

Input Icons for UI Toolkit

This is an “Input Icons for TMPPro” extension.

Requirements (from package manager. Window → Package Manager):

- **Unity 2021.2 or higher**
- **Input Icons for TMPPro (available on the Asset Store: <https://u3d.as/2Lkz>)**
- **TextMeshPro 2.1.6 or higher**
- **Input System 1.2.0 or higher (1.3.0, 1.4.4 or higher recommended)**
- **UI Builder/UI Toolkit (automatically included in Unity 2021 and higher)**

Similar to Input Icons for TMPPro, this asset aims to provide the same functionality but for UI Toolkit. Once setup, you can display the bindings of your Input Action Assets in UI Document rich texts. Just like in Input Icons for TMPPro we can use the “style” tag.

Display the bindings of an action by writing `<style=NameOfActionMap/NameOfAction>` into a text field in the UI Builder. The manager (which is a Scriptable Object) will update the displayed sprites whenever the user switches to another device.

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Updating From An Earlier Version

When you update from an earlier version, the references on the manager might get reset. So if you made any changes to the default Manager, Panel Settings, Text Settings, Theme Style or the Text Style Sheet asset, those changes will probably be lost and you will have to make your changes again. For that reason, you might want to create your own assets and link reference them on the manager so you don't have to do a huge amount of work every time you update this asset.

Also when you update, you will likely have to do the setup again in “Tools -> Input Icons -> Input Icons UI Toolkit Setup”.

Getting Started

Before you start, make sure you have the following installed.

- **TextMeshPro** (with TMP essential resources)
- The “new” **Input System** (package manager version **1.2.0 or higher**)
- **Input Icons for TMPPro** (available on the Asset Store: <https://u3d.as/2Lkz>)
- **UI Toolkit** (in later Unity version this should be automatically included)

Important: You have to **setup Input Icons for TMPPro before** you can use Input Icons for UI Toolkit. The reason for that is that we need the created sprite textures containing all keys and buttons before we can create the sprite assets for UI Toolkit. Also this ensures we have already selected the needed Input Action Assets and are matching the Control Scheme Names.

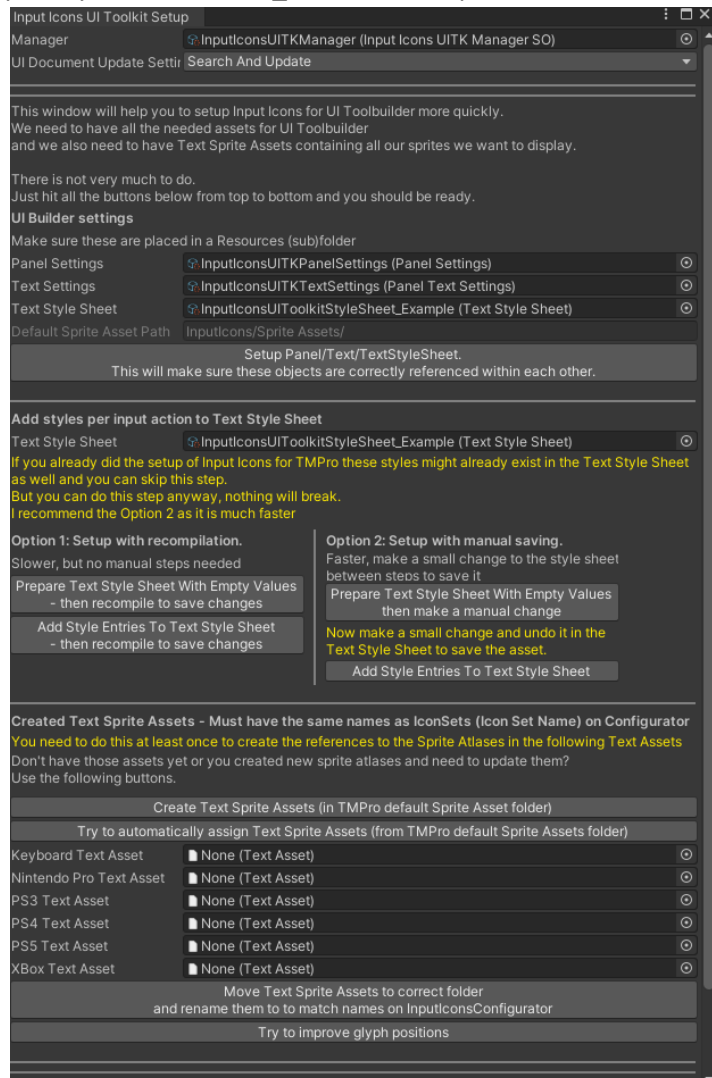
To start open **“Tools/Input Icons/Input Icons UI Toolkit Setup”** from the toolbar to open the setup window. Don’t worry it looks like a lot but the setup process is quite fast.

