913
0914	01536	0 04 02352	STA	DNX2		0914
0915	01537	0 10 01342	DN07	JST	INPUT DIGIT	0915
0916	01540	100040	SZE			0916
0917	01541	0 01 01603	JMP	DN14	(A) NON-ZERO, GO TO DN14	0917

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0918	01542	0 02 01477	DN10	LDA	TID+2			0918
0919	01543	0 03 01510		ANA	K158			0919
0920	01544	100040		SZE				0920
0921	01545	0 01 01575		JMP	SKIP			0921
0922	01546	0 06 00653		ADD	IM			0922
0923	01547	0405 77		ARS	1			0923
0924	01550	0 06 01514		ADD	F4	F4 = F4+1 IF NO OVERFLOW		0924
0925	01551	0 04 01514		STA	F4	AND IM ALREADY SET TO REAL		0925
0926	01552	0 02 00717		LDA	K101			0926
0927	01553	0 04 00573		STA	NT	NT=1		0927
0928	01554	0 06 00717		ADD	K101			0928
0929	01555	0 04 00655		STA	IU	IU = VAR/COD		0929
0930	01556	0 10 03202		JST	SFT	SHIFT ID LEFT		0930
0931	01557	0 001475		DAC	ID			0931
0932	01560	0 10 02754		JST	MOV3	MOVE TO TEMP STORE		0932
0933	01561	0 10 03202		JST	SFT			0933
0934	01562	0 001475		DAC	ID			0934
0935	01563	0 10 03202		JST	SFT			0935
0936	01564	0 001475		DAC	ID			0936
0937	01565	0 10 02653		JST	AD3	ID = 10*ID+TC		0937
0938	01566	0 10 02741		JST	BLNK			0938
0939	01567	0 002347		DAC	DNX1			0939
0940	01570	0 02 00607		LDA	TC			0940
0941	01571	0 07 00715		SUB	K60			0941
0942	01572	0 04 02347		STA	DNX1			0942
0943	01573	0 10 02653		JST	AD3			0943
0944	01574	0 01 01537		JMP	DN07			0944
0945	01575	0 02 00762	SKIP	LDA	MIN2			0945
0946	01576	0 06 00653		ADD	IM			0946
0947	01577	0405 77		ARS	1			0947
0948	01600	0 06 01514		ADD	F4			0948
0949	01601	0 04 01514		STA	F4			0949
0950	01602	0 01 01537		JMP	DN07			0950
0951	01603	0 02 00653	DN14	LDA	IM	IM = REAL		0951
0952	01604	0 07 00720		SUB	K102			0952
0953	01605	100040		SZE				0953
0954	01606	0 01 01704		JMP	DN50	NO, GO TO DN50		0954

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0955	01607	0 02 00675	DN16	LDA	K10	YES,	0955
0956	01610	0 04 01515	DN17	STA	F5	F5 = ','	0956
0957	01611	0 02 00643		LDA	DFL	IF DFL = 0, GO SO DN20 (5)	0957
0958	01612	100040		SZE			0958
0959	01613	0 01 02144		JMP	DN90	ELSE GO TO DN90 (9)	0959
0960	01614	0 02 00607	DN20	LDA	TC	IF TC = D, GO TO DN26	0960
0961	01615	0 07 02543		SUB	K11		0961
0962	01616	101040		SNZ			0962
0963	01617	0 01 01660		JMP	DN26		0963
0964	01620	0 07 00717		SUB	K101	ELSE, IF TC = E, GO TO DN22	0964
0965	01621	101040		SNZ			0965
0966	01622	0 01 01631		JMP	DN22	TERMINATOR = E	0966
0967	01623	0 10 01251		JST	UC00		0967
0968	01624	0 02 00675		LDA	K10	=1256 (,)	0968
0969	01625	0 04 00643		STA	DFL	SET DELIMITER FLAG	0969
0970	01626	0 02 00717		LDA	K101	=1	0970
0971	01627	0 04 00653		STA	IM	SET ITEM MODE TO INTEGER	0971
0972	01630	0 01 01772		JMP	DN67	FINISH OPERATOR AND EXIT	0972
0973			*				0973
0974	01631	0 10 01342	DN22	JST	ID00	INPUT DIGIT	0974
0975	01632	101040		SNZ		IF (A) = 0, GO TO DN30	0975
0976	01633	0 01 01670		JMP	DN30		0976
0977	01634	0 02 00607		LDA	TC	IF TC = -, GO TO DN28	0977
0978	01635	0 07 00676		SUB	K12		0978
0979	01636	101040		SNZ			0979
0980	01637	0 01 01663		JMP	DN28		0980
0981	01640	0 06 00720		ADD	K102		0981
0982	01641	101040		SNZ			0982
0983	01642	0 01 01665		JMP	DN29		0983
0984	01643	0 02 01515		LDA	F5		0984
0985	01644	0 04 00643		STA	DFL		0985
0986	01645	0 10 01251		JST	UC00	UN-INPUT COL	0986
0987	01646	0 10 01412	DN24	JST	FN00	FINISH OPERATOR	0987
0988	01647	0 02 00717	DN25	LDA	K101	IM = INT	0988
0989	01650	0 04 00653		STA	IM		0989
0990	01651	0 02 01476		LDA	ID+1	IF ID IS TOO BIG TO	0990
0991	01652	100040		SZE		BE AN INTEGER (>L2),	0991

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0992	01653	0 01 01776	JMP	DN69	GO TO DN69 (20)	0992
0993	01654	0 02 01477	LDA	ID+2		0993
0994	01655	100040	SZE			0994
0995	01656	0 01 01776	JMP	DN69		0995
0996	01657	0 01 02055	JMP	DN84	OTHERWISE, GO TO DN84(12)	0996
0997	01660	0 02 00724	DN26 LDA	K106	IM = DBL	0997
0998	01661	0 04 00653	STA	IM		0998
0999	01662	0 01 01631	JMP	DN22		0999
1000	01663	0 02 00717	DN28 LDA	K101	F2 = 1	1000
1001	01664	0 04 01512	STA	F2		1001
1002	01665	0 10 01342	DN29 JST	ID00	INPUT DIGIT	1002
1003	01666	100040	SZE		IF (A) = 0, GO TO DN30 (8.5)	1003
1004	01667	0 01 01776	JMP	DN69	ELSE, GO TO DN69 (20)	1004
1005	01670	0 02 01513	DN30 LDA	F3	F3 = 10 * F3	1005
1006	01671	0415 75	ALS	3		1006
1007	01672	0 13 01513	IMA	F3	F3 = F3 +TC	1007
1008	01673	0415 77	ALS	1		1008
1009	01674	0 06 01513	ADD	F3	INPUT DIGIT	1009
1010	01675	0 06 00607	ADD	TC		1010
1011	01676	0 07 00715	SUB	K60		1011
1012	01677	0 04 01513	STA	F3	IF (A) = 0, GO TO DN30 (8.5)	1012
1013	01700	0 10 01342	JST	ID00	ELSE, GO TO DN90 (9)	1013
1014	01701	100040	SZE			1014
1015	01702	0 01 02144	JMP	DN90		1015
1016	01703	0 01 01670	JMP	DN30		1016
1017	01704	0 02 00720	DN50 LDA	K102	IM=REA	1017
1018	01705	0 04 00653	STA	IM		1018
1019	01706	0 02 00607	LDA	TC	IF TC = ,, GO TO DN54	1019
1020	01707	0 07 00675	SUB	K10		1020
1021	01710	101040	SNZ			1021
1022	01711	0 01 01725	JMP	DN54	ELSE,	1022
1023	01712	0 02 00573	LDA	NT		1023
1024	01713	101040	SNZ		IF NT = 0, GO TO DN72	1024
1025	01714	0 01 02005	JMP	DN72		1025
1026	01715	0 02 00607	LDA	TC	IF TC = H, GO TO DN9H (22)	1026
1027	01716	0 07 02544	SUB	K14		1027
1028	01717	101040	SNZ			1028

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1029	01720	0 01 02301	JMP	DN9H		1029
1030	01721	0 02 00643	LDA	DFL	IF DFL = 0,	1030
1031	01722	100040	SZE		GO TO DN16 (4,9)	1031
1032	01723	0 01 01647	JMP	DN25	ELSE, GO TO DN25	1032
1033	01724	0 01 01607	JMP	DN16		1033
1034	01725	0 10 01342	DN54 JST	ID00	INPUT DIGIT	1034
1035	01726	101040	SNZ			1035
1036	01727	0 01 01542	JMP	DN10	IF (A) = 0, GO TO DN10 (3)	1036
1037	01730	0 02 00573	LDA	NT		1037
1038	01731	101040	SNZ		IF NT = 0, GO TO DN56	1038
1039	01732	0 01 01735	JMP	DN56		1039
1040	01733	0 02 00607	LDA	TC	F5 = TC	1040
1041	01734	0 01 01607	JMP	DN16	GO TO DN16 (4)	1041
1042	01735	140040	DN56 CRA			1042
1043	01736	0 04 00607	STA	TC	TC = )	1043
1044	01737	0 10 01251	DN58 JST	UC00	UN-INPUT A COLUMN,	1044
1045	01740	0 02 01511	LDA	F1	IF F1 = 0, GO TO DN60	1045
1046	01741	100040	SZE			1046
1047	01742	0 01 01756	JMP	DN63	ELSE, GO TO DN63 (15)	1047
1048	01743	0 02 00724	DN60 LDA	K106		1048
1049	01744	0 10 01355	JST	IA00	INPUT (6) CHARS	1049
1050	01745	0 10 02764	JST	CIB	IF IBUF = TRUE,,	1050
1051	01746	1 002534	DAC	K1+3,1		1051
1052	01747	0 01 01761	JMP	DN64		1052
1053	01750	0 10 02764	JST	CIB	IF IBUF = FALSE,,	1053
1054	01751	1 002537	DAC	K2+3,1	GO TO DN66 (16)	1054
1055	01752	0 01 01763	JMP	DN66		1055
1056	01753	0 10 02764	JST	CIB	CHECK FOR ,NOT, OPERATOR	1056
1057	01754	1 002543	DAC	KNOT+3,1	CHECK FOR ,NOT, OPERATOR	1057
1058	01755	0 01 02342	JMP	DN9N	OPERATOR IS ,NOT,	1058
1059	01756	140040	DN63 CRA		IM = 0	1059
1060	01757	0 04 00653	STA	IM		1060
1061	01760	0 01 01772	JMP	DN67	GO TO DN67 (18)	1061
1062	01761	0 02 00717	DN64 LDA	K101		1062
1063	01762	0 04 01475	STA	TID		1063
1064	01763	0 02 00717	DN66 LDA	K101		1064
1065	01764	0 04 00573	STA	NT	NAME TAG = 1 (CONSTANT)	1065

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1066	01765	0 02 00720	LDA	K102	IU=VAR	1066
1067	01766	0 04 00655	STA	IU		1067
1068	01767	0 02 00721	LDA	K103		1068
1069	01770	0 04 00653	STA	IM	IM = LOG	1069
1070	01771	0 10 01256	JST	CH00		1070
1071	01772	0 10 01412	DN67 JST	FN00	FINISH OPERATOR	1071
1072	01773	0 02 01516	DN68 LDA	F6	IF F6 = 0,	1072
1073	01774	101040	SNZ		GO TO DN70 (21)	1073
1074	01775	0 01 02000	JMP	DN70		1074
1075	01776	0 02 00675	DN69 LDA	K10		1075
1076	01777	0 04 00607	STA	TC	TC = .	1076
1077	02000	140040	DN70 CRA			1077
1078	02001	0 04 01516	STA	F6	F6 = SXF = 0	1078
1079	02002	0 04 00050	STA	SXF		1079
1080	02003	0 02 00653	LDA	IM	(A) = IM	1080
1081	02004	-0 01 01521	JMP*	DN00	RETURN	1081
1082	02005	0 02 01511	DN72 LDA	F1	IF F1 = 0, GO TO DN74	1082
1083	02006	101040	SNZ			1083
1084	02007	0 01 02013	JMP	DN74		1084
1085	02010	0 02 01511	LDA	F1	ELSE, TC = F1	1085
1086	02011	0 04 00607	STA	TC		1086
1087	02012	0 01 01737	JMP	DN58	GO TO DN58 (14)	1087
1088	02013	0 02 00607	DN74 LDA	TC	IF TC = -, GO TO DN82	1088
1089	02014	0 07 00676	SUB	K12		1089
1090	02015	101040	SNZ			1090
1091	02016	0 01 02052	JMP	DN82		1091
1092	02017	0 06 00720	ADD	K102	CHECK FOR TC = +	1092
1093	02020	101040	SNZ			1093
1094	02021	0 01 02052	JMP	DN82		1094
1095	02022	0 02 00643	LDA	DFL	IF DFL = NON-ZERO	1095
1096	02023	100040	SZE			1096
1097	02024	0 01 01756	JMP	DN63	GO TO DN63 (15)	1097
1098	02025	0 02 00607	LDA	TC		1098
1099	02026	0 11 00712	CAS	K43		1099
1100	02027	0 01 02032	JMP	*+3		1100
1101	02030	0 01 02035	JMP	DN78		1101
1102	02031	0 01 02037	JMP	DN80		1102



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1103	02032	0 11 02545	CAS	K62		1103
1104	02033	0 01 02037	JMP	DN80		1104
1105	02034	101000	NOP			1105
1106	02035	0 02 00717	DN78 LDA	K101	IM = INT	1106
1107	02036	0 04 00653	STA	IM		1107
1108	02037	0 02 00607	DN80 LDA	TC	PACK TC TO ID	1108
1109	02040	0 10 03055	JST	PACK		1109
1110	02041	0 10 01256	JST	CH00	INPUT CHAR	1110
1111	02042	0 02 00643	LDA	DFL	IF DFL IS NOT ZERO,	1111
1112	02043	100040	SZE		GO TO DN67 (18)	1112
1113	02044	0 01 01772	JMP	DN67		1113
1114	02045	0 02 00575	LDA	NTID	IF NTID = 6, GO TO DN67	1114
1115	02046	0 07 00724	SUB	K106		1115
1116	02047	100040	SZE			1116
1117	02050	0 01 02037	JMP	DN80		1117
1118	02051	0 01 01772	JMP	DN67		1118
1119	02052	0 10 01412	DN82 JST	FN00		1119
1120	02053	0 04 01511	STA	F1	F1 = CONVERTED TC	1120
1121	02054	0 01 01534	JMP	DN06	GO TO DN06 (2)	1121
1122	02055	0 02 01511	DN84 LDA	F1	IF F1 = -,	1122
1123	02056	0 07 00720	SUB	K102	GO TO DN85(13)	1123
1124	02057	100040	SZE			1124
1125	02060	0 01 02100	JMP	DN85		1125
1126	02061	140040	CRA			1126
1127	02062	0 07 01475	SUB	TID	COMPLEMENT THREE WORDS AT TID	1127
1128	02063	100040	SZE			1128
1129	02064	0 01 02071	JMP	DN8A		1129
1130	02065	0 07 01476	SUB	TID+1		1130
1131	02066	100040	SZE			1131
1132	02067	0 01 02074	JMP	DN8B		1132
1133	02070	0 01 02076	JMP	DN8C		1133
1134	02071	0 04 01475	DN8A STA	TID		1134
1135	02072	0 02 00741	LDA	K123		1135
1136	02073	0 07 01476	SUB	TID+1		1136
1137	02074	0 04 01476	DN8B STA	TID+1		1137
1138	02075	0 02 00741	LDA	K123		1138
1139	02076	0 07 01477	DN8C SUB	TID+2		1139

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1140	02077	0 04 01477	STA	TID+2		1140
1141	02100	0 02 00050	DN85 LDA	SXF	IF SXF = 0, GO TO DN67 (18)	1141
1142	02101	101040	SNZ			1142
1143	02102	0 01 01772	JMP	DN67	ELSE,	1143
1144	02103	0 02 00653	LDA	IM	IF IM NOT = REA,	1144
1145	02104	0 07 00720	SUB	K102		1145
1146	02105	100040	SZE		GO TO DN67 (18)	1146
1147	02106	0 01 01772	JMP	DN67		1147
1148	02107	0 02 01516	LDA	F6	ELSE,	1148
1149	02110	101040	SNZ		IF F6 = 0, GO TO DN87	1149
1150	02111	0 01 02127	JMP	DN87		1150
1151	02112	0 02 00723	LDA	K105		1151
1152	02113	0 04 00653	STA	IM	IM = CPX	1152
1153	02114	0 02 01475	LDA	TID	INTERCHANGE	1153
1154	02115	0 13 03637	IMA	TIDB	3 CELLS	1154
1155	02116	0 04 01475	STA	TID	TID	1155
1156	02117	0 02 01476	LDA	TID+1	WITH	1156
1157	02120	0 13 03640	IMA	TIDB+1	3 CELLS	1157
1158	02121	0 04 01476	STA	TID+1	OF	1158
1159	02122	0 02 01477	LDA	TID+2	TIDB	1159
1160	02123	0 13 03641	IMA	TIDB+2		1160
1161	02124	0 04 01477	STA	TID+2		1161
1162	02125	0 10 02555	JST	IP00	)=INPUT OPERATOR	1162
1163	02126	0 01 02000	JMP	DN70	GO TO DN70 (21)	1163
1164	02127	0 02 00607	DN87 LDA	TC	IF TC = ,	1164
1165	02130	0 07 00672	SUB	K5		1165
1166	02131	100040	SZE			1166
1167	02132	0 01 01772	JMP	DN67	TID=BAR = TID	1167
1168	02133	0 02 01475	LDA	TID	F6 = 1	1168
1169	02134	0 04 03637	STA	TIDB	GO TO DN01 (1)	1169
1170	02135	0 02 01476	LDA	TID+1		1170
1171	02136	0 04 03640	STA	TIDB+1	ELSE, GO TO DN67 (18)	1171
1172	02137	0 02 01477	LDA	TID+2		1172
1173	02140	0 04 03641	STA	TIDB+2		1173
1174	02141	0 02 00717	LDA	K101		1174
1175	02142	0 04 01516	STA	F6		1175
1176	02143	0 01 01522	JMP	DN01		1176

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1177	02144	0 02 01512	DN90	LDA	F2	IF F2= 0, GO TO DN9A (10)	1177
1178	02145	101040		SNZ			1178
1179	02146	0 01 02152		JMP	DN9A		1179
1180	02147	0 02 01513		LDA	F3	F3 = - F3	1180
1181	02150	140407		TCA			1181
1182	02151	0 04 01513		STA	F3		1182
1183	02152	0 02 01513	DN9A	LDA	F3	F4 = F3 - F4	1183
1184	02153	0 07 01514		SUB	F4		1184
1185	02154	0 04 01514		STA	F4		1185
1186	02155	0 02 00676		LDA	K12	F2 = EXP, BIAS + MANTISSA	1186
1187	02156	0 04 01512		STA	F2		1187
1188	02157	0 02 01475		LDA	TID	IF TID = 0,	1188
1189	02160	0 06 01476		ADD	TID+1		1189
1190	02161	0 06 01477		ADD	TID+2	GO TO DN85(13)	1190
1191	02162	101040		SNZ			1191
1192	02163	0 01 02100		JMP	DN85		1192
1193	02164	0 02 01477	DN9C	LDA	TID+2		1193
1194	02165	0414 77		LGL	1	NORMALIZE ID	1194
1195	02166	100400		SPL			1195
1196	02167	0 01 02176		JMP	DN9D	ID IS NORMALIZED	1196
1197	02170	0 10 03202		JST	SFT		1197
1198	02171	0 001475		DAC	ID		1198
1199			*			F2 = F2 - = SHIFTS	1199
1200	02172	0 02 01512		LDA	F2		1200
1201	02173	0 07 00717		SUB	K101		1201
1202	02174	0 04 01512		STA	F2		1202
1203	02175	0 01 02164		JMP	DN9C	CONTINUE NORMALIZE LOOP	1203
1204	02176	0 02 01514	DN9D	LDA	F4		1204
1205	02177	0 11 00757		CAS	ZERO		1205
1206	02200	0 01 02232		JMP	DN9E		1206
1207	02201	0 01 02250		JMP	DN9G	FINISHED E FACTOR LOOP	1207
1208	02202	0 12 01514		IRS	F4		1208
1209	02203	101000		NOP		F4 = F4 +1	1209
1210	02204	0 02 01505		LDA	K155	DIVIDE LOOP COUNTER	1210
1211	02205	0 04 01504		STA	TIDN		1211
1212	02206	0 10 03157		JST	SRT	RIGHT SHIFT TID	1212
1213	02207	0 001475		DAC	TID		1213

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1214	02210	0 10 03157	JST	SRT			1214
1215	02211	0 001475	DAC	TID			1215
1216	02212	0 10 03202	DND1 JST	SFT			1216
1217	02213	0 001475	DAC	TID			1217
1218	02214	0 02 01477	LDA	TID+2			1218
1219	02215	0 07 01506	SUB	K156	10 AT B=4		1219
1220	02216	101400	SMI				1220
1221	02217	0 04 01477	STA	TID+2			1221
1222	02220	101400	SMI				1222
1223	02221	0 12 01475	IRS	TID			1223
1224	02222	0 12 01504	IRS	TIDN			1224
1225	02223	0 01 02212	JMP	DND1	REDUCE DIVIDE COUNTER		1225
1226	02224	0 10 03202	JST	SFT			1226
1227	02225	0 001475	DAC	TID			1227
1228	02226	0 02 01477	LDA	TID+2			1228
1229	02227	0 03 01507	ANA	K157			1229
1230	02230	0 04 01477	STA	TID+2			1230
1231	02231	0 01 02164	JMP	DN9C			1231
1232	02232	0 07 00717	DN9E SUB	K101			1232
1233	02233	0 04 01514	STA	F4	F4 = F4-1		1233
1234	02234	0 02 01512	LDA	F2	F2 = F2+4		1234
1235	02235	0 06 00722	ADD	K104			1235
1236	02236	0 04 01512	STA	F2			1236
1237	02237	0 10 03157	JST	SRT			1237
1238	02240	0 001475	DAC	ID			1238
1239	02241	0 10 02754	JST	MOV3			1239
1240	02242	0 10 03157	JST	SRT	ID = ID*10		1240
1241	02243	0 001475	DAC	ID			1241
1242	02244	0 10 03157	JST	SRT			1242
1243	02245	0 001475	DAC	ID			1243
1244	02246	0 10 02653	JST	AD3	ADD THREE WORD INTEGERS		1244
1245	02247	0 01 02164	JMP	DN9C			1245
1246			*		CONVERT THREE WORD INTEGER TO INTERNAL FORMAT		1246
1247	02250	0 02 01477	DN9G LDA	TID+2			1247
1248	02251	000201	IAB				1248
1249	02252	0 02 01512	LDA	F2			1249
1250	02253	0401 70	LRS	8			1250

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1251	02254	101040	SNZ			1251
1252	02255	0 01 02260	JMP	++3		1252
1253	02256	0 10 03116	JST	ER00		1253
1254	02257	141705	BCI	1,CE	CONSTANT'S EXPONENT OVER 8 BITS (OVERFLOW)	1254
1255	02260	000201	IAB			1255
1256	02261	0 13 01477	IMA	TID+2		1256
1257	02262	000201	IAB			1257
1258	02263	0 02 01476	LDA	TID+1		1258
1259	02264	0414 77	LGL	1		1259
1260	02265	0402 70	LRR	8		1260
1261	02266	0 04 01476	STA	TID+1		1261
1262	02267	0402 67	LRR	9		1262
1263	02270	0 02 01475	LDA	TID	PACK UP TRIPLE PRECISION	1263
1264	02271	0414 77	LGL	1		1264
1265	02272	0402 71	LRR	7	REAL CONSTANT	1265
1266	02273	0 04 01475	STA	TID		1266
1267	02274	0 02 01512	LDA	F2		1267
1268	02275	0404 70	LGR	8		1268
1269	02276	100040	SZE			1269
1270	02277	0 01 01776	JMP	DN69	GO TO DN69 (20)	1270
1271	02300	0 01 02055	JMP	DN84	ELSE, GO TO DN84 (12)	1271
1272	02301	0 04 00653	DN9H STA	IM		1272
1273	02302	0 02 00051	LDA	SPF		1273
1274	02303	0 07 00720	SUB	K102		1274
1275	02304	100040	SZE			1275
1276	02305	0 02 00724	LDA	K106		1276
1277	02306	0 07 00742	SUB	K124		1277
1278	02307	0 06 01475	ADD	TID		1278
1279	02310	101400	SMI			1279
1280	02311	0 01 02000	JMP	DN70		1280
1281	02312	0 02 01475	LDA	TID		1281
1282	02313	0 04 01520	STA	HOLF	HOLF=NO. OF HOLLERITH CHARS.	1282
1283	02314	0 04 01513	STA	F3		1283
1284	02315	140407	TCA			1284
1285	02316	101040	SNZ			1285
1286	02317	0 01 02340	JMP	DN9K	FIELD WIDTH OF ZERO	1286
1287	02320	0 04 01512	STA	F2	F2= -1(1 CHAR) OR -2(2 CHAR)	1287

1288	02321	0 10 02741	JST	BLNK	SET ID, ID+1 (ID+2 TO ZERO)	1288
1289	02322	0 001475	DAC	TID		1289
1290	02323	0 10 01066	DN9J JST	IC00	INPUT COLUMN (INCLUDING BLANKS)	1290
1291	02324	0 10 03055	JST	PACK	PACK CHARACTERS 2 PER WORD	1291
1292	02325	0 12 01512	IRS	F2	REDUCE CHARACTER COUNT	1292
1293	02326	0 01 02323	JMP	DN9J	INPUT AND PACK MORE CHARACTERS	1293
1294	02327	0 02 01513	LDA	F3	F3= 0 IF 2 CHAR. HAVE BEEN INPUT	1294
1295	02330	0 03 00717	ANA	K101		1295
1296	02331	101040	SNZ			1296
1297	02332	0 01 02335	JMP	++3		1297
1298	02333	0 02 00673	LDA	K8	=1240 (SP)	1298
1299	02334	0 10 03055	JST	PACK	SHIFT A SPACE INTO THE LAST WORD	1299
1300	02335	0 12 00653	IRS	IM		1300
1301	02336	0 10 01256	DN9M JST	CH00	INPUT THE TERMINATING CHARACTER	1301
1302	02337	0 01 01772	JMP	DN67	FINISH OPERATOR AND EXIT	1302
1303	02340	0 10 03116	DN9K JST	ER00		1303
1304	02341	144306	BCI	1, HF		1304
1305	02342	0 02 00723	DN9N LDA	K105	SET ,NOT, OPERATOR (TC=5)	1305
1306	02343	0 04 00607	STA	TC	SET .NOT, OPERATOR (TC=5)	1306
1307	02344	140040	CRA			1307
1308	02345	0 04 00653	STA	IM	IM=0 = UNDEFINED	1308
1309	02346	0 01 01773	JMP	DN68		1309
1310	02347		DNX1 BSS	3		1310
1311	02352	0 000000	DNX2 DAC	**	OVERFLOW FLAG	1311
1312	02353	-0 01 02352	JMP*	*-1		1312
1313			*			1313
1314			*			1314
1315			*	*****		1315
1316			*	*INPUT ITEM*		1316
1317			*	*****		1317
1318			*	INPUTS AND ASSIGNS ITEM (IF ONE EXISTS)		1318
1319			*			1319
1320	02354	0 000000	I100 DAC	**		1320
1321	02355	0 10 01521	JST	DN00	INPUT DNA	1321
1322	02356	101040	SNZ		IF (A) = 0	1322
1323	02357	-0 01 02354	JMP*	I100	RETURN	1323
1324	02360	0 10 03241	JST	AS00	NO, ASSIGN ITEM	1324

1325	02361	0 02 00653	LDA	IM				1325
1326	02362	-0 01 02354	JMP*	I100		RETURN (A) = IM		1326
1327		*						1327
1328		*						1328
1329		*			*****			1329
1330		*			*INPUT OPERAND*			1330
1331		*			*****			1331
1332		*			EXIT WITH ITEM MODE IN A (TC SET TO , IF NO			1332
1333		*			OPERAND)			1333
1334		*						1334
1335	02363	0 000000	OP00	DAC	**	INPUT OPERAND		1335
1336	02364	0 10 02354	JST	I100		INPUT ITEM		1336
1337	02365	100040	SZE			IF IM = 0, SKIP		1337
1338	02366	-0 01 02363	JMP*	OP00		ELSE (A) = IM, RETURN		1338
1339	02367	0 02 00675	LDA	K10		TC = ,		1339
1340	02370	0 04 00607	STA	TC		(A) = 0		1340
1341	02371	140040	CRA					1341
1342	02372	-0 01 02363	JMP*	OP00		RETURN		1342
1343		*						1343
1344		*						1344
1345		*			*****			1345
1346		*			*INPUT NAME*			1346
1347		*			*****			1347
1348		*			INPUT OPERAND AND ENSURE THAT IT IS A NAME			1348
1349		*						1349
1350	02373	0 000000	NA00	DAC	**	INPUT NAME		1350
1351	02374	0 10 02363	JST	OP00		INPUT OPERAND		1351
1352	02375	0 02 00573	LDA	NT		IF NT = 1,		1352
1353	02376	101040	SNZ					1353
1354	02377	0 01 02402	JMP	NA10				1354
1355	02400	0 10 03116	JST	ER00				1355
1356	02401	0 00 00011	PZE	9				1356
1357	02402	0 02 00653	NA10	LDA	IM	(A) = IM		1357
1358	02403	-0 01 02373	JMP*	NA00		RETURN		1358
1359		*						1359
1360		*						1360
1361		*			*****			1361

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1362          *          *INPUT INTEGER*
1363          *          *****
1364          *          INPUT ITEM AND ENSURE THAT IT IS AN INTEGER CONSTANT
1365          *          GREATER THAN ZERO
1366          *
1367 02404    0 000000  IG00 DAC  **          INPUT INTEGER
1368 02405    0 10 01521  JST  DN00        INPUT - DNA
1369 02406    0 02 01511  LDA  F1
1370 02407    100040      SZE                    IF F1 = 0,
1371 02410    0 01 02430  JMP  IG20        AND NT = 1,
1372 02411    0 02 00573  LDA  NT          AND IM = INT,
1373 02412    101040      SNZ                    AND TID L2**15,
1374 02413    0 01 02430  JMP  IG20        GO TO IG10
1375 02414    0 02 00653  LDA  IM          ELSE, GO TO IG20
1376 02415    0 07 00717  SUB  K101
1377 02416    100040      SZE
1378 02417    0 01 02430  JMP  IG20
1379 02420    0 02 01476  LDA  TID+1
1380 02421    100040      SZE
1381 02422    0 01 02430  JMP  IG20
1382 02423    0 02 01477  LDA  TID+2
1383 02424    100040      SZE
1384 02425    0 01 02430  JMP  IG20
1385 02426    0 02 01475  IG10 LDA  TID
1386 02427    -0 01 02404  JMP* IG00
1387 02430    0 10 03116  IG20 JST  ER00        ERROR
1388 02431    144716      BCI  1,IN          INTEGER REQUIRED
1389          *
1390          *
1391          *          *****
1392          *          *INPUT INTEGER VAR/CON*
1393          *          *****
1394          *
1395 02432    0 000000  IV00 DAC  **
1396 02433    0 10 02363  JST  OP00        INPUT OPERAND
1397 02434    0 10 02635  JST  IT00        INTER TEST
1398 02435    0 10 03642  JST  TV00        TAG VARIABLE

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1399	02436	-0 01 02432	JMP*	IV00	EXIT	1399
1400			*			1400
1401			*			1401
1402			*			1402
1403			*			1403
1404			*			1404
1405			*			1405
1406	02437	0 000000	IR00	DAC	**	1406
1407	02440	0 10 02432	JST	IV00	INPUT INT VAR	1407
1408	02441	0 10 02611	JST	NC00	INPUT INT VAR/CON	1408
1409	02442	-0 01 02437	JMP*	IR00	NON-CONSTANT TEST	1409
1410			*		RETURN	1410
1411			*			1411
1412			*			1412
1413			*			1413
1414			*			1414
1415			*			1415
1416			*			1416
1417			*			1417
1418	02443	0 000000	IS00	DAC	**	1418
1419	02444	140040	IS04	CRA		1419
1420	02445	0 04 00573	STA	NT		1420
1421	02446	0 04 00653	STA	IM		1421
1422	02447	0 04 00655	STA	IU	IU = IM = IT = 0	1422
1423	02450	0 04 00575	STA	NTID	PUT LEADING 'S' IN STATEMENT NO,	1423
1424	02451	0 02 02516	LDA	K79		1424
1425	02452	0 10 03055	JST	PACK		1425
1426	02453	0 10 01342	IS10	JST	ID00	1426
1427	02454	100040	SZE		INPUT DIGIT	1427
1428	02455	0 01 02471	JMP	IS20	NOT A DIGIT GO TO IS20	1428
1429	02456	0 02 00575	LDA	NTID		1429
1430	02457	0 07 00724	SUB	K106		1430
1431	02460	101400	SMI			1431
1432	02461	0 01 02475	JMP	IS22		1432
1433	02462	0 02 00607	LDA	TC		1433
1434	02463	0 10 03055	JST	PACK		1434
1435	02464	0 02 01475	LDA	TID	PACK TC TO ID - LEGAL ST, NO, CHAR	1435

