

Appendix A Reference Information

For a complete list of the reference information in Appendix A, refer to the Reference and Appendix Information section of the manual.

Table of Contents - System Parameter Settings

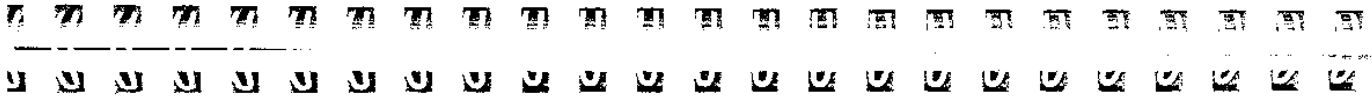
- System Menu
- System Information
- System Status
- System Settings

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Reference Information

System Menus (Continued)

FILES	<p>DF: delete specified file INV DF: delete specified file in RAM cartridge (program only) CAT: show catalog of directory INV CAT: show catalog of RAM cartridge (program only) CD: clear all files in directory INV CD: clear all files in RAM cartridge (program only) NAM: rename a RAM cartridge</p>	<p>RD: read from tape WRT: write to tape VFY: verify tape</p>
I/O	<p>TAP: tape storage functions PRT: printer setup CIO: call I/O subroutine KW: key wait</p>	<p>DEV: set printer device # WID: set print width WB: word break on INV WB: word break off</p>
TESTS	<p>IF>: if greater than INV IF>: if less than or equal IF<: if less than INV IF<: if greater than or equal IF=: if equal INV IF=: if not equal DSZ: decrement and skip if zero INV DSZ: decrement and skip if not zero Y/N: yes/no input test</p>	<p>conditional</p>



RUN	<p>PGM: run program in program memory MEM: run program from file space MTH, STA, or NEW: run program in named cartridge* ESC: escape</p>	
LEARN	<p>1st: show first step PC: show current step END: show last step ESC: escape</p>	
PART	<p>PS: specify program steps REG: specify registers FIL: specify file space SET: accept current setting ESC: escape</p>	
HELP	<p>YES: set all defaults NO: set selected defaults ESC: escape</p>	
FLAGS	<p>CLR: clear flags SF: set flag RF: reset flag TF: test for flag set INV TF: test for flag reset</p>	
PUNC	<p>QAD: quadratic equations CUB: cubic equations SYS: system functions</p>	<p>STB: store byte RCB: recall byte SBA: call assembly language subroutine</p>

* The name may be the name of a library cartridge or a name assigned to a Constant Memory™ cartridge.

Accuracy Information

The calculator maintains values internally to greater accuracy than the values it displays. Occasionally, the difference between a displayed number and its internal value can produce unexpected results.

Numeric Accuracy
Any displayed number is a rounded representation of an internally stored 13-digit value. This internal value, not the displayed number, is used during calculations.

The additional digits kept internally are referred to as "guard digits." Although you can usually disregard these digits, they can be important in interpreting unexpected results.

As an example of the effect of guard digits, it is possible for an expression equal to zero to produce a nonzero result (for example $1 \div 3 \times 3 - 1$).

Press	Display
1 \div 3 \times	.3333333333
3 $-$ 1 $=$	-1. -18

Differences in guard digits are especially important if you write a program that compares two values for equality.

If you suspect these differences are responsible for an unexpected result of a comparison, use the ROUND numeric function before making the comparison. This sets the internal value of the number to the value shown in the display.

Internal Values

The 13 digits of the mantissa are displayed when you use the $\boxed{\text{ZND}} \boxed{\text{I13d}}$ key sequence.

All the digits of the internal value are shown in the unformatted mode (a selection of $\boxed{\text{CONV}} \langle \text{BAS} \rangle$). An unformatted number has three parts:

- ▶ The left 13 digits are the base 10 mantissa with the decimal implied after the first digit.
- ▶ The 14th digit conveys the sign of both the mantissa and the exponent. (Because the signs are indicated by a digit, the $\boxed{+/-}$ key has no effect in this mode.)

Mantissa Sign	Exponent Sign	Sign Digit
+	+	0
-	+	4
+	-	8
-	-	C

- ▶ The last two digits are the exponent of scientific notation.

The main use of the unformatted mode is the entry of hexadecimal values for GIO (call I/O) instead of numeric calculations.

Number Limits

The range of numbers that can be displayed depends on the display format in use. This table lists the allowable range of numbers for each format.

Display Format	Allowable Range
Standard notation	-99999999999 to -0.000000001 zero 0.000000001 to 9999999999
Scientific or engineering notation	-9.999999 $\times 10^{99}$ to -1×10^{-99} zero 1×10^{-99} to 9.999999×10^{99}
Hexadecimal	-FFFFFFFFF to FFFFFFFF
Octal	-777777777 to 777777777

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Use this list of items to find a topic of reference. Also see the Key Index inside the front cover.

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