

ZEOS[®] Pocket PC User's Manual



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Technical Overview

Processor	<ul style="list-style-type: none">• NEC V30 (80C86 compatible) 4.77/7.15 MHz clock speed
Video	<ul style="list-style-type: none">• Non glare mono supertwist LCD• 640 x 200 resolution• 80 x 25 columns• CGA emulation with 16 grey levels• 32KB video SRAM• Rotary dial contrast control
Memory	<ul style="list-style-type: none">• ROM (drive C:\) 512KB• ROM (drive D:\) 1MB• RAM (drive E:\) 384KB• RAM (system) 640KB
IC Memory Cards	<ul style="list-style-type: none">• 2 compartments available for installation of PCMCIA 1.0 memory cards. (drives A:\ & B:\)• 128KB/512KB/1MB/2MB/4MB/8MB supported card configuration.
Keyboard	<ul style="list-style-type: none">• 82 QWERTY design• PC AT compatible with 12 function keys• Embedded numeric keypad• Pre-programmed hotkeys for application access• Hardware reset button
I/O Ports	<ul style="list-style-type: none">• 1 RS232C serial port with standard 9 pin output• 1 25 pin centronics compatible parallel port
Power Supply	<ul style="list-style-type: none">• Main - (2) AA size standard alkaline batteries• Backup - (1) 3V Lithium battery (CR 2032)• AC/DC - optional 110/220 VAC AC/DC converter
Software	<ul style="list-style-type: none">• BIOS: Phoenix (XT)• Operating system: MS DOS 5.0
Dimensions	<ul style="list-style-type: none">• 245mm x 115mm x 25mm (LxWxH)
Weight	<ul style="list-style-type: none">• 550gms (1.2lbs including batteries)
EMI	<ul style="list-style-type: none">• FCC-B, ZZF-B

Introduction

Weighing less than 1.5 pounds and 100% DOS compatible, the Pocket PC represents the latest in compact design and manufacturing technology.

The Pocket PC features 1MB of RAM and 1.5 MB of ROM. The ROM memory has been pre-programmed with a personal organizer, MS DOS 5.0, the operating system, and Microsoft Works 2.0 an integrated wordprocessor, spreadsheet, database and communications program. Additional memory for storing data or other applications can be easily installed by inserting one or two PCMCIA 1.0 IC memory cards into the built-in memory card compartments. A RS232C serial port and centronics compatible parallel port are also built-in to support your data communications and printing input and output.

Setup

In order for you to operate your Pocket PC quickly and efficiently, The following 5 steps should be completed:

- Step 1 - Visual inspection of the Pocket PC system and package.
 - Step 2 - Install the batteries and/or install the AC/DC adapter.
 - Step 3 - Set system clock options.
 - Step 4 - Set time, date, password and personal options.
 - Step 5 - Install/format IC Memory Card(s).
-

Conventions

To allow for quick and easy comprehension the following standards have been set throughout this manual:

- **Bold** has been used to highlight a key to press.

Example: press **Enter**

- Brackets have been used around certain keys to indicate that you must press and hold down the bracketed key first, then press the key following it.

Example: press **[Alt] E** (Hold down the [Alt] key, then press E).

- If more than one key follows the bracketed key, press them in sequence.

Example: press **[Alt] E,I** (Hold down the [Alt] Key then press E, release the [Alt] key, then press I)

Step 1

Visual Inspection of Your Computer and Accessories

Your Pocket PC package should contain the following:

- The Pocket PC Computer
- 2 AA Size Batteries
- 1 3V Lithium Battery
- 1 Carrying Case
- 1 Parallel Cable
- 1 Serial Cable
- 1 AC/DC Power Converter
- This Manual

Check to be sure that all equipment has been packaged and that there is no damage to your computer.

Cables and Connectors

When using the Pocket PC note the following precautions:

- Whenever installing or removing cables, turn the Pocket PC off first.
- To install or remove the serial or parallel cables from the Pocket PC, squeeze the cable connector and it will latch or unlatch from the port.
- Always leave the cover on the ports when not in use to prevent static discharge (ESD) damage and dust build up.
- To meet FCC requirements you must place a ferrite core around the cable end (supplied with the cable).
- To connect to a standard printer, connect the special parallel cable to a standard centronics/25 pin printer cable.
- To connect to a modem, plug the modem directly into the 9 pin RS232 serial cable. To connect to another computer you must use a NULL modem

Step 2

Installing Batteries

The Pocket PC depends on 2 sources of batteries for its power. The main source is supplied by two AA size batteries. (Battery life varies with use and with battery quality, but should last at least 10 hours) The backup power is supplied by one 3V Lithium battery. (good for about 1 year)

To install or replace main batteries:

- Slide and remove main battery compartment cover.
- Place 2 AA batteries in the compartment, direction as indicated.
- Replace cover.

To install or replace backup battery:

- Unscrew small security screw on backup battery compartment.
- Slide and remove cover.
- Place 3V Lithium battery in the compartment (+) side up.
- Replace cover and screw small security screw tightly back into place.

When replacing batteries always observe the following precautions:

- Turn computer off before removing batteries.
- Always install the main batteries first.
- Do not leave your computer without the main batteries installed, the lithium battery will only provide backup power for about 3 minutes.
- Never remove the main and backup batteries at the same time, this will result in loss of any data stored in the RAM drive.
- When replacing the Lithium battery, be sure that the main batteries have enough power to save your data. If the main batteries have lost their charge, replace them before replacing the lithium battery.
- Replace the backup battery only with a CR 2032 3V Lithium.
- Do not mix old and new batteries together in the main compartment.
- Re-chargeable batteries are not recommended.
- Do not mutilate, puncture, or dispose of batteries in fire. If you do so, they may burst or explode, releasing hazardous chemicals. Discard used batteries according to manufacturer's instructions.

Low Battery Power Warnings

When the computer's battery power becomes low, one of the following messages will flash in the center of your screen. The message will disappear when you hit any key, but will reappear again the next time you turn on your system.

Main Battery Low The main battery has about 1 hour of life left.
(if alkaline batteries are used)

Backup Battery Low Replace the backup as soon as possible.
(RAM disk data could be lost)

If you have installed an IC memory card and it's battery power is becoming low, you will see one of the following messages:

Replace Battery on drive A: Replace Battery on drive B:

Refer to Step 5 on how to change the IC memory card battery.

Using the AC Adapter

- Do not remove the batteries when using the adapter.
 - Ensure that the adapter remains connected to the AC outlet to avoid discharging the battery power.
-

Power Conservation

Whenever you are not using your computer it is recommended to press the ON/OFF key to put the computer in power down mode. The ON/OFF key does not reboot the computer. To continue exactly where you left off, press the ON/OFF key again. (You will not lose your data that has been stored in the RAM disk)

If you leave your computer inactive for a period of time (specified in the setup menu - the default is 2 minutes) it will automatically power down to conserve battery power.

When using AC power the screen will go blank after an inactive period to protect the lifespan of the LCD screen. Press the ON/OFF key to continue.

Other ways to conserve the life of your batteries are to slow the clock speed down by pressing: [Ctrl][Alt] - (minus). To speed the computer back up press [Ctrl][Alt]+ (plus) Note: You must turn on the NUM lock and use the green plus or minus key on the embedded numeric keypad. You can also turn the RS232 port off in the setup menu to save power. (press F10 for the setup menu)

Turning the System On

After installing the batteries, press the On/OFF key. You will briefly see the following display:

```
Phoenix 8086 ROM BIOS Version 2.52.10
Copyright (c) 1984-1988 Phoenix Technologies Ltd.
All Rights Reserved

Drive A : IC CARD
Drive B : IC CARD

Microsoft PCMCIA CARD DRIVES 1.0
The Device Driver system installed 02 drive(s) starting at drive A:

MS-DOS Power Monitor Extension Version 1.00
Copyright (C) 1990-1991 Microsoft Corp.

Microsoft ROMDrive version 1.00 virtual disk D:

TM8886 Virtual Disk Version 1.0
384k OK
```

This informs you of:

- The BIOS version.
- The BIOS has recognized the drives for the IC memory cards.
- The driver for the IC memory cards has been loaded.
- The Power conservation driver has been loaded.
- The ROM drive driver has been loaded to recognize the D:\ drive.
- The ROM disk has been formatted and contains 384KB of available memory. (E:\ drive)

The first time you turn on your system after installing the batteries you will be prompted for the date and time. Enter the correct date and time, then press Enter.

The Pocket PC will automatically create two directories on the E:\ drive, one for your personal organization data and one for your Works data. (You may wish to backup your data onto your IC memory cards often for protection against accidental data loss)

The next screen that will be displayed prompts you to press any key to enter the Main Menu setup screen. Press any key.

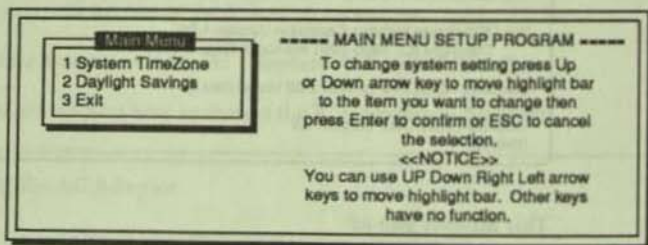
Step 3

Set System Clock Options

The next screen that will appear will be the Main Menu Setup screen.

The Main Menu is self explanatory. Use the UP and DOWN arrow keys to highlight a selection, then press Enter.

To save your setup configuration, be sure to highlight the EXIT option and press Enter. (To exit and not save press the Esc key)



- Set the system time zone according to where you live.
- Set the daylight savings option if needed.
- Highlight Exit to save, then press Enter.

If the Main Menu appears after turning your computer on or if you want to change any of your setup options, press the Esc key. At the C:\RP> prompt type **install** to enter the setup menu.

To re-enter the Main Menu after configuring your setup information, type **RP** at the DOS prompt.

Step 4

Personalizing Your Computer


- At the Main Menu press the F10 key to enter the Utility Menu.
- Highlight Setup, then press Enter. You will see the following screen:

KC Information		TM8886.001
Date	1992.04.22	
Time	12:19:25	
Name		
Address		
Company		
Phone		
Password		
Comment		
Power Savings	Enable/Disable	
Ram disk size	384 k bytes	
Auto off time	2	minutes
RS-232	OFF	
Quit		

The date, time, name, address, company, phone and comment are self explanatory, use the arrow keys to highlight choice then press Enter. Type in your relevant information. You must scroll to Quit and press Enter to save the information.

Setting or Changing a Password

- Highlight the password option. You will be prompted to type in the current password. If you have not set a password yet or you do not want to use a password, press Enter.
- You will then be prompted for a new password. Type in any 7 letter word. For security, it will prompt you a second time to type your new password. Do this if you want to keep the password or press Enter again for no password.
- Highlight Quit, press Enter to save and exit.

 Note: The password that you type in is case sensitive, meaning that if you enter a password with capital letters, you must always use capitals to enter your password and vis versa.

If you have forgotten your password, the only way to change it would be to remove all of the batteries from the computer. After removing then re-installing the batteries you must re-enter all of the setup information.

Power Saver Enable/Disable

Disable the power saver switch only if you have installed a 3rd party software and have encounter any operating errors. To set:

- Highlight Power saver, press Enter.
 - Select Enable (on) or Disable (off), press Enter.
 - Highlight Quit to save, press Enter. (or continue to next option)
-

RAM Disk Size

- The RAM disk size can not be modified.
-

Automatic Screen Saver

The Auto Off is a screen saver that allows you to set the computer to automatically turn off the LCD screen and go into a power down mode to conserve battery life and screen LCD life when not in use. To set:

- Highlight the Auto Off time, press Enter.
 - Choose 1,2, 3,4 or 5 minutes, press Enter.
 - Highlight Quit to save, press Enter. (or continue to next option)
-

RS-232 Communication Port

The RS232 port is for your serial communications such as a modem or to connect to another computer. To set:

- Highlight RS-232, press Enter.
- Choose ON or OFF, press Enter.
- Highlight Quit to save, press Enter. (or continue to next option)

Turn off the communications port to save battery life.

Note: It is not necessary to turn this port on or off while using the MS Works Communications application. It will automatically turn the port on or off as needed. It is necessary, however, to turn this port on or off, before or after, using the DOS Interserve program.

Step 5

Installing the IC Memory Card

On the bottom of the Pocket PC there are two compartments to install PCMCIA 1.0 IC memory cards. Before you can use the card, you must format it. IC memory cards are available in many sizes, but the formatting is the same for all size cards. No special parameters are necessary.

To install IC memory card:

- Turn system on.
- Close the Pocket PC. (This way, when you slide the compartment open, you will have a better hand position)
- Turn Pocket PC over, slide the cover off of compartment A for your first IC memory card or B for the second card.
- Be sure that the small write protection switch is turned off so you can format your card and write data to it. You may wish to turn this switch on after you have written data to it and want to save/protect it.
- Insert card face side up, with small pin end inserted first.
- Slowly close the compartment cover, visually checking to make sure that all the data pins are lined up and that there is an exact fit.

There are three ways to format the cards, all of which perform the same function.

To format the IC memory card:

- Use the File Management tool. See page 26.
Press F3 at the Main Menu.
Press [Alt] D (for the disk pull down menu)
Press A to format card A or B to format card B.
- Or use the MS Works File Manager. See page 57.
- Or go to the DOS prompt and use the Format command. See the DOS appendix.

To change the IC memory card battery:

- Turn system on.
- Flip the small cover up on the IC memory card compartment.
- Leave the IC memory card in the computer.
- Use a small screw driver or paperdip to flip the small latch so the battery door will open.
- Remove the battery and replace it with a new one. (Since each card uses a different battery, refer to the battery for the correct replacement size)
- Close both the battery cover on the battery and on the Pocket PC.

By leaving the card in the computer when changing the battery, you protect your data from being lost. Some IC cards have two batteries to protect your data.

Memory Allocation

Within your computer there are 2 types of memory, Read Only Memory (ROM) and Random Access Memory (RAM). The ROM (1.5MB) contains factory programmed applications and the operating system. The RAM (1MB) is used for application workspace (640KB) and RAM disk (384KB). The computer also has 5 drives (including the optional IC memory cards):

- Drive A:\ The first IC memory card drive. It contains RAM memory and is used in much the same way as a floppy disk. It has a write protect switch and has its own built-in battery so that it can retain data even if the card is removed from the computer. The memory card drive must be formatted before use. You may wish to store your data to this drive or store downloaded applications (or data) from another PC.
- Drive B:\ The second IC memory card drive (same as A:)
- Drive C:\ Contains 512KB of ROM. This memory has been factory programmed with the BIOS, DOS boot files and the Race Pen application. This memory is READ ONLY. You can not store any data or modify any files on this drive.
- Drive D:\ Contains 1MB of ROM. Similar to the C:\ drive, this memory has been factory programmed with the Microsoft Works application and MS DOS.
- Drive E:\ Contains the remaining 384KB of system RAM. This memory gets formatted to be a RAM disk. Unlike a regular PC, you will not lose the data that you have stored in this drive if you turn off the computer.

Resetting the Computer

If, for any reason, you need to reset the computer, there are two methods that you may use:

Hardware Reset

Press the small reset button located near the upper right corner of the backspace key. The hardware reset will do a complete reboot of the system, which may result in the loss of your RAM disk data. You will know if any data has been lost if you see the "Formatting and Initializing the RAM disk" statement while the system restarts.

Software Reset

Press the CTRL + ALT + DEL buttons together. The software reset clears all of the data out of the CPU and system memory, but will not destroy your RAM disk data.

Main Menu

Introduction

The Main Menu is a personal information management program that has been designed to help you organize and automate your data. You can keep track of appointments, projects, business contacts, friends, family, finances and more. The Main Menu tools gives you the convenience of automated calculations and conversions. The main menu is also the interface used for easy access to Microsoft Works.

The Main Menu has been factory programmed into your computer ROM (C:\) therefore, the application can never be accidentally erased or modified.

Moving Around the Menu

Press any of the preprogrammed function keys to enter a tool or use the arrow keys to select a tool, then press Enter.

Once inside any of the tools, you can switch between the tools by pressing any of the preprogrammed function keys. You cannot, however, switch to a Microsoft Works application. You must first return to the Main Menu, then press F9 to enter MS Works.

The Main Menu

The main application menu offers you 8 options to choose from:

- | | |
|------------------------|--|
| F3 File Manager | An easy access menu that allows you to manage your files and directories. You can also format your RAM drive and IC memory cards from the pull down menu options. A command line prompt allows you to use standard DOS commands. |
| F4 Planner | A calendar, planner and appointment scheduler. Selectable for daily, weekly and monthly planning. Features an alarm for daily reminders. |
| F5 To Do List | Make important project lists, set priorities. |
| F6 Phone Book | Keep track of names, addresses, phone & fax numbers and more. |
| F7 Information | International country and city telephone area codes, international time zone convertor, weight, temp & measurement convertor, currency exchanger, and personal information database. |
| F8 Calculator | Basic, trig, exponents, log, hyperbolic and memory functions. |
| F9 MS WORKS | Word Processor, Spreadsheet, Charting, Database and Reporting, Communications, Alarm Clock, Calculator, and File Manager. |
| F10 Utilities | Password option, power conservation settings, setup for time & date. Inter Server communication link. DOS shell. |

Basic Tool Functions

There are several basic functions used throughout the program. In order for you to become efficient with it, you should familiarize yourself with these functions. In the Planner, To Do List and Phone Book tools you will notice the File, Edit, Query and Option pull down menus. (The Option menu is also in the Calculator and Information tools)

To enter the pull down menus, press the [Alt] key along with the first letter or the highlighted letter of the menu choice.

(Example: To get into the File menu, press [Alt] F)

Edit Menu

New Entry	Alt-N
Copy Entry	Alt-C
Delete Entry	Alt-D
Mark	Alt-M
Unmark	Alt-U

Making a New Entry:

- Press [Alt] N (new entry) (or for pull down menus [Alt] E, N)
 - In the information boxes, type in or select the required information.
 - Press **TAB** or **Enter** to bypass any information field that is not need.
 - Select **OK** to save and then press **Enter**.
-

Copying an Entry:

- Select the entry you wish to copy.
 - Press [Alt] C (copy entry) (or for pull down menu [Alt] E, C)
 - Modify the entry with the new information then select **OK**
 - Press **Enter** to create a new record.
-

Deleting an Entry:

- Select the entry you wish to delete.
 - Press [Alt] D (delete entry)
 - Select if you wish to delete one, all, marked or unmarked at the prompt.
 - Press **Enter**
-

Marking an Entry:

- Select the entry you wish to mark.
 - Press [Alt] M (mark entry)
 - All entries that have been marked will be highlighted (reverse video).
-

Unmarking an Entry:

- Select the entry you wish to unmark.
- Press [Alt] U (unmark)

File Menu

Export
Import
Print
Exit Esc

Importing & Exporting Data

You can export (transfer) data that you have created/stored in system tools to other applications. You can also import data from other applications. (However, as of this writing, Main Menu files can not be imported into MS Works)

When you transfer data between files, you must use the correct data format so that the target application knows how to read the data. The Main Menu supports the 3 most common formats. They are:

- I. Data in each field is surrounded by quotation marks (") and each field is separated by a comma(,).
- II. Data in each field is separated by a comma(,).
- III. Each data field is arranged by its original size.

To Export Data:

- Press [Alt] F,E (file, export)
- You will be in the Export File Box prompt. Type the name of the file that you wish the data to be transferred to.
- Next, enter the data format. You will be prompted 1,2 or 3. Choose the format that relates to your data.
- Enter the data mode - one file, all files or marked files.
- Select OK, then Enter. (use the TAB key to go back to change an option)

To Import Data:

- Press [Alt] F,I (file, import)
- Enter the name of the file that you wish to import.
- Enter the data format of the file to be imported.
- Select OK, then press Enter.

Printing

To print:

- Press [Alt] F,P (file, print)
- Select one, all, marked or unmarked at the prompt. (type 1,2,3,4 or scroll)
- Select to turn form feed on or off. (continuous feed paper)
- Select OK, then press Enter.

Exiting

- Press the Esc key to exit any tool.
- If you are in the pull down File menu press X.

Query Menu

Search	Alt-S
Repeat	Alt-R
Sort	

Searching for an Entry

If there are a large number of entries in a tool list, you can scroll through them using the following keys:

- Arrow keys to scroll up or down one entry at a time.
- [Fn]PgUp/PgDn to scroll up /down 1 screen.
- [Ctrl]PgUp/PgDn to scroll from the list top to list bottom.

You can also use the Search command to find a particular record.

To use the search command:

- Press [Alt] S (search)
- In the Pattern box type in the word you are searching for.
- Select the direction of the search.
- Select if you desire the search to be case sensitive.
- Press Enter

Sorting your Data

Sorting your lists rearranges your data so that you can view or print them a certain way. Depending on the tool, you can sort by name, date, priority or several other formats. (You can sort your data in only the Todo List and Business Card tools)

To sort a list:

- Press [Alt] Q,O (query, sort)
- You will be prompted to enter the order of the fields that you want to sort. Use the arrow keys to scroll through the list. Select the field that you want sorted first, second, third, forth, fifth, and sixth. If you want a simple sort or you want to leave out a few fields, use the TAB key to skip over a choice. Use the delete field option if you want to change a field.
- Choose if you want to sort in ascending or descending order.

Ascending order = A to Z or lowest number first.
Descending order = Z to A or highest number first.

- Choose if you want to distinguish uppercase and lowercase in your sort. Enter Y/N.
- Select OK, then press Enter.

Options Menu

Calendar
Date Format
Set Timezone
Show Clock

Calendar

The calendar provides a 4 month continuous calendar for quick reference of dates and includes holiday and schedule information. Information may be recorded by using the Planner tool.

To operate the Calendar:

- Press [Alt] O,C (option, calendar)
- Use the up or down arrow keys to view the next 2 months.
- Use the [Fn]PgUp/PgDn to view the next 4 months.

Date Format

You may wish to change the date format displayed at the top of the screen and for data entry.

- Press [Alt] O,D (option, date format)
- Choose the date format you prefer.
- Select OK, then press Enter.

Set Timezone

When you travel to a different time zone, simply select the new time zone without having to reset the clock. When you return, switch the Timezone back to normal.

To set the timezone:

- Press [Alt] O,S (option, set timezone)
- Scroll through the chart with the arrow keys, highlight your selection and press Enter.
- Choose if you want to be in Daylight savings mode, Enter.
- Select Ok, then press Enter

Show Clock

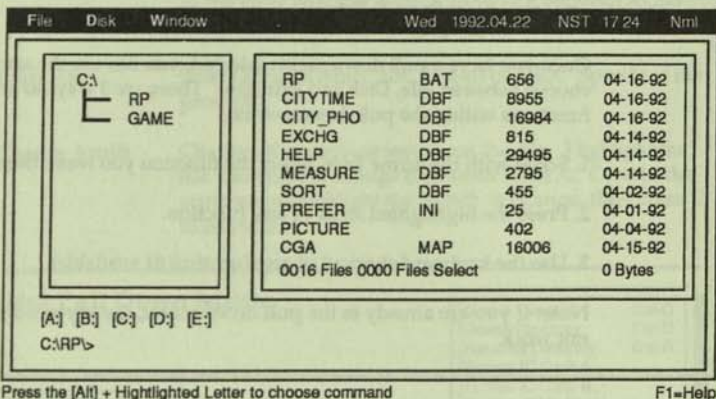
Displays the time in the upper right corner.

To show or remove clock:

- Press [Alt] O,H (option, show clock)

File Manager - F3

The File Manager provides an easy to use menu to manage your files and directories. It also allows you to format your IC cards and RAM disk.



Use The TAB key to choose between file maintenance, directory maintenance, or the drive letter /command line prompt. There will be a flashing block prompt in either the upper left corner of the menu windows or near the bottom of the menu in the command line area to indicate which window is active. (There are 3 TAB stops)

The File Manager tool displays:

- Top menu bar:** Indicates File, Disk and Window pull down menu choices. Also the day, date (format selectable), timezone, time and daylight savings or Normal time.
- Left side window:** Displays a tree structure of the directories that have been created.
- Right side window:** Displays files, file name extensions, file size, file creation date, total number of files in the directory, total files selected and total bytes of the files selected.
- Drive letters:** Drives available on your computer.
- Command prompt:** (C:\RP\>) operates any DOS command.
- Bottom status bar:** Brief explanation of function and/or instruction.

Near the top of the screen you will see File, Disk and Window pull down menu choices. To access these, use the [Alt] key in combination with the first letter of the menu you want.

- For Files press [Alt] F
- For Disk (directory) press [Alt] D
- For Window [Alt] W

Once you have a pull down menu selected, you can use the arrow keys to choose between File, Disk and Window. There are 3 ways to access the functions within the pull down menus.

1. Scroll with the arrow keys, select the function you want, then press Enter.
2. Press the highlighted letter of any function.
3. Use the keyboard shortcut of any function (if available)

Note: If you are already in the pull down menu, the keyboard shortcuts will not work.

File Pull Down Menu

Run File	Alt-R
Copy File	Alt-C
Delete File	Del
Rename File	Alt-E
View File	Alt-V
Print File	Alt-P
Change Attrib	Alt-A
Exit	Esc

To work on a file:

- Use the TAB key to activate the file window.
- Use the arrow key to highlight the file you want to work on.
- Press [Alt] F to pull down the File menu, then select the function you want.
or
- Highlight the file, then use one of the keyboard shortcuts.

Run File

Execute a file that has been highlighted. Files that can be run will have the .exe, .com, or .bat file name extensions.

Copy file

Copy any file or group of tagged files to another location. For single file copy highlight the file you wish to copy then press [Alt] C you will be prompted for a location. Enter the target drive and directory. For group file copy, TAB to the File menu, then tag the files you want by pressing the enter key to select or deselect. Press [Alt] C. Specify at the next prompt where to copy the files to.

Delete File	Deletes file or files. Same as copy except press Del.
Rename File	Renames a file. Enter new name at the prompt.
View File	Lets you view the code of the file in ACSII/HEX. Highlight the file you want, then press [ALT] V. Once in the view window press A to switch between ACSII and HEX. Use the (Fn) PgUp/PgDn to scroll.
Print File	Prints a file in either ASCII (text) or HEX. Specify at the prompt.
Change Attrib	Changes the attribute switch on the file. Highlight the file you want to change then enter [Alt] A. Once in the attrib menu highlight the switch to change, then press U to confirm.

Disk Pull Down Menu

Create Directory	Ctrl-C
Delete Directory	Ctrl-D
Rename Directory	Ctrl-R
Format IC Card A	
Format IC Card B	
Format RAM Disk	

Working on a Directory

There are two methods of selecting a directory to work on.

Method 1:

- Use the TAB key to cursor to the bottom option field.
- Use the arrow keys to select which drive the directory you want is on or which drive you want to create/rename/delete a directory.
- Press Enter
- Use the TAB key again to highlight the left (Dir) window area.
- Use the arrow key to scroll down the directory tree and highlight the directory you want to work on.
- Use the keyboard shortcut to create/rename or delete a directory or press [Alt] D for the Disk pull down menu, select and highlight the function you want to use, then press Enter.

Method 2:

- Use the TAB key to select a drive. (or type in the drive you want such as A:\ B:\ D:\ E:\ on the command line)
- On the command line use the DOS command CD\ (for change directory)

example: at the C:\RP> prompt type: CD\WORKS

- Press Enter



Remember that you can not make, delete or rename a directory on the C:\ or D:\ drive it is READ ONLY.

Formatting Your Memory Card or RAM disk.

- Press [Alt] D for the pull down menu.
- Highlight, then press Enter on any of the format options.
- Format IC Card A - Insert card and press Enter.
- Format IC Card B - same

It is not necessary to type in any formatting parameters. The Pocket PC will automatically format your IC memory cards with the correct information.

- Format RAM disk - This will quickly reformat and erase any data on your RAM disk. Press Enter.

Window Pull Down Menu

Next Window	TAB
Zoom Window	CTRL-Z

There are 2 choices for you to use. The first, [Alt] W,N performs the same function as the TAB key.

The second, [Ctrl] Z allows you to zoom in on the Directory or file menu. This is useful to view file attributes and time of file creation in the file menu or if you have very complex directory structures.

Going to DOS (3 methods)

1. Press the ESC key at the Main Menu. (type RP to re-enter menu)
2. Press F10 (Utility) function key at the Main Menu. Scroll to the DOS shell option. Press Enter (type EXIT to re-enter the Main Menu).
3. In Microsoft Works, press [Alt] F, scroll to run other programs, then TAB to the <Run> choice, then press Enter. (type EXIT to re-enter MS Works)

You may prefer to use the File Manager built into MS Works or use the DOS command line instead to manage your files or to format your drives.

File Manager - Keyboard Shortcuts

Files

[Alt] R - Run File

[Alt] C - Copy File

Del - Delete File

[Alt] E - Rename File

[Alt] V - View File

[Alt] P - Print File

[Alt] A - Change Attribute

ESC - Exit

Directories

[Ctrl] C - Create New Directory

[Ctrl] D - Delete Directory

[Ctrl] R - Rename Directory

[Alt] D+A - Format IC Card A

[Alt] D+B - Format IC Card B

[Alt] D+R - Format RAM Disk

Window

TAB - Tab to next active window

[Ctrl] Z - Zoom Active Window

Help

F1

Planner - F4

The planner is a tool to organize important times, dates, projects, notes and appointments. It operates in 3 modes:

- In **Monthly Mode** (shown below) three windows will be displayed. Calendar, Notes and Personal Important Information.
- In **Weekly Mode** the screen will display an overview of your schedule for a particular week.
- In **Daily Mode** the screen will display a list of all appointments for a particular day. You have the option of setting an alarm and making notes for each appointment.

File	Query	Option	Special	Sat 1992 04 25 GMT 20 32 Nrm						
				April 1992						
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Note			
			1	2	3	4				
5	6	7	8	9	10	11				
12	13	14	15	16	17	18				
19	20	21	22	23	24	25				
26	27	28	29	30						
Personal important date										

By default the Planner will always start in the monthly mode.

- To switch to the daily mode press **Enter** on any date.
- To switch to the weekly mode press **[Alt] P,W**.
- To return to the monthly mode press **Esc**.
- You may also use **Alt+P** (special menu) to switch between modes.

To move around the menu:

Use the **TAB** key to choose which field you want to use. A block cursor will be in the upper left hand corner of each window to indicate which window is active.

Monthly Mode

Calendar

To select a day:

- Use the TAB key to activate the calendar window.
- Use the arrow keys to scroll to the day you want to schedule.
- Press Enter on any day and you will be in the daily mode.

- To move to another month press [Fn]PgUp/PgDn.
- To move to another year press [Fn][Ctrl]PgUp/PgDn.

To select a specific date:

- Use the TAB key to activate the calendar window.
- Press [Alt] P,J (special , Jump date option)
- Select the year, month and day you want, press Enter.

To set a holiday:

- Use the TAB key to activate the calendar window.
- Press [Alt] P,S (special menu, Set holiday option)
- Select the day(s) you wish to set as a holiday and press Enter.
- Press TAB to move to the Start Date field. Enter in the year and month you wish to start your holiday. (You must type in the full year i.e. 1992)
- Enter the ending year/day of your holiday. (Do you want the holiday to be marked just for one month, a few months or for a few years?)
- Select OK, press Enter.

The day(s) you select as a holiday will be highlighted on the calendar.

To select or deselect a single day as a holiday:

- Use the TAB key to activate the calendar window.
- Select the date you wish to set.
- Press [Alt] H (The day will now be highlighted)
- Press [Alt] H again and you will deselect the holiday.

To clear holidays:

- Use the TAB key to activate the calendar window.
- Press [Alt] P,C (Clear holiday option)
- Select the day(s) you wish to clear.
- Enter the start date and end date.
- Select OK, press Enter.

Notes

Use the note field to type in any important information for that day.

To type a note:

- Use the TAB key to activate the Note window.
- Type in your message.
- Use the TAB key again to return to the calendar when finished.

Personal Important Information

The third window on the monthly menu allows you to pre-program any important information. To do this you must switch to the F7 Information tool.

- Press F7
- Select 5 (personal information), press Enter
- Enter on the name of your choice. (Refer to page 37 to enter names)
- At the bottom of the next menu select **Important Date**, press Enter.
- Press [Alt] N, type in the date and the message.
- Select OK, then press Enter.

If you have more than one important message you will notice a small indicator arrow pointing up or down on the right side of the window border. Use the arrow key to scroll through your messages. You might also find it useful when you write a message to include names or numbers since you can input data on up to 10 different people.

Weekly Mode

You can use the weekly mode to review a summary chart of your schedule for a selected week. The dates of the selected week are shown in the upper left corner of the screen. A solid bar in the chart represents your scheduled appointments (busy periods) based on the information recorded in the daily mode. The time (in a 24 hour clock) is displayed across the top of the screen. Days are on the left.

To switch to the weekly mode:

- Press [Alt] P,W
- Scroll through the dates with the arrow keys to see a continuous calendar of dates or press [Fn] PgUp/PgDn to skip from week to week.
- Press Enter on any date and you will be in the daily mode screen.
- Use [Fn][Ctrl]PgUp/PgDn to view month to month schedule.

Daily Mode

To switch to the daily mode:

- Press **Enter** on any date in the monthly or weekly mode, or
- Press **[Alt] P,D**

• If you make an entry into the daily mode on any date it will be indicated in the monthly mode by a small dot next to the date.

To enter data into the Daily mode:

- Press **[Alt] N** (New entry)
- You will be prompted with a new entry data form. Enter the starting and ending time of your scheduled appointment. (use 2 numbers for the time entries such as 08:30 or 15:00 for easier entry)
- If you want an **alarm beeper** to go off at a certain time before your appointment is to begin, enter the time at the prompt. You may also wish to change the default alarm lead time so all your appointments use the alarm. (To do this, press **[Alt] P**, then press **enter**. Enter the lead time, then press **enter** again)
- In the note field type any relevant information. The complete field will be displayed when the alarm goes off. You can also view your notes by highlighting the appointment and pressing **Enter**.

