	STORAG STORAG RAP		L0681	16,105106,110	0037,044,049,053053N00000N00001026 0117B101/I9I#071029C029056B026/B001/0991 5040,047054,061068,072/061039		117I0? 0011040			1 2 3
									PAGE	1
SEQ F	G LIN	LABEL	OP	OPERANDS		SFX CT	LOCN	INSTRUCTION	TYPE	CARD
101			JOB							
102			CTL	6611						
103			ORG	87				0087		
104	89	X1		000		3	0089			4
105	91		DC	00		2	0091			4
106	94	X2	DCW	000		3	0094			4
107	96		DC	00		2	0096			4
108	99	Х3	DCW	000		3	0099			4
109	100		DC	0		1	0100			4
110		*								
111		* ARIT	HMETIC	INTERPRETER						
112		*								
113					RETED STRING IS					
114			-	OPERATOR OPE						
115					S A WORD MARK, IT'S AN OPERATOR,					
116					L. OPERANDS ARE MACHINE ADDRESSES,					
117					DIGIT TO INDICATE TYPE: A- OR B-					
118		* ZONE	ALONE	INDICATES II	NTEGER. OPERATORS ARE ONE CHARACTER.					
119 120			a commun	I ATODO TAL TIL	TODING ADEA ADE HOED. THE LOW ODDED					
121					E PRINT AREA ARE USED. THE LOW-ORDER LOADED INTO ACCUMULATOR 1 AT 250; IT					
122					HE LENGTH OF THE OPERAND, AND RIGHTWARD					
123					HE MANTISSA WIDTH. ACCUMULATOR 2 HAS IT	'C				
124					); IT EXTENDS RIGHTWARD BY THE MANTISSA	د.				
125		* WIDT		DIGIT III 200	, II BAIBADO RIGHIWARD DI IND IRRATIONI					
126		*								
127		* MOST	LY, IN	DEX REGISTER	USAGE IS					
128				ND ADDRESS						
129		* X2 =	INTER	PRETER'S COUR	NTER, LOW-ORDER DIGIT OF ACCUM 1					
130				ND WIDTH						
131		*								
132			ORG	700				0700		
133		ARITF		X2			0700			5
134	704			X1-3			0704			5
135	708				INTERPRETER ADDRESS FOR ERR MSGS		0708			5
136	712	NXTOP	MCW	2&X2,X1	X1 = OPERAND (RESULT) ADDRESS			M 0!2 089		5
137	719				SAVE X2-1		0719	_		5
138				SX2B&6	TWICE		0723			5 5
139 140	727 735			1206,0&X2,\$	SAVE X1 (RESULT ADDRESS)			B S06 0!0 \$ H T75 0'0		6
141	742		CS		CLEAR ACCUMUMULATORS		0733			6
141	742		CS	303	CLEAR ACCOMOMOLATORS		0742			6
143	747		CS				0740			6
144	748			KZ1,280	SET HIGH-ORDER ZERO IN ACCUM 2			L W85 280		6
145		NXTOP1			CLEAR X1		0755			6
146		SX2A			RECOVER X2 = ADDR(OPERAND) - 1			Н 094 000		6
147	766		C		COMPARE OP TO ASSIGNMENT OP			C 0!4 W86		7
				•						

