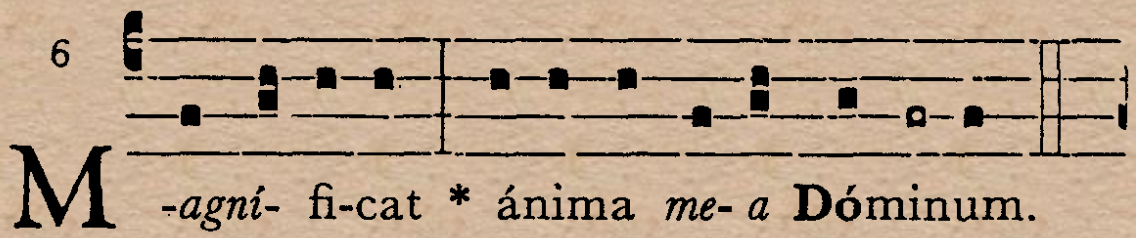
SINGING GREGORIAN CHANT

Pitch and Mode



A basic tutorial.

Singing Gregorian Chant



Gregorian chant is prayer sung in unison. To make chant, we have to control three things: pitch, rhythm, and expression. To help us control pitch, it would be useful to have a way of representing pitches and the moments we sing them (pitch events) graphically. To that end: let's say the line above represents one pitch. If we want to sing “kyrie eleison” on that pitch, we can indicate the syllables we want to sing by placing marks on the line above them.

Singing Gregorian Chant



To indicate any more elaborate a melody, we need a way of indicating a variety of pitches, and in a precise way. We can begin to do that by using both lines and the spaces above and below them. To indicate a pitch *below* the pitch indicated by the line, we simply draw a mark *below the line*. That still is rather limiting, isn't it? What if we want our melody to drop below that lower pitch? Or higher than the space above the line?

Singing Gregorian Chant



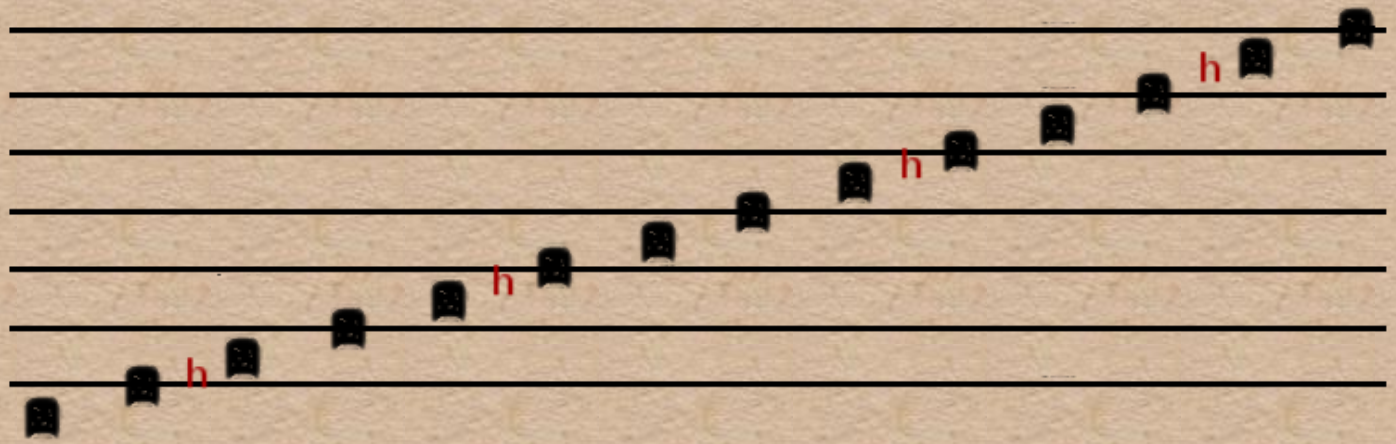
The solution of course is to add more lines. A collection of lines is called a *staff*. With a staff, we can indicate a greater variety of pitches. Unfortunately, there is still a problem. The above pitches could be sung several different ways, depending on what we think their *exact* relative differences are. Right now, the staff and its marks do not tell us.

Singing Gregorian Chant



Moving the marks onto different lines won't solve the problem either, because we would just be exchanging one set of unspecified differences for another. So what should we do, specify the exact differences *between* every single mark? That would be tedious. We need a way that is more efficient. To find it, let's step back and look at the full *range* of pitches used in Gregorian chant.

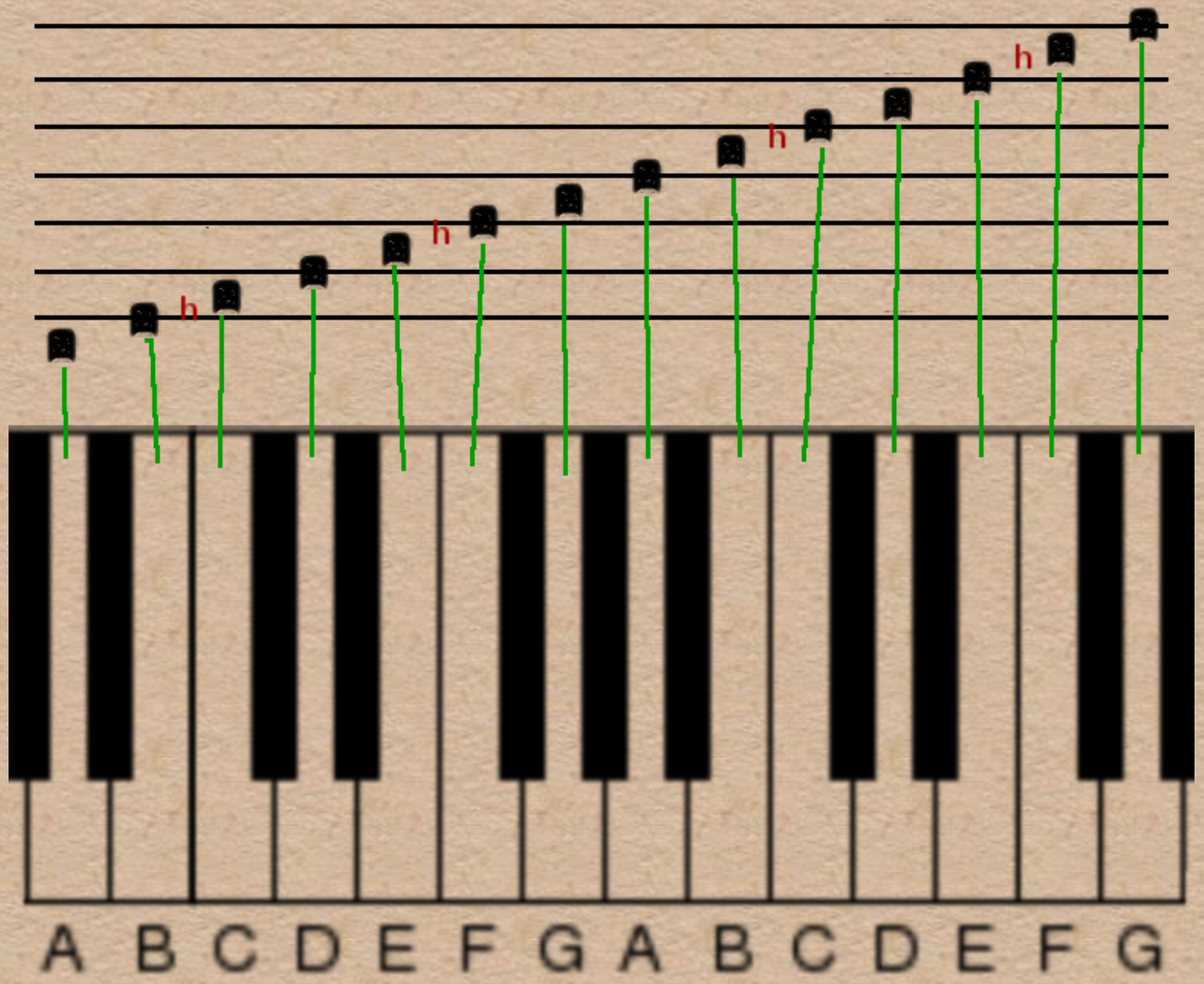
Singing Gregorian Chant



How this set is generated is an interesting question, but for now let's specify that the difference in sound between each pitch will be constant, and let's call that difference a *whole step*. However, let's admit a few exceptions where the sound difference will be less than a whole step, and let's call those differences *half steps* (indicated above in red).

Singing Gregorian Chant

This range of pitches and its particular placement of whole and half steps corresponds exactly to the arrangement of white notes on a piano, as shown.



Singing Gregorian Chant: Solfeggio



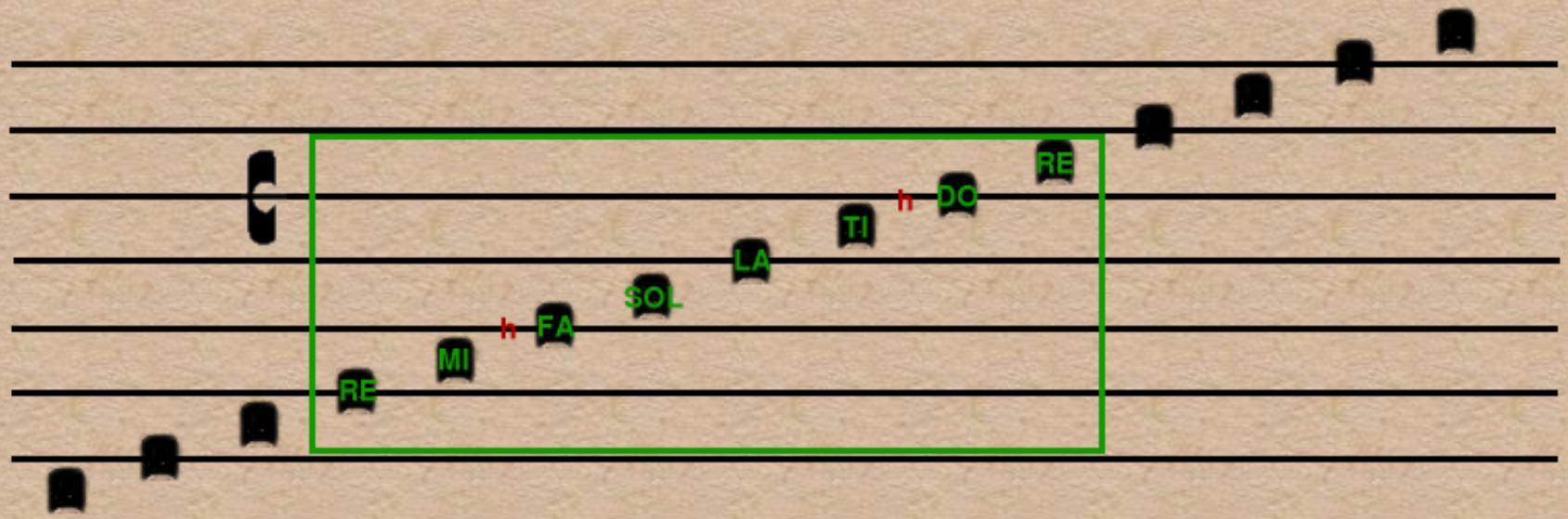
Instead of letters, let's give these pitches names. The names in the above graphic is called “solfeggio” and has been in use as a pitch-naming system for many centuries. Notice that half steps only occur in two places: between MI and FA, and between TI and DO.

Singing Gregorian Chant: Solfeggio



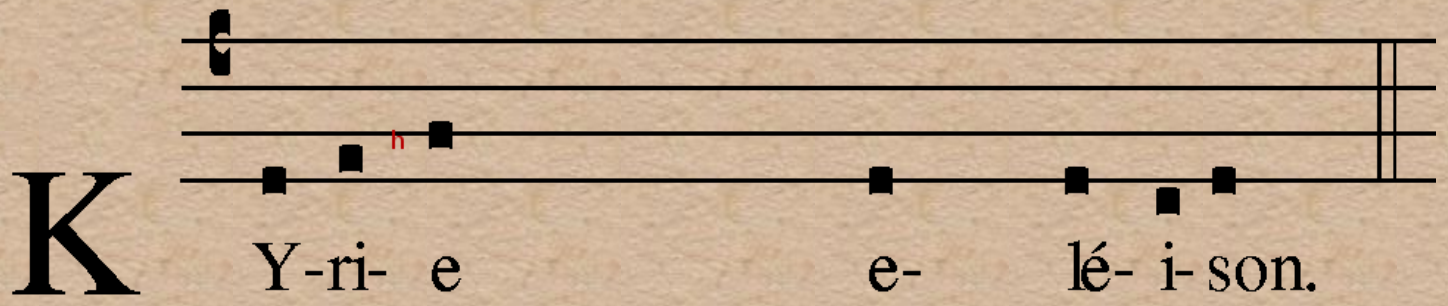
If a given melody only ranges a small distance from low to high, it would be ungainly to draw all these lines. It would also be tedious to write solfeggio names on every single mark, or indicate where whole and half steps occur in every instance. What can we do to indicate what we need without so much trouble?

Singing Gregorian Chant: the DO clef



Answer: select only the four lines we need to encompass the range of pitches our melody requires, and (this is the stroke of genius) indicate which of the lines represents DO. By doing this, all our problems are solved! *Marking DO effectively implies what all the other pitches are, and exactly where the whole and half steps occur.* This mark (it looks like a C) is called the DO clef.

Singing Gregorian Chant



Returning to our original melody with DO indicated on the top line, we can now sing it confidently. We know that it starts on RE, that the distance between the second and third pitch is a half step, and that the distance between the penultimate and last pitch is a whole step. Sing it. It sounds rather serious, doesn't it? But what if it isn't what we want? What if the distance between the second and third pitch is supposed to be a *whole* step?

