

# **[*ACCORDION4COMPOSERS*]**

*Version 1.0*

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## NOTES

Dear composers and accordion lovers, this book and all of the audio samples accompanying it are totally free. Simply save the book on to your computer desktop and enjoy!

To obtain the audio samples, please write me at [info@lucapiovesan.it](mailto:info@lucapiovesan.it) and you will receive an invitation to the shared Dropbox folder containing all of the files. I will only use your e-mail addresses for a newsletter on [accordion4composers] updates. If you do not want to receive any emails, just let me know.

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- You must always attribute this work to me
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### Notes on recordings:

I recorded all audio samples with 2 microphones in stereo ORTF position with coincident capsules, one meter far from my accordion in frontal position.

I have used two Schoeps microphones CMC5+MK4; the preamp is a Universal Audio 4-710d.

There is no added compression or volume changes between takes, just a bit of added reverb (Lexicon room).

So the difference in volume between a fortissimo cluster and the pianissimo air sound is proportional to the live experience.

My intention was to give you a clean sound from a frontal position, not an artificial studio-balanced sound.

I would very much appreciate the following:

- Send feedback to help me update this book, and I will take your suggestions into consideration on next release.
- if you enjoy this work please consider donating a small amount to my paypal account on [info@lucapiovesan.it](mailto:info@lucapiovesan.it) or buy one of my albums (you may contact me for details). This work is the culmination of hundreds of hours thinking, writing and recording, and years of experience. I would be very grateful for your help.
- Lastly, spread the word to your composer and musician friends!

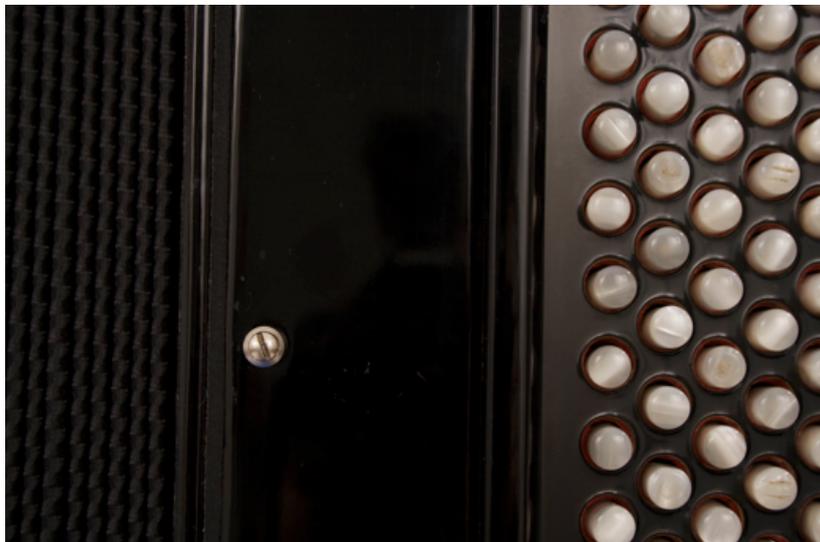
*Gratefully dedicated to my accordion teachers  
and all the composers who I worked with.*

*A huge thanks to Lesley Hinger for the precious editing help  
and to Claudio Jacomucci for the part on tone production (p. 11-12).*

*A special thanks to Davide Ianni for giving me so  
many opportunities to expose and improve this project.*

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# 1 - INTRODUCTION



The accordion is a well-known instrument that is often associated with popular and folk music. Over the last 30-40 years it has become increasingly popular in contemporary pieces, from solo to chamber music.

Composers such as Gubaidulina, Berio, Kagel, Hosokawa, Furrer, Nordheim, and Sciarrino, have all written pieces for this instrument contributing a new and important repertoire, and increasing the interest in the accordion internationally.

The appeal of the accordion comes from its ability to create many different sounds, with quick variations in timbre, pitch (including bending), registers, note repetition, dynamics, chords and more.

I have found that the best way to describe the accordion to a composer is to think of a polyphonic wind instrument controlled by two keyboards.

It is essentially a small organ with great agility in terms of speed, sound control and dynamic.

The bellows pushes and pulls the air through the reeds, and the keyboard buttons select the notes, and control how the notes begin and end.

The two hands move on two different keyboards, so they do not cross and they have more freedom than a single keyboard. The left hand is also constantly

pushing and pulling the bellows. This means that even if only one note is depressed on the right hand, the left hand is already working to control airflow and dynamics.

Playing the accordion is a very demanding activity; supporting the weight of the instrument (about 16-17 kilos), pulling and pushing the bellows and performing the necessary techniques requires a large amount of energy.

