

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
101			JOB		FORTRAN COMPILER -- NORMAL FORMAT -- PHASE 54C								
102			CTL		6611								
103			*										
104			*		NORMAL FORMAT ROUTINE								
105			*										
106			*		FOR EACH INPUT-OUTPUT STATEMENT, AN ENTRY TO THE FORMAT								
107			*		ROUTINE IS COMPILED. FOLLOWING THIS APPEARS:								
108			*		1. A CODE INDICATING THE APPROPRIATE I/O DEVICE;								
109			*		& IS READ, - IS PUNCH, * IS PRINT, OTHERWISE DIGIT PART								
110			*		IS TAPE NUMBER AND NO ZONE IS READ TAPE, A ZONE IS WRITE								
111			*		TAPE, B ZONE IS READ INPUT TAPE, AB ZONE IS WRITE OUTPUT								
112			*		TAPE;								
113			*		2. THE ADDRESS OF A SERIES OF INSTRUCTIONS (FORMAT STRING)								
114			*		WHICH DETERMINES THE ARRANGEMENT OF THE DATA (COMPILED								
115			*		FROM THE REFERENCED FORMAT STATEMENT); AND								
116			*		3. THE ADDRESS OF THE SPECIFIED LIST OF DATA (LIST STRING).								
117			*										
118			*		THE FORMAT STRING CONSISTS OF								
119			*		1. BRANCHES TO APPROPRIATE CLOSED SUBROUTINES OF THE FORMAT								
120			*		ROUTINE,								
121			*		2. PARAMETERS DESCRIBING THE DATA WHICH ARE NEEDED BY THESE								
122			*		SUBROUTINES,								
123			*		3. THE DATA ITSELF (H-CONVERSION FIELDS), AND								
124			*		4. CERTAIN REGISTER-UPDATING INSTRUCTIONS.								
125			*										
126			X1	EQU	89				0089				
127			X2	EQU	94				0094				
128			X3	EQU	99				0099				
129			*										
130				EXT00	SNAPSH, LOADNX, CDOVLY								MACRO
131			SNAPSH	EQU	333				0333				GEN
132			PHASLD	EQU	381				0381				GEN
133			SNAPEX	EQU	564				0564				GEN
134			LOADNX	EQU	700	CARD OVERLAY UNLESS NOP			0700				GEN
135			CDOVLY	EQU	700	1 IF LOADING FROM CARDS, N IF FROM TAPE			0700				GEN
136			TPREAD	EQU	704	LOAD OVERLAY FROM TAPE			0704				GEN
137			TPERR	EQU	728				0728				GEN
138			*										
139				XT52A	STUFF IN PHASE 52A -- LOAD 54B&C								MACRO
140			EXLINK	EQU	840	139 I XLINKF ENTRY ADDRESS			0840				GEN
141			USER1	EQU	876	127 R USER FUNCTION 01 ENTRY ADDRESS			0876				GEN
142			SUBSC	EQU	909	116 SUBSCRIPT			0909				GEN
143			OBLIST	EQU	912	115 I/O LIST AND NOT LIMITED FORMAT			0912				GEN
144			SX2	EQU	927				0927				GEN
145			CONBOT	EQU	930	BOTTOM OF CONSTANTS - 1 FIXWD			0930				GEN
146			ARYBOT	EQU	933	BOTTOM OF ARRAYS - 1 FLTWD			0933				GEN
147			BEG52A	EQU	934	V3M4			0934				GEN
148				XT54A	STUFF IN PHASE 54A -- FORMAT LOADER								MACRO
149			LOAD54	EQU	934				0934				GEN
150			SKIPB	EQU	934	SKIP 54B -- LIMITED FORMAT			0934				GEN

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
151			SKIPC	EQU	935 SKIP 54C -- NORMAL FORMAT			0935		GEN			
152			SKIPD	EQU	936 SKIP 54D -- A FORMAT			0936		GEN			
153			RET54B	EQU	976 Q: DID WE SKIP 54B			0976		GEN			
154			RET54D	EQU	1011 Q: DID WE SKIP PHASE 54C			1011		GEN			
155			SKIP54	EQU	1062 Q: LOADING FROM AUTOCODER TAPE?			1062		GEN			
156			GMWM54	EQU	1140			1140		GEN			
157			EXT63		STUFF IN PHASE 63 -- RUNTIME ARITHMETIC					MACRO			
158			ARITF	EQU	700			0700		GEN			
159			SETPF	EQU	831 LOADER PLUGS MANTISSA WIDTH INTO B			0831		GEN			
160			DOSUB	EQU	1206 LOADER PLUGS SUBSCRIPT ROUTINE ADDRESS HERE			1206		GEN			
161			QFUNCT	EQU	1327 GO TO FUNCTION SELECTOR			1327		GEN			
162			ARITI	EQU	1530 LOADER PUTS INTEGER SIZE IN B			1530		GEN			
163			AGMWM	EQU	1696			1696		GEN			
164			*										
165			*		RUNTIME ADDRESSES								
166			MANWID	EQU	SETPF&6 MANTISSA WIDTH. IN ARITHMETIC INTERPRETER			0837					
167			*										
168			PHS54C	LDPH	,FMTBAS,LOADNX,SKIPC,SKIP54,54C.1					MACRO			
			*	PHAZ	LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]					GEN			
			*	XFR	PHASZ PROHIBITED IN A MACRO					GEN			
			*							GEN			
			*	LOAD	THE BLOCK IF NO WM IN SKIPC, ELSE SKIP IT					GEN			
			*							GEN			
169			)6K005	EQU	700 LOAD NEXT PHASE			0700		GEN			
170			)6L005	EQU	704 TAPE READ INSTRUCTION			0704		GEN			
171			)6M005	EQU	728 TAPE ERROR HANDLER			0728		GEN			
			*							GEN			
172				ORG	201				0201				
173			PHS54C	EQU	*&1			0201		GEN			
174			BW	)1J005,SKIPC	Q: SKIP THE BLOCK?	8	0201	V 245 935 1	GEN	1	245	935	
175			BCE	)6K005,)6K005,1	Q: LOADING FROM CARDS?	8	0209	B 700 700 1	GEN	1	700	700	
176			BCE	)6K005,)6L005&4,0	Q: LOADING FROM AUTOCODER TAPE?	8	0217	B 700 708 0	GEN	1	700	708	
177			RTW	1,FMTBAS	READ THE BLOCK	8	0225	L %U1 W97 R	GEN	1	%U1	1697	
178			BER	)6M005	Q: TAPE ERROR?	5	0233	B 728 L	GEN	1	728		
179			CS	LOADNX,)9R005	ENTER THE BLOCK	7	0238	/ 700 258	GEN	2	700	258	
			*	SKIP	THE BLOCK					GEN			
180			)1J005	CS	SKIP54,)9R005	7	0245	/ |62 258	GEN	2	1062	258	
181			DC	#1		1	0252		GEN	2			
182			DC	@54C.1@	PHASE NUMBER	5	0257		GEN	2			
183			)9R005	DCW	@}@	1	0258		GEN	2			
184			XFR	PHS54C				B 201		3	201		
185			*										
186				ORG	1697			1697					
187	*1	697	FMTBAS	SBR	X1	4	1697	H 089		4	089		
188	1	701	MCW	0&X1,UNIT		7	1701	M 0|0 J36		4	000+1	2136	
189	1	708	MCW	*-6,TAPE ASSUME TAPE I/O WITHOUT WORD MARKS		7	1708	M X08 D34		4	1708	3434	
190	1	715	SBR	RELENT&3,7&X1		7	1715	H J35 0|7		4	2135	007+1	
191	1	722	MCW	6&X1,LSTIPOS		7	1722	M 0|6 Z68		4	006+1	1968	
192	1	729	ZA	*-6,A12K		7	1729	? X29 L27		4	1729	2327	
193	1	736	CW	RDFLAG	START BY ASSUMING WRITE	4	1736	) 23V		5	4235		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
194	1	740		SW	GMWM	4		1740	, 27Z		5	4279	
195	1	744		MCW	3&X1,X2	7		1744	M 0|3 094		5	003+1	094
196	1	751		SBR	X3,200	7		1751	H 099 200		5	099	200
197	1	758		SBR	ENDREC,334	7		1758	H 23Y 334		5	4238	334
198	1	765		BCE	READCD,0&X1,&	8		1765	B E56 0|0 &		5	3556	000+1
199	1	773		BCE	PUNCH,0&X1,-	8		1773	B E25 0|0 -		6	3525	000+1
200	1	781		BCE	CLEARP,0&X1,*	8		1781	B D71 0|0 *		6	3471	000+1
201	1	789		BM	RDTAPE,0&X1	8		1789	V C12 0|0 K		6	3312	000+1
202	1	797		BWZ	CLEARW,0&X1,B	8		1797	V C75 0|0 B		6	3375	000+1
203	1	805		SBR	X2,GETWM	7		1805	H 094 Z16		6	094	1916
204	1	812		CS	332	4		1812	/ 332		7	332	
205	1	816		CS		1		1816	/		7		
206	1	817		CS		1		1817	/		7		
207	1	818		SBR	X3,100	7		1818	H 099 100		7	099	100
208	1	825		MCW	LCA,TAPE TAPE I/O WITH WORD MARKS	7		1825	M !79 D34		7	2079	3434
209	1	832		SW	0&X3	4		1832	, 0?0		7	000+3	
210	1	836		B	1943	4		1836	B Z43		7	1943	
211	1	840		BWZ	RDTAPE,UNIT,2	8		1840	V C12 J36 2		8	3312	2136
212	1	848		SBR	RECPOS,100	7		1848	H 24/ 100		8	4241	100
213				*									
214				*	FIND THE RIGHT-HAND (HIGHER CORE ADDRESS) OF A HOLLERITH								
215				*	FIELD WITH A LEFT-HAND END HAVING A WORD MARK, AS IT IS								
216				*	MOVED TO THE OUTPUT BUFFER.								
