

VISICALC INSTRUCTIONS VERS. 1.7A (APPLE II)

MOVING THE CURSOR

1. THE ARROW KEYS MOVE THE CURSOR LEFT AND RIGHT OR, USING SPACEBAR, UP OR DOWN. THERE IS A DIRECTION INDICATOR IN THE FIRST LINE (! OR -)
2. ";" IF TWO WINDOWS, MOVES THE CURSOR FROM 1 WINDOW TO THE OTHER.
3. ">" GO TO COMMAND. TYPE THE COORDINATES OF THE ENTRY WHERE YOU WANT CURSOR TO GO; <RETURN>.

USE THE BREAK KEY TO ABORT AN ENTRY

SETTING A LABEL ENTRY

LABEL ENTRIES START WITH A LETTER, (A-Z), OR WITH A QUOTE CHARACTER. PROMPT LINE WILL SAY LABEL. USE THE " ENTRY TO ENTER A NUMBER AS A LABEL, OR TO ENTER SEVERAL BLANK SPACES BEFORE A WORD.

SETTING A VALUE ENTRY

A VALUE ENTRY DISPLAYS THE CALCULATED VALUE OF THE EXPRESSION STORED AT THE ENTRY. CONSISTS OF NUMBERS, COORDINATES, FUNCTIONS, ARITHMETIC OPERATORS (+, -, /, *, ^), BOOLEAN OPERATORS (>, <, >=, <=, <>, =) AND/OR PARENTHESES.

START AN EXPRESSION WITH + TO SET THE PROMPT LINE TO VALUE, OTHERWISE, IT WILL BE A LABEL. IF YOU PRESS ! WHILE ENTERING AN EXPRESSION, IT WILL CALCULATE ON THE EDIT LINE.

FUNCTIONS

1. **@SUM(RANGE)** CALCULATES THE SUM OF THE VALUES IN THE RANGE.
EX. @SUM(A2..A10). YOU CAN ALSO ADD CELLS AS +A2+B5 OR SUBSTRACT AS +A2-B5.
2. **@MIN(RANGE)** CALCULATED THE MINIMUM VALUE IN THE RANGE.
EX. @MIN(A2..A10)
3. **@MAX(RANGE)** CALCULATES THE MAXIMUM VALUE IN THE RANGE.
EX. @MIN(A2..A10)
4. **@COUNT(RANGE)** # OF NON-BLANK ENTRIES IN THE RANGE.
EX. @COUNT(A2..A9)
5. **@AVERAGE(RANGE)** CALCULATES THE AVERAGE OF VALUES IN THE RANGE.
EX. @AVERAGE(A2..A9)
6. **@NPV(V,RANGE)** CALCULATES NET PRESENT VALUE OF CASH FLOWS IN THE RANGE.
EX. @NPV(.10,A2..A9)
7. **@CHOOSE(N,RANGE)** RESULTS IN THE NTH VALUE IN RANGE.
8. **@LOOKUP(V,RANGE)** COMPARES THE VALUE V TO THE VALUES OF ENTRIES IN THE RANGE, AND SELECTS A CORRESPONDING VALUE FROM THE COLUMN OR ROW IMMEDIATELY TO THE RIGHT OR BELOW THE ENTRIES IN RANGE.
9. **@NA** RESULTS IN A NOT AVAILABLE VALUE THAT MAKES ALL EXPRESSION USING THE VALUE DISPLAY AS NA.
10. **@ERROR** RESULTS IN AN ERROR VALUE THAT MAKES ALL EXPRESSIONS USING THE VALUE DISPLAY ERROR.
11. **@PI** RESULTS IN 3.1415926536.
12. **@ABS(V)** RESULTS IN THE ABSOLUTE VALUE OF V.
13. **@INT(V)** RESULTS IN THE INTEGER PORTION OF V, EX. INT(A1)
14. CALCULATES THE APPROPRIATE FUNCTION:

@EXP(V)	@SQRT(V)
@LN(V)	@LOG10(V)
@SIN(V)	@ASIN(V)
@COS(V)	@ACOS(V)
@TAN(V)	@ATAN(V)
15. BOOLEAN FUNCTION:
@IF(L,V1,V2),@AND(L1,L2,...),@OR(L1,L2,...)