SEQ P	G LIN	LABEL	OP	OPERANDS		SFX CT	LOCN	INSTRUCTION TYPE	CARD
148	773		MCW	4&X2,SAVOP	SAVE WHATEVER OPERATOR IT IS	7	0773	M 0!4 924	7
149	780		SW	201		4	0780	, 201	7
150	784		BL		FUNC IF ASSIGNMENT OP .LT. OPERATOR				7
151		*							
152		* ASSI	GNMENT	OP GREATER (	OR EQUAL TO OPERATOR, I.E., OPERATOR IS				
153		* BLAN	к, .,	) LOZENGE, }	GROUP MARK, &, \$, *, -, /, COMMA, %, #				
154		*							
155	789		SBR	NXTOP2&6,4&2	K2 SAVE ADDR OF OPERATOR	7	0789	H 874 0!4	7
156	796		BCE	1199,5&X2,\$	NEXT OPERAND \$?	8	0796	B /99 0!5 \$	7
157	804		MCW	7&X2,X1	X2 SAVE ADDR OF OPERATOR NEXT OPERAND \$? SECOND OPERAND ADDRESS TO X1 SAVE 4&X2 OPERAND 2 TAG IS B ZONE (INTEGER)?	7	0804	M 0!7 089	8
158	811		SAR	SX2A&6	SAVE 4&X2	4	0811	Q 765	8
159	815	TSTZON	BWZ	ARITI,X1-1,	K OPERAND 2 TAG IS B ZONE (INTEGER)?	8	0815	V V30 088 K	8
160	823		BWZ	ARITI,X1-1,	S OPERAND 2 TAG IS A ZONE (INTEGER)?	8	0823	V V30 088 S	8
161	831		SBR	X3,0	LOADER PLUGS MANTISSA WIDTH INTO B	7	0831	н 099 000	8
162	838		CW	IFLAG	INDICATE FLOATING POINT	4	0838	) W87	8
163	842		MCW	0&X1,EXP1-1	SAVE EXPONENT 1	7	0842	M 0'0 W82	9
164	849		SAR	X1	SAVE MANTISSA 1 ADDRESS	4	0849	Q 089	9
165	853		MCW	0&X1,250	MANTISSA I TO ACCUMULATOR I	/	0853	M 0'0 250	9
166	0.00	* FROM	HERE,	X2 INDEXES A	ACCUM 1, FIRST HIGH, THEN LOW DIGIT	4	0000	11 004	9
167 168	860		SBR	XZ	SEI XZ IO ACCUM I ADDRESS - OP WIDTH	4	0860	H U94	9
169	0.00	NVTODO	LCA	NOCTON O O	APPEND A HIGH-ORDER ZERO IO ACCUM I	4	0004	L W83	9
170	076	NXIOPZ	BW M7	NOSIGN,U-U	WM UNDER OPERAIOR:	8	0000	V 883 UUU 1	10
171	003	NOCTON	P1Z	ZJU, ZAS	ADD 7FDC DFIOW MANTICCA	7	00/0	1 230 07 C W05 2E2	10
172	890	MODIGM	C	1.Y2 K71	SECOND OPERAND ADDRESS TO X1 SAVE 4&X2  C OPERAND 2 TAG IS B ZONE (INTEGER)? C OPERAND 2 TAG IS A ZONE (INTEGER)? LOADER PLUGS MANTISSA WIDTH INTO B INDICATE FLOATING POINT SAVE EXPONENT 1 SAVE MANTISSA 1 ADDRESS MANTISSA 1 TO ACCUMULATOR 1 ACCUM 1, FIRST HIGH, THEN LOW DIGIT SET X2 TO ACCUM 1 ADDRESS - OP WIDTH APPEND A HIGH-ORDER ZERO TO ACCUM 1 WM UNDER OPERAND 1 DETERMINES ZA OR ZS ADD ZEROS BELOW MANTISSA COMPARE OPERAND HIGH-ORDER DIGIT TO 0 X2 NOW AT LOW-ORDER DIGIT OF ACCUM 1 / DIVIDE?  