217				*									
218	1	855	CHARS	MCW	0&X1,0&X3	7		1855	M 0|0 0?0		8	000+1	000+3
219	1	862		SAR	X2	4		1862	Q 094		8	094	
220	1	866		B	INCX3	4		1866	B J37		8	2137	
221	1	870		BW	*&5,1&X2	8		1870	V Y82 0!1 1		8	1882	001+2
222	1	878		B	CHARS	4		1878	B Y55		9	1855	
223	1	882		B	CHKLEN	4		1882	B Q08		9	2808	
224	1	886		SBR	2222,REDOIO	7		1886	H K22 C84		9	2222	3384
225	1	893		B	1832	4		1893	B Y32		9	1832	
226				*									
227				*	MOVE A FIELD TO THE OUTPUT BUFFER								
228				*									
229	1	897	GOTWM	B	CHKLEN	4		1897	B Q08		9	2808	
230	1	901		LCA	0&X3,0&X1	7		1901	L 0?0 0|0		9	000+3	000+1
231	1	908		B	1943	4		1908	B Z43		9	1943	
232	1	912	GETWML	B	INCX3 GET X3 UP TO	4		1912	B J37		10	2137	
233	1	916	GETWM	BW	GOTWM,1&X3 ONE BELOW NEXT WM	8		1916	V Y97 0?1 1		10	1897	001+3
234	1	924		B	GETWML	4		1924	B Z12		10	1912	
235				*									
236	1	928		SBR	2222	4		1928	H K22		10	2222	
237	1	932		MCW	X3,RECPOS	7		1932	M 099 24/		10	099	4241
238	1	939		B	0&X2	4		1939	B 0!0		10	000+2	
239				*									
240	1	943		SBR	2006	4		1943	H !06		10	2006	
241	1	947		MCW	X2,MYSX2&6	7		1947	M 094 !02		11	094	2002
242	1	954		BW	2031,FLAG	8		1954	V !31 23U 1		11	2031	4234
243	1	965		T	OBLIST	4		1962	T 912		11	912	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
244	1	968	LSTPOS	DCW	#3 POSITION IN I/O LIST	3		1968			11		
245	1	969		SBR	X2	4		1969	H 094		11	094	
246	1	973		MZ	NOZONE,X1-1	7		1973	Y B62 088		11	3262	088
247	1	980		BCE	2046,X1,.	8		1980	B !46 089 .		12	2046	089
248	1	988		BCE	2007,X1,	8		1988	B !07 089		12	2007	089
249	1	996	MYSX2	SBR	X2,0	7		1996	H 094 000		12	094	000
250	2	003		B	0	4		2003	B 000		12	000	
251			*										
252	2	007		BW	RELENT,RDFLAG	8		2007	V J32 23V 1		12	2132	4235
253	2	015		C	RECPOS,X3	7		2015	C 24/ 099		13	4241	099
254	2	022		BU	2208	5		2022	B K08 /		13	2208	
255	2	027		B	RELENT	4		2027	B J32		13	2132	
256	2	031		CW	FLAG	4		2031	) 23U		13	4234	
257	2	035		MCW	SX1,X1	7		2035	M 24Z 089		13	4249	089
258	2	042		B	1973	4		2042	B Z73		13	1973	
259			*										
260	2	046		MCW	2&X2,X3	7		2046	M 0!2 099		13	002+2	099
261	2	053		MCW	5&X2,X1	7		2053	M 0!5 089		14	005+2	089
262	2	060		MCW	1&X1,CH	7		2060	M 0|1 24S		14	001+1	4242
263	2	067		BW	LCA,1&X1	8		2067	V !79 0|1 1		14	2079	001+1
264	2	075		CW	WMFLAG	4		2075	) 24T		14	4243	
265	2	079	LCA	LCA	GMWM,1&X1	7		2079	L 27Z 0|1		14	4279	001+1
266	2	086		B	INCX3	4		2086	B J37		14	2137	
267	2	090		SBR	X2,*&13	7		2090	H 094 J09		15	094	2109
268	2	097		BWZ	RDTAPE,UNIT,2	8		2097	V C12 J36 2		15	3312	2136
269	2	105		B	REDOIO	4		2105	B C84		15	3384	
270	2	109		MCW	CH,1&X1	7		2109	M 24S 0|1		15	4242	001+1
271	2	116		BW	RELENT,WMFLAG	8		2116	V J32 24T 1		15	2132	4243
272	2	124		CW	1&X1	4		2124	) 0|1		15	001+1	
273	2	128		SW	WMFLAG	4		2128	, 24T		16	4243	
274	*2	132	RELENT	B	0 ENTER HERE FROM RELOCATABLE FUNCTION TABLE	4		2132	B 000		16	000	
275	2	136	UNIT	DCW	#1 TAPE UNIT NUMBER	1		2136			16		
276			*										
277			*	INCREMENT	X3 BY 1.								