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1436	02465	0 11 02517	CAS	K79X		1436
1437	02466	0 01 02453	JMP	IS10		1437
1438	02467	0 01 02444	JMP	IS04	IGNORE LEAD ZERO ON ST, NO,	1438
1439	02470	0 01 02453	JMP	IS10		1439
1440	02471	0 02 00575	IS20 LDA	NTID		1440
1441	02472	0 07 00717	SUB	K101		1441
1442	02473	101400	SMI			1442
1443	02474	0 01 02477	JMP	IS25		1443
1444	02475	0 10 03116	IS22 JST	ER00		1444
1445	02476	151724	BCI	1,ST	ILLEGAL STATEMENT NUMBER FORMAT	1445
1446	02477	0 10 03241	IS25 JST	AS00	ASSIGN ITEM	1446
1447	02500	0 10 02672	JST	STXA		1447
1448	02501	1 02 15401	LDA	DP+1,1		1448
1449	02502	0 03 00730	ANA	K111		1449
1450	02503	1 04 15401	STA	DP+1,1	IU = 0	1450
1451	02504	0 02 00630	LDA	AF	ADDRESS FIELD IS	1451
1452	02505	0 11 00055	CAS	XST	LE XST - ALREADY ASSIGNED	1452
1453	02506	-0 01 02443	JMP*	IS00		1453
1454	02507	-0 01 02443	JMP*	IS00	OK - OTHERWISE	1454
1455	02510	0 02 00631	LDA	AT	MUST HAVE STR-ABS OTHERWISE	1455
1456	02511	0 11 00720	CAS	K102		1456
1457	02512	0 01 02514	JMP	**2		1457
1458	02513	-0 01 02443	JMP*	IS00		1458
1459	02514	0 10 03116	JST	ER00		1459
1460	02515	151316	BCI	1,RN	REFERENCE TO A SPECIFICATION SIMNT NUMBER	1460
1461	02516	000337	K79 OCT	337		1461
1462	02517	157660	K79X OCT	157660		1462
1463			*			1463
1464	02520	0 000000	SY00 DAC	**	INPUT SYMBOL	1464
1465	02521	0 02 00717	LDA	K101		1465
1466	02522	0 04 00574	STA	N7F	N7F - NOT 0 - DON'T SET IU IN AS00	1466
1467	02523	0 10 02373	JST	NA00	INPUT NAME	1467
1468	02524	-0 01 02520	JMP*	SY00	EXIT	1468
1469			*			1469
1470			*			1470
1471			*		*EXAMINE NEXT CHARACTER*	1471
1472			*			1472

```

1473          *          CHECK NEXT CHAR FOR DIGIT (BACKUP ONE COL, THEN EXIT)          1473
1474          *
1475 02525    0 000000  XN00 DAC  **
1476 02526    0 10 01342  JST  ID00          INPUT DIGIT          1475
1477 02527    0 10 01251  JST  UC00          UNINPUT COLUMM      1476
1478 02530   -0 01 02525  JMP* XN00
1479 02531    152322    K1   BCI   3,TRUE,          1478
      02532    152705
      02533    127240
1480 02534    143301    K2   BCI   3,FALSE,          1480
      02535    146323
      02536    142656
1481 02537    000247    K3   OCT   247
1482 02540    147317    KNOT BCI  3,NOT,          CONSTANT FOR ,NOT, TEST  1481
      02541    152256
      02542    120240
1483 02543    000304    K11  OCT   304          OD          1485
1484 02544    000310    K14  OCT   310          OH          1484
1485 02545    000316    K62  OCT   316          ON          1485
1486 02546    000336    K64  OCT   336          0)          1486
1487          *
1488          *
1489          *
1490          *          *****
1491          *          *ALL CHARACTER TEST*
1492          *          *****
1493 02547    0 000000  TS00 DAC  **          TEST (A) AGAINST TC      1493
1494 02550    0 07 00607  SUB   TC
1495 02551    101040    SNZ
1496 02552   -0 01 02547  JMP* TS00          RETURN          1495
1497 02553    0 10 03116  JST  ER00          TO ERROR TEST      1496
1498 02554    141710    BCI  1,CH          IMPROPER TERMINATING CHARACTER  1498
1499          *
1500          *
1501          *          *****
1502          *          *)- INPUT OPERATOR*
1503          *          *****

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1504			*						1504
1505	02555	0 000000	IP00	DAC	**				1505
1506	02556	0 02 00671		LDA	K4		TEST - )		1506
1507	02557	0 10 02547		JST	TS00				1507
1508	02560	0 10 01256		JST	CH00		INPUT CHAR		1508
1509	02561	0 10 01412		JST	FN00		FINISH OPERATOR		1509
1510	02562	0 02 00642		LDA	B		B = B-16		1510
1511	02563	0 07 00726		SUB	K109				1511
1512	02564	0 04 00642		STA	B				1512
1513	02565	140040		CRA			(A) = 0		1513
1514	02566	-0 01 02555		JMP*	IP00		RETURN		1514
1515			*						1515
1516			*						1516
1517			*						1517
1518			*		B1		COMMA OR C/R TST		1518
1519	02567	0 02 00752	B1	LDA	K134		IF TC = ', '(CONVERTED TO 17)		1519
1520	02570	0 07 00607		SUB	TC				1520
1521	02571	101040		SNZ					1521
1522	02572	-0 01 04600		JMP*	A9T2		GO TO SIDSW		1522
1523	02573	0 01 04266		JMP	A1		ELSE, GO TO C/R TEST		1523
1524			*						1524
1525			*						1525
1526	02574	0 000000	NR00	DAC	**		NON-REL TEST		1526
1527	02575	0 02 00631		LDA	AT				1527
1528	02576	0 07 00717		SUB	K101		IF AT = 1 GO TO ERROR-		1528
1529	02577	100040		SZE			TEST		1529
1530	02600	-0 01 02574		JMP*	NR00		RETURN		1530
1531	02601	0 10 03116		JST	ER00		ERROR TEST ROUTINE		1531
1532	02602	146723		BCI	1,MS		MULTIPLY DEFINED STATEMENT NUMBER		1532
1533			*						1533
1534			*						1534
1535			*			*****			1535
1536			*			*NO USAGE TEST*			1536
1537			*			*****			1537
1538			*						1538
1539	02603	0 000000	NU00	DAC	**		NO USAGE TEST		1539
1540	02604	0 02 00655		LDA	IU				1540

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1541	02605	101040	SNZ			IF IU NOT = 0, TO ERROR	1541
1542	02606	-0 01 02603	JMP*	NU00		RETURN	1542
1543	02607	0 10 03116	JST	ER00		ERROR TEST	1543
1544	02610	147325	BCI	1,NU		NAME ALREADY BEING USED	1544
1545		*					1545
1546		*					1546
1547		*					1547
1548		*					1548
1549		*					1549
1550		*					1550
1551	02611	0 000000	NC00	DAC	**	NON CONSTANT TEST	1551
1552	02612	0 02 00573	LDA	NT			1552
1553	02613	101040	SNZ			IF NT NOT = 0, TO ERROR TEST	1553
1554	02614	-0 01 02611	JMP*	NC00		RETURN	1554
1555	02615	0 10 03116	JST	ER00		ERROR TEST	1555
1556	02616	147303	BCI	1,NC		CONSTANT MUST BE PRESENT	1556
1557		*					1557
1558		*					1558
1559		*					1559
1560		*					1560
1561		*					1561
1562		*					1562
1563	02617	0 000000	NS00	DAC	**	NON SUBPROGRAM TEST	1563
1564	02620	0 02 00655	LDA	IU			1564
1565	02621	0 07 00717	SUB	K101		IF IU = 1, GO TO-	1565
1566	02622	100040	SZE			ERROR TEST	1566
1567	02623	-0 01 02617	JMP*	NS00		RETURN	1567
1568	02624	0 10 03116	JST	ER00		ERROR TEST	1568
1569	02625	147323	BCI	1,NS		SUBPROGRAM NAME NOT ALLOWED	1569
1570		*					1570
1571		*					1571
1572		*					1572
1573		*					1573
1574		*					1574
1575		*					1575
1576	02626	0 000000	AT00	DAC	**	ARRAY TEST	1576
1577	02627	0 02 00655	LDA	IU			1577

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1578	02630	0 07 00721	SUB	K103	IF IU = 3, GO TO	1578
1579	02631	101040	SNZ			1579
1580	02632	-0 01 02626	JMP*	AT00	RETURN	1580
1581	02633	0 10 03116	JST	ER00	ERROR TEST	1581
1582	02634	140722	BCI	1,AR	ITEM NOT AN ARRAY NAME	1582
1583		*				1583
1584		*				1584
1585		*		*****		1585
1586		*		*INTEGER TEST*		1586
1587		*		*****		1587
1588		*				1588
1589	02635	0 000000	IT00	DAC **	INTEGER TEST	1589
1590	02636	0 02 00653	LDA	IM		1590
1591	02637	0 07 00717	SUB	K101	IF IM = 1, GO TO-	1591
1592	02640	101040	SNZ		ERROR ROUTINE, ELSE	1592
1593	02641	-0 01 02635	JMP*	IT00	RETURN	1593
1594	02642	0 10 03116	JST	ER00	TO ERROR TEST	1594
1595	02643	144724	BCI	1,IT	ITEM NOT AN INTEGER	1595
1596		*				1596
1597		*				1597
1598	02644	0 000000	TA00	DAC **		1598
1599	02645	0 02 00631	LDA	AT	STRING-ABS TEST	1599
1600	02646	0 07 00720	SUB	K102		1600
1601	02647	101040	SNZ			1601
1602	02650	-0 01 02644	JMP*	TA00		1602
1603	02651	0 10 03116	JST	ER00		1603
1604	02652	147322	BCI	1,NR	ITEM NOT A RELATIVE VARIABLE	1604
1605		*				1605
1606		*				1606
1607		*				1607
1608		*				1608
1609		*				1609
1610		*				1610
1611		*				1611
1612		*				1612
1613	02653	0 000000	AD3	DAC **	ADD TWO THREE WORD INTEGERS.	1613
1614	02654	0 02 01475	LDA	TID		1614

1615	02655	0 06 02347	ADD	DNX1		1615
1616	02656	140320	CSA			1616
1617	02657	0 04 01475	STA	TID		1617
1618	02660	0 02 01476	LDA	TID+1		1618
1619	02661	141216	ACA			1619
1620	02662	0 06 02350	ADD	DNX1+1		1620
1621	02663	140320	CSA			1621
1622	02664	0 04 01476	STA	TID+1		1622
1623	02665	0 02 01477	LDA	TID+2		1623
1624	02666	141216	ACA			1624
1625	02667	0 06 02351	ADD	DNX1+2		1625
1626	02670	0 04 01477	STA	TID+2		1626
1627	02671	-0 01 02653	JMP*	AD3		1627
1628			*			1628
1629			*			1629
1630			*			1630
1631			*			1631
1632			*			1632
1633			*			1633
1634	02672	0 000000	STXA	DAC	**	1634
1635	02673	0 02 00040	LDA	A		1635
1636	02674	0 04 00000	STA	0		1636
1637	02675	-0 01 02672	JMP*	STXA		1637
1638	02676	0 000000	STXI	DAC	**	1638
1639	02677	0 02 00041	LDA	I		1639
1640	02700	0 04 00000	STA	0		1640
1641	02701	-0 01 02676	JMP*	STXI		1641
1642	02702	000016	K153	OCT	16	1642
1643	02703	0 000000	IM00	DAC	**	1643
1644	02704	0 04 02720	STA	T1IM		1644
1645	02705	0 02 00737	LDA	K120		1645
1646	02706	0 04 02721	STA	T2IM		1646
1647	02707	140040	CRA			1647
1648	02710	140200	RCB			1648
1649	02711	0400 77	IM10	LRL	1	1649
1650	02712	100001	SRC			1650
1651	02713	0 06 02720	ADD	T1IM		1651

\*\*\*\*\*  
\*ASSIGN INDEX REGISTER\*  
\*\*\*\*\*

MULTIPLY A BY B  
=-15

C BIT = 0  
LOW BIT OF B INTO C  
SKIP IF B = 0

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1652	02714	0 12 02721	IRS	T2IM		1652
1653	02715	0 01 02711	JMP	IM10		1653
1654	02716	0410 62	LLL	14		1654
1655	02717	-0 01 02703	JMP*	IM00	RETURN, RESULT IN A	1655
1656	02720	0 00 00000	T1IM	PZE 0		1656
1657	02721	0 00 00000	T2IM	PZE 0		1657
1658			*			1658
1659			*			1659
1660	02722	0 000000	NF00	DAC **	CONSTRUCT EXTERNAL NAME	1660
1661	02723	0 02 02730	LDA	K80	ENTRY FOR FORTRAN GENERATED	1661
1662	02724	0 04 00570	STA	NAMF		1662
1663	02725	0 02 02731	LDA	K81	SUBROUTINE CALLS,	1663
1664	02726	0 04 00572	STA	NAMF+2		1664
1665	02727	-0 01 02722	JMP*	NF00		1665
1666	02730	143244	K80	BCI 1,FS		1666
1667	02731	120240	K81	BCI 1,		1667
1668	02732	000001	KM92	DEC 1	001 = INT	1668
1669	02733	000002		DEC 2	010 = REA	1669
1670	02734	000001		DEC 1	011 = LOG	1670
1671	02735	000000		DEC 0	- -	1671
1672	02736	000004		DEC 4	101 = CPX	1672
1673	02737	000003		DEC 3	110 = DBL	1673
1674	02740	000003		OCT 3	111 = HOL	1674
1675			*			1675
1676			*			1676
1677	02741	0 000000	BLNK	DAC **	CLEAR A 3/36	1677
1678	02742	0 10 03007	JST	SAV	AREA TO ZEROS	1678
1679	02743	-0 02 02741	LDA*	BLNK		1679
1680	02744	0 04 00000	STA	XR		1680
1681	02745	140040	CRA		CLEAR 3 WORDS OF MEMORY	1681
1682	02746	1 04 00001	STA	1,1	PARAMETER INPUT ADDRESS TO 0	1682
1683	02747	1 04 00002	STA	2,1		1683
1684	02750	1 04 00000	STA	0,1		1684
1685	02751	0 10 03016	JST	RST		1685
1686	02752	0 12 02741	IRS	BLNK		1686
1687	02753	-0 01 02741	JMP*	BLNK	EXIT	1687
1688			*			1688



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1689			*						1689
1690	02754	0 000000	MOV3	DAC	**		MOVE 3-WORDS		1690
1691	02755	0 02 01475		LDA	TID		TO TEMO STORE		1691
1692	02756	0 04 02347		STA	DNX1				1692
1693	02757	0 02 01476		LDA	TID+1				1693
1694	02760	0 04 02350		STA	DNX1+1				1694
1695	02761	0 02 01477		LDA	TID+2				1695
1696	02762	0 04 02351		STA	DNX1+2				1696
1697	02763	-0 01 02754		JMP*	MOV3				1697
1698			*						1698
1699			*						1699
1700			*						1700
1701			*						1701
1702	02764	0 000000	CIB	DAC	**		COMPARE IBUF TO A CONSTANT		1702
1703	02765	0 10 03007		JST	SAV		SAVE INDEX		1703
1704	02766	-0 02 02764		LDA*	CIB		+DDR OF CON+3,0		1704
1705	02767	0 04 03006		STA	CIBZ				1705
1706	02770	140040		CRA					1706
1707	02771	0 07 00721		SUB	K103		XR=-3		1707
1708	02772	0 04 00000		STA	XR				1708
1709	02773	1 02 01504	CIBB	LDA	IBUF+3,1				1709
1710	02774	-0 07 03006		SUB*	CIBZ				1710
1711	02775	100040		SZE					1711
1712	02776	0 01 03004		JMP	CIBD				1712
1713	02777	0 12 00000		IRS	XR				1713
1714	03000	0 01 02773		JMP	CIBB				1714
1715	03001	0 12 02764	CIBC	IRS	CIB				1715
1716	03002	0 10 03016		JST	RST		RESTORE INDEX		1716
1717	03003	-0 01 02764		JMP*	CIB				1717
1718	03004	0 12 02764	CIBD	IRS	CIB				1718
1719	03005	0 01 03001		JMP	CIBC				1719
1720	03006	0 000000	CIBZ	DAC	**				1720
1721			*						1721
1722			*						1722
1723			*						1723
1724			*						1724
1725	03007	0 000000	SAV	DAC	**		SAVE INDEX REGISTER		1725

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1726	03010	0 04 03027	STA	SAVY	STACKED IN PUSH DOWN LIST	1726
1727	03011	0 02 00000	LDA	XR		1727
1728	03012	-0 04 03030	STA*	SAV9		1728
1729	03013	0 12 03030	IRS	SAV9		1729
1730	03014	0 02 03027	LDA	SAVY		1730
1731	03015	-0 01 03007	JMP*	SAV		1731
1732	03016	0 000000	RST DAC	**	RESTORE INDEX REGISTER	1732
1733	03017	0 04 03027	STA	SAVY		1733
1734	03020	0 02 03030	LDA	SAV9	UNSTACK PUSH DOWN LIST	1734
1735	03021	0 07 00717	SUB	K101		1735
1736	03022	0 04 03030	STA	SAV9		1736
1737	03023	-0 02 03030	LDA*	SAV9		1737
1738	03024	0 04 00000	STA	XR		1738
1739	03025	0 02 03027	LDA	SAVY		1739
1740	03026	-0 01 03016	JMP*	RST		1740
1741	03027	0 00 00000	SAVY PZE	0		1741
1742	03030	0 003031	SAV9 DAC	SAVX	IS INITIATED BY A092	1742
1743	03031		SAVX BSS	20		1743
1744			*			1744
1745			*			1745
1746	03055	0 000000	PACK DAC	**	PLACE CHARACTER IN A	1746
1747	03056	0 04 03113	STA	PAK7		1747
1748	03057	0 02 00575	LDA	NTID	INTO ID - UPDATE 3 WORDS OF	1748
1749	03060	101040	PAK1 SNZ		ID	1749
1750	03061	0 01 03103	JMP	PAK4		1750
1751	03062	0400 77	LRL	1		1751
1752	03063	0 06 03115	ADD	PAK9		1752
1753	03064	0 04 03114	STA	PAK8		1753
1754	03065	0 02 03113	LDA	PAK7		1754
1755	03066	000201	IAB			1755
1756	03067	100400	SPL			1756
1757	03070	0 01 03076	JMP	PAK3		1757
1758	03071	0410 50	LLL	24		1758
1759	03072	0 06 00673	ADD	K8		1759
1760	03073	-0 04 03114	PAK2 STA*	PAK8		1760
1761	03074	0 12 00575	IRS	NTID		1761
1762	03075	-0 01 03055	JMP*	PACK		1762

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1763	03076	0410 70	PAK3	LLL	8				1763
1764	03077	-0 02 03114		LDA*	PAK8				1764
1765	03100	0404 70		LGR	8				1765
1766	03101	0410 70		LLL	8				1766
1767	03102	0 01 03073		JMP	PAK2				1767
1768	03103	0 02 03112	PAK4	LDA	PAK6				1768
1769	03104	0 04 01475		STA	TID				1769
1770	03105	0 04 01476		STA	TID+1				1770
1771	03106	0 04 01477		STA	TID+2				1771
1772	03107	0 04 01500		STA	TID+3				1772
1773	03110	0 02 00575		LDA	NTID				1773
1774	03111	0 01 03062		JMP	PAK1+2				1774
1775	03112	120240	PAK6	BCI	1,				1775
1776	03113	0 000000	PAK7	DAC	**				1776
1777	03114	0 000000	PAK8	DAC	**				1777
1778	03115	0 001475	PAK9	DAC	TID				1778
1779			*						1779
1780			*						1780
1781			*			*****			1781
1782			*			*ERROR ROUTINE*			1782
1783			*			*****			1783
1784			*						1784
1785	03116	0 000000	ER00	DAC	**	ERROR ROUTINE			1785
1786	03117	0 02 03030		LDA	SAV9				1786
1787	03120	0 04 03031		STA	SAVX				1787
1788	03121	0 02 03156		LDA	ER93	=-35			1788
1789	03122	0 04 00000		STA	0	SET INDEX			1789
1790	03123	0 02 03155		LDA	ER91	(*)(*)			1790
1791	03124	1 04 14745		STA	PRI+35,1	SET ** INTO PRINT BUFFER			1791
1792	03125	0 12 00000		IRS	0	SET COMPLETE PRINT BUFFER TO *****			1792
1793	03126	0 01 03124		JMP	**2				1793
1794	03127	0 02 00662		LDA	CC				1794
1795	03130	0405 77		ARS	1	CC = CC/2			1795
1796	03131	0 07 00717		SUB	K101	=1			1796
1797	03132	100400		SPL					1797
1798	03133	140040		CRA					1798
1799	03134	0 04 00000		STA	XR				1799

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1800	03135	0 02 00660	LDA	EBAR	(NEGATIVE IF NOT WITHIN AN EQUIVALENCE ST.)	1800
1801	03136	100400	SPL		SKIP IF PROCESSING AN EQUIVALENCE STATEMENT	1801
1802	03137	0 01 03142	JMP	**3		1802
1803	03140	0 02 00761	LDA	KAEQ	= '142721 (= (E) (Q) )	1803
1804	03141	1 04 14703	STA	PRI+1,1		1804
1805	03142	-0 02 03116	LDA*	ER00		1805
1806	03143	1 04 14702	STA	PRI,1	SET ERROR TYPE LETTERS INTO THE BUFFER	1806
1807	03144	0 10 00000	CALL	F4SSYM	PRINT THE BUFFER	1807
1808	03145	0 014702	DAC	PRI		1808
1809	03146	0 10 14301	JST	PRSP	SET PRINT BUFFER TO SPACES	1809
1810	03147	0 02 00607	LDA	TC		1810
1811	03150	0 11 00756	ER20 CAS	CRET	INPUT CHARACTERS UNTIL C/R	1811
1812	03151	0 01 03153	JMP	**2		1812
1813	03152	0 01 04353	JMP	C7	GO TO STATEMENT INPUT	1813
1814	03153	0 10 01256	JST	CH00		1814
1815	03154	0 01 03150	JMP	ER20		1815
1816	03155	125252	ER91 BCI	1,**		1816
1817	03156	177735	ER93 OCT	177735	-35	1817
1818			*			1818
1819			*			1819
1820	03157	0 000000	SRT	DAC	**	1820
1821	03160	0 10 03007	JST	SAV		1821
1822	03161	-0 02 03157	LDA*	SRT	SHIFT RIGHT ONE PLACE	1822
1823	03162	0 04 00000	STA	XR	TRIPLE PRECISION	1823
1824	03163	1 02 00000	LDA	0,1		1824
1825	03164	000201	IAB			1825
1826	03165	1 02 00001	LDA	1,1		1826
1827	03166	0401 77	LRS	1		1827
1828	03167	0414 77	LGL	1		1828
1829	03170	000201	IAB			1829
1830	03171	1 04 00000	STA	0,1		1830
1831	03172	1 02 00002	LDA	2,1		1831
1832	03173	0401 77	LRS	1		1832
1833	03174	1 04 00002	STA	2,1		1833
1834	03175	000201	IAB			1834
1835	03176	1 04 00001	STA	1,1		1835
1836	03177	0 10 03016	JST	RST		1836

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1837	03200	0 12 03157	IRS	SRT		1837
1838	03201	-0 01 03157	JMP*	SRT		1838
1839			*			1839
1840			*			1840
1841	03202	0 000000	SFT	DAC	**	1841
1842	03203	0 10 03007	JST	SAV		1842
1843	03204	-0 02 03202	LDA*	SFT		1843
1844	03205	0 04 00000	STA	XR		1844
1845	03206	1 02 00000	LDA	0,1		1845
1846	03207	000201	IAB			1846
1847	03210	1 02 00001	LDA	1,1		1847
1848	03211	0411 77	LLS	1		1848
1849	03212	140320	CSA			1849
1850	03213	1 04 00001	STA	1,1		1850
1851	03214	000201	IAB			1851
1852	03215	1 04 00000	STA	0,1		1852
1853	03216	141216	ACA			1853
1854	03217	0401 77	LRS	1		1854
1855	03220	1 02 00002	LDA	2,1		1855
1856	03221	0411 77	LLS	1		1856
1857	03222	140320	CSA			1857
1858	03223	1 04 00002	STA	2,1		1858
1859	03224	0 10 03016	JST	RST		1859
1860	03225	0 12 03202	IRS	SFT		1860
1861	03226	-0 01 03202	JMP*	SFT		1861
1862			*			1862
1863	03227	0 000000	LIST	DAC	**	1863
1864	03230	0 10 14301	JST	PRSP		1864
1865	03231	100010	SR2			1865
1866	03232	0 01 03235	JMP	**3		1866
1867	03233	0 10 00000	CALL	F4SSYM	PRINT BLANK LINE	1867
1868	03234	0 014702	DAC	PR1		1868
1869	03235	0 10 00000	CALL	F4SSYM	PRINT SOURCE INPUT LINE	1869
1870	03236	0 001155	DAC	C1		1870
1871	03237	-0 01 03227	JMP*	LIST		1871
1872			*		*****	1872
1873			*		*ASSIGN ITEM*	1873

1874	*								1874
1875	*								1875
1876	*								1876
1877	*								1877
1878	*								1878
1879	*								1879
1880	*								1880
1881	*								1881
1882	*								1882
1883		0 00 00000	TOAS	PZE	0				1883
1884		0 000000	AS00	DAC	**				1884
1885		140040		CRA					1885
1886		0 04 00040		STA	A	A = A (0)			1886
1887		0 10 02672	AS04	JST	STXA				1887
1888		0 10 04062		JST	NXT	GET NEXT ENTRY			1888
1889		0 01 03355		JMP	AS30	AT END, GO TO AS30			1889
1890		0 02 00573		LDA	NT				1890
1891		0 07 00617		SUB	NTA	NT = NT(A)			1891
1892		100040		SZE					1892
1893		0 01 03244		JMP	AS04	NO, GO TO AS04			1893
1894		0 02 01475		LDA	TID				1894
1895		0 07 03634		SUB	TIDA				1895
1896		100040		SZE					1896
1897		0 01 03244		JMP	AS04	TID = TID(A)			1897
1898		0 02 01476		LDA	TID+1				1898
1899		0 07 03635		SUB	TIDA+1				1899
1900		100040		SZE					1900
1901		0 01 03244		JMP	AS04	NO, GO TO AS04			1901
1902		0 02 01477		LDA	TID+2				1902
1903		0 07 03636		SUB	TIDA+2				1903
1904		100040		SZE					1904
1905		0 01 03244		JMP	AS04				1905
1906		0 02 00573		LDA	NT	IF NT (A) ,NE. 0,			1906
1907		101040		SNZ		GO TO AS10			1907
1908		0 01 03331		JMP	AS16	GO TO AS16 (4)			1908
1909		0 02 00653	AS10	LDA	IM	IF IM .NE. IM (A),			1909
1910		0 07 00621		SUB	IMA	GO TO AS04 (1)			1910

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1911	03274	100040	SZE				1911
1912	03275	0 01 03244	JMP	AS04			1912
1913	03276	0 02 00655	LDA	IU	IF IU = 0,		1913
1914	03277	101040	SNZ		OR NOT EQUAL IU (A)		1914
1915	03300	0 01 03244	JMP	AS04	GO TO AS04 (1)		1915
1916	03301	0 07 00623	SUB	IUA			1916
1917	03302	100040	SZE				1917
1918	03303	0 01 03244	JMP	AS04	ELSE,		1918
1919	03304	0 02 00653	LDA	IM			1919
1920	03305	0 07 00723	SUB	K105	GO TO AS16 (4)		1920
1921	03306	100040	SZE				1921
1922	03307	0 01 03331	JMP	AS16			1922
1923	03310	0 10 04062	JST	NXT	ELSE, GET NEXT ENTRY		1923
1924	03311	0 01 03355	JMP	AS30			1924
1925	03312	0 02 03634	LDA	TIDA	IF ID (A) = TIDB		1925
1926	03313	0 07 03637	SUB	TIDB	GO TO AS16 (4)		1926
1927	03314	100040	SZE		ELSE, GO TO AS04 (1)		1927
1928	03315	0 01 03244	JMP	AS04			1928
1929	03316	0 02 03635	LDA	TIDA+1			1929
1930	03317	0 07 03640	SUB	TIDB+1			1930
1931	03320	100040	SZE				1931
1932	03321	0 01 03244	JMP	AS04			1932
1933	03322	0 02 03636	LDA	TIDA+2			1933
1934	03323	0 07 03641	SUB	TIDB+2			1934
1935	03324	100040	SZE				1935
1936	03325	0 01 03244	JMP	AS04			1936
1937	03326	0 02 00040	LDA	A			1937
1938	03327	0 07 00723	SUB	K105			1938
1939	03330	0 04 00040	STA	A			1939
1940	03331	0 02 00623	LDA	IUA	IF IU (A) .NE. 0		1940
1941	03332	0 06 00574	ADD	NTF			1941
1942	03333	100040	SZE				1942
1943	03334	0 01 03345	JMP	AS18	GO TO AS18 (5)		1943
1944	03335	0 02 00051	LDA	SPF	IF SPF = 0, GO TO AS18 (5)		1944
1945	03336	101040	SNZ				1945
1946	03337	0 01 03345	JMP	AS18			1946
1947	03340	0 02 00607	LDA	TC	IF TC = (		1947

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1948	03341	0 07 00702		SUB	K17		1948
1949	03342	100040		SZE			1949
1950	03343	0 01 03353		JMP	AS19		1950
1951	03344	0 10 03465		JST	TG00	TAG SUBPROGRAM	1951
1952	03345	140040	AS18	CRA		SET NTF TO 0	1952
1953	03346	0 04 00574		STA	NTF	SET NTF TO 0	1953
1954	03347	0 10 03656		JST	FA00	GO TO FETCH ASSIGNS	1954
1955	03350	0 10 02672		JST	STXA		1955
1956	03351	0 02 00653		LDA	IM		1956
1957	03352	-0 01 03241		JMP*	AS00	RETURN	1957
1958	03353	0 10 03642	AS19	JST	TV00	TAG VARIABLE	1958
1959	03354	0 01 03345		JMP	AS18		1959
1960	03355	0 10 04142	AS30	JST	BUD	BUILD ASSIGNMENT ENTRY	1960
1961	03356	0 02 00573		LDA	NT	IF NT = 1	1961
1962	03357	100040		SZE			1962
1963	03360	0 01 03365		JMP	AS32	OR IV = VAR,	1963
1964	03361	0 02 00655		LDA	IU		1964
1965	03362	0 07 00720		SUB	K102		1965
1966	03363	100040		SZE			1966
1967	03364	0 01 03407		JMP	AS40	AMD	1967
1968	03365	0 02 00653	AS32	LDA	IM	IF IM = CPX,	1968
1969	03366	0 07 00723		SUB	K105		1969
1970	03367	100040		SZE			1970
1971	03370	0 01 03407		JMP	AS40		1971
1972	03371	0 04 00655		STA	IU	MOVE 1ST PART OF	1972
1973	03372	0 02 03637		LDA	TIDB	COMPLEX ENTRY TO	1973
1974	03373	0 04 01475		STA	TID	TID AND BUILD	1974
1975	03374	0 02 03640		LDA	TIDB+1	ASSIGNMENT ENTRY	1975
1976	03375	0 04 01476		STA	TID+1		1976
1977	03376	0 02 03641		LDA	TIDB+2		1977
1978	03377	0 04 01477		STA	TID+2		1978
1979	03400	0 02 00040		LDA	A		1979
1980	03401	0 06 00723		ADD	K105		1980
1981	03402	0 04 00040		STA	A		1981
1982	03403	0 10 04142		JST	BUD		1982
1983	03404	0 02 00040		LDA	A		1983
1984	03405	0 07 00723		SUB	K105	RESTORE A	1984



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1985 03406 0 04 00040 STA A
1986 03407 0 02 00054 AS40 LDA ABAR
1987 03410 0 07 00040 SUB A
1988 03411 0 06 00723 ADD K105
1989 03412 140407 TCA
1990 03413 0 04 03240 STA TOAS
1991 03414 140407 TCA
1992 03415 0 06 00661 ADD DO
1993 03416 0 04 00661 STA DO
1994 03417 0 02 00652 LDA IFLG
1995 03420 101040 SNZ
1996 03421 0 01 03460 JMP AS60
1997 03422 0 02 00041 LDA I
1998 03423 0 07 03240 SUB TOAS
1999 03424 0 04 00041 STA I
2000 03425 141206 AOA
2001 03426 0 11 00044 AS41 CAS L
2002 03427 101000 NOP
2003 03430 0 01 03456 JMP AS50
2004 03431 0 06 00104 ADD '104
2005 03432 0 04 03463 STA AS91
2006 03433 0 06 03240 ADD TOAS
2007 03434 0 04 03464 STA AS92
2008 03435 0 07 03240 SUB TOAS
2009 03436 0 07 00104 SUB '104
2010 03437 0 07 00661 SUB DO
2011 03440 101040 SNZ
2012 03441 0 01 03331 JMP AS16
2013 03442 140407 TCA
2014 03443 0 04 03240 STA TOAS
2015 03444 140040 CRA
2016 03445 0 04 00000 STA XH
2017 03446 -0 02 03464 AS46 LDA* AS92
2018 03447 -0 04 03463 STA* AS91
2019 03450 0 02 00000 LDA 0
2020 03451 0 07 00717 SUB K101
2021 03452 0 04 00000 STA 0
    
```

```

TU = -(ABAR-A+5)
GIVING NO. OF WORDS TO MOVE TABLES UP

CO=DO+TO

IF IFLG = 0, THERE IS NO EXPRESSION TABLE
GO TO AS60

I = I - TO(TO IS NEGATIVE)
CHECK AGAINST BOTTOM OF TRIAD TABLE

=DP,1
AS91 = NEW TABLE TOP

AS92
COMPUTE SIZE OF FLOATING TABLES
=DP,1

IF ZERO, ASSIGN TABLE ONLY.

END=5
END (MOVE TABLES UP)

=1
REDUCE INDEX
    
```

1985  
1986  
1987  
1988  
1989  
1990  
1991  
1992  
1993  
1994  
1995  
1996  
1997  
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1999  
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2015  
2016  
2017  
2018  
2019  
2020  
2021

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2022	03453	0 12 03240	IRS	TUAS	= NO. OF WORDS TO MOVE	2022
2023	03454	0 01 03446	JMP	AS46		2023
2024	03455	0 01 03331	JMP	AS16		2024
2025	03456	0 10 03116	AS50 JST	ER00		2025
2026	03457	146717	BCI	1,MO	DATA POOL OVERFLOW	2026
2027	03460	0 02 00661	AS60 LDA	DO		2027
2028	03461	0 06 00057	ADD	D		2028
2029	03462	0 01 03426	JMP	AS41		2029
2030	03463	0 000000	AS91 DAC	0		2030
2031	03464	0 000000	AS92 DAC	**		2031
2032			*			2032
2033			*			2033
2034			*			2034
2035			*			2035
2036			*			2036
2037			*			2037
2038			*			2038
2039			*			2039
2040			*			2040
2041			*			2041
2042			*			2042
2043	03465	0 000000	TG00 DAC	**		2043
2044	03466	0 02 00655	LDA	IU		2044
2045	03467	0 07 00717	SUB	K101	IF IU = SUB	2045
2046	03470	101040	SNZ			2046
2047	03471	-0 01 03465	JMP*	TG00	RETURN, ELSE	2047
2048	03472	0 10 02603	JST	NU00	NO - USAGE TEST	2048
2049	03473	0 02 03534	LDA	TG22	=-21	2049
2050	03474	0 04 00000	STA	0	SET INDEX	2050
2051	03475	0 02 01476	TG04 LDA	ID+1	CHARACTERS 3 AND 4	2051
2052	03476	1 11 03607	CAS	TGT2+21,1	IMPLICIT MODE SUBR. NAME TABLE	2052
2053	03477	0 01 03501	JMP	**2		2053
2054	03500	0 01 03514	JMP	TG10		2054
2055	03501	0 12 00000	TG06 IRS	0		2055
2056	03502	0 01 03475	JMP	TG04	NOT DONE WITH TABLE	2056
2057	03503	0 02 00717	TG08 LDA	K101	=1 (IU=SUBR.)	2057
2058	03504	0 04 00655	STA	IU		2058

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2059	03505	0 10 02672	JST	STXA		2059
2060	03506	1 02 15401	LDA	DP+1,1	IU(A) = SUB	2060
2061	03507	0414 77	LGL	1		2061
2062	03510	140500	SSM			2062
2063	03511	0404 77	LGR	1		2063
2064	03512	1 04 15401	STA	DP+1,1		2064
2065	03513	-0 01 03465	JMP*	TG00	RETURN	2065
2066			*			2066
2067	03514	0 02 01475	TG10 LDA	ID	CHARACTERS 1 AND 2	2067
2068	03515	0 03 00730	ANA	K111	*'37777	2068
2069	03516	0 06 00760	ADD	HBIT	*'140000	2069
2070	03517	1 07 03562	SUB	TGT1+21,1		2070
2071	03520	100040	SZE			2071
2072	03521	0 01 03501	JMP	TG06	CONTINUE SEARCH	2072
2073	03522	0 02 01477	LDA	ID+2	CHARACTERS 5 AND 6	2073
2074	03523	1 07 03634	SUB	TGT3+21,1		2074
2075	03524	100040	SZE			2075
2076	03525	0 01 03501	JMP	TG06	CONTINUE SEARCH	2076
2077	03526	1 02 03562	LDA	TGT1+21,1		2077
2078	03527	0404 70	LGR	8		2078
2079	03530	0 03 00725	ANA	K107	*7      (=3 IF CPX, 4 IF DBL)	2079
2080	03531	0 06 00720	ADD	K102	*2      (=5 IF CPX, 6 IF DBL)	2080
2081	03532	0 10 04026	JST	DM00	DEFINE IM	2081
2082	03533	0 01 03503	JMP	TG08		2082
2083			*			2083
2084	03534	177753	TG22 OCT	177753	*-21	2084
2085			*			2085
2086			*.....	IMPLICIT MODE	SUBROUTINE NAME TABLE	2086
2087	03535	142305	TGT1 BCI	6,DECEDLCLDLS		2087
	03536	141705				
	03537	142314				
	03540	141714				
	03541	142314				
	03542	142323				
2088	03543	141723	BCI	6,CSDCCCDSCSDA		2088
	03544	142303				
	03545	141703				

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	03546	142323			
	03547	141723			
	03550	142301			
2089	03551	142301	BCI	6,DADMDADMDMS	2089
	03552	142315			
	03553	142301			
	03554	142315			
	03555	142315			
	03556	142323			
2090	03557	142302	BCI	3,DBCMCO	2090
	03560	141715			
	03561	141717			
2091	03562	154320	TGT2 BCI	6,XPXPOGOGGIN	2091
	03563	154320			
	03564	147707			
	03565	147707			
	03566	147707			
	03567	144716			
2092	03570	144716	BCI	6,INOSOSQRQRTA	2092
	03571	147723			
	03572	147723			
	03573	150722			
	03574	150722			
	03575	152301			
2093	03576	152301	BCI	6,TAODBSAXINIG	2093
	03577	147704			
	03600	141323			
	03601	140730			
	03602	144716			
	03603	144707			
2094	03604	146305	BCI	3,LEPLNJ	2094
	03605	150314			
	03606	147312			
2095	03607	120240	TGT3 BCI	6,            10        /	2095
	03610	120240			
	03611	120240			
	03612	120240			

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03613	130660					
03614	120240					
2096 03615	120240	BCI	6,	T T N	/	2096
03616	120240					
03617	120240					
03620	152240					
03621	152240					
03622	147240					
2097 03623	147262	BCI	6,N2	1 1 N	/	2097
03624	120240					
03625	120240					
03626	130640					
03627	130640					
03630	147240					
2098 03631	120240	BCI	3,	X G	/	2098
03632	154240					
03633	143640					
2099		*				2099
2100		*				2100
2101 03634		TIDA BSS	3			2101
2102 03637		TIDB BSS	3			2102
2103		*				2103
2104		* -	TV00	TAG VARIABLE		2104
2105 03642	0 000000	TV00 DAC	**			2105
2106 03643	0 02 00655	LDA	IU	IF IU = 'VAR',		2106
2107 03644	0 07 00720	SUB	K102			2107
2108 03645	101040	SNZ				2108
2109 03646	-0 01 03642	JMP*	TV00	RETURN		2109
2110 03647	0 10 02603	JST	NU00	ELSE, NO USAGE TEST		2110
2111 03650	0 10 02672	JST	STXA			2111
2112 03651	1 02 15401	LDA	DP+1,1			2112
2113 03652	0 03 00730	ANA	K111	IU (A) = 'VAR'		2113
2114 03653	140500	SSM				2114
2115 03654	1 04 15401	STA	DP+1,1			2115
2116 03655	-0 01 03642	JMP*	TV00	RETURN		2116
2117		*				2117
2118		*				2118

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2119	*						2119
2120	*						2120
2121	*						2121
2122	*						2122
2123	*			*****			2123
2124	*			*FETCH ASSIGN*			2124
2125	*			*****			2125
2126	*			SET ASSIGNMENT DATA FROM ASSIGN (EXCEPT ID)			2126
2127	*			EXPAND DIMENSION INFO IF ARRAY			2127
2128	03656	0 000000	FA00 DAC	**			2128
2129	03657	0 10 02672	JST	STXA			2129
2130	03660	1 02 15400	LDA	DP,1			2130
2131	03661	0400 61	LRL	15			2131
2132	03662	0 04 00573	STA	NT	NT=NT(A)		2132
2133	03663	140040	CRA				2133
2134	03664	0410 75	LLL	3			2134
2135	03665	0 04 00631	STA	AT	AT=AT(A)		2135
2136	03666	140040	CRA				2136
2137	03667	0410 75	LLL	3	IM = IM(A)		2137
2138	03670	0 04 00653	STA	IM			2138
2139	03671	0 04 00000	STA	0			2139
2140	03672	1 02 02731	LDA	KM92-1,1			2140
2141	03673	0 04 00633	STA	DO	DO = NUMBER OF WORDS		2141
2142	03674	0415 76	ALS	2			2142
2143	03675	0 06 00633	ADD	DO			2143
2144	03676	0 04 00612	STA	X	X = POINTER TO CONSTANT NUMBER OF WORDS		2144
2145	03677	0 10 02672	JST	STXA			2145
2146	03700	1 02 15401	LDA	DP+1,1			2146
2147	03701	0400 62	LRL	14			2147
2148	03702	0 04 00655	STA	IU			2148
2149	03703	0 07 00721	SUB	K103	IF IU NOT 'ARR'		2149
2150	03704	101040	SNZ				2150
2151	03705	0 01 03712	JMP	FA10			2151
2152	03706	140040	CRA				2152
2153	03707	0410 62	LLL	14	AF = GF(A)		2153
2154	03710	0 04 00630	STA	AF			2154
2155	03711	-0 01 03656	JMP*	FA00			2155

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2156	03712	0410 62	FA10	LLL	14		2156
2157	03713	0 04 00000		STA	0	INDEX = GF(A)	2157
2158	03714	1 02 15404		LDA	DP+4,1		2158
2159	03715	0 04 00613		STA	X1	POINTER OF DIMENSION 1	2159
2160	03716	1 02 15403		LDA	DP+3,1		2160
2161	03717	0 04 00614		STA	X2	POINTER OF DIMENSION 2	2161
2162	03720	1 02 15402		LDA	DP+2,1		2162
2163	03721	0 04 00615		STA	X3	POINTER OF DIMENSION 3	2163
2164	03722	1 02 15401		LDA	DP+1,1		2164
2165	03723	0 03 00730		ANA	K111	= '37777	2165
2166	03724	0 04 00630		STA	AF	AF = GF(GF(A))	2166
2167	03725	1 02 15400		LDA	DP,1		2167
2168	03726	0404 67		LGR	9		2168
2169	03727	0 03 00725		ANA	K107	=7	2169
2170	03730	0 04 00571		STA	ND	NUMBER OF DIMENSIONS	2170
2171	03731	0 04 00000		STA	0		2171
2172	03732	0 02 00717		LDA	K101	=1	2172
2173	03733	0 04 00635		STA	D2		2173
2174	03734	0 04 00636		STA	D3		2174
2175	03735	-1 01 03764		JMP*	FA91-1,1		2175
2176	03736	0 02 00615	FA22	LDA	X3	FETCH 3RD DIMENSION SIZE	2176
2177	03737	0 04 00000		STA	XR		2177
2178	03740	0 10 03755		JST	FA40		2178
2179	03741	0 04 00636		STA	D3	STORE D3	2179
2180	03742	0 02 00614	FA24	LDA	X2		2180
2181	03743	0 04 00000		STA	XR		2181
2182	03744	0 10 03755		JST	FA40		2182
2183	03745	0 04 00635		STA	D2	D2 = 2ND DIMENSION SIZE	2183
2184	03746	0 02 00613	FA26	LDA	X1		2184
2185	03747	0 04 00000		STA	XR		2185
2186	03750	0 10 03755		JST	FA40		2186
2187	03751	0 04 00634		STA	D1	D1 = 1ST DIMENSION SIZE	2187
2188	03752	0 10 02672		JST	STXA	EXIT WITH AF IN A	2188
2189	03753	0 02 00630		LDA	AF		2189
2190	03754	-0 01 03656		JMP*	FA00		2190
2191	03755	0 000000	FA40	DAC	==		2191
2192	03756	1 02 15400		LDA	DP,1	IM OF SUBSCRIPT VALUE	2192

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2193	03757	140100		SSP					2193
2194	03760	0404 64		LGR	12				2194
2195	03761	0 07 00723		SUB	K105	=5			2195
2196	03762	100040		SIZE		SKIP IF DUMMY SUBSCRIPT			2196
2197	03763	1 02 15404		LDA	DP+4,1	FETCH VALUE OF SUBSCRIPT			2197
2198	03764	-0 01 03755		JMP*	FA40				2198
2199	03765	0 003746	FA91	DAC	FA26				2199
2200	03766	0 003742		DAC	FA24				2200
2201	03767	0 003736		DAC	FA22				2201
2202			*						2202
2203			*						2203
2204			*						2204
2205			*						2205
2206			*						2206
2207			*						2207
2208			*						2208
2209			*						2209
2210	03770	0 000000	FL00	DAC	**				2210
2211	03771	0 10 02672		JST	STXA				2211
2212	03772	1 02 15400		LDA	DP,1	A = 5 * CL(A)			2212
2213	03773	0 03 00735		ANA	K118				2213
2214	03774	0 04 00667		STA	FLT1				2214
2215	03775	0415 76		ALS	2				2215
2216	03776	0 06 00667		ADD	FLT1	(FLT1 ALSO USED BY ASSIGN SPEC)			2216
2217	03777	0 04 00040		STA	A				2217
2218	04000	0 10 03656		JST	FA00	FETCH ASSIGN			2218
2219	04001	0 10 04005		JST	KT00	DO = = WDS /ITEM			2219
2220	04002	0 02 00040		LDA	A				2220
2221	04003	0 07 00664		SUB	F	(A) = A-F			2221
2222	04004	-0 01 03770		JMP*	FL00	RETURN			2222
2223			*						2223
2224			*						2224
2225			*						2225
2226			*						2226
2227			*						2227
2228			*						2228
2229			*						2229



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2230			*						2230
2231	04005	0 000000	KT00	DAC	**				2231
2232	04006	0 02 00655		LDA	IU		IF IU NOT 'ARR'		2232
2233	04007	0 07 00721		SUB	K103				2233
2234	04010	100040		SZE					2234
2235	04011	-0 01 04005		JMP*	KT00		RETURN		2235
2236	04012	0 02 00633		LDA	D0				2236
2237	04013	000201		IAB			D0 * D0 * D1 * D2 * D3		2237
2238	04014	0 02 00634		LDA	D1				2238
2239	04015	0 10 02703		JST	IM00		MULTIPLY A BY B		2239
2240	04016	000201		IAB					2240
2241	04017	0 02 00635		LDA	D2				2241
2242	04020	0 10 02703		JST	IM00		MULTIPLY A BY B		2242
2243	04021	000201		IAB					2243
2244	04022	0 02 00636		LDA	D3				2244
2245	04023	0 10 02703		JST	IM00		MULTIPLY A BY B		2245
2246	04024	0 04 00633		STA	D0				2246
2247	04025	-0 01 04005		JMP*	KT00		RETURN		2247
2248			*						2248
2249			*						2249
2250			*						2250
2251			*						2251
2252			*						2252
2253			*						2253
2254			*						2254
2255			*						2255
2256	04026	0 000000	DM00	DAC	**				2256
2257	04027	0 04 00653		STA	IM		IM * (A)		2257
2258	04030	0 10 02672		JST	STXA		ESTABLISH A		2258
2259	04031	1 02 15400		LDA	DP,1				2259
2260	04032	0400 67		LRL	9				2260
2261	04033	0404 75		LGR	3		IM(A) * IM		2261
2262	04034	0414 75		LGL	3				2262
2263	04035	0 06 00653		ADD	IM				2263
2264	04036	0410 67		LLL	9				2264
2265	04037	1 04 15400		STA	DP,1				2265
2266	04040	-0 01 04026		JMP*	DM00				2266

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2267          *
2268          *
2269          *
2270          *          *****
2271          *          *DEFINE AF*
2272          *          *****
2273          *          AF SUBA = AF (SET FROM A REG)
2274 04041    0 000000  DA00 DAC  **
2275 04042    0 04 00630  STA  AF          AF = (A)
2276 04043    0400 62    LRL  14
2277 04044    0 10 02672  JST  STXA
2278 04045    1 02 15401  DA10 LDA  DP+1,1  IF IU (A) NOT ARR
2279 04046    0404 62    LGR  14
2280 04047    0 11 00721  CAS  K103  GF (A) = AF
2281 04050    0 01 04052  JMP  **+2
2282 04051    0 01 04055  JMP  DA20  ELSE, GF (GF (A)) = AF
2283 04052    0410 62    LLL  14
2284 04053    1 04 15401  STA  DP+1,1
2285 04054   -0 01 04041  JMP* DA00  RETURN
2286 04055    1 02 15401  DA20 LDA  DP+1,1
2287 04056    0 03 00730  ANA  K111
2288 04057    0 04 00650  STA  GFA
2289 04060    0 04 00000  STA  0
2290 04061    0 01 04045  JMP  DA10
2291 04062    0 000000  NXT  DAC  **  GET NEXT ENTRY
2292 04063    0 02 00040  LDA  A  FROM ASSIGNMENT
2293 04064    0 06 00723  ADD  K105  =5
2294 04065    0 04 00040  STA  A
2295 04066    0 04 00000  STA  0
2296 04067    0 11 00054  CAS  ABAR
2297 04070   -0 01 04062  JMP* NXT
2298 04071    101000  NOP
2299 04072    0 12 04062  IRS  NXT
2300 04073    1 02 15400  LDA  DP,1
2301 04074    0400 61    LRL  15
2302 04075    0 04 00617  STA  NTA
2303 04076    140040  CRA          NT(A) = NT FROM (A)

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2341	04142	0 00000	BUD	DAC	**	BUILD ASSIGNMENT	2341
2342	04143	0 10 02672		JST	STXA		2342
2343	04144	0 04 00054		STA	ABAR		2343
2344	04145	0 02 01475		LDA	TID	TABLE ENTRY	2344
2345	04146	1 04 15404		STA	DP+4,1		2345
2346	04147	0 02 01476		LDA	TID+1		2346
2347	04150	1 04 15403		STA	DP+3,1		2347
2348	04151	0 02 01477		LDA	TID+2		2348
2349	04152	1 04 15402		STA	DP+2,1		2349
2350	04153	0 02 00655		LDA	IU		2350
2351	04154	0 04 00623		STA	IUA		2351
2352	04155	0414 62		LGL	14		2352
2353	04156	1 04 15401		STA	DP+1,1		2353
2354	04157	0 02 00573		LDA	NT		2354
2355	04160	0414 75		LGL	3		2355
2356	04161	0 06 00720		ADD	K102	AT = STR/+BS	2356
2357	04162	0414 75		LGL	3		2357
2358	04163	0 06 00653		ADD	IM		2358
2359	04164	0400 60		LRL	16		2359
2360	04165	0 04 00665		STA	CL		2360
2361	04166	0 02 00720		LDA	K102		2361
2362	04167	0 04 00631		STA	AT		2362
2363	04170	0 02 00040		LDA	A	CL(A) = A/5	2363
2364	04171	0 07 00723		SUB	K105		2364
2365	04172	100400		SPL			2365
2366	04173	0 01 04176		JMP	*+3		2366
2367	04174	0 12 00665		IRS	CL		2367
2368	04175	0 01 04171		JMP	*-4		2368
2369	04176	0410 47		LLL	25		2369
2370	04177	0 06 00665		ADD	CL		2370
2371	04200	1 04 15400		STA	DP,1		2371
2372	04201	100400		SPL			2372
2373	04202	-0 01 04142		JMP*	BUD		2373
2374	04203	0 02 00666		LDA	DT		2374
2375	04204	0414 77		LGL	1		2375
2376	04205	0 06 00610		ADD	TT		2376
2377	04206	0414 62		LGL	14		2377

2378	04207	1 13 15404	IMA	DP+4,1		2378
2379	04210	0 03 00730	ANA	K111		2379
2380	04211	1 06 15404	ADD	DP+4,1		2380
2381	04212	1 04 15404	STA	DP+4,1		2381
2382	04213	-0 01 04142	JMP*	BUD		2382
2383			*			2383
2384			*			2384
2385			*			2385
2386			*			2386
2387			*			2387
2388			*	*****		2388
2389			*	*DEFINE AFT*		2389
2390			*	*****		2390
2391			*	AT SUBA = AT (FROM B REG), THEN DEFINE AF		2391
2392			*			2392
2393	04214	0 000000	AF00	DAC	**	2393
2394	04215	000201	IAB			2394
2395	04216	0 04 04231	STA	AF90		2395
2396	04217	0 10 02672	JST	STXA		2396
2397	04220	0 02 04231	LDA	AF90		2397
2398	04221	0414 64	LGL	12		2398
2399	04222	1 13 15400	IMA	DP,1		2399
2400	04223	0 03 04232	ANA	AF91		2400
2401	04224	1 06 15400	ADD	DP,1		2401
2402	04225	1 04 15400	STA	DP,1	AT(A) = CONTENTS OF B INPUT	2402
2403	04226	000201	IAB			2403
2404	04227	0 10 04041	JST	DA00	DEFINE AF	2404
2405	04230	-0 01 04214	JMP*	AF00		2405
2406	04231	0 00 00000	AF90	PZE	0	2406
2407	04232	107777	AF91	OCT	107777	2407
2408			*			2408
2409			*			2409
2410			*	*****		2410
2411			*	*DEFINE LOCATION*		2411
2412			*	*****		2412
2413			*	SET AF = RPL, AT = REL		2413
2414	04233	0 000000	LO00	DAC	**	2414

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2415 04234 0 02 00717 LDA K101 REL
2416 04235 000201 IAB
2417 04236 0 02 00060 LDA RPL
2418 04237 0 10 04214 JST AF00 DEFINE AF
2419 04240 -0 01 04233 JMP* L000
2420 *
2421 * *****
2422 * *ASSIGN INTEGER CONSTANT*
2423 * *****
2424 04241 0 000000 AI00 DAC ** IM (INTEGER), IU(VARIABLE) , ASSIGN SPECIAL
2425 04242 140040 CRA **
2426 04243 0 04 01476 STA ID+1
2427 04244 0 04 01477 STA ID+2
2428 04245 0 02 00717 LDA K101 (B) = INT
2429 04246 000201 IAB
2430 04247 0 02 00720 LDA K102 (A) = VAR
2431 04250 0 10 04252 JST AA00 ASSIGN SPECIAL
2432 04251 -0 01 04241 JMP* AI00 RETURN
2433 *
2434 *
2435 * *****
2436 * *ASSIGN SPECIAL*
2437 * *****
2438 * B REG TO IM, A REG TO IU, 1 TO NT (CONSTANT), THEN
2439 * ASSIGN ITEM
2440 04252 0 000000 AA00 DAC **
2441 04253 0 04 00655 STA IU IU = (A)
2442 04254 000201 IAB
2443 04255 0 04 00653 STA IM IM = (B)
2444 04256 0 02 00717 LDA K101
2445 04257 0 04 00573 STA NT NT = 1
2446 04260 0 10 03241 JST AS00 ASSIGN ITEM
2447 04261 -0 01 04252 JMP* AA00 RETURN
2448 *
2449 *
2450 * *****
2451 * *JUMP *

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2452			*		*ILL TERM*			2452
2453			*		*****			2453
2454			*					2454
2455			*		CLEAR LAST OP FLAG FOR NO PATH TESTING			2455
2456			*					2456
2457	04262	140040	B6	CRA				2457
2458	04263	0 04 00073		STA	LSTP	LSTP = 0		2458
2459			*		SET ILLEGAL DO TERM FLAG			2459
2460	04264	0 02 00717	C5	LDA	K101			2460
2461	04265	0 04 00072		STA	LSTF	LSTF = 1		2461
2462	04266	0 02 00756	A1	LDA	CRET			2462
2463	04267	0 10 02547		JST	TS00	IF IC NOT C/R, ERROR		2463
2464	04270	0 01 04271		JMP	C6			2464
2465			*					2465
2466			*					2466
2467			*		*****			2467
2468			*		*CONTINUE*			2468
2469			*		*****			2469
2470			*		WRAPUP LOGICAL IF, CHECK TRACE STOP AND SEARCH			2470
2471			*		DO TABLE FOR DO TERMINATION			2471
2472	04271	0 02 00070	C6	LDA	LIF			2472
2473	04272	100040		SZE		IF LIF NON-ZERO,		2473
2474	04273	0 01 04333		JMP	C6H	GO TO		2474
2475	04274	0 02 00071	C6A	LDA	LSTN	IF LSTN NON-ZERO,		2475
2476	04275	100040		SZE		GO TO		2476
2477	04276	0 01 04301		JMP	C6C			2477
2478	04277	0 04 00072	C6B	STA	LSTF	LSTF = 0		2478
2479	04300	0 01 04353		JMP	C7	GO TO STATEMENT INPUT		2479
2480	04301	0 07 00065	C6C	SUB	TRF	TRACE FLAG		2480
2481	04302	101040		SNZ		SKIP IF NOT END OF TRACE ZONE		2481
2482	04303	0 04 00065		STA	TRF	SET TRF TO ZERO (TURN FLAG OFF)		2482
2483	04304	0 02 00661		LDA	DO	START OF DO TABLE		2483
2484	04305	0 06 00057		ADD	D			2484
2485	04306	0 04 00041	C6D	STA	I	I = DO + D		2485
2486	04307	0 10 02676		JST	STXI			2486
2487	04310	0 07 00661		SUB	DO			2487
2488	04311	101040		SNZ				2488

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2489	04312	0 01 04277	JMP	C6B	GO TO C6B - FINISHED DO	2489
2490	04313	1 02 15374	LDA	DP-4,1		2490
2491	04314	0 07 00071	SUB	LSTN		2491
2492	04315	100040	SZE			2492
2493	04316	0 01 04327	JMP	C6E		2493
2494	04317	0 02 00072	LDA	LSTF		2494
2495	04320	100040	SZE			2495
2496	04321	0 01 04351	JMP	C6K		2496
2497	04322	0 10 06773	JST	DQ00	DO TERMINATION	2497
2498	04323	0 02 00057	LDA	D		2498
2499	04324	0 07 00723	SUB	K105		2499
2500	04325	0 04 00057	STA	D	D = D-5	2500
2501	04326	0 02 00072	LDA	LSTF		2501
2502	04327	0 04 00072	C6E STA	LSTF		2502
2503	04330	0 02 00041	LDA	I		2503
2504	04331	0 07 00723	SUB	K105		2504
2505	04332	0 01 04306	JMP	C6D	I = I-5 - CONTINUE DO LOOP	2505
2506	04333	0 02 00053	C6H LDA	IFF		2506
2507	04334	0 04 00040	STA	A		2507
2508	04335	101040	SNZ			2508
2509	04336	0 01 04344	JMP	C6J		2509
2510	04337	0410 60	LLL	16		2510
2511	04340	0 02 13733	LDA	OMI5	(A) = JMP INSTRUCTION	2511
2512	04341	0 10 12467	JST	OB00	OUTPUT OA	2512
2513	04342	140040	CRA			2513
2514	04343	0 04 00053	STA	IFF	IFF = 0	2514
2515	04344	0 04 00040	C6J STA	A	A = 0	2515
2516	04345	0 02 00070	LDA	LIF		2516
2517	04346	0 04 00073	STA	LSTP	SET TO NON-ZERO TO PREVENT DATA ERROR MSG	2517
2518	04347	0 10 14135	JST	OS00	OUTPUT STRING - RPL	2518
2519	04350	0 01 04274	JMP	C6A		2519
2520		*				2520
2521	04351	0 10 03116	C6K JST	ER00		2521
2522	04352	142324	BCI	1,DT		2522
2523		*				2523
2524		*				2524
2525		*			*STATEMENT INPUT*	2525



