

# PCB-1.99j-mag1 command reference

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|                    |               |                                     |                 |
|--------------------|---------------|-------------------------------------|-----------------|
| <b>via</b>         | <i>F1</i>     | enter via-mode                      | <i>[C/v]</i>    |
|                    |               | increase initial size               | <i>[S/v]</i>    |
|                    |               | decrease initial size               | <i>[M/v]</i>    |
|                    |               | inc. initial drilling hole          | <i>[M/v]</i>    |
|                    |               | dec. initial drilling hole          | <i>[S/M/v]</i>  |
|                    |               | convert via to mounting hole        | <i>[C/h]</i>    |
| <b>lines/arcs</b>  | <i>F2</i>     | enter line mode                     |                 |
|                    | <i>F8</i>     | enter arc mode                      |                 |
|                    | <i>I</i>      | increase initial line size          | <i>[S/l]</i>    |
|                    |               | decrease initial line size          | <i>[S/l]</i>    |
|                    | period        | toggle 45 degree enforcement        | <i>/</i>        |
|                    |               | cycle multiline mode                |                 |
|                    |               | override multiline mode             | <i>[S]</i>      |
| <b>pastebuffer</b> | <i>F3</i>     | enter pastebuffer-mode              |                 |
|                    |               | rotate 90 degree cc                 | <i>[S/F3]</i>   |
|                    |               | copy to layout                      | <i>[S/1..5]</i> |
|                    |               | select buffer # 1..5                | <i>x</i>        |
|                    |               | copy selected objects to buffer     | <i>[S/x]</i>    |
|                    |               | cut selected objects to buffer      |                 |
| <b>sizing</b>      | <i>s</i>      | increase size of TLAPV <sup>a</sup> | <i>[S/s]</i>    |
|                    |               | decrease size of TLAPV              | <i>[S/s]</i>    |
|                    |               | increase drill size of PV           | <i>[S/M/s]</i>  |
|                    |               | decrease drill size of PV           | <i>[S/M/s]</i>  |
|                    | <i>k</i>      | increase clearance of LAPV          | <i>[S/k]</i>    |
|                    |               | decrease clearance of LAPV          | <i>[S/k]</i>    |
| <b>element</b>     | <i>d</i>      | display pinout                      |                 |
|                    | <i>[S/d]</i>  | open pinout window                  |                 |
|                    | <i>h</i>      | hide/show element name              |                 |
|                    | <i>n</i>      | change element name                 |                 |
| <b>pin/pad</b>     | <i>n</i>      | change name                         |                 |
|                    | <i>b</i>      | toggle square flag                  |                 |
| <b>rats nest</b>   | <i>w</i>      | add all rats                        |                 |
|                    | <i>[S/w]</i>  | add rats to selected pins/pads      |                 |
|                    | <i>e</i>      | delete all rats                     |                 |
|                    | <i>[S/e]</i>  | delete selected rats                |                 |
|                    | <i>o</i>      | optimize all rats                   |                 |
|                    | <i>[S/o]</i>  | optimize selected rats              |                 |
| <b>text</b>        | <i>F5</i>     | enter text-mode                     |                 |
|                    | <i>n</i>      | edit string                         |                 |
|                    | <i>t</i>      | increase initial text size          | <i>[S/t]</i>    |
|                    |               | decrease initial text size          | <i>[S/t]</i>    |
| <b>polygon</b>     | <i>F4</i>     | enter rectangle-mode                |                 |
|                    | <i>F6</i>     | enter polygon-mode                  |                 |
|                    | <i>[S/p]</i>  | close path                          |                 |
|                    | <i>insert</i> | enter insert point mode             |                 |

