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## Product Update Status

Basic-2C is now supported in the following environments:

### Single-User MS-DOS Systems

- |                          |                                   |                            |
|--------------------------|-----------------------------------|----------------------------|
| AMSTRAD PC1512           | HP VECTRA                         | SPERRY PC,PC/IT            |
| * ARCHIE/RIVAL - 286     | * IBM PC,XT,AT                    | TANDY 3000                 |
| * AST PREMIUM 286        | * IBM PC XT 286                   | TELEVIDEO TELE-PC          |
| AT&T 6300, 6300 PLUS     | * IBM PS/2 MODELS 30,50,60,70,80, | TELEVIDEO TELE-XT          |
| COMMODORE PC-10, PC-20   | 30/286, 50S, 70Z/386              | TI BUSINESS PRO            |
| COMPAQ DESKPRO           | ITT XTRA XP                       | * TOSHIBA T3100,T3200      |
| COMPAQ PLUS              | * KAYPRO 1610                     | TULIP COMPACT              |
| COMPAQ PORTABLE          | * KAYPRO 16/E                     | UNISYS PW2/500-12          |
| * COMPAQ PORTABLE III    | * KAYPRO PC,PC10,PC30             | * UNISYS PW2-500           |
| * COMPAQ 286 DESKPRO     | * KAYPRO 286i                     | UNISYS PW2-800             |
| * COMPAQ 386 PORTABLE    | * KAYPRO 386                      | * WANG PC.APC              |
| * COMPAQ 386 DESKPRO     | * KAYPRO 2000+                    | * WANG PC280               |
| * COMPAQ 386/S DESKPRO   | LEADING EDGE PC (D)               | * WANG PC380               |
| * COMPAQ 386/20E DESKPRO | MAI/BASIC4 PC                     | * WYSE PC.PC286,2108,2200, |
| * COMPAQ LAPTOP SLT/286  | * MULTITECH LAN 500 (ACER)        | 3216                       |
| COMPUTERLAND PC          | * MULTITECH 700,710 (ACER)        | XEROX 6060PC               |
| DEC VAXMATE              | * MULTITECH 900,910 (ACER)        | XEROX 6065                 |
| * DELL SYSTEM 220/286    | * MULTITECH 1100 (ACER)           | ZENITH 150 SERIES          |
| EPSON EQUITY I,II,III    | NCR PC6                           | ZENITH 248 SERIES          |
| HONEYWELL PC AP          | NEC APC IV                        | * ZENITH SUPER SPORT/286   |

\* Tested and passed for 2.01. Note - to date no previously approved compatible has failed the 2.01 compatibility testing.

### Multi-User Shared Logic Systems

Computer	Operating System
ALTOS 686, 886, 1086, 2086, 3086	XENIX 3.0
ALTOS SERIES 2000	XENIX V
ALTOS 500, 1000, 2000 SYSTEM V	UNIX V
DEC MICROVAX II	VMS
DEC VAX 8000 SERIES	VMS
HONEYWELL XPS-100	UNIX V
IBM AT & IND. STANDARD 286	SCO XENIX V 286 AT
IBM PC,XT,AT	SUPERDOS
IBM PS/2 SERIES	SUPERDOS
INDUSTRY STANDARD 386	SCO XENIX V 386 AT
NEC ASTRA-XL SERIES	ASTR-IX
WYSE PC 286 SERIES	SUPERDOS
WYSE PC 386 SERIES	SUPERDOS
WANG APC	XENIX 3.0
WANG APC	XENIX V

### Multi-User Distributed Logic Systems (Networking)

- NOVELL E/TI NETWORKING
- SPERRY USERNET
- IBM & ALL APPROVED COMPATIBLES
- (SEE SINGLE USER MS/DOS)

# Basic-2C Release III - Product Brief

In the four year history of Basic-2C there have been two major steps in the evolution of the product; first the initial release of Basic-2C in October, 1984; and second, the release of the Interpreter in September, 1986. We view Release III as the third major step. Why do we consider Release III so significant? To put it simply, Release III will be the first version of Basic-2C to provide substantial enhancements to the Basic-2C language.

