

## Modul:Convert/text/sandbox

This page defines text used by [Module:Convert](#). All documentation (from [Module:Convert/doc](#)) is at that module. The text includes messages and categories output by the module, and parameters used as input.

This is a separate module to simplify translation for use on another wiki. For example, see [translation\\_table](#) and the other tables in [bn:Module:Convert/text](#). Documentation is at [Template:Convert/Transwiki guide](#).

Any changes should first be tested at [Module:Convert/text/sandbox](#)—see [Template:Convert/testcases#Sandbox testcases](#).

```
-- Text used by Module:Convert for enwiki.
-- This is a separate module to simplify translation for use on another wiki.
-- See [[:en:Template:Convert/Transwiki guide]] if copying to another wiki.

-- Some units accept an SI prefix before the unit code, such as "kg" for kilogram
local SIprefixes = {
    -- The prefix field is what the prefix should be, if different from the p
    ['Y'] = { exponent = 24, name = 'yotta',          },
    ['Z'] = { exponent = 21, name = 'zetta',          },
    ['E'] = { exponent = 18, name = 'exa',           },
    ['P'] = { exponent = 15, name = 'peta',           },
    ['T'] = { exponent = 12, name = 'tera',           },
    ['G'] = { exponent = 9,  name = 'giga',           },
    ['M'] = { exponent = 6,  name = 'mega',           },
    ['k'] = { exponent = 3,  name = 'kilo',           },
    ['h'] = { exponent = 2,  name = 'hecto',          },
    ['da'] = { exponent = 1, name = 'deca', name_us = 'deka' },
    ['d'] = { exponent = -1, name = 'deci',           },
    ['c'] = { exponent = -2, name = 'centi',          },
    ['m'] = { exponent = -3, name = 'milli',          },
    ['μ'] = { exponent = -6, name = 'micro',           }, -- key = 'C
    ['µ'] = { exponent = -6, name = 'micro', prefix = 'µ' }, -- key = 'M
    ['u'] = { exponent = -6, name = 'micro', prefix = 'µ' }, -- not an S
    ['n'] = { exponent = -9, name = 'nano',           },
    ['p'] = { exponent = -12, name = 'pico',          },
    ['f'] = { exponent = -15, name = 'femto',         },
    ['a'] = { exponent = -18, name = 'atto',          },
    ['z'] = { exponent = -21, name = 'zepto',         },
    ['y'] = { exponent = -24, name = 'yocto',         },
}

-- Some units can be qualified with one of the following prefixes, when linked.
local customary_units = {
    { "US", link = "United States customary units" },
    { "U.S.", link = "United States customary units" },
    { "imperial", link = "Imperial units" },
    { "imp", link = "Imperial units" },
}

-- Names when using engineering notation (a prefix of "eN" where N is a number; e
-- key = { "name", link = "article title", exponent = numeric_key_value }
-- If lk=on and link is defined, the name of the number will appear as a link.
local eng_scales = {
    ["3"] = { "thousand", exponent = 3 },

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["6"] = { "million", exponent = 6 },
["9"] = { "billion", link = "1000000000 (number)", exponent = 9 },
["12"] = { "trillion", link = "1000000000000 (number)", exponent = 12 },
["15"] = { "quadrillion", link = "1000000000000000 (number)", exponent = 15 }
}

local all_categories = {
    unit = "[[Category:Convert errors]]",
    option = "[[Category:Convert errors]]",
    warning = "[[Category:Convert invalid options]]",
    tracking = "[[Category:Convert tracking]]",
}

-- For some error messages, the following puts the wanted style around
-- each unit code marked like '...%{ft%}...'.
local unitcode_regex = '%%({})'
local unitcode_replace = { ['{'] = '', ['}'] = '' } -- no longer need the more

-- All messages that may be displayed if a problem occurs.
local all_messages = {
    -- Message format string: $1=title, $2=text, $3=category, $4=anchor.
    -- Each displayed message starts with "Convert:" so can easily locate by