278			*										
279	2	137	INCX3	SBR	INCX3X&3	4		2137	H J51		16	2151	
280	2	141		SBR	X3,1&X3	7		2141	H 099 0?1		16	099	001+3
281	2	148	INCX3X	B	0	4		2148	B 000		16	000	
282			*										
283	2	152		SBR	X2	4		2152	H 094		16	094	
284	2	156		MN	0&X2	4		2156	D 0!0		17	000+2	
285	2	160		MN		1		2160	D		17		
286	2	161		MN		1		2161	D		17		
287	2	162		MN		1		2162	D		17		
288	2	163		SAR	2309	4		2163	Q L09		17	2309	
289	2	167		MCW	2&X2,COUNT	7		2167	M 0!2 24W		17	002+2	4246
290	2	174		SBR	2207,3&X2	7		2174	H K07 0!3		17	2207	003+2
291	2	181		B	*&5	4		2181	B J89		18	2189	
292	2	185		SBR	X2	4		2185	H 094		18	094	
293	2	189		S	K1,COUNT	7		2189	S E74 24W		18	3574	4246

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
294	2	196		BM	0&X2,COUNT	8		2196	V 0!0 24W K		18	000+2	4246
295	2	204		B	0	4		2204	B 000		18	000	
296			*										
297	2	208		SBR	X2	4		2208	H 094		18	094	
298	2	212		MCW	RECPOS,X3	7		2212	M 24/ 099		18	4241	099
299	2	219		B	0	4		2219	B 000		19	000	
300			*										
301	2	223		BW	*&13,RDFLAG	8		2223	V K43 23V 1		19	2243	4235
302	2	231		C	RECPOS,X3	7		2231	C 24/ 099		19	4241	099
303	2	238		BU	2208	5		2238	B K08 /		19	2208	
304	2	243		MCW	LSTPOS,*&7	7		2243	M Z68 K56		19	1968	2256
305	2	250		BCE	2298,0,,	8		2250	B K98 000 ,		19	2298	000
306	2	258		MCW	LSTPOS,LISTP2	7		2258	M Z68 K71		20	1968	2271
307	2	268		T	OBLIST	4		2265	T 912		20	912	
308	2	271	LISTP2	DCW	#3	3		2271			20		
309	2	272		BCE	RELENT,X1,	8		2272	B J32 089		20	2132	089
310	2	280		MCW	LISTP2,LSTPOS	7		2280	M K71 Z68		20	2271	1968
311	2	287		MCW	X1,SX1	7		2287	M 089 24Z		20	089	4249
312	2	294		SW	FLAG	4		2294	, 23U		21	4234	
313	2	298		BW	2208,RDFLAG	8		2298	V K08 23V 1		21	2208	4235
314	2	306		B	0	4		2306	B 000		21	000	
315			*										
316	2	310		SBR	X2	4		2310	H 094		21	094	
317	2	314		ZA	2&X2,A12K	7		2314	? 0!2 L27		21	002+2	2327
318	2	321		B	3&X2	4		2321	B 0!3		21	003+2	
319			*										
320	2	327	A12K	DSA	12000	3		2327	00?		21	12000	
321			*										
322			*		* COPY THE ARGUMENT TO THE OUTPUT BUFFER								
323			*										
324	2	328		SBR	X2	4		2328	H 094		22	094	
325	2	332	CPARGL	BW	*&8,RDFLAG	8		2332	V L47 23V 1		22	2347	4235
326	2	340		MCW	0&X2,0&X3	7		2340	M 0!0 0?0		22	000+2	000+3
327	2	347		MCW	0&X3,0&X2 WHY?	7		2347	M 0?0 0!0		22	000+3	000+2
328	2	354		B	INCX3	4		2354	B J37		22	2137	
329	2	358		SBR	X2,1&X2	7		2358	H 094 0!1		22	094	001+2
330	2	365		BW	*&5,0&X2	8		2365	V L77 0!0 1		23	2377	000+2
331	2	373		B	CPARGL	4		2373	B L32		23	2332	
332	2	377		B	CHKLEN	4		2377	B Q08		23	2808	
333	2	381		B	0&X2	4		2381	B 0!0		23	000+2	
334			*										
335	2	385		SBR	X2	4		2385	H 094		23	094	
336	2	389		MCW	3&X2,COUNT2	7		2389	M 0!3 25S		23	003+2	4252
337	2	396	DEC2	S	K1,COUNT2	7		2396	S E74 25S		23	3574	4252
338	2	403		BWZ	MORE,COUNT2,B STILL POSITIVE?	8		2403	V M31 25S B		24	2431	4252
339	2	411		BCE	7&X2,0&X2,I	8		2411	B 0!7 0!0 I		24	007+2	000+2
340	2	419		BCE	7&X2,0&X2,A	8		2419	B 0!7 0!0 A		24	007+2	000+2
341	2	427		B	10&X2	4		2427	B 0J0		24	010+2	
342	2	431	MORE	B	1943	4		2431	B Z43		24	1943	
343	2	434		S		1		2435	S		24		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
344	2	438		DC	@_00@	3		2438			24		
345	2	539		SW		1		2439	,		24		
346	2	442		DC	@;0J@	3		2442			25		
347	2	443		BW	3651,RDFLAG	8		2443	V F51 23V 1		25	3651	4235
348	2	451		CS	24	4		2451	/ 024		25	024	
349	2	455		SW	0&X3	4		2455	, 0?0		25	000+3	
350	2	459		MN		1		2459	D		25		
351	2	460		SBR	X3	4		2460	H 099		26	099	
352	2	464		SBR	SW1&3,2&X3	7		2464	H Q97 0?2		26	2897	002+3
353	2	471		SBR	CW2&3	4		2471	H A49		26	3149	
354	2	475		SW	1	4		2475	, 001		26	001	
355	2	479		BCE	IFMT,0&X2,I	8		2479	B Q33 0!0 I		26	2833	000+2
356	2	487		BCE	AFMT3,0&X2,A	8		2487	B 41Z 0!0 A		26	4419	000+2
357	2	495		MCW	0&X1	4		2495	M 0|0		26	000+1	
358	2	501		DC	@;00@	3		2501			27		
359	2	502		MCW		1		2502	M		27		
360	2	503		SBR	X1	4		2503	H 089		27	089	
361	2	507		SW	0&X1	4		2507	, 0|0		27	000+1	
362	2	511		A	6&X2,X3	7		2511	A 0!6 099		27	006+2	099
363	2	518		SBR	CW1&3,2&X3	7		2518	H A45 0?2		28	3145	002+3
364	2	525		MCW	K0DOT0 0.0	4		2525	M 25V		28	4255	
365	2	529		SW	2&X3	4		2529	, 0?2		28	002+3	
366	2	533		BCE	*&9,1&X1,0	8		2533	B N49 0|1 0		28	2549	001+1
367	2	541		V	2674	4		2541	V 074		28	2674	
368	2	548		DC	@;0K2@	4		2548			28		
369	2	549		BCE	EFMT,0&X2,E	8		2549	B N68 0!0 E		28	2568	000+2
370	2	557		A	A12K NOT E FORMAT	4		2557	A L27		29	2327	
371	2	563		DC	@;00@	3		2563			29		
372	2	564		B	*&8	4		2564	B N75		29	2575	
373	2	568	EFMT	S	A12K	4		2568	S L27		29	2327	
374	2	574		DC	@;00@	3		2574			29		
375	2	575		MN		1		2575	D		29		
376	2	578		DC	@;00@	3		2578			29		
377	2	581		DC	W2	3		2581	F50		29	3650	
378	2	582		MN		1		2582	D		29		
379	2	583		MCW		1		2583	M		29		
380	2	586		DC	@;00@	3		2586			29		
381	2	587		BCE	FFMT1,0&X2,F	8		2587	B P04 0!0 F		29	2704	000+2
382	2	595		C	W2,KZ4-2 TWO ZERO DIGITS	7		2595	C F50 B64		30	3650	3264
383	2	602		BE	*&9	5		2602	B 015 S		30	2615	
384	2	607		BM	*&8,SAVZON	8		2607	V 022 F48 K		30	2622	3648
