



NUMBER ONE 1979

Here are some helpful tips for your ATARI® 400™ or ATARI® 800™ Personal Computer. In NEWS BITS you'll find useful programming tips, new product descriptions, and other helpful information.

How Wide is Your Television Screen?

This question, which seems very simple, uncovers a much more subtle question. Many home televisions overscan significantly. Overscanning occurs when part of the picture sent to your screen is lost around the edges. This could obscure the first and/or last characters on each line of your computer display. So...

How wide is your usable screen display area?

To insure that you will have a clear, readable display even on television sets that may overscan, your ATARI® 400™ or ATARI® 800™ Personal Computer is preprogrammed to display 38 characters across one line on your television or video monitor. However, the scanning on many sets permits the use of 36 or 40 characters per line.

If you so wish, you may reprogram your computer in BASIC Language to display a 36 or 40 character line.

First, get your computer up and running in BASIC (see **Operators Manual**, final section, or **ATARI® BASIC**).

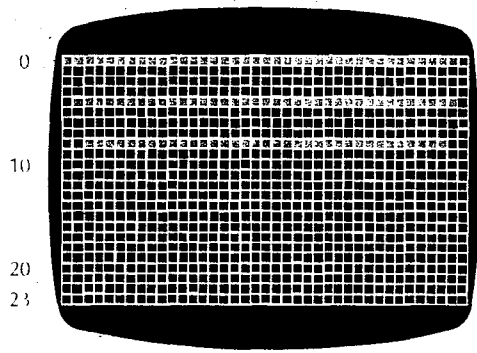
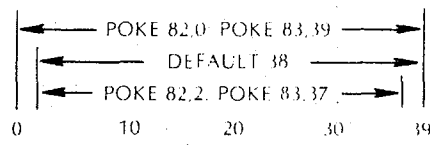
DO THIS

```
FOR A 36 CHARACTER DISPLAY
POKE 82,2: POKE 83,37
RETURN
```

```
FOR A 40 CHARACTER DISPLAY
POKE 82,0: POKE 83,39
RETURN
```

Within a BASIC Language Program you may use the POKE instruction with an appropriate line number to change the number of characters displayed per line at any time.

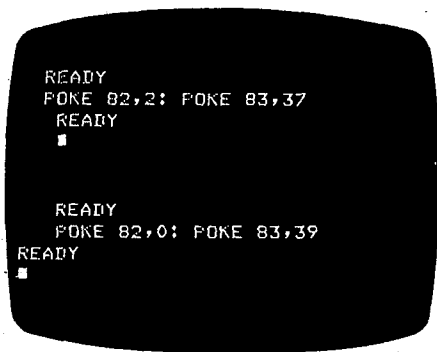
Your computer is set up to display 38 characters across the screen. This is called the DEFAULT format. Whenever your computer is powered up it is programmed to be in this format.



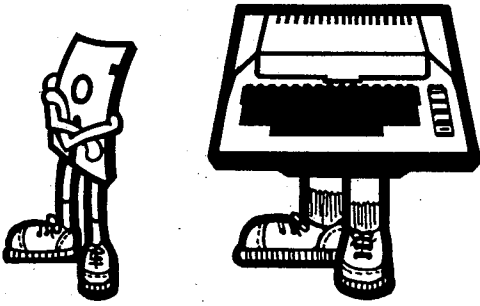
NOTE: Your new display will remain in effect until:

- **SYSTEM RESET** is pushed.
- the computer is powered down.
- the computer receives another POKE instruction.

SEE THIS



DISC RECORDER 810™



Once in a while your disc may refuse to talk to your computer. The computer will inform you of this problem by typing "ERROR-138". If this should occur, use the following procedure:

1. Remove the diskette.
2. Turn the Disk Drive OFF, then ON.
3. Replace the diskette and try the disk operation again.

CASSETTE

Your computer sometimes gets confused after you hit **SYSTEM RESET** and refuses to write to the cassette. To insure that your BASIC programs are properly written to the cassette, you should always enter them by typing LPRINT **RETURN** before typing CSAVE. If you don't have a printer, the system will print out "ERROR-138" which you should ignore.

Computers are NIT-PICKERS:

While "the book" may state that spacing in BASIC programs is "optional", there's always the exception that proves the rule... If there are spaces between the name of an array or matrix and the parentheses that encloses the array row/column variable(s) or numbers, Computer may drop the leading parentheses and come up with an error message. Therefore:

Array references should look like this:

TYPE	DO NOT TYPE
A(30)	A (30)
	↑
	(space)

Remember that NO SPACES SHOULD BE USED IN ARRAY VARIABLES. Pretty soon this will become habit, and Computer will, in turn, break its own bad habit of spraying you with "couthless" ERROR messages!

You Can't Go Wrong Using English Spacing In BASIC

Related to the "nit-picking" problem above, beginning programmers should develop the habit of using spaces between words, symbols, etc. (just as a High School English teacher would like!) Doing this doesn't cost a single byte of RAM: Since each statement is checked and tokenized as it enters the computer, the spaces aren't stored anyhow...they are used only in the interpretation portion of input processing. Remembering this can make your programs more "human" and easier to RUN and read, and can avoid all kinds of potential confusion on the part of your computer!

