

FIG. 1 IRQ, NMI, RTI, BRK OPERATION

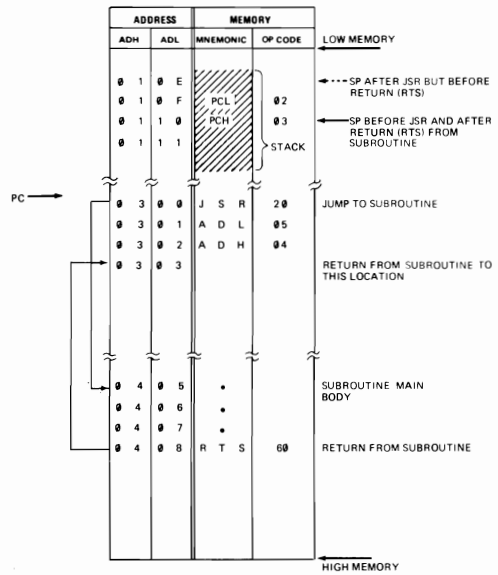


FIG. 2 JSR, RTS OPERATION

ASSEMBLER DIRECTIVES

- OPT - IF USED MUST BE THE FIRST EXECUTABLE STATEMENT IN THE PROGRAM.
- OPTIONS ARE: - (OPTIONS LISTED ARE THE DEFAULT VALUE. TURNED OFF BY (NO) PREFIX.)
COUNT (COU OR CNT) - LIST ALL INSTRUCTIONS AND THEIR USAGE.
NOGENERATE (NOG) - DO NOT GENERATE MORE THAN ONE LINE OF CODE FOR ASCII STRINGS.
XREF (XRE) - PRODUCE A CROSS-REFERENCE LIST IN THE SYMBOL TABLE.
ERRORS (ERR) - CREATE AN ERROR FILE.
MEMORY (MEM) - CREATE AN ASSEMBLER OBJECT OUTPUT FILE.
LIST (LIS) - PRODUCE A FULL ASSEMBLY LISTING.
- BYTE - PRODUCES A SINGLE BYTE IN MEMORY EQUAL TO EACH OPERAND SPECIFIED.
- WORD - PRODUCES TWO BYTES IN MEMORY EQUAL TO EACH OPERAND SPECIFIED.
- * - DEFINES THE BEGINNING OF A NEW PROGRAM COUNTER SEQUENCE.
- PAGE - ADVANCES THE LISTING TO THE TOP OF A NEW PAGE.
- END - DEFINES THE END OF A SOURCE PROGRAM.

LABELS:

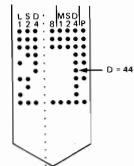
LABELS BEGIN IN COLUMN 1 AND ARE SEPARATED FROM THE INSTRUCTION BY AT LEAST ONE SPACE.
LABELS CAN BE UP TO 6 ALPHANUMERIC CHARACTERS LONG AND MUST BEGIN WITH AN ALPHA CHARACTER.
A, X, Y, S, AND P ARE RESERVED AND CANNOT BE USED AS LABELS.
LABEL = EXPRESSION CAN BE USED TO EQUATE LABELS TO INSTRUCTIONS.
LABEL * * * * N CAN BE USED TO RESERVE AREAS IN MEMORY

CHARACTERS USED AS SPECIAL PREFIXES:

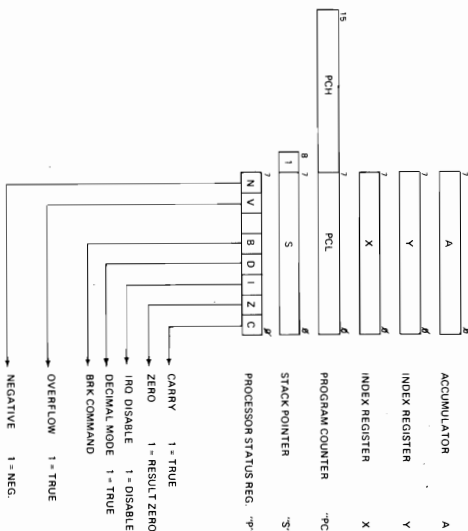
- INDICATES AN ASSEMBLER DIRECTIVE
- # SPECIFIES THE IMMEDIATE MODE OF ADDRESSING.
- \$ SPECIFIES A HEXADECIMAL CHARACTER.
- @ SPECIFIES AN OCTAL NUMBER.
- % SPECIFIES A BINARY NUMBER.
- ' SPECIFIES AN ASCII LITERAL CHARACTER.
- () INDICATES INDIRECT ADDRESSING.
- : IN COLUMN 1 INDICATES A COMMENT.

ASCII CHARACTER SET (7-BIT CODE)

	MSD	0	1	2	3	4	5	6	7
LSD	000	001	010	011	100	101	110	111	111
0	0000	NUL	DLE	SP	@	P	a	p	
1	0001	SOH	DC1	1	A	Q	a	q	
2	0010	STX	DC2	"	2	B	R	b	r
3	0011	ETX	DC3	#	3	C	S	c	s
4	0100	EOT	DC4	\$	4	D	T	d	t
5	0101	ENG	NAK	%	5	E	U	e	u
6	0110	ACK	SYN	&	6	F	V	f	v
7	0111	BEL	ETB	'	7	G	W	g	w
8	1000	BS	CAN	(	8	H	X	h	x
9	1001	HT	EM	)	9	I	Y	i	y
A	1010	LF	SUB	*	:	J	Z	j	z
B	1011	VT	ESC	+	; K	[	k		
C	1100	FF	FS	=	< L	\	l	l	
D	1101	CR	GS	-	= M	]	m	m	
E	1110	SO	RS	.	> N	^	n	n	
F	1111	SI	VS	/	? O	~	o	o	DEL



PROCESSOR PROGRAMMING MODEL



MCS6500 INSTRUCTION SET SUMMARY

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