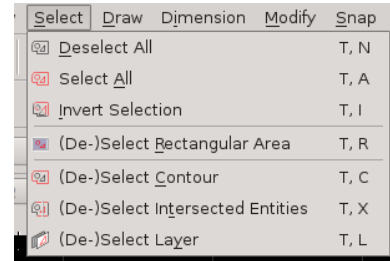



Note: English is not my native language

System : AMD Athlon(tm) 64 X2 Dual Core Processor 4000+ OS: Kubuntu 14.04 (Linux 3.16.0-52-generic), Qt Version: 4.8.6 QCAD 3.11.3

## Command: Select

As a typical keyboard draftsman, I noticed a severe lack in keyboard functionality for many Select command options. Some options of QCAD's selection-tool are handy, others are quite nasty -such as the toggle-functions- at times if one misses an entity. It would be a major improvement for QCAD, to commit to the overall common used selection methods for CAD. A review and evaluation of all the Selection- /icon-tool-routine and options, and rebuilding these to one Select-command with options as one single function seems more than appropriated. I suggest to use the command **Select** (as should be used in the Command line) as a pathway, so in future this command and its options can also be used for command scripting (see acad Script-command). After a rebuild of the Select command and its command line functionality, QCAD's current selection methods, menu's and icons are not lost, but are improved.














Command: select ; Collect entities tool, or (redefine function selectionmenu)  
 Command: ss ; shortcut Select(ion) Set (transparent command), or  
 ; Select , or  
 -point to entity and click- ; select if nothing active  
 -point P1 and drag square box to P2- ; box-select (within, or crossing)



Syntax:[command], question <active options>: ; 'Select' invoked by command xxx, 'what to select?' <current mode>:  
 Select, Select entity <S,A>: ; - add entities to set - (Single, Add activated)  
 Select, Select entity <W,R> ; (next window within, will be removed from selection set)  
 Select, Select entity <S>: ? [Enter] ; First help-level; what options available?

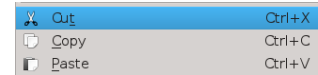
Select, Select entity Add/Remove/Invert/Single/Object/Window/Crossing/Line/Box/Type/Filter/CoNtour/  
 Polygon Window/Polygon Crossing/LaYer/Visible/Previous/New/Group/Undo/Quit/?? <S,A>:

 Add	; A	Add; add next object/selection to selection set (default) = Multiple
	;	(within Window->Add, Crossing->Add)
 Subtract	; R	Remove; remove next object/entity from selection set
	;	(within Window->Remove, Crossing->Remove)
 Invert selection	; I	Invert current selection set to visible not selected entities
-pointer select-	; S	Single; one object selection, select entity closest to the pointer.
x,y	; O	Object; select object crossing coordinaat
 Area, non crossing	; W	Window; select inside windowbox (area) (no toggle!)
 Area, crossing	; C	Crossing; select within and crossing windowbox (no toggle!)
 Line intersec.	; L	Line; select entities crossing selection line
-Box P1 to P2-	; B	Box; Command Script selection, Point1=x,y Point2=x,y
	;	(Point1 < Point2= Window; Point1 > Point2=Crossing)
	;	(Select only visible entities inside or crossing)
Type	; T	Entity type; only same type entities; only lines, only text, only ..
Type Filter	; TF	Type Filter; select visible entities on logical and boolean settings.
 Contour	; CN	Contour, Select connected entities
 Polygon	; PW	Polygon Window, select entities within a random polygon area.
 Polygon crossing	; PC	Polygon crossing, select entities in and crossing random polygon area.
 Layer	; LY	Layer; select all layer-entities from next entity
 Select All	; V	Visible; select all visible entities
ss<=	; P	Previous; use previous selection set
	;	(Rotate a set, Mirror same set)
=>ss	; N	New; select newly added entities
	;	(Copy a set, Move newly added set)
Group	; G	A previous selection set stored as named group.
Undo	; U	Undo; undo last added/removed object from set
 Deselect All	; Q	Quit, clear selection.
??	; ??	Second help-level; Open Manual, command Select.
[Enter]	; Enter	Right mouse click = Close set
[Esc]	; Cancel	Cancel command

## Reference Manual

Command: Select


Most of the draftsman's time is spent on modifying, such as change, rotate, delete, trim, copy, move, mirror, scale, ... . The overall well known 'selection' method in most Graphical User Interface (-GUI-) applications is 'Cut, Copy & Paste'.

