

C47 Keyboard listing per layer

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
unshifted	1	1	[0]	F1	Function key 1 :	Function key 1 : unshifted keyboard	F-key			Function key
		2	[0]	F2	Function key 2 :	Function key 2 : unshifted keyboard	F-key			Function key
		3	[0]	F3	Function key 3 :	Function key 3 : unshifted keyboard	F-key			Function key
		4	[0]	F4	Function key 4 :	Function key 4 : unshifted keyboard	F-key			Function key
		5	[0]	F5	Function key 5 :	Function key 5 : unshifted keyboard	F-key			Function key
		6	[0]	F6	Function key 6 :	Function key 6 : unshifted keyboard	F-key			Function key
	2	1	[Σ+]	Σ+	Sigma+	Enter data into the statistics matrix (STATS) ; the [Σ+] key also is the hotkey that can be used for special key assignments in NORMAL mode, using menu Σ+ KEY (TI : nnn data point(s) ; Info : if a nx2 matrix is in X, Σ+ appends the data to the STATS matrix (creating it as necessary) ; Σ+ disables automatic stack lift for the next entry)	Command	Σ+		Summary statistics
		2	[1/x]	1/x	Reciprocal	Reciprocal (1/X) (Info : When X is a matrix 1/x inverts it ([M] ⁻¹))	Function (monadic)	1/x		Mathematics
		3	[√x]	√x	Square root	Square root of X (Info : When X is a matrix √x calculates its square root (MSQRT))	Function (monadic)	√x		Mathematics
		4	[LOG]	LOG	Common logarithm	Common logarithm (base 10)	Function (monadic)	LOG		Mathematics
		5	[LN]	LN	Natural logarithm	Natural logarithm (base e)	Function (monadic)	LN		Mathematics
		6	[XEQ]	XEQ	Execute	Execute function or program with global or local label (TAM : XEQ __ TamLabel menu ; Info : XEQ + TAM [XEQ] to enter global XEQ __ TamAlpha menu ; XEQ + button : on [TamLabel.1] F3 to enter XEQ : __ TamLocalLabel menu for easy access to local labels a-l, D-F or local named labels (additionally pressing button α on [TamLocalLabel.1] F3 or TAM [XEQ] to enter XEQ : __ TamAlpha menu))	Command (PEM)	XEQ		Programming
	3	1	[STO]	STO	Store	Store X in global register or variable and create variable if it does not exist ; maximum variable length is : 7 characters (TAM : STO __ TamSto menu (TamStoTVM when menu TVM is open) ; Info : local registers .00-.nn etc. need to be allocated using LocR nn+1 ; TI : Rnn : or '<var>' : (or R.nn : or or '<var>' :) ; Ref : https://47calc.com/doc/C47/Reference/C47_Variable_naming.pdf)	Command	STO		Stack
		2	[RCL]	RCL	Recall	Recall value from register or variable (TAM : RCL __ TamRcl menu (TamRclTVM when menu TVM is open) ; TI : Rnn : or '<var>' : (or R.nn : or or '<var>' :) ; Info : local registers .00-.nn etc. need to be allocated using LocR nn+1)	Command	RCL		Stack
		3	[R↓]	R↓	Roll down	Roll down stack	Command	R↓		Stack
		4	[SIN]	SIN	Sine	Sine	Function (monadic)	SIN		Trigonometry
		5	[COS]	COS	Cosine	Cosine	Function (monadic)	COS		Trigonometry
		6	[TAN]	TAN	Tangent	Tangent	Function (monadic)	TAN		Trigonometry
	4	1	[ENTER]	ENTER	Enter	If eRPN is SET, in Numeric Input Mode, ENTER pushes the input value onto the stack, and if CLEAR, then it also duplicates X to Y ; without input or in Program Entry Mode, ENTER always duplicates X to Y ; only if eRPN is CLEAR, automatic stack lift is disabled after ENTER (Info : Note that In Program Entry Mode, ENTER terminates numeric input without inserting an ENTER instruction (it is not necessary to separate numbers on consecutive program lines and - if eRPN is SET - ENTER would lead to unnecessary duplication of X) ; For assignments (ASN (f[i])), spell the name as 'ENTER' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command	ENTER		Stack
		2	[x↔y]	x↔y	Swap X and Y	Swap register X and register Y	Command	x↔y		Stack
		3	[+/-]	+/-	Change sign	Change sign of number or time value in X (Info : CHS does not copy input to LASTx ; 0. CHS returns -0. provided flag SPCRES is SET)	Function (monadic)	CHS		Numeric input
		4	[E]	E	Enter exponent	Enter exponent (decimal input, powers of 10)	Command			Numeric input
		5	[←]	←	Backspace	Backspace : clear input when in Numeric Input Mode ; when not in NIM, executes DROPx ; CLX depending on whether flag ←DROP is SET or CLEAR (default CLEAR) (TAM : BACK __ TamNonReg menu)	Command (nonpgm)	BACK		Cleanup
	5	1	[▲]	▲	Up	Scroll up for menus and browser screens or backstep through program steps (Info : To assign ↑ to a key or button, use ASN (f[i]) and spell the name as 'UP' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation
		2	[7]	7	Digit 7	Digit 7 (Fontcode : 0037 ₁₆)	Digit			Numeric input
		3	[8]	8	Digit 8	Digit 8 (Fontcode : 0038 ₁₆)	Digit			Numeric input
		4	[9]	9	Digit 9	Digit 9 (Fontcode : 0039 ₁₆)	Digit			Numeric input
		5	[÷]	÷	Divide	Divide Y by X	Function (dyadic)	÷		Mathematics
	6	1	[▼]	▼	Down	Scroll down for menus and browser screens or single step through program steps (Info : To assign ↓ to a key or button, use ASN (f[i]) and spell the name as 'DOWN' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
		2	[4]	4	Digit 4	Digit 4 (Fontcode : 0034 ₁₆)	Digit			Numeric input
		3	[5]	5	Digit 5	Digit 5 (Fontcode : 0035 ₁₆)	Digit			Numeric input
		4	[6]	6	Digit 6	Digit 6 (Fontcode : 0036 ₁₆)	Digit			Numeric input
		5	[x]	x	Multiply	Multiply Y by X	Function (dyadic)	x		Mathematics
	7	1	[f/g]	f/g	Shift f/g	Single press : shift f (yellow) ; double press : shift g (blue) (Info : SBI f ; g is shown if flag SBshfR is SET ; note that USER mode assignment to longerpress f/g is possible, if either HOME _F or MyM _F is SET, see Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	f/g-shift	f/g		Keyboard
		2	[1]	1	Digit 1	Digit 1 (Fontcode : 0031 ₁₆)	Digit			Numeric input
		3	[2]	2	Digit 2	Digit 2 (Fontcode : 0032 ₁₆)	Digit			Numeric input
		4	[3]	3	Digit 3	Digit 3 (Fontcode : 0033 ₁₆)	Digit			Numeric input
		5	[-]	-	Subtract	Subtract X from Y	Function (dyadic)	-		Mathematics
	8	1	[EXIT]	EXIT	Exit	Exit (Info : To assign EXIT to a key or button, use ASN (f[1]) and spell the name as 'EXIT' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation
		2	[0]	0	Digit 0	Digit 0 (Fontcode : 0030 ₁₆)	Digit			Numeric input
		3	[.]	.	Radix	Enter radix (default ".") (Info : Second press enters fraction mode ; set default symbol in menu RADIX from menu [DISP.1] gF2)	Symbol			Numeric input
		4	[R/S]	R/S	Run/Stop	Run/Stop (Program) (Info : In Program Entry Mode, R/S enters STOP)	Command			Programming
