

# BYZANTINE MUSIC FORMULÆ

## *Plagal First Mode - Heirmologic*

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Key:

1 = accented syllable

0 = unaccented syllable

X = syllable that may be either  
accented or unaccented

Variations of the same formula  
are indicated in color

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\* The Byzantine music formulae herein were extracted from all the heirmologic melodies found in the *Zoe Anastasimatarion* (14th edition, 2002).

**A) Medial Cadences on Ke**

Accented on last syllable:

From Ke

00  $\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

000  $\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

$\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

0000  $\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

00000  $\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

10001  $\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

$\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

100001  $\begin{array}{c} \text{x} \\ \text{q} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

From Nee

00  $\begin{array}{c} \text{v}' \\ \text{n} \end{array} \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

00001  $\begin{array}{c} \text{v}' \\ \text{n} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

010001  $\begin{array}{c} \text{v}' \\ \text{n} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

0010001  $\begin{array}{c} \text{v}' \\ \text{n} \end{array} \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \overbrace{\quad} \quad \begin{array}{c} \text{x} \\ \text{q} \end{array}$

$\overbrace{\quad} \quad \overbrace{\quad}$   
1 0

*Plagal First Mode - Heirmologic*

0100001	$\overset{\gamma'}{\alpha} \curvearrowright \curvearrowright \curvearrowright \curvearrowright \text{---} \curvearrowright \overset{\chi}{\dot{q}}$ 0 1 0 0 0 0 1
0100X0X	$\overset{\gamma'}{\alpha} \curvearrowright \text{---} \text{---} \text{---} \curvearrowright \text{---} \overset{\chi}{\dot{q}}$ 0 1 0 0 X 0 X
1010001	$\overset{\gamma'}{\alpha} \text{---} \curvearrowright \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 1 0 1 0 0 0 1
01000001	$\overset{\gamma'}{\alpha} \curvearrowright \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 0 1 0 0 0 0 0 1
10010001	$\overset{\gamma'}{\alpha} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 1 0 0 1 0 0 0 1
010010001	$\overset{\gamma'}{\alpha} \curvearrowright \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 0 1 0 0 1 0 0 0 1
010100001	$\overset{\gamma'}{\alpha} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 0 1 0 1 0 0 0 0 1
100100001	$\overset{\gamma'}{\alpha} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 1 0 0 1 0 0 0 0 1
0100010001	$\overset{\gamma'}{\alpha} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 0 1 0 0 0 1 0 0 0 1
00100100001	$\overset{\gamma'}{\alpha} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 0 0 1 0 0 1 0 0 0 0 1


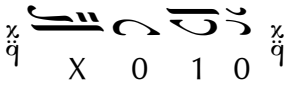
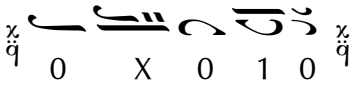
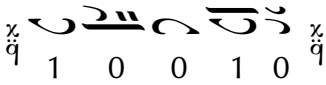
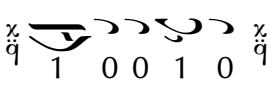
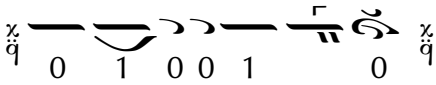
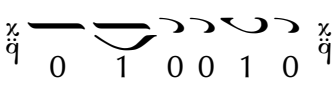
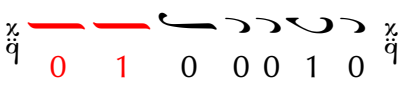
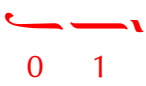
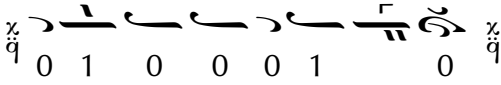
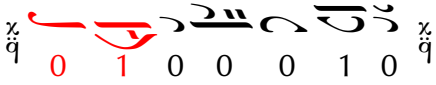
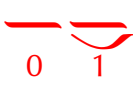
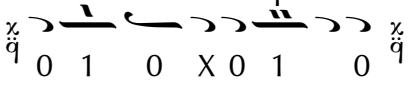
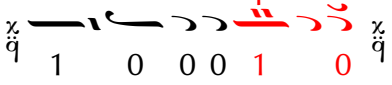

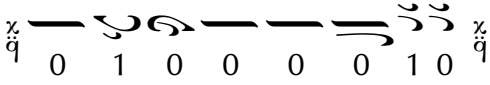
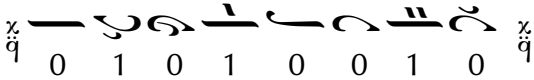
Accented on second to last syllable:

From Ke

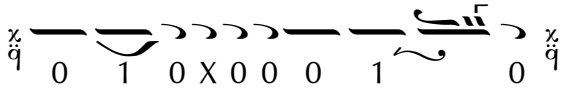
10	$\overset{\chi}{\dot{q}} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 1 0
	$\overset{\chi}{\dot{q}} \text{---} \text{---} \overset{\chi}{\dot{q}}$ 1 0

$\text{---} \text{---} \text{---}$   
1

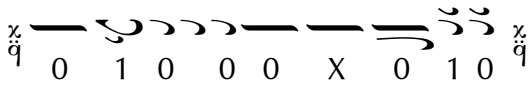
*Plagal First Mode - Heirmologic*

		
X010		
0X010		
10010		
		
010010		
		
0100010		
		
		
010X010		
1000010		
01000010		
01010010		

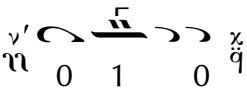
*Plagal First Mode - Heirmologic*

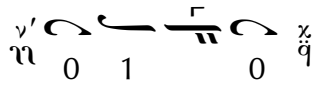
010X00010 

010000010 

01000X010 

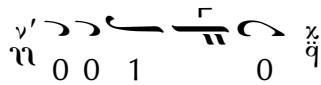
From Nee

010 

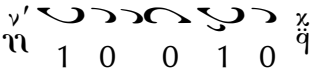


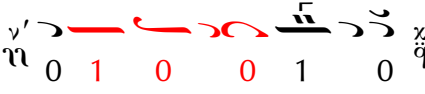

0010  

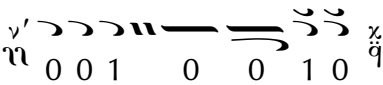




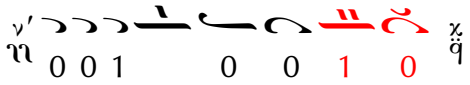

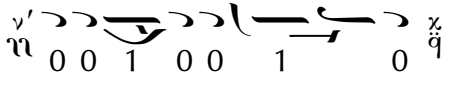
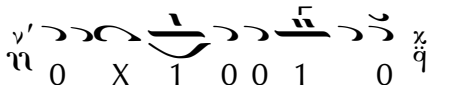
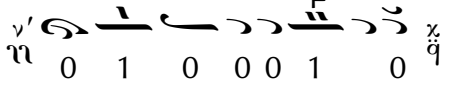

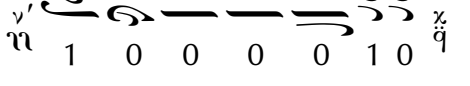
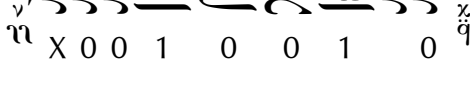
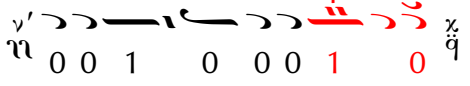
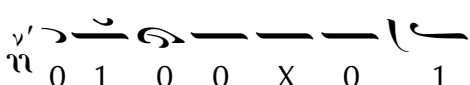

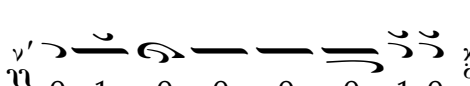
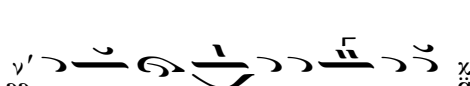
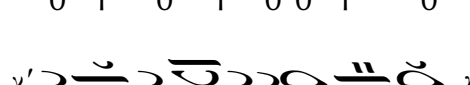
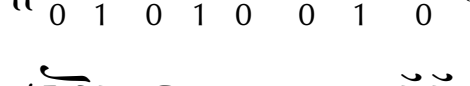

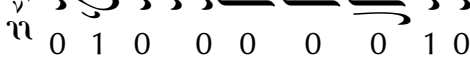
10010 

010010  

0010010 

*Plagal First Mode - Heirmologic*

		
		
0X10010		
0100010		
		
1000010		
		
X0010010		
00100010		
0100X010		
01000010		
01010010		
		
10X00010		
010000010		

*Plagal First Mode - Heirmologic*

010X00010	
010010010	
100000110	
100100010	
0100X00010	
01000100010	
10100X0X010	

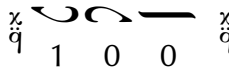
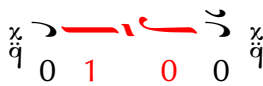

