BASIC-2/386
Operating System
Release 1.2

Customer Software Release Notice
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FCC and DOC Notices
The Federal Communications Commission (FCC) and the Canadian Department of Communications (DOC) require that information regarding the interference potential of electrical equipment be included in the user documentation for the equipment. They also require that specific information be provided for components that will be connected to the Public Switched Telephone Network (PSTN).

Electromagnetic Interference Requirements
Wang Laboratories, Inc., manufactures both Class A verified computers and peripherals and Class B certified computers and peripherals. To determine which of the following warnings apply to the equipment, the user should refer to the label affixed to the device.

An example of a Class A verified label is the following:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

An example of a Class B certification label is the following:
FCC I.D. B4YPC250-16
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Warning
For Class A – This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

For Class B – This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

DOC Warning
For Class A – This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.
For Class B – This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Connection to the PSTN
FCC Part 68 Requirements
If this equipment connects to the PSTN, it complies with Part 68 of the FCC Rules. A label is affixed to this equipment that contains, among other information, the FCC Registration Number (REN) and Ringer Equivalence Number (REN) for this equipment. Upon request, the user must provide this information to the telephone company.

The REN is useful to determine the number of devices that the user may connect to the telephone line and still have all those devices ring when the telephone number is called. In most but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5). To be certain of the number of devices that the user may connect to the line, as determined by the REN, the user should contact the local telephone company to determine the maximum REN for the calling area.
If the telephone equipment causes harm to the telephone network, the telephone company may discontinue service temporarily. If possible, the user will be notified in advance. However, if advance notice is not practical, the user will be notified as soon as possible. The user will be informed of the right to file a complaint with the FCC.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of the equipment. If such changes are made, the user will be notified in advance to give the user an opportunity to maintain uninterrupted telephone service.

If the user experiences trouble with this telephone equipment, the telephone company may ask that the user disconnect the equipment from the network until the problem has been corrected or until the user is sure that the equipment is not malfunctioning. For service or repairs, the user should contact the point of sales representative or Wang Laboratories, Inc.

This equipment may not be used in conjunction with coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

**DOC Notice for Canadian Users**

Notice - If this equipment contains a Canadian Department of Communications label, it identifies DOC-certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The DOC does not guarantee that the equipment will operate to the user's satisfaction.

Before installing this equipment, the user should ensure that it is permissible for it to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The user should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request that the user disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

*Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority or electrician, as appropriate.*

**Load Number** - The Load Number (LN) assigned to each terminal device denotes the percentage of the total load that can be connected to a telephone loop. The termination on a loop may consist of any combination of devices, subject only to the requirement that the total of the Load Numbers of all devices does not exceed 100. An alphabetical suffix is also specified in the Load Number for the appropriate ringing type (A or B), if applicable. For example, LN=20A designates a Load Number of 20 and an "A" type ringer. The Load Number for this equipment can be found in the installation instructions pertaining to connection to the PSTN.

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1. This equipment requires the use of shielded cables.

2. If the user attaches a Class A verified device to equipment otherwise labeled as Class B, the combined system meets Class A regulations only. Class A specifications provide reasonable protection against radio and television interference in a commercial environment. Operation of Class A equipment in a residential environment may cause interference.

3. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

4. Any modifications to this equipment not expressly approved by Wang Laboratories, Inc., could void the user's authority to operate this equipment.
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Preface

This document summarizes Release 1.2 of the Wang Multiuser BASIC-2/386 Operating System. It also contains the information included in Release 1.1, as well as corrections to any problems found.

Intended for all users, this release notice is organized as follows:

- Chapter 1 lists Release 1.2's features, and explains what hardware and software you need.
- Chapter 2 describes the enhancements to the Wang Multiuser BASIC-2/386 Operating System.
- Chapter 3 corrects any problems found in Release 1.1.
- Chapter 4 describes the media you can install.

The following documents provide additional information:

- *CS-D User’s Guide (715-2364)*
- *BASIC-2 Utilities Reference Manual (700-6855A)*
Introduction

Summary of Features

The Wang Multiuser BASIC-2/386 Operating System is designed for interactive programming and ease of use. Release 1.2 is a general release.

