Tables

Table 1 Units with special names and symbols[1]

ALL VALUES DECIMAL

Unit Category		Dimension	The Universal Unit Systems				
			with the Rydberg constant(u)		with the GCD Unit(h)		
Coherent	base units that are not natural units	length	m_u	272.102883 mm	$m_{h\ or}$ hm [2]	272.352206 mm	
		time	s_u	390.267520 ms	$s_{h\ or}$ nc	390.625115 ms	
		energy	J_u	64.143274 mJ	J_h	64.084555 mJ	
		temperature [3]	K_u	58.441061 μK	K_h	58.387561 μK	
	base units that are natural units	plane angle	rad	(2/π) arc sin(1)			
		logarithm	neper	log(e)			
		amount of substance	mol_n or N_A^{-1}	mol / 6.022140857×10.$^{23.}$			
		impedance	Ω_n,Z_P or nh	29.9792458 Ω (=1sr/($\varepsilon_0 c_0$) strict [4], is called 'nohm')			
	derived units of electromagnetic quantities	charge	C_u	28.896578 mC			
		electric current	A_u	74.043000 mA	A_h	73.975218 mA	
		field strength	O_u [5]	272.113986 mA/m	O_h	271.616004 mA/m	
		flux density	G_u [5]	390.283444 mC/m^2	G_h	389.569207 mC/m^2	
	derived units of dynamical quantities	mass	g_u	131.950080 g	$g_{h\ or}$ ll	131.829287 g	
		power	W_u	164.357194 mW	W_h	164.056412 mW	
		force	N_u	235.731697 mN	N_h	235.300297 mN	
		pressure	P_u	3.183843 Pa	P_h	3.172201 Pa	
Non coherent	defining constants	wave number	R_∞	10,973,731.568508 /m (is called 'Rydberg')			
		velocity	c_0	299,792,458 m/s (defined, and is called 'light')			
		action	$\hbar$	1.054571800×10.$^{-34.}$Js (is called 'quantum')			
		heat capacity	k_B	1.38064852×10.$^{-23.}$J/K (is called 'Boltzmann')			

[1] Please see also http://www.asahi-net.or.jp/~dd6t-sg/univunit-e/units.pdf and http://z13.invisionfree.com/DozensOnline/index.php?showtopic=371&st=6 for details. A web based unit converter is available at http://hosi.org:8080/cgi-bin/conv.cgi .

[2] 'harmon(hm)', 'nic(nc)', 'looloh(ll)', and 'nohm(nh)' constitutes a quartet. These are alias for common use.

[3] The unit of thermodynamic temperature has been changed. The new unit is one-1,0000;th of the old unit in the paper http://dozenal.com along with the introduction of the Earth local extension.

[4] If we adopt the elementary charge as one of definition constants, Ω_u is used in substitution for Ω_n.

[5] The unit symbol O(Ørsted) and G(Gauß) are associated with the units of CGS unit system.

Non coherent	supplementary constants	total solid angle of a hypershere	Ω_k	$\frac{2\pi^{\frac{k+1}{2}}}{\Gamma(\frac{k+1}{2})}$ rad^k	k=0,1, 2 Ω_0=2 Ω_1=2π rad (circle, cycle) Ω_2=4π sr (sphere, turn)
		logalithm of an integer	f_k	log(2^k)	k=1(bit), d(figure), 4(nibble), 8(byte), .. d=log$_2$(12.)
		amount of substance	mol$_u$	132.007618 mol	(=12.$^{24.}$/ N_A)
		elementary charge	e	1.6021766208×10.$^{-19.}$C	$(=\sqrt{\frac{\alpha\hbar}{\Omega_n}})$

Table 2 Physical, material and astronomical constants[6]

