User Interface Design for the Run Plugins By Name plugin
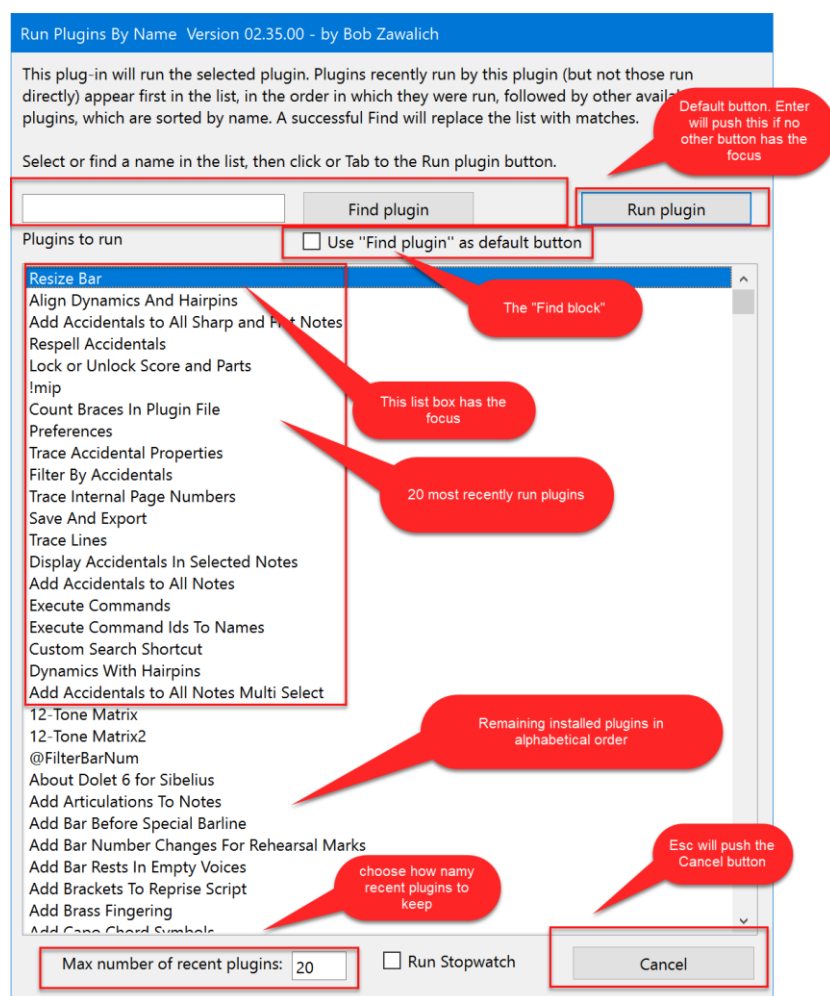
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Run Plugins By Name provides an alphabetized list of the names of all installed plugins. You can select a plugin name in the list and run that plugin.

I consider the essential parts of the dialog to be the **Plugins to run** list box and the **Run plugin** button. If the focus is in the list box, you can use your mouse or arrow keys to select a plugin name, and then press the **Run plugin** button to execute it.

The current version of the plugin has several additional controls and "regions" in the dialog, and these will be explained below, but for now here are the basic dialog regions.

The regions of the dialog

The list box contains the names of the installed plugins. If the **Max number of recent plugins** edit box is 1 or greater, the names of that many most recently run plugins are moved to the top of the list, for easier access. In the screenshot above, **Resize Bar** was the last plugin I had run using Run **Plugins By Name**.

Once the max number (20 by default) of recent plugins is reached, the next plugin to run is moved to the top of the list, the bottom entry is removed from the recently run portion, and the remaining recent plugins are moved down one slot. I refer to the recent plugins at the top of the list as the **Working Set** of plugins. They are the ones you have used recently and are most likely to want to run again. They will all be visible at the top of the list the next time you run **Run Plugins By Name**.

You can type all or a part of a plugin name into The **Find** edit box and then press the **Find plugin** button, and a plugin whose name includes the typed pattern will be selected in the list box. This is described in more detail below.

The **Run stopwatch** checkbox is for plugin developers. It will display how long it takes for a plugin to run, stating from when the **Run** button is pressed until the plugin that was run terminates.

The following actions would apply to almost any dialog you encounter:

If the focus is in a listbox you can navigate the listbox using the up and down arrow keys, typing the first few letters in a name (after the **Working Set** entries, the list is in alphabetical order), or scrolling with the mouse.

You can use **TAB** and **Shift+Tab** to move between controls in the dialog.

When the focus is not on a **button** (**Find plugin**, **Run plugin**, or **Cancel** in this dialog), the **default button**, which in Windows will have a special border, will be activated if **Enter** is pressed. **Esc** will close the dialog. If the focus is on a non-default button that button will be activated when **Enter** is pressed.

