

Reference information

Regulatory information

This section contains information that shows how the HP 39G/40G graphing calculator complies with regulations in certain regions. Any modifications to the calculator not expressly approved by Hewlett-Packard could void the authority to operate the HP 39G/40G in these regions.

USA

This calculator generates, uses, and can radiate radio frequency energy and may interfere with radio and television reception. The calculator complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

However, there is no guarantee that interference will not occur in a particular installation. In the unlikely event that there is interference to radio or television reception (which can be determined by turning the calculator off and on), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Relocate the calculator, with respect to the receiver.

Connections to peripheral devices

To maintain compliance with FCC Rules and Regulations, use only the cable accessories provided.

Canada

This Class B digital apparatus complies with Canadian EMC Class B requirements.

Cet appareil numérique de la classe B est conforme à la classe B des normes canadiennes de compatibilité électromagnétiques (CEM).

LED safety

The infrared port located on the top of the calculator is classified as a Class 1 LED (light emitting diode) device according to International Standard IEC 825-1 (EN 60825-1). This device is not considered harmful, but the following precautions are recommended:

- Do not attempt to make any adjustments to the unit.
- Avoid direct eye exposure to the infrared LED beam. Be aware that the beam is invisible light and cannot be seen.
- Do not attempt to view the infrared LED beam with any type of optical device.

CLASS 1 LED PRODUCT

LEDSCHÜTZKLASSE 1 PRODUKT

Warranty

HP 39G/40G Graphical Calculator

Warranty period: 12 months

1. HP warrants to you, the end-user customer, that HP hardware, accessories and supplies will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.
2. HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software media which does not execute its programming instructions due to such defects.
3. HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within

a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

4. HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.
5. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.
6. HP MAKES NO OTHER EXPRESS WARRANTY OR CONDITION WHETHER WRITTEN OR ORAL. TO THE EXTENT ALLOWED BY LOCAL LAW, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY SET FORTH ABOVE. Some countries, states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country to country, state to state, or province to province.
7. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries, States or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
8. FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY

RIGHTS APPLICABLE TO THE SALE OF THIS
PRODUCT TO YOU.

CAS

The HP 40G is packaged with a computerized algebra system (CAS). Refer to the CAS Manual for further information.

Resetting the HP 39G/40G

If the calculator “locks up” and seems to be stuck, you must **reset** it. This is much like resetting a PC. It cancels certain operations, restores certain conditions, and clears temporary memory locations. However, it does *not* clear stored data (variables, applet databases, programs) *unless* you use the procedure below, “To erase all memory and reset defaults”.

To reset using the keyboard

Press and hold the **ON** key and the top-row left-middle key (top row, third from left) simultaneously, then release them.

If the calculator does not respond to the above key sequence, then

1. Turn the calculator over and locate the small hole in the back of the calculator. Insert the end of a straightened metal paper clip into the hole until it reaches the bottom. Hold it there for 1 second, then remove it.
2. Press **ON**. If necessary, press **ON**+*top-row, left-middle key*.

To erase all memory and reset defaults

If the calculator does not respond to the above resetting procedures, you might need to restart it by erasing all of memory. *You will lose everything you have stored.* All factory-default settings are restored.

1. Press and hold the **ON** key, the *leftmost top-row* key, and the *rightmost top-row* key simultaneously.
2. To *cancel* this process, release *only* the top-row keys, then press the *left-middle top-row* key.
3. To proceed, release all keys.

Glossary

aplet	A small application, limited to one topic. The built-in aplet types are Function, Parametric, Polar, Sequence, Solve, and Statistics. An aplet can be filled with the data and solutions for a specific problem. It is reusable (like a program, but easier to use) and it records all your settings and definitions.
command	An operation for use in programs. Commands can store results in variables, but do not display results. Arguments are separated by semi-colons and no parentheses, such as <code>DISP <i>expression</i> ; line#</code> .
expression	A number, variable, or algebraic expression (numbers plus functions) that produces a value.
function	An operation, possibly with arguments, that returns a result. It does not store results in variables. The arguments must be enclosed in parentheses and separated with commas (or periods in Comma mode), such as <code>CROSS(<i>matrix1</i>,<i>matrix2</i>)</code> .
Home	The basic starting point of the calculator. Go to Home to do calculations.
Library	For aplet management: to start, save, reset, send and receive aplets.
list	A set of values separated by commas (periods if the Decimal Mark is Comma) and enclosed in braces. Lists are commonly used to enter statistical data and to evaluate a function at multiple values. Created and manipulated by the List editor and catalog.