Don't Use "Reserved" BASIC WORDS As Variables!

If you use a BASIC keyword or other "reserved" word that your computer may interpret as a function or statement rather than a variable, sooner or later it WILL so interpret! Learn to avoid such problems as use of the variable name LETTER (includes the word LET), FORTY (the computer may see this as if it were FOR TY), NEXT (used as a variable name), and the like. You get the idea!

A Somewhat "NOTTY" Problem

The BASIC interpreter has difficulties when you combine logical operators (NOT, =, <, >, <=, >= and <>) with the operator NOT. In fact in some cases it just plain stops! When this happens, all contact between the keyboard and the Computer itself is lost, and even pressing SYSTEM RESET doesn't help. The only recourse at this point is to turn the system OFF and then ON again. This licks the problem with NOT, but simultaneously causes everything in RAM to be lost.

The best solution, as usual, is an ounce of prevention: ALWAYS ENCLOSE THE NOT AND ITS ASSOCIATED VARIABLE IN PARENTHESES, like these examples:

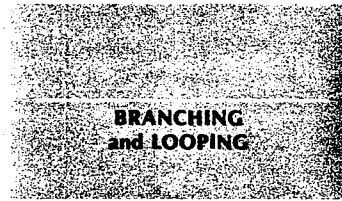
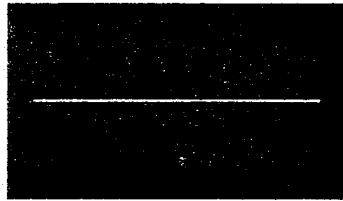
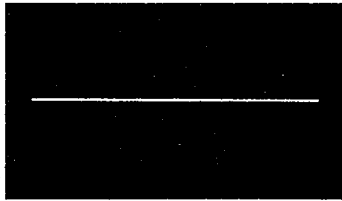
```
100 PRINT A = (NOT B)
```

```
100 PRINT A < (NOT B)
```

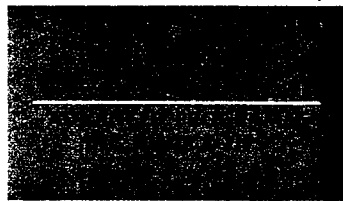
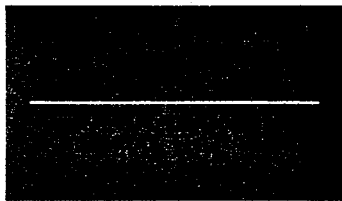
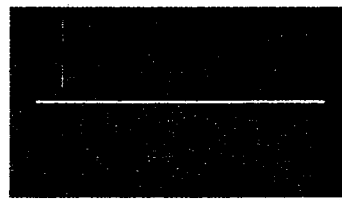
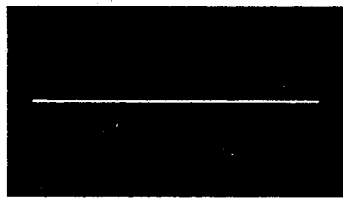
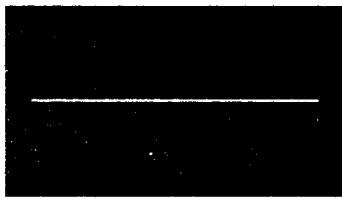
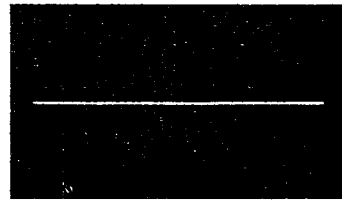
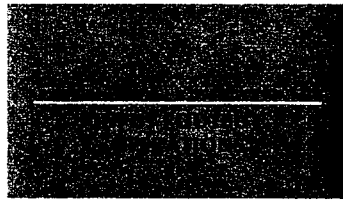
and so forth...

Chapter Reference Tabs

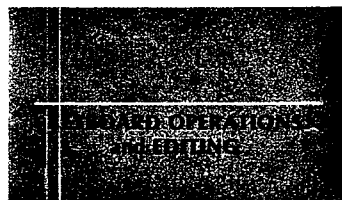
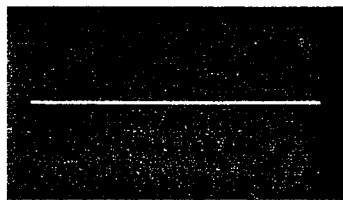
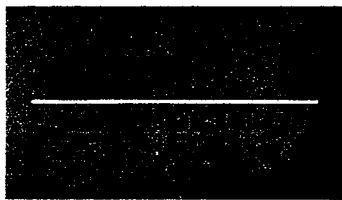
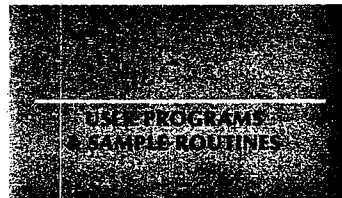
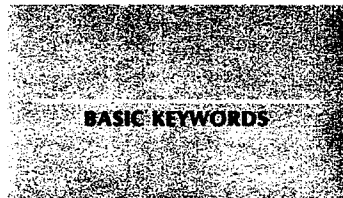
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**VARIABLES, OPERATORS,
and PRECEDENCE**



ERROR MESSAGES



CUT ALONG HERE