2526			*						2526
2527			*						2527
2528			*						2528
2529			*						2529
2530	04353	140040	C7	CRA					2530
2531	04354	0 04 00071		STA	LSTN	LSTN = 0			2531
2532	04355	0 04 00652		STA	IFLG	IFLG = 0			2532
2533	04356	0 04 00070		STA	LIF	LIF = 0			2533
2534	04357	0 02 00113		LDA	L0	L = L (0)			2534
2535	04360	0 04 00044		STA	L				2535
2536	04361	0 02 01155		LDA	CI	CHECK CARD COLUMN 1			2536
2537	04362	0404 70		LGR	8	FOR \$ CHARACTER			2537
2538	04363	0 07 00700		SUB	K15	=(S)			2538
2539	04364	101040		SNZ					2539
2540	04365	0 01 04433		JMP	CCRD	CONTROL CARD			2540
2541	04366	0 10 02525		JST	XN00	EXAMINE NEXT CHAR			2541
2542	04367	100040		SZE					2542
2543	04370	0 01 04375		JMP	C71				2543
2544	04371	0 10 02443		JST	IS00	INPUT STATEMENT =			2544
2545	04372	0 02 00040		LDA	A				2545
2546	04373	0 04 00071		STA	LSTN	LSTN = A			2546
2547	04374	0 04 00073		STA	LSTP				2547
2548	04375	0 02 00053	C71	LDA	IFF	CHECK FOR IFF=0			2548
2549	04376	0 02 00053		LDA	IFF	IF IFF = 0,			2549
2550	04377	101040		SNZ					2550
2551	04400	0 01 04405		JMP	C7B	GO TO C7B			2551
2552	04401	0 07 00071		SUB	LSTN	IF = LSTN			2552
2553	04402	100040		SZE					2553
2554	04403	0 01 04407		JMP	C7C				2554
2555	04404	0 04 00053	C7A	STA	IFF	IFF = 0			2555
2556	04405	0 10 04416	C7B	JST	C7LT	LINE TEST			2556
2557	04406	0 01 04456		JMP	C8				2557
2558	04407	0 02 00053	C7C	LDA	IFF	IFF = A			2558
2559	04410	0 04 00040		STA	A				2559
2560	04411	0400 40		LRL	32				2560
2561	04412	0 02 13733		LDA	K201	(A) = JMP INSTRUCTION			2561
2562	04413	0 10 12467		JST	0B00	OUTPUT OA			2562

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2563	04414	140040		CRA				2563
2564	04415	0 01 04404		JMP	C7A	GO TO C7A		2564
2565	04416	0 000000	C7LT	DAC	**	LINE TEST		2565
2566	04417	0 02 01157		LDA	CI+2	CI = BLANK		2566
2567	04420	0 03 00733		ANA	K116	LIST LINE		2567
2568	04421	0 06 00673		ADD	K8	RETURN		2568
2569	04422	0 04 01157		STA	CI+2			2569
2570	04423	0 02 00607		LDA	TC			2570
2571	04424	0 07 00763		SUB	HC2	IF TC = SPECIAL		2571
2572	04425	100040		SZE				2572
2573	04426	0 01 04431		JMP	C7LU			2573
2574	04427	0 10 03227		JST	LIST			2574
2575	04430	-0 01 04416		JMP*	C7LT			2575
2576	04431	0 10 03116	C7LU	JST	ER00	CONSTRUCTION ERROR		2576
2577	04432	151703		BCI	1,SC	STATEMENT NO, ON A CONTINUATION CARD		2577
2578			*					2578
2579			*					2579
2580			*					2580
2581			*					2581
2582			*			*****		2582
2583			*			*CONTROL CARD PROCESSOR*		2583
2584	04433	0 10 14523	CCRD	JST	FS00	FLUSH BUFFER IF NECESSARY		2584
2585	04434	0 10 03227		JST	LIST	LIST CARD		2585
2586	04435	0 02 01155		LDA	CI	WORD CONTAINING COLUMN 1		2586
2587	04436	0414 64		LGL	12			2587
2588	04437	101040		SNZ				2588
2589	04440	0 02 04454		LDA	CCRK	= '030000 (EOJ CODE = 3)		2589
2590	04441	0404 72		LGR	6	TRUNCATE TO A DIGIT		2590
2591	04442	0 04 14632		STA	OCI			2591
2592	04443	0 02 00724		LDA	K106	=6		2592
2593	04444	0 04 00602		STA	KCNT	SET BUFFER WORD COUNT TO 3		2593
2594	04445	0 10 14523		JST	FS00	FLUSH BUFFER		2594
2595	04446	0 02 01155		LDA	CI			2595
2596	04447	0414 64		LGL	12	CHECK COLUMN 1 FOR CONTROL CODE 0		2596
2597	04450	100040		SZE				2597
2598	04451	0 01 03150		JMP	ER20	SKIP TO NEXT CARD (NOT CONTROL CARD)		2598
2599	04452	0 10 00000		CALL	F4\$END	CLOSE-OUT I/O DEVICES AND STOP		2599

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2600	04453	0 01 01003	JMP	A0		RESTART NEW COMPILATION	2600
2601	04454	030000	CCRK OCT	030000		EOJ CONTROL CODE	2601
2602			*				2602
2603			*		*****		2603
2604			*		*STATEMENT SCAN*		2604
2605			*		*****		2605
2606			*		DETERMINE THE CLASS OF THE STATEMENT		2606
2607			*		IF AN = IS FOUND WITH A FOLLOWING ,		2607
2608			*		THE STATEMENT IS A DO		2608
2609			*		IF NO FOLLOWING COMMA, THE PAREN FLAG		2609
2610			*		IS TESTED, IF NO PARENS, THE STATEMENT		2610
2611			*		IS ARITHMETIC ASSIGNMENT		2611
2612			*		IF PARENS WERE DETECTED AND THE FIRST		2612
2613			*		NAME IS AN ARRAY, THE STATEMENT IS		2613
2614			*		ARITHMETIC ASSIGNMENT		2614
2615			*		OTHERWISE, IT IS A STATEMENT FUNCTION		2615
2616			*		IF NO = IS FOUND, THE STATEMENT IS		2616
2617			*		PROCESSED FURTHER IN STATEMENT ID		2617
2618	04455	0 00 00000	C8T1 PZE	0			2618
2619	04456	0 02 00662	C8 LDA	CC		SAVE CC	2619
2620	04457	0 04 04576	STA	C8X9			2620
2621	04460	0 02 00717	LDA	K101			2621
2622	04461	0 04 04455	STA	C8T1		T (1) = 1	2622
2623	04462	140040	CRA				2623
2624	04463	0 04 00651	STA	ICSW		ICSW = SIR	2624
2625	04464	0 10 01256	C8A JST	CH00		INPUT CHARACTER	2625
2626	04465	0 02 00607	C8B LDA	TC		IF TC = )	2626
2627	04466	0 07 00671	SUB	K4			2627
2628	04467	100040	SZE				2628
2629	04470	0 01 04502	JMP	C8C			2629
2630	04471	0 10 01256	JST	CH00		INPUT CHAR	2630
2631	04472	0 02 00643	C8B2 LDA	DFL		IF DFL NOT ZERO	2631
2632	04473	100040	SZE				2632
2633	04474	0 01 04465	JMP	C8B		GO TO C8B	2633
2634	04475	0 02 04576	C8B4 LDA	C8X9		RESTORE CC	2634
2635	04476	0 04 00662	STA	CC			2635
2636	04477	0 02 00717	LDA	K101		IPL	2636

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2637	04500	0 04 00651	STA	ICSW	ICSW = IPL	2637
2638	04501	0 01 04602	JMP	A9	GO TO STATEMENT ID	2638
2639	04502	0 02 00607	C8C LDA	TC	IF TC NOT (,	2639
2640	04503	0 07 00702	SUB	K17		2640
2641	04504	100040	SZE			2641
2642	04505	0 01 04515	JMP	C8D	GO TO C8D	2642
2643	04506	0 02 04455	LDA	C8T1	T1 = T1 - 1	2643
2644	04507	0 07 00717	SUB	K101		2644
2645	04510	0 04 04455	STA	C8T1		2645
2646	04511	100040	C8C4 SZE		IF T1 = 0	2646
2647	04512	0 01 04475	JMP	C8B4		2647
2648	04513	0 10 01521	JST	DN00	INPUT DNA	2648
2649	04514	0 01 04472	JMP	C8B2	GO TO C8B2	2649
2650	04515	0 02 00607	C8D LDA	TC	IF TC = ,	2650
2651	04516	0 11 00752	CAS	K134	'17 ('FINISHED' CODE FOR COMMA)	2651
2652	04517	0 01 04521	JMP	**2		2652
2653	04520	0 01 04524	JMP	C8D2	TC = COMMA	2653
2654	04521	0 07 00672	SUB	K5		2654
2655	04522	100040	SZE			2655
2656	04523	0 01 04526	JMP	C8E		2656
2657	04524	0 02 04455	C8D2 LDA	C8T1	GO TO C8C4,	2657
2658	04525	0 01 04511	JMP	C8C4		2658
2659	04526	0 02 00607	C8E LDA	TC	ELSE, IF TC = '/'	2659
2660	04527	0 07 00674	SUB	K9		2660
2661	04530	101040	SNZ			2661
2662	04531	0 01 04475	JMP	C8B4	GO TO C8B4	2662
2663	04532	0 02 00607	LDA	TC		2663
2664	04533	0 07 00703	SUB	K18	IF NOT = ,	2664
2665	04534	100040	SZE			2665
2666	04535	0 01 04464	JMP	C8A	GO TO C8A	2666
2667	04536	0 02 00725	LDA	K107	INPUT 7 CHARACTERS	2667
2668	04537	0 10 01355	JST	IA00		2668
2669	04540	0 02 04576	LDA	C8X9	RESTORE CC	2669
2670	04541	0 04 00662	STA	CC		2670
2671	04542	0 02 00717	LDA	K101	IPL	2671
2672	04543	0 04 00651	STA	ICSW	ICSW = IPL	2672
2673	04544	0 02 00607	LDA	TC		2673

2674	04545	0 07 00672	SUB	K5	IF TC NOT,	2674
2675	04546	100040	SZE			2675
2676	04547	0 01 04563	JMP	C8G	GO TO C8G	2676
2677	04550	0 02 00720	LDA	K102	ELSE, INPUT 2 CHARS	2677
2678	04551	0 10 01355	JST	IA00		2678
2679	04552	0 02 01501	LDA	IBUF	IF (A) = 'DO'	2679
2680	04553	0 07 00704	SUB	K19		2680
2681	04554	101040	SNZ			2681
2682	04555	0 01 04560	JMP	**3		2682
2683	04556	0 10 03116	JST	ER00		2683
2684	04557	141715	BCI	1,CM	COMMA OUTSIDE PARENTHESES, NOT IN DO STMT.	2684
2685	04560	0 02 00722	LDA	K104		2685
2686	04561	0 10 05074	JST	NP00	FIRST NON-SPEC CHECK	2686
2687	04562	0 01 05510	JMP	C9	GO TO DO	2687
2688	04563	0 02 04455	C8G LDA	C8T1	1 IF NO ( TO LEFT OF EQUALS	2688
2689	04564	100040	SZE			2689
2690	04565	0 01 06321	JMP	G2	ARITHMETIC ASSIGNMENT STATEMENT	2690
2691	04566	0 10 02520	JST	SY00	INPUT SYMBOL	2691
2692	04567	0 02 04576	LDA	C8X9		2692
2693	04570	0 04 00662	STA	CC	RESTORE CC	2693
2694	04571	0 02 00655	LDA	IU	IF IU = SUBR	2694
2695	04572	0 07 00721	SUB	K103		2695
2696	04573	100040	SZE			2696
2697	04574	0 01 06367	JMP	G1	GO TO ARITH ST, FUNCT,	2697
2698	04575	0 01 06321	JMP	G2	OTHERWISE = ASSIGNMENT STATEMENT	2698
2699	04576	0 00 00000	C8X9 PZE	0		2699
2700			*			2700
2701			*			2701
2702			*			2702
2703			*			2703
2704			*			2704
2705			*			2705
2706			*			2706
2707	04577	0 00 00000	A9T1 PZE	0		2707
2708	04600	0 00 00000	A9T2 PZE	0		2708
2709	04601	0 00 00000	A9T3 PZE	0		2709
2710	04602	0 02 00722	A9 LDA	K104		2710

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2711	04603	0 10 01355	JST	IA00	INPUT (4) CHARS	2711
2712	04604	0 02 01501	LDA	IBUF		2712
2713	04605	0 04 00570	STA	NAMF	NAMF = IBUF	2713
2714	04606	0 02 01502	LDA	IBUF+1		2714
2715	04607	0 04 00571	STA	NAMF+1		2715
2716	04610	0 02 05070	LDA	A9Z9	INITIALIZE INDEX FOR LOOP	2716
2717	04611	0 04 00000	STA	XR	THROUGH THE STATEMENT NAMES	2717
2718	04612	0 02 00570	A9A LDA	NAMF		2718
2719	04613	1 07 04732	SUB	A9X1+30,1		2719
2720	04614	100040	SZE			2720
2721	04615	0 01 04661	JMP	A9F	READ IN REST OF	2721
2722	04616	0 02 00571	LDA	NAMF+1	CHECK REST OF SPELLING FOR	2722
2723	04617	1 07 04770	SUB	A9X2+30,1		2723
2724	04620	100040	SZE		A MATCH ON 4 CHARACTERS	2724
2725	04621	0 01 04661	JMP	A9F	NOT FOUND	2725
2726	04622	1 02 05070	LDA	A9X4+30,1		2726
2727	04623	0 03 10027	ANA	K133		2727
2728	04624	0 04 04577	STA	A9T1	T1 = NUMBER OF REMAINING CHARACTERS	2728
2729	04625	1 02 05026	LDA	A9X3+30,1	LEFT TO CHECK	2729
2730	04626	0400 63	LRL	13		2730
2731	04627	000201	IAB			2731
2732	04630	0404 75	LGR	3		2732
2733	04631	0 04 04600	STA	A9T2	T2 = ADDRESS OF ROUTINE	2733
2734	04632	000201	IAB			2734
2735	04633	0 10 05074	JST	NP00	FIRST NON-SPECIFIC. CHECK -(A) =	2735
2736	04634	0 02 04577	A9B LDA	A9T1	HIERARCHY CODE	2736
2737	04635	100040	SZE			2737
2738	04636	0 01 04640	JMP	A9C	MUST CHECK MORE CHARACTERS	2738
2739	04637	-0 01 04600	JMP*	A9T2	FINISHED CHARACTER CHECK, EXIT TO	2739
2740			*		SPECIFIC ANALYZER.	2740
2741	04640	0 07 00724	A9C SUB	K106		2741
2742	04641	100400	SPL			2742
2743	04642	0 01 04654	JMP	A9E		2743
2744	04643	0 04 04577	STA	A9T1		2744
2745	04644	0 02 00724	LDA	K106	REMAINING SPELLING IS CHECKED.	2745
2746	04645	0 04 04601	A9D STA	A9T3		2746
2747	04646	0 10 01355	JST	IA00		2747

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2748	04647	0 07 04601	SUB	A9T3		2748
2749	04650	101040	SNZ			2749
2750	04651	0 01 04634	JMP	A9B		2750
2751	04652	0 10 03116	JST	ER00		2751
2752	04653	151720	BCI	1,SP	STATEMENT NAME MISSPELLED	2752
2753	04654	0 06 00724	A9E ADD	K106		2753
2754	04655	0 13 04577	IMA	A9T1		2754
2755	04656	140040	CRA			2755
2756	04657	0 13 04577	IMA	A9T1		2756
2757	04660	0 01 04645	JMP	A9D		2757
2758	04661	0 12 00000	A9F IRS	XR	LOOP CONTROL FOR STATEMENT NAMES,	2758
2759	04662	0 01 04612	JMP	A9A	MORE NAMES - CONTINUE LOOP	2759
2760	04663	0 02 00607	LDA	TC		2760
2761	04664	0 07 00756	SUB	CRET		2761
2762	04665	100040	SZE			2762
2763	04666	0 01 04672	JMP	A9G		2763
2764	04667	0 02 00071	LDA	LSTN	TC = C/R	2764
2765	04670	101040	SNZ			2765
2766	04671	0 01 04353	JMP	C7	AND LSTN = 0 - INPUT NEW STATEMENT	2766
2767	04672	0 10 03116	A9G JST	ER00		2767
2768	04673	144704	BCI	1,ID	UNRECOGNIZED STATEMENT	2768
2769	04674	144716	A9X1 BCI	10,INREDOCOLOFUSUBLEXDI		2769
		04675		151305		
		04676		142317		
		04677		141717		
		04700		146317		
		04701		143325		
		04702		151725		
		04703		141314		
		04704		142730		
		04705		142311		
2770	04706	141717	BCI	10,COEQGOCARECOFOIFWRRE		2770
		04707		142721		
		04710		143717		
		04711		141701		
		04712		151305		
		04713		141717		

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	04714	143317			
	04715	144706			
	04716	153722			
	04717	151305			
2771	04720	141301	BCI	7,BAENREENASSTPA	2771
	04721	142716			
	04722	151305			
	04723	142716			
	04724	140723			
	04725	151724			
	04726	150301			
2772	04727	142301	BCI	2,DATR	2772
	04730	152322			
2773	04731	150322	BCI	1,PR	2773
2774	04732	152305	A9X2 BCI	10,TEALUBMPGINCBROCTEME	2774
	04733	140714			
	04734	152702			
	04735	146720			
	04736	143711			
	04737	147303			
	04740	141322			
	04741	147703			
	04742	152305			
	04743	146705			
2775	04744	146715	BCI	10,MMUITOLLTUNTRM( ITAD	2775
	04745	152711			
	04746	152317			
	04747	146314			
	04750	152325			
	04751	147324			
	04752	151315			
	04753	124240			
	04754	144724			
	04755	140704			
2776	04756	141713	BCI	3,CKDFWI	2776
	04757	142306			
	04760	153711			



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2777	04761	142215		OCT	142215				
2778	04762	151711		BCI	3,SIOPUS		D, C/R		2777
	04763	147720							2778
	04764	152723							
2779	04765	152301		BCI	2,TAAC				2779
	04766	140703							
2780	04767	144716		BCI	1,IN				2780
2781	04770	0 011101	A9X3	DAC	A3				2781
2782	04771	0 011103		DAC	A4				2782
2783	04772	0 011105		DAC	A5				2783
2784	04773	0 011107		DAC	A6				2784
2785	04774	0 011111		DAC	A7				2785
2786	04775	0 011042		DAC	R1				2786
2787	04776	0 011044		DAC	R2				2787
2788	04777	0 012303		DAC	R3				2788
2789	05000	0 011145		DAC	B2				2789
2790	05001	0 011134		DAC	B3				2790
2791	05002	0 011253		DAC	B4				2791
2792	05003	0 011335		DAC	B5				2792
2793	05004	-0 005334		DAC*	R7				2793
2794	05005	-0 006301		DAC*	R8				2794
2795	05006	-0 006330		DAC*	R9				2795
2796	05007	-0 005026		DAC*	CONT				2796
2797	05010	-0 005771		DAC*	V2				2797
2798	05011	-0 005210		DAC*	V3				2798
2799	05012	-0 005552		DAC*	V4				2799
2800	05013	-0 005543		DAC*	V5				2800
2801	05014	-0 005526		DAC*	V6				2801
2802	05015	-0 005533		DAC*	V7				2802
2803	05016	-0 005335		DAC*	V8				2803
2804	05017	0 026444		DAC	W5+'20000				2804
2805	05020	-0 005443		DAC*	W3				2805
2806	05021	-0 006233		DAC*	W7				2806
2807	05022	-0 006274		DAC*	W8				2807
2808	05023	1 011762		DAC	W4,1				2808
2809	05024	=1 032313		DAC*	TRAC+'20000,1		TRACE STATEMENT		2809
2810	05025	-0 005753		DAC*	V10				2810

2811		*							2811
2812		*							2812
2813		*							2813
2814		*							2814
2815	05026	0 02 00073	CONT LDA	LSTP				ACCOUNTS FOR POSSIBLE PATH ERROR	2815
2816	05027	0 06 00071	ADD	LSTN				ACCOUNTS FOR POSSIBLE PATH ERROR	2816
2817	05030	0 04 00073	STA	LSTP				ACCOUNTS FOR POSSIBLE PATH ERROR	2817
2818	05031	0 01 04271	JMP	C6					2818
2819		*							2819
2820			*-----THE FOLLOWING TABLE IS USED BY STATEMENT ID						2820
2821			*------(RIGHT 6 BITS) AND OUTPUT ITEM,						2821
2822	05032	000003	A9X4	OCT	000003	(00)			2822
2823	05033	030100		OCT	030100	(01) +	(AS--)		2823
2824	05034	032313		OCT	032313	(02) -	(SS--)		2824
2825	05035	031503		OCT	031503	(03) *	(MS--)		2825
2826	05036	030403		OCT	030403	(04) /	(DS--)		2826
2827	05037	000004		OCT	000004	(05) .NOT,			2827
2828	05040	000006		OCT	000006	(06) .AND,			2828
2829	05041	031405		OCT	031405	(07) .OR,	(LS--)		2829
2830	05042	000004		OCT	000004	(10) .LT,			2830
2831	05043	000005		OCT	000005	(11) .LE,			2831
2832	05044	000002		OCT	000002	(12) .EQ,			2832
2833	05045	000007		OCT	000007	(13) .GE,			2833
2834	05046	000000		OCT	000000	(14) .GT,			2834
2835	05047	000000		OCT	000000	(15) .NE,			2835
2836	05050	031003		OCT	031003	(16) =	(HS--)		2836
2837	05051	000005		OCT	000005	(17) ,			2837
2838	05052	030503		OCT	030503	(20) 'E'	(ES--)		2838
2839	05053	031600		OCT	031600	(21) 'C'	(NS--)		2839
2840	05054	000001		OCT	000001	(22) 'A'			2840
2841	05055	000000		OCT	000000	(23)			2841
2842	05056	000005		OCT	000005	(24) 'X'			2842
2843	05057	000003		OCT	000003	(25) 'H'			2843
2844	05060	000002		OCT	000002	(26) 'L'			2844
2845	05061	000000		OCT	000000	(27) 'I'			2845
2846	05062	000002		OCT	000002	(30) 'T'			2846
2847	05063	031400		OCT	031400	(31) 'F'	(LS--)		2847

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2848	05064	000001		OCT	000001				
2849	05065	000000		OCT	000000	(32)	'0'		2848
2850	05066	000001		OCT	000001				2849
2851	05067	000001		OCT	000001				2850
2852	05070	-1 177742	A9Z9	DAC*	-30,1			NO. OF ITEMS IN STMT NAME TABLE	2851
2853			*						2852
2854			*						2853
2855			*						2854
2856			*						2855
2857			*						2856
2858			*						2857
2859			*						2858
2860	05071	0 00 00000	T0NP	PZE	0				2859
2861		005071	NPT0	EQU	TONP				2860
2862	05072	0 00 00000	T2NP	PZE	0				2861
2863	05073	0 00 00000	T1NP	PZE	0				2862
2864	05074	0 000000	NP00	DAC	**				2863
2865	05075	0 04 05071		STA	NPT0			T0 = (A)	2864
2866	05076	0 02 00040		LDA	A				2865
2867	05077	0 04 05073		STA	T1NP			T1 = A	2866
2868	05100	0 02 05071		LDA	NPT0				2867
2869	05101	0 11 00725		CAS	K107			=7	2868
2870	05102	0 01 05104		JMP	**2				2869
2871	05103	0 01 05115		JMP	NP10			TRACE STMT, (MAY OCCUR ANYWHERE)	2870
2872	05104	0 11 00051		CAS	SPF			T0 , G,R, SPF, GO TO NP30	2871
2873	05105	0 01 05154		JMP	NP30			T0 = SPF, GO TO NP25	2872
2874	05106	0 01 05142		JMP	NP25				2873
2875	05107	0 02 00607		LDA	TC			IF TC = C/R	2874
2876	05110	0 07 00756		SUB	CRET			GO TO NP10	2875
2877	05111	101040		SNZ					2876
2878	05112	0 01 05115		JMP	NP10				2877
2879	05113	0 10 03116		JST	ER00			ELSE, ILLEGAL STATEMENT	2878
2880	05114	142730		BCI	1,EX			SPECIFICATION STATEMENT APPEARS AFTER	2879
2881			*					SPECIFICATION STATEMENT CLEAN-UP	2880
2882	05115	0 02 00071	NP10	LDA	LSTN				2881
2883	05116	0 04 00040		STA	A			A = LSTN	2882
2884	05117	101040		SNZ					2883

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2885	05120	0 01 05135	JMP	NP16	IF ZERO, RETURN	2885
2886	05121	0 10 03656	JST	FA00	FETCH ASSIGNS	2886
2887	05122	0 02 00721	LDA	K103	STR=REL	2887
2888	05123	0 07 00631	SUB	AT		2888
2889	05124	100040	SZE			2889
2890	05125	0 01 05140	JMP	NP20		2890
2891	05126	0 02 00630	LDA	AF		2891
2892	05127	0 10 14135	JST	OS00	OUTPUT STRING RPL	2892
2893	05130	0 10 04233	NP15 JST	L000	DEFINE LOCATION	2893
2894	05131	0 02 00570	LDA	NAMF		2894
2895	05132	0 07 04714	SUB	A9X1+16		2895
2896	05133	100040	SZE			2896
2897	05134	0 10 13663	JST	TRSE	OUTPUT TRACE COUPLING	2897
2898	05135	0 02 05073	NP16 LDA	T1NP		2898
2899	05136	0 04 00040	STA	A		2899
2900	05137	-0 01 05074	JMP*	NP00		2900
2901	05140	0 10 02574	NP20 JST	NR00	NON-REL TEST	2901
2902	05141	0 01 05130	JMP	NP15		2902
2903	05142	0 02 00070	NP25 LDA	LIF		2903
2904	05143	100040	SZE			2904
2905	05144	0 01 05135	JMP	NP16		2905
2906	05145	0 02 00073	LDA	LSTP	IF LSTP + LSTN =0	2906
2907	05146	0 06 00071	ADD	LSTN		2907
2908	05147	100040	SZE			2908
2909	05150	0 01 05115	JMP	NP10		2909
2910	05151	0 12 00073	IRS	LSTP		2910
2911	05152	0 10 03116	JST	ER00	'NO PATH' ERROR	2911
2912	05153	150310	BCI	1,PH	NO PATH LEADING TO THE STATEMENT	2912
2913	05154	0 02 00051	NP30 LDA	SPF	IF SPF 0 0	2913
2914	05155	100040	SZE			2914
2915	05156	0 01 05175	JMP	NP37		2915
2916	05157	0 02 00607	NP32 LDA	TC		2916
2917	05160	0 04 05072	STA	T2NP	T2 = TC	2917
2918	05161	0 02 00060	LDA	RPL		2918
2919	05162	0 04 00055	STA	XST	XST = RPL	2919
2920	05163	0 02 00061	LDA	BDF	BLOCK DATA SUBPROGRAM FLAG	2920
2921	05164	100040	SZE		SKIP IF NOT BLOCK DATA SUBPROGRAM	2921

2922	05165	0 01 11375	JMP	C2	GO TO RELATE COMMON	2922
2923	05166	0 04 00040	STA	A	SET LISTING FOR OCTAL ADDR.	2923
2924	05167	0 02 13733	LDA	OMI5	JMP INSTRUCTION	2924
2925	05170	0 04 00640	STA	DF	SET LISTING FOR SYMBOLIC INSTR.	2925
2926	05171	0 10 14127	JST	OA00	OUTPUT ABSOLUTE	2926
2927	05172	0 01 11375	JMP	C2	GO TO RELATE COMMON	2927
2928	05173	0 02 05072	NP35 LDA	T2NP		2928
2929	05174	0 04 00607	STA	TC		2929
2930	05175	0 02 05071	NP37 LDA	TONP		2930
2931	05176	0 04 00051	STA	SPF	SPF = T0	2931
2932	05177	0 07 00722	SUB	K104		2932
2933	05200	100040	SZE			2933
2934	05201	0 01 05115	JMP	NP10		2934
2935	05202	0 04 00040	NP40 STA	A	SET LISTING FOR OCTAL ADDR.	2935
2936	05203	0 02 00055	LDA	XST	LOCATION OF INITIAL JUMP	2936
2937	05204	0 10 14135	JST	OS00	OUTPUT STRING	2937
2938	05205	0 02 00060	LDA	RPL		2938
2939	05206	0 04 00055	STA	XST	XST = RPL	2939
2940	05207	0 01 05115	JMP	NP10	GO TO NP10	2940
2941		*				2941
2942		*				2942
2943		*				2943
2944		*				2944
2945		*				2945
2946		*				2946
2947		*				2947
2948		*				2948
2949		*				2949
2950		*				2950
2951		*				2951
2952	05210	0 10 02354	V3 JST	II00	INPUT ITEM	2952
2953	05211	101040	SNZ			2953
2954	05212	0 01 05220	JMP	V310	IM=0 (POSSIBLE UNARY + OR -)	2954
2955	05213	0 02 00643	LDA	DFL		2955
2956	05214	100040	SZE			2956
2957	05215	0 01 05220	JMP	V310	FIRST ITEM IN EXPRESSION O.K.	2957
2958	05216	0 10 03116	V308 JST	ER00	ERROR.....IF(SENSE SWITCH,..ETC).....	2958

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2959	05217	144706		BCI	1,IF	ILLEGAL IF STATEMENT TYPE	2959
2960	05220	140040	V310	CRA		(A)=0	2960
2961	05221	0 10 07041		JST	EX00	EXPRESSION EVALUATOR	2961
2962	05222	0 02 00671		LDA	K4		2962
2963	05223	0 10 02547		JST	TS00	)-TEST	2963
2964	05224	140040		CRA			2964
2965	05225	0 04 00040		STA	A	SET A TO SPECIAL (IF) ENTRY IN DATA POOL	2965
2966	05226	0 04 00000		STA	0		2966
2967	05227	0 02 00045		LDA	MFL	SET MODE OF EXPRESSION INTO SPECIAL (IF)	2967
2968	05230	0414 67		LGL	9		2968
2969	05231	1 04 15400		STA	DP,1		2969
2970	05232	0 10 13663		JST	TRSE	OUTPUT TRACE COUPLING (IF NECESSARY)	2970
2971	05233	0 02 00045		LDA	MFL	CHECK MODE FLAG FOR LOGICAL	2971
2972	05234	0 07 00721		SUB	K103		2972
2973	05235	100040		SZE			2973
2974	05236	0 01 05253		JMP	V320	ARITHMETIC IF	2974
2975	05237	0 02 00070		LDA	LIF		2975
2976	05240	100040		SZE			2976
2977	05241	0 01 05216		JMP	V308		2977
2978	05242	0 04 00630		STA	AF	SET ADDR OF SNZ AND JMP INSTR TO 00000	2978
2979	05243	0 02 13741		LDA	OMJ2	=SNZ INSTR,	2979
2980	05244	0 10 14127		JST	OA00	OUTPUT ABSOLUTE	2980
2981	05245	0 02 00060		LDA	RPL	SET LIF=CURRENT +DDR, (STRING BACK)	2981
2982	05246	0 04 00070		STA	LIF		2982
2983	05247	0 02 13733		LDA	OMI5	=JMP 0 INSTR,	2983
2984	05250	0 10 14127		JST	OA00	OUTPUT ABSOLUTE	2984
2985	05251	0 10 02525		JST	XN00	GO TO NEXT INPUT LINE	2985
2986	05252	0 01 04456		JMP	C8	GO TO STATEMENT SCAN	2986
2987							2987
2988	05253	0 07 00720	V320	SUB	K102	CHECK FOR MODE = COMPLEX	2988
2989	05254	101040		SNZ			2989
2990	05255	0 01 05216		JMP	V308	ERROR,...COMPLEX MODE EXPRESSION	2990
2991	05256	0 02 05321		LDA	V356	=-3	2991
2992	05257	0 04 00041		STA	I		2992
2993	05260	0 10 02443	V324	JST	IS00	INPUT STATEMENT NUMBER	2993
2994	05261	0 10 02676		JST	STXI	SET INDEX TO I	2994
2995	05262	0 02 00040		LDA	A		2995

H O N E Y W E L L      C O M P U T E R   C O N T R O L   D I V I S I O N      P R O G R A M   D O C U M E N T A T I O N

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2996	05263	1 04	05334	STA	T1V3+3,1	SAVE BRANCH ADDRESSES	2996
2997	05264	0 12	00041	IRS	I	I=I+1	2997
2998	05265	0 01	05316	JMP	V350	CHECK FOR TERMINAL COMMA	2998
2999	05266	0 02	05333	LDA	T3V3		2999
3000	05267	0 11	05332	CAS	T2V3	CHECK FOR ADDR-2 = ADDR-3	3000
3001	05270	0 01	05272	JMP	**2		3001
3002	05271	0 01	05302	JMP	V330	ADDR-2 = ADDR-3	3002
3003	05272	140040		CRA			3003
3004	05273	0 04	00040	STA	A		3004
3005	05274	0 02	13741	LDA	OMJ2	=SNZ INSTR.	3005
3006	05275	0 04	00640	STA	DF		3006
3007	05276	0 10	14127	JST	0A00	OUTPUT ABSOLUTE	3007
3008	05277	0 02	05332	LDA	T2V3		3008
3009	05300	0 10	05322	JST	V360	OUTPUT A JMP(ADDR-2) INSTR.	3009
3010	05301	0 02	05333	LDA	T3V3		3010
3011	05302	0 11	05331	V330 CAS	T1V3	CHECK FOR ADDR-3 = ADDR-2	3011
3012	05303	0 01	05305	JMP	**2		3012
3013	05304	0 01	05313	JMP	V340	ADDR-3 = ADDR-1	3013
3014	05305	140040		CRA			3014
3015	05306	0 04	00040	STA	A		3015
3016	05307	0 02	13742	LDA	OMJ3	=SMI INSTR.	3016
3017	05310	0 10	14127	JST	0A00	OUTPUT ABSOLUTE	3017
3018	05311	0 02	05333	LDA	T3V3		3018
3019	05312	0 10	05322	JST	V360	OUTPUT A JMP (ADDR-3) INSTR.	3019
3020	05313	0 02	05331	V340 LDA	T1V3		3020
3021	05314	0 04	00053	STA	IFF	SET IFF ' ADDR-1	3021
3022	05315	0 01	04264	JMP	C5	GO TO ILL-TERM	3022
3023				*			3023
3024	05316	0 02	00672	V350 LDA	K5		3024
3025	05317	0 10	02547	JST	TS00	COMMA TEST	3025
3026	05320	0 01	05260	JMP	V324	INPUT NEXT STATEMENT NO.	3026
3027				*			3027
3028	05321	177775		V356 OCT	177775	-3	3028
3029				*			3029
3030				*-----SUBROUTINE TO OUTPUT A RELATIVE JMP			3030
3031	05322	0 000000	V360	DAC	**		3031
3032	05323	0 04	00040	STA	A	SET ADDR. OF JUMP REF. TO A	3032

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3033	05324	140040		CRA					3033
3034	05325	000201		IAB			SET (B) = 0		3034
3035	05326	0 02 13733		LDA	OM15		SET (A) = JMP INSTR,		3035
3036	05327	0 10 12467		JST	OB00		OUTPUT OA		3036
3037	05330	-0 01 05322		JMP*	V360		EXIT		3037
3038				*					3038
3039	05331	0 00 00000	T1V3	***	**		ADDR-1		3039
3040	05332	0 00 00000	T2V3	***	**		ADDR-2		3040
3041	05333	0 00 00000	T3V3	***	**		ADDR-3		3041
3042			*						3042
3043			*		*****				3043
3044			*		*GO TO*				3044
3045			*		*****				3045
3046			*		CHECK FOR NORMAL (R740), COMPUTED (R710) OR				3046
3047			*		ASSIGNED (R730), INPUT BRANCH LIST USED BY BOTH				3047
3048			*		R710 AND R730 FOR STATEMENT NO. LIST.				3048
3049			*						3049
3050			*						3050
3051	05334	0 10 02525	R7	JST	XN00		EXAMINE NEXT CHAR		3051
3052	05335	100040		SZE					3052
3053	05336	0 01 05343		JMP	R78		GO TO TEST DFL		3053
3054	05337	0 10 02443		JST	IS00		INPUT STMT =		3054
3055	05340	0 02 00040		LDA	A		(GO TO 20)		3055
3056	05341	0 04 00053		STA	IFF		IFF = A		3056
3057	05342	0 01 04264		JMP	C5		GO TO ILLTERM		3057
3058	05343	0 02 00643	R7B	LDA	DFL				3058
3059	05344	100040		SZE					3059
3060	05345	0 01 05356		JMP	R7D				3060
3061	05346	0 10 02437		JST	IR00		GO TO I (10, 20, 30)		3061
3062	05347	0400 40		LRL	32				3062
3063	05350	0 02 13740		LDA	K206		OUTPUT JMP* INSTRUCTION		3063
3064	05351	0 10 12467		JST	OB00		OUTPUT OA		3064
3065	05352	0 02 00752		LDA	K134				3065
3066	05353	0 10 02547		JST	TS00		, TEST		3066
3067	05354	0 10 05414		JST	IB00		INPUT BRANCH LIST		3067
3068	05355	0 01 04262		JMP	B6		GO TO JUMP		3068
3069	05356	0 10 05414	R7D	JST	IB00		INPUT BRANCH LIST GO TO (10,11,12), I		3069



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3070	05357	0 02 00752	LDA	K134		3070
3071	05360	0 10 02547	JST	TS00	, TEST	3071
3072	05361	0 10 02437	JST	IR00	INPUT INT VAR	3072
3073	05362	0400 40	LRL	32		3073
3074	05363	0 02 13735	LDA	K200	OUTPUT LDA	3074
3075	05364	0 10 12467	JST	OB00	OUTPUT OA	3075
3076	05365	140040	CRA			3076
3077	05366	0 04 00040	STA	A		3077
3078	05367	0 04 00630	STA	AF	CAUSE OCTAL ADDRESS IN LISTING	3078
3079	05370	0 02 05442	LDA	K75		3079
3080	05371	0 10 14127	JST	OA00	OUTPUT ABS (STA 0) - INDEX LOAD	3080
3081	05372	0 02 00060	LDA	RPL		3081
3082	05373	0 04 00630	STA	AF	CAUSE RPL TO BE IN LISTING	3082
3083	05374	0 02 13753	LDA	K207		3083
3084	05375	0 10 13773	JST	OR00	OUTPUT RELATIVE (JMP RPL,1)	3084
3085	05376	0 02 00113	LDA	L0		3085
3086	05377	0 07 00717	R7F SUB	K101		3086
3087	05400	0 04 00041	STA	I	I = L (0)	3087
3088	05401	0 10 02676	JST	STXI		3088
3089	05402	1 02 15400	LDA	DP,1		3089
3090	05403	0 04 00040	STA	A		3090
3091	05404	0 10 02672	JST	STXA		3091
3092	05405	101040	SNZ			3092
3093	05406	0 01 04262	JMP	B6	FINISHED LOOPING ON LIST	3093
3094	05407	0410 60	LLL	16		3094
3095	05410	0 02 13733	LDA	K201	OUTPUT JMP INSTRUCTIONS	3095
3096	05411	0 10 12467	JST	OB00	OUTPUT OA (JMP 0)	3096
3097	05412	0 02 00041	LDA	I		3097
3098	05413	0 01 05377	JMP	R7F		3098
3099		*		*****		3099
3100		*		*INPUT BRANCH LIST*		3100
3101		*		*****		3101
3102		*		INPUT STATEMENT NO. LISTS FOR GO TO PROCESSOR		3102
3103	05414	0 000000	I800 DAC	**		3103
3104	05415	0 02 00113	LDA	L0		3104
3105	05416	0 07 00717	SUB	K101		3105
3106	05417	0 04 00041	STA	I	I = L0-1	3106

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3107	05420	0 10 01256	JST	CH00	INPUT CHAR	3107
3108	05421	0 02 00702	LDA	K17		3108
3109	05422	0 10 02547	JST	TS00	(= TEST	3109
3110	05423	0 10 02443	IB10 JST	IS00	INPUT STMT =	3110
3111	05424	0 10 02676	JST	STXI		3111
3112	05425	0 02 00040	LDA	A		3112
3113	05426	1 04 15400	STA	DP.1	SET POINTER OF ST, NO, INTO TRIAD TABLE	3113
3114		*			AREA	3114
3115	05427	0 02 00041	LDA	I	DP (J) = A	3115
3116	05430	0 07 00717	SUB	K101		3116
3117	05431	0 04 00041	STA	I	I = I-1	3117
3118	05432	0 02 00607	LDA	TC	IF TC = , GO TO IB10	3118
3119	05433	0 07 00672	SUB	K5		3119
3120	05434	101040	SNZ			3120
3121	05435	0 01 05423	JMP	IB10	CONTINUE LOOP	3121
3122	05436	140040	CRA			3122
3123	05437	1 04 15377	STA	DP-1,1	SET END FLAG INTO TABLE	3123
3124	05440	0 10 02555	JST	IP00	)= INPUT OPEN	3124
3125	05441	-0 01 05414	JMP*	IB00	EXIT	3125
3126	05442	0 04 00000	K75 STA	0		3126
3127		*				3127
3128		*				3128
3129		*				3129
3130		*				3130
3131		*				3131
3132		*				3132
3133	05443	0 10 02443	W3 JST	IS00	CHECK TO SEE THAT 'TO' IS INCLUDED PROPERLY	3133
3134	05444	0 02 00040	LDA	A	INPUT STMT =	3134
3135	05445	0 04 05506	STA	T1W3	SAVE A	3135
3136	05446	0 02 00607	LDA	TC		3136
3137	05447	0 07 00705	SUB	K34	CHECK FOR TO	3137
3138	05450	100040	SZE			3138
3139	05451	0 01 05460	JMP	W305	CLEAR A FOR OUTPUT REL	3139
3140	05452	0 04 00040	STA	A	CAUSE OCTAL ADDRESS IN LIST	3140
3141	05453	0 10 01256	JST	CH00	INPUT CHAR	3141
3142	05454	0 02 00607	LDA	TC		3142
3143	05455	0 07 00706	SUB	K35		3143

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3144	05456	101040		SNZ				3144
3145	05457	0 01 05462		JMP	**3			3145
3146	05460	0 10 03116	W305	JST	ER00	ERROR		3146
3147	05461	152317		BCI	1,T0	GO TO IN ASSIGN STATEMENT		3147
3148	05462	0 02 00060		LDA	RPL			3148
3149	05463	0 06 00720		ADD	K102			3149
3150	05464	0 04 00630		STA	AF	OUTPUT REL LDA **2		3150
3151	05465	0 02 13735		LDA	K200	OUTPUT LDA **2		3151
3152	05466	0 10 13773		JST	OR00	OUTPUT REL		3152
3153	05467	0 02 00060		LDA	RPL			3153
3154	05470	0 06 00720		ADD	K102			3154
3155	05471	0 04 00630		STA	AF	OUTPUT REL JMP **2		3155
3156	05472	0 02 13733		LDA	K201			3156
3157	05473	0 10 13773		JST	OR00	OUTPUT OA		3157
3158	05474	0400 40		LRL	32			3158
3159	05475	0 02 05506		LDA	T1W3			3159
3160	05476	0 04 00040		STA	A	RESTORE A		3160
3161	05477	140040		CRA				3161
3162	05500	0 10 12467		JST	0B00	OUTPUT DAC ST. NO,		3162
3163	05501	0 10 02437		JST	1R00	INPUT INTEGER VARIABLE		3163
3164	05502	0400 40		LRL	32			3164
3165	05503	0 02 13736		LDA	K202	OUTPUT STA INSTRUCTION		3165
3166	05504	0 10 12467		JST	0B00	OUTPUT OA		3166
3167	05505	0 01 04266		JMP	A1	GO TO C/R TEST		3167
3168	05506	0 00 00000	T1W3	PZE	**	TEMP STORE		3168
3169			*					3169
3170			*					3170
3171			*					3171
3172			*					3172
3173			*					3173
3174			*					3174
3175			*					3175
3176	05507	0 00 00000	C9T0	PZE	**			3176
3177	05510	0 10 02443	C9	JST	1S00	INPUT STATEMENT =		3177
3178	05511	0 10 02574		JST	NR00	NON-REL TEST		3178
3179	05512	0 02 00040		LDA	A			3179
3180	05513	0 04 05507		STA	C9T0	T0 = A		3180

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3181	05514	0 10 01251	JST	UC00	UNINPUT COLUMN	3181
3182	05515	0 10 02437	JST	IR00		3182
3183	05516	0 02 05525	LDA	C951		3183
3184	05517	0 10 02547	JST	TS00		3184
3185	05520	0 02 05507	LDA	C9T0	(A) = T0	3185
3186	05521	000201	IAB			3186
3187	05522	0 10 06702	JST	DP00	DO INPUT	3187
3188	05523	0 10 06747	JST	DS00	DO INITIALIZE	3188
3189	05524	0 01 04264	JMP	C5	GO TO ILLTERM	3189
3190	05525	000016	C951 OCT	16	=	3190
3191			*			3191
3192			*			3192
3193			*			3193
3194			*	*****		3194
3195			*	*END FILE*		3195
3196			*	*****		3196
3197			*	*BACKSPACE*		3197
3198			*	*REWIND *		3198
3199			*	*****		3199
3200	05526	0 02 05537	V6 LDA	K71		3200
3201	05527	0 04 00571	V6A STA	NAMF+1		3201
3202	05530	0 10 02722	JST	NF00	SET UP NAMF	3202
3203	05531	0 10 12337	JST	OI00	OUTPUT I/O LINK	3203
3204	05532	0 01 04266	JMP	A1	GO TO C/R TEST	3204
3205	05533	0 02 05540	V7 LDA	K72		3205
3206	05534	0 01 05527	JMP	V6A		3206
3207	05535	0 02 05541	V8 LDA	K73		3207
3208	05536	0 01 05527	JMP	V6A		3208
3209	05537	143316	K71 BCI	1, FN	FN	3209
3210	05540	142316	K72 BCI	1, DN		3210
3211	05541	141316	K73 BCI	1, BN	BN	3211
3212			*			3212
3213			*			3213
3214			*	*****		3214
3215			*	*READ *		3215
3216			*	*WRITE *		3216
3217			*	*INPUT FORMAT*		3217