		5	[+]	+	Add	Add X to Y ; concatenate X and Y, including numbers, dates and times + strings and vice versa	Function (dyadic)	+		Mathematics and text functions
f-shift	2	1	f[Σ+]	→I	To integer	Convert to Long integer (0), Short integer (8.02-8.16) (cyclic, max 1000 digits) (Info : Short integer indicated by subscript ₁₀ ; can show TI: Ovrfl<0: or Ovrfl>64 bits : which can be abbreviated as OF, indicating overflow condition)	Function (monadic, cyclic)	→I		Integers
		2	f[1/x]	y ^x	y to the power x	Raise value in the Y-register to the power in the X-register	Function (dyadic)	y ^x		Mathematics
		3	f[√x]	x ²	Square	Square of X	Function (monadic)	x ²		Mathematics
		4	f[LOG]	10 ^x	10 to the power x	Raise 10 to the power in the X-register	Function (monadic)	10 ^x		Mathematics
		5	f[LN]	e ^x	e to the power x	Raise e to the power in the X-register	Function (monadic)	e ^x		Mathematics
		6	f[XEQ]	[α]	Alpha input	Open alpha menu to enter, edit and clear alpha input ; when TAM is active, open menu TamAlpha (Shortcut : longpress [XEQ] (even when M.14 is ON) ; Info : Alpha Input Mode is opened in UPPERCASE ; menu CAT [ALPHA] is available on keyboard alpha f[+] ; alpha g-shift characters can also be reached from alpha longpress keyboard)	MENU (item)	ALPHA		Text input
	3	1	f[STO]	x	Magnitude	Magnitude (absolute value) of Complex number	Function (monadic)	x		Complex numbers
		2	f[RCL]	%	Percent	X Percent of Y, keeping Y on stack -- see Formula_PC.png : https://47calc.com/doc/Images/Formula_PC.png	Function (dyadic)	%		Financial
		3	f[R+]	π	pi	Enter value of pi on the stack	Command			Constants
		4	f[SIN]	ASIN	Arc sine	Inverse sine (Info : Returns the principal value of the inverse sine of X ; if flag CPXRES is SET, the domain is extended beyond [-1, +1] and complex results may be returned)	Function (monadic)	ARCSIN		Trigonometry
		5	f[COS]	ACOS	Arc cosine	Inverse cosine (Info : Returns the principal value of the inverse cosine of X ; if flag CPXRES is SET, the domain is extended beyond [-1, +1] and complex results may be returned)	Function (monadic)	ARCCOS		Trigonometry
		6	f[TAN]	ATAN	Arc tangent	Inverse tangent (Info : Returns the principal value of the inverse tangent of X ; if flag SPCRES is SET, infinity input is allowed and the range is extended to [-90°, 90°] (inclusive))	Function (monadic)	ARCTAN		Trigonometry
	4	1	f[ENTER]	COMPLEX	Complex number	Convert to or from Complex number (2.0-2.5)	Function (dyadic)	COMPLEX		Complex numbers
		2	f[x↔y]	LASTx	Last X	Recall last X (Register L)	Command	LASTx		Stack
		3	f[+/-]	[MODE]	Mode settings	System (mode settings) settings (Info : MODE replaces R47 menu PREF ; Ref : https://47calc.com/doc/Application%20Notes/AN0028_C47_R47_JM_Configurability_Tour.pdf)	MENU	MODE		System
		4	f[E]	[DISP]	Display settings	Display settings (Info : On DISP page 3, special indicators are used : ♦ : all group settings comply, ◇ : ≥1 group settings differ ; Ref : https://47calc.com/doc/Application%20Notes/AN0028_C47_R47_JM_Configurability_Tour.pdf)	MENU	DISP		Display
		5	f[↶]	↶	Undo	Restore complete stack, LASTx, STATS and system flags (Info : Error 128 -- Undo failed: likely no memory -- may be raised)	Command (nonpgm)	UNDO		Stack
	5	1	f[▲]	≡▲	Backstep	Backstep (Shortcut : [▲])	Command (nonpgm)	BST		Programming
		2	f[7]	[EQN]	Equation editor	Equation editor to enter multiple expressions (Info : EIM = Equation Input Mode ; when no expression has been entered, only button NEW is shown in this menu ; when two or more expressions have been entered, use [▲] or [▼] to select ; menu CAT [EQN] is available on keyboard f[+] in EIM ; Ref : https://47calc.com/doc/C47/Reference/C47_Equation_editor.pdf)	MENU	EQN		Equations

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		3	f[8]	[ADV]	Advanced	Advanced functions, using RPN user programs (Ref : https://47calc.com/doc/Application%20Notes/AN0011_C47_JM_EQN_and_ADV_menu_solver_integrator_updated.pdf)	MENU	ADV		RPN Calculus and plotting
		4	f[9]	[MATX]	Matrix	Matrix functions ; a matrix is displayed in X and shown in other stack registers as [m×n Matrix] or [m×n C Matrix] when containing complex element(s) (Ref : https://47calc.com/doc/Application%20Notes/AN0020_C47_R47_Matrix_and_Vector.pdf ; Info : monadic functions work per matrix element (except 1/x, which is a shortcut for [M] ⁻¹ , use -1 y* instead ; and $\sqrt{x}$, which is a shortcut for MSQRT, use 0.5 y* instead) ; in edit mode, all functions work per element ; use registers to input calculation results)	MENU	MATX		Matrix operations
		5	f[÷]	[STAT]	Statistics	Statistics functions (Ref : https://47calc.com/doc/C47/Reference/C47_Formulas.pdf)	MENU	STAT		Summary statistics
	6	1	f[▼]	≡▼	Single step	Single step (Shortcut : [▼])	Command (nonpgm)	SST		Programming
		2	f[4]	[BASE]	Number base	Number base operations (Short integer (8.02-8.16)) (Split screen : Displaying value of X according to setting dSI (short integer split screen lines) : 0 : <none> ; 1 : HEX ; 2 : HEX/DEC ; 3 : HEX/BIN/DEC ; if flag BCD is SET, instead of HEX, BCD is displayed with subscript digits and followed by subscript _{bcd} ; Info : on BASE page 2, special indicators are used : ◇ : all group settings comply, ◊ : ≥1 group settings differ)	MENU	BASE		Number bases
		3	f[5]	[CONV]	Unit conversions	Unit conversions (Info : Flag CONV _{HP} may be SET for <to> ↔ <to> unit conversion buttons ; CLEAR for <from> → <from> unit conversion buttons (default SET) ; Ref : https://47calc.com/doc/Application%20Notes/AN0024_C47_R47_JM_Assigning_custom_conversion_pairs.pdf)	MENU	CONV		Unit conversions
		4	f[6]	[FLAG]	Flags	Setting, clearing and testing flags	MENU	FLAG		Programming
		5	f[x]	[PROB]	Probability	Probability functions	MENU	PROB		Probability
	7	2	f[1]	ASN	Assign	Assign function, menu or character to a keyboard key or to a button in a menu ; for options including creating user defined menus, see reference page (TAM : ASSIGN α (f[XEQ]) activates "ASSIGN ' _ TamAlpha menu _ " and allows a function or command to be spelled, to assign it to a key or button ; Info : "ASSIGN _ _ " indicates that a key or button can be pressed to assign it to another button or key ; use button ASN ([ALPHA.1]fF4) for character assignments in Alpha Input Mode ; this button is not shown in Program Entry Mode ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command	ASSIGN		Text input
