

Binary Technology, Inc.

BT



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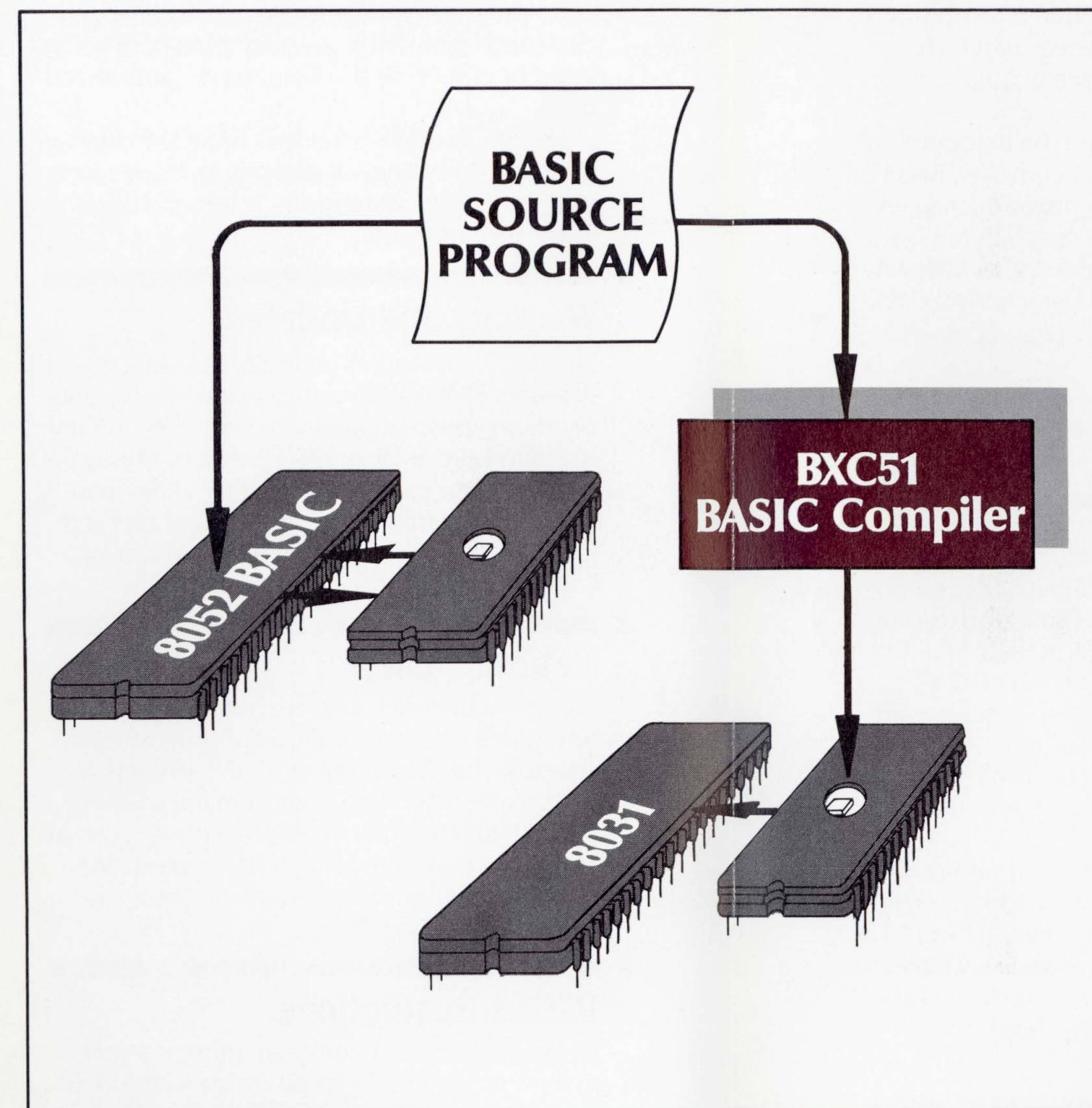


Binary Technology, Inc.

# BASIC COMPILER STREAMLINES MICRO- CONTROLLER APPLICATIONS

## BXC51

*BXC51 is a BASIC compiler for the 8051 family of processors.*

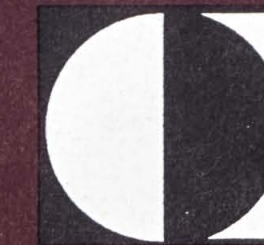


*Save 90%\*  
on the cost of  
your C.P.U.s  
with the  
BXC51 BASIC  
Compiler*

\*Based upon Intel's list price as of 2/15/89 for 8052 BASIC and 8031 microprocessors.



*The BXC51 is aimed at helping engineers and programmers develop 8051 systems quickly, easily and inexpensively.*



**Binary Technology, Inc.**

BXC51 is a BASIC compiler for the Intel MCS-51® family of processors.

Prior to the introduction of the BXC51 compiler, system designers had to resort to assembly language, 'C', and/or PLM-51 when their systems outgrew the BASIC-52 interpreter; costly and time-consuming alternatives.

This has been changed with the introduction of Binary Technology's BXC51 compiler. BXC51 reads your BASIC-52 source program and outputs an 8051/8052 machine code file in "Intel Hex" format. You then have the option of downloading this file into a PROM programmer, an In Circuit Emulator (ICE), or a monitor/debugger-equipped target system.

An intermediate assembly language file can be produced allowing additional optimization if desired.

## The BXC51 is Easy to Use

Start by writing your own program with a non-formatting text editor or by capturing an existing program from the 8052 BASIC CPU with a terminal emulator such as Kermit. Use BXC51 to compile the program; a one-step process with no linking required. Download the resulting hex file into a programmer, plug the programmed PROM into your target system and you're done!