The purpose of this article is to provide you with detailed information about the language enhancements which will be present in Release III. But before we do that, there are two points we'd like to make:

1. The Release III product is a product that is still under development. Therefore, although the specifications detailed below accurately represent our intentions and will very likely be implemented as described, they are subject to change without notice prior to the actual release of the product.
2. We have not yet set a formal release date for this product. However, at this time we expect to ship the first hardware versions of the Release III product in late first quarter or early second quarter 1989. This date is preliminary and is subject to change without notice.

The enhancements for Release III are grouped into 3 categories, each of which is discussed in greater detail below:

- I. External Call capability
- II. Expanded user partition size
- III. Instruction set enhancements

## I. External Call Capability

Of all the enhancements in Release III, this is clearly the most significant. External call capability provides you, the software developer, with the capability to develop subroutines and modules in languages other than Basic-2C while being able to access these subroutines from your Basic-2C program. In addition, you will be able to incorporate third party library routines for functions such as access methods, graphics capabilities, communications capabilities, and mathematical functions and routines that fully utilize co-processors. Note that new floating point formats for \$PACK/\$UNPACK will be included in this release to allow conversion between Basic-2C internal numeric format and the various floating point formats required.

Note - if you are interested in using external calls to link to third party products, please complete our survey on this subject (see related article below).

### Languages supported:

#### A. MS-DOS/Novell

Microsoft "C"  
Microsoft Pascal  
Microsoft Macro Assembler

#### B. SuperDOS

Metaware Professional "C"  
Metaware Professional Pascal  
Microsoft Macro Assembler (cross compiled from MS-DOS)

#### C. Xenix, Unix (68000) and VMS

"C" and assembler as provided by the manufacturer.

### Basic-2C Interface

Basic-2C programs will be able to 'call' the external subroutines by use of standard GOSUB' statements. When an external routine is present, GOSUB' will transfer control to the external routine and pass the address, type, and length of all parameters specified by the GOSUB'. The subroutine may then make direct modification to the memory areas associated with the Basic-2C variable addresses. Upon return to Basic-2C, the modified values will simply be present in the variables.

This technique allows for very simple modifications to existing Basic-2C programs to utilize external subroutines. Once the external routine is developed and linked into RTP, the programmer may use existing logic by simply removing the Basic-2C DEFFN's which have been replaced by the external DEFFN's. Alternately, to add entirely new functions, the programmer may simply add new GOSUB's to the application. Note that the range of GOSUB' numbers will be expanded beyond '255.

### Creation and Linking of External Subroutines:

Complete documentation and example external subroutines for each language supported on each operating system will be provided with the product.

### Expertise Required:

Although our intentions is to make the interface between Basic-2C and external subroutines as simple as possible, proper use of this capability will require programming expertise in the language(s) used for developing the external routines.

## II. Expanded User Partition Size

The size of the user partition will now be limited only by the physical or logical amount of memory made available by the host operating system. In addition, no distinction will be made between memory used for program text and memory used for variables.

### Partition Size:

- A. MS-DOS/Novell - up to 400k on a 640k system, depending on the actual configuration used.
- B. SuperDOS - up to the maximum task size, 999k under Protected Mode.
- C. Xenix V, System V, Unix V, VMS - up to the virtual task size limit.

Note that the practical size of the user partition on shared logic machines may be limited by the amount of memory physically available or by performance considerations on virtual memory operating systems. More detailed specifications will be published in the hardware specific Basic-2C Supplements for Release III.

### How this will work:

Allocation of space within the user partition will be entirely dynamic. As programs are loaded and variables are defined, memory is allocated as required unless the actual machine limit as described above is exceeded. As programs and variables are cleared, memory is made available for other functions. This operates transparently to the application.

Existing SPACE, SPACEP, and SPACEV functions will always report about 64k available unless less than 64k is actually available. In this case, the actual memory available will be reported.

Two new SPACE functions will be added:

SPACEF will return the total remaining memory available in bytes.

SPACEW will return the total size of the user partition in bytes (equivalent to the way SPACEK works).

Note that the maximum size of an individual variable or array will still be 64k.

