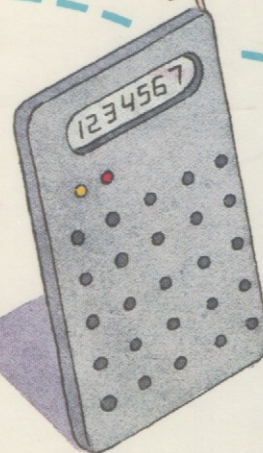
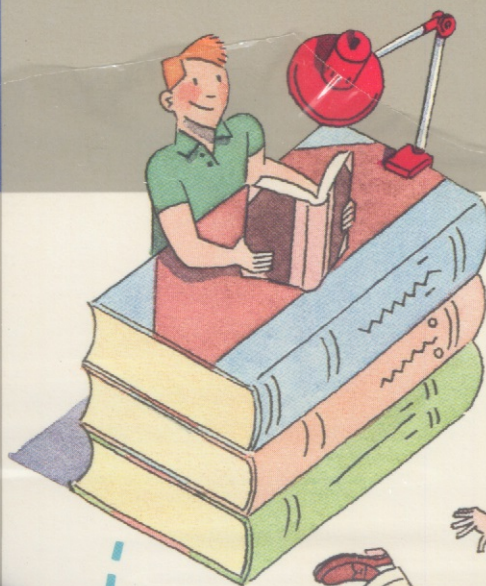


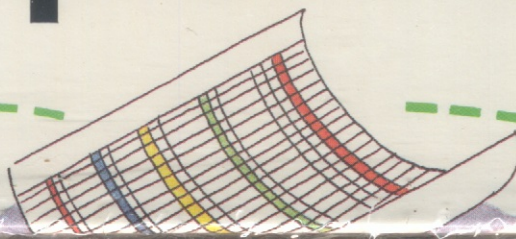
CLARIS™

The best-selling
integrated program
for the Apple II.

NEW
AppleWorks® 3.0
NEW



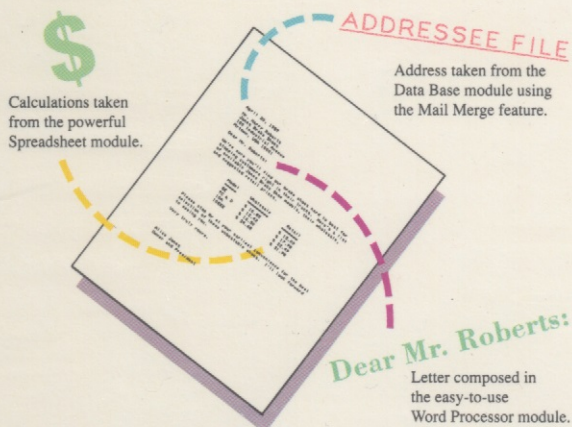
AppleWorks®



AppleWorks®

Why more than 1 million people use AppleWorks

- Three powerful applications in one program
- Lightning fast
- Easy to learn and use



Use all three applications in AppleWorks to create a professional-looking document.

Word Processor: Communicate your ideas clearly and professionally

- Achieve greater precision with real tab settings
- Create professional formats using normal, center, right, and full justification
- Add more impact to your documents with multiline headers and footers
- Make sure your documents are letter perfect with the 90,000-word dictionary

Data Base: Manage and organize your information quickly and easily

- Manipulate your data with easy-to-use record selection rules
- Sort up to three categories at one time
- Create two or more mailing labels across a page
- Use totals, subtotals, and calculated categories to add more detail to your reports

Spreadsheet: Perform complex or repetitive calculations in seconds

- Choose from more than 40 powerful functions, including arithmetic, financial, logical, and trigonometric functions
- Copy or move blocks of information directly to Word Processor or Data Base
- Create look-up tables referencing both values and labels
- Sort your information for quicker data analysis

Mail Merge: Combine data base information with your word processing documents to produce customized letters or reports

Assembled in U.S.A.