Monthly Mode

[Alt] F, E Export data record
 [Alt] F, I Import data record
 [Alt] P, D Go to daily mode
 [Alt] P, W Go to weekly mode
 [Alt] P, S Set holiday
 [Alt] P, C Clear holiday
 [Alt] P, J Jump to specific date
 [Alt] F, E Export data record
 [Alt] F, I Import data record

[Alt] P, D Go to daily mode
 [Alt] P, W Go to weekly mode
 [Alt] P, S Set holiday
 [Alt] P, C Clear holiday
 [Alt] P, J Jump to specific date

Weekly Mode

[Alt] P, D Return to daily mode
 [Alt] P, M Return to monthly mode

Daily Mode

[Alt] N New entry
 [Alt] C Copy entry
 [Alt] D Delete entry
 [Alt] M Mark entry
 [Alt] U Unmark entry
 [Alt] P Sets lead time for alarm

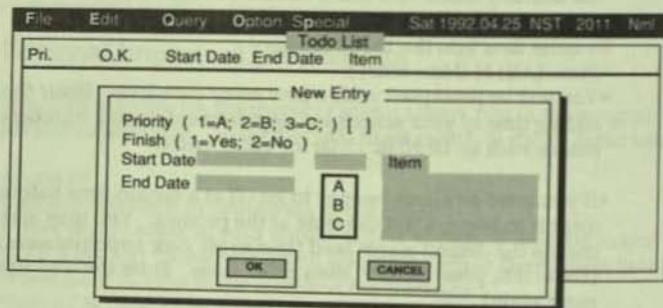
Daily, Weekly & Monthly

[Alt] F, P Print record
 [Alt] F, D Enter DOS shell
 [Alt] F, X Exit
 [Alt] S Search for an entry
 [Alt] R Repeat search
 [Alt] O, C View 4 month calendar
 [Alt] O, D Change date format
 [Alt] O, S Set timezone
 [Alt] O, H Show clock

F1 Help

To Do List - F5

The To Do List was designed to help you with your project management. You can specify job priorities and if the project(s) has been completed. Also built into the Todo List is an overview feature that allows you to view your projects and commitments over a 1 year period.



To Enter Data:

- Press [Alt] N (You will be prompted with the above entry screen)
- Choose the priority of the project (type in A, B or C or use the arrow key).
- Mark if the project has been completed Yes/No.
- Enter start date (example 1992 04 22).
- Enter completion or scheduled completion date.
- Fill in the Item project description form with any relevant information.
- Select Ok, press Enter.

Use the TAB key to skip a field or change data. Once you have created a record you can highlight on it at anytime and press enter to change the information or to read the complete field.

Overview

To view a complete yearly overview of your projects:

- Press [Alt] P,O or [Alt] P, then Enter.
- Use [Fn]PgUp/PgDn to view next years (or previous years) projects.
- To print the chart, press Shift+ PrtSc key. (Print Screen).

Card File - F6

The Card File tool provides you an automated and organized way of recording important information about clients, colleagues, friends, family, professors, doctors, etc.

The new entry menu is self explanatory. Just enter the data that is assigned to each field. You have the option of defining 2 additional fields.

To create a new card:

- press [Alt] N
- Type in the type of relationship (client, vendor, friend, colleague, etc., this is a good field to sort your data with)
- Fill in all the required information, use the TAB key to skip an entry.
- Select Ok, then press Enter.

To change Free Item Fields (user defined)

- press [Alt] P,C (or press [Alt] P then Enter).
- Fill in the space with the desired field label (10 characters).
- Select Ok, then press Enter.

The free item field remains consistent across all Phone Book entries.

- To view or edit any record, highlight the record, then press Enter.

Information - F7

The general information tool consists of an international telephone area code listing, a clock that allows you to view 4 time zones at the same time, a weight, temperature and measurement conversion table, a currency exchanger and a personal database for up to 10 important contacts.

Information Menu

1. International Telephone Area Codes
2. International Time Zone
3. Weight & Measure Conversion Tables
4. Currency Exchange
5. Personal Information
6. Exit

International Telephone Area Codes

This list gives you fingertip reference to most of the major countries and cities around the world. A list of the countries is displayed on the left side of the screen, while the right side windows contains the major cities.

- To move between the two windows use the **TAB** key.
- To find a specific country, use the arrow keys to scroll through the list.
- Use **[Fn]PgUp/PgDn** to scroll from one page of countries to the next.
- Use **[Fn][Ctrl]PgUp/PgDn** to scroll from the top to bottom of the list.

To search for a country or city:

- If you want to search for a country, be sure that the left side window is active. If you want to search for a city, be sure the right side window is active.
- press **[Alt] S** (search)
- Enter the country or city name. (Beware of periods in certain names)
- Enter if you want a case sensitive search and the direction of the search. (It may be faster one way or another depending on what you are looking for)
- Select **OK**, then press **Enter**.

International Time Zones

The International Time Zones tool allows you to quickly check the current time anywhere in the world. You can also set 4 clocks for fast reference to times that you refer to most.

The window on the left side of the screen contains the country and city name. The 4 smaller windows on the right contain the time zones of your choice. If the exact city you want is not listed, use a city that is in the same time zone.

To set the 4 clock windows on the right:

- Use the **TAB** key to activate the right side windows. You will know that the timezone windows are active by noticing the flashing border around one of the blocks. Use the arrow keys to select the clock you want to program. Once the flashing border is around the border of the window you want, press the **TAB** key to activate the left side window.
- Scroll through the country/city list to find the timezone you want. Highlight that timezone, then press enter.
- **TAB** back to the right side window, select the next window, press **TAB**.
- Repeat the above steps for all 4 windows.
- Press **Esc** to exit, or press another function key to enter a different tool.
- Use **[Fn]PgUp/PgDn** to scroll from page to page or use **[Fn][Ctrl]PgUp/PgDn** to scroll from the top of the list to the bottom.
- You can also use the **[Alt]S** (search) command to search for a specific timezone. To use the search, the left windows need to be active. Refer to page for basic tool functions, if needed.

Weight & Measure Conversion Table

This tool contains a program for the following 10 conversions:

- | | |
|--------------------|------------------------|
| • Linear Measure | • Dry Measure |
| • Nautical Measure | • Avoirdupois Measure |
| • Square Measure | • Troy weight Measure |
| • Cubic Measure | • Apothecaries Measure |
| • Liquid Measure | • Temperature Measure |

To use the conversion list:

- In the Select Item menu, use the arrow keys to select and highlight the required type of conversion then press **Enter**. You can also press the number corresponding to the choice.
 - A chart will appear on the right side with a list of units followed by their values.
 - The default value is expressed in 1 unit of measure. Notice on each chart which unit the other units are converted to (for your reference)
 - To enter in your measurement, scroll through the list, highlight the unit that you have the measurement in, then press **Enter**.
 - Type in your measurement, then press **Enter**. All other units will be displayed relative to the amount you enter.
 - To use the temperature conversion, use the **TAB** key to switch between the Fahrenheit and Centigrade measurements. Enter in either degree for conversion then press **Enter**.
-

Currency Exchange

This list contains a list of countries and their currency exchange values.

To use, you must first enter in the present exchange rates. Press **[Alt] C** and you will be prompted to edit the currency rates.

- Use the arrow keys to scroll through the list. There are 3 lists within the Currency Edit menu: Country Name, Currency Name and Value.
- Scroll through the lists, when you select and highlight a choice, press **Enter**. Enter the new values, press **Enter** again, then press **Esc**.
- You may wish to custom configure this list with new country choices, change the sequence of countries or delete some entries. Be sure to update all 3 lists if you change or move any information.

To exchange currency rates:

- Select and highlight the currency you want to exchange, press **Enter**.
- Enter in the amount of currency, press **Enter**.
- All values will then be displayed relative to your currency amount.

Personal Information

The Personal Information database allows you to record important information on up to 10 contacts. You may record general information, health information, credit card information, bank information and important date information (which will be displayed during the monthly mode of the planner tool).

- The first step of using the database is to record the name(s) of the people you want to keep records on.
- At the first screen, Press [Alt] C to enter a new name.
- Select and highlight the entry number you want with the arrow keys and press Enter.
- Type in the name.

When finished, either press Enter and you will be at the second personal information menu or to continue adding names, scroll down with the arrow keys to the next selection, press [ALT] C again, then enter the next name.

To use the database:

- Select and highlight the persons name, then press Enter. (or press the corresponding number)
 - At the second menu, select and highlight the record you wish to use, then press Enter. (or press the corresponding number)
-

Identification & Health

The data fields are self explanatory. Fill in the relevant data, press Enter or use the TAB key to move around the record. Select OK and press Enter to save or Esc to quit.

Credit Card & Bank

The credit card and Bank databases display bank information and credit card information. (account numbers & expiration dates) The data fields are self explanatory, Use [Alt] N to enter a new record.

Important Information

Use the important information record to keep track of any date that has significance. The note message that you type in will be displayed in the monthly mode of the Planner Tool.

- To Use, press [Alt] N to record a new entry.
- Type in the date and message, Select OK, then press Enter.

Calculator - F8

Use the number keys to enter any numeric input and basic function. To use advanced functions, press [Alt] P to pull down the function menu. Scroll through the menu, highlight any desired function, then press Enter. You may also wish to use the keyboard shortcuts listed below:

Basic Functions

C	ClearAll
Bkspc	Clear entry
M	Mod
I	+/-
Q	π

Memory Functions

[Alt] 1	Add memory
[Alt] 2	Delete memory
[Alt] 3	Recall memory
[Alt] 4	Clear memory

Trigonometric Functions

\	Rad\Deg switch
S	Sin
C	Cos
T	Tan
[Alt] S	ARC(SIN)
[Alt] C	ARC(COS)
[Alt] T	ARC(TAN)

Hyperbolic Functions

[Ctrl] S	SINH
[Ctrl] C	COSH
[Ctrl] T	TANH

Exponential Functions

E	EXP
P	X^*
J	10^*
H	X^1
R	\sqrt{X}
W	X^{**}

Logarithm Functions

N	LN
L	LOG

Because the hotkey (P) for the pull down menu gets turned into the minus (-) key when you turn on the NUM LOCK for the embedded keyboard, You must use the above listed keyboard shortcuts.

Utilities - F10

Setup

Please refer to page 13 for complete coverage of the Setup utility.

DOS Shell

The DOS shell option will switch you out of the Main Menu program temporarily and into DOS at the C:\> command line. You can run any DOS command that has been installed or run other applications.

To use the DOS shell:

- Press F10 for the Utility menu.
 - Select DOS prompt and press Enter.
 - You can re-enter Main Menu by Typing EXIT.
-

Interserve

Interserve is a MS DOS 5.0 data transfer utility that allows you to connect two computers through either the serial port or parallel port via a client server architecture. The server runs a dedicated program; once a connection is made to the server, the client uses devices on the server machine as though they were local devices. Serial ports are linked with a NULL modem adapter. Parallel ports are linked via a special adapter provided by a 3rd party.

To automatically install Interlink press F10, then choose the Interserver option. The file INTERSVR.EXE will load automatically into your computers memory. The following file, INTERLNK.EXE must be copied and installed on the computer you want to communicate with. See the topic on Auto Install. You must also turn on the RS232 switch in the Setup menu before you can communicate.

Client Device Driver (INTERLNK.EXE)

The file transfer client is a single device driver performing the serial and parallel communication and redirection of server drives and printer. Use of the drives and printer attached to the remote machine is as if the devices were local.

Connection with the server via the serial or parallel port shall be dynamic. Once connected, the drive type for remote drives would look like removable drives.

In order to improve ease of use for the novice user, INTERLNK does not require any special switches or parameters for most configurations.

If the user wishes to minimize the driver's memory image, only portions of the driver required for chosen options can be loaded. To exclude loading of specific drive functions, the below CONFIG.SYS parameters are used.

DEVICE=D:\DOS\INTERLNK.EXE [/drives:n][/noprinter][Auto]

/drives:n Maximum number of drives to redirect. Default value is 3.
/noprinter Do not enable printer redirection.
/Auto Does not load device driver if no connect is made at the boot time.

In addition, the following parameters are used to override the automatic features or default values. If serial or parallel ports are specified as parameters, only those ports are scanned for connection.

DEVICE=D:\DOS\INTERLNK.EXE \ [low][noscan][com:[n | address]] [lpt:[n | address]][/baud:xxxx]/v

/low Loads driver in conventional memory, even if upper memory is available.
/noscan Do not scan for connections at boot time.
/com:n Indicates that only specified COM port n is to be scanned for connection. e.g. if /COM1 is specified, then the driver should only scan COM1. If /COM is specified, then all COM ports are scanned, but no parallel ports are scanned.

If /Com is specified with a port address, only the port at that address is scanned. To scan all serial ports listed in the BIOS in addition to the port specified, use /com together with /com:address.

/lpt:n Indicates that only specified port n is to be scanned for connection e.g. if /lpt1 is specified, then the driver should only scan LPT1.

If /lpt is specified with a port address, only the port address at that address is scanned. To scan all serial ports listed in the BIOS in addition to the port specified, use /lpt together with lpt:address.

/baud Maximum baud rate used; 9600, 19200, 37400, 57600 or 115200 baud.

/v Forces Interlnk to drop into the variable mode if using a serial connection. This mode has reduced throughput but uses "polite" handling of the timer. It is because the "impolite" handler does not always pass timer interrupts to the rest of the chain. The impolite handler hangs some machines.

Client Device Drive Executable

The device driver is in .EXE format so that it can be run as a program if called from the command line. The syntax for the client program from the command line are as follows:

INTERLNK [/?][client={server}]

/?	Displays help text information for this program (including a description of config.sys options)
Client	Specifies a local drive to map to a remote drive. Redirects the mapping if no remote drive is specified.
Server	Specifies a remote drive to map a local drive to.

If the client program is called without arguments, the current drive mappings and the drives offered by the server are displayed. Drives offered by the servers are displayed in the order of priority.

Interlnk Server Program (INTERSVR.EXE)

The file transfer server is a dedicated, full screen program, capable of communicating with the client via serial and parallel lines. The server allows use of local drives and attached printer by the client machine.

The server program provide an interactive user interface and a command line option to do the following:

- Exclude certain drives from being offered on the server.
- Allow the user to prioritize the offering of drives.

While the server will not require any user action once started, it provides feedback to the user on:

- Current state of drive mappings and printer re-direction.
- Drives that are currently being offered.
- Whether connected via COM or parallel port.
- Current baud rate.
- Drive activity.

Server syntax is as follows:

INTERSVR [/?][drive:[...]][/LPT:[n | address]][/COM:[n | address]]
[baud:rate] /v

/?	Displays help text information for this program.
drive:	Specifies the drive(s) that will be redirected.
/X=drive:	Specifies the drive(s) that will be redirected.
/LPT:n	Specifies a port to scan. (/LPT scans all LPT ports)
/LPT:address	Specifies a port address to scan.
/COM:n	Specifies a port to scan (/COM scans all COM ports)
/COM:address	Specifies a port address to scan.
/baud:rate	Set a maximum serial baud rate.
/v	Forces Interlnk to drip into the variable mode if using the serial connection.

INTERLNK Connection

Client tries to connect to a server in the following cases:

- At the driver initialization (i.e. boot time)
- Every time Interlnk program is executed on the client system.
- When any of the remote volume is accessed by the client system.

Auto Bauding

Both server and client sample the transmissions and dynamically increase or decrease the baud transfer rate depending on the number of errors detected. Minimum baud rate is 9600.

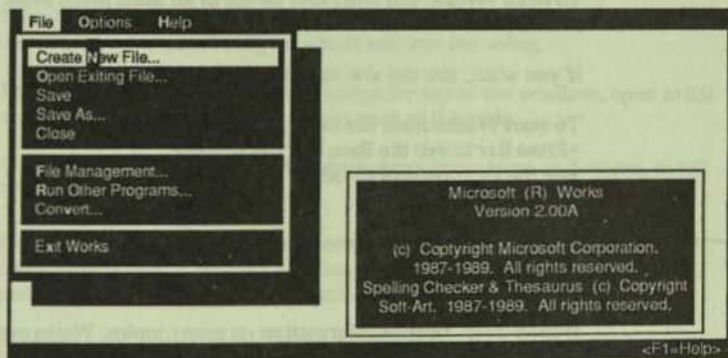
Auto Install

The **INTERSVR /RCOPY** command will install the **INTERLNK** files on a remote computer whose COM port is connect to the local computer by a 7 wire null-modem cable.

Cables Supported

The file transfer utility should support serial links using a null modem cable and should support serial and parallel links using cables provide by several of the most popular data transfer software programs.

Microsoft Works



Creates new Works file.

Introduction

Microsoft Works consists of the 4 most commonly used applications in personal computing - a Word Processor, Spreadsheet, Database and a Communications application.

All of the Works applications were designed to be used together, giving you the added benefit of compatibility. They are supported by several built in utilities including an alarm clock, calculator, file manager, automatic phone dialer (If you have a modem installed) and an extensive help database.

Works has been pre-installed on your computer's D:\ (ROM) drive. It is read only and can never be accidentally erased or modified.

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Getting Started

To enter Works, you must first be out of all Main Menu tools. At the Main Menu, press **F9** to enter Works.

If you wish, you can also start Works from the DOS prompt.

To start Works from the DOS prompt:

- Press **Esc** to exit the Race Pen main menu.
- At the DOS prompt **C:\RP\>** type **works**
- Press **Enter**

Getting Help

Works' help contains information on many topics. Works can select an appropriate topic for you based on what you are currently doing, or you can select a topic from the Help Index of all available topics.

To get help related to what you are doing on the keyboard:

- Press **F1**
- Press **PgUp/PgDn** if the topics longer than one screen.

If you are using the Communications tool, and you are connected to another computer, press **[Alt]** then press **F1**.

To select a topic from the Help Index:

- Press **[Alt] H,H**
- Follow the instructions on the screen.

Looking at the Works Screen

The parts of the screen are the same for all Works tools.

Menu Bar The menu bar, shown at the top of the window, list menu names. The names differ depending on which tool you are using.

Menus The menus, which appear across the top of the window, open to list commands. The menus are similar in each of the tools.

Commands You use commands, which drop down from each menu, to tell Works what to do.

Status Line The status line, which is shown near the bottom of the window, contains information such as your location in the file, keys that are locked, and other information specific to each tool.

Message Line The message line appears at the bottom of the window. It tells you what action to take or it displays a brief description of the highlighted command.

Help reminder The Help reminder appears at the far right of the status line. You can press F1 for help at any time.

Choosing Commands

To choose a command from the keyboard:

- Press the [Alt] key. Works activates the menu bar.
- Press the Highlighted letter in the name of the menu you want. Once the cursor is in the menu bar, you can choose a different pull down menu with the arrow key.
- Press the highlighted letter of the command you want from the pull down menu or use the arrow keys to scroll.

If a command does not apply to what you are doing, the command will not have a highlighted letter and you will not be able to use it.

Using Function Key Shortcuts

You can take advantage of the many shortcuts available in Works by using the keyboard shortcuts listed in each menu or by using function keys on your keyboard. For a comprehensive listing of function keys and keyboard combination shortcuts, refer to the Help Index Keyboard.

<u>Function Keys</u>	<u>with SHIFT</u>	<u>with CTRL</u>
F1 Help topic	Help Lesson	
F2 Edit cell		
F3 Move selection	Copy Selection	
F4 Absolute cell reference (SS)		
F5 Go To Go to named range (SS)	Go to next bookmark (WP)	
F6 Next/previous pane		
F7 Repeat Search	Repeat Copy or Format	
F8 Extend selection	Select field or column + CTRL=Select all cells	Select record or row
F9 Paginate now (WP) List/View form (DB) Calculate now (SS)		
F10 Leave Chart/report View	View Chart or report	

Dialog Box

When you choose some commands, Works displays a Dialog box to get information from you.

To enter information in a Dialog text box:

- Hold down the [ALT] key and press the highlighted letter of the option you want.
- Type the new information in.
- To delete selected text, press **Backspace** or **Delete**.
- To delete the character to the left of the cursor, press **Backspace**.
- To select text, hold down **SHIFT** and use the arrow keys.
- To move the cursor, press **RIGHT**, **LEFT**, **HOME** or **END**.

List Box

You change a list item by selecting an item in the List box. The selected item is indicated by a highlight. If there are more items than you can see at one time, you can scroll to see the rest. In the List box you can select more than one item.

To select a List box item:

- Hold down the [Alt] key and press the highlighted letter of the option you want.
 - To change the selection, press **Up**, **Down**, **Home**, **End**, **PgUp** or **PgDn**.
 - To select the next item in the list that begins with a particular letter, press the letter you want.
-

Check Box

A Check box can either be on or off. When you open a dialog box that contains a check box, it reflects whatever you selected in your file prior to choosing the command. An X in the Check box means it is turned on. A dash means that you have chosen more than one item. When you see a dash, you can turn it on or off, or you can leave it as is. If you leave it, Works will not change the selection.

To select a Check box item:

- Hold down the [Alt] key and press the highlighted letter of the option you want.
-

Option Box

A mark beside an Option box means that it is the selected option in the box. You can have only one option selected at a time.

To select an Option box item:

- Hold down the [Alt] key and press the highlighted letter of the option you want.
-

Command Button

After selecting the commands you want, you choose a button to carry out or cancel a command. Most dialog boxes have just two buttons, OK and Cancel. The OK button closes the dialog box and carries out a command. The Cancel closes the dialog box without carrying out the command.

- To choose OK, press Enter.
 - To choose Cancel, press Esc.
 - To choose the Done button or any other button, hold down the [Alt] key and press the highlighted letter or the button you want. (or use the arrow keys or TAB Key to scroll to the button and press Enter)
-

Using a Terminate-And-Stay-Resident Program with Works

To use a TSR program, with Works you must run Works in text mode. Don't use a TSR program while Works is displaying a chart or previewing a page. (See Files, Windows and Accessories to change modes)

Where To Go Next

As you will notice, the Works commands are listed in alphabetical order.

To get started in any tool, read the first page for a general outline of the features of that tool, then read how to Select in each tool.

Reading through the Files, Windows and Accessories section will also help you with many of the standard commands and options.

Refer to the Printing appendix to setup your printer settings before creating any file.

Files, Windows and Accessories

Microsoft Works provides some basic resources that are available in all four Works Tools. For example, Works uses files to help you organize information and windows to display files on the screen. Works accessories complement the integrated tools They include:

An **Alarm Clock** that is both a clock and an electronic scheduler. Use it to remind yourself about birthdays, meetings, appointments or any other events you might note on a calendar.

A **Calculator** that is an onscreen pocket calculator. You can insert numbers directly from the calculator into an active Works file.

A **Telephone Dialer** that will automatically dial telephone numbers. Use it to place a call to any telephone number that appears in an active Works file.

A **File Management** system that helps in computer "housekeeping". Use it to copy, delete and rename files; to create and remove directories; and to format disks without leaving Works.

Alarm Clock

You can set the alarm to go off at specified times and dates to remind you of any scheduled events. The initial Alarm clock date and time are supplied by your computer. If they are not correct, you can reset them. (See the Date and Time topic)

Note: If Works is not running when an alarm goes off, the alarm will be displayed the next time you start the program.

The Alarm dialog box displays:

Message Your message can be up to 60 characters long.

Date You can type in the date in several formats, including 12/30/92; December 30, 1992; Dec 30, 1992.

Time You can type the time in formats, such as 8:30PM; 20:30; and 8:30.

Current Alarms Shows the date, time, and message for all alarms currently set. When you "snooze" an alarm that is set to go off more than once, Works shows both regular and "snoozed" alarms. A snoozed alarm is shown with an (S) next to it.

Suspend Alarms Prevents alarms from going off, but doesn't delete alarms.

Set Adds a new alarm to the list.

Change Makes the changes you specified for the specific alarm.

Delete Deletes the selected alarm.

To open the Alarm Clock:

- Press [Alt] O,A (options, alarm clock)

To set an alarm:

- Press [Alt] O,A (option menu, alarm clock)
- In the message, date and time boxes, type in the appropriate information.

If you don't type a date, the alarm will go off at the next occurrence of the time. If you don't type a time, the alarm will go off at 12:00 AM.

- In the frequency box, specify how often you want the alarm to go off.
- Press [Alt] S (set) To set alarm, then press done.
- Set another alarm or press [Alt] D (done).

The alarms you set will not be saved on disk until after you leave Works.

To change an existing alarm:

- Press [Alt] O,A (options, alarm clock)
- In the Current Alarms box, select the alarm you want to change.
- Select the message, date, time or frequency you want to change.
- Press [Alt] C (change)
- Change another alarm or press [Alt] D (done).

To delete an alarm:

- Press [Alt] O,A (options, alarm clock)
- In the Current Alarms box, select the alarm you want to delete.
- Press [Alt] T (delete)
- Delete another alarm or press [Alt] D (done).

To suspend all alarms:

- Press [Alt] O,A (options, alarm clock)
- Turn on the Suspend Alarm Clock check box.
- Press [Alt] D (done)

Responding to an Alarm

To shut off an alarm:

- Press Enter

To "snooze" an alarm for 10 minutes:

- In the Alarm dialog box, press [Alt] S (snooze).

To reset an alarm:

- In the alarm dialog box, press [Alt] R (reset).

Backing Up Your Work

A backup file is an additional copy of a file. Backup files provide extra protection against accidentally losing your work in case of hardware failure or power outage. You can open a backup file and use it just as you would any other Works file. It will have all the work you did since the last time you saved the file.

Saving a Backup File

The first time you save a file, Works saves one copy of it and adds a tool-specific Works filename extension. If you make changes to the file and save it again while the Make Backup copy check mark is turned on, Works saves the new version as it normally does and also saves the previous version as the backup file. It gives the previous version a different extension to identify it as a backup copy and stores it in the directory from which you opened the original file.

<u>Tool</u>	<u>Original Works Extension</u>	<u>Backup Extension</u>
Word Processor	.WPS	.BPS
Spreadsheet	.WKS	.BKS
Database	.WDB	.BDB
Communications	.WCM	.BCM

To save a backup copy:

- Press [Alt] F,A (file, save as)
- Turn on the Make Backup Copy check box.
- Press Enter

Works stores this setting with your file, so it remembers to back up your file each time you save it until you turn off the check box. To turn it off, you must use the Save As command again. Works does not make a backup copy the first time you save a file. Also beware that backup copies of large files or several files can occupy a large amount of disk space.

Using a Backup Copy

Backup copies are listed under Other Files in the Open dialog box. You can open both your original file and your backup file to retrieve work, or you can open only your backup file. If your original file is damaged and you use the backup copy to replace it, you can rename your backup copy as a regular works file. Now when you save it, Works will make a new backup copy.

To use a Backup copy:

- Press [Alt] F,O (file, open existing file)
- Select the appropriate drive or directory in the Directories box, and then press Enter to have Works display the files in that drive or directory.
- In the Files box, select the name of the backup file you want.
- Press Enter to open the file.

Calculator

The calculator works like a hand held or desk calculator. You can also use it to insert a number into the file you are working in. If you have already used the calculator since you last started Works, Works remembers and displays the last number you calculated. You use most of the buttons on the calculator by pressing the corresponding keys on the keyboard.

CHS	Changes the sign of the displayed number.
CL	Clears everything.
CE	Clears only the last entry.
Insert	Inserts the displayed number in the active file at the location of the highlight or cursor.
Cancel	Closes the calculator.

To do a calculation:

- Press [Alt] O,C (options, calculator)
If there is a number displayed that you don't want to use, press [Alt] C (clear entry) to clear the calculator.
- Make your calculation.
- Press Esc to close the calculator.

To insert a number from the calculator into the active file:

- Move the cursor to where you want to insert the number.
- Press [Alt] O,C (options, calculator)
- Make whatever calculations you want.
- Press [Alt] I (insert)

To copy a number to the calculator:

- Select the number in your Works file you want to copy.
- Press SHIFT F3 or [Alt] E,C (edit, copy)
- Press [Alt] O,C (options, calculator)

The number you selected in your file is displayed in the calculator.

Closing a File

When you finish working with a file, you close it to clear it from the screen. Closing a file removes it from the computers memory.

To close the active file:

- Press [Alt]F,C (file, close)

Copying a File

You can make an identical copy of a file on a disk or drive and give it a different name.

To copy a file:

- Press [Alt] F,F (file, file management)
- Select Copy File

If the file you want to copy is in a different drive or directory, select the drive or directory in the Directories box, then press Enter.

- In the Files box, select the file you want to copy or type the filename in the File to Copy box.
 - Press Enter
 - In the new file Name box, type a new name for that file.
 - Press Enter to copy the file.
- Works creates a new copy of the original file and gives it the name you specified.
- To copy another file, repeat the above steps.
 - Press Esc

Creating a File

When you create a file, Works displays an empty window in the tool you choose. You can create a file in any tool at any time. However, if there are already eight files open, you must close one of them before you create another file.

To create a file:

- Press [Alt] F,N (file, new)
- Choose the type of file you want to create.
- You can immediately begin working in the file.

Date and Time

Date You can type in the date in several formats, including: 12/30/92; December 30, 1992; Dec 30, 1992. For more information see the Date and time topic in the Spreadsheet reference.

Time You can type in the time formats such as 8:30 PM; 20:30; and 8:30.

To change the date or time:

- Press [Alt] F,F (file, file management)
- Select Set Date & Time.
- Press Enter
- Type in the new date or time in the appropriate box.
- Press Enter to save or Esc to cancel.

Deleting Files

You can delete files in your disk or drive that you no longer want from within Works. You cannot, however, delete a file that is currently open; close the file, and then delete it.

To delete a file:

- Press [Alt] F,F (file, file management)
- Select Delete File.
- Press Enter.

If the file you want to delete is in another drive or directory, select the drive or directory in the Directories box, then press Enter.

- In the files box, select the file you want to delete, or type the filename in the Files to delete box.
- Press Enter to delete the file.
- Press Enter again to accept the deletion.
- Press Esc to cancel.

Dialing a Telephone Number

If you have a Hayes compatible modem, you can use Works to automatically dial a telephone number to talk with someone. Dialing a telephone is not the same as communicating with another computer. (See the communications section) If you do not have a modem you can not use this feature.

Connecting Your Modem

To use automatic dialing, your modem must be able to operate at a data-transmission rate of at least 1200 baud. Most modems are equipped with two modular phone jacks. Connect one of these jackets to the telephone outlet and the other to your telephone, using normal telephone cables. Connect the modem to the serial port cable of the Pocket PC.

Check Your Settings

Before you dial a number, you should check the Works telephone settings to make sure they match your own system. To do this, choose the Options Works Settings command and either accept or change the Modem Port and Dial type options. Modem Port identifies the computer port you connect the modem to. Dial type identifies whether you are using a pulse or tone telephone. These settings remain in effect until you change them. You do not have to reset them each time you dial a number.

Checking the Phone Number

The telephone number you select must contain any special codes you would normally dial. For example, if you select a long distant number, it must contain a 1 before the area code. If you first need an outside line, you might type 9 before the number. If necessary, you can also insert a comma (,) in the number to tell the modem to pause before it continues to dial.

To automatically dial a telephone number:

You can not dial a number if you are already connected to another computer.

- Open a Word Processor, Spreadsheet or Database file that contains the phone number you want to dial.
 - Select the telephone number.
 - Press [Alt] O,D (options, dial this number)
 - Works dials the number, then displays a message.
 - Pick up your telephone and press Enter.
- If the call did not go through or if you want to cancel automatic dialing press Esc. Works returns to your file.
- When you are finished with the call hang up the phone.

Directories

Directories provide a convenient way to organize your files. Each directory is like a file folder. It contains files that are like the documents you might normally place in a file folder. Each directory can contain subdirectories to help you organize your work.

You can move to the directory immediately above the one you are currently in by selecting the two dots (..) in the Directories list. the directory you are in is called the current directory.

To create a new directory:

- Press [Alt] F,F (file, file management)
- Select Create directory.
- Press Enter.

The directory you create will be a subdirectory in the current directory.

If you want a directory to be below a different directory, select the appropriate directory in the Directories box. Then press Enter.

- In the Directory to Create box, type the name for the new directory.
- To create another directory repeat the above steps. Press Esc to cancel.

To remove a directory:

Note: Before you remove a directory, you must delete all files in it.

- Press [Alt] F,F (file, file management)
- Select remove directory.
- Press Enter

If the directories you want to remove is a subdirectory or a directory other than the current one, select the appropriate drive or directory in the Directories box, then press [Alt] C (change).

- In the Directories box, select the name of the directory you want to remove.
- Press [Alt] R (remove) to remove the directory.
- Press Esc

You can open a file from another drive or directory, either by changing the current directory or by typing the full path name of the file.

To change the current drive and directory:

- Press [Alt] F,O (file, open)
 - In the Directories box, select the drive or directory containing the file you want to open. Selecting the two dots (..) takes you to the next higher directory.
 - Press Enter to see the files in the new current drive and directory.
-

Disks

Formatting erases everything on your disk. You do not need to type in any special parameters.

To format a disk:

- Press [Alt] F,F (file, file management)
 - Select format disk.
 - Press Enter
 - Follow the instructions on your screen.
 - Press Esc
-

Exiting Works

To exit works:

- Press [Alt] F,X (file, exit)

If there are any unsaved files Works asks if you want to save the changes. Works also saves information about your printer and changes you made using the Works settings command in a file called WORKS.INI. Works uses this information the next time you start Works.

File Management

The information in your computer is stored on your disks or drive in files. A file can contain many different types of information. To help you manage your files you use DOS. You can use some DOS commands without leaving Works.

DOS stands for Disk Operating System. DOS contains a set of commands that you use to manipulate files. DOS can do much more than what is described here. If you are interested in learning more about DOS, there are numerous books available.

To use DOS commands from Works:

- Press [Alt] F,F (file, file manager)
- Select the command you want to use.
- Press Enter
- When your finished, press Esc.

Opening a File

You can open and display a file you have created, saved and closed. When you open a file it remains open until you close it or exit Works. You can have up to eight files open a once.

