

A Primer of Kievan Square-note (Quadratic or Synodal) Musical Notation

by Nikita Simmons

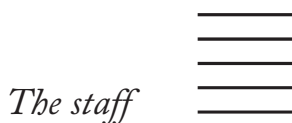
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For those who are having difficulties reading the Kievan Square-note notation, I will present here some basic concepts which should be of assistance in learning how to interpret the notation.

First of all, there are two areas of difficulty: 1) recognizing the shapes of the notes and correlating them to modern notational values; and 2) determining the scale position, pitch values and intervals of the notes.

1) The Shapes of the Notes and Symbols

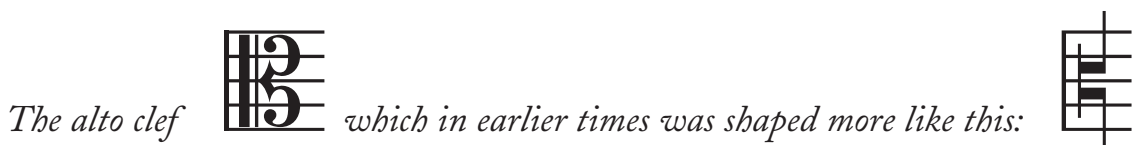
a) The Symbols. This can be an intimidating part of the process for those who are trying to learn this notation. Unfortunately, some of the note shapes look almost the same, so this leads to some confusion at first. Let's start with the five-lined and build on this concept.



Now we have to add a symbol called a “clef” to indicate where “DO” (the starting note of a scale) rests. In modern music most of the time we use the “treble” or “G” clef and the “bass” or “F” clef.



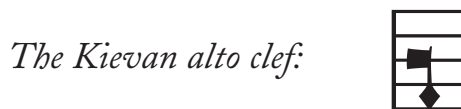
But in earlier styles of music (and for some special musical instruments like the viola) we often use the “alto” or “C” clef.



With the treble or “G” clef (which is intentionally shaped somewhat like a “G”), the lower portion loops around the second line from the bottom and indicates that this is the position for the note “G”. Likewise for the “bass” or “F” clef (which is shaped like an old-fashion letter “F”), the two dots surround the 4th line and indicate that this is where the note “F” is located. For the alto or “C” clef, the symbol draws your attention to the middle line of the staff, and this is where the note “C” is located, which also happens to be the position of “DO”.



The Kievan Square-note notation also uses the “alto” or “C” clef, but it has a much simpler shape, which beginners can get confused with a half note. Note that it looks like a key, and this is no coincidence.



Now that we have covered clefs, we can move on to what comes next.

In the standard Kievan notation that was adopted by the official Synodal Printing Press of the Russian Church to print volumes of Znamenny Chant (and for later chant systems), they settled upon only one position for “DO”: the middle line of the staff, which does not require any “key signature”. (Other regional varieties of Kievan chant sometimes move the position of “DO” around, requiring a couple key signatures, but this is not encountered in the official chant books and won’t be discussed here.)

The next thing that follows in modern music is a “time signature”, but because traditional liturgical chants are based on the rhythms of the texts, we do not encounter time signatures in traditional notation. It should be noted, however, that the values of the Kievan notes are double their equivalents in the modern system, so we should sing all the chants as if they were given a time signature of “cut time” (♩). Although this may seem a bit odd to the student, the importance of keeping this system is that it avoids confusion in the long run.