The BXC51 supports in-line assembly code eliminating the need for the complicated assembly interfacing required by the Intel BASIC-52 interpreter. With BXC51, just include an '\$asm' command, insert your lines of assembly code, and return to BASIC using the '\$basic' command.

## The BXC51 Saves You Money

The BXC51 saves you not just time but real dollars! Your program will now run 2 to 10 times faster and you can save 90% on the cost of your CPUs by using the 8031 in place of the 8052-

BASIC chip (based on Intel's list prices as of 2/15/89).

Another advantage of using the BXC51 compiler is that the source for your painstakingly developed program is now protected from being listed or otherwise divulged to non authorized users.

The BXC51 adheres to Intel's BASIC-52 language standard. It includes all statements, expressions, string operators, extensions, interrupt handlers, real-time clocks, etc.

## Warranty and Updates

The BXC51 comes with a 30 day defective media warranty. Binary Technology makes no warranty regarding merchantability or suitability for any specific purpose. Binary Technology will provide you with free updates within the 30 day period with subsequent updates available for a fixed rate of \$50.00 each. Site licenses are available. Call for details.

## Returns Policy

Binary Technology software products are not returnable once the seal on the program disk envelope has been broken. If the seal has not been broken and you wish to make a return, contact our customer service department within 10 days of purchase for an RMA (Return Merchandise Authorization) number. There is a restocking fee of 10%.

## BXC51 Restrictions:

Because the BXC51 compiler adheres strictly to the Intel BASIC-52 language standards, external RAM for the BASIC stack is required in all hardware configurations.

8052/8032: BXC-51 compiled code supports all BASIC-52 statements except for the PROM programming "PGM" routines.

8051/8031: No serial printer support; BASIC

"PRINT#", and "PH1.#" statements are redirected to the console serial port. (Uses TIMER1 for the console baud rate generator).

8751/8752: Supports "PGM" routines. Although the code generated by BXC51 can be put in the internal ROM of an 8751 or 8752, it still requires external RAM for the BASIC stack.

*Note:* BASIC commands such as RUN, LIST, PROG, etc. have no meaning in compiled code and are not supported.

## General

Binary Technology has been producing Intel-based microcontroller products since 1982. Our products cover a wide range of hardware, firmware, and software applications aimed at helping engineers and programmers develop 8051 systems quickly, easily and inexpensively.

## Pricing and Ordering Information

The BXC51 is \$295 and is available for PC-DOS and MS-DOS based systems with a minimum of 256K of RAM, at least one floppy disk and DOS 2.0 or later.

Included with the BXC51 is Binary Technology's SXA51 cross-assembler and full documentation.

Orders are generally shipped within two days of receipt of order with UPS and Federal Express being the usual method of shipment. Other arrangements are available. Binary Technology will ship COD, with prepayment, VISA, Mastercard or on a purchase order to companies who have established credit with us. Payment in US funds only.

To order by VISA, Mastercard, or COD, call

**603-469-3232**

or send your personal check, money order, or purchase order to:

**Binary Technology, Inc.**  
Main Street, P.O. Box 67  
Meriden, NH 03770

## COMMAND SUMMARY

BAUD	Set baud rate for printer port. (8751/8051/8031 only)
CALL	Call assembly routine by address
CLEAR	Clear all variables, arrays, and interrupts
CLEARI	Clear all interrupts
CLEARs	Clear stack space
CLOCK0	Turn real-time clock off
CLOCK1	Turn real-time clock on
DIM	Dimension an array
DO..UNTIL	Loop until a certain condition arises
DO..WHILE	Loop while a condition is true
END	Halt program execution normally
FOR..NEXT	Loop with an index variable a finite number of times
GOSUB..RETURN	Call a BASIC subroutine
GOTO	Jump to another line of BASIC
IDLE	Wait for an interrupt to occur
IF.THEN..ELSE	Conditionally execute a statement
INPUT	Input information from user
LD@	Push a floating point value on the stack from memory
LET	Assign an expression to a variable
ONERR	If a program error occurs, call a BASIC subroutine
ONEXT1	If external interrupt 1 occurs, call a BASIC subroutine
ON GOSUB	On an index, GOSUB a BASIC line number
ON GOTO	On an index, GOTO a BASIC line number
ONTIME	If a timer interrupt occurs, call a BASIC subroutine
PGM	Program an EPROM (8752 only)
PH0.	PRINT, outputting numbers in hexadecimal
PH0.@	PH0. to a user defined output driver
PH0.#	PH0. to the list device*
PH1.	PRINT, outputting numbers in hex with leading zeros
PH1.@	PH1. to a user defined output driver
PH1.#	PH1. to the list device*
POP	Pop value(s) off the top of the floating point stack
PRINT	Output text, numbers, and strings to console device
PRINT@	PRINT to a user defined output driver
PRINT#	PRINT to the list device*
PUSH	Push a value on the floating point stack
PWM	Pulse width modulation
READ..DATA	Read a value from a DATA statement with expressions
REM	A comment
RESTORE	Mark all DATA as unread
RETI	RETURN from ONTIME or ONEXT1
ST@	Pop a value off floating point stack to memory
STOP	Abort program execution with a message
STRING	Allocate string storage space
UI0	Turn off user defined console input routines
UI1	Turn on user defined console input routines
UO0	Turn off user defined console output routines
UO1	Turn on user defined console output routines

\*For 8751/8051/8031 CPUs these commands are redirected to the console serial port.