Singing Gregorian Chant



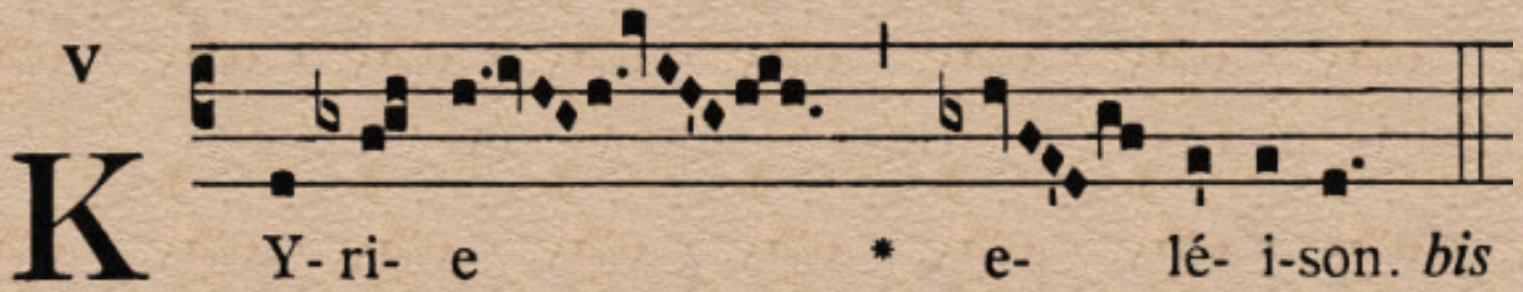
Simple: move the clef down a line. That makes the bottom line FA, and if you refer back to the illustration of all the pitches, you'll notice that the distance between the second and third pitch from FA is a whole step. In addition, you'll also see that the distance between the penultimate and last pitch above is a half step. Our melody now sounds rather different, rather festive, perhaps. The location of half steps evidently creates different effects.

Singing Gregorian Chant



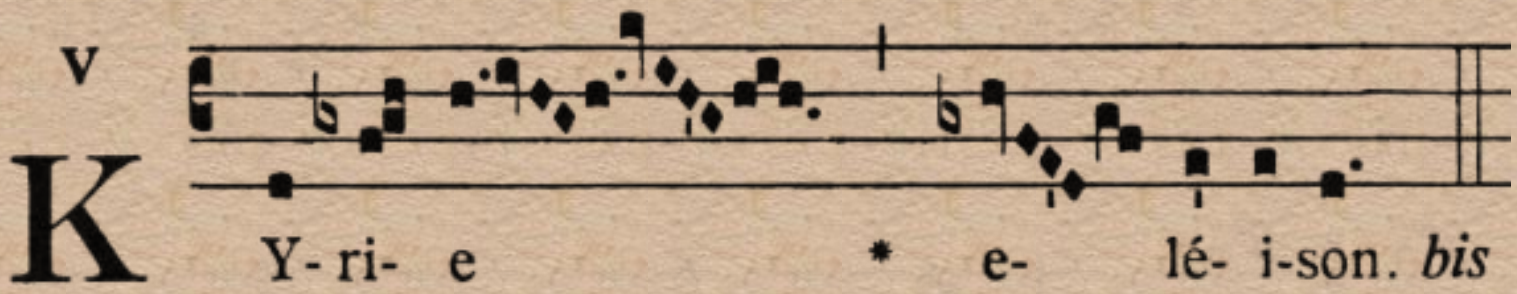
We could move the DO clef down to the third line as well, preserving almost the same arrangement of whole and half steps, but indicating DO on the third line is not as common as a clef to indicate FA, shown above. Why use it? Simply a matter of visual convenience: chants using the FA clef often range around FA, both above and below it.

Singing Gregorian Chant: Neumes



Now let's return to the business of how Gregorian chant illustrates pitch events on these lines and spaces. In chant, pitch events are indicated with marks called *neumes*. More than one neume associated with a given syllable is called a *melisma*. As you can see, neumes can have different shapes. These shapes have names. Let's learn the names of the basic neumes, those which affect the order in which we sing them, and those which affect how we express or articulate their pitches.

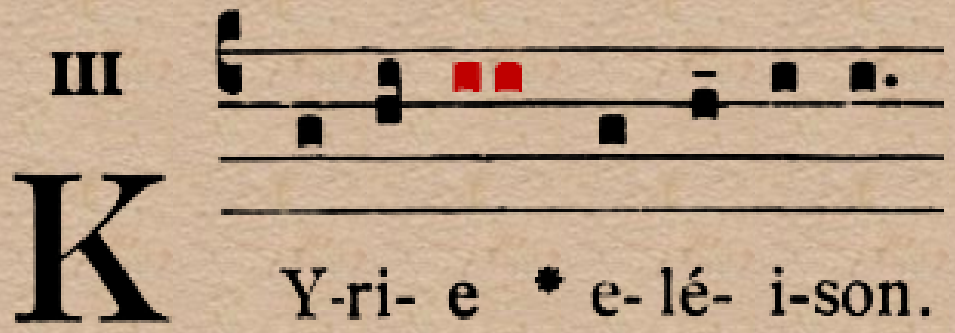
Singing Gregorian Chant: Punctum and Podatus



The basic square or diamond shape is called a *punctum*. Note that some punctums are connected to each other by a vertical line. For example, the third neume above (called a *podatus*) combines two pitches, one on top of the other. The bottom pitch is always sung first.

The dots adjacent to some neumes above are rhythmic and expressive marks, not pitches. Ditto for the short vertical lines underneath some neumes.

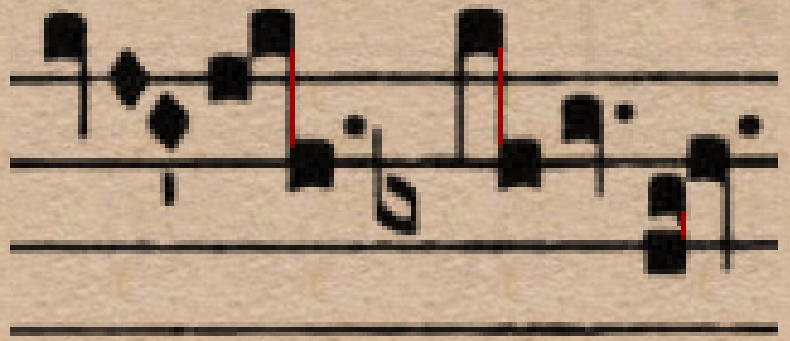
Singing Gregorian Chant: Bistropha, etc.



Consecutive punctums on the same pitch, placed close together, are called a *bistropha* (two punctums) or *tristropha* (three punctums). The number of punctums indicates duration: two indicate twice the duration of one, three indicate thrice the duration, etc. Some scholars recommend distinguishing each pulse with a little push of your diaphragm, something called *repercussion*. Others recommend a slight crescendo.

Singing Gregorian Chant: Torculus and Clivis

Notice there are two punctums to the right which are also connected by vertical lines (in red), but the bottom punctums are placed to the right of the top punctums. Are these podatuses? No, the first is a *torculus*, the second a *clivis*. There's no singing problem: you follow the usual principle of singing pitches from left to right. Showing their connectivity with a line suggests their connection to a group of neumes, called a *phrase*.

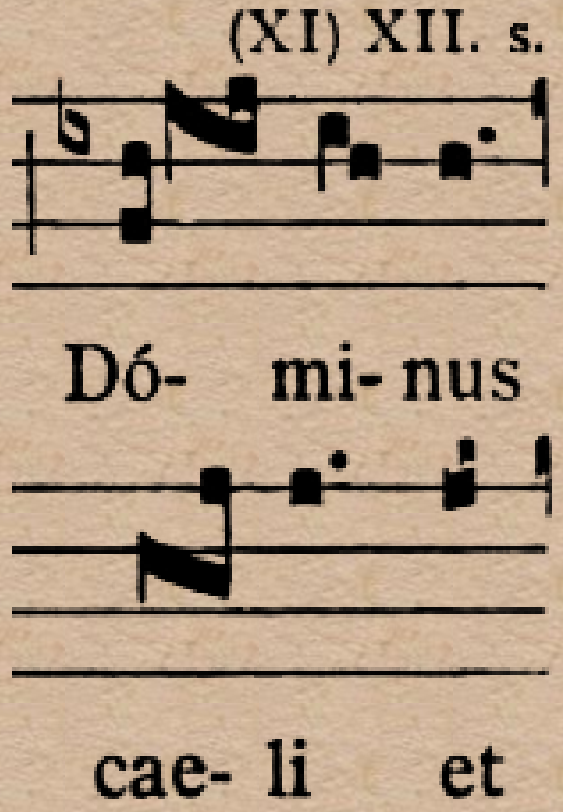


Careful phrasing is *very* important to making chant sound like an integrated piece of music.

Singing Gregorian Chant: the Porrectus

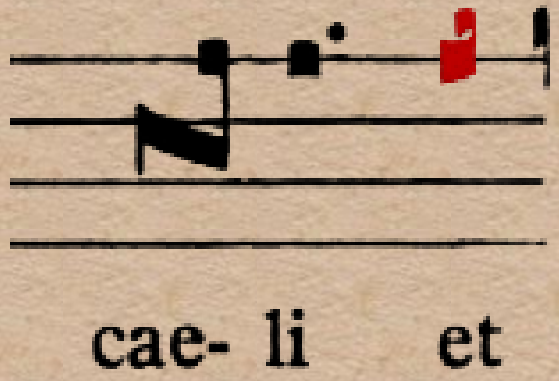
A neume which looks like a tipped-over Z is called a *porrectus*. It denotes three pitches: you sing the top left pitch first, then the bottom right, then the top right.

The porrectus in the bottom staff spans a greater distance between its second and third pitch, but it is sung in the same order: left, down, up.



Singing Gregorian Chant: Liquescents

The neume in red is like a podatus in that it is composed of two pitches, but notice that the top pitch is smaller in size. This is called a *liquescent* neume. The smaller pitch is always sung *after* the bigger pitch, even if it appears below it. It's also sung more softly. Sometimes the liquescent pitch indicates that you should sing the smaller pitch on a consonant sound, such as the *n* sound in hosa*nn*a.



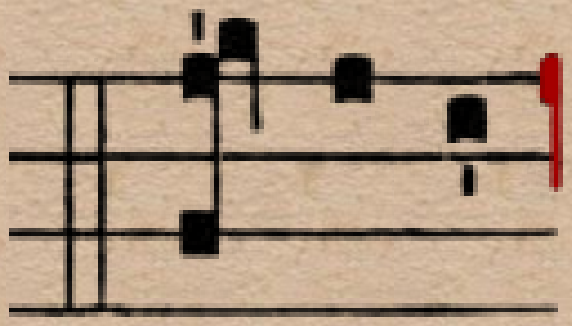
Singing Gregorian Chant: the Quilisma

The squiggly line in red is called a *quilisma* and also denotes a sung pitch. In this example, the quilisma connects the punctum to its left to the porrectus to its right.



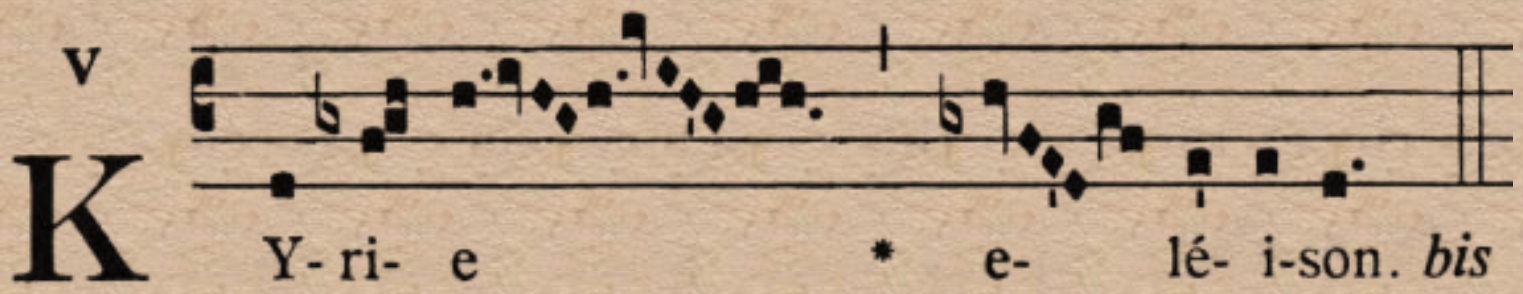
Chant scholars have different interpretations as to how the quilisma should be sung. One common view is that it should be treated as having less the duration of the preceding pitch, and that one moves through it quickly and lightly to the next pitch.

Singing Gregorian Chant: the Custos



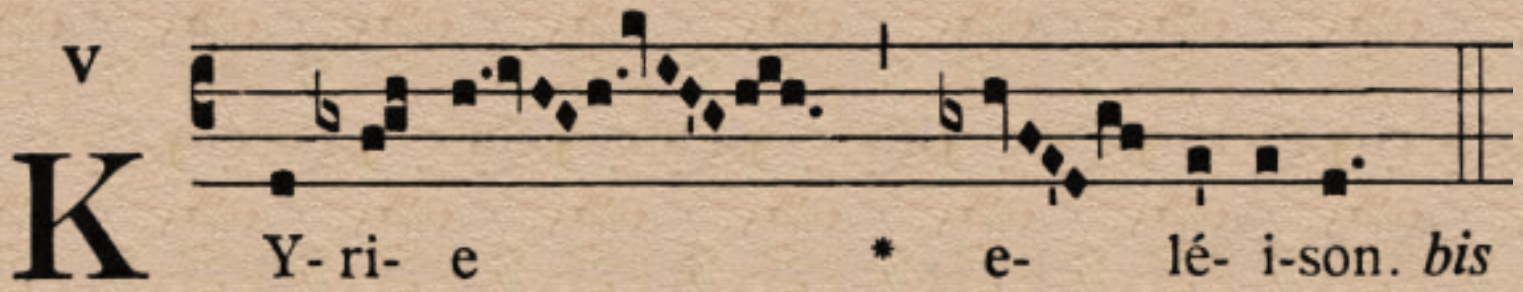
What looks like half of a note at the very end of a staff (above, in red) is called a *custos*. It is not sung. Instead, its purpose is to indicate the first pitch of the following staff. It is a "cue" note – a courtesy to singers.