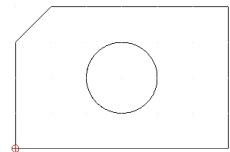


However, 'Cut, Copy & Paste'- functionality is based upon the properties of screen character and pixel video-memory manipulation. 'Cut, Copy & Paste' is NOT vector-orientated and certainly not CAD! A black smith and a silver smith are both metal workers. Within CAD the common tool 'Cut, Copy & Paste' is almost the same as using a sledge hammer, if a gentle pinch of a tweezer is needed; 'Cut, Copy & Paste' is far to rough, rude and crude.

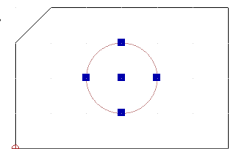
Many of the CAD modifying commands, requests the user to select one or more CAD-entities, -sometimes even only a single point- for processing. The selected entity might be a single object -such as a line, text or block-, or contains several totally different entities. A collection of selected objects or entities is called a '*selection set*'. The command to start making a selection set is **Select**. The Select command can also be used *semi transparant*, meaning it might also be invoked by other CAD commands. Suppose you enter the **Move** command in the command line. If no previous selection set was created, Move will invoke the Select command. This semi transparant feature of Select assures many draftsman to a much more flexible, natural and intuitive approach of drafting.

**Select** is QCAD's fine tuned selection tool, and combines most of the commonly used selection methods. This implies very specific fine tuned CAD-selections, as the more overall known (not quite specific CAD) selection methods.

**Neutral state.** Use [Esc] [Esc] to bring QCAD in it's neutral state.  If no command is active, and no entitties are selected, QCAD is in its neutral state. The Select command is invoked by simply selecting an entity. Hoover the cursor above an entity. Whenever the desired entity highlights, you can select is with a left mouse click. Note; the highlight method depends on your display hardware and color settings.

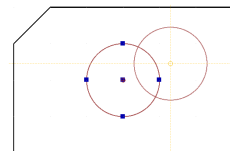


**Selection set and Grips.** A selected entity is highlighted as red-brown entities, with little blue *grip* squares. *Grips* are the entity-reference-points, and can be used as markers or grips for further processing. Every red-brown highlighted entity becomes part of the 'current selection set'.



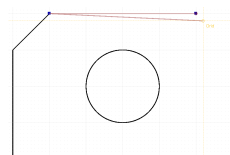
**Handle.** Do not mix up the comprehensions *grips* (-entity reference points-) with *handle*. A *handle* is the entity's unique identifier code (-a kind of 'entity chassismr'-) within the CAD-file, and actually defines the entity's apearing sequence in the drawing.

**Free hand dragging.** Hoover the cursor above an selected entity's grip square. If the grip highlights push the left mousebutton down, keep it down and move sideways, untill the entity becomes 'dragged' and release the mouse button. The entity is now in *dragmode* and can be moved, scaled, and dragged as if it was a pixel selection. The new entity grip position is entered with the left mouse button. Dragging a grip might results in different actions, such as enlarge a circle, move a circle, or move a text, or... whatever.



Warning: Freehand dragging implies only the selected entity; not the selection set!

**Free hand exact dragging.** Example; change line endpoint. Hoover the cursor above the upper horizontal selected line right grip square. If the grip highlights push the left mousebutton down, keep it down and move sideways, untill the entity becomes 'dragged' and release the mouse button. Hit [Space] and enter @-5,0 , meaning move selected endpoint 5 units to the left. Note; Freehand dragging implies only the selected entity; not the selection set!



Note: English is not my native language

System : AMD Athlon(tm) 64 X2 Dual Core Processor 4000+ OS: Kubuntu 14.04 (Linux 3.16.0-52-generic), Qt Version: 4.8.6 QCAD 3.11.3

**Command line.** The original method for using CAD, is by using the command line for entering drafting commands. Mouse, menu's, dialogs, icons, moves and gestures, are nothing more than just shortcuts to these commands (The first CAD-applications used the *cursor-keys* for cursor-movement). Using commands and the command line for drafting, gives one insight in vector drawing-techniques, and trains oneself in basic draft-programming, also known as *Command scripting*. A far more bigger advantage of using the command line, is the experience and routine. A good command-line-draftsman drafts faster as the screen can show (dependable of the OS and keyboard-buffer-settings).