    cvt_format = '<sup class="noprint Inline-Template" style="white-space:nowrap">Convert: $1 $2 $3 $4',
    cvt_format2 = '<sup class="noprint Inline-Template" style="white-space:nowrap">Convert: $1 $2 $3 $4',
    cvt_format_preview = '<strong class="error">Error in convert: $1 [[Help:Convert]]',
    -- Each of following messages is a table:
    -- { [1] = 'title',          -- mouseover title text
    --   [2] = 'text',          -- link text displayed in article
    --   [3] = 'category key',  -- key to lookup category in all_categories
    --   [4] = 'anchor',       -- anchor for link to relevant section on help page
    --   regex = gsub_regex,
    --   replace = gsub_table,
    -- }
    cvt_bad_input      = { 'input "$1" must be a number and unit'      , 'input'
    cvt_bad_num        = { 'Value "$1" must be a number'              , 'input'
    cvt_big_prec       = { 'Precision "$1" is too large'                , 'precision'
    cvt_invalid_num    = { 'Number has overflowed'                      , 'number'
    cvt_no_num         = { 'Needs the number to be converted'          , 'number'
    cvt_no_num2        = { 'Needs another number for a range'          , 'number'
    cvt_bad_altitude  = { '"$1" needs an integer'                     , 'input'
    cvt_bad_frac       = { '"$1" needs an integer above 1'            , 'input'
    cvt_bad_prec       = { 'Precision "$1" must be an integer'         , 'input'
    cvt_bad_sigfig     = { '"$1" needs a positive integer'            , 'input'
    cvt_empty_option   = { 'Ignored empty option "$1"'                 , 'empty'
    cvt_deprecated     = { 'Option "$1" is deprecated'                 , '*'
    cvt_no_spell       = { 'Spelling is not available'                 , 'boolean'
    cvt_unknown_option = { 'Ignored invalid option "$1"'               , 'input'
    cvt_wd_fail        = { 'Unable to access Wikidata'                  , 'wikidata'
    cvt_bad_default    = { 'Unit "$1" has an invalid default'          , 'boolean'
    cvt_bad_unit       = { 'Unit "$1" is invalid here'                 , 'unit'
    cvt_no_default     = { 'Unit "$1" has no default output unit'     , 'boolean'
    cvt_no_unit        = { 'Needs name of unit'                        , 'number'
    cvt_unknown        = { 'Unit name "$1" is not known'               , 'unit'
    cvt_should_be      = { '$1'                                        , 'and'
    cvt_mismatch       = { 'Cannot convert "$1" to "$2"'               , 'unit'
    cvt_bug_convert    = { 'Bug: Cannot convert between specified units', 'boolean'
    cvt_lookup         = { 'Unit "$1" is incorrectly defined'          , 'boolean'
}

-- Text to join input value/unit with output value/unit.
local disp_joins = {
    -- [1]=before output, [2]=after output, [3]=between outputs in a combination
    -- [wantname] gives default abbr=off
    ["or"] = { " or " , " , " or " , wantname = true },
}
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["sqbr-sp"] = { " [" , "]" },
["sqbr-nbsp"] = { "&nbsp;[" , "]" },
["comma"] = { " , " , " , " , " },
["slash-sp"] = { " / " , " " , wantname = true },
["slash-nbsp"] = { "&nbsp;/ " , " " , wantname = true },
["slash-nosp"] = { "/" , " " , wantname = true },
["b"] = { " (" , ")" },
["(or)"] = { " (" , ")", " or " },
["br"] = { "<br />" , " " , wantname = true },
["br()"] = { "<br />(" , ")", wantname = true },
}

-- Text to separate values in a range.
local range_types = {
  -- Specifying a table requires either:
  -- * "off" and "on" values (for "abbr=off" and "abbr=on"), or
  -- * "input" and "output" values (for LHS and RHS);
  -- other fields are optional.
  -- When "adj=on|abbr=off" applies, spaces in range text are replaced with
  -- With "exception = true", that also occurs with "adj=on|abbr=on".
  -- If "adj" is defined here, that text (unchanged) is used with "adj=on"
  ["+"] = " + ",
  [","] = ",&nbsp;",
  [", and"] = ", and ",
  [", or"] = ", or ",
