



BLAISE  
COMPUTING  
INC.

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Thank you for your interest in Blaise Computing Inc. Blaise Computing produces productivity tools for system developers, providing the software and support to take advantage of the power of the IBM Personal Computer and XT. We support both Pascal and C; probably the most powerful general purpose languages available in the DOS environment.

TOOLS allows you to take advantage of the machine dependent features of the IBM PC/XT as well as providing other important functions. Complete screen access, extensive string handling and a general gate to the BIOS functions are just some of the features provided. TOOLS 2 provides the capability to utilize the features and power of DOS 2.0 without resorting to assembly language programming. TOOLS 2 provides extended memory allocation, program and DOS command execution, DOS file handling and a number of other utilities. The C version of TOOLS 2 also supports interrupt processing. With these functions, you can write general interrupt service routines entirely in C.

VIEW MANAGER is an extensive screen management system. With VIEW MANAGER you can interactively design and create screens, and then easily access them using simple procedure calls. C support for VIEW MANAGER will be available early in 1983.

All Blaise Computing products are carefully crafted to not only provide you with important functions, but also to give you a model of program development in each language. C and Pascal versions are written in their respective languages to take advantage of the strengths of each, and to work harmoniously with your applications. All source code (including the necessary assembler routines) comes with TOOLS and TOOLS 2. The source code for the VIEW MANAGER library procedures is also available at additional cost. The license agreement for all Blaise Computing products allows you to distribute your developed applications without any additional royalty costs.

Blaise Computing Inc. supports its products with telephone support and a quarterly newsletter. Routine updates are available at a nominal cost. We can also provide the MS-Pascal compiler and Microsoft C compiler at below list price, and have technically competent support.

Enclosed please find more detailed information about our products and an order form. Please feel free to call if you have any other questions.

# PASCAL TOOLS

The following list provides a brief description of the functions and procedures which comprise Pascal TOOLS. All routines are written in Pascal except for a general BIOS gate, which is written in Macro Assembler. All the procedures are carefully documented and written to take specific advantage of the features of Pascal.

## String Functions

**leftzz** Extract the left most characters of a string  
**rightzz** Extract the right most characters of a string  
**substrzz** Extract a substring  
**midstrzz** Insert one string in the middle of another  
**fillzz** Construct a string of repeated characters  
**indexzz** Return the starting position of one string within another string  
**verifyzz** Verify that all characters of a string appear in another string  
**xlatezz** Translate a string using a string table  
**cvtzz** Convert a string using a general conversion code  
**ivalzz** Convert a numeric string into its value  
**datezz** Return a full date string including the day of the week  
**timezz** Return the time of day as a string (for example, 11:59 AM)

## Screen Handling

**resetv** Initialize the screen video attributes  
**modevv** Return the screen mode, including which adapter is currently in use  
**pagsetvv** Set the current display page  
**actpagvv** Select the active display page  
**scrollvv** Scroll lines of text within a specified window  
**clsvv** Clear the screen  
**cursetvv** Set the cursor position  
**curposvv** Return the cursor position  
**cursorvv** Set the cursor size  
**attribvv** Set display attributes or colors  
**readvv** Read a character and display attributes  
**writevv** Write copies of a character without changing the display attributes  
**scnstrvv** Write to a display page using standard TTY format

## Fast Forms Utilities

**alarmuu** Sound the screen beeper  
**abortuu** Terminate the program and return with a message  
**errmsguu** Display a message at a specified position on the screen with a specified display attribute  
**clrmsguu** Clear a screen message  
**inkeyuu** Wait until a key is depressed, and then return the character or extended character code.  
**pauseuu** Display a message and suspend processing.

## Graphics Interface Functions

**initgg** Initialize graphics or text mode and set border and background colors  
**ptwritgg** Write a point with a specified color  
**ptreadgg** Read the color of a specified point  
**hsetgg** Set the home plotting position  
**hreadgg** Return the coordinates of the position  
**linegg** Draw a line between two points using a color  
**amovegg** Draw a line using absolute coordinates  
**rmovegg** Draw a line using relative coordinates

## Application Functions

**pyesnoxx** Display a prompt and accept a YES/NO response  
**prdnmxx** Display a prompt and accept a numeric response  
**prdlinx** Display a prompt and accept a text response  
**comlinxx** Return the last DOS command line  
**cparsexx** Parse a command line and return the next token

## Basic Intrinsic Functions

**minbb** Return the minimum of two integers  
**maxbb** Return the maximum of two integers  
**signbb** Return the sign of an integer  
**powerbb** Extended exponentiation function  
**rndbb** Pseudo random number generator

## Pascal TOOLS INCLUDES

Pascal TOOLS is delivered on standard DOS diskettes and includes all source code as well as the compiled unit object modules which can be used immediately. The routines are supplied as six separately compiled units, and interface files are included to let you use the units without modification if you wish.