Clarix Corporation
5201 Patrick Henry Drive
Box 58168
Santa Clara, CA 95052-8168

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CLARIS™

Key Features:

Word Processor

- 90,000-word spelling checker with custom dictionaries and spelling summary
- Multiline headers and footers
- Left, right, center and decimal tabs
- Multiple tab rulers
- Text find and replace capability
- Boldfaced or underlined text
- Superscripts and subscripts
- Up to 25 pages on a 128K system
- Up to 300 pages on systems with expanded memory

Data Base

- Up to 30 categories per record
- Up to 20 different reports per data base
- Sort on multiple categories
- Record selection rules
- Two or more labels across a page
- Calculated categories
- Total and subtotals
- Up to 800 records on a 128K system
- Up to 16,000 records on systems with expanded memory

Spreadsheet

- Over 40 functions including:
 - Arithmetic functions (Average, Logarithm, Rounding)
 - Financial functions (Net Present Value, Future Value, Payment)
 - Trigonometric functions (Sine, Cosine, Tangent)
 - Logical functions (If, And, Not)
- Look-up tables
- Ability to reference strings
- Cell protection
- Sorting capability

Required equipment:

- Apple IIC, IIC Plus, IIE (minimum 128K), or Apple IIGS
- For Apple IIE only: extended 80-column text card
- Disk Drive
- Monitor

Optional equipment:

- Second disk drive (recommended for 5.25-inch disk users)
- Memory expansion card
- Compatible with Apple ImageWriters, and various printers by Epson, Brother, and Panasonic.

This package contains the following:

- AppleWorks Reference manual
- AppleWorks Tutorial manual
- AppleWorks Getting Started
- AppleWorks Quick Reference
- Four 5.25-inch disks
 - AppleWorks Startup/Program (Word Processor & Data Base)
 - AppleWorks Program (Spreadsheet)/Dictionary
 - AppleWorks Sample Files disk
 - AppleWorks Training disk
- Two 3.5-inch disks
 - AppleWorks Startup (includes Program, Sample Files & Dictionary)
 - AppleWorks Training disk



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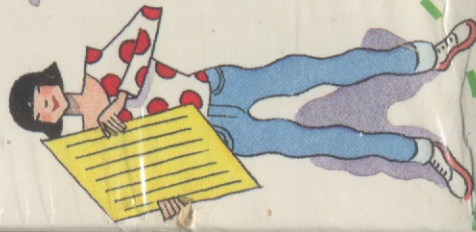
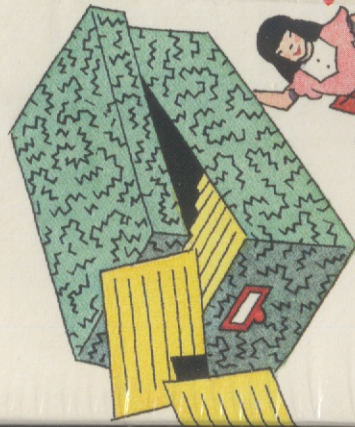
CLARIS™