MULTIPLY? TURN IT BACK TO ZA COPY THIS OP CODE HIGH-ORDER DIGIT OF ACCUM 2 ZERO? ACCUM 1 HIGH-ORDER DIGIT IS ZERO -1 EXP2 IS NOW EXP2 - EXP1 MOVE ABS(EXP2-EXP1) TO X1 ARE MANTISSA WIDTH AND ABS(EXP2-EXP1) -1 EXP1.GT. EXP2 ABS(EXP2-EXP1) GF. MANTISSA WIDTH -1 ADD EXP2-EXP1 TO EXP1 SHIFT MANTISSA RIGHT BY EXP2-EXP1 X1 AND X3 NOW BOTH MANTISSA WIDTH SIGN OF ACCUM 1 DEPENDS ON OP ADD (SUBTRACT) MANTISSAS  RETURN HERE TOO	7	0890	C 011 W85	10
173	897		Δ	X3 X3	X2 NOW AT LOW-ORDER DIGIT OF ACCIM 1	7	0897	A 099 094	10
174	904		BCE	FDIV.SAVOP.	/ DIVIDE?	8	0904	B S33 924 /	10
175	912		BCE	FMPY.SAVOP.	* MIII.TTPI.Y?	8	0912	B S62 924 *	11
176	920		S	SAVOP	TURN IT BACK TO ZA	4	0920	S 924	11
177	924	SAVOP	ZA	ZAS	COPY THIS OP CODE	4	0924	? '87	11
178	928		BCE	NMLZ1,280,0	HIGH-ORDER DIGIT OF ACCUM 2 ZERO?	8	0928	B '17 280 0	11
179	936		BE	CLRWK	ACCUM 1 HIGH-ORDER DIGIT IS ZERO	5	0936	B /34 S	11
180	941		S	EXP1-1, EXP2	-1 EXP2 IS NOW EXP2 - EXP1	7	0941	S W82 W79	11
181	948		ZA	EXP2,X1&1	MOVE ABS(EXP2-EXP1) TO X1	7	0948	? W80 090	12
182	955		C	X3,X1 COMP	ARE MANTISSA WIDTH AND ABS(EXP2-EXP1)	7	0955	C 099 089	12
183	962		BM	E1GTE2,EXP2	-1 EXP1 .GT. EXP2	8	0962	V /65 W79 K	12
184	970		BH	EXDGMW	ABS(EXP2-EXP1) .GT. MANTISSA WIDTH	5	0970	B /88 U	12
185	975		A	EXP2-1, EXP1	-1 ADD EXP2-EXP1 TO EXP1	7	0975	A W79 W82	12
186	982		ZA	250,250&X1	SHIFT MANTISSA RIGHT BY EXP2-EXP1	7	0982	? 250 2V0	13
187	989		ZA	X3&1,X1&1	X1 AND X3 NOW BOTH MANTISSA WIDTH	7	0989	? 100 090	13
188	996	ADDSUB	MZ	ZAS,0&X2	SIGN OF ACCUM 1 DEPENDS ON OP	7	0996	Y '87 0!0	13
189	1 003		A	279&X1,0&X2	ADD (SUBTRACT) MANTISSAS	-/	1003	A 2X9 0!0	13
190		*	~~ == = = = =						
191		* RELO	CATABL	E FUNCTIONS I	RETURN HERE TOO				
192	1 010			0.440 530		7	1010	V 010 107	10
193	1 010	*	MZ	0&X2,ZAS		/	1010	Y 0!0 '87	13
194			AT.TTE	FIOATING_DOI	NT RESULT OF A SINGLE ARITHMETIC				
		* UDED	ATTON.	DIACE THE M	NEWALIZED RESULT IN THE MODERING				
197		* ACCIII	MIII.ATO	R. IF EXPON	ORMALIZED RESULT IN THE WORKING ENT OVERFLOW IS DETECTED, GO TO ERMSG TO	)			
		110001				-			