## III. Instruction Set Enhancements

Over 60 instruction set enhancements will be incorporated into Release III. These range from relatively minor enhancements to existing instructions to significant new language features like INPUT SCREEN/PRINT SCREEN and Keyboard Logging. Here are some of the highlights:

A. Wang Basic-2 3.1 instructions. The following instructions introduced by Wang in the 3.1 release of Basic-2 will be supported:

1. DATA LOAD BM/DATA SAVE BM - will allow direct access read/writes of partial sectors or multiple sectors.
2. DO/ENDDO groups - will allow multiple statements to be executed as the result of conditional statements IF, ELSE, and ERROR. As an extension over the Wang implementation, nested DO groups will be supported.
3. RESAVE - will perform the equivalent of SCRATCH and SAVE.
4. RENAME - will allow Basic-2C files to be renamed in a single statement.
5. Use of LS and END parameters on MOVE (form 1) will be supported.
6. ERR\$ - will return a text format description of the specified error code.

7. Expanded device table - up to 256 file number slots may be defined. Rules for definition and access to file number slots will be identical with the Wang 3.1 implementation.
8. LISTDCT[W] - [W] option specifies that the listing will display file names only.
9. SELECT function - Wang syntax introduced in 3.1 now supported along with original Basic-2C syntax. In addition, the SELECT function will optionally return the width of PRINT, LIST, and CO functions.

B. Syntactical compatibility with non-supported Wang Basic-2 statements. The following statements will be syntactically supported but will either perform no operation or will produce an error if actually executed:

1. <W> option for SAVE, SAVE DA, and RESAVE.
2. \$DISCONNECT
3. SELECT TC
4. SELECT TERMINAL
5. SELECT ON/OFF [ALERT, GOSUB]
6. SELECT DRIVER
7. SELECT ON CLEAR

### C. Input Screen/Print Screen

A much enhanced version of the Wang Basic-2 INPUT SCREEN statement will be implemented. INPUT SCREEN allows the current contents of the screen to be read into a specified variable. In addition to INPUT SCREEN, PRINT SCREEN will be implemented. PRINT SCREEN will write the contents of a specified variable to the screen where the variable conforms to the format produced by INPUT SCREEN.

Some of the significant enhancements over the Wang implementation are:

1. Will be supported on all terminals supported by Basic-2C.
2. Specification of a limited screen area to INPUT and PRINT will be supported. This feature makes INPUT SCREEN/PRINT SCREEN ideal for pop-up type applications. Note, a smaller variable may be specified when partial INPUT or PRINT SCREEN is performed.

3. For color monitors, color attributes may optionally be INPUT or PRINTed.
4. Other important screen information including cursor position, cursor status, current attribute selection, attribute status, and character set selection is returned by INPUT SCREEN and automatically used by PRINT SCREEN.

### D. Device Equivalence Table (DET) Enhancements

1. The number of entries in the DET will be set by a RunTime startup option. Up to 255 entries may be defined. This is expanded from the current limit of 16.
2. A \$MACHINE byte will be used to maintain the number of entries set at start-up time.
3. A second \$MACHINE byte will be used to maintain the number of entries currently used.
4. A new statement, \$DET, will allow examination of the DET in physical order. This will allow programs to determine what device addresses are defined.

### E. Keyboard Logging

This new feature will allow for automatic logging of keyboard input to a specified ASCII file. Output is stored in the format utilized by \$DEMO. This feature allows for generation of \$DEMO script files based on actual operator keystrokes.

### F. Other Enhancements

1. \$PACK/\$UNPACK will support floating point formats for:
  - Wang 2200 internal numeric format
  - Basic-2C internal numeric format
  - 4 or 8 byte IEEE Binary Real, H-L format
  - 4 or 8 byte IEEE Binary Real, L-H format
  - 4 or 8 byte DEC VAX floating point format
2. Partial support for background partitions will be present. Note that this feature may not be supported on all operating systems.

3. A new startup option, /T, will allow specification of an arbitrary #TERM value to be used by RTP. This allows a unique #TERM to be generated in situations where standard RTP logic for determining #TERM is otherwise inadequate.

4. New \$OPTIONS bytes will be available to suppress the Native Operating System and Kill Basic-2C options of the HELP Processor.