Phrases of text may be separated by a vertical line on the staff:



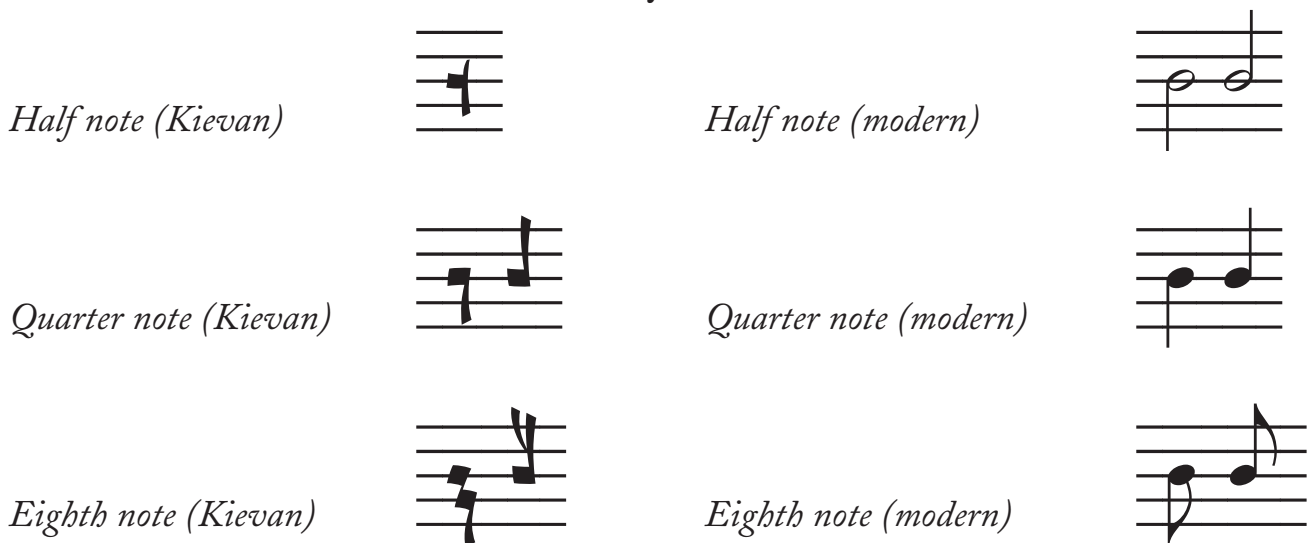
Finally, we conclude each chant with a distinctive symbol following the staff, which is equivalent to a double bar line in modern notation:



b) The Notes.

The basic note value is the “half note”, which in the cut-time system is equivalent to a single beat. This beat is called the “takt” from the Latin word “tactus” (meaning “touch”, a much gentler word than “beat”), and is roughly equivalent to a walking pace or swinging your arms back and forth.

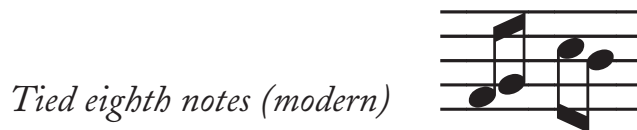
To divide this beat in half, try swinging (or “beating”) your forearm down and up quickly, like one is directing music with one’s hand, and count “one-and” with each beat. You will find that with each down and up motion your hand will be at two places during each beat; these are equivalent to “quarter notes”. Dividing each quarter note in half produces “eighth notes”, which are not used extensively, but do occur from time to time.



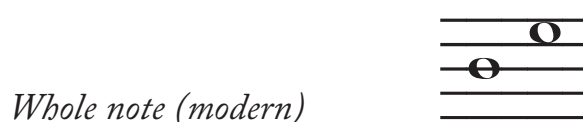
Notice that some notes have downward and upward forms. This is a written convention used to avoid having stems go too far below the staff and look unreadable.

Also notice that the half and quarter notes look almost the same, but the half note has a little tail sticking up; one must learn to recognize this subtle difference in order to interpret the chants with proper note values.

In addition, pairs or groups of eighth notes are often “tied” together like this:



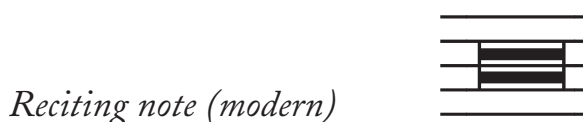
When we double the basic half-note beat, we get a “whole note” (which has two beats in the cut-time system). This note is a bit troublesome for the beginner, but if you remember that the two diamonds surround the actual pitch, this will help.



