## **Windows - Managing and Moving To Other Windows**

<u>Operation</u>	Keystro	<u>ke</u>	Functio	n			<u>N</u>	<u>ote</u>	
Window Operations See also:	Emacs basic window management commands are bound to C-x o, C-x 0, C-x 1, C-x 2 and C-x 3 with some derivatives and support for multiple frames. These basic facilities can be extended by several built-in and external packages:  • window, built-in, activated by PEL, but not using the standard wind move key bindings (which use Shift with cursors) to preserve ability to shift-mark when moving across text with cursor.								
• ∑ Customize • ∑ Key-Chords • ∑ Frames • ∑ Speedbar	<ul> <li>winner, also built-in, which provides the ability to restore previous window pane layouts. PEL activates it when pel-use-winner user option is t.</li> <li>ace-window, an external package, which extends the C-x o command by displaying Ace target in the windows' upper left corner to quickly select the target window to move to and possibly operate on.</li> <li>key-chord, an external package, that PEL use (when pel-use-key-chord user option is t) to activate dual-key chords to move across windows.</li> <li>Windows can be dedicated to specific buffers, for example by Speedbar (see Speedbar).</li> <li>Several windows with the same buffers can operate as a single flow with follow mode.</li> </ul>								
	<ul> <li>It adds seven</li> <li>On mace</li> <li>On Wind</li> <li>In graphe</li> <li>They car</li> </ul>	eral key bindi OS, in graphi ows, the <u>Mer</u> ics mode, mo n also be ena n windows ca	buse operations are availabled in terminal mode	key is mapped the hyper key. vailable. e, with the xtern ows in other fra	to the Below n-mou	super prefix key (s-). the � icon is used to se-mode enabled. W	o represent the Mer	modes.  nu key under Windows.  > <f12> to toggle the appropriate or in terminal mode.</f12>	
Open this PDF file. See also: <u>Nelp/Info</u>	<f11> w <f1></f1></f11>		(pel-help-pdf &optional OPEN- WEB-PAGE)		Open the local copy of the <u>\( \) Windows \( \) PDF file unless a command prefix (like <b>c-u</b>) was used. In that case it opens the Github-hosted file instead.</u>				
Customize PEL window control	<f11> w <f2></f2></f11>		(pel-customize-pel &optional OTHER-WINDOW)		Customize PEL Window support.  • If OTHER-WINDOW is non-nil (use <b>C-u</b> ), display in other window.				
<u> ▼ Customize</u> Emacs window control	<f11> w <f3< td=""><td>&gt;</td><td colspan="3">(pel-customize-library &amp;optional OTHER-WINDOW)</td><td colspan="4">Customize Emacs Window support groups: windows, ace-window, ace-window-display, winner, windmove.</td></f3<></f11>	>	(pel-customize-library &optional OTHER-WINDOW)			Customize Emacs Window support groups: windows, ace-window, ace-window-display, winner, windmove.			
Management Hydra	<ul> <li>Hydra set of keys to help speed up navigation and management of windows. These keys are identified in the table below.</li> <li>To start this Hydra, hit the <f7> key, then hit one of the following keys once or several times.</f7></li> <li>The keys that are in the PEL window hydra are all identified below with a <f7> prefix, but after typing <f7> once, you can hit several other window hydra keys without typing the <f7> prefix again.</f7></f7></f7></li> <li>While active the Hydra Hint is normally shown in the minibuffer (like the one shown below). While the Hydra is active use the ? key to toggle it off or back on. To have the Hydra hint off when the Hydra activates set the hydra-is-helpful user option to nil (but then you can still toggle it on/off with ?.</li> <li>To cancel the Hydra hit the <f7> key again or use a command not available in the windows management hydra.</f7></li> <li>The name of the PEL window hydra commands are not listed below. They all have a name that begins with pel-∑wnd/ and ends with the same name as the command function listed in the Function column. For example, pel-∑wnd/windmove-up is bound to <f7> <up>.</up></f7></li> <li>A snapshot of the window management hydra hint menu that shows up in the minibuffer area as soon as one of its keys is pressed is shown below.</li> <li>Use the q key to quit from buffers that can be dismissed like the *Help* buffer. It also changes the buffer visible in the normal windows. You can also use b and B to change the buffer visible in the current window.</li> </ul>								
	Move	Resize	Split	Split.		Layout	Close/Buffer	Close.	End
	<right>: right Showing Hydra H</right>	H: wider h: narrowe int	3: vertically   _: horizontally   2: horizontally	<b>C⊸right&gt;</b> : r   	elow eft ight	x: swap with   M-v: flip vert.   M-h: flip horiz.	k: &kill buffer   1: all others   q: quit window   b: next buffer   B: prev buffer	C-S- <up>: above C-S-<down: below<br="">C-S-<left: left<br="">C-S-<right>: right</right></left:></down:></up>	?: hint   <f7>: cancel</f7>
Move point to other window - C-u: swap - C-u C-u: delete	C-x o	ow bound to	C-x o key provides a partially overlapping feature set but (other-window COUNT & optional ALL-FRAMES)  Select (move point) to Select another wind With prefix argumen  This is Emacs defau			ct (move point) to oth lect another window th prefix argument co	er window. in cyclic ordering o onsider all frames.		
