

LiveParameters

A persistent, real-time palette for managing Fusion User Parameters.

Introduction: The "Why" and "What"



If you design parametrically in Fusion, you know the struggle. It isn't just about changing numbers; it's the tedious cycle of:

*Modify > Change Parameters > Edit > OK > Check Model
> Realize you need a change > Modify > Change
Parameters...*

Lather. Rinse. Repeat.

The native Fusion dialog is **modal**, meaning it **must be dismissed** to continue any real editing, rotating, or selecting of geometry.

LiveParameters solves this by moving your parameters into a **modeless palette**.

- **Real-Time Updates:** Tweak dimensions and see your model update instantly without closing windows.
- **Workflow Efficiency:** Keep your parameters docked on the side while you design.
- **Enhanced Management:** Search, filter by favorites, and manage comments easier than ever before.

Installation

Method: Manual Installation (Scripts & Add-Ins)

Since this is a Python-based add-in, you can install it directly into your Fusion API folder.

1. **Download:** Download the source code (ZIP) from this repository and unzip it.
2. **Locate Folder:** You should have a folder named `LiveParameters-main` containing files like `LiveParameters.manifest` and `LiveParameters.py`.
3. **Rename Folder:** Rename the folder to `LiveParameters`.
4. **Move to Fusion:**
 - **Windows:** Copy the folder to: `%AppData%\Autodesk\Autodesk Fusion 360\API\AddIns\`
 - **Mac:** Copy the folder to: `~/Library/Application Support/Autodesk/Autodesk Fusion 360/API/AddIns/`
5. **Activate:**
 - Open Fusion.

- Press **Shift+S** to open **Scripts and Add-Ins**.
- Click the **Add-Ins** tab.
- Select **LiveParameters** and click **Run**.
- (*Optional*) Check **Run on Startup** to have it load automatically next time.

Using LiveParameters

Once running, the **LiveParameters** palette will appear (defaulting to the right side). You can access it via the **Solid > Modify** panel if you close it.

The Interface

- **Search Bar:** Instantly filter your parameter list by name. No more scrolling through hundreds of parameters!
- **★ Favs Only:** Toggle this checkbox to hide everything except your "Favorite" parameters.
- **Dark/Light Mode:** Use the toggle in the header to switch themes.

Managing Parameters

- **Create:** Expand the "**Add Parameter**" section.
 - Supports Name, Unit (dropdown + custom), Expression, and Comments.
 - *Note: Text parameters must be enclosed in single quotes (e.g., '**MyText**').*
- **Edit Values:** Type a new value or expression into any input box and press **Enter** (or Tab away) to apply it immediately.
- **Edit Comments:** Click the **Pencil** (✎) icon next to a parameter to update its comment.
- **Delete:** Click the **X** icon to remove a parameter.
 - *Safety Check:* The add-in will prevent deletion if the parameter is currently in use by the model.

Tech Stack

For the fellow coders and makers out there, here is how **LiveParameters** was built:

- **Language:** Python (Fusion API)
- **Interface:** HTML5 / CSS3 / JavaScript (running inside a Fusion Palette)
- **Communication:** JSON-based bridge between Python (Logic) and JavaScript (UI).

Acknowledgements & Credits

- **Developer:** Ed Johnson ([Making With An EdJ](#))
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