A comprehensive User Reference Manual documents each routine, and examples are given showing their use. Included are complete sample Pascal programs using TOOLS.

Pascal TOOLS requires the IBM Pascal or Microsoft MS-Pascal Compiler, and any version of DOS. TOOLS can be used on the IBM PC/XT or any hardware compatible machine.



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# PASCAL TOOLS 2

The following list provides a brief description of the functions and procedures which comprise Pascal TOOLS 2. All routines are written in Pascal except for a general DOS gate, which is written in Macro Assembler. All the routines are carefully documented both in the source files and in the Reference manual. The package is designed and written to take specific advantage of the features of Pascal.

## Support Utilities

initgg Initialize registers in preparation for calling the general DOS gate  
dos General DOS gate allows any DOS function to be accessed.

## Program Control and Memory Management

allocmm Allocate a block of memory beyond the normal data space  
freemm Free a previously allocated memory block  
setblkmm Adjust the size of an allocated memory block  
shrinkmm Release all memory not needed for the program  
execmm Load and execute another program  
doscmdmm Execute a DOS command  
exitmm Terminate a program and set an error code  
waitmm Inspect the return code set by pcexit or pcrexet

## DOS File Handling Functions

creatff Create and open a file with the specified pathname  
openff Open a file  
closeff Close a file  
setatrff Inspect or set file attributes  
seekff Position the file pointer  
readff Read data from a file to a specified buffer  
writeff Write data from a buffer to a file  
deleteff Delete a file  
retdtaff Return the Disk Transfer Area location  
setdtaff Set the Disk Transfer Area location

## Directory Maintenance

mkdircc Create a new subdirectory  
rmdircc Remove a subdirectory  
chdircc Change the current directory  
curdircc Return the path of the current directory  
sfirstcc Find file information for the first file name matching specified requirements  
snextcc Return information for the next matching file name  
renamecc Rename a file  
stampcc Return or alter the file date/time stamp

## DOS System Information

getdatqq Return the system date  
gettimqq Return the system time  
setdatqq Set the system date  
settimqq Set the system time  
getdosqq Return the DOS Version number  
diskspqq Return disk space allocation for a specified drive

## Pascal TOOLS 2 INCLUDES

Pascal TOOLS 2 is delivered on standard DOS diskettes and includes all source code as well as the separately compiled units which can be used immediately. Interface files are included to let you use the units without modification if you wish.

A comprehensive User Reference Manual documents each routine, and examples are given showing their use. Included are complete sample Pascal programs using TOOLS 2 illustrating how TOOLS 2 can be used to develop applications.

Pascal TOOLS 2 requires the IBM Pascal or Microsoft MS-Pascal Compiler, and Version 2.0 of DOS. Although C TOOLS 2 does not require C TOOLS, the naming and coding conventions are similar to make using both packages easy. TOOLS 2 can be used on the IBM PC/XT or any hardware compatible system.



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# C TOOLS

The following list provides a brief description of the functions which comprise C TOOLS. All routines are written in C except for a general BIOS gate, an extended DOS function and a memory move procedure, which are written in Macro Assembler. All the functions are carefully documented and written to take specific advantage of the features of C.

## String Functions

stcleft Extract the left most characters of a string  
stcright Extract the right most characters of a string  
stcsub Extract a substring  
stcmid Insert one string in the middle of another  
stcfill Construct a string of repeated characters  
ststindex Return the starting position of one string within another string  
stschind Return the position of a character in a string  
stsverfy Verify that all characters of a string appear in another string  
stpxlate Translate a string using a string table  
stpcvt Convert a string using a general conversion code  
stpline Return a line of text from the console without echo  
stsddate Return the system date, both in numeric form and as a string including the day of the week  
ststime Return the system time, both in numeric form and as a string (for example, 11:59 AM)

## Screen Handling Functions

screset Initialize the screen video attributes  
scmode Return the screen mode, including which adapter is currently in use  
scpage Set the current display page  
scapage Select the active display page  
scscroll Scroll lines of text within a specified window  
scclear Clear the screen  
sccurset Set the cursor position  
sccurpos Return the cursor position  
sccursor Set the cursor size  
scattrib Set display attributes or colors  
scread Read a character and display attributes  
scwrite Write copies of a character without changing the display attributes  
scattywrt Write to a display page using standard TTY format  
scdspmsg Display a message at a specified position on the screen with a specified display attribute  
scclrmsg Clear a screen message