Note: If you want to display filenames of only one type in the Files box, you can type wildcards in the Files To Open Box. For example type *.wks if you want to list only Spreadsheet files. The asterisk (*) stands for any number of characters in that same position. The question marks (?) can stand for any single character in the same position as the question mark.

If you open an ASCII file rather than a Works file, Works will ask if you want to open the file as a Word Processing file, Spreadsheet file or Database file.

To open a file from the current directory:

- Press [Alt] F,O (file, open existing file)
- In the Files box, select a name from the Files box, Works automatically displays the name in the File To Open box.
- Press Enter

To open a file from another drive or directory:

- Press [Alt] F,O (file, open existing file)
- In the Directories box, select the drive or directory containing the file you want to open. Select the two dots (...) at the top of the list to go to the next higher directory.
- Press Enter to see the files in the new current drive and directory.
- In the Files box, select the file you want to open.
- Press Enter

To open a file from a different drive and directory without changing the current directory:

- Press [Alt] F,O (file, open existing file)
- In the File To Open box, type in the complete pathname and filename of the file you want to open. For example, to open the file TOYS in the SAMPLE directory on drive C:\ type c:\sample\toys
- Press Enter

Renaming a File

You can rename any file on a disk or drive. If you want to create a duplicate file and give it a new name, you use the File Save As command.

To rename a file:

- Press [Alt] F,F (file, file management)
- Select Rename File.
- Press Enter

If the file you want to rename is in another directory, select the appropriate drive or directory in the Directories box.

- Press Enter
- In the New File Name Box, type the new name for the file.
- Press Enter. Works renames the file with the name you specify.
- Press Esc

Running Other Programs

From within Works, you can run DOS commands or temporarily display the DOS prompt and then type whatever you would normally type in DOS.

To run a program:

- Press [Alt] F,R (file, run other file)
- In the Programs box, select the program you want to run or in the command box type a program command.
- Press [Alt] R (run)

Works runs the program. When you are finished using the program, a message tells you to press any key to return to Works.

To temporarily exit to DOS:

- Press [Alt] F,R (file, run other programs)
- In the program box, select DOS.
- Press [Alt] R (run)
- Press Enter to accept leaving DOS.
- Type EXIT and then press Enter to leave DOS and return to Works.
(You do not need to type WORKS again to return to Works)

Changing a Program in the List

You can add, remove, or change program names and program commands in the Change List dialog box.

To add a program to the list:

- Press [Alt] F,R (file, run other programs)
- Press [Alt] C (change)

- In the Program Names box, type the descriptive name of the program you want to add.
- In the Program Command box, type the specific command you use to run the program.
- Press [Alt] A (add)
- Repeat if necessary or press [Alt] D (done).

To delete a program from the list:

- Press [Alt] F,R (file, run)
- Press [Alt] C (change)
- In the Programs box, select the program you want to delete.
- Press [Alt] T (delete)
- Repeat if necessary or press [Alt] D (done).

To change a program in the list:

- Press [Alt] F,R (file, run)
- Press [Alt] C (change)
- In the Programs box, select the program you want to change.
- In the Program Name and/or Program Command box, type the changes you want.
- Press [Alt] C (change)
- Repeat if necessary or press [Alt] D (done).

Saving and Naming a File

Until you save a new file, all your work is held temporarily in the computer's memory. To save your work permanently, save the file on a drive. Save frequently to protect yourself from loss of work and time.

When you create a file, Works gives it a name, such as WORD1.WPS. You can change this to a more descriptive name. If you do not change the name, Works will replace your file the next time it names a file WORD1.WPS.

To save a file:

- Press [Alt] F,S (file, save)
- In the Save File As box, type a name for the file, if you are saving the file for the first time. Do not type a extension as Works will automatically add it.
- Press Enter. Works saves the file in the directory from which it was opened.

Naming Guidelines

When you create a file, Works automatically gives it a name and extension that identifies which type of file it is (Word Processor, Spreadsheet, Database or Communications) and the sequence in which it was created. For example if you created two Word Processor files, Works names them WORD1.WPS and WORD2.WPS.

When you save a file for the first time, you will want to give a more descriptive name that tells you what information the file contains.

A filename can be up to eight characters long. You can use any characters in a filename except for spaces and ones that have special meaning to DOS including: * ? / . ; [] + = \ : | < >

File extensions help you identify and organize files. When you create a file, Works automatically adds an appropriate extension to the filename.

<u>For this tool</u>	<u>Works adds this extension</u>
Word Processor	.WPS
Spreadsheet	.WKS
Database	.WDB
Communications	.WCM

For example a filename may look like this:

EMPLOYEE.WDB
 | |
 |Filename |Extension

If you change the filename that Works proposes, you can add an optional extension or from one to three characters. If you add a non-standard extension to a Works file, it will not be listed in the Files List box in several dialog boxes. If you want no extension, type a period after the file name.

Saving in a Different Drive or Directory

When you save a file with the File Save As or File Save command, Works saves the file in the current directory. If you change the current directory, Works saves all files you create in the new current directory unless you specify otherwise. Files opened from other directories, however, are saved in the drive or directory from which they were opened, regardless of what the current directory is.

To change the current directory and drive and save a file:

- Press [Alt] F,A (file, save as)
- In the directories box, select the drive and/or directory you want to save your file in.
- Press Enter to change the current directory to the one you selected.
- In the Save File As box, type the name of your file.
- Press Enter to save the file.

To save a file in another drive or directory without changing the current directory:

- Press [Alt] F,A (file, save as)
- In the Save File As box, type the complete pathname and filename.
- Press Enter.

Settings

You can customize the display and control certain preset options. Works remembers any changes each time you start a Works session.

Country - Selects the appropriate preset settings for the item listed below that reflects the standards of the selected country.

- Page length and width (The proposed responses in the Print Page Setup & Margins dialog box)
- Currency symbol & display format (In Spreadsheet and Database)
- Date and time order & display format (In Spreadsheet and Database used whenever Works displays a date and time)
- Miscellaneous items, including column width (In spreadsheet and Database) and separator characters used in numbers, dates and times.

Units - Determines the default unit used when you type a measurement in one of the command boxes (specify margins, indents, etc.) To specify a unit other than what you set in this box you must type both the number and the units symbol. Works will then convert it for you. The following table shows the available units, the acceptable abbreviations and an example:

<u>Unit</u>	<u>Abbreviation</u>	<u>Example</u>
Inches	in or "	0.5 in or 0.5"
Centimeters	cm	1.25 cm
Ten pitch	p10	5p10
Twelve pitch	p12	6p12
Points	pts or p	36pts or 36p

Screen colors - Determines the combination of colors/shades of gray used for the display. Experiment if you wish, LCD works the best.

Lines - Works is preset to display 25 lines.

Use template for - determines whether a new file that you open in a Works tool is a template file or a standard Works file.

Modem port - selects which port your modem is connected to. Your computer is only compatible with external type modems. Since there is only 1 port (COM 1) you do not need to change this setting.

Dial type - Specifies the type of dialing your phone supports. If you have a push button phone select tone, if you have a rotary dial select pulse.

Template Files

Creating a template file reduces the need for you to do the same work over and over again. You can store all of the settings, text and formats that you want to keep constant from file to file in a template and not have to start from scratch every time you want to open a similar document. You can set up one template file for each of the 4 Works applications.

To create a template file:

- Press [Alt] F,N (file menu, create new)
- Select which tool you want to create the template in.
- Set up the template exactly as you want it by typing text or choosing commands as necessary.
- Press [Alt] F,A (file, save as)
- Turn on the Save As Template check box.
- Press Enter.

To use the template file:

- Press [Alt] O,W (option menu, works settings)
- Use the TAB key to scroll to the Use template for box.
- Select the application the template will be used for.

After you set this switch, Works will always open the application with a copy of your template. If you wish to create a standard Works document other than the template, you must first check this box off then proceed to start a new document.

To edit a template:

- Press [Alt] F,O (file menu, open existing file)
- In the Files box, select the template file that you want to change.
- Press Enter

The template files are identified by the filename TEMPLATE, followed by these extensions: .PS (Word Processor), .KS (Spreadsheet), .DB (Database), .CM (Communications) They are always in the Works program directory.

- Make the changes to the file.
- Press [Alt] F,S (file menu, save option)

Text (ASCII) File

Files are normally saved in Works format. Files with Works format contain text you type and any formatting you do. You can save files in the Text and Commas or Text & Tabs formats. These files, called text or ASCII files, contain only the text and numbers from the file (without the formatting) and can be used with other programs that don't use the Works format.

Windows

With Works, you can display up to 8 windows at a time - one for each open file. Windows may overlap each other or be arranged side by side. You can switch from one file to another without closing any of the files you are working on. The active window is the one you are currently working in. It contains the cursor and the scroll bars. The menu bar, status bar and message bar always apply to the active window.

You can control the size of the windows and split the window's area into 2 or 4 equal size areas or panes. This is useful if you want to refer to two different parts of a large document at the same time. Adjacent panes scroll together along the direction of the split. (i.e. side-by-side panes scroll together and upper & lower panes scroll together).

To open another window:

If you are in one Works application and you want to open another file in the same application or different Works application, press **[Alt] F,N** (File new) and you will be prompted with the new file dialogue box. After starting the new file it will be displayed overlapping your old file.

To switch between windows:

- Press **[Ctrl] F6**

You can also press **[Alt] W** to pull down the windows menu. At the bottom of the menu there is a list of the open files. Highlight the file you want and press **Enter**.

- Use **shift [Ctrl] F6** to scroll to the last file open.

To move a window:

- Press **[Alt] W,M** (move window) then use the arrow keys to move the file.
- Press **Enter** to save new location or
- **Esc** to leave in the original location.

To resize a window:

You can control the size of the window to see either more or less of your document. Make the window that you want to resize active first.

- Press **[Alt] W,S** (windows menu, size option)
- Use the arrow keys to reduce or enlarge the size of any window.
- Press **Enter**.
- Press **Esc** if you want to leave the window in its original size.

To enlarge the work area:

The active work area will take up almost the entire area of the screen, giving you as much work area as possible. When a window is enlarged, Works displays a mark on the Window menu next to Maximize. When the command is checked, any new windows you open are also enlarged and any window you make active is enlarged to.

- Press [Alt] W, X (windows menu, maximize option)
- To reduce the window size, press [Alt] W, X again.

To arrange the windows:

- Press [Alt] W, A (windows menu, arrange option)
- The windows will all be visible and arranged side-by-side.

To split a window and move split lines:

- Press [Alt] W, T (windows menu, split option)
- Press the arrow keys to move the horizontal and/or vertical split lines to where you want to split the display window.
- Press Enter

You can split the Spreadsheet and Database into 2 or 4 panes and the Word Processor into a upper and lower pane.

Once split, press F6 to move clockwise around the split or Shift F6 to move counter clockwise.

To remove the split, press [Alt] W, T again to go into the split mode, then use the arrow keys to move the split lines.

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Word Processor

The Works Word Processor can help you write and edit the documents you need at home, at school or in your business. You can use the features listed below to refine your writing and enhance the appearance of your documents.

- Add Footnotes as you type your documents. A list of all the footnotes you cited in the report appears at the end of the document.
- Use tab stops to organize information into tables.
- Insert a Spreadsheet chart into a Word Processing document. If you updated the spreadsheet, Works updates the chart in your Word Processor document before printing.
- Print form letters and mailing labels with the Word Processor, using names and address from a Works Database file.
- Identify and quickly correct spelling.
- Place markers in your documents to help you move quickly from place to place as you write and edit.
- Undo and edit or format change.
- Simultaneously display two different portions of your document.
- Use one document as a template for other documents.
- Preview a document on screen to see how it will look before printing.

Getting Started

- To create a new document, press [Alt] F,N,W (file, create new, word processor)

Review the topic "Selecting Text" to help better understand how to use many of the features.

Using Works with other Word Processors

Works provides two ways to use files from other word processor programs, with formatting in place or as a text file. If you have a file created in some other word processing program, you may be able to convert the file to a Works file format and save all or most of the formatting in that file.

To preserve the formatting of the file, however, it must be in one of the file formats recognized by Works: Microsoft Word Format, Microsoft Interchange Rich Text Format (RTF), or IBM Document Content Architecture (DCA) format. If your file was created in any other format, you must use the their conversion utility to first convert the file into a Works format or one of the formats recognized by Works.

To convert a word processing file to Works format:

- Press [Alt] F, V (file, convert)
- In the file to convert box, type in the filename and the extension of the file you want to convert, or select the filename in the Files box.
- Press Enter
- In the New File Name box, type a filename to name the Works document you are creating. Works will automatically add the .WPS file name extension.
- In the Format box, select Microsoft Works.
- Press Enter
- When the conversion is complete, press Enter again to accept the conversion.

To convert a Works file to another word processing file format:

- The Works file must be closed before you can convert it.
- Press [Alt] F, V (file, convert)
- In the file to convert box, type the filename and the extension of the Works document you want to convert, or select the filename in the box.
- Press Enter
- In the New File Name box, type a filename. Works will automatically add the appropriate extension name to the file.
- In the Format box, select the format you want to convert to.
- Press Enter

Using An Unformatted File

Text files are used by most word processing programs because they have no formatting that the program must interpret. You can save any word processing file as a text file, and then open it and edit it in Works. When you select the Text option in the File Save dialogue box, Works saves the document with a carriage return and a line feed at the end of each paragraph, not at the end of each line. All special formatting, such as bold, italic or justification is lost.

Some Word Processing programs look for a carriage return and a line feed at the end of each line within a paragraph; select Printed Text format when saving Word Processor documents for use with these programs.

To save a Word Processor file as a text file:

- Press [Alt] F,A (file, save as)
- In the Save File As box, type a new filename and extension. Works does not add a filename extension. (a common extension is .TXT)
- In the Format box, select Text or Printed Text format.
- Press Enter
- Press Enter again to accept loss of formatting.

Your original file is not changed or replaced.

Aligning and Centering a Paragraph

Alignment places all text evenly along the right or left margin. Paragraphs are left-aligned by default. Centering is self explanatory, it centers the paragraph horizontally on the page and is often used for letterheads and titles.

To re-align a paragraph:

- Select the paragraph you want to re-align.
 - Press [Alt] T,L (format, left align) or [Alt] T,R (format, right align)
 - Press [Alt] T,C to center. (If there are any indents, the text will be centered between the indents, otherwise it will be centered between the margins)
-

Bold

Bold prints heavier than plain text.

To apply Bold:

- Select the text that you want to format.
 - Press [Ctrl] B or [Alt] T,B (format menu, bold)
-

Bookmarks

Bookmarks are placeholders you can use to move quickly between different parts of a document. For example, if you're working on a business report with several sections, you can place a bookmark in each section. You can then display the list of bookmark names, select the one that corresponds to the section you want to work on, and go directly to it. When creating a bookmark, Works creates a hidden marker at the cursor position and displays a dialogue box to enter the name.

To create:

- Move the cursor to where you want to insert the bookmark.
- Press [Alt] E,N (edit menu, name option)
- Type in the name.
- Press [Alt] C (create) or press Enter.

To delete:

- Press [Alt] E,N
- In the name box select the bookmark you want to delete
- Press [Alt] C (create) or Enter.

To use:

- Press [Alt] S,G (select, go to)
- In the name box select the bookmark you want to go to or in the Go TO box type in the name and press Enter.

Borders

Borders are single, double, or bold lines that you place around a paragraph to call attention to it or that you use to create tables.

Note: If you plan to use borders in your document, be sure that your printer can print the necessary characters. (Check your printer manual)

To add a border:

- Select the paragraph you want to add a border to.
- Press [Alt] T,O (format, Border)
- In the border box turn on the border you want.
- In the line style box, select the style of border. then press Enter.

You can add an outline border to more than one paragraph by marking the paragraphs you want to outline and then selecting Outline in the border box.

To remove a border:

- Select the bordered paragraph
- Press [Alt] T,O (format, border)
- In the border box turn off each option that you do not want, press Enter.

Character Styles and Positions

Character styles - bold, italic, underline and strike through styles change the way the characters look and distinguish them from the surrounding text.

Character positions - superscript and subscript, print text above or below the normal line level. Superscript is often used for footnote reference marks and subscript for scientific notation.

Copying styles and formats from a character or a paragraph to other text in the same or different document can help you do complex formatting tasks more quickly. Copying styles or formats replaces any existing formats of that text.

You can select text and then style it or you can choose a style just before typing the text.

To apply styles and positions:

- Select the characters that you want to apply a style or position to.
- Press [Alt] T,F (format, font & style)
- In the style box, turn on the style you want.
- In the Position box, select the option you want, then press Enter.

To remove a style:

- Select the text you want to change.
- Press [Alt] T,P (format, plain text) or [Ctrl]+spacebar.

To copy styles or formats:

- Move the cursor to the text that has the style or format you want to copy.
 - Press [Alt] E,P (edit, copy special)
 - Select the text that you want to copy the style/format to, press Enter.
 - In the Copy Special box, select Character Format or Paragraph format.
 - Press Enter.
-

Copying Text

You can copy selected text with its character styles from one location to another, in the same document, or to any other Works application. If the copied text includes a paragraph mark Works also copies the paragraph formats to the new location.

Note: You can not copy text to a chart nor to a Database Query or Report views.

You can also use the Edit copy command to replace text. If you select text at the new location and the Typing Replaces Selection is on, Works replaces the selection with the new text.

To copy text:

- Select the text that you wish to copy
- Press Shift F3 or [Alt] E,C (edit, copy)
- Move the cursor to the new location, either in the same or different document or application)
- Press [Alt] E,C again or press Enter.

To move the same text again:

- Press Shift F7
-

Deleting Text

You delete text to remove it from a document. You can delete any amount of text you want. The Edit Undo command will recover deleted text, but only if you choose it immediately after deleting the text.

To delete text:

- Select the text you want to delete.
- Press [Alt] E, D (edit, delete) or press the DELETE key or Backspace.

To recover from deleted text:

- Press [Alt] E,U (edit, undo)

Fonts

A font is a set of characters with a specific design, also called a typeface. You can print in any of the fonts your printer has available. You can use more than one font in a paragraph or in a line of text. Fonts do not appear on the screen, but Works prints your documents using the selected font and size.

To change fonts:

- Press [Alt] T, F (format, font & style)
- In the Fonts and Sizes box, select the font and size you want.
- Press Enter

Note: If your printer's fonts are not listed in the Font & Style box you may not have the right printer selected in the printer setup box.

Works measures font sizes in units called points. Fonts available with your printer are listed in the Fonts & Styles box in the Format menu.

Depending on the font size you use, your lines may extend beyond the width of the window. If you are using a small font, you may want to use the Options Wrap for Screen command so that you can see all your text in the window. If you are using a large font, Wrap for Screen will treat it as a 12 pt font making more of the text fit into the window. This command does not change line breaks when you print.

To use the Wrap for screen option:

- Press [Alt] O,P (option, wrap for screen)

Footers

You create footers in a Word Processor document using the Print menu Headers and Footers command. Refer to the Headers and Footers topic for more information.

Footnotes

Footnotes provide additional information that supports the main text. Works places a footnote reference mark in your document and opens a footnote reference pane where you can type in your footnote. Works numbers footnotes automatically, but you can also specify non-numerical footnote reference marks, such as an asterisks (*). When printing, Works prints the footnotes at the end of the document.

To create a footnote:

- Move the cursor to where you want to insert the footnote reference mark.
- Press [Alt] E,T (edit, footnote)
- Select which type of mark you want (up to 10 characters) then press Enter

To open or close the footnote pane:

- Press [Alt] O,F (option, show footnote)

To edit the footnote:

- If the footnote pane is closed press [Alt] O,F
- Press F6 to move between the document and footnote pane, then edit.

To move or copy a footnote:

- Select the footnote reference mark you want to move
- Press [Alt] E,M (edit, move) or [Alt] E,C (edit copy)
- Move the cursor to where you want to move or copy the footnote to
- Press Enter

To delete a footnote:

- Select the footnote reference mark you want to delete, then press delete.

Form Letters

A form letter is a standard letter sent to many different people. With the Word Processor you can create form letters with the information from the Database.

The 4 basic steps necessary to create a form letter are:

1. You must create a database file containing the information that individualizes each form letter, such as names and addresses.
2. Create a Word Processor document containing the text that is the same for each letter.
3. Indicate where you want the database information to go by inserting placeholders in the Word Processing document. Placeholders indicate every place in the form letter where Works will insert database information. Each placeholder represents one field of a database file and includes the field's name. Once you have inserted a placeholder, you can copy, move or delete it.
4. Print the Word Processor file using the Print Print Form Letters command. Works prints multiple copies of the letter, one for each record of the database, replacing each placeholder with the appropriate database fields. If a field is blank, Works does not leave a blank space or line in the form letter.

To create a form letter file:

1. Create a database file (refer to the database section of this manual)
2. Create the document for the form letter, type in the standard text.
3. Move the cursor to where you want to insert the first placeholder.
4. Press [Alt] E,F (edit, insert field)
5. In the database box, select the file you want.
6. In the field box, select the field for this placeholder., then press Enter.

Repeat the above steps for the remaining placeholders. You can format the text and placeholders by first selecting them, and then choosing commands from the Format menu.

7. Press [Alt] F,A (file, save file)
8. In the Save File As box, type in the name for the file, then press Enter.

Works prints one copy of the letter for each of displayed record in the Database file; before you print, make sure that all the records you want to print are displayed in the correct order in the Database file.

To print a form letter:

1. Open the database file. (if it is not open already)
2. From the Window menu, select the form letter file.
3. Prepare your printer with any special paper or forms.
4. Press [Alt] P,F (print, form letters)
5. In the Databases box, select the file you want, then press Enter.
6. In the print dialogue box, select the print options you want.
- 7 Press Enter again.

The status line displays first the total number of forms to be printed, and then the number that have been printed.

You can also print a single copy of a form letter using the Print Print command. This is useful if you want to proofread your letter or verify the paper alignment in your printer. The Print Print command prints one copy of the document showing placeholders instead of your database information.

To cancel printing press Esc at anytime.

Headers and Footers

A header is text that appears at the top of every page; a footer is text that appears at the bottom. There are two types of headers and footers; paragraph and standard.

Paragraph headers and footers can be formatted like regular text and can include tabs and multiple lines. They also have preset tab stops so you can center or align text at the right margin.

To create a paragraph header or footer:

- Press [Alt] P,H (print, headers & footers)
- Turn on the Use Headers & Footers Paragraphs check box, press Enter.

Works inserts the header and footer paragraphs at the top of the topic. A page-number placeholder is in the footer paragraph.

Move the cursor to the header (H) or footer (F) paragraph mark, and type the text for the header or footer. (note the marks are located on the upper left corner of the screen)

Press TAB to center or right align text before typing text. Use the Edit Insert Special command to insert date, time or filename placeholders, or to add a page number to an existing header or footer.

When finished, press the arrow key to move the cursor to the document window.

To create multiple-line header or footer:

- Press [Alt] P,H (print, headers & footers)
- Turn on the Use Headers and Footers Paragraph check, press Enter.
- Move the cursor to the header (H) or footer (F) mark, type in the text.
- Press [Alt] E,P (edit, insert special) and select End-of-line mark to start a new line or press Shift+Enter when you want to start a new line within the header or footer. Works inserts an end-of-line mark to show a line break.

To create a standard header or footer:

- Press [Alt] P,H (print, headers & footers)
- Turn off the use Header & Footer paragraph box.
- Type text in the Header and Footer boxes using special header and footer codes if you wish. (listed below) press Enter.

To	Type
Align the characters that follow at the left or right margin	&l or &r
Center the characters that follow between margins	&c
Print the page number	&p
Print the filename	&f
Print the date	&d
Print the time	&t
Print a single ampersand (&) character	&&

You can include as many of these codes as you want in a single header or footer.

example type: &lBudget&cPage - &p&r&d to create a header like this:

Budget	Page - 2	5/8/92
--------	----------	--------

Standard headers and footers are automatically centered unless you change the alignment. Unless you change Works' country settings, dates are printed in this format: 5/8/92; and times are printed in this format: 3:45pm.

Setting Header and footer Margins

The header and footer margins are the distances between the top of the page and the header, and the bottom of the page and the footer. Works proposes 0.5 inch. By setting the header and footer margin, you can control where a header or footer prints on the page. If you create a header or footer paragraph with several lines, you need to make sure the margin is large enough.

To change header or footer margins:

- Press [Alt] P,M (print, page setup and margins)
- Type the appropriate measurements in the Header Margin or Footer Margin boxes, then press Enter.

Turning off Headers and Footers

To avoid printing a header or footer on the first page:

- Press [Alt] P,H (print, headers & footers)
- Turn on the No Header On 1st Page check box, press Enter.

To turn off a header or a footer:

- Press [Alt] P,H (print, headers & footers)
- Delete all text in the Header and Footer Boxes, or turn off the Use Headers and Footers Paragraphs check box.

Indenting a Paragraph

Paragraphs that you type in a new document have Normal paragraph format with no indents. You can change indents for each paragraph in your document in the Indents and Spacing dialogue box.

To see the indents for a selected paragraph, display the ruler and move the cursor anywhere in the paragraph. The ruler shows left and right indents with square brackets ([]) and shows a first line indent mark with (|).

To indent the first line of a paragraph

- Select the paragraph you want to indent
- Press [Alt] T,A (format, indents & spacing)
- In the 1st line Indent box type in a measurement, then press Enter.

To indent all lines of a paragraph:

- Select the paragraph you want to indent
- Press [Alt] T,A
- In the Left Indent or Right Indent box, type in a measurement, press Enter.

To remove indents:

- Select the paragraph that you want to remove indents from.
- Press [Alt] T,A
- In the 1st line, left or right Indent box type 0.
- Press Enter.

Creating a hanging indent

- Type or select the first paragraph you want to have a hanging indent. If the paragraph starts with a number or a bullet, press TAB to insert a tab mark between the number or bullet and the rest of the text.
- Press [Ctrl] H
- Press Enter to start another hanging indent or press [Ctrl] G to return to the previous indenting.

To create a custom hanging indent:

- Type or select the first paragraph you want to have a hanging indent.
- Press [Alt] T,A (format, Indents & Spacing)
- In the left indent box, type a measurement equal to the amount you want the paragraph indented, then press Enter.
- In the 1st Line Indent box, type a measurement that is a negative number equal to the left indent. (example: if left indent is 1.5" type in -1.5")
- Press Enter again to begin another hanging paragraph or
- Select [Alt] T,N to return to normal paragraph formatting.

Inserting a Chart

You can insert a chart you've created with the Works Spreadsheet into your document and preview or print the results. Because Works gets the chart from an open Spreadsheet file when you print the document, your chart will always reflect the latest changes you have made to the spreadsheet. Note: Both the Word Processor document and Spreadsheet file must be open to insert a chart.

To insert a chart:

- Open the Spreadsheet file that contains the chart you want to insert.
- From the window menu, choose the Word Processor document into which you want to insert the chart.
- Move to cursor to where you want to insert the chart.
- Press [Alt] E,I (edit, insert chart)
- In the charts box, select the chart you want, then press Enter.

Works inserts a chart placeholder in your file that shows the name of the spreadsheet and its associated chart.

Note: When you print the Word Processor file, the chart prints in the place of the placeholder. You can select the chart placeholder and move it around as needed. To replace the chart placeholder, you select it and delete it, and then use the Edit Insert Chart command again to insert a different chart.

To size a chart:

- Move the cursor to the chart placeholder.
- Press [Alt] T,A (format, indents & spacing)
- In the Left or Right Indent box type in a measurement.
- In the chart height box, type a vertical measurement for the chart.
- In the orientation box, select portrait or landscape, then press Enter.

Italic

Italic text prints with a forward slant. To apply Italic:

- Select the text you want to format.
- Press [Ctrl] I or [Alt] T,I (format, italic)

Justifying a Paragraph

The lines of a justified paragraph are evenly aligned with the right and left indents.

To justify a paragraph:

- Select the paragraphs you want to justify.
- Press [Ctrl] J or [Alt] T,J (format, justified)

Mailing Labels

To create a mailing label file:

- Create and open a database with the information you want to use on your mailing labels.
- Create a word processing document that will include any standard text that will remain the same for all labels.
- Press [Alt] E,F (edit, insert field) to indicate where to insert the placeholders.
- In the Database box select the file you want to use.
- In the Fields box, select the field name for the placeholder, then press Enter. Works inserts the placeholder into the word processing file.
- Type in any text you want before or after the placeholders.
- Repeat the above steps for each database field you want to insert.
- Save your file

Note: Printing starts at the upper left corner of each label. If you want the text indented slightly from the left edge of the labels, select the text and increase the measurement in the Left Indent box in the Format Indents & Spacing dialogue box. If you want the text to start slightly below the top edge of the labels, insert a blank line or select the first line of text and increase the measurement in the Space Before Paragraph box in the Indents & Spacing dialogue box.

Printing Mailing Labels

Works prints one label for each displayed record in the Database file; the labels will print as they are sorted in the Database file. You specify the size of your labels in the Print Labels dialogue box.

To print labels:

- Open the Database file if it is not open already.
- From the Window menu, select the Word Processing mailing labels file. Make sure you have the labels loaded in the printer.
- Press [Alt] P,L (print, print labels)
- In the Databases box, select the file you want to use.
- In the vertical box, type the measurement from the top of one label to the top of the next label.

If you have more than one label across each page, type the measurement from the left edge of one label to the left edge of the next label in the Horizontal box. If you have just one label across each page, type the width in the Horizontal box.

- In the Numbers of Labels Across Page box, type the numbers of labels across the page.
- Press [Alt] P (print)

If you want to test the alignment of your labels in the printer before choosing **Print Labels**, you can press **[Alt] T** (test) to test. Works will print 2 lines of labels. Adjust the margins and page measurements until you are satisfied.

- In the **Page Setup & Margins** dialogue box, type the appropriate margins and page measurements, if necessary.
- Press **Enter**
- In the **Print** dialogue box, turn on any print options you want.
- Press **Enter** again to print.

To cancel printing press **Esc** at any time.

Note: If information from the database is too long to fit on the label, select all of the text and placeholders in the Word Processor file and change to a smaller font size.

Margins and Page Setup

Margins are the spaces between the edges of the paper and the printed area. **Page Setup** indicates what size paper Works prints on. You set margins and page setup with the **Print Page Setup & Margins** command. See the appendix on printing for further information.

Moving Text

You can move selected text with its character styles from one location in any document to another. If the text includes a paragraph mark, Works may also copy the paragraph formats to a new location.

You can use the **Edit Move** command to replace text.

Note: Before you choose the **Edit move** to complete a move you can cancel the command by pressing **Esc**.

To move text:

- Select the text you want to move
- Press **F3** or **[Alt] E,M** (edit,move)

Moving the Cursor and Scrolling

Press the appropriate Keys:

To move	Press
Left/right one character	Left/Right arrow
Up/Down one line	Up/Down arrow
Left/Right one word	[Ctrl] Left/Right arrow
Up/Down one paragraph	[Ctrl] Up/Down
To beginning of line	Home
To end of line	End
To beginning of document	[Ctrl] Home
To end of document	[Ctrl]End
Up/Down one window	PgUp/PgDn
To beginning of window	[Ctrl] PgUp
To end of widow	[Ctrl] PgDn

To move the cursor to a bookmark or page:

- Press [Alt] S,G (select, go to) or press F5
- In the Go to box, type the bookmark name or page you want to move to or in the Names box, select the bookmark that you want to move to.
- Press Enter.

Page Breaks

A page break tells the printer where to end one page and begin a new one.

To insert a manual page break:

- Position the cursor where you want to insert a manual page break.
- Press [Alt] P,I (print, Insert page break)
- To delete, select the page break and press delete.

Page Numbers

To add page numbers:

- Press [Alt] P,H (print headers & footers)
- Turn on the Use Header and Footer Paragraphs check box.
- Press Enter.
- The page-number placeholder *page*, is in the footer paragraph.

To add page numbers to an existing header or footer:

- Move the highlight to the header or footer paragraph where you want to add the page number.
- Press [Alt] E,P (edit, insert special) and select Print Page, or press [Ctrl] P.

To remove page numbers:

- Press [Alt] P,H (print, headers & footers)
- Turn off the Use Header & Footer Paragraphs check box to remove all headers and footers.

To avoid printing a page number on the first page:

- Press [Alt] P,H (print, headers & footers)
- Turn on the No Header On 1st Page or the No Footer On 1st Page check box.
- Press Enter

To change the starting page number:

- Press [Alt] P,M (print, page setup & margins)
- In the 1st Page Number box, type in the starting page number.
- Press Enter

Paragraphs

Works defines a paragraph as any text followed by a paragraph mark, including one line titles. Every time you press Enter, Works places a paragraph mark. Paragraph formats include alignments, indents, line spacing, tab settings and borders. If you delete a paragraph mark the text will take on the format of the paragraph above it.

Printing

Please refer to the printing appendix for detailed printing information.

To print a document:

- Press [Alt] P,P (print, print)
- Select the print options necessary for your document.
- Press [Alt] P to print (or use the TAB key to move to move and press Enter)

Rulers

The ruler appears as scale across the top of the screen. The ruler shows the approximate length of lines, the indents, and the tab stops you have set for the paragraph the cursor is in. You can show or hide the ruler.

To show or hide the ruler:

- Press [Alt] O,R (options, show ruler)

Searching and Replacing

You can search for text in a document and you can also replace it with a different text.

You search for and replace text in your document using characters you specify. If you search for the characters "cash", Works also finds "cashier" unless you tell Works to search for whole words only.

The question mark (?) wildcard represents any single character in the same position in a word as the question mark. (example: anders?n will find both Andersen and Anderson)

Works can also search for and replace text in a specific uppercase and lowercase combination. When Works finds the search text, it selects it.

Works searches from the cursor to the end of the document. If you have text selected, Works searches from the end of the selection to the end of the document. To search the entire document, go to the beginning of the document.