@NOT(L) , @ISERROR(CELL) , @ISNA(CELL)

COMMANDS

1. **/B** SETS AN ENTRY TO BLANK, MUST HIT <RETURN> OR ARROW KEYS.
2. **/C** CLEARS THE SHEET, MUST TYPE "Y" TO CONFIRM THIS COMMAND.
3. **/D** DELETES THE ROW (**/DR**) OR COLUMN (**/DC**) ON WHICH THE CURSOR LIES.
4. **/F** SETS THE DISPLAY TO ONE OF THE FOLLOWING FORMATS:
 - /FG** GENERAL FORMAT
 - /FI** INTEGER
 - /F\$** DOLLAR AND CENTS
 - /FL** LEFT JUSTIFIED
 - /FR** RIGHT JUSTIFIED
 - /F*** GRAPH FORMAT
 - /FD** DEFAULT RESETS ENTRY

CAN USE GLOBAL DEFAULT FORMAT INSTEAD OF FORMAT SET WITH /F CMD

5. **/G** GLOBAL COMMANDS ... APPLY TO ENTIRE WORKSHEET.
 - /GC** SETS COLUMN WIDTH, 2-43, <RETURN>, EX. /GC9 IS THE DEFAULT.
 - /GF** - GLOBAL FORMAT - SETS FORMAT OF ALL ENTRIES WITHOUT /F COMMAND.
USE SAME DISPLAY FORMATS USED BY THE /F COMMAND. EX. /GFI.
 - /GO** SETS ORDER OF CALCULAT. TO BE DOWN COLUMNS **/GOC**, OR ACROSS ROWS **/GOR**.
 - /GR** SETS RECALC. TO BE AUTOMATIC (**/GRA**) OR MANUAL(**/GRM**).
! FOR A MANUAL RECALC.
6. **/I** INSERTS A ROW (**/IR**) OR A COLUMN (**/IC**) JUST ABOVE OR TO THE LEFT OF THE ROW OR COLUMN ON WHICH CURSOR LIES.
7. **/M** MOVES ENTIRE ROW OR COLUMN, END WITH <RETURN>.
8. **/P** PRINT COMMAND.
9. **/R** REPLICATE COMMAND.
10. **/S** STORAGE COMMAND.
11. **/T** SETS TITLES HORIZONTAL (**/TH**), OR VERTICAL (**/TV**) OR BOTH (**/TB**), OR NONE (**/TN**).
12. **/V** DISPLAYS SERIAL NUMBER AND VERSION NUMBER.
13. **/W** WINDOW CONTROL, SPLITS SCREEN INTO 2 WINDOWS AT CURSOR POSITION (**/WH** FOR HORIZONTAL, **/WV** VERTICAL, **/W1** ONE WINDOW). WINDOWS MAY BE SYNCHRONIZED (**/WS**) OR UNSYNCHRONIZED (**/WU**).
14. **/-** REPEATING LABEL FOR A CELL.

PRINTING

1. **/P** COMMAND LETS YOU OUTPUT SHEET TO PRINTER OR DISK AS A DISK FILE.
2. WITH CURSOR ON UPPER LEFT, ENTER /P P-ENTER LOWER RIGHT-<RETURN>.
3. TO SET UP YOUR PRINTER WITH PRINTER CONTROLS: ENTER **/PP-**" FOR SET-UP. FOR NEC ENTER ESC-Q FOR CONDENSED, <RETURN> TO ENTER LOWER RIGHT, <RETURN> TO PRINT
4. (-) OR (&) : TO SUPPRESS THE LINE FEED, TYPE (-) , TO REINITIATE
5. TO OUTPUT TO A FILE: TYPE F, ENTER FILENAME-<RETURN> MOVE CURSOR TO OR ENTER LOWER RIGHT CORNER OF RECTANGLE TO PRINT OUT AND PRESS <RETURN>.

REPLICATE

THE **/R** COMMAND ALLOWS YOU TO MAKE COPIES OF ENTRIES.