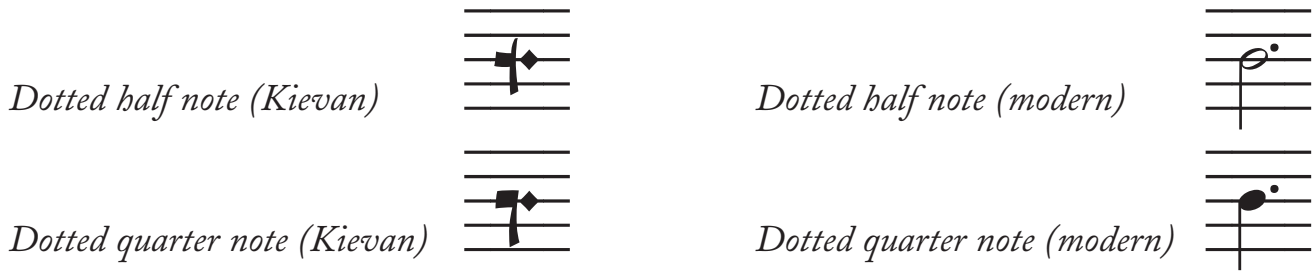
Kievan Square-note notation has a special form of the whole note when it comes at the end of a piece of music, and this note may be held if one wishes to. (In modern notation one could place a “fermata” or “hold sign” over the final note, but this is not really necessary.) It also surrounds the place on the staff where the pitch is located:



Kievan notation has a special note to indicate “recitative” or a length of text recited on repeated quarter notes. Since there is no equivalent for this symbol in modern notation, we have borrowed it for modern use. Like the whole note, it surrounds the place on the staff where the pitch is located:



Finally, there are the dotted notes, where some note values are lengthened by half their value. This is used to produce “syncopated” or skipping rhythms.



2) The Scale

Learning the notes of the scale and their modern equivalents can also be an intimidating process for beginners.

The first thing that must be kept in mind is that the medieval Znamenny scale is **NOT** a scale in the classical sense, which is based on the interval of an octave.

The Znamenny scale is properly called by the medieval term “*gamut*”, which indicates the complete range of 12 pitches used by Znamenny Chant. The *gamut* is made up of four smaller units called “tonal ranges”; each range (except the top one) has four pitches (or “*tetrachords*”) and is structured like the modern major scale DO-RE-MI-FA. FA in turn becomes DO (called “UT” in medieval times), so we could chart out the *gamut* in this manner (with the traditional names of the tonal ranges):

DO RE MI	DO RE MI FA	DO RE MI FA	DO RE MI FA
<i>Dark Range</i>	<i>Simple Range</i>	<i>Bright Range</i>	<i>Thrice-bright Range</i>

There is an interval of a *whole step* between DO and RE and between RE and MI, but an interval of a *half step* between MI and FA. Since FA in essence become DO again, we continue up the *gamut* with each tetrachord

having the same interval structure. These stacked tetrachords make it necessary to introduce a “flat” in the top tonal range in order to maintain the DO-RE-MI-FA relationship of intervals. (In this case, eight notes below this pitch is not a perfect octave.) To demonstrate the positions of the notes using the Kievan notation, with the intervals between the notes:

DO - RE - MI - DO - RE - MI - DO - RE - MI - DO - RE - MI

1 1 1/2 1 1 1/2 1 1 1/2 1 1

Divided into tetrachords:

Another way to look at the *gamut* is to think of the 12 pitches as being divided into two “*hexachords*” (this is another medieval music theory concept), or sequences of six pitches of the major scale:

DO RE MI FA SOL LA — DO RE MI FA SOL LA

Coincidentally, we can also take the six middle notes of the gamut and consider these as a hexachord with the same interval structure:

These six pitches (traditionally called UT-RE-MI-FA-SOL-LA) form the central range of Znamenny Chant, and we make occasional use of the lower and upper ranges.