AppleWorks®

For Apple II 91200U
English

CLARIS™

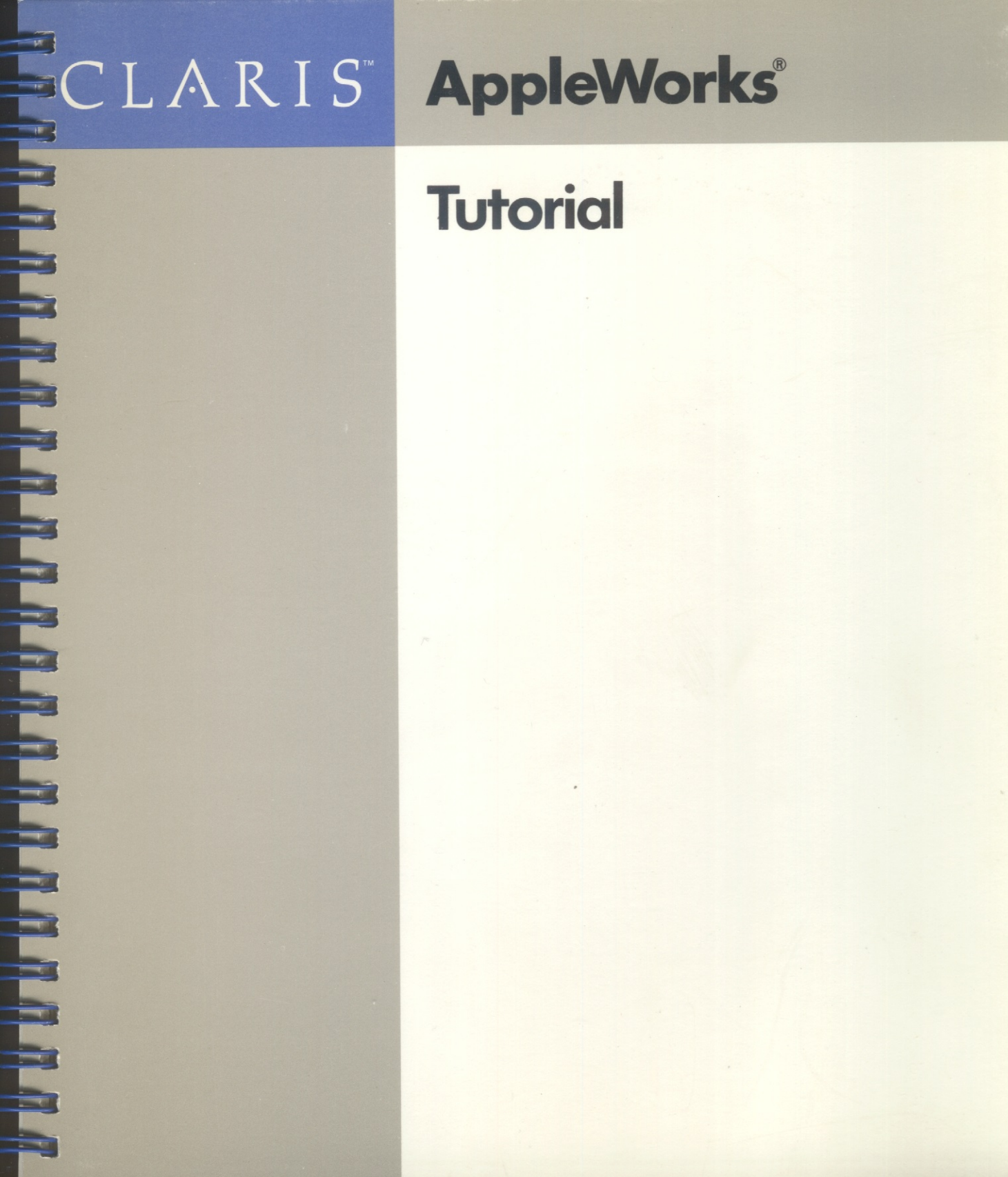
For Apple II 91200U
English



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Reference



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Tutorial

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AppleWorks®

Getting Started

Important! Please read before installing AppleWorks 3.0.

RAM Disk Users

The AppleWorks® 3.0 application will attempt to use all the memory installed in your computer for desktop space. Older versions of AppleWorks did not recognize certain kinds of memory cards, which typically functioned as "RAM disks." If you do not partition your memory using special RAM disk software, you can use AppleWorks as you would normally, without any special procedures.

However, if you use special RAM disk software to partition your memory, Claris™ recommends that you call the manufacturer of the memory card or RAM disk software for information on compatibility with AppleWorks 3.0.

- ◆ **Important:** If you use a RAM disk, you must update your utility software for use with AppleWorks 3.0. *If you do not use updated software, you will lose the contents of your RAM disk when you start AppleWorks.* You might also experience lockups and other unexpected results when using AppleWorks 3.0 with outdated RAM disk software.

If you use a RAM disk to speed up AppleWorks operations, refer to pages B-8 through B-9 of *AppleWorks Reference* for information on preloading AppleWorks. AppleWorks is compatible with the built-in RAM disk option for Apple IIgs computers.

AppleWorks GS Users

AppleWorks GS, version 1.1 and later, can open all AppleWorks files, including files created or edited with AppleWorks 3.0. Earlier versions of AppleWorks GS will not read 3.0 files correctly.

Preloading AppleWorks 3.0

Please note, page B-8, paragraph 2 of *AppleWorks Reference* should read: "If you do not have at least 320K of RAM, AppleWorks will not preload any modules."