Move to other window     Move to specified window Ace target     Operate on specified window			(ace-window ARG)			window = nil. Change it to activate the functionality described in next row.  Move to (and possibly operate on) window selected by an Ace target code.  Requires the ace-window external package.  PEL downloads, installs and activates it when the pel-use-ace-window user option is set to t.  Demo: C'est la Z, video 5			
See also: <u>S Customize</u>			With only 2 windows, move to the other window.  With 3 windows or more: display an Ace target in the windows' upper left corner: it identifies the window target.  Type this number to move to the window, or  Type one of the following letters, followed by the target number to move to the target window and operate on it:  x - delete window  m - swap windows  M - move window  c - copy window  j - select buffer  n - select the previous window  u - select buffer in the other window  c - split window fairly, either vertically or horizontally  v - split window horizontally  b - split window horizontally  o - maximize current window  ? - show these command bindings						
	<ul> <li>In graphics mode the other Emacs frames are in other OS window.</li> <li>In text terminal mode, other Emacs frames are hidden (as they occupy the exact same OS window): just one Emiss displayed.</li> <li>✓ An argument can be used to perform more operations:</li> <li>To force a window number prompt, use any negative prefix (including just typing C alone). Useful with sever when current frame has 1 or 2 windows active.</li> <li>Prefixed with one C-u, does a swap between the selected window and the current window, so that the selected moves to current window (and current buffer moves to selected window). The PEL <f11> w x key does the selected windows.)</f11></li> <li>Prefixed with two C-u's, deletes the window identified by the window number.</li> </ul>					ful with several frames			
Move point to next window • can specify all frames	<f11> w o</f11>		(pel-other-window & ALL-FRAMES)	&optional	Move to other window, like the original other-window.  • With any prefix argument consider all frames. Without argument move only within current frame.  • Useful when 'other-window' has been remapped to something like 'ace-window' and want to see where the <i>next</i> window is.				

<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>		
Move point to previous	<f11> w 0</f11>	(pel-other-window-backward	Select Nth previous window.		
window  can specify all frames	&optional N)		<ul> <li>n defaults to 1: meaning direct previous window.</li> <li>with negative n: move as (abs n) but consider all frames. If n is positive consider only current frame.</li> <li>This is the inverse of what does the standard (other-window).</li> </ul>		
			This command might be useful when ace-window is not used.		
Esc-cursor keys for windmove	conflict with some other b	indings, for example in Org-mode the	cursor key bindings described below. In some circumstances, these key bindings can ese keys can be translated to Meta-cursor keys that are bound to Org-mode operations. bindings: pel-windmove-on-esc-cursor controls the <esc> bindings, it is on by default. In by default.</esc>		
Move to window above	• <f11> <up> • <f1> <up> • <f1> <up> • <esc> <up> • %-<up> • %-<up> • \$f7&gt;<up> • √yu</up></up></up></up></esc></up></f1></up></f1></up></f11>	(windmove-up &optional ARG)	Select the window above the current one.  • With no prefix argument, or with prefix argument equal to zero, "up" is relative to the position of point in the window; otherwise it is relative to the left edge (for positive ARG) or the right edge (for negative ARG) of the current window.  • If no window is at the desired location, an error is signaled.  With PEL, the yu key-chord is also available when key-chord is available and active. See Key-Chords.		