Singing Gregorian Chant: the flat sign



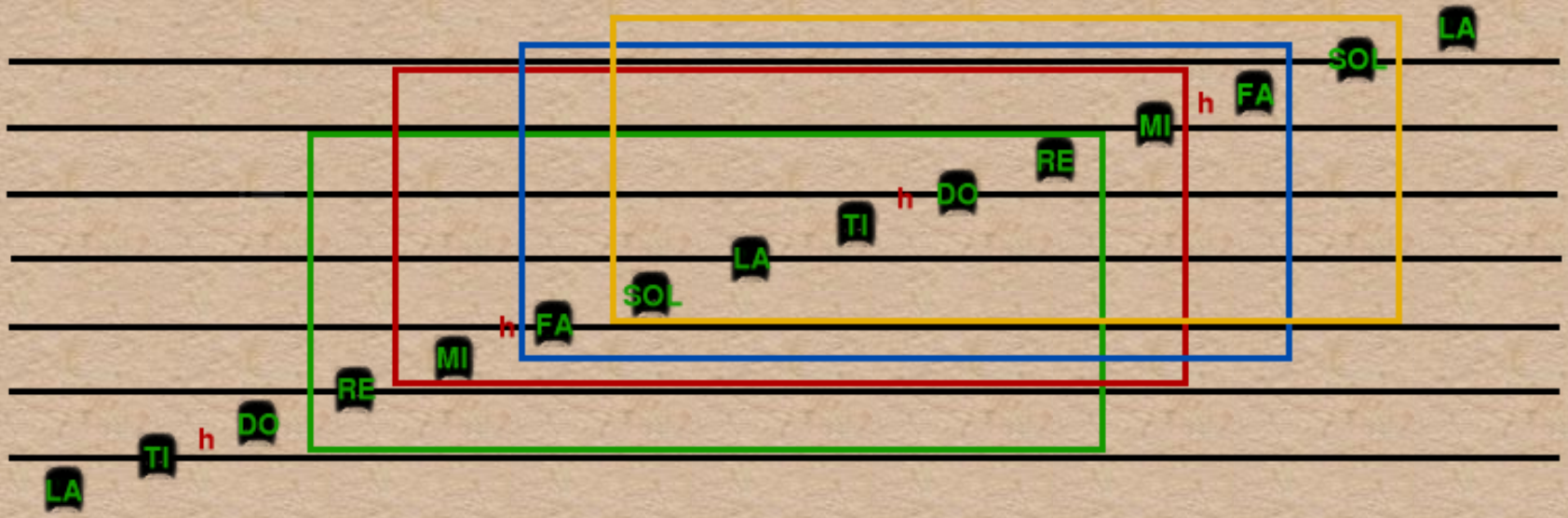
The hollow, b-shaped mark above (the second mark after the clef) is not itself a pitch; instead, it lowers the adjacent pitch in that space by a half step. This is called *flattening* that pitch, and the mark is accordingly called a *flat* sign. It applies to every pitch in that space, in that phrase. (Notice that the flat sign returns later, in "eleison.")

Singing Gregorian Chant



You can now read this Kyrie, which is an excerpt from Mass VIII (De Angelis) in the *Kyriale Romanum.* Since DO is the second line from the top, the chant begins on FA. Take care to flatten TI by a half step. We call the flattened pitch TE. Also, a point about rhythm: the dots above indicate that the pitches to their left are to be lengthened a bit. This confers a phrase-like feeling to parts of the chant and invites us to perceive melodic structure and rest.

Singing Gregorian Chant: Modes



In the Gregorian tradition, pitches are organized into four groups based on four pitches called *finals*: they are RE, MI, FA and SOL. Notice that in each case the placement of half steps differs. Such differences give each group of pitches a unique set of expressive advantages.

Singing Gregorian Chant: Mode I



This first mode is based on RE. Notice that its third pitch is a half step above the second pitch. Note also that TI can often become TE (flattened), and that between the seventh pitch (DO) and the final (RE) there is a whole step. This arrangement of whole and half steps gives the mode its characteristically serious sound.

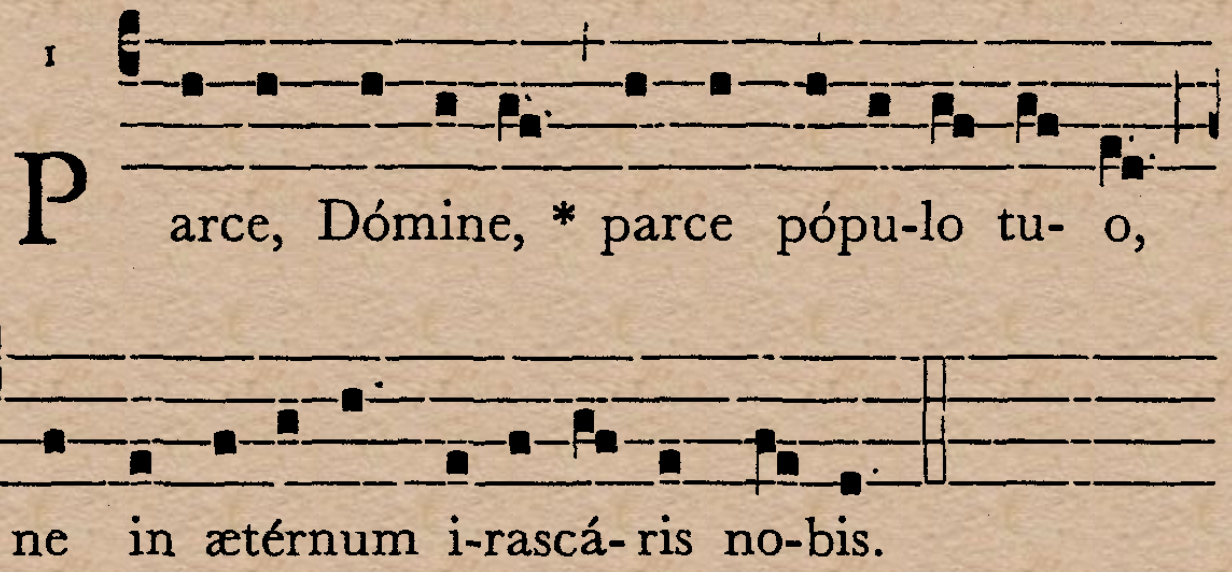
Be aware that chants in this and other modes may form themselves around a *reciting tone* five steps above the final. (Modes III and IV are exceptions.)

Singing Gregorian Chant: Mode I, descending



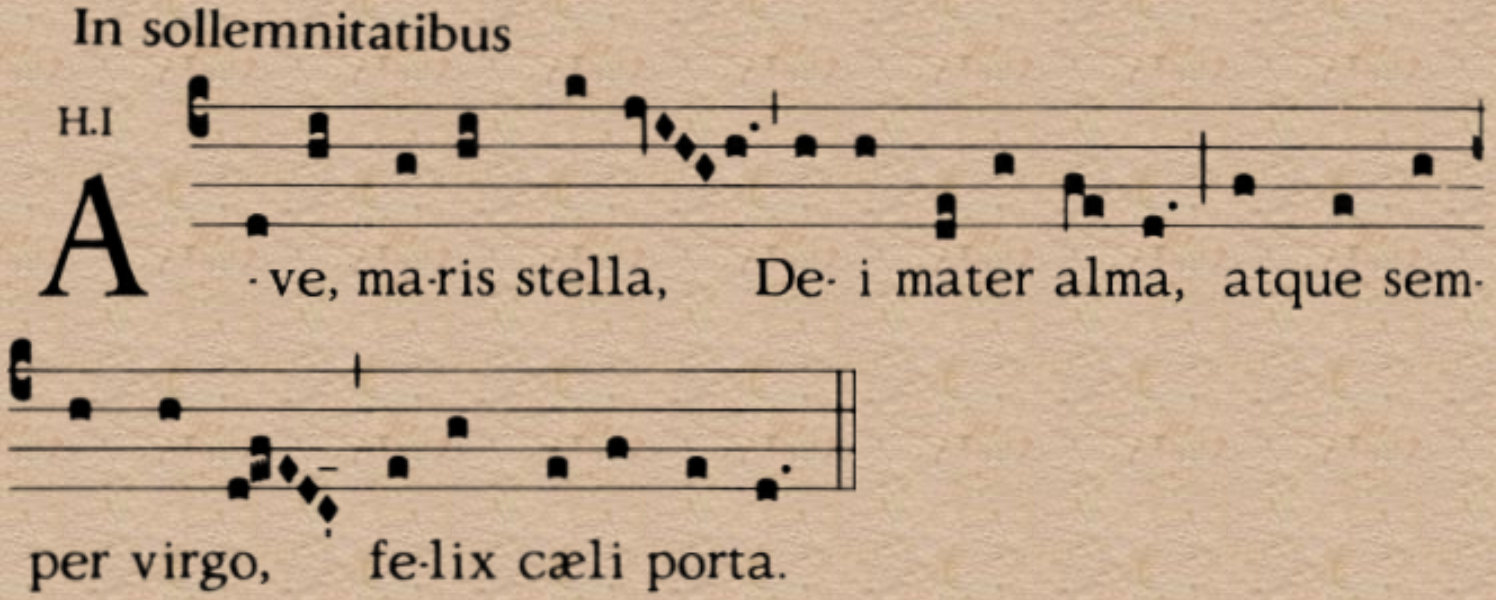
Mode I viewed in descending order. It is useful to get into the habit of singing modes in descending order as much as in ascending order because the tendency of our voices is to go flat as we sing them. It is very desirable to resist this tendency and develop good pitch accuracy. One way to do this is to check your accuracy on the third and seventh pitches: these tend to fall flat.

Singing Gregorian Chant: Mode I, example



"Spare thy people, O LORD, be not angry with us forever" (Joel 2:17). Part of a litany sung during Lent. Note the heavy use of FA (the minor-sounding third) and LA (the reciting tone).

Singing Gregorian Chant: Mode I, example



A hymn from the ninth century. "Hail, star of the sea, mother of God, ever virgin, happy portal of heaven." Notice that the highest note of the chant illustrates the word *star*. This is musical illumination of the text, something at which chant excels.

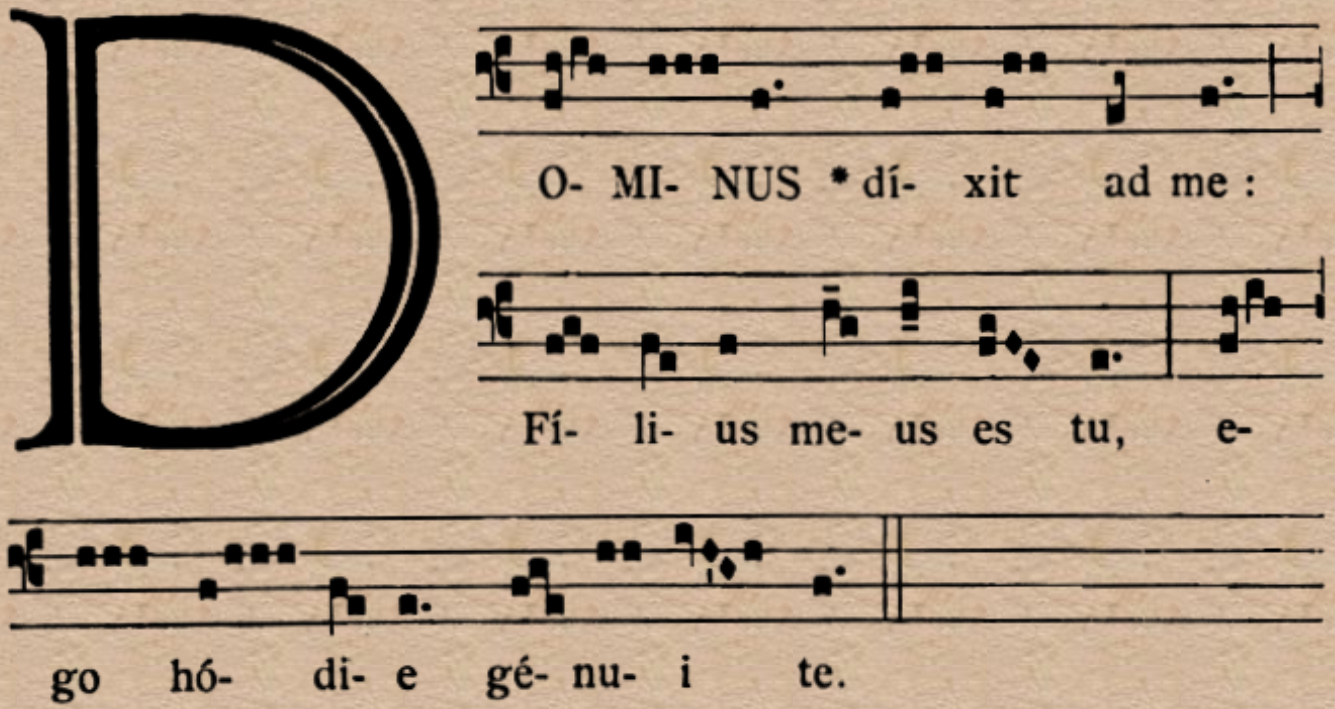
Singing Gregorian Chant: Mode II (plagal)



Mode II has the same pitches as Mode I, but visually its melodies tend to range both above and below RE. This is called the mode's "plagal" range. Every mode has a plagal range.

Notice the change of clef.

