

# Imperial Stone Feet (Universal Windows Platform application)

## Operation manual Ver. 1.1 (2020/ 3/10)

**At the beginning:** This application's characteristics are: number change by "direct touch to number" and automatic calculation of result. No explanation is necessary for basic calculations, I think. This manual includes only the minimum functional description. Word "Touch" in this manual is assuming touchscreen. If you use different point device like mouse, please replace it with the corresponding operation.

**Attention:** Please check by yourself carefully any value, if you use it to practical purpose.

I make no warranty and can't respond to claims of any kind of damage.

I have developed and checked this application with Surface Pro, its keyboard, and attached mouse. I follow rule of Universal Windows Platform, and I have corresponded and checked different screen resolution, so I believe it works on any models without a problem, but I can't guarantee. If you encounter this application's trouble, I wish you to inform me it with as much as possible detailed information like equipment specs, etc.

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## Attached calculations in this Application

This application is specialized to Imperial units and United States customary units (Simplified to 'Imperial units' in this manual) calculation. It has 5 sheets.

By scrolling right or left (Touch dark color behind and move right or left), you can switch to another sheet.

### 1. Addition/Proportion 2sheets

For multiple use purpose, each sheet wears different color. These do the same calculation.

**Length**

10.32in
+
0yd1ft11.00in
+
210.00mm
+
3.20ch
↓
<b>71yd1ft07.99in</b>

**Mass**

5st06.00lb
:
2st04.00lb
↓
3.00kg
:
<b>1.26kg</b>
<b>3.38lb t</b>

**Area**

1yd <sup>2</sup> 0ft <sup>2</sup> 000.00in <sup>2</sup>
+
0yd <sup>2</sup> 0ft <sup>2</sup> 100.00in <sup>2</sup>
+
0yd <sup>2</sup> 0ft <sup>2</sup> 000.01in <sup>2</sup>
↓
0yd <sup>2</sup> 1ft <sup>2</sup> 121.00in <sup>2</sup>
+
<b>0yd<sup>2</sup>7ft<sup>2</sup>123.01in<sup>2</sup></b>

**Volume**

0qt1pt00.00foz
+
3,200.00mm <sup>3</sup>
+
8.00yd <sup>3</sup>
↓
1,200.00in <sup>3</sup>
+
<b>1341gl1qt0pt</b>

By scrolling up or down (Touch dark color behind and move up or down), you can switch another calculation in the sheet. (Addition/Proportion & Multiplication) After number input, it is impossible to switch.

Thin color squares are either number input field or calculation result field. You can switch these by touch. (P.8)

## 2. Multiplication 2sheets

For multiple use purpose, each sheet wears a different color. These do the same calculation.

**Length**

0yd1ft00.32in  
×  
2.00  
×  
3.00  
×  
5.00  
↓  
10yd0ft09.60in

**Volume**

1qt0pt00.00foz  
×  
1.20  
×  
00,000,000.00  
↓  
8.00  
×  
0qt0pt06.00foz

## 3. Total calculation (2items)

**L\*L→A**

2yd04.00in  
×  
3yd06.00in  
+  
1yd00.12in  
×  
0yd32.00in  
↓  
7yd<sup>2</sup>0747.84in<sup>2</sup>

**L\*L\*L→V**

2ft00.00in  
×  
2ft00.00in  
×  
2ft00.00in  
↓  
128.00  
×  
1qt1pt02.29foz

Below units are provided.

**(Length)** mile, yard, feet, inch, league, furlong, chain, perch, pole, rod, link, barleycorn, pica, point, mil, thou, nmile, cable, fathom, & meter

**(Area)** mile<sup>2</sup>, acre, yard<sup>2</sup>, feet<sup>2</sup>, inch<sup>2</sup>, rood, chain<sup>2</sup>, rod<sup>2</sup>, pole<sup>2</sup>, perch<sup>2</sup>, section, township, & meter<sup>2</sup>, are

**(Volume)** gallon, quart, pint, ounce, yard<sup>3</sup>, feet<sup>3</sup>, inch<sup>3</sup>, acre-feet, hogshead, barrel, bushel, peck, cup, gill, tablespoon, teaspoon, drachm, scruple, minim, & meter<sup>3</sup>, liter

**(Mass)** ton, hundredweight, quarter, stone, pound, ounce, drachm, grain, pennyweight, carat, tonne, troy ounce, troy pound, & gram

Depending on window size, following items are switched.