385	2	615		MZ	NOZONE,SAVZON	7		2615	Y B62 F48		30	3262	3648
386	2	622		ZA	A12K	4		2622	? L27		30	2327	
387	2	628		DC	@;00@	3		2628			30		
388	2	629		MN		1		2629	D		30		
389	2	633		DC	@;00@	3		2632			30		
390	2	635		DC	SBR&6	3		2635	O43		31	2643	
391	2	636		MN		1		2636	D		31		
392	2	637	SBR	SBR	X1,0&X1	7		2637	H 089 0|0		31	089	000+1
393	2	644		ZA	MANWID,W3 MANTISSA WIDTH IN ARITF	7		2644	? 837 23S		31	837	4232

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
394	2	651		S	K2,W3			7	2651	S E05 23S		31 3505	4232
395	2	658		C	W3			4	2658	C 23S		32 4232	
396	2	664		DC	@;00@			3	2664			32	
397	2	665		BH	2728			5	2665	B P28 U		32 2728	
398	2	670		B	2797			4	2670	B P97		32 2797	
399			*										
400	2	674		MCW	KX,2&X3			7	2674	M 25Y 0?2		32 4258	002+3
401	2	681		MCW	BLANK X BLANK 0.0			1	2681	M		32	
402	2	682		SBR	X3,2&X3			7	2682	H 099 0?2		32 099	002+3
403	2	689		SBR	CW3&3			4	2689	H A53		32 3153	
404	2	693		A	9&X2,X3			7	2693	A 0!9 099		33 009+2	099
405	2	700		B	NOOVFL			4	2700	B A38		33 3138	
406			*										
407	2	704	FFMT1	BM	2766,SAVZON			8	2704	V P66 F48 K		33 2766	3648
408	2	712		C	6&X2,W2			7	2712	C 0!6 F50		33 006+2	3650
409	2	719		BL	2629			5	2719	B 029 T		33 2629	
410	2	724		B	2674			4	2724	B 074		33 2674	
411			*										
412	2	728		S	23			4	2728	S 023		33 023	
413	2	732		MCM				1	2732	P		34	
414	2	738		DC	@_0A001@			6	2738			34	
415	2	739		MCW	KZ4			4	2739	M B66		34 3266	
416	2	743		MZ	NOZONE			1	2743	Y		34	
417	2	744		MCW	W2,X1			7	2744	M F50 089		34 3650	089
418	2	751		MCW	KZ4-3 ONE ZERO DIGIT			4	2751	M B63		34 3263	
419	2	755		MCW	GMWM,3&X1			7	2755	M 27Z 0|3		34 4279	003+1
420	2	762		B	2797			4	2762	B P97		34 2797	
421	2	766		MZ	NOZONE,0&X1			7	2766	Y B62 0|0		35 3262	000+1
422	2	773		C	9&X2,W2			7	2773	C 0!9 F50		35 009+2	3650
423	2	780		BU	*&8			5	2780	B P92 /		35 2792	
424	2	785		C				1	2785	C		35	
425	2	788		DC	@_0A@			3	2788			35	
426	2	791		DC	K5			3	2791	23T		35 4233	
427	2	792		BH	IFMT2			5	2792	B Q65 U		35 2865	
428	2	797		MZ				1	2797	Y		35	
429	2	800		DC	@;0K@			3	2800			35	
430	2	803		DC	@0|0@ 0&X1			3	2803			35	
431	2	804		B	IFMT2			4	2804	B Q65		36 2865	
432			*										
433			*		CHECK RECORD LENGTH								
434			*										
435	2	808	CHKLEN	SBR	CHKLEX&3			4	2808	H Q32		36 2832	
436	2	812		C	ENDREC,X3			7	2812	C 23Y 099		36 4238	099
437	2	819		BL	CHKLEX			5	2819	B Q29 T		36 2829	
438	2	824		NOP	3700 SNAPSHOT ROUTINE IS CLOBBED			4	2824	N G00		36 3700	
439	2	828		H				1	2828	.		36	
440	2	829	CHKLEX	B	0			4	2829	B 000		36 000	
441			*										
442	2	833	IFMT	MCW	0&X1			4	2833	M 0|0		37 000+1	
443	2	839		DC	@_00@			3	2839			37	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
444	2	840		A	6&X2,X3	7		2840	A 0!6 099		37	006+2	099
445	2	847		MCW	6&X2,X1	7		2847	M 0!6 089		37	006+2	089
446	2	854		ZA		1		2854	?		37		
447	2	857		DC	@_00@	3		2857			37		
448	2	860		DC	@0|0@ 0&X1	3		2860			37		
449	2	861		B	INCX3	4		2861	B J37		37	2137	
450	2	865	IFMT2	MCS	0&X1,0&X3	7		2865	Z 0|0 0?0		37	000+1	000+3
451	2	872		SBR	SX3&6	4		2872	H R58		38	2958	
452	2	876		MN	0&X1,0&X3 AT LEAST SHOW THE LOW ORDER DIGIT	7		2876	D 0|0 0?0		38	000+1	000+3
453	2	883		SBR	MCS&3,0&X3	7		2883	H A90 0?0		38	3190	000+3
454	2	890		SBR	CW3&3	4		2890	H A53		38	3153	
455	2	894	SW1	SW	0	4		2894	, 000		38	000	
456	2	898		BM	*&5,0&X1	8		2898	V R10 0|0 K		38	2910	000+1
457	2	906		B	SX3	4		2906	B R52		38	2952	
458	2	910	GETB	BCE	GOTB,0&X3, FOUND A BLANK?	8		2910	B R34 0?0		39	2934	000+3
459	2	918		SBR	X3	4		2918	H 099		39	099	
460	2	922		BW	SX3,1&X3 END OF THE FIELD, NO SIGN	8		2922	V R52 0?1 1		39	2952	001+3
461	2	930		B	GETB	4		2930	B R10		39	2910	
462	2	934	GOTB	MZ	BZONE,0&X3 SET THE SIGN	7		2934	Y G81 0?0		39	3781	000+3
463	2	941		SW	1&X3	4		2941	, 0?1		39	001+3	
464	2	945		SBR	CW3&3,1&X3	7		2945	H A53 0?1		40	3153	001+3
465	2	952	SX3	SBR	X3,111	7		2952	H 099 111		40	099	111
466	2	959		BCE	CW2,0&X2,I	8		2959	B A46 0!0 I		40	3146	000+2
467	2	967		A	9&X2,X3	7		2967	A 0!9 099		40	009+2	099
468	2	974		BCE	FFMT2,0&X2,F	8		2974	B R93 0!0 F		40	2993	000+2
469	2	982		MN	0&X3	4		2982	D 0?0		41	000+3	
470	2	986		MN		1		2986	D		41		
471	2	987		MN		1		2987	D		41		
472	2	988		MN		1		2988	D		41		
473	2	989		SBR	X3	4		2989	H 099		41	099	
474	2	993	FFMT2	SBR	SX3A&6,1&X3	7		2993	H ?88 0?1		41	3088	001+3
475	3	000		S	1&X3	4		3000	S 0?1		41	001+3	
476	3	004		MN		1		3004	D		42		
477	3	005		SAR	X3	4		3005	Q 099		42	099	
478	3	009		BCE	FINDGM,0&X2,E	8		3009	B ?44 0!0 E		42	3044	000+2
479	3	017		BWZ	FINDGM,SAVZON,B	8		3017	V ?44 F48 B		42	3044	3648
480	3	025		C	9&X2,W2	7		3025	C 0!9 F50		42	009+2	3650
481	3	032		BH	SX3A	5		3032	B ?82 U		42	3082	
482	3	037		A	W2,X3	7		3037	A F50 099		43	3650	099
483	3	044	FINDGM	BCE	SX3A,3&X1,} GM	8		3044	B ?82 0|3 } GMARK		43	3082	003+1
484	3	052		MN	1&X1,2&X3	7		3052	D 0|1 0?2		43	001+1	002+3
485	3	059		SBR	X1,1&X1	7		3059	H 089 0|1		43	089	001+1
486	3	066		BWZ	SX3A,2&X3,B	8		3066	V ?82 0?2 B		43	3082	002+3