  ["by"] = " by ",
  ["-"] = "-",
  ["to about"] = " to about ",
  ["and"] = { off = " and " , on = " and " , exception = true },
  ["and(-)"] = { input = " and " , output = "-" },
  ["or"] = { off = " or " , on = " or " , exception = true },
  ["to"] = { off = " to " , on = " to " , exception = true },
  ["to(-)"] = { input = "&nbsp;to " , output = "-" },
  ["+/-"] = { off = "&nbsp;±&nbsp;" , on = "&nbsp;±&nbsp;" , adj = "&nbsp;" },
  ["by(x)"] = { input = " by " , output = " x&nbsp;" , out_range_x = true },
  ["x"] = { off = " by " , on = " x&nbsp;" , abbr_range_x = true },
  ["xx"] = "&nbsp;x&nbsp;" ,
  ["*"] = "x" ,
  ["/"] = "&thinsp;/&thinsp;" , -- for a table of high/low temperature
}

local range_aliases = {
  -- ["alternative name for a range"] = "standard range name"
  ["-"] = "-",
  ["&ndash;"] = "-",
  ["x"] = "x",
  ["&times;"] = "x",
  ["±"] = "+/-" ,
  ["&plusmn;"] = "+/-" ,
}

-- Convert accepts range text delimited with whitespace, for example, {{convert|
-- In addition, the following "words" are accepted without spaces, for example, {
-- Words must be in correct order for searching, for example, 'x' after 'xx'.
local range_words = { '- ', '- ', 'xx', 'x', '*' }

local ranges = {
  types = range_types,
  aliases = range_aliases,
  words = range_words,
}

-- Valid option names.
local en_option_name = {
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-- ["local text for option name"] = "en name used in this module"
["$"] = "$",
["abbr"] = "abbr",
["adj"] = "adj",
["altitude_ft"] = "altitude_ft",
["altitude_m"] = "altitude_m",
["comma"] = "comma",
["debug"] = "debug",
["disp"] = "disp",
["frac"] = "frac",
["input"] = "input",
["lang"] = "lang",
["lk"] = "lk",
["order"] = "order",
["qid"] = "qid",
["qual"] = "qual",
["qualifier"] = "qual",
["round"] = "round",
["sigfig"] = "sigfig",
["sing"] = "adj", -- "sing" is an old alias for "adj"
["sortable"] = "sortable",
["sp"] = "sp",
["spell"] = "spell",
["stylein"] = "stylein",
["styleout"] = "styleout",
["tracking"] = "tracking",
}

-- Valid option values.
-- Convention: parms.opt_xxx refers to an option that is set here
-- (not intended to be set by the template which invokes this module).
-- Example: At enwiki, "abbr" includes:
-- ["values"] = "opt_values"
-- As a result, if the template uses abbr=values, Module:Convert sets:
-- parms["opt_values"] = true
-- parms["abbr"] = nil
-- Therefore parms.abbr will be nil, or will have one of the listed values
-- that do not start with "opt_".
-- An option value of form "xxx?" is the same as "xxx" but shows the input as default
local en_option_value = {
  ["$"] = 'TEXT', -- TEXT should be a currency symbol if not a unit
  ["abbr"] = {
    -- ["local text for option value"] = "en value used in this module"
    ["def"] = "", -- ignored (some wrapper templates use "def")
    ["h"] = "on", -- abbr=on + use "h" for hand units
    ["hh"] = "opt_hand_hh", -- abbr=on + use "hh" for hand units
    ["in"] = "in", -- use symbol for LHS unit
    ["none"] = "off", -- old name for "off"
    ["off"] = "off", -- use name for all units
    ["on"] = "on", -- use symbol for all units
    ["out"] = "out", -- use symbol for RHS unit (default)
    ["unit"] = "unit", -- abbr=on but abbreviate units (default)
    ["values"] = "opt_values", -- show only input and output numbers
    ["~"] = "opt_also_symbol", -- show input unit symbol as well
  },
  ["adj"] = {
    ["mid"] = "opt_adjectival, opt_adj_mid", -- adj=on with user-specified text
    ["off"] = "", -- ignored (off is the default)
    ["on"] = "opt_adjectival", -- unit name is singular and hypochronous
    ["pre"] = "opt_one_preunit", -- user-specified text before input
    ["ri0"] = "opt_ri=0", -- round input with precision = 0
    ["ri1"] = "opt_ri=1", -- round input with precision = 1
    ["ri2"] = "opt_ri=2", -- round input with precision = 2
    ["ri3"] = "opt_ri=3", -- round input with precision = 3
  }
}
```