5. An alpha-variable may be specified as the device-address in all statements where a device-address is required. For example:

```
0010 A$="215"
0020 $OPEN <A$>
```

6. NEXT CLEAR - will terminate the current FOR/NEXT loop leaving the value of the index variable unchanged.

7. UNSCRATCH - will change the status of a file from scratched to not scratched.

8. DELETE - will remove the specified file name from the diskimage index.

9. New statements will allow the file type to be changed from program to data or from data to program.

10. A new statement will return the number of index sectors, end catalog, and current end of the specified disk address into numeric variables.

11. Access to 3-1/2" 'raw' format diskettes will be supported, both 720k and 1.44 MB formats.

12. The file name will be maintained in the file trailer sector.

13. A new statement will return the native operating system error code or message generated in conjunction with a Basic-2C error code.

14. \$PROGRAM - will return the names of the first program plus the names of the last 5 programs loaded since the most recent CLEAR or LOAD RUN statement.

15. Error control for print or keyboard output directed to an ASCII test file may be enabled under program control.

16. A new \$DEVICE clause will allow the primary and secondary extent size of files to be specified. This will work for both disk class and print class devices (when print class output is directed to an ASCII file) on operating systems where extent size must be defined at file creation time.

17. LIST DT - will be enhanced to display debug status information including current TRACE status, current STEP status, and program branch information.

18. LIST #, LIST ', LIST T, and LIST V - will be enhanced to allow specification of a line number range to be accessed for the specified list operation.

19. \$REV - will return the complete RTP revision number.

20. READ DC - will search the index of the specified diskimage, returning all filenames matching a specified alpha-mask.

21. PRINT TO - will direct print output to a specified variable much like PRINTUSING TO.

22. MAT SEARCH - will be enhanced to allow a numeric-array to be specified as the receiver-variable.

23. DEFFN'/GOSUB' - will be enhanced:

A. Greater than 255 unique DEFFN' numbers will be supported.

B. Greater than 16 parameters will be supported.

C. A P37 error (undefined marked subroutine) will now be a recoverable error.

D. Mismatched parameter types will now result in a recoverable error.



24. Program Editor enhancements:

A. Multi-command buffering

Multiple immediate mode commands or program lines will be retained in the command buffer and will be accessible from the keyboard.

B. TAB support

Multiple tab stops may be defined. TAB and BACKTAB keys may be used to move from one tab stop to the next.

25. A new \$MACHINE byte will be used to maintain the on/off status of \$DEMO keyboard re-direction.

C. Are there any specific packages that you know of that would accomplish your objectives? If so, please describe them including the name and distributor of the package.

3. Do you intend to develop your own external routines? If so:

A. What language(s) will you use?

B. For what operating systems will you be doing this?

C. What functionality do you hope to add to your application?

Please direct your responses to the attention of Niakwa R&D at our Illinois office.

## External Call Survey

As part of our continuing development effort on the external call capability (see Release III Product Brief above), we would like to ask potential users of this feature to take a few minutes to complete the following questionnaire. This will prove very helpful to us.

1. Do you intend to use the external call capability with any specific third party library packages? If so, please:

A. Provide complete information regarding the package including package name, distributor, language version you intend to use, and the operating system you intend to use it on.

B. Please briefly describe the intended use of this product.

C. Please describe why you want to use this particular package as opposed to other similar packages.

2. Do you intend to use third party library packages without having a particular package in mind? If so:

A. What types of third party packages are you interested in? That is, what do you want to accomplish by use of a third party library package?

B. For what operating systems?

## Other News

### Novell SFT Advanced Netware 286 IBM PC DOS 4.0 and Basic-2C Version 2.12

Niakwa has performed an evaluation of Novell SFT Advanced 286 Netware Version 2.12. The RunTime Package was tested successfully and has been approved for operation under SFT Advanced Netware 286 version 2.12. However, during this evaluation Niakwa discovered two problems involving the operation of the Basic-2C "\$SHELL" commands.

