

BURROUGHS 220

A Summary of Operations in Alphabetic Order

Instruction Format	OPERATION	
± 1234 56 7890	ABR	NAME
+ 1110 12 4aaa	ADD	ADD
+ 1111 12 4aaa	ADA	ADD ABSOLUTE
+ 1111 19 4aaa	ADL	ADD TO LOCATION
+ 1110 35 4aaa	BCE	BRANCH, COMPARISON EQUAL
+ 1110 34 4aaa	BCH	BRANCH, COMPARISON HIGH
+ 1111 34 4aaa	BCL	BRANCH, COMPARISON LOW
+ 1111 35 4aaa	BCU	BRANCH, COMPARISON UNEQUAL
+ u111 28 4aaa	BCS	BRANCH, CONTROL SWITCH
+ sLnn 36 4aaa	BFA	BRANCH, FIELD A
+ sLnn 37 4aaa	BFR	BRANCH, FIELD R
+ 1111 31 4aaa	BOF	BRANCH, OVERFLOW
+ 1111 32 4aaa	BRP	BRANCH, REPEAT
+ 111n 33 4aaa	BSA	BRANCH, SIGN A
+ 1111 30 4aaa	BUN	BRANCH, UNCONDITIONALLY
+ u1vr 60 4aaa	CRD	CARD READ
+ u1if 62 4aaa	CRP	CARD READ, FORMAT LOAD
+ u1ii 64 4aaa	CRI	CARD READ INTERROGATE, BRANCH
+ u1cf 61 4aaa	CWR	CARD WRITE
+ u1if 63 4aaa	CWP	CARD WRITE, FORMAT LOAD
+ u1ii 65 4aaa	CWI	CARD WRITE INTERROGATE, BRANCH
+ 1111 45 1111	CLA	CLEAR A
+ 1115 45 1111	CAB	CLEAR A, B
+ 1110 10 4aaa	CAD	CLEAR, ADD
+ 1111 10 4aaa	CAA	CLEAR, ADD ABSOLUTE
+ 1113 45 1111	CAR	CLEAR A, R
+ 1117 45 1111	CLT	CLEAR A, R, B
+ 1114 45 1111	CLB	CLEAR B
+ 1111 46 4aaa	CLL	CLEAR, LOCATION
+ 1112 45 1111	CLR	CLEAR R
+ 1116 45 1111	CRB	CLEAR R, B
+ 1110 11 4aaa	CSU	CLEAR, SUBTRACT
+ 1111 11 4aaa	CSA	CLEAR, SUBTRACT ABSOLUTE
+ sLfo 18 4aaa	CFA	COMPARE FIELD A
+ sLfi 18 4aaa	CFR	COMPARE FIELD R
+ nnnn 21 4aaa	DBB	DECREASE B, BRANCH
+ sLnn 27 4aaa	DPL	DECREASE FIELD LOCATION
+ sLnn 28 4aaa	DLB	DECREASE FIELD LOCATION, LOAD B
+ 1111 15 4aaa	DIV	DIVIDE
+ 1111 17 4aaa	EXT	EXTRACT
+ n1i0 22 4aaa	FAD	FLOATING ADD
+ n1i1 22 4aaa	FAA	FLOATING ADD ABSOLUTE
+ 1111 25 4aaa	FDV	FLOATING DIVIDE
+ 1111 24 4aaa	FMU	FLOATING MULTIPLY
+ n1i0 23 4aaa	FSU	FLOATING SUBTRACT
+ n1i1 23 4aaa	PSA	FLOATING SUBTRACT ABSOLUTE
+ 1111 00 1111	HLT	HALT
+ nnnn 20 4aaa	IBB	INCREASE B, BRANCH
+ sLnn 26 4aaa	IPL	INCREASE FIELD LOCATION
+ 1111 08 1111	KAD	KEYBOARD ADD
+ 1110 42 4aaa	LDB	LOAD B
+ 1111 42 4aaa	LBC	LOAD B, COMPLEMENT
+ 1111 41 4aaa	LDR	LOAD R
+ 111n 43 1111	LSA	LOAD SIGN A
4 uhhk 51 4aaa	MFC	MAGNETIC-TAPE FIELD SCAN
4 uhh0 50 4aaa	MPS	MAGNETIC-TAPE FIELD SEARCH
+ unkk 54 4aaa	MIR	MAGNETIC-TAPE INITIAL WRITE
+ un12 55 4aaa	MIR	MAGNETIC-TAPE INITIAL WRITE, RECORD
+ u1i0 59 4aaa	MIB	MAGNETIC-TAPE INTERROGATE, BRANCH
+ u1i1 59 4aaa	MIE	MAGNETIC-TAPE INTERROGATE END OF TAPE, BRANCH
+ uhh4 50 1111	MLS	MAGNETIC-TAPE LANE SELECT
+ unkk 56 4aaa	MOW	MAGNETIC-TAPE OVERWRITE
+ un11 57 4aaa	MOR	MAGNETIC-TAPE OVERWRITE, RECORD
+ u1i2 58 1111	MPE	MAGNETIC-TAPE POSITION AT END OF INFORMATION
+ un11 58 1111	MPB	MAGNETIC-TAPE POSITION BACKWARD
+ un10 58 1111	MPP	MAGNETIC-TAPE POSITION FORWARD
+ un1v 52 4aaa	MRD	MAGNETIC-TAPE READ
+ un1v 53 4aaa	MRR	MAGNETIC-TAPE READ, RECORD
+ uhh8 50 1111	MRW	MAGNETIC-TAPE REWIND
+ uhh9 50 1111	MDC	MAGNETIC-TAPE REWIND, DE-ACTIVATE
0 uhhk 51 4aaa	MTA	MAGNETIC-TAPE SCAN
0 uhh0 50 4aaa	MTS	MAGNETIC-TAPE SEARCH
+ 1111 14 4aaa	MUL	MULTIPLY
+ 1111 01 1111	NOP	NO OPERATION
+ unnv 03 4aaa	PRD	PAPER-TAPE READ
+ u1iv 04 4aaa	PRB	PAPER-TAPE READ, BRANCH
+ unnv 05 4aaa	PRI	PAPER-TAPE READ, INVERSE FORMAT
+ unni 06 4aaa	PWR	PAPER-TAPE WRITE
+ u1i1 07 4aaa	PWI	PAPER-TAPE WRITE INTERROGATE, BRANCH
+ inn1 29 4aaa	RTP	RECORD TRANSFER
+ 1111 16 1111	RND	ROUND
+ 1110 49 11nn	SLA	SHIFT LEFT A
+ 1111 49 11nn	SLT	SHIFT LEFT A AND R
+ 1112 49 11nn	SLS	SHIFT LEFT A WITH SIGN
+ 1110 48 11nn	SRA	SHIFT RIGHT A
+ 1111 48 11nn	SRT	SHIFT RIGHT A AND R
+ 1112 48 11nn	SRS	SHIFT RIGHT A WITH SIGN
+ sLfo 40 4aaa	STA	STORE A
+ sLfi 40 4aaa	STB	STORE B
+ 1111 44 4aaa	STP	STORE P
+ sLfi 40 4aaa	STR	STORE R
+ 1110 13 4aaa	SUB	SUBTRACT
+ 1111 13 4aaa	SUA	SUBTRACT ABSOLUTE
+ dnnv 09 4aaa	SPO	SUPERVISORY PRINT-OUT

