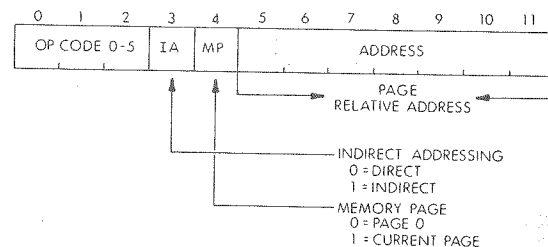


BASIC INSTRUCTIONS

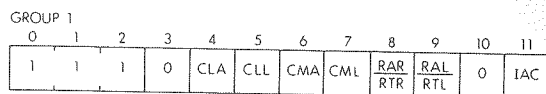
AND	0000	logical AND	2.6
TAD	1000	2's complement add	2.6
ISZ	2000	increment, and skip if zero	2.6
DCA	3000	deposit and clear AC	2.6
JMS	4000	jump to subroutine	2.6
JMP	5000	jump	1.2
IOT	6000	in/out transfer	—
OPR	7000	operate	1.2



Memory Reference Instruction Bit Assignments

GROUP 1 OPERATE MICROINSTRUCTIONS (1.2μsec)

			Sequence
NOP	7000	no operation	—
CLA	7200	clear AC	1
CLL	7100	clear link	1
CMA	7040	complement AC	2
CML	7020	complement link	2
RAR	7010	rotate AC and link right one	4
RAL	7004	rotate AC and link left one	4
RTR	7012	rotate AC and link right two	4
RTL	7006	rotate AC and link left two	4
IAC	7001	increment AC	3
BSW	7002	swap bytes in AC	4



Logical Sequences:

- 1—CLA, CLL
- 2—CMA, CML
- 3—IAC
- 4—RAR, RAL, RTR, RTL, BSW

Group 1 Operate Instruction Bit Assignments

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GROUP 2 OPERATE MICROINSTRUCTIONS (1.2μsec)

			Sequence
SMA	7500	skip on minus AC	1
SZA	7440	skip on zero AC	1
SPA	7510	skip on plus AC	1
SNA	7450	skip on non-zero AC	1
SNL	7420	skip on non-zero link	1
SZL	7430	skip on zero link	1
SKP	7410	skip unconditionally	1
OSR	7404	inclusive OR, switch register with AC	3
HLT	7402	halts the program	3
CLA	7600	clear AC	2

GROUP 2

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

Logical Sequences:

- 1 (Bit 8 is Zero)—Either SMA or SZA or SNL
- 1 (Bit 8 is One)—Both SPA and SNA and SZL
- 2—CLA
- 3—OSR, HLT

Group 2 Operate Instruction Bit Assignments

COMBINED OPERATE MICROINSTRUCTIONS (1.2μsec.)

			Sequence
CIA	7041	complement and increment AC	2, 3
LAS	7604	load AC with switch register	2, 3
STL	7120	set link (to 1)	1, 2
GLK	7204	get link (put link in AC bit 11)	1, 4
CLA CLL	7300	clear AC and link	1
CLL RAR	7110	shift positive number one right	1, 4
CLL RAL	7104	shift positive number one left	1, 4
CLL RTL	7106	clear link, rotate 2 left	1, 4
CLL RTR	7112	clear link, rotate 2 right	1, 4
SZA CLA	7640	skip if AC=0, then clear AC	1, 2
SZA SNL	7460	skip if AC=0 or link is 1, or both	1
SNA CLA	7650	skip if AC=0, then clear AC	1, 2
SMA CLA	7700	skip if AC<0, then clear AC	1, 2
SMA SZA	7540	skip if AC<0	1
SMA SNL	7520	skip if AC<0 or link is 1, or both	1
SPA SNA	7550	skip if AC>0	1
SPA SZL	7530	skip if AC>0, and if the link is 0	1
SPA CLA	7710	skip if AC>0, then clear AC	1, 2
SNA SZL	7470	skip if AC=0 and link=0	1