THE DOZENAL SOCIETY OF AMERICA'S COMPREHENSIVE SYNOPSIS OF

Dozenal and Transdecimal Symbologies

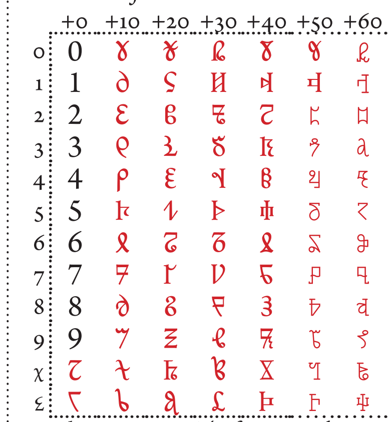
from the *Duodecimal Bulletin* and Beyond

Style *Symbology*	Dozenal Digit 0 1 2 3 4 5 6 7 8 9	χ	Ɛ	*Reference**
Least Change: Repurposing: Sequential				
"IBM" (applied to dozenal)	0 1 2 3 4 5 6 7 8 9	A	B	DB 27·2·10
Alphanumeric lowercase	0 1 2 3 4 5 6 7 8 9	a	b	
Least Change: Repurposing: Rationalized				
D'Alembert & Buffon	0 1 2 3 4 5 6 7 8 9	X	Z	NR 02·1·11
"Hall"	0 1 2 3 4 5 6 7 8 9	t	e	DB 2♯·1·1♯
G. Chrystal (1150;)	0 1 2 3 4 5 6 7 8 9	τ	ε	DB 03·1·11
Henry Parkhurst (1115;)	0 1 2 3 4 5 6 7 8 9	X	Λ	DB 10·2·33
"Delta-Epsilon"	0 1 2 3 4 5 6 7 8 9	δ	ε	Note 2
H. K. Humphrey (Strict)	0 1 2 3 4 5 6 7 8 9	d	k	DB 01·3·23
"Alice"	0 1 2 3 4 5 6 7 8 9	Λ	Ɛ	Note A
Jene Farmer (11χƐ;)	0 1 2 3 4 5 6 7 8 9	Ю	И	DB 44·1·10
Bryan Parry A (11Ɛ1;)	0 1 2 3 4 5 6 7 8 9	Γ	Э	Note P
Bryan Parry B (11Ɛ1;)	0 1 2 3 4 5 6 7 8 9	β	Σ	Note P
Bryan Parry C (11Ɛ1;)	0 1 2 3 4 5 6 7 8 9	Δ	Σ	Note P
Bryan Parry D (11Ɛ1;)	0 1 2 3 4 5 6 7 8 9	Λ	Σ	Note P
Bryan Parry E (11Ɛ1;)	0 1 2 3 4 5 6 7 8 9	Ж	Π	Note P
Bryan Parry F (11Ɛ1;)	0 1 2 3 4 5 6 7 8 9	Ж	Ђ	Note P
Bryan Parry G (11Ɛ1;)	0 1 2 3 4 5 6 7 8 9	Ж	И	Note P
"Decker"	0 1 2 3 4 5 6 7 8 9	δ	ỉ	Note E
Least Change: Repurposing: Creative				
Edna Kramer	0 1 2 3 4 5 6 7 8 9	*	#	NR 02·1·11
Lancelot Hoghen	0 1 2 3 4 5 6 7 8 9	♀	♂	NR 02·1·12
T. Pendlebury	0 1 2 3 4 5 6 7 8 9	?	&	NR 08·2·03
F. S. Whellams	0 1 2 3 4 5 6 7 8 9	♯	♭	NR 09·2·09
Least Change: Derived: Aesthetically Rationalized				
Juan C. Lobkowitz (Ɛ50;)	0 1 2 3 4 5 6 7 8 9	ρ	Ո	NR 02·1·11