matrix	A two-dimensional array of values separated by commas (periods if the Decimal Mark is Comma) and enclosed in nested brackets. Created and manipulated by the Matrix catalog and editor. Vectors are also handled by the Matrix catalog and editor.
menu	A choice of operations given in the display. It can appear as a list or as a set of <i>menu-key labels</i> across the bottom of the display.
menu keys	The top row of keys. Their operations depend on the current context. The labels in the bottom of the display show the current meanings.
note	Text that you write in the Notepad <i>or</i> in the Note view for a specific applet.
program	A reusable set of instructions that you record using the Program editor.
sketch	A drawing that you make in the Sketch view for a specific applet.
variable	The name of a number, list, matrix, note, or graphic that is stored in memory. Use STO> to store and use [VAR] to retrieve.
vector	A one-dimensional array of values separated by commas (periods if the Decimal Mark is Comma) and enclosed in single brackets. Created and manipulated by the Matrix catalog and editor.
views	The possible contexts for an <i>applet</i> : Plot, Plot Setup, Numeric, Numeric Setup, Symbolic, Symbolic Setup, Sketch, Note, and special views like split screens.

Operating details

Operating temperature : 0° to 45°C (32° to 113°F).

Storage temperature : -20° to 65°C (-4° to 149°F).

Operating and storage humidity : 90% relative humidity at 40°C (104°F) maximum. *Avoid getting the calculator wet.*

Battery operated at 4.5V dc, 60mA maximum.

Batteries

When battery power is low, the ((●)) annunciator stays on, even when the calculator is off. There is also a warning message that appears when the calculator is on, Warning: Low Bat.

The HP 39G/40G uses three AAA batteries. *Be sure all three are of the same brand and type.* Rechargeable batteries are *not* recommended because of their lower capacity and more sudden demise.

1. Turn the calculator off and place the slide cover over the keyboard to keep from pressing keys.

Caution

Your calculator can lose memory if it is turned on while the batteries are being removed

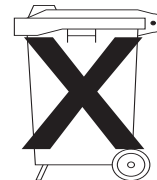
2. Slide the battery compartment door off the rear of the calculator by pressing down on the dimple and pushing the door off.
3. Replace the batteries within 2 minutes to avoid memory loss. Position the fresh batteries according to the diagram inside the battery compartment--it is easiest to install the flat end of each battery first.

The Netherlands

This regulation applies only to The Netherlands.

Batteries are delivered with this product, when empty do not throw them away but collect as small chemical waste.

Bij dit produkt zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.



Menu Maps of the VARS Menu

Home variables

Category	Available name
Complex	Z1...Z9, Z0
Graphic	G1...G9, G0
Library	Function Parametric Polar Sequence Solve Statistics <i>User-named</i>
List	L1...L9, L0
Matrix	M1...M9, M0
Modes	Ans Date HAngle HDigits HFormat Ierr Time
Notepad	User-named
Program	Editline <i>User-named</i>
Real	A...Z, Y

Function applet variables

Category	Available name	
Plot	Axes	Xcross
	Connect	Ycross
	Coord	Xtick
	FastRes	Ytick
	Grid	Xmin
	Indep	Xmax
	InvCross	Ymin
	Labels	Ymax
	Recenter	Xzoom
	Simult	Yzoom
	Tracing	
Plot-FCN	Area	Root
	Extremum	Slope
	Isect	
Symbolic	Angle	F6
	F1	F7
	F2	F8
	F3	F9
	F4	F0
	F5	
Numeric	Digits	NumRow
	Format	NumStart
	NumCol	NumStep
	NumFont	NumType
	NumIndep	NumZoom
Note	NoteText_	
Sketch	Page	PageNum