Activate the Command line ('cursor, left mousebutton' or [Space]), and type in;

Command: select [Enter] ; Start the Select command, or  
 Command: ss ; shortcut

**Command log screen.** No matter whatever input/selection mode is used, all commands, actions, input, responses, options, messages and warnings are logged above the Command line in a temporary log-screen (here shown in blue). If the command line tool bar is on screen, error messages are displayed with a beep in the command log screen, and do not appear as dialog windows needing OK-confirmation.

If the command line is used as input method (here in black), the focus remains on the command line. Dialog windows and icon-tools as graphical user interface are suppressed. Without this command line focus feature, *Command scripting* would not be possible.

**Select prompt.** The Select command responses in a three section prompt,

syntax: [command], notify <active options>: ; 1. [command] = the command invoked Select; this can be any  
 ; other command like; Copy, Move, Trim, Stretch, Select,Change  
 ; 2. notify = user interaction  
 ; 3. <active options> = short list of current settings

Example;

Command: select [Enter] ; Start the Select command  
 Command: Select, Select entity <S,A>: ; Select is activated as a stand alone selecting tool with the  
 ; command select, in Single entity Add mode, asks to select an  
 ; entity, every next selected entity is added to the selection set.

Command: Trim [Enter] ; In neutral state command Trim is entered at the command line  
 Command: Trim, Choose limiting entity <S>: ; Trim starts Select in Single mode

Command: Move [Enter] ; In neutral state command Move is entered at the command line  
 Command: Move, Select entity <S>: C [Enter] ; Move starts Select in Single mode; Crossing area entered  
 Command: Move, Select upper right corner of window <C>:  
 Command: Move, Select lower left corner of window <C>:

**Selection feedback.** Every time an entity or object selection action is executed, Select messages as a suffix the recently added (negative number is removed), and total entities selected in the selection set;

(Selection set: n1 picked, n2 selected.) ; (n1 and n2 are applicvars available for Command scripting)

If an invalid option or selection is given, Select responds: "Invalid option or selection, use ? to see all available options."



**Help mode.** As usual the available command options will be displayed by giving the question mark as response;

Command: Select, Select entity <S,A>: ? [Enter] ; First help-level; what options available?

Command: Select, Select entity /Add/Remove/Single/Object/Window/Crossing/Line/Previous/New/Invert/Undo/Box/Type/Type Filter/CoNtour/Visible/LaYer/Quit/?? <S,A>:  
; This is an overview of all options of the select command,  
; uppercase character activates the option.

One of the options is the double question mark. If ?? is given as response, the second help-level is started. QCAD's Reference Manual will be opened at the Select Command section.

**Selection modes.** The select command has three types of overall selection modes.

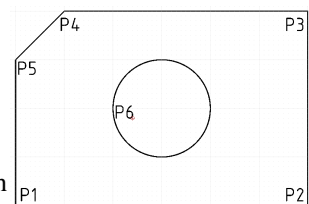
- S Single, for selecting one entity. The entity direct under the cursor-arrow-tip will be selected.
- A  Add, for adding entities to the selection set. If Select is invoked by its own command, Add is default activated.
- R  Remove, for removing entities from the selection set.

The selection mode-keys are radio-button-toggle-switches, meaning only one of these three modes can be selected as active. If Remove is activated when Add is active, Add will be switched off. If an already active mode is selected again, it will be switched off. If Add and Remove modes are switched off, Single mode is activated as default.

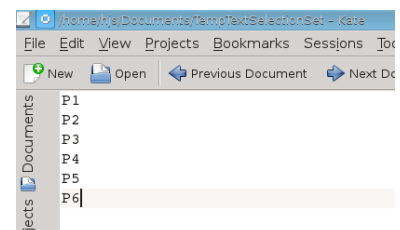
- [Shift] If selecting in GUI-mode, the [Shift]-key is a temporary 'reverse selection mode' switch.  
If Single mode is active, [Schift] [Left mouse button] other entity, will add that entity to the selection set.  
If Add mode is active use [Shift] and [Left mouse button] will remove an already selected entity from the selection set.  
In Remove mode, use [Shift] and [Left mouse button] to add an entity to the selection set.

**Selection set.** The selection set itself, is actualy a temporary list of entities. Every selected entity will be added as a single textline to this tempory list. Therefore, the sequence of selecting defines the position of the entity within the selection set. Whenever selecting multiple entities at once (a window or crossing area), the selected entities are subsequently added to the selection set by there *handle*-sequence.