Display length 10-digits or 14-digits, 1 sheet or 2 sheets pair, and vertical or horizontal.

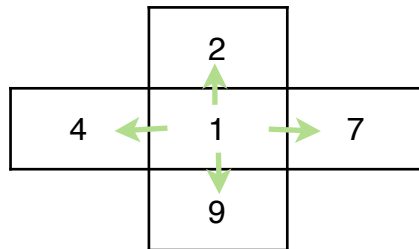
## Number Input

There are 4 ways to input number. (①Touch to number itself ②Copy/Paste ③Software keyboard ④Hardware keyboard)

### ① Touch to number itself

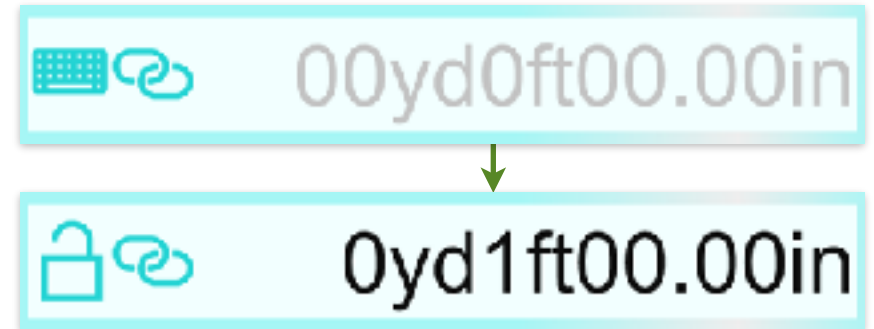
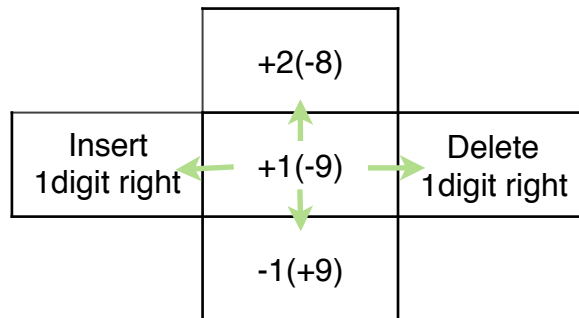
In number input field, if it is initial state, input guide is dimmed.  
(Right figure)

**Touch directly** the digit in the guide, the most significant digit location of number you want to input. The digit changes to below table number depending on following action. (Release without move/Up/Down/Right/Left)  
Operate slowly. Stop a moment after touching and then move.



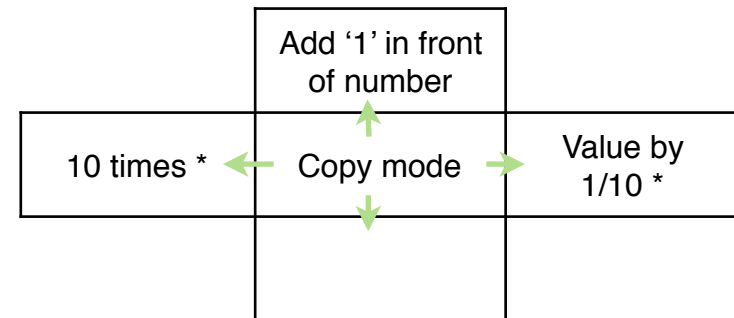
Adjust to aimed number by similar repeated touch actions to each digit.

After this, motion differs depending on whether on blank or on number, and following action. (Release without move/Up/Down/Right/Left)  
**On number**, below left table operations work. Only when moving up or down, continuous operation works, for adjusting the value.



In Imperial units junction format, each digit varies within possible range. When the value is out of range, the string color becomes thin.

**On blank**, below right table operations work.



\* mark functions don't work on Imperial units junction format.