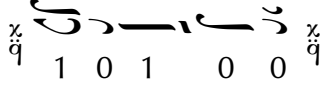

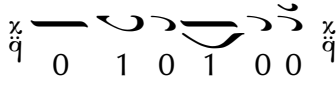

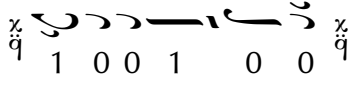
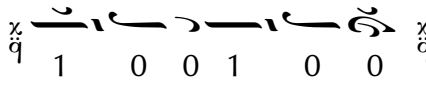

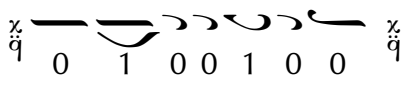

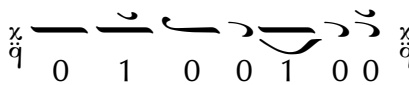

Accented on third to last syllable:

From Ke

100	

10  
1

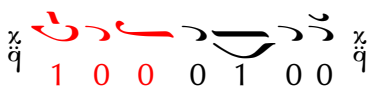
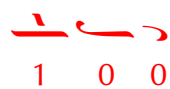
*Plagal First Mode - Heirmologic*


	$\frac{x}{q}$  $\frac{x}{q}$
0100	$\frac{x}{q}$  $\frac{x}{q}$
	$\frac{x}{q}$  $\frac{x}{q}$
10100	$\frac{x}{q}$  $\frac{x}{q}$
010100	$\frac{x}{q}$  $\frac{x}{q}$
	$\frac{x}{q}$  $\frac{x}{q}$
100100	$\frac{x}{q}$  $\frac{x}{q}$
	$\frac{x}{q}$  $\frac{x}{q}$
	$\frac{x}{q}$  $\frac{x}{q}$
	$\frac{x}{q}$  $\frac{x}{q}$
0100100	$\frac{x}{q}$  $\frac{x}{q}$
	$\frac{x}{q}$  $\frac{x}{q}$
	$\frac{x}{q}$  $\frac{x}{q}$
1101100	$\frac{x}{q}$  $\frac{x}{q}$

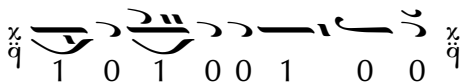




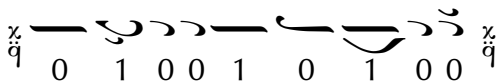
*Plagal First Mode - Heirmologic*

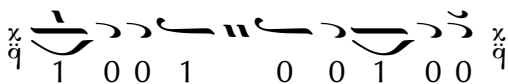
1000100  

  $\frac{x}{q}$

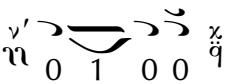
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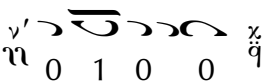
  $\frac{x}{q}$


010010100 

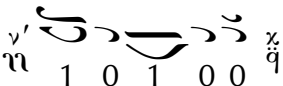
  $\frac{x}{q}$

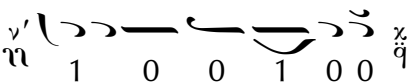
From Nee

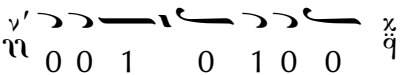
0100 

  $\frac{x}{q}$

00100 

  $\frac{x}{q}$

100100 

  $\frac{x}{q}$

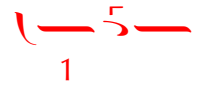
0010100 

  $\frac{x}{q}$

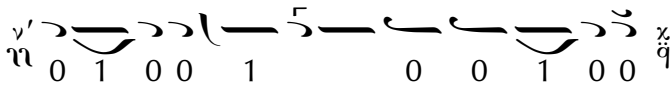


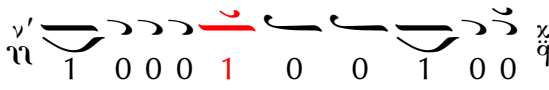
*Plagal First Mode - Heirmologic*

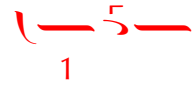
01100100	
10010100	
100X0100	
10100100	
010000100	
010010100	
010100100	
0100X0100	
011000100	
100000100	
1000X0100	
100100100	
0010100100	

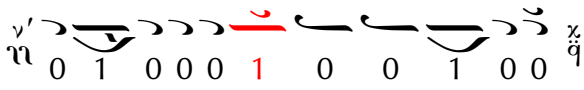


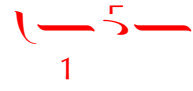
*Plagal First Mode - Heirmologic*

0100100100 

1000100100 

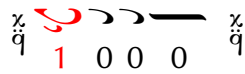


01000100100 

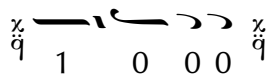


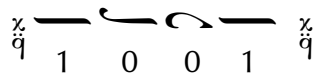
Accented on fourth to last syllable:

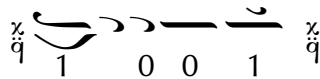
From Ke

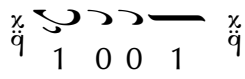
1000 

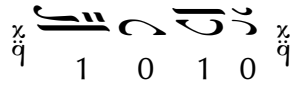


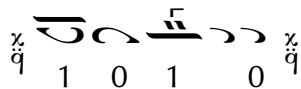


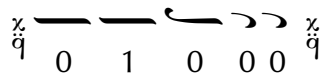
1001 





1010 



01000 



*Plagal First Mode - Heirmologic*

01001	$\begin{array}{c} \text{̄} \\ \text{q} \\ \text{0 1 0 0 1} \end{array}$
01010	$\begin{array}{c} \text{̄} \\ \text{q} \\ \text{0 1 0 1 0} \end{array}$
010X010	$\begin{array}{c} \text{̄} \\ \text{q} \\ \text{0 1 0 X 0 1 0} \end{array}$
01000X010	$\begin{array}{c} \text{̄} \\ \text{q} \\ \text{0 1 0 0 0 X 0 1 0} \end{array}$

From Nee

001001	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{0 0 1 0 0 1} \end{array}$
1001000	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{1 0 0 1 0 0 0} \end{array}$
1001010	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{1 0 0 1 0 1 0} \end{array}$
0100X010	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{0 1 0 0 X 0 1 0} \end{array}$
01001001	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{0 1 0 0 1 0 0 1} \end{array}$
10001001	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{1 0 0 0 1 0 0 1} \end{array}$
010001010	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{0 1 0 0 0 1 0 1 0} \end{array}$
	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{0 1 0 0 0 1 0 1 0} \end{array}$
010X0X010	$\begin{array}{c} \text{̄} \\ \text{n} \\ \text{0 1 0 X 0 X 0 1 0} \end{array}$

*Plagal First Mode - Heirmologic*

0100001010       $\begin{array}{l} \gamma' \\ \alpha \end{array} \begin{array}{cccccccc} \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} \\ 0 & 1 & 0 & 0 & 0 & 0 & 1 & 0 & 1 & 0 \end{array} \begin{array}{l} \text{u} \\ \text{q} \end{array}$

$\begin{array}{l} \gamma' \\ \alpha \end{array} \begin{array}{cccccccc} \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} \\ 0 & 1 & 0 & 0 & 0 & 0 & 1 & 0 & 1 & 0 \end{array} \begin{array}{l} \text{u} \\ \text{q} \end{array}$





010X001010       $\begin{array}{l} \gamma' \\ \alpha \end{array} \begin{array}{cccccccc} \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} \\ 0 & 1 & 0 & X & & 0 & 0 & 1 & 0 & 1 & 0 \end{array} \begin{array}{l} \text{u} \\ \text{q} \end{array}$

10100X0X010       $\begin{array}{l} \gamma' \\ \alpha \end{array} \begin{array}{cccccccc} \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} & \text{u} \\ 1 & 0 & 1 & 0 & 0 & X & 0 & X & 0 & 1 & 0 \end{array} \begin{array}{l} \text{u} \\ \text{q} \end{array}$

**B) Medial Cadences on High Nee**

Accented on last syllable:

From Ke

0	$\overset{x}{\underset{q}{\bar{0}}} \overset{v'}{\bar{u}}$	
00	$\overset{x}{\underset{q}{\bar{0}}} \overset{v'}{\bar{0}} \overset{v'}{\bar{u}}$	
01	$\overset{x}{\underset{q}{\bar{0}}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	
	$\overset{x}{\underset{q}{\bar{0}}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	
	$\overset{x}{\underset{q}{\bar{0}}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	
0001	$\overset{x}{\underset{q}{\bar{0}}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	 1
10001	$\overset{x}{\underset{q}{\bar{1}}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	
	$\overset{x}{\underset{q}{\bar{1}}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{1}}$	 1
	$\overset{x}{\underset{q}{\bar{1}}} \overset{v'}{\bar{1}}$	 1
	$\overset{x}{\underset{q}{\bar{1}}} \overset{v'}{\bar{1}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	
100001	$\overset{x}{\underset{q}{\bar{1}}} \overset{v'}{\bar{1}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	
	$\overset{x}{\underset{q}{\bar{1}}} \overset{v'}{\bar{1}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{0}} \overset{v'}{\bar{1}} \overset{v'}{\bar{u}}$	 1

*Plagal First Mode - Heirmologic*

	$\begin{matrix} x \\ q \end{matrix}$		
010001	$\begin{matrix} x \\ q \end{matrix}$		
0010001	$\begin{matrix} x \\ q \end{matrix}$		
0100001	$\begin{matrix} x \\ q \end{matrix}$		
1001001	$\begin{matrix} x \\ q \end{matrix}$		
010000001	$\begin{matrix} x \\ q \end{matrix}$		