Move to window below	- <f11> <down> <f1> <down> <f1> <down> <f2> <down></down></f2></down></f1></down></f1></down></f11>	(windmove-down &optional ARG)	Select the window below the current one.  • With no prefix argument, or with prefix argument equal to zero, "down" is relative to the position of point in the window; otherwise it is relative to the left edge (for positive ARG) or the right edge (for negative ARG) of the current window.  • If no window is at the desired location, an error is signaled.  With PEL, the bn key-chord is also available when key-chord is available and active. See Key-Chords.		
Move to window at left	<pre>   <f11> <left>   <f1> <down>   <esc> <left>     %-<left>     %-<left>     <f7> <left>     '*-</left></f7></left></left></left></esc></down></f1></left></f11></pre>	(windmove-left &optional ARG)	Select the window to the left of the current one.  • With no prefix argument, or with prefix argument equal to zero, "left" is relative to the position of point in the window; otherwise it is relative to the top edge (for positive ARG) or the bottom edge (for negative ARG) of the current window.  • If no window is at the desired location, an error is signaled.  With PEL, the gf key-chord is also available when key-chord is available and active. See Key-Chords.		
Move to window at right	• <f11> <right> • <f1> <right> • <f1> <right> • <esc> <right> • %-<right> • ∜-<right> • <f7> <right> • ik</right></f7></right></right></right></esc></right></f1></right></f1></right></f11>	(windmove-right &optional ARG)	Select the window to the right of the current one.  • With no prefix argument, or with prefix argument equal to zero, "right" is relative to the position of point in the window; otherwise it is relative to the top edge (for positive ARG) or the bottom edge (for negative ARG) of the current window.  • If no window is at the desired location, an error is signaled.    With PEL, the jk key-chord is also available when key-chord is available and active. See   Key-Chords.		
Exchange windows	• <f11> w x • <f7> x</f7></f11>	(ace-swap-windows)	Swap buffers of the current window with another. If 3 windows or more, a single digit shows up in the top-left corner identifying the number to type to swap to this window.  Requires the <a href="mailto:ace-window">ace-window</a> external package. PEL downloads, install and activates it when the <a href="mailto:pel-use-ace-window">pel-use-ace-window</a> user options is set to t.		
Close/Create Windows	The following commands are used to create and remove windows.  The last 2 rows correspond to two sets of four PEL commands bound to cursor keys.				
Close this windows	• C-x 0 • <f7> 0 • <f7> d</f7></f7>	(delete-window &optional WINDOW)	This just closes the window and moves the cursor to the next window.		
Kill current buffer and close window See also: Buffers	• C-x 4 0 • <f7> k</f7>	(kill-buffer-and-window)	Kill the current buffer and delete the selected window.		
Close a window identified by number	<f11> w k</f11>	(ace-delete-window)	Delete a window selected by a number, a number shown in the top-left corner of the window.  PEL downloads, installs and activates it when the pel-use-ace-window user options is set to t.		
Close all other windows	• C-x 1 • <f7> 1 • <f7> .</f7></f7>	(delete-other-windows &optional WINDOW)	Make current window fill its frame.		
Maximize one window, identified by number	<f11> w m</f11>	(ace-maximize-window) (ace-delete-other-windows)	Maximize a window. Close all windows except the window selected by number, a number shown in the top-left corner of the window.  Requires the <u>ace-window</u> external package. The old versions used ace-window-maximize, but newer versions use ace-delete-maximize-windows. PEL uses the one that is available. PEL downloads, install and activates it when the pel-use-ace-window user options is set to t.		
Create new window below	• C-x 2 • <f7> 2 • <f7> -</f7></f7>	(split-window-below &optional SIZE)	Split the selected window into two windows, one above the other.  • The selected window is above. The newly split-off window is below and displays the same buffer.  ► Note that Emacs default behaviour attempts to maximize the view into the current buffer when splitting the buffer into 2 windows. This means that the cursor will not be located in the same position in the new window. To change this behaviour and keep the same point in both windows, execute (setq split-window-keep-point nil). The PEL packages does that.		