The first problem involves use of memory on the file server to track open files, filelocks, and record locks. This memory is referred to as "Dynamic Memory 2". Each time a "\$SHELL" process is executed the Novell Operating System will allocate a section of the "Dynamic Memory 2" to track open files, file locks and record locks. The problem that occurs is that when the "\$SHELL" process is finished the memory allocated from "Dynamic Memory 2" is not fully released. Very frequent use of the "\$SHELL" will eventually cause the file server to exceed the limit for "Dynamic Memory 2". If "Dynamic Memory 2" is exceeded the following error (in most cases) will be generated: "Network Error out of dynamic work space during OPEN FILE. File=xxxxxxx". This error will result in the workstations and/or the file server crashing. However, this problem can be alleviated by increasing the amount of "Dynamic Memory 2" at installation time. The size of "Dynamic Memory 2" is configured at installation time by the number of open files specified.

The second problem is a very intermittent problem which involves the print width of a SELECT PRINT statement. If the print width has been set to 132 columns by a SELECT PRINT(132) statement, and a "\$SHELL" process is executed, the print width will sometimes be set back to 80 columns at the return of the "\$SHELL" process. These two problems are under review for possible correction in subsequent releases of Basic-2C.

### Novell ELS II Version 2.12

Currently the Novell ELS II version 2.12 Operating System has not been tested for operation with Basic-2C. This testing will be conducted in the near future. If you will be considering the use of Novell ELS II version 2.12 please call the Niakwa technical support staff for up to date information.

Basic-2C for IBM (Release 2.01.20) has been successfully tested and approved for operation under IBM PC DOS 4.0. All aspects of the RunTime were tested for operation under the DOSSHELL of IBM PC DOS 4.0. There has been a patch diskette released by IBM to correct a series of problems with the initial release, Niakwa suggests that this patch be installed. Note that IBM PC DOS 4.0 is an IBM version and not a Microsoft version.

Although no problems were found with Basic-2C, users should be aware that several industry reviews have noted problems with IBM PC DOS 4.0.

### Basic-2C on Digital VMS 5.0

Basic-2C for VMS has been successfully tested and approved for operation under VMS 5.0. It should be noted that in order for Basic-2C to operate properly with this release of VMS, as well as past releases (starting with VMS 4.6), you will need to verify that the supplied PATCH 2 files on the development package have been implemented. For details on the patch procedure, please refer to your Basic-2C supplement for VMS.

### Basic-2C on Honeywell Bull

Basic-2C for Honeywell Bull XPS-100 Series Models X20 and X40 have been successfully installed and tested for operation under Unix System V Version 2.2 Release 4. Use of Basic-2C Rev. 2.01.09 for Honeywell Bull is required.

### Basic-2C on SCO Xenix V 386AT 2.3

Basic-2C for SCO Xenix has been successfully tested and approved for operation under SCO Xenix V 386AT Version 2.3. It should be noted that if you intend to apply this new release using the update instructions supplied by SCO, you may want to preserve your current .profile file, as the update procedure will create a new .profile file.

## Product Review - System Support Toolkit

The System Support Toolkit is a set of utility programs written in Basic-2C by Associated Software Consultants, Inc., intended for use by Basic-2C programmers both for in-house development and end-user support. This package is an extensively updated version of ASC's 2200 System Utilities package which has been on the market for use on Wang 2200s for 5 years.

The package is comprised of four sets of utilities:

- Disk management
- Disaster recovery
- Program management
- Native ASCII test file editor

The disk management utilities contain several utilities which are functionally equivalent to many of the Niakwa Development Package utilities including SCRATCH DISK, MOVE END, Disk Listing, Disk Format, and File Copy utilities. However, in addition to this, the ASC package contains utilities to:

- Change the size of the index in place
- Remove free space from files. Either programs, data files, or both may be specified.
- Reorganize a diskimage, removing scratched files and closing all 'gaps', thereby making more space available.
- Reorganize the index of a diskimage removing 'dead' entries and re-hashing the index.
- Compare file names on disks.

The disaster management utilities are intended to help recover from a situation where a diskimage has been damaged, whether by inadvertant overwriting of an index sector, hardware failure, or other such problems. Of course it should be noted that use of the utilities offers no guarantee that all damage can be undone. Rather, they are intended to provide tools by which the damage can be repaired as much as possible. The specific utilities in this group are:

- Rebuild a damaged index.

- Change disk field index entry.
- Recover or copy physical sectors from one diskimage to another.
- List and edit physical sector contents.
- Compare disk files by sector.

The program management utilities utilize the Basic-2C statements \$SOURCE and \$OBJECT to provide the following functions for Basic-2C p-code programs:

- Search for text within programs.
- Search and replace program text.
- List program source code.
- Compare programs.