In some situations the sequence, and even the directions of lines and arcs are very important. Suppose your design (-here at right-) has to be 'printed' on a plasma cutter (-or vinyl-cutter-plotter, or an engraving machine, or...-). For material holding reasons, you would like to start cutting the circle first, so start the cutting proces at P6 and circle round. The next cut would idealy start at P1 to P2, to P3, to P4, to P5, back to P1 and stop. The sequence P1-P5, P2-P3, P2-P1, P5-P4, P3-P4 would also do the job, however not as smooth and neat, and with a lot more needlessly used energy and production time.

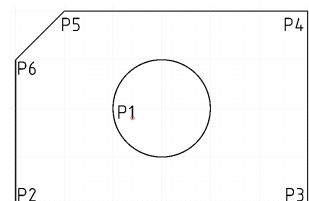


Is this example one can also subsequently select the texts P6, P1, P2, P3, P4, P5. The selection set texts can be transfered to a script editor (-Windows; ..., Apple; ..... Linux; Kate-), where every subsequent line represents the sequenced selected text. Delete the first line, and add to the end a new line with text P6. Closing the script editor forces QCAD to replace the subsequent textlines with the new values.



Therefore; selection set sequence can be important if the design is used in manufacturing.

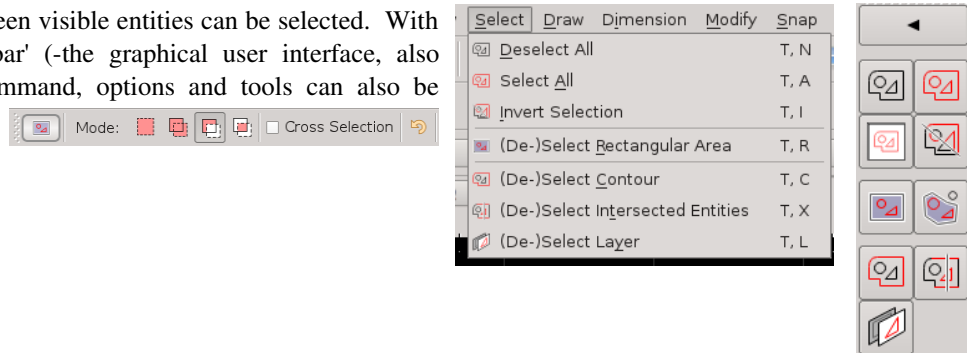
Not yet available in QCAD is the Script-Editor for multi-textline-editing, but the principle of selection set sequence might be clear.





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System : AMD Athlon(tm) 64 X2 Dual Core Processor 4000+ OS: Kubuntu 14.04 (Linux 3.16.0-52-generic), Qt Version: 4.8.6 QCAD 3.11.3

**Selection tools.** Only on screen visible entities can be selected. With focus on the 'Options toolbar' (-the graphical user interface, also known as GUI-), Select command, options and tools can also be activated by their icons and shortcuts.



When using the Command line GUI-dialogs are suppressed. The Select command contains several tools available for selecting an entity or multiple entities. One has the freedom of using the tools - or combining subsequent tools as Single point Add, and next window Crossing Remove-, that seems the most appropriate at hand.


**Single**  (selectsingle). Select a single entity or object (-block, hatch,...-) by hovering above the object, and when highlighted left mouse click.  With QCAD in its neutral state this Select-selection-tool is always direct mouse available.

Command: select [Enter] ; Select command  
 Command: Select, Select entity <S,A>: ; default Single entity, Add mode

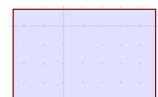
**Object** If an absolute or relative coordinaat is entered -or a mouse pointer is entered-, the entity crossing that point will be selected.

Do not enter intersection object points, because the outcome is unpredictable.  
 Polyline edges should be used for selecting, not its solid filled region.


Command: select [Enter] ;  
 Command: Select, Select entity <S,A>: o [Enter] ; Object  
 Command: Select, Select entity crossing point <O,A>: ; coordinaat or mouse

**Window**  (selectwindow) This tool allows you to select all entities completely inclosed within a rectangular area or 'window'. QCAD prompts for the two opposite corners to describe the window area;

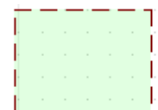
Command: select [Enter] ;  
 Command: Select, Select entity <S,A>: W [Enter] ; Window  
 Command: Select, Select lower left corner <W,A>: ; -select first corner-  
 Command: Select, Select upper right corner <W,A>: ; -select opposite corner-  
 All the visible entities within this blueish boxed area, will be selected.  
 Entities crossing the solid border will be ignored.