H. G. G. Robertson	0 1 2 3 4 5 6 7 8 9	ϑ	Ħ	DB 03·4·07
Tom Johnson	0 1 2 3 4 5 6 7 8 9	θ	Ħ	Note A
Peter Barlow (106χ;)	0 1 2 3 4 5 6 7 8 9	φ	γ	NR 02·1·11
Peter Barlow (106Ɛ;)	0 1 2 3 4 5 6 7 8 9	φ	π	NR 02·1·11
Vicente Pujals de la Bastida	0 1 2 3 4 5 6 7 8 9	Շ	ϯ	NR 02·1·11
Sir Issac Pitman (10χ9;)	0 1 2 3 4 5 6 7 8 9	Ɛ	V	NR 02·1·11
Sir Issac Pitman (10χ9;)	0 1 2 3 4 5 6 7 8 9	Շ	Ɛ	DB 03·2·01
William S. Crosby	0 1 2 3 4 5 6 7 8 9	Շ	Ɛ	DB 02·2·14
William Dwiggins	0 1 2 3 4 5 6 7 8 9	χ	Ɛ	DB 01·1·02
G. Elbrow	0 1 2 3 4 5 6 7 8 9	Շ	Ɛ	DB 04·1·11
T. Wood	0 1 2 3 4 5 6 7 8 9	χ	Ɛ	NR 02·1·12
DSA-"Bell" via Churchman	0 1 2 3 4 5 6 7 8 9	Ӿ	Ħ	DB 25·1·02
William Schumacher	0 1 2 3 4 5 6 7 8 9	∂	℘	DB 37·2·19
H. K. Humphrey	0 1 2 3 4 5 6 7 8 9	∂	℞	DB 01·3·23
Paul Van Buskirk	0 1 2 3 4 5 6 7 8 9	ȼ	ɇ	DB 03·4·18
Ray Greaves / David James	0 1 2 3 4 5 6 7 8 9	Շ	Ɛ	Note C
DeVlieger "Arqam" (1193;)	0 1 2 3 4 5 6 7 8 9	Շ	Ր	DB 45·2·1♯
Least Change: Derived: Technically Rationalized				
Don Hammond	0 1 2 3 4 5 6 7 8 9	ɂ	Ɛ	Note B
Don Hammond	0 1 2 3 4 5 6 7 8 9	ʗ	Ɛ	Note B
Niles Whitten 1	0 1 2 3 4 5 6 7 8 9	ɛ̈	ɛ	Note S
Niles Whitten 2	0 1 2 3 4 5 6 7 8 9	ʗ	Ɛ	Note S
Paul Rapoport	0 1 2 3 4 5 6 7 8 9	ʗ	Ƹ	DB 31·3·04
"Bell" numerals via Zirkel	0 1 2 3 4 5 6 7 8 9	H	E	DB 32·1·12
"Bell" via Radio Shack	0 1 2 3 4 5 6 7 8 9	Ɽ	H	DB 32·1·12
Ray Greaves	0 1 2 3 4 5 6 7 8 9	ฅ	E	Note C
Timothy F. Travis	0 1 2 3 4 5 6 7 8 9	ᑯ	Ո	Note R
Least Change: Improvisation: Rationalized				
Charles Bagley 2	0 1 2 3 4 5 6 7 8 9	ρ	ſ	DB 1Ɛ·2·37
Tom Linton	0 1 2 3 4 5 6 7 8 9	Ͻ	ſ	DB 1Ɛ·2·37
"växan" (11Ɛ2;)	0 1 2 3 4 5 6 7 8 9	ᑫ	ᖱ	Note V
"växan" (11Ɛ2;)	0 1 2 3 4 5 6 7 8 9	Ͻ	ᖱ	Note V