487	3	074		SBR	X3	4		3074	H 099		44	099	
488	3	078		B	FINDGM	4		3078	B ?44		44	3044	
489	3	082	SX3A	SBR	X3,0	7		3082	H 099 000		44	099	000
490	3	089		BAV	*&1	5		3089	B ?94 Z		44	3094	
491	3	094		A	KP5,0&X3	7		3094	A F47 0?0		44	3647	000+3
492	3	101		MCW	NOZONE,0&X3	7		3101	M B62 0?0		44	3262	000+3
493	3	108		BCE	FFMT3,0&X2,F	8		3108	B A33 0!0 F		45	3133	000+2

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
494	3	116		SBR	X3,4&X3	7		3116	H 099 0?4		45	099	004+3
495	3	123		MN	0&X3	4		3123	D 0?0		45	000+3	
496	3	127		MCW	W2	4		3127	M F50		45	3650	
497	3	131		MZ		1		3131	Y		45		
498	3	132		MCW		1		3132	M		45		
499	3	133	FFMT3	BAV	OVFL	5		3133	B A66 Z		45	3166	
500	*3	138	NOOVFL	CW		1		3138	)		46		
501	3	141		DC	@_00@ 11-7-8,0,0	3		3141			46		
502	3	142	CW1	CW	0	4		3142	) 000		46	000	
503	3	146	CW2	CW	0	4		3146	) 000		46	000	
504	3	150	CW3	CW	0	4		3150	) 000		46	000	
505	3	154	SW2	SW		1		3154	,		46		
506	3	157		DC	@_0A@ 11-7-8,0,A	3		3157			46		
507	3	158		B	CHKLEN	4		3158	B Q08		46	2808	
508	3	162		B	DEC2	4		3162	B L96		46	2396	
509			*										
510	3	166	OVFL	MCW	CW1&3,X1	7		3166	M A45 089		47	3145	089
511	3	173		MZ	NOZONE,0&X1	7		3173	Y B62 0|0		47	3262	000+1
512	3	180		MCW	DOT	1		3180	M		47		
513	3	181		A	ONE	1		3181	A		47		
514	3	182		BAV	OVR9S	5		3182	B A95 Z		47	3195	
515	3	187	MCS	MCS	0	4		3187	Z 000		47	000	
516	3	191		B	NOOVFL	4		3191	B A38		47	3138	
517	3	195	OVR9S	MN	0&X1	4		3195	D 0|0		48	000+1	
518	3	199		C		1		3199	C		48		
519	3	200		MN		1		3200	D		48		
520	3	201		SBR	X1	4		3201	H 089		48	089	
521	3	205		C	CW2&3,X1	7		3205	C A49 089		48	3149	089
522	3	212		BL	XXFLD	5		3212	B B40 T		48	3240	
523	3	217		SW	0&X1	4		3217	, 0|0		48	000+1	
524	3	221		MCW	1&X1,0&X1	7		3221	M 0|1 0|0		49	001+1	000+1
525	3	228		CW		1		3228	)		49		
526	3	229		LCA	K10,2&X1	7		3229	L 27Y 0|2		49	4278	002+1
527	3	236		B	4269	4		3236	B 26Z		49	4269	
528	3	240	XXFLD	MCW	1&X3,0&X3 CLEAR THE FIELD	7		3240	M 0?1 0?0		49	001+3	000+3
529	3	247		MCW		1		3247	M		49		
530	3	248		MCW		1		3248	M		49		
531	3	249		MCW	KX,3&X1 THEN PUT BLANK X BLANK IN IT	7		3249	M 25Y 0|3		50	4258	003+1
532	3	256		B	NOOVFL	4		3256	B A38		50	3138	
533			*										
534	3	260		DCW	1	1		3260			50		
535	3	261		DCW	@.@	1		3261			50		
536	3	262	NOZONE	DCW	#1	1		3262			50		
537	3	266	KZ4	DCW	@0000@	4		3266			50		
538			*										
539			*	TAPE	BLOCK IS TOO BIG FOR CHM TAU EMULATOR								
540			*										
541			END1	DCW	@)@	1		3267		GMARK	50		
542				XFR	LOADNX LOAD THIS				B 700		51	700	
543			PART2	LDPH	,IFMT3,LOADNX,SKIPC,SKIP54,54C.2 LOAD PART2					MACRO			

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
587	3	325	ENDRD	BEF	EOFRD	5		3325	B C07 K		57	3307	
588	3	330	BCE		REDOIO,12&X3,} SHORT -- NOISE -- RECORD?	8		3330	B C84 0A2 }	GMARK	57	3384	012+3
589	3	338		CHAIN	12					MACRO			
590				BCE		1		3338	B	GEN	57		
591				BCE		1		3339	B	GEN	57		
592				BCE		1		3340	B	GEN	57		
593				BCE		1		3341	B	GEN	57		
594				BCE		1		3342	B	GEN	57		
595				BCE		1		3343	B	GEN	58		
596				BCE		1		3344	B	GEN	58		
597				BCE		1		3345	B	GEN	58		
598				BCE		1		3346	B	GEN	58		
599				BCE		1		3347	B	GEN	58		
600				BCE		1		3348	B	GEN	58		
601				BCE		1		3349	B	GEN	58		
602	3	350		B	1928	4		3350	B Z28		59	1928	
603	3	354		B	CLEARR	4		3354	B C16		59	3316	
604				*									
605				*	END OF TAPE ON OUTPUT								
606				*									
607	3	358	EOFWR	MN	UNIT,*&4	7		3358	D J36 C68		59	2136	3368
608	3	365		WTM	0	5		3365	U %U0 M		59	%U0	
609	3	370		NOP	4003	4		3370	N 00T		59	4003	
610	3	374		H		1		3374	.		59		
611				*									
612				*	WRITE TAPE								
613				*									
614	3	375	CLEARW	CS	332	4		3375	/ 332		59	332	
615	3	379		CS		1		3379	/		60		
616	3	380		B	1928	4		3380	B Z28		60	1928	
617	3	384	REDOIO	MN	UNIT,TAPE&3	7		3384	D J36 D37		60	2136	3437
618	3	391		MCW	KR,TAPE&7 ASSUME IT'S READ, NOT WRITE	7		3391	M 25Z D41		60	4259	3441
619	3	398		ZA	KR,W3 @R@ USED AS -9 HERE	7		3398	? 25Z 23S		60	4259	4232
620	3	405		BW	DOIO,RDFLAG	8		3405	V D27 23V 1		60	3427	4235
621	3	413		MCW	KW,TAPE&7 OOPS, IT'S WRITE	7		3413	M 26 | D41		61	4260	3441
622	3	420		A	KP41,W3	7		3420	A 26S 23S		61	4262	4232
623	3	427	DOIO	LCA	GMWM,SNAPSH	7		3427	L 27Z 333		61	4279	333
624	3	434	TAPE	RT	0,0&X3	8		3434	M %U0 0?0 R		61	%U0	000+3
625	3	442		LCA	FMTBAS,SNAPSH UNCLOBBER	7		3442	L W97 333		61	1697	333
626	3	449		BER	TAPERR	5		3449	B E91 L		62	3591	
627	3	454		BCE	ENDRD,TAPE&7,R	8		3454	B C25 D41 R		62	3325	3441
628	3	462		BEF	EOFWR	5		3462	B C58 K		62	3358	
629	3	467		B	CLEARW	4		3467	B C75		62	3375	
630				*									
631				*	PRINT								
632				*									
633	3	471	CLEARP	CS	SNAPSH	4		3471	/ 333		62	333	
634	3	475		CS		1		3475	/		62		
635	3	476		B	1928	4		3476	B Z28		62	1928	
636	3	480		BCE	K2,200, NO SPACING	8		3480	B E05 200		63	3505	200

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
637	3	488		BCE	DBLE,200,0	8		3488	B E20 200 0		63	3520	200
638	3	496		MN	200,*&2	7		3496	D 200 E04		63	200	3504
