BASIC

LEROY'S CHEATSHEET — Keyboard Overlay
for the COMMODORE VIC-20 and 64

STATEMENTS

CL▁	(L)	**CLR** Clear variables in memory
D♠	(A)	**DATA** *c1*[,*c2*,...,*cn*] Define constant DATA for READ
D▔	(E)	**DEF FN** *name*(*variable*) = expression Defines user function
D┐	(I)	**DIM** *var*(*s1*,...,*sn*) [,*var*(*s1*,...,*sn*)...] Deminsion arrays
E╱	(N)	**END** End of program execution
F┌	(O)	**FOR** *var=start* **TO** *limit* **[STEP** increment**]** Loop from FOR to NEXT
N▔	(E)	**NEXT** [*var*] [,*var*]... Terminates FOR loops
G▔	(E)	**GET** *var1* [,*var2*...,*var10*] Read keyboard keys into variables
GO♥	(S)	**GOSUB** *line#* Go to subroutine at *line#* and return to next statement
G┌	(O)	**GOTO** *line#* Go to *line#*
IF		**IF** *exp* **THEN** *line#* if exp is true, then go to *line#*
		IF *exp* **THEN** statements If *exp* is true, then execute statements on line
INPUT		**INPUT** [“*prompt*”;] variable list Read keyboard data into variable list
L▔	(L)	**[LET]** *variable = esp* Assign *exp* to variable
ON		**ON** *exp* **GOTO** or **GOSUB** *line#*[,*line#*] Go to *line#* indexed by *exp*
P┌	(O)	**POKE** *adr,value* Put 8-bit *value* into memory *adr*
?		**PRINT**[*var1*] [,*var2* or ;*var2*] [;] Write variables
R▔	(E)	**READ** *var1*],*var2*...,*varn*] Read DATA statements into variables
REM		**REM** [*text*] Remark statement
RE♥	(S)	**RESTORE** Reset DATA statement pointer to beginning
RE│	(T)	**RETURN** Exit subroutine to statement following GOSUB
S│	(T)	**STOP** Stops program execution
S │	(Y)	**SYS** *addr* Go to memory address *addr* and execute machine program
W♠	(A)	**WAIT** *addr*,*mask1*[,*mask2*] Wait for address *addr* to match *mask(s)*

T │	(H)	**THEN**
ST▔	(E)	**STEP**

NUMERIC FUNCTIONS

A│	(B)	**ABS**(*exp*)	— Absolute value of *exp*
A♥	(S)	**ASC**(*n*)	— Convert Commodore ASCII to value *n*
A│	(T)	**ATN**(*n*)	— Arctangent of *n*
COS		**COS**(*n*)	— Cosine of *n*
E✚	(X)	**EXP**(*n*)	— e(2.7182 . . .) raised to power *n*
F▁	(R)	**FRE**(*dmy*)	— Returns amount of free memory space
INT	(N)	**INT**(*n*)	— Returns integer part
LEN		**LEN**(*str*)	— Returns length of *string*
LOG		**LOG**(*n*)	— Log base e of *n*
P▔	(E)	**PEEK**(*adr*)	— Return value at *addr*
POS	(O)	**POS**(*dmy*)	— Returns cursor position
RN	(N)	**RND**(*n*)	— Random number (0.0 to 1.0)
S┐	(I)	**SIN**(*n*)	— Sine of *n*
S●	(Q)	**SQR**(*n*)	— Square root of *n*
ST		**STATUS**	— Status of last I/O operation
TAN		**TAN**(*n*)	— Tangert of *n*
TI		**TIME**	— Elapsed time in 1/60 seconds
U♥	(S)	**USR**(*adr*)	— Jump to user subroutine
V♠	(A)	**VAL**(*str*)	— Converts numeric *string* to value

COMMANDS

C┌	(O)	**CONT** Continue to RUN program after STOP or END.
L┐	(I)	**LIST** [*first line#*] - [*second line#*] List program
L┌	(O)	**LOAD** [“*filename*”] [,*device#*] [,*address*] Load program
NEW		**NEW** Delete current program and clear variables
R╭	(U)	**RUN** [*line#*] Run program and clear variables
S♠	(A)	**SAVE** [“*filename*”] [,*device#*] [,*address*] Save program
V▔	(E)	**VERIFY** [“*filename*”] [,*device#*] Compare saved program

DEVICE NUMBER

0	Keyboard
1	Cassette tape
2	RS232
3	Screen
4	Printer #1
5	Printer #2
8	Disk #1 (15=CMD CHNL)
9	Disk #2 (16=CMD CHNL)
10	Disk #3 (17=CMD CHNL)
11	Disk #4 (18=CMD CHNL)

A╱	(N)	**AND**
OR		**OR**
N┌	(O)	**NOT**

BASIC

LISTING PROGRAM ON PRINTER

```
OPEN4,4:CMD4:LIST:PRINT#4:CLOSE4
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STATEMENTS (I/O)

CL┌	(O)	**CLOSE** [*file#*] Close file
C╲	(M)	**CMD** *file#*[,*string*] Re-direct display output to file#
GET#		**GET#** *file#*, *varl*, [*var2* . . .,*varn*] Read character from file #
I╱	(N)	**INPUT#** *file#*,variable list Read data from file# to variable list
O┐	(P)	**OPEN** *file#*[,*device#*] [,*addr#*] [,“*filename*[, **REL** or **SEQ**] [, **R** or **W**]”] Open file for device
P▁	(R)	**PRINT#** *file#*,[*varl*] [,*var2* or ;*var2*] [;] Write variables to file
R▔	(E)	**READ** *varl*[,*var2* . . .,*varn*] Read DATA statements into variables

DISK COMMANDS

OPEN 15,8,15,"UI":CLOSE15	Sets 1541 disk to use VIC-20
VERIFY"TEST",8	Compares program with memory
OPEN15,8,15	Opens CMD channel for the following:
PRINT#15,"N0:diskname,ID"	Formats blank diskette (2 to 3 min)
PRINT#15,"C0:newfile=0:oldfile"	Copies file
PRINT#15,"R0:newname=oldname"	Renames file
PRINT#15,"S0:filename"	Erases file
PRINT#15,"I"	Initialize disk
PRINT#15,"V"	Validate diskette
LOAD"$",8	Loads disk directory into memory
SAVE"@0:TEST",8	Saves and replaces program

STRING FUNCTIONS

C │	(H)	**CHR$**(*n*)	— Convert *n* to ASCII character
LE▁	(F)	**LEFT$**(*str*,*n*)	— Leftmost *n* characters
M┐	(I)	**MID$**(*str*,*s*,*n*)	— Substring starting at s for *n* char
R┐	(I)	**RIGHT$**(*str*,*n*)	— Rightmost *n* characters
S┐	(P)	**SPC**(*n*)	— Print (or output) *n* spaces
ST▁	(R)	**STR$**(*n*)	— Convert *n* to string
T♠	(A)	**TAB$**(*n*)	— Tab to *nth* position
TI$		**TIME$**	— Set and return time as *hhmmss*

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