Run Last Named Plugin

The plugin **Run Last Named Plugin** will re-run the plugin most recently run by **Run Plugins By Name**, without bringing up the **Run Plugins By Name** dialog. It is very useful if you need to run the same plugin several times in a row and don't want to give it a separate shortcut. It will run the plugin that appears at the top of the listbox if the edit box **Max number of recent plugins** is at least 1.

Keyboard shortcuts

I personally use a related pair of shortcuts for **Run Plugins By Name** (F8) and **Run Last Named Plugin** (F7). Since I use these so often, I wanted to have easily accessible and adjacent keys without modifiers, and F7 and F8 were available to me. I run these dozens of times every day, so I want them to be easy to run.

Workflows

My original design did not have a working set or a **Find** button. It was simply a list of plugin names in alphabetical order, and it removed the need for me to know which menus held the plugin I wanted. I could either scroll down the list to find the plugin I wanted or type the first 1 or 2 letters in a name to get to my plugin, and then press **Enter** to run the plugin.

It quickly became clear that it was tedious to keep finding the name in the list if I wanted to run the same plugin more than once, so I added the **Working Set** feature, where the names of the most recently run plugins would be moved to the top of the list, followed by the remaining plugin names in alphabetical order.

I then added a **Find** box for faster searching. I decided that if I were going to use **Find** a lot (which I do), I would like the dialog to be set up so I can immediately type what I wanted to find. This turned out to be great when doing a lot of finding, and not so convenient when I just wanted to run the first couple of recently run plugins, so I set up 2 similar dialogs, which I can toggle between using the **Use Find plugin as default button** checkbox.

The **Find-centric** dialog is optimized for using **Find**, and the **List box-centric** dialog is better when navigating in the list box and you want to quickly run the list box selection.

You can, of course, use the mouse to navigate the dialog, in which case the Tab order does not matter, but I wanted to set up a keystroke order that would allow the most common operations to be done most efficiently.

One thing I take advantage of in my Tab order decisions: you do not need to be able to easily Tab to the default button. If the focus is not on another button, Enter will activate the default button. The **Find** and **Run** buttons are the ones to optimize for, and one dialog uses **Find** as the default button, and the other uses **Run**. In determining the Tab order, it is best to optimize for moving to the non-default button.
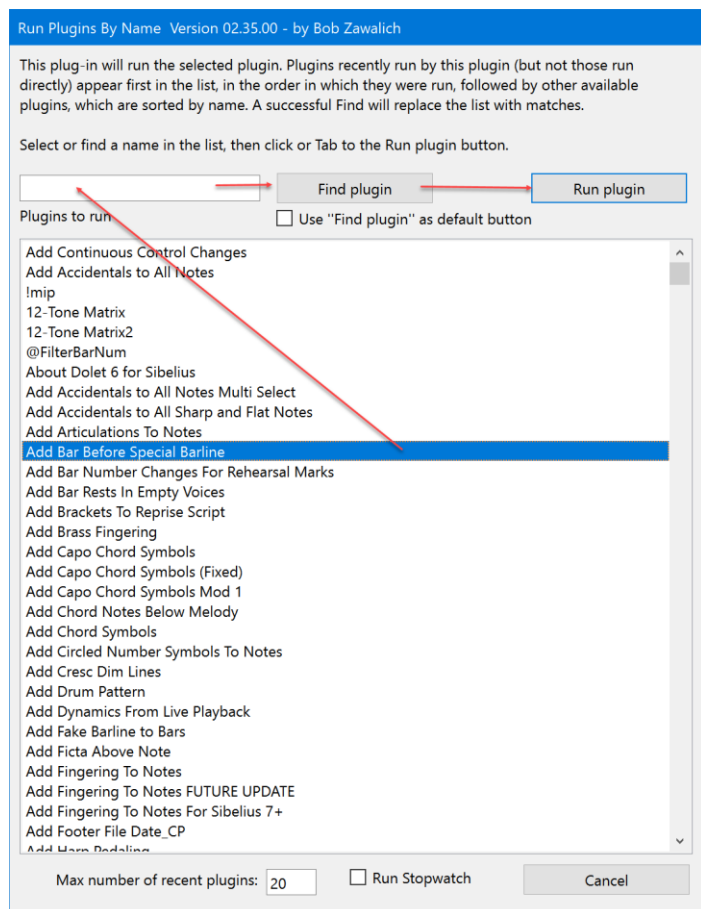
The List box-centric dialog

Intended workflow

This is the simpler setup and is the way the plugin comes up by default. The most important details are that the initial focus goes to the listbox, and the default button is **Run plugin**. You can navigate in the list box with arrow keys, typing, or the mouse and scroll bar, and then press **Enter** to run the selected plugin, since the default button is **Run plugin**. This is what I expect the primary activity would be, and this should be easy to accomplish with the Tab order described below.