In GUI-mode neutral state this Select-window-selection-tool is direct mouse available. Push left mouse button down and drag rectangular window to right. If executed with [Shift]-key pressing down the selected entities will be added, already selected entities will be removed without confirmation.

**Crossing**  (selectwindow) This tool allows you to select all entities inclosed within and crossing a rectangular area or 'window'. QCAD prompts for the two opposite corners to describe the window area;

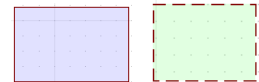
Command: select [Enter] ;  
 Command: Select, Select entity <S,A>: C [Enter] ; Crossing  
 Command: Select, Select upper right corner <C>: ; -select first corner-  
 Command: Select, Select lower left corner <C>: ; -select opposite corner-  
 All the visible entities within and crossing this greenish dashed border, will be selected.




In GUI-mode in its neutral state this Select-crossing-selection-tool is direct mouse available. Push left mouse button down and drag rectangular window to left. If executed with [Shift]-key pressing down the selected entities will be added, already selected entities will be removed without confirmation.

**Box** This selection tool allows selecting entities with the Window or Crossing selection tool within a *macro* or *Command script*. The Box selection tool requires coordinate input. If command line activated, QCAD prompts for the two opposite x,y-coordinate corners to describe a Window or Crossing selection.

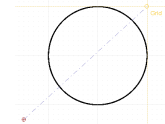
Command: select [Enter] ;  
 Command: Select, Select entity <S,A>: B [Enter] ; Box  
 Command: Select, Enter first area coordinate <B,A>: ; -x,y(1)-  
 Command: Select, Enter opposite area coordinate <B,A>: ; -x,y(2)-  
 If x(1) >= x(2) then Window select, Else Crossing select.



Note; with QCAD in its neutral state this 'Select Box Window- or Crossing-selection-tool' is set to 'Auto-mode', meaning direct mouse available. Push left mouse button down and drag rectangular window to right or left. The Dashed area selecting box is the crossing selection.

**Line**  (selectintersected) Sometimes a very low and wide, or high and small, rotated Window or Crossing selection is needed. Use in such a situation the Line selection tool, by using a temporary selection line. All entities crossing that line will be selected. QCAD prompts for the start- and endpoint x,y-coordinates of the line.

Command: select [Enter] ;  
 Command: Select, Select entity <S,A>: L [Enter] ; Line  
 Command: Select, Enter start point coordinate <L,A>: ; -x,y (1)-  
 Command: Select, Enter end point coordinate <L,A>: ; -x,y(2)-



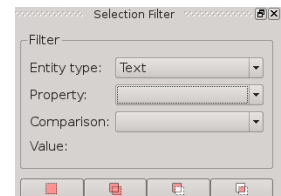
**Type** The Type-selection tool is actually a selection-setting. With this selection-setting one can specify that QCAD should only select certain entities of a specific type, such as polylines, texts, lines, hatches, circles, arc's, ... . All other entities within the next used selection tool (-such as Single,Window, Crossing, Box, Line-) are then ignored.


Command: select [Enter] ;  
 Command: Select, Select entity <S,A>:T [Enter] ; Type  
 Command: Select, Select entity for setting type <T>: ; select an entity; example a text  
 Command: Select, Select text entity <S,A>: c [Enter] ;  
 Command: Select, Select text upper right corner <C>: ; -select first corner-  
 Command: Select, Select text lower left corner <C>: ; -select opposite corner-

**Type Filter**

The Type Filter-selection tool is a very advanced GUI selecting tool. Based upon logical and boolean expressions, one can select entities by its type, properties and many other variables. An ordinary draftsman will seldom use this tool.


Command: select [Enter] ;  
 Command: Select, Select entity <S,A>:TF [Enter] ; Type Filter  
 Command: Select, ..... ;

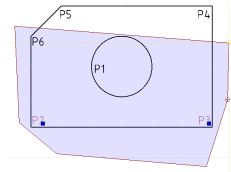



**CoNtour**  (selectcontour) The contour selection tool, selects lines and arc's, who use similar entity points (*grips*). Whenever a line's endpoint is also used as another line's starting point, then these lines are 'connected'. With a CoNtour-select, the selection of the first line also selects all the connected lines. CoNtour-select is very useful for selecting hatch- or solid fill boundaries, and complex shape selection.