To search for text:

- Press [Alt] S,S (select, search)
- To search the entire document press [Ctrl] Home to go to the top of the document.
- In the Search For box, type the text you want to search for.
- Turn on the Match Whole Word check box if you want Works to search for only whole words.
- Turn on the Match Upper/Lower Case check box if you want Works to match capitalization when searching.
- Press Enter
- Press F7 to repeat the previous search.
- Press Esc to cancel the search.

To replace text:

- Press [Alt] S,R (select, replace)
- To replace text in the entire document, press [Ctrl] Home to go to the top of the document.
- In the Search For box, type in the text you want to replace.
- In the Replace With box, type in the replacement text.
- Turn on the Match Whole Word check box if you want Works to search for whole words.
- Turn on the Match Upper/Lower Case check box if you want Works to match capitalization.
- Press [Alt] R (replace) if you want to be prompted for replacement or
- Press [Alt] A (replace all) if you want Works to automatically replace text.
- Press Enter when the search is over.
- Press Esc to cancel a search & replace command.

To search for and replace special characters:

- Press [Alt] S,S (select, search) or [Alt] S,R (select, replace)
- In the Search For or Replace With box, type the special characters you want to search for or replace.

<u>To search for or replace</u>	<u>Type</u>
Tab	^t
Paragraph mark	^p
End-of-line mark	^n
Manual page-break mark	^d
Non-breaking space	^s
Optional hyphen	^-
Non-breaking hyphen	^~
Caret (^)	^^
Question mark	^?
Any ASCII character	^# (# represents the ASCII number)
White space	^w
Any character	?

Press Shift F6 to type the caret (^).

Search/Replace example: to search for a tab mark followed by the words "skin diving" and to replace it with 2 spaces and the word "snorkeling" type:

^tskin diving (In the Search For box) ^s^ssnorkeling (In the Replace With box)

Selecting Text

Selecting text is how to indicate which text you want to edit or format. When you select text, Works highlights the text.

To select a word, sentence, paragraph or document:

- Move the cursor to where you want to begin the selection.
- Press F8 until the amount of text you want is selected.
EXT (for extend) is displayed in the status line.
- To cancel extending a selection, press Esc.

<u>Press F8</u>	<u>To select</u>
Two times	A word
Three times	A sentence
Four Times	A paragraph
Five Times	Entire Document

To select blocks of text:

- Move the cursor to where you want to begin the selection.
- Use the Arrow keys to extend the selection.
You can also hold down the Shift + arrow keys to select blocks of text.
- Press Esc to cancel.

Spacing Between Lines and Paragraphs

You can tell Works to automatically add additional space between lines and before & after a paragraph.

When you apply the Single Space command, Works looks for the largest font size in a line and sets the height of the line to this size. If you type in a number in the Indents and Spacing dialogue box, Works assumes it is the number of lines. If you want to use other units of measure type in that unit abbreviation.

Typing 1 in the Line Spacing box sets the line height to 1/6 inch, or six lines per vertical inch regardless of the font size. Typing a number larger than 1 puts additional spaces between the lines, in units of 1/6 inch. Typing auto in the box sets single spacing.

Your screen will display spacing for whole-number amounts only. However, Works applies the line spacing you specified when you print your document.

To change to single or double spacing:

- Select the paragraphs you want to have single or double spaced.
- Press [Alt] T,S (format, single space) or [Alt] T,D (format, double spacing)

To specify line spacing other than single or double:

- Select the paragraphs you want to specify for spacing.
- Press [Alt] T,A (format, indents & spacing)
- In the line spacing box, type in the amount of the line spacing you want.
- Press Enter

To add space before or after a paragraph:

- Select the paragraphs you want to add space before or after.
- Press [Alt] T,A (formats, indents & spacing)
- In the Space Before Paragraph or Space After Paragraph box, type the number of lines you want.
- Press Enter

Special Characters

Special characters are characters such as end-of-line marks, optional hyphens, page-number placeholders or page breaks. You can display special characters on your screen or you can hide them.

To hide or display special characters:

- Press [Alt] O,L

A Word Processor document always displays the end mark \blacklozenge . You cannot move the cursor below this mark or hide it.

To insert a special character:

- Move the cursor to where you want the special character placeholder to be.
- Press [Alt] E, P (edit, insert special)
- Select the special character to insert then press Enter.

Works special characters are:

End-of-Line Mark	Inserts an end-of-line mark and starts a new line but not a new paragraph.
Optional Hyphen	You can designate how to hyphenate word if they appear at the end of a paragraph. You can not see optional hyphens unless you select the Options Show All Characters command.
Non-Breaking Hyphen	This keeps two words that must be joined by a hyphen from being separated at the end of a line. Non-breaking hyphens are always displayed.
Non-Breaking Space	This keeps two words that must stay together, such as a first and last name, from being separated at the end of a line.
Print Page	Inserts the page number placeholder. Works prints the page number when you print the file.
Print File	Inserts the filename place holder. Works prints the filename when you print the file.
Print Date	Inserts the date placeholder. Works prints the date when you print the file.
Print Time	Inserts the time placeholder. Works prints the time when you print the file.
Current Date	Inserts the current date.
Current Time	Inserts the current time.

Spelling

You can check the spelling in your document with Works' built-in dictionary. Works searches for incorrectly spelled words, incorrect capitalization & hyphenation and repeated words. You can also add or delete words to your dictionary.

When Works finds a word that is not in its dictionaries, it selects the word and displays it in the Replace With box. You can ask it to suggest the correct spelling in the Suggestions box.

To check spelling:

- Move the cursor to where you want to begin the spell check or select the text you want to check.
- Press [Alt] O,S (options, check spelling)
- Press [Alt] I (ignore) to leave the word as is.
- Press [Alt] G (ignore all) to ignore all instances of the same word.
- Press [Alt] C (change) to change a word. Type in or edit the replacement word in the Replace With box.
- Press [Alt] H (change all) to change all instances of the same word.
- Press [Alt] S To view a list of proposed spellings. Select a word from the list then press [Alt] C (change).

To add a word to the dictionary:

- Move the cursor to the word (if necessary)
- Press [Alt] A (add)

To end the spell checker at any time, press [Alt] D (done).

Tabs and Tables

A tab stop is a fixed position on a line. Works uses preset (default) tab stops or custom tab stops that you set using the Tabs dialogue box. A new file has preset tab stops every 0.5 inch, but Works does not show these on the ruler. All preset tab stops to the left of a custom tab stop are removed.

To change the distance between preset tab stops:

- Press [Alt] T, T (format, tabs)
- Select default
- In the Spacing box, type in the distance you want between preset tab stops.
- In the Alignment and Leaders boxes, select the options you want.
- Press Enter.
- Press [Alt] D (done)

Custom tab stops are set for individual paragraphs that you select or can be for the entire document. They are part of a paragraphs format and are shown on the ruler. You can align text to the right or left of a tab stop, or align it at the decimal point.

To set a custom tab stop:

- Select the paragraph you want to set tab stops for.
- Press [Alt] T,T (format, tabs)
- Press [Ctrl]Left or [Ctrl]Right to move the cursor to the position on the ruler where you want to set the tab stop. You can also type the position in the Position box.
- In the alignment and leader boxes, select options you want.
- Press [Alt] I (insert)
- Repeat steps 3-5 to set as many tabs as you want.
- Press [Alt] D (done)

To remove a custom tab stop:

- Select the paragraph you want to remove the tab stops from.
- Press [Alt] T,T (format, tabs)
- Press [Ctrl]Left or [Ctrl]Right to move to the tab stop's position on the ruler.
- Press [Alt] T (delete)
Tab marks that you have already typed in are not removed so that the text aligns at the next tab stop.
- Repeat the above steps as necessary.
- Press [Alt] D (done)

To remove all custom tab stops:

- Select the paragraph that you want to remove the tab stops from.
- Press [Alt] T,T (format, tabs)
- Press [Alt] A (delete all)
Works removes all custom tab stops. Tab marks in the paragraphs align with the nearest preset tab stop.
- Press [Alt] D (done).

To add, change or delete alignment or leader characters:

- Select the paragraphs to change
- Press [Alt] T,T (format, tabs)
- Press [Ctrl]Left or [Ctrl]Right to move to the position on the ruler of the tab whose alignment or leader character you want to change.
- In the Leader & Alignment box, select a leader character or option or an alignment option, then press [Alt] I (insert)
- To delete leader characters, select None.
- Repeat the above steps as necessary.
- Press [Alt] D (done).

Creating a Table

With tab stops you can create and adjust a table with precisely aligned columns. If you copy information from the Spreadsheet or Database, Works arranges it with tab marks inserted between the columns; the columns align on the preset tab stops.

To create a table:

- Set a tab stop for each column in the table.
- Use decimal or right aligned tab stops for columns of numbers. If your first tab stop is a decimal tab stop, press TAB before you begin typing.
- Press [Alt] E, P (edit, insert special) and select end-of-line mark to start a new line in the table or press Shift Enter.

This allows you to format the table as one paragraph. If you want to format each line separately, press Enter instead.

To add a column to a table:

- Select the entire table.
- Press [Alt] T, T (format, tabs)
- Press [Ctrl] Left or [Ctrl] Right to move the cursor to the position on the ruler where you want to set the tab stops. You can also type in the tab stop position in the Positions Box.
- In the Alignment and Leader box, select the options you want.
- Press [Alt] I (insert)
- Press [Alt] D (done)

Thesaurus and Tutorial

As of this writing, the Thesaurus and Tutorial have not been installed.

Typing Text

Text is made up of letters, numbers, symbols and spaces. The text you type automatically moves to the next line if it doesn't fit within the margins. This is called word wrap. There are two situations in which you want to prevent wordwrap:

- When you want to end a paragraph, press Enter.
- When you want to begin a new line within a paragraph, press Shift Enter (or press [Alt] E, P (edit, insert special) and choose end-of-line mark.
- To type new text, position the cursor and type.
- To delete a typing mistake, press Backspace.

Underline

Self explanatory, this feature will underline text or numbers.

To underline:

- Select the text you want to underline.
 - Press [Ctrl] U or press [Alt] T,U (format, underline)
-

Undo

The Edit Undo command reverses your most recent editing or formatting action.

To undo a command or action:

- Press [Alt] E,U (edit, undo)

You can undo the following actions or commands:

- Typing, from the time the last command was carried out or since you last moved the cursor.
- All commands on the Edit menu, except the bookmark names and the Undo command itself.
- All commands on the Format menu
- Options Check Spelling command - undoes all of the words changed during a spell check.
- Select Replace command - undoes the last word you replaced.
- Select Replace command (all) - undoes all the words you replaced.

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Spreadsheet

The Works Spreadsheet is ideal for calculating. Listed below are some of the many features:

- Clear the contents of one or more cells or the entire Spreadsheet using a single command.
- Fill in a long sequence of numbers or dates with a single command.
- Automatically calculate the current date and time.
- Hide columns to prevent the information from being printed or displayed on a spreadsheet.
- Use the character styles and sizes supported by your printer to make spreadsheets attractive and easier to read.
- Scan selected cells or an entire spreadsheet to find the information you need.
- Retain certain columns and rows - for example, those with labels - on the screen as you scroll through the spreadsheet or when you print it.
- Create formulas to calculate almost anything, from adding two numbers to figuring the return on an investment.
- Type entries in any order and then let Works sort alphabetically or numerically.
- Automatically recalculate appropriate formulas when you change a value.
- Use built-in functions in your formulas, Works has 57 functions.

Getting Started

To create a new spreadsheet:

- Press [Alt] F,N,S (fie, create new, spreadsheet)

Review the topic "Selecting a Cell or Range".

Using Works with Other Spreadsheets and Databases

You can save a Works Spreadsheet or Database file as a text file (also known as an ASCII file) so that it can be used with many other spreadsheet or database applications.

When you save a Works Spreadsheet or Database as a text file, the cell contents are retained as values, not as formulas. For example if you type in the number 3 in a cell that has Currency format with 2 decimal places, then \$3.00 is displayed in the cell and retained in the text file. If the display of \$3.00 is the result of a formula, such as =1+2, only the value \$3.00 is retained in the formula and not the value.

In Spreadsheet and Database text files, the contents of each row or record are separated by carriage returns and line feeds.

If you choose the Text & Comma option, the contents of each field or cell are separated by comma; text is inside double quotation marks; and number formats, such as Currency, are not saved.

If you choose the Text & Tabs option, the contents of each field or cell are separated by tabs and number formats are saved.

Most database programs only recognize numbers in general, fixed, exponential or true/false formats. Spreadsheet column labels and Database field names are not retained in the text file.

To save a Works Spreadsheet or Database file as a text file:

- Press [Alt] F,A (file, save as)
- In the Format box, select Text & Commas or Text & Tabs.
- In the Save File As box, type the filename and extension for the text version of the file.
- Press Enter
- Press Enter again to accept loss of formatting.

The text file is saved to your disk. Your original file continues to be displayed and is not replaced or altered.

You can use database and spreadsheet files from another application if the file is a text file. Works recognizes fields or cells separated by either commas or tab marks and records and rows separated by carriage returns.

To open a spreadsheet or database file from another application:

- Press [Alt] F,O (file, open existing file)
- In the File To Open box, type the filename and extension of the text file you want to open, or select the file from the file box.
- Press Enter

- In the Open As dialogue box, select the application you want to open in Work.
- Press Enter

When opening a text file, Works assumes that the first line of the file contains the first row or record rather than column labels or field names. If you have labels or field names, they will appear as records or rows.

Using a Lotus 1-2-3 File

You can use a 1-2-3 file (Version 1A or 2) spreadsheet file in Works, and a Works spreadsheet in 1-2-3, without converting the file format. Works spreadsheet files and charts are stored in the WKS file format used by 1-2-3 Version 1A. This format is also recognized by 1-2-3 Version 2.

The Works spreadsheet and the 1-2-3 spreadsheet are not identical. Works supports some features not found in 1-2-3, 1-2-3 supports some features not found in Works, and some features are supported by both programs in different ways. The most important part of the spreadsheet - values, formulas, formats and range names - are retained when you exchange files between programs. However, some information may be lost if you create a file in one program and then open program and save it.

The Works Spreadsheet does not support the 1-2-3 Version 2 string combination operator (&) and the following 1-2-3 Version 2 functions:

Logical function:	@ISNUMBER, @ISSTRING
Special functions:	@@, @CELL, @CELLPOINTER
Date and time functions:	@DATEVALUE, @TIME VALUE

If you open a 1-2-3 Version 2 file containing formulas that use these functions, only the values of these formulas are retained in the Works Spreadsheet file; the formulas themselves are not retained.

To open a 1-2-3 file in Works:

- Press [Alt] F,O (file, open existing file)
- In the Files box, select the name of the 1-2-3 file, or type the name of the 1-2-3 file in the File To Open box.
- Press Enter

If you encounter difficulties using an imported file, save the file first, then reopen it as a .WKS file.

Calculating Manually

Whenever you change a value or formula in your spreadsheet, Works begins to recalculate the spreadsheet. You do not need to wait for a recalculation. You only need to turn the manual calculation mode on under special circumstances. CALC appears on the status line when manual calculation is on.

To turn manual calculations on or off:

- Press [Alt] O,M

To calculate a spreadsheet when manual calculation is on:

- Press F9 or [Alt] O,N (option, calculate now)

When manual calculation is on, CALC appears in the status line.

Character Styles and Alignment

Character styles determine the appearance of text and numbers. You can format spreadsheet entries to be bold, underline or italic.

Character alignment positions text and values horizontally in a cell. When you create a spreadsheet text is left aligned and dates and numbers are right aligned (referred to as general alignment)

To change character styles or alignment:

- Select the cell or range you want to change.
 - Press [Alt] T,S (format, Style)
 - In the Alignment and Styles boxes, select the options you want.
 - Press Enter
-

Circular Reference

If a formula is entered that refers to itself, the formula has no beginning value with which to calculate. Such an error is called a circular reference. When Works finds a circular reference CIRC is displayed on the status line. To correct this condition change one of the values in the formula.

Clearing Cell Contents

Clearing a cell permanently removes its contents, but leaves its formatting.

To clear one or more cells:

- Select the cell or range you want to clear
- Press [Alt] E,E (edit, clear)
- To clear a single space, press backspace then press Enter.

Column Width

Column width determines how many characters fit inside a cell. The default width is 10 character spaces. If you enter text or values wider than the cell width they will be displayed in the adjoining cell if it is empty, if not Works displays only what will fit in the cell.

Works displays ##### if a number or date exceeds its cell width.

To change column width:

- Select a cell in each column you wish to change.
- Press [Alt] T,W (format, column width)
- Type a column width between 0 and 79.
- Press Enter

Copying Cells and Formats

You can copy cell contents to another location in the same or another file to avoid repetitive typing or to consolidate information from more than one spreadsheet.

To copy to adjacent cells:

- Select the cell, column or row you want to copy.
- Extend the selection to the right or down to include the cells into which you want the copies placed.
- Press [Alt] E,R (edit, fill right) or [Alt] E,F (edit, fill down)

You can also type the same data into many cells at the same time by selecting the range of cells in which you want the data, typing the information, pressing [Ctrl]+' then pressing Enter to repeat the information in each cell or selection.

To copy to non-adjacent cells:

- Select the cell or range you wish to copy.
- Press Shift F3 or [Alt] E,C
- Select the cell, or upper-left cell of a range, into which you want to place the copy.
- To copy to another spreadsheet file, open the file or choose an open file from the Windows menu.
- Press Enter (or Esc to cancel)

To immediately repeat a copy command:

- Select the cell or upper-left cell of a range you wish to place the next copy.
- Press Shift F7

Copying, adding or subtracting values

You can perform specialized copying tasks using the Edit Copy Special command: copy only values, styles and alignments from one range to another or add or subtract values from one range to or from another range. You can also consolidate two or more spreadsheets in order the transfer values from one file to another or add or subtract values from one spreadsheet to another.

To copy add or subtract values:

- Select the cell or range you want to copy.
- Press [Alt] E,S (edit, copy special)
- Select the cell or the upper-left cell of a range into which you want to place the copy.
 - To copy to another spreadsheet file, open the file or choose an open file from the Window menu.
- Press Enter (or Esc to cancel)
- In the dialogue box, select Values Only, Add Values, or Subtract Values.
- Press Enter again.

Copying to Another Works Tool

You can copy cell contents to a Word Processor document or a Database file. You can also send Spreadsheet data to another computer using the Communications application.

Data from the Spreadsheet is copied to another Works application as a table. If you copy information to the Word Processor or Communications, each cell is separated from the next cell by a tab stop and each row ends with a paragraph mark. If you copy information to the Database, each column becomes a field and each row becomes a record.

To copy Spreadsheet data to another Works Application:

- Select the cell or range you want to copy.
- Press Shift F3 or [Alt] E,C (edit, copy)
- Open another works file, or choose an open file from the Windows menu.
- Move to the location in the file where you want to place the copy.
- Press Enter

Date and Time

You can type dates and times into cells and use them as formulas. You can type dates in a long or short format and times in a 12 or 24 hour format.

Works displays ##### is a number or date exceeds its cell width.

The formats Works recognizes and in which dates are displayed is affected by the Works Country Settings.

The following table is a list of the time and date formats that Works will recognize as times and dates:

Format	To display	Type
<u>Long</u>	<u>Month, day, year</u>	<u>Oct 30, 1960</u>
	Month, year	Oct, 1960
	Month, day	Oct 30
	Month only	Oct
<u>Short</u>	<u>Month, day, year</u>	<u>10/30/6</u>
	Month, year	10/60
	Month, day	10/30
<u>24-hour</u>	<u>Hour, minute, second</u>	<u>14:30:00</u>
	Hour, minute	14:30
<u>12-hour</u>	<u>Hour, minute, second</u>	<u>2:30:00PM</u>
	Hour, minute	2:30PM
	Hour only	2PM

To type the date or time:

- Select the cell in which you want the date or time to be displayed.
- Type the date or time in a format Works recognizes.
- Press Enter

To change the date or time format:

- Select the cell or range you want to change.
- Press [Alt] T,T (format, time/date)
- Press Enter

You can use a shortcut method of inserting the current date or time. When you insert the date or time this way, it does not change if you recalculate.

Inserting the current date or time:

- Select the cell in which you want the date or time to appear.
- Press [Ctrl]; (semicolon) to enter the date and [Ctrl] : (colon) to enter time.
- Press Enter

Updating Date or Time Automatically

Works will update a date or time every time it recalculates, if you use the NOW function. Please refer to the function section of this manual.

To insert a recalculating date or time:

- Select the cell in which you want the date or time to appear.
- Type =now()
- Press Enter
- Format the cell with the date or time format you want.

Calculating Dates and Times

You can use the date and time arithmetic in calculations, for example, to calculate the number of days in a project or to determine elapsed time. For example, to calculate the elapsed days between the date in cell A12 (3/30/89) and the date in cell B12 (1/1/89) type =A12-B12 in cell B13. The result will be 88 days.

To use a date in a formula, enclose it in single quotation marks ('). For example, the formula ='3/30/89'-'1/1/89' calculates the number of days (88) between the two dates. You can use times in a formula in the same manner.

Deleting a Row or a Column

When you delete a column, the columns to the right shift to the left and fill the space. When you delete a row, the rows below the deleted rows shift up to fill the vacated space. Works adjusts cell references to compensate for deleted columns and rows. If you delete cells to which other formulas refer, Works replaces the references to the deleted cells with the error value ERR.

To delete a column or a row:

- Select the range containing cells from each column or that you want to delete.
- Press [Alt] E,D (edit, delete column/row)
- In the Delete dialogue box, select Row or Column.
- Press Enter

If you select an entire column or row before choosing Edit Delete Row/Column, Works deletes that column or row without displaying the Delete dialogue box.

Editing Cell Contents

When you select a cell to edit, the contents of that cell are displayed in the formula bar at the top of the screen, as well as in the selected screen. One way to edit is to retype the entire contents of the cell. Another is to edit the formula bar.

To replace the contents of a cell:

- Select the cell you want to change.
- Type a new entry.
- Press Enter

When you begin to type, the new typing replaces the cell contents.

To edit the contents of a cell in the formula bar:

- Select the cell you want to edit.
- Press F2 Then use the following keys:

To

Go to the beginning or end of the formula bar
 Go left or right one character
 Delete the character to the left of the cursor
 Delete the selected character
 Select one or more characters

Press

HOME or END
 LEFT/RIGHT arrow key
 BACKSPACE
 DELETE
 SHIFT LEFT or RIGHT

- Press Enter to confirm or Esc to cancel.

Inserting Cell or Range reference into a formula:

- Select the cell containing the formula you want to edit.
- Press F2
- Select the cell or range you want to reference.
- Type the remainder of the formula.
- Press Enter.

Entering a Series of Numbers or Dates

You can automatically fill any number of cells with a series of numbers or dates.

- Type a starting value - a number or a date - then press Enter.
- Select the cell with the starting value and the cells to the right or below in which you want the series.
- Press [Alt] E,L (edit, fill series)
- Select the unit.
- In the Step by box, type a value.
- Press Enter

Entering Text, Numbers or Formulas

To enter text, dates or numbers you simply type. To enter a formula, you type and equal sign (=) followed by the formula.

If you enter a date or number that is too wide to fit in the cell, Works displays #####. If you enter text that is longer than the width of the cell it will be displayed in the adjoining cell if it is empty, if not it will display only what can fit into the width of the cell. To treat a number as text, first type a double quotation mark. For example "20184.

Fonts

A spreadsheet can have only one font (or typeface). Fonts may be either non-proportional (which have all the same width characters) or proportional. If you use a non-proportional font such as Line Printer, Courier or Pica to print a spreadsheet, the columns may not line up properly.

To change the printer font:

- Press [Alt] T,F (format, fonts)
- In the Fonts and Size dialog boxes, select the font and size you want.
- Press Enter.

Footers

Please refer to the Word Processor reference on Headers & Footers.

Formatting a Number

You can change the way a cell displays a number by formatting the cell either before or after you enter the data into it. The default format is General.

- | | |
|-------------|--|
| General | Displays values as precisely as possible, using an integer (123), decimal fraction (1.23), or exponential notation (1.23E+75) if the number is too large to fit into the cell. A negative number is displayed with a minus sign. |
| Fixed | Displays a specific number of decimal places, rounding figures appropriately. A negative number is displayed with a minus sign. |
| Currency | Inserts a currency sign and inserts commas every three places. Negative numbers are enclosed in parentheses. You can also type a currency symbol before a number and Works will recognize it. |
| Comma | Inserts a comma every three places. Negative numbers are enclosed in parentheses. |
| Percent | Shows percentages. Negative numbers are displayed with a minus sign. You can also type a percent symbol following a number and Works recognizes the percent format. |
| Exponential | Shows values in scientific notation. Negative numbers are displayed with a minus sign. |
| True/False | Causes cell to display logical values. That is, all cells whose values are zero display FALSE, and all non-zero cells display TRUE. |

To change a number format:

- Select the cell or range you want to format.
- Press [Alt] T (format) select the desired format.
- If the Decimal box is displayed, type the number of decimals you want.
- Press Enter

When you enter numbers as fractions, Works converts them to decimal numbers. For example if you type in 10 3/4 Works converts it to 10.75. All fractions must be preceded by a whole number. To enter 2/5 you must type in 0 2/5.

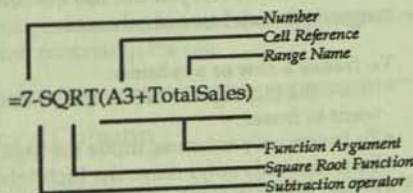
Formulas in a Spreadsheet

A formula is an equation that calculates a new value from the existing values. Unless you specify otherwise, a spreadsheet cell displays only the value that a formula calculates. The formula itself is displayed in the formula bar at the top of the screen.

To show or hide formulas in a spreadsheet:

- Press [Alt] O,F (options, formulas)

An example of a formula:

**To enter a formula into a cell:**

- Select the cell in which you want the formula to appear.
- Type = (equal sign) and then the formula.
- Press Enter (or Esc to cancel)

How Works Evaluates a Formula

Works follows standard algebraic rules to evaluate a formula.

- The contents of the innermost set of parentheses first
- Operators in the standard order of evaluation
- If two or more operators have the same order, Works evaluates them from left to right.

The following table shows Works' operators and their order of evaluation:

<u>Operator</u>	<u>Order of evaluation</u>
^(exponential)	First
-(negative), +(positive)	Second
*(multiplication), / (division)	Third
+(addition), -(subtraction)	Fourth
=(equal to), <> (not equal to)	Fifth
<(less than), >(greater than)	
<= (less than or equal to)	
>= (greater than or equal to)	
~(NOT)	Sixth
!(OR), & (AND)	Seventh

Freezing Rows or Column Titles

You can freeze column and row titles to keep them in the windows while you scroll through other parts of a spreadsheet, or to print those rows or titles on every page of a multi-paged spreadsheet. Freezing affects all rows above and to the left of the highlight.

You can not use the arrow keys to move the highlight into frozen rows or columns. However, you can use the Select Go To command to select cells or ranges in frozen rows or columns.

To freeze a row or a column:

- Move the highlight to below the rows or to the right of the columns you want to freeze.
- To freeze only columns, move the highlight to row 1.
- To freeze only rows move the highlight to column A.
- Press [Alt] O,T (options, freeze titles)

To unfreeze a row or column:

- Press [Alt] O,T (options, unfreeze titles) when freeze title is on.

Functions in a Formula

A function is a built-in calculation. Works has 57 functions that perform common Spreadsheet tasks. Please refer to the Function appendix.

Headers and Footers

A header is text that appears at the top of every printed page. A footer is text that is printed at the bottom of every page. Refer to the Word Processing topic on headers and footers form more information.

Hiding a Column

A hidden column in a spreadsheet does not appear in the screen and does not print. Use hidden columns to make spreadsheets easier to read.

You can not use the arrow keys to scroll through or enter information into the cells of a hidden column. However, you can select a cell in a hidden column using the Select Go To command.

To hide a column:

- Select any cell(s) in the column(s) you want to hide.
- Press [Alt] T,W (format, column width)
- Type 0 (zero)
- Press Enter

To display a hidden column:

- Press F5 or [Alt] S,G (select, go to)
- In the Go To box, type a cell reference for the column you want to display.
- Press Enter - The column should now be displayed.

To select a cell in a hidden column:

- Press F5 or [Alt] S,G (select, go to)
- In the Go To box, type in the cell you want to select.
- Press Enter
- Press [Alt] T,W (format, column width) and then type a greater value than 0 to display the column containing the cell.

Inserting a Row or a Column

When you insert a column, Works moves the selected column to the right and inserts a blank column. When you insert a row, Works moves the selected row down and inserts a blank row.

To insert one or more rows of columns:

- Select cells in one or more columns or rows. Works will insert a blank row or column for each row or column you select.
- Press [Alt] E,I (edit, insert row/column)
- In the Insert dialog box, select Row or Column.
- Press Enter

Moving Cell Contents

You can move information from one location to another in your spreadsheet. When you do, Works maintains the accuracy of the spreadsheet's formulas, moving them does not change the formulas.

To move a cell or a range:

- Select the cell(s) or range you want to move.
- Press F3 or [Alt] E,M (edit, move)
- Select the cell or the range to which you want the data moved.
- Press [Alt] E,M (edit, move)

To move a column or a row:

- Select the column(s) or row(s) that you want to move.
- Press F3 or [Alt] E,M (edit, move)
- Select the column or row that you wish to move the data to.
- Press Enter

If the column or row you select contains information, the moved information will replace it.

Moving the Highlight and Scrolling

To jump directly to a cell reference or a range name:

- Press F5 (the shortcut for Select Go To)
- In the Names box, select the range name to which you want to move.
- Press Enter

To move the highlight (the selected cell) around the spreadsheet use the following keys:

<u>To move</u>	<u>Press</u>
Left or Right one cell	LEFT or RIGHT arrow key
Up or Down one cell	UP or DOWN arrow key
To the first cell of the row	HOME
To the last value in the row	END
Up one window	PgUp
Down one window	PgDn
Right one window [Ctrl]	PgDn
Left one window [Ctrl]	PgUp
Upper-Left cell of spreadsheet	[Ctrl] HOME
Lower-right cell of spreadsheet	[Ctrl] END
Move by one block of data Left, Right, Up or Down	[Ctrl] Arrow key

Page Breaks

When you print more data that can fit on a sheet of paper, Works automatically breaks the spreadsheet into pages. If you want to specify exactly what information appears on each page, you can set your own page breaks. When you do, a page break mark (>>) appears at the row or column letter where the new page begins.

To insert or delete a page break:

- Select the cell in the column or where you want to insert or delete a page break.
 - Press [Alt] P, I (print, insert page break)
 - Select Rows or Columns in the dialogue box, then press Enter.
 - Press [Alt] P, D (print, delete page break) to delete.
-

Page Setup and Margins

Please refer to the printing appendix for more information.

Printing

To print a spreadsheet:

- Press [Alt] P, P (print, print)
- Select your specific print options.
- Press [Alt] P (print)

As your spreadsheet is printed, the percentage of printing that is complete is displayed on the left end of the status line.

Selecting the Print Area

Besides printing an entire spreadsheet, you can also print only part of it by first setting a print area.

To set a print area:

- Select the portion of the spreadsheet you want to print.
- Press [Alt] P, A (print, set print area)

To reset the entire area as the print area:

- Press [Ctrl] Shift F8 or [Alt] S, A (select all)
- Press [Alt] P, A (print, set print area)

Protecting Cell Contents

Use this option to safeguard cells against unauthorized or accidental change.

To lock or unlock:

- Select the cell or range that you want to lock or unlock.
- Press [Alt] T,S
- Turn on or off the Locked check box.
- Press Enter

To protect some cells, but not others, unlock the cells you do not want to protect, and then turn on protection. With protection on, you can use the TAB and Shift TAB keys to move the highlight to only the unlocked cells.

When more than one cell is selected, Works displays a dash (-) in the Locked check box. Turning on Locked will lock all of the selected cells and a X is displayed in the check box.

To turn protection on or off:

- Press [Alt] O,P (options, protect data)

Range Names

A range can be a single cell, a column or a row, or blocks of cells, or an entire spreadsheet. After you define and name a range, you can use the name to reference the range in a formula.

If a range name resembles a number, cell reference or function, enclose the range name in a single quotation mark to use it in a formula. For example type 'A1 to use A1 as the range name for a formula.

To name a cell or a range:

- Select the cell or range you want to name.
- Press [Alt] E,N (edit, range name)
- Type a name from 1 to 15 characters. You can not use single quotation marks in a range name.
- Press [Alt] C (create)

When you create a range name, Works changes any references to that cell range into named range reference.

To delete a range name:

- Press [Alt] E,N (edit, range name)
- In the Names box, select the name that you want to delete.
- Press [Alt] T (delete)
- Press [Alt] D (done)

When you delete a range name, Works changes any references to that range into cell references.

To change the reference of an existing range name:

- Select the new range.
- Press [Alt] E,N (edit, range name)
- In the Names box, select the name you want to assign to the new range.
- Press [Alt] C (create)

When you change the range assigned to a name, Works changes all formulas referring to the old range so that they refer to the new range. If you don't want your formulas to refer to the new range, first delete the old range name, then use it again to name the new range.

To select a range name:

- Press F5 or press [Alt] S,G (select, go to)
- In the Names box, select the range name that you want to go to.
- Press Enter

Inserting a List of Range Names

You can insert into your spreadsheet a list that shows the range names and references you have created. Use the range list to help you locate specific information. Inserting a list into a range replaces any existing data in that range.

To insert a list into a spreadsheet:

- Select the upper-left corner cell in which you want the list displayed.
- Press [Alt] E,N (edit, range name)
- Press [Alt] L (list)

Referencing a Cell or a Range

References identify cell and range locations in a spreadsheet. Using references you can include a cell's value in another cell's formula. Then if you change the value of the referenced cell, Works recalculates the formula in the other cell.

A reference identifies a single cell by using the cell's column letter and row number. A range reference identifies a block of cells. It uses the cell references of the upper-left and lower-right corner cells, separated by a colon, to describe the range.