First decide on how you want to update your UI Documents. The options the same as in Input Icons for TMPPro: “Search and Update” searches the active scene(s) for UI Documents and refreshes them all. “Via Input Icons Text Components” requires you to add the `II_Document` script to UI Documents which display Input Icons.

In the next part we make sure the Panel Settings, Text Settings and Text Style Sheet reference each other correctly. The default ones should already be set up, but if you use some others, the “Setup Panel/Text/TextStyleSheet” button might be handy.

Next we have to **add the styles** to the referenced text style sheet. This is the same procedure as we did in the “Input Icons for TMPPro” setup. Use either the left or the right buttons to add those styles to the style sheet. **NOTE:** When you make changes to your Input Action Asset(s) you might have to do this step again to add the new styles as well.

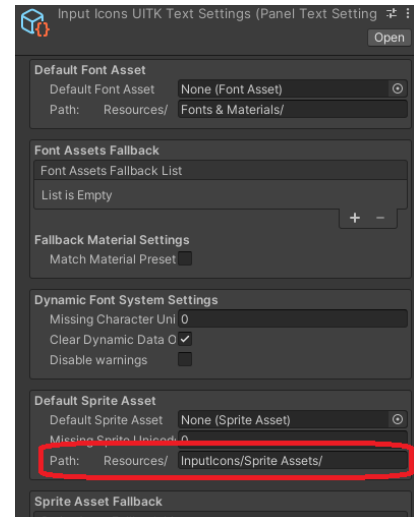
Last but not least we need to create the Text Sprite Assets and place them into a folder in which the UI Toolkit texts can access them to display the key and button sprites. Before we do this step we should have already completed the basic setup in “Input Icons for TMPPro” since we need the created textures containing all the key and button sprites. Here is a little more detail about what these buttons do.



1. By clicking the first button, we search in the Sprite Assets folder of TMPPro for textures with the same name as our used IconSets (“Keyboard and Mouse_Grey, PS3, PS4, Xbox, ...) and

create Text Sprites Assets out of them. If you do this multiple times you will end up with unneeded Text Sprite Assets and might want to delete any additional ones you don't need.

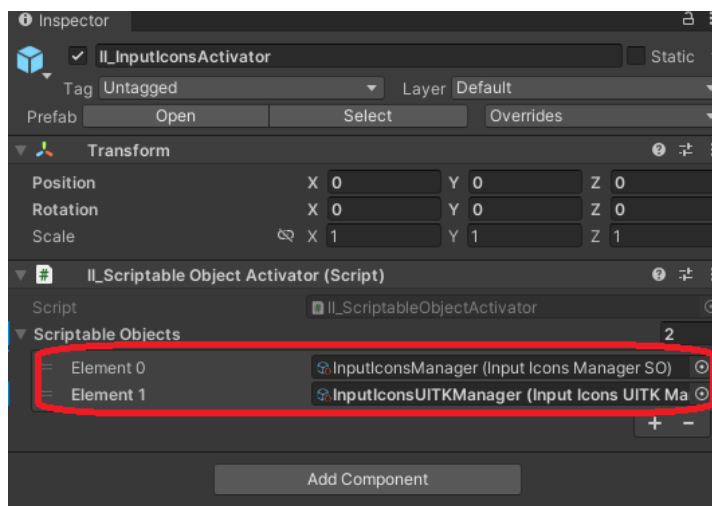
2. Here we search for the just created Text Sprite Assets and try to automatically assign them to the manager.
3. Now we move the Text Sprite Assets to the folder specified in the Panel Text Settings asset. (see image)
4. Lastly we correct the glyph positions of the Text Assets. When the Text Assets get created, the positions usually are weirdly moved to the bottom left. By pressing this button, we move them all so they are centered horizontally and moved upwards so they fit better into our other text.



IMPORTANT: Input Icons Activator Prefab

If you are already using Input Icons for TMPPro, you probably already added the `II_InputIconsActivator` prefab to your first scene. This prefab simply references the Input Icons Manager to ensure it is active in builds.

To support Input Icons for UI Toolkit in builds you have to reference the new manager in that script as well to ensure it is active.