SEQ PG LIN	LABEL	OP	OPERANDS		SFX CT	LOCN	INSTRUCTION TYPE	CARD
198 199 200 201	* IS D	ETECTE		N GO TO STR99. IF EXPONENT UNDERFLOW . HERE, THE LOW-ORDER DIGIT OF THE				
202		NORMAI	LIZED RESULT IS	LEFT IN ACCUM 2.				
203	*							
204 1 017	NMLZ1	ZA	EXP1-1,EXP2-1	SERT RM AFTER LOW-ORDER DIGIT	7	1017	? W82 W79	14 14
206 1 024	NMLZZ	MCW MZ	KM,1&XZ IN	AIN	1	1024	M W/5 U:1	14
207 1 032		M7.		TWO ZEROS		1031		14
208 1 033		A						14
209 1 034		MN	DE	D ADD ANOTHER ONE CR A AND B (COPIES JUNK TO UNUSED)	1	1034	D	14
210 1 035		SBR	X1		/	1025	TT 000	14
211 1 039		S	281&X3 CL	EAR ACCUM 2	4	1039	S 2H1	15
212 1 043	NMLZL	BCE	STRZE,2&X1,'	RECORD MARK INDICATES ZERO RESULT BUMP X1	8	1043	B /42 0'2 '	15
		SBR	X1	BUMP X1	4	1051	H 089	15 15
214 1 055 215 1 063		MCM	NMLZL,1&X1,U	ZERO MEANS MORE NORMALIZATION NEEDED NORMALIZE	8	1055	B '43 U'I U	15
216 1 070		S	X3 X2	NORPALIZE	7	1003	5 099 094	15
217 1 077		CW	NO / NE	DECREASE AS AND BS TO	1	1077	)	15
218 1 078		CW		REFER TO X2 AND X1	1	1078	)	16
219 1 079		S		S X2,X1	1	1079	S	16
220 1 080		S	X1,EXP2-1	STORE NORMALIZED EXPONENT	7	1080	S 089 W79	16
221 1 087	ZAS	ZA	279&X3	ZS IF ACCUM 1 NEGATIVE	4	1087	? 2G9	16
222 1 091		SW	~		1	1091	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	16
223 1 092 224 1 100		BCE	CLRWK, EXP2-3,	U EVDONENT LINDEDELON	8	1100	B / 34 W / / U	16 16
225 1 108		DIM	DDMCC	EXPONENT OVERFLOW	0	1100	V /42 W/3 K	17
226 1 114		DCW	anora	EXIONENT OVERLEOW	3	1114	D 0/1	17
227	*	20	C1.02 C	ZERO MEANS MORE NORMALIZATION NEEDED NORMALIZE  DECREASE AS AND BS TO REFER TO X2 AND X1 S X2,X1 STORE NORMALIZED EXPONENT ZS IF ACCUM 1 NEGATIVE  0  EXPONENT UNDERFLOW EXPONENT OVERFLOW				
228				ESULT MAGNITUDE EQUAL TO LARGEST				
229				NG-POINT NOTATION; SET RESULT SIGN				
230	* AS A	PPROPE	RIATE.					
231	*			0.0 0.0 0.000				
232 1 115 233 1 122			KM99,EXP2-1 KM99,279&X3	-99 TO EXP2	7		? W89 W79 D W89 2G9	17 17
234 1 129				TO MANTISSA	1	1122		17
235 1 130			278&X3	-99 TO EXP2 ALL 9'S TO MANTISSA IN ACCUM2	4		M 2G8	17
236	*	11011	2,04110	111 11000112	-	1100	11 200	- /
237	* CLEA	R ACCU	JM 1 AFTER AN I	NDIVIDUAL ARITHMETIC OPERATION				
238	*							
239 1 134			278				/ 278	17
240 1 138		В	NXTOP1		4	1138	В 755	18
241	*		NIDEDELOU OD D	DOLLER TO BEDO OF BLOOMING DOLLER				
242	* RESU			ESULT IS ZERO. SET FLOATING-POINT				
243	* KESU	тт 10	AERU					
		S	EXP2-1 EXP2	= 0	4	1142	S W79	18
				2 MANTISSA = 0			S 2G9	18
247 1 150			CLRWK				B /34	18

							-
SEQ PG LII	I LABEL	OP	OPERANDS	SFX CT	LOCN	INSTRUCTION TYPE	CARD
248	*						
249	* DTV	ISTON 1	BY ZERO				
250	*						