ALL VALUES DOZENAL

Constant Symbols and Name (UNDERLINE INDICATES CONSTANT MAINTAINS SAME VALUE BETWEEN SYSTEMS u, e AND h)		Constant Value expressed by the Universal Unit Systems		Exponent N of ×10;^{N}	Unit Symbol (u and h suffixes omitted)
		with the Rydberg constant (u)	with the GCD Unit (h)		
R_∞	Rydberg constant	1	1;00170000	6;	Ω_1/m
c_0	speed of light in vacuum	1		8;	m/s
$\hbar$	quantum of action	1		-26;	J s
k_B	Boltzmann constant	1		-20;	J/K
N_A	Avogadro constant	1		20;	mol^{-1}
R	gas constant	1		0;	J/(mol K)
u	unified atomic mass unit	1;0009061	1;0024073	-20;	g [7]
a_B	Bohr Radius	1;005E85686	1;00447X740	-9;	m
α	fine structure constant	1;07399405		-2;	-
e	elementary charge	1;0374439E		-14;	C
m_e	electron mass	0;E469222	0;E48324X	-23;	g
σ	Stefan-Boltzmann constant	1;E82E28		-1E;	W/(m^{2}K^4)
m_G	gravitic meter ($\sqrt{2E;}$ l_P)	1;0018	1;0001	-27;	m
l_P	Planck length	2;0445	2;0413	-28;	m
F_P	Planck force ($\hbar$ c_0/ l_P^2)	2;XE23	2;XEE5(≒ 2;E)[8]	35;	N

[6] If CODATA (2014) values are required, see http://physics.nist.gov/cuu/Constants/index.html .

[7] Because g_u is approximately 100;$^{10;}$ u, I add alias name 'looloh'(lú:loʊ/əʊ) to g_h.

[8] If this is expressed as 2;E, the error from CODATA (2014) becomes -2;53(-2.44) times standard deviation. The Gravitic Universal Unit System can be derived from 35G (m_G), c_0, $\hbar$, k_B and Z_P .

G	Newtonian constant of gravitation (c_0^4/F_P)	4;1574	4;1463	-X;	$(m^4/s^4)/N$
θ_W	weak mixing angle	E;304		-2;	Ω_1
V_m	molar volume of an ideal gas under standard conditions	1;02X468	1;025664	2;	m^3/mol
	black-body radiation at the ice point	0;EX2462	0;EX8780	2;	W/m^2
	maximum density of water	1;088184	1;092X47 (≒ 15;/14;)	2;	g/m^3
	density of ice at the ice point	0;E7E9	0;E85E	2;	g/m^3
	specific heat of water[9]	0;6052	0;6045 (≒ 1/2)	0;	J/(g K)
	surface tension of water at 25°C	0;EE68	0;EEE4	-1;	N/m
atm	standard atmosphere	1;65008E	1;659967 (≒ 1;66)	4;	P
g_n	standard gravitational acceleration	5;5X54XE9	5;5E21264 (≒ E;/2)	0;	m/s^2
r_E	gravitational radius of the Earth	2;41E8982X13	2;4180306534	-2;	m
au	astronomical unit	8;X67575537	8;X55509X33	X;	m
	astronomical unit	9;E91731X53		-3;	$c_0\ s_E$ day

Table 3 Power prefixes

name	symbol	Plain text	value	name	symbol	Plain text	value
dirac	D		10;[1]	dour	d		10;[-1]
hecty	H		10;[2]	centy	c		10;[-2]
kily	K		10;[3]	milly	m		10;[-3]
super	**S**		**10;[4]**	**sub**	**s**		**10;[-4]**
cosmic	$_{+}$	_+	**10;[8](=M)**	**atomic**	$_{-}$	_-	**M [-1]**
di-cosmic	$_{2+}$	_2+	M [2]	di-atomic	$_{2-}$	_2-	M [-2]
tri-cosmic	$_{3+}$	_3+	M [3]	tri-atomic	$_{3-}$	_3-	M [-3]
tetra-cosmic	$_{4+}$	_4+	M [4]	tetra-atomic	$_{4-}$	_4-	M [-4]
penta-cosmic	$_{5+}$	_5+	M [5]	penta-atomic	$_{5-}$	_5-	M [-5]
hexa-cosmic	$_{6+}$	_6+	M [6]	hexa-atomic	$_{6-}$	_6-	M [−6]
hepta-cosmic	$_{7+}$	_7+	M [7]	hepta-atomic	$_{7-}$	_7-	M [−7]
…	…	…	…	…	…	…	…

A prefix with no corresponding unit is treated as a noun form, which means the abbreviation of the corresponding plain angle unit prefixed to Ω_1. The above-proposed is an explanation of the prefixes put on the unit. As for number counting, I propose duodecimal myriad system replacing ten/hundred with dozen/gross. [10] 'y' is pronounced [ɑɪ] and is treated as a duodecimal context mark. The notation 'M(=10;[8]) to the power of octal number' is used for exponential expression of big pure numbers.