Parametric applet variables

Category	Available name	
Plot	Axes	Tracing
	Connect	Tstep
	Coord	Xcross
	Grid	Ycross
	Indep	Xtick
	InvCross	Ytick
	Labels	Xmin
	Recenter	Xmax
	Simult	Ymin
	Tmin	Ymax
	Tmax	Xzoom
		Yzoom
Symbolic	Angle	Y5
	X1	X6
	Y1	Y6
	X2	X7
	Y2	Y7
	X3	X8
	Y3	Y8
	X4	X9
	Y4	Y9
	X5	X0
		Y0
Numeric	Digits	NumRow
	Format	NumStart
	NumCol	NumStep
	NumFont	NumType
	NumIndep	NumZoom
Note	NoteText	
Sketch	Page	PageNum

Polar applet variables

Category	Available names	
	Axes	Ystep
	Connect	Tracing
	Coord	Xcross
	Grid	Ycross
	Indep	Xtick
	InvCross	Ytick
	Labels	Xmin
	Recenter	Xmax
	Simult	Ymin
	Umin	Ymax
	Umax	Xzoom
		Yxoom
Symbolic	Angle	R6
	R1	R7
	R2	R8
	R3	R9
	R4	R0
	R5	
Numeric	Digits	NumRow
	Format	NumStart
	NumCol	NumStep
	NumFont	NumType
	NumIndep	NumZoom
Note	NoteText	
Sketch	Page	
	PageNum	

Sequence applet variables

Category	Available name	
Plot	Axes	Tracing
	Coord	Xcross
	Grid	Ycross
	Indep	Xtick
	InvCross	Ytick
	Labels	Xmin
	Nmin	Xmax
	Nmax	Ymin
	Recenter	Ymax
	SeqPlot	Xzoom
	Simult	Yzoom
Symbolic	Angle	U6
	U1	U7
	U2	U8
	U3	U9
	U4	U0
	U5	
Numeric	Digits	NumRow
	Format	NumStart
	NumCol	NumStep
	NumFont	NumType
	NumIndep	NumZoom
Note	NoteText	
Sketch	Page	PageNum

Solve applet variables

Category	Available name
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Plot	Axes	Xcross
	Connect	Ycross
	Coord	Xtick
	FastRes	Ytick
	Grid	Xmin
	Indep	Xmax
	InvCross	Ymin
	Labels	Ymax
	Recenter	Xzoom
	Tracing	Yzoom
Symbolic	Angle	E6
	E1	E7
	E2	E8
	E3	E9
	E4	E0
	E5	
Numeric	Digits	NumCol
	Format	NumRow
Note	NoteText	
Sketch	Page	PageNum

Statistics applet variables

Category	Available name	
Plot	Axes	S4mark
	Connect	S5mark
	Coord	StatPlot
	Grid	Tracing
	Hmin	Xcross
	Hmax	Ycross
	Hwidth	Xtick
	Indep	Ytick
	InvCross	Xmin
	Labels	Xmax
	Recenter	Ymin
	S1mark	Ymax
	S2mark	Xzoom
	S3mark	Yzoom

Symbolic	Angle	S3fit
	S1fit	S4fit
	S2fit	S5fit
Numeric	C0,...C9	NumFont
	Digits	NumRow
	Format	StatMode
	NumCol	
Stat-One	Max Σ	Q3
	Mean Σ	PSDev
	Median	SSDev
	Min Σ	PVar Σ
	N Σ	SVar Σ
	Q1	Tot Σ
Stat-Two	Corr	ΣX
	Cov	ΣX^2
	Fit	ΣXY
	MeanX	ΣY
	MeanY	ΣY^2
	RelErr	
Note	NoteText	
Sketch	Page	PageNum

Menu Maps of the MATH Menu

Math functions

Category	Available name
Calculus]
	*
	TAYLOR
Complex	ARG
	CONJ
	IM
	RE

Category	Available name (Continued)	
Constant	e	
	i	
	MAXREAL	
	MINREAL	
	π	
Hyperb.	ACOSH	
	ASINH	
	ATANH	
	COSH	
	SINH	
	TANH	
	ALOG	
	EXP	
	EXPM1	
	LNP1	
List	CONCAT	
	Δ LIST	
	MAKELIST	
	π LIST	
	POS	
	REVERSE	
	SIZE	
	Σ LIST	
	SORT	
Loop	ITERATE	
	RECURSE	
	Σ	
Matrix	COLNORM	QR
	COND	RANK
	CROSS	ROWNORM
	DET	RREF
	DOT	SCHUR
	EIGENVAL	SIZE
	EIGENVV	SPECNORM
	IDENMAT	SPECRAD
	INVERSE	SVD
	LQ	SVL
	LSQ	TRACE
	LU	TRN
	MAKEMAT	