A range reference is useful in formula. For example if you type the formula =sum(d18:d17) into a cell, Works adds all values in that range and displays the total in the cell where you typed the formula. A range name is the same as a range reference. The advantage of a range name is that it makes the formula easier to read.

Inserting Cell or Range References into a Formula

Works has two methods for inserting cell and range references into formulas without typing the references.

To insert references using the Arrow keys:

- Type the formula up to the point where you want to insert the cell or range reference.
- Use the arrow keys to select the cell or range that you want to insert.
- Type the rest of the formula.
- Press Enter

To insert references using Go To:

- Type the formula up to the point where you want to insert the range name or reference.
- Press F5 or press [Alt] S,G (select, go to)
- Type a range reference, or select a range name from the Names box.
- Press Enter
- Type the rest of the formula
- Press Enter again.

References for Cells and Ranges

Within the spreadsheet you can choose between 3 types of references:

Relative references (default)

Are the equivalent of directional guides. If you copy a formula with a relative reference to another cell, the direction of the original reference is transferred to the new cell and the formula adjusted to fit the new location.

Absolute references

Are the equivalent of specific destinations. If you copy a formula with an absolute reference to another cell, the formula remains unchanged. Press F4 to insert the dollar signs into a reference that you want to be absolute.

Mixed references

Are used to refer cells where only the column or row reference is absolute. When you copy a mixed reference, the absolute portion remains fixed and the relative portion is adjustable.

The F4 key cycles through the different combinations of mixed references, starting with the current reference, as shown in the following table:

Reference	Example
Relative column, relative row	A2
Absolute column, absolute row	\$A\$2
Relative column, absolute row	A\$2
Absolute column, relative row	\$A2

To insert an absolute or mixed reference:

- Select the cell into which you want to enter the formula.
- Type your formula up to the point where you want to insert a reference.
- Use the arrow keys, or press [Alt] S,G (select, go to) to select the cell or range reference you want to insert.
- Press F4 until the desired reference type appears in the formula bar.
- Type the rest of the formula.
- Press Enter

A named reference can also be absolute.

Searching Spreadsheet Data

You can instruct Works to look quickly through selected cells or an entire spreadsheet to find specific text or values in a cell. When Works finds the search item, it selects the cell containing the search item. Works examines both values and formulas. Data in hidden columns will not be found.

To search a range or spreadsheet:

- Select the range you want to search. To search the entire spreadsheet do not select a range.
- Press [Alt] S,S (select, search)
- Type the text or value you want to find.
- In the Search By Box, select Rows or Columns.
- Press Enter

To search in a formula:

- Select the range you want to search. To search the entire spreadsheet do not select a range.
- Press [Alt] O,F (options, show formulas)
- Press [Alt] S,S (select, search)
- Type the item you want to find, such as a range name or cell reference.
- In the Search By box, select the Rows or Columns.
- Press Enter

To repeat the previous search:

- Press F7

Searching with Wildcards

Wildcards are characters that help you find cells in which the contents are similar, but not quite the same. The question mark (?) wildcard represents any single character in the same position as the question mark. For example if you want to find a name in your spreadsheet, but you are not sure if it is Smithson or Smithsen, type `smiths?n` and Works will find either name.

The asterisk (*) wildcard represents any number of characters in that position. For example, if you type `s*s`, Works finds all the text that begins with "s" and ends with an "s" such as sales or salaries.

Selecting a Cell or Range

Selecting is how you tell Works which cell(s) you want to work with. The spreadsheet always has at least one cell selected and that cell is highlighted. Works displays the reference of the selected cell or range in the status line.

To select a cell:

- Press an arrow key to move to the cell you want.

To select a row:

- Move the highlight to the row you want to select.
- Press [Ctrl] F8 or [Alt] S,R (select, row)

To select a column:

- Move the highlight to the column you want to select.
- Press Shift F8 or [Alt] S,C (select, column)

To select a range:

- Select a cell at a corner of the desired range.
- Press F8 or [Alt] S,E (select, range)
EXT is displayed on the bottom status line.
- Press the arrow keys to extend the selection to other cells.
- Press Esc to cancel

To select a previously named range:

- Press F5 or [Alt] S,G (select, go to)
- In the Names box, select a name.
- Press Enter

To select the entire spreadsheet:

- Press Shift [Ctrl] F8 or [Alt] S,A (select, all)

Sorting Text, Data or Values

Sorting rearranges rows alphabetically or numerically according to the contents of the column you select. If the selection you are sorting contains a mixture of numbers, text, times and dates, Works sorts the sequence of the dates and times the same way it sorts numbers. In an ascending sort, numbers follow text. In a descending sort, text follows numbers. After sorting Works adjusts relative references, but not absolute references.

Works can sort one, two or three columns. For each column you choose ascending or descending order. Works only sorts entries in a specified second or third column of some of the entries in the preceding columns are identical.

To sort selected rows:

- In the column you want to sort by, select the rows you want to sort.
- Press [Alt] S,O (select, sort rows)

The select column letter is proposed as the first column to be sorted.

- Select either Ascend or Descend.
- If you want to sort additional columns, move to the 2nd or 3rd Column box and type the column letter of the column you want to sort.
- Press Enter

Journal of the Royal Society of Medicine

The first part of the paper deals with the general principles of the method of moments, and the second part with the application of this method to the study of the distribution of the elements of a population. The method of moments is a simple and powerful method of statistical analysis, and it is particularly useful in the study of the distribution of the elements of a population. The method of moments is based on the assumption that the moments of the distribution of the elements of a population are known, and that the moments of the distribution of the elements of a population are equal to the moments of the distribution of the elements of a population. The method of moments is a simple and powerful method of statistical analysis, and it is particularly useful in the study of the distribution of the elements of a population.

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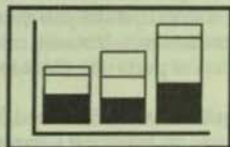
Charting

You can create several different types of charts. Each chart emphasizes different aspects of your spreadsheet information. You can change charts from one type to another or combine charts to experiment with different ways of displaying your data.

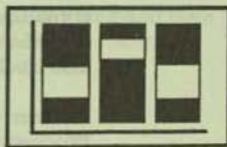
Standard Charts Types (without labels displayed)



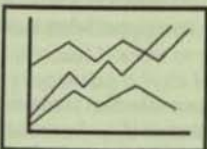
Bar Chart
Shows differences between various categories of data. Each row or column of spreadsheet numbers appears as a set of bars with the same pattern or color.



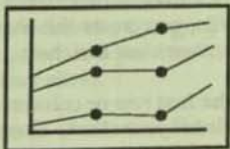
Stacked Bar Chart
A bar chart in which the bars are stacked on top of each other to show the total in each category. Each bar represents a row or column from your spreadsheet.



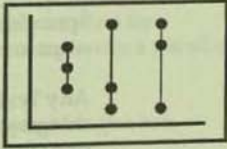
100% Bar Chart
A bar chart in which the bars are stretched to be the same length in order to show the percentage each bar is of the total. Each bar represents a row or column from your spreadsheet.



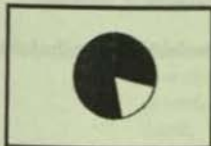
Line Chart
Shows trends or changes in data. Each line represents a row or column from your spreadsheet.



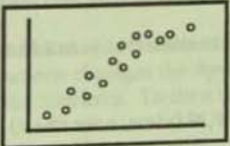
Area Line Chart
A line chart in which lines are "stacked" or combined to show the total in each category. Each line's values are added to those of the lines below.



Hi-Lo-Close Chart
Shows the range between high and low values within one category. Each marker, or dot, in a vertical grouping represents one value.



Pie Chart
Shows percentage breakdowns. Each pie slice represents an individual value; the whole pie represents on spreadsheet column or row.



X-Y Chart
Shows numerical values from the spreadsheet along both the X axis and Y axis. Each marker represents the relationship between the X and Y values.

Creating a Chart

Each chart is based on a Works Spreadsheet file. You open a Spreadsheet file to create and view a chart. Each Spreadsheet file can have up to eight charts associated with it.

When you create a chart, you tell Works which spreadsheet rows and columns you want translated into a chart. The rows and columns are organized into categories along a horizontal line called an X-axis. The becomes the X-series in your chart. Each row or column you select becomes one of the bars or lines, called the Y-series, in your chart. Whenever you change values or text in your spreadsheet, Works updates the chart the next time you view it, the new values are reflected in the chart. You can create many different types of charts. You can also label different parts of a chart to improve its appearance and effectiveness.

To insert a chart into a Works Word Processing document, please refer the Word Processing topic on Inserting Charts.

Basic Charting

You can plot data from as many as six adjacent spreadsheet rows or columns. The rows and columns can include the text Works will use to create legends and category labels to clarify your chart. Once you have selected the rows and columns for your chart, or entered the information you want to chart into a Spreadsheet file, you create the chart in two steps: Select the information you want to chart, then view the chart.

Any Text in the first row or column of your selection becomes the X-series and category labels for your chart. The numbers in the columns under the first row or to the right of the first row or to the right of the first column become the Y-series: the first column is the first Y-series, the second column is the second Y-series, and so on up to six Y-series.

To create a chart:

- In the Spreadsheet file, select up to six adjacent rows or columns of numbers, plus any words that label each row or column.

To chart information that is not in a spreadsheet, enter the information into the spreadsheet.

- Press [Alt] V,N (view, new chart)

Works names the new chart and adds it to the View menu with a mark beside the chart name. The new chart is now active.

- Press Esc when finished viewing.
- Press F10 or [Alt] V,S (view, spreadsheet) to return to the spreadsheet view.

Borders

You can refine the appearance of a chart by adding a rectangular border around it.

To add or remove a border:

- Press [Alt] O,B (options, show border)

Color or Black & White display

Since your computer can only display in monochrome, this command does not serve any purpose unless you have experimented with the commands and need to set it back to the default.

To change between color and black & white display:

- Press [Alt] O,F (options, format for B&W)

Colors, Patterns and Markers

The colors, patterns, marker (dot) styles, and line styles in a chart are called data formats. When you create a chart Works automatically assigns a different data format (called auto) to each set of bars, lines or pie slice. You can refine the appearance of a chart by changing the data formats for individual Y-series or pie charts. In a pie chart you can emphasize a pie slice by separating it from the other slices.

You can change data formats in the Format Data Formats dialogue box.

- | | |
|----------|---|
| Series | Lists the Y-series in the chart. When you select a Y-series, the other boxes show the data format for that Y-series. For a pie-chart, the Series box is replaced with a Slices box that lists pie slices. |
| Color | Shows the colors available for bars, lines, markers or pie slices. |
| Patterns | Shows the patterns available for bars, lines or pie slices. In a line chart, pattern changes the appearance of the lines connecting the markers. To turn off a line, set its pattern to none. |
| Markers | Shows the marker styles available for the line chart. Markers are the circles, diamonds or rectangles which mark data points in a Line or Hi-Lo-Close chart. This box is empty when you have a bar chart and does not appear if you have a pie chart. |

- | | |
|------------|--|
| Format | Applies your data format selections to the selected Y-series or pie slice. |
| Format All | Applies your data format selections to every Y-series or pie slice. If you are formatting a mixed Line or Bar chart, Format All applies your data format selections to every Y-series of the same type as the selected Y-series. |

To change data formats: (except in a pie chart)

- Press [Alt] T,D (format, data format)
- In the series box, select the Y-series whose format you wish to change.
- In the Colors, Patterns and Markers boxes, select the options you want, or accept the Auto setting.
- Press [Alt] F (format) to apply the new data formats to the selected Y-series, or press [Alt] A (format all) to apply the new formats to all the Y-series in the chart.
- Repeat the above steps to change the data format of other Y-series.
- Press [Alt] D (done)

To change data formats in a pie chart:

- Press [Alt] T,D
- In the Slices box, select a slice whose format you want to change.
- In the Colors and Patterns boxes, select the option you want, or accept the auto setting.
- Turn on the Exploded check box to explode a slice or turn off to return the slice to the normal position.
- Press [Alt] F (format) to apply the new data to the selected slice, or press [Alt] A (format all) to apply the new formats to all the slices in the chart.
- Repeat the above steps to change the data format in other slices.
- Press [Alt] D (done)

Different printers may have different options available as colors, patterns, or marker styles. Works will automatically select the formats for screen and the formats for printing. If you want to change the formats, you want the Data Format dialog to list the options available for your printer. You can use the Options List Printer Formats command to list the options in the dialog box. The screen display of your chart will not change. If you have more than one printer, specify the printer you want to use before choosing this command.

To list printer data formats:

- Press [Alt] O,P (options, list printer formats)

Copying A Chart

You can create additional charts based upon an existing chart by copying the existing chart, then modifying it. Once you copy a chart, the copy becomes the active chart in Chart view and its name is selected on the view menu. Any changes you make are made only to the copy.

To copy a chart:

- Press [Alt] V,C (view, charts)
 - In the Charts box, select the chart you want to copy.
 - In the Name box, type a name (up to 15 characters) for the new copy of the chart.
 - Press [Alt] C (copy)
 - Repeat the above steps to copy another chart.
 - Press [Alt] D (done)
 - Press F10 or [Alt] V,S (view, Spreadsheet) to return to the spreadsheet view.
-

Changing the Chart Type

To change the chart type:

- Press [Alt] T (format)
- Select the new chart type you want.
- Press [Alt] V (view) and the chart name.
- Press F10 or [Alt] V,S (view, spreadsheet) to return to the spreadsheet view.

Note - A Pie Chart displays data from only the first spreadsheet row or column in a selection.

Modifying a Chart

Once you have created a chart, you can add, change, or delete the rows in columns used for Y-series and X-series.

To add information to a chart:

- In Chart view, select the row or column you want added to the chart as a Y-series or an X-series.
- Press [Alt] D (data) and the appropriate Y-series or X-series command.

For information of changing or deleting a Y-series or X-series, see the Editing Data topic.

Custom Chart Types

To show more information to a chart, you can add a second Y-axis or mix lines and bars. The legends in a two-Y-axis chart do not automatically indicate the Y-axis to which you have assigned each Y-series. If you have added a right-sided Y-axis, you can give each Y-axis a descriptive title.

To add or remove a right Y-axis:

- Press [Alt] O,T (options, two Y-axes)
- In the dialog box, select Right for a t least one Y-series to add a right Y-axis, or select Left for every Y-series to remove a right Y-axis.
- Press Enter

To combine lines and bars:

- Press [Alt] O,M (options, mixed line & bar)
- Select Line or Bar for each Y-series you want Works to display differently.
- Press Enter

To return to a lines-only or a bars-only chart type:

- Press [Alt] O,M (options, mixed lines & bars)
- Select Line for every Y-series or select Bar for every Y-series.
- Press Enter

Deleting a Chart

To delete a chart:

- Press [Alt] V,C (view, charts)
- In the charts box, select the chart you want to delete.
- Press [Alt] T (delete)
- Press Enter to accept the deletion or Esc to cancel.
- Press [Alt] D (done)

Editing Data

You can edit your spreadsheet data while in chart view. Any changes that you make to the spreadsheet are automatically reflected in any chart you view. You can use Edit Data to help you find the spreadsheet rows and columns used in chart. Series shows the range reference of the spreadsheet cells assigned to each series in a chart.

To find spreadsheet cells used in a chart:

- Press [Alt] D,S (data, series)
- In the Series box, select the series whose assigned cells you want to review.
- Press [Alt] G (go to)

To delete a series:

- Press [Alt] D,S (data, series)
- In the Series box, select the series you want to delete.
- Press [Alt] T (delete)
- Press [Alt] D (done) or repeat the above steps to delete additional series.

To change a series:

- In the Chart view, select the row or column that you want as the new series.
- Press [Alt] D (data) and the appropriate Y or X series command.
- Press [Alt] V (view) and select the chart name.
- Press Esc when finished viewing.

Fonts

A font or typeface is a set of characters with a specific design. Depending on your printer, you can choose from various fonts and sizes to print the text and numbers in a chart. Once you have specified fonts for printing a chart, the chart will be displayed on your screen in your computer's usual screen fonts unless you turn on Show Printer Fonts.

To change the font for a chart title:

- Press [Alt] T,F (format, title font)
- In the Fonts box, select a font.
- In the Sizes box, select a font size.
- Press Enter

To change the font for other text and numbers in a chart:

- Press [Alt] T,O (format, other font)
- In the fonts box, select the font .
- In the size box, select the size.
- Press Enter

To display a printer font:

- Press [Alt] O,S (option, show printer fonts)

Note: Works can display a chart faster with screen fonts.

Software Charting Fonts

Works supplies special software fonts that are used only for printing chart text. The fonts are divided into two groups: raster fonts and stroke fonts. The screen fonts and some of the software fonts (with the filename extension .RFT) are raster fonts. The rest of the software fonts are stroke fonts. With the exception of plotters, all printers supported by Works can print both raster and stroke fonts. Plotters can only print stroke fonts.

With stroke fonts, you have more sizes. With raster fonts, you usually get better-quality printed text. However, the raster fonts will look slightly different in your screen from the way they will look printed. The following software fonts are provided with Works:

Raster Fonts (available in only 3 fixed sizes)

Decor A
Modern C
Bold Modern C
Italic C

Stroke Fonts (available in all even point sizes from 6 to 126)

Modern B
Bold Modern B
Roman B
Bold Roman B
Italic Roman B
Bold Italic Roman B
Script B

Grid Lines

Y-axis grid lines extend horizontally from the left Y-axis, X axis grid lines extend vertically from the X-axis.

To add or delete grid lines:

- Press [Alt] O,X (options, X-axis) to add or delete vertical grid lines or
- Press [Alt] O,Y (options, Y-axis) to add or delete horizontal grid lines.
- Turn on or off Grid Lines to add or delete grid lines for the axis.
- Press Enter

Hi-Lo-Close Charts

In a Hi-Lo-Close chart, data from a spreadsheet row or column is displayed as a set of markers, such as dots. The markers in each data category are connected by a vertical line to show the range between the highest and lowest data values.

You can include as many as six Y-series in one chart. If you change numbers in your spreadsheet, Works automatically adjusts the Y-series and the chart so the next time you view the chat it reflects the changes in the spreadsheet.

You must include at least two Y-series, representing high, low or closing values. The numbers in each Y-series may be greater than, equal to or less than zero.

Inserting a Chart into a Word Processor Document

Please refer to the Word Processing topic Inserting a Chart.

Labels

Labels are words or numbers from a spreadsheet that identify numbers in a chart. Category labels are displayed along the X-axis. Data labels are displayed next to and above bars, lines or markers they identify.

When you create a chart, Works automatically assigns category labels if you selected a row or column of words. To add or change category labels, you assign cells from a spreadsheet row or column to the X-series. Each word or number in the X-series becomes a category label in the chart's X-axis. If you change words or numbers in your spreadsheet, Works adjusts the X-series and the chart.

To add or change category labels:

- Select the spreadsheet row or column containing the words or numbers you want to use as labels.
- Press [Alt] D,X (data, x-series)

Note - In a pie chart, each category label identifies one pie slice. In an X-Y chart, category labels serve as horizontal-axis scale numbers.

To delete category labels:

- Press [Alt] D,S (data, series)
- In the Series box, select the X-series.
- Press [Alt] T (delete)
- Press [Alt] D (done)

To find spreadsheet cells used as category labels:

- Press [Alt] D,S (data, series)
- In the Series box, select the X-series.
- Press [Alt] G (go to)

To change the frequency of category labels:

- Press [Alt] O,X (options, X-axis)
- In the Label Frequency box, type the interval you want between the X-series entries used as category labels. For example, type 12 to use only every twelfth X-series entry as a category label.
- Press Enter

To create data labels:

- Select the spreadsheet row or column (or portion of a row or column) that contains the words or numbrs you want to use as data labels for a Y-series.
- Press [Alt] D,D (data, data labels)
- In the Series box, select the Y-series you want to label.
- Press [Alt] C (create)

To find spreadsheet cells used as data labels:

- Press [Alt] D,D
- In the Series box, select the Y-series whose data labels you want to review.
- Press [Alt] G (go to)

To delete data labels:

- Press [Alt] D,D (data, data labels)
- In the series box, select the Y-series whose data labels you want to delete.
- Press [Alt] T (delete), repeat if you have more labels to delete.
- Press [Alt] D (done)

Legends

Legends tell you what the colors, patterns and markers mean. When you create a chart, Works will automatically create legends for each Y-series, if you select rows of columns containing words.

To add or change a legend for a Y-series:

- Press [Alt] D,L (data, legends)
- In the Series box, select the Y-series for which you want to add or change a legend.
- In the Legend box, type the legend text or a reference to a spreadsheet cell containing the legend text. Use any text you want up to 19 characters, but type a double quotation mark (") before any text that resembles a cell reference.
- Press [Alt] C (create) repeat the above steps if necessary.
- Press [Alt] D (done)

To delete a legend for a Y-series:

- Press [Alt] D,L (data, legends)
- In the Series box, select the Y-series whose legend you want to delete.
- In the Legend box, select the legend text or reference.
- Press DELETE, repeat the above steps if necessary.
- Press [Alt] D (done)

To hide or show legends:

- Press [Alt] O,L (options, show legends)

Legends will be hidden from view, but not deleted or changed.

Naming a Chart

When you create a chart Works automatically names it Chart1, Chart 2 and so on. It is also added the View menu with a number to the left of the chart name. You can give the chart a more descriptive name in the Charts dialogue box. The chart name in the View menu does not appear in the chart itself. (See Titles if you want to create a title for your chart)

To change the name of your chart:

- Press [Alt] V,C (view, charts)
 - In the Charts box, select the chart you want to rename.
 - In the Name box, type in the new chart name. (up to 15 characters)
 - Press [Alt] R (rename) repeat as necessary.
 - Press [Alt] D (done)
-

Page Setup

Please refer to the Printing appendix for more information.

Printing

To print a chart:

- Press [Alt] P,P (print, print)
- Turn on the print options that you want.
- Press [Alt] P (print)

Refer to the Printing appendix for more information.

Returning to the Spreadsheet

When you have finished working on a chart, you can return to Spreadsheet view.

To return to the active Spreadsheet file:

- Press F10 or [Alt] V,S (view, spreadsheet)

Scales

A scale is a set of numbered marks measuring values along an axis. A scale has a minimum, maximum and interval between the marks. In a chart, Works displays the values that are between the scale's minimum and maximum.

When you create a chart, Works automatically determines an appropriate scale for the values along an axis. You can change the emphasis or improve the appearance of a chart by changing a scale's interval. You can also change the minimum and maximum used for the scale.

To change the scale of a Y-axis:

- Press [Alt] O,Y to change the left Y-axis scale or
- Press [Alt] O,R to change the right Y-axis scale.
- In the Minimum box, type in the lowest number you want shown on the axis scale or accept the Auto setting.
- In the Maximum box, type the highest number you want shown on the axis scale or accept the Auto setting.
- In the Interval box, type the interval you want between the numbers shown on the axis scale, or accept the Auto setting.
- Press Enter

To change the scale of the X-axis:

- Press [Alt] O,X (options, x-axis)
- Repeat the above listed steps.

Standard and Logarithmic Scales

You can use two types of scales in a chart: standard (linear) or logarithmic. A logarithmic scale is useful when the range of data values is large or when you want to show a logarithmic relationship.

With standard scale, the interval is the amount Works adds to each number on the scale to determine the next number. With a log scale, the interval is the amount by which Works multiplies each number on the scale to determine the next number.

You can use log scales in all charts except the Pie chart. Log scale values must be specified in powers of 10, such as 1/100th, 1/10th, 1, 10 etc. Log scale intervals must also be specified in powers of 10 and must not be less than 10.

To change between logarithmic and standard scales:

- Press [Alt] O,Y to change a left Y-axis scale or
- Press [Alt] O, R to change a right Y-axis scale.
- Turn Logarithmic on or off.
- Press Enter

Selecting Cells or Ranges for a chart

Before you create a chart, you must select the cells or ranges containing the data you want to chart. For information on selecting cells and ranges, please refer to the Spreadsheet reference.

Titles

You can refine and clarify a chart by giving it a title, subtitle or axis title. You create titles and subtitles either by typing text or by referencing a spreadsheet cell whose contents you want to use as a title or subtitle. Use any text you want up to 37 characters as a title or subtitle. If the text resembles a cell reference, type a double quotation mark (") before the text. Once they are created, Works adds double quotation marks to all entries in the dialogue box.

To create chart titles:

- Press [Alt] D,T (data, titles)
- In the dialogue box, type a title or cell reference.
- Type a subtitle or cell reference.
- Type an X-axis title or cell reference.
- In the chart has a right Y-axis, type a right Y-axis title or cell reference.
- Press Enter

To delete chart titles:

- Press [Alt] D,T (data, titles)
 - Select the title you want to delete.
 - Press DELETE, repeat the above steps as necessary.
 - Press Enter
-

Viewing a Chart

After you select the rows and columns in your spreadsheet that you want charted, you select View to see the chart. When you view a chart, Works makes it the active chart so that any changes you make to the spreadsheet data affect the chart. The active chart always has a mark beside its name on the View menu.

To view an active chart:

- Press Shift F10 or [Alt] V (view)

To view any chart:

- Press [Alt] V (view) and the chart name. For example press [Alt] V,1 to view the first chart in the numbered lists of charts. This chart now becomes the active chart.
- Press Esc to remove the chart from the screen.
- To return to your spreadsheet, press F10 or [Alt] V,S (view, spreadsheet)

X-Y Charts

An X-Y chart is similar to a line chart, but instead of having evenly spaced values in the X-Series, the values can be irregular. X-Y charts are typically used for plotting experimental data.

Each number in a Y-series is plotted as a marker above the corresponding number on the X-axis. You can include as many as six Y-series in one chart. If you change numbers in your spreadsheet, Works automatically adjusts the Y-series and the chart so the next time you view the chart, it reflects the change in the spreadsheet.

The X-series in an X-Y chart must contain numbers. The numbers in the Y-series and X-series may be greater than, equal to or less than zero.

To create an X-Y chart:

- In the spreadsheet file, select up to six adjacent rows or columns of numbers, and any rows or columns with words that label either the rows or columns.
- Press [Alt]V,N (view, new chart)
- Press Esc when finished viewing.
- Press [Alt] T,X (format, x-y)
- Select the row or column you want the X-series
- Press [Alt] D,X (data, x-series)
- Press [Alt] V (view) and the chart name if you wish to view the chart.
- Press Esc

You can later add rows of data (Y-series) to your chart that were not part of your original selection or that you have added to your spreadsheet.

Database & Reporting

The Works database is a filing system. You can use it to store a variety of information, and then quickly sort, extract, and print the specific information you want. The Database can also count, calculate and summarize your data.

Some of the Database features allow you to:

- Look at any database file in one of two ways, one record at a time (File view) or arranged by columns (List view).
- Sort your entries alphabetically or numerically.
- Add a column of numbers or apply an income tax formula, Works has 57 built-in functions to calculate interest, find square roots and so on.
- Copy, move, insert, delete or change any entry.
- Move quickly within in a database to locate particular data.
- Insert times and dates that are automatically updated or use times and dates in calculations.
- Divide List View into two or four work areas. Each area can apply to different parts of the database.
- Print one record, selected records, or all the records in a database. Or print the database in a list form, with information arranged in columns.

Getting Started

To create a new database:

- Press [Alt] F,N,D (file, create new, database)

Review the next page on Working with a Database. It is also recommended to review the topic "Selecting Records, Fields and Cells".

Working with a Database

Information in your database is divided into records and fields. A record is all the information about 1 person, 1 product or 1 event. Each item in a record - name, street address, state, etc. is a field; the corresponding information in each record is in the same field.

A field consists of a field name and the information for each record, the field contents. A label is any explanatory text you type in Form view - a title, for example. A cell is the point in List view or Report view where a row and a column intersect.

You can look at records, fields, and cells in two ways: in the Form view or List view.

Form view - Displays a record one at a time.

List view - Lets you work with the Database similar to the Spreadsheet: the grid of records and fields makes it convenient to work with several records at a time. Each cell in the grid is equivalent to a field in Form view.

Whenever you choose Create New File and choose the Database application, Works automatically opens a blank database form. You start designing your database with this form.

To create a database:

- Press [Alt] F,N,D (file, create new, database)

All of the database commands are listed in alphabetical order for easy reference. It is suggested to read through the chapter to get an idea of the many tools available for use.

Using Works Database with other Databases

Please refer to page 94 in the Spreadsheet reference for more information.

Character Styles and Alignment

A field's or cell's format refers to its character styles, the alignment of its contents, and the printing position of its contents. Works has 3 character styles: Bold, Italic and Underline.

Character Alignment positions text and values horizontally in a field. You can select among General (default), Left, Right and Center alignment. When you create a database text is aligned on the left edge of a cell and dates and numbers on the right edge. You can apply styles and alignment to fields before or after entering data. You can only underline fields that contain text or values.

To change character style or Alignment:

- Select the label, field name or cell you want to change.
- Press [Alt] T,S (format, style)
- In the Alignment and Styles boxes, select the options that you want.
- Press Enter

To slide a field or label to the Left: (also to remove spaces when printing)

- Select the field or label to slide to the left.
- Press [Alt] T,S (format, style)
- Turn on the slide to left check box. (repeat as necessary)
- Press Enter

If you select a field, you can also press [Alt] F,N (format, show name box) to hide the field name.

Copying Data Within a Database or Report

You can duplicate the contents and formats of any record, field, or cell in your database file. If, for example, you have several records with the same last name, instead of typing in the names many times, type it in once then copy it to other records. In Form view, you can copy an entire record or label to a new location. In List and Report views, you can also copy the contents of more than one record, field or cell.

To Copy

A record, field, or cell in List or Report view

A record in Form view

A label in Form view

The contents of one or more cells in a field into selected cells below

In the Edit menu, choose

Copy

Copy Record

Copy Label

Fill Down

To copy a record, field or cell in List and Report views

- Select the record, field or cell you want to copy.
- Press Shift F3 or [Alt] E,C (edit, copy)
- Move the highlight to the upper-left cell of the area into which you want to insert the copy.
- Press Enter to copy or Esc to cancel.

To copy a record in Form view:

- Scroll to the record you want to copy.
- Press [Alt] E,P (edit, copy record)
- Scroll to the record you want to replace with the copy.
- Press Enter

Note - The copied cells replace all information in the cells you copy to. To copy into a blank record, you must first insert a blank record or row.

To copy a label in Form View:

- Select the label you want to copy.
- Press Shift F3 or [Alt] E,C (edit, copy)
- Move the highlight to where you want to insert the copy.
- Press Enter

To repeat the previous copy command:

- Select the record, field or cell into which you want to place the next copy.
- Press Shift F7

Copying down to adjacent cells in List view:

- Select the cells you want to copy.
- Extend the selection down to include all the cells into which you want to place the copy.
- Press [Alt] E,F (edit, fill down)

Copying to another Works Application

Information from the Database is copied to other Works applications as a table. If you copy information to the Word Processor or Communications, each field is separated from the next field by a tab stop and each record ends with a paragraph mark. If you copy information to the Spreadsheet, each field is in a column and each record is in a row.

To copy to another works tool:

Use List view when copying from the Database to another Works application.

- Select the cells of the database or report that you want to copy.
- Press Shift F3 or [Alt] E,C (edit, copy)
- Open another Works file, or choose an open file from the Windows menu.
- Move the Highlight to the new location.
- Press Enter

Creating a Report

After you have entered the information into a database, you may want to group or summarize your records in a report. You can view the report on the screen, print the report, or copy it to another Works application.

A report is defined using different types of rows that control where information goes in a report. The cell contents determine what information goes in each row. The initial report definition contains these row types:

- Two blank introductory report rows that are printed at the beginning of the report. You can add titles here.
- An Introductory page row containing the database field names as column headings. You can type any other column label here.
- A blank introductory page row to separate column headings from the records. You can add column labels here also.
- A record row containing formulas that determine the fields or values included in a report.
- Two blank summary report rows that will be at the end of the report. You can put summary statistics here or leave them blank to create groupings.

To create a report:

- Press [Alt] V,N (view, new report)

Works displays a report. Works also names the report and adds it to the View menu with a mark beside the report name. The new report is now the active report.

- Press Enter to view additional reports.
- Press Esc to see the report definition.
- Press F10 to return to List or Form view.

Customizing a Report

You design a report by specifying in a report definition which rows you want to be included, and what the cell contents of each row should be.

Row type determines how often and where information is printed. (For example you can specify a title for the first page only or for the top or every page) Cell contents determine what information from your database will be included in your report. You can change the width and formatting of cells. You can also change the contents of the report by sorting it or creating a query.

A report is defined by the number and type of rows in the report definition. You can have as many of each row type as you want. You can also delete all rows of a particular row type, but the rows you use must be in the order shown in the following table.

The three major row types are:

- Intr rows - (introductory), are rows typically for report titles or column labels for each grouping within a report.
- Record rows - Hold field contents. These can be broken into groupings you specify.
- Summ rows - (summary) are rows used for calculating totals, averages or other statistics about records. These rows create the breaks for groupings or records.

The row types, their contents, and the order in which they print are:

Row type	Prints	Typical contents
Intr Report	At the beginning (introduction) of a report	Text for the report title
Intr Page	At the top (introduction) of each page	Label for each column or field name of each column
Intr 1st fieldname	At the beginning (introduction) of each grouping created by 1st sort break	Label for the first grouping of records
Intr 2nd fieldname or Intr 3rd fieldname	At the beginning (introduction) of each grouping created by the 2nd or 3rd sort break	Label for the subgroupings
Record	One entry for each record in the database	Each record in the database
Summ 3rd fieldname or Summ 2nd fieldname	At the end (summary) of each grouping created by the 3rd or 2nd sort break	Any statistic you select or text
Summ 1st fieldname	At the end (summary) of each grouping created by the 1st sort break	Any statistic you select or text
Summ Report	At the end of the report	Any statistic you select or text

To insert a row:

- Select the entire row into which you want to insert the new row type.
- Press [Alt] E,I (edit insert row/column)
- In the Type box, select a row type.
- Press Enter

To insert a column:

- Select the entire column into which you want to insert the new column.
- To insert more than one column, select more than one column.
- Press [Alt] E,I (edit, insert row/column)

To delete a row or a column:

- Select the entire row or column you want to delete.
- Press [Alt] E,D (edit, delete)

Entering Information Into a Cell

You can type text, numbers, dates or formulas into any cell in any row of your report.