From Nee

01	$\begin{matrix} u' \\ n \end{matrix}$		
001	$\begin{matrix} u' \\ n \end{matrix}$		
	$\begin{matrix} u' \\ n \end{matrix}$		
0001	$\begin{matrix} u' \\ n \end{matrix}$		
	$\begin{matrix} u' \\ n \end{matrix}$		



*Plagal First Mode - Heirmologic*

00001	$\overset{\gamma'}{\text{u}} \overbrace{0000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	
10001	$\overset{\gamma'}{\text{u}} \overbrace{1000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	
000001	$\overset{\gamma'}{\text{u}} \overbrace{0000}^{\text{—}} \underset{\text{—}}{0} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	
010001	$\overset{\gamma'}{\text{u}} \overbrace{01000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	$\overset{\gamma'}{\text{u}}$ 1
010X01	$\overset{\gamma'}{\text{u}} \overbrace{010X0}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	$\text{—}$ 1
100001	$\overset{\gamma'}{\text{u}} \overbrace{10000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	$\text{—}$ 1
110001	$\overset{\gamma'}{\text{u}} \overbrace{11000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	
0100001	$\overset{\gamma'}{\text{u}} \overbrace{010000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	
	$\overset{\gamma'}{\text{u}} \overbrace{0100000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	
010000001	$\overset{\gamma'}{\text{u}} \overbrace{01000000}^{\text{—}} \underset{\text{—}}{1} \overset{\gamma'}{\text{u}}$	

Accented on second to last syllable:

From Ke

10	$\overset{\gamma'}{\text{u}} \overbrace{10}^{\text{—}} \overset{\gamma'}{\text{u}}$
	$\overset{\gamma'}{\text{u}} \overbrace{10}^{\text{—}} \overset{\gamma'}{\text{u}}$

*Plagal First Mode - Heirmologic*

	$\frac{x}{q}$ $\frac{y'}{n}$	
010	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
0010	$\frac{x}{q}$ $\frac{y'}{n}$	
00010	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
10010	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
	$\frac{x}{q}$ $\frac{y'}{n}$	
000010	$\frac{x}{q}$ $\frac{y'}{n}$	
00X010	$\frac{x}{q}$ $\frac{y'}{n}$	

*Plagal First Mode - Heirmologic*

010010		
100010		
0100010		
1000010		
100X010		

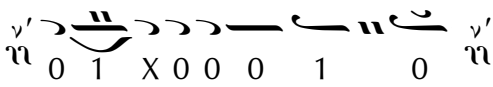


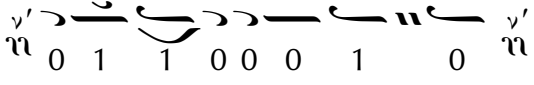
*Plagal First Mode - Heirmologic*

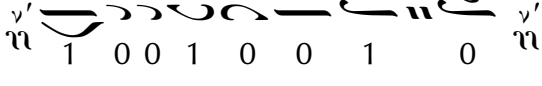
	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 0 \quad 1 \quad 0 \end{array}$	
0X010	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad X \quad 0 \quad 1 \quad 0 \end{array}$	
00010	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	$\begin{array}{c} \text{---} \text{---} \\ 1 \quad 0 \end{array}$
	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
10010	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 1 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 1 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
	$\begin{array}{c} \text{---} \text{---} \text{---} \text{---} \\ 1 \quad 0 \quad 1 \quad 0 \end{array}$	
	$\begin{array}{c} \text{---} \text{---} \\ 1 \quad 0 \end{array}$	
	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 1 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
000010	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	
010010	$\begin{array}{c} \overset{\gamma'}{\text{u}} \text{---} \text{---} \text{---} \text{---} \text{---} \overset{\gamma'}{\text{u}} \\ 0 \quad 1 \quad 0 \quad 0 \quad 1 \quad 0 \end{array}$	

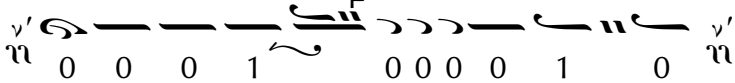


*Plagal First Mode - Heirmologic*

01X00010 

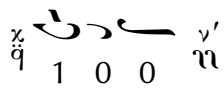
01100010 

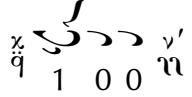
10010010 

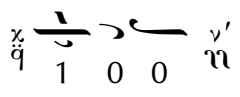
0001000010 

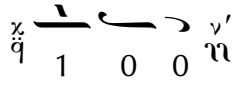
Accented on third to last syllable:

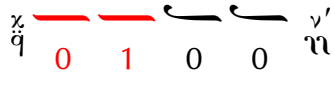
From Ke


100 

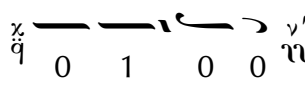


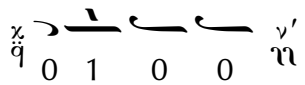


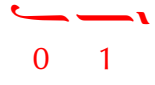


0100 













*Plagal First Mode - Heirmologic*

$\overset{x}{\underset{q}{\bar{1}}}$  —  $\overset{\bar{1}}{\cup}$   $\cup$   $\cup$  —  $\bar{1}$   $\cup$   $\cup$   $\overset{y'}{\bar{1}}$   
 0 1 0 0 0 0 1 0 0  $\bar{1}$

010010100

$\overset{x}{\underset{q}{\bar{1}}}$  —  $\overset{\bar{1}}{\cup}$   $\cup$   $\cup$   $\cup$  —  $\bar{1}$   $\cup$   $\cup$   $\overset{y'}{\bar{1}}$   
 0 1 0 0 1 0 1 0 0  $\bar{1}$

100100100

$\overset{x}{\underset{q}{\bar{1}}}$   $\cup$   $\cup$   $\overset{\bar{1}}{\cup}$   $\cup$   $\cup$  — —  $\cup$   $\cup$   $\overset{y'}{\bar{1}}$   
 1 0 0 1 0 0 1 0 0  $\bar{1}$

From Nee

100

$\overset{y'}{\bar{1}}$   $\cup$   $\cup$  —  $\overset{y'}{\bar{1}}$   
 1 0 0  $\bar{1}$

$\overset{y'}{\bar{1}}$   $\cup$   $\cup$  —  $\overset{y'}{\bar{1}}$   
 1 0 0  $\bar{1}$

$\bar{1}$   
0

$\overset{y'}{\bar{1}}$   $\cup$   $\cup$  —  $\overset{y'}{\bar{1}}$   
 1 0 0  $\bar{1}$

$\overset{y'}{\bar{1}}$   $\cup$   $\cup$  —  $\overset{y'}{\bar{1}}$   
 1 0 0  $\bar{1}$

$\overset{y'}{\bar{1}}$  —  $\cup$   $\cup$  —  $\overset{y'}{\bar{1}}$   
 1 0 0  $\bar{1}$

0100

$\overset{y'}{\bar{1}}$   $\cup$   $\bar{1}$   $\cup$  —  $\overset{y'}{\bar{1}}$   
 0 1 0 0  $\bar{1}$

$\overset{y'}{\bar{1}}$  —  $\bar{1}$   $\cup$   $\cup$  —  $\overset{y'}{\bar{1}}$   
 0 1 0 0  $\bar{1}$

$\bar{1}$   
1

$\bar{1}$   
1

010X

$\overset{y'}{\bar{1}}$  — —  $\bar{1}$  —  $\overset{y'}{\bar{1}}$   
 0 1 0 X  $\bar{1}$

$\bar{1}$   
0 1

*Plagal First Mode - Heirmologic*

00101  $\overset{\gamma'}{\alpha} \text{---} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 0 1 0 1

$\overset{\gamma'}{\alpha} \text{---} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 0 1 0 1

000100  $\overset{\gamma'}{\alpha} \text{---} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 0 0 1 0 0

$\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 0 0 1 0 0

010100  $\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \text{---} \overline{\text{---}} \overline{\text{---}} \overset{\gamma'}{\alpha}$   
 0 1 0 1 0 0

100100  $\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \text{---} \overline{\text{---}} \overline{\text{---}} \overset{\gamma'}{\alpha}$   
 1 0 0 1 0 0

$\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 1 0 0 1 0 0

$\overline{\text{---}} \overline{\text{---}}$   
 1 0

0000100  $\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 0 0 0 1 0 0

0100100  $\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 1 0 0 1 0 0

$\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 1 0 0 1 0 0

$\overline{\text{---}} \overline{\text{---}}$   
 1 0

$\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 1 0 0 1 0 0

0100101  $\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 0 1 0 0 1 0 1

1000100  $\overset{\gamma'}{\alpha} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \overline{\text{---}} \text{---} \overset{\gamma'}{\alpha}$   
 1 0 0 0 1 0 0

*Plagal First Mode - Heirmologic*

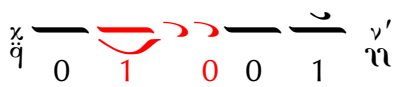
00010100	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$
01000100	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$
01100100	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$
000100100	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$

Accented on fourth to last syllable:

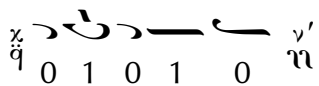
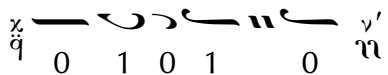
From Ke