251 1 15	DVERR	В	ERMSG @DZE@ DIVIDE BY ZERO MESSAGE STR99 INSERT OVERFLOW EXPONENT	4	1154	B U71	18
252 1 160	)	DCW	@DZE@ DIVIDE BY ZERO MESSAGE	3	1160		18
253 1 163	-	В	STR99 INSERT OVERFLOW EXPONENT	4	1161	В /15	18
254	*						
255		1 IS G	REATER THAN EXP2				
256	*						
257 1 16	E1GTE	2 BH	NMLZ1 ABS(EXP2-EXP1) .GT. MANTISSA WIDTH	5	1165	B '17 U	19
258 1 170	,	S	X3&1,X1&1 SUBTR MAN. WIDTH FROM ABS(EXP2-EXP1)	7	1170	S 100 090	19
259 1 17	,	MZ	2/9&X3,2/9&X1 MOVE ZONE OVER 10 NEW WIDIH	/	11//	Y 2G9 2X9	19
260 1 184	. *	В	NMLZ1 ABS(EXP2-EXP1) .GT. MANTISSA WIDTH X3&1,X1&1 SUBTR MAN. WIDTH FROM ABS(EXP2-EXP1) 279&X3,279&X1 MOVE ZONE OVER TO NEW WIDTH ADDSUB GO ADD (OR SUBTRACT) MANTISSAS	4	1184	В 990	19
262	* ARS	(EXP2-1	EXP1) .GT. MANTISSA WIDTH				
263		( 1111 2 )					
		W A	EXP1-1,EXP2-1 RESTORE EXP2 CLRWK	7	1188	A W82 W79	19
265 1 19	5	В	CLRWK	4	1195	В /34	19
266 267 1 199	)	SBR	X2,5&X2	7	1199	H 094 0!5	20
268 1 200	5	В	X2,5&X2 0	4	1206	H 094 0!5 В 000	20
269	*						
270 1 210 271 1 214	)	MN	0&X2	4	1210	D 0!0	20
271 1 214	l .	MN		1	1214	D	20
272 1 213 273 1 216 274 1 21		MN		1	1215	D	20
2/3 1 210	7	MN	0,40,7,4,4	1	1216	D 7.CF	20
274 1 21	CVOD	DOE	NXTOPO,0,\$	4	121/	Q 700	21
276 1 229				0	1221	D 0!0 D D D Q 765 B 723 000 \$ B 815	21
277	*			-4	1223	Б 013	21
278	* FLO	ATTNG-1	POINT DIVIDE				
279	*						
280 1 233	BFDIV	BE	DVERR DIVIDE BY ZERO 279&X3,1&X2  0&X1,251 DIVIDE MANTISSAS EXP1-1 NEGATE EXPONENT EXPS GO ADD EXPONENTS, NORMALIZE, ETC.	5	1233	B /54 S	21
281 1 238	3	MN	279&X3,1&X2	7	1238	D 2G9 0!1	21
282 1 245	5	MCW		1	1245	M	21
283 1 240	5	MN		1	1246	D	21
284 1 24	7	D	0&X1,251 DIVIDE MANTISSAS	7	1247	% 0'0 251	21
285 1 25		ZS	EXP1-1 NEGATE EXPONENT	4	1254	! W82	22
286 1 258	3	В	EXPS GO ADD EXPONENTS, NORMALIZE, ETC.	4	1258	B S83	22
287 288			POINT MULTIPLY				
290 1 26	FMPY	М	279£X3 251£X3 MIII.TIPI.Y MANTISSAS	7	1262	@ 2G9 2E1	22
291 1 269	)	SBR	X2.36X2	7	1269	H 094 0!3	22
292 1 276		S	KP2,EXP2-1	7	1276	S W90 W79	22
293 1 283	EXPS	A	279&X3,251&X3 MULTIPLY MANTISSAS X2,3&X2 KP2,EXP2-1 EXP1-1,EXP2-1 ADD EXPONENTS 279&X3,*&1 PREPARE TO ZAS SET SIGN OF RESULT NMLZ2 NORMALIZE	7	1283	A W82 W79	22
294 1 290	)	MZ	279&X3,*&1 PREPARE TO	7	1290	Y 2G9 S97	23
295 1 29	7	ZA	ZAS SET SIGN OF RESULT	4	1297	? <b>'</b> 87	23
296 1 30	-	В	NMLZ2 NORMALIZE	4	1301	B '24	23
297	*						

SEQ	PG	LIN	LABEL	OP	OPERANDS		SFX CT	LOCN	INSTRUCTION TYPE	CARD
298 299 300 301 302			* CURR * IF N	ENT OP OT REC	ERATOR IS ONE ORD MARK, IT'	LESS THAN CURRENT OPERATOR, I.E., OF @, ?, A-I, !, J-R, ', S-Z, 0-9. S THE FIRST CHARACTER OF WHAT WOULD , SO BUMP THE OPERAND ADDRESS.				
