

Units Conversion Menu

This menu adds a powerful physical units conversion calculation. To show it, touch the “**Convert**” menu button and touch the “**UNITS**” button.

The screenshot shows the 'Units Conversion Menu' interface. On the left, there is a 'Select Category' panel with a 'Length' button (indicated by a red arrow from the 'Selected Category Name' label) and an 'Edit Units' button (indicated by a red arrow from the 'Opens the Units Editor' label). On the right, a table displays 'Units Equivalent' for the selected category. The table has a light green background and lists units with their conversion factors relative to the selected unit (Centimeters).

Unit	Conversion Factor
Centimeters	1.00000
Fath	+2.10936
Fathoms	2.10936
ft	+12.6266
Feet	12.6266
fu	+0.0254
Furlongs	0.0254

Touch the Category name to display a list with all units categories available. Select the desire category from the list and all the available units in that category will be shown in the Units Equivalent table.

Simply type a value with the calculator keypad, then touch the unit row in the list to assign that value to that unit. The **Units Conversion** tool will calculate all the other units equivalent values automatically.

Optionally, units arithmetics can be performed using **[STO] [+]** or **[STO] [-]** functions (see the example below).

Touching the **[Edit Units]** button, the “**Units Editor**” view will be shown. There, you can fully edit the categories and units listing at your preference.

Example: Units Conversion and Arithmetic

Add 11.36 feet plus 5.75 inches plus 2 meters plus 25 centimeters and minus 0.1 chains, what is the total length expressed in yards?

Solution:

With the “Unit Conversion” menu in place, select the “**Length**” category. Then follow the next sequence:

Keystrokes	Description
Type “11.36” touch the “ ft ” unit	Enters 11.36 feet.
Type “5.75” [STO] [+] & touch the “ in ” unit	Adds 5.75 inches to the conversion.
Type “2” [STO] [+] & touch the “ m ” unit	Adds 2 meters to the conversion.
Type “25” [STO] [+] & touch the “ cm ” unit	Adds 25 centimeters to the conversion.
Type “0.1” [STO] [-] & touch the “ ch ” unit	Subtract 0.1 chains from the conversion.
Touch the “ yd ” unit	Recalls and display the total conversion value in yards. Result = 4.21 (yds)

Units Editor View

This view adds a convenient editor to customize the “Unit Conversion” menu. To show it, touch the “Edit Units” button in the “Units Conversion” menu.

The screenshot shows the Units Editor View for Length Units. The interface includes a list of units, a detailed editor for the selected unit (ft), and a bottom action menu. Callout boxes provide the following descriptions:

- Select a Unit category to edit:** Points to the 'Category' dropdown menu.
- Select Next Unit in the list:** Points to the upward arrow icon.
- Select Previous Unit in the list:** Points to the downward arrow icon.
- Conversion Equation:** Points to the formula $S.I. = Kn \cdot (Unit - Co) / Kd + Cn / Cd$.
- Remove unit from the list:** Points to the red minus icon.
- Shows unit input data view:** Points to the information icon.
- Ordering Control:** Points to the hamburger menu icon.
- Close the editor and updates the Units Database:** Points to the 'Done' button.
- Shows the Action Menu to create, rename, delete, reset, etc...:** Points to the 'Action' button.
- Close the editor and discard all changes:** Points to the 'Cancel' button.
- Insert a new Unit to the list:** Points to the green plus icon.
- Selected Unit input data view:** Points to the input fields for Kn, Kd, Cn, Cd, and Co.

The unit list includes: mm (Milimet), cm (Centim), in (Inches), ft (Feet), m (Meters), yd (Yards), km (Kilomet), mi (Miles), au (Astronomical Unit), ch (Chains), Fath, fu (Furlongs), g.mi (Geographic Miles), hu (Hubbles), and ld (Earth to Moon Distance).

The editor has three areas: the data listing, the keypad to enter numbers and the actions buttons.

Unit Listing:

- Shows the units contained in the selected Category.
- Touch a Unit in the list to show the edition buttons to Insert, Delete or Edit.
- Touch the “Ordering Control” and drag up or down to re-order the unit in the list.

Input Data View:

- Touch any of the fields to edit it. The coefficients K_n , K_d , C_n , C_d and C_o correspond to the conversion equation to get a S.I. system value.
- A number in edition is actually entered in the list when the **[INPUT]** key is pressed

[Action ►] Button:

New Unit	Creates a new unit in the current Category at the end of the list and shows the Unit Input view.
New Category	Ask for the new category name and creates it.
Rename Category	Ask for a new name for the current Category.
Delete Category	Removes the current category from the unit database.
Reset Category	Reset the current category to the factory default. All reordering, deletion, addition or edition previously done will be lost. If the category is a custom one, not originally present in the DataBase
Reset All Units	Resets all units and categories to factory default. All custom edition will be lost.