@COUNT Function

Please note, page 13-20 and 13-23 of *AppleWorks Reference* should read:

"@COUNT (list or range): When you supply a range, the number returned is the number of cells containing values, ignoring blank cells and cells with labels. When you supply a list, the number returned includes all cells — even those which have labels or are empty."

Financial Functions

Please note, the formula given on page 13-13 of *AppleWorks Reference* for the general case of financial functions is incorrect. The correct formula, when rate $\neq 0$, is:

$$pv * (1 + rate)^{term} + pmt * (1 + rate * type) * \frac{(1 + rate)^{term} - 1}{rate} + fv = 0$$

Calculated Data Base Fields

Please note, page 9-16 of *AppleWorks Reference* indicates you can use parentheses to control the order in which a formula is evaluated. This is incorrect. You cannot use parentheses in data base formulas; you must instead construct your formula so that it evaluates properly when read from left to right. For example, $2 + 3 + 2$ yields 2.5, not 3.5.

AppleWorks Upgrade Package

The AppleWorks Upgrade package does *not* contain the *AppleWorks Training* disk or the *AppleWorks Tutorial* manual. These materials are for new AppleWorks users, and are similar to the training materials provided with earlier versions. Please disregard the reference to the *AppleWorks Tutorial* manual and the *AppleWorks Training* disk on pages 3 and 5 of the *AppleWorks Getting Started* manual.

Printer Setup

AppleWorks is preset to work with the Apple ImageWriter. If you wish to use a different type of printer, you must use the Printer Information setup menu. (Refer to Appendix A of *AppleWorks Reference* for information on how to remove and add printers.) However, for the most reliable printer setup, do not remove the ImageWriter from the printer list. Some users have experienced garbled text and extra characters when they have deleted the ImageWriter from the printer list.

Loading the Dictionaries to Memory

If you have extra memory in your machine, AppleWorks automatically preloads program segments to RAM. However, because the dictionary files are large, they are not copied to RAM and remain on disk.

If you would like to run the spelling checker from RAM, you must use the IIGS Control Panel (or AppleWorks 3.0-compatible utility software) to create a RAM disk on your memory card large enough to accommodate *both the program and the dictionary files*. Copy AppleWorks and the dictionary files onto the RAM disk, and start the program from RAM. Set up AppleWorks so that none of the program preloads (it is already running from memory). You must use this setup because AppleWorks requires that the dictionary disk be in the same drive as the program disk.

AppleWorks® Compatibility

The following is a partial listing of popular AppleWorks add-on/enhancement software and Apple II hardware products. This list is provided as a customer service to inform users of the compatibility or incompatibility between current versions of these products and AppleWorks 3.0. For information on AppleWorks 3.0 compatibility with AppleWorks GS, refer to the Read Me file located in the subdirectory called SAMPLE.FILES.

This list was developed from information provided by the manufacturers. Claris makes no guarantees as to product compatibility. For more information on a specific product's compatibility, call the vendor at the number listed.

Software

Company/ Address/Phone	Product	Description	Compatibility Status
Beagle Bros, Inc. 6215 Ferris Square Suite 100 San Diego, CA 92121 (619) 452-5500	TimeOut Series, version 3.0: Desk Tools, Desk Tools II FileMaster, Graph Macro Tools, Macro Tools II PowerPack, ReportWriter SideSpread, SpreadTools SuperFonts, TeleComm Thesaurus, UltraMacros	Time-saving productivity applications	Compatible with AppleWorks 3.0 TimeOut updates are available from local users groups or directly from Beagle Bros. Send Beagle Bros your original TimeOut disk(s) and payment of \$10 per update disk.
Intuit 540 University Ave. Palo Alto, CA 94301	Quicken	Personal finance and check writing	No upgrades available at this time; compatible only with 2.0
JEM Software P.O. Box 20920 El Cajon, CA 92021	AppleWorks enhancements	Most of the features of JEM are now built into AppleWorks 3.0	No upgrades planned; contact JEM for future 3.0-specific products
K-12 Micromedia Publishing 6 Arrow Rd. Ramsey, NJ 07446 (201) 825-8888	SchoolWorks Series OfficeWorks Family Files	Templates for education, office forms, and home computing	Upgrades planned; call or write for more information
Manzanita Software One Sierra Gate Plaza, #200A Roseville, CA 95678 (916) 781-3880	BusinessWorks, version 5.01	Full featured, modular-designed accounting system	Compatible with AppleWorks 3.0
PBI Software, Inc. 1592 Union St. San Francisco, CA 94123 (415) 349-8765	Visualizer IIe, Visualizer IIGS CommWorks	Graphing program for AppleWorks	No upgrades planned; compatible only with AppleWorks 2.1 Compatible with AppleWorks 3.0
RC Systems 121 W. Winesap Rd. Bothell, WA 98012 (206) 672-6909	AppleWorks Companion	AppleWorks enhancement for the visually impaired	Compatible with AppleWorks 3.0