The native ASCII text file editor is a full screen editor written in Basic-2C. It provides basic text editing capabilities and is very suitable for use in modifying files like CONFIG.SYS or various batch files.

In our review we found the System Support Toolkit to be a well-designed and well-written package. Several features are worth noting:

- The utilities are easy to install and operate. On line HELP (using the Basic-2C HELP facility) is available for all utilities.
- The utilities are designed in a very conservative fashion, which is essential for utilities of this nature:

They always require that the user acknowledge that a backup has been performed before updating any diskimage.

They always display information from the index of all specified diskimages. This allows the user to verify that the proper diskimage has been specified.

They are password protected thus preventing use by unsophisticated users. This feature is particularly important if the utilities are to be installed at an end user site.

The utilities work with Basic-2C extended diskimages (> 16 MB).

For all file level operations, a low/high range of filenames may be specified. Thus, for example, a program search and replace operation can operate on a range of files in one pass.

The Basic-2C date/time stamp is used and displayed wherever possible.

The System Support Toolkit is currently supported by ASC for use on Basic-2C versions 1.03, 2.00.04, and 2.01.20 for MS-DOS and Novell (note that program management utilities require 2.00.04 or 2.01.20 versions of RTI). ASC expects the utilities to operate well on other hardware versions of Basic-2C but has not extensively tested them as of the date of this review (9/1/88). Note that one known exception to this will be the native ASCII text editor. This utility is known to not operate on Digital/VMS. This restriction is due to Basic-2C limitations in accessing native files under VMS.

The System Support Utilities are currently available. For further information, or to request a free demonstration copy, please contact:

Associated Software Consultants, Inc.  
7530 Lucerne Drive  
Suite 115  
Middleburg Heights, OH 44130

Phone - 216/826-1010

## SCO Xenix V - Supported Systems

As published in both Newsletter #14 and the Basic-2C Supplement for Xenix, the current revision of Basic-2C for SCO Xenix V is supported for use on the following two SCO versions:

SCO 286AT Xenix V Version 2.2

SCO 386AT Xenix V Version 2.2 (and, as of publication of this Newsletter, SCO 386AT Xenix V version 2.3 is now supported - see related article below)

We further state that the CPU and serial cards used must be approved as compatible with one of the above SCO versions by SCO. SCO lists supported CPUs, serial boards, and other peripherals in their documentation.

Please be aware that attempting to use anything other than the above listed versions of SCO may result in Basic-2C not operating. There are two particular situations you should be aware of:

1. The PS/2 versions of SCO Xenix V are NOT supported with the current release of Basic-2C.
2. Many hardware manufacturers offer an OEM version of SCO Xenix V for use with their hardware. These OEM versions may or may not work with Basic-2C. Note that in many cases, the standard SCO286AT or SCO386AT versions will work with the machine in question.

## Multi-User MS-DOS Systems

The only multi-user MS-DOS based system supported by Basic-2C is Novell Netware and a few true compatible networks as listed in the supported systems sections of all newsletters. No other multi-user system based on MS-DOS is supported. This includes all other network implementations such as 3-COM, Banyon/Vines, or others, and all other operating systems that allow execution of single user MS-DOS programs on multiple terminals.

Attempting to use non supported MS-DOS based multi-user systems is a particularly dangerous idea. This is because the IBM MS-DOS or Novell RunTime program will actually come up and seem to operate normally on most of these systems. However, all multi-user functions will not be operational! This creates a very dangerous environment for your application and your user's data! This topic was discussed in greater detail in Newsletter #5, August 1986.

We strongly urge you to not attempt to utilize non-supported multi-user systems. No matter how well you believe that you can 'work around' the lack of multi-user capabilities in RTP, you will be placing your users at risk of severe data integrity problems.

And as noted in the article above on USE OF BASIC-2C ON NON-SUPPORTED SYSTEMS, do not be swayed by claims by the manufacturer of the operating system that it is '100% compatible' or that 'Basic-2C works great on it!'. The only reliable source of information about what systems are supported by Basic-2C is Niakwa!