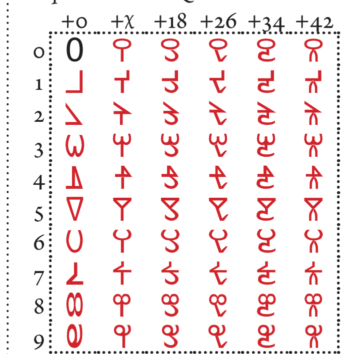
Style *Symbology*	Dozenal Digit 0 1 2 3 4 5 6 7 8 9 χ Ɛ	*Reference**
Least Change: Improvisation: Creative		
Handy/Norland	0 1 2 3 4 5 6 7 8 9 Ɛ ∠	DB 01·2·22
Jean Essig	0 1 2 3 4 5 6 7 8 9 Շ ∠	DB 10·2·48
Charles Bagley 1	0 1 2 3 4 5 6 7 8 9 ℑ ℘	DB 11·2·48
"Compromise"	0 1 2 3 4 5 6 7 8 9 χ ∠	DB 1Ɛ·1·15
Frank Plevin	0 1 2 3 4 5 6 7 8 9 ϑ ℛ	NR 06·2·07
Dr. Paul Rapoport	0 1 2 3 4 5 6 7 8 9 ȣ ℛ	DB 2χ·2·24
Shaun Ferguson 2	0 1 2 3 4 5 6 7 8 9 ℵ ꟻ	Note J
Separate Identity: Repurposing: Sequential		
"Ernest Stryver"	a b c d f g h i l m n o	DB 01·3·22
J. Halcro Johnson-1	0 1 2 3 4 5 6 5 4 3 2 1	DB 06·2·25
Louis Loynes 1	Z I A B C D E F G H J K	NR 03·2·03
Louis Loynes 2	M A B C D E F G H J K L	NR 03·2·03
Separate Identity: Repurposing / Derived: Rationalized: Modular Symmetry		
DeVlieger "Acýlin" (11χƐ;)	0 1 2 3 3 ∂ 8 6 Ɛ Ɛ Շ Շ	Note E
J. Halcro Johnson-2	0 1 2 3 4 5 6 5 ϟ Ɛ Շ I	DB 02·1·18
Separate Identity: Improvised: Rationalized: Additive Analog		
Rafael Marino	[illegible]	DB 38·2·10
F. Ruston	0 / Λ Π ≷ X ρ ⋌ Π ≷ X	NR 03·2·03
Gwenda Turner	· ι ∟ ∂ δ 8 7 ϟ 9 ∂ ∂	DJ 04·04
R. J. Hinton	0 ρ Ɓ Ɛ δ 8 8 ४ ४ ४ ४	NR 03·2·07
P. D. Thomas "Modular"	0 ɟ ♆ Ψ ƚ λ Ӿ ¥ ǂ Ʊ ∠ ⊧	Note D
D. A. Sparrow	0 Շ Ͻ Ɛ ρ Շ Λ Ձ Ɣ Ɖ K И	NR 03·2·0Ɛ
Fred Newhall "Efficient"	[illegible]	DB 2χ·3·16
Separate Identity: Improvised: Rationalized: Multiplicative / Exponential		
Shaun Ferguson 1	[illegible]	Note C
Separate Identity: Improvised: Rationalized: Rotational Run Sequence		
Lauritzen "Gravity" (11χ0;)	[illegible]	DB 3♯·1·04, L
Kingsland Camp	ɸ ∠ ♆ θ ɸ Շ φ 7 6 θ ρ Ɂ	DB 02·1·16
Separate Identity: Improvised: Rationalized: Indexed Value		
Smooth Binary Coded	[illegible]	
George P. Jelliss	[illegible]	Note F
Separate Identity: Improvised: Modular Symmetry		
A. D. Gautier (10χχ;)	0 ɟ ʯ G Ʊ Ɛ 0 Z ՈΩ Ͻ ϟ	NR 03·2·03
George Brost "Dyhexal"	[illegible]	DB 35·2·0χ
James Conlon	[illegible]	Note A
Separate Identity: Improved: Creative		
Dudley George (±1146;)	0 1 ∠ Ɂ ϑ V Ɣ Λ Ɛ S ℵ ℛ	DB 02·2·17
A. Chilton	0 / Z 3 Ɫ ϟ ⋏ 7 X Ɣ И Ϡ	NR 02·1·10
Shaun Ferguson	0 1 ₸ ₹ ₰ ₷ ₳ ∆ И V Ɛ Ɛ	NR 02·1·10
Louis Loynes 3	∇ 1 2 3 Я И 6 7 8 9 Շ Ɛ	Note A
Mohan Kala	[illegible]	DJ 31·35
Raymond Mason	θ 1 Ͻ Ɛ Ɫ V Ո Ͻ Ɣ Շ Ɛ	Note A
Peter Sorrenson	[illegible]	Note N

