

MATX	Matrix					
g-shift	$R_{nn} \rightarrow V$	$V \rightarrow R_{nn}$	STOVEL	RCLVEL		
f-shift	IDENT	DIM	DIMgr	DIMN#	CNCATS	CNCATR
unshifted	NEW	$[M]^T$	EDIT	EDITN	SIM EQ	VECTOR
Page 1	F1	F2	F3	F4	F5	F6

- Prev menu

https://47calc.com/doc/R47/Menus/R47v0_Menu_MATRS_page_1.pdf
- Next menu

https://47calc.com/doc/R47/Menus/R47v0_Menu_MATX_page_2.pdf
- Ref 1

https://47calc.com/doc/Application%20Notes/AN0020_C47_R47_Matrix_and_Vector.pdf

Level	Label	Type	FullName	Extended description	Category	Flag	Catalog	Default
Menu p1	MATX	MENU	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	Matrix operations		MATX	
F1	NEW	Command (submenu)	New matrix	Create new matrix with Y rows and X columns	Matrix operations		M.NEW	
F2	[M] ^T	Function (monadic)	Transpose matrix	Transpose matrix in X	Matrix operations		[M] ^T	
F3	EDIT	MENU (item, nonpgm)	Edit matrix	Open matrix editor for matrix in X ; Info : CAT.MENUS M_EDIT ; MIM = Matrix Input Mode ; [$\uparrow$] or [$\downarrow$] to move up or down one position ; Ref : 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	Matrix operations		M.EDIT	
F4	EDITN	MENU (item, nonpgm)	Edit matrix (named)	Open matrix editor for matrix in register or variable ; TAM : M.EDITN __ Tam menu	Matrix operations		M.EDITN	
F5	SIM EQ	MENU (item)	Matrix simultaneous equations	Matrix simultaneous equations : Mat A · Mat X = Mat B, where Mat A is the equation coefficient matrix and Mat B is the equation result vector ; Mat X is the equation solution vector ; TAM : SIM_EQ __ TamNonReg menu to enter number of equations ; Info : CAT.MENUS M_SIMQ	Matrix operations		SIM_EQ	
F6	VECTOR	MENU	Vector menu	Vector functions ; Ref : https://47calc.com/doc/R47/Reference/R47v0_Vector_display.pdf ; Info : Vectors are stored internally as rectangular and calculation results are presented in rectangular format ; to edit a vector, first put it in rectangular format ; vector TI's are shown for values in X only and a small font may be used ; vector TI's are minimised if the stack changes or [EXIT] is pressed (only ijk or r0k or p0φ is shown, without subscripts or brackets)	Vector operations		VECTOR	
fF1	IDENT	Command	New identity matrix	Create new identity matrix with Y rows and X columns	Matrix operations		M.IDENT	
fF2	DIM	Function (monadic)	Dimension (flow)	Set dimension of matrix (named register or variable) to Y rows and X columns ; refloes elements by row and cuts off excess elements or pads with zero elements ; creates a new matrix if necessary ; TAM : M.DIM __ Tam menu ; Info : also see function DIMgr	Matrix operations		M.DIM	
fF3	DIMgr	Function (monadic)	Dimension (grow)	Set dimension of matrix (named register or variable) to Y rows and X columns ; cuts off rows and columns or pads with zero element rows and columns ; creates a new matrix if necessary ; TAM : M.DIMgr __ Tam menu ; Info : also see function DIM	Matrix operations		M.DIMgr	
fF4	DIMN#	Command	Matrix dimension? (named)	Get dimensions of matrix in register or variable ; TAM : M.DIMN# __ Tam menu	Matrix operations		M.DIMN#	
fF5	CNCATB	Command (strike)	Concatenate (bottom)	Concatenate matrices (bottom) ; TAM : M.CNCTB __ Tam menu	Matrix operations		M.CNCTB	
fF6	CNCATR	Command (strike)	Concatenate (right)	Concatenate matrices (right) ; TAM : M.CNCTR __ Tam menu	Matrix operations		M.CNCTR	
gF1	R _{nn} →V	Command	Fill matrix from registers	Fill matrix or vector in X from ascending range of registers starting with register nn (TAM), where numbers of registers depends on size of matrix or vector ; TAM : R _{nn} →V __ TamIndirect menu ; Ref : https://47calc.com/doc/R47/Reference/R47v0_Registers.pdf	Matrix operations	3Dxyz	R _{nn} →V	
gF2	V→R _{nn}	Command	Copy elements to registers	Copy elements of matrix or vector in X to ascending range of registers, starting with register nn (TAM), where numbers of registers depends on size of matrix or vector ; TAM : V→R _{nn} __ TamIndirect menu ; be careful when using the range of stack registers (100-107) ; Ref : https://47calc.com/doc/R47/Reference/R47v0_Registers.pdf	Matrix operations	3Dxyz	V→R _{nn}	
gF3	STOVEL	Command	Store X into vector element	Store X into element n (TAM) of vector or matrix in Y ; Shortcut : [ST0] - ...VEL _{nn} ; TAM : STOVEL __ Tam menu	Matrix operations		STOVEL	
gF4	RCLVEL	Command	Recall vector element	Recall element n (TAM) of vector or matrix in X ; Shortcut : [RCL] - ...VEL _{nn} ; TAM : RCLVEL __ Tam menu	Matrix operations		RCLVEL	
gF5								

Level	Label	Type	FullName	Extended description	Category	Flag	Catalog	Default
gF6								

p1	MATX	Link
F1	NEW	
F2	$[M]^T$	
F3	EDIT	https://47calc.com/doc/R47/Menus/R47v0_Menu_EDIT_MATX_page_1.pdf
F4	EDITN	https://47calc.com/doc/R47/Menus/R47v0_Menu_EDITN_page_1.pdf
F5	SIM EQ	https://47calc.com/doc/R47/Menus/R47v0_Menu_SIM_EQ_page_1.pdf
F6	VECTOR	https://47calc.com/doc/R47/Menus/R47v0_Menu_VECTOR_page_1.pdf
fF1	IDENT	
fF2	DIM	
fF3	DIMgr	
fF4	DIMN#	
fF5	ENCATB	
fF6	ENCATR	
gF1	$R_{nn} \rightarrow V$	
gF2	$V \rightarrow R_{nn}$	
gF3	STOVEL	
gF4	RCLVEL	
gF5		
gF6		