Create new window at right	• C-x 3 • <f7> 3 • <f7>  </f7></f7>	(split-window-right &optional SIZE)	Split the selected window into two side-by-side windows.  • The selected window is on the left. The newly split-off window is on the right and displays the same buffer.		
Create window at cursor direction	• ESC C- <right> • ESC C-<left> • ESC C-<down> • ESC C-<up> • <f1> C-<right> • <f1> C-<left> • <f1> C-<left> • <f1> C-<down> • <f1> C-<up> • <f11> C-<up> • <f11> C-<right> • <f11> C-<right> • <f11> C-<right> • <f11> C-<right> • <f11> C-<left> • <f11> C-<left> • <f11> C-<left> • <f11> C-<down> • <f11> C-<up> • <f7> C-<left> • <f7> C-<right> • <f7> C-<right> • <f7> C-<left> • <f7> C-<left> • <f7> C-<left> • <f7> C-<left> • <f7> C-<up> • <f7> C-<up></up></f7></up></f7></left></f7></left></f7></left></f7></left></f7></right></f7></right></f7></left></f7></up></f11></down></f11></left></f11></left></f11></left></f11></right></f11></right></f11></right></f11></right></f11></up></f11></up></f1></down></f1></left></f1></left></f1></right></f1></up></down></left></right>	(pel-create-window-right)     (pel-create-window-left)     (pel-create-window-down)     (pel-create-window-up)	Create a window at the location pointed by the cursor's direction, and move point inside the new window.  • The 4 different commands and shown in the same cell for convenience, one for each of the available cursors: <right>, <left>, <down> and <up>.  • There are 4 possible sets of bindings:  • 3 sets of stand-alone commands:  • Commands with <f11> prefix, always available.  • Commands with ESC prefix, available when pel-windmove-on-esc-cursor user option is on (set to t).  • Commands with <f1> prefix, available when pel-windmove-on-f1-cursor user option is on (set to t).  • The Hydra-based commands, with the Hydra activated with any of the key sequences that use the <f7> prefix. Available when pel-use-hydra user option is set to t.</f7></f1></f11></up></down></left></right>		

<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>		
Close a window at cursor direction	• ESC C-S- <right> • ESC C-S-<left> • ESC C-S-<down> • ESC C-S-<up> • <f1> C-S-<right> • <f1> C-S-<left> • <f1> C-S-<down> • <f1> C-S-<down> • <f1> C-S-<down> • <f1> C-S-<down> • <f1> C-S-<up> • <f11> C-S-<right> • <f11> C-S-<left> • <f11> C-S-<left> • <f11> C-S-<left> • <f11> C-S-<down> • <f11> C-S-<down> • <f11> C-S-<down> • <f11> C-S-<down> • <f11> C-S-<up> • <f7> C-S-<right> • <f7> C-S-<left> • <f7> C-S-<left> • <f7> C-S-&lt;<le><down> • <f7> C-S-&lt;<le><down> • <f7> C-S-&lt;<le><down> • <f7> C-S-&lt;<le><down> • <f7> C-S-&lt;<up></up></f7></down></le></f7></down></le></f7></down></le></f7></down></le></f7></left></f7></left></f7></right></f7></up></f11></down></f11></down></f11></down></f11></down></f11></left></f11></left></f11></left></f11></right></f11></up></f1></down></f1></down></f1></down></f1></down></f1></left></f1></right></f1></up></down></left></right>	pel-close-window-right)     (pel-close-window-left)     (pel-close-window-down)     (pel-close-window-up)	<ul> <li>Kill window pointed by the cursor's direction.</li> <li>The 4 different commands and shown in the same cell for convenience, one for each of the available cursors: ⟨right⟩, ⟨left⟩, ⟨down⟩ and ⟨up⟩.</li> <li>There are 4 possible sets of bindings: <ul> <li>3 sets of stand-alone commands:</li> <li>Commands with ⟨f11⟩ prefix, always available.</li> <li>Commands with ESC prefix, available when pel-windmove-on-esc-cursor user option is on (set to t).</li> <li>Commands with ⟨f1⟩ prefix, available when pel-windmove-on-f1-cursor user option is on (set to t).</li> <li>The Hydra-based commands, with the Hydra activated with any of the key sequences that use the ⟨f7⟩ prefix.</li> <li>Available when pel-use-hydra user option is set to t.</li> </ul> </li> </ul>		
