

SAS Enhanced Editor Tips

1. Useful Keyboard Shortcuts

Editing:

Ctl-Delete	Delete to start of next word (including space). If the cursor is at the start of a word, deletes the whole word.
Ctl-Backspace	Delete to beginning of previous word. If the cursor is at the end of a word, deletes the whole word.
Ctl-Y	Redo
Ctl-Z	Undo

Navigation:

Ctl-Tab	Go to next open window
Ctl-Shift-Tab	Go to previous open window
Ctl-G	Go to line #
Home	Go to beginning of line
End	Go to end of line
Ctl-Up Arrow	Keep cursor in current position, scroll screen up by one line
Ctl-Down Arrow	Keep cursor in current position, scroll screen down by one line
Alt-Up Arrow	Go to first visible line on screen
Alt-Down Arrow	Go to last visible line on screen
Ctl-Home	Go to beginning of document
Ctl-End	Go to end of document
Ctl-] or Ctl-[Go to matching parenthesis or bracket

Line Markers (useful to set 'bookmarks' in long programs, but they aren't saved with the program)

Ctl+F2	Toggle marker on current line
F2	Go to next marked line
Shift-F2	Go to previous marked line

Selection operations (do something to the selected text)

Ctl+/	Comment out selection with line comments (/*...*/)
Ctl+Shift+/	Uncomment the selection with line comments
Ctl+Shift+L	Convert selected text to lowercase
Ctl+Shift+U	Convert selected text to uppercase
Tab	Move selected text to the right one tab stop
Shift+Tab	Move selected text to the left one tab stop
Ctl+Shift+W	Clean up whitespace from end of line (useful for cleaning up mainframe programs moved to PC)

For a complete list, go to

<http://support.sas.com/onlinedoc/913/docMainpage.jsp> and select Base SAS -> Operating System Specific Information -> SAS Companion for Microsoft Windows -> Appendices -> Default Key Settings for Interactive SAS Sessions.

2. Defining Keys

In addition to the built-in keyboard shortcuts, you can define actions for the function keys as well as just about any other key combination. To define function keys, type 'keys' in the command box or select Tools -> Options -> Keys. A window will open with a list of key/key combinations to which you can assign commands. You can assign keys to open the log (LOG),

open the output window (OUTPUT), clear the current window (CLEAR), or submit the program (SUBMIT). You can specify multiple commands by separating them with semicolons (like LOG; CLEAR; OUTPUT; CLEAR).