639	3	503		CC	0	2		3503	F 0		63		
640	3	505	K2	W		1		3505	2		63		
641	3	506		BCV	*&5	5		3506	B E15 @		63	3515	
642	3	511		B	CLEARP	4		3511	B D71		63	3471	
643	3	515		CCB	CLEARP,1	5		3515	F D71 1		64	3471	
644	3	520	DBLE	CCB	K2,J	5		3520	F E05 J		64	3505	
645				*									
646				*	PUNCH								
647				*									
648	3	525	PUNCH	MCW	A281,ENDREC	7		3525	M 26V 23Y		64	4265	4238
649	3	532		CS	1928,285	7		3532	/ Z28 285		64	1928	285
650	3	539		SW	200	4		3539	, 200		64	200	
651	3	543		LCA	279,180	7		3543	L 279 180		64	279	180
652	3	550		P		1		3550	4		64		
653	3	551		SSB	PUNCH,4	5		3551	K E25 4		65	3525	
654				*									
655				*	READ A CARD								
656				*									
657	3	556	READCD	CS	80	4		3556	/ 080		65	080	
658	3	560		MCW	A281,ENDREC	7		3560	M 26V 23Y		65	4265	4238
659	3	567		SW	1,RDFLAG	7		3567	, 001 23V		65	001	4235
660	3	574	K1	R		1		3574	1		65		
661	3	575		LCA	80,279	7		3575	L 080 279		65	080	279
662	3	582		SSB	1928,1	5		3582	K Z28 1		65	1928	
663	3	587		B	READCD	4		3587	B E56		66	3556	
664				*									
665				*	TAPE I/O ERROR								
666				*									
667	3	591	TAPERR	MN	UNIT,BSP&3	7		3591	D J36 F08		66	2136	3608
668	3	598		MN	UNIT,SKP&3	7		3598	D J36 F21		66	2136	3621
669	3	605	BSP	BSP	0	5		3605	U %U0 B		66	%U0	
670	3	610		BCE	*&6,TAPE&7,R	8		3610	B F23 D41 R		66	3623	3441
671	3	618	SKP	SKP	0	5		3618	U %U0 E		66	%U0	
672	3	623		S	K1,W3	7		3623	S E74 23S		67	3574	4232
673	3	630		BWZ	DOIO,W3,B	8		3630	V D27 23S B		67	3427	4232
674	3	638		NOP	1111	4		3638	N /11		67	1111	
675	3	642		H		1		3642	.		67		
676	3	643		B	REDOIO	4		3643	B C84		67	3384	
677				*									
678	3	647	KP5	DCW	&5	1		3647			67		
679	3	648	SAVZON	DCW	#1	1		3648			67		
680	3	650	W2	DCW	00	2		3650			68		
681				*									
682	3	651		SW	0&X3	4		3651	, 0?0		68	000+3	
683	3	655		MCW	X1,4146	7		3655	M 089 14W		68	089	4146
684	3	662		MCW	X3,X1	7		3662	M 099 089		68	099	089
685	3	669		A	6&X2,X1	7		3669	A 0!6 089		68	006+2	089
686	3	676		BCE	IFMT4,0&X2,I	8		3676	B F99 0!0 I		68	3699	000+2

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
687	3	684		BCE	AFMT2,0&X2,A	8		3684	B 39 | 0!0 A		69	4390	000+2
688	3	692		A	9&X2,X1	7		3692	A 0!9 089		69	009+2	089
689	3	699	IFMT4	SW	0&X1	4		3699	, 0|0		69	000+1	
690	3	703		SBR	CW4&3,0&X1	7		3703	H 15Y 0|0		69	4158	000+1
691	3	710		S		1		3710	S		69		
692	3	713		DC	@;00@	3		3713			69		
693	3	714		S		1		3714	S		69		
694	3	715		MZ	NOZONE	4		3715	Y B62		69	3262	
695	3	721		DC	@;0K@	3		3721			69		
696	3	722		MZ	ABZ2,ZAS2	7		3722	Y G89 06S		70	3789	4062
697	3	729		BCE	3765,0&X3,	8		3729	B G65 0?0		70	3765	000+3
698	3	737		BCE	BZONE,0&X3,-	8		3737	B G81 0?0 -		70	3781	000+3
699	3	745		BCE	BZONE,0&X3,@	8		3745	B G81 0?0 @		70	3781	000+3
700	3	753		BCE	3785,0&X3,&	8		3753	B G85 0?0 &		70	3785	000+3
701	3	761		B	3793	4		3761	B G93		71	3793	
702	3	765		BW	4132,1&X3	8		3765	V 13S 0?1 1		71	4132	001+3
703	3	773		B	INCX3	4		3773	B J37		71	2137	
704	3	777		B	3722	4		3777	B G22		71	3722	
705	3	781	BZONE	ZS	ZAS2	4		3781	! 06S		71	4062	
706	3	785		SW	1&X3	4		3785	, 0?1		71	001+3	
707	3	789	ABZ2	B	INCX3	4		3789	B J37		71	2137	
708	3	793		BCE	IFMT3,0&X2,I	8		3793	B B67 0!0 I		72	3267	000+2
709	3	801		SBR	X1	4		3801	H 089		72	089	
710	3	807		DC	@_0J@	3		3807			72		
711	3	808		CW	FLAG1,FLAG2	7		3808	) 26W 26X		72	4266	4267
712	3	815		CW	FLAG3	4		3815	) 26Y		72	4268	
713	3	819		S	W3A	4		3819	S 22T		72	4223	
714	3	823		BCE	AFMT1,0&X2,A	8		3823	B 28 | 0!0 A		72	4280	000+2
715	3	831		B	CHKCH1	4		3831	B H81		73	3881	
716			*										
717	3	835	DOT	SBR	W3,0&X3	7		3835	H 23S 0?0		73	4232	000+3
718	3	842		SW	FLAG3	4		3842	, 26Y		73	4268	
719	3	846		BW	*&8,FLAG1	8		3846	V H61 26W 1		73	3861	4266
720	3	854		SBR	W3,1&X3	7		3854	H 23S 0?1		73	4232	001+3
721	3	861	NOTDOT	BW	CKEFMT,1&X3	8		3861	V 04X 0?1 1		73	4047	001+3
722	3	869		BCE	CKEFMT,1&X3,	8		3869	B 04X 0?1		74	4047	001+3
723	3	877		B	INCX3	4		3877	B J37		74	2137	
724	3	881	CHKCH1	BCE	DOT,0&X3,.	8		3881	B H35 0?0 .		74	3835	000+3
725	3	889		C	0&X3,KZ4-3 ONE ZERO DIGIT	7		3889	C 0?0 B63		74	000+3	3263
726	3	896		BL	4163	5		3896	B 16T T		74	4163	
727	3	901		BH	CHKCH2	5		3901	B I18 U		74	3918	
728	3	906		BW	4163,FLAG1	8		3906	V 16T 26W 1		75	4163	4266
729	3	914		B	NOTDOT	4		3914	B H61		75	3861	
730			*										
731			*		CHECK VALIDITY OF CHARACTER								
732			*										
733	3	918	CHKCH2	BCE	ER1121,0&X2,F NO EXPONENT IF F FORMAT	8		3918	B I71 0!0 F		75	3971	000+2
734	3	926		SBR	W3B,4&X3	7		3926	H 22W 0?4		75	4226	004+3
735	3	933		MZ	ABZONE,ZAS	7		3933	Y I76 03W		75	3976	4036
736	3	940		BCE	EXP,0&X3,E	8		3940	B I80 0?0 E		76	3980	000+3

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
737	3	948	CKSIGN	MZ	0&X3,ZAS	7		3948	Y 0?0 03W		76	000+3	4036
738	3	955		BCE	SIGN,0&X3,&	8		3955	B 01S 0?0 &		76	4012	000+3
739	3	963		BCE	SIGN,0&X3,-	8		3963	B 01S 0?0 -		76	4012	000+3
740			*										
741			*		DATA AND FORMAT SPECIFICATIONS DISAGREE IN MODE OR								
742			*		ACCEPTABLE CHARACTERS.								