## ② Copy/Paste

- (1) Touch and release on blank in front of the number you want to copy. Its color turns to thin.
- (2) Touch and release in destination number input field. The value (1) is pasted. The value is rounded following the settings (P.10).  
Or touch again on the same (1). The value is stored in clipboard.
- (3) By a touch on blank in front of input guide, the value in clipboard is pasted.  
In copy/paste operation, memory button (Right figure, bottom of sheet) is possible to use instead of number.  
When memory holds a value, the symbol is filled.



- (4) **Copy/Paste of whole sheet:** Touch and release without move on dark color behind. Select from appearing popup menu.  
(Selector is shown in the case only it works.)  
By copy choice, whole sheet text is stored in clipboard. By paste choice on another sheet, the clipboard content is recalled on it.  
And you can paste it into different application like Excel, NotePad.

## ③ Software keyboard

Keyboard appears by touch to the left side button (Either of right figure) in the number field.



## ④ Hardware keyboard

You can use hardware keyboard for number input. If software keyboard is on screen, the input is entered on it. Otherwise, the input is entered in number input field showing keyboard button (Right figure). When 2 sheets are on screen, left sheet is entered. Until [Enter] key press, the number is not fixed.

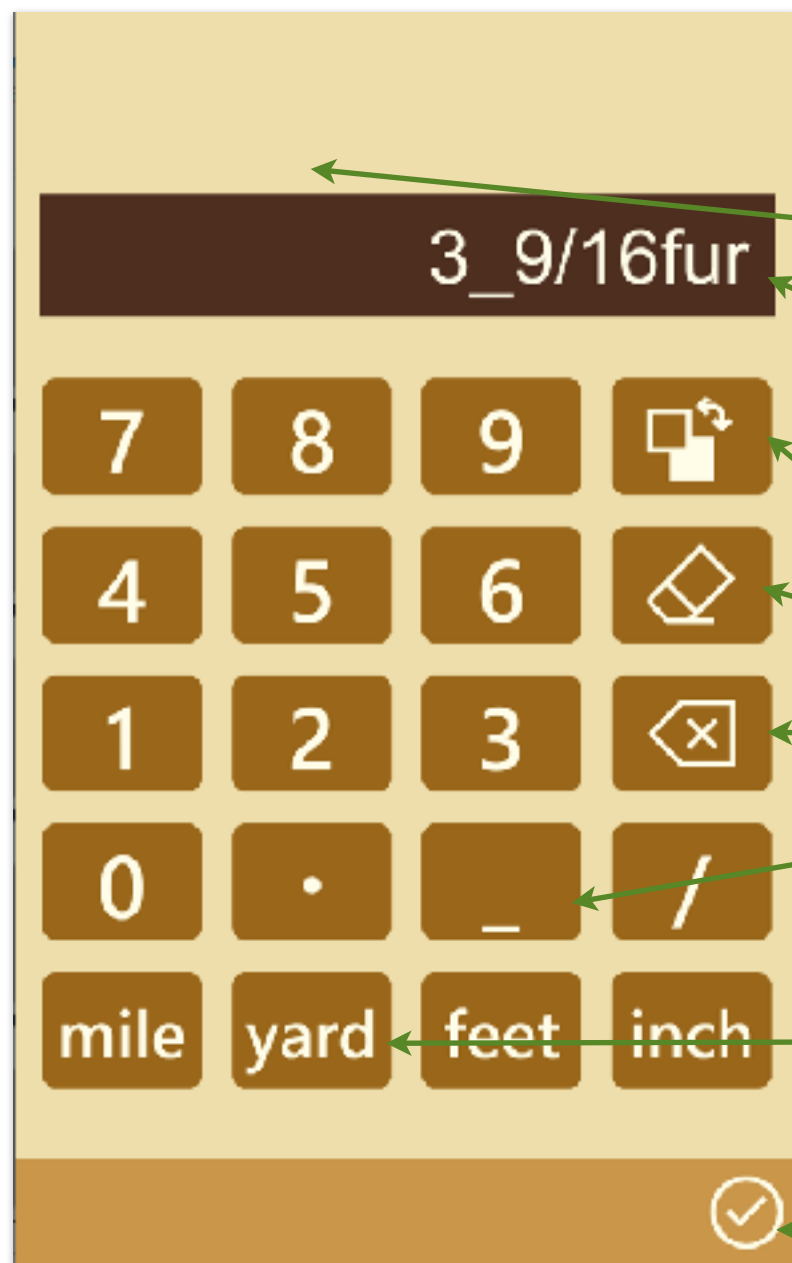


## \* Clear of number

By touch to the eraser button (Right figure, bottom right of sheet), whole sheet on screen is cleared.  
As a prevention of calculation loss by miss touch, it doesn't work by short touch.  
Memories are held in this sheet clear action.  
When you want to clear only one number or a memory, select it by the Copy/Paste (1)operation, and touch eraser button.