Hardware

Company/ Address/Phone	Product	Description	Compatibility Status
Applied Engineering 3201 Beltline Rd. Suite 154 Dallas, TX 75234 (214) 241-6060	RamFactor, RamWorks, GS-RAM, GS-RAM Plus RamKeeper AW Expander 3.0	Memory expansion cards Enhancement software	Built-in support for memory cards Upgrade planned for AW Expander software; call for more information
Checkmate Technology 509 S. Rockford Dr. Tempe, AZ 85281 (602) 966-5803	MultiRam, MultiRam Plus MultiRam IIe MultiRam Expander	Memory expansion cards Enhancement software	Built-in support for memory cards Upgrade planned for MultiRam Expander software; call for more information
Innovative Systems 150 Downing Rd. Seyern Park, MD 21146 (301) 987-8688	Math Coprocessor	Math Coprocessor	Compatible with AppleWorks 3.0
Orange Micro, Inc. 1400 N. Lakeview Ave. Anaheim, CA 92807 (714) 779-2772	Grappler C HotLink Pro Grappler Serial Grappler+	Serial and parallel printer interface cards	Compatible with AppleWorks 3.0
Sequential Systems 1200 Diamond Circle Lafayette, CO 80026 (800) 999-1717	Ram-80	Memory expansion card	Compatible with AppleWorks 3.0
ZIP Technology 5601 W. Slauson Ave. Suite 190 Culver City, CA 90230 (213) 337-1313	ZIP Chip, 8 MHz ZIP Chip, 4 MHz RAM Expansion ZIP GS ZIP IIgs	Accelerator cards	Compatible with AppleWorks 3.0

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Review/Add/Change Commands*

Keyword	Keystroke	Word Processor	Data Base	Spreadsheet
Arrange	⌘ -A		Arrange	Arrange
Blank	⌘ -B			Blank cells
Copy	⌘ -C	Copy text	Copy records	Copy cells
Delete	⌘ -D	Delete text block	Delete records	Delete cells
	Delete	Delete character left of cursor	Delete character left of cursor	Delete character at cursor when editing
	⌘ -Delete	Delete character at cursor	Delete character at cursor	
Edit, Cursor Switch	⌘ -E	Switch between insert and replace cursors	Switch between insert and replace cursors	Switch between insert and replace cursor
Find	⌘ -F	Find text, page, marker, case-sensitive text, printer options	Find all records that contain	Find cell or text
Hard Copy	⌘ -H	Print hard copy of screen	Print hard copy of screen	Print hard copy of screen
Insert	⌘ -I		Insert records	Insert rows or columns
Jump	⌘ -J			Jump split windows
Calculate	⌘ -K	Calculate page breaks		Recalculate
Layout	⌘ -L		Change record layout	Change cell layout
Move	⌘ -M	Move text	Move records	Move cells
Name Change	⌘ -N	Change filename	Change filename, categories	Change filename
Options, Printer	⌘ -O	Display printer options		Display printer options
Print	⌘ -P	Print text	Print reports; go to report menu	Print worksheet
Quick Change	⌘ -Q	Switch to another file	Switch to another file	Switch to another file
Replace or Record Selection	⌘ -R	Replace text	Set record selection rules	
Save	⌘ -S	Save file to current drive	Save file to disk	Save file to disk
	⌘ -Ctrl-S	Save file to original drive/directory	Save file to original drive/directory	Save file to original drive/directory
Tabs, Totals, or Titles	⌘ -T	Set tabs	Freeze or thaw titles	Freeze or thaw titles
Edit Cell Contents	⌘ -U			Edit cell contents
Value or Verify Spelling	⌘ -V	Verify spelling	Set standard values	Set standard values
Window	⌘ -W			Split, join windows
Clear/Delete	⌘ -Y/Ctrl-Y	Delete to end of line	Delete entry to end of line	Delete entry to end of line (editing)
Zoom	⌘ -Z	Zoom/display printer options	Zoom between Single and Multiple Record Layouts	Zoom/display formulas
Ruler	⌘ -1...9	Move within file to beginning (1), end (9), or proportionally (2-8)	Move within file to beginning (1), end (9), or proportionally (2-8)	Move within file to beginning (1), end (9), or proportionally (2-8)
Help	-?	Help	Help	Help