If similar information, will be repeated in every record or a grouping, you can type a field formula in the row before each group. The formulas used in a report definition can be as simple as =fieldname to insert field contents into a cell or as complex as a statistical calculation. You type the formula into the cell. Works also has three commands for inserting three typical kinds of formulas, or you can use these if you forget the name of a field or are unsure which statistical functions you can use in a summary row.

The Insert Field Name dialogue box and the Insert Field Contents dialogue box list all the fields in your database.

The Insert Field Summary dialogue box list each of the fields in your database and each of the seven statistical functions you can use in a summary row.

<u>Statistic</u>	<u>Calculates</u>
SUM	Total of the group
AVG	Average of the group
COUNT	Number of the Items in a group
MAX	Largest number in a group
MIN	Smallest number in a group
STD	Standard deviation of the group
VAR	Variance of the group

The row in which you enter a summary formula determines what the formula summarizes. For example, if you are in a Summ *fieldname* row and you select SALES for the field and AVG for the statistic, Works displays =AVG(Sales) in the Summ *fieldname* summary row. The actual values are seen when you view or print a report.

To enter text, numbers, dates or formulas:

- Select a cell.
- Type the text, number date or formula.
- Press Enter

To enter a field name as a label:

- Select the cell in which you want the field name.
- Press [Alt] E,N (edit, insert field name)
- Select a field name.
- Press Enter

To enter a field contents formula:

- Select the cell in which you want the field contents.
- Press [Alt] E,O (edit, insert field contents)
- Select a field name.
- Press Enter

Works displays =*fieldname* in the cell. The actual contents of the field can be seen when you view or print the report.

To enter a field summary formula:

- Select the cell in which you want the summary.
- Press [Alt] E,S (edit, insert field summary)
- In the fields box, select a field name.
- In the statistic box, select an option.
- Press Enter

Date and Time

You can enter dates and/or times into a spreadsheet. Please refer to pages the Spreadsheet date and time reference for more information.

Deleting a Report

Since each database can have only 8 reports, you may have to delete any existing report before you can create a new one.

To delete a report:

- Press [Alt] V,R (view, reports)
- In the reports box, select the report that you want to delete.
- Press [Alt] T (delete)
- Press Enter to accept deletion.
- Press [Alt] D (done)

Deleting and Clearing Data

Deleting removes the entire record or field and its formatting. Clearing removes the contents of a cell, but leaves its format. Deleted or cleared information cannot be recovered.

To delete a label in Form view:

- Select the label you want to delete.
- Press [Alt] E,D (edit, delete)
- Press Enter to delete or Esc to cancel.

To delete a record in Form view:

- Scroll to the record you want to delete.
- Press [Alt] E,L (edit, delete record)

To delete a field in Form view:

- Select the field name of the field you want to delete.
- Press [Alt] E,D (edit, delete)
- Press Enter to delete or Esc to cancel.

To delete a field or record in List view:

- Select the entire field or record you want to delete.
- Press [Alt] E,D (edit, delete)
- Press Enter

To delete a row or column in Report view:

- Select the entire row or column you want to delete.
- Press [Alt] E,D (edit, delete)
- Press Enter

To clear a formula in List or Form view:

- Select the field that contains the formula you want to clear.
- Type = (equal sign)
- Press Enter

Duplicating a Report

When you duplicate a report it becomes the active report.

To duplicate a report:

- Press [Alt] V,R (view, reports) in Report view.
- In the Reports box, select the report you want to copy.
- In the Names box, type a name for the copy.
- Press [Alt] D (done)

Editing Cell Contents

When you select a field or cell that you want to edit, the contents of the field or cell are displayed in the formula bar at the top of your windows, as well as in the selected field or cell.

To replace the contents of a field or cell:

- Select the field or cell you want to change
- Type a new entry
- Press Enter

To edit the contents of a field or cell:

- Select the field or cell you want to edit.
- Use the following keys to edit in the formula bar:

<u>To</u>	<u>Press</u>
Go to the beginning of the formula bar	HOME
Go to the end of the formula bar	END
Go left/right one character	LEFT/RIGHT arrow key
Delete the character to the left of the cursor	BACKSPACE
Select one or more characters	SHIFT+LEFT/RIGHT
Delete the selected character	DELETE

- Press Enter to confirm or Esc to cancel.

Entering a Field name

Please refer to the sections on Form view and List view for more information.

Entering a Series of Numbers or Dates

You can automatically fill any number of cells on a List view field with a series of dates or numbers. You select the units in your series and number of steps between each unit in the Edit Fill Series dialog box.

Number	Increments by a number.
Day	Increments by days of the week including Sat and Sun.
Weekday	Increments by the days of the week excluding Sat and Sun.
Month	Increments by months of the year.
Year	Increments by years.
Step By	Determines the increment for the series. The default is one.

If you want a date series, format the first date you type to include the unit you are incrementing.

To enter a series: (use List view)

- Type a number or date in a cell then press Enter.
- Select that cell and the cells below in which you want the series.
- Press [Alt] E,S (edit, fill series)
- Select a unit if you are entering a date series.
- Type a step value.
- Press Enter

Field and Column Size

When you create a new field in Form view, Works proposes to make it 20 characters wide by 1 line high. You can accept this or type in your own height and width.

In List and Report views, Works presets a field or column to be 10 characters wide and 1 line high. When you set the width of any cell in a field, the new width applies to the entire field or column.

In either Form or List view a field can hold more information than you can see. You can change the width or height of a field to show more or less of its contents. You can set field size in one view separately from every other view. Works displays ##### if a number or date exceeds its field or cell width.

To change field size in Form view:

- Select the field you want to change.
- Press [Alt] T,Z (format, field size)
- Type in a width between 1 and 256.
- Type in a height between 1 and 256.
- Press Enter

To change field or column width in List or Report view:

- Select a cell in the field or column you want to change.
- Press [Alt] T,W (format, field width)
- Press Enter

Fonts

A font (or typeface) is a set of characters with a specific design. Fonts do not appear on screen, but Works prints the database or report using the selected font and size. Fonts may be non proportional or proportional. In a non proportional font, all of the characters are the same width. Use a non proportional font (such as LinePrinter, Courier or Pica) to print a database otherwise the columns may not line up.

To change printer fonts:

- Press [Alt] T,F (format, font)
- In the Fonts and Sizes boxes, select the font and size you want.
- Press Enter

Footers

Please refer to Word Processing topic on Headers and Footers.

Form View

Form view displays your records one record at a time. When you create a new database, Works displays Form view.

To use form view:

Press F9 if you are in List view or press [Alt] V,F (view, form)

To create a field:

- Move the highlight to where you want a field.
- Type in a field name, followed by a : (colon). You can not use a single quotation mark in a fieldname.
- Press Enter
- Accept the default field size of 20 characters wide by 1 line high or
- Type in a new width and height for the field.
- Press Enter

You can have up to 256 fields in a database.

Entering Field Contents

The information that you type in each field is the field contents. Each field can be up to 256 characters. Move from field to field using the TAB key.

To enter field contents:

- Select the field to the right of a field name.
- Type a number, text or formula, then press Enter. (A formula must begin with an = sign)
- Press TAB or SHIFT TAB to move to subsequent fields or press Enter to stay in the field.

When you press TAB after typing the last field in a record, the next record is displayed and you can begin to type a new entry.

Entering a Label

A label is any descriptive text that appears in every record. It is not part of a field and is not displayed in List view.

To enter a label:

- Move the highlight to where you want the label.
- Type the text for the label.
- Press Enter

Inserting a Record into a Database

When you insert a record into a database it becomes the selected record. If you select record three and insert a new record, the new record becomes record 4. Your database can have up to 4096 records.

To insert a record:

- Scroll to the record before which you want the new record inserted.
- Press [Alt] E,S (edit, insert record)

Inserting a Blank Line in a Form

When you insert a blank line, the fields and labels below the highlight move down.

To insert a blank line:

- Move the highlight to where you want the new line inserted.
- Press [Alt] E,I (edit, insert line)

Formatting a Number

Numbers in a database file can be formulas or field contents. Works has several formats you can apply to numbers: general, fixed, currency, comma, percent, exponential and true/false. You can type and format a number at the same time, or you can change a number's format after you type it. For more information on number formats, please refer to page 102.

Formulas in a Database

Database formulas have two primary uses: to create proposed responses in a field where one condition is most likely to be true; or to calculate the contents of one field based on the contents of another field. For information on using formulas in a report, see the Customizing a Report topic.

You calculate mathematical values in a field by typing an equation into a field or cell. A formula must always be preceded by an equal sign.

You can have only one formula in a database field. Whenever you type a formula into a field, that formula is automatically entered into all other records.

Calculating a Fields Contents with a Formula

A formula can refer to other fields and can calculate a value using data in one or more cells or fields. For example, you could calculate a field that shows a salesperson's commission by typing `=rate*sales` where Rate is the percentage of the Commission field and Sales is the total monthly sales field.

When you want a formula to use data in another cell or field, you include the field names in the formula. For example, you might enter a Balance field that contains the formula `=price-deposit`. Works subtracts the value in the Deposit field from the value in the Price field to calculate the value for the Balance field.

In this formula: `=sales*(1+tax)/452`

the value in the Tax field plus 1 in multiplied by the value in the Sales field, then the result is divided by 452.

Note: If a field name in a formula resembles a number or a function, enclose it in single quotation marks (').

You can also calculate a field that uses information from another record to determine a fields contents. To keep a running total or insert an incrementing value, you use the incrementing field's name in the formula.

A formula is also useful for entering any piece of information that is not likely to change into each record of your database.

Functions in a Formula

A function is a built in mathematical equation. Works has 57 functions you can use in a database or report. For more information refer to the Function appendix of this manual.

Headers and Footers

A header is text that appears at the top of every page and a footer is text that appears at the bottom of every page. Headers or footers typically contain page numbers, titles or dates. The text for a header or footer is not displayed in your window, but you see it when you print or preview the database. For more information, refer to the Headers & Footers command in the Word Processing chapter.

Hiding a Field Name

To hide or display a field name:

- Select the field with the fieldname you want to hide or display.
- Press [Alt] T,N (format, show field name)

If the selected fields name is displayed, a mark appears next to the Format Show Field Name command. If the field name is hidden, there is no mark.

Hiding a Field or Record

You can control which database records are printed, included in a report, or printed in a Word Processor form letter or mailing labels by changing which records you hide or display. The number of displayed records versus the total number of records is shown on the status line. You typically display or hide records by finding and displaying a group of records using the Select Search command, or defining a query in the Query view. The records that do not match the search or query are hidden.

You can not delete hidden records. You can see the hidden records by switching the hidden and displayed records or showing all the records.

To hide a record:

- Select the record you want to hide.
- Press [Alt] S,H (select, hide record)

In the List view you can select more than one record at a time.

To switch hidden or displayed records:

- Press [Alt] S,W (select, hide record)

When the Switch Hidden Records command is on, a mark appears besides the command in the Select menu.

To display all record:

- Press [Alt] S,L (select, show records)

Hiding a Field

You can hide a field in List view so that more fields are displayed in each window. Information in hidden fields is still displayed in Form view and is included in any report.

To hide a field in List view:

- Select a cell in the field you want to hide.
- Press [Alt] T,W (format, field width)
- Type 0 (zero) in the width box.
- Press Enter

To display a hidden field:

- Press F5 or [Alt] S,G (select, go to)
- In the Go To box, type the name of the field you want to display.
- Press Enter, The field is selected although it is not displayed.
- Press [Alt] T,W (format, field width)
- Type in a value greater than zero in the width box.
- Press Enter, The field is now displayed.

List View

List view displays your records in a grid of rows and columns similar to a spreadsheet. This makes it convenient to work with several records at a time or to see the results of a search or query. Fields and records can be deleted or cleared in groups, and you can copy information into several cells at one time. Each row is a record, and each column is a field. You can also enter and edit field names and field contents, but you cannot enter or edit labels in the List view. You can change the size and formatting of any field.

To display List view:

- Press F9 or [Alt] V,L (view, list) if you are in Form view.

To create or change a field name:

- Move the highlight to any cell in the field.
- Press [Alt] E,N (edit, field name)
- Type a field name of up to 15 characters. You cannot use a single quotation mark (') in a field name. Do not type a colon at the end of the name.
- Press Enter

Entering Field Contents

Each field can contain up to 256 characters of text. If the field already contains information, it will be replaced by the new information.

To enter field contents:

- Select a cell for the field contents.
- Type a number, text, date or formula, then press Enter.
A formula must begin with an equal sign.

Inserting a Record or a Field

You can add one or more new fields or records in List view. Your database file can have up to 256 fields and up to 4096 records.

To insert a record or a field:

- Select an entire field or record for each field or record you want to insert.
- Press [Alt] E,I (edit, insert record/field)

Moving a Field, Record or Cell

In Form view you can move a field or label to a new location on a form. You can also move an entire record to a new location in the database. Works inserts the moved record between the two existing records. For example, if you move record number 5 to after record number 12, Works re-numbers all the records after number 4.

To move a field or label:

- Select the field or label you want to move.
- Press F3 or [Alt] E,M (edit, move)
- Move the highlight to a new location.
- Press Enter to move or Esc to cancel.

To move a record within the database:

- Scroll to the record you want to move.
- Press [Alt] E,V (edit, move record)
- Scroll to the record where you want to insert the moved record.
- Press Enter

In List or Report view, when you move an entire record or a row, the moved record, row column or field is inserted before the record, row, column or field you select as the destination. An entire row, record, column or field must be selected before you can move it.

When you move a cell or range of cells, the cells you move are left blank at the contents of the cells at the new location are replaced with the contents of the moved cells.

To move a cell:

- Select the cell you want to move. To move more than one, select more than one.
- Press F3 or [Alt] E,M (edit, move)
- Select the cell where you want to insert the moved item. If you are selecting a range of cells, select the upper-left most cell of the destination.
- Press Enter

To move a row, record, field or column:

- Select the entire row, record, field or column you want to move. To move more than one, select more than one.
- Press F3 or [Alt] E,M (edit, move)
- Select the entire row, record, field or column before which you want to insert the moved item.
- Press Enter

Moving the Highlight and Scrolling

Use the following keys to move through the database:

To move to the	In Form view press	In List and Report view press
Left or Right one field or cell	LEFT or RIGHT	LEFT or RIGHT
Down or Up one line or cell	DOWN or UP	DOWN OR UP
Next field	TAB	TAB
Previous field	SHIFT TAB	SHIFT TAB
Leftmost field or cell	HOME	HOME
Rightmost field or cell	END	END
Down one window	PgDn	PgDn
Up one window	PgUp	PgUp
Left one window	[Ctrl]LEFT	[Ctrl] PgDn
Right one window	[Ctrl]RIGHT	[Ctrl]PgUp
First record	[Ctrl]HOME	[Ctrl]HOME
Last record	[Ctrl]END	[Ctrl]END
Next record	[Ctrl]PgDn	
Previous record	[Ctrl]PgUp	
Move by one block of data left, right, up, down		[Ctrl]arrow keys

To move the highlight to a field or record:

- Press F5 or [Alt] S,G (select, go to)
- In the Go To box, type the record number or select the field name in the Names box where you want to move the highlight.
- Press Enter

Notes

If you want to make notes to yourself about the records in your database, you can create a multiple-line field for notes. Each multiple line can hold up to 256 characters. As you type the words will automatically move to the next line if they cannot fit on the line where you type them. If you want to create a new line in the field, you can press Shift Enter. You can also justify a multi-line field.

Page Breaks

When you print more data than fits on one sheet of paper, Works automatically breaks the data into pages. If you want to specify exactly what information appears on each page, you can set your own page breaks. When you do a page break mark (>>) appears where a new page begins. The page breaks in Form view do not affect page breaks in List view and vis versa.

To insert a page break in Form view:

- Select a cell in the line in which you want to insert a page break.
- Press [Alt] P,I (print, insert page break)

A page break marker (>>) appears to the left of the line.

To insert a page break in List or Report views:

- Select a cell in the row, record, field or column in which you want to insert a page break.
- Press [Alt] P,I (print, insert page break)
- Select Row or Record for a horizontal page break or Column or Field for a vertical page break.
- Press Enter

A page break mark (>>) appears next to the selected row or record or on top of the selected column for field.

To delete a page break in Form view:

- Move the highlight to the line containing the page break mark.
- Press [Alt] P,D (print, delete page break)

To delete a page break in List or Report views:

- Move the highlight to the row, record, field or column containing the page break mark.
- Press [Alt] P,D (print, delete page break)

If only one column exists, Works will delete it. If both the row and column or both the record and field have page breaks, Work will ask which one you want to delete.

Page Setup and Margins

When you want to print a database you can accept Works' preset margins or you can change the size of the page margins to include more or less data on a page. Please refer to the Printing appendix for more information.

Printing

There are many ways you can control your printing. In Form view, you can print your database form just as it appears on your screen. You can print the selected record or all the records. You can also print a blank form that contains no records, but contains field names and labels.

In List view, you can print your database in rows and columns just as it appears on your screen. You can print just the field contents, or you can print field names and records along with the field contents.

In Report view, you can print the entire report or print only the introductory and summary rows.

To print a database:

- Press [Alt] P,P (print, print)
- Turn on any options you want.
- Press [Alt] P (print)

To print a report:

- Press [Alt] V and the report you want to print.
 - Press Esc to see the report definition.
 - Press [Alt] P,P (print, print)
 - Turn on any option you want.
 - Press [Alt] P (print)
-

Protecting a Database

After you have designed a database and entered information into it, you can protect both the design and the contents. Initially, Works locks all fields or cells, but until you turn protection on, the lock has no effect.

To protect some fields or cells but not others, unlock the fields or cells you do not want to protect, then turn on protection. With protection on, you can use the TAB or Shift TAB keys to move the highlight to only the unlocked cells. This is particularly useful if you design a database form and someone else enters the data.

Protecting the Form Design

Your form design includes the field names, field locations, field locations and any labels in Form view. You can protect only the form design and still be able to enter and edit the contents of each cell.

To protect a form design:

- Press [Alt] O,F (options, protect form)

When the Protect Form command is turned on, there is a mark next to the command on the Options menu.

Protecting Field Contents

You can unlock some or all of the fields in your database. Unlocked fields can still be edited while protection is turned on.

To unlock or lock field:

- Select the field you want to unlock or lock.
- Press [Alt] T,S (format, style)
- Turn the locked checked box on or off.
- Press Enter

To turn protection on or off:

- Press [Alt] O,P (options, protect data)

When the Protect Data is turned on, there is a mark next to the command on the Options menu.

Query

You can control which database records are printed, included in a report, or printed in a Word Processor form letter or on mailing labels by changing which records you display or hide. You typically display or hide records by finding and displaying a group of records using the Select Search command, or by defining a query in Query view. The records that do not match the search are hidden. You can also hide individual records. For more information see the Hiding a Field or Record topic.

Sometimes you need to find more than one type of item in a database; you need to locate groups or records that fulfill a variety of conditions. These kinds of searches are called queries.

Creating and Applying a Query

When you apply or carry out a query, Works finds and displays the records that match your query instructions. Each time you apply your query Works searches all of your records, including the hidden ones.

When you want to create a query and choose the View Query command, Works displays your form with each field left blank. You enter your query into the blank fields instead of entering field contents.

In List view you can see all the records matching your query instructions; in Form view, only one matching record at a time is displayed.

To create and apply a query:

- In List view press [Alt] V,Q (view, query)
- Type your query formulas in one or more fields.
- Press [Alt] V,L (view, list) to view or press F10 to leave query view and apply the query. A list of records matching the query is displayed.

To apply an existing query:

- Press [Alt] S,Q (select, apply query)

After you apply your query once and then edit records or enter new records, you can choose the Select Apply Query command to apply the query again to see which records now match the query formula.

To view the results of a query:

- In list view press [Alt] S,W (select, switch hidden records) to see the records that do not match the query.
- Press [Alt] S,L (select, show all records) to see all of the records in your database.

Note: Choosing the Show all command does not delete the active query, you can apply the query again at a later time)

Changing a Query

Each time you apply a query, these formulas determine what Works finds and displays. You can change a query by clearing one or more formulas, or by deleting all the formulas.

To clear one query formula:

- Press [Alt] V,Q (view, query)
- Select the formula to clear.
- Press [Alt] E,E (edit, clear field contents)

To delete all queries in a formula:

- Press [Alt] V,Q (view, query)
- Press [Alt] E,L (edit, delete query)

Query Formulas

A query formula looks for an exact match to two or more items. (When you need to locate the records that exactly match only one condition, it is easier to use the Select search command)

Two wildcard characters, the question mark (?) and the asterisk (*), work in query formulas using text. A question mark means any single character in a specific location; an asterisk means any character or combination of characters. If you want to find all the last names that begin with C, you would type in c* in the Last Name field.

You build complex query formulas using comparison and logical operators. You automatically select the AND operator when you enter a query formula in more than one field.

You use the comparison operators to create formulas that find ranges of data, such as all last names before "M". The logical operators find records that meet more than one set of conditions.

You can use functions and other operators in a query formula. For example if you want to find all the payments due in March, you type =(month)=3) in the due date field.

Simple Comparison Formulas

Comparison formulas locate records that match simple criteria: an exact match of two records that fall above or below a specific value. The following table lists each comparison operator and its result when used in a Last Name, Deposit or Due Date field.

<u>Operator</u>	<u>Formula Used</u>	<u>Finds these records</u>
Equal to (=)	smith or ="smith"	The last name is Smith.
Not equal to (<>)	<>"smith"	The last name is not Smith.
Less than (<)	<1500	The balance is less than 1500.
Greater than (>)	>1500	The balance is greater than 1500.
Greater than or equal to (>=)	>='10/30/60' equal to (>=)	The date is October 30, 1960 or later.
Less than or equal to (<=)	<='5/30/89'	The date is may 30, 1989 or earlier.

Combining Query Formulas

The logical operators AND (&), OR (!), and NOT (~) provide a way for you to link multiple conditions when you create a query. The conditions can apply to one field or several fields.

The AND and OR operators are typically used to link multiple conditions in a single field. For example, the formula >1500&<2500 typed in a deposit field will find the ranges of record in which the Deposit amount is greater than 1500 and less than 2500. The OR operator can also be used to link multiple conditions in more than one field.

Whenever you combine operators for more than one field, you type the formula in this order:

- =(equal sign)
- The formula stating the first condition for which to search, exactly as show in the preceding table of comparison operators.
- The combining operator such as & or !.
- The next condition for which to search, exactly as shown in the preceding table or comparison operators.

The following table shows the results of using OR or NOT operator in a Last Name field.

<u>Operator</u>	<u>Formula used</u>	<u>Finds these records</u>
OR (!)	=="Smith"!="Symth"	The last name is Smith or Smyth.
NOT (~)	~(Deposit>1500! Last Name="smith")	The deposit is NOT greater than 1500 or the last name is not Smith.

Renaming a Report

When you create a database Works gives it a name: the first report that you create has the name Report1, the second Report2, etc. You can give your reports a more descriptive name.

To rename a report:

- In the Report view, press [Alt] V,R (view, reports)
- In the Reports box, select the report you want to rename.
- In the Name box, type a new name of up to 15 characters.
- Press [Alt] R (rename)
- Press [Alt] D (done) or repeat the above steps as necessary.

Searching a Database

You can control which database records are printed, included in a report, or printed in a Word Processor form letter or mailing labels by changing which records you display or hide. You typically display or hide records by finding a group of records using the Select Search command, or by defining a query in Query view. You can also hide individual record by using the Select Hide Record command.

If you want to search for an exact match or a range of values, such as last names from "A" to "E" or totals less than 1500, you need to create a query in the Query view.

In List view you can search the entire database or only selected fields or records. In Form view you can only search the entire database. Hidden records are included in the search.

In the Search dialogue box, you can tell Works to find only the next occurrence of the text or number you are looking for or the find all the occurrences. When you select the Next Record option, no records are hidden: when you select the All Records option, Works displays the matching records and hides the records that do not match.

Use List view to see the results of a search or to select the field or column you want to search.

To search a database:

- Press [Alt] S,S (select, search)
- In the Search For box, type the text that you want to search for.
- Select Next Record or All records.
- Press Enter

To repeat the previous search:

- Press F7

Searching with Wildcards

Wildcards help you find fields or records whose contents are similar, but not exactly the same. The question mark (?) represents any single character in the same position in a word as the question mark. For example, if you want to find a particular name, but are not sure if it is spelled Smithson or Smithsen, type smiths?n in the Search For box. Works will find either name.

The asterisk (*) stands for any number of characters in that same position. For example if you type s*p in the Search For box, Works finds all the words that begin with "s" and end with "p".

Selecting Records, Fields or Cells

Any time you want to view, edit, copy, or move a record, field or cell in a Works database, you must select it first. A selection is usually highlighted; the exception is the displayed record in the Form view.

In Form view you can select only one cell at a time, in List view, you can select an entire field or column, an entire record or row or a range of cells. In Report view, you may use the same commands as in List view to select rows or columns.

To select a field name, field or label in Form view:

- Press the arrow key to move the highlight to the cell you want.

To select in List and Report view

If you press F8 before pressing the arrow key or key combination, or if you hold down the Shift key while pressing the arrow key or key combination, you can also select everything from the first selected cell to the destination of the arrow key or key combination.

To select a cell:

- Press the arrow keys to move the highlight to the cell you want to select.

To select several cells:

- Select the upper-left cell in the range of cells you want to select.
- Press F8 or [Alt] S,E (select, cells) EXT is then displayed on the status line.
- Use the arrow keys (or Shift arrow) to extend the direction to other cells.
- Press Esc to cancel.

To select a record or a row:

- Move the highlight to the record(s) or row(s) you want to select.
- Press [Ctrl] F8 or [Alt] S,R (select, record) to select the record(s) or row(s).

To select a field or column:

- Move the highlight to the field(s) or column(s) you want to select.
- Press Shift F8 or [Alt] S,C (select, column) to select the field(s) or column(s).

To select an entire database:

- Press Shift [Ctrl] F8 or [Alt] S,A (select, all)

You can only select the entire database while on List view.

To select using a field name or record number:

- Press F5 or [Alt] S,G (select, go to)
- In the Go To box, type the field name or record number.
- Press Enter. The highlight moves to the field or record and selects it.

Sorting a Report

You sort a report to arrange entries in a particular order, such as alphabetically by last name, or chronologically by date. You specify which fields are to determine the order of the sort in the Select Sort Records box. These fields are called sort fields.

If you want, for example, the total number of members who joined in each year, you can create a break between groups. You specify which sort fields should also have breaks in the Select Sort Records dialog box. Works creates a break by inserting a Summ row. The row can be blank or it can contain a statistical formula, such as =count (date) to count the number of records in that group.

When a sort field contains text, you can specify breaks whenever the first letter of a field changes. For example, have the break occur only after all the entries that begin with "A" in a field instead of breaking after each new word.

Each report can be sorted and broken differently. However, when you specify a sort order in Report view, the entire database is sorted using that sort order. When you return to Form or List view, the database will be sorted in the same order as the last report in which you sorted. If you choose the Select Sort Records command, Works proposes the last sort fields you specified in List or Form view; you can just choose OK to re-sort the database.

Sort Orders

- | | |
|---------------------------------|--|
| 1st Field, 2nd Field, 3rd Field | Up to three fields can be sorted at a time, beginning with the 1st Field. |
| Ascend/Descend | Works sorts each sort field in one of these orders. Ascending order is from A-Z and from 0-9 and sorts in the following order:

Text, NA values, numbers, ERR values and then blanks. Descending order is from Z-A and from 9-0 and sorts in the opposite order. |
| Break | Creates a grouping by inserting a summary (Summ) row in the report whenever the contents of the sort field change. |
| 1st Letter | Creates a grouping in the report only when the first letter of the sort field change. |

To sort a report and set up breaks:

- Press [Alt] S,O (select, sort records)
- Type the name in the first sort field.
- Select either Ascend or Descend.
- Turn on the Break check box if you want to create a grouping.
- Turn on the 1st Letter check box if you want a grouping only after the first letter of the sort field changes. Turn off the 1st Letter check box if you want groupings whenever there is a change in any part of the sort field. The first letter option works only if you turn on the Break check box.
- Repeat the above steps (except the first) if you want to specify a second or third sort field.
- Press Enter

The sort order and breaks will be displayed the next time you preview, print, or view your report.

Sorting Records

Sorting rearranges the records in the Database. You can specify up to three fields for Works to sort at one time. These fields are called sort fields. When you specify a sort fields, specify the most important sort first.

To sort more than three fields, sort the database twice, specifying the least important sort fields the first time you sort then the more important fields the second time you sort.

To sort a database:

- Press [Alt] S,O (select, sort records)
- In the 1st Field box, type in the name of the first field to be sorted. Works proposes the first field of your database.
- Select either Ascending or Descend.
- Repeat for the 2nd and 3rd fields if necessary.
- Press Enter

To repeat a sort:

- Press [Alt] S,O (select, sort records)
- Press Enter

Viewing a Report

You do not need to print a report to see the results. Each time you choose **View New Report** or **View Reportname** commands, Works displays a report.

Works uses the entire screen to display a report. When you view a report, Works makes it the active report: the active report always has a mark besides it on the View menu.

To view an active report:

- Press **SHIFT F10** or press **[Alt] V** (view) and the report name.
- Press **Enter** to view additional pages.
- Press **Esc** to leave the report screen and see the report definition.
- Press **F10** to return to the database or press **[Alt] V,F** (view, form) or **[Alt] V,L** (view, list)

To view any report:

- Press **[Alt] V** (view) and then choose report name. (For example, press **[Alt] V,1** to view the first report in the numbered list)
- Press **Enter** to view additional pages.
- Press **Esc** to leave the report screen and see the report definition.
- Press **F10** to return to your database or press **[Alt] V,F** (view, form) or **[Alt] V,L** (view, list)

Communications

Use Communications for exchanging Works files with other computers, send and receive electronic mail, share programs you create and obtain public domain programs, check on news and sports events, monitor stock market prices, shop electronically and much more.

Some of the features include in Communications allow you to:

- Exchange information with a personal computer, a mainframe computer or a minicomputer.
 - Set record sign-on procedures so that you can automatically connect to the same computer or service.
 - Set Communications so that it knows the phone settings for connecting to one or more computer services.
 - Use your computer as a terminal for another computer.
 - Use Communications to automatically answer a phone call.
 - Temporary interrupt or pause a transmission.
 - Automatically dial phone numbers.
 - Send text files, program files or other files to another computer.
-

Getting Started

There are two ways of communicating with another computer:

1. Connecting a modem to your serial port and then using the telephone line.
2. Directly connecting to another computer through the serial port.

Refer to the topics "Connecting and Disconnecting", "Communicating with Another Computer or Information Service" and "Creating a Communications File" first.

Answering an Incoming Call

Your computer can automatically answer calls from another computer. You usually answer incoming calls when you are receiving information from other personal computer users.

To automatically answer an incoming call:

- Press [Alt] O,P (options, phone)
- Turn on Automatic Answer.
- Press Enter
- Press [Alt] C,C (connect, connect)

You may have to first adjust your communications and terminal settings to match the computer calling you.

When a call is received from another computer, your computer will automatically answer the call. Works cancels Automatic Answer when you disconnect.

ASCII File

When you want to send a Works file to someone who does not have Works, you first save the file as an ASCII (or text) file. An ASCII file does not contain any special formatting. When you save a file with the Text option in the Save As dialog box, an ASCII file is the result.

Binary File

Binary files contain special formatting codes or other special characters. All Works files are binary files, unless you saved them as text files. Software programs (files with .COM or .EXE extensions) are also binary files.

Break

Usually, you send a break signal to get the other computer's attention, to force it to interrupt a program or to log off when the other computer does not respond.

To send a break signal:

- Press [Alt] C,B (connect, break)

Buffer

The communications buffer temporarily stores data received from another computer so you can review it or copy it to another Works application.

You can scroll through the Communications window to display different parts of the buffer. You must pause or be disconnected to move the cursor in the buffer. If you are not paused or disconnected, pressing any key will transmit that keystroke to the other computer. Use the arrow keys to scroll and move around the buffer.

To move the cursor in the buffer:

- If you are connected, press [Alt] C,P (connect, pause)
- Press the keys shown in the following table to move around the buffer.
- When you are ready to leaf the buffer, press [Alt] C,P (connect, pause) to end the pause.

To move to	Press
Any location in the buffer	Arrow Keys
First character of a line	HOME
Last character of a line	END
Beginning of buffer	[Ctrl]HOME
End of buffer	[Ctrl]END
Down one Window	PgDn
Up one window	PgUp

If you save incoming text that contains more lines than the buffer can hold, you can save incoming text or other data directly to a file.

To capture incoming text to a file:

- When connected, press [Alt] T,C (transfer, capture text)
- In the Directories box, select the drive or directory you want to open.
- In the Save File As box, type a file name and extension for the captured text file.
- Press Enter
- If the first file already exists, press [Alt] A (append) to add text to the end of the file, or press [Alt] R to replace the existing file or press Esc to cancel and return to the dialogue box to type in a different name.

All subsequent text will be appended to this file.

- Press [Alt] T,E (transfer, end capture text) to stop capturing the data.

Changing the Buffer Size

You can reset the size of the buffer in increase or decrease the amount of storage area. Works initially sets the buffer or receive 100 lines of text. You can make the buffer smaller to save memory, or larger to hold more text.

<u>Buffer size</u>	<u>Number of lines</u>
Small	100 lines
Medium	300 lines
Large	750 lines

To set the buffer size:

- Press [Alt] O,T (options, terminal)
- In the buffer box select small, medium or large.
- Press Enter

Communicating with Another Computer or Information Service

When calling another computer, you need to carefully match the communications settings. Discuss with the other party what their communications settings are first. If the other party is using Works, have them turn on the Automatic Answer option in the Phone dialogue box. If they are not using Works have them prepare their computer to answer. You will originate the call.

