COMMODORE 64 QUICK REFERENCE CARD

SIMPLE VARIABLES

Type	Name Range
Real	XY = 1.70141183E+38
	= 2.93873588E-39
Integer	XY% = 32767
String	XY$ 0 to 255 characters

X is a letter (A–Z), Y is a letter or number (0-9). Variable names can be more than 2 characters, but only the first two are recognized.

ARRAY VARIABLES

Type	Name
Single Dimension	XY(5)
Two-Dimension	XY(5,5)
Three-Dimension	XY(5,5,5)

Arrays of up to eleven elements (subscripts 0-10) can be used where needed. Arrays with more than eleven elements need to be DIMensioned.

ALGEBRAIC OPERATIONS

=	Assigns value to variable
-	Negation
↑	Exponentiation
*	Multiplication
/	Division
+	Addition
-	Subtraction

RELATIONAL AND LOGICAL OPERATORS

=	Equal
<>	Not Equal To
<	Less Than
>	Greater Than
<=	Less Than or Equal To
>=	Greater Than or Equal To
NOT	Logical "Not"
AND	Logical "And"
OR	Logical "Or"

Expression equals 1 if true. 0 if false.

SYSTEM COMMANDS

LOAD "NAME"	Loads a program from tape
SAVE "NAME"	Saves a program on tape
LOAD "NAME",8	Loads a program from disk
SAVE "NAME",8	Saves a program to disk
VERIFY "NAME"	Verifies that program was SAVEd without erors
RUN	Executes a program
RUN XXX	Executes a program starting at line XXX
STOP	Halts execution
END	Ends Execution
CONT	Continues program execution from line where program was halted
PEEK(X)	Returns contents of memory location X
POKE X,Y	Changes contents of location X to value Y
SYS xxxxx	Jumps to execute a machine language program starting at xxxxx
WAIT X,Y,Z	Program waits until contents of location X, when EORed with Z and ANDed with Y, is nonzero
USR(X)	Passes value of X to a machine language subroutine

EDITING AND FORMATTING COMMANDS

LIST	Lists entire program
LIST A-B	Lists from line A to line B
REM Message	Comment message can be listed but is ignored during program execution
TAB(X)	Used in PRINT statements. Spaces X positions on screen

SPC(X)	PRINTs X blanks on line
POS(X)	Returns current cursor position
CLR/HOME	Positions cursor to left corner of screen
SHIFT CLR/HOME	Clears screen and places cursor in "Home" position
SHIFT INST/DEL	Inserts space at current cursor position
INST/DEL	DELetes character at current cursor Position
CTRL	When used with numeric color key, selects text color. May be used in PRINT statement
CRSR Keys	Moves cursor up, down, left, right on screen
Commodore Key	When used with SHIFT selects between upper/lower case and graphic display mode. When used with numeric color key, selects optional text color

ARRAYS AND STRINGS

DIM A(X,Y,Z)	Sets maximum subscripts for A; reserves space for (X+1)*(Y+1)*(Z+1) elements starting at A(0,0,0)
LEN(X$)	Returns number of characters in X$
STR$(X)	Returns numeric value of X, converted to a string
VAL(X$)	Returns numeric value of X$, up to first non-numeric character
CHR$(X)	Returns ASCII character whose code is X
ASC(X$)	Returns ASCII code for first character of X$
LEFT$(A$,X)	Returns leftmost X characters of A$
RIGHT$(A$,X)	Returns rightmost X characters of A$
MID$(A$,X,Y)	Returns Y characters of A$ starting at character X

INPUT/OUTPUT COMMANDS

INPUT A$ or A	PRINTs "?" on screen and waits for user to enter a string or value
INPUT "ABC",A	PRINTs message and waits for user to enter value. Can also INPUT A$
GET A$ or A	Waits for user to type one character value, no RETURN needed
DATA A,"B",C	Initializes a set of values that can be used by READ statement
READ A$ or A	Assigns next DATA value to A$ or A
RESTORE	Resets data pointer to start READing the DATA list again
PRINT "A= ";A	PRINTs string "A=" and value of A. ";" suppresses spaces "," tabs data to next field

PROGRAM FLOW

GOTO X	Branches to line X
IF A=3 THEN 10	IF assertion is true THEN execute following part of statement. IF false, execute next line number
FOR A =1 TO 10 STEP 2: NEXT	Executes all statements between FOR and corresponding NEXT, with A going from 1 to 10 by 2. Step size is 1 unless specified
NEXT A	Defines end of loop. A is optional
GOSUB 2000	Branches to subroutine starting at line 2000
RETURN	Marks end of subroutine. Returns to statement following most recent GOSUB
ON X GOTO A,B	Branches to Xth line number on list. If X = 1 branches to A, etc.
ON X GOSUB A,B	Branches to subroutine at Xth line number in list