3218		*								3218
3219		*								3219
3220		*								3220
3221		*								3221
3222		*								3222
3223		*								3223
3224		*								3224
3225	05542	0 00	00000	T0V5	PZE	**				3225
3226	05543	0 02	00710	V5	LDA	K41		FSRN		3226
3227	05544	0 04	00571		STA	NAMF+1				3227
3228	05545	0 10	02525		JST	XN00		EXAM NEXT CHAR		3228
3229	05546	100040			SZE					3229
3230	05547	0 01	05554		JMP	V5A		GENERAL READ		3230
3231	05550	0 02	05736		LDA	V5K4				3231
3232	05551	0 01	05754		JMP	V10A		CARD READ		3232
3233	05552	0 02	00707	V4	LDA	K40		NAMF = FSWN		3233
3234	05553	0 04	00571		STA	NAMF+1				3234
3235	05554	0 10	02722	V5A	JST	NF00		SET UP REMAINING NAME		3235
3236	05555	0 02	00057		LDA	D				3236
3237	05556	0 04	05732		STA	V5T1				3237
3238	05557	0 10	01256		JST	CH00		INPUT CHARACTER		3238
3239	05560	0 02	00702		LDA	K17		'250.....(		3239
3240	05561	0 10	02547		JST	TS00		(-TEST		3240
3241	05562	0 10	12337		JST	O100		OUTPUT IO LINK		3241
3242	05563	0 02	00607		LDA	TC		IF TC .NE. ,		3242
3243	05564	0 07	00752		SUB	K134		'17 (,)		3243
3244	05565	100040			SZE			GO TO V5J		3244
3245	05566	0 01	05726		JMP	V5J				3245
3246	05567	0 10	05740		JST	V5X		INPUT FORMAT		3246
3247	05570	0 10	02555	V5B	JST	IP00		) - INPUT OPERATOR		3247
3248	05571	0 02	00607		LDA	TC				3248
3249	05572	0 07	00756		SUB	CRET		TEST FOR TC=C/R		3249
3250	05573	100040			SZE					3250
3251	05574	0 01	05603		JMP	V5C		NO, GO TO V5C		3251
3252	05575	0 02	00711	V5B2	LDA	K42		YES, NAMF = ND		3252
3253	05576	0 04	00571		STA	NAMF+1				3253
3254	05577	0 10	12363		JST	CN00		CALL NAME		3254

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3255	05600	0 02 05732	LDA	V5T1		3255
3256	05601	0 04 00057	STA	D		3256
3257	05602	0 01 04266	JMP	A1	GO TO C/R TEST	3257
3258	05603	0 10 01251	V5C JST	UC00		3258
3259	05604	140040	V5C5 CRA			3259
3260	05605	0 04 00654	STA	I0F	I0F = U	3260
3261	05606	0 10 02354	V5D JST	II00	INPUT ITEM	3261
3262	05607	100040	SZE			3262
3263	05610	0 01 05625	JMP	V5E	IF (A) NOT 0, GO TO V5E	3263
3264	05611	0 02 00702	LDA	K17		3264
3265	05612	0 10 02547	JST	TS00	(-TEST	3265
3266	05613	140040	CRA			3266
3267	05614	0 04 00577	STA	02	02 = 0	3267
3268	05615	0 02 00654	LDA	I0F		3268
3269	05616	0 04 00576	STA	01	01 = I0F	3269
3270	05617	0 02 05733	LDA	V5K1	= '27	3270
3271	05620	0 04 00600	STA	P		3271
3272	05621	0 10 10436	JST	ET00		3272
3273	05622	0 02 00044	LDA	L		3273
3274	05623	0 04 00654	STA	I0F	I0F = L	3274
3275	05624	0 01 05606	JMP	V5D	GO TO V5D	3275
3276	05625	0 10 02611	V5E JST	NC00	NON-CONSTANT TEST	3276
3277	05626	0 02 00655	LDA	IU	IF IU NOT ARR	3277
3278	05627	0 07 00721	SUB	K103		3278
3279	05630	100040	SZE			3279
3280	05631	0 01 05675	JMP	V5H	GO TO V5H	3280
3281	05632	0 02 00607	LDA	TC		3281
3282	05633	0 07 00702	SUB	K17	IF TC NOT -(,	3282
3283	05634	100040	SZE			3283
3284	05635	0 01 05673	JMP	V5G	GO TO V5G	3284
3285	05636	0 02 00633	LDA	D0		3285
3286	05637	0 04 05542	STA	T0V5	T5 = D0	3286
3287	05640	0 02 00721	LDA	K103		3287
3288	05641	140407	TCA			3288
3289	05642	0 10 07041	JST	EX00	EXPRESSION	3289
3290	05643	0 02 05542	LDA	T0V5		3290
3291	05644	0 04 00633	STA	D0	D0 = T5	3291

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3292	05645	0 02 00040	V5E5	LDA	A		3292
3293	05646	0 04 00577		STA	02		3293
3294	05647	0 02 00633		LDA	D0	02 = D0	3294
3295	05650	0 04 00576		STA	01		3295
3296	05651	0 02 05734		LDA	V5K2	= '32	3296
3297	05652	0 04 00600		STA	P		3297
3298	05653	0 10 10436		JST	ET00	ENTER TRIAD	3298
3299	05654	0 02 00607	V5E7	LDA	TC	IF TC = COMMA	3299
3300	05655	0 07 00752		SUB	K134	GO TO V5D	3300
3301	05656	101040		SNZ			3301
3302	05657	0 01 05606		JMP	V5D		3302
3303	05660	0 02 00654		LDA	IOF	I = IOF	3303
3304	05661	0 04 00041		STA	I		3304
3305	05662	100040		SZE		IF NOT ZERO,	3305
3306	05663	0 01 05666		JMP	V5F	GO TO V5F	3306
3307	05664	0 10 12700		JST	OT00	OUTPUT TRIADS	3307
3308	05665	0 01 05575		JMP	V5B2	GO TO V5B2	3308
3309	05666	0 10 02555	V5F	JST	IP00	)-INPUT OPERATOR	3309
3310	05667	0 10 02676		JST	STXI		3310
3311	05670	1 02 15401		LDA	DP+1,1		3311
3312	05671	0 04 00654		STA	IOF	IOF = 01 (I)	3312
3313	05672	0 01 05654		JMP	V5E7		3313
3314	05673	0 10 04005	V5G	JST	KI00	K = = WDS/ITEM	3314
3315	05674	0 01 05645		JMP	V5E5	GO TO V5E5	3315
3316	05675	0 10 03642	V5H	JST	TV00	TAG VARIABLE	3316
3317	05676	0 02 00607		LDA	TC		3317
3318	05677	0 07 00701		SUB	K16X	= '16 (=)	3318
3319	05700	100040		SZE		GO TO V5E5	3319
3320	05701	0 01 05645		JMP	V5E5	ELSE,	3320
3321	05702	0 10 02635		JST	IT00	INTEGER TEST	3321
3322	05703	0 02 00654		LDA	IOF		3322
3323	05704	101040		SNZ		IF IOF = ZERO OR L	3323
3324	05705	0 01 05711		JMP	V5H7		3324
3325	05706	0 07 00044		SUB	L		3325
3326	05707	100040		SZE			3326
3327	05710	0 01 05713		JMP	**+3	ERROR	3327
3328	05711	0 10 03116	V5H7	JST	ER00		3328

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3329	05712	150322		BCI	1,PR	PARENTHESES MISSING IN DO STATEMENT	3329
3330	05713	0 10 06702		JST	DP00	DO INPUT	3330
3331	05714	0 02 00654		LDA	IOF		3331
3332	05715	0 04 00041		STA	I		3332
3333	05716	0 10 02676		JST	STX1		3333
3334	05717	0 02 00057		LDA	D		3334
3335	05720	1 04 15400		STA	DP,1	02(IOF) = D	3335
3336	05721	0 04 00577		STA	02	02 = D	3336
3337	05722	0 02 05735		LDA	V5K3	= '30	3337
3338	05723	0 04 00600		STA	P		3338
3339	05724	0 10 10436		JST	ET00	ENTER TRIAD 'T'.	3339
3340	05725	0 01 05666		JMP	V5F		3340
3341	05726	140040	V5J	CRA			3341
3342	05727	0 04 00040		STA	A	A = 0	3342
3343	05730	0 10 14127		JST	0A00	OUTPUT ABSOLUTE	3343
3344	05731	0 01 05570		JMP	V5B		3344
3345	05732	0 00 00000	V5T1	PZE	0		3345
3346	05733	000027	V5K1	OCT	27		3346
3347	05734	000032	V5K2	OCT	32		3347
3348	05735	000030	V5K3	OCT	30		3348
3349	05736	151263	V5K4	BCI	1,R3		3349
3350	05737	153664	V5K5	BCI	1,W4		3350
3351	05740	0 000000	V5X	DAC	**	INPUT FORMAT	3351
3352	05741	0 10 02525		JST	XN00	EXAM NEXT CHARACTER	3352
3353	05742	100040		SZE			3353
3354	05743	0 01 05750		JMP	V5X5	GO TO INPUT ARRAY NAME	3354
3355	05744	0 10 02443		JST	IS00	INPUT STMT NO.	3355
3356	05745	0400 40	V5X2	LRL	32	OUTPUT DAC A	3356
3357	05746	0 10 12467		JST	0B00	OUTPUT OA	3357
3358	05747	-0 01 05740		JMP*	V5X	RETURN	3358
3359	05750	0 10 02373	V5X5	JST	NA00	INPUT NAME	3359
3360	05751	0 10 02626		JST	AT00	ARRAY TEST	3360
3361	05752	0 01 05745		JMP	V5X2		3361
3362			*	PRINT			3362
3363	05753	0 02 05737	V10	LDA	V5K5	PRINTER	3363
3364	05754	0 04 00571	V10A	STA	NAMF+1		3364
3365	05755	0 10 02722		JST	NF00	SET UP REST OF NAME	3365



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3366	05756	0 10 12363	JST	CN00	CALL NAME	3366
3367	05757	0 10 05740	JST	V5X	INPUT FORMAT	3367
3368	05760	0 02 00607	LDA	TC		3368
3369	05761	0 07 00752	SUB	K134		3369
3370	05762	100040	SZE		SKIP IF COMMA	3370
3371	05763	0 01 05575	JMP	V5B2		3371
3372	05764	0 02 00057	LDA	D		3372
3373	05765	0 04 05732	STA	V5T1		3373
3374	05766	0 01 05604	JMP	V5C5		3374
3375			*			3375
3376			*			3376
3377			*			3377
3378			*			3378
3379			*			3379
3380			*			3380
3381			*			3381
3382			*			3382
3383	05767	0 00 00000	T0V2	PZE	0	3383
3384	05770	0 00 00000	T2V2	PZE	0	3384
3385		005767	V2T0	EQU	T0V2	3385
3386		005770	V2T2	EQU	T2V2	3386
3387	05771	0 02 00702	V2	LDA	K17	3387
3388	05772	0 10 12437	JST	OK00	OUTPUT RACK	3388
3389	05773	140040	CRA			3389
3390	05774	0 04 05767	STA	T0V2	T0 = 0	3390
3391	05775	0 02 00073	LDA	LSTP	IF LSTOP .NE. 0	3391
3392	05776	100040	SZE			3392
3393	05777	0 01 06126	JMP	V2K	GO TO V2K	3393
3394	06000	0 10 06160	V2A JST	SI00	INPUT FORMAT STRING	3394
3395	06001	100040	SZE			3395
3396	06002	0 01 06012	JMP	V2B		3396
3397	06003	0 02 00607	V2A1 LDA	TC		3397
3398	06004	0 07 00676	SUB	K12	IF TC NOT MINUS	3398
3399	06005	100040	SZE			3399
3400	06006	0 01 06070	JMP	V2F	GO TO V2F	3400
3401	06007	0 10 06153	JST	IN00	INPUT NUMERIC FORMAT STRING	3401
3402	06010	140040	CRA			3402

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3403	06011	0 04 01475		STA	TID	TID = 0	3403
3404	06012	0 02 00607	V2B	LDA	TC	IF TC ,NE, P	3404
3405	06013	0 07 06224		SUB	K46		3405
3406	06014	100040		SZE			3406
3407	06015	0 01 06117		JMP	V2H	GO TO V2H	3407
3408	06016	0 10 06160		JST	SI00	INPUT FORMAT STRING	3408
3409	06017	100040		SZE			3409
3410	06020	0 10 06145		JST	NZ00	IF (A) ,NE, 0	3410
3411	06021	0 02 00607	V2C	LDA	TC		3411
3412	06022	0 11 02543		CAS	K52	IF TC = D,E,F, OR G	3412
3413	06023	101000		NOP			3413
3414	06024	0 01 06026		JMP	**+2		3414
3415	06025	0 01 06036		JMP	V2DA		3415
3416	06026	0 11 06230		CAS	K53		3416
3417	06027	0 01 06057		JMP	V2E5-2		3417
3418	06030	101000		NOP			3418
3419	06031	0 10 06153		JST	IN00	INPUT NUMERIC FORMAT STRING	3419
3420	06032	0 10 06145		JST	NZ00	NON-ZERO STRING TEST	3420
3421	06033	0 02 00675		LDA	K10		3421
3422	06034	0 10 02547		JST	TS00	PERIOD TEST	3422
3423	06035	0 10 06153	V2D	JST	IN00	INPUT NUMERIC FORMAT STRING	3423
3424	06036	0 02 00607	V2DA	LDA	TC	IF TC = )	3424
3425	06037	0 07 00671		SUB	K4		3425
3426	06040	100040		SZE			3426
3427	06041	0 01 06052		JMP	V2E		3427
3428	06042	0 10 01256		JST	CH00		3428
3429	06043	0 10 12437		JST	OK00	INPUT CHAR AND OUTPUT PACK	3429
3430	06044	0 02 03767		LDA	TOV2	IF F4 + ( = (	3430
3431	06045	0 07 00717		SUB	K101	GO TO V2E	3431
3432	06046	0 04 05767		STA	TOV2		3432
3433	06047	100400		SPL			3433
3434	06050	0 01 04266		JMP	V2N	ELSE,	3434
3435	06051	0 01 06036		JMP	V2DA		3435
3436			*			GO TO C/R TEST	3436
3437	06052	0 02 00607	V2E	LDA	TC	IF TC = ,	3437
3438	06053	0 07 00672		SUB	K5		3438
3439	06054	101040		SNZ			3439

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3440	06055	0 01 06000	JMP	V2A	GO TO V2A	3440
3441	06056	0 02 00674	LDA	K9		3441
3442	06057	0 10 02547	JST	TS00	/ TEST	3442
3443	06060	0 01 06000	JMP	V2A		3443
3444	06061	0 10 06160	V2E5 JST	S100	INPUT FORMAT STRING	3444
3445	06062	100040	SZE		IF (A) NOT 0,	3445
3446	06063	0 01 06012	JMP	V2B	GO TO V2B	3446
3447	06064	0 02 00643	LDA	DFL	IF DFL .NE. ZERO,	3447
3448	06065	100040	SZE			3448
3449	06066	0 01 06036	JMP	V2DA	GO TO V2DA	3449
3450	06067	0 01 06003	JMP	V2A1		3450
3451	06070	0 02 00607	V2F LDA	TC	IF TC = H	3451
3452	06071	0 11 02544	CAS	K48		3452
3453	06072	0 01 06074	JMP	**2		3453
3454	06073	0 01 06212	JMP	V2P	GO TO V2P	3454
3455	06074	0 11 06225	V2FB CAS	K47		3455
3456	06075	0 01 06077	JMP	**2		3456
3457	06076	0 01 06061	JMP	V2E5		3457
3458	06077	0 11 00702	CAS	K17	IF TC = (,	3458
3459	06100	0 01 06102	JMP	**2		3459
3460	06101	0 01 06215	JMP	V2Q	GO TO V2Q	3460
3461	06102	0 02 00607	LDA	TC	IF TC .NE. A,I, OR L	3461
3462	06103	0 11 06226	CAS	K49	A	3462
3463	06104	0 01 06106	JMP	**2		3463
3464	06105	0 01 06114	JMP	V2G		3464
3465	06106	0 11 00712	CAS	K50	I	3465
3466	06107	0 01 06111	JMP	**2		3466
3467	06110	0 01 06114	JMP	V2G		3467
3468	06111	0 07 06227	SUB	K51	L	3468
3469	06112	100040	SZE			3469
3470	06113	0 01 06021	JMP	V2C		3470
3471	06114	0 10 06153	V2G JST	IN00	INPUT NUMERIC FORMAT STRING	3471
3472	06115	0 10 06145	JST	NZ00	NON-ZERO STRING TEST	3472
3473	06116	0 01 06036	JMP	V2DA		3473
3474	06117	0 10 06145	V2H JST	NZ00	NON-ZERO STRING TEST	3474
3475	06120	0 02 00607	LDA	TC	IF TC = H,	3475
3476	06121	0 07 02544	SUB	K48		3476

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3477	06122	100040		SZE				3477
3478	06123	0 01 06070		JMP	V2F			3478
3479	06124	0 10 06664	V2J	JST	HS00	TRANSMIT HOLLERITH STRING		3479
3480	06125	0 01 06061		JMP	V2E5	GO TO V2E5		3480
3481	06126	0 02 00071	V2K	LDA	LSTN	IF LSTN = 0,		3481
3482	06127	100040		SZE				3482
3483	06130	0 01 06133		JMP	**+3			3483
3484	06131	0 10 03116		JST	ER00	ERROR, NO PATH		3484
3485	06132	147306		BCI	1,NF	NO REFERENCE TO FORMAT STATEMENT		3485
3486	06133	0 02 00060		LDA	RPL	LIF = RPL		3486
3487	06134	0 04 00070		STA	LIF			3487
3488	06135	140040		CRA				3488
3489	06136	0 04 00040		STA	A			3489
3490	06137	0 04 00630		STA	AF			3490
3491	06140	141206		AOA				3491
3492	06141	0 04 00640		STA	DF			3492
3493	06142	0 02 13733		LDA	K201	= JMP 0		3493
3494	06143	0 10 14127		JST	OA00	OUTPUT ABS		3494
3495	06144	0 01 06000		JMP	V2A	GO TO V2A		3495
3496			*					3496
3497	06145	0 000000	NZ00	DAC	**			3497
3498	06146	0 02 01475		LDA	TID			3498
3499	06147	100040		SZE				3499
3500	06150	-0 01 06145		JMP*	NZ00			3500
3501	06151	0 10 03116	NZ10	JST	ER00			3501
3502	06152	147332		BCI	1,NZ	NON-ZERO STRING TEST FAILED		3502
3503	06153	0 000000	IN00	DAC	**			3503
3504	06154	0 10 06160		JST	SI00	(A) = 0 IS ERROR CONDITION		3504
3505	06155	100040		SZE				3505
3506	06156	-0 01 06153		JMP*	IN00			3506
3507	06157	0 01 06151		JMP	NZ10			3507
3508	06160	0 000000	SI00	DAC	**			3508
3509	06161	140040		CRA				3509
3510	06162	0 04 01475		STA	TID	ID = T2 = 0		3510
3511	06163	0 04 05770	SI05	STA	V2T2			3511
3512	06164	0 10 01256		JST	CH00	INPUT CHAR		3512
3513	06165	0 10 12437		JST	OK00	OUTPUT PACK		3513

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3514	06166	0 02 00607	LDA	TC					3514
3515	06167	0 07 00715	SUB	K60			ASC-2 ZERO		3515
3516	06170	0 11 00742	CAS	K124					3516
3517	06171	0 01 06206	JMP	SI10					3517
3518	06172	101000	NOP						3518
3519	06173	100400	SPL						3519
3520	06174	0 01 06206	JMP	SI10					3520
3521	06175	0 04 00607	STA	TC					3521
3522	06176	0 02 01475	LDA	TID			TID = 10*TID+TC		3522
3523	06177	0415 75	ALS	J					3523
3524	06200	0 06 01475	ADD	TID					3524
3525	06201	0 06 01475	ADD	TID					3525
3526	06202	0 06 00607	ADD	TC					3526
3527	06203	0 04 01475	STA	TID					3527
3528	06204	0 02 00717	LDA	K101			T2 = 1		3528
3529	06205	0 01 06163	JMP	SI05					3529
3530	06206	0 02 05770	SI10 LDA	V2T2			(A) = ERROR CONDITION OR NOT		3530
3531	06207	-0 01 06160	JMP*	SI00					3531
3532	06210	0 10 03116	V2M JST	ER00					3532
3533	06211	143322	BCI	1,FR			FORMAT STATEMENT ERROR		3533
3534		004266	V2N EQU	A1					3534
3535	06212	0 02 00717	V2P LDA	K101					3535
3536	06213	0 04 01475	STA	ID			ID = 1		3536
3537	06214	0 01 06124	JMP	V2J			GO TO V2J		3537
3538	06215	0 02 05767	V2Q LDA	TOV2					3538
3539	06216	141206	AOA						3539
3540	06217	0 04 05767	STA	TOV2					3540
3541	06220	0 07 00721	SUB	K103					3541
3542	06221	100040	SZE						3542
3543	06222	0 01 06000	JMP	V2A					3543
3544	06223	0 01 06210	JMP	V2M					3544
3545	06224	000320	K46 OCT	320			OP		3545
3546	06225	000330	K47 OCT	330			OX		3546
3547		002544	K48 EQU	K14			OH		3547
3548	06226	000301	K49 OCT	301			OA		3548
3549	06227	000314	K51 OCT	314			OL		3549
3550		002543	K52 EQU	K11			OD		3550

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3551	06230	000307	K53	OCT	307	OG		3551
3552		000712	K50	EQU	K43	OI		3552
3553			*					3553
3554			*					3554
3555			*			*****		3555
3556			*			*STOP *		3556
3557			*			*PAUSE*		3557
3558			*			*****		3558
3559			*			PAUSE AND STOP GENERATE CALLS TO FSHT		3559
3560	06231	0 00 00000	T1W7	PZE		0		3560
3561	06232	0 00 00000	T2W7	PZE		0		3561
3562	06233	0 02 06300	W7	LDA	K55			3562
3563	06234	0 04 06231		STA	T1W7			3563
3564	06235	0 02 06276	W7A	LDA	K74			3564
3565	06236	0 04 00571		STA	NAMF+1	NAMF = FSHT		3565
3566	06237	0 10 02722		JST	NF00	SET-UP REMAINING CHAR OF NAME		3566
3567	06240	0 10 02525		JST	XN00	EXAMINE NEXT CHAR		3567
3568	06241	0 02 00607		LDA	TC			3568
3569	06242	0 07 00756		SUB	CRET			3569
3570	06243	101040		SNZ				3570
3571	06244	0 01 06251		JMP	W7C	TC = C/R = NOTING FOLLOWING		3571
3572	06245	0 10 02432		JST	IV00	INPUT INTEGER/VARIABLE		3572
3573	06246	0400 40		LRL	32			3573
3574	06247	0 02 13735		LDA	K200	OUTPUT LDA		3574
3575	06250	0 10 12467		JST	OB00	OUTPUT OA		3575
3576	06251	0 10 12363	W7C	JST	CN00	CALL NAME		3576
3577	06252	140040		CRA				3577
3578	06253	0 04 00640		STA	DF	DF = 0		3578
3579	06254	0 02 06231		LDA	T1W7			3579
3580	06255	0 04 01475		STA	ID			3580
3581	06256	0 10 04241		JST	A100	ASSIGN INTEGER CONSTANT		3581
3582	06257	140040		CRA		OUTPUT DAC		3582
3583	06260	0 10 12467		JST	OB00	OUTPUT OA OF ST/PA OR HT		3583
3584	06261	0 02 06231		LDA	T1W7			3584
3585	06262	0 07 06277		SUB	K54			3585
3586	06263	101040		SNZ				3586
3587	06264	0 01 04264		JMP	C5	PA-NDT THE CASE		3587

3588	06265	0 02 00060	LDA	RPL		3588
3589	06266	0 04 00630	STA	AF	OUTPUT JMP *	3589
3590	06267	140040	CRA			3590
3591	06270	0 04 00040	STA	A	CAUSE LISTING TO HAVE OCTAL ADDRESS	3591
3592	06271	0 02 13733	LDA	K201		3592
3593	06272	0 10 13773	JST	OR00	OUTPUT RELATIVE	3593
3594	06273	0 01 04262	JMP	B6		3594
3595	06274	0 02 06277	W8 LDA	K54		3595
3596	06275	0 01 06234	JMP	W7+1		3596
3597	06276	144324	K74 BCI	1,HT	HT	3597
3598	06277	150301	K54 BCI	1,PA	PA	3598
3599	06300	151724	K55 BCI	1,ST	ST	3599
3600			*			3600
3601			*			3601
3602			*	R8 CALL		3602
3603			*	GENERATES CALL DIRECTLY OR USES EXPRESSION TO		3603
3604			*	ANALYZE AN ARGUMENT LIST,		3604
3605	06301	0 10 02520	R8 JST	SY00	INPUT SYMBOL	3605
3606	06302	0 02 00655	LDA	IU		3606
3607	06303	0 07 00717	SUB	K101	=1 (SUB)	3607
3608	06304	100040	SZE		SKIP IF IU=SUBR,	3608
3609	06305	0 10 03465	JST	TG00	TAG SUB PROGRAM	3609
3610	06306	0 02 00607	LDA	TC		3610
3611	06307	0 07 00702	SUB	K17	=1250 ( ( )	3611
3612	06310	100040	SZE			3612
3613	06311	0 01 06314	JMP	**3		3613
3614	06312	0 02 00717	G2B LDA	K101	SET A=1 BEFORE EXPRESSION	3614
3615	06313	0 01 06325	JMP	G2A		3615
3616	06314	140040	CRA			3616
3617	06315	000201	IAB		(B)=0	3617
3618	06316	0 02 13730	LDA	OMI2	=JST INSTR,	3618
3619	06317	0 10 12467	JST	OB00	OUTPUT OA	3619
3620	06320	0 01 04266	JMP	A1	CR TEST	3620
3621			*	*****		3621
3622			*	*ASSIGNMENT STATEMENT*		3622
3623			*	*****		3623
3624	06321	0 02 00722	G2 LDA	K104		3624

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3625	06322	0 10 05074	JST	NP00	FIRST NON-SPEC CHECK	3625
3626	06323	0 10 02354	JST	I100	INPUT ITEM	3626
3627	06324	0 02 00720	LDA	K102	SET A = 2 BEFORE EXPRESSION	3627
3628	06325	140407	G2A TCA			3628
3629	06326	0 10 07041	JST	EX00		3629
3630	06327	0 01 04266	JMP	A1		3630
3631			*			3631
3632			*			3632
3633			*	*****		3633
3634			*	*RETURN*		3634
3635			*	*****		3635
3636			*	OPTIMIZES EXIT CODING FOR FUNCTIONS TO MINIMIZE		3636
3637			*	FETCHES OF THE FUNCTION VALUE,		3637
3638	06330	0 02 00047	R9 LDA	SBF	A = SBF,	3638
3639	06331	0 04 00040	STA	A	IF ZERO, GO TO ERROR	3639
3640	06332	100040	SZE			3640
3641	06333	0 01 06336	JMP	**+3		3641
3642	06334	0 10 03116	JST	ER00		3642
3643	06335	151324	BCI	1,RT	RETURN NOT ALLOWED IN MAIN PROGRAM	3643
3644	06336	0 02 00046	LDA	SFF	ELSE, IF SFF = 0,	3644
3645	06337	101040	SNZ			3645
3646	06340	0 01 06356	JMP	R9C	GO TO R9C	3646
3647	06341	0 11 00717	CAS	K101	IF SFF = 1, GO TO R9B	3647
3648	06342	0 01 06344	JMP	**+2		3648
3649	06343	0 01 06351	JMP	R9B		3649
3650	06344	0 04 00630	STA	AF	OUTPUT REL JMP TO 1ST RETN	3650
3651	06345	0400 40	LRL	32		3651
3652	06346	0 04 00040	STA	A	SET A=0 TO OUTPUT OCTAL ADDR ON LISTING	3652
3653	06347	0 02 13733	LDA	K201		3653
3654	06350	0 01 06362	JMP	R9A		3654
3655	06351	000201	R9B IAB			3655
3656	06352	0 02 00060	LDA	RPL	SFF = RPL	3656
3657	06353	0 04 00046	STA	SFF		3657
3658	06354	0 02 06364	LDA	K56	OUTPUT ITEM (F,A)	3658
3659	06355	0 10 13147	JST	OM00		3659
3660	06356	0400 40	R9C LRL	32		3660
3661	06357	0 04 00040	STA	A	SET FOR OCTAL ADDRESS IN LISTING	3661



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3662	06360	0 04 00630	STA	AF	SET RELATIVE ADDRESS TO ZERO	3662
3663	06361	0 02 13740	LDA	K206	JUMP I, 0	3663
3664	06362	0 10 13773	R9A JST	OR00	OUTPUT REL	3664
3665	06363	0 01 04262	JMP	B6	EXIT	3665
3666	06364	000031	K56 OCT	31	P CODE FOR 'F' (FETCH)	3666
3667		*				3667
3668		*				3668
3669		*				3669
3670		*				3670
3671		*				3671
3672		*				3672
3673		*				3673
3674	06365	0 00 00000	G1T0 PZE	0		3674
3675	06366	0 00 00000	G1T1 PZE	0		3675
3676	06367	0 02 00721	G1 LDA	K103	(A) = 3	3676
3677	06370	0 10 05074	JST	NP00	FIRST NON-SPEC CHECK	3677
3678	06371	0 10 02520	JST	SY00	INPUT SYMBOL	3678
3679	06372	0 10 04233	JST	L000	DEFINE LOCATION	3679
3680	06373	0 02 00721	LDA	K103		3680
3681	06374	0 04 00041	STA	I		3681
3682	06375	0 10 10525	JST	GE00	GENERATE SUBPROGRAM ENTRANCE	3682
3683	06376	0 02 00041	LDA	I		3683
3684	06377	0 04 06366	STA	G1T1	T1 = I	3684
3685	06400	0 02 00701	LDA	K16X	'=' TEST	3685
3686	06401	0 10 02547	JST	TS00		3686
3687	06402	0 10 02354	JST	II00	INPUT ITEM	3687
3688	06403	140040	CRA			3688
3689	06404	0 10 07041	JST	EX00	EXPRESSION	3689
3690	06405	0 02 06366	LDA	G1T1		3690
3691	06406	0 04 00041	STA	I	I = T1	3691
3692	06407	0 12 00052	IRS	TCF	TCF = TCF+1	3692
3693	06410	0 10 02676	G1A JST	STXI		3693
3694	06411	1 02 10462	LDA	SFTB+2,1		3694
3695	06412	0 04 00040	STA	A		3695
3696	06413	1 02 10460	LDA	SFTB+0,1		3696
3697	06414	000201	IAB			3697
3698	06415	0 10 02672	JST	STXA	SET R TO A	3698

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3699	06416	000201	IAB						3699
3700	06417	1 04 15400	STA	DP,1					3700
3701	06420	0 10 02676	JST	STXI	SET R TO I				3701
3702	06421	1 02 10461	LDA	SFTB+1,1					3702
3703	06422	000201	IAB						3703
3704	06423	0 10 02672	JST	STXA	SET R TO A				3704
3705	06424	000201	IAB						3705
3706	06425	1 04 15401	STA	DP+1,1					3706
3707	06426	0 02 00041	LDA	I					3707
3708	06427	0 07 00721	SUB	K103	I = I-3 = 0				3708
3709	06430	0 04 00041	STA	I					3709
3710	06431	0 07 00721	SUB	K103					3710
3711	06432	100040	SZE						3711
3712	06433	0 01 06410	JMP	G1A	NO, GO TO G1A				3712
3713	06434	0 02 05073	LDA	T1NP					3713
3714	06435	0 04 00040	STA	A					3714
3715	06436	0410 60	LLL	16					3715
3716	06437	0 02 13740	LDA	OMJ1					3716
3717	06440	0 10 12467	JST	OB00					3717
3718	06441	0 10 03465	JST	TG00	TAG SUBPROGRAM				3718
3719	06442	0 01 04266	JMP	A1	GO TO C/R TEST				3719
3720				W5					3720
3721			*	END					3721
3722			*	*****					3722
3723			*	*END PROCESSOR*					3723
3724			*	*****					3724
3725			*	FIRST CHECK SUBPROGRAMS FOR CORRECT USAGE, THEN					3725
3726			*	GENERATE MAP AND STRING BACK VARIABLES					3726
3727	06443	0 00 00000	T1W5 PZE		AND CONSTANTS,				3727
3728	06444	0 02 00061	W5 LDA	BDF	IF BLOCK DATA,				3728
3729	06445	100040	SZE						3729
3730	06446	0 01 06525	JMP	W5K	GO TO W5K				3730
3731	06447	0 02 00047	LDA	SBF	IF SBF NOT ZERO				3731
3732	06450	0 04 00040	STA	A	INDICATES SUBROUTINES				3732
3733	06451	100040	SZE		OR FUNCTION,				3733
3734	06452	0 01 06532	JMP	W5M	GO TO W5M				3734
3735	06453	140040	W5B CRA						3735

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3736	06454	0 04 00040		STA	A	A=J=0	3736
3737	06455	0 01 06500		JMP	W5H		3737
3738	06456	0 10 03656	W5D	JST	FA00	FETCH ASSIGNS	3738
3739	06457	0 10 02672		JST	STXA		3739
3740	06460	0 02 00573		LDA	NT		3740
3741	06461	100040		SZE		IF NT=1 (CONSTANT)	3741
3742	06462	0 01 06552		JMP	W50	GO TO W50	3742
3743	06463	0 02 00655		LDA	IU		3743
3744	06464	0 07 00717		SUB	K101	IF IU=1	3744
3745	06465	100040		SZE		INDICATES VARIABLE,	3745
3746	06466	0 01 06627		JMP	W5T	GO TO W5T	3746
3747	06467	0 02 00060	W5F	LDA	RPL	SAVE RPL	3747
3748	06470	0 04 06443		STA	T1W5	RPL=-AF (INHIBIT LISTING)	3748
3749	06471	0 02 00630		LDA	AF		3749
3750	06472	140500		SSM			3750
3751	06473	0 04 00060		STA	RPL		3751
3752	06474	140040		CRA			3752
3753	06475	0 10 13773		JST	OR00	OUTPUT REL	3753
3754	06476	0 02 06443		LDA	T1W5	RESTORE RPL	3754
3755	06477	0 04 00060		STA	RPL		3755
3756	06500	0 02 00040	W5H	LDA	A	A=A+5	3756
3757	06501	0 06 00723		ADD	K105		3757
3758	06502	0 04 00040		STA	A		3758
3759	06503	0 07 00054		SUB	ABAR	IF A=ABAR, (DONE)	3759
3760	06504	0 07 00723		SUB	K105		3760
3761	06505	100040		SZE			3761
3762	06506	0 01 06456		JMP	W5D	ELSE, GO TO W5D	3762
3763	06507	0 10 14523	W5J	JST	FS00	FLUSH BUFFER	3763
3764	06510	0 02 00047		LDA	SBF		3764
3765	06511	100040		SZE			3765
3766	06512	0 02 00727		LDA	W5Z1		3766
3767	06513	0 05 00740		ERA	W5Z2		3767
3768	06514	0 04 14632		STA	OCI		3768
3769	06515	0 02 00047		LDA	SBF		3769
3770	06516	100040		SZE			3770
3771	06517	0 02 00733		LDA	W5Z3		3771
3772	06520	0 04 14633		STA	OCI+1		3772

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3773	06521	0 02 00724	LDA	K106		3773
3774	06522	0 04 00602	STA	OCNT		3774
3775	06523	0 10 14523	JST	FS00		3775
3776	06524	0 01 01007	JMP	A051		3776
3777	06525	0 02 00060	LDA	RPL	GO TO INITIALIZE	3777
3778	06526	101040	SNZ		IF RPL NOT ZERO,	3778
3779	06527	0 01 06507	JMP	W5J		3779
3780	06530	0 10 03116	JST	ER00	ERROR-CODE GENERATED	3780
3781	06531	141304	BCI	1,BD	IN A BLOCK DATA SUBPROGRAM	3781
3782	06532	0 10 03656	JST	FA00	FETCH ASSIGNS	3782
3783	06533	0 02 00046	LDA	SFF	IF FUNCTION,	3783
3784	06534	100040	SZE			3784
3785	06535	0 01 06544	JMP	W5N	GO TO W5N	3785
3786	06536	0 10 02603	JST	NU00	NO USE TEST	3786
3787	06537	0 10 02672	JST	STXA		3787
3788	06540	1 02 15400	LDA	DP,1	IF NO ERROR,	3788
3789	06541	140500	SSM		NT(A)=1	3789
3790	06542	1 04 15400	STA	DP,1		3790
3791	06543	0 01 06453	JMP	W5B	GO TO W5B	3791
3792	06544	0 02 00655	LDA	IU		3792
3793	06545	0 07 00720	SUB	K102	IU MUST BE VAR/CON,	3793
3794	06546	101040	SNZ		ELSE,	3794
3795	06547	0 01 06453	JMP	W5B		3795
3796	06550	0 10 03116	JST	ER00	ERROR-FUNCTION	3796
3797	06551	143304	BCI	1,FD	NAME NOT DEFINED BY AN ARITHM. STATEMENT	3797
3798	06552	0 02 00655	LDA	IU	IF IU=VAR/CON	3798
3799	06553	0 07 00720	SUB	K102		3799
3800	06554	100040	SZE			3800
3801	06555	0 01 06500	JMP	W5H		3801
3802	06556	0 02 00631	LDA	AT	AND AT = STR/REL	3802
3803	06557	0 07 00721	SUB	K103	A "STRING" REQ'D.	3803
3804	06560	100040	SZE			3804
3805	06561	0 01 06500	JMP	W5H		3805
3806	06562	0 02 00633	LDA	DO	IF DO IS 4, THE	3806
3807	06563	0 07 00722	SUB	K104	CONSTANT IS COMPLEX,	3807
3808	06564	100040	SZE		OTHERWISE	3808
3809	06565	0 01 06605	JMP	W5Q	GO TO W5Q	3809

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3810	06566	0 02 00630	LDA	AF		3810
3811	06567	0 10 14135	JST	OS00	OUTPUT STRING	3811
3812	06570	0 10 02672	JST	STXA		3812
3813	06571	1 02 15402	LDA	DP+2,1	OUTPUT 4 WORDS	3813
3814	06572	0 10 06651	JST	W5X	OF CONSTANT	3814
3815	06573	1 02 15403	LDA	DP+3,1		3815
3816	06574	0 10 06651	JST	W5X		3816
3817	06575	0 02 00573	LDA	NT		3817
3818	06576	101040	SNZ			3818
3819	06577	0 01 06614	JMP	W5S		3819
3820	06600	0 02 00040	LDA	A	INCREMENT A	3820
3821	06601	0 06 00723	ADD	K105		3821
3822	06602	0 04 00040	STA	A		3822
3823	06603	0 10 02672	JST	STXA		3823
3824	06604	0 01 06614	JMP	W5S		3824
3825	06605	0 02 00630	W5Q LDA	AF		3825
3826	06606	0 10 14135	JST	OS00	OUTPUT STRING	3826
3827	06607	0 10 02672	JST	STXA		3827
3828	06610	0 02 00633	LDA	D0	IF D0=1,	3828
3829	06611	0 07 00717	SUB	K101	INDICATES INTEGER,	3829
3830	06612	101040	SNZ			3830
3831	06613	0 01 06624	JMP	W5R	GO TO W5R	3831
3832	06614	1 02 15402	W5S LDA	DP+2,1	OUTPUT TWO WORDS	3832
3833	06615	0 10 06651	JST	W5X	FLOATING POINT CONSTANT	3833
3834	06616	1 02 15403	LDA	DP+3,1		3834
3835	06617	0 10 06651	JST	W5X		3835
3836	06620	0 02 00633	LDA	D0	IF DOUBLE PRECISION,	3836
3837	06621	0 07 00721	SUB	K103		3837
3838	06622	100040	SZE			3838
3839	06623	0 01 06500	JMP	W5H		3839
3840	06624	1 02 15404	W5R LDA	DP+4,1	OUTPUT THE 3RD WORD	3840
3841	06625	0 10 06651	JST	W5X		3841
3842	06626	0 01 06500	JMP	W5H	GO TO W5H	3842
3843	06627	0 02 00631	W5T LDA	AT		3843
3844	06630	0 11 00721	CAS	K103		3844
3845	06631	0 01 06467	JMP	W5F	STRUNG VARIABLE (IU=NON 0)	3845
3846	06632	0 01 06644	JMP	W5T5		3846

