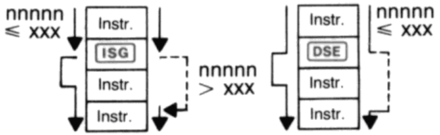
nnnnn is the current counter value,
xxx is the counter test value, and
yy is the increment or decrement value.



Continuous Memory

When calculator is switched off, Continuous Memory feature retains current display mode, all lines of occupied program memory, and all data in storage registers. All other operational aspects are cleared (i.e., stack, LAST X register, flags, trig mode, pending subroutine returns), and calculator returns to line 000 of program memory.

ERROR MESSAGES

Error 0: Illegal argument to math routine.
Error 1: Storage register overflow (except [Σ+], [Σ−]).
Error 2: Called invalid storage register, i.e., register nonexistent or converted to program memory.
Error 3: Improper statistical operation.
Error 4: Nonexistent [LBL]; line number called for is currently unoccupied or is nonexistent; or attempt to load more than 210 lines of program instructions.
Error 5: Recursive call to [∫] or [SOLVE].
Error 6: [SOLVE] unable to find a root.
Error 7: Illegal label (4 through 9) used with [∫] or [SOLVE], or illegal flag name (4 through 9, [A] or [B]).
Error 8: Subroutine level too deep.
Error 9: Self-test discovered circuitry problem.
Pr Error: Continuous memory cleared due to loss of battery power.

HEWLETT hp PACKARD

00034-90012 May 1979

HP-34C Quick Reference Card

THE MEMORY

Automatic Memory Stack

T	0.0000	Top
Z	0.0000	
Y	0.0000	
X	0.0000	Always displayed.

LAST X: 0.0000

Storage Registers

		(i) Address			(i) Address
R_0	n	0	$R_{.0}$		10
R_1	Σx	1	$R_{.1}$		11
R_2	Σx^2	2	$R_{.2}$		12
R_3	Σy	3	$R_{.3}$		13
R_4	Σy^2	4	$R_{.4}$		14
R_5	Σxy	5	$R_{.5}$		15
R_6		6	$R_{.6}$		16
R_7		7	$R_{.7}$		17
R_8		8	$R_{.8}$		18
R_9		9	$R_{.9}$		19
			I		20

Program Memory

000–	071–
001–	072–
002–	073–
•	•
•	•
•	•
068–	208–
069–	209–
070–	210–

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Calculator automatically converts indicated registers into seven lines each of program memory, one register at a time, as you need additional program memory. Storage register conversion to program memory occurs in sequence $R_{.9}$ through $R_{.0}$, then R_9 through R_0. Deleting lines of program memory converts from programming to storage registers in reverse order.

ACCUMULATIONS

Σ+ Summation. Accumulates numbers from X- and Y-registers into storage registers R_0 through R_5. (Remember to press f CLEAR Σ to clear statistics registers before starting a problem that uses Σ+.)

After each press of Σ+, stack and LAST X register contain the following:

T	y_{n-2}	
Z	y_{n-1}	
Y	y_n	
X	n	Current number of entries.

LAST X: x_n

MATHEMATICS

SOLVE Finding the roots of an equation.

Root Found

T	
Z	$f(x)$ at root
Y	A previous estimate
X	Root

Root Not Found

T	
Z	$f(x)$ at best x value
Y	A previous estimate
X	Best x value

If SOLVE fails to find a root when executed from keyboard, ***Error 6*** appears in display. Press any key to clear error signal and view "best" x value. If SOLVE fails to find a root when executed in a running program, no error display appears. Instead, program execution skips first line of program memory after SOLVE instruction and resumes.

∫ Numerical integration.

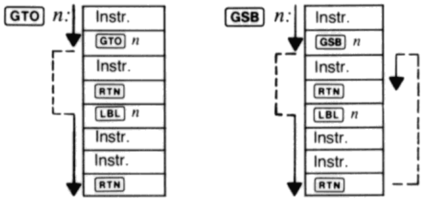
T	Upper Limit
Z	Lower Limit
Y	Uncertainty
X	Integral

Labels A, B, or 0 through 3 can be used with SOLVE or ∫ subroutines.

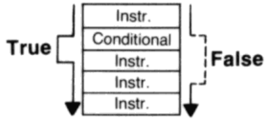
PROGRAMMING THE HP-34C

MEM Current memory allocation.

Allocated but unused program lines. } ***p–nn, r–.n*** { Next register to be converted.



x≤y x>y x≠y x=y Conditionals.
x<0 x>0 x≠0 x=0
F?



"Do if True" rule

Flags are numbered 0, 1, 2, and 3. Turning calculator off automatically clears all flags.

USING THE I-REGISTER

Indirect Operations With (i)

h x⇄(i) uses absolute value of integer portion of number in I as an address for exchanging number in X-register with number in a storage register.

STO f (i), RCL f (i) use absolute value of integer portion of number in I as an address for storing a number in or recalling a number from a storage register.

STO (−, +, ×, or ÷,) (i) use absolute value of integer portion of number in I as an address for performing storage register arithmetic. Contents of specified storage register are replaced with value resulting from storage register arithmetic operation.

Program Control With I

GTO f I, GSB f I Branching or subroutine using label address. With integer portion of a number in I from 0 through +11, calculator transfers to designated label according to following address scheme:

	I Address		I Address
h LBL 0	0	h LBL 6	6
h LBL 1	1	h LBL 7	7
h LBL 2	2	h LBL 8	8
h LBL 3	3	h LBL 9	9
h LBL 4	4	h LBL A	10
h LBL 5	5	h LBL B	11

GTO f I, GSB f I Branching or subroutine using line number address. With negative number in I, calculator transfers to occupied line number addressed by absolute value of integer portion of number in I.

Controlled Looping

ISG, DSE Increment, then skip if greater; decrement, then skip if less than or equal. Control program loops by interpreting number in I as three separate integers. Format of number is nnnnn.xxxyy, where