743			*										
744	3	971	ER1121	NOP	1121	4		3971	N /21		76	1121	
745	3	975		H		1		3975	.		76		
746	3	976	ABZONE	B	ER1121	4		3976	B I71		77	3971	
747			*										
748	3	980	EXP	BWZ	*&9,1&X3,2	8		3980	V I96 0?1 2		77	3996	001+3
749	3	988		B	INCX3	4		3988	B J37		77	2137	
750	3	992		B	CKSIGN	4		3992	B I48		77	3948	
751	3	996		BCE	*&5,1&X3,	8		3996	B 00Y 0?1		77	4008	001+3
752	4	004		B	*&5	4		4004	B 01S		77	4012	
753	4	008		B	INCX3	4		4008	B J37		77	2137	
754	4	012	SIGN	SW	1&X3	4		4012	, 0?1		78	001+3	
755	4	016		BW	ZAS,2&X3	8		4016	V 03W 0?2 1		78	4036	002+3
756	4	024		BCE	ZAS,2&X3,	8		4024	B 03W 0?2		78	4036	002+3
757	4	032		SBR	X3	4		4032	H 099		78	099	
758	4	036	ZAS	ZA	1&X3,W3A SOMETIMES ZS	7		4036	? 0?1 22T		78	001+3	4223
759	4	043		B	*&16	4		4043	B 06S		78	4062	
760	4	047	CKEFTM	BCE	ER1121,0&X2,E E FORMAT?	8		4047	B I71 0!0 E		79	3971	000+2
761	4	055		SBR	W3B,1&X3	7		4055	H 22W 0?1		79	4226	001+3
762	4	062	ZAS2	ZA		1		4062	?		79		
763	4	065		DC	@;0K@	3		4065			79		
764	4	066		BW	*&5,FLAG1	8		4066	V 07Y 26W 1		79	4078	4266
765	4	074		B	4140	4		4074	B 14		79	4140	
766	4	078		BW	*&15,FLAG3	8		4078	V 10 26Y 1		79	4100	4268
767	4	086		S	9&X2,W3B	7		4086	S 0!9 22W		80	009+2	4226
768	4	093		ZA	W3B,W3	7		4093	? 22W 23S		80	4226	4232
769	4	100		S	W3,W3C	7		4100	S 23S 22Z		80	4232	4229
770	4	107		A	A12K,W3A	7		4107	A L27 22T		80	2327	4223
771	4	114		ZS	W3C	4		4114	! 22Z		80	4229	
772	4	118		A	W3C,W3A	7		4118	A 22Z 22T		80	4229	4223
773	4	125		ZA	W3A	4		4125	? 22T		81	4223	
774	4	131		DC	@;00@	3		4131			81		
775	4	132		BCE	IFMT3,0&X2,I	8		4132	B B67 0!0 I		81	3267	000+2
776	4	140		MCW		1		4140	M		81		
777	4	143		DC	@;00@	3		4143			81		
778	4	146		DC	000	3		4146			81		
779	4	147		LCA		1		4147	L		81		
780	4	148		MCW	*&4,X3	7		4148	M 15Y 099		81	4158	099
781	4	155	CW4	CW	0	4		4155	) 000		81	000	
782	4	159		B	SW2	4		4159	B A54		81	3154	
783			*										
784	4	163		BW	*&12,FLAG1	8		4163	V 18S 26W 1		82	4182	4266
785	4	171		SBR	W3C,0&X3	7		4171	H 22Z 0?0		82	4229	000+3
786	4	178		SW	FLAG1	4		4178	, 26W		82	4266	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
846				JOB	FORTRAN COMPILER -- A CONVERSION -- PHASE 54D								
847				ORG	4280				4280				
848	*4	280	AFMT1	BW	*&12, FLAG1	8		4280	V 29Z 26W 1		92	4299	4266
849	4	288		SBR	W3C, 0&X3	7		4288	H 22Z 0?0		92	4229	000+3
850	4	295		SW	FLAG1	4		4295	, 26W		92	4266	
851	4	299		BW	ATEST, FLAG2	8		4299	V 34/ 26X 1		92	4341	4267
852	4	307		MN	0&X3, 2&X1	7		4307	D 0?0 0|2		92	000+3	002+1
853	4	314		MZ	0&X3, 2&X1	7		4314	Y 0?0 0|2		93	000+3	002+1
854	4	321		SBR	X1	4		4321	H 089		93	089	
855	4	325		SW	FLAG2	4		4325	, 26X		93	4267	
856	4	329		BCE	ATEST, 4&X1, } GM	8		4329	B 34/ 0|4 } GMARK		93	4341	004+1
857	4	337		CW	FLAG2	4		4337	) 26X		93	4267	
858	4	341	ATEST	BW	*&9, 1&X3 END OF SOURCE FIELD?	8		4341	V 35X 0?1 1		93	4357	001+3
859	4	349		B	INCX3	4		4349	B J37		93	2137	
860	4	353		B	AFMT1	4		4353	B 28|		94	4280	
861	4	357		SBR	W3B, 1&X3	7		4357	H 22W 0?1		94	4226	001+3
862	4	364		MCW	4146, *&7	7		4364	M 14W 37X		94	4146	4377
863	4	371		MCW	0, 0	7		4371	M 000 000		94	000	000
864	4	378		LCA		1		4378	L		94		
865	4	379		MCW	CW4&3, X3	7		4379	M 15Y 099		94	4158	099
866	4	386		B	SW2	4		4386	B A54		94	3154	
867	4	390	AFMT2	MCW	K3B	4		4390	M 57X		95	4577	
868	4	396		DC	@;00@	3		4396			95		
869	4	397		MCW	W20	4		4397	M 59X		95	4597	
870	4	403		DC	@;0K@	3		4403			95		
871	4	404		SW	0&X1	4		4404	, 0|0		95	000+1	
872	4	408		SBR	CW4&3, 0&X1	7		4408	H 15Y 0|0		95	4158	000+1
873	4	415		B	3793	4	V3M4	4415	B G93		95	3793	
874				*									
875				* MOVE DATA TO A FORMAT FIELD									
876				*									
877	4	419	AFMT3	MCW	2501, *&7	7		4419	M N01 43S		95	2501	4432
878	4	426	AMCW	MCW	0, 0	7		4426	M 000 000		96	000	000
879	4	433		MCW		1		4433	M		96		
880	4	434		SBR	X1	4		4434	H 089		96	089	
881	4	438		SBR	SRC, 1&X1	7		4438	H 60T 0|1		96	4603	001+1
882	4	445		SBR	TRGEND, 0&X3	7		4445	H 60W 0?0		96	4606	000+3
883	4	452		MA	6&X2, TRGEND	7		4452	# 0!6 60W		96	006+2	4606
884	4	459		SBR	TARGET, 1&X3	7		4459	H 60| 0?1		97	4600	001+3
885	4	466		MCW	AMCW&6, SRCEND	7		4466	M 43S 60Z		97	4432	4609