Resize Window	The following commands are used to change the current window size. Except for the hydra, none of these commands are easy to re-type quickly.  • The best way to use them is to type them once and then use a <u>repeat key</u> :  • Emacs native repeat key is C−x z once and then repeat more by only typing 'z'.  • The PEL package also binds the <f5> key to repeat.  • PEL also provides the Window Hydra (described above) which can be started with one of the following commands using the <f7> prefix. Once the Hydra is entered, commands can be issued again without any prefix.  Each of the first 5 commands below have 5 possible bindings:  • The Emacs default key binding using the C-x prefix.  • The commands with the default PEL <f11> prefix, always available.  • The commands with ESC prefix, was available when pel-windmove-on-esc-cursor user option is on (set to t).  • The Hydra-based commands, with the Hydra activated with any of the key sequences that use the <f7> prefix. Available when pel-use-hydra user option is set to t.</f7></f11></f7></f5>				
Grow window taller	• C-x ^ • <f11> w s V • ESC M-<up> • <f1> M-<up> • <f7> V</f7></up></f1></up></f11>	(enlarge-window DELTA &optional HORIZONTAL)	Grow window taller by DELTA lines (defaults to 1), specify more with <b>C-u</b> n (or <b>M-</b> n) argument prefix.  • See note above for availability of various bindings.		
Shrink window smaller	• <f11> w s v • ESC M-<down> • <f1> M-<down> • <f7> v</f7></down></f1></down></f11>	(shrink-window DELTA &optional HORIZONTAL)	Shrink height of window by DELTA lines (defaults to 1), specify more with <b>C-u</b> n (or <b>M-</b> n) argument prefix.  • See note above for availability of various bindings.		
Grow windows wider	• C-x } • <f11> w s H • ESC M-<right> • <f1> M-<right> • <f7> H</f7></right></f1></right></f11>	(enlarge-window-horizontally DELTA)	Enlarge the current window horizontally.  • See note above for availability of various bindings.		
Shrink window narrower	• C-x { • <f11> w s h • ESC M-<left> • <f1> M-<left> • <f7> h</f7></left></f1></left></f11>	(shrink-window-horizontally DELTA)	Reduce the width of the current window.  • See note above for availability of various bindings.		
Make all windows the same size	• C-x + • <f11> w s = • ESC <kp-5> • <f1> <kp-5> • <f7> =</f7></kp-5></f1></kp-5></f11>	(balance-windows & optional WINDOW-OR-FRAME)	Balance the sizes of windows of WINDOW-OR-FRAME.  WINDOW-OR-FRAME is optional and defaults to the selected frame.  If WINDOW-OR-FRAME denotes a frame, balance the sizes of all windows of that frame. If WINDOW-OR-FRAME denotes a window, recursively balance the sizes of all child windows of that window.  Bee note above for availability of various bindings.		
Reduce current window size if buffer is smaller than window	• C-x - • <f11> w s -</f11>	(shrink-window-if-larger-than- buffer &optional WINDOW)	Shrink height of current window if its buffer doesn't need so many lines.  More precisely, shrink window vertically to be as small as possible, while still showing the full contents of its buffer.  Do not shrink window to less than 'window-min-height' lines. Do nothing if the buffer contains more lines than the present window height, or if some of the window's contents are scrolled out of view, or if shrinking this window would also shrink another window, or if the window is the only window of its frame.		
Quick Window Layout Change	The following commands flip the layout of 2 windows: the current and <i>next</i> window between 2 horizontal windows to 2 vertical windows and vice versa.				
Flip 2 horizontal windows to 2 vertical ones	• <f11> w v • <f7> M-v</f7></f11>	(pel-2-vertical-windows)	Convert 2 horizontal windows into 2 vertical windows.  • Flip the orientation of the current window and its next one.  • The next window is placed at the right of the current window.		