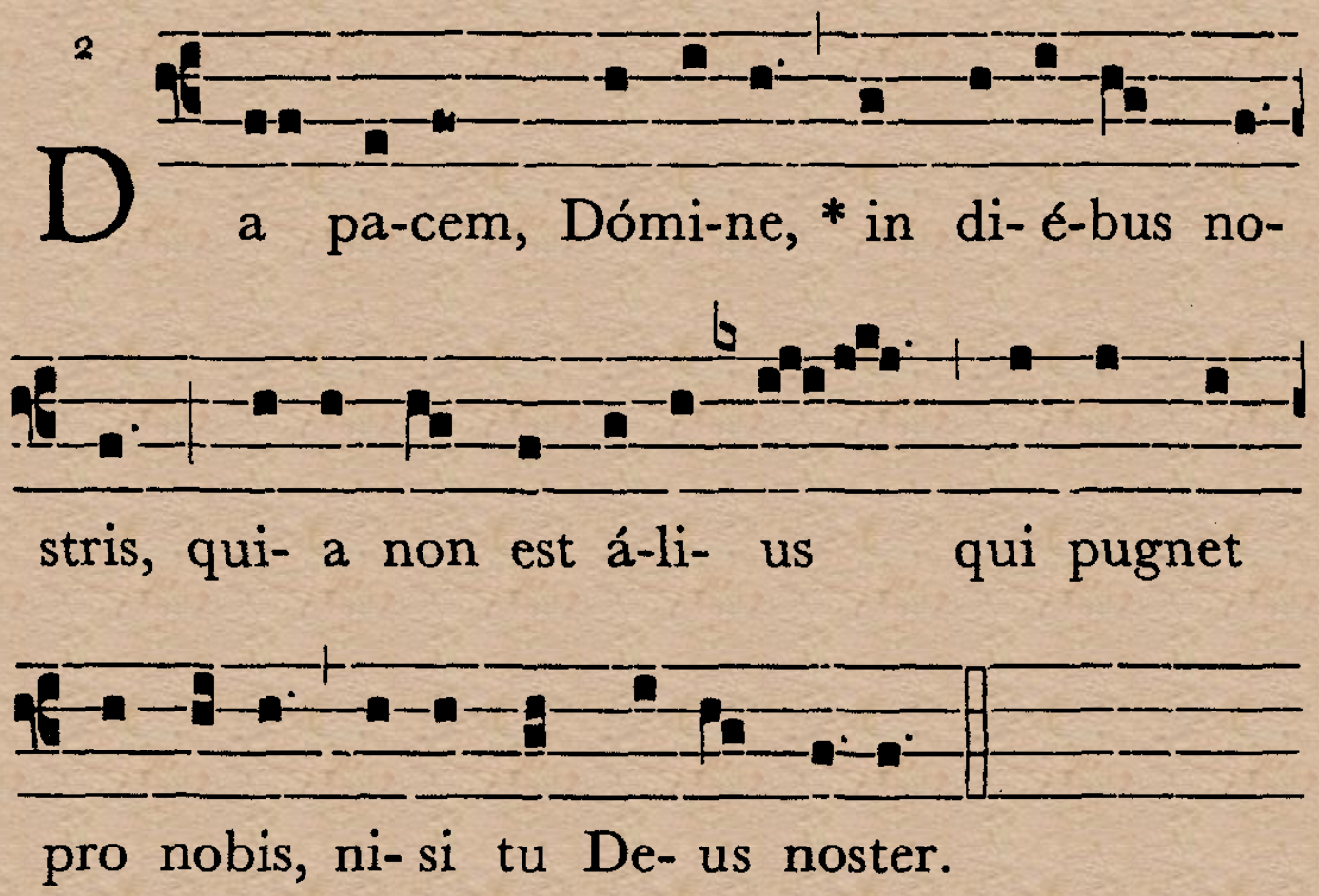
Singing Gregorian Chant: Mode II, example



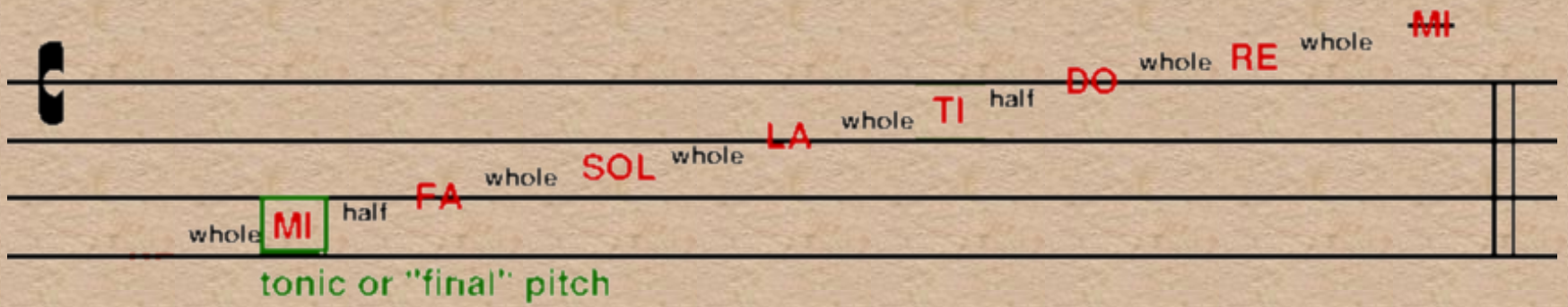
"The Lord said to me: You are my Son, this day I have begotten Thee." The Introit antiphon for the night before Christmas.

Singing Gregorian Chant: Mode II, example

"Give peace, O Lord, in our times, because there is none other who fights for us, but only You, our God."

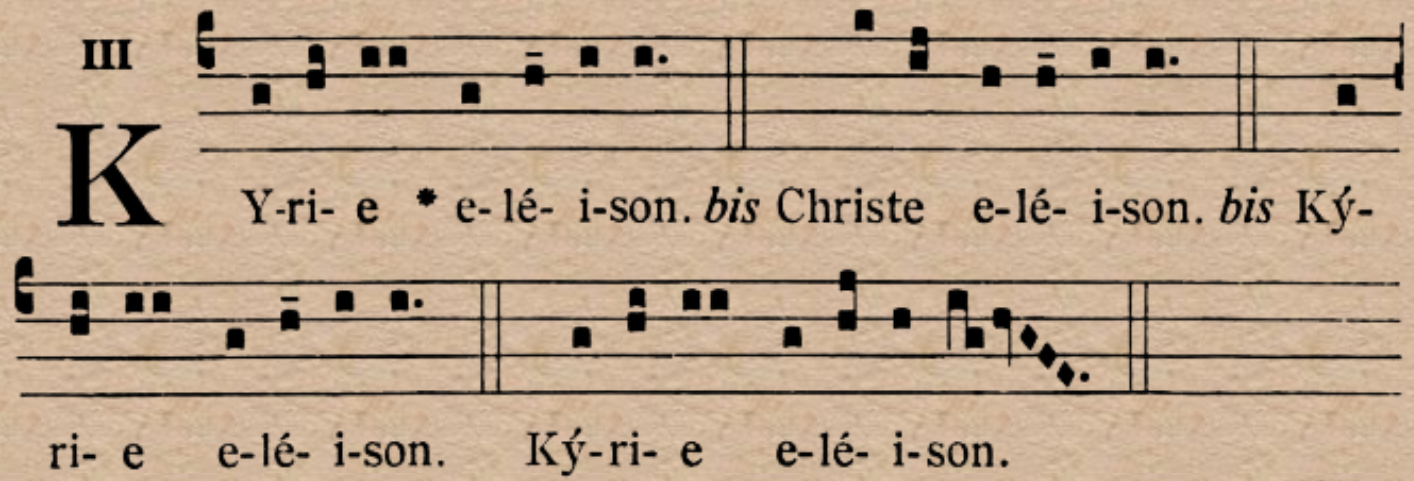


Singing Gregorian Chant: Mode III



Mode III (and its plagal range, Mode IV) are based on MI. Notice how the first step from MI to FA is a half-step. This is unusual. There is also no consistent reciting tone. It can be difficult to sight-read chants in these modes because of these two features, but they do give Modes III and IV a rather unusual sound and make them expressive in a strangely beautiful way.

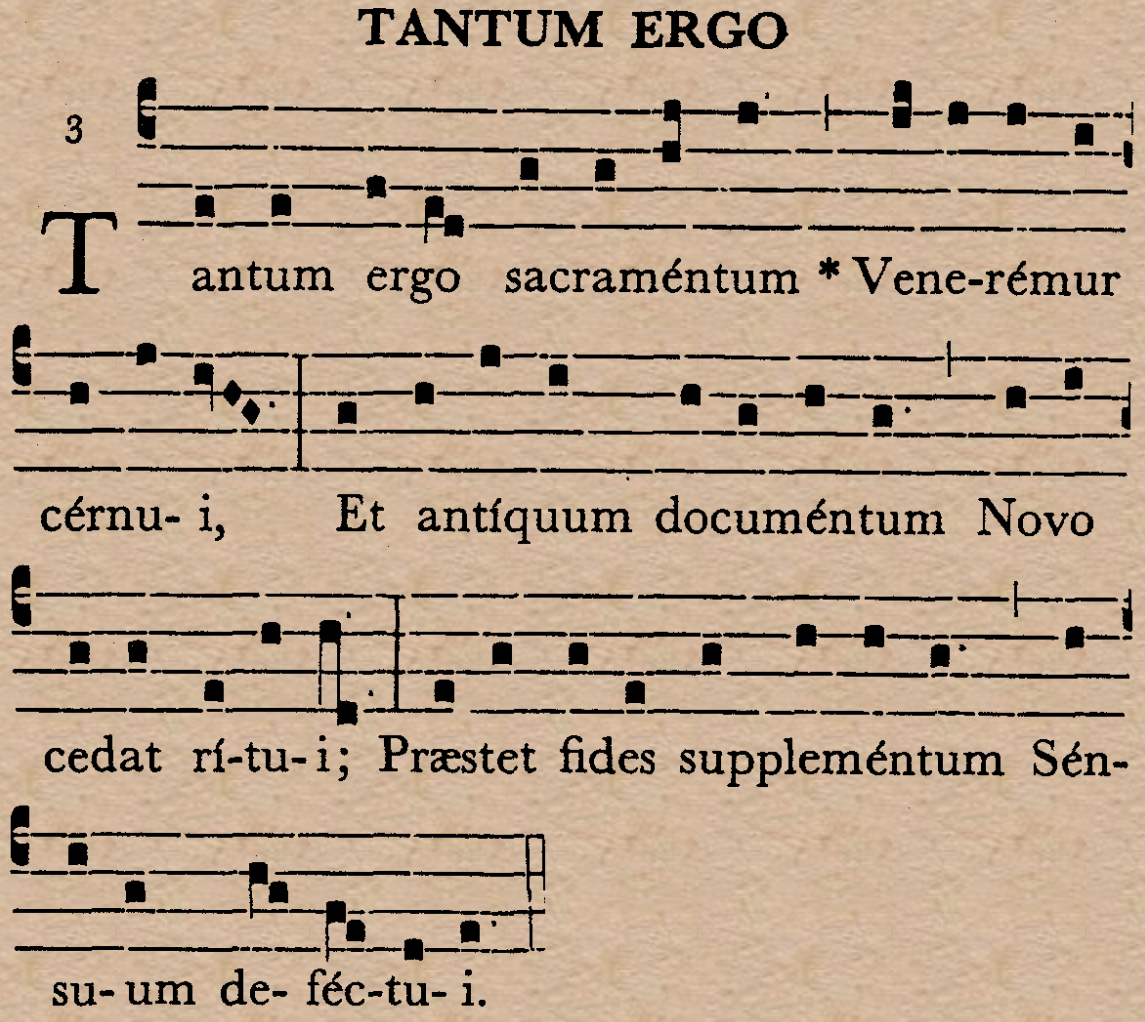
Singing Gregorian Chant: Mode III, example



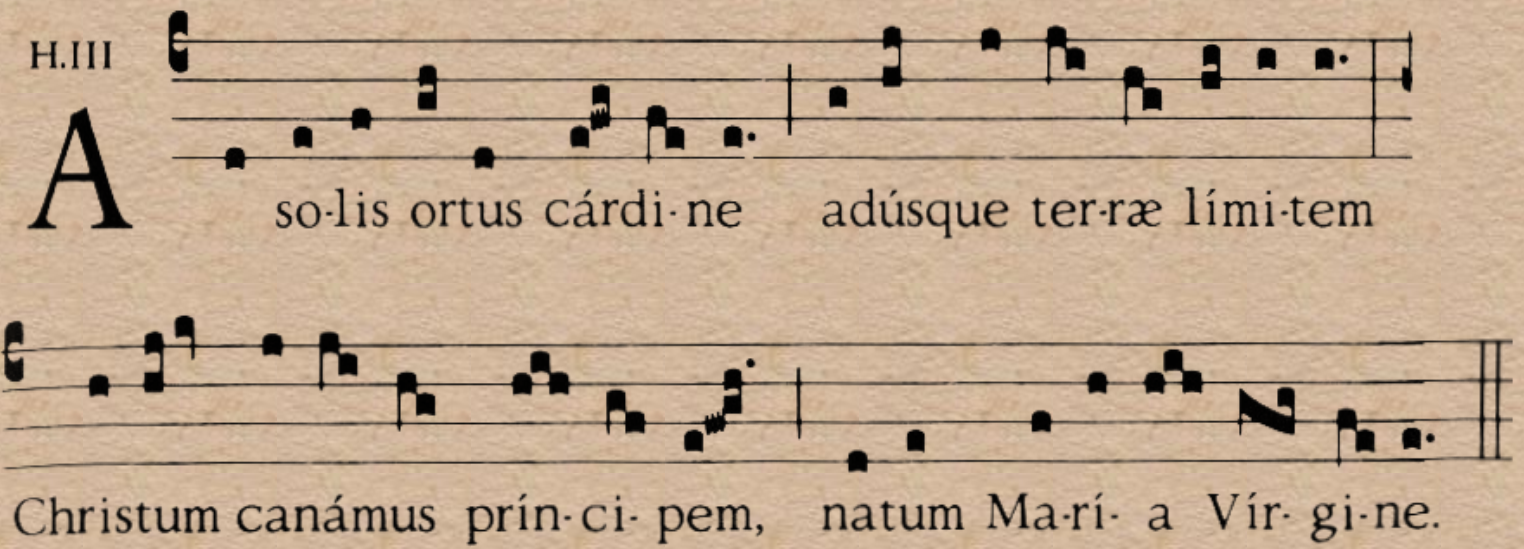
From Mass XVI in the *Kyriale Romanum*. Notice how the melody centers around TI and SOL (sounding "major") before plunging mysteriously down to MI in the final phrase.

Singing Gregorian Chant: Mode III, example

A famous chant, the Tantum Ergo is part of another famous chant, Pange lingua gloriosi. Again, notice how major and assured the entire chant sounds until the final word "defectui" (defective). The half-step movement toward MI gives the final word a sense of incompleteness – another illumination?

