

# ERA 1103

## GENERAL PURPOSE COMPUTER SYSTEM

### REPERTOIRE OF INSTRUCTIONS

11	TRANSMIT POSITIVE (TPuv)	$(u) \rightarrow (v)$
12	TRANSMIT MAGNITUDE (TMuv)	$ u  \rightarrow (v)$
13	TRANSMIT NEGATIVE (TNuv)	$(u)' \rightarrow (v)$
14	INTERPRET (IPxx)	$y+1 \rightarrow (F_1)$ , take $F_2$
15	TRANSMIT U-ADDRESS (TUuv)	$(u_u) \rightarrow (v_u)$
16	TRANSMIT V-ADDRESS (TVuv)	$(u_v) \rightarrow (v_v)$
17	EXTERNAL FUNCTION (EF-v)	Select Ext. Equipment
21	REPLACE ADD (RAuv)	$(u)+(v) \rightarrow (u)$
23	REPLACE SUBTRACT (RSuv)	$(u)-(v) \rightarrow (u)$
27	CONTROLLED COMPLEMENT (CCuv)	$(u) \oplus (v) \rightarrow (u)$
31	SPLIT POSITIVE ENTRY (SPuk)	$S(u) \cdot 2^k \rightarrow (A)$
32	SPLIT ADD (SAuk)	$[(A)_i + S(u)] \cdot 2^k \rightarrow (A)$
33	SPLIT NEGATIVE ENTRY (SNuk)	$S(u)' \cdot 2^k \rightarrow (A)$
34	SPLIT SUBTRACT (SSuk)	$[(A)_i - S(u)] \cdot 2^k \rightarrow (A)$
35	ADD AND TRANSMIT (ATuv)	$(A)_i + (u) \rightarrow (v)$
36	SUBTRACT AND TRANSMIT (STuv)	$(A)_i - (u) \rightarrow (v)$
37	RETURN JUMP (RJuv)	$y+1 \rightarrow (u)$ , take $v$
41	INDEX JUMP (IJuv)	$(u)-1 \rightarrow (A)$ , $(A)_f \rightarrow (u)$ , take $v$
42	THRESHOLD JUMP (TJuv)	$(u) > (A)$ take $v$
43	EQUALITY JUMP (EJuv)	$(u) = (A)$ take $v$
44	Q-JUMP (QJuv)	$(Q) -$ take $u$ , $(Q) +$ take $v$
45	MANUALLY SELECTIVE JUMP (MJjv)	$j=0$ or $1, 2, 3$ & $MJS =$ take $v$
46	SIGN. JUMP (SJuv)	$(A) -$ take $u$ , $(A) +$ take $v$
47	ZERO JUMP (ZJuv)	$(A) \neq 0$ take $u$ , $(A) = 0$ take $v$
51	Q-CONTROLLED TRANSMIT (QTuv)	$L(Q)(u) \rightarrow (v)$
52	Q-CONTROLLED ADD (QAuv)	$(A)_i + L(Q)(u) \rightarrow (v)$
53	Q-CONTROLLED SUBSTITUTE (QSuv)	$L(Q)(u) + L(Q)(v) \rightarrow (v)$
54	LEFT SHIFT IN A (LAuk)	$(A)_f = (u)_i \cdot 2^k$ , $(A)_f \rightarrow (u)$
55	LEFT SHIFT IN Q (LQuk)	$(Q)_f = (u)_i \cdot 2^k$ , $(Q)_f \rightarrow (u)$
56	MANUALLY SELECTIVE STOP (MSjv)	$j=0$ , stop; $j=1, 2, 3$ & $MSS =$ , stop
57	FINAL STOP (FS_)	Stop and Indicate
61	PRINT (PR-v)	Print = code in $(v)$
63	PUNCH (PUjv)	Punch = code in $(v)$ , $j=1, 7$ th level
64	READ MAGNETIC TAPE (RMjnv)	Read $n$ blks, $jMT$ , Start $(v)$
65	WRITE MAGNETIC TAPE (WMjnv)	Write $n$ blks, $jMT$ , Start $(v)$
66	ADVANCE MAGNETIC TAPE (AMjn_)	Advance $jMT$ $n$ blocks
67	BACK MAGNETIC TAPE (BMjn_)	Back $jMT$ $n$ blocks
71	MULTIPLY (MPuv)	$(u)(v) \rightarrow (A)$
72	MULTIPLY ADD (MAuv)	$(A)_i + (u)(v) \rightarrow (A)$
73	DIVIDE (DVuv)	$(A) \div (u) \rightarrow (Q)$ , $r \rightarrow (A)$ , $(Q) \rightarrow (v)$
74	SCALE FACTOR (SFuv)	Shift $A$ until $A_{34} \neq A_{35}$ , $SK \rightarrow (v)$
75	REPEAT (RPjnv)	Repeat $N$ " $n$ " times, jump to $F_1$
76	EXTERNAL READ (ERjv)	$j=0$ , $(IOA) \rightarrow v$ ; $j=1$ , $(IOB) \rightarrow v$
77	EXTERNAL WRITE (EWjv)	$j=0$ , $(v) \rightarrow IOA$ ; $j=1$ , $(v) \rightarrow IOB$