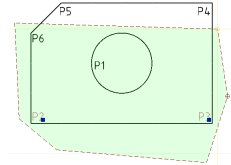
Command: select [Enter] ;  
 Command: Select, Select entity <S,A>:CN [Enter] ;  
 Command: Select, Select entity for contour <CN,A>: ; select an entity


**Polygon Window**

 PW. Select all entities within a freehand polygon. A temporary freehand polygon is used as closed contourline, and everything within that multicorner enclosure is selected. Polygon Window is a more flexibler variant of Window Select.

**Polygon Crossing**


 PC. Select all entities within and crossing a freehand polygon. A temporary freehand polygon is used as closed contourline, and everything within and crossing that multicorner enclosure is selected. Polygon Crossing is a more flexibler variant of Window Select.

**LaYer**


 (selectlayer) The Layer-selection tool is almost similar as Type selection-tool. With Layer-selection one selects all entities of a layer by selecting one layer's entity. If not hidden, frozen or locked, off screen entities of that layer also will be selected.


Command: select [Enter] ;  
 Command: Select, Select entity <S,A>:LY [Enter] ;  
 Command: Select, Select entity for layer select <LY,A>: ; select an entity

**Visible**


 (selectall, Ctrl + A) With the Visible-selection tool one selects every visible entities on screen. Hidden, locked or frozen, are not selected. In fact the Visible-selection-tool is a Zoom All Window Crossing selection of the screen.

Command: select [Enter] ;  
 Command: Select, Select entity <S,A>:V [Enter] ; alle visible screen entities are selected  
 Command: Select, Select entity <S,A>: ; select next entity

 (De)Select All. This GUI toggle selects all visible editable entities. As a toggle switch it can also be used to clear the selection set.

HOLD View?  View? Selects all entities that are completely inside the currently visible area.

**Invert**

 (selectinvert) This tool inverts the current selection set, to all the current not selected visible entities on screen.

**Previous**


To reuse the same selection set to perform multiple operations. If not deleted, QCAD remembers the last selection set. Suppose one had moved a selected set of entities, and want to scale the same set.

Command: scale [Enter] ;  
 Command: Scale, Select entity <S,A>:P [Enter] ; previous selection set is selected  
 Command: Scale, Select entity <S,A>: ; select next entity to add to set

**New**

The New selection tool is used to select all newly added entities. Suppose a selection set was used with the Copy command. With the New option the selection set is cleared and all newly added entities are selected.

Command: select [Enter] ;  
 Command: Select, Select entity <S,A>:N [Enter] ; newly added entities  
 Command: Select, Select entity <S,A>: ; select next entity

QCAD  Replace means "clears current selection set and make a new one". This is not the same.

**Group** In rare occasions a created selection set can be reused. Once a selection set has been created, it can be stored within the drawing file with the Group option. Take notice; saved selection sets are easily outdated or obsolete. The Group tool contains several sub-options;

**GS** ; Group Save  
 Command: Select, Select entity <S,A> ; selected multiple entities  
 Command: Select, Select entity <S,A>: GS [Enter] ; Save selection set command  
 Command: Select, Save selection set as <SelSet01>: [Enter] ; Give a name or  
 ; accept Selection set saved as 'Selset01'

**GO** ; Group Open  
 Command: Select, Select entity <S,A> ; continue  
 Command: Select, Select entity <S,A>: GO ; Load Selection Set  
 Command: Select, Open selection set <SelSet01>: Door [Enter]; Load selection set with that name

**Response;**  
 Command: Select, Error load selection set, no such set, Select entity <S,A>:  
 ; continue is selection set name not found  
 Command: Select, Error load selection set, set incomplete, Select entity <S,A>:  
 ; continue is selection set is outdated

**GL** ; Group List  
 Command: Select, Select entity <S,A> ; continue  
 Command: Select, Select entity <S,A>: GL ; List saved Selection Sets  
 Command: Select, Group List Selset01/Selset02/Floor, Select entity <S,A> :  
 ; continue

**GC** ; Group Clear  
 Command: Select, Select entity <S,A> ; continue  
 Command: Select, Select entity <S,A>: GC ; Remove all saved Selection Sets  
 Command: Select, Select entity <S,A> ; continue

**Undo** Since the selection set itself is a temporary list of entities, one can remove the last added entity or object from the selection set list with undo. You can not Redo an inadvertently removed selection.  
 Command: Select, Select entity <S,A> ; selected multiple entities  
 Command: Select, Select entity <S,A>: U [Enter] ; remove last added entity from set  
 Command: Select, Select entity <S,A>: u [Enter] ; remove last added entity from set

**-close-** After every select attemp, the Select prompt reappears for further manipulating and selecting to make a selection set. If all desired entities and object are selected as part of the selection set, the Select command can be closed with a 'null' response, meaning close the command with the Enter-key or right mouse button.  
 Command: select [Enter] ;  
 Command: Select, Select entity <S,A> ; select an entity  
 Command: Select, Select entity <S,A>: [Enter] ; close Select  
 Command: ; focus on command line

**Esc** Escape = Cancel. The Escape-key itself might be used to cancel any command or options, including Select. If required 'Esc' is also a Select option.