1. POSITION CURSOR ON FIRST CELL ENTRY YOU WANT TO REPLICATE, TYPE /R
2. PROGRAM WILL ASK FOR COORDINATES OF THE SOURCE (WHAT YOU WANT TO COPY). IF YOU ARE REPLICATING JUST THE CURRENT ENTRY, PRESS <RETURN>. TO REPLICATE A RANGE OF ENTRIES, TYPE AN "(" AND PROVIDE THE COORDINATES, THEN <RETURN>.
3. PROGRAM WILL ASK FOR COORDINATES OF THE TARGET (WHERE YOU WANT TO COPY IT TO), THEN <RETURN>.
4. IF THE EXPRESSION BEING REPLICATED CONTAINS VALUE REFERENCES PROGRAM WILL ASK YOU FOR EACH VALUE REFERENCED WHETHER IT SHOULD NOT BE MODIFIED (RESPOND WITH N IF YOU WANT IT EXACTLY AS THE SOURCE) OR SHOULD ALWAYS REFER TO THE ENTRY IN THE SAME RELATIVE POSITION (ENTER R, IT WILL NOT BE THE SAME AS THE SOURCE).
5. EX. /R REPLICATE, SOURCE RANGE, TARGET RANGE, <RETURN>, N OR R

STORAGE COMMANDS

1. **/SS** SAVE ALL ENTRIES, TITLES, AND WINDOW SETTINGS IN A FILE, PROMPTS FOR A FILENAME. EX. **/SS** FILENAME <RETURN>.
2. **/SL** LOAD CONTENTS , PROMPTS FOR FILENAME, OR USE <CTRL-RIGHT ARROW> TO SCAN DISK DIRECTORY AND HIT <RETURN> WHEN YOU WANT TO LOAD A TITLE THAT YOU SEE.
3. **/SD** DELETES SPECIFIED FILE ON DISK, MUST TYPE "Y" TO CONFIRM.
4. **/SI** FORMAT DISK (INITIALIZE) <RETURN>.
5. **/S#S** SAVES DATA IN A DIF FILE. PROMPTS FOR A FILENAME, THEN LOWER RIGHT, <RETURN>, R OR C FOR ROWS OR COLUMNS, THEN <RETURN>.
6. **/S#L** LOADS DATA FROM DIF FILE, ASKS FOR FILENAME, AND R OR C.
7. **/SQ** QUILTS VISICALC & RETURNS TO DISK OPERATING SYSTEM, MUST CONFIRM WITH "Y".

