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WANG MULTIUSER BASIC-2/386 OPERATING SYSTEM RELEASE 1.3 - CONTENTS

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715-3520A

1st Edition - February 1994

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PREFACE

This Wang Multiuser BASIC-2/386 Operating System Customer Software Release Notice provides information about Release 1.3 of the Wang Multiuser BASIC-2/386 Operating System.

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

- Chapter 1 provides an introduction to this release of the Wang Multiuser BASIC-2/386 Operating System software, including hardware and software requirements.
- Chapter 2 describes the enhancements added to this Wang Multiuser BASIC-2/386 Operating System.
- Chapter 3 describes the main problems that are corrected in this release of the Wang Multiuser BASIC-2/386 Operating System.
- Chapter 4 discusses the special considerations needed to run this release of the software including known anomalies.
- Chapter 5 describes the contents of the media you can install on your system as part of this software release.
- Chapter 6 details how to install this operating system using 2 of the utilities included with the software.

Refer to the following documents for additional information about the Wang Multiuser BASIC-2/386 Operating System:

- CS-D User's Guide (715-2364A)
- BASIC-2 Utilities Reference Manual (700-3949A)
- Multiuser BASIC-2 Language Reference Manual (700-4080F)

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CHAPTER 1 - INTRODUCTION

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OVERVIEW

This chapter discusses the features of Release 1.3 of the Multiuser BASIC-2/386 Operating System and details the system hardware and software requirements.

SUMMARY OF FEATURES

The Wang Multiuser BASIC-2/386 Operating System is designed for interactive programming and ease of use. This release, 1.30, is a general release replacing general release 1.10 as the operating system of choice on the CS/386 line of computers.

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

SELECT NEW
PRINT # CPU (previously added but not documented)
PARTITION GENERATOR utility
PARTITION STATUS utility*
FORMAT utility
MOVE FILE utility*
SYSTEM INSTALL utility
MOVING a SELECTED LIST of FILES utility....(previously Make a Reference
List of File Names)
INITIALIZE DATE and TIME utility*

* Minor changes have been made to these utilities to allow auto conversion to 'NEW' format and/or to handle additional features supported with the CS/Turbo. No further information is in this CSRN.

These utilities are newly included with release 1.3:

BACKUP Utilities
RESTORE Utilities
DISK MANAGEMENT Utilities
DOS Utilities

SYSTEM REQUIREMENTS

The following hardware and software requirements and concerns should be considered when changing over to CS/386 Release 1.30.

Hardware

must include:

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

Software

From Existing CS/386 CPUs:

All software currently running on any supported CS/386 Release is fully compatible with release 1.3.

From non-386 2200 CPUs (MVP, LVP, CS, etc.):

Most programs from non-386 2200 CPUs will run without modification. However, any program that makes a reference to a specific Operating System resource may require a change. These resources include:

- Imbedded CPU Prom ID Number: this number can be used by a programmer to provide security preventing programs from executing on other systems where the prom ID would be different.
- Partition Size: programs require more memory to execute on the 386, approximately 80% more than on older 2200 CPUs. If a program makes a calculation based on partition size, a change may be required.
- CPU Type Status Byte 9: partition status line byte 9 represents the CPU type. For the 386 this byte is a 'W', on the Turbo a 'T', and on the MVP/LVP/MicroVP/CS an 'M'. Programs using this byte will need to be updated to recognize the 'W'.
- Partition Status Line Bytes 10 and 11: on the non-386 CPUs byte 10 denotes memory bank and byte 11 partition. With the CS/386 there are no memory banks and both bytes are used for partition size.
- Floating Point Numbers: the 386 chip was built with 10 digit accuracy while the older CPUs provided accuracy to the 13th digit. If a program makes a decision based on the 11th to 13th digits to the right of the decimal point, a problem could occur as these numbers could be slightly different on the CS/386.
- Header Record for Programs: proper disk protocol requires the first byte of the header record for all programs in a disk catalog to be either 40, 50, 60, or 70. If the 2nd half of this byte is other than '0', an A01 error could occur loading this program even though on older systems this would not be a problem.
- 'NEW' or '386' Format: programs loaded into memory on the CS/386 are converted into a '386' format. This conversion process can slow down load time of a program, especially when multiple program loads are occurring. To negate this problem, it is recommended all programs on the system be converted to 'NEW' format. This can be done file by file with the SAVE command after executing a SELECT NEW command. Wang can also provide a special O/S to help automate this procedure. Programs containing long lines may require those lines to be split to enable conversion. The special O/S will flag these programs. Once converted to 'NEW' format these program will not run on the non-386 CPUs. They can be converted back if needed.

