

BLUE47	Access blue functions					
g-shift	a b/c	*	.ms	.d	LBL	RTN
f-shift	π	$\Delta\%$	$\sqrt{y}$	<i>i</i>	$\rightarrow R$	$\rightarrow P$
unshifted	x	CPX	STK	TRG	EXP	∇
Page 1	F1	F2	F3	F4	F5	F6

Prev menu https://47calc.com/doc/R47/Menus/R47v0_Menu_BITSHFT_page_1.pdf

Next menu https://47calc.com/doc/R47/Menus/R47v0_Menu_BLUE47_page_2.pdf

Level	Label	Type	FullName	Extended description	Category	Flag	Catalog	Default
Menu p1	BLUE47	MENU	Access blue functions	Access all functions of the DM42-layout g-shift keyboard (blue) and a few of the f-shift keyboard ; Info : Assigned to calculator function SETUP (f[0]) in layout DM42	Keyboard		BLUE47	
F1	x	Function (monadic)	Magnitude	Magnitude (absolute value) of Complex number	Complex numbers		x	
F2	CPX	MENU	Complex functions	Complex functions ; Ref : https://47calc.com/doc/Application%20Notes/AN0001_C47_R47_JM_Complex_number_engineering_example.pdf	Complex numbers		CPX	
F3	STK	MENU	Stack	Stack functions	Stack		STK	
F4	TRG	MENU	Trigonometry	Trigonometry functions ; Info : C47 menu TRG is replaced by TRG_R47 ; Ref : https://47calc.com/doc/R47/Reference/R47v0_DMS-HMS.pdf	Trigonometry		TRG	
F5	EXP	MENU	Exponential	Exponential functions	Mathematics		EXP	
F6	↵	Command (nonpgm)	Undo	Restore complete stack, LASTx, STATS and system flags ; Info : Error 128 -- Undo failed: likely no memory -- may be raised	Stack		UNDO	
fF1	∠	Function (monadic)	Argument (angle)	Argument (angle) of Complex number	Complex numbers		∠	
fF2	Δ%	Function (dyadic)	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% :	Financial		Δ%	
fF3	$\sqrt[y]{x}$	Function (dyadic)	xth root	Xth root of Y	Mathematics		$\sqrt[y]{x}$	
fF4	i	Command	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 CPX.j when in RECT mode	Complex numbers	CPX.j	op_i	
fF5	→R	Function (monadic, dyadic)	To rectangular	Transform polar to rectangular coordinates (dyadic, stack conventions according to flag RP _{HP} 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 RP _{HP} determines whether →RECT _{HP} or →RECT _{CX} is stored ; vector display depends on flag 3Dxyz, for 2D rectangular vector : [ij] [v ₁ v ₂] ; 3D rectangular vector : [ijk] [v ₁ v ₂ v ₃]	Complex and coordinates	RP _{HP}	→RECT	
fF6	→P	Function (monadic, dyadic)	To polar	Transform rectangular to polar coordinates (dyadic, stack conventions according to flag RP _{HP} 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 RP _{HP} determines whether →POL _{HP} or →POL _{CX} 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;ij] [v ₁ v ₂] ^P ; 3D spherical vector : [rθ;ijk] _M [v ₁ v ₂ v ₃] ^a ; 3D cylindrical vector : [rθ;ijk] [v ₁ v ₂ v ₃] ^c	Complex and coordinates	RP _{HP}	→POLAR	
gF1	a b/c	Setting (cyclic, pgm, stack)	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[y*]) ; starts in mode last used or as set by flags PROPFR, FRACT and IRFRAC ; When FRCYC is SET full cycle is available, when CLEAR, flag PROPFR 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 xI or -I indicates that approximate multiples or fractions can be used, of the irrational numbers $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$, $\sqrt{11}$, ϕ , π^{-2} , π^{-1} , $\sqrt{17}$, π , π^2 , e^{-2} , e^{-1} , e and e^2 (with tolerance 10 ⁻²⁴) ; Prefix ≈ + <approximation> ; multiplication symbol SET for displaying multiplication symbol × ; SBI is shown if flag SBfrac is SET ; Ref : https://47calc.com/doc/R47/Reference/R47v0_Fractions.pdf ; SBI : a ^{b/n} ; b/n ; [+≈] ; a ^{b/cxI} ; b/cxI ; [+≈]	Fractions	FRACT		OFF
gF2	#	Setting (pgm, stack)	Number base	Set number base ; operates on all stack registers depending on BASE _{HP} ; TAM : →INT __ TamNonReg menu ; #TAM shortcuts : B = BIN ; D = DEC ; ENTER = DEC ; H = HEX ; Info : SBI is shown if flag SBfrac is SET ; exit base mode by .d, →I, [.] or CLRMOD (longerpress [EXIT]) ; SBI : #BASE ; #KEY _{A-F}	Number bases	KEY _{A-F}	→INT	OFF

Level	Label	Type	FullName	Extended description	Category	Flag	Catalog	Default
gF3	.ms	Function (monadic, cyclic)	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.mmss) format ; stack input treated as decimal value	<i>Time/angle conversions</i>		.ms	
gF4	.d	Function (monadic)	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/R47/Reference/R47v0_Date_formats.pdf	<i>Reals</i>	FRACT		
gF5	LBL	Command (PEM)	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 'α. 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 :α. 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	<i>Programming</i>		LBL	
gF6	RTN	Command (PEM)	Return	Return from subroutine to calling program	<i>Programming</i>		RTN	

p1	BLUE47	Link
F1	x	
F2	CPX	https://47calc.com/doc/R47/Menus/R47v0_Menu_CPX_page_1.pdf
F3	STK	https://47calc.com/doc/R47/Menus/R47v0_Menu_STK_page_1.pdf
F4	TRG	https://47calc.com/doc/R47/Menus/R47v0_Menu_TRG_page_1.pdf
F5	EXP	https://47calc.com/doc/R47/Menus/R47v0_Menu_EXP_page_1.pdf
F6	↵	
fF1	4	
fF2	Δ%	
fF3	$\sqrt[n]{y}$	
fF4	i	
fF5	→R	
fF6	→P	
gF1	a b/c	
gF2	#	
gF3	.ms	
gF4	.d	
gF5	LBL	
gF6	RTN	