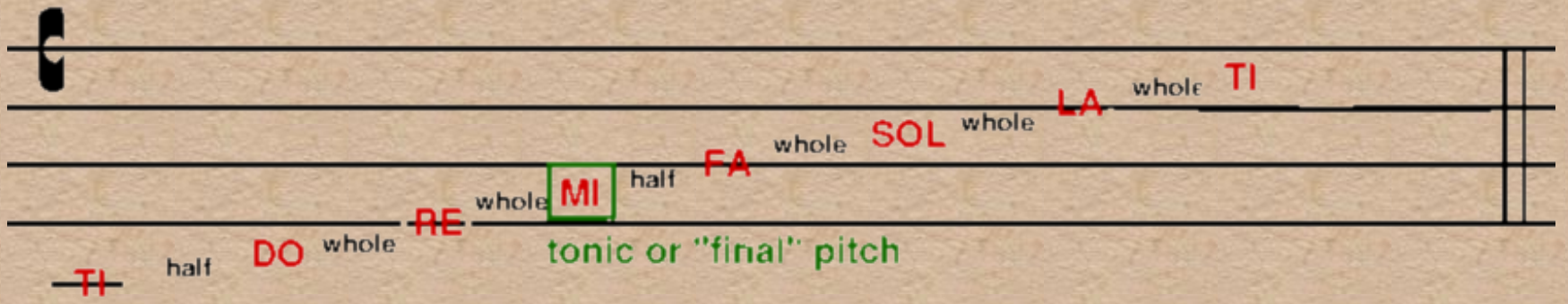


Singing Gregorian Chant: Mode III, example



“From the sun's eastern rising, to earth's remotest boundaries, let us sing of Christ the King, born of the Virgin Mary.” A good example of Mode III's beautiful, contemplative character, this hymn has enjoyed traditional use during Lauds on Christmas morning.

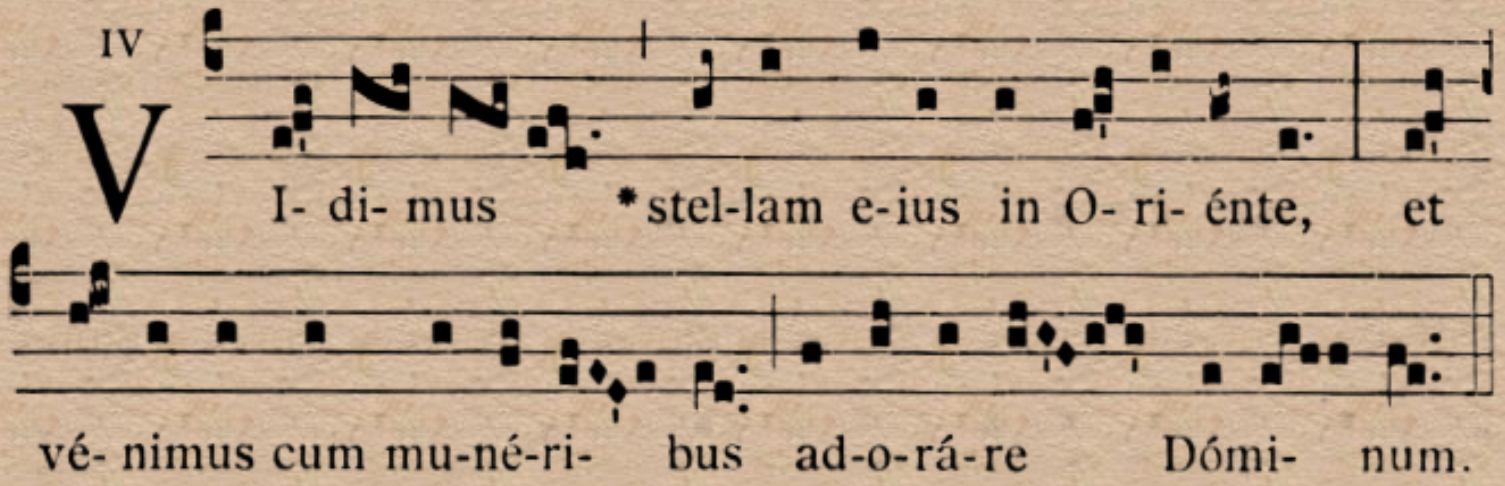
Singing Gregorian Chant: Mode IV (plagal)



Mode IV is the plagal range of MI.

This mode is unusual also because one finds it notated with three clefs: DO on the top line, DO on the second line, or (rarely) FA on the second line.

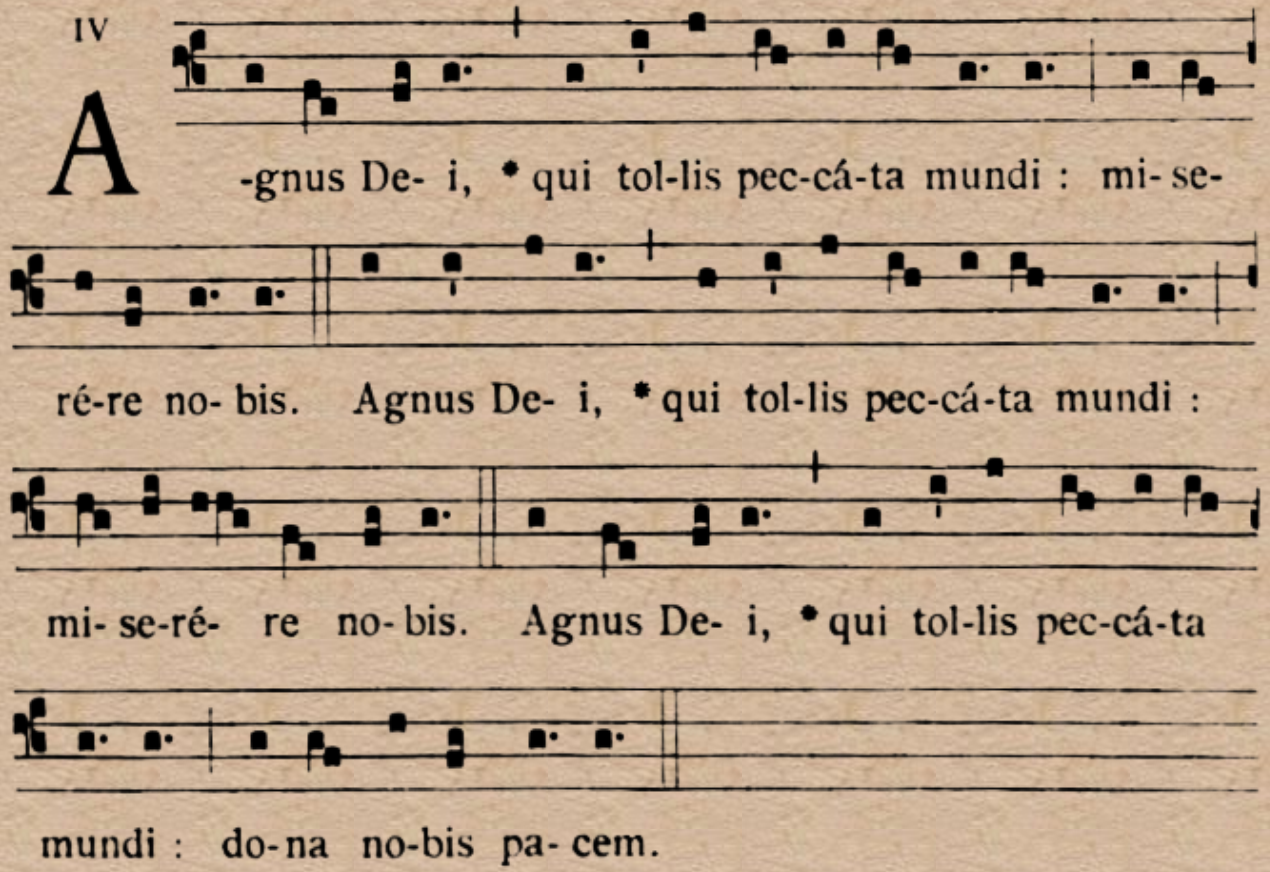
Singing Gregorian Chant: Mode IV, example



"We have seen His star in the East, and we have come with gifts to adore the Lord." The communion antiphon on Epiphany Sunday.

Singing Gregorian Chant: Mode IV, example

from Mass X,
Kyriale Romanum



Singing Gregorian Chant: Mode V

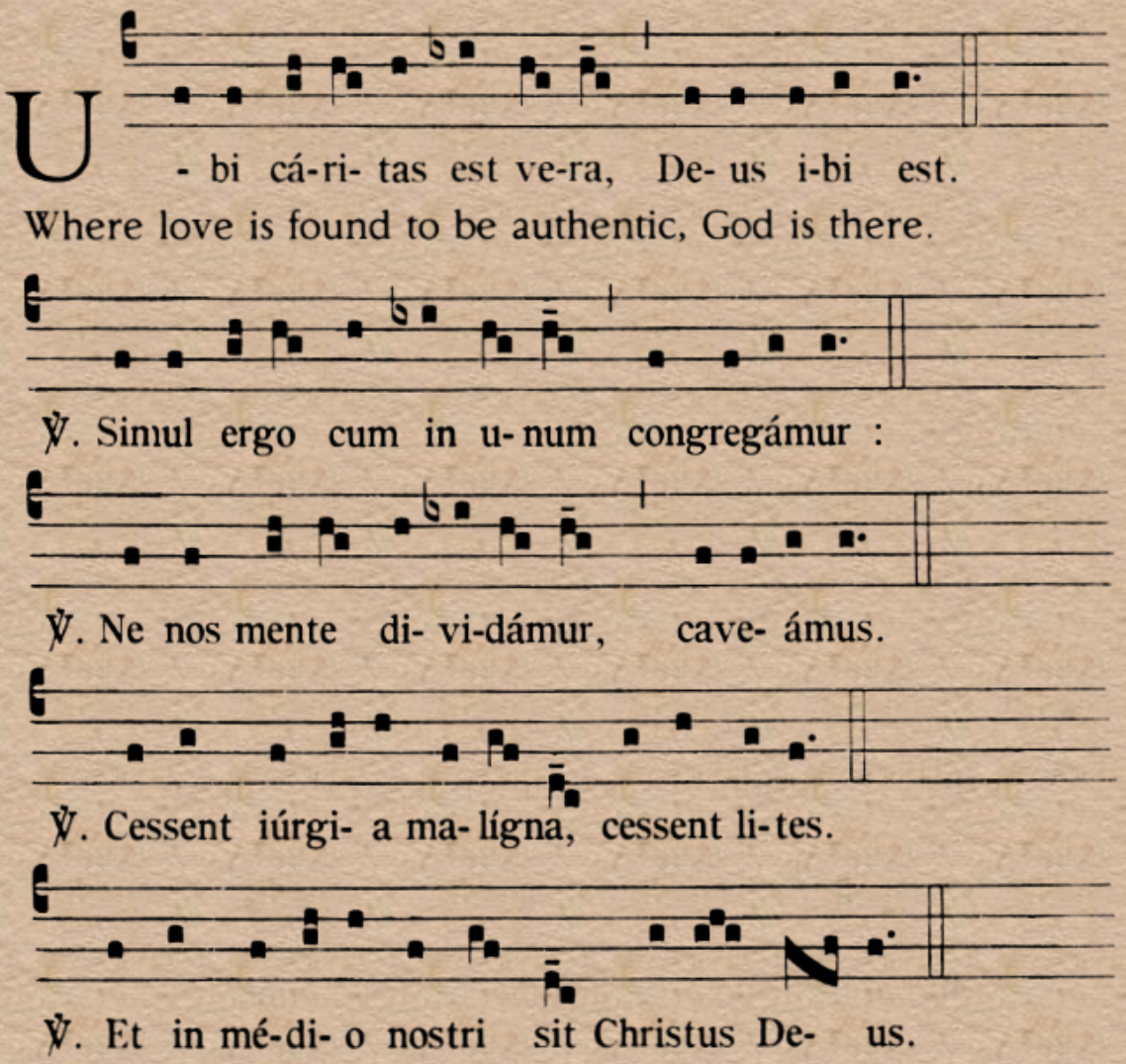


Modes V and VI, based on FA, are quite common and festive. Note the use of TI as the fourth step. In a major scale, the fourth step would represent a half-step up from LA. Here, it is a whole step, giving the mode an unusually buoyant, suspended sound. However, TI is not always used. Frequently it is lowered to TE, which results in the familiar sound of a major scale.

The DO clef in Mode V is placed either on the first or second line.