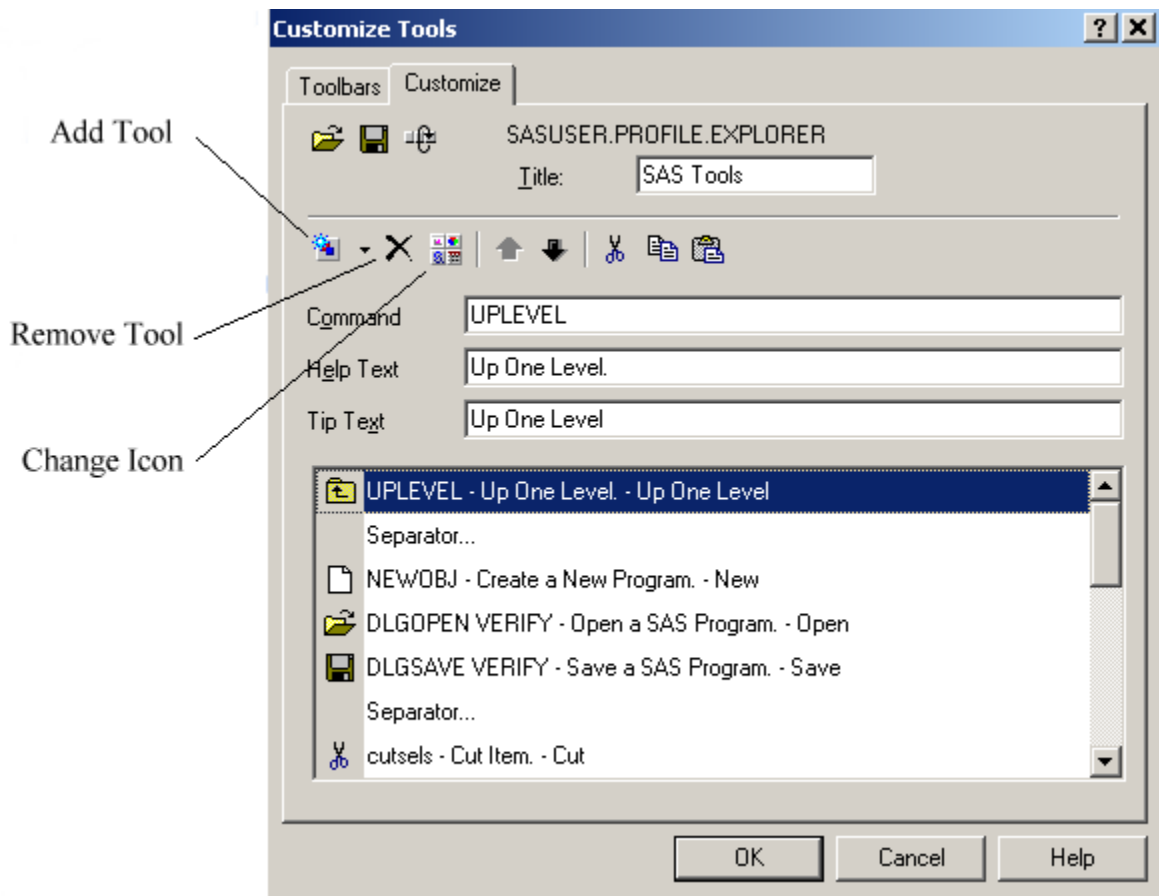
A partial list of commands that can be used is in the online docs: go to <http://support.sas.com/onlinedoc/913/docMainpage.jsp> and select Base SAS -> Operating System Specific Information -> SAS Companion for Microsoft Windows -> Features of the SAS Language -> Commands Under Windows.

3. Customizing toolbars

You can customize the toolbars on any of the windows in SAS - enhanced editor, log, output, explorer, results. Unfortunately, I don't think there is a way to put a button on all of the toolbars at once - if you want a button on each toolbar, you have to add it to each one.

Example: to add a button to include the header file that should start all programs:

- make the enhanced editor the selected window
- choose Tools -> Customize, and select the Customize tab on the popup window



- select the line below where you want the new button to appear (i.e., if you want the new button to appear after the UPLEVEL button in the picture above, select the first separator line)
- click on the down arrow next to the Add Tool button (the one with the tiny blue star on it), and select Blank Tool
- Fill in the text command in the command box:

```
include "k:\projects\template.sas"; dlgsave
```

This command will include the header template and then open a "Save As" dialog box to allow you to save the file under a

different name.

- Fill in the help text (Include Template) and the tip text (Template). The tip text shows up when you hover the mouse pointer over the button, the help message shows up in the status area.
- Select an icon for the button by clicking the Change Icon button and selecting an icon from the display and click OK.

You can also modify the toolbar by deleting buttons (use the button marked X) or moving buttons around with the up and down arrows. You can specify multiple commands by separating them with semicolons (like LOG; CLEAR; OUTPUT; CLEAR).

4. Creating code templates

Another very nice feature of the Enhanced Editor is the ability to create abbreviations for things like code templates. Once an abbreviation is created, you can type a keyword, hit Tab, and the keyword will be replaced by the code template.

Example: Create templates for sql joins and left joins.

- Type the code you want to appear in the editor:

```
proc sql;

quit;

create table <----> as
select <---->
from <---->
where <---->;

create table <----> as
select <---->
from <----> as a, <----> as b
where a.<----> = b.<---->;
```

- Select the lines from proc sql to quit and hit Ctl-C.
- Select Tools -> Add Abbreviation
- For the abbreviation, type procsql (don't use just sql - it's a reserved word)
- move the cursor to the Text to Insert box and type Ctl-V
- Click OK
- In the editor window, type procsql and then hit Tab. The "procsql" should be replaced by the proc sql ... quit lines.
- repeat for the other two code segments, using the abbreviations sqlselect and sqljoin.
- to use the templates, type the abbreviation name (like procsql) and then hit Tab.

You can leave out the <----> if you want - they are just reminders that you need to replace them with real values before submitting the code.