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System : AMD Athlon(tm) 64 X2 Dual Core Processor 4000+ OS: Kubuntu 14.04 (Linux 3.16.0-52-generic), Qt Version: 4.8.6 QCAD 3.11.3


Note; In *Command scripting* and *macro's* function keys are always a little bit tricky to programm. Since the introduction of Unicode, is hasn't become easier.

In QCAD *Command scripting* or *Macro* , all menu-options can be activated by typed between accolades; {Menu}{File}{Open} is the same as using these menu-options.

Also, in *Command scripting* or *Macro* , keyboard keys can be programmed between hooks; [Esc] is the same as using the Esc-key, [Tab] = Tab-key, [F1] = Function key 1, [Insert] = Insert mode key,...

Within a macro or command script the Esc-option can be used.

```
IF ssget = null      ; if selection set is empty
  then              ; then
    [Esc]           ; quit selection (Command: Select, Select entity <xx>: [Esc])
ENDIF               ;
IF ssget = null then [Esc] ENDIF      ; same line
```

Quit  (deselect all, Ctrl + K) If command Select is active and asks for a selection, the Q-options clears the selection set, and quits the command. Use this option to make sure the selection set is deleted.

**WARNING:**

In GUI-mode -as in most pixel editor programmes-, the selection set is cleared by pointing somewhere into the empty area of the drawing.  
In QCAD this means if one misses to select a particular entity, the selection set will be cleared without confirmation.  
Undo won't restore it!!!

```
Command: select [Enter]          ;
Command: Select, Select entity <S,A>:      ; select an entity
Command: Select, Select entity <S,A>: Q    ; close Select en Quit Select
Command:                             ; focus on command line
```

? First help level. Whenever a question mark is given as command line response, QCAD will start the First help level, meaning all possible and available options are shown.

```
Command: select [Enter]          ;
Command: Select, Select entity <S,A>: ?    ; what options available?
Command: Select, Select entity
Command: Select, Select entity Add/Remove/Invert/Single/Object/Window/Crossing/Line/Box/Type/
Filter/CoNtour/ Polygon Window/Polygon/Crossing/LaYer/Visible/
Previous/New/Group/Undo/Quit/?? <S,A>:
```

?? Second help level. Swith to reference manual section Select.

## Other Selecting tools for modification.

The Select command and its options are QCAD's fine tuned vector 'Cut, Copy & Paste'-precision tool for tweezing CAD-entities. As stated earlier, the overall known and therefore favorite 'Cut, Copy & Paste'-edit-functionality is based upon the properties of screen character and pixel video-memory manipulation, is NOT vector-orientated, certainly not CAD, and a much to brute tool to use! Therefore the ordinary common Clipboard content is for CAD not suitable at all.

**Cut, Copy & Paste.** However, Ribbonsoft has implemented some of the common known and used 'text/pixel' manipulation methods into QCAD. Whenever a vector selection set is made, QCAD simulates in menu Edit the 'Cut, Copy & Paste' functionality, as if one uses a pixel editor. Use *Cut* to delete, *Copy* to make a selection set, and *Paste* to enter a copy of the selection set. *The CAD commands Erase, Copy and Move are more suitable.*

**Clipboard.** The clipboard introduced and used by QCAD is NOT the ordinary character and pixel-based interchange-application! In fact QCAD's clipboard is the selection set as a separate drawing file. Since the content of this clipboard is CAD vector-orientated, you can often not use it in other ordinary applications. *The CAD commands Erase, Copy and Move are more suitable.* The contents of this clipboard gets lost if QCAD is closed. *The CAD command Wblock is more suitable to save a selection set on a more permanent base.*



**Dragging.** in GUI selected entities (NOT the selection set) can be moved or changed by dragging them at their grips. See Freehand Dragging earlier in this chapter. *The CAD commands Change, Move and Stretch are more suitable. In CAD dragging is automatically started as soon as a reference point is entered.*

**Edit** Edit **E**dit or Modify **M**odify, what is the difference?

Editing is making something more appealing, mostly done for commercial reasons. Texts, photo's and pictures are *edited* so they are made more attractive.