Tab order

As a secondary activity, it would be useful to get to **Find** easily, even without a mouse, and so the **Tab** order is set up to facilitate this. Starting in the listbox, **Tab** takes you to the **Find** edit box. You can type in the edit box and use **Tab** to go to the **Find plugin** button. Since it has the focus, you can press **Enter** to activate it, and keep pressing the button until you have selected the plugin you want to run. Now **Tab** again to move to the **Run plugin** button. Press **Enter** to close the dialog and run the plugin.

If the focus is on **Run plugin** and you press **Tab** again, you will move to the remaining controls, which is usually not useful. **Shift+Tab** will take you back to the other main controls.

The Find-centric dialog

Intended workflow

If **Use "Find plugin" as default button** is checked, a different copy of the dialog will come up. In this dialog, the initial focus is in the **Find** edit box, and the default button is **Find plugin**, rather than **Run plugin**. I use this form when I expect to need to find a plugin rather than expecting it to be at the top of the list, which for me is a very common scenario.

Prior to version 02.35.00 of the plugin, **Find plugin** would select the next matching entry in the list box, if any. As of 02.35.00, the plugin replaces the list with a list of all the entries that match the pattern. If you press **Enter** or press **Find plugin** again, it will move to the next entry in the list.

If you want to change the matching pattern, the focus will still be in the edit box if you had used **Enter** to activate **Find plugin**. You can backspace, type different text, and press **Enter**, and the plugin will search for the new pattern in the original full list. Here, typing "accid" gives me all the plugins with "accid" anywhere in the name.

To get the original list of all the plugins back, make the edit box blank and press **Enter**.

Once you have selected the plugin name you want, **Tab** twice to get to the **Run plugin** button, then press **Enter**.

If the focus is on the **Find plugin** button, it is tricky to **Tab** back to the edit box (see the discussion below), but you can press **Shift+Tab** or **Tab** until you return to the edit box, and then type another pattern.

Tab order

The Tab order for this plugin is a little more complicated. It is optimized for this set of operations:

- type match pattern in edit box
- press **Enter** for **Find plugin** as many times as necessary
- press **Tab** twice to put the focus on **Run plugin**
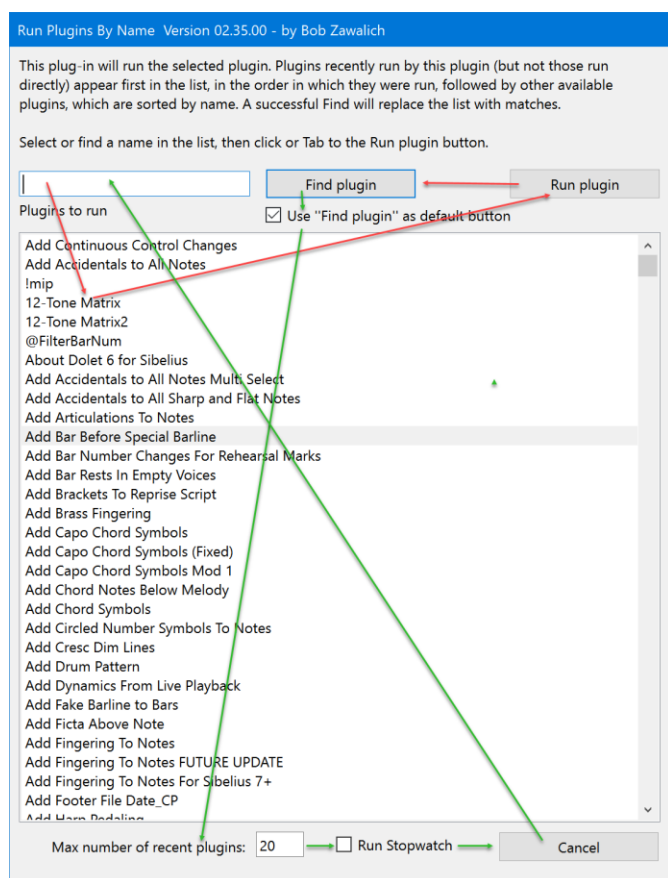- press **Enter** to run the plugin

A secondary optimization is to make it easy to run the plugin when the focus is moved to the list box. In that case,

- **Tab** to move to **Run plugins**, then press **Enter**, or
- **Shift+Tab** to move back to the **Find** edit box.

Given the desire to optimize these workflows, the one really awkward spot is when the focus is in the **Find plugin** button. Given that **Find plugin** is the default button, it does not need to have the focus for **Enter** to activate it, so **Enter** will do a find even if the focus is not on the **Find plugin** button.

If the **Find plugin** button does have the focus, you can use **Shift+Tab** to get to the **Run plugin** button, and keep pressing **Shift+Tab** to get back to the edit box.

Here is the tab order for all the dialog controls, with the main controls marked with red arrows:

Once the focus is on **Find plugin**, **Tab** will take you to the remaining minor controls until you eventually come around to the edit box again.

It works much better to keep the focus in the edit box, use **Enter** to activate **Find plugin**, and then **Tab** twice to get to **Run plugin**.