

Composing for the Carillon: Recommendations and Examples

This explanation will, I hope, be helpful to you in at least introducing you to the technical and musical considerations of writing for the carillon. The best introduction, still, is to find a skilled carillonneur who is willing to spend time with you showing you how the instrument is played. If you are unsure as to who to contact, please contact me (information at the end of this document, as I will be glad to be of assistance in finding the carillonneur nearest you.

A recording is available which features a variety of recent compositions demonstrating various approaches to the instrument. *The Organ and Carillon, Volume 3: A Summer's Night* is available for \$14.98 (plus shipping and handling), including works commissioned by the Johan Franco Composition Fund of The Guild of Carillonneurs in North America by John Pozdro, Stephen Paulus, and Libby Larsen. This may be ordered from the following:

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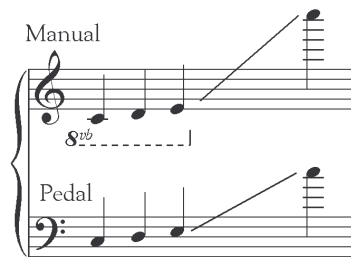
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For the purposes of competitions and commissions sponsored by the Johan Franco Composition Fund of The Guild of Carillonneurs in North America, pieces must be playable on a carillon of four octaves' range, minus low C# and D#. (Some carillons include low C# and many carillons today include low D#, but there is still a large number of instruments in which those lowest chromatics are eliminated – a savings in space as well as expense.)

A few very basic considerations:

I. Technical:

1. Normally, carillon music is written on two staves, the lower in bass clef, representing the pedals, and the upper, in treble clef, representing the manuals. The pedal range on a 47-bell North American carillon is normally two octaves (c-c2). The manual range can extend as low as c, going up to c4; however, in practice most manual writing rarely ventures below middle c (c1), as the heavier clappers are more easily controlled by the pedals, where the player's leg weight can assist in overcoming the inertia of the heavier clappers (and the action connecting to them).



Some carillons are pitched 1–4 semitones higher or lower (much higher in a few cases), which is mostly a function of the money and space available. The carillon at Culver (used in this video) is pitched approximately one semitone low, for example. Usually, it is best to think in terms of a carillon at “concert pitch” in order to have a piece that will “fit” the large majority of instruments available. The trend in newer instruments is generally to build them in “concert pitch” whenever possible, adding extra bass notes if space and money permit.

2. Except in slower passages, the carillonneur can generally play only one note at a time in each hand. In slower passages, the maximum range of notes that may be played is a perfect fourth. Thus, two notes a fourth apart may be played in one hand, or a cluster, or of course, a smaller interval.

3. Because of the heaviness of the lower bells, and the longer time it takes those keys to return, it is difficult to play a long string of notes below d^1 at a rate of more than, say, 200 per minute, and rapid repeated notes in the low range are nearly impossible on most carillons. (On video, excerpt from **Johan Franco: *Prelude and Toccata II.***)

4. Composers should bear in mind that frequent, radical, sudden changes in register (from high treble bells to lower, etc.) can be very awkward to play, and as a result, could count against the composition in a competition. (On video, example from **Roy Hamlin Johnson: *Winter Song***)

5. Because the keys are so much farther apart (manual and pedal) on the carillon than on the piano and organ, wide reaches between the feet (a tenth at most) or between the hands (usually less than two octaves, although wider are possible) can be awkward if not impossible, especially for players with a smaller physique. (**Johnson: *Jubilant Carol***)

The image displays two systems of musical notation for piano accompaniment. The first system consists of two staves: a treble clef staff with a rapid eighth-note arpeggio and a bass clef staff with a single low note. The second system is marked "ritardando" and "ff", showing a treble clef staff with a similar arpeggio and a bass clef staff with a low note and a fermata.

6. Arpeggio figurations in which the notes each hand plays are staggered (see first line of the example below) are easier to execute, as the hands don't have to make such radical moves to get to the next note. Traditional "straight" arpeggios are common also (see second line) but they are less "natural" for the player. Also note in this example that a melody doubled in octaves is another possible solution to the balance challenges inherent in many carillons. (**John Gouwens: *Sicilienne ronde***)

II. Musical:

1. The biggest consideration is the strong series of partials (overtones). For middle C (c^1), the main overtones would be c (a “hum-tone” an octave below the main note), $e\text{-flat}^1$ (just a minor third above the main note), g^1 , and c^2 . Because of this unusual series of partials, intervals used in especially the lower range of the carillon must be carefully selected.

The partials in a “middle c” bell.

The top three are not usually tuned individually, but nevertheless are usually present. They combine to create a “resultant” pitch which, when a bell is well-tuned, is in unison with the Prime. This short-lived resultant is called the “strike tone.”