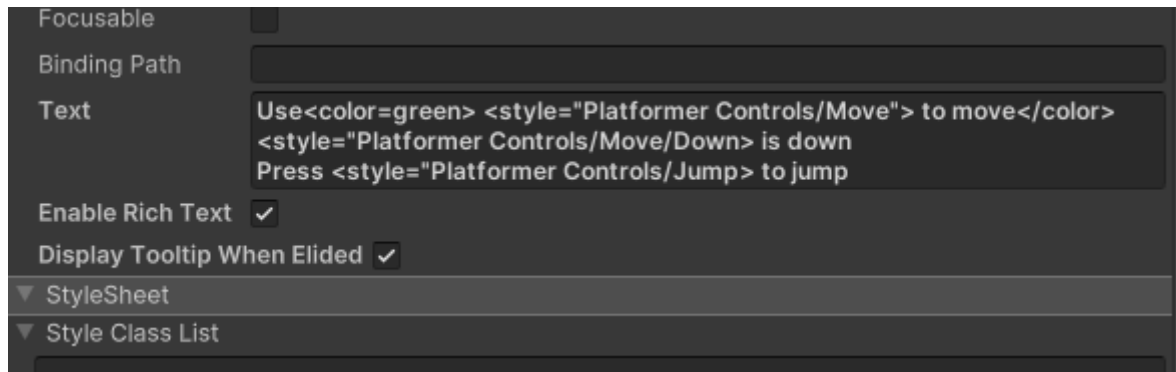


Displaying Input Bindings in UI Toolkit

We have several options to display the current bindings in UI Documents. They are very similar to how we display bindings in Input Icons for TMPPro.

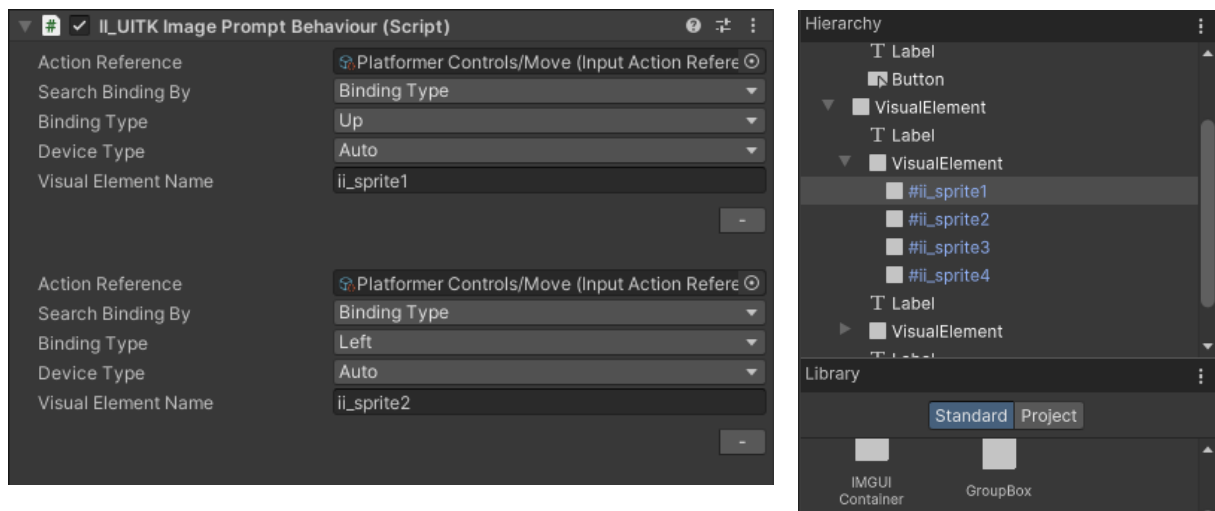
Displaying Input Bindings in Text

Create a Visual Element with a text in the UI Builder (like a Label or a Button), make sure "Enable Rich Text" is enabled and use the style tag to display the current binding. The schema is "`<style="ActionMap/Action">`" or "`<style="ActionMap/Action/Direction">`" for composite bindings.



Displaying Input Bindings in Visual Elements

First rename the Visual Element to give it an ID (In the examples I named them ii_sprite1, ii_sprite2, ...) Then add the II_UITKImagePromptBehaviour to the UI Document. In this component you can add as many action references as you want to display. This works very similar to how you display bindings in Sprite Renderers or in UI Images in “Input Icons for TMPPro”, but here you need to type in the name/ID of the Visual Element which should display the binding.



Limitations

As this is an extension to “Input Icons for TMPPro” we have the same limitations. In short:

- Supported keyboards: QWERTY, QWERTZ, AZERTY, falling back to QWERTY for special characters and non supported keyboard layouts.
- We must avoid having multiple Input Action Assets assigned to the manager when these Input Action Assets contain Action Maps and Actions with the same name as we can not differentiate between those.

One more limitation compared to “Input Icons for TMPPro” is that there is currently not rebinding logic available in this asset. So you either have to create your own logic for that or use the rebinding prefabs of “Input Icons for TMPPro”.

Get in contact

This asset is very new and there might be bugs. Let me know if you are facing problems. Email me at support@octacube-studios.com