From CS/386 Turbo CPUs:

All programs that run on the Turbo should run on the CS/386 without modification with the following exceptions:

- Programs using the embedded CPU Prom ID Number as a security measure preventing programs from executing on other systems where the prom ID would be different.
- Programs using any of the new commands available only on the Turbo including; SELECT 3 ON/OFF, \$CLEAR, \$MOVE!, \$ROTATE.
- Programs using command enhancements only available on the Turbo including; GOSUB'256 - 65535, LIMITS with more than 4 variables, and COM or DIM greater than (65535).

Release 1.3 is user installable. Follow the instructions for installing the operating system as described in Chapter 6 of this document or refer to the introductory or user manual supplied with your CS/386 2200 system. If your boot procedure has been customized or you are unfamiliar with the steps outlined for upgrading, you should contact your system's programmer or the Wang Regional Support Center at 1-800-247-9264.

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CHAPTER 2 - ENHANCEMENTS

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OVERVIEW

This chapter discusses the added features provided in Release 1.3. For more details on the utilities, refer to the BASIC-2 Utilities Reference Manual, part number 700-3949A.

ENHANCEMENTS OF RELEASE 1.3

This section describes the latest enhancements of Release 1.3.

Command Calls

SELECT NEW/OLD

The SELECT NEW command causes all programs saved to disk using the SAVE or RESAVE command to be written to disk in 'NEW' or '386' format. Standard 2200 programs are normally stored on disk in a binary-coded-decimal format. On the non-386 CPUs, this was the native format used by the operating system. The 386 processor does not recognize this format and requires programs to go through a conversion process when loading into memory. This conversion can negatively affect program load performance. If stored in NEW format on disk, conversion is no longer necessary. Some programs may require certain lines to be split in order to be stored on disk in 'NEW' format. Because programs require more space in this format, long lines of 190 bytes or more could exceed the 256 byte line limit when converted which would cause an error during conversion. A special operating system which can help to automate the conversion procedure is available from R&D. Programs saved in 'NEW' format will not execute on non-386 CPUs. New with this release, once executed for a partition, SELECT NEW remains active until the SELECT OLD command is executed. Also with this release, all files* have been modified as necessary to convert to 'NEW' format smoothly without requiring any line splits.

- * NOTE: The boot menu program, @BOOT, must not be converted to 'NEW' format. It must be in standard 2200 format or the system will hang during the standard boot procedure used to load the O/S.

SELECT OLD causes all programs written to disk with the SAVE or RESAVE command to be stored in the original binary-coded-decimal format recognized by the non-386 CPUs. This is the default on power up.

PRINT # CPU

The PRINT # CPU command gives you the CPU number from 1 to 31 assigned in the Partition Generator program executed during the boot process. This number is only significant when multiplexing multiple CPU's to a DS disk cabinet. It provides a way for the DS to identify which CPU a particular partition is coming from.

Utilities

Backup Utilities

Backup utilities are now included with this release of the CS/386 Operating System. This software was previously only available on separate media. There are 2 options available to the CS/386 user, "Backup Disk Platters to DS Tape Cassette" and "Backup Disk Platters to Disk Drive". Use of these utilities requires the use of the corresponding "Restore Utilities" to recover the data from the backups created. See the CS Basic-2 Utilities Reference Manual, part number 715-3949A for more information on these utilities.