*Modifying* is making something more suitable, more fitted for a purpose. By nature CAD 'pictures' are technical designs. One changes the design by *modifying* it.

**Delete.** Cut, Erase, Remove and Delete, what is the difference?

Entities can be **E**rased (by an eraser ) , Files can be **D**eleted (thrown away and trashed ) ,

**R**emove is relocating an entity (by moving it ) . **C**ut is relocating cutted  sections (to clipboard ) .

To delete files one has to close and quit QCAD and uses a file manager.

**Erase** To *erase* entities,

Command: Erase, Select entity <S,A>: ; semi transparant selection not programmed yet

Select the entities to be erased,

a. Command: er ; first, make selection set

b. press [Del] ; transparant erase is available

c. press [Backspace] ; brilliant by simplicity

d. Menu, Edit, Delete ; why?

e. del ; file?

f. Menu, Edit, Cut ; shortcut for Delete activates Dimension Leader

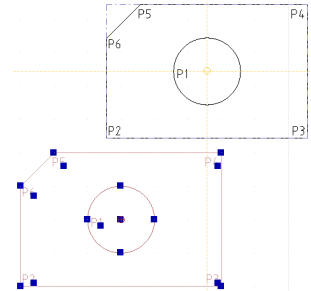
g. ct ; semi clipboard *cut* to *erase*

h. Ctrl + X ; unknown command

h. Ctrl + X ; *copy, cut* to clipboard to *erase*

**Copy** To copy entities,  
 Command: Copy ; not programmed yet in menu Modify!  
 Command: Copy, Select entity <S,A>: ; semi transparent selection not programmed yet

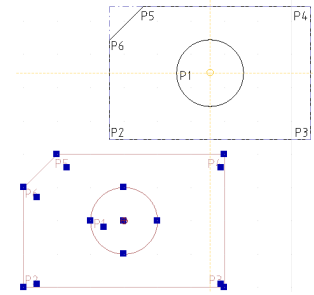
Select entities to be copied, ; make selection set  
 a. Command: cp ; not programmed yet  
 b. Command: mv ; use *Move to Copy* instead  
     Reference point: ; point entered -> dragmode started  
     Target point: ; new location of selection set  
 c1. Menu, Edit, Copy ; copy selection set  
     ; to QCAD clipboard  
 c2. Menu, Edit, Paste ; place copied selection  
     ; freehand in drawing  
 d. mouse drag ; one entity,  
     ; not the selection set!



*Note; Using Block as clipboard saves the selection set and does the same job.  
 Write selection set as Block (instead to clipboard), insert Block and Explode.*

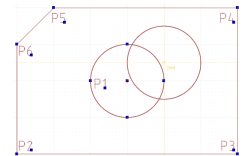
Move To move entities,  
 Command: Move ; not programmed yet in menu Modify!  
 Command: Move, Select entity <S,A>; ; semi transparent selection not programmed yet

Select entities to be copied, ; make selection set  
 a. Command: cp ; not programmed yet  
 b. Command: mv ; use *Move to Copy* instead  
     Reference point: ; point entered -> dragmode started  
     Target point: ; new location of selection set  
 c1. Menu, Edit, Copy ; copy selection set  
     ; to QCAD clipboard  
 c2. Menu, Edit, Paste ; place copied selection  
     ; freehand in drawing



*Note; Using Block as clipboard saves the selection set and does the same job.  
 Write selection set as Block (instead to clipboard), insert Block and Explode.*

d. mouse drag ; one entity,  
     ; not the selection set!



Change To change entities,  
 Command: Change ; not programmed yet in menu Modify!  
 Command: Change, Select entity <S,A>; ; semi transparent selection not programmed yet  
     ; select entity  
 Command: Change, PProperties/Change Point <CP>; ; to drag nearest point of selected entity

Note: in QCAD command Change is only various GUI accessible;

a. Select entity ; by mouse  
 b. move entity ; mouse pointer somewhere between grips  
 c. change point ; mouse pointer on endpoint-grip  
  
 d. change properties  
 d1. Menu, View, Property Editor ; menu activated property editor  
 d2. gp ; shortcut activated property editor