	1	305	FUNC	BCE	DONE 46Y2 /	DONE (RECORD MARK)?	Q	1305	B T31 0!4 '	23
		313	LONC			BUMP OPERAND ADDR			Н 765 0!1	23
		320		C	280,KZ1				C 280 W85	23
306		320	* THE			LOCATABLE FUNCTION SELECTOR ADDRESS HER		1320	C 200 W03	23
	1	327						1327	В 000	2.4
308	1	331	DONE	BCE	RES.280.0	FLOATING-POINT RESULT ZERO?	8	1331	B T69 280 0	24
309	1	339	DOILE	BW	RES.IFLAG	INTEGER RESULT?	8	1339	V T69 W87 1	24
310	1	347		BW	FPRES.4&X2	WM UNDER OPERATOR?	8	1347	V T92 0!4 1	24
311	1	355		SBR	X3,2&X3		7	1355	н 099 0?2	24
312	1	362	SEXP2	MCM	EXP2-2,278&X	3 MOVE EXP2 TO ACCUM 2	7	1362	P W78 2G8	25
313	1	369	RES	LCA	279&X3,0	STORE ACCUMULATOR TO SAVED B	7	1369	L 2G9 000	25
314	1	376		BW	5&X2,4&X2	RETURN IF DONE (WORD MARK)	8	1376	V 0!5 0!4 1	25
315	1	384		SAR	X2	BUMP X2 TO NEXT OPERAND	4	1384	Q 094	25
316	1	388		В	NXTOP	GO TO FUNCTION SELECTOR FLOATING-POINT RESULT ZERO? INTEGER RESULT? WM UNDER OPERATOR?  3 MOVE EXP2 TO ACCUM 2 STORE ACCUMULATOR TO SAVED B RETURN IF DONE (WORD MARK) BUMP X2 TO NEXT OPERAND	4	1388	В 712	25
317			*							
318				D NONZ	ERO FLOATING-	POINT RESULT				
319			*							
			FPRES	A	KP5,278&X3	ROUND MANTISSA	7	1392	A W91 2G8	25
				BWZ	CARRY,280,S	CARRY IN ACCUM 2 INDICATED BY A-ZONE?	8	1399	V U18 280 S	26
			CPZONE		279&X3,277&X	3 MOVE ZONE FROM EXPONENT TO MANTISSA	7	1407	Y 2G9 2G7	26
			CARRY		SEXP2	DUMP EMPONENT			B T62	26
					FOVFL, EXP2-3	BUMP EXPONENT			A W92 W79	26
		425				,I OVERFLOW? CLEAR MANTISSA			B U48 W77 1 S 2G9	26 26
		433			K1B-1,280	AND PUT 1 IN ITS HIGH-ORDER DIGIT				26 27
		444		В	CPZONE	AND FOI I IN 115 HIGH-ONDER DIGIT			B U07	27
329			*	D	CIZONE			1111	Б 007	21
330			* FLOA	TING-P	OINT OVERFLOW	HIGH-ORDER DIGIT OF EXP2 IS 1				
331			*							
332	1	448	FOVFL	MN	KM99,279&X3	99 TO EXPONENT ALL 9S TO MANTISSA	7	1448	D W89 2G9	27
333	1	455		MCW		EXPONENT	1	1455	M	27
334	1	456		MCW	278&X3	ALL 9S TO MANTISSA	4	1456	M 2G8	27
		460		S	KP1,EXP2-1					27
		467		В	CPZONE		4	1467	B U07	27
337			*							
338						MESSAGES, WHICH INCLUDES A MNEMONIC				
339						D THE DISPLAY ADDRESS IN THE GENERATED				
340			* PROC	EDURE	OF THE SOURCE	PROGRAM STATEMENT BEING EXECUTED. THI ECORD CIRCUMSTANCES, OCCURRING DURING	IS			
342			* ARII * ADVE			WHICH MAY AFFECT THE CALCULATION				
343 344			* ADVE	ROELI.						