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3847 06633 0 11 00720 CAS K102 TEST FOR STG ABS ADDRESS 3847
3848 06634 017400 OCT 17400 3848
3849 06635 0 01 06637 JMP **2 3849
3850 06636 0 01 06467 JMP W5F NO 3850
3851 06637 1 02 15404 LDA DP+4,1 TEST FOR PREFIX G 3851
3852 06640 0 03 06634 ANA *-4 3852
3853 06641 0 07 06634 SUB *-5 3853
3854 06642 100040 SZE 3854
3855 06643 0 01 06467 JMP W5F STRUNG VARIABLE (IU=NON 0) 3855
3856 06644 0 02 00655 W5T5 LDA IU 3856
3857 06645 100040 SZE 3857
3858 06646 0 01 06562 JMP W5P 3858
3859 06647 0 10 03116 JST ERU0 3859
3860 06650 152723 BCI 1,US 3860
3861 06651 0 000000 W5X DAC ** 3861
3862 06652 0400 60 LRL 16 3862
3863 06653 0 04 00640 STA DF 3863
3864 06654 000201 IAB 3864
3865 06655 0 10 14127 JST 0A00 OUTPUT ABS 3865
3866 06656 0 10 02672 JST STXA REST "A" 3866
3867 06657 -0 01 06651 JMP* W5X EXIT 3867
3868 000727 W5Z1 EQU K100 000377 3868
3869 000740 W5Z2 EQU K122 040000 3869
3870 000733 W5Z3 EQU K116 177400 3870
3871 * 3871
3872 * 3872
3873 * 3873
3874 * 3874
3875 * 3875
3876 * 3876
3877 * ***** 3877
* INPUT CHAR/OUTPUT PACK*
* ***** 3878
3878 * 3878
3879 06660 0 000000 P000 DAC ** 3879
3880 06661 0 10 01256 JST CH00 INPUT CHAR 3880
3881 06662 0 10 12437 JST OK00 OUTPUT PACK 3881
3882 06663 -0 01 06660 JMP* P000 RETURN 3882
3883 * ***** 3883

```

3884		*		*TRANS HOLLERITH STRING*		3884
3885		*		*****		3885
3886		*		FORM HOLLERITH STRING, CHARACTER COUNT IN ID ON		3886
3887		*		ENTRY, C/R WILL ALSO TERMINATE STRING.		3887
3888	06664	0 000000	HS00 DAC	**		3888
3889	06665	0 10 01066	HS10 JST	IC00	INPUT 1 CHARACTER	3889
3890	06666	0 11 00756	CAS	CRET	CHECK FOR CHAR = C/R	3890
3891	06667	0 01 06671	JMP	**2		3891
3892	06670	0 01 06700	JMP	HS15	HOLLERITH STRING EXTENDS PAST END OF CARD	3892
3893	06671	0 10 12437	JST	OK00	OUTPUT PACK THE CHARACTER	3893
3894	06672	0 02 01475	LDA	ID		3894
3895	06673	0 07 00717	SUB	K101	REDUCE CHARACTER COUNT BY 1	3895
3896	06674	0 04 01475	STA	ID		3896
3897	06675	100040	SZE			3897
3898	06676	0 01 06665	JMP	HS10	INPUT MORE CHARACTERS	3898
3899	06677	-0 01 06664	JMP*	HS00		3899
3900	06700	0 10 03116	HS15 JST	ER00		3900
3901	06701	144323	BCI	1,HS	HOLLERITH STRING EXTENDS OVER STATEMENT	3901
3902		*				3902
3903		*				3903
3904		*		*****		3904
3905		*		*DO INPUT*		3905
3906		*		*****		3906
3907		*		SET UP DO TABLE ENTRIES,		3907
3908	06702	0 000000	DP00 DAC	**		3908
3909	06703	0 02 00057	LDA	D	D = D+5	3909
3910	06704	0 06 00723	ADD	K105	IFLG = NON-ZERO	3910
3911	06705	0 04 00652	STA	IFLG		3911
3912	06706	0 04 00057	STA	D		3912
3913	06707	0 06 00661	ADD	DO	I = DO+D	3913
3914	06710	0 04 00041	STA	I		3914
3915	06711	0 10 02676	JST	STXI		3915
3916	06712	0 02 00040	LDA	A	DP (I-4) = (B)	3916
3917	06713	1 04 15376	STA	DP-2,1	DP (I-2) = A	3917
3918	06714	000201	IAB			3918
3919	06715	1 04 15374	STA	DP-4,1		3919
3920	06716	0 10 02432	JST	IV00	INPUT INT VAR/CON	3920

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3921	06717	0 02 00752	LDA	K134	= ,	3921
3922	06720	0 10 02547	JST	TS00	COMMA TEST	3922
3923	06721	0 10 02676	JST	STXI		3923
3924	06722	0 02 00040	LDA	A		3924
3925	06723	1 04 15400	STA	DP,1	DP(1) = INITIAL VALUE POINTER	3925
3926	06724	0 10 02432	JST	IV00	INPUT INT VAR/CON	3926
3927	06725	0 10 02676	JST	STXI		3927
3928	06726	0 02 00040	LDA	A		3928
3929	06727	1 04 15377	STA	DP-1,1	DP (I-1) = A - FINAL VALUE POINTER	3929
3930	06730	0 02 00607	LDA	TC		3930
3931	06731	0 07 00752	SUB	K134	= ,	3931
3932	06732	100040	SZE		IF THIRD TERM	3932
3933	06733	0 01 06743	JMP	DP20		3933
3934	06734	0 10 02432	JST	IV00	READ AND ASSIGN,	3934
3935	06735	0 10 02676	DP10 JST	STXI		3935
3936	06736	0 02 00040	LDA	A		3936
3937	06737	1 04 15375	STA	DP-3,1	DP(I-3) = INCREMENT POINTER	3937
3938	06740	140040	CRA			3938
3939	06741	0 04 00652	STA	IFLG	CLEAR IFLAG	3939
3940	06742	-0 01 06702	JMP*	DP00	EXIT	3940
3941	06743	0 02 00717	DP20 LDA	K101		3941
3942	06744	0 04 01475	STA	ID	THIRD TERM = 1	3942
3943	06745	0 10 04241	JST	AI00	ASSIGN CONSTANT	3943
3944	06746	0 01 06735	JMP	DP10		3944
3945			*		*****	3945
3946			*		*DO INITIALIZE*	3946
3947			*		*****	3947
3948			*		GENERATE DO INITIALIZATION CODE.	3948
3949	06747	0 000000	DS00 DAC	**		3949
3950	06750	0 10 02676	JST	STXI	ESTABLISH I	3950
3951	06751	1 02 15400	LDA	DP,1	A = DP (I)	3951
3952	06752	0 04 00040	STA	A		3952
3953	06753	0 02 13735	LDA	K200		3953
3954	06754	0 10 06764	JST	DS20	LOAD - LDA INITIAL VALUE	3954
3955	06755	1 02 15376	LDA	DP-2,1		3955
3956	06756	0 04 00040	STA	A	A = DP (I-2)	3956
3957	06757	0 02 00060	LDA	RPL		3957



H O N E Y W E L L      C O M P U T E R   C O N T R O L   D I V I S I O N      P R O G R A M   D O C U M E N T A T I O N

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3958	06760	1 04 15400	STA	DP,1	SET RETURN ADDRESS INTO DP(1)	3958
3959	06761	0 02 13736	LDA	K202		3959
3960	06762	0 10 06764	JST	DS20	STORE - STA VARIABLE NAME	3960
3961	06763	-0 01 06747	JMP*	DS00		3961
3962			*		OUTPUT OA SUBROUTINE	3962
3963	06764	0 000000	DS20	DAC	**	3963
3964	06765	000201		IAB		3964
3965	06766	0410 60		LLL	16	3965
3966	06767	0 10 12467	JST	OB00	SET B = 0	3966
3967	06770	0 10 02676	JST	STXI	OUTPUT OA	3967
3968	06771	-0 01 06764	JMP*	DS20	RESTORE I	3968
3969			*		RETURN	3969
3970	06772	0 00 00000	DS90	PZE	0	3970
3971			*			3971
3972			*		*****	3972
3973			*		*DO TERMINATION*	3973
3974			*		*****	3974
3975			*		GENERATE DO TERMINATION CODE,	3975
3976	06773	0 000000	DQ00	DAC	**	3976
3977	06774	0 10 02676	JST	STXI		3977
3978	06775	1 02 15376	LDA	DP-2,1		3978
3979	06776	0 04 00040	STA	A		3979
3980	06777	0 02 13735	LDA	K200		3980
3981	07000	0 10 06764	JST	DS20	OUTPUT LDA VARIABLE NAME	3981
3982	07001	1 02 15375	LDA	DP-3,1		3982
3983	07002	0 04 00040	STA	A		3983
3984	07003	0 02 13732	LDA	K203		3984
3985	07004	0 10 06764	JST	DS20	OUTPUT ADD INCREMENT	3985
3986	07005	1 02 15377	LDA	DP-1,1		3986
3987	07006	0 04 00040	STA	A		3987
3988	07007	0 02 13760	LDA	OMK9		3988
3989	07010	0 10 06764	JST	DS20	OUTPUT CAS FINAL VALUE	3989
3990	07011	140040	CRA			3990
3991	07012	0 04 00040	STA	A		3991
3992	07013	0 02 00060	LDA	RPL		3992
3993	07014	0 06 00721	ADD	K103		3993
3994	07015	0 04 00630	STA	AF		3994

3995	07016	1 02 15400	LDA	DP,1				3995
3996	07017	0 04 06772	STA	DS90				3996
3997	07020	0 02 13733	LDA	OMI5	JUMP **3			3997
3998	07021	0 10 13773	JST	OR00	OUTPUT REL			3998
3999	07022	0 02 06772	LDA	DS90				3999
4000	07023	0 04 00630	STA	AF				4000
4001	07024	0 02 13733	LDA	OMI5	JMP RPL (SAVED) - POINTS TO 'STA' INST.			4001
4002	07025	0 10 13773	JST	OR00	OUTPUT REL			4002
4003	07026	0 02 13733	LDA	OMI5	OUTPUT JMP RPL (SAVED)			4003
4004	07027	0 10 13773	JST	OR00	OUTPUT REL			4004
4005	07030	-0 01 06773	JMP*	DQ00				4005
4006		*		*****				4006
4007		*		*EXPRESSION*				4007
4008		*		*****				4008
4009		*		THE RESULTANT OUTPUT IS A BUILT UP AOIN				4009
4010		*		TABLE THAT IS FURTHER PROCESSED BY SCAN.				4010
4011	07031	0 00 00000	TOEX	PZE	0			4011
4012		007031	EXT0	EQU	TOEX			4012
4013	07032	0 00 00000	T1EX	PZE	0			4013
4014	07033	0 00 00000	T2EX	PZE	0			4014
4015	07034	0 00 00000	T3EX	PZE	0			4015
4016	07035	0 00 00000	T5EX	PZE	0			4016
4017	07036	0 00 00000	T6EX	PZE	0			4017
4018	07037	0 00 00000	EXT7	PZE	0			4018
4019	07040	0 00 00000	T9EX	PZE	0			4019
4020	07041	0 000000	EX00	DAC	**			4020
4021	07042	0 04 00664	STA	F	F = (A)			4021
4022	07043	0 02 00040	LDA	A	SAVE POINTER TO FIRST VARIABLE			4022
4023	07044	0 04 00066	STA	TRFA	FOR LATER POSSIBLE TRACING			4023
4024	07045	0 02 00057	LDA	D	I = D+D0+10			4024
4025	07046	0 06 00661	ADD	D0				4025
4026	07047	0 06 00743	ADD	K125	=8			4026
4027	07050	0 04 00041	STA	I				4027
4028	07051	0 10 10016	JST	EX99	DATA POOL CHECK			4028
4029	07052	0 10 02676	JST	STXI				4029
4030	07053	140040	CRA					4030
4031	07054	0 04 07031	STA	EXT0	TO = 0			4031

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4032	07055	0 04 00642	STA	B	B = 0	4032
4033	07056	0 04 07037	STA	EXT7	T7 = 0	4033
4034	07057	0 06 07770	ADD	EX92+12		4034
4035	07060	0414 67	LGL	9	O(I-2) = '='	4035
4036	07061	1 04 15377	STA	DP-1,1	O(I) = 0	4036
4037	07062	140401	CMA			4037
4038	07063	0 04 00652	STA	IFLG	IFLG NOT 0	4038
4039	07064	0 02 00113	LDA	L0		4039
4040	07065	1 04 15376	STA	DP-2,1	O(I-2) = L0	4040
4041	07066	0 10 02676	EX10 JST	STXI		4041
4042	07067	140040	CRA			4042
4043	07070	0 04 07032	STA	T1EX	T1 = 0	4043
4044	07071	1 04 15400	STA	DP,1	AOIN(I) = T(1) = 0	4044
4045	07072	1 04 15401	STA	DP+1,1		4045
4046	07073	0 02 00653	LDA	IM	IF IM NOT ZERO,	4046
4047	07074	100040	SZE			4047
4048	07075	0 01 07331	JMP	EX50	GO TO EX50	4048
4049	07076	0 02 00724	LDA	K106		4049
4050	07077	140407	TCA			4050
4051	07100	0 04 00000	STA	0		4051
4052					PERFORM TABLE SEARCH	4052
4053	07101	0 02 00607	EX11 LDA	TC	GO TO ROUTINE ACCORDING	4053
4054	07102	1 07 07746	SUB	EX90+6,1	TO TC,	4054
4055	07103	101040	SNZ		IF NO MATCH, ERROR	4055
4056	07104	0 01 07114	JMP	EX11		4056
4057	07105	0 12 00000	IRS	XR		4057
4058	07106	0 01 07101	JMP	EX11		4058
4059	07107	0 10 02676	JST	STXI		4059
4060	07110	0 02 00670	LDA	LIBF	SPECIAL LIBRARY FLAG	4060
4061	07111	100040	SZE			4061
4062	07112	0 01 07270	JMP	EX39		4062
4063	07113	0 01 10010	JMP	EX95	ERROR CONDITION	4063
4064	07114	1 02 07754	EX11 LDA	EX91+6,1		4064
4065	07115	0 04 00000	STA	0		4065
4066	07116	1 01 00000	JMP	0,1	PROCESS LEADING OPERATOR	4066
4067					SPECIAL OPERATOR FLAG SET WHEN COMPILING THE FORTRAN	4067
4068					LIBRARY IN WHICH CASE THE OPERATIONS ( A= ) AND	4068

4069	*		( =A ) ARE REQUIRED, THIS LOGIC WILL ALLOW THESE	4069	
4070	*		TO BE PROCESSED WITHOUT GIVING AN ERROR MESSAGE IF THE	4070	
4071	*		SPECIAL LIBRARY FLAG (LIBF) IS SET TO NON-ZERO,	4071	
4072	*			4072	
4073	07117	0 02 00642	EX12 LDA B	TC = (	4073
4074	07120	0 06 00726	ADD K109	B = B+16	4074
4075	07121	0 04 00642	STA B	SXF = NON-ZERO	4075
4076	07122	0 04 00050	STA SXF		4076
4077	07123	0 10 02354	EX14 JST I100	INPUT ITEM	4077
4078	07124	0 10 02676	JST STXI		4078
4079	07125	0 01 07066	JMP EX10	GO TO EX10	4079
4080	07126	0 10 02676	EX16 JST STXI	TC = *	4080
4081	07127	0 02 00607	LDA TC		4081
4082	07130	0414 67	LGL 9	OI (I-2) = *, B+13	4082
4083	07131	0 06 00642	ADD B		4083
4084	07132	0 06 00747	ADD K129		4084
4085	07133	1 05 15377	ERA DP-1,1		4085
4086	07134	140100	SSP		4086
4087	07135	101040	SNZ		4087
4088	07136	0 01 07141	JMP **3		4088
4089	07137	0 10 03116	JST ER00	NO, CONSTR ERROR	4089
4090	07140	150327	BCI 1,PW	* NOT PRECEDED BY ANOTHER *	4090
4091	07141	0 02 00726	LDA K109	(E = '20)	4091
4092	07142	0414 67	LGL 9		4092
4093	07143	1 13 15377	IMA DP-1,1		4093
4094	07144	0 03 00735	ANA K118	= '777	4094
4095	07145	0 06 00717	ADD K101		4095
4096	07146	1 05 15377	ERA DP-1,1	CHANGE * TO **	4096
4097	07147	1 04 15377	STA DP-1,1		4097
4098	07150	0 01 07123	JMP EX14	GO TO EX14	4098
4099	07151	0 02 00720	EX18 LDA K102	=2	4099
4100	07152	0 04 00607	STA TC	SET TC TO -	4100
4101	07153	0 02 00743	LDA K125	=8	4101
4102	07154	0 04 07032	STA T1EX	T1 = 8	4102
4103	07155	0 10 02676	JST STXI		4103
4104	07156	1 02 15377	LDA DP-1,1		4104
4105	07157	0 03 00735	ANA K118		4105

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4106	07160	0 07 00642		SUB	B	B .GT. I (I-2) -B	4106
4107	07161	0 07 07032		SUB	T1EX		4107
4108	07162	100400		SPL			4108
4109	07163	0 01 07166		JMP	**3		4109
4110	07164	0 10 03116	EX19	JST	ER00	NO, ERROR	4110
4111	07165	147324		BCI	1,NT	LOGICAL .NOT. NOT A UNARY OPERATOR	4111
4112	07166	0 02 07031	EX20	LDA	TOEX	YES	4112
4113	07167	100040		SZE		T (0) = 0	4113
4114	07170	0 01 07230		JMP	EX34		4114
4115	07171	0 02 00642	EX22	LDA	B	YES,	4115
4116	07172	0 06 00664		ADD	F	B + + (5) .GT. 0	4116
4117	07173	100400		SPL		NO, ERROR	4117
4118	07174	0 01 10012		JMP	EX96		4118
4119	07175	0 10 02676	EX24	JST	STXI		4119
4120	07176	0 02 00607		LDA	TC		4120
4121	07177	0414 67		LGL	9		4121
4122	07200	0 06 07032		ADD	T1EX		4122
4123	07201	0 06 00642		ADD	B		4123
4124	07202	1 04 15401		STA	DP+1,1	OI(I) = TC , T1+B	4124
4125	07203	0 10 10016		JST	EX99	DATA POOL CHECK	4125
4126	07204	0 01 07123		JMP	EX14		4126
4127	07205	0 10 02676	EX26	JST	STXI		4127
4128	07206	1 02 15377		LDA	DP-1,1		4128
4129	07207	0 03 00735		ANA	K118	IF I (I-2) .LT. B	4129
4130	07210	0 11 00642		CAS	B		4130
4131	07211	0 01 10014		JMP	EX97	ERROR-----MULTIPLE + OR - SIGNS	4131
4132	07212	101000		NOP			4132
4133	07213	0 02 00750	EX30	LDA	K131	SET INDEX TO	4133
4134	07214	0 04 00000		STA	0	SEARCH OPERATOR TABLE FOR TRAILING	4134
4135	07215	1 02 07772	EX31	LDA	EX92+14,1	OPERATOR AFTER HAVING ENCOUNTERED AN	4135
4136	07216	0 07 00607		SUB	TC	ITEM OR A NEGATE,	4136
4137	07217	100040		SZE			4137
4138	07220	0 01 07226		JMP	EX32		4138
4139	07221	1 02 10010		LDA	EX93+14,1		4139
4140	07222	0 04 07225		STA	**3		4140
4141	07223	0 10 02676		JST	STXI		4141
4142	07224	-0 01 07225		JMP*	**1		4142

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4143	07225	0 000000		DAC	**		4143
4144	07226	0 12 00000	EX32	IRS	XR	CONTROL OPERATOR LOOP	4144
4145	07227	0 01 07215		JMP	EX31	CONTINUE	4145
4146	07230	0 02 00642	EX34	LDA	B	IF B = 0	4146
4147	07231	0 07 07037		SUB	EXT7		4147
4148	07232	100040		SZE			4148
4149	07233	0 01 07274		JMP	EX40	NO, GO TO EX40	4149
4150	07234	0 02 07031		LDA	TOEX	IF T (0) = 0	4150
4151	07235	100040		SZE			4151
4152	07236	0 01 07251		JMP	EX38	NO, GO TO EX38	4152
4153	07237	140040	EX35	CRA			4153
4154	07240	0 04 00652		STA	IFLG	IFLG = 0	4154
4155	07241	0 02 00664		LDA	F		4155
4156	07242	141206		AOA			4156
4157	07243	101400		SMI		F . GE. -1	4157
4158	07244	0 01 07246		JMP	EX36	YES	4158
4159	07245	-0 01 07041		JMP*	EX00	RETURN - NO	4159
4160	07246	0 10 10040	EX36	JST	CA00	SCAN	4160
4161	07247	0 10 12700		JST	OT00	OUTPUT TRIADS	4161
4162	07250	-0 01 07041		JMP*	EX00	RETURN	4162
4163	07251	0 10 02676	EX38	JST	STX1		4163
4164	07252	0 02 00642		LDA	B		4164
4165	07253	0 07 00726		SUB	K109		4165
4166	07254	0 04 00642		STA	B		4166
4167	07255	0 02 00721		LDA	K103		4167
4168	07256	0 04 00045		STA	MFL		4168
4169	07257	0 02 07031		LDA	TOEX		4169
4170	07260	0414 67		LGL	9	O (I) = T (0)	4170
4171	07261	0 06 00642		ADD	B	I (I) = B+9	4171
4172	07262	0 06 00742		ADD	K124	I = I+2	4172
4173	07263	1 04 15401		STA	DP+1,1		4173
4174	07264	0 10 10016		JST	EX99	DATA POOL CHECK	4174
4175	07265	140040		CRA			4175
4176	07266	0 04 07031		STA	TOEX	T0 = 0	4176
4177	07267	0 04 07037		STA	EXT7	T7 = 0	4177
4178	07270	0 02 00113	EX39	LDA	L0		4178
4179	07271	0 04 00040		STA	A	A = L0	4179

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4180	07272	0 04 00653	STA	IM	IM NOT EQ 0	4180
4181	07273	0 01 07066	JMP	EX10		4181
4182	07274	0 02 00607	EX40 LDA	TC	TC J ,	4182
4183	07275	0 11 00672	CAS	K5	= '254 (,) IN BCD MODE	4183
4184	07276	0 01 07300	JMP	**2		4184
4185	07277	0 01 07303	JMP	EX41		4185
4186	07300	0 07 00752	SUB	K134	=17	4186
4187	07301	100040	SZE			4187
4188	07302	0 01 07316	JMP	EX44	NO, GO TO EX44	4188
4189	07303	0 02 00041	EX41 LDA	I		4189
4190	07304	0 07 00720	EX42 SUB	K102		4190
4191	07305	0 04 00000	STA	XR	B VS, I (J)	4191
4192	07306	1 02 15401	LDA	DP+1,1		4192
4193	07307	0 03 00735	ANA	K118		4193
4194	07310	0 11 00642	CAS	B		4194
4195	07311	0 01 07314	JMP	**3		4195
4196	07312	0 01 07175	JMP	EX24	EQUAL, GO TO EX24	4196
4197	07313	-0 01 07041	JMP*	EX00	LESS, RETURN	4197
4198	07314	0 02 00000	LDA	XR	GREATER, REPEAT LOOP	4198
4199	07315	0 01 07304	JMP	EX42		4199
4200	07316	0 10 02555	EX44 JST	IP00	) - INPUT OPERATOR	4200
4201	07317	0 01 07213	JMP	EX30	GO TO EX30	4201
4202	07320	-0 02 00040	EX46 LDA*	A		4202
4203	07321	0 04 07036	STA	T6EX	IF 01(01(A)) = L(0)	4203
4204	07322	-0 02 07036	LDA*	T6EX		4204
4205	07323	0 11 00113	CAS	L0		4205
4206	07324	0 01 07326	JMP	**2		4206
4207	07325	0 01 07230	JMP	EX34	GO TO EX34	4207
4208	07326	0 04 00577	STA	O2	O2 = L0	4208
4209	07327	0 10 10436	EX48 JST	ET00	ENTER TRIAD	4209
4210	07330	0 01 07230	JMP	EX34		4210
4211	07331	0 10 02676	EX50 JST	STXI		4211
4212	07332	0 02 00040	LDA	A	A(I) = A	4212
4213	07333	1 04 15400	STA	DP,1		4213
4214	07334	0 02 00655	LDA	IU	IU = SUB OR ARR	4214
4215	07335	101100	SLN			4215
4216	07336	0 01 07213	JMP	EX30	NO, GO TO EX30	4216

H O N E Y W E L L      C O M P U T E R   C O N T R O L   D I V I S I O N      P R O G R A M   D O C U M E N T A T I O N

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4217	07337	0 02 00607	LDA	TC			4217
4218	07340	0 07 00702	SUB	K17	TC = (		4218
4219	07341	100040	SZE				4219
4220	07342	0 01 07666	JMP	EX76	NO, GO TO EX76		4220
4221	07343	0 02 00642	LDA	B	YES, B = B+16		4221
4222	07344	0 06 00726	ADD	K109			4222
4223	07345	0 04 00642	STA	B			4223
4224	07346	0 02 00655	LDA	IU	IU = ARR		4224
4225	07347	0 07 00721	SUB	K103			4225
4226	07350	100040	SZE				4226
4227	07351	0 01 07663	JMP	EX75	NO, GO TO EX75		4227
4228	07352	140040	CRA				4228
4229	07353	1 04 15400	STA	DP,1	A(I) = 0		4229
4230	07354	0 04 00616	STA	X4	X4 = 0		4230
4231	07355	0 04 07034	STA	T3EX	T3 = 0		4231
4232	07356	0 04 10032	STA	K	T5 = A		4232
4233	07357	0 02 00633	LDA	DO			4233
4234	07360	0 04 07040	STA	T9EX	T9 = DO		4234
4235	07361	0 02 00040	LDA	A			4235
4236	07362	0 04 07035	STA	T5EX	T5 = A		4236
4237	07363	0 02 00631	LDA	AT			4237
4238	07364	0 07 00723	SUB	K105	AT = DUM		4238
4239	07365	100040	SZE				4239
4240	07366	0 01 07660	JMP	EX74	NO, GO TO EX74		4240
4241	07367	140040	CRA				4241
4242	07370	0 04 07033	STA	T2EX	YES, T (0) = 0		4242
4243	07371	0 10 10016	JST	EX99	DATA POOL CHECK		4243
4244	07372	0 10 02676	JST	STXI			4244
4245	07373	0 02 00040	LDA	A			4245
4246	07374	1 04 15400	STA	DP,1	A(I) = A		4246
4247	07375	0 02 00751	LDA	K132	OI (I) = A, 11		4247
4248	07376	0414 67	LGL	9			4248
4249	07377	0 06 00742	ADD	K124			4249
4250	07400	1 04 15401	STA	DP+1,1	I=9		4250
4251	07401	0 02 00633	LDA	DO	IF DO = 1, GO TO EX56		4251
4252	07402	0 07 00717	SUB	K101			4252
4253	07403	101040	SNZ				4253



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4254	07404	0 01 07427	JMP	EX56		4254
4255	07405	0 10 10016	JST	EX99	DATA POOL CHECK	4255
4256	07406	0 01 07410	JMP	**2		4256
4257	07407	0 12 10032	EX55 IRS	K	K = K+1	4257
4258	07410	0 02 10032	LDA	K		4258
4259	07411	0 04 00000	STA	XR		4259
4260	07412	1 02 00612	LDA	X,1		4260
4261	07413	0 04 07036	STA	T6EX	T6 = X (K)	4261
4262	07414	0 10 02676	JST	STXI		4262
4263	07415	0 02 07036	LDA	T6EX		4263
4264	07416	1 04 15400	STA	DP,1	O(I) = *	4264
4265	07417	0 02 00721	LDA	K103	I (I) = T3+13	4265
4266	07420	0414 67	LGL	9	T3 = T3+16	4266
4267	07421	0 06 07034	ADD	T3EX	A (A) = T6	4267
4268	07422	0 06 00747	ADD	K129	=13	4268
4269	07423	1 04 15401	STA	DP+1,1		4269
4270	07424	0 03 00735	ANA	K118		4270
4271	07425	0 06 00721	ADD	K103		4271
4272	07426	0 04 07034	STA	T3EX	T3 = A(A)	4272
4273	07427	0 10 02432	EX56 JST	IV00	INPUT INTEGER VARIABLE	4273
4274	07430	0 10 10016	JST	EX99	DATA POOL CHECK	4274
4275	07431	0 10 02676	JST	STXI		4275
4276	07432	0 02 00040	LDA	A	A(I) = A	4276
4277	07433	1 04 15400	STA	DP,1		4277
4278	07434	0 02 00573	LDA	NT		4278
4279	07435	100040	SZE			4279
4280	07436	0 01 07614	JMP	EX68	CONSTANT ENCOUNTERED	4280
4281	07437	0 10 01251	JST	UC00	UNINPUT COLUMN	4281
4282	07440	0 10 01521	JST	DN00	INPUT DO NOT ASSIGN	4282
4283	07441	101040	SNZ			4283
4284	07442	0 01 07450	JMP	EX57	IM = 0	4284
4285	07443	0 07 00717	SUB	K101		4285
4286	07444	101040	SNZ			4286
4287	07445	0 01 07450	JMP	EX57	IM = INTEGER	4287
4288	07446	0 10 03116	JST	ER00		4288
4289	07447	151725	BCI	1,SU	SUBSCRIPT INCREMENTER NOT A CONSTANT	4289
4290	07450	0 10 02676	EX57 JST	STXI		4290

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4291	07451	0 02 00717	LDA	K101		4291
4292	07452	0414 67	LGL	9		4292
4293	07453	0 06 07034	ADD	T3EX		4293
4294	07454	0 06 00745	ADD	K127		4294
4295	07455	1 04 15401	STA	DP+1,1	O(I) = +, I(I) = T3+11	4295
4296	07456	0 10 10016	JST	EX99	DATA POOL CHECK	4296
4297	07457	0 02 07040	EX58 LDA	T9EX		4297
4298	07460	0 04 00633	STA	DO	RESET D(0)	4298
4299	07461	0 02 01475	LDA	ID	SUBSCRIPT SIZE	4299
4300	07462	0 07 00717	SUB	K101	ID = ID-1	4300
4301	07463	0 04 01475	STA	ID		4301
4302	07464	101040	SNZ		IF ZERO, GO TO EX60	4302
4303	07465	0 01 07500	JMP	EX60		4303
4304	07466	0 02 10032	LDA	K		4304
4305	07467	0 04 00000	STA	0		4305
4306	07470	1 02 00633	LDA	DO,1	D(K) = 0	4306
4307	07471	101040	SNZ			4307
4308	07472	0 01 07601	JMP	EX67	YES - (DUMMY DIMENSION)	4308
4309	07473	000201	IAB			4309
4310	07474	0 02 01475	LDA	ID		4310
4311	07475	0 10 02703	JST	IM00		4311
4312	07476	0 06 07033	ADD	T2EX		4312
4313	07477	0 04 07033	STA	T2EX	T2 = T2+ID*D(K)	4313
4314	07500	0 02 07040	EX60 LDA	T9EX		4314
4315	07501	0 04 00633	STA	DO	RESET D(0)	4315
4316	07502	0 02 10032	LDA	K		4316
4317	07503	0 04 00000	STA	0		4317
4318	07504	1 02 00614	LDA	X+2,1	X(K+2) = 0	4318
4319	07505	101040	SNZ			4319
4320	07506	0 01 07517	JMP	EX62	YES - FINISHED	4320
4321	07507	0 02 00752	LDA	K134	=17	4321
4322	07510	0 10 02547	JST	TS00	COMMA TEST	4322
4323	07511	1 02 00634	LDA	DO+1,1		4323
4324	07512	000201	IAB			4324
4325	07513	1 02 00633	LDA	DO,1		4325
4326	07514	0 10 02703	JST	IM00		4326
4327	07515	1 04 00634	STA	DO+1,1	D(K+1) = D(K+1)*D(K)	4327

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4328	07516	0 01 07407	JMP	EX55		4328
4329	07517	0 10 02676	EX62 JST	STXI		4329
4330	07520	1 02 15377	LDA	DP-1,1	DOES O(I-2) = *	4330
4331	07521	140100	SSP			4331
4332	07522	0404 67	LGR	9		4332
4333	07523	0 11 00721	CAS	K103		4333
4334	07524	0 01 07526	JMP	**2		4334
4335	07525	0 01 07575	JMP	EX66	YES,	4335
4336	07526	101040	SNZ		NO,	4336
4337	07527	0 01 07562	JMP	EX64	O(I-2) = 0 - YES	4337
4338	07530	0 11 00751	CAS	K132	DOES O(I-2) = A	4338
4339	07531	0 01 07537	JMP	EX63		4339
4340	07532	0 01 07534	JMP	**2	YES	4340
4341	07533	0 01 07537	JMP	EX63		4341
4342	07534	0 02 07033	LDA	T2EX	IS T2 = 0	4342
4343	07535	101040	SNZ			4343
4344	07536	0 01 07567	JMP	EX65	YES (DUMMY ARRAY (1,1,1))	4344
4345	07537	0 02 00717	EX63 LDA	K101		4345
4346	07540	1 04 15377	STA	DP-1,1	OI(I-2) = 1	4346
4347	07541	0 02 07033	LDA	T2EX	A(I) = T2	4347
4348	07542	1 04 15400	STA	DP,1		4348
4349	07543	0 02 00753	LDA	K137	O='X' ('24), I=2	4349
4350	07544	1 04 15401	STA	DP+1,1		4350
4351	07545	140040	CRA			4351
4352	07546	1 04 15403	STA	DP+3,1	OI(I+2) = 0	4352
4353	07547	0 02 07035	LDA	T5EX		4353
4354	07550	1 04 15402	STA	DP+2,1	A(I+2) = T5	4354
4355	07551	0 10 10016	JST	EX99	DATA POOL CHECK	4355
4356	07552	0 10 10040	JST	CA00	SCAN	4356
4357	07553	0 02 00576	LDA	O1		4357
4358	07554	0 04 00040	STA	A	A = O1	4358
4359	07555	0 10 02672	JST	STXA		4359
4360	07556	1 02 15402	LDA	DP+2,1	S(A) = NON-ZERO	4360
4361	07557	140500	SSM			4361
4362	07560	1 04 15402	STA	DP+2,1	S(A) = 1	4362
4363	07561	0 01 07316	JMP	EX44		4363
4364	07562	0 02 00113	EX64 LDA	LO		4364

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4365	07563	1 04 15400	STA	DP,1	A(I) = L0	4365
4366	07564	0 10 10016	JST	EX99	DATA POOL CHECK	4366
4367	07565	0 10 02676	JST	STXI		4367
4368	07566	0 01 07537	JMP	EX63		4368
4369	07567	0 02 00041	EX65 LDA	I		4369
4370	07570	0 07 00722	SUB	K104		4370
4371	07571	0 04 00041	STA	I	I = I-4	4371
4372	07572	0 02 07035	LDA	T5EX		4372
4373	07573	1 04 15374	STA	DP-4,1	A(I) = T5	4373
4374	07574	0 01 07316	JMP	EX44		4374
4375	07575	0 02 00041	EX66 LDA	I		4375
4376	07576	0 07 00720	SUB	K102		4376
4377	07577	0 04 00041	STA	I	I = I-2	4377
4378	07600	0 01 07517	JMP	EX62	ASSIGN INT CONSTANT	4378
4379	07601	0 10 04241	EX67 JST	AI00		4379
4380	07602	0 10 02676	JST	STXI	SET XR TO I	4380
4381	07603	0 02 00040	LDA	A		4381
4382	07604	1 04 15400	STA	DP,1	A(I) = A	4382
4383	07605	0 02 00717	LDA	K101		4383
4384	07606	0414 67	LGL	9		4384
4385	07607	0 06 07034	ADD	T3EX		4385
4386	07610	0 06 00745	ADD	K127		4386
4387	07611	1 04 15401	STA	DP+1,1	OI(I) = +, T3+11	4387
4388	07612	0 10 10016	JST	EX99	DATA POOL CHECK	4388
4389	07613	0 01 07500	JMP	EX60		4389
4390	07614	0 02 00607	EX68 LDA	TC	IS TC	4390
4391	07615	0 11 00721	CAS	K103	= *	4391
4392	07616	0 01 07620	JMP	*+2		4392
4393	07617	0 01 07621	JMP	*+2		4393
4394	07620	0 01 07457	JMP	EX58	NO	4394
4395	07621	0414 67	LGL	9		4395
4396	07622	0 06 07034	ADD	T3EX		4396
4397	07623	0 06 00747	ADD	K129	=13	4397
4398	07624	1 04 15401	STA	DP+1,1	OI(I) = *, T3+13	4398
4399	07625	0 10 02437	JST	IR00	INPUT INTEGER VAR/CON	4399
4400	07626	0 01 07430	JMP	EX56+1		4400
4401	07627	140040	EX69 CRA		SET LISTING FOR OCTAL ADDR	4401

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4402	07630	0 04 00040	STA	A		4402
4403	07631	0 02 13733	LDA	OMI5	JMP 0 INSTRUCTION	4403
4404	07632	0 04 00640	STA	DF	SET LISTING FOR SYMBOLIC A INSTR.	4404
4405	07633	0 10 14127	JST	QA00	OUTPUT ABSOLUTE	4405
4406	07634	0 02 00060	LDA	RPL		4406
4407	07635	0 04 00577	STA	Q2		4407
4408	07636	0 02 00754	LDA	K138		4408
4409	07637	0 04 00600	STA	P	P = H	4409
4410	07640	0 10 10436	JST	ET00	ENTER TRIAD	4410
4411	07641	0 10 06664	JST	HS00	TRANSFER HOLLERITH STRING	4411
4412	07642	0 02 00756	LDA	CRET	(A) = C/R	4412
4413	07643	0 10 12437	JST	OK00	OUTPUT PACK	4413
4414	07644	140040	CRA			4414
4415	07645	0 04 00000	STA	0	SET LISTING FOR OCTAL ADDR.	4415
4416	07646	0 04 00040	STA	A	SET LISTING FOR OCTAL ADDR.	4416
4417	07647	0 02 00577	LDA	Q2		4417
4418	07650	0 07 00717	SUB	K101		4418
4419	07651	0 10 14135	JST	OS00	OUTPUT STRING RPL-1	4419
4420	07652	0 10 01256	JST	CH00	INPUT CHARACTER	4420
4421	07653	0 10 01412	JST	FN00		4421
4422	07654	0 10 02676	JST	STX1	RESET INDEX TO I	4422
4423	07655	0 02 00044	LDA	L		4423
4424	07656	1 04 15400	STA	DP,1	A(I) = L	4424
4425	07657	0 01 07666	JMP	EX76		4425
4426	07660	0 02 00630	EX74 LDA	AF		4426
4427	07661	0 04 07033	STA	T2EX	T2 = AF	4427
4428	07662	0 01 07401	JMP	EX54	GO TO EX54	4428
4429	07663	0 02 00752	EX75 LDA	K134		4429
4430	07664	0 04 00607	STA	TC	TC = ,	4430
4431	07665	0 01 07175	JMP	EX24	GO TO EX24	4431
4432	07666	1 02 15377	EX76 LDA	DP-1,1		4432
4433	07667	0404 67	LGR	9		4433
4434	07670	0 03 10027	ANA	K133		4434
4435	07671	0 07 00752	SUB	K134		4435
4436	07672	101040	SNZ			4436
4437	07673	0 01 07230	JMP	EX34	WITHIN AN ARGUMENT LIST	4437
4438	07674	0 10 03116	JST	ER00		4438

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4439	07675	140707		BCI	1,AG				4439
4440	07676	0 02 00745	EX78	LDA	K127				4440
4441	07677	0 04 07032	EX79	STA	T1EX		T (1) = 11		4441
4442	07700	0 01 07171		JMP	EX22				4442
4443	07701	0 02 00747	EX80	LDA	K129		T (1) = 13		4443
4444	07702	0 01 07677		JMP	EX79				4444
4445	07703	0 02 00724	EX81	LDA	K106				4445
4446	07704	0 04 07032		STA	T1EX		T (1) = 6		4446
4447	07705	0 01 07166		JMP	EX20				4447
4448	07706	0 02 00722	EX82	LDA	K104		T (1) = 4		4448
4449	07707	0 01 07704		JMP	EX81+1				4449
4450	07710	0 02 07031	EX83	LDA	TOEX		T (0) = 0		4450
4451	07711	100040		SZE					4451
4452	07712	0 01 07726		JMP	EX84				4452
4453	07713	0 02 00607		LDA	TC		YES,		4453
4454	07714	0 04 07031		STA	TOEX		T (0) = TC		4454
4455	07715	0 02 07755		LDA	EX92+1				4455
4456	07716	0 04 00607		STA	TC		TC = -		4456
4457	07717	0 02 00642		LDA	B				4457
4458	07720	0 06 00726		ADD	K109				4458
4459	07721	0 04 00642		STA	B				4459
4460	07722	0 04 07037		STA	EXT7				4460
4461	07723	0 02 07725		LDA	*+2				4461
4462	07724	0 01 07677		JMP	EX79				4462
4463	07725	177773		DEC	=5				4463
4464	07726	0 10 03116	EX84	JST	ER00		ERROR		4464
4465	07727	151314		BCI	1,RL		MORE THAN 1 RELATIONAL OPERATOR		4465
4466	07730	0 02 00664	EX85	LDA	F				4466
4467	07731	0 06 00720		ADD	K102		T (5) = T (5) + 2 = B = 0		4467
4468	07732	0 04 00664		STA	F				4468
4469	07733	0 06 00642		ADD	B				4469
4470	07734	101040		SNZ					4470
4471	07735	0 01 07175		JMP	EX24				4471
4472	07736	0 10 03116		JST	ER00		ERROR		4472
4473	07737	142721		BCI	1,EQ		MULTIPLE '='S, OR EXPRESSION TO LEFT OF =		4473
4474	07740	000250	EX90	OCT	250		(		4474
4475	07741	000003		OCT	3		*		4475

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4476	07742	000005		OCT	5		NOT		4476
4477	07743	000001		OCT	1		+		4477
4478	07744	000002		OCT	2		-		4478
4479	07745	000310		OCT	310		H		4479
4480	07746	0 007117	EX91	DAC	EX12		(		4480
4481	07747	0 007126		DAC	EX16		*		4481
4482	07750	0 007151		DAC	EX18		NOT		4482
4483	07751	0 007205		DAC	EX26		+		4483
4484	07752	0 007205		DAC	EX26		+		4484
4485	07753	0 007627		DAC	EX69		H		4485
4486	07754	000001	EX92	OCT	1		+		4486
4487	07755	000002		OCT	2		-		4487
4488	07756	000003		OCT	3		*		4488
4489	07757	000004		OCT	4		/		4489
4490	07760	000006		OCT	6		AND		4490
4491	07761	000007		OCT	7		OR		4491
4492	07762	000015		OCT	15		NE		4492
4493	07763	000012		OCT	12		EQ		4493
4494	07764	000014		OCT	14		GT		4494
4495	07765	000010		OCT	10		LT		4495
4496	07766	000013		OCT	13		GE		4496
4497	07767	000011		OCT	11		LE		4497
4498	07770	000016		OCT	16		=		4498
4499	07771	000016		OCT	16		= (ERROR)		4499
4500	07772	0 007676	EX93	DAC	EX78		+		4500
4501	07773	0 007676		DAC	EX78				4501
4502	07774	0 007701		DAC	EX80		*		4502
4503	07775	0 007701		DAC	EX80		/		4503
4504	07776	0 007703		DAC	EX81		AND		4504
4505	07777	0 007706		DAC	EX82		OR		4505
4506	10000	0 007710		DAC	EX83		NE		4506
4507	10001	0 007710		DAC	EX83		EQ		4507
4508	10002	0 007710		DAC	EX83		GT		4508
4509	10003	0 007710		DAC	EX83		LT		4509
4510	10004	0 007710		DAC	EX83		GE		4510
4511	10005	0 007710		DAC	EX83		LE		4511
4512	10006	0 007730		DAC	EX85		=		4512

4513	10007	0 007230		DAC	EX34	NONE OF THESE	4513
4514	10010	0 10 03116	EX95	JST	ER00		4514
4515	10011	147720		BCI	1,OP	MORE THAN ONE OPERATOR IN A ROW	4515
4516	10012	0 10 03116	EX96	JST	ER00	ERROR	4516
4517	10013	150301		BCI	1,PA	OPERATOR MUST BE WITHIN PARENTHESES	4517
4518	10014	0 10 03116	EX97	JST	ER00	ERROR	4518
4519	10015	152717		BCI	1,UO	MULTIPLE + OR - SIGNS NOT AS UNARY OPS	4519
4520			*	BUMP	THE I COUNT BY TWO	AND CHECK FOR DATA OVERFLOW	4520
4521	10016	0 000000	EX99	DAC	**		4521
4522	10017	0 12 00041		IRS	I		4522
4523	10020	0 12 00041		IRS	I		4523
4524	10021	0 02 00041		LDA	I		4524
4525	10022	141206		AOA			4525
4526	10023	0 11 00044		CAS	L		4526
4527	10024	101000		NOP			4527
4528	10025	0 01 03456		JMP	AS50		4528
4529	10026	-0 01 10016		JMP*	EX99		4529
4530	10027	000077	K133	OCT	77		4530
4531	10030	177772	K130	DEC	-6		4531
4532	10031	000041	K141	DEC	33		4532
4533	10032	0 00 00000	K	PZE	0		4533
4534	10033	177770	KM8	DEC	-8		4534
4535			*				4535
4536			*				4536
4537			*				4537
4538			*				4538
4539			*				4539
4540			*			*****	4540
4541			*			*SCAN	4541
4542			*			*TRIAD SEARCH	4542
4543			*			*TEMP STORE CHECK*	4543
4544	10034	0 00 00000	TOCA	PZE	0		4544
4545	10035	0 00 00000	T1CA	PZE	0		4545
4546	10036	0 00 00000	T2CA	PZE	0		4546
4547	10037	0 00 00000	T9CA	PZE	0		4547
4548			*			THE AOIN TABLE IS PROCESSED FROM THE BOTTOM	4548
4549			*			UP AND ENTRIES ARE FORMED FOR INCLUSION	4549



4550			*									4550
4551			*									4551
4552			*									4552
4553			*									4553
4554	10040	0 000000	CA00	DAC	**							4554
4555	10041	0 02 00113		LDA	LO							4555
4556	10042	0 04 10457		STA	ACCP							4556
4557	10043	0 10 02676	CA04	JST	STXI					INDICATE EMPTY ACCUM ESTABLISH I		4557
4558	10044	0 04 10035		STA	T1CA					T1 = I		4558
4559	10045	1 02 15377		LDA	DP-1,1							4559
4560	10046	0 03 00735		ANA	K118							4560
4561			*							IF I (I-2) = 0, OR .LT. I (I)		4561
4562	10047	0 04 10037		STA	T9CA							4562
4563	10050	1 02 15401		LDA	DP+1,1							4563
4564	10051	0 03 00735		ANA	K118							4564
4565	10052	0 11 10037		CAS	T9CA							4565
4566	10053	0 01 10061		JMP	CA08					GO TO CA08		4566
4567	10054	101000		NOP								4567
4568	10055	0 02 00041		LDA	I							4568
4569	10056	0 07 00720		SUB	K102							4569
4570	10057	0 04 00041		STA	I					I = I-2		4570
4571	10060	0 04 00000		STA	0							4571
4572	10061	1 02 15403	CA08	LDA	DP+3,1							4572
4573	10062	1 05 15401		ERA	DP+1,1							4573
4574	10063	0 04 10034		STA	T0CA							4574
4575	10064	1 02 15401		LDA	DP+1,1							4575
4576	10065	0 03 00735		ANA	K118							4576
4577	10066	0 04 10036		STA	T2CA							4577
4578	10067	1 02 15401		LDA	DP+1,1							4578
4579	10070	140100		SSP								4579
4580	10071	0404 67		LGR	9					P = 0 (I)		4580
4581	10072	0 04 00600		STA	P							4581
4582	10073	0 11 00720		CAS	K102							4582
4583	10074	0 11 00723		CAS	K105					IF P IS NOT * OR /, GO TO CA10		4583
4584	10075	0 01 10100		JMP	CA10							4584
4585	10076	0 01 10100		JMP	CA10							4585
4586	10077	0 01 10143		JMP	CA14					GO TO CA14		4586

IN THE TRIAD TABLE, LEVELS ARE USED TO CONTROL THE ORDER OF ENTRY INTO THE TRIADS, SIGN CONTROL IS ALSO ACCOMPLISHED IN THIS ROUTINE.

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4587	10100	0 02 10034	CA10	LDA	TOCA
4588	10101	101400		SMI	
4589	10102	0 01 10121		JMP	CA13
4590	10103	0 02 10033		LDA	KM8
4591	10104	0 13 00000		IMA	XR
4592	10105	000201		IAB	
4593	10106	0 02 00600		LDA	P
4594	10107	1 11 10426		CAS	CA90+8,1
4595	10110	0 01 10112		JMP	**2
4596	10111	0 01 10115		JMP	**4
4597	10112	0 12 00000		IRS	XR
4598	10113	0 01 10107		JMP	**4
4599	10114	0 01 10324		JMP	CA45
4600	10115	1 02 10436		LDA	CA91+8,1
4601	10116	0 04 00600		STA	P
4602	10117	000201		IAB	
4603	10120	0 04 00000		STA	XR
4604	10121	0 02 10030	CA13	LDA	K130
4605	10122	0 13 00000		IMA	XR
