

# PCB-1.99j-mag1 command reference

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## misc operations

backspace remove object  
*[S][C]Btn1* remove object  
 scroll wheel vertical pan  
*[S]*scroll wheel horizontal pan  
*Btn1* current mode action  
 u undo operation  
*[S]*r redo operation  
*[S][C]*u clear undo-list  
 tab switch viewing side  
 cursor key move crosshair 1 grid  
*[S]*cursor key move crosshair 10 grid

## connections

*[S]*f reset found connections  
 f find connections  
*[S]*backspace remove connections

## user (:) commands

:DRC() check layout for rule violations  
 :l [file] load data file  
 :le [file] load element to buffer  
 :m [file] load layout to buffer  
 :q quit application  
 :rn [file] load netlist  
 :s [file] save data as file

## display

c center display  
 g increase grid spacing  
*[S]*g decrease grid spacing  
*[C]*m mark location  
 r clear and redraw output  
 z zoom in  
*[S]*z zoom out  
 v zoom extents  
*[S]*Btn3 temporary zoom extents

## selection

*Btn2* select/deselect object  
*[S]*Btn2 toggle object to selection  
 drag *Btn2* select only objects in box  
 drag *[S]*Btn2 add box to selection  
*[S]*m move selected to current layer

## copy and move

drag *Btn2* move object or selection  
 drag *[M]*Btn2 copy object  
 drag *[S][M]*Btn2 override rubberband & move  
 m move to current layer

## pastebuffer

*[C]*x copy selected objects to buffer  
 and enter pastebuffer mode  
*[S][C]*x cut selected objects to buffer  
 and enter pastebuffer mode  
*Btn1* in pastebuffer mode copy to layout  
*[C]*1..5 select buffer # 1..5

## sizing

s increase size of TLAPV <sup>a</sup>  
*[S]*s decrease size of TLAPV  
*[M]*s increase drill size of PV  
*[S][M]*s decrease drill size of PV  
 k increase clearance of LAPV  
*[S]* k decrease clearance of LAPV

## element

d display pinout  
*[S]*d open pinout window  
 h hide/show element name  
 n change element name

## pin/pad

n change name  
 q toggle square flag

## via

*F1* enter via-mode  
*[C]*v increase initial size  
*[S][C]*v decrease initial size  
*[M]*v inc. initial drilling hole  
*[S][M]*v dec. initial drilling hole  
*[C]*h convert via to mounting hole

## lines/arcs

*F2* enter line mode  
*F3* enter arc mode  
 l increase initial line size  
*[S]*l decrease initial line size  
 period toggle 45 degree enforcement  
 / cycle multiline mode  
*[S]* override multiline mode

## polygon

*F5* enter rectangle-mode  
*F6* enter polygon-mode  
*[S]*p close path  
 insert enter insert point mode

## text

*F4* enter text-mode  
 n edit string  
 t increase initial text size  
*[S]*t decrease initial text size

## rats nest

w add all rats  
*[S]*w add rats to selected pins/pads  
 e delete all rats  
*[S]*e delete selected rats  
 o optimize all rats  
*[S]*o optimize selected rats

<sup>a</sup>TLAPV: text, line, arc, pin or via

Obviously  $[S]$ ,  $[C]$ ,  $[M]$ ,  $F$  and  $Btn$  mean the shift, control, modifier1 (BTNMOD for buttons), function key and mouse button.