Nominal (octave above prime)
 Quint (fifth)
 Tierce (minor third)
 Prime (and strike tone resultant)

Hum tone (one octave below prime)

Minor thirds, tritones, minor sixths, perfect fourths, and to some extent major seconds, though not all of these would be obvious choices, are often especially good. (Daniel Robins: #1 of *Five Short Pieces*)

Many composers have used the “octatonic” scale (alternating half-steps and whole steps: C C# D# E F#, etc.) to great effect, since its interval content is so idiomatic to the carillon. Within this scale, even chords that would otherwise be too thick on the bells can be effective. (Roy Hamlin Johnson: *Jubilant Carol*)

A variant on the “natural overtone” scale (C D E F# G A Bb) can also be effective. (Courter: *Gaudí’s Chimneys, First Movement*)

2. Chords should be thinned out as much as is practical, in view of the already full, rich sound of the bells. Spacing of the chords is critical. (c-e-g-c¹ would sound terrible, whereas c-g-e¹-c², while still a bit thick on some carillons, is much better.) You can get by with much thicker writing in the treble range (above c²), both musically and because the lighter action allows the player far greater agility. Some piano and organ pieces have been successfully transcribed for carillon by being played an octave higher (due to the hum tone, especially) with good results. Many chords that would otherwise be too thick on the carillon work better when arpeggiated. That spreads out the more short-lived partials so that they “fight” less.

3. Obviously, the fact that there are no dampers means that rapid changes in harmony can be a problem (also, a rapid “walking” bass line can be quite muddy at times). The bass bells always ring longer. In the treble range, with the short ring time, one can change harmony much more rapidly. (One noted composer refers to that as “modulation by evaporation.”) (Pozdro: *Slavic Dance, from Triptych*)

4. For reasons of balance, care should be taken to avoid active low bass notes against very high melody in the treble. (Figuration in the treble over a melodic bass is very effective.) In most carillons, the bass bells are more powerful and longer ringing than the trebles. (**John Gouvens: Nocturne**)

The image displays two systems of musical notation for a carillon piece. The first system consists of two staves: a treble staff and a bass staff. The treble staff begins with a melodic line marked *mp* and *cantabile, espressivo*, featuring a slur over several notes and a fermata. The bass staff provides a rhythmic accompaniment with repeated eighth notes, marked *ppp*. The second system continues the piece, with the treble staff marked *pp sempre* and the bass staff marked *mp*. Both systems include dynamic markings and articulation symbols like slurs and fermatas.

5. The higher carillon bells tend to be weaker in sound than the lower ranges (far less bell metal mass, after all). As such, a piece which combines very high and very low notes simultaneously, with a gap between, can tend to be ineffective on the carillon, as it can be difficult to “rein in” the bass bells enough to balance. Many carillon compositions therefore involve crescendi that begin in the high range and come lower as the dynamic level increases. (On video, example from **Roy Hamlin Johnson: Summer Fanfares**)

6. Some lovely effects are possible using the accumulations of sounds from several notes played in succession; however, carillons with dry (short-ringing) treble bells or in very open towers can render some of these pieces ineffective (On video, example from **Lee Hoiby: Variations and Theme**). In the lower range, the ringing on of larger bells can be used to great effect on nearly any carillon (On video, example from **Roy Hamlin Johnson: Summer Fanfares**). The lower bells in the carillon are often long-ringing enough to have a fine “pedal point” effect on their own (On video, example from **Roy Hamlin Johnson: Victimae paschali laudes**).

7. Under the best of conditions, the carillon is capable of tremendous dynamic nuances, even more so than a piano, in the opinion of some. It is a good idea to take advantage of it!

III. Notation Conventions:

1. It is standard in carillon music to write on two staves, the lower being for the pedal and the upper for the manual. In the case of high pedal notes, performers tend to be more comfortable with 8va notation than with a treble clef for the lower staff. Carillonneurs as a group definitely do not like to have the handling (choice of left or right hand) and pedaling (left or right foot) indicated in the notation, so it is best not to separate the two hands (for instance) on separate staves unless it is necessary for making it clarification of musical intent.

2. Carillon music often involves one or the other of two types of arpeggios. Because the hands can more easily get to the next note in the arpeggio rapidly, the first type given below is actually more common in carillon music. Examples of both types are provided on the next page:

Type 1 "broken chord" arpeggio (or Belgian style)



Type 2 "straight" arpeggio



3. If you thoroughly understand which notes might be played in the pedals and which in the manual, it can be helpful if the notation reflects that, but in most cases, it is better to entrust those choices to an editor who is also a carillonneur (and preferably, one who uses the same music notation software you do)! The following excerpt is an example where it would have been difficult for the composer to guess which notes are more easily executed by the player. The following reflects the carillonneur-editor's practical solution. (**Pozdro: Slavic Dance, from Triptych**)



I hope this helps! As a friendly suggestion, I should comment also that a piece written with the intention of being truly idiomatic to the sound of the carillon will always fare better than a piece that applies an abstract technique (such as pointilistic serialism) which is conceived in theoretical terms only, not really using the special capabilities of the carillon. (Final example on video is **Emilien Allard: Image N° 2.**)

If you have specific questions, please feel free to contact me.

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