|                      |                         |                                     |                |
|----------------------|-------------------------|-------------------------------------|----------------|
| <b>selection</b>     | <i>Btn2</i>             | select/deselect object              |                |
|                      | <i>[S/Btn2]</i>         | add object to selection             |                |
|                      | <i>drag [S/Btn2]</i>    | select only objects in box          |                |
|                      | <i>drag [S/Btn2]</i>    | add box to selection                |                |
|                      | <i>[S/m]</i>            | move selected to current layer      |                |
| <b>copy and move</b> | <i>drag Btn2</i>        | move object or selection            |                |
|                      | <i>drag [M/Btn2]</i>    | copy object                         |                |
|                      | <i>drag [S][M/Btn2]</i> | override rubberband & move          |                |
|                      | <i>m</i>                | move to current layer               |                |
| <b>pastebuffer</b>   | <i>F3</i>               | enter pastebuffer-mode              |                |
|                      | <i>[S/F3]</i>           | rotate 90 degree cc                 |                |
|                      | <i>Btn1</i>             | copy to layout                      |                |
|                      | <i>[S/1..5]</i>         | select buffer # 1..5                |                |
|                      | <i>x</i>                | copy selected objects to buffer     |                |
|                      | <i>[S/x]</i>            | cut selected objects to buffer      |                |
| <b>sizing</b>        | <i>s</i>                | increase size of TLAPV <sup>a</sup> |                |
|                      |                         | decrease size of TLAPV              | <i>[S/s]</i>   |
|                      |                         | increase drill size of PV           | <i>[S/M/s]</i> |
|                      |                         | decrease drill size of PV           | <i>[S/M/s]</i> |
|                      | <i>k</i>                | increase clearance of LAPV          | <i>[S/k]</i>   |
|                      |                         | decrease clearance of LAPV          | <i>[S/k]</i>   |
| <b>element</b>       | <i>d</i>                | display pinout                      |                |
|                      | <i>[S/d]</i>            | open pinout window                  |                |
|                      | <i>h</i>                | hide/show element name              |                |
|                      | <i>n</i>                | change element name                 |                |
| <b>pin/pad</b>       | <i>n</i>                | change name                         |                |
|                      | <i>b</i>                | toggle square flag                  |                |

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

|                           |                       |                                  |                    |
|---------------------------|-----------------------|----------------------------------|--------------------|
| <b>misc operations</b>    | backspace             | remove object                    | <i>[S][C/Btn1]</i> |
|                           | escape                | remove object                    | <i>[S][C/Btn1]</i> |
|                           | <i>Btn1</i>           | create object or part            |                    |
|                           | <i>u</i>              | undo operation                   |                    |
|                           | <i>[S/r]</i>          | redo operation                   |                    |
|                           | <i>[S/C/u]</i>        | clear undo-list                  |                    |
|                           | tab                   | switch viewing side              |                    |
|                           | cursor key            | move crosshair 1 grid            |                    |
|                           | <i>[S]/cursor key</i> | move crosshair 10 grid           |                    |
| <b>connections</b>        | <i>[S/f]</i>          | reset found connections          |                    |
|                           | <i>f</i>              | find connections                 |                    |
|                           | <i>[S/backspace]</i>  | remove connections               |                    |
| <b>user (:): commands</b> | <i>:DR()</i>          | check layout for rule violations |                    |
|                           | <i>:l [file]</i>      | load data file                   |                    |
|                           | <i>:le [file]</i>     | load element to buffer           |                    |
|                           | <i>:m [file]</i>      | load layout to buffer            |                    |
|                           | <i>:p</i>             | quit application                 |                    |
|                           | <i>:rn [file]</i>     | load netlist                     |                    |
|                           | <i>:s [file]</i>      | save data as file                |                    |
| <b>display</b>            | <i>c</i>              | center display                   |                    |
|                           | <i>s</i>              | increase grid spacing            |                    |
|                           | <i>[S/g]</i>          | decrease grid spacing            |                    |
|                           | <i>[C/m]</i>          | mark location                    |                    |
|                           | <i>r</i>              | clear and redraw output          |                    |
|                           | <i>z</i>              | zoom in                          |                    |
|                           | <i>[S/z]</i>          | zoom out                         |                    |
|                           | <i>v</i>              | zoom extents                     |                    |

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