Restore Utilities

The Restore utilities are now included with this release of the CS/386 Operating System. These utilities complement the Backup utilities providing the means to recover data stored with the corresponding Backup utility. Previously this software was only available on separate media. See the CS Basic-2 Utilities Reference Manual, part number 715-3949A for more information on these utilities.

Disk Management Utilities

The Disk Management utilities used with the DS are now included with this release of the CS/386 Operating System. These utilities allow the user to check the configuration of any DS on the system, reconfigure the winchester drives if using the DS R4 prom, protect/unprotect DS addresses, manage DS RAM disk, and monitor DS cache usage. Previously this software was only available on separate media. See the CS Basic-2 Utilities Reference Manual, part number 715-3949A or the CS-D/N, CS/386, and CS/Turbo User's Guide, part number 715-2364A for more information on these utilities.

DOS Utilities

The DOS utilities are now included with this release of the CS/386 Operating System. These utilities allow the user to use a 5 1/4" floppy drive to format a diskette in DOS format, look at the contents of the root directory of a DOS diskette, and display, delete, or rename a root directory file all in a DOS emulated environment. Other features include duplicating a DOS diskette and moving files back and forth between a 2200 disk drive and the root directory of a 5 1/4" floppy. Once the utilities are loaded from the main menu, type in 'setup' to assign DOS addresses for disks and printer and/or type in 'help' to display the available commands and the proper syntax. See the CS Basic-2 Utilities Reference Manual, part number 715-3949A for more information on these utilities.

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CHAPTER 3 - CORRECTED PROBLEMS

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OVERVIEW

This chapter discusses the problems corrected in Release 1.3.

PROBLEMS CORRECTED IN RELEASE 1.3

Release 1.3 corrects a number of reported problems to the operating system since the last general release, 1.1. In addition, it also includes corrections to problems identified with some of the utility programs.

Operating System

The following problems are corrected in this release. Some of the problems listed may not have been present in the previous general release, 1.1, but may have occurred due to changes made to resolve an existing problem in 1.1 or a subsequent maintenance release.

Corrects possible P59 error that could occur if redimensioning an array in a program overlay.

Corrects problem where spaces were deleted from a REM statement when used in conjunction with an IF THEN or ERROR command.

DATALOAD AC OPEN now works correctly.

DOS format of a 1.2M floppy now correctly provides 4800 sectors.

Corrects possible S16 errors on COPY in foreground when a global partition is being accessed by two or more partitions.

The PACK/UNPACK command now works correctly when more than 1 '#' is used to the left of the decimal point.

Corrects a problem with the DATALOAD BAT command where a fractional number would be accepted for the sector number and the load would successfully execute.

Corrects the possibility of erroneous S16, S20, and S24 errors occurring within global partitions.

Corrects MXE related problem where intermittently 'Load Receive Code Translation' would result in 'end of record detection errors'.

Resolves a system hang condition that could result if an attempt was made to access a disk drive that was powered off.

Corrects a hang condition that would result if 3 disk addresses were hogged with the same \$OPEN command with SELECT H ON.

Corrects problem where a terminal connected to a Triple Controller (terminal/printer/disk) would intermittently blank out.

Corrects problem with SELECT H ON where the disk address would not be hogged if the same \$OPEN was also used to hog a printer address.

RESET, CLEAR, and LOADRUN now correctly clear a hogged device if executed from the partition that issued the hog.

Resolves a print problem that could occur on the last port of an MXE Terminal Controller if using HEX(0A) to turn off expanded print in conjunction with a PRINTUSING command.

Corrects a problem where with the IF/THEN command an array with more than 32767 elements always indicated a value.