Singing Gregorian Chant: Mode V example

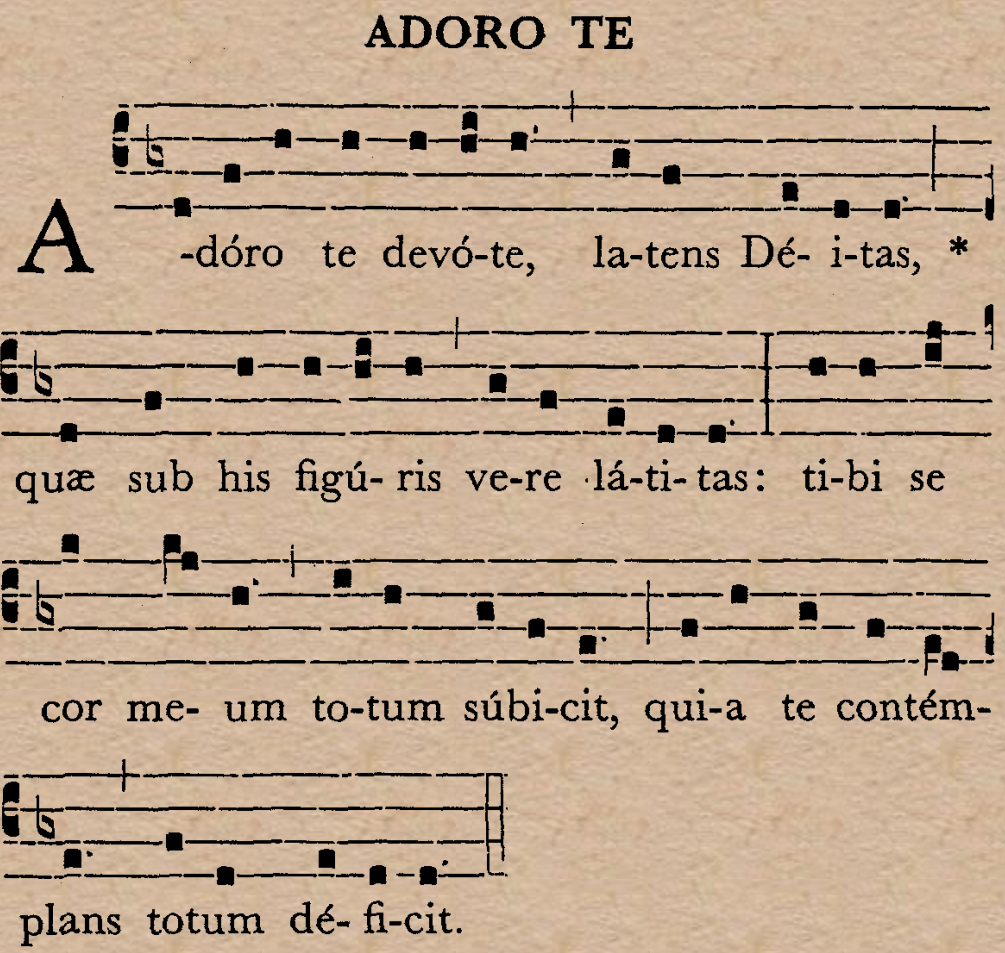
"Where love is found to be authentic, God is there. Therefore when we are together, let us take heed not to be divided in mind. Let there be an end to bitterness and quarrels, an end to strife, and in our midst be Christ our God."



Singing Gregorian Chant: Mode V example

The first verse of a famous chant written by St. Thomas Aquinas.

"Hidden God, devoutly I adore Thee, truly present underneath these veils: all my heart subdues itself before Thee, since it all before Thee faints and fails."

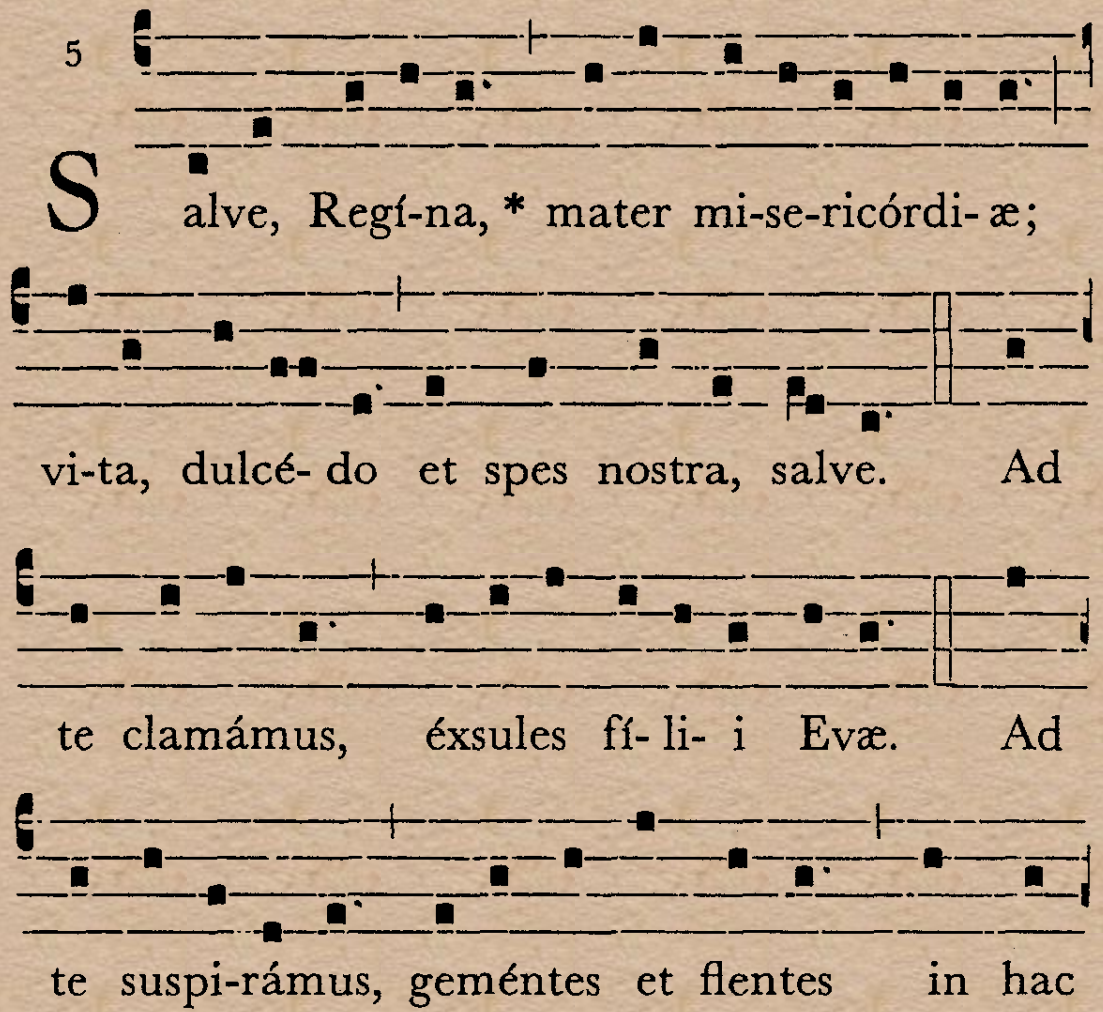


Singing Gregorian Chant: Mode V example

This chant illustrates a curious and useful fact about music. Notice that its mode is stated to be V, but its final is on DO. What gives?

It turns out that melodies based on one pitch can be shifted entirely and based on another pitch -- and yet retain its original pattern of whole and half steps.

This is called *transposition*.

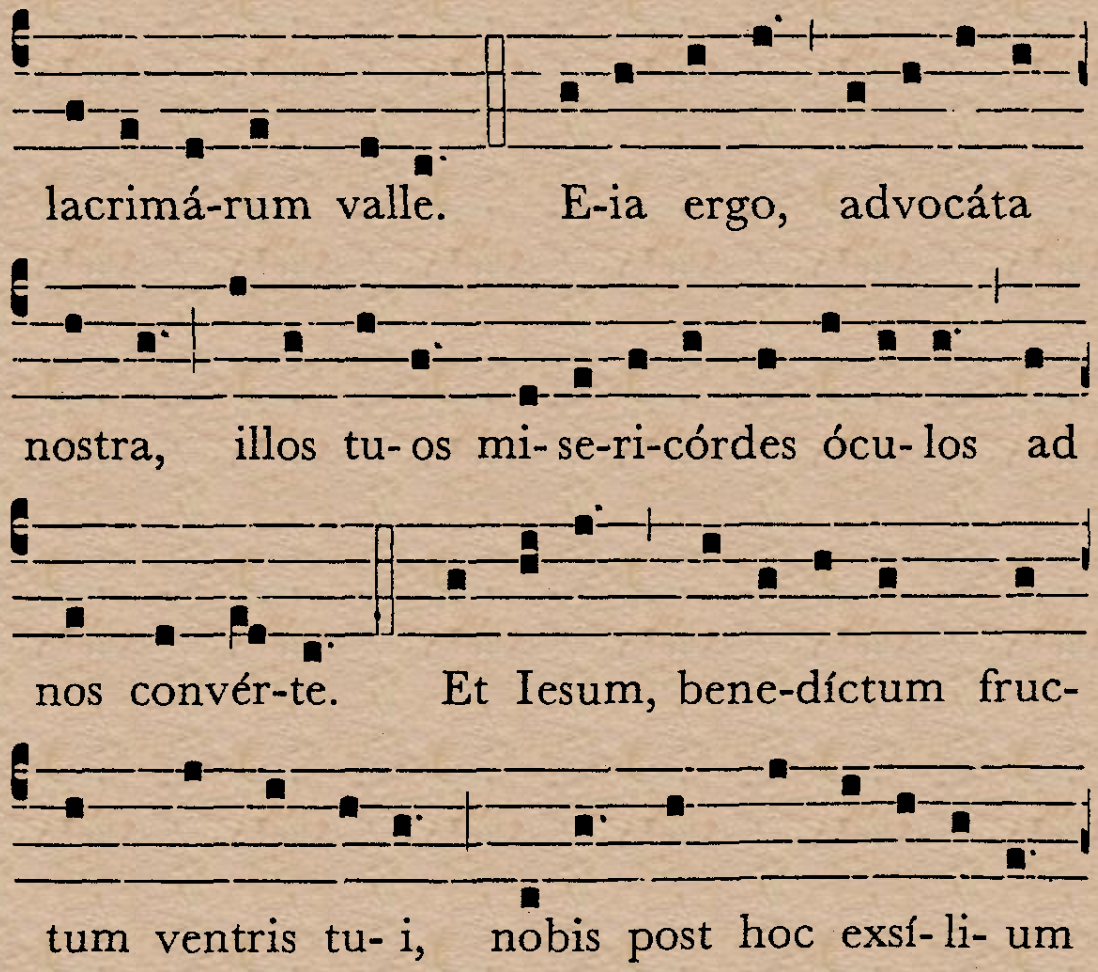


Singing Gregorian Chant: Mode V example

Here, the melody of “Salve Regina” has been shifted from its original base on FA to a new base on DO.

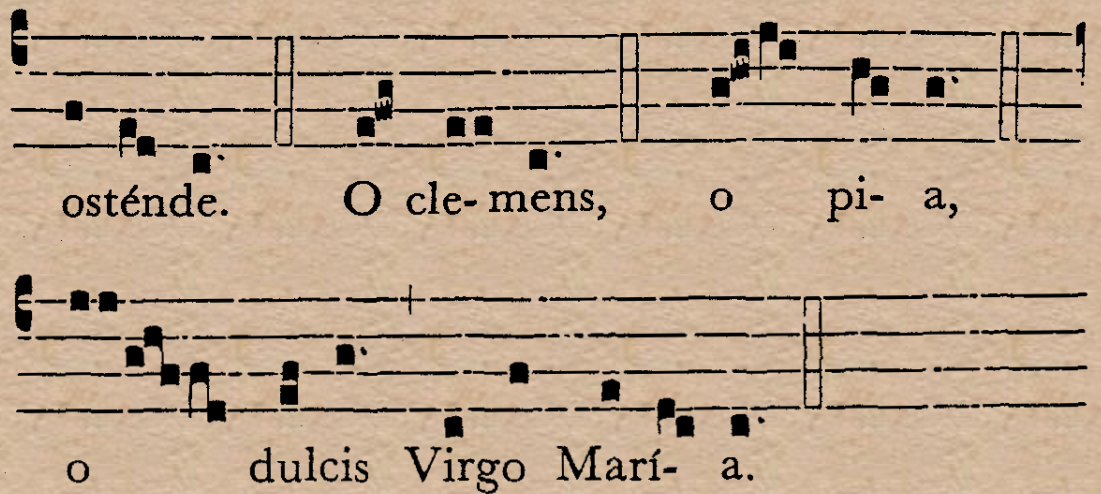
Since the melody's pattern of whole and half steps remains the same, we can say that the melody has been transposed from FA to DO.

The mode remains the same.



Singing Gregorian Chant: Mode V example

"Hail, Queen, Mother of mercy, our life, sweetness, and our hope, hail. To you we cry, exiled children of Eve; to you we send our sighs, mourning and weeping in this valley of tears. Turn then, our advocate, your eyes of mercy toward us. And Jesus, blessed fruit of thy womb, after this our exile, show to us. O clement, O loving, O sweet virgin Mary."

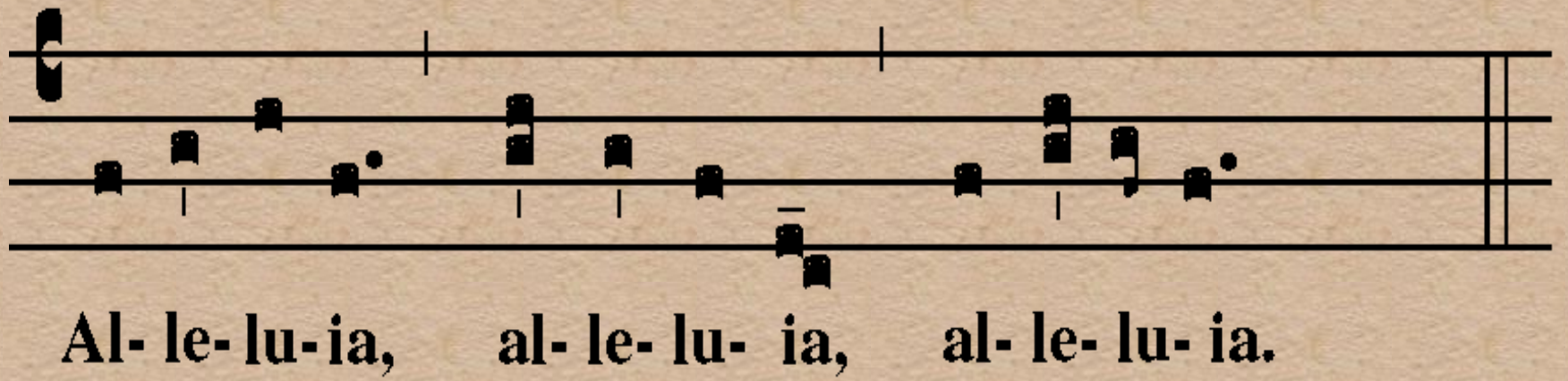


Singing Gregorian Chant: Mode VI (plagal)



Mode VI is the plagal range of FA.

