

PDP-8 summary

MAIN INSTRUCTIONS

OP			I	P	Y						
0	1	2	3	4	5	6	7	8	9	10	11

P=1: $Y \leftarrow Y + \text{CURRENT PAGE}$

I=1: $Y \leftarrow C(Y)$

0 AND	$AC \leftarrow AC \wedge C(Y)$	AND
1 TAD	$L:AC \leftarrow AC + C(Y)$	TWO'S COMP. ADD
2 ISZ	$C(Y) \leftarrow C(Y)+1$. $C(Y) = 0$: SKIP	INDEX, SKIP IF ZERO
3 DCA	$C(Y) \leftarrow AC$. $AC \leftarrow 0$	DEPOSIT, CLEAR AC
4 JMS	$C(Y) \leftarrow PC$. $PC \leftarrow Y+1$	JUMP TO SUBROUTINE
5 JMP	$PC \leftarrow Y$	JUMP
6 IOT		IO TRANSFER
7 OPR		OPERATE

IO TRANSFER

1	1	0	DEV						P4	P2	P1
0	1	2	3	4	5	6	7	8	9	10	11

INTERRUPT SYSTEM

6001 ION	INTERRUPTS ON
6002 IOF	INTERRUPTS OFF

KEYBOARD

6031 KSF	FLAG = 1: SKIP
6032 KCC	FLAG $\leftarrow 0$. $AC \leftarrow 0$
6034 KRS	$AC \leftarrow AC \vee \text{BUF}$
6036 KRB	KCC. KRS
RECEIVED	$\text{BUF} \leftarrow \text{char}$. FLAG $\leftarrow 1$

TELEPRINTER

6041 TSF	FLAG = 1: SKIP
6042 TCF	FLAG $\leftarrow 0$
6044 TPC	$\text{BUF} \leftarrow AC$. XMIT
6046 TLS	TCF. TPC
XMITTED	FLAG $\leftarrow 1$

OPERATE GROUP 1

1	1	1	0	CLA	CLL	CMA	CML	RAR	RAL	rot2	IAC
0	1	2	3	4	5	6	7	8	9	10	11

7200 CLA	$AC \leftarrow 0$	CLEAR AC
7100 CLL	$L \leftarrow 0$	CLEAR L
7040 CMA	$AC \leftarrow \sim AC$	COMPLEMENT AC
7020 CML	$L \leftarrow \sim L$	COMPLEMENT L
7010 RAR	$L:AC \leftarrow \text{rotate } L:AC \text{ right}$	ROTATE AC RIGHT
7004 RAL	$L:AC \leftarrow \text{rotate } L:AC \text{ left}$	ROTATE AC LEFT
7012 RTR	RAR twice	ROTATE TWICE RIGHT
7006 RTL	RAL twice	ROTATE TWICE LEFT
7001 IAC	$L:AC \leftarrow AC + 1$	INDEX AC
7041 CIA	$L:AC \leftarrow \sim AC + 1$	COMPLEMENT, INDEX AC

OPERATE GROUP 2

1	1	1	1	CLA	SMA	SZA	SNL	SKP	OSR	HLT	0
0	1	2	3	4	5	6	7	8	9	10	11

7600 CLA	$AC \leftarrow 0$	CLEAR AC	
7500 SMA	$AC < 0$: SKIP	OR	SKIP ON MINUS AC
7440 SZA	$AC = 0$: SKIP		SKIP ON ZERO AC
7420 SNL	$L \neq 0$: SKIP	AND	SKIP ON NON-ZERO L
7510 SPA	$AC \geq 0$: SKIP		SKIP ON POSITIVE AC
7450 SNA	$AC \neq 0$: SKIP		SKIP ON NON-ZERO AC
7430 SZL	$L = 0$: SKIP		SKIP ON ZERO L
7410 SKP	reverse SKIP condition		SKIP
7404 OSR	$AC \leftarrow AC \vee SR$		OR SWITCH REGISTER
7402 HLT	HALT		HALT