Resolves intermittent I92 and I93 disk errors that may occur while running TC 'BISYNC' protocol from another partition.

Corrects possible I94 errors that could occur with the DATASAVE command if using SELECT H ON in a multi-CPU environment.

Fixes a miscalculation error with fractional numbers when using the CONVERT and PRINTUSING commands together with a mask with more than 1 '#' to the left of the decimal.

The LISTDCT SP command now correctly lists all 'scratched programs'.

The LISTDCT SD command now correctly lists only 'scratched data files'.

RESET will now clear a hogged MXE TC port if executed at the partition initiating the hog.

Corrects a print problem where if 2 print drivers are simultaneously active and using different escape codes for the same function, the drivers could get crossed resulting in intermittent garbage characters in the printout.

Corrects a problem seen using 2200WP in conjunction with the laser printer driver where the letters 'cf' would appear at the top of the first page of a document and an 'f' at the top of all following pages.

Corrects problem where a \$CLOSE from a 2nd partition could clear a hogged TC address initiated by a different partition.

Corrects problem where if a character represented by a HEX(7E) followed a REM% command, all subsequent commands on that line would be ignored.

Resolves a hang condition that could occur if a partition with SELECT H OFF was trying to hog the disk while another partition with SELECT H ON was using RESET to clear a hogged slave address in the same disk unit.

RENUMBER now correctly changes all line numbers for GOTO commands when using the Katakana character set.

LIST' now correctly cross references all GOSUB' commands when using the Katakana character set.

The LIST # command now correctly cross references all line numbers.

The RENUMBER command now correctly rennumbers.

Corrects an intermittent hang condition that could occur if doing a MAT SEARCH while printing or accessing CPU RAM Disk, address 340.

Corrects a problem where if a program is enlarged to require additional disk space and resaved, under some instances the resave could appear to work but the resaved file would be empty.

Corrects a problem where if a program saved in 'NEW' or '386' format is loaded into memory and contains a DEFFN command, hitting that DEFFN key before executing the program could blow the system.

Corrects the possibility of a system hang condition that could occur if long strings of numbers are added or subtracted in immediate mode with a PRINT command.

Utilities

DOS Utilities

The following problem was corrected in the DOS Utilities:

If an error occurs formatting the B drive, the utility will not indicate an error with the A drive. The following error message is returned: 'Read Error or bad Write'.

Disk Management Utilities (ver 1.1)

The following problems were corrected in the DS Configuration program since release 1.0 of the Disk Utilities:

When running the configuration utility to partition the drives, entering a sector address greater than 65535 is no longer accepted with the CS/386 O/S.

When running the configuration utility to partition the drives, the program will now accept small or capital 'm' or 's' in response to Master or Slave address.

When running the configuration utility to partition the drives, indicating yes to use the DS Defaults now correctly assigns drives on Drive Select 1 and 2 to Master addresses and drives on Drive Select 3 and 4 to Slave addresses.

If running the configuration utility to partition the drives, the program will now indicate an 'Illegal Configuration' if a drive is not connected to Drive Select 1.

During the 'apply' procedure when configuring drives using the R4 prom, the program will now accept small or capital 'y' or 'n' in response to the continue message given at the warning.

Format Utility (ver 2.0)

The following problems have been corrected in release 2.0 of the Format Utility since release 1.05:

The utility will now always recognize the 5 1/4" drive and ask if a DOS or 2200 format is to be used.

The utility will now display the format error message immediately should it occur instead of returning to the 'Mount disk' screen.

The Format Utility will now return the 'Format Completed' message after doing a DOS format to a 5 1/4" floppy.

The Format Utility now properly recognizes if a 5 1/4" floppy has an index already when choosing a DOS format and will ask if you still want to format.

The Format Utility will now recognize a Phoenix removable disk and format it.

Address B10 is now recognized as a removable address.