Category	Available name (Continued)	
Polynom.	POLYCOEF POLYEVAL POLYFORM POLYROOT	
Prob.	COMB ! PERM RANDOM UTPC UTPF UTPN UTPT	
Real	CEILING DEG→RAD FLOOR FNROOT FRAC HMS→ →HMS INT MANT MAX	MIN MOD % %CHANGE %TOTAL RADPDEG ROUND SIGN TRUNCATE XPON
Stat-Two	PREDX PREDY	
Symbolic	= ISOLATE LINEAR? QUAD QUOTE 	
Tests	, ∂ 55 ⇒ . ⊗	AND IFTE NOT OR XOR

Category	Available name (Continued)
Trig	ACOT
	ACSC
	ASEC
	COT
	CSC
	SEC

Program constants

Category	Available name
Angle	Degrees
	Grads
	Radians
Format	Standard
	Fixed
	Sci
	Eng
	Fraction
SeqPlot	Cobweb
	Stairstep
S1...5fit	Linear
	LogFit
	ExpFit
	Power
	QuadFit
	Cubic
	Logist
	User
StatMode	Stat1Var
	Stat2Var
StatPlot	Hist
	BoxW

Program commands

Category	Command	
Aplet	CHECK	
	SELECT	
	SETVIEWS	
	UNCHECK	
Branch	IF	
	THEN	
	ELSE	
	END	
	CASE	
	IFERR	
	RUN	
Drawing	STOP	
	ARC	LINE
	BOX	PIXOFF
	ERASE	PIXON
Graphic	FREEZE	TLINE
	DISPLAYR	MAKEGROB
	RDISPLAY	PLOTR
	RGROB	RPLOT
	GROBNOT	REPLACE
	GROBOR	SUB
	GROBXOR	ZEROGROB
Loop	FOR	UNTIL
	=	END
	TO	WHILE
	STEP	REPEAT
	END	END
	DO	BREAK
Matrix	ADDCOL	REDIM
	ADDROW	REPLACE
	DELCOL	SCALE
	DELROW	SCALEADD
	EDITMAT	SUB
	RANDMAT	SWAPCOL
		SWAPROW

Category	Command (Continued)	
Print	PRDISPLAY PRHISTORY PRVAR	
Prompt	BEEP CHOOSE DISP DISPTIME EDITMAT	FREEZE GETKEY INPUT MSGBOX WAIT
Stat-One	DO1VSTATS RANDSEED	SETFREQ SETSAMPLE
Stat-Two	DO2VSTATS SETDEPEND SETINDEP	

Selected status messages

Message	Meaning
Bad Argument Type	Incorrect input for this operation.
Bad Argument Value	The value is out of range for this operation.
Infinite Result	Math exception, such as 1/0.
Insufficient Memory	You must recover some memory to continue operation. Delete one or more matrices, lists, notes, or programs (using catalogs), or custom (not built-in) aplets (using SHIFT <i>MEMORY</i>).
Insufficient Statistics Data	Not enough data points for the calculation. For two-variable statistics there must be two columns of data, and each column must have at least four numbers.
Invalid Dimension	Array argument had wrong dimensions.

Message	Meaning (Continued)
Invalid Statistics Data	Need two columns with equal numbers of data values.
Invalid Syntax	The function or command you entered does not include the proper arguments or order of arguments. The delimiters (parentheses, commas, periods, and semi-colons) must also be correct. Look up the function name in the index to find its proper syntax.
Name Conflict	The (where) function attempted to assign a value to the variable of integration or summation index.
No Equations Checked	You must enter and check an equation (Symbolic view) before evaluating this function.
(OFF SCREEN)	Function value, root, extremum, or intersection is not visible in the current screen.
Receive Error	Problem with data reception from another calculator. Re-send the data.
Too Few Arguments	The command requires more arguments than you supplied.
Undefined Name	The global variable named does not exist.
Undefined Result	The calculation has a mathematically undefined result (such as 0/0).
Out of Memory	You must recover a lot of memory to continue operation. Delete one or more matrices, lists, notes, or programs (using catalogs), or custom (not built-in) aplets (using SHIFT MEMORY).