## Keyboard



10 keyboards (Imperial unit 8 [Length/Area/Volume/Mass × Junction/Single], metric, number without unit) are equipped and suitable keyboard is automatically selected corresponding to the content. (Below is Imperial unit Length × Single keyboard)

Label of the inputting number.

This displaying number is stored. Touch correction to number and unit(prefix) is possible.

After storing, decimal number is rounded according to the setting (P.10). If it is blank, nothing is stored.

Switch the keyboard to other units that cannot be displayed.

Clear inputted number. It doesn't work by short touch. (Hard key [Del])

Delete last 1 character.

Separator integer part of mixed fraction [], and separator between numerator and denominator of fraction [/]. Fraction input and result is possible only in Imperial unit Single field.

Bottom line unit keys vary depending on the keyboard. Other units exist on switched keyboard. Only some frequent units are implemented in hard key.

Finish number input and **quit** this sheet. (Hard key [Enter])

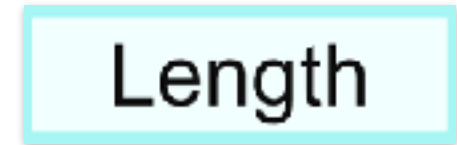
## Other operations

### \* Selector

Thin colored small squares at top of each sheets are selectors.

You can choose from the defined contents by touch and following action (Release without move/Up/Down). Kind of quantity can be switched.

After number input, this becomes thick letter and impossible to change.



### \* Switch unit system

3 unit systems of quantity can be switched. On second place from left side, unit system button (Right figure) is displayed in both number input field and calculation result field. Touching of this switches to the next system. From left to right, Imperial units junction format, metric unit format, and Imperial unit single format (Various unit conversion).

Value is converted depending on the unit.

In input field of metric unit format, you can change prefix by touch and following action (Release without move/Up/Down).

In input or result field of Imperial unit single format, you can change unit by touch and following action (Release without move/Up/Down).



### \* Calculation result field

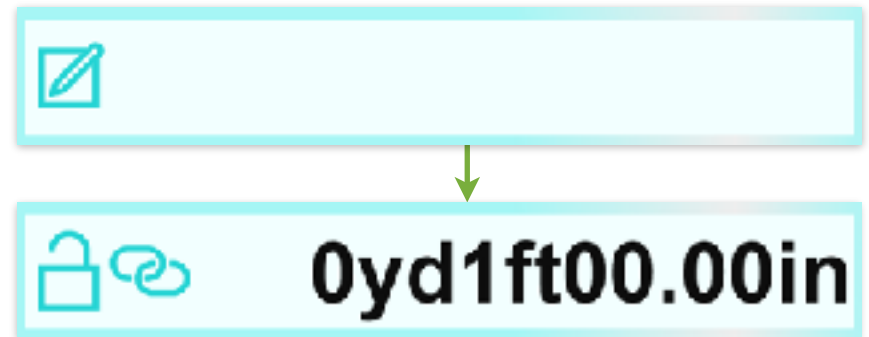
In calculation result field, before calculation, blank is displayed (Right figure).

At the time inputted number amount reaches to the possible level, the calculation is automatically done and the result is displayed when it is in the range.

The calculation result is rounded according to the setting (P.10) and displayed in thick.

Touch to calculation result field, regardless of which blank or result, changes it to number input field.

(However, there are cases logically impossible. Neither software keyboard nor lock button works in the situation.)