Partition Generation Program

The following problem is corrected in this release of the Partition Generation program:

A configuration with more than 16 partitions created on a Turbo can no longer be inadvertently loaded blowing the operating system. The message, "Invalid Configuration" is returned.

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CHAPTER 4 - SPECIAL CONDITIONS

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OVERVIEW

This chapter discusses the special conditions for this release of the Wang Multiuser BASIC-2/386 Operating System software.

SPECIAL CONDITIONS

This release of the Operating System requires a CS/386-D/N or a CS, CS-D/N, or MicroVP Systems with a CS/386 CPU board.

The System Install utility has been specifically modified to work with this release of the CS/386 O/S. Using an older version will likely result in an error in locating certain files. See Chapter 6 for details on installing Release 1.3.

KNOWN ANOMALIES

The following is a list of known anomalies with release 1.3 as of the date of this publication.

If SELECT H ON (platter hog) is used in a multi-CPU environment and 2 or more CPUs are hogging addresses in the same DS or CS-D unit, intermittent disks hangs are likely as well as erratic performance. Circumvention: SELECT H should not be used in a multiplexed (more than 1 CPU sharing a disk) configuration.

The LISTS command does not work correctly to a terminal printer (address 204) if the printer uses a printer driver. Only the first line is printed. LISTS is used to print out 1 screen at a time. Circumvention: Use the LIST command with a first and last line number to control the printout.

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CHAPTER 5 - MEDIA CONTENTS

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OVERVIEW

This chapter describes the contents of this release of the Wang Multiuser BASIC-2/386 Operating System.

MEDIA CONTENTS OF RELEASE 1.3

This section describes the diskettes included in the Wang Multiuser BASIC-2/386 Operating System, Release 1.3.

Part Number	Number of Diskettes	Comments
295-7432-9A	3	5 1/4-inch Double-Sided Double-Density 360K 2275/DS diskettes
which includes:		
731-8016B	Disk 1 of 3	Boot files and 3 print drivers
731-8017B	Disk 2 of 3	Standard utilities and print drivers
731-8029	Disk 3 of 3	Disk and DOS utilities

The following 70 files are included with Release 1.3:

FileName	Type	Disk #	Function
.STARTD	Data	2	System menu support
* @.BACKUP	Program	3	Backup Utilities Menu
* @.DISK	Program	3	Disk Management Utilities Menu
* @.RESTOR	Program	3	Restore Utilities Menu
@@	Data	1	Initial O/S boot file
@BACKUP	Program	2	BACKUP utility
@BOOT	Program	1	Menu for bootstrap
@CLOC ^a	Program	2	Initialize date and time
@DATE	Data	2	Date file
@DAVFU ^a	Program	2	Vertical Format Control utility
@DG1 ^a	Program	1	Menu for system diagnostics
@DM50/V0	Data	2	Printer driver
* @DOS	Program	3	DOS command processor emulation
* @DOS.HLP	Data	3	DOS help screen data
* @DOSCOPY	Program	3	DOS copy command emulation
* @DOSCYCS	Program	3	Copy DOS to/from 2200
* @DOSDCPY	Program	3	DOS disk copy
* @DOSDEL	Program	3	DOS file delete
* @DOSDIRP	Program	3	DOS dir command emulation
* @DOSDIRW	Program	3	DOS dir command in widescreen format
* @DOSEXIT	Program	3	Exit DOS
* @DOSFORM ^a	Program	3	DOS format command emulation
* @DOSHELP	Program	3	DOS help screen display program
* @DOSREN	Program	3	DOS rename command emulation
* @DOSSET	Program	3	DOS setup program