1001	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	
1010	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	
01001	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\chi}{\eta}$ $\overset{\gamma'}{\alpha}$	

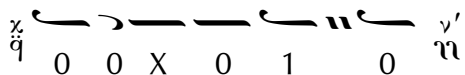
*Plagal First Mode - Heirmologic*



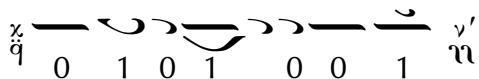
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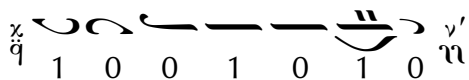
00X010



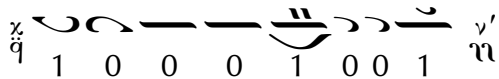
0101001



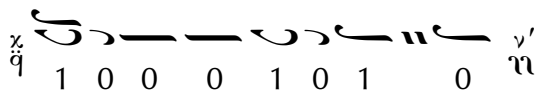
1001010



10001001

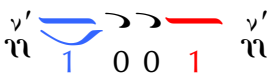
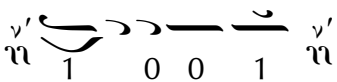


10001010



From Nee

1001



*Plagal First Mode - Heirmologic*

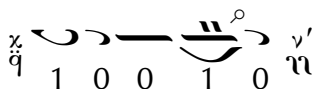
1010	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
01001	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
01010	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
0X010	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
10X010	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
000X010	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
010X010	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	
01001010	$\overset{\gamma'}{\alpha}$ $\overset{\gamma'}{\alpha}$	

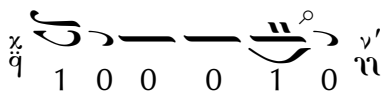
*Plagal First Mode - Heirmologic*



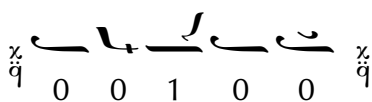
**C) Formula with Fthoras**

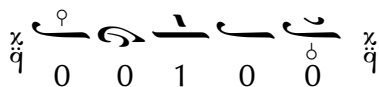
Accented on second to last syllable:

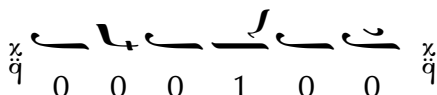
10010 

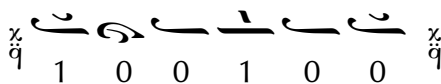
100010 

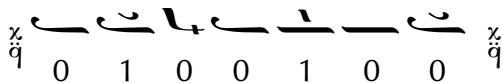
Accented on third to last syllable:

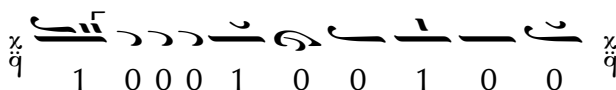
00100 

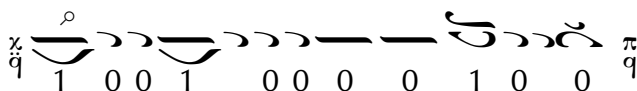


000100 

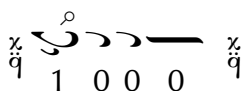
100100 

0100100 

10001100100 

10010000100 

Accented on fourth to last syllable:

1000 

*Plagal First Mode - Heirmologic*

01001001





*Plagal First Mode - Heirmologic*

D) Final Cadences

Accented on last syllable:

From Ke

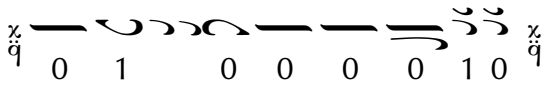
010001	
100001	
1010001	
10X0001	
10100001	
110X0001	

Accented on second to last syllable:

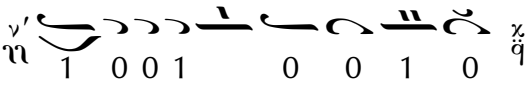
From Ke

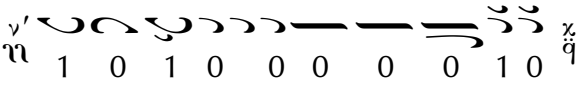
00010		
10010		
010010		
100010		
1000010		

*Plagal First Mode - Heirmologic*

01000010 

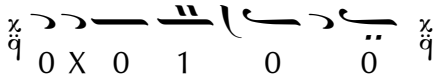
From Nee

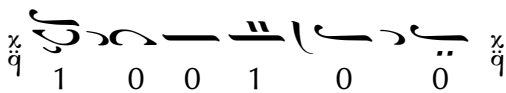
10010010 

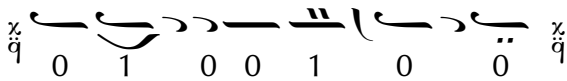
1010000010 

Accented on third to last syllable:

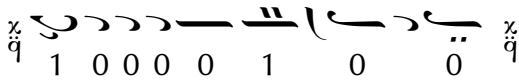
From Ke

0X0100 

100100 

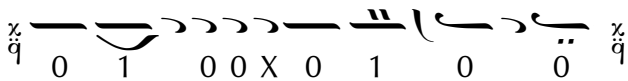
0100100 

10X0100 

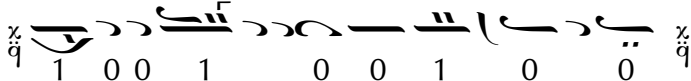
10000100 

10100100 



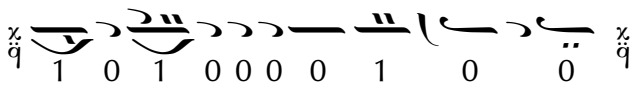
0100X0100 

010100100 

100100100 

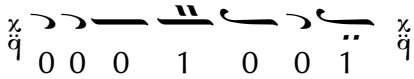
*Plagal First Mode - Heirmologic*

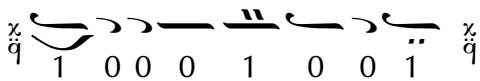
10X0X0100 

1010000100 

Accented on fourth to last syllable:

From Ke

0001001 

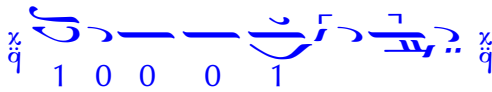
10001001 

E) Cadences for Theotokia\*


Accented on last syllable:

From Ke

10001 

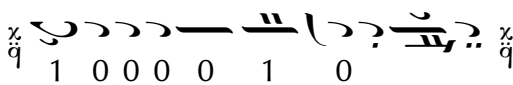
10001 

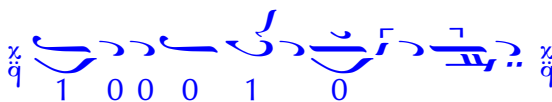
From Nee

010001 

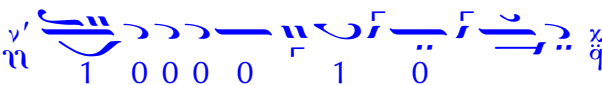
Accented on second to last syllable:

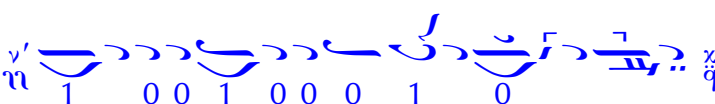
From Ke

1000010 

100010 

From Nee

1000010 

100100010 

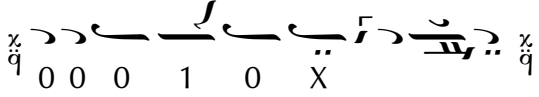
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\* The formulae in blue in this section are from the Athonite oral tradition, as represented in the book *Παρακλητικῆς, Μουσικὸν Ἐγκόλπιον, Πλάγιοι Ἦχοι*, Ἱεροθέου Ἱερομονάχου, ἐκδόσεις Ἱ.Μ. Φιλοθέου, Ἁγίον Ὄρος, 2004.

*Plagal First Mode - Heirmologic*


Accented on third to last syllable:

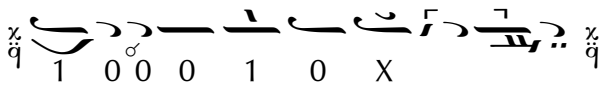
From Ke

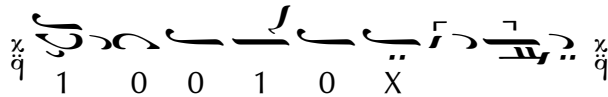
00010X 

100100 

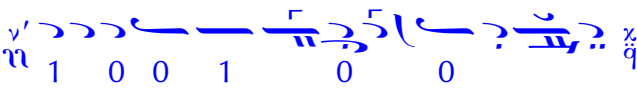


1000100 


100010X 



From Nee

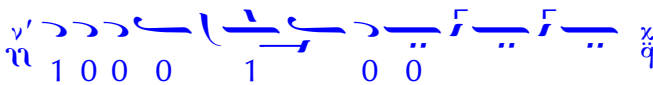
100100 



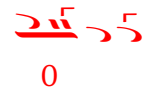
0100100 



1000100







*Plagal First Mode - Heirmologic*

Accented on fourth to last syllable:

1001