	1	471	ERMSG	SBR	ERSVX&6 S	AVE RETURN ADDRESS	Λ	1471	Н U92	28
		475	DIWING	CS		TETOTAL TEDITOR			/ 2?2	28
		479			ERSX3&6,0&X3	SAVE X3			H V25 0?0	28
	_				,		,			

								_
SEQ PG LIN	LABEL O	P OPE	ERANDS	ETURN ADDRESS TO X3 NEMONIC TO PRINT AREA NTERPRETER ADDRESS TO PRINT AREA  3 RETURN ADDRESS TO EXIT ESTORE X3	SFX CT	LOCN	INSTRUCTION TYPE	CARD
348 1 486	ERSVX S	BR X3.	.0 R	ETURN ADDRESS TO X3	7	1486	н 099 000	28
349 1 493	М	ICW 2.83	x3.212 M	NEMONIC TO PRINT AREA	7	1493	M 032 212	28
350 1 500	ERMSI S	BR 217	7.0 I	NTERPRETER ADDRESS TO PRINT AREA	7	1500	н 217 000	28
351 1 507	W	1	•		1	1507	2	28
352 1 508	S	W 201	1		4	1508	, 201	29
353 1 512	S	BR ERN	MSGX&3,3&X	3 RETURN ADDRESS TO EXIT	7	1512	H V29 0?3	29
354 1 519	ERSX3 S	BR X3,	,0 R	ESTORE X3	7	1519	Н 099 000	29
355 1 526	ERMSGX B	0	,		4	1526	в 000	29
356	*							
				A OR B BUT NOT AB ZONE (INTEGER ARITH.				
359 1 530	ARITI S	BR X3,	, 0	LOADER PUTS INTEGER SIZE IN B INDICATE INTEGER OPERAND TO ACCUMULATOR 1 DIVIDE? MULTIPLY? SUBTRACT? ADD OPERAND TO ACCUMULATOR 2 PUT A SIGN ON THE ACCUMULATOR	7	1530	н 099 000	29
360 1 537	S	W IFI	LAG	INDICATE INTEGER	4	1537	, W87	29
361 1 541	M	ICS 0&X	X1,250	OPERAND TO ACCUMULATOR 1	7	1541	Z 0'0 250	30
362 1 548	В	CE XDI	IV,SAVOP,/	DIVIDE?	8	1548	B W23 924 /	30
363 1 556	В	CE XME	PY,SAVOP,*	MULTIPLY?	8	1556	B V98 924 *	30
364 1 564	В	M XSU	JB,SAVOP	SUBTRACT?	8	1564	V V87 924 K	30
365 1 572	A	. 0&2	X1,279&X3	ADD OPERAND TO ACCUMULATOR 2	7	1572	A 0'0 2G9	30
366 1 579	XSIGN Z	A 279	9&X3	PUT A SIGN ON THE ACCUMULATOR	4	1579	? 2G9	31
367 1 583	В	CLF	RWK		4	1583	В /34	31
368 1 587	XSUB S	4.30	X1,279&X3	SUBTRACT OPERAND FROM ACCUMULATOR 2	7	1587	S 0'0 2G9	31
369 1 594	В	XS1	IGN		4	1594	B V79	31
370 1 598	XMPY L	CA 0&>	X1,250	MOVE OPERAND TO ACCUMULATOR 1	7	1598	L 0'0 250	31
371 1 605	M	279	9&X3,251&X	3	7	1605	@ 2G9 2E1	31
372 1 612	M	ICW 251	1&X3 <b>,</b> 279&X	3	7	1612	M 2E1 2G9	32
373 1 619	В	CLF	RWK		4	1619	в /34	32
374 1 623	XDIV B	CE DVE	ERR,250,	DIVIDE BY ZERO?	8	1623	в /54 250	32
375 1 631	M	ICW 0&>	X1,250&X3		7	1631	M 0'0 2E0	32
376 1 638	M	IN			1	1638	D	32