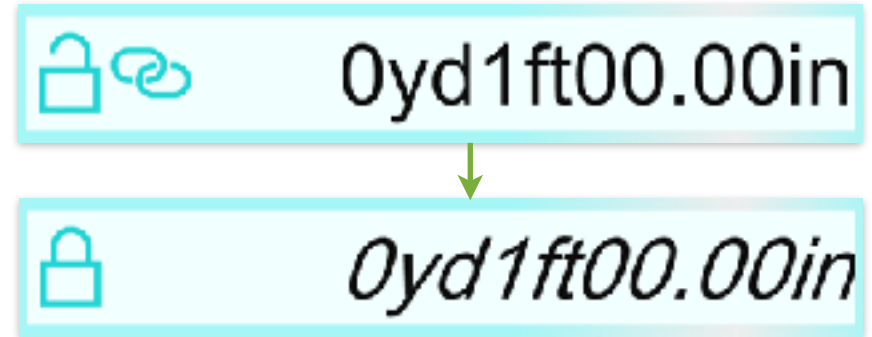


**\* Lock of number**

Lock button is displayed left side of both number inputted and calculated (Right figure). The number is locked by touch to the button.

The value is held while locking. However, it changes by reset or reload operation (P.10).

Re-touch to lock button releases this lock state. As a prevention of value change by miss touch, it doesn't work by short touch.



**\* Setting change**

Settings sheet (P.10) appears by touch to the gear button (Right figure, bottom left of sheet).

You can choose whether Imperial unit or US Customary unit, and detailed dialect. And you can choose which unit to use in Imperial units Junction format.



## Settings

**Rounding**

• 0 1 **2** 3 4 5

• /4 **/8** /16 /32 /64

↓ **5/4** ↑

**Length/Area**

MYFI MYI MFI MY MF YI **FI**

**SI** Survey Army

**Volume**

GQPO GPO **GP** GO PO

**UK** Wet Dry Oil Beer FDA CA AU

**Mass**

HPOD THPO TPO TP PO **SP**

**UK** US

**Metric prefix**

• **c,d,da,h** Exp

↶ ↷ 📄 ✓

**Rounding location** is same in all numbers. Choose decimal part length. At '.' setting, Imperial unit single format result is converted to fraction following below setting. Number is full digit display.(Until 10 or 14 digits. Digit is reduced depending on format.)

Choose denominator of fraction to rounding. '.' shows by the fraction decimal.

**Rounding rule** is same in all numbers. (Round down/Round off/Round up)

Length and area units used in Imperial units junction format. (First letter of units)

Length and area Imperial unit type. International, US survey or US army (International+differ 'Cable').

Volume units used in Imperial units junction format. (First letter of units)

Volume Imperial unit type. UK, US fluid, US dry, US Oil\*1, US Beer\*1, US FDA, Canada\*2 or Australia\*3. \*1...US fluid+differ 'bbl', \*2...US fluid+differ 'cup/tea spoon/table spoon' \*3...UK+differ 'cup/tea spoon /table spoon'

Mass units used in Imperial units junction format. (First letter of units)

Mass Imperial unit type. UK(long) or US(short).

Metric prefix multiple of 3, full metric prefix or exponential format.

**Reset:** Use it only when you want to initialize this application.











Reload the situation this application started. It doesn't work by short touch.

Show this manual.

Finish these settings and **quit** this sheet.

## Notes on units

- \* Imperial units in numeric are shown with abbreviated form. These are shortened for display convenience and don't always match with their accustomed form.
- \* 'ha' of area is described by h + are(modified from m<sup>2</sup>) in metric format with prefix.
- \* The number of digits is abridged to the level which the numeric including units hasn't difficulty to display and operate in the format.

Length		Length	
 0000yd0ft00.in	:	 23.00cm	+
 0000yd0ft00.in	↓	 0.00cm	+
	:	 00yd0ft00.00in	+
 4yd2ft11.in		 00yd0ft00.00in	↓
 <b>14.916667ft</b>		 <b>2.30dm</b>	

- \* Ratio calculation (attached to Addition sheet) bottom 2 numerics are the same value. You can use these for unit conversion. Or addition with 0 can be used as a conversion.
- \* Metric prefix is adjusted to most suitable form after conversion or in the result. So input side adjustment is necessary for conversion of value with any prefix.

\*

## Modification history