		3	f[2]	USER	USER mode	Switch on xxx ; not programmable - in PEM, use flag USER (Info : To assign USER to a key or button, use ASN (f[1]) and spell the name as 'USER' ; during assignment, pressing USER (f[2]) opens MyMenu ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Setting		OFF	Customisation
		4	f[3]	[P.FN]	Programming functions	User menu to quickly access selected menus and functions for programming ; all buttons are user assignable ('riveted' look) ; initially populated for basic programming options ; reset using PFN.R (Shortcut : PEM long [EXIT] ; PEM triple [f/g] (because either HOME _r or MyM _r is SET and either HOME _b or MyM _b is SET) ; PEM longer [f/g] (because either HOME _r or MyM _r is SET and either HOME _b or MyM _b is SET))	MENU	P.FN		Programming
		5	f[-]	[PRINT]	Printing	Printing functions (Info : Infrared printing is in development for new models and simulator, but is currently not available on DM42 hardware ; Ref : https://47calc.com/doc/Application%20Notes/AN0021_C47_R47_DL_Printing.pdf)	MENU	PRINT		Printing
	8	1	f[EXIT]	OFF	Off	Turn off calculator (Info : On the simulator, pressing OFF or quitting the application saves the calculator state in : backup.cfg)	Command	OFF		System
		2	f[0]	VIEW	View	View register or variable (with preceding TI) (TAM : VIEW _ _ Tam menu ; Info : if ≡ACT is SET, VIEW will print when executed from the keyboard in MAN, NORM or TRACE ; in Program Entry Mode, ≡EN must be SET as well ; if ≡ACT is CLEAR and ≡EN is SET, VIEW halts execution (STOP))	Command	VIEW		Status
		3	f[.]	SHOW	Show	Show item in maximum detail, according to data type (tag) : Long integers up to 10 ¹²³ will be displayed in large numeric font ; up to 10 ⁴¹⁶ in the medium standard font and up to 10 ¹⁰⁰⁰ in tiny font ; Real numbers in SIG 6, UNIT 3, SCI 3 ; Complex numbers (RECT and POLAR) in SIG 4 ; Virtual compound data types are shown with all digits in large, medium or tiny font (Info : Key [R/S] changes view for Long integers ; Virtual compound data types (font size, next page) ; use [▲] or [▼] to scroll through all registers (and matrix variables) ; when menu XFCNS is open, if XYZ contains result in Virtual compound data type, SHOW displays X : XY+Z = <value> and ditto for T : TA+B and for the dedicated triple register storage, e.g. R90 : FMA: (fused multiply-add) ; Ref : https://47calc.com/doc/C47/Reference/C47_Datatypes.pdf)	Command	SHOW		Stack and registers
		4	f[R/S]	PRGM	Programming	Enter Program Entry Mode (PEM) and activate menu P.FN (Info : Program Entry Mode starts in UPPERcase)	Command			Programming

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
		5	f[+]	[CAT]	Catalog	Catalog of all items (functions, characters, programs, variables, menus) (Info : Press [EXIT] to exit catalogs)	MENU	CATALOG		Catalog
g-shift	2	1	g[Σ+]	a ^{b/c}	Fractions modes	Set and cycle fractions modes : proper (mixed), improper fractions (denominator determined by DMX, DENFIX, DENANY) ; or fractional approximations including irrationals ; exit fractions mode via .d (g[LOG]) ; starts in mode last used or as set by flags PROPF, FRACT and IRFRAC ; When FRCYC is SET full cycle is available, when CLEAR, flag PROPF is excluded (used as is) and OFF state is included in cycle (Shortcut : <a> [.] [.] <c> ; Info : IRFRAC and FRACT are linked (both cannot be SET at the same time) ; SBI ×I or ·I indicates that approximate multiples or fractions can be used, of the irrational numbers $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$, $\sqrt{7}$, ϕ , π^{-2} , π^{-1} , $\sqrt{\pi}$, π , π^2 , e^{-2} , e^{-1} , e and e^2 (with tolerance 10^{-24}) ; Prefix $\approx$ + <approximation> ; multiplication symbol SET for displaying multiplication symbol × ; SBI is shown if flag SBfrac is SET ; Ref : https://47calc.com/doc/C47/Reference/C47_Fractions.pdf)	Setting (cyclic, pgm, stack)		OFF	Fractions
		2	g[1/x]	#	Number base	Set number base ; operates on all stack registers depending on BASEHP (TAM : →INT __ TamNonReg menu ; #TAM shortcuts : B = BIN ; D = DEC ; ENTER = DEC ; H = HEX ; O = OCT ; Info : SBI is shown if flag SBfrac is SET ; exit base mode by .d, →I, [.] or CLRMOD (longerpress [EXIT]))	Setting (pgm, stack)	→INT	OFF	Number bases
		3	g[√x]	.ms	Minutes & seconds	Convert sexagesimal format input sequence or decimal stack value to hh:mm:ss hours or dd:mm:ss degrees (cyclic) (Info : NIM input treated as sexagesimal (hh/dd:mm:ss) format ; stack input treated as decimal value)	Function (monadic, cyclic)	.ms		Time/angle conversions
		4	g[LOG]	.d	Decimal (Real) or Date	Convert to decimal (Real) or date value ; untag (ADM) angle ; clear Fractions Mode, #BASE Mode ; convert angles / Times / Dates to Real ; convert NIM input to Date (according to CLK date format settings and implied conversion set by YY ; convert Complex number with zero imaginary part to Real ; when editing angles using EDIT, key .d removes the angle tag (Normal Mode and PEM) ; when editing short integers, key .d removes the base (Normal Mode and PEM) ; in PEM, .d registers as →REAL (TI : decimal h: or yyyy.mmdd: ; Ref : https://47calc.com/doc/C47/Reference/C47_Date_formats.pdf)	Function (monadic)			Reals
		5	g[LN]	LBL	Label	Create global or local label ; create global label by pressing key α (f[XEQ]) and entering the name, which will be displayed as '<label>' ; local labels only exist within the scope of the program ; they are numeric : 01-99, single letter : a-l or {A}-[E], F, {G}-[L] ; or created as local named labels, by pressing button : ([TamLabel.1]F3), then button α ([TamLocalLabel.1]F3) or key α (f[XEQ]) and entering the name, which will be displayed as '<label>' ; maximum label length is : 7 characters (TAM : LBL __ TamLabel menu ; Info : LBL + TAM [XEQ] to enter global LBL '._ TamAlpha menu ; LBL + button : on [TamLabel.1]F3 to enter LBL :__ TamLocalLabel menu to create local labels a-l, D-F or local named labels (additionally pressing button α on [TamLocalLabel.1]F3 or TAM [XEQ] to enter LBL :._ TamAlpha menu) ; note that a label may be used multiple times in a program ; local labels are searched forwards from the GT0 or XEQ command, before global labels, which are searched from the start of program memory)	Command (PEM)	LBL		Programming