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## General Utility Functions and Macros

utslmove Move bytes from one location to another. Any memory location can be used.  
utabort Terminate the program and return with a message  
utinkey Wait until a key is depressed, and then return the character or extended character code.  
utpause Display a message and suspend processing until a key is depressed.  
utrnd Pseudo random number generator  
uthibyte (Macro) Return the high byte  
utlobyte (Macro) Return the low byte  
utbyword (Macro) Construct a "word" from two bytes  
utoutrng (Macro) Check the range of a numeric  
utsign (Macro) Return the sign of a numeric  
utalarm (Macro) Sound the screen beeper  
utskip (Macro) Display a carriage return/line feed

## Graphics Interface Functions

grinit Initialize graphics or text mode and set border and background colors  
grptwrit Write a point with a specified color  
grptread Read the color of a specified point  
grline Draw a line between two points using a color  
gramove Draw a line using absolute coordinates  
grrmove Draw a line using relative coordinates

## Application Functions

apyesno Display a prompt and accept a YES/NO response  
aprdnum Display a prompt and accept a numeric response  
aprdtxt Display a prompt and accept a text response  
apcomlin Return the entire DOS command line rather than a token at a time.

## C TOOLS INCLUDES

C TOOLS is delivered on standard DOS diskettes and includes all source code as well as a C TOOLS library which can be used immediately. The functions have been separately compiled so that programs include only the functions they need. Header files let you include function, variable and macro declarations easily into your C programs.

A comprehensive User Reference Manual documents each function, and examples are given showing their use. Included are complete sample C programs using TOOLS.

C TOOLS requires the Microsoft (Lattice) C Compiler or the Computer Innovations C86 Compiler, and any version of DOS. TOOLS can be used on the IBM PC/XT or any hardware compatible machine.

# C TOOLS 2

The following list provides a brief description of the functions which comprise C TOOLS 2. All routines are written in C except for a general DOS gate, and the interrupt function support procedures, which are written in Macro Assembler. All the functions are carefully documented both in the source files and in the Reference manual. The package is designed and written to take specific advantage of the features of C.

## Support Utilities

**utinit** Initialize register structure in preparation for calling a DOS function  
**utslmove** Move data from one memory location to another using the segment and offset addresses  
**dos** General DOS gate allows any DOS function to be accessed.

## Program Control and Memory Management

**pcalloc** Allocate a block of memory beyond the normal data space  
**pcfrees** Free a previously allocated memory block  
**pcsetblk** Adjust the size of an allocated memory block  
**pcshrink** Release all memory not needed for the program  
**pcexec** Load and execute another program  
**pcdoscmd** Execute a DOS command  
**pcenvchk** Return an environment parameter  
**pcexit** Terminate a program and set an error code  
**pcresext** Terminate a program but stay resident  
**pcwait** Inspect the return code set by **pcexit** or **pcresext**  
**pcsetvec** Set an interrupt vector  
**pcrctvec** Return an interrupt vector  
**pcintoff** Disable maskable interrupts  
**pcinton** Enable maskable interrupts  
**pcsetisr** Define an interrupt service routine  
**pcinvint** Invoke a software interrupt

## DOS File Handling Functions

**flcreate** Create and open a file with the specified pathname  
**flopen** Open a file  
**flclose** Close a file  
**flsetatr** Inspect or set file attributes  
**flseek** Position the file pointer  
**flread** Read data from a file to a specified buffer  
**flwrite** Write data from a buffer to a file  
**fldelete** Delete a file  
**flretdta** Return the Disk Transfer Area location  
**flsetdta** Set the Disk Transfer Area location

## Directory Maintenance

**drmkdir** Create a new subdirectory  
**drmdir** Remove a subdirectory  
**drchdir** Change the current directory  
**drcurdir** Return the path of the current directory  
**drsfirst** Find file information for the first file name matching specified requirements  
**drsnxt** Return information for the next matching file name  
**drrename** Rename a file  
**drstamp** Return or alter the file date/time stamp

## DOS Information

**qygetdat** Return the system date  
**qygettim** Return the system time  
**qysetdat** Set the system date  
**qysettim** Set the system time  
**qydosver** Return the DOS Version number  
**qydisksp** Return disk space allocation for a specified drive

## C TOOLS 2 INCLUDES

C TOOLS 2 is delivered on standard DOS diskettes and includes all source code as well as a C TOOLS 2 library which can be used immediately. The functions have been separately compiled so that programs include only the functions they need. Header files let you include function, variable and macro declarations easily into your C programs.

A comprehensive User Reference Manual documents each function, and examples are given showing their use. Included are complete sample C programs using TOOLS 2 illustrating how TOOLS 2 can be used to develop applications.

C TOOLS 2 requires the Microsoft (Lattice) C Compiler and Version 2.0 of DOS. Although C TOOLS 2 does not require C TOOLS, the naming and coding conventions are similar to make using both packages easy. TOOLS 2 can be used on the IBM PC/XT or any hardware compatible system.



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