*See "Data Base: Report Format/Record Layout Commands" for additional Data Base commands.

Word Processor Options

Printer Options

Press **⌘-O** to get the Printer Options display. To set an option, type the two-letter code, then press Return. Then, if AppleWorks prompts you, type a number for the setting.

Printer and Paper

PL Paper Length PW Platen Width

Page Description

BM	Bottom Margin	PH	Pause Here
EK	Enter from Keyboard	PN	Set Page Number
FO	Footer	PP	Print Page Number
HE	Header	PT	Print Time
LM	Left Margin	RM	Right Margin
MM	Mail Merge	SK	Skip Lines
NP	New Page	SM	Set Marker
PD	Print Date	TM	Top Margin
PE	Pause Each Page		

Control Keys

Ctrl-B	Begin/end bold-facing	Ctrl-L	Begin/end underlining
Ctrl-C	Begin center text	Ctrl-N	Begin normal justification
Ctrl-F	Begin full justification	Ctrl-P	Page break
		Ctrl-R	Begin right justification

Font

CI	Characters per inch	P1	Proportional Font 1
LI	Lines per inch	P2	Proportional Font 2

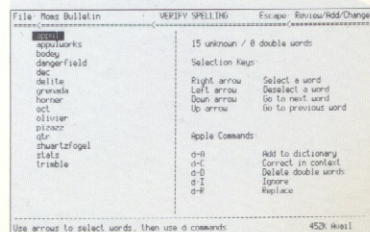
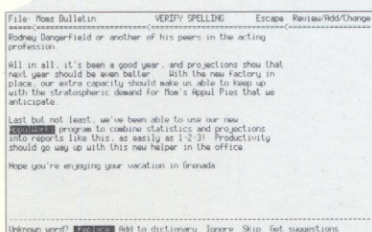
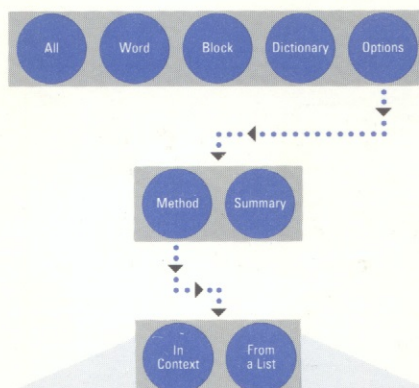
Format

CN	Center Text	JU	Justify Text
DS	Double Space	RJ	Right Justify Text
GB	Group Begin	SS	Single Space
GE	Group End	TS	Triple Space
IN	Indent	UJ	Unjustify Text

Style

+B	Superscript Begin	-E	Subscript End
-B	Subscript Begin	SC	Special Printer Codes
BB	Boldface Begin	UB	Underline Begin
BE	Boldface End	UE	Underline End
+E	Superscript End		

Spelling Checker Menu Options



Spreadsheet Functions

Spreadsheet functions perform various arithmetic, search, financial, and logical operations. Some functions require an argument.

Types of arguments include:

Value — a number or label. You can also use a cell reference or formula that evaluates to a number or label.

Range — a series of adjacent cells in a single column or row, such as (A9...A19) or (B45...H45).