4606	10123	000201		IAB	
4607	10124	0 02 00600		LDA	P
4608	10125	1 11 10426		CAS	CA90+8,1
4609	10126	0 01 10130		JMP	**2
4610	10127	0 01 10137		JMP	CA50
4611	10130	0 12 00000		IRS	XR
4612	10131	0 01 10125		JMP	**4
4613	10132	000201		IAB	
4614	10133	0 04 00000		STA	XR
4615	10134	000201		IAB	
4616	10135	1 02 15401		LDA	DP+1,1
4617	10136	0 01 10140		JMP	**2
4618	10137	140040	CA50	CRA	
4619	10140	0 04 10034		STA	TOCA
4620	10141	000201		IAB	
4621	10142	0 04 00000		STA	XR
4622	10143	1 02 15400	CA14	LDA	DP,1
4623	10144	0 04 00576		STA	01

01=A(I)



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4661	10212	101040		SNZ					4661
4662	10213	0 01 10217		JMP	CA22				4662
4663	10214	0 12 00000		IRS	XR	J = J+2			4663
4664	10215	0 12 00000		IRS	XR				4664
4665	10216	0 01 10205		JMP	CA20				4665
4666	10217	0 10 02676	CA22	JST	STXI				4666
4667	10220	1 02 15401		LDA	DP+1,1				4667
4668	10221	140100		SSP		IF U (I) = ,			4668
4669	10222	0404 67		LGR	9				4669
4670	10223	0 11 00600		CAS	P				4670
4671	10224	0 01 10230		JMP	CA24				4671
4672	10225	0 11 00752		CAS	K134				4672
4673	10226	0 01 10230		JMP	CA24				4673
4674	10227	0 01 10256		JMP	CA30	GO TO CA30			4674
4675	10230	0 10 10335	CA24	JST	ST00	TRIAD SEARCH			4675
4676	10231	0 02 00600		LDA	P				4676
4677	10232	0 11 00751		CAS	K132	IF P = +,*, AND, OR			4677
4678	10233	0 01 10254		JMP	CA28				4678
4679	10234	0 01 10301		JMP	CA37	GO TO CA37			4679
4680	10235	0 11 00725		CAS	K107				4680
4681	10236	0 01 10254		JMP	CA28	ELSE, GO TO CA26			4681
4682	10237	0 01 10301		JMP	CA37				4682
4683	10240	0 11 00724		CAS	K106				4683
4684	10241	0 01 10254		JMP	CA28				4684
4685	10242	0 01 10301		JMP	CA37				4685
4686	10243	0 11 00721		CAS	K103				4686
4687	10244	0 01 10254		JMP	CA28				4687
4688	10245	0 01 10301		JMP	CA37				4688
4689	10246	0 11 00717		CAS	K101				4689
4690	10247	0 01 10251		JMP	CA26				4690
4691				*					4691
4692				*					4692
4693				*					4693
4694	10250	0 01 10301		JMP	CA37				4694
4695	10251	0 11 00720	CA26	CAS	K102				4695
4696	10252	0 01 10254		JMP	*+2	IF P = -			4696
4697	10253	0 01 10276		JMP	CA35	GO TO			4697

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4698	10254	0 02 00576	CA28	LDA	01		4698
4699	10255	0 10 10404		JST	TC00	TEMP STORE CHECK	4699
4700	10256	0 02 00577	CA30	LDA	02		4700
4701	10257	0 10 10404		JST	TC00	TEMP STORE CHECK	4701
4702	10260	0 10 10436	CA31	JST	ET00	ENTER TRIAD	4702
4703	10261	0 10 02676	CA32	JST	STXI		4703
4704	10262	0 02 00576		LDA	01		4704
4705	10263	1 04 15400		STA	DP,1		4705
4706	10264	1 02 15401		LDA	DP+1,1		4706
4707	10265	0400 61		LRL	15		4707
4708	10266	0 02 10034		LDA	TOCA		4708
4709	10267	0404 61		LGR	15		4709
4710	10270	0410 61		LLL	15		4710
4711	10271	1 04 15401		STA	DP+1,1		4711
4712	10272	0 02 10036		LDA	T2CA	IF T2 NOT ZERO,	4712
4713	10273	100040		SZE			4713
4714	10274	0 01 10043		JMP	CA04	GO TO CA04	4714
4715	10275	-0 01 10040		JMP*	CA00	ELSE, RETURN	4715
4716	10276	0 02 10034	CA35	LDA	TOCA		4716
4717	10277	0 05 15034		ERA	'100000		4717
4718	10300	0 04 10034		STA	TOCA		4718
4719	10301	0 02 00577	CA37	LDA	02		4719
4720	10302	0 13 00576		IMA	01	01 = 02	4720
4721	10303	0 04 00577		STA	02		4721
4722	10304	101040		SNZ		IF 02 = 0,	4722
4723	10305	0 01 10261		JMP	CA32	GO TO CA32	4723
4724			*				4724
4725			*				4725
4726			*				4726
4727	10306	0 10 10335		JST	ST00	TRIAD SEARCH	4727
4728	10307	0 02 10034		LDA	TOCA		4728
4729	10310	101400		SMI			4729
4730	10311	0 01 10254		JMP	CA28	GO TO CA28	4730
4731	10312	0 02 00600		LDA	P		4731
4732	10313	0 01 10251		JMP	CA26	ELSE, GO TO CA26	4732
4733	10314	0 07 00746	CA39	SUB	K128		4733
4734	10315	101040		SNZ		IF P = , OR	4734

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4735	10316	0 01 10043	JMP	CA04		4735
4736	10317	0 02 10035	LDA	T1CA		4736
4737	10320	0 07 00722	SUB	K104		4737
4738	10321	100040	SZE		ELSE,	4738
4739	10322	0 01 10203	JMP	CA18	GO TO CA18	4739
4740	10323	0 01 10043	JMP	CA04		4740
4741	10324	0 02 10035	CA45 LDA	T1CA		4741
4742	10325	0 04 00041	STA	I	I = T1	4742
4743	10326	0 04 10036	STA	T2CA		4743
4744	10327	140040	CRA			4744
4745	10330	0 04 10034	STA	TOCA	* * * * *	4745
4746	10331	0 04 00577	STA	O2	O2 = C = 0	4746
4747	10332	0 07 00731	SUB	K110	P = C	4747
4748	10333	0 04 00600	STA	P		4748
4749	10334	0 01 10230	JMP	CA24	GO TO CA24	4749
4750		*			IF THE CURRENT TRIAD (IN WORKING STORAGE) MATCHES	4750
4751		*			ANY TRIAD TABLE ENTRY, EXIT WITH THE	4751
4752		*			POINTER VALUE OF THE MATCHING ENTRY	4752
4753		*			(THIS ACCOMPLISHES ELIMINATION OF REDUNDANT	4753
4754		*			SUBEXPRESSION CALCULATIONS,	4754
4755	10335	0 000000	ST00 DAC	**	TRIAD SEARCH	4755
4756	10336	0 02 00664	LDA	F		4756
4757	10337	0 06 00721	ADD	K103		4757
4758	10340	100040	SZE			4758
4759	10341	0 01 10353	JMP	ST10	GO TO ST10	4759
4760	10342	0 02 00600	ST05 LDA	P	ELSE, IF P = X	4760
4761	10343	0 07 00755	SUB	K139		4761
4762	10344	101040	SNZ			4762
4763	10345	0 01 10260	JMP	CA31	GO TO CA31	4763
4764	10346	0 02 00576	LDA	O1	ELSE, IF O1=ACCP	4764
4765	10347	0 07 10457	SUB	ACCP		4765
4766	10350	101040	SNZ			4766
4767	10351	0 01 10256	JMP	CA30	GO TO CA30	4767
4768	10352	-0 01 10335	JMP*	ST00	ELSE, RETURN	4768
4769	10353	0 02 00113	ST10 LDA	L0		4769
4770	10354	0 04 00000	STA	XR		4770
4771	10355	0 02 00000	ST20 LDA	XP		4771

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4772	10356	0 07 00721	SUB	K103			4772
4773	10357	0 04 00000	STA	XR			4773
4774	10360	0 07 00044	SUB	L	J = J-2		4774
4775	10361	100400	SPL		IF J .LT. L		4775
4776	10362	0 01 10342	JMP	ST05	GO TO ST05		4776
4777	10363	0 02 00577	LDA	02			4777
4778	10364	1 07 15400	SUB	DP,1	IF 01/P/02 .NE. 01/P/02(J)		4778
4779	10365	100040	SZE				4779
4780	10366	0 01 10355	JMP	ST20	GO TO ST20		4780
4781	10367	1 02 15402	LDA	DP+2,1			4781
4782	10370	140100	SSP		EXTRACT OFF STORE BIT		4782
4783	10371	0 07 00600	SUB	P			4783
4784	10372	100040	SZE				4784
4785	10373	0 01 10355	JMP	ST20			4785
4786	10374	0 02 00576	LDA	01			4786
4787	10375	1 07 15401	SUB	DP+1,1			4787
4788	10376	100040	SZE				4788
4789	10377	0 01 10355	JMP	ST20	01 = J		4789
4790	10400	0 02 00000	LDA	XR			4790
4791	10401	0 04 00576	STA	01			4791
4792	10402	0 10 02676	JST	STXI	ESTABLISH I		4792
4793	10403	0 01 10261	JMP	CA32	GO TO CA32		4793
4794					IF J IS A REFERENCE TO A TRIAD , THE TEMP		4794
4795					STORE BIT OF THE REFERENCED TRIAD IS SET.)		4795
4796	10404	0 000000	TC00	DAC	**		4796
4797	10405	0 04 00000	STA	XR	TEMP STORE CHECK		4797
4798	10406	0 02 00054	LDA	ABAR			4798
4799	10407	0 07 00000	SUB	XR			4799
4800	10410	101400	SMI		IS J .GR. ABAR		4800
4801	10411	-0 01 10404	JMP*	TC00	NO,		4801
4802	10412	1 02 15402	LDA	DP+2,1	YES,		4802
4803	10413	140500	SSM				4803
4804	10414	1 04 15402	STA	DP+2,1	S(J) = 1		4804
4805	10415	-0 01 10404	JMP*	TC00			4805
4806	10416	000001	CA90	OCT	1,2,11,10,13,14,12,15		4806
	10417	000002					
	10420	000011					

10421	000010					
10422	000013					
10423	000014					
10424	000012					
10425	000015					
4807 10426	000002	CA91 OCT	2,1,13,14,11,10,12,15			4807
10427	000001					
10430	000013					
10431	000014					
10432	000011					
10433	000010					
10434	000012					
10435	000015					
4808		*				4808
4809		*				4809
4810		*	*****			4810
4811		*	*ENTER TRIAD*			4811
4812		*	*****			4812
4813		*	STORE CURRENT TRIAD INTO THE NEXT TRIAD ENTRY			4813
4814		*	LOCATION.			4814
4815 10436	0 000000	ET00	DAC	**		4815
4816 10437	0 10 03007		JST	SAV		4816
4817 10440	0 02 00044		LDA	L		4817
4818 10441	0 07 00721		SUB	K103	=3	4818
4819 10442	0 04 00044		STA	L	L=L-3	4819
4820 10443	0 04 10457		STA	ACCP	SET ACCUM PTR TO LAST TRIAD ENTRY	4820
4821 10444	0 04 00000		STA	0	J=L	4821
4822 10445	0 02 00600		LDA	P		4822
4823 10446	1 04 15402		STA	DP+2,1	P(J) = P	4823
4824 10447	0 02 00576		LDA	01		4824
4825 10450	1 04 15401		STA	DP+1,1	01(J) = 01	4825
4826 10451	0 02 00577		LDA	02		4826
4827 10452	1 04 15400		STA	DP,1	02(J) = 02	4827
4828 10453	0 02 00000		LDA	0		4828
4829 10454	0 04 00576		STA	01	01=J	4829
4830 10455	0 10 03016		JST	RST		4830
4831 10456	-0 01 10436		JMP*	ET00		4831



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4832	10457	0 000000	ACCP DAC	**	ACCUM POINTER	4832
4833			*			4833
4834			*			4834
4835	10460		SFTB BSS	36	SUBFUNCTION TABLE	4835
4836			*		*****	4836
4837			*		*GENERATE SUBPRO ENTRANCE*	4837
4838			*		*****	4838
4839			*		OUTPUT SUBPROGRAM ENTRANCE CODE , INCLUDING THE	4839
4840			*		CALL TO ARGUMENT ADDRESS TRANSFER,	4840
4841	10524	0 00 00000	TOGE PZE	0		4841
4842	10525	0 000000	GE00 DAC	**		4842
4843	10526	140040	CRA			4843
4844	10527	0 04 10524	STA	TOGE		4844
4845	10530	0 02 00702	LDA	K17	( TEST	4845
4846	10531	0 10 02547	JST	TS00		4846
4847	10532	0 10 02373	GE10 JST	NA00	INPUT NAME	4847
4848	10533	0 02 00041	LDA	I	IFF I=0,	4848
4849	10534	101040	SNZ			4849
4850	10535	0 01 10564	JMP	GE20	GO TO GE20	4850
4851	10536	0 11 10031	CAS	K141		4851
4852	10537	101000	NOP			4852
4853	10540	0 01 10621	JMP	GE30	MAKE ENTRY IN SFTB TABLE	4853
4854	10541	0 06 00721	ADD	K103		4854
4855	10542	0 04 00041	STA	I	IF FULL, GO TO GE30	4855
4856	10543	0 10 02672	JST	STXA	SET XR TO A	4856
4857	10544	1 02 15400	LDA	DP,1		4857
4858	10545	000201	IAB			4858
4859	10546	0 10 02676	JST	STXI	ESTABLISH I	4859
4860	10547	000201	IAB			4860
4861	10550	1 04 10460	STA	SFTB,1		4861
4862	10551	0 10 02672	JST	STXA	SET XR TO A	4862
4863	10552	1 02 15401	LDA	DP+1,1		4863
4864	10553	000201	IAB			4864
4865	10554	0 10 02676	JST	STXI	SET XR TO I	4865
4866	10555	000201	IAB			4866
4867	10556	1 04 10461	STA	SFTB+1,1		4867
4868	10557	0 02 00040	LDA	A		4868

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4869	10560	1 04 10462	STA	SFTB+2,1		4869
4870	10561	0 10 02672	JST	STXA	SET XR TO A	4870
4871	10562	140040	CRA			4871
4872	10563	1 04 15401	STA	DP+1,1	CLEAR OLD USAGE	4872
4873	10564	0 02 00723	GE20 LDA	K105		4873
4874	10565	000201	IAB			4874
4875	10566	0 02 00060	LDA	RPL		4875
4876	10567	0 06 10524	ADD	TOGE		4876
4877	10570	0 06 00721	ADD	K103	(B) = DUM	4877
4878	10571	0 10 04214	JST	AF00	DEFINE AFT (A=RPL+TO+3)	4878
4879	10572	0 12 10524	IRS	TOGE	TO = TO+1	4879
4880	10573	0 02 00752	LDA	K134		4880
4881	10574	0 07 00607	SUB	TC	IF TC = ,	4881
4882	10575	101040	SNZ			4882
4883	10576	0 01 10532	JMP	GE10	GO TO GE10	4883
4884	10577	0 10 02555	JST	IP00	INPUT OPERATOR	4884
4885	10600	140040	CRA			4885
4886	10601	0 04 00640	STA	DF		4886
4887	10602	0 10 14127	JST	0A00	OUTPUT ABS (0)	4887
4888	10603	0 02 10524	LDA	TOGE		4888
4889	10604	0 04 01475	STA	ID	ID = TO	4889
4890	10605	0 02 10623	LDA	K69		4890
4891	10606	0 04 00571	STA	NAMF+1	NAMF = AT	4891
4892	10607	0 10 02722	JST	NF00	FILL IN REMAINING NAME	4892
4893	10610	0 10 12330	JST	OL00	OUTPUT OBJECT LINK	4893
4894	10611	0 02 10524	LDA	TOGE		4894
4895	10612	140407	TCA			4895
4896	10613	0 04 10524	STA	TOGE		4896
4897	10614	140040	CRA			4897
4898	10615	0 10 14127	JST	0A00	OUTPUT NUMBER OF ARGS	4898
4899	10616	0 12 10524	IRS	TOGE	OUTPUT SPACE FOR ARG, ADDR.	4899
4900	10617	0 01 10614	JMP	*-3		4900
4901	10620	-0 01 10525	JMP*	GE00	RETURN	4901
4902	10621	0 10 03116	GE30 JST	ER00	CONSTR. ERROR	4902
4903	10622	140705	BCI	1,AE		4903
4904	10623	140724	K69 BCI	1,AT	AT	4904
4905						4905

4906		*		*****		4906
4907		*		*EXCHANGE LINKS*		4907
4908		*		*****		4908
4909		*		CL SUBA IS INTERCHANGED WITH CL SUBF		4909
4910	10624	0 000000	EL00 DAC	**		4910
4911	10625	0 10 02672	JST	STXA		4911
4912	10626	1 02 15400	LDA	DP,1		4912
4913	10627	0 04 10647	STA	EL90	CL (F) ** CL (A)	4913
4914	10630	0 02 00664	LDA	F		4914
4915	10631	0 04 00000	STA	0		4915
4916	10632	0 10 10636	JST	EL40		4916
4917	10633	0 10 02672	JST	STXA		4917
4918	10634	0 10 10636	JST	EL40		4918
4919	10635	-0 01 10624	JMP*	EL00		4919
4920	10636	0 000000	EL40 DAC	**		4920
4921	10637	1 02 15400	LDA	DP,1		4921
4922	10640	0 13 10647	IMA	EL90		4922
4923	10641	0 03 00735	ANA	K118		4923
4924	10642	1 13 15400	IMA	DP,1		4924
4925	10643	0 03 00736	ANA	K119		4925
4926	10644	1 06 15400	ADD	DP,1		4926
4927	10645	1 04 15400	STA	DP,1		4927
4928	10646	-0 01 10636	JMP*	EL40		4928
4929	10647	0 00 00000	EL90 PZE	0		4929
4930		*				4930
4931		*				4931
4932		*		*****		4932
4933		*		*NON COMMON TEST*		4933
4934		*		*****		4934
4935	10650	0 000000	NM00 DAC	**	NON-COMMON TEST	4935
4936	10651	0 02 00631	LDA	AT		4936
4937	10652	0 07 00722	SUB	K104		4937
4938	10653	100040	SZE			4938
4939	10654	-0 01 10650	JMP*	NM00		4939
4940	10655	0 10 03116	JST	ER00		4940
4941	10656	141722	BCI	1,CR	ILLEGAL COMMON REFERENCE	4941
4942		*				4942

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4943		*							4943
4944		*							4944
4945		*				*****			4945
4946		*				*NON DUMMY OR SUBPRO TEST*			4946
4947	10657	0 000000	ND00	DAC	**				4947
4948	10660	0 02 00631		LDA	AT		TEST		4948
4949	10661	0 07 00723		SUB	K105				4949
4950	10662	100040		SZE					4950
4951	10663	0 01 10667		JMP	ND10				4951
4952	10664	0 10 03116		JST	ER00				4952
4953	10665	142301		BCI	1,DA		ILLEGAL USE OF A DUMMY ARGUMENT		4953
4954	10666	-0 01 10657		JMP*	ND00				4954
4955	10667	0 10 02617	ND10	JST	NS00				4955
4956	10670	-0 01 10657		JMP*	ND00				4956
4957		*							4957
4958		*							4958
4959		*				*****			4959
4960		*				*INPUT SUBSCRIPT*			4960
4961		*				*****			4961
4962	10671	0 00 00000	SCT0	PZE	0				4962
4963	10672	0 000000	SC00	DAC	**				4963
4964	10673	0 04 10671		STA	SCT0		TO = (A)		4964
4965	10674	140040		CRA					4965
4966	10675	0 04 00572		STA	NS				4966
4967	10676	0 04 00605		STA	S2		NS = S2 = S3 = 0		4967
4968	10677	0 04 00606		STA	S3				4968
4969	10700	0 02 00702		LDA	K17		(-TEST		4969
4970	10701	0 10 02547		JST	TS00				4970
4971	10702	0 02 00660	SC10	LDA	EBAR				4971
4972	10703	101400		SMI					4972
4973	10704	0 01 10710		JMP	SC15		EBAR . GR. 0		4973
4974	10705	0 10 02525		JST	XN00		EXAMINE NEXT CHAR,		4974
4975	10706	100040		SZE					4975
4976	10707	0 01 10745		JMP	SC70		IF (A) NON ZERO,		4976
4977	10710	0 10 02404	SC15	JST	IG00		GO TO SC70		4977
4978	10711	0 02 10671		LDA	SCT0		INPUT INTEGER		4978
4979	10712	100040		SZE					4979

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4980	10713	100400		SPL				4980
4981	10714	0 01 10720		JMP	SC60			4981
4982	10715	0 02 01475		LDA	ID			4982
4983	10716	0 07 00717		SUB	K101			4983
4984	10717	0 01 10722		JMP	SC30			4984
4985	10720	0 10 03241	SC60	JST	AS00	ASSIGN ITEM		4985
4986	10721	0 02 00040	SC20	LDA	A	S (NS+1) = A		4986
4987	10722	000201	SC30	IAB				4987
4988	10723	0 02 10757		LDA	SC90			4988
4989	10724	0 06 00572		ADD	NS			4989
4990	10725	0 04 10760		STA	SC91			4990
4991	10726	000201		IAB		S(NS+1) = A		4991
4992	10727	-0 04 10760		STA*	SC91			4992
4993	10730	0 02 00572		LDA	NS			4993
4994	10731	141206		AOA				4994
4995	10732	0 04 00572		STA	NS	NS = NS + 1		4995
4996	10733	0 07 00721		SUB	K103			4996
4997	10734	100040		SZE				4997
4998	10735	0 01 10740		JMP	SC50	MORE SUBSCRIPTS PERMITTED		4998
4999	10736	0 10 02555	SC40	JST	IP00	)-INPUT OPERATOR		4999
5000	10737	-0 01 10672		JMP*	SC00	RETURN		5000
5001	10740	0 02 00607	SC50	LDA	TC			5001
5002	10741	0 07 00752		SUB	K134			5002
5003	10742	100040		SZE				5003
5004	10743	0 01 10736		JMP	SC40	TERMINATOR NOT A COMMA		5004
5005	10744	0 01 10702		JMP	SC10	GO TO SC10		5005
5006	10745	0 10 02437	SC70	JST	IR00	INPUT INT VARIABLE		5006
5007	10746	0 02 10671		LDA	SC70	CHECK FOR NON-DUMMY		5007
5008	10747	101040		SNZ		VARIABLE DIMENSIONS		5008
5009	10750	0 01 10721		JMP	SC20			5009
5010	10751	0 02 00631		LDA	AT			5010
5011	10752	0 07 00723		SUB	K105			5011
5012	10753	101040		SNZ				5012
5013	10754	0 01 10721		JMP	SC20			5013
5014	10755	0 10 03116		JST	ER00			5014
5015	10756	153304		BCI	1,VD	ILLEGAL SYMBOLIC SUBSCRIPT		5015
5016	10757	0 000604	SC90	DAC	S1			5016

5017	10760	0 000000	SC91 DAC	**		5017
5018			*			5018
5019			*			5019
5020			*			5020
5021			*			5021
5022			*			5022
5023			*			5023
5024	10761	0 000000	IL00 DAC	**	IF THE ITEM IS AN ARRAY, PROCESS THE SUBSCRIPT	5024
5025	10762	0 10 02373	JST	NA00	INPUT NAME	5025
5026	10763	0 02 00631	LDA	AT		5026
5027	10764	0 07 00723	SUB	K105	NON-DUMMY TEST	5027
5028	10765	100040	SZE			5028
5029	10766	0 01 10771	JMP	**3		5029
5030	10767	0 10 03116	JST	ER00	USAGE ERROR	5030
5031	10770	142304	BCI	1,DD	DUMMY ITEM IN AN EQUIV. OR DATA LIST	5031
5032	10771	0 02 00655	LDA	IU	IF IU NOT ARR,	5032
5033	10772	0 07 00721	SUB	K103		5033
5034	10773	100040	SZE			5034
5035	10774	0 01 11037	JMP	IL30	GO TO IL30	5035
5036	10775	0 02 00721	LDA	K103		5036
5037	10776	0 10 10672	JST	SC00	INPUT SUBSCRIPTS	5037
5038	10777	0 10 03656	JST	FA00	FETCH ASSIGNS	5038
5039	11000	0 02 00571	LDA	ND	IF ND * NS	5039
5040	11001	0 07 00572	SUB	NS		5040
5041	11002	100040	SZE		S1 * D* (S1 + D1* (S2+D2*S3)	5041
5042	11003	0 01 11022	JMP	IL10	ELSE, GO TO IL10	5042
5043	11004	0 02 00606	LDA	S3		5043
5044	11005	000201	IAB			5044
5045	11006	0 02 00635	LDA	D2		5045
5046	11007	0 10 02703	JST	IM00		5046
5047	11010	0 06 00605	ADD	S2		5047
5048	11011	000201	IAB			5048
5049	11012	0 02 00634	LDA	D1		5049
5050	11013	0 10 02703	JST	IM00		5050
5051	11014	0 06 00604	ADD	S1		5051
5052	11015	000201	IAB			5052
5053	11016	0 02 00633	LDA	D0		5053

5054	11017	0 10 02703	JST	IM00		5054
5055	11020	0 04 00604	STA	S1		5055
5056	11021	-0 01 10761	JMP*	IL00	RETURN	5056
5057	11022	0 02 00572	IL10 LDA	NS	IF NS NOT 1	5057
5058	11023	0 07 00717	SUB	K101		5058
5059	11024	100040	SZE			5059
5060	11025	0 01 11034	JMP	IL20	GO TO IL20	5060
5061	11026	0 02 00604	LDA	S1	ELSE, 20	5061
5062	11027	000201	IAB		S1 = D0*S1	5062
5063	11030	0 02 00633	LDA	D0		5063
5064	11031	0 10 02703	JST	IM00		5064
5065	11032	0 04 00604	IL18 STA	S1		5065
5066	11033	-0 01 10761	JMP*	IL00	RETURN	5066
5067	11034	0 10 03116	IL20 JST	ER00		5067
5068	11035	147304	BCI	1,ND	WRONG NUMBER OF DIMENSIONS IN ARRAY ELEMENT	5068
5069	11036	-0 01 10761	JMP*	IL00	RETURN	5069
5070	11037	0 10 03642	IL30 JST	TV00	TAG VARIABLE	5070
5071	11040	140040	CRA		S1 = 0	5071
5072	11041	0 01 11032	JMP	IL18	RETURN	5072
5073		*				5073
5074		*				5074
5075		*				5075
5076		*				5076
5077		*				5077
5078		*				5078
5079		*				5079
5080		*				5080
5081	11042	0 02 00717	R1 LDA	K101		5081
5082	11043	0 04 00046	STA	SFF	SFF = 1	5082
5083	11044	0 02 00072	R2 LDA	LSTF		5083
5084	11045	100040	SZE		IF LSTF = 0	5084
5085	11046	0 01 11051	JMP	R2A		5085
5086	11047	0 10 03116	JST	ER00	ILLEGAL STATEMENT	5086
5087	11050	143323	BCI	1,FS	NOT FIRST STATEMENT IN SUBPROGRAM	5087
5088	11051	0 10 02373	R2A JST	NA00	INPUT NAME	5088
5089	11052	0 02 00040	LDA	A		5089
5090	11053	0 04 00047	STA	SBF	SBF = A	5090

H O N E Y W E L L      C O M P U T E R   C O N T R O L   D I V I S I O N      P R O G R A M   D O C U M E N T A T I O N

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5091	11054	140040		CRA		ADDR=0, S/C CODE =0	5091
5092	11055	0 10 14312		JST	ON00	OUTPUT NAME BLOCK TO THE LOADER	5092
5093	11056	0 02 00045		LDA	MFL		5093
5094	11057	100040		SZE			5094
5095	11060	0 10 04026		JST	DM00	DEFINE IM	5095
5096	11061	0 02 00607		LDA	TC		5096
5097	11062	0 07 00756		SUB	CRET	IF TC NOT C/R	5097
5098	11063	100040		SZE			5098
5099	11064	0 01 11072		JMP	R2C	GO TO	5099
5100	11065	0 02 00046		LDA	SFF	IF SFF = 0	5100
5101	11066	101040		SNZ			5101
5102	11067	0 01 11076		JMP	R2D	GO TO R2D	5102
5103	11070	0 10 03116		JST	ER00	ERROR	5103
5104	11071	143301		BCI	1,FA	FUNCTION HAS NO ARGUMENTS	5104
5105	11072	140040	R2C	CRA			5105
5106	11073	0 04 00041		STA	I	I = 0	5106
5107	11074	0 10 10525		JST	GE00	GENERATE SUBPROGRAM ENTRY	5107
5108	11075	0 01 04266		JMP	A1	GO TO C/R TEST	5108
5109	11076	140040	R2D	CRA			5109
5110	11077	0 10 14127		JST	OA00	OUTPUT ABS	5110
5111	11100	0 01 04271		JMP	C6	GO TO CONTINUE	5111
5112			*				5112
5113			*				5113
5114			*				5114
5115			*				5115
5116			*				5116
5117			*				5117
5118			*				5118
5119			*				5119
5120			*				5120
5121			*				5121
5122			*				5122
5123	11101	0 02 00717	A3	LDA	K101	INTEGER	5123
5124	11102	0 01 11112		JMP	A7A	TMFL = INT	5124
5125	11103	0 02 00720	A4	LDA	K102	REAL	5125
5126	11104	0 01 11112		JMP	A7A	TMFL = REAL	5126
5127	11105	0 02 00724	A5	LDA	K106	DOUBLE PRECISION	5127

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*****
*INTEGER *
*REAL *
*DOUBLE PRECISION*
*COMPLEX *
*LOGICAL *
*****

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THE MODE FLAG (MFL) IS SET TO THE APPROPRIATE VALUE AND ANY ARRAY INFO IS PROCESSED



5128	11106	0 01 11112		JMP	A7A	TMFL = DBL	5128
5129	11107	0 02 00723	A6	LDA	K105	COMPLEX	5129
5130	11110	0 01 11112		JMP	A7A	TMFL = CPX	5130
5131	11111	0 02 00721	A7	LDA	K103	LOGICAL	5131
5132	11112	0 04 00045	A7A	STA	MFL	TMFL = LOG	5132
5133	11113	0 02 00072		LDA	LSTF	IF LSTF = 0, GO TO A7B (2)	5133
5134	11114	101040		SNZ			5134
5135	11115	0 01 11140		JMP	A7B	ELSE,	5135
5136	11116	0 02 00662		LDA	CC	SAVE CC	5136
5137	11117	0 04 11144		STA	A790		5137
5138	11120	140040		CRA			5138
5139	11121	0 04 00651		STA	ICSW		5139
5140	11122	0 10 01521		JST	DN00	INPUT DNA	5140
5141	11123	0 02 11144		LDA	A790	RESTORE CC	5141
5142	11124	0 04 00662		STA	CC		5142
5143	11125	0 04 00651		STA	ICSW	ICSW = IPL	5143
5144	11126	0 02 00643		LDA	DFL	IF DFL NOT = 0, GO TO A7B	5144
5145	11127	100040		SZE			5145
5146	11130	0 01 11140		JMP	A7B		5146
5147	11131	0 02 01475		LDA	TID	IF ID = FUNCTI,	5147
5148	11132	0 07 11137		SUB	A7K	GO TO A9	5148
5149	11133	101040		SNZ		SKIP IF NOT 'FUNCTION'	5149
5150	11134	0 01 04602		JMP	A9	FUNCTION PROCESSOR	5150
5151	11135	0 10 03116	A7A5	JST	ER00	CONSTRUCTION ERROR	5151
5152	11136	152306		BCI	1,TF	'TYPE' NOT FOLLOWED BY 'FUNCTION' OR LIST	5152
5153	11137	143325	A7K	BCI	1,FU	CONSTANT FOR 'FUNCTION' CHECK	5153
5154	11140	0 10 02373	A7B	JST	NA00	INPUT NAME	5154
5155	11141	0 02 00045		LDA	MFL		5155
5156	11142	0 10 04026		JST	DM00	DEFINE IM	5156
5157	11143	0 01 11246		JMP	B7	GO TO INPUT DIMENSION	5157
5158	11144	0 00 00000	A790	PZE	0		5158
5159		*					5159
5160		*					5160
5161		* -		B2	EXTERNAL		5161
5162		*		TAGS	NAME AS SUBPROGRAM		5162
5163	11145	0 10 02373	B2	JST	NA00	EXTERNAL, INPUT NAME	5163
5164	11146	0 10 03465		JST	TG00	TAG SUBPROGRAM	5164

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5165 11147 0 01 02567      JMP      B1          GO TO , OR C/R TEST          5165
5166                      *                               5166
5167                      *                               5167
5168                      *                               5168
5169                      *                               5169
5170                      *                               5170
5171                      *                               5171
5172                      *                               5172
5173                      *                               5173
5174 11150 0 00 00000 B3T0 PZE 0                               5174
5175 11151 0 00 00000 B3T1 PZE 0                               5175
5176 11152 0 00 00000 B3T2 PZE 0                               5176
5177 11153 0 00 00000 B3T3 PZE 0                               5177
5178 11154 0 10 02373 B3   JST  NA00                          5178
5179 11155 0 02 00631 B3A LDA  AT          IF AT = DUM          5179
5180 11156 0 07 00723     SUB  K105       (A) = 0              5180
5181 11157 100040        SZE                               ELSE (A) = ,LT. 0    5181
5182 11160 140500        SSM                               5182
5183 11161 0 04 11150 B3B STA  B3T0       T0 = (A)            5183
5184 11162 0 02 00630     LDA  AF                               5184
5185 11163 0 04 11153     STA  B3T3       T3 = AF            5185
5186 11164 0 02 00040     LDA  A                               5186
5187 11165 0 04 11151     STA  B3T1       T1 = A            5187
5188 11166 0 02 00631     LDA  AT          TEST FOR AT=DUMMY   5188
5189 11167 0 07 00723     SUB  K105       =5                5189
5190 11170 100040        SZE                               SKIP NO-USAGE TEST IF DUMMY 5190
5191 11171 0 10 02603     JST  NU00       NO USAGE TEST          5191
5192 11172 0 10 02672     JST  STXA                               5192
5193 11173 1 02 15401     LDA  DP+1,1     IU (A) = ARR          5193
5194 11174 0400 62        LRL  14                               5194
5195 11175 0 02 00721     LDA  K103                               5195
5196 11176 0410 62        LLL  14                               5196
5197 11177 1 04 15401     STA  DP+1,1                               5197
5198 11200 0 02 11150     LDA  B3T0       (A) = T0          5198
5199 11201 0 10 10672     JST  SC00       INPUT SUBSCRIPT        5199
5200 11202 0 02 00604     LDA  S1                               5200
5201 11203 0 04 01475     STA  ID                               5201

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5239	11251	0 01 11235		JMP	B3D		5239
5240	11252	0 01 11155		JMP	B3A		5240
5241			*				5241
5242			*				5242
5243			*		*****		5243
5244			*		*COMMON*		5244
5245			*		*****		5245
5246			*		INPUT BLOCK NAMES AND LINK THEM WITH THE		5246
5247			*		FOLLOWING VAR/ARRAY NAMES, BLOCK NAMES		5247
5248			*		ARE LINKED TOGETHER THROUGH THEIR GENERAL FIELDS		5248
5249	11253	0 02 02731	B4	LDA	K81		5249
5250	11254	0 04 01475		STA	ID		5250
5251	11255	0 04 01476		STA	ID+1		5251
5252	11256	0 04 01477		STA	ID+2		5252
5253	11257	0 02 11333		LDA	B4Z9	SET SWITCH IN INPUT DIMENSION	5253
5254	11260	0 04 04600		STA	A9T2		5254
5255	11261	0 10 01256		JST	CH00	INPUT CHAR	5255
5256	11262	0 07 00674		SUB	K9	IF NOT SLASH	5256
5257	11263	100040		SZE		GO TO	5257
5258	11264	0 01 11331		JMP	B4E		5258
5259	11265	0 10 01521	B40	JST	DN00	INPUT DNA	5259
5260	11266	0 02 00722		LDA	K104	SLASH TEST	5260
5261	11267	0 10 02547		JST	TS00		5261
5262	11270	0400 40	B4B	LRL	32		5262
5263	11271	0 02 00717		LDA	K101	(A) = SUB, (B) = 0	5263
5264	11272	0 10 04252		JST	AA00	ASSIGN SPECIAL	5264
5265	11273	0 02 00056		LDA	CFL		5265
5266	11274	101040		SNZ			5266
5267	11275	0 02 00040		LDA	A		5267
5268	11276	0 04 00056		STA	CFL		5268
5269	11277	0 02 00040		LDA	A		5269
5270	11300	0 04 00664		STA	F		5270
5271	11301	0 10 03770		JST	FL00	FETCH LINK	5271
5272	11302	100040		SZE			5272
5273	11303	0 01 11320		JMP	B4D		5273
5274	11304	0 02 00056		LDA	CFL		5274
5275	11305	0 04 00000		STA	0		5275

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5276	11306	1 02 15401	LDA	DP+1,1	GF(CFL)	5276
5277	11307	0 13 00040	IMA	A		5277
5278	11310	0 04 00000	STA	0	INDEX = A	5278
5279	11311	0 13 00040	IMA	A		5279
5280	11312	1 04 15401	STA	DP+1,1	GF(A) = GF(CFL)	5280
5281	11313	0 02 00056	LDA	CFL		5281
5282	11314	0 04 00000	STA	0	INDEX = CFL	5282
5283	11315	0 02 00040	LDA	A		5283
5284	11316	0 06 00740	ADD	K122	= '040000	5284
5285	11317	1 04 15401	STA	DP+1,1	GF(CFL) = A	5285
5286	11320	0 10 02373	B4D JST	NA00	INPUT NAME	5286
5287	11321	0 10 10657	JST	ND00	NON DUMMY/SUBPROG TEST	5287
5288	11322	0 10 10650	JST	NM00	NON-COMMON TEST	5288
5289	11323	0 10 10624	JST	EL00	EXCHANGE LINKS	5289
5290	11324	1 02 15400	LDA	DP,1		5290
5291	11325	0 03 11334	ANA	B4F	= '107777	5291
5292	11326	0 06 00740	ADD	K122	AT(A) = COM (= '040000)	5292
5293	11327	1 04 15400	STA	DP,1		5293
5294	11330	0 01 11246	JMP	B7		5294
5295	11331	0 10 01251	B4E JST	UC00	UNINPUT COLUMN	5295
5296	11332	0 01 11270	JMP	B48		5296
5297	11333	0 011320	B4Z9 DAC	B4D	GO TO INPUT DIMENSION	5297
5298	11334	107777	B4F OCT	107777	EXTRACT MASK TO STRIP OFF AT FIELD	5298
5299			*			5299
5300			*			5300
5301			*	*****		5301
5302			*	*EQUIVALENCE*		5302
5303			*	*****		5303
5304			*	STORE EQUIV INFO IN THE DATA POOL FOR LATER		5304
5305			*	PROCESSING BY GROUP EQUIV (PART OF SPECS WRAPUP)		5305
5306	11335	0 02 00646	B5 LDA	E0	L=NEXT WORD IN EQUIVALENCE TABLE	5306
5307	11336	0 04 00041	STA	I	I=L	5307
5308	11337	0 07 00717	SUB	K101	(=1)	5308
5309	11340	0 04 00646	STA	E0	L=L-1	5309
5310	11341	0 07 00054	SUB	ABAR		5310
5311	11342	101400	SMI			5311
5312	11343	0 01 11346	JMP	**+3		5312

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5313	11344	0 10 03116	JST	ER00	DATA POOL FULL	5313
5314	11345	146717	BCI	1,MO	MEMORY OVERFLOW	5314
5315	11346	0 10 02676	JST	STXI	ESTABLISH I	5315
5316	11347	140040	CRA			5316
5317	11350	1 04 15400	STA	DP,1	DP (I) = 0	5317
5318	11351	0 10 01256	B5B JST	CH00		5318
5319	11352	1 02 15400	LDA	DP,1	INPUT CHAR	5319
5320	11353	100040	SZE			5320
5321	11354	0 01 11371	JMP	B5D		5321
5322	11355	0 02 00607	LDA	TC	PUT IN FIRST CHARACTER	5322
5323	11356	0414 70	LGL	8	PACK INTO DP (I)	5323
5324	11357	1 04 15400	B5C STA	DP,1		5324
5325	11360	0 02 00607	LDA	TC		5325
5326	11361	0 07 00756	SUB	CRET		5326
5327	11362	101040	SNZ			5327
5328	11363	0 01 04271	JMP	C6	CHARACTER E C/R = EXIT	5328
5329	11364	1 02 15400	LDA	DP,1		5329
5330	11365	0 03 00727	ANA	K100		5330
5331	11366	101040	SNZ			5331
5332	11367	0 01 11351	JMP	B5B	WORD NOT FULL	5332
5333	11370	0 01 11335	JMP	B5	OBTAIN NEW WORD	5333
5334	11371	0 02 00607	B5D LDA	TC	PUT IN SECOND CHARACTER	5334
5335	11372	1 05 15400	ERA	DP,1		5335
5336	11373	0 01 11357	JMP	B5C		5336
5337			*			5337
5338			*			5338
5339			*			5339
5340			*			5340
5341			*			5341
5342			*			5342
5343			*			5343
5344			*			5344
5345			*			5345
5346	11374	0 00 00000	C2T0 PZE	0		5346
5347	11375	0 02 00056	C2 LDA	CFL		5347
5348	11376	0 04 00040	STA	A	A = F = CFL	5348
5349	11377	140040	C2A CRA			5349

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5350	11400	0 04 11374	STA	C2T0	TO = 0	5350
5351	11401	0 02 00040	LDA	A		5351
5352	11402	0 04 00664	STA	F	F = A	5352
5353	11403	0 10 03770	C2B JST	FLOO	FETCH LINK	5353
5354	11404	101040	SNZ			5354
5355	11405	0 01 11413	JMP	C2D		5355
5356	11406	0 02 00633	LDA	D0		5356
5357	11407	0 06 11374	ADD	C2T0	TO = T0 + D0	5357
5358	11410	0 04 11374	STA	C2T0		5358
5359	11411	0 10 04041	JST	DA00	DEFINE ADDRESS FIELD	5359
5360	11412	0 01 11403	JMP	C2B		5360
5361	11413	0 10 03770	C2D JST	FLOO	FETCH LINK	5361
5362	11414	100040	SZE			5362
5363	11415	0 01 11424	JMP	C2F		5363
5364	11416	0 02 00630	LDA	AF		5364
5365	11417	0 04 00040	STA	A	A = AF	5365
5366	11420	0 07 00056	SUB	CFL		5366
5367	11421	100040	SZE			5367
5368	11422	0 01 11377	JMP	C2A	AF = CFL, NO	5368
5369	11423	0 01 11442	JMP	C3	YES - GROUP EQUIVALENCE	5369
5370	11424	0 02 11374	C2F LDA	C2T0		5370
5371	11425	0 07 00630	SUB	AF	(A) = T0 - AF	5371
5372	11426	0 10 04041	JST	DA00	DEFINE AF	5372
5373	11427	0 02 00655	LDA	IU		5373
5374	11430	100040	SZE			5374
5375	11431	0 01 11413	JMP	C2D		5375
5376	11432	0 10 03642	JST	TV00	TAG VARIABLE	5376
5377	11433	0 01 11413	JMP	C2D		5377
5378		*				5378
5379		*				5379
5380		*				5380
5381		*				5381
5382		*				5382
5383		*				5383
5384		*				5384
5385		*				5385
5386		*				5386

\*\*\*\*\*  
\*GROUP EQUIVALENCE\*  
\*\*\*\*\*

THE EQUIV GROUPS ARE PROCESSED NOW, ANY COMMON  
USAGE IS CHECKED TO SEE THAT THE ORIGIN  
IS NOT MOVED AND THAT ONLY ONE ITEM IS  
COMMON.

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5387	11434	0 00 00000	C3T0	PZE	0			5387
5388	11435	0 00 00000	C3T1	PZE	0			5388
5389	11436	0 00 00000	C3T2	PZE	0			5389
5390	11437	0 00 00000	C3T3	PZE	0			5390
5391	11440	0 00 00000	C3T4	PZE	0			5391
5392	11441	0 00 00000	C3T5	PZE	0			5392
5393		011434	T0C3	EQU	C3T0			5393
5394		011435	T1C3	EQU	C3T1			5394
5395		011436	T2C3	EQU	C3T2			5395
5396		011437	T3C3	EQU	C3T3			5396
5397		011440	T4C3	EQU	C3T4			5397
5398	11442	0 02 00646	C3	LDA	E0			5398
5399	11443	0 04 00660		STA	EBAR	E BAR = E(0) = END OF EQUIVALENCE TABLE		5399
5400	11444	0 02 00113		LDA	L0			5400
5401	11445	0 04 00644		STA	E	E = L(0) = START OF EQUIVALENCE TABLE		5401
5402	11446	0 02 00756		LDA	CRET			5402
5403	11447	0 04 00607		STA	TC			5403
5404	11450	0 02 00644	C3B	LDA	E			5404
5405	11451	0 04 00645		STA	EP	E-PRIME = E		5405
5406	11452	140040		CRA				5406
5407	11453	0 04 00664		STA	F	I = 0		5407
5408	11454	0 02 00720		LDA	K102	T4 = STR-ABS		5408
5409	11455	0 04 11440		STA	C3T4			5409
5410	11456	0 10 01256		JST	CH00	INPUT CHARACTER		5410
5411	11457	0 02 00702		LDA	K17			5411
5412	11460	0 10 02547		JST	TS00	(TEST		5412
5413	11461	0 10 10761	C3D	JST	IL00	INPUT LIST ELEMENT		5413
5414	11462	0 10 11751		JST	SAF			5414
5415	11463	0 02 00604		LDA	S1			5415
5416	11464	0 07 00630		SUB	AF	T1 = S1-AF		5416
5417	11465	0 04 11435		STA	C3T1			5417
5418	11466	0 02 00040		LDA	A	T2 = A		5418
5419	11467	0 04 11436		STA	C3T2			5419
5420	11470	0 02 00664	C3F	LDA	F	IF I=0, GO TO C3P		5420
5421	11471	101040		SNZ				5421
5422	11472	0 01 11607		JMP	C3P			5422
5423	11473	0 02 00664	C3G	LDA	F	ELSE,		5423



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5424	11474	0 07 00040		SUB	A				
5425	11475	101040		SNZ		IF A = I, GO TO C3N			5424
5426	11476	0 01 11556		JMP	C3N				5425
5427	11477	0 02 00631	C3H	LDA	AT	ELSE,			5426
5428	11500	0 07 00722		SUB	K104	IF AT = COM, GO TO C3O			5427
5429	11501	101040		SNZ					5428
5430	11502	0 01 11563		JMP	C3O				5429
5431	11503	0 02 11435	C3H2	LDA	T1C3				5430
5432	11504	0 06 00630		ADD	AF	T(0) = AF + T (1)			5431
5433	11505	0 04 11434		STA	T0C3				5432
5434	11506	0 02 11440		LDA	T4C3	IF T(4) = 0, GO TO C3K			5433
5435	11507	0 07 00722		SUB	K104				5434
5436	11510	100040		SZE					5435