But this still does not unlock the secret of easily recognizing the pitches and figuring out the intervals. Fortunately, this can be overcome by tricking the brain to see these pitches in terms of the modern staff. First of all, let's convert the square notes into modern round equivalents:

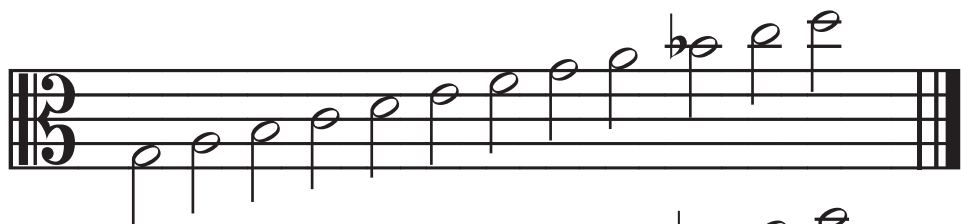


Since the middle line of the staff is where “DO” is, all we have to do is find a treble clef scale which uses the same note positions. In this case it is the key of B-flat, which has two flats in the key signature. We still need to use the extra flat on the upper “A” pitch (the same note as the original *gamut*) to maintain the same intervals, but this helps us by maintaining continuity with the older square-note system. (There are no sharps used in this system, nor is there any need for natural signs.) This method of substitution is extremely convenient because it does not require shifting the positions of the notes or altering the position of the flatted note. Furthermore, if one is able to simply envision this substitution, it is not even necessary to transcribe the notation, but it is now possible to chant directly from original texts (unless one is going to translate the text). To demonstrate:

original notation:



converted to modern round notes:



then converted to the Treble clef:



That's it! Now for some samples:

Γλῶσση , ᾠ .



Ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α.

Tone 1: Alleluia



A-lle-lu-i-a, a-lle-lu-i-a, a-lle-lu-i-a.



A-lle-lu-i-a, a-lle-lu-i-a, a-lle-lu-i-a.

Γλῶσση , β̣ .



Ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α.

Tone 2: Alleluia



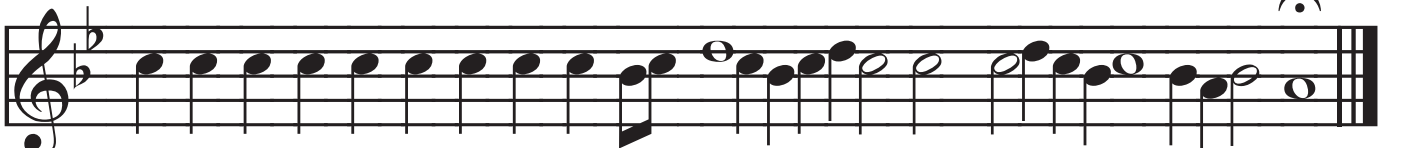
A-lle-lu-i-a, a-lle-lu-i-a, a-lle-lu-i-a.

Γλῶσση , γ̣ .



Ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α.

Tone 3: Alleluia



A-lle-lu-i-a, a-lle-lu-i-a, a-lle-lu-i-a.

Γλῶσση, ᾠ.



Ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α.

Tone 4: Alleluia



A-lle-lu-i-a, a-lle-lu-i-a, a-lle-lu-i-a.

Γλῶσση, ᾠ.



Ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α.

Tone 5: Alleluia



A-lle-lu-i-a, a-lle-lu-i-a, a-lle-lu-i-a.

Γλῶσση, ᾠ.



Ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α, ἄ-λλη-λό-ϊ-α.

Tone 6: Alleluia



A-lle-lu-i-a, a-lle-lu-i-a, a-lle-lu-i-a.