*	@DOSSTRT	Program	3	DOS start program
*	@DOSTYLP	Program	3	DOS file to printer via type command
*	@DOSYPE	Program	3	DOS type command emulation
*	@DOSUTIL	Data	3	DOS utility names data file
*	@DOScfig	Data	3	DOS disk related data
*	@DOSfmt1	Data	3	Data file for DOS format
*	@DOSfmt2	Data	3	Data file for DOS format
*	@DSAPPLY	Program	3	Apply hard disk config for DS w/ R4 prom
*	@DSCFIG ^a	Program	3	DS configuration program
*	@DSCFIGP	Program	3	DS disk protect program
*	@DSTAPEB	Program	3	DS tape backup
*	@DSTAPER	Program	3	DS tape restore
	@FORMAT ^a	Program	2	Format disk platter
	@GEN.386	Program	1	Memory size for 386 CPUs
	@GENPART ^a	Program	1	Partition Generator
*	@HITRATE	Program	3	DS Cache hit rate program
*	@HQ300V0	Data	1	Printer driver for HQ200/HQ300
	@INSTALL ^a	Program	2	System install
	@LASRJV1	Data	1	Printer driver for Laserjet printer
	@MENU	Program	2	System menu program
	@MODSYSF	Program	1	Convert system configuration file
	@MOVE1	Program	2	Overlay for @MOVEFIL and @INSTALL
	@MOVEFIL ^a	Program	2	Move file
	@MRTIAN	Program	2	Game
	@MVP ^a	Data	1	Operating System microcode
	@MXEO	Data	1	MXE Terminal Controller microcode
	@PM010V2	Data	2	Printer driver
	@PM016V3	Data	2	Printer driver
	@PM017V3	Data	1	Printer driver
	@PM018V3	Data	2	Printer driver
	@PM060V0	Data	2	Printer driver
	@PSTAT ^a	Program	2	Partition status utility
*	@RAMDISK	Program	3	Manage DS RAM disk size
	@RECOVER	Program	2	Recover from backup
	@SYSFILE ^a	Data	1	MVP configuration file
	@SYSMVPB ^a	Program	2	Menu for System Utilities
	@TO.CRE0	Program	2	Load or create a reference file
	@TO.CREF ^a	Program	2	Create reference file
	@TO.DISK	Program	2	Copy to disk
	@TO.SUBS	Program	2	Overlay for @TO.DISK/IMAGE
	@TOIMAGE	Program	2	Copy to disk image
*	@VERCPUB	Program	3	Verify CPU type for SCSI backup
*	@VERCPUC	Program	3	Verify CPU type for SCSI config program
*	@VERCPUR	Program	3	Verify CPU type for SCSI restore
	START	Program	2	Calls System Utilities menu

* These files have been added since the last general release of the BASIC-2/386 Operating System, version 1.10.

^a These files have been modified since the last general release of the BASIC-2/386 Operating System, version 1.10. Chapter 3 identifies problems that were corrected resulting in the modifications that were made to many of these files.

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CHAPTER 6 - INSTALLATION

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OVERVIEW

This chapter describes how to install this release of the Wang Multiuser BASIC-2/386 Operating System. There are several easy ways to install this new release either manually file by file or by using the utilities supplied with the operating system. In this section we will cover how to install this release including all utilities using the System Install Utility or just selected Operating System files using the Move File Utility.

INSTALLATION PROCEDURE

System Install Utility

The 'System Install' Utility allows you to move all operating system files including all the latest utilities from the 3 diskettes included with this release to your system boot disk. The 'Install' program included with this release has been customized specifically for this release and must be used. Earlier versions will not move all files and may be unable to locate others. A listing of the files in this release along with a brief description is given in Chapter 5, Media Contents. From that list the following 3 files will not be copied if they currently reside on the output disk:

.STARTD	datafile	system menu support
START	program	used to call system utility menu
@SYSFILE	datafile	MVP configuration file

By not updating these 3 files your program start up, (LOAD RUN), will remain the same and your current system configuration as well as any additional configurations saved remain intact. One change to note. If your system currently boots automatically to a main menu or date screen, after the update it will now stop with the partition generation program screen. To complete the boot proceed as follows:

key SF'15	to load your normal configuration
key Y Return	to accept & execute the configuration
key Return	to accept the standard password