		6	g[XEQ]	GT0	Go to	Go to global or local label ; GT0. to go to (local) label or step ; GT0.. to move the program pointer to the end of program memory ; GT0↑ to go to the start of the (previous) program or jump to the start of program memory ; GT0↓ to go to the next program or jump to the end of program memory (TAM : GT0 __ TamLabel menu ; Info : GT0 + TAM [XEQ] to enter global GT0 '._ TamAlpha menu ; GT0 + button : on [TamLabel.1]F3 to enter GT0 :__ TamLocalLabel menu for easy access to local labels a-l, D-F or local named labels (additionally pressing button α on [TamLocalLabel.1]F3 or TAM [XEQ] to enter GT0 :._ TamAlpha menu))	Command (PEM)	GT0		Programming
	3	1	g[ST0]	∠	Argument (angle)	Argument (angle) of Complex number	Function (monadic)	∠		Complex numbers
		2	g[RCL]	Δ%	Delta percent	Delta percentage from Y to X, keeping Y on stack -- see Formula_DELTAPC.png : https://47calc.com/doc/Images/Formula_DELTAPC.png (TI : Δ% :)	Function (dyadic)	Δ%		Financial
		3	g[R+]	$\sqrt[n]{y}$	xth root	Xth root of Y	Function (dyadic)	$\sqrt[n]{y}$		Mathematics
		4	g[SIN]	i	Complex number (rectangular notation)	Enter complex number (rectangular notation) whether RECT is set or not ; e.g. a i b ENTER results in a + b i (Info : In NIM, works like CC with RECT set ; displayed according to flag CPXj when in RECT mode)	Command	op_i		Complex numbers
		5	g[COS]	→R	To rectangular	Transform polar to rectangular coordinates (dyadic, stack conventions according to flag RPH SET or CLEAR) ; transform Complex number or 2D/3D vector to rectangular notation (monadic) and set RECT tag (TI : x : Re = ; y : Im = (RECT) ; Info : in Program Entry Mode, flag RPH determines whether →RECThp or →RECTcx is stored ; vector display depends on flag 3Dxyz, for 2D rectangular vector : [ij] [v1 v2] ; 3D rectangular vector : [ijk] [v1 v2 v3])	Function (monadic, dyadic)	→RECT		Complex and coordinates

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		6	g[TAN]	→P	To polar	Transform rectangular to polar coordinates (dyadic, stack conventions according to flag RPHF SET or CLEAR); transform Complex number or 2D/3D vector to polar notation (monadic) and set POLAR tag (TI : r = ; θ = (POLAR) ; Info : in Program Entry Mode, flag RPHF determines whether →POLHP or →POLCX is stored; for a 3D vector in X, function →POLAR (→P) cycles through →SPH, then →CYL; vector display depends on flag 3Dxyz, for 2D polar vector : [rθ _i] [v ₁ v ₂] ^P ; 3D spherical vector : [ρθ _i φ _k] _M [v ₁ v ₂ v ₃] ^S ; 3D cylindrical vector : [rθ _i k] [v ₁ v ₂ v ₃] ^C	Function (monadic, dyadic)	→POLAR		Complex and coordinates
	4	1	g[ENTER]	[CPX]	Complex functions	Complex functions (Ref : https://47calc.com/doc/Application%20Notes/AN0001_C47_R47_JM_Complex_number_engineering_example.pdf)	MENU	CPX		Complex numbers
		2	g[x↔y]	[STK]	Stack	Stack functions	MENU	STK		Stack
		3	g[+/-]	[TRG]	Trigonometry	Trigonometry functions (Info : TRG replaces R47 menu TRG_R47; Ref : https://47calc.com/doc/C47/Reference/C47_DMS-HMS.pdf)	MENU	TRG		Trigonometry
		4	g[E]	[EXP]	Exponential	Exponential functions	MENU	EXP		Mathematics
		5	g[←]	[CLR]	Clear	Clear flags, programs, registers, stacks, variables and reset calculator	MENU	CLR		Cleanup
	5	1	g[▲]	REGS	Register browser	Browse all registers (Shortcut : [.] : Switch register/variable view, [R/S] : Switch contents/storage view, [RCL] : Recall bottom item, [▲], [▼], ABCDEGHIJKLMNO, 00..99 : Navigate, [EXIT] : Exit Register browser; Ref : https://47calc.com/doc/C47/Reference/C47_Registers.pdf)	Browser	REGS		Status
		2	g[7]	[HOME]	HOME	User menu to quickly access user selected menus and functions; all buttons are user assignable ('riveted' look); initially populated for basic scitech options; reset using HOME.R (Shortcut : triple [f/g] (because HOME ^R is SET); longerpress [f/g] (because HOME ^R is SET))	MENU	HOME		Customisation
		3	g[8]	[FIN]	Financial	Financial calculations including time value of money (TVM) and TVM cash flow (Ref : https://47calc.com/doc/C47/Reference/C47_Formulas.pdf)	MENU	FIN		Financial
		4	g[9]	[X.FN]	Extended functions	Extended functions (Bessel, Bernoulli, Gamma, Elliptical, Orthogonal, etcetera) (Ref : https://47calc.com/doc/C47/Reference/C47_Prime_numbers.pdf)	MENU	X.FN		Mathematics
		5	g[÷]	[PLOT]	Plotting	Plotting and summation functions (Info : When SDIGS is set to the maximum value of 34, plotting uses 15 instead, otherwise it uses the value set by SDIGS)	MENU	PL0T		Plotting and summation
	6	1	g[▼]	FLGS	Flag browser	Browse status pages (flags 00-99, lettered flags, status overview, system flags) (Info : Press [EXIT] to exit Flag browser and browse using [▲] and [▼]; browser STATUS in menu FLAG shows the same status pages in a different order; Ref : https://47calc.com/doc/C47/Reference/C47_Flags_p1.pdf)	Browser	FLGS		Status
		2	g[4]	[BITS]	Bitwise functions	Bitwise functions	MENU	BITS		Bits and bytes
		3	g[5]	[CLK]	Clock	Clock functions, including setting date and time and julian day numbers (astronomy) (Info : Use TDISP to set time display format : 0 = full ; 1,2 = hours/minutes ; 3 = hours/minutes/seconds ; 4,5,6 = 1,2,3 decimal places for the seconds; Ref : https://47calc.com/doc/C47/Reference/C47_Date_formats.pdf)	MENU	CLK		Time functions
		4	g[6]	[REAL]	Real	Functions on Real numbers and Complex numbers	MENU	REAL		Reals
		5	g[x]	[INTS]	Integers	Short integer functions	MENU	INTS		Integers
	7	2	g[1]	[KEYS]	Keys	Layouts, ribbons and special key assignments (Ref : https://47calc.com/doc/C47/Reference/C47_Keyboards_side_by_side.pdf)	MENU	KEYS		Customisation
		3	g[2]	[α.FN]	Alpha functions	Alpha (text string) functions	MENU	α.FN		Text functions
		4	g[3]	[LOOP]	Looping	Looping (programming) functions	MENU	LOOP		Programming
		5	g[-]	[I/O]	Input/Output	I/O functions (read/load, write/save, export program, in-export registers, SNAP, audio, print)	MENU	I/O		Input-Output
	8	1	g[EXIT]	SNAP	Screenshot	Save screenshot to backup file (.bmp) and save contents of stack or alpha buffer as backup file (.REGS.TSV) in FAT; plays clicking sound (Shortcut : [f/g] + [E] (DMCP-shortcut for screenshot bitmap only); Info : screenshot is saved in file SCREENS/<YYYYMMDD-HHMMSS00>.bmp; SNAP also appends data to file DATA/<YYYYMMDD-HHMMSS00>.REGS.TSV; new datafile after timeout of 2 minutes)	Command	SNAP		Input-Output