Terminal settings are particularly important when calling a mainframe or a minicomputer because they allow your computer to emulate different terminal types. Find out if the other computer works best with a VT52 terminal or an ANSI terminal (equivalent to the DEC VT100 or VT220/VT240) Then you can select the appropriate terminal settings in the Terminal dialogue box. If your not sure which terminal setting to use, try the VT52 first.

If you want to subscribe to a information service, contact that service and ask them to set up an account for you. When you subscribe to an information service, You usually receive a user ID number and password that allows you to log on (connect) to the service. Most services will send you information about which communications settings and terminal settings to use with their service.

To communicate with an information service for the first time:

- Press [Alt] F,N,C (file, create new file, communications)

If you need to adjust your communication settings and terminal settings to match the computer you are calling, use the Options Communications and Options Terminal commands.

- Press [Alt] O,P (options, phone)
- In the phone number box, type the local phone number of the service.
- Press Enter

If you need to reach an outside line first, type 9 and a , (comma) before you type the phone number. (This step is necessary, for example, if you are dialing from within an organization that uses a phone system)

- Press [Alt] C,C (connect, connect)

When the Connect Connect command is on, a mark is displayed next to the command on the menu. When Works establishes a connection, the OFFLINE message in the status line changes to display time elapsed during the connection.

- Log on using the procedures provided by your service. Usually you are prompted for your ID and password.
- Information you receive is stored in the communications buffer. If you want to use the information in another Works application, press [Alt] C,P (connect, pause) and copy that information to that application.
- Log off from the service when you are finished, then press [Alt] C,C again to disconnect.
- Press [Alt] F,S (file, save) to save the communications file.

To communicate with another computer for the first time:

- Follow the first 6 steps stated previously.
- When another computer responds, type your ID and password if necessary.
- Type text, copy information from another Works application to the other computer, copy information received from the computer to another works tool or transfer text or binary files.
- Press [Alt] C,C (connect, connect) to disconnect when finished.
- Press [Alt] F,S (file, save)

The phone number and settings for the computer are saved, along with any recorded sign on you created to automatically log on to the computer. The next time you call the computer, Works will automatically connect for you.

To communicate again:

- Open the communication file for the service or computer you want to call.
- Press Enter to accept connecting to the other computer.

To save information in the buffer for future use, press [Alt] S,A (select, all) and copy the text to a Word Processor document, then save the document.

Communications Settings

Communications settings control the communication hardware connected to your computer. Your settings must match those of the other computer. The settings Works proposes in a new Communications file are compatible with most other computers. Usually, you only need to type or select the phone number before connecting to another computer. Try establishing a connection without changing any settings first.

You change communications settings in the Communication Dialogue Box

Baud Rate - Determines the speed in which data is transmitted and received. The higher the setting the faster you can communicate.

Your modem is designed to communicate only at certain rates, usually 300, 1200, 2400, 9600 and faster. Check your modem manual to find out what speed your modem can use. If you connect directly to another computer with a cable, you will probably use 9600 baud.

Data Bits - Determines the number of bits used to represent one character. The most common setting is 8.

Stop Bits - Determines the number of bits used to represent where one character ends and another begins. The most common setting is 2.

Parity - An error-checking process that detects communications errors. Works proposes the Mask option, which allows communications regardless of the other computers parity setting.

Handshake - Controls the flow of communications, to insure that information is not lost during the communications session.

Set the handshake to match the computer you want to communicate with. Works proposes Xon/Xoff, a software handshake commonly used when communicating through a modem. A hardware handshake is used only when there is a direct cable connection between the computers. If you know the computer you are communicating with doesn't use either type of handshake, select none.

Port - Some computers have two communications ports, COM1 and COM2. Select the port that is connected to you modem or cable. Your computer has only one com port COM1.

Connecting and Disconnecting

Connecting is the process of establishing two-way communications with another computer. Works can communicate in 2 ways: with a modem (Hayes compatible) or with a direct Null modem serial cable connection.

When Works establishes a connection, the OFFLINE message in the status line changes to display the elapsed time during the connection.

Connecting with a Modem

Most modems are equipped with two modular phone jacks. Plug one end of the jack into the telephone outlet and the other into the modem. (refer to the modem manual). Plug the modem into the computer using the serial cable.

To establish a connection with a modem:

- Open the communications file for the computer or service you want to connect with or press [Alt] F,N,C (file, new, communications) to open a new file. Configure settings if necessary.
- Press Enter to accept connecting to another computer.

If you get a busy signal will attempting to connect, you can redial without disconnecting by pressing [Alt] C,D (connect, dial again)

Connecting with a Cable

You can connect your computer directly to another computer through the COM1 serial port using a Null modem cable. The cable that is supplied with your computer is a standard serial cable, You must purchase a Null modem adapter.

To establish a direct connect with a cable:

- Open the communications file for the computer you want to connect with or press [Alt] F,N,C (file, new, communications) to create a new file. Configure settings if necessary.
- Press Enter to accept connecting to the other computer.

Disconnecting

When you want to stop communicating with the other computer, you disconnect (hang-up). If you are connected to an information service be sure to Log off first or else you may be charged for the time it takes the service to recognize that you have disconnected.

To disconnect:

- Press [Alt] C,C (connect, connect) When the Connect Connect command is on, a mark is displayed next to the command on the menu. Choosing it again turns it off and disconnects.
- Press Enter

Copying to and from Communications

To copy from a Works application to another computer:

- Connect to the other computer.
- Open a Word Processor, Spreadsheet or Database file.
- Press SHIFT F3 or [Alt] E,C (edit, copy)
- In the windows menu, select the Communications file.
- Press enter to copy the information to another computer.

Copying from Communications to Other Works Applications

When you copy information from the buffer to a Word Processor document, you first select the text, then copy it. Works copies the characters exactly as they are stored in the buffer.

You can copy text or tables from the buffer to a Spreadsheet or Database file. If you copy text, each line from the buffer is stored inside a single cell inside the spreadsheet or database. If you copy a table from the buffer to the Spreadsheet or Database Application, Works automatically recognizes the rows and columns in the table, and copies the table format into rows and columns in a Spreadsheet or Database.

To copy information to a Works Application:

- Connect to the information service, bulletin board or other computer.
- Open a Word Processor, Spreadsheet or Database file.
- Receive the information you want from the other computer. The information is stored in the buffer.
- Press SHIFT F3 or [Alt] C,P (connect, pause)
- In the Windows menu, choose the file into which you want to place the information.
- Move the cursor or highlight to where you want to place the copied text.
- Press Enter

To copy the information into a single cell of a Database or Spreadsheet file, select Copy As Text. To automatically divide a table into rows and columns (or records and fields) select Copy as Table.

- Press Enter
- In the Windows men, select the communications file.
- Press [Alt] C,P (connect, pause) again to resume.

To select text in the buffer:

- Press [Alt] C,P (connect, pause)
 - When the Connect Pause command is on, a mark is displayed next to the command on the menu.
 - Press [Alt] S,E and then use the arrow key(s) to select the text you want or press [Alt] S,A to select the entire buffer.
 - Press [Alt] C,P to again to resume.
-

Creating a Communications File

Works Communications files store phone numbers, settings and recorded sign-ons.

When you connect to another computer for the first time, you create a communications file and begin a communications session. The next time you connect to the same computer, open this file and Works will connect for you.

To create a new communication file:

- Press [Alt] F,N,C (file, new creation, communication)
-

Dialing and Redialing

Dialing is the first step in connecting to another computer if you are using a modem. When you connect after creating a Communication file, the modem will automatically dial the telephone number you type in the Phone dialogue box. If you want the computer to dial a phone number in order for you to talk with someone, use the Telephone Dialer. (refer to page 55)

To dial a number:

- Create or open a Communication file.
- Press [Alt] O,P (options, phone)
- In the phone number box, type the number you want to dial.
- Press Enter
- Press [Alt] C,C (connect,connect)

You may need to type 9 and a , (comma) if you need to reach an outside line.

To redial:

- Press [Alt] C,D (connect, dial again)

To cancel dialing in progress:

- Press Esc
- Press Enter to accept cancellation

Downloading a File

To download is to receive information from another computer. Please refer to the Receiving a File topic.

Pausing Communications

You pause communications to prevent the other computer from continuing to send information while you are reviewing or copying text from the buffer. If you do not pause, the other computer may continue to send information that may be lost.

You must select a handshake option (Xon/Xoff or Hardware) for the Pause command to work.

To pause connections:

- Press [Alt] C,P (connect, pause)

To turn pause off press [Alt] C,P again.

Phone Settings

Phone settings control how your modem makes or answers calls. You type the phone number and select phone settings in the Phone dialogue box.

- | | |
|-------------------------|---|
| Phone Number | Tells your modem what number to dial. The number should include all area codes and prefixes. You can include dashes or parentheses, although they are not required. If you must reach an outside line to place a call, type 9 and a , (comma) before you type the phone number.
You can include special dialing characters, for example, a comma will cause your modem to pause before it continues dialing. See your modem manual for more information on special characters. |
| Modem Setup | Adjusts your modem prior to dialing. (for example, to change speaker volume) See your modem manual for optional modem commands, Usually you can leave the option blank. |
| Dial Type | If you have a push button phone, use Tone, If you have a rotary dial, use Pulse. |
| Automatic Answer | Tells Works to answer incoming calls. Automatic answer is turned on after you choose Connect Connect. (Refer to answering an incoming call) |

To change phone settings:

- Press [Alt] O,P (options, phone)
 - In the Phone Number box, type the phone number.
 - Type commands in the Modem Setup box and select an option in the Dial type box, if necessary.
 - Press Enter
-

Protocol

A protocol is a set of communications procedures that two computers follow when communicating. For Works Communications, protocols refer specifically to the error checking and correction routine XMODEM, that Works uses when transferring files.

When transferring files, the other computer must also be able to use XMODEM protocol. Most popular computer communication services, software and bulletin boards support this protocol.

You can send or receive either text files or binary files with XMODEM. During an XMODEM file transfer, the file is sent block by block, then checked for errors by the receiving computer. If the receiving computer detects an error, it requests retransmission of a block. The process continues until the entire file has been sent without errors.

Receiving a File

You can receive files from other computers using the XMODEM protocol. To receive files you use the Transfer Receive File command.

To receive a file:

- Connect to the information service, bulletin board or another computer.
- Ask the computer to send the file (start XMODEM transfer)

If you are communicating with a information service or bulletin board, you usually choose a file to download, and then enter the option number or press Enter to start the transfer. If you are communicating with another computer, you can type a message to tell the other party to start sending.

- Press [Alt] T,R (Transfer, Receive file)
- In the Directories box, select the drive or directory you want to open.
- In the Save File As box, type a name for the file you receive.
- Select Binary or Text.
- Press Enter
- When the transfer is completed successfully, press Enter again to continue the communications session.

During the transfer, Works displays a status box. The status line message will alternate between RECEIVE and WAITING as Works receives the file.

When you select the text option in the Transfer Receive box, Works automatically converts all incoming ends-of-lines to carriage returns and line feeds (CR/LF). This means Works adds carriage return to lines that end in line feed only, or adds line feed to lines that end in carriage return only, so that the received file will always be a valid DOS text file.

To cancel a file transfer:

- Press Esc
- Press Enter to accept the cancellation.

Recording a Sign-On

When you record the sign-on sequence you use to communicate with an information service or another computer, you can sign on automatically instead of entering your user ID and password each time. The recorded sign-on is saved as part of the Communications file. Listed below are some important notes about recording a sign-on:

- You can store only one sign-on sequence for each communication file. If a sign-on already exists, recording the new sign on will replace it.
- If you change your password or other responses, you must record the sign on sequence again before Works will recognize the new prompts.
- If the prompts from the other computer change, you must record the sign-on sequence again before Works will recognize the new prompts.
- Automatic sign-on will not work if the prompts from the other computer vary between sessions. Usually, this is caused by the other computer including the date or time as part of the prompt. To use automatic sign-on with another computer that sends inconsistent prompts, connect and get the inconsistent prompt from the other computer. Then start recording. You might also use a macro that will pause while signing on.

To record a sign-on sequence:

Press [Alt] C,R (connect, record sign-on)

- Sign on as you usually do. Works records your entries and the other computers responses.
- Press [Alt] C, R (connect, record sign-on) again to stop recording.

When the Connect Record Sign-on command is on, a mark is displayed next to the command on the menu. The next time you open this Communications file, Works asks if you want to connect. If you have a recorded sign-on, Works automatically uses the sign-on after connecting to another computer.

Sending a File

You can send files (or upload files) to other computers using the XMODEM protocol. To send a file, use the Transfer Send File command.

To transfer a file with the XMODEM protocol:

- Connect to the information service, bulletin board or other computer.
- Send a message telling the other computer to get ready to receive a file.

If you are communicating with an information service or a bulletin board, you usually enter an option number or press Enter to start the transfer. If you are communicating with another computer, you can type a message to tell the other user you are sending a file.

- Press [Alt] T,S (transfer, send file)
- In the Directories box, select the drive or directory you want open.
- In the File To Send box, type the name of the file you want to send or select it from the file list.
- Select Binary or Text.
- If the file you are sending is a text file, select the appropriate option in the End-Of-Line box. Select CR & LF if you are not sure.
- Press Enter

During the transfer, Works displays a status box. The status line message will alternate between SEND and WAITING as Works sends the file. If more than 10 errors occur while sending one block of the file, Works cancels the transfer.

- When the transfer is completed successfully, press Enter to continue the communications session.

To cancel a file transfer:

- Press Esc
- Press Enter to accept the cancellation.

Sending Text (ASCII File)

The Transfer Send Command is like typing text, except that it lets you send text you stored in a file earlier, rather than typing text as you send it. This text is not automatically saved in a file when it received by the other computer, as it is when you use the Transfer Send File command. You use the Send Text Dialogue box to begin sending.

To send a text file:

- Connect to the information, bulletin board or other computer.
- Send a message telling the other computer to get ready to receive a file.

If you are communicating with an information service or bulletin board, you usually need to enter an option number or press Enter to start sending text. If you are communicating with another computer, you can type a message to the other user you are sending a message.

- Press [Alt] T,T (transfer, send text)
- In the directories box, select the drive or directory you want to open.
- In the File To Send box, type the name of the file you want to send, or select it from the Files list.
- In the Delay box, type a delay if necessary.
- Press Enter

A delay controls how long Works will pause at the end of each line of transmitted text. The Delay setting is useful if the other computer is having trouble processing text at the rate you are sending it. The number you enter represents tenths of seconds.

To cancel a text file:

- Press Esc
- Press Enter to accept the cancellation.

Signing On

To sign on using a recorded sign-on:

Once you have created a recorded sign-on sequence, Works plays the sign-on sequence back automatically each time you connect to that computer. Use this procedure if the Communications file is already open.

- Press [Alt] C,S (connect, sign-on)

When playing back a sign on, Make sure you start playing back the sequence at the same stage in the sign-on procedure that you recorded it.

Terminal Emulation

A terminal is keyboard and a screen connected to a another computer via a network. With Works, you can use your computer to emulate several common terminal types including the VT52 terminal (very similar to the Zenith Z19), and the ANSI terminal (similar to the DEC VT100 or VT220/VT240 terminals)

You will probably want to turn on Full Screen check box in the Terminal dialogue box when using terminal emulation so that the other computer can display information on, and move the cursor to, all parts of your screen.

Terminal Settings

The terminal settings control how your computer responds to the data sent to it. You change the terminal settings in the Terminal dialog box.

The default settings that Works proposes are compatible with most computers. Try to establish a connection before changing any of the settings.

Terminal - Indicates the type of terminal you want to emulate. If you are not sure, select the VT52.

Add to Incoming Lines - Adds a carriage return or line feed to the end of each line of text as it is displayed in your text.

Most computers end each line with both a carriage return (CR) and a Line feed (LF) character. If a computer sends you lines of text that don't include both of these characters, the lines will be displayed incorrectly. Refer to the following table for settings:

If your display	Then set Add To Incoming Lines to
Is normal	Nothing
Has lines that overwrite	LF
Has lines that do not begin at left of screen	CR

Buffer - Temporarily stores received data. Select small (100 lines), medium (300 lines) or large (750 lines) to set the buffer size.

Local Echo - Causes Text to appear on screen.

Local Echo is usually off, because most other computers echo back the characters you type as they receive them. If you don't see characters as you type, turn on Local Echo. If you are connecting to another computer that is using Works, you should both turn echo off. If you see double characters, turn Local Echo off.

Wraparound - Causes incoming lines of text more than 80 characters wide to automatically wrap to the next line at the window edge.

Full Screen - Switches your screen between normal display and Full Screen display when you are using terminal emulation. Normal display is the way your screen appears when you start Communications. Full Screen display removes the menu bar, status line, and message line.

With Full Screen on, you can still use the Communications menus as usual; they become visible if you press the [Alt] key. Full screen goes into effect when you connect.

- Keypad Alternate -** When Keypad Alternate and NUMLOCK are both on, your keypad is in application mode. This applies to both VT52 and ANSI terminal emulation.
- Cursor Alternate -** When Cursor Alternate is turned on and NUMLOCK is off, your cursor keys are in application mode. This applies only for ANSI terminal emulation.

To change terminal settings:

- Press [Alt] O,T (options, terminal)
- Change settings as necessary.
- Press Enter.

Troubleshooting Communications

Communication problems usually fall into two categories:

- Trouble connecting
- Trouble during the session

Trouble Connecting

Problem

Cable problems

Solution

Check the connectors on both ends of the cable. If they look normal, the cable may have internal damage. Try another cable.

Wrong COM port selected

Make sure that the Port setting in the Communications dialogue box corresponds to the port that your modem or other computer is connected to.

Mismatched baud rates

Check the baud rate setting in the Communications dialogue box and change if necessary.

Mismatched communications settings

Other than baud rate, Works' preset communication and terminal settings should be compatible with most other computers. Check the settings in the Communications dialogue box and make sure they match the other computer.

Trouble After Connecting**Problem**

Text is garbled, strange characters on the screen.

Solution

Make sure the settings in the communications dialogue box match the other computer. Try adjusting parity, data bits and stop bits. Try opening a new Communications file and starting over.

Characters are doubled.

Turn Local Echo off in the Terminal dialogue box.

You don't see what you type when connected.

Turn Local Echo on in the Terminal dialogue box.

Incoming text is double-spaced.

Change Add To Incoming Lines setting to none in the Terminal dialogue box.

Incoming lines overwrite each other.

Change Add To Incoming Lines setting to LF (line feed) in the Terminal dialogue box.

Cursor doesn't return to left of screen.

Change Add To Incoming Line setting to CR (carriage return).

When using Transfer Send Text, parts of the outgoing message are not displayed on your screen.

Try specifying a delay in the Send Text dialog box to make Works pause at the end of each line it sends.

Clusters of asterisks appear when you are receiving text.

Try adjusting the Parity setting in the Communications dialog box. If that doesn't help, return the parity to the original setting and the disconnect and reconnect.

You are repeatedly disconnected from the other computer

Your telephone line may have a call waiting feature. This feature generates a beep that usually cause the other computer to disconnect. Turn off the call waiting feature by inserting the correct digits into the telephone number in the Phone dialogue box. (ask your phone company for the correct digits). If you do not have call waiting, you may have a poor connection. Try disconnecting and connecting again.

You momentarily switched to another window, and lost some data sent by the other computer.

Turn on Xon/Xoff in the communications dialogue box. The other computer must respond to the handshake signals. Otherwise, data sent while you work in another window may be lost.

Date	Description	Amount	Balance
1890	Jan 1		
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Appendix A: Printing

This appendix explains how to print the files you create in Microsoft Works. The first part of the appendix presents a series of topics arranged according to the sequence you usually follow to print successfully.

- Page Setup and Margins
- Page Breaks
- Previewing a File
- Printing a File

The second part of the appendix contains the Selecting a Printer topic for when you are preparing to print for the first time, and Printing Tips topic.

Page Setup and Margins

The Page Setup command indicates the paper size and margins you want to use when you print. Works is preset to print on letter size 8.5 inch by 11 inch paper. You need to change the page height and width only if you want to print a file sideways (Landscape orientation) or if you want to print on paper of a different size such as legal.

Margins are the spaces between the edges of a page and the printed area. You can control the size of the printed area by increasing or decreasing the margins.

Note: In the Word Processor, you can use indents as well as margins to add space around text. Margins are set for the entire document; indents add space around the individual paragraphs.

To change page setup and margin settings:

- Press [Alt] P,M (print, page setup & margins)
- Type the new measurement for any setting you want to change.
- Press Enter

Works assumes that all measurements are in inches; you do not need to type the inch symbol (") when entering a new value. If you want to enter another unit of measurement, such as centimeter, picas or points, type the abbreviation after the measurement. For more information see the Settings topic in the "Files, Windows and Accessories" chapter.

To print sideways:

- Press [Alt] P,M (print, page setup & margins)
- In the Word Processors, Spreadsheet or Database, reverse the page length and width dimensions.
- Press Enter

Not every printer can print text sideways, check your printer manual first. If you print with a laser, inkjet or thermal printer, you may also need to select a landscape printer file in the Printers box of the Printer Setup box.

Page Setup and Margins in Charting

You can print a chart in either Portrait or Landscape orientation. Use Portrait orientation to print a chart across the width of a page; use Landscape orientation to print a chart sideways across the length of a page. Landscape is the preset option in Charting. You can also change the size of a chart with the Page Setup & Margins command.

To print a chart:

- Press [Alt] P,M (print, page setup & margins)
- Select an orientation. Landscape is proposed.
- Press Enter

If you choose Portrait, you don't need to change page length or width. You do need to change chart height and chart width.

Page Breaks

A page break tells the printer where to end one page and begin printing a new one. Works automatically inserts a break when you've typed enough text or entered enough data to fit on a page. As you insert or delete text or data, Works adjusts the automatic page breaks. You can insert manual page breaks. When you insert a manual break, Works repositions the automatic page breaks that follow.

Page Breaks in the Word Processor

In the Word Processor, an automatic page break is marked on your screen with a double arrow (>>) in the left margin. Manual page breaks are marked with a dotted line across the screen and a double arrow in the left margin.

Works automatically prevents awkward page breaks such as at the last line of a paragraph appearing alone at the top of a page.

You can format a paragraph so that a page break will not split it, or so that a page break will not separate it from the following paragraph. Using this feature, you can prevent tables from being split across pages or a heading from being separated from the text that follows it.

The status line tells you the total number of pages in your document and the current page number. Whenever you stop typing Works updates this information.

If you have a very long file, or if you have been typing for a long time, automatic pagination may lag behind by a few pages. If you are working with a long file you can ensure the page breaks are accurate with the Options Paginate Now command.

To prevent page breaks within a paragraph or between two paragraphs:

- Select the paragraph you don't want to break or that you want to keep with the next paragraph.
- Press [Alt] T,A (format, indent & spacing)
- Turn on the Don't Break This Paragraph check box, or the Keep This Paragraph With Next check box.
- Press Enter

To complete pagination of a file:

- Press [Alt] O,N (options, paginate now)

To insert or delete a manual page break in the Word Processor:

- Move the cursor to the beginning of the line where you want a new page to begin, or select the page break (marked dotted line) that you want to delete.
- Press [Alt] P,I (print, insert page break) or press DELETE.

Page Breaks in the Spreadsheet and Database

In the Spreadsheet, you can set vertical as well as horizontal page breaks. When you have both horizontal and vertical page breaks, pages starting with the upper left and print counterclockwise.

In the Database, you can insert horizontal and vertical page breaks in the List view and Report view that are just like page breaks in the Spreadsheet; pages print in the same order. In Form view you can insert only horizontal page breaks. Page breaks in Form view and List view are independent of each other.

To insert or delete a manual page break in a Spreadsheet or Database:

- Select the row, column or line where you want to insert or delete a page break.
- Press [Alt] P,I (print, insert page break)
If Works asks where to place the page break, select Row or Record for a horizontal page break, or Column or Field for a vertical page break.
- To delete a page break, press [Alt] P,D (print, delete page break)
If Works asks where to delete the page break, select Row or Record for a horizontal page break, Column or Field for a vertical page break.

Previewing a File

You can see how your document, spreadsheet, chart, database or report will look when printed by previewing it using the Print Preview command.

To preview:

- Press [Alt] P,V (print, preview)
To preview a report or chart, you must first be in Report or Chart view.
- Turn on any printing options.
- Press [Alt] P (preview)
- Press PgDn or PgUp to see the next or previous page.
- Press Esc to return to your work.

Note: You can print from Print Preview by pressing P.

Printing a File

Works offers many printing options, depending on which Tool you are working with. This topic first describes basic printing options available in every tool and then explains special printing capabilities available with different tools. The following options are available to every tool:

<i>Number of copies</i>	Enter the appropriate amount.
<i>Print specific pages</i>	Separate a range of pages with a colon (:) or a dash (-). Separate single pages with commas.
<i>Print to File</i>	Creates a file that includes all of the commands Works normally sends to the printer. You can print a file without starting Works by using the DOS print command. You can also use the Communications tool to send the file to another computer to print. The operator of the second computer can print the file even without Works.

Printing in the Word Processor

In the Word Processor, you have the added option of printing in draft quality.

<i>Draft Quality</i>	For quicker printer. With this option turned on, inserted charts do not print, microspacing is turned off (used by some printers for text justification) and daisy wheel printers print using the current printwheel only.
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Printing in the Spreadsheet

In the Spreadsheet you have the option to print or not to print row and column labels. You can also select a portion of the spreadsheet to be the printed area. When you print in the Spreadsheet, only the print area prints. If you do not select the print area the entire spreadsheet prints. If you want to print formulas, you can turn on the Options Show Formula command.

Note: The printer font you select affects how your spreadsheet columns are aligned. Fonts may either be nonproportional (also called fixed pitch) or proportional. In a nonproportional font, all the characters are the same width. Use a nonproportional font, such as LinePrinter, Courier, or Pica, to print a spreadsheet, or the columns will not line up.

To set the print area:

- Select the portion of the spreadsheet you want to print.
- Press [Alt] P,A (print, Set print area)

To reset the entire spreadsheet as the print area:

- Press [Ctrl] Shift F8 or press [Alt] S,A (select, all)
- Press [Alt] P,A (print, set print area)

Printing in Charting

If you have a plotter, you can select the Slow Pen Speed option. Turn on the Slow Pen Speed check box to tell Works to produce a higher Quality chart. Slow Pen Speed is especially useful when plotting on transparencies (film) or when the plotter pens are somewhat dry. As of this writing, there is not driver supplied for a plotter. See your dealer about connect a plotter to the Pocket PC.

Printing in the Database in Form View

In the Form view, you can print your database form just as it appears on your screen. You can print the selected record or all the records. You can also print a blank form. You will have the following options:

- | | |
|-----------------------------------|--|
| <i>Print Records on Same Page</i> | Works prints only one record per page. If you want records printed one after the other on the same page, you must turn OFF this option. |
| <i>Space Between</i> | Enter the amount of space to leave between the bottom of one record and the top of the next record if you are printing more than one record on a page. |
| <i>Print What</i> | You can select one option in each of the groups under the Print What option. |

Printing in the Database in List View

In List view, you can print your database in rows and columns just as it appears on your screen. You have the option to print or not to print record numbers and field names.

Note: The printer font you select affect how your database columns are aligned. Please read the note in the Spreadsheet print reference.

Printing in the Database in Report View

You can print reports only in Report view. In Report view, you can print the entire report or print only the introductory and summary rows. If you turn on the Print All But Record Rows option in the Print Print dialog box, Works prints only the introductory (Intr) and summary (Summ) rows.

Selecting a Printer

In some cases, you may want to change your printer selection or options before printing. You can use the Print Printer Setup command to:

- Change printers.
- Use manual feed, for example, for printing envelopes or mailing labels.
- Set the resolution for printing charts.
- Select the port your printer is connected to.

The first time you start Works, you might want to check the Printer setup command to make sure the printer, port and page feed settings are correct.

When you choose the Printer Setup command, you should see a printer list in the model box. The Pocket PC has four of the most widely use printer drives installed. Select the drive you need or select the drive that is the closest to your printer.

Continuous feed means that the paper is fed continuously rather than one sheet at a time. Most printers, including laser printers and printer that use fanfold paper, use the continuous feed option. Manual feed means that you insert each sheet of paper or envelope by hand when Works prompts you to.

If the selected printer can print graphics, The Printer Setup dialog box specifies at least one printing resolution (in dots per inch - dpi) in the Graphics box. Works uses the resolution setting only for printing charts, not text. Lower resolutions print more quickly than higher ones. For a laser printer, lower resolutions also require less printer memory; sometimes a printer will not have enough memory to print a large chart unless you print it at a lower resolution.

To change the selected printer:

- Press [Alt] P,S (print, printer setup)
- Select a printer from the Printers box.
You will see the list of models displayed for the selected printer.
- Select a printer model in the Model box.
- If printing charts, select the resolution in the Graphics box.
- Press Enter

Common Printer Problems

If your printer does not print, it is often caused by a simple mechanical problem, such as a printer being offline or not properly connect to the computer. If your printer does not print, make sure the printer is:

- Selected in the Works Print Printer Setup dialog box.
- Plugged in and turned on.
- Properly connected to your computer.
- Loaded with paper.
- Mounted with the appropriate printwheel or cartridge.

Also verify that:

- The printer-cable connect between both the printer and the computer is secure. If, necessary, turn off the computer and printer then disconnect and reconnect the cable. The Pocket PC printer cable interface is a standard 25 pin (female) connector. Depending on your printer interface, you may be able to plug the cable directly into your printer or you may need to plug the cable into a standard parallel printer cable first.

If you can print your document, but it contains garbled, unreadable or extra characters, make sure that:

- The correct printer and model are setup in the Print Printer Setup box.
- Your printer is set according to the manufacturers specifications. See your printer manual for specific instructions.

If your document does not print with the fonts or styles you selected, one or more of the following may be the cause:

- Your printer may not be able to print the selected font or style. Refer to your printer manual for specific mode and emulation information.
- The correct printer and model may not be selected in the Print Printer setup dialog box.
- You may have selected the font from the printer itself, instead of from Works. You should always select the font form within Works.
- You may have selected a font without first selecting the text to apply the font to.

Appendix B: Functions

A function is a built-in equation you can use in Microsoft Works Spreadsheet or Database. You use functions to save time typing what might be a complex formula. Works has 57 functions that do a wide range of calculations.

Writing a Function Formula

Most functions consist of the function name, a set of parentheses, and arguments. (See page 103) Functions and their arguments must be written in a particular way - called the function syntax. Some of the rules for function syntax are:

- An argument must be a number or an expression that results in a number. This means that an argument can be a number, a cell or range reference, another function, or any combination.
- The arguments must be separated by commas.
- The arguments of a function must be inside parentheses.
- Some functions, such as COLS, can only use a range reference or field name as an argument. Some functions, such as FALSE(), have no arguments.

You can also put a function inside any mathematical formula, along with arithmetic operators, operands (numbers or values), range or cell references, or field names.

A formula can contain one or more Works functions.

ABS(x)

Gives the absolute (positive) value of x .

ACOS(x)

Gives the arccosine of X . The arccosine is the angle whose cosine is x . ACOS gives the size of the angle in radians. X must be in the range from -1 through 1.

ASIN(x)

ASIN gives the arcsine of x . The arcsine is the angle whose sine is x . ASIN gives the size of the angle in radians. X must be in the range from -1 through 1.

ATAN(x)

ATAN gives the arctangent of x . The arctangent is the angle whose tangent is x . ATAN gives the size of the angle in radians. The angle must range from $\pi/2$ radians (-90 degrees) through $\pi/2$ radians (90 degrees).

ATAN2(x-coordinate,y-coordinate)

ATAN2 gives the arctangent of an angle defined by x - and y -coordinates. The arctangent is the angle, in radians, determined by the point described by the coordinates. The angle will range from $-\pi$ radians (180 degrees) to, but not including, π radians (180 degrees). If both the x -coordinate and y -coordinate equal 0, ATAN2 gives the error value ERR.

AVG(RangeReference0,RangeReference1,...)

AVG give the average of values in *RangeReferences*. *Range References* may be numbers, cell references, range references, or formulas. In cell references, blank cells are treated as 0 (zero). In range references, blank cells are ignored. In all references, text is treated as 0 (zero).

CHOOSE(Choice,Option0,Option1,...)

CHOOSE uses *Choice* to select an *Option* from the list. If the *Choice* is less than 0, or greater than the options in the list, CHOOSE gives the error ERR.

COLS(RangeReference)

COLS gives the number of columns in *RangeReference*.

COS(x)

COS gives the cosine of x . X is an angle measured in radians.

COUNT(RangeReference0,RangeReference1,...)

COUNT give the number of cells contained in *RangeReferences*. COUNT adds 1 for every cell that contains a number, formula, text, ERR and N/A.

CTERM(Rate,FutureValue,PresentValue)

CTERM gives the number of compounding periods need for an investment, earning a fixed *Rate* per compounding period, to grow from a *PresentValue* to a *FutureValue*.

Rate represents the interest rate for a single compounding period.

DATE(Year,Month,Day)

DATE gives the number for the date specified by *Year,Month,Day*. The date number is an integer ranging from 1 through 65534, representing the dates from January 1, 1900 to June 3, 2079.

Year must be a number ranging from 0 (1900) to 179 (2079). *Month* is generally a number ranging from 1 through 12, while *Day* is generally a number ranging from 1 through 31. If the month or day references are outside these ranges, DATE adjusts to the correct date. If *Year, Month* and *Day* do not make up a valid date within Works' range of dates, DATE gives the error value ERR.

DAY(DateNumber)**Month(DateNumber)****Year(DateNumber)**

DAY, MONTH, and YEAR give the number for the day, month, or year of the date specified by *DateNumber*. DAY gives an integer ranging from 1 through 31, MONTH gives an integer ranging from 1 through 12, and YEAR gives an integer ranging from 0 through 179.