The following command calls have been added:

- `SELECT T ON`
- `SELECT T OFF`
- `SELECT H ON`
- `SELECT H OFF`

The following command calls or utilities have been changed or modified:

- `LIST SELECT`
- `FORMAT utility`
- `$PACK/$UNPACK`
System Requirements

Hardware

- Wang CS/386-D/N, CS-D, or Micro VP with a CS/386 CPU board
- 2200 terminal
- 5 1/4-inch diskette drive

Software

You need BASIC-2/386 Operating System Release 1.2. Follow the instructions in your user manual to install it.
Enhancements

Enhancements to Release 1.2

This section describes the latest enhancements to Release 1.2. (For more details, refer to the Multiuser BASIC-2 Language Reference Manual.)

Command Calls

SELECT T ON/OFF
SELECT T allows you to enter the DATE and TIME record on all programs SAVED or RESAVED for each partition.
SELECT T OFF disables the DATE and TIME record and is the default when you power on your system.

SELECT H ON/OFF
SELECT H ON initiates DISK platter hogging on a DS data storage unit with PROMs Revision 3.0 or greater. It allows you to hog only a platter, and not the complete storage unit, with a $OPEN command for each partition. (The original $OPEN and $CLOSE commands function on only the controller level of the disk system.)
SELECT H OFF disables DISK platter hogging and is the default when you power on your system.
LIST SELECT
LIST SELECT displays the options currently SELECTED including SELECT T (date/time) and SELECT H (hogging).

FORMAT Utility
An option has been added to the FORMAT utility that enables you to FORMAT a diskette in DOS format.

$PACK/$UNPACK
You can use $PACK/$UNPACK to pack numeric values (decimals) within a binary overflow format. You can also use $PACK/$UNPACK to compress the alphanumerics format.
Corrected Problems

Problems Corrected

This section lists the problems corrected in Releases 1.1 and 1.2.

Operating System

Release 1.1 has corrected errors in the following areas:

- The PRINTER DRIVERS devices – The correction includes a background print task to Port 204.
- The PLOT statement.
- The $GIO statement works correctly with the IDEAS Release 1.5 package.
- The LIST V command.
- The LIST COM/DIM command.
- The GLOBAL ACCESS partition.
Release 1.2 has corrected the following Release 1.1 errors:

- The S16 error (that occurred in certain global partition conditions) no longer occurs.
- The operating system no longer removes extra spaces in text when an IF...THEN...REM or ERROR...REM statement is executed.
- The problem of hogging disk platters when the SELECT H ON command is executed no longer occurs.
- The DATALOAD AC OPEN command no longer stops program execution.
- The 1.2-MB DOS formatted disk (supposed to format in 512-byte sectors within a 2371-sector partition) now formats correctly. (The operating system could not read the disk with DOS running on a PC.)
- The PACK/UNPACK command no longer stops the program from execution if you enter a number containing a decimal.
- The DATALOAD BAT/xxx (9999.9) disk address now goes out to the correct sector.
- The LOAD Receive Code Translation command no longer stops program execution.
- The operating system no longer “hangs” if you execute the COPY command to a powered-off drive and then execute RESET to get out of the program.
- The I90 ERROR no longer appears if you execute RESET while moving to a 2270A disk unit.

**MXE Terminal Processor**

The following problem was corrected in the MXE:

**Hesitation** – If you print using Port 204, the system hesitates (or slows down). If you set the terminal at 38.4 KB the system does not hesitate.
Media Contents

Media Contents of Release 1.2

Release 1.2 contains the following diskettes:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number of Diskettes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>295-7432-9</td>
<td>2</td>
<td>5 1/4-inch double-sided double-density 2275/DS diskettes</td>
</tr>
</tbody>
</table>

These diskettes contain the following files:

