**Imperial VBA Module — User Manual**

**By Preston Powell**

The **ImperialPlusPlus** VBA module adds a rich set of User-Defined Functions (UDFs) for working with imperial and metric length values directly in Excel. It allows you to convert, format, parse, and snap lengths into common feet–inches–fractions with customizable options (denominators, Unicode primes, tolerance, etc.).

**Installation**

1. Open Excel and press **Alt+F11** to open the VBA editor.

2. In the editor: **File** → **Import File…** and select *imperialplusplus.bas*.

3. Close the editor, then **Save As** your workbook with the type **Excel Macro-Enabled Workbook (\*.xlsm)**.

4. Enable macros when prompted. The UDFs are now available as worksheet functions.

**Available Functions**

All functions are available directly in cells (e.g., =FmtInches(...)). Below is a summary of the most important UDFs.

|  |  |
| --- | --- |
| Function | Purpose / Example |
| FmtInches(inches, [denom], [useUnicode], [fractionOnlyIfSubInch], [hyphenBetween], [showFeet]) | Format inches as a mixed fraction. Example: =FmtInches(38.9375,16,FALSE |
| FmtInchesAuto(inches, [maxDenom], …) | Pick the best denominator (up to max) automatically. Example: =FmtInchesAu |
| FmtInchesWithTol(inches, [denom], [tolDenom]) | Format with tolerance. Example: =FmtInchesWithTol(10/3,16,32) → 3" ±1/32" |
| FmtFeetInches(inches, [denom]) | Convenience wrapper for feet+inches formatting. |
| PrettyInches(inches, [denom], [useFeet], [useUnicode]) | Simplified wrapper. Example: =PrettyInches(38.9375,16,TRUE) |
|  |  |
|  |  |
| MetersToInchesText(meters, [denom], [useFeet]) | Convert meters to formatted imperial string. |
| MillimetersToInchesText(mm, [denom], [useFeet]) | Convert mm to formatted imperial string |
|  |  |
| CentimetersToInchesText(cm, [denom], [useFeet]) | Convert cm to formatted imperial string. |
|  |  |
| ParseLengthToInches(text) | Parse text like "5' 7-3/16"" or "2m 5cm" into numeric inches. |
| ParseAndFormat(text, [denom], [useFeet]) | Parse and immediately format. Example: =ParseAndFormat("2m 5cm 4mm",1 |
| SnapToDenom(inches, denom) | Round to nearest 1/denom inch. Example: =SnapToDenom(2.01,16) → 2 |
| InchesToFeetInchesArray(inches, [denom]) | Return array {feet, wholeInches, num, den, sign}. |

**Notes and Tips**

• Denominators are typically powers of two (2, 4, 8, 16, 32, 64) for carpentry and woodworking.• Unicode primes option replaces ' with ′ and " with ″ for typographic formatting.  
• The parser accepts both imperial (ft/in) and metric (m/cm/mm) inputs.

• Negative values are supported.

• Always save your workbook as .xlsm if you want the functions to persist.