## Use of Basic-2C on Non-supported Systems

Niakwa's policy on supported hardware/operating system platforms is pretty straightforward. We explicitly document in Niakwa Newsletters and in the Basic-2C Supplements what hardware/operating system platforms are supported for use with each hardware version of Basic-2C. In some cases, such as single user MS-DOS, this is in the form of a listing of 'approved' compatibles that Niakwa has tested. In other cases, such as SuperDOS and SCO Xenix, we document support for specific versions of the operating system and refer to the provider of the operating system for a list of supported hardware. Niakwa offers no guarantee of successful operation and no support for use of Basic-2C on any other system.

In the case of IBM Compatible MS-DOS single user systems, many of our licensees have found that Basic-2C operates quite well on most machines even though they may not be listed as an Approved Compatible. Yes, there is some risk in using a non-approved IBM single user compatible, but in most cases Basic-2C will just flat work. Note, this is not to say that Niakwa's policy for single user systems has changed. It has not. It is still the case that if you have a problem using a non-approved single user compatible, you may be on your own with it!

Multi-user implementations of Basic-2C are quite a different story (see related articles on SCO Xenix and DOS multi-user implementations below). Most often Basic-2C will simply not work on a non-supported multi-user system! Or, even if it does 'work', important functions will not be operational. Even on systems that are, according to the manufacturer, '100% compatible' with a supported Basic-2C system you may find that Basic-2C does not work. In some cases even when the manufacturer states that Basic-2C works on their system, it may not. The only reliable source of information about what systems are supported by Basic-2C is Niakwa. If you are at all uncertain about whether or not a system you are proposing will work with Basic-2C, please call. Either Basic-2C technical support staff or your account representative will be able to tell you whether or not your proposed system is supported for use with Basic-2C. And please, please, please call before you sell the system. Afterwards is much too late.

## Wang Laptop Install Problem

In reference to problem 53 of the Basic-2C Bug Report dated 9/30/88, please make a note that this problem will not be resolved in the current release of Basic-2C. If you need to install Basic-2C on a Wang Laptop please specify this so that we can send you Revision 2.00.04 of Basic-2C.

## Post Office Box, Prairie View

We did not renew our post office box at the Prairie View Post Office which expired on September 30, 1988.

For a period of one year all first class mail will forwarded to us here at our Milwaukee Avenue address. For a period of ninety days second class and third class mail will be forwarded. All bulk mail will be disposed of by the post office. After these time periods, first and second class mail will be returned to sender and third class will be disposed of by the post office.

Thanks for your cooperation.

## Emergency Shipments

Niakwa's delivery policy is for shipment to be made within 3-5 business days of receipt of order. We have always made every effort to help our customers in emergency situations by delivering RunTime packages on a "RUSH" basis and will continue to do so.

However, due to the high volume of such orders and the extra work involved, we find it necessary to implement a service charge of \$15.00 on all orders requested on a "RUSH" basis. An order is considered to be on a "RUSH" basis if shipment is required overnight. This new policy will be effective January 1, 1989.

## Approved Compatibles for Release 2.01.20

The following is a compilation of systems we have tested and approved for use with Basic-2C Release 2.01.20.

ALTOS 386 SERIES 500	KAYPRO PC, PC10, PC30
ARCHE RIVAL/286	KAYPRO 286i
AST PREMIUM 286	KAYPRO 386
COMPAQ DESKPRO 286	KAYPRO 2000 PLUS
COMPAQ DESKPRO 386/20E	MULTITECH LAN 500 (ACER)
COMPAQ DESKPRO 386/S	MULTITECH 700,710 (ACER)
COMPAQ PORTABLE III	MULTITECH 900,910 (ACER)
COMPAQ LAPTOP SLT/286	MULTITECH 1100 (ACER)
DELL SYSTEM 220/286	TOSHIBA T3100, T3200
IBM PC,XT,AT	WANG PC, APC
IBM PC XT/286	WANG PC 280
IBM PS/2 MODELS 30,50,60,70,80	WANG PC 380
IBM PS/2 MODEL 30/386	WYSE PC, PC286
IBM PS/2 MODEL 50S	WYSE PC 2108,2200
KAYPRO 1610	WYSE PC 3216/386
KAYPRO 16/E	ZENITH SUPER SPORT/286



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