DateNumbers use the integers 1 through 65534 to represent the dates January 1, 1900 through June 3, 2079. January 1, 1900 is day 1, January 2, 1900 is day 2 and so on through June 3, 2079, which is date 65534.

DDB(Cost,Salvage,Life,Period)

DDB uses the double-declining balance method to find the depreciation in a specific Period.

Cost is the amount you paid for the asset. *Salvage* is the amount you expect to obtain when you sell the asset at the end of its life. *Life* is the number of time periods (usually years) you expect the asset to be in use. *Period* is the period of time for which you want to find the depreciation amount.

ERR()

ERR gives the error value ERR. You can use it to force a cell to display err whenever a specified condition exists. You can use ERR to find other cells whose formulas are dependent on the erroneous cell.

EXP(x)

EXP gives e to the power of x , where e is 2.71828..., the base number of natural logarithms. To compute powers of other bases, use the exponentiation operator (^). EXP is the inverse of LN.

FALSE()

FALSE give the logical value 0 (FALSE). You can use **FALSE()** instead of 0 (zero) to create more readable logical formulas.

FV(Payment,Rate,Term)

FV gives the future value of an ordinary annuity of equal *Payments*, earning a fixed interest *Rate* per *Term*, compounded by several *Terms* (*Term*).

Works assumes that the first *Payment* occurs at the end of the first period.

HLOOKUP(LookupValue,RangeReference,RowNumber)**VLOOKUP(LookupValue,RangeReference,ColumnNumber)**

HLOOKUP and **VLOOKUP** find an entry in a table.

HLOOKUP searches the top row of *RangeReference* until it finds the number that matches *LookupValue*. Then it goes down the column the number of rows indicated by *RowNumber* to get the entry.

Arrange the numbers in the top row in ascending order. **Works** searches the top row for the largest number that is less than or equal to the *LookupValue*.

VLOOKUP works in a similar way to **HLOOKUP**. It searches the left-most column of *RangeReference* until it finds the number that matches the *LookupValue*. Then it goes to the right by the number of columns indicated by *ColumnNumber* to get the entry.

Arrange the numbers in the left most column in ascending order. **Works** searches the left column for the largest number that is less than or equal to *LookupValue*.

If *ColumnNumber* or *RowNumber* is negative, or is greater than or equal to the number of rows or columns in *RangeReference*, **Works** gives the error value **ERR**.

HOUR(TimeNumber)**Minute(TimeNumber)****Second(TimeNumber)**

HOUR, **MINUTE**, and **SECOND** give the number for the hour, minute, or second of the time represented by *TimeNumber*. **HOUR** gives an integer ranging from 0 through 23. **MINUTE** and **SECONDS** give integers ranging from 0 through 59. *TimeNumber* should range from 0 through 0.999.

TimeNumber uses the decimal fractions 0 through 0.9999 to represent the times 12:00:00 A.M. through 11:59:59 P.M.

IF(Condition,ValueIfTrue,ValueIfFalse)

IF determines whether *Condition* is true or false, then gives either *ValueIfTrue* or *ValueIfFalse*.

INDEX(RangeReference,Column,Row)

Index gives the value in a cell in *RangeReference* at the intersection of *Column* and *Row*.

If *Column* or *Row* is negative, or greater than or equal to the number of rows or columns in *RangeReference*, Works gives the error value ERR.

INT(x)

INT gives the integer part of *x*. INT deletes the digits to the right of the decimal point without rounding to the nearest integer. (Use ROUND to round *x* to the nearest integer.)

IRR(Guess,RangeReference)

IRR gives the internal rate or return for the cash flow series in *RangeReference*. The internal rate of return is the interest rate that gives the cash flow series a net present value of 0 (zero).

IRR uses an iterative technique that can have more than one solution. IRR gives an ERR error value if the computations do not converge to within 0.0000001 after 20 iterations.

You enter a *Guess* to tell IRR where to begin. Enter a different *Guess* if Works cannot determine the IRR. Usually, a starting value between 0 and 1 yields a meaningful result.

ISSER(x)

ISSER gives the logical value 1 (TRUE) if *x* is the error value ERR. Otherwise it gives the logical value 0 (FALSE).

Use ISSER to test for errors in your spreadsheets.

ISNA(x)

ISNA give the logical value 1 (TRUE) if *x* is the value N/A. Otherwise, it gives the logical value 0 (FALSE).

Use ISNA to test for N/A values in your spreadsheet.

LN(x)

LN gives the natural logarithm of x . X must be a positive number. Natural logarithms use the mathematical constant e , 2.71828..., as a base. X must be a positive number.

LOG(x)

LOG gives the base 10 logarithm of x . X must be a positive number. The inverse of LOG is exponentiation.

MAX(RangeReference0,RangeReference1,...)

MAX gives the largest number contained in *RangeReferences*.

MIN(x)(RangeReference0.RangeReference1,...)

MIN gives the smallest number contained in *RangeReferences*.

MOD(Numerator,Denominator)

MOD gives the remainder (modulus) of Numerator over Denominator. The remainder has the same sign as Numerator. MOD gives the ERR error value if Denominator equals 0 (zero).

NA()

NA gives the numeric value or N/A. You can use NA() to indicate that information is not available.

NOW()

NOW gives the date and time number for the current date and time. It is updated at every recalculation. The integer portion of NOW() is the date number, and the decimal fraction is the time number.

You can use the Format menu's Time/Date command to display actual date or time.

NPV(Rate,RangeReference)

NPV gives the net present value of a series of cash flow payments, represented by numbers in *RangeReference*, discounted at a fixed *Rate* per period.

Rate represents the interest you want to use to discount each period.

Range Reference must be the reference of a single cell or part of a single row or column. It may not be a range with more than one row or more than one column.

Works assumes that payments occur at the end of periods of equal lengths. To find the net present value of a cash flow series whose first payment occurs at beginning of the periods, you must add the amount of the first payment to the net present value of the subsequent payments.

PI()

PI() gives the number 3.14159..., an approximation of the mathematic constant.

PMT(Principal,Rate,Term)

PMT gives the periodic payment for a loan of an investment of *Principal* based on a fixed interest *Rate* per compounding period over a given *Term*. Works assumes that payments occurs at the end of periods of equal lengths.

Rate represents the interest rate for a single compounding period.

PV(Payment,Rate,Term)

PV gives the present value of an ordinary annuity of equal *Payments*, earning a fixed interest *Rate* per period, over several periods (*Terms*).

Works assumes that the first *Payment* occurs at the end of the first period.

RAND()

RAND gives a random number from 0 (zero) up to, but not including, 1. A random number is generated every time the spreadsheet is re-calculated.

RATE(FutureValue,PresentValue,Term)

RATE gives the fixed interest rate per compounding period needed for an investment of *PresentValue* to grow to a *FutureValue* over several compounding periods (*Terms*).

ROUND(x,NumberOfPlaces)

ROUND rounds x to the specified *NumberOfPlaces* to the left or right of the decimal point.

If the *NumberOfPlaces* is positive, x is rounded to the number of decimal places to the right of the decimal point. If the *NumberOfPlaces* is 0, x is rounded to the nearest integer. If the *NumberOfPlaces* is negative, Works rounds to the number of places to the left of the decimal point.

Rows(RangeReference)

Rows gives the number of rows in the *RangeReference*.

SIN(x)

SIN gives the sine of x . X is an angle measured in radians.

SLN(Cost,Salvage,Life)

SLN uses the straight-line depreciation method to find the amount of depreciation in one period.

Cost is the amount you paid for the asset. *Salvage* is the amount you expect to obtain when you sell the asset at the end of its life. *Life* is the number of periods (usually measured in years) you expect the asset to be in use.

SQRT(x)

SQRT gives the square root x . If x is negative, Works gives the error value ERR.

STD(RangeReference0,RangeReference1,..)

STD gives the population standard deviation of *RangeReferences*.

SUM(RangeReference0,RangeReference1,..)

SUM gives the total of all values in *RangeReferences*.

SYD(Cost,Salvage,Life,Period)

SYD uses the sum-of-the-years-digits method to find the amount of depreciation in a specific *Period*.

Cost is the amount you paid for the asset. *Salvage* is the amount you expect to obtain when you sell the asset at the end of its life. *Life* is the number of periods you expect the asset to be in use. *Period* is the period for which you want to find the depreciation.

TAN(x)

TAN gives the tangent of x. X is an angle measured in radians.

TERM(Payment,Rate,Future Value)

TERM gives the number of compounding periods necessary for a series of equal Payments, earning a fixed interest Rate per period, to grow to a FutureValue.

TIME(Hour,Minute,Second)

TIME gives a time number for the time specified by *Hour*, *Minute* and *Second*. The time number is a fraction ranging from 0.0 through .999, representing times from 0:00 or 12:00 P.M. through 23:59:59 or 11:59:59 P.M.

Hour is generally a number ranging from 0 through 23. *Minute* and *Second* are generally numbers ranging from 0 through 59. If minute or second are outside the range of 0 through 59, TIME adjusts to the correct time.

TRUE()

TRUE give the logical value 1 (TRUE). You can use TRUE() instead of 1 to create more readable logical formulas.

VAR(RangeReference0,RangeReference1,...)

VAR calculates the variances of the numbers in RangeReferences.

Appendix C: Macros

Microsoft Works macros work like a tape recorder. However, instead of recording sounds, macros record your keystrokes. When you play back a macro, Works automatically repeats the recorded keystrokes in the same order you recorded them.

This section tells you how to record and play macros. The macro options are listed in the Macro Options dialog box. This dialogue box is displayed when you press [Alt] /. Every time you start Works, any macros you previously recorded are available; pressing the macro playback key causes a macro to run. Macros are saved when you exit Works.

In the Record Macro dialog box, you are prompted for the following:

- | | |
|---------------------|--|
| <i>Playback key</i> | A single key or key combination that you press when you want to play the macro. At this prompt press the keys or key combination and it will appear in the dialog box. |
| <i>Title</i> | A description of the macro you want to record. The title can be up to 30 characters. The title is not mandatory, but makes referencing easier. |

Recording a Macro

Important: When you begin recording a macro, you must have everything in your document or file exactly as it will be when the macro is played back: the cursor or highlight must be positioned where you want it to be when you begin recording keystrokes; any conditions, options or views required (such as manual calculation, data protection or List view) must be turned on or selected. If you want the macro to use nonstandard specifications, like custom tab stops, country settings or units of measurement, change them before you record your macro.

To record a macro:

- Work in your document or file until you want to begin recording the macro.
 - Press [Alt] /
 - Select Record Macro.
 - Press Enter
 - In the Record Macro dialog box, press the playback key you want to assign to this macro.
 - Type an optional title in the Title box.
 - Press Enter
- The word RECORD appears in the Works message line. Works will now record every keystroke you make until you end the recording.
- Type the exact keystrokes for the task you want to record.

- Press [Alt] / when you complete the keystrokes you want included in the macro. (You can also press [Alt] - (minus) to do the next 2 steps)
- Select End Recording
- Press Enter

Now press the playback key. The macro plays every keystroke you pressed while recording, including any existing macros whose playback key you pressed while recording.

To cancel a macro while recording:

- Press [Alt] /
 - Select Cancel Recording.
 - Press Enter. No macro is created.
-

Correcting a Mistake

If you make a mistake while recording a macro, you have two choices: continue with the macro by pressing whatever keys are necessary to correct the error or cancel the macro and begin again. Although you can not change a macro while you are recording it, you can edit macros in the Word Processor. For more information, see Editing and Writing Macros in the Advanced Macros topic.

Playing a Macro

You can play a macro using either its playback key or the Play macro option.

To play a macro using its playback key:

- Work in your document or file until you want to play the macro.
- Press the macro's playback key.

Once you start the playback, Works plays the macro until it is completed or until you cancel the playback.

To play a macro from the dialog box:

- Work in your document or file until you want to play the macro.
- Press [Alt] /
- Select Play Macro, then press Enter.
- In the Macros box, select the macro you want to play.
- Press [Alt] P (play)

To cancel playback:

Press [Alt] /

Stopping a macro during playback does not reverse any actions the macro has already performed, but does stop the macro from performing any further actions.

Skipping a Macro

If the playback key you assign to a macro is also a key Works uses to perform another function, you can skip (or ignore) the macro playback and use the playback key for its original purpose.

To skip a macro:

- Press ` (accent grave) to skip the macro playback. (next to the 1 key on the keyboard)
- Press the key whose function you want to use.

Note: You can also insert a skip before a playback key by selecting the Skip option from the Macro Options dialog box.

Deleting a Macro

You can delete a macro you no longer need using the Delete Macro Option.

To delete a macro:

- Press [Alt] /
 - Select Delete Macro, then press Enter.
 - In the Macros box, select the macro you want to delete.
 - Press [Alt] T (delete)
 - Repeat if necessary or press [Alt] D (done).
-

Changing a Macro Playback Key or Title

To change a macro playback key or title:

- Press [Alt] /
- Select Change Key & Title, then press Enter.
- Press [Alt] C (change) The record macro dialog box is displayed.
- In the Record Macro dialog box, press the new playback key you want to assign to this macro.
- Type a new title in the title box.
- Press Enter. The Change Key & Title dialog box is displayed.
- Repeat or press [Alt] D (done) when finished.

Advanced Macros

Works macros have other powerful features in addition to recording and playing. You can also:

- Turn off all macros.
 - Create a macro that repeats itself.
 - Create a macro that pauses for a specified amount of time.
 - Create a macro that pauses for you to type.
 - Create and play one macro while you are playing another.
 - Edit an existing macro or create one in the Works Word Processor.
-

Turning off Macros

You can turn off all macros if you want to use playback keys for other tasks or to avoid accidentally playing a macro.

To turn macros on and off:

- Press [Alt] /
 - If macros are on, select Turn macros off, if they are off select Turn macros on.
 - Press Enter
-

Repeating a Macro

A repeating macros replays until you stop it.

To create a repeating macro:

- Start recording the macro.
- Type the exact keystrokes for the task you want to perform.
- When you have completed the task, press the macro's playback key. Pressing the macro's playback key during a recording automatically ends the macro recording and creates a macro that repeats its task until you stop it. You don't need to press [Alt] / to end the macro recording.

To stop a repeating macro:

- Press [Alt] /

Note: When creating repeating macros, you can insert a pause in the macro that lets you decide if you want the macro to continue repeating. You can insert a timed pause or a pause for input as described in the following topic.

Pausing a Macro

You can insert three types pauses into a macro; a timed pause, a fixed-input pause, and a variable-input pause. You can insert a pause while recording a macro by choosing one of the pause options from the Macro Option dialog box.

Pause Specifies that the macro remain paused for a specified period of time. When you play the macro it stops where you inserted the pause, and the words PAUSE appear in the message line. When the specified time is over the macro continues playing. You can end a pause before its specified time elapses by pressing any key. Works continues to play the macro.

Fixed Input Specifies that the macro remain paused until you type a specific number of characters. When you play the macro, it stops when it reaches the point where you inserted the pause, and the words FIXINPUT appears in the message line. After you type the last character, the macro continues.

Variable Input Specifies that the macro remain paused until you type any number of characters, and then press Enter. When you play the macro, it stops when it reaches the point where you inserted the pause, and the word VARINPUT appears in the message line. When you press Enter to end the pause, the macro continues to play.

You can not use the Enter key as one of the characters you are typing during the pause, because the Enter key is used to end the pause.

To insert a timed pause:

- Begin recording the macro.
- At the point where you want to pause, press [Alt] /.
- Select Pause, then press Enter.
- Type the pause time in the HH:MM:SS.T format.

Example: To have a macro pause for 1 minute, 10 and 5/10 seconds, type 1:10.5

- Press Enter
- Continue recording the macro.

When you play the macro, the macro will pause for the amount of time you specified.

To insert a fixed-input pause:

- Begin recording a new macro.
- At the point where you want a fixed-input pause, press [Alt] /.
- Select Fixed Input, then press Enter. (Or press [Ctrl]] (right bracket) to do steps 2 and 3.)
- Type the fixed-input entry.
Works keeps track of the number of keys you press, including any spaces, tabs or other special characters.
- To end the fixed-input pause, press [Alt] /.
- Continue recording the macro.

When you play the macro, the macro will pause for the exact number of characters you specified.

To insert a variable-input pause:

- Begin recording a new macro.
- At the point where you want a variable-input pause, press [Alt] /.
- Select Variable Input, then press Enter. (or press [Ctrl] - (minus) to do steps 2 and 3)
- Type a variable-input entry.
(Do not press Enter as part of your variable input)
- To end the variable-input, press [Alt] /.
- Press Enter
- Continue recording your macro.

When you play the macro, the macro will pause until you press Enter.

Creating a Nested Input Macro

Much like a variable-input pause, a nested input macro permits you to pause a macro and type variable input. This input becomes a separate macro you can repeat any number of times within the current macro. Or you can play the nested input macro in its own.

To create a nested macro:

- Start recording your primary macro.
- At the point where you want the primary macro to pause while you record a nested input macro, press [Alt] /.
- Select Nested Input, then press Enter.
- Press a playback key for the second macro and type in a title. (if wanted)
- Press Enter
- Type the exact keystrokes for the task you want to record for the nested input macro.
- Press [Alt] /
- Press Enter

- Continue recording the primary macro.
- At a point where you want to repeat the nested input, press its playback key.

If you want the primary macro to play the second macro more than once, repeat the previous step in each place you want the second macro to be played.

- End the macro recording.

When you play the macro, the macro will pause for the nested input until you press Enter. You now have two macros, the primary macro and the second, or nested macro.

After you have created a nested input macro, you can play the nested input macro without playing the primary macro.

To play a nested macro without playing the primary macro:

- Move the cursor to where you want to play the nested macro.
- Press the nested macro's playback key.

Editing and Writing Macros

When you record a macro, Works immediately saves it and adds it to the macro definition file (MACRO.INI). Using the Word Processor, you can open the macro definition file and edit the macro definitions.

You can also write an entire macro definition in a Word Processor document, rather than recording it. You write a macro by typing the keys you want the macro to play in the Word Processing document.

In the macro definition file, Works represents all keys with a keyname, some of which are enclosed in angle brackets (<>). For example Works represents the key sequence Alt + W as <altw>.

If you write a macro definition, you must type each of the macro codes and keystrokes in the body of the macro.

Example:

```
*Window1
<begdef><ctrl><altw><enddef>
```

| End of Macro - the code generated when recording is turned off
 | Macro body - the keys you pressed while recording
 | Playback key
 | Beginning of macro - the code generated when recording is on
 | Title line - an asterisk and the title for the macro or just an asterisk if there is no title

Important: While MACRO.INI is open in the Word Processor, you cannot record or play macros.

To open the macro file:

- Press [Alt] F,O (file, open)
- Move to your Works program directory, if necessary.
The macro definition file must be in the Works program directory or on the Works program drive.
- In the File To Open box, type macro.ini
- Press Enter
- A message is displayed, press Enter to remove message.
- Press [Alt] W (word processor)
- Press Enter

To edit or write a macro definition:

- Move the cursor to the macro definition you want to edit or to the line in which you want to insert a new macro definition.
- Edit the existing macro definition or write a new macro.
If you are writing a new macro, be sure to type in a asterisk on the title line.
- Press [Alt] F,S (file, save) to save the file.
- Press [Alt] F,C (file, close) to clear the file from the screen and make your new macro available for use.

Macro Keys and Keynames

The following table lists all the keys and keynames available for playback keys and recording a macro.

Note: If you choose a key combination in which you press and release the Alt key, such as ALT FS for the File Save command, the macro code displayed in your macro file is <menu>, rather than <Alt>.

<u>Alone</u>	<u>With SHIFT</u>	<u>With CONTROL</u>	<u>With ALT</u>
Function Keys, F1-F12			
<F1>	<Shiftf1>	<ctrlf1>	<altf1>
Numerical keys, 0-9			
1	!	<ctrl1>	<alt1>
Alphabetical keys, A-Z			
a	A	<ctrla>	<alta>
Other characters and keys			
`	~		
-	_	<ctrl->	<alt->
=	+	<ctrl=>	<alt=>
[{	<ctrl[>
]		}	<ctrl]>
\			<ctrl\>

;	:	<ctrl>	
'	"	<ctrl'>	
,	<	<ctrl,>	
.	>	<ctrl.>	
/	?		<alt/>
<back>	<shiftback>	<ctrlback>	<altback>
<space>	<shiftspace>	<ctrlspace>	<altspace>
<esc>			<altesc>
<tab>	<shifftab>	<ctrltab>	<alttab>
<enter>	<shiftdenter>	<ctrlenter>	<altenter>
<left>	<shiftleft>	<ctrlleft>	
<right>	<shiftright>	<ctrlright>	
<up>	<shiftup>	<ctrlup>	

Numeric Keypad

Alone	With SHIFT	With CONTROL	WITH NUMLOCK ON
<end>	<shiftpend>	<ctrlend>	<k1>
<down>	<shiftdown>	<ctrltdown>	<k2>
<pgdn>	<shiftpgdn>	<ctrlpgdn>	<k3>
<left>	<shiftleft>	<ctrlleft>	<k4>
<clear>	<shiftclear>	<ctrlclear>	<k5>
<right>	<shiftright>	<ctrlright>	<k5>
<home>	<shifthome>	<ctrlhome>	<k6>
<up>	<shiftup>	<ctrlup>	<k7>
<pgup>	<shiftpgup>	<ctrlpgup>	<k8>
<ins>	<shiftins>	<ctrlins>	<k9>
	<shiftdel>	<ctrlidel>	<K>

With ALT

<k/>	<altk/>
<k*>	<altk*>
<k->	<altk->
<k+>	<altk+>

Macro options

When you choose a macro option, such as a variable input pause, a code is inserted into your macro.

Option	Code
Timed pause	<pause hh:mm:ss.t>
Variable input	<vfid>
Fixed Input	<ffid n>
Nested input	<nest playbackkey>

Keys not available for playback

The below listed keys can be used to record or write a macro, but can not be used as macro playback keys.

<u>Alone</u>	<u>With SHIFT</u>	<u>With CONTROL</u>	<u>With ALT</u>
<esc>			<altesc>
<tab>	<shifftab>	<ctrltab>	<alttab>
<enter>	<shiftenter>	<ctrlenter>	<altenter>
<kenter>	<shiftkenter>	<ctrlkenter>	<altkenter>
<left>	<shiftright>	<ctrlleft>	
<right>	<shiftright>	<ctrlright>	
<up>	<shiftdown>	<ctrlup>	
<down>	<shiftdown>	<ctrldown>	
<xleft>	<shiftxleft>	<ctrlxleft>	<altxleft>
<xright>	<shiftxright>	<ctrlxright>	<altxright>
<xup>	<shiftxup>	<ctrlxup>	<altxup>
<xdown>	<shiftxdown>	<ctrlxdown>	<altxdown>

Note: If you try to use common typing keys such as letters or numbers as playback keys, Works displays a warning message.

Appendix D: DOS

DOS, short for Disk Operating System, manages the way your files, directories, hardware and software are controlled.

Your Pocket PC computer has MS DOS version 5.0. installed in the C:\ and D:\ ROM drives. The C:\ drive contains the boot and configuration files and the D:\ drive contains the program files. This appendix is divided into two sections the first will cover some of the basic DOS commands and rules and the second will cover the DOS commands that have been installed on your computer.

Working with Files

The information you create and that the computer uses is stored in files. The instructions are stored as program files and the information you create is stored in data files. These files are then stored and organized in directories. Every file has a name and most files have filename extensions. Filenames usually identify their contents and filename extensions help you identify the file type.

DOS File Naming Rules:

- Filename can not contain more than 8 characters.
 - Filename extensions can not contain more than 3 characters.
 - Valid characters include the letters A-Z, the numbers 0-9 and the following special characters: _ ^ \$ ~ ! # % & - [] @ ' `
 - Invalid characters are: spaces, commas, backslashes or periods (except periods that separate names and extensions)
 - Invalid file names also include several DOS commands such as CLOCK\$, CON, AUX, COMn (where n = 1-4), LPTn (where n = 1-3), NUL and PRN.
-

Types of Files

Within DOS and any DOS compatible application there are five basic types of files they are:

Program Files

These are files that contain the programs that run your computer. They usually have the .EXE or .COM file name extension.

Specialize Data Files

Most programs usually produce data files that contain certain codes that can be used only with the specific program.

Unformatted Text Files

These are files that contain only text. Almost all computer programs use a system call ASCII to represent text. Text files usually have the .TXT extension.

System Files

System files contain information about your hardware and are sometimes called device drivers. These files usually have the .SYS extension.

Batch Programs

These files are unformatted text files that contain MS-DOS commands. If you often do the same set of commands to start a program, you can put them in a batch program. These files always have the .BAT extension.

File Size, Date and Time

MS DOS stores information about file size, file creation date & time and attributes such as if it has been modified, if it is read only, hidden etc. (see the attribute command) If you type dir on the command line you will see a list of the files, the file size, and the file creation date and time.

Organizing Files into Directories

Depend on the size of the drive, a disk can hold thousands of files. To keep track of your files, you can use DOS to regroup these files into directories.

When you format a disk, MS DOS creates one large directory called the root directory. All other directories you create branch from the root directory.

MS DOS Command Line

The MS DOS command line is where you type commands after a command prompt. The command line is indicated by the prompt C:\>

A Directory or subdirectory name can follow the prompt to indicate what directory you are currently in such as D:\WORKS

To direct DOS to perform a task, you type a command, then press Enter.

Parts of a DOS Command

Depending on the command it can have one, two or three parts. Some commands you need only to type in the command *name* such as VER on the command line it will tell you the DOS version. Others you may need to type in *parameters* or *switches*.

Parameters

Defines the object you want DOS to act on, such as a file name.

Switches

Modifies the way a command performs a task. A switch is a forward slash (/) usually followed by a single letter or number.

Shortcuts to Typing a Command

DOS has editing keys that change or repeat a command that you have just typed. The most common two are F1 and F3.

F1 Displays the previous command one character at a time.

F3 Displays all of the previous command.

DOS has a DOSkey program that retrieves, modifies and reuses commands. See the command reference on the following pages for more information.

Pressing INS toggles between the insert and replace mode.

Using Wildcards

A wildcard acts as a substitute for a name or extension. There are two DOS wild cards: the question mark (?) which represents a single character and the asterisk (*) which represents a group of characters or an entire word.

If you wanted to see all the files on drive a: with the .EXE filename extension you could type on the command line: `dir a:*.exe`

Stopping or Canceling a Command

You can temporarily stop the output of a command by pressing [CTRL] S or PAUSE. Press any key except the PAUSE to restart the command.

If you want to stop DOS from completing a command,, press [Ctrl] BREAK or [CTRL] C.

Designating a Drive

The current drive appears as the first letter in the command prompt. On your Pocket PC drive C:\ and D:\ are the ROM memory drives, drive E:\ is your RAM Disk and drives A:\ and B:\ are the IC memory cards.

If the files or directories you want to work on are on the current drive, you do not have to specify a drive letter. To change to the current drive, type the letter of the drive you want followed by a colon. For example to change from drive D:\ to A:\ type **a:** on the command line.

Internal and External DOS Commands

DOS loads some of the commands into memory when you boot, or start, your system. These are called internal commands and are located inside a file called COMMAND.COM. To use an internal command type it on the command line with any necessary parameters or switches.

Internal Commands

CD	Changes directory
CLS	Clears screen
COPY	Copies files to another location.
DATE	Sets the date
DEL	Deletes
DIR	Gives a directory listing.
MD	Makes directory.
PATH	Sets a path for executable files.
REN	Renames a file
RD	Removes directory
TIME	Sets the time.
TYPE	Displays the contents of a text file.
VER	Displays the DOS version
VERIFY	Tells DOS whether to verify that your files are written correctly.
VOL	Displays the volume label and serial number (If one exists)

External Commands

FORMAT	Formats drives.
XCOPY	Copies directories, subdirectories and files.
INTERLNK	Communication program
INTERSVR	Communication program
LABEL	Puts a name on a drive.
KEYB	Determines the country code for the keyboard.
PRINT	Print a file to the printer or to another file.
ATTRIB	Special codes attached to all files.
DOSKEY	Shortcut key

Attrib

Displays, sets or removes the read-only, archive, system, and hidden attributes assigned to files.

Syntax: `attrib [+r|-r][+a|-a][+s|-s][+h|-h][drive:][path]filename [/s]`

To display all attributes of all files in the current directory, type `attrib`

`+r -r` Sets/clears the read only attribute.

`+a -a` Sets/clears the archive attribute.

`+h -h` Sets/clears the hidden attribute.

CD

Displays the name of the current directory or changes the current directory.

Syntax: `cd [drive:][path]`

To change to the root directory type `cd \`

To change to the parent directory from a subdirectory type `cd..`

CLS

Clears the screen.

Syntax: `cls`

COPY

Copies files to another location.

Syntax: `copy [/a \b]source[/a /b][+source[/a /b][+...]] destination [/a /b] /v`

DATE

Displays or lets you change the date.

Syntax: `date [mm-dd-yy]`

DEL

Deletes specific files.

Syntax: `Del [drive:][path]filename[/p]`

If you use the `/p` switch, `del` displays the name of a file and prompts you with a delete message.

DIR

Displays a list of a directories files and subdirectories.

Syntax: `dir [drive:][path][filename][p][c] [/a[:attributes]][/o[:sortorder]]`

switches

`/p` Displays one screen listing at a time.

`/w` Displays the listing in wide format.

attributes

`h` hidden files
`-h` files that are not hidden
`s` system files
`-s` files other than system files
`d` directories
`-d` files only
`a` files ready for archiving
`-a` files that have not changed
`r` read only files
`-r` files that are not read only

sort order

`n` alphabetical order
`-n` reverse alphabetical
`e` alphabetical by extension
`-e` reverse alphabetical by ext.
`d` by date and time earliest first
`-d` by date and time latest first
`s` by size, smallest first
`-s` by size largest first
`g` with dirs before files
`-g` with directories after files

DOSKEY

Starts the DOSkey program, which recalls the MS-DOS commands, edits command lines and creates macros. DOSkey is a TSR program and occupies about 3k of resident memory.

Syntax: `doskey [/reinstall][/bufsize=size][macros][history][insert/overstrike][macroname=[text]]`

Switches

`/reinstall` Installs a new copy of Doskey program, even if one already is already installed. In the latter case the `/reinstall` switch also clears the buffer.

`/bufsize` Specifies the size of the buffer in which Doskey stores commands. the default is 512 bytes. The min is 256 bytes.

`/macros` Lists all Doskey macros.

`/history` or `/h` Displays a list of all commands stored in memory.

`/insert/overstrike` Specifies if new text is to replace old text.

Recalling a DOSkey command

UP ARROW Recalls the previous command.
 DN ARROW Recall the command you used after the one displayed.
 PgUp Recalls the oldest command.
 PgDn Recalls the most recent command.

FORMAT

Formats the drive to accept DOS files. Format creates a new root directory and File Allocation Table (FAT) for the drive. It also checks for bad areas on a drive.

Syntax: **format** *drive*:

The Pocket PC does not require any special format switches.

KEYB

Configures a keyboard for a specific language. Use Keyb for languages other than US English.

Syntax: **keyb**[*xx*],[*yyy*],[*drive*:][*path*]*filename*]]

parameters

xx specifies the keyboard code

Germany gr

France fr

Spain sp

yyy specifies the code page

Germany 850,437

France 850,437

Spain 850,437

LABEL

Creates, changes or deletes a disk volume label.

Syntax: **Label** [*drive*:][*label*]

MD

Makes a directory.

Syntax: **md** [*drive*:][*path*]*directoryname*

PATH

Sets a search path for executable files. DOS uses the path command to search for .exe files in the directories you specify.

Syntax: **path** [*drive*:]*path*

To clear all search-path settings other than the default setting, use the following syntax: **path** ;

PRINT

Prints a text file while you are using other DOS commands. This command can print in the background if an output device is connected to your systems serial or parallel port.

Syntax: `print[/d:device][drive:][path]filename`

REN

Changes the name of a file or files.

Syntax: `ren [drive:][path]filename1 filename2`

RD

Removes (deletes) a directory.

Syntax: `rd [drive:]path`

TIME

Displays the system time or sets your computers internal clock.

Syntax: `time[hours:[minutes[:seconds[.hundredth]]][a|p]`

a|p sets a.m. or p.m.

TYPE

Displays the contents of a text file.

Syntax: `type [drive:][path]filename`

VER

Displays the MS-DOS version.

Syntax: `ver`

VERIFY

Tells DOS whether to verify that your files are written correctly to disk.

Syntax: `verify on|off`

The on enables the verify, off disables it.

VOL

Displays the disk volume label and serial number (if they exist)

Syntax: vol [*drive*:]

XCOPY

Copies files (except hidden and system) and directories, including subdirectories.

Syntax: xcopy *source*[*destination*][/a | /m][/d*date*][/p][/s][/e][/v][/w]

parameters

source Specifies the files you want to copy. *Source* must include either a drive or path.

switches

- /a Copies only source files whose archive file attribute are set, without modifying the attribute bit.
- /m Copies only source files whose archive file has been set, turns off the archive bit specified in *source*.
- /d:*date* Copies only files modified on or after the specified date.
- /p Prompts you to confirm whether you want to create each destination file.
- /s Copies directories and subdirectories unless they are empty.
- /e Copies subdirectories even if they are empty.
- /v Verifies each file as it is written.
- /w Displays a prompt for response.

Batch File Commands

A batch file program is a text (ASCII) file containing a series of MS-DOS commands which can be executed with a single command. A batch file must be given a .BAT extension. Any DOS command can be put into a batch program. There are eight additional commands specially designed for batch programs:

CALL	GOTO	REM
ECHO	IF	SHIFT
FOR	PAUSE	

To create a batch program with the copy command:

- At the command prompt type copy con *filename.bat*
- Type the batch program commands each on a separate line.
- Press F6 or [Ctrl]Z when finished.

If interested in batch programming please refer to a more detailed DOS guide.