		2	g[0]	[STOPW]	Stopwatch	Stopwatch with running time, counter and countdown (playing BEEP after running down)	App	STOPW		Time functions
		3	g[.]	[INFO]	Information	System information and some information about the value in the X-register	MENU	INFO		Information
		4	g[R/S]	[TEST]	Testing	Testing functions	MENU	TEST		Programming
		5	g[+]	[CNST]	Constants	Important scientific and technical constants (Info : In Program Entry Mode, constants selected from the menu are stored in programs as "# ", the reference number, the label and the abbreviated name; in the equation editor the label is simply preceded by "#"; Type characters 1-2 to search; TI : <constant abbreviation> = <value>; Ref : https://47calc.com/doc/C47/Reference/C47_Constants.pdf)	MENU (ASM)	CNST		Catalog

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
doublepress	2	6	double [XEQ]	[TamAlpha*]	TAM mode (alpha)	Transient Alpha Mode is activated for trailing input (alpha) (Shortcut : Activated from TAM menus by α (f[XEQ]) or TAM [XEQ] ; Info : Alpha Input Mode is opened in UPPERCASE for labels, lowercase for variables ; menu CAT [ALPHA] is available on keyboard alpha f[+] ; alpha g-shift characters can also be reached from alpha longpress keyboard)	MENU (TAM)			Trailing input
	4	5	double [↵]	DROPx*	Drop X	Drop X from stack (Shortcut : double [↵] (if $\leftarrow$ DROP is CLEAR -- default))	Command	DROPx		Stack
	7	1	double [f/g]	<g>*	Shift g	Shift g (blue) (Shortcut : double [f/g] ; longpress [f/g] ; Info : SBI position depends on flag SBshfr)	g-shift	g		Keyboard
triplepress		1	triple [f/g]	[HOME*]	HOME	User menu to quickly access user selected menus and functions ; all buttons are user assignable ('riveted' look) ; initially populated for basic scitech options ; reset using HOME.R (Shortcut : triple [f/g] (because HOME ^g is SET) ; longerpress [f/g] (because HOME ^g is SET))	MENU	HOME		Customisation
alpha	2	1	alpha [Σ+]	A	A	Character A (Fontcode : 0041 ₁₆)	Character			Numeric input and characters
		2	alpha [1/x]	B	B	Character B (Fontcode : 0042 ₁₆)	Character			Numeric input and characters
		3	alpha [√x]	C	C	Character C (Fontcode : 0043 ₁₆)	Character			Numeric input and characters
		4	alpha [LOG]	D	D	Character D (Fontcode : 0044 ₁₆)	Character			Numeric input and characters
		5	alpha [LN]	E	E	Character E (Fontcode : 0045 ₁₆)	Character			Numeric input and characters
		6	alpha [XEQ]	F	F	Character F (Fontcode : 0046 ₁₆)	Character			Numeric input and characters
	3	1	alpha [ST0]	G	G	Character G (Fontcode : 0047 ₁₆)	Character			Characters
		2	alpha [RCL]	H	H	Character H (Fontcode : 0048 ₁₆)	Character			Characters
		3	alpha [R↓]	I	I	Character I (Fontcode : 0049 ₁₆)	Character			Characters
		4	alpha [SIN]	J	J	Character J (Fontcode : 004A ₁₆)	Character			Characters
		5	alpha [COS]	K	K	Character K (Fontcode : 004B ₁₆)	Character			Characters
		6	alpha [TAN]	L	L	Character L (Fontcode : 004C ₁₆)	Character			Characters
	4	1	alpha [ENTER]	ENTER	Enter	If eRPN is SET, in Numeric Input Mode, ENTER pushes the input value onto the stack, and if CLEAR, then it also duplicates X to Y ; without input or in Program Entry Mode, ENTER always duplicates X to Y ; only if eRPN is CLEAR, automatic stack lift is disabled after ENTER (Info : Note that In Program Entry Mode, ENTER terminates numeric input without inserting an ENTER instruction (it is not necessary to separate numbers on consecutive program lines and - if eRPN is SET - ENTER would lead to unnecessary duplication of X) ; For assignments (ASN (f[1])), spell the name as 'ENTER' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command	ENTER		Stack
		2	alpha [x↔y]	M	M	Character M (Fontcode : 004D ₁₆)	Character			Characters
		3	alpha [+/-]	N	N	Character N (Fontcode : 004E ₁₆)	Character			Characters
		4	alpha [E]	O	O	Character O (Fontcode : 004F ₁₆)	Character			Characters
		5	alpha [←]	←	Backspace	Backspace : clear input when in Numeric Input Mode ; when not in NIM, executes DROPx ; CLX depending on whether flag $\leftarrow$ DROP is SET or CLEAR (default CLEAR) (TAM : BACK __ TamNonReg menu)	Command (nonpgm)	BACK		Cleanup
	5	1	alpha [▲]	↑ (HOME←)	Cursor to begin	Jump to top left of alpha input	Command			Text input
		2	alpha [7]	P	P	Character P (Fontcode : 0050 ₁₆)	Character			Characters
		3	alpha [8]	Q	Q	Character Q (Fontcode : 0051 ₁₆)	Character			Characters
		4	alpha [9]	R	R	Character R (Fontcode : 0052 ₁₆)	Character			Characters
		5	alpha [÷]	S	S	Character S (Fontcode : 0053 ₁₆)	Character			Characters
	6	1	alpha [▼]	↓ (END→)	Cursor to end	Jump to bottom right of alpha input	Command			Text input
		2	alpha [4]	T	T	Character T (Fontcode : 0054 ₁₆)	Character			Characters
		3	alpha [5]	U	U	Character U (Fontcode : 0055 ₁₆)	Character			Characters
		4	alpha [6]	V	V	Character V (Fontcode : 0056 ₁₆)	Character			Characters
		5	alpha [x]	W	W	Character W (Fontcode : 0057 ₁₆)	Character			Characters
	7	1	alpha [f/g]	f/g	Shift f/g	Single press : shift f (yellow) ; double press : shift g (blue) (Info : SBI f ; g is shown if flag SBshfr is SET ; note that USER mode assignment to longerpress f/g is possible, if either HOME ^g or MyM ^g is SET, see Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	f/g-shift	f/g		Keyboard
		2	alpha [1]	X	X	Character X (Fontcode : 0058 ₁₆)	Character			Characters
		3	alpha [2]	Y	Y	Character Y (Fontcode : 0059 ₁₆)	Character			Characters
		4	alpha [3]	Z	Z	Character Z (Fontcode : 005A ₁₆)	Character			Characters

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
		5	alpha [-]	_	Underscore	Character _ (Fontcode : 005F ₁₆)	Character			Characters
	8	1	alpha [EXIT]	EXIT	Exit	Exit (Info : To assign EXIT to a key or button, use ASN (f[1]) and spell the name as 'EXIT' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation
		2	alpha [0]	:	Colon	Character : ; in the equation editor, the colon can be used to name an expression (<name> : <expression>) (Shortcut : alpha [0] ; Fontcode : 003A ₁₆)	Character			Characters
		3	alpha [,]	,	Comma	Character , (Fontcode : 002C ₁₆)	Character			Characters
		4	alpha [R/S]	?	Question mark	Character ? (Fontcode : 003F ₁₆)	Character			Characters
		5	alpha [+]	␣	Space	#N/A	Character	#N/A	#N/A	Characters
alpha f-shift	2	1	alpha f[Σ+]	a	a	Character a (Fontcode : 0061 ₁₆)	Character			Characters
		2	alpha f[¹ /x]	b	b	Character b (Fontcode : 0062 ₁₆)	Character			Characters