886	4	473		MA	AM2, SRCEND	7		4473	# 61S 60Z		97	4612	4609
887	4	480	ALOOP	MN	1&X1, 2&X3	7		4480	D 0|1 0?2		97	001+1	002+3
888	4	487		MZ	1&X1, 2&X3	7		4487	Y 0|1 0?2		97	001+1	002+3
889	4	494		C	TARGET, TRGEND	7		4494	C 60| 60W		98	4600	4606
890	4	501		BE	AEND	5		4501	B 55| S		98	4550	
891	4	506		C	SRC, SRCEND	7		4506	C 60T 60Z		98	4603	4609
892	4	513		BE	AEND	5		4513	B 55| S		98	4550	
893	4	518		MA	A001, SRC	7		4518	# 61V 60T		98	4615	4603
894	4	525		MA	A001, TARGET	7		4525	# 61V 60|		98	4615	4600
895	4	532		SBR	X1, 1&X1	7		4532	H 089 0|1		99	089	001+1

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
896	4	539		SBR	X3,1&X3	7		4539	H 099 0?1		99	099	001+3
897	4	546		B	ALOOP	4		4546	B 48 |		99	4480	
898	4	550	AEND	SBR	CW3&3,0&X3	7		4550	H A53 0?0		99	3153	000+3
899	4	557		MCW	TRGEND,X3	7		4557	M 60W 099		99	4606	099
900	4	564		SBR	X3,2&X3	7		4564	H 099 0?2		99	099	002+3
901	4	571		B	CW2	4		4571	B A46		100	3146	
902			*										
903	4	577	K3B	DCW	#3	3		4577			100		
904	4	597	W20	DCW	#20	20		4597			100		
905	4	600	TARGET	DCW	#3	3		4600			100		
906	4	603	SRC	DCW	#3	3		4603			100		
907	4	606	TRGEND	DCW	#3	3		4606			100		
908	4	609	SRCEND	DCW	#3	3		4609			100		
909	4	612	AM2	DSA	15998 -2 = 16000 - 2 = 15998	3		4612	I9H		101	15998	
910	4	615	A001	DSA	1	3		4615	001		101	001	
911	4	616	GMWMA	DCW	@}@ AT END OF A FORMAT ROUTINE	1		4616		GMARK	101		
912	*		AGM	EQU	GMWMA			4616					
913				XFR	RET54D				B |11		102	1011	

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)1J005	0245: 0	)1J006	0245: 0	)1J007	0245: 0	)6K005	0700: 0	)6K006	0700: 0	)6K007	0700: 0
)6L005	0704: 0	)6L006	0704: 0	)6L007	0704: 0	)6M005	0728: 0	)6M006	0728: 0	)6M007	0728: 0
)9R005	0258: 0	)9R006	0258: 0	)9R007	0256: 0	A001	4615: 0	A12K	2327: 0	A281	4265: 0
ABZ2	3789: 0	ABZONE	3976: 0	AEND	4550: 0	AFMT1	4280: 0	AFMT2	4390: 0	AFMT3	4419: 0
AGM	4616: 0	AGMWM	1696: 0	ALOOP	4480: 0	AM2	4612: 0	AMCW	4426: 0	ARITF	0700: 0
ARITI	1530: 0	ARYBOT	0933: 0	ATEST	4341: 0	BEG52A	0934: 0	BSP	3605: 0	BZONE	3781: 0
CDOVLY	0700: 0	CH	4242: 0	CHARS	1855: 0	CHKCH1	3881: 0	CHKCH2	3918: 0	CHKLEN	2808: 0
CHKLEX	2829: 0	CKEFMT	4047: 0	CKSIGN	3948: 0	CLEARP	3471: 0	CLEARR	3316: 0	CLEARW	3375: 0
CONBOT	0930: 0	COUNT	4246: 0	COUNT2	4252: 0	CPARGL	2332: 0	CW1	3142: 0	CW2	3146: 0
CW3	3150: 0	CW4	4155: 0	DBLE	3520: 0	DEC2	2396: 0	DOIO	3427: 0	DOSUB	1206: 0
DOT	3835: 0	EFMT	2568: 0	END1	3267: 0	ENDRD	3325: 0	ENDREC	4238: 0	EOFRD	3307: 0
EOFWR	3358: 0	ER1121	3971: 0	EXLINK	0840: 0	EXP	3980: 0	FFMT1	2704: 0	FFMT2	2993: 0
FFMT3	3133: 0	FINDGM	3044: 0	FLAG	4234: 0	FLAG1	4266: 0	FLAG2	4267: 0	FLAG3	4268: 0
FMTBAS	1697: 0	GETB	2910: 0	GETWM	1916: 0	GETWML	1912: 0	GMWM	4279: 0	GMWM54	1140: 0
GMWMA	4616: 0	GOTB	2934: 0	GOTWM	1897: 0	IFMT	2833: 0	IFMT2	2865: 0	IFMT3	3267: 0
IFMT4	3699: 0	INCX3	2137: 0	INCX3X	2148: 0	KODOT0	4255: 0	K1	3574: 0	K10	4278: 0
K2	3505: 0	K3B	4577: 0	K5	4233: 0	KP41	4262: 0	KP5	3647: 0	KR	4259: 0
KW	4260: 0	KX	4258: 0	KZ4	3266: 0	LCA	2079: 0	LISTP2	2271: 0	LOAD54	0934: 0
LOADNX	0700: 0	LSTPOS	1968: 0	MANWID	0837: 0	MCS	3187: 0	MORE	2431: 0	MYSX2	1996: 0
NGM	4279: 0	NOOVFL	3138: 0	NOTDOT	3861: 0	NOZONE	3262: 0	OBLIST	0912: 0	OVFL	3166: 0
OVR9S	3195: 0	PART2	0201: 0	PART3	0201: 0	PHASLD	0381: 0	PHS54C	0201: 0	PUNCH	3525: 0
QFUNCT	1327: 0	RDFLAG	4235: 0	RDTAPE	3312: 0	READCD	3556: 0	RECPOS	4241: 0	REDOIO	3384: 0
RELENT	2132: 0	RET54B	0976: 0	RET54D	1011: 0	SAVZON	3648: 0	SBR	2637: 0	SETFP	0831: 0
SIGN	4012: 0	SKIP54	1062: 0	SKIPB	0934: 0	SKIPC	0935: 0	SKIPD	0936: 0	SKP	3618: 0
SNAPEX	0564: 0	SNAPSH	0333: 0	SRC	4603: 0	SRCEND	4609: 0	SUBSC	0909: 0	SW1	2894: 0
SW2	3154: 0	SX1	4249: 0	SX2	0927: 0	SX3	2952: 0	SX3A	3082: 0	TAPE	3434: 0
TAPERR	3591: 0	TARGET	4600: 0	TPERR	0728: 0	TPREAD	0704: 0	TRGEND	4606: 0	UNIT	2136: 0
USER1	0876: 0	W2	3650: 0	W20	4597: 0	W3	4232: 0	W3A	4223: 0	W3B	4226: 0
W3C	4229: 0	WMFLAG	4243: 0	X1	0089: 0	X2	0094: 0	X3	0099: 0	XXFLD	3240: 0
ZAS	4036: 0	ZAS2	4062: 0								

UNREFERENCED SYMBOLS

AGM AGMWM ARITF ARITI ARYBOT BEG52A CDOVLY CONBOT DOSUB EXLINK GMWM54 LOAD54 PHASLD QFUNCT RET54B SKIPB SNAPEX
SUBSC SX2 TPERR TPREAD USER1