ADDITIONAL COMMENTS

1. TOTAL OF 63 COLUMNS AND 254 ROWS
2. ANY ERROR CAUSES A "BEEP" SOUND.
3. TOP OF SCREEN: A ENTRY CONTENTS LINE & A PROMPT LINE.
4. CAN USE CAPITAL/LOWER CASE LETTERS
5. BREAK KEY CANCELS OUT ALL ENTRIES
6. DEFAULT COLUMN WIDTH IS /GC9. THE INFORMATION STORED IS THE SAME, ONLY THE INFORMATION DISPLAYED IS CHANGED WITH DIFFERENT COLUMN WIDTHS.
7. **/B** TO BLANK A SINGLE ENTRY. EX. **/B** <RETURN> OR USE ARROW.
8. **/C** CLEAR CMD, "Y" TO CONFIRM, CANCEL BY HITTING BREAK OR SPACE BAR.
9. CAN USE **/R** CMD TO REPLICATE A BLANK OR BLANK FORMAT ENTRY.
10. AFTER A CLEAR SHEET COMMAND, ALL GOES TO DEFAULTS AS FOLLOWS: COLUMN WIDTH = 9, COLUMNWISE CALC, AUTOMATIC RECALC. MODE, GENERAL FORMAT, SINGLE WINDOW, CURSOR AT A1, AND NO FIXED TITLES.
11. BACKUP COPIES ARE MOST IMPORTANT!
12. IF WORKSHEET IS NOT CLEARED FIRST, CAN LOAD ONE WORKSHEET ON TOP OF THE FIRST.
13. **/D** (R=ROW OR C=COLUMN) THINK & HESITATE BEFORE YOU DO DELETE A ROW OR COLUMN. EX. **/DR** OR **/DC**
14. AFTER ROW OR COLUMN IS DELETED, THE FORMULAS WILL BE ADJUSTED.
15. **/G CORF**
C COLUMN WIDTH, **/GC9**
O ORDER OF RECALCULATION, **/GOC**
R RECALCULATION MODE, **/GRA**
F FORMAT, EX. **/GF\$**
16. CAN USE WILDCARD FOR FILENAMES USING THE *
17. VISICALC PUTS A FILENAME.VC EXTENDER (VC)
18. DON'T FORGET TO CLEAR SHEET FIRST (/C, "Y", RET.) OR YOU WILL GET AN OVERLAY ON LOADING A NEW PROGRAM.
19. USE THE SPLIT SCREEN WHEN PRINTING, SO THAT YOU CAN FIND THE LOWER RIGHT CORNER (/W V OR H).
20. PUT DOS ON DATA DISKS SO THAT YOU CAN USE CONTROL KEY + RIGHT ARROW KEY TO READ DIRECTORY.
21. >>>>>> IN A CELL MEANS NOT ENOUGH ROOM IN A CELL TO DISPLAY PROPERLY, CAN MAKE WIDER COLUMNS.
22. EEEEEEE IN A CELL, MEANS THAT THERE HAS BEEN AN ERROR, IF IT'S DO TO REFERENCING A CELL TO THE RIGHT OF THE SHEET UPON LOADING, HIT ! AFTER LOADING TO CORRECT THIS. OR YOU MAY HAVE DELETED A CELL THAT A FORMULA NEEDED. AVOID BY PLACING A @NA (NOT AVAILABLE) IN A CELL YOU DON'T HAVE A VALUE FOR YET. ALL CELLS THAT REFERENCE A "NA" CELL WILL HAVE A NA.
23. POINTING THE CURSOR - IN PRINTING THE SHEET, YOU MOVE TO THE LOWER RIGHT CORNER OF THE RECTANGLE AND PRESS <RETURN> TO TELL VISICALC THIS IS THE CORNER. THIS IS CALLED "POINTING" WITH THE CURSOR AND IS A TECHNIQUE THAT YOU CAN USE ALMOST ANYWHERE YOU NEED A COORDINATE REFERENCE.
24. @LOOKUP - LOOKUP TABLES SHOULD BE PLACED BELOW OR TO THE RIGHT OF VALUES TO BE FOUND. EX. @LOOKUP (B2,C15...C23). IN THE EX., B2 IS THE ENTRY TO LOOK UP IN THE TABLE, C15...C23 THE 1ST COLUMN OF THE TABLE. IT WILL <RETURN> THE CORRESPONDING VALUE IN THE TABLE'S 2ND COLUMN. IT LOOKS FOR A NUMBER THAT IS NOT GREATER THAN THE LOOKUP VALUE WHEN IT GOES THROUGH THE TABLE. PUT A ZERO IN EVERY LOOKUP TABLE FOR THE FIRST ENTRY OF THE 1ST COLUMN TO PREVENT GETTING

EEEEEE IN CELLS WHEN COMPARING VERY LOW VALUES. CAN USE @LOOKUP IN FORMULAS,
@LOOKUP(B2,C15...C24)*B2

25. SOME GOOD REFERENCES:

*1. *VISICALC FOR THE APPLE II PLUS COMPUTER*, EDWARD J. DESAUTELS, 1982.
EXCELLENT 1ST BOOK WITH SOME GOOD EXAMPLES. NOT A LOT OF TEMPLATES BUT MORE OR
LESS A TUTORIAL.

*2. *VISICALC HOME AND OFFICE COMPANION*, CASTLEWITX, CHISAUSKY AND KRONBERG,
1982. SOME 50 VISICALC TEMPLATES WHICH ARE EXCELLENT.

3. *THE POWER OF VISICALC: REAL ESTATE*, SPECTRUM BOOKS. VERY GOOD
BUT THE BEST PROGRAMS USE @IF STATEMENTS WHICH ATARI VISICALC CAN NOT USE.

4. *THE VISICALC BOOK: ATARI EDITION*, DONALD BEIL, 1982. THIS BOOK IS VERY,
VERY ELEMENTARY. I THINK THAT THE BEST BEGINNER BOOK IS THE FIRST REFERENCE.

5. *THE DIF FILE*, DONALD BIEL. A WHOLE BOOK DEVOTED TO USING THE DIF FILE.

H A P P Y V I S I C A L C I N G !