Symbology	Hexadecimal Digit 0 1 2 3 4 5 6 7 8 9 χ Ɛ 10 11 12 13	*Reference**
Least Change: Repurposing: Sequential		
"IBM"	0 1 2 3 4 5 6 7 8 9 A B C D E F	DB 27·2·10
Least Change: Derived: Rationalized		
Whillock Com.	0 1 2 3 4 5 6 7 8 9 χ ∠ Շ Ɛ ϟ ʕ	DB 27·3·07
Least Change: Repurposing: Creative		
"WordPerfect"	0 1 2 3 4 5 6 7 8 9 / \ : * ? +	DB 33·2·1χ
Least Change: Improved: Creative		
"Arqam" (1193;)	0 1 2 3 4 5 6 7 8 9 Շ Ր ɣ ∂ Ɛ ϱ	DB 45·2·1♯
Separate Identity: Improvised: Rationalized: Indexed Value		
Bruce Martin	[illegible]	Note M
Schumacher	0 ˥ ┌ ∩ └ ┘ ├ h ┘ ┤ ┌ ┤ ∪ Ч ᖰ H	DB 33·3·0χ
Binary Coded	[illegible]	DB 49·1·15
T. Hauptman	8 ♀ 9 Ձ ɸ ǀ ƃ ¿ ∂ ʔ 3 2 6 ʕ S Ɛ	Note T
Separate Identity: Repurposing: Rationalized: Indexed Value		
Whillock Com.	0 1 2 3 4 5 6 7 8 9 b L d E h ʕ	DB 27·3·07

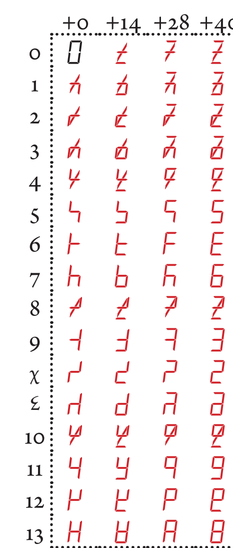
Numerals for number bases much in excess of hexadecimal:



DeVlieger Arqam: *The first seven dozen arqam. See Note Q.*

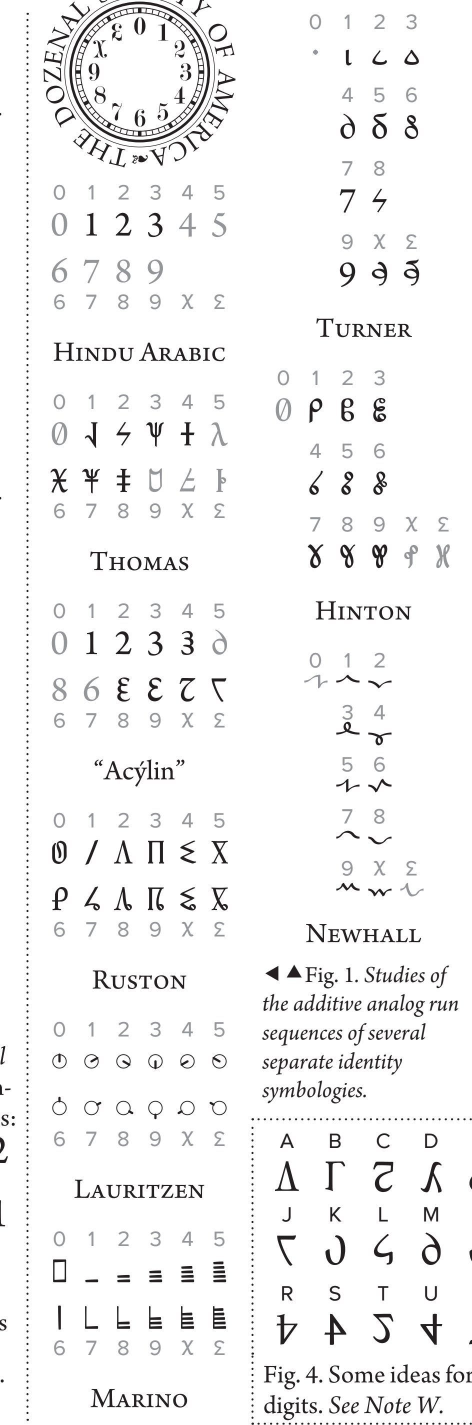


Jean-Michel Smith: *See Note S.*



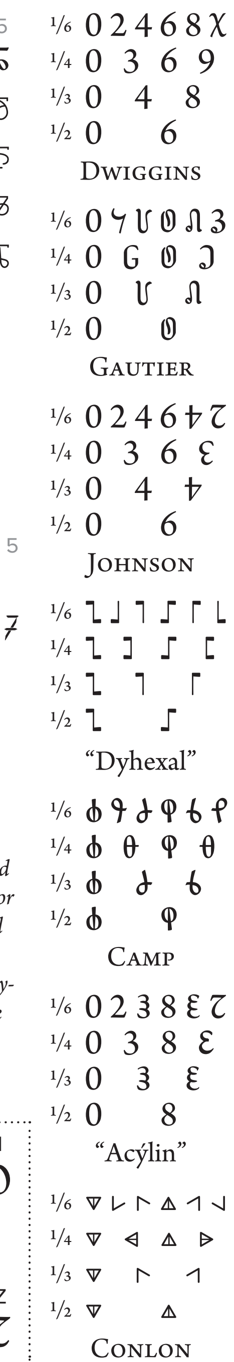
Gene Zirkel's expansion of Schumacher numerals: See DB 49·1·15

Visit the DSA's *Duodecimal Bulletin* symbology issues: DB 4χ·2 and DB 4Ɛ·1 for more in depth discussion and analysis of dozenal symbology.



◄▲Fig. 1. *Studies of the additive analog run sequences of several separate identity symbologies.*

▲ Fig. 2. *Studies of the multiplicative strategy exhibited by the "arqam" least change symbology, and exponential strategy for Shaun Ferguson's and the Schumacher and Zirkel-modified binary-coded analog separate identity sequences.*



▲ Fig. 3. *Studies of various modular symmetries of some separate identity symbologies. The rows of each study lay out digits divisible by 2, 3, 4, or 6.*

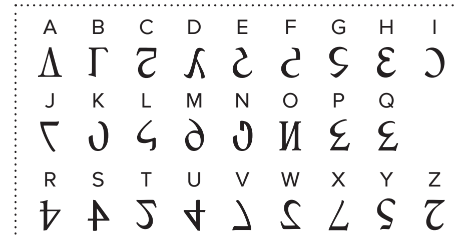


Fig. 4. Some ideas for dozenal transdecimal digits. *See Note W.*

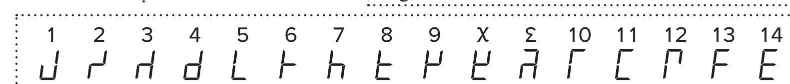


Fig. 5 Seven-segment characters determined to be candidates for dozenal transdecimal digits. *See Note H.*

See the *Duodecimal Bulletin* WN 99; VOL. 4χ; № 2 and WN 9χ; VOL. 4Ɛ; № 1 for further exploration of the subject of "symbology", the devising of a set of symbols to serve as numerals for dozenal and other number bases. The *Duodecimal Bulletin* is a publication of the Dozenal Society of America.

Notes:

* The reference notation indicates items in the DSA's *Duodecimal Bulletin* (DB) or the DSGB's *Duodecimal Newscast, Duodecimal / Dozenal Review* (NR) in the format Volume·Number·Page. Items deriving from the DSGB's *Dozenal Journal* (DJ) are presented in the format Continuation Number·Page. All figures in the dozenal symbology in use at the time of publication of that issue. Thus, DB 02·1·1χ refers to Vol. 2 № 1 page one dozen ten; DB 2♯·1·1♯ refers to Volume two-dozen eleven № 1 page one dozen eleven. The publications of the DSGB use the Pitman symbology.