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},
["altitude_ft"] = 'INTEGER',
["altitude_m"] = 'INTEGER',
["comma"] = {
  ["5"] = "opt_comma5",           -- only use numsep grouping if 5
  ["gaps"] = "opt_gaps",         -- use gaps, not numsep, to separate
  ["gaps3"] = "opt_gaps, opt_gaps3", -- group only in threes rather than
  ["off"] = "opt_nocomma",      -- no numsep in input or output
},
["debug"] = {
  ["yes"] = "opt_sortable_debug", -- make the normally hidden sort key
},
["disp"] = {
  ["5"] = "opt_round=5?",        -- round output value to nearest
  ["b"] = "b",                  -- join: '(...)'
  ["(or)"] = "(or)",            -- join: '(...)' with 'or' between
  ["br"] = "br",                -- join: '<br />'
  ["br()"] = "br()",            -- join: '<br />(...)'
  ["comma"] = "comma",          -- join: ','
  ["flip"] = "opt_flip",        -- reverse order of input/output
  ["number"] = "opt_output_number_only", -- display output value (not
  ["or"] = "or",                -- join: 'or'
  ["out"] = "opt_output_only",
  ["output number only"] = "opt_output_number_only",
  ["output only"] = "opt_output_only",
  ["preunit"] = "opt_two_preunits", -- user-specified text before
  ["sqbr"] = "sqbr",            -- join: '[...]'
  ["table"] = "opt_table",      -- output is suitable for a table
  ["tablecen"] = "opt_tablecen", -- output is suitable for a table
  ["unit"] = "opt_input_unit_only", -- display input symbol/name (not
  ["unit or text"] = "opt_input_unit_only, opt_ignore_error", -- display
  ["unit2"] = "opt_output_unit_only",
  ["x"] = "x",                  -- join: <first>...<second> (use
},
["frac"] = 'INTEGER',
["input"] = 'TEXT',            -- TEXT should be value<space><unit>
["lang"] = {                   -- language for output digits (both
  ["en"] = "opt_lang_en",      -- use en digits for numbers, regardless
  ["local"] = "opt_lang_local", -- use local digits for numbers
},
["lk"] = {
  ["in"] = "in",               -- link LHS unit name or symbol
  ["off"] = "off",             -- do not link: same as default
  ["on"] = "on",               -- link all unit names or symbols
  ["out"] = "out",             -- link RHS unit name or symbol
},
["order"] = {
  ["flip"] = "opt_flip",       -- reverse order of input/output
  ["out"] = "opt_order_out",   -- do not show input; instead, use
},
["qid"] = 'TEXT',              -- TEXT should be a Wikidata Q item
["qual"] = 'TEXT',             -- TEXT should be a Wikidata Q item
["round"] = {
  ["0.5"] = "opt_round=0.5",   -- round output value to nearest
  ["5"] = "opt_round=5",       -- round output value to nearest
  ["10"] = "opt_round=10",     -- round output value to nearest
  ["25"] = "opt_round=25",     -- round output value to nearest
  ["50"] = "opt_round=50",     -- round output value to nearest
  ["each"] = "opt_round_each", -- using default precision in a
},
["sigfig"] = 'INTEGER',
["sortable"] = {
  ["off"] = "",                -- ignored (off is the default)
  ["on"] = "opt_sortable_on",  -- output sort key for use in a
}
```

```
        ["debug"] = "opt_sortable_on, opt_sortable_debug", -- |sortable=
    },
    ["sp"] = {
        ["us"] = "opt_sp_us", -- use U.S. spelling (like "meter")
    },
    ["spell"] = { -- only English spelling is supported
        ["in"] = "opt_spell_in", -- spell input value in words
        ["In"] = "opt_spell_in, opt_spell_upper", -- spell
        ["on"] = "opt_spell_in, opt_spell_out", -- spell
        ["On"] = "opt_spell_in, opt_spell_out, opt_spell_upper", -- same
    },
    ["stylein"] = 'TEXT',
    ["styleout"] = 'TEXT',
    ["tracking"] = 'TEXT',
}

local titles = {
    ["frac"] = "Fraction/styles.css",
    ["sfrac"] = "Sfrac/styles.css",
}

return {
    SIprefixes = SIprefixes,
    all_categories = all_categories,
    all_messages = all_messages,
    currency = { ['$'] = true, ['f'] = true, ['€'] = true, ['P'] = true, ['']
    customary_units = customary_units,
    disp_joins = disp_joins,
    en_option_name = en_option_name,
    en_option_value = en_option_value,
    eng_scales = eng_scales,
    ranges = ranges,
    titles = titles,
}
```