		3	alpha f[√x]	c	c	Character c (Fontcode : 0063 ₁₆)	Character			Characters
		4	alpha f[LOG]	d	d	Character d (Fontcode : 0064 ₁₆)	Character			Characters
		5	alpha f[LN]	e	e	Character e (Fontcode : 0065 ₁₆)	Character			Characters
		6	alpha f[XEQ]	f	f	Character f (Fontcode : 0066 ₁₆)	Character			Characters
	3	1	alpha f[STO]	g	g	Character g (Fontcode : 0067 ₁₆)	Character			Characters
		2	alpha f[RCL]	h	h	Character h (Fontcode : 0068 ₁₆)	Character			Characters
		3	alpha f[R4]	i	i	Character i (Fontcode : 0069 ₁₆)	Character			Characters
		4	alpha f[SIN]	j	j	Character j (Fontcode : 006A ₁₆)	Character			Characters
		5	alpha f[COS]	k	k	Character k (Fontcode : 006B ₁₆)	Character			Characters
		6	alpha f[TAN]	l	l	Character l (Fontcode : 006C ₁₆)	Character			Characters
	4	1	alpha f[ENTER]	X.EDIT	Edit X	Edit contents of stack register X as text (Shortcut : alpha long [ENTER] ; EIM long [ENTER])	Command	X.EDIT		Text input
		2	alpha f[x↔y]	m	m	Character m (Fontcode : 006D ₁₆)	Character			Characters
		3	alpha f[+/-]	n	n	Character n (Fontcode : 006E ₁₆)	Character			Characters
		4	alpha f[E]	o	o	Character o (Fontcode : 006F ₁₆)	Character			Characters
		5	alpha f[←]	CLA	Clear alpha	In Alpha Input Mode, clear alpha input buffer ; in Equation Input Mode, clear equation (alpha) input buffer (Shortcut : alpha f[←] ; alpha g[←] ; alpha long [←] ; EIM long [←])	Command			Text input
	5	1	alpha f[▲]	CASE UP	Alpha lock upwards	Move up alpha lock from A to a to N (Shortcut : alpha f[▲] ; Info : sets initial case of menu A...Ω/α...ω and αINTL/αintl)	Alpha-shift			Text input
		2	alpha f[7]	p	p	Character p (Fontcode : 0070 ₁₆)	Character			Characters
		3	alpha f[8]	q	q	Character q (Fontcode : 0071 ₁₆)	Character			Characters
		4	alpha f[9]	r	r	Character r (Fontcode : 0072 ₁₆)	Character			Characters
		5	alpha f[÷]	s	s	Character s (Fontcode : 0073 ₁₆)	Character			Characters
	6	1	alpha f[▼]	CASE DN	Alpha lock downwards	Move down alpha lock from N to A to a (Shortcut : alpha f[▼] ; Info : sets initial case of menu A...Ω/α...ω and αINTL/αintl)	Alpha-shift			Text input
		2	alpha f[4]	t	t	Character t (Fontcode : 0074 ₁₆)	Character			Characters
		3	alpha f[5]	u	u	Character u (Fontcode : 0075 ₁₆)	Character			Characters
		4	alpha f[6]	v	v	Character v (Fontcode : 0076 ₁₆)	Character			Characters
		5	alpha f[x]	w	w	Character w (Fontcode : 0077 ₁₆)	Character			Characters
	7	1	alpha f[f/g]	<f>lipchar	Flip case (one character)	Set next alpha entry to flip lower/UPPER case (one character) (Shortcut : alpha f + <char>)	Alpha-shift (special)			Text input
		2	alpha f[1]	x	x	Character x (Fontcode : 0078 ₁₆)	Character			Characters
		3	alpha f[2]	y	y	Character y (Fontcode : 0079 ₁₆)	Character			Characters
		4	alpha f[3]	z	z	Character z (Fontcode : 007A ₁₆)	Character			Characters
		5	alpha f[-]	e	eEuler	Character e (Shortcut : alpha f[-] ; Info : Fontcode : 2147 ₁₆)	Character			Characters
	8	1	alpha f[EXIT]	OFF	Off	Turn off calculator (Info : On the simulator, pressing OFF or quitting the application saves the calculator state in : backup.cfg)	Command	OFF		System
		2	alpha f[0]	;	Semicolon	Character ; (Shortcut : alpha f[0] ; Info : Fontcode : 003B ₁₆)	Character			Characters
		3	alpha f[.]	#	Number sign	Number sign, used for Short integer (8.02-8.16) base (Shortcut : alpha f[.] ; Fontcode : 0023 ₁₆)	Character			Number bases and characters
		4	alpha f[R/S]	!	Exclamation mark	In edit equation, used as Factorial x! or Γ(x+1) (Shortcut : alpha f[R/S] ; Fontcode : 0021 ₁₆)	Character			Mathematics and characters
		5	alpha f[+]	[CAT]	Catalog (alpha)	Catalog of items available in Alpha Input Mode (Info : CAT [EQN] is available on keyboard f[+] in EIM)	MENU	CATe		Catalog
alpha g-shift	2	1	alpha g[Σ+]	Σ	SIGMA	Character Σ (Shortcut : alpha g[Σ+] ; Info : Fontcode : 03A3 ₁₆ ; press [▼] for σ at [α...ω.2] F2)	Character			Characters
		2	alpha g[¹ /x]	^	Circumflex accent	Raise to power (Shortcut : alpha g[¹ /x] ; Fontcode : 005E ₁₆)	Character			Mathematics and characters

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
		3	alpha g[$\sqrt{x}$]	✓	Square root	Square root (Shortcut : alpha g[$\sqrt{x}$] ; Fontcode : 221A ₁₆)	Character			Mathematics and characters
		4	alpha g[LOG]	LOG	Common logarithm (string)	Common logarithm (base 10) (Shortcut : alpha g[LOG] ("LOG"))	Character			Mathematics and characters
		5	alpha g[LN]	LN	Natural logarithm (string)	Natural logarithm (base e) (Shortcut : alpha g[LN] ("LN"))	Character			Mathematics and characters
		6	alpha g[XEQ]	α	alpha	Character α (Shortcut : alpha g[XEQ] ; Info : Fontcode : 03B1 ₁₆ ; press [▲] for A at [A...Ω.1] F1)	Character			Characters
	3	1	alpha g[STO]		Bar	Open or close absolute value (Shortcut : alpha g[STO] ; Fontcode : 007C ₁₆)	Character			Mathematics and characters
		2	alpha g[RCL]	Δ	DELTA	Character Δ (Shortcut : alpha g[RCL] ; Info : Fontcode : 0394 ₁₆ ; press [▼] for δ at [α...ω.1] F4)	Character			Characters
		3	alpha g[R+]	π	pi	Greek character π (Shortcut : alpha g[R+] ; Info : Fontcode : 03C0 ₁₆ ; press [▲] for Π at [A...Ω.1] gF5)	Character			Mathematics and characters
		4	alpha g[SIN]	SIN	Sine (string)	Sine (Shortcut : alpha g[SIN] ("SIN"))	Character			Trigonometry and characters
		5	alpha g[COS]	COS	Cosine (string)	Cosine (Shortcut : alpha g[COS] ("COS"))	Character			Trigonometry and characters
		6	alpha g[TAN]	TAN	Tangent (string)	Tangent (Shortcut : alpha g[TAN] ("TAN"))	Character			Trigonometry and characters
	4	1	alpha g[ENTER]	↵	Carriage return	Character ↵ (Shortcut : alpha g[ENTER] ; alpha longer [ENTER] ; EIM longer [ENTER] ; Info : Fontcode : 21B5 ₁₆)	Character			Characters
		2	alpha g[x↔y]	↔	Left right arrow	Character ↔ (Shortcut : alpha g[x↔y] ; Info : Fontcode : 21C4 ₁₆)	Character			Characters
		3	alpha g[+/-]	±	Plus-minus	Character ± (Shortcut : alpha g[+/-] ; Info : Fontcode : 00B1 ₁₆)	Character			Characters
		4	alpha g[E]	<E>	Exponent sign (AIM)	Character E (displays as outline E in numeric font) (Shortcut : alpha g[E] ; Info : Fontcode : 2073 ₁₆)	Character			Characters
		5	alpha g[←]	CLA	Clear alpha	In Alpha Input Mode, clear alpha input buffer ; in Equation Input Mode, clear equation (alpha) input buffer (Shortcut : alpha f[←] ; alpha g[←] ; alpha long [←] ; EIM long [←])	Command			Text input
	5	1	alpha g[▲]	↑ (α ^{SUP})	Superscript	Superscript (Shortcut : alpha g[▲])	Alpha-shift			Text input