List — a list of single values, labels, cell references, or ranges (you can usually mix them) separated by commas, such as (B9, H19, A1...A13).

Reference — a cell reference, such as B1 or DW24.

Trigonometric Functions

@ACOS(value)	Arcosine
@ASIN(value)	Arcsine
@ATAN(value)	Arctangent
@ATAN2(X value, Y value)	Arctangent based on x and y coordinates
@COS(value)	Cosine
@DEG(value)	Radians to degrees
@RAD(value)	Degrees to radians
@SIN(value)	Sine
@TAN(value)	Tangent

Arithmetic Functions

^ Exponentiation	
* Multiplication (times)	
/ Division (divided by)	
+ Addition (plus)	
– Subtraction (minus)	This also negates the value.
@ABS(value)	Absolute value
@AVG(list or range)	Average
@EXP(value)	Raises <i>e</i> to the power of value
@INT(value)	Integer portion of value
@LN(value)	Natural logarithm (inverse of @EXP)
@LOG(value)	Base 10 logarithm (inverse of @LN)
@MAX(list or range)	Largest value in list or range
@MIN(list or range)	Smallest value in list or range
@MOD(value, divisor)	Modulo (remainder after division)
@PI	3.1415927...
@ROUND(value, decimal places)	Rounds value to decimal places.
@SQRT(value)	Square root
@SUM(list or range)	Sums all values in list or range

Financial Functions

@IRR(range, guess value)	Internal rate of return
@NPV(rate value, range)	Net present value (variable payments)
@RATE(term, pv, fv)	Interest rate
@PV(rate, term, payment [, fv, type])	Present value of annuity (fixed payments)
@TERM(rate, payment, pv [, fv, type])	Term of annuity
@FV(rate, term, payment [, pv, type])	Future value of annuity
@PMT(rate, term, pv [, fv, type])	Payment of annuity

Search Functions

@CHOOSE(value, list)	Value is index into the list of cells.
@COUNT (list or range)	Counts number of nonblank cells in a range and the number of cells, whether blank or not, in a list.
@ERROR	Displays ERROR.
@LOOKUP (value, range)	Searches successively through range for the largest entry that is less than or equal to value. Returns the corresponding value from a second range adjacent to range on the right or below.
@NA	Displays "NA" for Not Available.

Logical Functions

@AND(logical value, logical value[,...])	True if all logical values are true.
@FALSE	Returns the value false (0).
@IF(logical value, true value, false value)	Returns true value if logical value true; true value, false value if false.
@ISBLANK (reference)	Returns the value true if the cell reference is empty; otherwise false.
@ISERROR(reference)	Returns true if the cell reference has the value "ERROR"; otherwise returns false.
@ISNA(reference)	Returns true if the cell reference has the value "NA"; otherwise it returns false.
@NOT(value)	Returns the Boolean value 1 (true) if value = 0; returns the Boolean value 0 (false) for any nonzero argument.
@OR(logical value, logical value [,...])	True if any logical value is true.
@TRUE	Returns the value true (1).

Logical Operators

<	less than
>	greater than
=	equal to
<=	less than or equal to
>=	greater than or equal to
<>	not equal to

Data Base: Report Format/Record Layout Commands

Keystroke	Table Report Format	Label Report Format	Single Record Layout	Multiple Record Layout
⌘ -A	Arrange	Arrange		
⌘ -D	Delete (hide) category	Delete line or category		Delete (hide) category
⌘ -G	Group totals			
⌘ -H	Print hard copy of screen	Print hard copy of screen	Print hard copy of screen	Print hard copy of screen
⌘ -I	Insert a category	Insert a line or category		Insert a deleted category
⌘ -J	Right-justify category	Left-justify category		
⌘ -K	Define calculated category			
⌘ -N	Change report name, title line	Change report name, title line		
⌘ -O	Display printer options	Display printer options		
⌘ -P	Print report	Print report		
⌘ -Q	Switch to another file	Switch to another file	Switch to another file	Switch to another file
⌘ -R	Set record selection rules	Set record selection rules		
⌘ -S	Save file to current drive	Save file to current drive	Save file to current drive	Save file to current drive
⌘ -Ctrl-S	Save file to original drive/ directory	Save file to original drive/ directory	Save file to original drive/ directory	Save file to original drive/ directory
⌘ -T	Total a category		Invert titles	
⌘ -V		Switch entry only and entry with category name		
⌘ -Y	Delete to end of line (editing names)	Delete to end of line (editing names)		
⌘ -Z		Display category name or entry contents		
⌘ -1...9		Move within file to beginning (1), end (9), or proportionally (2-8)		
⌘ -?		Help		