5437	11511	0 01 11521		JMP	C3K				5436
5438	11512	0 02 11437		LDA	T3C3	ELSE,			5437
5439	11513	0 07 11434		SUB	T0C3	T(0) = T(3)-T(0)			5438
5440	11514	0 04 11434		STA	T0C3				5439
5441	11515	101400		SMI					5440
5442	11516	0 01 11521		JMP	C3K	IF T(0)<0,			5441
5443	11517	0 10 03116		JST	ER00				5442
5444	11520	144703		BCI	1, IC	IMPOSSIBLE COMMON EQUIVALENCING			5443
5445	11521	0 02 11440	C3K	LDA	C3T4				5444
5446	11522	000201		IAB		AT (A) = COM			5445
5447	11523	0 02 11434		LDA	T0C3				5446
5448	11524	0415 76		ALS	2				5447
5449	11525	0404 76		LGR	2				5448
5450	11526	0 10 04214		JST	AF00	DEFINE AF			5449
5451	11527	0 10 03770		JST	FLO0	FETCH LINK			5450
5452	11530	0 10 11751		JST	SAF				5451
5453	11531	0 02 00040		LDA	A				5452
5454	11532	0 07 11436		SUB	C3T2	IF A .NE, T (2),			5453
5455	11533	100040		SZE		GO TO C3G (5)			5454
5456	11534	0 01 11473		JMP	C3G				5455
5457									5456
5458	11535	0 10 10624		JST	EL00	EXCHANGE CL(A) = CL(I)			5457
5459	11536	0 02 00607	C3M	LDA	TC	EXCHANGE LINKS (CL(A) WITH CL(F) )			5458
5460	11537	0 07 00752		SUB	K134	IF TC = ,			5459

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5461	11540	101040	SNZ						5461
5462	11541	0 01 11461	JMP	C3D		ELSE,			5462
5463	11542	0 10 02555	JST	IP00		)-INPUT OPERATOR			5463
5464	11543	0 02 00607	LDA	TC					5464
5465	11544	0 07 00752	SUB	K134		IF TC = , OR C/R			5465
5466	11545	101040	SNZ			GO TO C3B (1)			5466
5467	11546	0 01 11450	JMP	C3B					5467
5468	11547	0 02 00607	LDA	TC					5468
5469	11550	0 07 00756	SUB	CRET					5469
5470	11551	101040	SNZ						5470
5471	11552	0 01 11450	JMP	C3B		ELSE,			5471
5472	11553	0 10 03116	JST	ER00					5472
5473	11554	142703	BCI	1,EC		EQUIVALENCE GROUP NOT FOLLOWED BY , OR CR			5473
5474	11555	0 01 11450	JMP	C3B					5474
5475	11556	0 02 11435	C3N LDA	T1C3		IF T1 = 0, GO TO C3M			5475
5476	11557	101040	SNZ						5476
5477	11560	0 01 11536	JMP	C3M					5477
5478	11561	0 10 03116	C3N5 JST	ER00		ERROR IMPOSSIBLE GROUP			5478
5479	11562	144705	BCI	1,IE		IMPOSSIBLE EQUIVALENCE GROUPING			5479
5480	11563	0 02 00604	C30 LDA	S1					5480
5481	11564	0 06 00630	ADD	AF					5481
5482	11565	0 04 11437	STA	T3C3					5482
5483	11566	0 02 00722	LDA	K104		=4			5483
5484	11567	0 11 11440	CAS	T4C3					5484
5485	11570	0 01 11572	JMP	**2					5485
5486	11571	0 01 11561	JMP	C3N5					5486
5487	11572	0 04 11440	STA	T4C3					5487
5488	11573	0 02 00664	LDA	F					5488
5489	11574	0 11 00040	CAS	A		IF A = F, GO TO C3M (8)			5489
5490	11575	0 01 11577	JMP	**2					5490
5491	11576	0 01 11536	JMP	C3M		ELSE,			5491
5492	11577	0 04 00040	STA	A		A = I			5492
5493	11600	0 13 11436	IMA	C3T2					5493
5494	11601	0 04 00664	STA	F					5494
5495	11602	140040	CRA			T1 = 0			5495
5496	11603	0 04 11435	STA	C3T1					5496
5497	11604	0 10 03656	JST	FA00		FETCH ASSIGNS			5497



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5535	11643	0 04 11613	STA	C4T1		5535
5536	11644	0 10 04005	JST	KT00	SET D(0) = NO. OF WORDS PER ITEM	5536
5537	11645	0 10 11751	C4F JST	SAF		5537
5538	11646	0 11 11612	CAS	C4T0		5538
5539	11647	0 04 11612	STA	C4T0		5539
5540	11650	101000	NOP			5540
5541	11651	0 02 00633	LDA	D0		5541
5542	11652	0 07 00630	SUB	AF	(A) = D(0) - AF	5542
5543	11653	0 11 11613	CAS	C4T1		5543
5544	11654	0 04 11613	STA	C4T1		5544
5545	11655	101000	NOP			5545
5546	11656	0 10 03770	JST	FL00	FETCH LINK ( (A)=A - F )	5546
5547	11657	100040	SZE			5547
5548	11660	0 01 11645	JMP	C4F	GO TO C4F	5548
5549	11661	0 02 00060	LDA	RPL		5549
5550	11662	0 06 11612	ADD	C4T0	RPL = RPL + T0 + T1	5550
5551	11663	0 04 11612	STA	C4T0		5551
5552	11664	0 06 11613	ADD	C4T1	T0 = RPL-T1	5552
5553	11665	0 04 00060	STA	RPL		5553
5554	11666	0 10 11751	C4I JST	SAF		5554
5555	11667	0 02 00717	LDA	K101		5555
5556	11670	000201	IAB		(B) = REL	5556
5557	11671	0 02 11612	LDA	C4T0	(A) = T0-AF	5557
5558	11672	0 07 00630	SUB	AF		5558
5559	11673	0 10 04214	JST	AF00	DEFINE AFT	5559
5560	11674	0 10 03770	JST	FL00	FETCH LINK	5560
5561	11675	100040	SZE		IF (A) NOT ZERO,	5561
5562	11676	0 01 11666	JMP	C4I	NOT END OF EQUIVALENCE GROUP	5562
5563	11677	0 01 11615	JMP	C4C	CHECK NEXT ITEM IN ASSIGNMENT TABLE	5563
5564			*			5564
5565	11700	0 02 00667	C4L2 LDA	FLT1	= LINK LOCATION TO COMMON BLOCK NAME	5565
5566	11701	0 04 11613	STA	C4T1		5566
5567	11702	0 02 00040	C4L3 LDA	A		5567
5568	11703	0 04 00041	STA	I	SAVE A FOR LATER MODIFICATION	5568
5569	11704	0 10 03770	JST	FL00	FETCH LINK	5569
5570	11705	101040	SNZ			5570
5571	11706	0 01 11733	JMP	C4M	END OF COMMON GROUP	5571

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5572	11707	0 10 02676	JST	STX1	SET INDEX TO POINT TO CURRENT ITEM IN	5572
5573			*		COMMON GROUP.	5573
5574	11710	1 02 15400	LDA	DP,1	SET CL FIELD TO POINT AT COMMON BLOCK	5574
5575			*		NAME,	5575
5576	11711	0 03 00736	ANA	K119	(='177000)	5576
5577	11712	0 06 11613	ADD	C4T1	(= LINK LOCATION OF COMMON BLOCK NAME)	5577
5578	11713	1 04 15400	STA	DP,1		5578
5579	11714	0 01 11702	JMP	C4L3	PROCESS NEXT ITEM IN COMMON BLOCK	5579
5580			*			5580
5581	11715	0 02 00056	C4 LDA	CFL	LOC. OF FIRST (BLANK) COMMON BLOCK	5581
5582	11716	0 04 00664	STA	F		5582
5583	11717	0 04 00040	C4L6 STA	A		5583
5584	11720	140040	CRA			5584
5585	11721	0 04 11612	STA	C4T0		5585
5586	11722	0 10 03770	C4L JST	FL00	FETCH LINK	5586
5587	11723	101040	SNZ			5587
5588	11724	0 01 11700	JMP	C4L2	NO MORE ITEMS IN COMMON BLOCK	5588
5589	11725	0 02 00633	LDA	D0	ELSE, IF TO .LT. D0+AF,	5589
5590	11726	0 06 00630	ADD	AF		5590
5591	11727	0 11 11612	CAS	C4T0	T0 = D0 + AF	5591
5592	11730	0 04 11612	STA	C4T0		5592
5593	11731	101000	NOP			5593
5594	11732	0 01 11722	JMP	C4L	GO TO C4L	5594
5595	11733	0 02 00630	C4M LDA	AF		5595
5596	11734	0 04 00664	STA	F	I=AF	5596
5597	11735	0 02 11612	LDA	C4T0	(A) = T0	5597
5598	11736	0 10 04041	JST	DA00	DEFINE AF	5598
5599			*....	OUTPUT COMMON BLOCK NAME	AND SIZE TO LOADER	5599
5600	11737	0 02 00630	LDA	AF	LENGTH OF COMMON BLOCK	5600
5601	11740	0 03 00730	ANA	K111	= '37777	5601
5602	11741	0 06 00740	ADD	K122	= '40000 (S/C CODE = 1)	5602
5603	11742	0 10 14312	JST	ON00	OUTPUT NAME BLOCK TO LOADER	5603
5604	11743	0 02 00664	LDA	F		5604
5605	11744	0 07 00056	SUB	CFL	IF I = CFL	5605
5606	11745	101040	SNZ			5606
5607	11746	0 01 11614	JMP	C4B		5607
5608	11747	0 02 00664	LDA	F		5608

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5609	11750	0 01 11717	JMP	C4L6		5609
5610		*				5610
5611	11751	0 000000	SAF	DAC	**	5611
5612	11752	0 02 00630	LDA	AF		5612
5613	11753	0414 76	LGL	2		5613
5614	11754	0405 76	ARS	2		5614
5615	11755	0 04 00630	STA	AF		5615
5616	11756	-0 01 11751	JMP*	SAF		5616
5617		*				5617
5618		*				5618
5619		*				5619
5620		*				5620
5621		*				5621
5622		*				5622
5623	11757	0 00 00000	T0W4	PZE	0	5623
5624	11760	0 00 00000	T1W4	PZE	0	5624
5625	11761	0 00 00000	G	PZE	0	5625
5626	11762	0 02 00113	W4	LDA	L0	5626
5627	11763	0 04 00041		STA	I	5627
5628	11764	0 10 10761	W4B	JST	IL00	5628
5629	11765	0 02 00631		LDA	AT	5629
5630	11766	0 07 00720		SUB	K102	5630
5631	11767	101040		SNZ		5631
5632	11770	0 01 12270		JMP	W4T	5632
5633	11771	0 02 00041		LDA	I	5633
5634	11772	0 04 00000		STA	0	5634
5635	11773	0 02 00604		LDA	S1	5635
5636	11774	0 06 00630		ADD	AF	5636
5637	11775	1 04 15400		STA	DP,1	5637
5638	11776	0 02 00040	W4C	LDA	A	5638
5639	11777	1 04 15377		STA	DP-1,1	5639
5640	12000	0 02 00041		LDA	I	5640
5641	12001	0 07 00720		SUB	K102	5641
5642	12002	0 04 00041		STA	I	5642
5643	12003	0 04 11761		STA	G	5643
5644	12004	0 02 00607		LDA	TC	5644
5645	12005	0 07 00752		SUB	K134	5645

\*\*\*\*\*  
 \*DATA STATEMENT PROCESSOR\*  
 \*\*\*\*\*

PROCESS VARIABLE LIST .THEN OUTPUT LITERAL ITEMS  
 TO APPROPRIATE LOCATIONS. MODES MUST AGREE

LOWEST INDEX POINT IN LIST

I=END OF DATA POOL  
 INPUT LIST ELEMENT  
 D (0) = \*WDS/ITEM

IF AT = 'STR-ABS'  
 GO TO

S1 = DEFLECTION IF AN ARRAY

DP(E) = AF + S1

DP (E-1) = A

IF TC = ,

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5646	12006	101040		SNZ				5646
5647	12007	0 01 11764		JMP	W4B	GO TO W4B		5647
5648	12010	0 02 00722		LDA	K104			5648
5649	12011	0 10 02547		JST	TS00	TEST FOR SLASH TERMINATOR		5649
5650	12012	0 02 00060		LDA	RPL			5650
5651	12013	0 04 11760		STA	T1W4			5651
5652	12014	0 02 00113		LDA	L0			5652
5653	12015	0 04 00041		STA	I	I = END OF DATA POOL		5653
5654	12016	140040	W4E	CRA				5654
5655	12017	0 04 00657		STA	KPRM	K' = KBAR = 0		5655
5656	12020	0 04 00656		STA	KBAR			5656
5657	12021	0 10 01521	W4F	JST	DN00	INPUT, DNA		5657
5658	12022	0 02 00573		LDA	NT			5658
5659	12023	100040		SZE		IF NT = 0		5659
5660	12024	0 01 12035		JMP	W4G	VARIABLE OR ARRAY		5660
5661	12025	0 02 00607		LDA	TC	LAST CHARACTER		5661
5662	12026	0 11 00702		CAS	K17	'250 ( =( )		5662
5663	12027	0 01 12031		JMP	**2			5663
5664	12030	0 01 12033		JMP	**3	START OF COMPLEX CONSTANT		5664
5665	12031	0 10 03116		JST	ER00	ERROR		5665
5666	12032	141716		BCI	1,CN	NON-CON DATA		5666
5667	12033	0 04 00050		STA	SXF	SET SXF TO NON-ZERO		5667
5668	12034	0 01 12021		JMP	W4F	FINISH INPUT OF COMPLEX CONSTANT		5668
5669	12035	0 02 00656	W4G	LDA	KBAR	MULTIPLY COUNT		5669
5670	12036	100040		SZE				5670
5671	12037	0 01 12051		JMP	W4K	GO TO W4K		5671
5672	12040	0 02 00607		LDA	TC	IF TC NOT *		5672
5673	12041	0 07 00721		SUB	K103			5673
5674	12042	100040		SZE				5674
5675	12043	0 01 12054		JMP	W4L			5675
5676	12044	0 02 01475		LDA	ID			5676
5677	12045	0 07 00717		SUB	K101			5677
5678	12046	0 04 00656		STA	KBAR	KBAR = ID-1		5678
5679	12047	0 10 02635		JST	IT00	INTEGER TEST		5679
5680	12050	0 01 12021		JMP	W4F			5680
5681	12051	0 02 00657	W4K	LDA	KPRM	IF K NOT ZERO		5681
5682	12052	100040		SZE				5682

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5683	12053	0 01 12061	JMP	W4M	GO TO W4M	5683
5684	12054	0 02 00656	W4L LDA	KBAR		5684
5685	12055	0415 77	ALS	1	K ! = E-3* KBAR	5685
5686	12056	140407	TCA			5686
5687	12057	0 06 00041	ADD	I		5687
5688	12060	0 04 00657	STA	KPRM		5688
5689	12061	0 10 02676	W4M JST	STXI	SET INDEX = I	5689
5690	12062	1 02 15377	LDA	DP-1,1		5690
5691	12063	0 04 00040	STA	A	A = DP (E-1)	5691
5692	12064	0 02 00653	LDA	IM		5692
5693	12065	0 04 11757	STA	TOW4	TU = IM	5693
5694	12066	0 10 03656	JST	FA00		5694
5695	12067	0 02 00061	LDA	BDF	IF BDF NOT ZERO	5695
5696	12070	100040	SZE			5696
5697	12071	0 01 12217	JMP	W4S	GO TO W4S	5697
5698	12072	0 10 10650	JST	NM00	NON-COMMON TEST	5698
5699	12073	0 10 02676	W40 JST	STXI	SET INDEX = I	5699
5700	12074	1 02 15400	LDA	DP,1		5700
5701	12075	0 04 00060	STA	RPL	RPL = AF	5701
5702	12076	0 10 14523	JST	FS00	FLUSH	5702
5703	12077	140040	CRA			5703
5704	12100	0 04 00640	STA	DF	DF = 0	5704
5705	12101	0 02 01520	LDA	HOLF	IS IT HOLLERITH DATA	5705
5706	12102	100040	SZE		NO	5706
5707	12103	0 01 12122	JMP	WHOW	YES, GO TO OUTPUT IT	5707
5708	12104	0 02 00633	LDA	DO		5708
5709	12105	0 04 00000	STA	0		5709
5710	12106	1 01 12106	JMP	*,1	SWITCH ON NUMBER OF WORDS TO OUTPUT	5710
5711	12107	0 01 12161	JMP	W405		5711
5712	12110	0 01 12151	JMP	W403		5712
5713	12111	0 01 12155	JMP	W404		5713
5714	12112	0 02 01477	LDA	TID+2		5714
5715	12113	0 10 14127	JST	OA00		5715
5716	12114	0 02 01476	LDA	TID+1		5716
5717	12115	0 10 14127	JST	OA00		5717
5718	12116	0 02 03641	LDA	TIDB+2		5718
5719	12117	0 10 14127	JST	OA00		5719



5720	12120	0 02 03640	LDA	TIDB+1		5720
5721	12121	0 01 12162	JMP	W406		5721
5722	12122	0 02 00633	WHOW LDA	DO	(A)=NO. OF WORDS PER ITEM	5722
5723	12123	0415 77	ALS	1	(A)=NO. OF CHARS, PER ITEM	5723
5724	12124	0 04 00575	STA	NTID	NTID=NO. OF CHARS, TO BE OUTPUT	5724
5725	12125	0 07 01520	SUB	HOLF		5725
5726	12126	100400	SPL			5726
5727	12127	0 01 12170	JMP	WERR		5727
5728	12130	0 02 01475	LDA	ID	FIRST WORD	5728
5729	12131	0 10 12141	JST	WSNG	OUTPUT IT	5729
5730	12132	0 02 01476	LDA	ID+1	2ND WORD	5730
5731	12133	0 10 12141	JST	WSNG	OUTPUT IT	5731
5732	12134	0 02 01477	LDA	ID+2	3RD WORD	5732
5733	12135	0 10 12141	JST	WSNG	OUTPUT IT	5733
5734	12136	0 02 01500	LDA	ID+3	4TH WORD	5734
5735	12137	0 10 14127	JST	0A00	OUTPUT IT	5735
5736	12140	0 01 12172	JMP	W420	TO CHECK NEXT DATA	5736
5737			*			5737
5738	12141	0 00 00000	WSNG PZE	0		5738
5739	12142	0 10 14127	JST	0A00	OUTPUT (A)	5739
5740	12143	0 02 00575	LDA	NTID	NO. OF CHARS, REMAINED TO BE OUTPUT	5740
5741	12144	0 07 00720	SUB	K102		5741
5742	12145	0 04 00575	STA	NTID	NTID=NTID-2	5742
5743	12146	101040	SNZ			5743
5744	12147	0 01 12172	JMP	W420	ALL FINISHED, CHECK NEXT ITEM	5744
5745	12150	-0 01 12141	JMP*	WSNG	SOME HOLLERITH CHARS, REMAINED	5745
5746	12151	0 02 01477	W403 LDA	TID+2	REAL OUTPUT	5746
5747	12152	0 10 14127	JST	0A00		5747
5748	12153	0 02 01476	LDA	TID+1		5748
5749	12154	0 01 12162	JMP	W406		5749
5750	12155	0 02 01477	W404 LDA	TID+2	DOUBLE PRECISION OUTPUT	5750
5751	12156	0 10 14127	JST	0A00		5751
5752	12157	0 02 01476	LDA	TID+1		5752
5753	12160	0 10 14127	JST	0A00		5753
5754	12161	0 02 01475	W405 LDA	TID	INTEGER OUTPUT	5754
5755	12162	0 10 14127	W406 JST	0A00		5755
5756	12163	0 02 11757	LDA	TOW4		5756



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5794	12230	0 04 14633	STA	OCI+1		5794
5795	12231	0 10 03770	JST	FL00	FETCH LINK	5795
5796	12232	1 02 15404	LDA	DP+4,1		5796
5797	12233	140500	SSM			5797
5798	12234	0416 77	ALR	1		5798
5799	12235	140500	SSM			5799
5800	12236	0406 77	ARR	1		5800
5801	12237	0400 70	LRL	8		5801
5802	12240	0 05 14633	ERA	OCI+1		5802
5803	12241	0 04 14633	STA	OCI+1		5803
5804	12242	1 02 15403	LDA	DP+3,1		5804
5805	12243	000201	IAB			5805
5806	12244	1 02 15404	LDA	DP+4,1		5806
5807	12245	0410 70	LLL	8		5807
5808	12246	0 04 14634	STA	OCI+2		5808
5809	12247	1 02 15402	LDA	DP+2,1		5809
5810	12250	000201	IAB			5810
5811	12251	1 02 15403	LDA	DP+3,1		5811
5812	12252	0410 70	LLL	8		5812
5813	12253	0 04 14635	STA	OCI+3		5813
5814	12254	1 02 15402	LDA	DP+2,1		5814
5815	12255	0414 76	LGL	2		5815
5816	12256	0 06 00721	ADD	K103		5816
5817	12257	0414 72	LGL	6		5817
5818	12260	0 04 14636	STA	OCI+4		5818
5819	12261	0 02 00746	LDA	K128		5819
5820	12262	0 04 00602	STA	OCNT		5820
5821	12263	0 10 02676	JST	STXI	I POINTS TO DATA TABLE	5821
5822	12264	1 02 15377	LDA	DP-1,1	SET A TO VARIABLE	5822
5823	12265	0 04 00040	STA	A		5823
5824	12266	0 10 03656	JST	FA00		5824
5825	12267	0 01 12073	JMP	W40		5825
5826	12270	0 02 00717	LDA	K101	=1 (=REL)	5826
5827	12271	000201	IAB			5827
5828	12272	0 02 00060	LDA	RPL		5828
5829	12273	0 10 04214	JST	AF00	DEFINE AFT (AT=REL, AF=RPL)	5829
5830	12274	0 02 00041	LDA	I	SET POINTER IN DATA POOL	5830

5831	12275	0 04 00000	STA	0						
5832	12276	0 02 00060	LDA	RPL						5831
5833	12277	1 04 15400	STA	DP,1						5832
5834	12300	0 06 00633	ADD	DO				DP(I) = RPL OF VARIABLE		5833
5835	12301	0 04 00060	STA	RPL						5834
5836	12302	0 01 11776	JMP	W4C						5835
5837			*							5836
5838			*							5837
5839			*							5838
5840			*							5839
5841			*							5840
5842			*							5841
5843	12303	0 02 00072	R3 LDA	LSTF				SET BLOCK DATA FLAG AND OUTPUT FORCE LOAD CODE		5842
5844	12304	100040	SZE					=0 IF FIRST STATEMENT IN THE SUBPROGRAM		5843
5845	12305	0 01 12310	JMP	**3						5844
5846	12306	0 10 03116	JST	ER00				ERROR.,.,NOT FIRST STATEMENT		5845
5847	12307	141314	BCI	1,BL				'BLOCK DATA' NOT FIRST STATEMENT		5846
5848	12310	0 04 00061	STA	BDF				SET BLOCK DATA FLAG ON (NON-ZERO)		5847
5849	12311	0 10 01256	JST	CH00				INPUT NEXT CHARACTER		5848
5850	12312	0 01 04266	JMP	A1				CHECK FOR (CR) AND EXIT		5849
5851			*							5850
5852			*							5851
5853			*							5852
5854			*							5853
5855			*							5854
5856			*							5855
5857			*							5856
5858			*							5857
5859			*							5858
5860			*							5859
5861			*							5860
5862	12313	0 10 02525	TRAC JST	XN00				SETS TRACE TAG ON VARIABLES OR SETS TRACE FLAG		5861
5863	12314	100040	SZE					EXAMINE NEXT CHARACTER		5862
5864	12315	0 01 12322	JMP	TRAD				SKIP IF CHAR, WAS A DIGIT		5863
5865	12316	0 10 02443	JST	IS00				JUMP IF CHAR, WAS A LETTER		5864
5866	12317	0 02 00040	LDA	A				INPUT STATEMENT NO.		5865
5867	12320	0 04 00065	STA	TRF				STATEMENT NO, POINTER		5866
								SET TRACE FLAG ON		5867

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5868 12321 0 01 04266 JMP A1 TEST FOR (CR) AND EXIT 5868
5869 * 5869
5870 12322 0 10 02373 TRAD JST NA00 INPUT NAME 5870
5871 12323 0 10 02672 JST STXA SET INDEX TO NAME ENTRY 5871
5872 12324 1 02 15404 LDA DP+4,1 TT(A) TRACE TAG 5872
5873 12325 140024 CHS 5873
5874 12326 1 04 15404 STA DP+4,1 5874
5875 12327 0 01 02567 JMP B1 (,) OR (CR) TEST 5875
5876 * (RETURN TO TRAC IF (,) ) 5876
5877 * 5877
5878 * 5878
5879 * 5879
5880 * 5880
5881 * *OUTPUT OBJECT LINK* 5881
5882 * ***** 5882
5883 12330 0 000000 OL00 DAC ** 5883
5884 12331 0 10 12363 JST CN00 CALL NAME 5884
5885 12332 140040 CRA 5885
5886 12333 0 04 00640 STA DF DF = 0 5886
5887 12334 0 02 01475 LDA ID (A) = IP 5887
5888 12335 0 10 14127 JST OA00 OUTPUT +BS 5888
5889 * 5889
5890 12336 -0 01 12330 JMP* OL00 5890
5891 * 5891
5892 * ***** 5892
5893 * *OUTPUT I/O LINK* 5893
5894 * ***** 5894
5895 * GENERATE I/O DRIVER LINKAGE CODE, NAME OF 5895
5896 * CALLED ROUTINE IS CHANGED IF UNIT DESIGNATOR 5896
5897 * IS A CONSTANT, 5897
5898 12337 0 000000 O100 DAC ** 5898
5899 12340 0 10 02432 JST IV00 INPUT INT VAR/CON 5899
5900 12341 0 02 00573 LDA NT 5900
5901 12342 101040 SNZ IF NT = 0 5901
5902 12343 0 01 12357 JMP OI20 GO TO OI20 5902
5903 12344 0 02 01475 LDA ID IF ID CR 9 5903
5904 12345 0 07 00744 SUB K126 GO TO OI20 5904
    
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5905	12346	101400		SMI						5905
5906	12347	0 01 12357		JMP	OI20					5906
5907			*							5907
5908	12350	0 02 00571		LDA	NAMF+1			FORM F3RN OR F3WN		5908
5909	12351	0 03 00733		ANA	K116					5909
5910	12352	0 06 01475		ADD	ID					5910
5911	12353	0 06 00715		ADD	K60			=1260 (SP)		5911
5912	12354	0 04 00571		STA	NAMF+1					5912
5913	12355	0 10 12363	OI10	JST	CN00			CALL NAME		5913
5914	12356	-0 01 12337		JMP*	OI00			RETURN		5914
5915	12357	0400 40	OI20	LRL	32					5915
5916	12360	0 02 13735		LDA	OMI7			OUTPUT OA		5916
5917	12361	0 10 12467		JST	OB00			(LOAD A (UNIT NO.))		5917
5918	12362	0 01 12355		JMP	OI10			FO TO OI10		5918
5919			*							5919
5920			*							5920
5921			*							5921
5922			*							5922
5923			*							5923
5924			*							5924
5925	12363	0 000000	CN00	DAC	**			SET UP NAME AND GENERATE CODE FOR CALLING IT.		5925
5926	12364	0 10 14523		JST	FS00			FLUSH		5926
5927	12365	0 10 14301		JST	PRSP			SET PRINT BUFFER TO SPACES		5927
5928	12366	0 02 12432		LDA	K147			SET UP OCI FOR CALL		5928
5929	12367	0 04 14632		STA	OCI					5929
5930	12370	0 02 00571		LDA	NAMF+1			OCI = NAMF		5930
5931	12371	0 04 14713		STA	PRI+9					5931
5932	12372	000201		IAB				ALSO TO PRINT BUFFER		5932
5933	12373	0 02 00570		LDA	NAMF					5933
5934	12374	0 04 14712		STA	PRI+8					5934
5935	12375	0400 70		LRL	8					5935
5936	12376	0 04 14633		STA	OCI+1					5936
5937	12377	0410 60		LLL	16					5937
5938	12400	0 04 14634		STA	OCI+2					5938
5939	12401	0 02 00572		LDA	NAMF+2					5939
5940	12402	0 04 14714		STA	PRI+10					5940
5941	12403	000201		IAB						5941

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J C N O . 1 8 0 4 6 3 0 0 0

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P A G E   1 6 6

5942	12404	0 02 00571	LDA	NAMF+1		5942
5943	12405	0410 70	LLL	8		5943
5944	12406	0 04 14635	STA	OCI+3		5944
5945	12407	0410 60	LLL	16		5945
5946	12410	0 04 14636	STA	OCI+4		5946
5947	12411	0 02 00746	LDA	K128	= '14	5947
5948	12412	0 04 00602	STA	OCNT	OCNT = 6	5948
5949	12413	0 02 12433	LDA	CN90		5949
5950	12414	0 04 14707	STA	PRI+5		5950
5951	12415	0 02 12434	LDA	CN90+1		5951
5952	12416	0 04 14710	STA	PRI+6		5952
5953	12417	0 02 00060	LDA	RPL		5953
5954	12420	0 10 14150	JST	OR80		5954
5955	12421	0 014702	DAC	PRI		5955
5956	12422	100010	SR2			5956
5957	12423	0 01 12426	JMP	*+3	INHIBIT SYMBOLIC OUTPUT	5957
5958	12424	0 10 00000	CALL	F4SSYM	OUTPUT SYMBOLIC LINE.	5958
5959	12425	0 014702	DAC	PRI		5959
5960	12426	0 12 00060	IRS	RPL	RPL = RPL + 1	5960
5961	12427	0 10 14301	JST	PRSP	SET PRINT BUFFER TO SPACES	5961
5962	12430	0 10 14523	JST	FS00	FLUSH	5962
5963	12431	-0 01 12363	JMP*	CN00	RETURN	5963
5964	12432	055000	K147 OCT	55000		5964
5965	12433	141701	CN90 BCI	2,CALL		5965
	12434	146314				
5966			*	*****		5966
5967			*	*OUTPUT PACK*		5967
5968			*	*****		5968
5969			*	OUTPUT THE PACK WORD WHEN IT IS FULL.		5969
5970	12435	0 00 00000	PKF PZE	0	PACK FLAG	5970
5971	12436	0 00 00000	TOOK PZE	0		5971
5972	12437	0 000000	OK00 DAC	**		5972
5973	12440	0 11 00756	CAS	CRET	IF (A) = C/R	5973
5974	12441	0 01 12443	JMP	*+2		5974
5975	12442	0 01 12460	JMP	OK30	GO TO OK30	5975
5976	12443	0 12 12435	IRS	PKF	PKF = PKF + 1	5976
5977	12444	0 01 12453	JMP	OK20	IF NON-ZERO, GO TO OK20	5977

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5978	12445	0 06 12436	OK10	ADD	TOOK	(A) = (A) + TO	5978
5979	12446	0400 60		LRL	16		5979
5980	12447	0 04 00640		STA	DF		5980
5981	12450	000201		IAB			5981
5982	12451	0 10 14127		JST	0A00	OUTPUT ABS	5982
5983	12452	-0 01 12437		JMP*	OK00		5983
5984	12453	0414 70	OK20	LGL	8		5984
5985	12454	0 04 12436		STA	TOOK		5985
5986	12455	0 02 00741		LDA	K123	PKF = - 1	5986
5987	12456	0 04 12435		STA	PKF		5987
5988	12457	-0 01 12437		JMP*	OK00	RETURN	5988
5989	12460	0 02 12435	OK30	LDA	PKF	IF PKF = 0	5989
5990	12461	101040		SNZ			5990
5991	12462	-0 01 12437		JMP*	OK00	RETURN	5991
5992	12463	0 02 00673		LDA	K8	ELSE (A) = SPACE,	5992
5993	12464	0 04 12435		STA	PKF		5993
5994	12465	0 01 12445		JMP	OK10	GO TO OK10	5994
5995			*				5995
5996			*				5996
5997			*				5997
5998			*		*****		5998
5999			*		*OUTPUT OA*		5999
6000			*		*****		6000
6001			*		GENERAL OUTPUT ROUTINE, MAKES CHECKS AGAINST		6001
6002			*		THE ASSIGNMENT TABLE ENTRY TO PROCESS DUMMY,		6002
6003			*		EXTERNAL, RELATIVE, ABSOLUTE OR STRING		6003
6004	12466	0 00 00000	T10B	PZE	0	REFERENCES PROPERLY.	6004
6005	12467	0 000000	0B00	DAC	**		6005
6006	12470	0 04 00647		STA	FTOP	FTOP = (A)	6006
6007	12471	000201		IAB			6007
6008	12472	0 04 12466		STA	T10B	ESTABLISH A	6008
6009	12473	0 10 02672		JST	STXA	IF A = 0	6009
6010	12474	101040		SNZ		GO TO 0B08	6010
6011	12475	0 01 12535		JMP	0B08	FETCH ASSIGNS	6011
6012	12476	0 10 03656		JST	FA00	SPECIAL OUTPUT FLAT	6012
6013	12477	0 02 00067		LDA	SOF		6013
6014	12500	100040		SZE			6014



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6015	12501	0 01 12660	JMP	OB60	SUBSCRIPT CONSTANT DEFLECTION	6015
6016	12502	0 02 00630	LDA	AF		6016
6017	12503	0 04 12466	STA	T10B	TO = AF	6017
6018	12504	0 02 00631	LDA	AT		6018
6019	12505	0 07 00723	SUB	K105	IF AT = 'DUM'	6019
6020	12506	101040	SNZ			6020
6021	12507	0 01 12547	JMP	OB15	GO TO OB15	6021
6022	12510	0 02 00655	LDA	IU		6022
6023	12511	0 07 00717	SUB	K101	IF IU = 'SUB'	6023
6024	12512	101040	SNZ			6024
6025	12513	0 01 12652	JMP	OB40	GO TO OB40	6025
6026	12514	0 02 00631	OB06 LDA	AT		6026
6027	12515	0 11 00722	CAS	K104	IF AT = 'COM'	6027
6028	12516	0 01 12520	JMP	**2		6028
6029	12517	0 01 12553	JMP	OB20	GO TO OB20	6029
6030	12520	0 11 00717	CAS	K101		6030
6031	12521	0 01 12523	JMP	**2	IF AT = 'REL'	6031
6032	12522	0 01 12542	JMP	OB10	GO TO OB10	6032
6033	12523	0 02 00721	LDA	K103		6033
6034	12524	000201	IAB			6034
6035	12525	0 02 00060	LDA	RPL		6035
6036	12526	0 10 04214	JST	AF00	DEFINE AF AND AT	6036
6037	12527	0 02 00631	LDA	AT	IF AT = 'STR-RE'	6037
6038	12530	0 07 00721	SUB	K103		6038
6039	12531	101040	SNZ			6039
6040	12532	0 01 12542	JMP	OB10	GO TO OB10	6040
6041	12533	140040	CRA			6041
6042	12534	0 04 00630	STA	AF	AF = 0	6042
6043	12535	0 02 00720	OB08 LDA	K102		6043
6044	12536	0 04 00640	STA	DF	SET FLAG TO OUTPUT SYMBOLIC	6044
6045	12537	0 02 00647	LDA	FTOP		6045
6046	12540	0 10 14127	JST	OA00	OUTPUT ABSOLUTE	6046
6047	12541	-0 01 12467	JMP*	OB00	RETURN	6047
6048	12542	0 02 12466	OB10 LDA	T10B		6048
6049	12543	0 04 00630	STA	AF		6049
6050	12544	0 02 00647	LDA	FTOP		6050
6051	12545	0 10 13773	JST	OR00	OUTPUT REL	6051

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6052	12546	-0 01 12467	JMP*	OB00
6053	12547	0 02 00647	OB15 LDA	FTOP
6054	12550	140024	CHS	
6055	12551	0 04 00647	STA	FTOP
6056	12552	0 01 12542	JMP	OB10
6057	12553	0 10 14523	OB20 JST	FS00
6058	12554	0 02 12466	LDA	T10B
6059	12555	0400 62	LRL	14
6060	12556	0 02 00647	LDA	FTOP
6061	12557	0404 66	LGR	10
6062	12560	0 06 12673	ADD	K150
6063	12561	0410 72	LLL	6
6064	12562	0 04 14632	STA	OCI
6065	12563	0410 70	LLL	8
6066	12564	0 04 14633	STA	OCI+1
6067	12565	0 10 03007	JST	SAV
6068	12566	0 10 03770	JST	FL00
6069	12567	1 02 15402	LDA	DP+2,1
6070	12570	0 04 14717	STA	PRI+13
6071	12571	0412 70	LLR	8
6072	12572	0 04 14636	STA	OCI+4
6073	12573	0410 70	LLL	8
6074	12574	1 02 15403	LDA	DP+3,1
6075	12575	0 04 14716	STA	PRI+12
6076	12576	0412 70	LLR	8
6077	12577	0 04 14635	STA	OCI+3
6078	12600	0410 70	LLL	8
6079	12601	1 02 15404	LDA	DP+4,1
6080	12602	0 03 00730	ANA	K111
6081	12603	0 11 12604	CAS	*+1
6082	12604	020240	OCT	020240
6083	12605	0 05 00740	ERA	K122
6084	12606	0 05 00760	ERA	HBIT
6085	12607	0 04 14715	STA	PRI+11
6086	12610	0412 70	LLR	8
6087	12611	0 04 14634	STA	OCI+2
6088	12612	0410 70	LLL	8

RETURN

REVERSE INDIRECT BIT

GO TO OB10

OUTPUT COMMON REQUEST  
PACK ADDRESS INTO BLOCK

SET COMMON NAME INTO PRINT BUFFER

SET COMMON NAME INTO PRINT BUFFER

= '037777

LOOK FOR BLANK COMMON

SET NAME INTO PRINT BUFFER

6052  
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6089	12613	0 02 14633	LDA	OCI+1		6089
6090	12614	0410 70	LLL	8		6090
6091	12615	0 04 14633	STA	OCI+1		6091
6092	12616	0 02 00746	LDA	K128	= '14	6092
6093	12617	0 04 00602	STA	OCNT		6093
6094	12620	0 10 03016	JST	RST		6094
6095	12621	0 02 00000	LDA	0		6095
6096	12622	0 04 00040	STA	A	RESTORE A TO POINT AT NAME	6096
6097	12623	0 02 00060	LDA	RPL	SET RPL MINUS	6097
6098	12624	140500	SSM		TO DISABLE WORD OUTPUT	6098
6099	12625	0 04 00060	STA	RPL		6099
6100	12626	0 02 00647	LDA	FTOP	OUTPUT WORD TO LIST	6100
6101	12627	0 10 13773	JST	OR00	SYMBOLIC COMMAND	6101
6102	12630	0 02 00060	LDA	RPL	RESTORE AND	6102
6103	12631	140100	SSP		INCREMENT PROGRAM	6103
6104	12632	141206	AOA		COUNTER FOR COMMON	6104
6105	12633	0 04 00060	STA	RPL	OUTPUT	6105
6106	12634	0 10 14523	JST	FS00	CLOSE OUT BLOCK	6106
6107	12635	-0 01 12467	JMP*	OB00	EXIT	6107
6108	12636	1 02 15404	OB30 LDA	DP+4,1		6108
6109	12637	140500	SSM			6109
6110	12640	0416 77	ALR	1		6110
6111	12641	140500	SSM			6111
6112	12642	0406 77	ARR	1		6112
6113	12643	0 04 00570	STA	NAMF		6113
6114	12644	1 02 15403	LDA	DP+3,1		6114
6115	12645	0 04 00571	STA	NAMF+1		6115
6116	12646	1 02 15402	LDA	DP+2,1		6116
6117	12647	0 04 00572	STA	NAMF+2		6117
6118	12650	0 10 12363	JST	CN00		6118
6119	12651	-0 01 12467	JMP*	OB00		6119
6120	12652	0 02 00631	OB40 LDA	AT		6120
6121	12653	0 07 00720	SUB	K102		6121
6122	12654	101040	SNZ			6122
6123	12655	0 01 12636	JMP	OB30		6123
6124	12656	0 01 12514	JMP	OB06		6124
6125	12657	140000	OB50 OCT	140000		6125

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6126			*							6126
6127	12660	140040	OB60	CRA						6127
6128	12661	0 04 00067		STA	SOF			RESET SPECIAL OUTPUT FLAG		6128
6129	12662	0 02 00631		LDA	AT			ADDRESS TYPE		6129
6130	12663	0 11 00723		CAS	K105			TEST FOR DUMMY		6130
6131	12664	0 01 12514		JMP	OB06			PROCESS NORMALLY		6131
6132	12665	0 01 12667		JMP	OB61					6132
6133	12666	0 01 12514		JMP	OB06			PROCESS NORMALLY		6133
6134	12667	0 02 12466	OB61	LDA	T108					6134
6135	12670	0 04 00647		STA	FTOP					6135
6136	12671	140040		CRA						6136
6137	12672	0 01 12536		JMP	OB08+1					6137
6138			*							6138
6139	12673	000700	K150	OCT	700					6139
6140			*							6140
6141			*							6141
6142			*							6142
6143			*							6143
6144			*							6144
6145			*							6145
6146			*							6146
6147			*							6147
6148			*							6148
6149	12674	0 00 00000	T00T	PZE	0					6149
6150	12675	0 00 00000	T20T	PZE	0					6150
6151	12676	0 00 00000	T10T	PZE	0					6151
6152	12677	0 00 00000	T30T	PZE	0			TEMP STORE FOR P		6152
6153	12700	0 000000	OT00	DAC	**					6153
6154	12701	0 10 03007		JST	SAV					6154
6155	12702	0 02 00113		LDA	LO					6155
6156	12703	0 04 00041		STA	I			I = LO		6156
6157	12704	140040		CRA						6157
6158	12705	0 04 12674		STA	T00T			T0 = 0		6158
6159	12706	0 04 00652		STA	IFLG					6159
6160	12707	0 04 12676	OT06	STA	T10T			T1 = I		6160
6161	12710	0 02 00041	OT10	LDA	I					6161
6162	12711	0 07 00721		SUB	K103			I = I-3		6162

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6163	12712	0 04 00041	STA	I		6163
6164	12713	0 04 12675	STA	T20T	T2 = I	6164
6165	12714	0 07 00044	SUB	L		6165
6166	12715	100400	SPL			6166
6167	12716	0 01 13121	JMP	OT60	IF FINISHED, GO TO OT60	6167
6168	12717	0 10 02676	JST	STXI		6168
6169	12720	1 02 15402	LDA	DP+2,1		6169
6170	12721	140100	SSP		CHECK P (I)	6170
6171	12722	0 11 00755	CAS	K139	X	6171
6172	12723	0 01 12725	JMP	**2		6172
6173	12724	0 01 12710	JMP	OT10		6173
6174	12725	0 11 00754	CAS	K138	H	6174
6175	12726	0 01 12730	JMP	**2		6175
6176	12727	0 01 12710	JMP	OT10		6176
6177	12730	0 11 13135	CAS	K142	I	6177
6178	12731	0 01 12733	JMP	**2		6178
6179	12732	0 01 13112	JMP	OT50		6179
6180	12733	0 11 13136	CAS	K143	T	6180
6181	12734	0 01 12736	JMP	**2		6181
6182	12735	0 01 13103	JMP	OT40		6182
6183	12736	0 11 13137	CAS	K151	Q	6183
6184	12737	0 01 12741	JMP	**2		6184
6185	12740	0 01 13074	JMP	OT35		6185
6186	12741	0 04 12677	STA	T30T	SAVE P	6186
6187	12742	1 02 15401	LDA	DP+1,1		6187
6188	12743	0 04 00040	STA	A	A = 01(I)	6188
6189	12744	0 11 12676	CAS	T10T		6189
6190	12745	0 01 12747	JMP	**2		6190
6191	12746	0 01 13016	JMP	OT30		6191
6192	12747	0 11 00113	CAS	L0		6192
6193	12750	0 01 13023	JMP	OT16		6193
6194	12751	0 01 13125	JMP	OT99	MAYBE SPECIAL LOAD FOR (A=) STATEMENT	6194
6195	12752	0 01 13023	JMP	OT16		6195
6196	12753	0 10 02676	OT18 JST	STXI		6196
6197	12754	1 02 15400	LDA	DP,1		6197
6198	12755	0 04 00040	STA	A	A = 02 (I)	6198
6199	12756	1 02 15402	LDA	DP+2,1		6199

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6200	12757	140100	SSP							
6201	12760	0 10 13147	JST	OM00						6200
6202	12761	0 10 02676	JST	STXI			OUTPUT ITEM(P(I),A = 02(I))			6201
6203	12762	1 02 15402	LDA	DP+2,1						6202
6204	12763	101400	SMI							6203
6205	12764	0 01 13014	JMP	OT28						6204
6206	12765	140040	CRA				ASSIGN TEMP STOR			6205
6207	12766	0 04 00573	STA	NT			NT = 0			6206
6208	12767	0 02 00720	LDA	K102						6207
6209	12770	0 04 00655	STA	IU			IU = VAR			6208
6210	12771	0 02 12674	LDA	T00T						6209
6211	12772	0400 72	LRL	6						6210
6212	12773	0 02 00052	LDA	TCF			ID =			6211
6213	12774	0400 75	LRL	3			TS-IM-TCF-T0			6212
6214	12775	0 02 00045	LDA	MFL						6213
6215	12776	0 04 00653	STA	IM						6214
6216	12777	0410 67	LLL	9						6215
6217	13000	0 10 14150	JST	OR80						6216
6218	13001	0 001475	DAC	ID						6217
6219	13002	0 02 13133	LDA	K77						6218
6220	13003	0 04 01475	STA	ID						6219
6221	13004	0 12 12674	IRS	T00T			T0 = T0+1			6220
6222	13005	0 10 03241	JST	AS00			ASSIGN ITEM			6221
6223	13006	0 10 02676	JST	STXI						6222
6224	13007	0 02 00040	LDA	A						6223
6225	13010	1 04 15400	STA	DP,1			02(I) = A			6224
6226	13011	0 02 02702	LDA	K153						6225
6227	13012	140500	SSM							6226
6228	13013	0 10 13147	JST	OM00			SURPRESS TRACE OF TEMPORARY STORAGE			6227
6229	13014	0 02 00041	LDA	I			OUTPUT ITEM (=,A)			6228
6230	13015	0 01 12707	JMP	OT06						6229
6231	13016	0 10 02672	JST	STXA						6230
6232	13017	1 02 15402	LDA	DP+2,1						6231
6233	13020	140100	SSP							6232
6234	13021	100040	SZE				IF P (A) = 0			6233
6235	13022	0 01 13025	JMP	OT32						6234
6236	13023	0 02 13140	LDA	K152			GENERATE FETCH			6235

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6237	13024	0 10 13147	JST	OM00	OUTPUT ITEM	6237
6238	13025	0 02 12677	OT32 LDA	T30T	CHECK FOR RELATIONALS	6238
6239	13026	0 07 00743	SUB	K125	= '10	6239
6240	13027	100400	SPL			6240
6241	13030	0 01 12753	JMP	OT18	NOT LOGICAL OPERATOR	6241
6242	13031	0 07 00724	SUB	K106	=6	6242
6243	13032	101400	SMI			6243
6244	13033	0 01 12753	JMP	OT18	NOT A LOGICAL OPERATOR	6244
6245	13034	0 04 00000	STA	0	SET INDEX = -1 TO -6	6245
6246	13035	0 02 00721	LDA	K103	=3 (LOG)	6246
6247	13036	0 04 00045	STA	MFL	SET MODE TO LOGICAL	6247
6248	13037	140040	CRA			6248
6249	13040	0 04 00040	STA	A	SET FOR OCTAL ADDRESS	6249
6250	13041	1 01 13050	JMP	**+7,1	BRANCH TO OPERATOR PROCESSOR	6250
6251	13042	0 01 13072	JMP	OT3G	.LT.	6251
6252	13043	0 01 13066	JMP	OT3E	.LE.	6252
6253	13044	0 01 13057	JMP	OT3C	.EQ.	6253
6254	13045	0 01 13055	JMP	OT3B	.GE.	6254
6255	13046	0 01 13053	JMP	OT3A	.GT.	6255
6256	13047	0 02 13743	LDA	OMJ4	.NE.    =ALS 16	6256
6257	13050	0 10 14127	JST	OA00	OUTPUT ABSOLUTE	6257
6258	13051	0 02 13745	LDA	OMJ6	=ACA	6258
6259	13052	0 01 13064	JMP	OT3D		6259
6260	13053	0 02 13746	OT3A LDA	OMJ7	=TCA	6260
6261	13054	0 01 13071	JMP	OT3F		6261
6262	13055	0 02 13747	OT3B LDA	OMK1	=CMA	6262
6263	13056	0 01 13071	JMP	OT3F		6263
6264	13057	0 02 13743	OT3C LDA	OMJ4	= ALS 16	6264
6265	13060	0 10 14127	JST	OA00		6265
6266	13061	0 02 13750	LDA	OMK2	=SSC	6266
6267	13062	0 10 14127	JST	OA00	OUTPUT ABSOLUTE	6267
6268	13063	0 02 13751	LDA	OMK3	=AOA	6268