377 1 639	S	BR MOV	VEQ&3	STORE ADDR TO MOVE TO ACCUM 2	4	1639	H W64	32
378 1 643	L	CA 279	9&X3		4	1643	L 2G9	32
379 1 647	Z	A 279	9&X3 <b>,</b> 250&X	3	7	1647	? 2G9 2E0	33
380 1 654	D	(3.0	X1,251		7	1654	% 0 <b>'</b> 0 251	33
381 1 661	MOVEQ M	ICW 249	9,279&X3		7	1661	M 249 2G9	33
382 1 668	В	CLF	RWK		4	1668	В /34	33
383	*			MOVE OPERAND TO ACCUMULATOR 1 3 3 DIVIDE BY ZERO? STORE ADDR TO MOVE TO ACCUM 2 3				
384	* DATA							
505	*	~~~		NED TO DV	2	1.65.4		2.2
386 1 674		CW 000		NED TO RM	3	1674		33
387 1 675		CW @'6	d	NED TO RM	1	1675		33
		CW 0	0010 5750	NEWE OF ACCUMA AND SERVICE ON	1	1676		33
389 1 680		CW @00	JU.G EXPO	NENT OF ACCUM 2, AND ZERO AND RM	4	1680		34
390 1 683		CW 000	) EXPO	NENT OF ACCUM I, AND ZERO	3	1683		34
		CW 8			1	1605		34 34
392 1 685		CW U	3 3007	CNIMENT OPERATOR	1	1000		34 34
393 1 686 394 1 687		CW 6#6	a ASSI	GNMENI UPEKAIUK	1	1607 1000		34 34
394 1 687		CW #1	MOKD	POD OVEREION	1	1600		34
		CW -95	, USEL	FOR OVERFEOW	1	1600		35
396 1 690		CW &2		NENT OF ACCUM 2, AND ZERO AND RM NENT OF ACCUM 1, AND ZERO  GNMENT OPERATOR MARK INDICATES INTEGER FOR OVERFLOW	1	1691		35
337 1 091	1(1 J D	.011 023			1	T 0 2 T		33

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			PAGE 7
SEQ PG LIN LABEL OP	OPERANDS	SFX CT LOCN	INSTRUCTION TYPE CARD
398 1 692 KP1 DCW	&1	1 1692	35
399 1 694 K1B DCW	01 0	2 1694	35
400 1 695 DCW	0	1 1695	35
401 1 696 DC	@"@ GROUP MARK	1 1696	GMARK 35
402 END			/ 000 080

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SYMBOL	ADDRESS												
ADDSUB	996	ARITF	700	ARITI	1530	ASGOP	1686	CARRY	1418	CLRWK	1134	CPZONE	1407
DONE	1331	DVERR	1154	E1GTE2	1165	ERMSG	1471	ERMSGX	1526	ERMSI	1500	ERSVX	1486
ERSX3	1519	EXDGMW	1188	EXP1	1683	EXP2	1680	EXPS	1283	FDIV	1233	FMPY	1262
FOVFL	1448	FPRES	1392	FRET	1010	FUNC	1305	IFLAG	1687	K1B	1694	KM99	1689
KP1	1692	KP2	1690	KP5	1691	KZ1	1685	MOVEQ	1661	NMLZ1	1017	NMLZ2	1024
NMLZL	1043	NOSIGN	883	NXTOP	712	NXTOP0	723	NXTOP1	755	NXTOP2	868	QFUNCT	1327
RES	1369	RM	1675	SAVOP	924	SEXP2	1362	STR99	1115	STRZE	1142	SX2A	759
SX2B	1221	TSTZON	815	X1	89	X2	94	Х3	99	XDIV	1623	XMPY	1598
XSIGN	1579	XSUB	1587	ZAS	1087								