		2	alpha g[7]	7	Digit 7	Digit 7 (Fontcode : 0037 ₁₆)	Character			Numeric input
		3	alpha g[8]	8	Digit 8	Digit 8 (Fontcode : 0038 ₁₆)	Character			Numeric input
		4	alpha g[9]	9	Digit 9	Digit 9 (Fontcode : 0039 ₁₆)	Character			Numeric input
		5	alpha g[÷]	÷	Obelus	Character ÷ (Shortcut : alpha g[÷] ; Info : Fontcode : 00F7 ₁₆)	Character			Characters
	6	1	alpha g[▼]	↓ (α _{SUB})	Subscript	Subscript (Shortcut : alpha g[▼])	Alpha-shift			Text input
		2	alpha g[4]	4	Digit 4	Digit 4 (Fontcode : 0034 ₁₆)	Character			Numeric input
		3	alpha g[5]	5	Digit 5	Digit 5 (Fontcode : 0035 ₁₆)	Character			Numeric input
		4	alpha g[6]	6	Digit 6	Digit 6 (Fontcode : 0036 ₁₆)	Character			Numeric input
		5	alpha g[x]	x	Cross	Character × (Shortcut : alpha g[x] ; Info : Fontcode : 00D7 ₁₆)	Character			Characters
	7	1	alpha g[f/g]	di<g>it	Set numeric (one digit)	Set next alpha entry to numeric (one digit) or other alpha g-shifted character (Shortcut : alpha g + <char>)	Alpha-shift (special)			Text input
		2	alpha g[1]	1	Digit 1	Digit 1 (Fontcode : 0031 ₁₆)	Character			Numeric input
		3	alpha g[2]	2	Digit 2	Digit 2 (Fontcode : 0032 ₁₆)	Character			Numeric input
		4	alpha g[3]	3	Digit 3	Digit 3 (Fontcode : 0033 ₁₆)	Character			Numeric input
		5	alpha g[-]	-	Minus	Minus (Shortcut : alpha g[-] ; Info : Fontcode : 002D ₁₆)	Character			Characters
	8	1	alpha g[EXIT]	SNAP	Screenshot	Save screenshot to backup file (.bmp) and save contents of stack or alpha buffer as backup file (.REGS.TSV) in FAT ; plays clicking sound (Shortcut : [f/g] + [E] (DMCP-shortcut for screenshot bitmap only) ; Info : screenshot is saved in file SCREENS/<YYYYMMDD-HHMMSS00>.bmp ; SNAP also appends data to file DATA/<YYYYMMDD-HHMMSS00>.REGS.TSV ; new datafile after timeout of 2 minutes)	Command	SNAP		Input-Output
		2	alpha g[0]	0	Digit 0	Digit 0 (Fontcode : 0030 ₁₆)	Character			Numeric input
		3	alpha g[.]	.	Full stop	Character . (Shortcut : alpha g[.] ; Info : Fontcode : 002E ₁₆)	Character			Characters
		4	alpha g[R/S]	/	Slash	Character / (Shortcut : alpha g[R/S] ; Info : Fontcode : 002F ₁₆)	Character			Characters
		5	alpha g[+]	+	Plus	Plus (Shortcut : alpha g[+] ; Info : Fontcode : 002B ₁₆)	Character			Characters
TAM	2	1	TAM [Σ+]	{A}	Register A	Easy access to Register A (104) : Stack level 5 (Shortcut : STO/RCL {A} ; TI : A:)	EasyAccess (TAM)			Trailing input
		2	TAM [1/x]	{B}	Register B	Easy access to Register B (105) : Stack level 6 (Shortcut : STO/RCL {B} ; TI : B:)	EasyAccess (TAM)			Trailing input
		3	TAM [√x]	{C}	Register C	Easy access to Register C (106) : Stack level 7 (Shortcut : STO/RCL {C} ; TI : C:)	EasyAccess (TAM)			Trailing input
		4	TAM [LOG]	{D}	Register D	Easy access to Register D (107) : Stack level 8 (Shortcut : STO/RCL {D} ; TI : D:)	EasyAccess (TAM)			Trailing input
		5	TAM [LN]	{E}	Register E	Easy access to Register E (217) : General purpose register E (Shortcut : STO/RCL {E} ; TI : E:)	EasyAccess (TAM)			Trailing input

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
		6	TAM [XEQ]	[TamAlpha]	TAM mode (alpha)	Transient Alpha Mode is activated for trailing input (alpha) (Shortcut : Activated from TAM menus by α (f[XEQ]) or TAM [XEQ] ; Info : Alpha Input Mode is opened in UPPERCASE for labels, lowercase for variables ; menu CAT [ALPHA] is available on keyboard alpha f[+] ; alpha g-shift characters can also be reached from alpha longpress keyboard)	MENU (TAM)			Trailing input
	3	1	TAM [ST0]	{G}	Register G	Easy access to Register G (219) : General purpose register G ; also used to store third to last long integer prime factor for FACTORS (Shortcut : ST0/RCL {G} ; TI : G:)	EasyAccess (TAM)			Trailing input
		2	TAM [RCL]	{H}	Register H	Easy access to Register H (220) : General purpose register H ; also used to store second to last long integer prime factor for FACTORS (Shortcut : ST0/RCL {H} ; TI : H:)	EasyAccess (TAM)			Trailing input
		3	TAM [R+]	{I}	Register I	Easy access to Register I (109) : General purpose register I ; also used to store current row of indexed matrix (Shortcut : ST0/RCL {I} ; TI : I: or M[I _r J _c]=<name> [<row> <col>] (if indexed matrix exists))	EasyAccess (TAM)			Trailing input
		4	TAM [SIN]	{J}	Register J	Easy access to Register J (110) : General purpose register J ; also used to store current column of indexed matrix (Shortcut : ST0/RCL {J} ; TI : J: or M[I _r J _c]=<name> [<row> <col>] (if indexed matrix exists))	EasyAccess (TAM)			Trailing input
		5	TAM [COS]	{K}	Register K	Easy access to Register K (111) : General purpose register K ; also used in VarMNU to store variable name when MVAR-defined button (<var...>) is pressed without NIM input ; also used to store last long integer prime factor for FACTORS or the remaining number to be factorised ; also used as the default alpha register for commands compatible with the HP-42S/DM42(n) calculator (Shortcut : ST0/RCL {K} ; TI : K:)	EasyAccess (TAM)			Trailing input
		6	TAM [TAN]	{L}	Register L	Easy access to Register L (108) : Last X (Shortcut : ST0/RCL {L} ; TI : L:)	EasyAccess (TAM)			Trailing input
	4	1	TAM [ENTER]	ENTER	Enter	If eRPN is SET, in Numeric Input Mode, ENTER pushes the input value onto the stack, and if CLEAR, then it also duplicates X to Y ; without input or in Program Entry Mode, ENTER always duplicates X to Y ; only if eRPN is CLEAR, automatic stack lift is disabled after ENTER (Info : Note that In Program Entry Mode, ENTER terminates numeric input without inserting an ENTER instruction (it is not necessary to separate numbers on consecutive program lines and - if eRPN is SET - ENTER would lead to unnecessary duplication of X) ; For assignments (ASN (f[i])), spell the name as 'ENTER' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command	ENTER		Stack
		2	TAM [x $\bar{z}$ y]	{M}	Register M	Easy access to Register M (211) : General purpose register M ; also used to store distribution parameter : mean, median, location, degree of freedom 1, centre, lower limit (Shortcut : ST0/RCL {M} ; TI : M:)	EasyAccess (TAM)			Trailing input
		3	TAM [+/-]	{N}	Register N	Easy access to Register N (212) : General purpose register N ; also used to store distribution parameter : degree of freedom 2, quantity, upper limit (Shortcut : ST0/RCL {N} ; TI : N:)	EasyAccess (TAM)			Trailing input