A Items retrievable at time of publishing from the Dozenal Society of Great Britain's official website, specifically, http://www.dozenalsociety.org.uk/basicstuff/digits.htm.

B Retrievable at time of publishing at http://www.dozenalsociety.org.uk/basicstuff/hammond.htm, part of the official website of the Dozenal Society of Great Britain.

C Private communication with the authors.

D P. D. Thomas, (1987). *Modular Counting: A Preview of the Numbers of the 21st Century* (Revised Edition). Clarence Gardens, South Australia. Modular Conversion Bureau.

E These systems are introduced here by the author as examples of his system in the case of "acýlin", and as a plausible example in the case of "Decker".

F Retrievable from the DozensOnline internet forum. George P. Jelliss (2005). Symbols for TEN and ELEVEN? (Internet forum thread in the "On Topic" Forum, "Number Bases" topic) http://z13.invisionfree.com/DozensOnline/index.php?showtopic=11, entry by user "GPJ" at 10:54 AM 14 August 2005.

H Retrievable from the DozensOnline internet forum. "Dan" (2005). Symbols for TEN and ELEVEN? (Internet forum thread in the "On Topic" Forum, "Number Bases" topic) http://z13.invisionfree.com/DozensOnline/index.php?showtopic=11, entry by user "Dan" at 5:16 PM 14 August 2005.

J Retrievable from the DozensOnline internet forum. Shaun Ferguson (2009). Symbols for TEN and ELEVEN? (Internet forum thread in the "On Topic" Forum, "Number Bases" topic) http://z13.invisionfree.com/DozensOnline/index.php?showtopic=11, entry by user "Shaun" at 8:41 AM 8 June 2009.

L "Nature's Numbers" or "gravity-generated numbers", retrievable at http://www.earth360.com/math-naturesnumbers.html, Prof. Lauritzen's website.

M *Letters to the editor: On binary notation*, Bruce A. Martin, Associated Universities Inc., Communications of the ACM, Volume 11, Issue 10 (October 1968) Page: 658.

N Retrievable from the DozensOnline internet forum. Peter Sorrenson (2011). Hello (Internet forum thread in the "Off Topic" Forum, "Getting to Know you …" topic) http://z13.invisionfree.com/DozensOnline/index.php?showtopic=382, entry by user "pvtpee" at 7:15 AM 11 January 2011.

P Retrievable from the DozensOnline internet forum. Bryan Parry (2005). Symbols for TEN and ELEVEN? (Internet forum thread in the "On Topic" Forum, "Number Bases" topic) http://z13.invisionfree.com/DozensOnline/index.php?showtopic=11, entry by user "The Mighty Dozen" at 8:56 PM 2 August 2005.

Q Retrievable at Michael DeVlieger's "Transdecimal Observatory" website at http://www.vincico.com/arqam/argam-pc-3330.pdf. These are the first 7 dozen numerals of over 2¾ gross.

R Retrieved at http://web.archive.org/web/20031212123420/http://www.raenbo.com/, an archived version of Mr. Travis' website, and through private communication with Mr. Travis.

S Retrievable at Jean-Michel Smith's site http://autonomyseries.com/Canon/Sexagesimal/

T Retrieved at Traveler Hauptman's wiki at http://www.hauptmech.com/base42/wiki/index.php?title=Main_Page; confirmed through private communication with the author.

V Retrievable from the DozensOnline internet forum. User "växan" (2006). Symbols for TEN and ELEVEN? (Internet forum thread in the "On Topic" Forum, "Number Bases" topic) http://z13.invisionfree.com/DozensOnline/index.php?showtopic=11, entry by user "växan" at 2:26 AM 10 February 2006.

W Retrievable from the DozensOnline internet forum. User Daniel White (2005). Symbols for TEN and ELEVEN? (Internet forum thread in the "On Topic" Forum, "Number Bases" topic) http://z13.invisionfree.com/DozensOnline/index.php?showtopic=11, entry by user "Twinbee" at 4:20 PM 6 August 2005.

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Errors or Suggestions? CONTACT: Editor@Dozenal.Org UPDATED 15 JANUARY 2011