Flip 2 vertical windows to 2 horizontal ones	• <f11> w h • <f7> M-h</f7></f11>	(pel-2-horizontal-windows)	Convert 2 horizontal windows into 2 horizontal windows.  Flip the orientation of the current window and its next one.  The next window is placed below the current one.		
Window Layout History	The following commands allow you to restore a previously used window layout.  They depend on the winner package, a package that is part of the standard Emacs. PEL activates them when pel-use-winner user option is t.				
Restore an earlier window configuration	• C-c <left> • <f11> w p • <f7> p</f7></f11></left>	(winner-undo)	Switch back to an earlier window configuration saved by Winner mode. In other words, "undo" changes in window configuration.		
Restore a more recent window configuration	• C-c <right> • <f11> w n • <f7> n</f7></f11></right>	(winner-redo)	Restore a more recent window configuration saved by Winner mode.		
Open Buffer in another window	and the other does not. Und	er PEL both commands are bound to	ide another window. One command select that other window (move point to that window) of the IDO version of the command when the pel-use-ido customization variable is set to t, g provides more information at the prompt.		
Select buffer in other window	C-x 4 b     (ido-switch-buffer-other-window)     (switch-to-buffer-other-window)     U		Select buffer bufname in another window (switch-to-buffer-other-window). See <u>Select Buffer</u> .		
Display buffer in other window, don't select the other window.	• C-x 4 C-o • <f11> w b</f11>	(ido-display-buffer)  ———————————————————————————————————	Display a buffer in other window but don't select it.  When <i>pel-use-ido</i> is customized to t, (ido-display-buffer) is used, which prompts and provides easy to select list of available buffer names. Otherwise the standard Emacs (display-buffer) is used prompting without showing the available buffers.		

<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>		
<b>Dedicated Windows</b>	Emacs windows can be dedi commands help you manage		ay that future windows operations do not affect the dedicated windows. The following		
Show dedicated status of current window	<f11> w d ?</f11>	(pel-show-window-dedicated- status)	Display the dedicated status of the current window in the echo area (the minibuffer).		
Toggle dedicated status of current window	<f11> w d d</f11>	(pel-toggle-window-dedicated)	Toggle the dedicated status of the current window. Use with care.		
Follow Mode	Emacs has a scroll all windows mode which applies all scroll commands to all visible windows. To support mouse wheel or scroll bar you need to implement extra code as suggested by the <a href="Emacs Wiki Scroll All Mode">Emacs Wiki Scroll All Mode</a> page.				
See also: Secrolling	Text in the first window goes to the bottom and then  Text in the first window in the second window. If there is another then		<ul> <li>When Emacs follow-mode is used on 2 or more windows, these windows show the text the same buffer spread across these windows that act as a one continuous stream.</li> <li>Follow mode is a minor mode that combines windows into one tall virtual window. This accomplished by two main techniques: <ul> <li>The windows always displays adjacent sections of the buffer. This means that whenever one window is moved, all the others will follow. (Hence the name Follow mode.)</li> <li>Should point (cursor) end up outside a window, another window displaying that point is selected, if possible. This makes it possible to walk between windows usin normal cursor movement commands.</li> </ul> </li> <li>Follow mode comes to its prime when used on a large screen and two or more side-by side windows are used. The user can, with the help of Follow mode, use these full-height windows as though they were one.</li> </ul>		
Toggle follow-mode See also: Scrolling	• <f11> w f • <f11>   f</f11></f11>	(follow-mode &optional ARG)	Toggle Follow mode. With a prefix argument ARG, enable Follow mode if ARG is positive, and disable it otherwise.		
Scrolling Window	For all other commands to	scroll the window text, see the \$\sigma S\$	crolling page		

## Windows - Reference

Topic/URL	Comment			
GNU Emacs — Displaying a Buffer in a Window	Describes the Emacs features related to displaying buffers inside windows.			
GNU Emacs Lisp — Displaying Buffers — The Zen of Buffer Display	Describes the rules Emacs tries to use to control the creation of new windows when they are created dynamically from commands.			