[9] This corresponds to the definition of thermodynamic calorie.

[10] See http://www.asahi-net.or.jp/~dd6t-sg/univunit-e/myriad.pdf.

Table 4 Examples of natural scale quantity representation [11]

quantity	symbol	plain text	value	refer to
2E; penta-cosmic Newton	$2E;N_{5+h}$	2E;N_5+h	$2E;\times M^{5}$ [harmonic] Newton	the Planck force
6;di-cosmic second	$6;s_{2+h}$	6;s_2+h	$6;\times M^{2}$ [harmo]nic[second]	the age of the universe
cosmic super bit [Boltzmann]	$Sf_{+1}[k_B]$	Sf_+1 [k_B]	$M^{1@4}log2^{1}$ [Boltzmann]	1.01 Tera Byte(=$2^{43.}$bit)
cosmic meter	m_{+h}	m_+h	M^{1} harmon[ic meter]	the speed of light in vacuum
atomic dour meter	dm_{-h}	dm_-h	$M^{-1@1}$ harmon[ic meter]	the Bohr radius
di-atomic Coulomb	C_{2-u}	C_2-u	M^{-2} [universal] Coulomb	the elementary charge
di-atomic sensible Watt [12]	$W_{2\text{-}sen[h]}$	W_2-sen[h]	M^{-2}[harmonic]sensible Watt	a photon energy (540.THz)
tri-atomic gram	g_{3-h}	g_3-h	M^{-3} [harmonic] gram	the unified atomic mass unit
2; tetra-atomic meter	$2;m_{4-h}$	2;m_4-h	$2;\times M^{-4}$ harmon[ic meter]	the Planck length

Table 5 The Earth local extension for the Harmonic Universal Unit System

category		name / description	symbol	plain text	value
Non coherent calendar time	prefix	septi	sep or “,”		2^{-7} (**se**venth **p**ower of **t**wo **i**nversed)
	units	day	day		1 Ω_1
					‘day’ corresponds to 86,400. s at the beginning of year 1900.
		year	y or a		265’27 days (365.+ 31./128.)days
		span or octal century	span or “`”		64. years
Non coherent unit and constants		difference between thermodynamic temperature and 118,2354; K_h (≒ -74.36°C)	°S	deg S	1,0000; K_h (≒1.210724 K ≒ 23./19. K)
					100; 0000°S is 99.9839 °C 78;0000°S is 37.0262°C 61;0000°S is 14.0224°C 51;5026°S is 0.0000°C
		approximate formula: $°C = \frac{1E;}{17;}°S - 62;4$; $°S = \frac{17;}{1E;}°C + 51;5$			99.9839 °C is the boiling point of water at the standard atmosphere.
	supple-mentary constants	the gravitational acceleration of the Earth (is called ‘gee [of Earth] ’)	g_E	g_E or gee	5;611X615 m_h/s_h^2 g_E is defined as $c_0^2 r_E (m_E \text{ rad})^{-2}$
		the rotation period of the Earth (is called ‘[Earth] solar’) at the beginning of year 1900.	s_E	s_E or solar	0;EEEEEE153565 s_h/septi milly day (This should be ‘coordinated’.)
		the meridian length of the Earth (is called ‘[Earth] meridian’)	m_E	m_E or meridian	4124,216E; m_h/Ω_1

[11] The part enclosed with‘[]’ can be omitted in Table 4 and Table 5.

[12] Units for quantity weighted by dimensionless human sensitivity are indicated by ‘sensible’. W_{sen} corresponds to 1;di-cosmic photon (540.THz) / harmonic second and 115.667210 lumen.