<table>
<thead>
<tr>
<th>File Name</th>
<th>Type</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>@BACKUP</td>
<td>Program</td>
<td>BACKUP utility</td>
</tr>
<tr>
<td>@BOOT</td>
<td>Program</td>
<td>Menu for bootstrap</td>
</tr>
<tr>
<td>@CLOC</td>
<td>Program</td>
<td>Initialize date and time</td>
</tr>
<tr>
<td>@DAVFU</td>
<td>Program</td>
<td>Vertical Format Control utility</td>
</tr>
<tr>
<td>@FORMAT#</td>
<td>Program</td>
<td>Format disk platter</td>
</tr>
<tr>
<td>@GENPART#</td>
<td>Program</td>
<td>Partition generator</td>
</tr>
<tr>
<td>@INSTALL#</td>
<td>Program</td>
<td>System install</td>
</tr>
<tr>
<td>@MENU</td>
<td>Program</td>
<td>System menu program</td>
</tr>
<tr>
<td>@MODSYSF#</td>
<td>Program</td>
<td>Convert system configuration file</td>
</tr>
<tr>
<td>@MOVE1#</td>
<td>Program</td>
<td>Overlay for @MOVEFIL and @INSTALL</td>
</tr>
<tr>
<td>@MOVEFIL#</td>
<td>Program</td>
<td>Move file</td>
</tr>
<tr>
<td>@PSTAT#</td>
<td>Program</td>
<td>Partition status</td>
</tr>
<tr>
<td>@RECOVER</td>
<td>Program</td>
<td>Recover from backup</td>
</tr>
<tr>
<td>@SYSMVPB#</td>
<td>Program</td>
<td>Menu for System Utilities</td>
</tr>
<tr>
<td>File Name</td>
<td>Type</td>
<td>Function</td>
</tr>
<tr>
<td>------------------</td>
<td>--------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>@TO.CREF</td>
<td>Program</td>
<td>Create reference file</td>
</tr>
<tr>
<td>@TO.CREO</td>
<td>Program</td>
<td>Load or create a reference file</td>
</tr>
<tr>
<td>@TO.DISK</td>
<td>Program</td>
<td>Copy to disk</td>
</tr>
<tr>
<td>@TO.SUBS</td>
<td>Program</td>
<td>Overlay for @TO.DISK/IMAGE</td>
</tr>
<tr>
<td>@TOIMAGE</td>
<td>Program</td>
<td>Copy to disk image</td>
</tr>
<tr>
<td>@STARTD</td>
<td>Data</td>
<td>System menu support</td>
</tr>
<tr>
<td>@@</td>
<td>Data</td>
<td>MVP system menu</td>
</tr>
<tr>
<td>@DATE</td>
<td>Data</td>
<td>Date file</td>
</tr>
<tr>
<td>@DM50/V0</td>
<td>Data</td>
<td>Printer driver</td>
</tr>
<tr>
<td>@LASRJV1</td>
<td>Data</td>
<td>Printer driver</td>
</tr>
<tr>
<td>@MVP</td>
<td>Data</td>
<td>MVP microcode</td>
</tr>
<tr>
<td>@MXE0</td>
<td>Data</td>
<td>MXE microcode</td>
</tr>
<tr>
<td>@PM010V2</td>
<td>Data</td>
<td>Printer driver</td>
</tr>
<tr>
<td>@PM016V3</td>
<td>Data</td>
<td>Printer driver</td>
</tr>
<tr>
<td>@PM017V3</td>
<td>Data</td>
<td>Printer driver</td>
</tr>
<tr>
<td>@PM018V3</td>
<td>Data</td>
<td>Printer driver</td>
</tr>
<tr>
<td>@PM060V0</td>
<td>Data</td>
<td>Printer driver</td>
</tr>
<tr>
<td>@SYSFLE</td>
<td>Data</td>
<td>MVP configuration file</td>
</tr>
<tr>
<td>@DG1</td>
<td>Program</td>
<td>Menu for system diagnostics</td>
</tr>
<tr>
<td>@MRTIAN</td>
<td>Program</td>
<td>Game</td>
</tr>
</tbody>
</table>

*a These files differ from the BASiC-2/386 Operating System.*