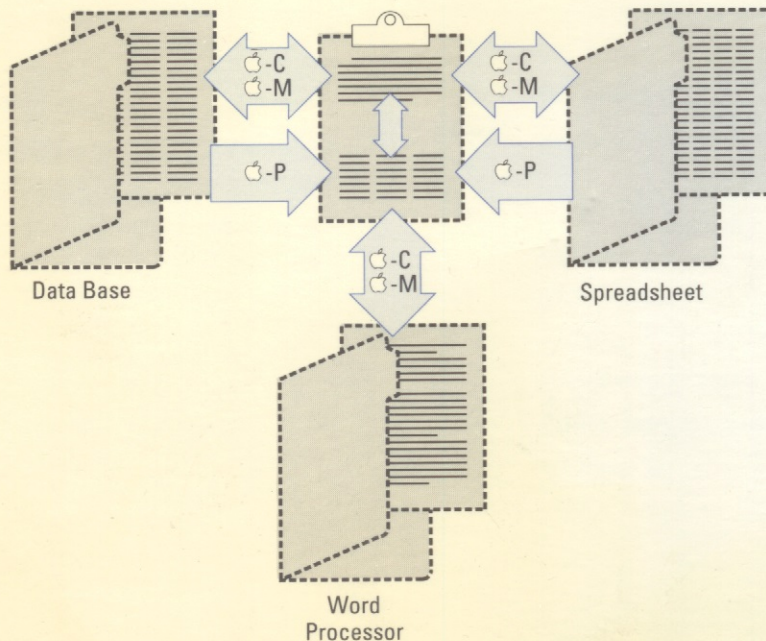
Cursor Moves

Right Arrow	Move right one category	Move right one character	Move right one character	Move right one category
Left Arrow	Move left one category	Move left one character	Move left one character	Move left one category
Up Arrow		Move up one line	Move up one line	
Down Arrow		Move down one line	Move down one line	
⌘ -Right Arrow	Widen column width	Move category right	Move category right	Widen column width
⌘ -Left Arrow	Narrow column width	Move category left	Move category left	Narrow column width
⌘ -Up Arrow		Move category up	Move category up	
⌘ -Down Arrow		Move category down	Move category down	
⌘ -<	Move category left	Show previous record		Move category left
⌘ ->	Move category right	Show next record		Move category right
Tab	Move right one category			Move right one category
⌘ -Tab	Move left one category			Move left one category

Moving Around

Keyword	Keystroke	Word Processor	Data Base	Spreadsheet
Cursor Moves	Right Arrow	Move right one character	Move right within category	Move cell pointer right
	Left Arrow	Move left one character	Move left within category	Move cell pointer left
	Up Arrow	Move up one line	Move up one line or record	Move cell pointer up
	Down Arrow	Move down one line	Move down one line or record	Move cell pointer down
	⌘-Right Arrow	Move right one word	Move right one screen	Move right one screen
	⌘-Left Arrow	Move left one word	Move left one screen	Move left one screen
	⌘-Up Arrow	Move up one screen	Move up one screen	Move up one screen
	⌘-Down Arrow	Move down one screen	Move down one screen	Move down one screen
	⌘-<	Move to beginning of line	Move to first category	Move to first column
	⌘->	Move to end of line	Move to last category	Move to last nonblank column
	Tab	Move to next tab stop	Move to next category	Move cell pointer right
	⌘-Tab	Move to previous tab stop	Move to previous category	Move cell pointer left
Others	⌘-Space bar	Sticky space		
	Return	End paragraph; new line	Accept	Enter
	⌘-"		Ditto (Multiple Record Layout only)	

Using the Clipboard



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