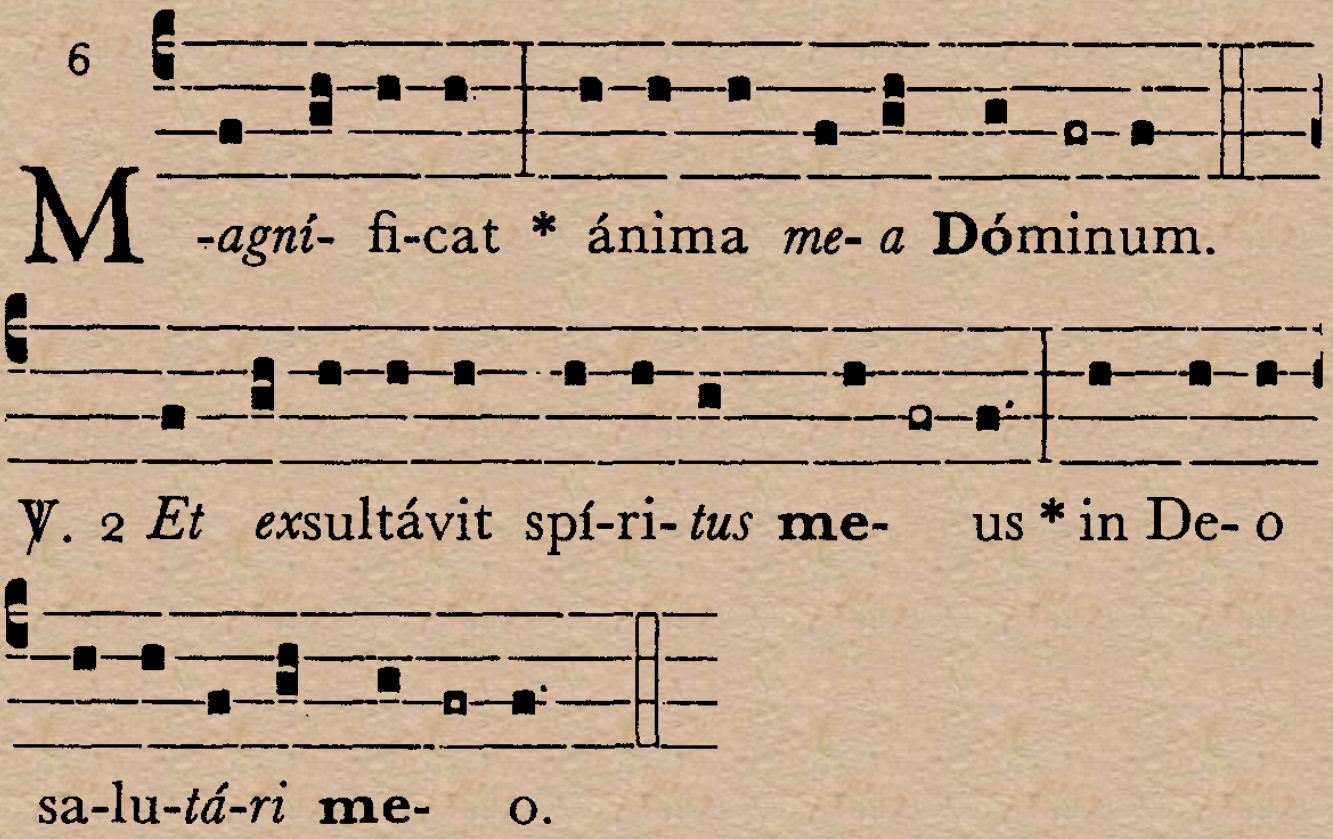
Singing Gregorian Chant: Mode VI example



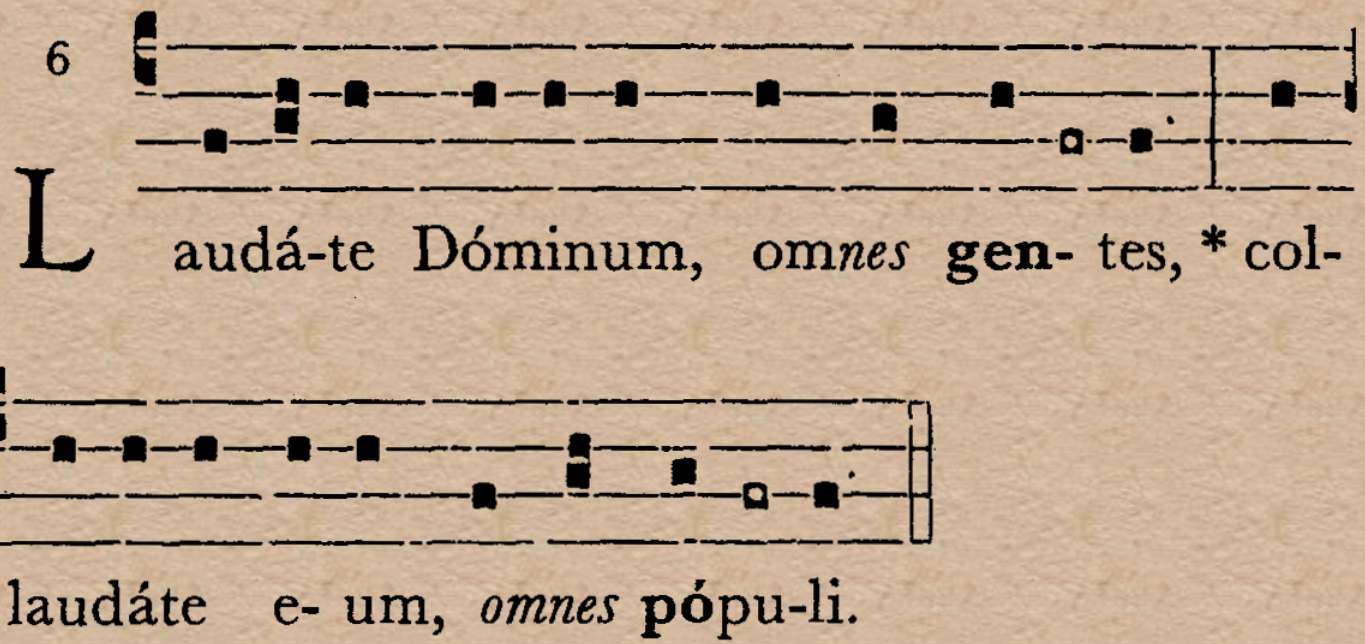
A good example of Mode VI is this familiar Alleluia.

Singing Gregorian Chant: Mode VI, example

"My soul magnifies the Lord, and my spirit exults in God my savior."

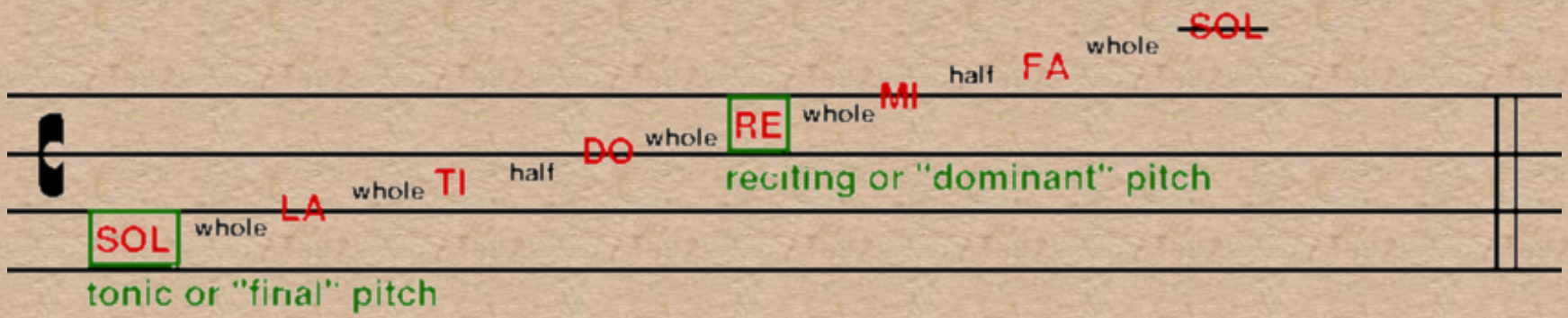


Singing Gregorian Chant: Mode VI, example



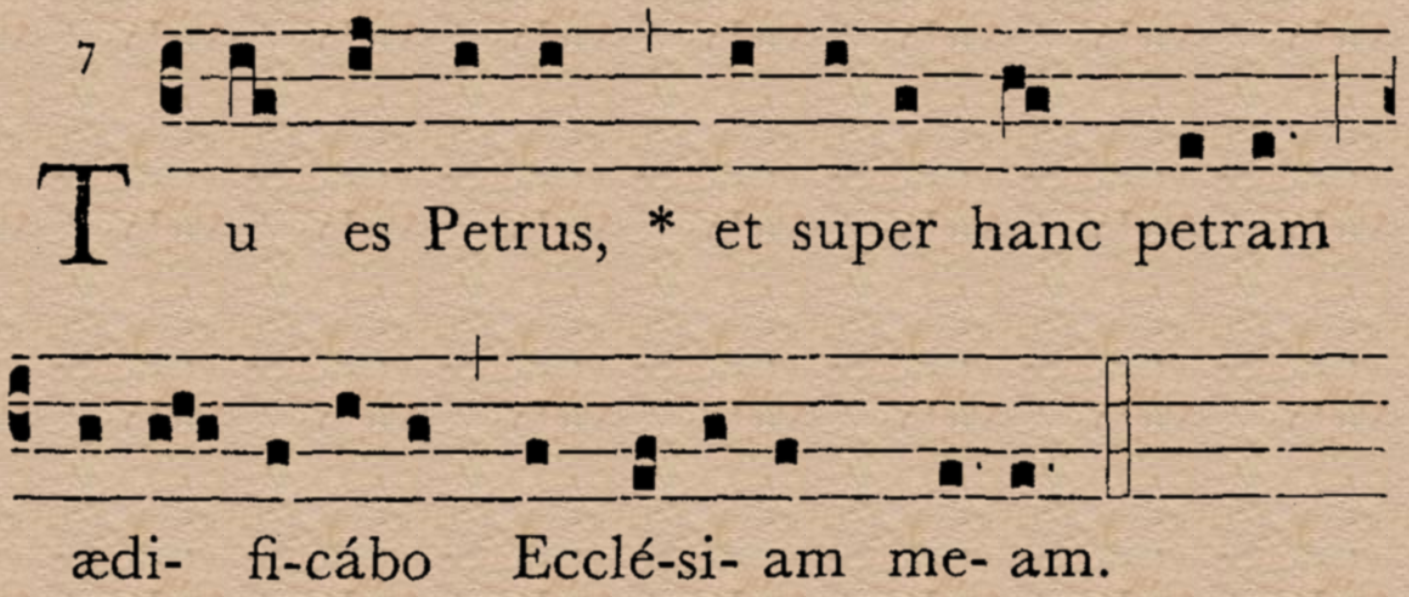
"Praise the Lord, all you nations, praise Him together, all you peoples."

Singing Gregorian Chant: Mode VII



Mode VII, based on SOL, is very common and sounds very “major” because of its arrangement of whole and half steps. It is like a major scale but does have a whole step between its seventh pitch and its tonic (which is not the case in a major scale). Still, it is usually considered bright and festive in character. The DO clef is usually placed as above; it can also appear on the third line.

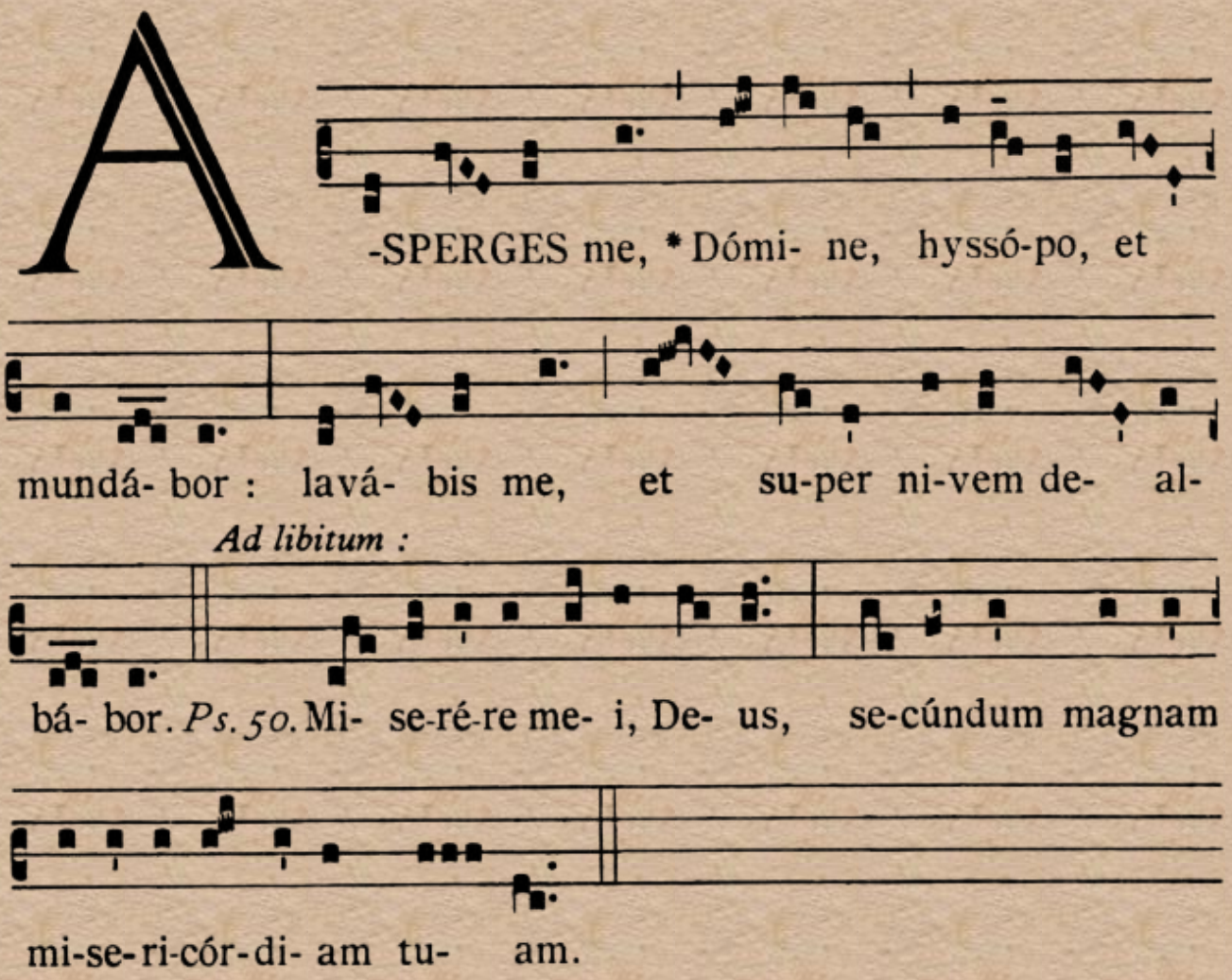
Singing Gregorian Chant: Mode VII, example