This can be done for any text you might want to add - a proc statement that you have trouble remembering the syntax for, or one you type often. You can even copy the proc syntax out of the help and paste it into the abbreviation window.

These abbreviations are saved as keyboard macros. You can edit/modify them by choosing Tools -> Keyboard Macros -> Macros, as well as assign them to a shortcut key. See the next section for details.

5. Macros

Similar to Word or Excel, the Enhanced Editor has a macro facility to automate repetitive tasks. You can record keystrokes into a macro, assign the macro to a key combination, and then rerun those keystrokes at will. You can also create a macro from scratch by selecting various commands.

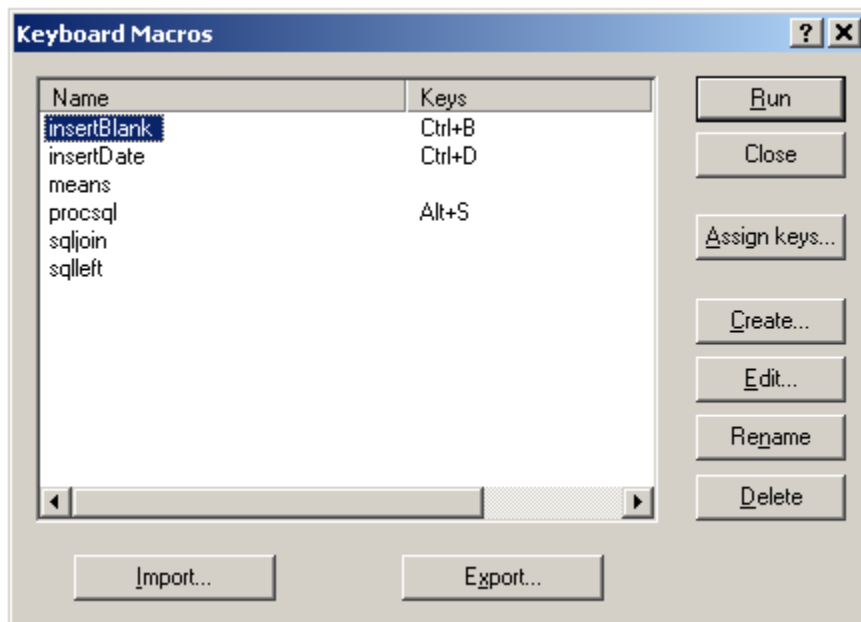
Recently, a question was posted on the SAS-L mailing list asking how to insert a blank line after every 5 lines of code. The poster had a long format definition that he wanted to insert blank lines into to make it more readable. This can be done with a recorded macro:

- Open a new enhanced editor window and hit return 10 or so times (to get enough lines to work with)
- Hit Ctl-Home to return to the beginning
- Select Tools -> Keyboard Macros -> Record New Macro
- Very carefully, hit the down arrow 5 times, hit End, and then hit <enter>
- Select Tools -> Keyboard Macros -> Stop Recording
- In the window that pops up, give the macro a name (insertBlank) and a description (insert a blank line 5 lines below the cursor)
- Click the Assign Keys button
- In the new window that opens, put the cursor in the text box labeled Press New Shortcut Key and hit Ctl-B
- Click Assign and then click OK