		4	TAM [E]	{0}	Register 0	Easy access to Register 0 (221) : General purpose register 0 (Shortcut : ST0/RCL {0} ; TI : 0:)	EasyAccess (TAM)			Trailing input
		5	TAM [←]	←	Backspace	Backspace : clear input when in Numeric Input Mode ; when not in NIM, executes DROPx ; CLX depending on whether flag $\leftarrow$ DROP is SET or CLEAR (default CLEAR) (TAM : BACK __ TamNonReg menu)	Command (nonpgm)	BACK		Cleanup
	5	1	TAM [▲]	▲	Up	Scroll up for menus and browser screens or backstep through program steps (Info : To assign $\uparrow$ to a key or button, use ASN (f[i]) and spell the name as 'UP' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation
		2	TAM [7]	7	Digit 7	Digit 7 (Fontcode : 0037 ₁₆)	Digit			Numeric input
		3	TAM [8]	8	Digit 8	Digit 8 (Fontcode : 0038 ₁₆)	Digit			Numeric input
		4	TAM [9]	9	Digit 9	Digit 9 (Fontcode : 0039 ₁₆)	Digit			Numeric input
		5	TAM [÷]	÷	Divide	Divide Y by X	Function (dyadic)	÷		Mathematics
	6	1	TAM [▼]	▼	Down	Scroll down for menus and browser screens or single step through program steps (Info : To assign $\downarrow$ to a key or button, use ASN (f[i]) and spell the name as 'DOWN' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation
		2	TAM [4]	4	Digit 4	Digit 4 (Fontcode : 0034 ₁₆)	Digit			Numeric input
		3	TAM [5]	5	Digit 5	Digit 5 (Fontcode : 0035 ₁₆)	Digit			Numeric input
		4	TAM [6]	6	Digit 6	Digit 6 (Fontcode : 0036 ₁₆)	Digit			Numeric input
		5	TAM [×]	×	Multiply	Multiply Y by X	Function (dyadic)	×		Mathematics
	7	1	TAM [f/g]	f/g	Shift f/g	Single press : shift f (yellow) ; double press : shift g (blue) (Info : SBI f ; g is shown if flag SBshfR is SET ; note that USER mode assignment to longerpress f/g is possible, if either HOME [®] or MyM [®] is SET, see Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	f/g-shift	f/g		Keyboard
		2	TAM [1]	1	Digit 1	Digit 1 (Fontcode : 0031 ₁₆)	Digit			Numeric input
		3	TAM [2]	2	Digit 2	Digit 2 (Fontcode : 0032 ₁₆)	Digit			Numeric input
		4	TAM [3]	3	Digit 3	Digit 3 (Fontcode : 0033 ₁₆)	Digit			Numeric input

Layer	Row	Column	Key	Layoutlabel	Fullname	Extended description	Type	Catalog	Default	Category
		5	TAM [-]	-	Subtract	Subtract X from Y	Function (dyadic)	-		Mathematics
	8	1	TAM [EXIT]	EXIT	Exit	Exit (Info : To assign EXIT to a key or button, use ASN (f[1]) and spell the name as 'EXIT' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation
		2	TAM [0]	0	Digit 0	Digit 0 (Fontcode : 0030 ₁₆)	Digit			Numeric input
		3	TAM [.]	.	Full stop	Character . (Shortcut : alpha g[.] ; Info : Fontcode : 002E ₁₆)	Character			Characters
		5	TAM [+]	+	Add	Add X to Y ; concatenate X and Y, including numbers, dates and times + strings and vice versa	Function (dyadic)	+		Mathematics and text functions
#TAM	2	2	#TAM [1/x]	BIN	Binary	Convert X to binary and toggle binary mode ; entering digits A-F switches the calculator to hexadecimal mode ; when KEY _{A-F} is SET, the respective digit is included in the row 2 key's longpress preview cycle (Shortcut : #TAM [1/x] (B) ; Info : values are displayed with subscript 2)	Setting (pgm)	BIN	OFF	Number bases
		4	#TAM [LOG]	DEC	Decimal (short integer)	Convert X to decimal (short integer) and toggle decimal (short integer) mode ; entering digits A-F switches the calculator to hexadecimal mode ; when KEY _{A-F} is SET, the respective digit is included in the row 2 key's longpress preview cycle (Shortcut : #TAM [LOG] (D) ; Info : values are displayed with subscript 10)	Setting (pgm)	DEC	OFF	Number bases
		6	#TAM [XEQ]	FP	Fractional Part	Fractional Part of real number (Shortcut : #TAM [XEQ] (F) for closed number)	Function (monadic)	FP		Fractions
	3	2	#TAM [RCL]	HEX	Hexadecimal	Convert X to hexadecimal and toggle hexadecimal mode ; if KEY _{A-F} is SET, digits A-F can be entered by pressing row 2 keys (Shortcut : #TAM [RCL] (H) ; Info : values are displayed with subscript 16)	Setting (pgm)	HEX	OFF	Number bases
		3	#TAM [R↓]	IP	Integer Part	Integer Part of number (returns Real number) (Shortcut : #TAM [R↓] (I) for closed number)	Function (monadic)	IP		Fractions
	4	1	#TAM [ENTER]	DEC	Decimal (short integer)	Convert X to decimal (short integer) and toggle decimal (short integer) mode ; entering digits A-F switches the calculator to hexadecimal mode ; when KEY _{A-F} is SET, the respective digit is included in the row 2 key's longpress preview cycle (Shortcut : #TAM [ENTER] ; Info : values are displayed with subscript 10)	Setting (pgm)	DEC	OFF	Number bases
		4	#TAM [E]	OCT	Octal	Convert X to octal and toggle octal mode ; entering digits A-F switches the calculator to hexadecimal mode ; when KEY _{A-F} is SET, the respective digit is included in the row 2 key's longpress preview cycle (Shortcut : #TAM [E] (O) ; Info : values are displayed with subscript 8)	Setting (pgm)	OCT	OFF	Number bases
		5	#TAM [←]	←	Backspace	Backspace : clear input when in Numeric Input Mode ; when not in NIM, executes DROPx ; CLX depending on whether flag ←DROP is SET or CLEAR (default CLEAR) (TAM : BACK __ TamNonReg menu)	Command (nonpgm)	BACK		Cleanup
	5	2	#TAM [7]	7	Digit 7	Digit 7 (Fontcode : 0037 ₁₆)	Digit			Numeric input
		3	#TAM [8]	8	Digit 8	Digit 8 (Fontcode : 0038 ₁₆)	Digit			Numeric input
		4	#TAM [9]	9	Digit 9	Digit 9 (Fontcode : 0039 ₁₆)	Digit			Numeric input
	6	2	#TAM [4]	4	Digit 4	Digit 4 (Fontcode : 0034 ₁₆)	Digit			Numeric input
		3	#TAM [5]	5	Digit 5	Digit 5 (Fontcode : 0035 ₁₆)	Digit			Numeric input
		4	#TAM [6]	6	Digit 6	Digit 6 (Fontcode : 0036 ₁₆)	Digit			Numeric input
	7	1	#TAM [f/g]	f/g	Shift f/g	Single press : shift f (yellow) ; double press : shift g (blue) (Info : SBI f ; g is shown if flag SBshfR is SET ; note that USER mode assignment to longerpress f/g is possible, if either HOME _f or MyM _f is SET, see Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	f/g-shift	f/g		Keyboard
		2	#TAM [1]	1	Digit 1	Digit 1 (Fontcode : 0031 ₁₆)	Digit			Numeric input
		3	#TAM [2]	2	Digit 2	Digit 2 (Fontcode : 0032 ₁₆)	Digit			Numeric input
		4	#TAM [3]	3	Digit 3	Digit 3 (Fontcode : 0033 ₁₆)	Digit			Numeric input
	8	1	#TAM [EXIT]	EXIT	Exit	Exit (Info : To assign EXIT to a key or button, use ASN (f[1]) and spell the name as 'EXIT' ; Ref : https://47calc.com/doc/C47/Reference/C47_Assignment.pdf)	Command			Navigation
		2	#TAM [0]	0	Digit 0	Digit 0 (Fontcode : 0030 ₁₆)	Digit			Numeric input