

the digital group

po box 6528 denver, colorado 80206 (303) 777-7133

flyer

NUMBER 8A

digital group

Maxi-BASIC

VERSION 1.0

The Digital Group is delighted to announce the availability of the first version of Digital Group Maxi-Basic for Z80 and 8080 based Digital Group systems. This BASIC is a powerful extended BASIC with many features not contained in standard BASICs.

MAJOR FEATURES:

- Fast BCD Floating Point Arithmetic
- Formatted Output
- Multiple Statements per line
- Multiple Line Functions - User Defined with multiple variables
- Available Memory Size Determined Automatically
- Statement Renumbering
- String Manipulation
- N-Dimensioned Arrays
- Most Source Statements are stored as single bytes

Due to the high interest in this product, we've decided to include as much information as possible on the statements and commands. While this approach will probably be a little dryer than normal, it should help provide many of the answers to your questions about Maxi-BASIC's capabilities.

First, some notes on abbreviations:

1. () = optional
2. LN = line number
3. exp = expression

General

Line number range = 0 through 65,535.

Multiple statement per line

separator = colon

Blanks are ignored anywhere in statements

Control-C = Halts execution whenever entered

Commands

RUN (LN)

LIST (LN), (LN)

SCR

= Scratch program

REN (beg LN) (increment) = Renumber

CLEAR = Clear all var.

CONT = Continue

Constant Range .1E-63 through .99999999 E+63

Operators: +, -, /, *, ↑

Relational: =, <, >, <>, >=, =>, <=, =<

Boolean: AND, OR, NOT

Statements:

Comments

LET (optional)	
IF ... THEN ... ELSE ...	
FOR ... STEP	multiply nested
NEXT	
GOTO	
ON ... GOTO	
EXIT	same as GOTO, but terminates active FOR loops
STOP	
END	
REM	
READ	
DATA	
RESTORE (LN)	LN specifies the line the READ pointer is to be restored to.
INPUT ("literal prompt")	
INPUT1	Same as INPUT but inhibits Carriage Return at end of user input
GOSUB	
RETURN	
PRINT	
FILL	Fill a byte in memory with an expression value
OUT	Executes a Z80/8080 OUT instruction. Ex: OUT 5,3 will perform an OUT 5 instruction with 3 in the Accumulator

Arrays:

Any number of dimensions
Any size, to the limits of memory

Strings:

A string of 8-bit characters may be dimensioned to any size, limited only by available memory. Exs:
100 DIM z\$(1), Z1\$(10000)

Substrings A\$(N,M) = substring of characters N through M

Concatenation: The string concatenation character is a plus sign

User Defined Functions

Either String or Numeric type
Single line
Multiple line
Any number of numeric arguments

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Functions:

FREE(0)	Number of bytes remaining in free storage
ABS(exp)	Absolute value of expression
SGN(exp)	Determines the sign of expression
INT(exp)	Integer value of the expression
LEN(str name)	Returns the length of the string
CHR\$(expr)	Returns a string with the specific character
VAL(str exp)	Returns the numeric value of the string
STR\$(exp)	Returns a string with the specified numeric value
ASC(str name)	Returns ASCII code of first character in string
SIN(exp)	SINE of expression
COS(exp)	COSINE of expression
RND(exp)	Returns a random number between 0 and 1.
LOG(exp)	Returns natural log of expression
EXP(exp)	Returns the value of e raised to the specified power
SQRT(exp)	Returns the positive square root of expression
CALL(exp,opt. exp)	See Machine Language Interfacing
EXAM(exp)	Returns the contents of addressed memory byte

Machine Language Subroutine Interfacing:

CALL (exp1, optional exp2)
 exp1 = address of machine language subroutine
 exp2 = value passed to machine language subroutine

Formatted Output:

PRINT %\$10F3,J

Digital Group Maxi-BASIC uses Format Strings anywhere in the PRINT statement. A Format String consists of optional format characters followed optionally by a format specification.

The Format characters are:

- C = place commas to the left of decimal point as needed
- \$ = place a dollar sign to the left of value
- Z = suppress trailing zeroes
- # = make this format string the default specification

Format Specifications (similar to FORTRAN) are:

- nFm = Value printed in n-char field, rt justified, m digits to rt of dec.
- nI = Value printed in n-char field, rt justified.
- nEm = Value printed in scientific notation.

All printed values are rounded if necessary.

TAB (N) = Advances printer to a specified output position

Storage Requirements:

Maxi-BASIC V.1.0 requires 8K and loads from 4K through 12K. The minimum Digital Group recommended configuration is 18K.



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Distribution Package Includes:

User Documentation - Knowledge of BASIC in general is presumed
Object code on Suding audio cassette (1100 baud)

You will probably notice that there is an option on the Order Form for a special deal on Z80 Maxi-BASIC. For an additional \$5.00 we will send you the Version 2.0 update to Z80 Maxi-BASIC. We are working hard on this also but no information is yet available as to capabilities or availability.

ORDER FORM

<u>Qty</u>	<u>Program</u>	<u>Price Each</u>	<u>Amount Extended</u>
___	Z80 Maxi-BASIC w/version 2.0 update	\$20.00	_____
___	Z80 Maxi-BASIC w/o update	\$15.00	_____
___	8080 Maxi-BASIC w/o update	\$15.00	_____

Amount Enclosed _____

Bankamericard # or Mastercharge # _____

Expiration date: _____ M/C Interbank # _____

SEND THIS FORM TO:

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