This should return you to your standard boot up screen. To reinstitute the auto boot process follow these steps once any current programs running on the terminal being used are completed:

key Shift/RESET	to clear screen
key CLEAR Return	clear memory for this terminal
LOAD DCT/Dxx,"@GENPART"	loads partition generation prog
key 100, then hit the EDIT key, then SF'15	displays line 100 on the screen

should read:	100 GOTO 1150: REM % Delete this GOTO for AUTO EXEC
if correct:	use left arrow or SF'13 to move cursor to 1st G after 100
	key INSERT or SF'10 4 times creates a space
	key in REM Return negates the GOTO
	RESAVE DCT/Dxx,"@GENPART" saves change on disk
	key CLEAR Return clear memory again

Reload your system programs to return to normal operation.

To run the System Install utility use the following steps:

- 1 Make a full backup of your system disk where the operating system will be loaded.
- 2 Insure all processes on the terminal to be used are completed:
- 3 Key: Shift/Reset to clear the screen.
- 4 Type in: SELECT DISK Dxx Return xx will be 10, 20, or 30, the address of your diskette drive.
- 5 Insert diskette 2 of 3 of the release 1.3 Operating System into your diskette drive.
- 6 Key: LOAD RUN Return will load the System Utilities menu
- 7 Use the Space Bar key to highlight 'System Install'.
- 8 Key: RUN displays address screen for Install
- 9 Input address = D10
Enter: D10, D20 or D30 Return usually same as step 4
- 10 Insert diskette 1 of 3 in Input Drive selected in step 9. Remove diskette 2 of 3 if same drive.
- 11 Output address = D11
Enter: Dxx Return enter address where O/S resides, usually D11, D21, or D31
- 12 Input disk contains CS/386 O/S. Install Y/N?
Enter: Y Return yes to install if indicates CS/386
- 13 Begins process of moving new files to system disk. When requested remove diskette 1 of 3 and insert diskette 2 of 3 in the Input drive.
- 14 Key: Return to continue install process
- 15 When requested remove disk 2 and insert disk 3 in the Input drive.
- 16 Key: Return to complete the install process
'Completed Software Installation.' will display when done.
- 17 Reboot system to load the new operating system.

If you have questions on upgrading your operating system or the preceding procedure, contact your system's programmer or the Wang Regional Support Center at telephone number 1-800-247-9264.

Move File Utility

The 'Move File' Utility allows you to move all or selected files from 1 disk address to another with the option of overwriting if desired. For our purposes we will limit the discussion to just the updating of the operating system code, file '@MVP'. To update other selected files from the list in chapter 5 of this document, use this same utility or the 'Moving a Selected List of Files' utility. For additional information on these 2 utilities, both included with this software, refer to the Basic-2 Utilities Reference Manual, part number 715-3949A.

To update just the operating system, '@MVP', using the 'Move File' utility, follow these steps:

- 1 Make a full backup of your system disk where the operating system will be loaded.
- 2 Insure all processes on the terminal to be used are completed:
- 3 Key: Shift/Reset to clear the screen.
- 4 Type in: SELECT DISK Dxx Return xx will be 10, 20, or 30, the address of your diskette drive.