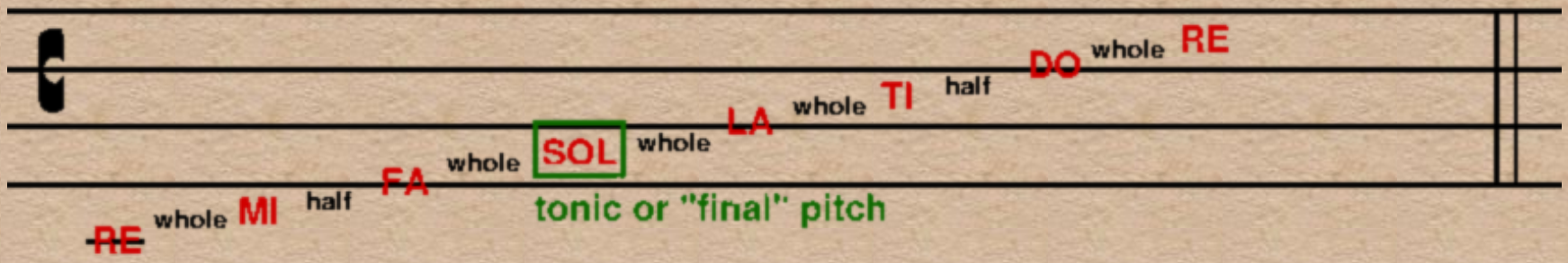
"You are Peter, and on this rock I will build my church."

Singing Gregorian Chant: Mode VII, example

"You will sprinkle me with hyssop, Lord, and I shall be cleansed; you will wash me and I shall be whiter than snow." On Sundays in Easter, it may be sung in place of the penitential rite.



Singing Gregorian Chant: Mode VIII (plagal)

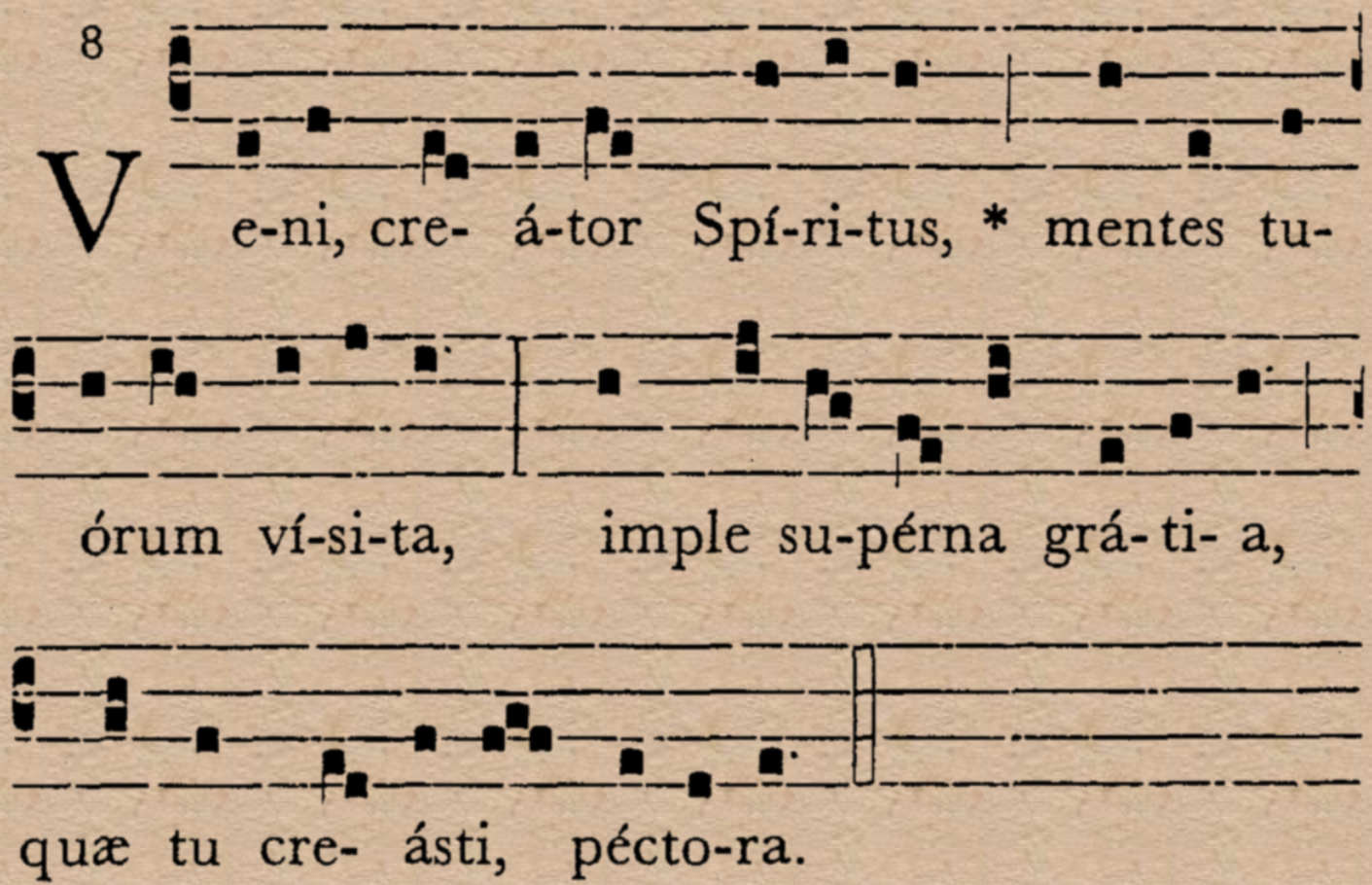


The last mode, Mode VIII, is the plagal range of SOL. Again, placement of clef can vary.

Notice that in all plagal ranges, the dominant or “reciting” tone has not been marked as such. This is the case because in plagal ranges, the dominant or reciting tone does not follow a set pattern.

Singing Gregorian Chant: Mode VIII example

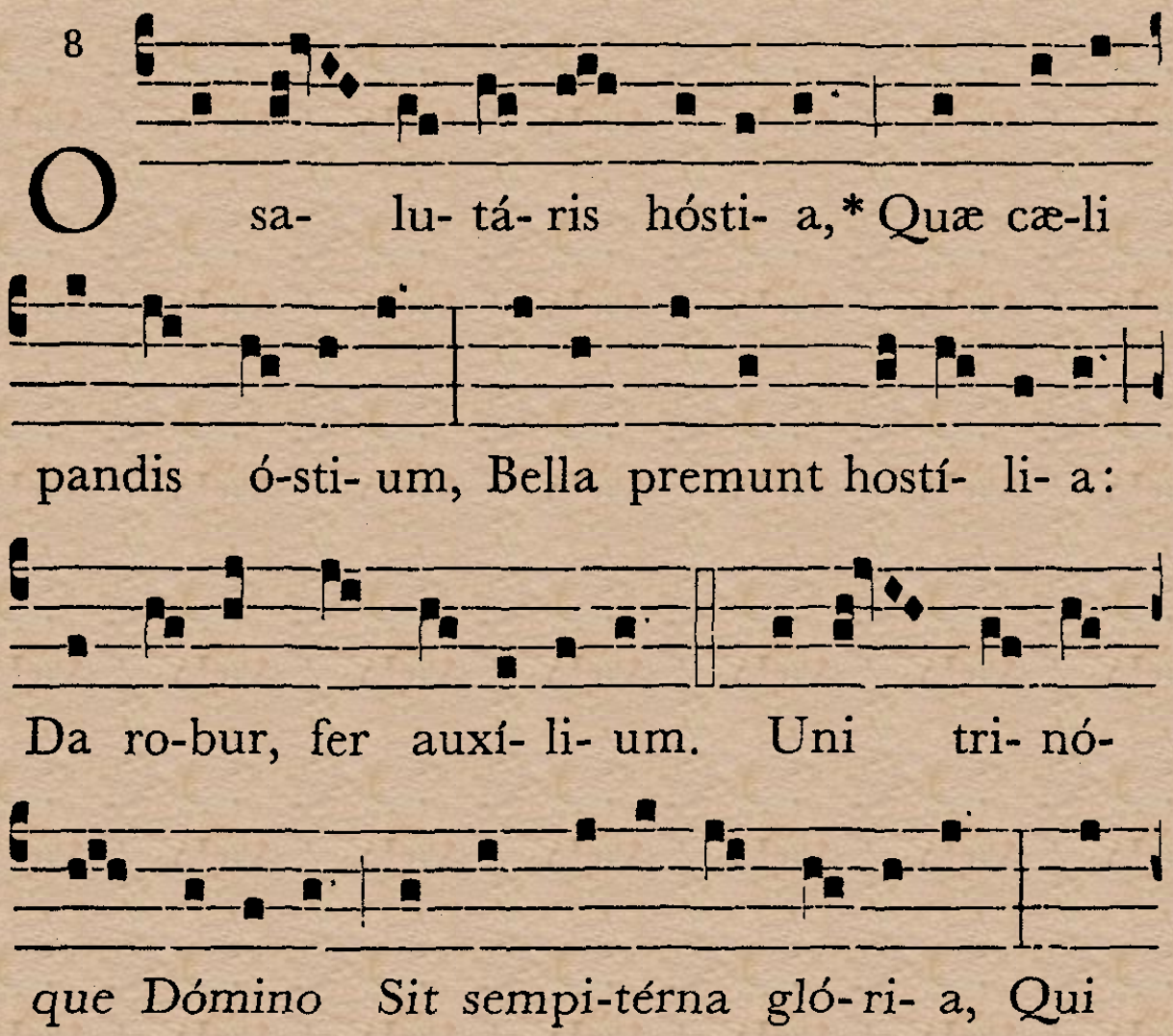
"Come Holy Spirit, Creator blest, and in our souls take up Thy rest; come with Thy grace and heavenly aid to fill the hearts which Thou hast made."



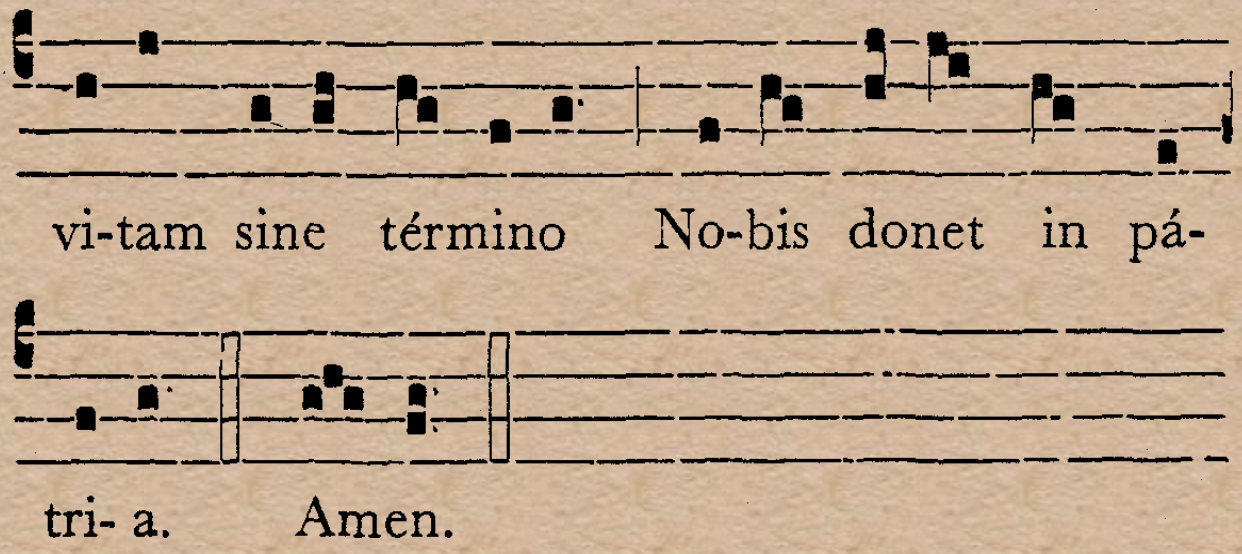
Singing Gregorian Chant: Mode VIII, example

"O Saving Victim, opening wide the gate of heaven to all below. Our foes press on from every side; Thine aid supply, Thy strength bestow.

To Thy great name be endless praise Immortal Godhead, One in Three; Oh, grant us endless length of days, In our true native land with Thee." (trans. E. Caswall)



Singing Gregorian Chant: Mode VIII, example



These are the last two verses of "Verbum Supernum," one of the five Eucharistic Hymns written by St. Thomas Aquinas for the feast of Corpus Christi.

Singing Gregorian Chant: First Review

I. Gregorian chant is prayer sung in unison.
II. The melody is composed of pitches arranged on a four-line staff.
III. Pitches can be given *solfeggio* names to aid one's memory and are distinguished from each other by whole or half step sounds.
IV. In chant, all pitches are presented as relative to a reference pitch: either DO or FA.
V. Based on visual considerations, the placement of clef can differ.
VI. In the Gregorian tradition, pitches are grouped into four sets based on their final pitches: RE, MI, FA, or SOL.
VII. Each set of pitches has a “plagal” range.
VIII. These four main sets and their respective ranges means that there are eight Gregorian “modes” of melody.
IX. Because the placement of whole and half steps differs from mode to mode, each mode has a different set of expressive advantages.