6269	13064	0 10 14127	OT3D JST	OA00	OUTPUT ABSOLUTE	6269
6270	13065	0 01 12761	JMP	OT22		6270
6271	13066	0 02 13741	OT3E LDA	OMJ2	=SNZ	6271
6272	13067	0 10 14127	JST	OA00	OUTPUT ABSOLUTE	6272
6273	13070	0 02 13752	LDA	OMK4	=SSM	6273





6311	13134	140722	K78	BCI	1,AR	AR	6311
6312	13135	000027	K142	OCT	27		6312
6313	13136	000030	K143	OCT	30		6313
6314	13137	000032	K151	OCT	32		6314
6315	13140	000031	K152	OCT	31		6315
6316			*			*****	6316
6317			*			*OUTPUT ITEM*	6317
6318			*			*****	6318
6319			*				6319
6320			*			DRIVES BASIC OUTPUT ROUTINES, HANDLES SPECIAL	6320
6321			*			SUBSCRIPT PROCESSING, GENERATES NECESSARY	6321
6322			*			MODE CONVERSION CALLS AND HANDLES MODE	6322
6323			*			CHECKING, IN-LINE ARITHMETIC CODE IS	6323
6324			*			GENERATED WHERE POSSIBLE, OTHERWISE CALLS	6324
6325			*			TO ARITHMETIC ROUTINES ARE GENERATED,	6325
6326			*				6326
6327	13141	0 00 00000	T00M	PZE	0		6327
6328	13142	0 00 00000	T10M	PZE	0		6328
6329	13143	0 00 00000	T20M	PZE	0		6329
6330	13144	0 00 00000	T80M	PZE	0		6330
6331	13145	0 00 00000	T90M	PZE	0		6331
6332	13146	0 00 00000	TX0M	PZE	0		6332
6333			*				6333
6334			*			-----OUTPUT ITEM	6334
6335	13147	0 000000	OM00	DAC	**	RETURN ADDR	6335
6336	13150	0 04 13144		STA	T80M		6336
6337	13151	140100		SSP			6337
6338	13152	0 04 13141		STA	T00M	R(0)=(A)='P' CODE	6338
6339	13153	0 11 00752		CAS	K134		6339
6340	13154	0 01 13156		JMP	**+2		6340
6341	13155	0 01 13653		JMP	OMD1		6341
6342	13156	0 02 13146		LDA	TX0M		6342
6343	13157	0 11 00717		CAS	K101		6343
6344	13160	0 01 13655		JMP	OME1		6344
6345	13161	0 01 13660		JMP	OME5		6345
6346	13162	140040	OM05	CRA			6346
6347	13163	0 04 13142		STA	T10M	T(1)=0	6347

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6348	13164	0 04	13145	STA	T90M	T(9)=0	6348
6349	13165	0 02	00040	LDA	A		6349
6350	13166	0 04	13143	STA	T20M	T(2)=A	6350
6351	13167	100040		SZE			6351
6352	13170	0 01	13173	JMP	OM07		6352
6353	13171	0 02	00045	LDA	MFL		6353
6354	13172	0 01	13205	JMP	OM13		6354
6355	13173	0 11	00113	OM07 CAS	LO		6355
6356	13174	0 01	13176	JMP	**+2		6356
6357	13175	0 01	13770	JMP	OML1		6357
6358	13176	0 11	00054	CAS	ABAR		6358
6359	13177	0 01	13413	JMP	OM76	A ,LE. ABAR,...WITHIN TRIAD TABLE	6359
6360	13200	0 01	13201	JMP	**+1		6360
6361	13201	0 10	02672	OM10 JST	STXA	SET INDEX=A	6361
6362	13202	1 02	15400	LDA	DP,1		6362
6363	13203	0405	67	ARS	9	SES IM=MODE OF ITEM	6363
6364	13204	0 03	00725	ANA	K107		6364
6365	13205	0 04	00653	OM13 STA	IM		6365
6366	13206	0 02	00045	OM14 LDA	MFL	SET MFL,IM AS DIGITS INTO NAMF	6366
6367	13207	0415	70	ALS	8		6367
6368	13210	0 06	00653	ADD	IM		6368
6369	13211	0 05	13516	ERA	OM90	ADD '0''0'	6369
6370	13212	0 04	00571	STA	NAMF+1		6370
6371	13213	0 02	10030	LDA	K130		6371
6372	13214	0 04	00000	STA	0	INDEX=-6	6372
6373	13215	0 02	13141	LDA	T00M		6373
6374	13216	1 11	13333	CAS	OM50+6,1	CHECK FOR SPECIAL OPERATOR	6374
6375	13217	0 01	13221	JMP	**+2	'1	6375
6376	13220	-1 01	13341	JMP*	OM52+6,1	'P'='Q',' ',' ','0','A','F', OR 'E'	6376
6377	13221	0 12	00000	IRS	0		6377
6378	13222	0 01	13216	JMP	**+4		6378
6379	13223	0 02	00045	LDA	MFL		6379
6380	13224	101040		SNZ			6380
6381	13225	0 01	13354	JMP	OM62	SPECIAL LIBRARY FIX FOR ( A= )	6381
6382	13226	0 11	00653	CAS	IM	CHECK FOR MODE MIXING	6382
6383	13227	0 01	13231	JMP	**+2		6383
6384	13230	0 01	13526	JMP	OMA1	ITEM MODE SAME AS CURRENT MODE	6384

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6385	13231	0 02	00721	OM20	LDA	K103		6385
6386	13232	0 10	13313		JST	OM44	CHECK MODE FOR LOG	6386
6387	13233	0 02	00720		LDA	K102	=2 (MODE CODE FOR REAL)	6387
6388	13234	0 11	00045		CAS	MFL	MODE OF EXPRESSION	6388
6389	13235	0 01	13237		JMP	*+2		6389
6390	13236	0 01	13244		JMP	OM26	IF MODE=REAL, ALLOW COMPLEX MODE MIXING	6390
6391	13237	0 11	00653		CAS	IM	MODE OF ITEM	6391
6392	13240	0 01	13242		JMP	*+2		6392
6393	13241	0 01	13244		JMP	OM26	IF MODE=REAL, ALLOW COMPLEX MODE MIXING	6393
6394	13242	0 02	00723		LDA	K105		6394
6395	13243	0 10	13313		JST	OM44	TEST FOR MODE= COMPLEX	6395
6396	13244	0 02	13141	OM26	LDA	T00M	OPERATOR BEING PROCESSED	6396
6397	13245	0 11	02702		CAS	K153		6397
6398	13246	0 01	13250		JMP	*+2		6398
6399	13247	0 01	13274		JMP	OM36	T(0)='=' (ALLOW INTEGER MODE)	6399
6400	13250	0 02	00717		LDA	K101		6400
6401	13251	0 10	13313		JST	OM44	TEST FOR MODE=INTEGER	6401
6402	13252	0 02	00653		LDA	IM		6402
6403	13253	0 11	00045		CAS	MFL		6403
6404	13254	0 01	13276		JMP	OM38	CONVERT MODE OF ACCUMULATOR	6404
6405	13255	0 01	13256		JMP	*+1		6405
6406	13256	0 10	02722	OM30	JST	NF00	SET LBUF+2 TO SPACES	6406
6407	13257	0 02	13141		LDA	T00M		6407
6408	13260	0 04	00000		STA	0		6408
6409	13261	1 02	05032		LDA	A9X4,1	PICK-UP PRINT CODE FOR 'P' OPERATOR	6409
6410	13262	0405	72		ARS	6		6410
6411	13263	0 03	00727		ANA	K100	= '377	6411
6412	13264	101040			SNZ			6412
6413	13265	0 01	13323		JMP	OM46	MODE MIXING ERROR	6413
6414	13266	0414	70		LGL	8		6414
6415	13267	0 05	13517		ERA	OM91	ADD 'S'	6415
6416	13270	0 04	00570		STA	NAMF		6416
6417	13271	0 02	00752		LDA	K134		6417
6418	13272	0 04	13141		STA	T00M	T(0)=','	6418
6419	13273	0 01	13303		JMP	OM40		6419
6420								6420
6421	13274	0 02	00723	OM36	LDA	K105		6421



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6459	13336	0	013341		DAC	OM56		( 'A' )	6459
6460	13337	0	013343		DAC	OM60		( 'F' )	6460
6461	13340	0	013401		DAC	OM70		( 'E' )	6461
6462				*					6462
6463				*					6463
6464	13341	0	02 13727	OM56	LDA	OMI1		SET T(1) = ADD*	6464
6465	13342	0	01 13607		JMP	OMB1			6465
6466				*					6466
6467	13343	0	10 02672	OM60	JST	STXA		SET INDEX = A	6467
6468	13344	1	02 15401		LDA	DP+1,1			6468
6469	13345	0	404 62		LGR	14		SET UV=IU(A)	6469
6470	13346	0	04 00655		STA	IU			6470
6471	13347	0	10 02676		JST	STXI		SET INDEX=I	6471
6472	13350	1	02 15402		LDA	DP+2,1		P(I)	6472
6473	13351	0	03 10027		ANA	K133		= '77	6473
6474	13352		101040		SNZ				6474
6475	13353	0	01 13370		JMP	OM64		(POSSIBLE DUMMY ARRAY FETCH)	6475
6476	13354	0	02 00653	OM62	LDA	IM			6476
6477	13355	0	04 00045		STA	MFL		SET CURRENT MODE TO ITEM MODE	6477
6478	13356		0414 70		LGL	8			6478
6479	13357	0	06 00653		ADD	IM			6479
6480	13360	0	05 13516		ERA	OM90			6480
6481	13361	0	04 00571		STA	NAMF+1			6481
6482	13362	0	02 00655		LDA	IU			6482
6483	13363	0	07 00717		SUB	K101		CHECK FOR IU=1 (SUBROUTINE)	6483
6484	13364		100040		SZE				6484
6485	13365	0	01 13526		JMP	OMA1			6485
6486	13366	0	02 13730		LDA	OMI2		SET T(1) = JST	6486
6487	13367	0	01 13377		JMP	OM66			6487
6488	13370	0	02 00655	OM64	LDA	IU			6488
6489	13371	0	07 00721		SUB	K103		CHECK FOR IV=3 (ARRAY)	6489
6490	13372		100040		SZE				6490
6491	13373	0	01 13354		JMP	OM62			6491
6492	13374	0	02 00717		LDA	K101		SET CURRENT MODE TO INTEGER	6492
6493	13375	0	04 00045		STA	MFL			6493
6494	13376	0	02 13731		LDA	OMI3		SET T(1) = LDA*	6494
6495	13377	0	04 13142	OM66	STA	T10M			6495



6533	13442	140040		CRA		SET A=0 (NOT SYMBOLIC)	6533
6534	13443	0 04 00040		STA	A		6534
6535	13444	0 02 00060		LDA	RPL		6535
6536	13445	0 06 00720		ADD	K102	AF=RPL+2	6536
6537	13446	0 04 00630		STA	AF		6537
6538	13447	0 02 13732		LDA	OMI4	=ADD INSTRUCTION	6538
6539	13450	0 10 13773		JST	OR00	OUTPUT RELATIVE	6539
6540	13451	0 02 00060		LDA	RPL		6540
6541	13452	0 06 00720		ADD	K102	AF = RPL P+ 2	6541
6542	13453	0 04 00630		STA	AF		6542
6543	13454	0 02 13733		LDA	OMI5	= JMP INSTR.	6543
6544	13455	0 10 13773		JST	OR00	OUTPUT RELATIVE	6544
6545	13456	0 02 13142		LDA	T10M		6545
6546	13457	0 04 00040		STA	A	RESTORE A	6546
6547	13460	0 04 00067		STA	SOF	SET SPECIAL OUTPUT FLAG TO NON-ZERO	6547
6548	13461	140040		CRA		= DAC INSTR.	6548
6549	13462	0 04 13142		STA	T10M		6549
6550	13463	0 02 00717		LDA	K101		6550
6551	13464	0 04 00631		STA	AT		6551
6552	13465	0 01 13504		JMP	OM88		6552
6553	13466	1 02 15401	OM84	LDA	DP+1,1	O1(A)	6553
6554	13467	0 04 00040		STA	A	A=O1(A)	6554
6555	13470	0 11 00113		CAS	L0		6555
6556	13471	0 01 13473		JMP	**2		6556
6557	13472	0 01 13476		JMP	OM86	A=L(0),...,CONSTANT SUBSCRIPT ONLY	6557
6558	13473	0 02 13726		LDA	OM10	T(1) = INDIRECT BIT	6558
6559	13474	0 04 13142		STA	T10M		6559
6560	13475	0 01 13201		JMP	OM10		6560
6561			*				6561
6562	13476	0 02 13143	OM86	LDA	T20M	A=T(2)	6562
6563	13477	0 04 00040		STA	A		6563
6564	13500	0 04 00000		STA	0		6564
6565	13501	0 04 00067		STA	SOF		6565
6566	13502	1 02 15400		LDA	DP,1	T(2) = O2(A)	6566
6567	13503	0 04 13143		STA	T20M		6567
6568	13504	0 10 02672	OM88	JST	STXA	INDEX=A	6568
6569	13505	1 02 15401		LDA	DP+1,1	O1(A)	6569





6607	13550	0 01 13607	JMP	OMB1		6607
6608	13551	0 02 13143	OMA4 LDA	T20M	VALUE OF A	6608
6609	13552	0 07 00744	SUB	K126	= '12 KNOWN LOCATION OF A FOR 2	6609
6610	13553	100040	SZE		SKIP IF MULTIPLIER IS A CONSTANT OF 2	6610
6611	13554	0 01 13256	JMP	OM30	COUPLE TO THE MULTIPLY SUBROUTINE	6611
6612	13555	0 04 00040	STA	A	SET A AND AF TO ZERO (FOR LISTING FLAGS)	6612
6613	13556	0 04 00630	STA	AF		6613
6614	13557	0 02 13562	LDA	**3	ALS 1 INSTRUCTION	6614
6615	13560	0 10 14127	JST	OA00	OUTPUT ABSOLUTE	6615
6616	13561	-0 01 13147	JMP*	OM00	EXIT OUTPUT ITEM	6616
6617	13562	0415 77	ALS	1	(INSTRUCTION TO BE OUTPUT)	6617
6618	13563	0 11 00720	OMA5 CAS	K102	CHECK FOR T(0) = '-'	6618
6619	13564	0 01 13576	JMP	OMA7		6619
6620	13565	0 02 13734	LDA	OMI6	=SUB INSTR,	6620
6621	13566	0 01 13607	JMP	OMB1		6621
6622	13567	140040	OMA6 CRA			6622
6623	13570	0 04 00040	STA	A	CAUSE OCTAL ADDR LISTING	6623
6624	13571	0 04 00630	STA	AF		6624
6625	13572	0 02 13575	LDA	**3	TCA	6625
6626	13573	0 10 14127	JST	OA00	OUTPUT ABSOLUTE	6626
6627	13574	-0 01 13147	JMP*	OM00	EXIT	6627
6628	13575	140407	TCA			6628
6629	13576	0 11 02702	OMA7 CAS	K153	CHECK FOR T(0) = '='	6629
6630	13577	0 01 13601	JMP	**2		6630
6631	13600	0 01 13606	JMP	OMA9	OUTPUT A STA INSTR,	6631
6632	13601	0 07 13140	SUB	K152	CHECK FOR T(0) = 'F'	6632
6633	13602	100040	SZE			6633
6634	13603	0 01 13256	JMP	OM30		6634
6635	13604	0 02 13735	OMA8 LDA	OMI7	=LDA INSTR,	6635
6636	13605	0 01 13607	JMP	OMB1		6636
6637	13606	0 02 13736	OMA9 LDA	OMI8	=STA INSTR,	6637
6638	13607	0 06 13142	OMB1 ADD	T10M	T(1) = T(1) + INSTR,	6638
6639	13610	0 04 13142	STA	T10M		6639
6640	13611	0 02 13143	OMB3 LDA	T20M	SET A=T(2)	6640
6641	13612	0 04 00040	STA	A		6641
6642	13613	0 02 13145	LDA	T90M	OUTPUT INSTR, WITH T(1) AND T(9)	6642
6643	13614	000201	IAB			6643

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6644	13615	0 02	13142	LDA	T10M					
6645	13616	0 10	12467	JST	0B00					
6646	13617	0 02	13144	LDA	T80M			OUTPUT OA		6644
6647	13620	0 11	02702	CAS	K153			CHECK FOR T(8) = '8'		6645
6648	13621	-0 01	13147	JMP*	OM00			= '16		6646
6649	13622	0 01	13624	JMP	**2					6647
6650	13623	-0 01	13147	JMP*	OM00					6648
6651	13624	0 02	00066	LDA	TRFA			EXIT		6649
6652	13625	0 04	00040	STA	A			POINTER TO FIRST VARIABLE OR ARRAY		6650
6653	13626	0 10	13663	JST	TRSE			PROCESSED IN EXPRESSION		6651
6654	13627	-0 01	13147	JMP*	OM00			OUTPUT TRACE COUPLING IF REQUIRED		6652
6655								EXIT OUTPUT ITEM		6653
6656										6654
6657	13630	0 02	13141	OMC1 LDA	T00M					6655
6658	13631	0 11	13140	CAS	K152			CHECK FOR T(0) = 'F'		6656
6659	13632	0 01	13634	JMP	**2					6657
6660	13633	0 01	13604	JMP	OMA8			OUTPUT A LDA INSTR.		6658
6661	13634	0 11	02702	CAS	K153			CHECK FOR T(0) = '8'		6659
6662	13635	0 01	13637	JMP	**2					6660
6663	13636	0 01	13606	JMP	OMA9			OUTPUT A STA INSTR.		6661
6664	13637	0 11	13522	CAS	OM94			CHECK FOR T(0) = 'C'		6662
6665	13640	0 01	13642	JMP	**2					6663
6666	13641	0 01	13256	JMP	OM30			OUTPUT COMPLEMENT CODING		6664
6667	13642	0 11	00724	CAS	K106					6665
6668	13643	0 01	13645	JMP	**2					6666
6669	13644	0 01	13651	JMP	OMC5			OUTPUT AN ANA INSTR.		6667
6670	13645	0 11	00725	CAS	K107					6668
6671	13646	0 01	13323	JMP	OM46			ERROR		6669
6672	13647	0 01	13256	JMP	OM30					6670
6673	13650	0 01	13323	JMP	OM46			ERROR		6671
6674	13651	0 02	13737	OMC5 LDA	OMI9			=ANA INSTR.		6672
6675	13652	0 01	13607	JMP	OMB1					6673
6676	13653	0 12	13146	OMD1 IRS	TXOM			T0 = T0+1		6674
6677	13654	0 01	13162	JMP	OM05					6675
6678	13655	140040		OME1 CRA						6676
6679	13656	0 04	00640	STA	DF			DF = 0		6677
6680	13657	0 10	14127	JST	0A00			OUTPUT ABSOLUTE		6678

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6681	13660	140040	OMES	CRA			6681
6682	13661	0 04 13146		STA	TXOM	TO = 0	6682
6683	13662	0 01 13162		JMP	OM05		6683
6684			*				6684
6685	13663	0 000000	TRSE	DAC	0	SUBROUTINE TO OUTPUT TRACE COUPLING	6685
6686	13664	0 10 02672		JST	STXA	SET INDEX = A	6686
6687	13665	100040		SZE			6687
6688	13666	1 02 15404		LDA	DP+4,1	CHECK STATUS OF TRACE TAG	6688
6689	13667	100400		SPL			6689
6690	13670	0 01 13676		JMP	TRS7		6690
6691	13671	100002		SR4			6691
6692	13672	0 01 13676		JMP	TRS7		6692
6693	13673	0 02 00065		LDA	TRF	CHECK STATUS OF TRACE FLAG	6693
6694	13674	101040		SNZ			6694
6695	13675	-0 01 13663		JMP*	TRSE		6695
6696	13676	0 10 02722	TRS7	JST	NF00	SET LBUF TO 'F's', LBUF+2 TO SPACES	6696
6697	13677	0 02 13521		LDA	OM93	= 'TR'	6697
6698	13700	0 04 00571		STA	NAMF+1		6698
6699	13701	0 10 12363		JST	CN00	OUTPUT,,,,,CALL NAME	6699
6700	13702	0 10 02672		JST	STXA	SET INDEX = A	6700
6701	13703	1 02 15404		LDA	DP+4,1		6701
6702	13704	0 03 13523		ANA	OM95		6702
6703	13705	0 04 13142		STA	T10M		6703
6704	13706	1 02 15403		LDA	DP+3,1		6704
6705	13707	0 04 13144		STA	T80M		6705
6706	13710	1 02 15402		LDA	DP+2,1		6706
6707	13711	0 04 13145		STA	T90M		6707
6708	13712	140040		CRA			6708
6709	13713	0 04 00640		STA	DF		6709
6710	13714	1 02 15400		LDA	DP,1	MERGE IM WITH ITEM NAME	6710
6711	13715	0405 67		ARS	9		6711
6712	13716	0414 63		LGL	13		6712
6713	13717	0 05 13142		ERA	T10M		6713
6714	13720	0 10 14127		JST	0A00	OUTPUT ABSOLUTE (FIRST 2 CHAR.)	6714
6715	13721	0 02 13144		LDA	T80M		6715
6716	13722	0 10 14127		JST	0A00	OUTPUT ABSOLUTE (NEXT 2 CHAR.)	6716
6717	13723	0 02 13145		LDA	T90M		6717

H O N E Y W E L L      C O M P U T E R   C O N T R O L   D I V I S I O N      P R O G R A M   D O C U M E N T A T I O N

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6718	13724	0 10 14127	JST	0A00	OUTPUT ABSOLUTE (LAST 2 CHAR.)	6718
6719	13725	-0 01 13663	JMP*	TRSE		6719
6720			*			6720
6721			*.....INSTRUCTION TABLE			6721
6722	13726	100000	OMI0	OCT 100000	INDIRECT BIT	6722
6723	13727	114000	OMI1	OCT 114000	ADD*	6723
6724	13730	020000	OMI2	OCT 020000	JST	6724
6725	13731	104000	OMI3	OCT 104000	LDA*	6725
6726	13732	014000	OMI4	OCT 014000	ADD	6726
6727	13733	002000	OMI5	OCT 002000	JMP	6727
6728	13734	016000	OMI6	OCT 016000	SUB	6728
6729	13735	004000	OMI7	OCT 004000	LDA	6729
6730	13736	010000	OMI8	OCT 010000	STA	6730
6731	13737	006000	OMI9	OCT 006000	ANA	6731
6732	13740	102000	OMJ1	OCT 102000	JMP*	6732
6733	13741	101040	OMJ2	OCT 101040	SNZ	6733
6734	13742	101400	OMJ3	OCT 101400	SMI	6734
6735	13743	0415 60	OMJ4	ALS 16		6735
6736	13744	040461	OMJ5	OCT 040461	LGR 15	6736
6737	13745	141216	OMJ6	OCT 141216	ACA	6737
6738	13746	140407	OMJ7	OCT 140407	TCA	6738
6739	13747	140401	OMK1	OCT 140401	CMA	6739
6740	13750	101001	OMK2	OCT 101001	SSC	6740
6741	13751	141206	OMK3	OCT 141206	AOA	6741
6742	13752	140500	OMK4	OCT 140500	SSM	6742
6743	13753	042000	OMK5	OCT 042000	JMP 0,1	6743
6744	13754	000000	OMK6	OCT 000000	DAC **	6744
6745	13755	0415 77		ALS 1	ALS1	6745
6746	13756	140407		TCA	TCA	6746
6747	13757	176000	OMK7	OCT 176000	STG	6747
6748	13760	0 11 00000	OMK9	CAS 0	CAS	6748
6749	13761	-0 04 00000		STA* 0		6749
6750	13762	-0 07 00000		SUB* 0		6750
6751	13763	-0 000000		DAC* **		6751
6752	13764	131001		OCT 131001		6752
6753	13765	030000		OCT 030000	SUBR	6753
6754	13766	-0 11 00000		CAS* 0		6754

6755	13767	000000	OMK8	OCT	0	(///)	6755
6756	13770	0 02 00717	OML1	LDA	K101		6756
6757	13771	0 04 00631		STA	AT		6757
6758	13772	0 01 12710		JMP	OT10		6758
6759			*				6759
6760			*		*****		6760
6761			*		*OUTPUT REL*		6761
6762			*		*****		6762
6763			*		ALSO DRIVES SYMBOLIC INSTRUCTION OUTPUT,		6763
6764	13773	0 000000	OR00	DAC	**		6764
6765	13774	0 04 00647		STA	FTOP		6765
6766	13775	0 02 00720		LDA	K102	DF = NON ZERO	6766
6767	13776	0 04 00640		STA	DF	CODE = 2	6767
6768	13777	0 04 00632	OR10	STA	CODE		6768
6769	14000	0 02 00060		LDA	RPL	LIST RPL	6769
6770	14001	140100		SSP			6770
6771	14002	0 10 14150		JST	OR80		6771
6772	14003	0 014702		DAC	PRI		6772
6773	14004	0 02 00640	OR12	LDA	DF	IF DF NOT ZERO	6773
6774	14005	100040		SZE			6774
6775	14006	0 01 14031		JMP	OR20	GO TO OR20	6775
6776	14007	0 02 14027		LDA	OR18	= '147703	6776
6777	14010	0 04 14707		STA	PRI+5		6777
6778	14011	0 02 14030		LDA	OR19	SET 'OCT' INTO PRINT IMAGE	6778
6779	14012	0 04 14710		STA	PRI+6		6779
6780	14013	0 02 00647		LDA	FTOP		6780
6781	14014	0 10 14150	OR13	JST	OR80		6781
6782	14015	0 014712		DAC	PRI+8		6782
6783	14016	0 02 00060	OR15	LDA	RPL	IF RPL PLUS	6783
6784	14017	101400		SMI			6784
6785	14020	0 10 14365		JST	OW00	OUTPUT WORD	6785
6786	14021	100010		SR2			6786
6787	14022	0 01 14025		JMP	**3	SURPRESS SYMBOLIC OUTPUT	6787
6788	14023	0 10 00000		CALL	F4\$SYM	LIST LINE	6788
6789	14024	0 014702		DAC	PRI		6789
6790	14025	0 10 14301		JST	PRSP	SET PRINT BUFFER TO SPACES	6790
6791	14026	-0 01 13773		JMP*	OR00	RETURN	6791

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6792	14027	147703	OR18	OCT	147703	(O)(C)	6792
6793	14030	152240	OR19	OCT	152240	(T)(SP)	6793
6794	14031	0 10 03007	OR20	JST	SAV		6794
6795	14032	0 02 14176		LDA	OR90	SEARCH OP-CODE LIST	6795
6796	14033	140407		TCA			6796
6797	14034	0 04 00000		STA	XR	PUT BCI IN PRINT IMAGE	6797
6798	14035	0 02 00647		LDA	FTOP		6798
6799	14036	140100		SSP			6799
6800	14037	100040		SZE			6800
6801	14040	0 01 14050		JMP	OR24		6801
6802	14041	0 02 00631		LDA	AT		6802
6803	14042	0 11 00721		CAS	K103		6803
6804	14043	0 07 00724		SUB	K106		6804
6805	14044	0 06 00720		ADD	K102		6805
6806	14045	140401		CMA			6806
6807	14046	0 03 00725		ANA	K107		6807
6808	14047	0 04 00632		STA	CODE		6808
6809	14050	0 02 00647	OR24	LDA	FTOP		6809
6810	14051	1 11 13767		CAS	OR91+NINS,1		6810
6811	14052	0 01 14054		JMP	**2		6811
6812	14053	0 01 14056		JMP	**3		6812
6813	14054	0 12 00000		IRS	XR		6813
6814	14055	0 01 14051		JMP	**4		6814
6815	14056	1 02 14237		LDA	OR92+NINS,1		6815
6816	14057	0 04 14707		STA	PRI+5		6816
6817	14060	1 02 14300		LDA	OR93+NINS,1		6817
6818	14061	0 04 14710		STA	PRI+6		6818
6819	14062	0 10 03016		JST	RST		6819
6820	14063	0 02 00040		LDA	A		6820
6821	14064	100040		SZE			6821
6822	14065	0 01 14071		JMP	OR30		6822
6823	14066	0 02 00630		LDA	AF		6823
6824	14067	0 03 00730		ANA	K111	MASK OUT HIGH BITS OF ADDRESS	6824
6825	14070	0 01 14014		JMP	OR13		6825
6826	14071	0 10 02672	OR30	JST	STXA		6826
6827	14072	1 02 15400		LDA	DP,1		6827
6828	14073	101400		SMI			6828

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6829	14074	0 01 14114	JMP	OR40		6829
6830	14075	0 02 14363	LDA	K149		6830
6831	14076	0 04 14712	STA	PRI+8	SET '=' INTO LISTING	6831
6832	14077	1 02 15400	LDA	DP,1	CHECK IM (A)	6832
6833	14100	0414 74	LGL	4		6833
6834	14101	100400	SPL		SKIP IF NOT COMPLEX	6834
6835	14102	0 01 14106	JMP	++4		6835
6836	14103	0414 76	LGL	2		6836
6837	14104	100400	SPL		SKIP IF INTEGER OR LOGICAL	6837
6838	14105	0 01 14110	JMP	++3		6838
6839	14106	1 02 15402	LDA	DP+2,1		6839
6840	14107	0 01 14111	JMP	++2	LIST EXPONENT AND PART OF FRACTION	6840
6841	14110	1 02 15404	LDA	DP+4,1	LIST INTEGER VALUE	6841
6842	14111	0 10 14150	JST	OR80	CONVERT OCTAL	6842
6843	14112	0 014713	DAC	PRI+9		6843
6844	14113	0 01 14016	JMP	OR15		6844
6845	14114	1 02 15404	OR40 LDA	DP+4,1	CONVERT AND PACK INTO	6845
6846	14115	0416 77	ALR	1		6846
6847	14116	140500	SSM		SYMBOLIC IMAGE	6847
6848	14117	0406 77	ARR	1		6848
6849	14120	140500	SSM			6849
6850	14121	0 04 14712	STA	PRI+8		6850
6851	14122	1 02 15403	LDA	DP+3,1		6851
6852	14123	0 04 14713	STA	PRI+9		6852
6853	14124	1 02 15402	LDA	DP+2,1		6853
6854	14125	0 04 14714	STA	PRI+10		6854
6855	14126	0 01 14016	JMP	OR15		6855
6856		*		*****		6856
6857		*		*OUTPUT ABS*		6857
6858		*		*****		6858
6859	14127	0 000000	0A00 DAC	**		6859
6860	14130	0 04 00647	STA	FTOP		6860
6861	14131	0 02 14127	LDA	0A00		6861
6862	14132	0 04 13773	STA	OR00		6862
6863	14133	140040	CRA			6863
6864	14134	0 01 13777	JMP	OR10		6864
6865		*		*****		6865

6866			*		*OUTPUT STRING-RPL*		6866
6867			*		*****		6867
6868	14135	0 000000	OS00	DAC	00		6868
6869	14136	0 04 00630		STA	AF		6869
6870	14137	0 02 13757		LDA	OMK7		6870
6871	14140	0 04 00647		STA	FTOP		6871
6872	14141	0 02 14135		LDA	OS00		6872
6873	14142	0 04 13773		STA	OR00	SET RETURN INTO OUTPUT REL	6873
6874	14143	0 02 00722		LDA	K104		6874
6875	14144	0 04 00632		STA	CODE		6875
6876	14145	0 04 14461		STA	STFL	STRING FLAG = NON ZERO	6876
6877	14146	0 10 14301		JST	PRSP	SET PRINT BUF. TO SPACES	6877
6878	14147	0 01 14031		JMP	OR20	JMP-OUTPUT REL FOR SYMBOLIC AND BINARY	6878
6879	14150	0 000000	OR80	DAC	**		6879
6880	14151	000201		IAB			6880
6881	14152	-0 02 14150		LDA*	OR80		6881
6882	14153	0 04 14175		STA	OR89		6882
6883	14154	140040		CRA			6883
6884	14155	0402 76		LRR	2		6884
6885	14156	0 12 14150		IRS	OR80		6885
6886	14157	0 10 14163		JST	OR85		6886
6887	14160	0 10 14163		JST	OR85		6887
6888	14161	0 10 14163		JST	OR85		6888
6889	14162	-0 01 14150		JMP*	OR80		6889
6890	14163	0 000000	OR85	DAC	**		6890
6891	14164	0 06 14364		ADD	K140		6891
6892	14165	0412 75		LLR	3		6892
6893	14166	0414 73		LGL	5		6893
6894	14167	0 06 14364		ADD	K140		6894
6895	14170	0410 75		LLL	3		6895
6896	14171	-0 04 14175		STA*	OR89		6896
6897	14172	0 12 14175		IRS	OR89		6897
6898	14173	140040		CRA			6898
6899	14174	-0 01 14163		JMP*	OR85		6899
6900	14175	0 00 00000	OR89	PZE	0		6900
6901	14176	0 000040	OR90	DAC	NINS		6901
6902		013735	K200	EQU	OMI7		6902



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6903	013733	K201 EQU	OMI5	6903
6904	013736	K202 EQU	OMI8	6904
6905	013732	K203 EQU	OMI4	6905
6906	013734	K204 EQU	OMI6	6906
6907	013742	K205 EQU	OMJ3	6907
6908	013740	K206 EQU	OMJ1	6908
6909	013753	K207 EQU	OMK5	6908
6910	013727	OR91 EQU	OMI1	6909
6911	14177	OR92 BCI	22,ADJSLDADJMSULDSTANJMSNSMLLLRACTCCMSSAOSSJMDA	6910
	14200			6911
	14201			
	14202			
	14203			
	14204			
	14205			
	14206			
	14207			
	14210			
	14211			
	14212			
	14213			
	14214			
	14215			
	14216			
	14217			
	14220			
	14221			
	14222			
	14223			
	14224			
6912	14225	BCI	2,ALTC	6912
	14226			
6913	14227	BCI	9,STCASTSUDAERSUCA//	6913
	14230			
	14231			
	14232			
	14233			

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	14234	142722
	14235	151725
	14236	141701
	14237	127657
6914	14240	142252
	14241	152240
	14242	140652
	14243	142240
	14244	150240
	14245	141240
	14246	140640
	14247	140640
	14250	140640
	14251	150252
	14252	155240
	14253	144640
	14254	130665
	14255	130665
	14256	140640
	14257	140640
	14260	140640
	14261	141640
	14262	140640
	14263	146640
	14264	150330
	14265	141640
6915	14266	151661
	14267	140640
6916	14270	143640
	14271	151640
	14272	140652
	14273	141252
	14274	141652
	14275	151257
	14276	141322
	14277	151652
	14300	127640

OR93 BCI    22,D\*T A\*D P B A A A P\*Z I 1515A A A C A M PXC

6914

BCI    2,S1A

6915

BCI    9,G S A\*B\*C\*R/BRS\*/

6916

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6917	000040	NINS EQU	32		6917
6918		*			6918
6919	14301	0 000000	PRSP DAC	**	SUBR. TO SET PRINT BUF. TO SPACES
6920	14302	0 02 14311	LDA	PRSK	=-40
6921	14303	0 04 00000	STA	0	
6922	14304	0 02 01154	LDA	KASP	(SP)(SP)
6923	14305	1 04 14752	STA	PRI+40,1	
6924	14306	0 12 00000	IRS	0	
6925	14307	0 01 14305	JMP	**2	
6926	14310	-0 01 14301	JMP*	PRSP	EXIT
6927	14311	177730	PRSK OCT	177730	=-40
6928		*			
6929		*			
6930		*			
6931		*			
6932		*			
6933		*			
6934	14312	0 000000	ON00 DAC	**	
6935	14313	0 04 14362	STA	ONT1	SAVE ADDRESS
6936	14314	0 10 14523	JST	FS00	FLUSH BUFFER IF NECESSARY
6937	14315	0 10 02672	JST	STXA	SET INDEX=A
6938	14316	0 02 14362	LDA	ONT1	SUBR. ENTRY ADDR.
6939	14317	0400 62	LRL	14	
6940	14320	0 04 14362	STA	ONT1	SAVE S/C BITS
6941	14321	0 02 14361	LDA	ON02	=1600 (=BLOCK CODE NO.)
6942	14322	0410 72	LLL	6	
6943	14323	0 04 14632	STA	OCI	FILL BUFFER
6944	14324	0400 70	LRL	8	
6945	14325	0 10 02672	JST	STXA	SET INDEX=A
6946	14326	1 02 15404	LDA	DP+4,1	FIRST 2 CHAR. OF NAME
6947	14327	0 03 00730	ANA	K111	=1037777
6948	14330	0 11 14331	CAS	**i	
6949	14331	020240	OCT	020240	
6950	14332	0 05 00740	ERA	K122	
6951	14333	0 05 00760	ERA	HBIT	=1140000
6952	14334	0402 70	LRR	8	
6953	14335	0 04 14633	STA	OCI+1	BUFFER



6991	14401	101000		NOP				6991
6992	14402	0 10 14523		JST	FS00	FLUSH BUFFER		6992
6993	14403	0 02 00602		LDA	OCNT			6993
6994	14404	0 06 00721		ADD	K103			6994
6995	14405	0 04 00602		STA	OCNT	OCNT = OCNT+3		6995
6996	14406	0 07 00721		SUB	K103			6996
6997	14407	0406 77		ARR	1	OCI (OUTPUT CARD IMAGE)		6997
6998	14410	0 04 00000		STA	XR			6998
6999	14411	101400		SMI		LEFT OR RIGHT POS.		6999
7000	14412	0 01 14462		JMP	OW20			7000
7001	14413	0 10 14465		JST	PU00			7001
7002	14414	0400 70		LRL	8	IF BUFFER FULL		7002
7003	14415	1 13 14632		IMA	OCI,1			7003
7004	14416	0 03 00733		ANA	K116	CALL FLUSH (FS00)		7004
7005	14417	1 05 14632		ERA	OCI,1			7005
7006	14420	1 04 14632	OW10	STA	OCI,1			7006
7007	14421	000201		IAB				7007
7008	14422	1 04 14633		STA	OCI+1,1			7008
7009	14423	0 02 14722		LDA	PRI+16			7009
7010	14424	000201		IAB				7010
7011	14425	0 02 14720		LDA	PRI+14	USE LOW BIT OF PRI+14 DATA		7011
7012	14426	0410 67		LLL	9			7012
7013	14427	0404 77		LGR	1	STRIP OFF HIGH BIT OF BLOCK CODE TYPE NO.		7013
7014	14430	0410 75		LLL	3	SET DIGITS IN PRI+17, PRI+19		7014
7015	14431	0 10 14150		JST	OR80			7015
7016	14432	0 014722		DAC	PRI+16			7016
7017	14433	0 02 14720		LDA	PRI+14			7017
7018	14434	0400 72		LRL	6			7018
7019	14435	0414 77		LGL	1	SHIFT ADDR. TO RIGHT BY 1 BIT		7019
7020	14436	0410 73		LLL	5			7020
7021	14437	0 10 14150		JST	OR80	SET DIGITS IN PRI+15, PRI+16		7021
7022	14440	0 014720		DAC	PRI+14			7022
7023	14441	0 02 01154		LDA	KASP	(SP)(SP)		7023
7024	14442	100020		SR1				7024
7025	14443	0 01 14450		JMP	OW14			7025
7026	14444	0 04 14721		STA	PRI+15	OVERWRITE BINARY DATA IN		7026
7027	14445	0 04 14722		STA	PRI+16	PRINT BUFFER WITH SPACES		7027

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7028	14446	0 04 14723	STA	PRI+17					
7029	14447	0 04 14724	STA	PRI+18					
7030	14450	0 04 14720	OW14 STA	PRI+14					
7031	14451	0 10 03016	JST	RST					
7032	14452	0 02 00060	LDA	RPL					
7033	14453	0 04 14464	STA	ORPL					
7034	14454	140040	CRA				ORPL=RPL		
7035	14455	0 13 14461	IMA	STFL					
7036	14456	101040	SNZ						
7037	14457	0 12 00060	IRS	RPL					
7038	14460	-0 01 14365	JMP*	OW00					
7039	14461	0 00 00000	STFL PZE	0					
7040	14462	0 10 14465	OW20 JST	PU00					
7041	14463	0 01 14420	JMP	OW10					
7042	14464	0 00 00000	ORPL PZE	0					
7043	14465	0 000000	PU00 DAC	**					
7044	14466	0 02 00632	LDA	CODE					
7045	14467	0 11 00722	CAS	K104					
7046	14470	101000	NOP						
7047	14471	0 01 14504	JMP	PU10					
7048	14472	100040	SZE						
7049	14473	0 01 14504	JMP	PU10					
7050	14474	0400 70	LRL	8					
7051	14475	0 02 00647	LDA	FTOP					
7052	14476	0400 74	PU08 LRL	4					
7053	14477	0 04 14720	STA	PRI+14					
7054	14500	000201	IAB						
7055	14501	0 04 14722	STA	PRI+16					
7056	14502	0402 64	LRR	12					
7057	14503	-0 01 14465	JMP*	PU00					
7058	14504	0400 74	PU10 LRL	4					
7059	14505	0 02 00630	LDA	AF					
7060	14506	0400 74	LRL	4					
7061	14507	0 05 00647	ERA	FTOP					
7062	14510	0 01 14476	JMP	PU08					
7063	14511	0400 74	PU20 LRL	4					
7064	14512	0 02 00630	LDA	AF					

IF NO BINARY LISTING IS WANTED

ORPL=RPL

INDICATE WORD WAS KEY TO LOADER  
THEN LEAVE RPL ALONE  
RPL = RPL+1

COMBINE CODES TO  
=4

SKIP IF ABS  
JUMP IF REL.

SAVE FOR LISTING

RESTORE POSITION

7028  
7029  
7030  
7031  
7032  
7033  
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7038  
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7065	14513	0 03 00730	ANA	K111		7065
7066	14514	0400 74	LRL	4		7066
7067	14515	0 13 00630	IMA	AF		7067
7068	14516	0 03 14521	ANA	K114		7068
7069	14517	0 05 00630	ERA	AF		7069
7070	14520	0 01 14476	JMP	PU08		7070
7071	14521	014000	K114 OCT	14000		7071
7072	14522	000117	K146 OCT	117		7072
7073			*			7073
7074			*			7074
7075			*	*****		7075
7076			*	*FLUSH SUBROUTINE*		7076
7077			*	*****		7077
7078	14523	0 000000	FS00 DAC	**		7078
7079	14524	0 02 00602	LDA	OCNT	BUFFER OCCUPANCY SIZE	7079
7080	14525	0 10 03007	JST	SAV	SAVE INDEX REGISTER	7080
7081	14526	0 07 00722	SUB	K104	CHECK FOR OCNT .GT. 4	7081
7082	14527	100400	SPL			7082
7083	14530	0 01 14603	JMP	FS20	SKIP OUTPUT IF BUFFER IS EMPTY	7083
7084	14531	0 06 00723	ADD	K105	ADD 1/2 AT B14	7084
7085	14532	0405 77	ARS	1	DIVIDE BY 2	7085
7086	14533	140407	TCA			7086
7087	14534	0 04 00602	STA	OCNT	OCNT = -WORDS/BUFFER	7087
7088	14535	0 07 00717	SUB	K101	=1	7088
7089	14536	0 04 00601	STA	PCNT	BUFFER SIZE INCLUDING CHECKSUM	7089
7090	14537	0 02 14632	LDA	OCI	FIRST WORD IN BUFFER	7090
7091	14540	0400 64	LRL	12		7091
7092	14541	0 11 00720	CAS	K102	=2	7092
7093	14542	0 01 14544	JMP	**2		7093
7094	14543	0 01 14615	JMP	FS30	BLOCK TYPE = 2 (RELOCATABLE CODE)	7094
7095			*		EVERY TIME A BLOCK OF OBJECT OUTPUT IS DUMPED, THE FIRST	7095
7096			*		3 WORDS OF THE BLOCK IS INSERTED IN THE SYMBOLIC OUTPUT	7096
7097			*		ALONG WITH AN EOB OPERATOR CODE IF SENSE SWITCH 1 IS DOWN,	7097
7098			*		TO INHIBIT THIS LINE, REPLACE FROM FS10 TO AND INCLUDING	7098
7099			*		FS11 WITH (FS10 CRA ).	7099
7100	14544	101020	FS10 SS1			7100
7101	14545	0 01 14570	JMP	FS11	NO BINARY LISTING UNLESS SSW-1 IS DOWN	7101

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7102	14546	0 10 00000	CALL	F4SSYM	OUTPUT WHATEVER MIGHT BE IN SYMBOLIC BUF.	7102
7103	14547	0 014702	DAC	PRI		7103
7104	14550	0 02 14626	LDA	FS41	*(E)(O)	7104
7105	14551	0 04 14707	STA	PRI+5	ENTER 'EOB' INTO LISTING	7105
7106	14552	0 02 14627	LDA	FS41+1	*(B)(SP)	7106
7107	14553	0 04 14710	STA	PRI+6		7107
7108	14554	0 02 14632	LDA	OCI		7108
7109	14555	0 10 14150	JST	OR80	ENTER FIRST WORD FROM BUFFER INTO LISTING	7109
7110	14556	0 014712	DAC	PRI+8		7110
7111	14557	0 02 14633	LDA	OCI+1		7111
7112	14560	0 10 14150	JST	OR80	ENTER WORD 2 FROM BUFFER INTO LISTING	7112
7113	14561	0 014716	DAC	PRI+12		7113
7114	14562	0 02 14634	LDA	OCI+2		7114
7115	14563	0 10 14150	JST	OR80	ENTER WORD 3 FROM BUFFER INTO LISTING	7115
7116	14564	0 014722	DAC	PRI+16		7116
7117	14565	0 10 00000	CALL	F4SSYM	OUTPUT SYMBOLIC BUFFER	7117
7118	14566	0 014702	DAC	PRI		7118
7119	14567	0 10 14301	JST	PRSP	RESET SYMBOLIC BUFFER TO SPACES	7119
7120	14570	140040	FS11	CRA		7120
7121	14571	0 04 00000	STA	0	COMPUTE CHECKSUM	7121
7122	14572	1 05 14632	FS12	ERA	MERGE BUFFER WORD INTO CHECKSUM	7122
7123	14573	0 12 00000	IRS	0	INCREMENT BUFFER POSITION	7123
7124	14574	0 12 00602	IRS	OCNT	DECREMENT BUFFER SIZE	7124
7125	14575	0 01 14572	JMP	FS12		7125
7126	14576	1 04 14632	STA	OCI,1	SET CHECKSUM INTO BUFFER	7126
7127	14577	0 02 00601	LDA	PCNT	* NO. OF WORDS IN BUFFER	7127
7128	14600	0 13 00000	IMA	0		7128
7129	14601	0 06 14625	ADD	FS40	* OCI+1,1	7129
7130	14602	0 10 00000	CALL	F4SOUT	PUNCH BUFFER	7130
7131	14603	0 02 00060	FS20	LDA	SET UP BUFFER FOR NEXT OUTPUT	7131
7132	14604	0400 70	LRL	8		7132
7133	14605	0 06 14630	ADD	K145	*'2000 (BLOCK CODE 2)	7133
7134	14606	0 04 14632	STA	OCI		7134
7135	14607	000201	IAB			7135
7136	14610	0 04 14633	STA	OCI+1	SET FIRST 2 WORDS OF BUFFER	7136
7137	14611	0 02 00721	LDA	K103	*0	7137
7138	14612	0 04 00602	STA	OCNT	RESET BUFFER OCCUPANCY SIZE	7138



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7139	14613	0 10 03016	JST	RST	RESET INDEX REGISTER	7139
7140	14614	-0 01 14523	JMP*	FS00	EXIT	7140
7141			*			7141
7142	14615	0414 72	FS30	LGL 6	MERGE BUFFER SIZE INTO BLOCK HEADER	7142
7143	14616	0 07 00602		SUB OCNT	BUFFER SIZE	7143
7144	14617	0 06 00717		ADD K101	=1 (ACCOUNT FOR CHECKSUM)	7144
7145	14620	0412 72		LLR 6		7145
7146	14621	0404 72		LGR 6		7146
7147	14622	0410 72		LLL 6	BRING IN UPPER HALF OF ADDRESSES	7147
7148	14623	0 04 14632		STA OCI	STORE INTO BUFFER	7148
7149	14624	0 01 14544		JMP FS10	COMPUTE CHECKSUM	7149
7150			*			7150
7151	14625	1 014633	FS40	DAC OCI+1,1		7151
7152	14626	142717	FS41	BCI 2,EOB	'EOB'	7152
	14627	141240				
7153	14630	020000	K145	OCT 20000	BLOCK TYPE 2 CODE	7153
7154	14631	060000	C499	OCT 060000		7154
7155			*			7155
7156	14632		OCI	BSS 40	40 WORD CARD IMAGE INPUT BUFFER	7156
7157	14702		PRI	BSS 40	40 WORD PRINT BUFFER	7157
7158	14752	120240		BCI 20,		7158
	14753	120240				
	14754	120240				
	14755	120240				
	14756	120240				
	14757	120240				
	14760	120240				
	14761	120240				
	14762	120240				
	14763	120240				
	14764	120240				
	14765	120240				
	14766	120240				
	14767	120240				
	14770	120240				
	14771	120240				
	14772	120240				

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14773	120240				
14774	120240				
14775	120240				
7159	14776				
7160		*	BSS	30	COMPILER PATCH AREA
7161		*			
7162		*			*****
7163		*			*IOS (AND IOL) GO HERE*
7164		*			*****
7165	15034		END	A0	

NO ERRORS IN ABOVE ASSEMBLY.  
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