- 5 Insert diskette 2 of 3 of the release 1.3 Operating System into your diskette drive.
- 6 Key: LOAD RUN Return will load the System Utilities menu
- 7 Use the Space Bar key to highlight 'Move File'.
- 8 Key: RUN displays Input address screen
- 9 Input address: D11
 Enter: D10, D20 or D30 Return usually same as step 4
- 10 Input platter type: W
 Enter: Return W indicates Wang type disk
- 11 Insert diskette 1 of 3 in Input Drive selected in step 9. Remove diskette 2 of 3 if same drive.
- 12 Output address: D10
 Enter: Dxx Return xx is the address where the O/S resides, usually D11, D21, or D31
- 13 Output platter type: W
 Enter: Return W indicates Wang type disk
- 14 Do you wish to move all active files? N
 Enter: Return N to selectively enter files
- 15 Input file name: @MXEO
 key in: @MVP Return to move the operating system
- 16 Extra Sectors: 00000
 key: Return to accept default
- *17 Output file name: @MVP
 key: Return to accept default or enter new name for output file (see * below)
- 18 If new file name given, file is now copied to output, otherwise if the file name exists will ask if you want to overwrite?
 Enter: Y Return to update operating system
- 19 Once the 'move' is completed the screen will prompt for another file. Repeat steps 15-18 to update other files. (may need to change disk)
 Key: Shift/Reset to end Move and clear screen
- 20 Type in: SELECT DISK Dxx xx is address where your system's programs reside
- 21 Key: LOAD RUN for most systems this will return you to your main system menu

To use the new O/S once this procedure has completed, the system must be rebooted.

* The Operating System can be renamed something other than @MVP on the output disk. This would be required to have more than 1 O/S file at the same address. If this is necessary, the file name is restricted to 4 characters total and must start with @. An example would be '@386'. The file @BOOT must then be manually updated to include an entry with the new file name. This file is used to provide a menu with the operating system choices or diagnostics which normally displays during the boot procedure. The file @BOOT does have some size restrictions that prevent you from successfully booting the system if too many lines are created for multiple operating system versions.

If you have questions on upgrading your operating system or the preceding procedure, contact your system's programmer or the Wang Regional Support Center at telephone number 1-800-247-9264.

January 12, 1994

1. M9/5029

If SELECT H ON (platter hog) is used in a 2 CPU environment with both CPUs hogging addresses in the same DS, intermittent disk hangs will result as well as erratic performance. To duplicate run the following program from at least 2 partitions on 2 CS/386 CPUs to the same DS. In @GENPART assign a different CPU # to each CPU.

```
10 DIM A$(16)
20 SELECT H ON
30 X=INT(RND(1)*65024)
35 Y=INT(RND(1)*65024)
36 J=J+1:PRINT "PASS =";J,X,Y
40 $OPEN/D11
50 $OPEN/D12
60 DATALOADBAT/D11,(X,L)A$()
70 DATALOADBAT/D12,(Y,L)A$()
80 $CLOSE/D11
90 $CLOSE/D12
100 GOTO 30
```

The pass counts should be fairly even on both CPU's if an equal number of partitions run the test from both. They are not and even between partitions on the same CPU there can be significant discrepancies. For example, in my configuration of 2 terminals on each CPU, all started at the same time, the pass counts at one point were:

	CPU1	CPU2
Terminal 1 -	4000	3579
Terminal 2 -	5092	3170

You will also notice that frequently 1 of the 4 terminals is just sitting there waiting for a turn which why the pass counts become so varied. With a large number of partitions running this test, symptoms are likely to be dramatically worse. P2.

2. M2/17352

The 2270A SSSD 8" Floppy unit does not work properly with the CS/386 O/S. A newly formatted diskette will return intermittent errors on VERIFY, each time in different sectors. On random reads, intermittent I90s and I97s will occur and possibly hangs. On a LIST, intermittent I95 errors. To duplicate run the following program:

```
10 DIM A$(16)
20 X=INT(RND(1)*1023)
30 PRINT X
40 DATALOADBAT/320,(X,L)A$()
50 GOTO 20
```

P1.

3. M2/17453

LISTS does not work correctly to a terminal printer port, address 204, if the printer requires a driver. Prints only the 1st line. Tested with both a 2536DW and a 2236DW with the same results. If the driver is off a full printout is produced but without a linefeed which is ok. The PM017 printer was used. P3.

4.

A write-protected 1.2M drive returns an I93 when trying to write. Should return I95, disk protected. May be DS bug. P3.