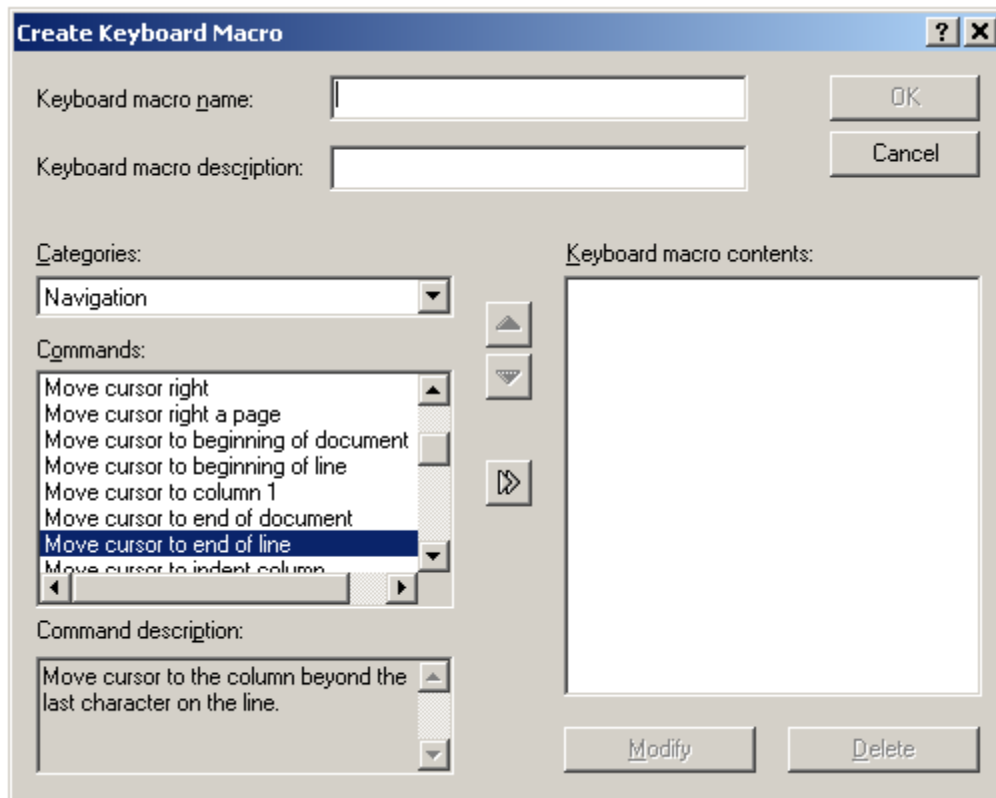
Now, when you hit Ctl-B, the cursor will move down 5 rows and insert a blank line. (I know, not very useful, but you get the idea!)

To create a macro from scratch:

- Select Tools -> Keyboard Macros -> Macros.
- Click Create in the window that appears



- The next window allows you to specify the macro name, description, and commands



- Enter a name (insertDate) and a description (Insert current date and time).
- From the Categories selection list, select Date/Time
- In the Commands box, click on Insert Current Date and Time, and then click the right arrow between then Commands box and the Keyboard macro contents box.
- Click OK to save the macro and go back to the previous window
- Click Assign Keys, put the cursor in the Press new Shortcut Key box, and hit Ctl-D, the click OK.
- Click Close

Now, when you want to insert the current date and time in a program (like in a "Last Run:" comment), just hit Ctl-D. You could also modify the macro to create a comment like this in one go (hint: edit the macro, and look in the Edit category for the Insert String command - insert a bit of text before the date/time, and another bit afterward).

6. Customizing the SAS Explorer Window

You can customize the SAS Explorer window to add favorite folders, "My Computer" navigation, and Results. This works best and is much more efficient if you have Explorer set up to display items as a List or Details instead of Large or Small Icons (select View -> List or View -> Details to change).

To add these extras to your SAS Explorer window:

- Make the SAS Explorer the active window by clicking on it.
- Select Tools -> Options -> Explorer
- In the popup window, select Initialization from the selection box at the top
- The Registered Types window should display five items: libraries, file shortcuts, favorite folders, extensions, and results. The libraries and file shortcuts probably have a + next to them indicating they are turned on, while the others have a red bar

indicating they are off.

- To turn on the favorite folders, extensions, and results, select them one at a time and click Add.
- Click OK
- You should now see entries in the SAS Explorer window named Favorite Folders, My Computer, and Results.

The Favorite Folders entry can be used to define folders that you visit often to load programs from. For example, I have one set up to refer to k:\Phil and another to refer to k:\fac_eval. To add a folder:

- Right-click on the Favorite Folders icon and choose New Favorite folder from the popup menu
- Give it a descriptive name (or just use the path for the name) in the top text box
- Type the directory (or browse to it and select it) in the bottom text box.
- Click ok.

You can now open SAS programs without having to go through File -> Open and then navigating through the file system to find your program. You can actually open any type of file in this folder - if it isn't a SAS file, it will be opened with the assigned Windows program.

The My Computer icon basically gives you access to Windows Explorer inside of SAS. You can open SAS programs or any other type of file from here.

The Results icon incorporates the Results window into the Explorer window so you don't have to switch back and forth.