BURROUGHS 220 Alphanumeric codes

SYMBOL		CODE							Punched Card	
Burroughs	220	Computer and Magnetic Tape	Paper Tape					X		
			0	Check	8	4	2			1
(Space)	(Space)	00		✓					(Blank)	
.	.	03	X	0		8		2	1	12 8-3
H	H	04	X	0	✓	8	4			12 8-4
&	&	10	X	0	✓					12
\$	\$	13	X		✓	8		2	1	11 8-3
*	*	14	X		✓	8	4			11 8-4
—	—	20	X							11
/	/	21		0	✓				1	0 1
%	%	23		0	✓	8		2	1	0 8-3
^	^	24		0	✓	8	4			0 8-4
~	~	33			✓	8		2	1	8-3
u	u	34			✓	8	4			8-4
A	A	41	X	0					1	12 1
B	B	42	X	0				2		12 2
C	C	43	X	0	✓				2	1 12 3
D	D	44	X	0	✓			4		12 4
E	E	45	X	0	✓			4	1	12 5
F	F	46	X	0	✓			4	2	12 6
G	G	47	X	0	✓			4	2	1 12 7
H	H	48	X	0	✓	8				12 8
I	I	49	X	0	✓	8			1	12 9
J	J	51	X						1	11 1
K	K	52	X					2		11 2
L	L	53	X					2	1	11 3
M	M	54	X		✓		4			11 4
N	N	55	X					4	1	11 5
O	O	56	X					4	2	11 6
P	P	57	X		✓			4	2	1 11 7
Q	Q	58	X		✓	8				11 8
R	R	59	X		✓	8			1	11 9
S	S	62		0	✓				2	0 2
T	T	63		0	✓			2	1	0 3
U	U	64		0	✓		4			0 4
V	V	65		0	✓		4	1		0 5
W	W	66		0	✓		4	2		0 6
X	X	67		0	✓		4	2	1	0 7
Y	Y	68		0	✓	8				0 8
Z	Z	69		0	✓	8			1	0 9
0 (Zero)	0 (Zero)	80		0						0
1	1	81								1
2	2	82							2	1
3	3	83			✓				2	1 3
4	4	84			✓			4		4
5	5	85			✓			4	1	5
6	6	85			✓			4	2	1 6
7	7	87						4	2	1 7
8	8	88				8				8
9	9	89			✓	8			1	9
TAB	SKIP	26		0	✓	8	4	2		0 8-6
CARRIAGE RETURN	CR	16	X		✓	8	4	2		11 8-6
FORM OUT	PI 6	15	X		✓	8	4	1		11 8-5
END-OF-WORD	PI 7	35				8	4	1		8-5
BLANK	SP 1	02	X	0	✓	8		2		12 8-2
TAPE FEED	TAPE FEED	*	X	0	✓	8	4	2	1	12 8-7
	END CARD 1	36				8	4	2		8-6
	END CARD 2	27		0		8	4	2	1	0 8-7
	CORRECT TAB	37		✓		8	4	2	1	8-7
	ERROR	17	X			8	4	2	1	11 8-7
	PI 1	32		✓		8		2		8-2
	PI 2	12	X			8		2		11 8-2
	PI 3	22		0		8		2		0 8-2
	PI 4	25		0	✓	8	4	1		0 8-5
	PI 5	05	X	0		8	4	1		12 8-5
	SP 2	06	X	0		8	4	2		12 8-6

*Not represented.