

## [10.2] Convert compound units to equivalent units

In some cases, you can use the built-in units conversion to express some units in terms of base units. Some examples:

<code>_coul▶_s</code>	<code>1*_A*1*_s</code>
<code>_J▶_N</code>	<code>1*_m*1*_N</code>
<code>_F▶1/_V</code>	<code>1*_coul/1*_V</code>
<code>_W▶1/_s</code>	<code>1*_J/1*_s</code>
<code>_henry▶1/_s</code>	<code>(1*_kg*1*_m<sup>2</sup>) / (1*_A*1*_coul*1*_s)</code>
<code>_Wb▶1/_A</code>	<code>1*_J / 1*_A</code>

If the converted-to unit appears in the denominator of the result, you need to express that unit as a reciprocal in the conversion command.

This method does not necessarily return the converted unit in terms of base units. This can be seen in the third example above, in which capacitance in farads (F) is converted to coulomb/volt. Neither the coulomb nor the volt are base units; a true base-units conversion would be  $(A^2*s^4)/(kg*m^2)$ . For reference, the seven SI base system units are:

Length, meter (m)	Temperature, degrees Kelvin (K)
Mass, kilogram (kg)	Luminous intensity, candela (cd)
Time, second (s)	Amount of substance, mole (mol)
Electric current, amp (A)	

If a conversion includes units other than these seven, it is not a base unit conversion.

*(credit to anonymous poster)*