You must also remember that we can not see the keyboards, but rather we orientate using tactile signs (usually on all C's and F's)

The accordion is attached to the body of the performer by shoulder and body of straps.

There are commonly two models of straps:

- two vertical shoulder straps are the most common (where often the two straps are also connected by an horizontal strap behind the shoulders of the performer)



- the newly popular "Ergonomic Straps" (designed by Claudio Jacomucci)



With these straps the base of the instrument is secured to the lower back by the lower belt. The upper straps distribute the pressure of pulling and pushing the bellows with four bands.

They are intended to prevent the most common ailments of traditional straps, where the shoulders are pushed forward and down, the chest is compressed down, floating ribs are squeezed, the sides of the chest are pulled down, there is a sinking down in the hip, and an increased weight on the lower back.

One of the main problems when composing for accordion comes from the huge amount of variation within keyboards (at least 3 models per hand), registers, and range. They vary a great deal depending on the brands and even single model, as many instruments are custom made to suit a single performer's requests.

I will try to be as general I can to suit these different models. However this guide is more focused on the button accordion in C griff, the model I use, which is honestly the most common accordion used by contemporary music performers.

## 2 - SOUND PRODUCTION

The sound of accordion is produced by air being pushed and pulled through metal free-reeds. There are two reeds per note in each register, one for the opening bellows and one for the closing bellows.



The sound of the accordion is controlled by the keys and the fingers (similar to the tongue for wind instruments).



So we can control with great detail the attack, sustain, decay, and end of each note (see also pages 11-12).

Remember that the two manuals act on the same bellows, which normally results in the same dynamics on both manuals. However we can emphasize one hand by using different registers, playing in octaves, or with different articulations within the hands.

The accordion is a stereo instrument, where the sound comes from two different sources.

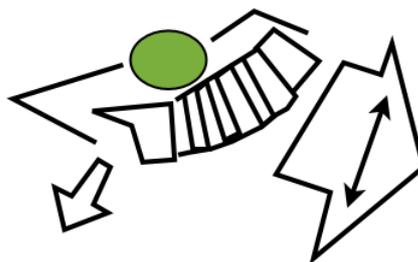


*[Jurgen Ganzer - Phantasie 84]*

However one source is stationary (the right hand) while the other moves continuously pulling and pushing the bellows.

This means the sound produced by the accordion moves in a awkward direction as is depicted in the image below.

In a live performance the balance between the two hands moves slightly, following the opening of the bellows.



***[\*AUDIO 2.1: Left hand moving with sustained chord]***

When playing chords the lowest note always dominates. When two or more notes are played on the same manual the lowest note will normally sound the strongest, as on the organ. If you want to emphasize the highest note simply move it to the other hand.

***[\*AUDIO 2.2: The lowest note dominates]***

Another important aspect of the accordion is that when playing any amount of notes (at least two) from *niente*, followed by a very slow crescendo, each note will sound at a different time, because of the different reaction-time of every reeds. There is no rule or regularity in the order of the notes sounding, it varies with each instrument.

As a performer this can be very frustrating, but the only way to avoid it is to put a very small accent on the beginning of the chord.

**[\*AUDIO 2.3: Chords crescendo from niente]**

The accordion does not resonate from the instrument itself, as the body of the instrument is not a resonant chamber.

The series of reeds are placed in castles with very tiny chambers (see picture below).

This means that it is a very "dry" instrument, no resonance, no echoes, no pedal effects. All sound will disappear as soon as we release the keys, so even though the instrument can seem very loud in small rooms, the sound does not carry very far. Any wind instrument can be much more perceptible than an accordion, and our harmonics tend to fade away in chamber ensembles.



The tuning of classical accordion is commonly 442 Hertz. Note that if we sound any note at *fortissimo* the tuning tends to drop.

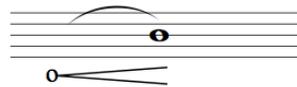
**[\*AUDIO 2.4: lowered note on ff]**

## Tone production - articulation - dynamics

There are marked analogies between singing, playing a wind instrument and playing the accordion: the bellows plays the role of the lungs, the left arm the role of the diaphragm and abdominal muscles, while the keys articulate the sound like the tongue or the lips. Variations in tone production, articulations and dynamics are provided by the combination of compression of the bellows and the speed of pressing and releasing the keys.

In order to produce a very soft attack of the sound, coming from silence (as in pronouncing a "ha"), first press a key (without producing any sound), then start to apply the pressure of the bellows slowly and gradually.

**[\*AUDIO 2.5: "ha" attack]**



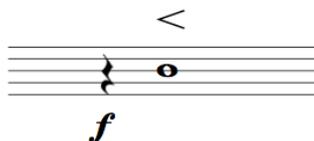
To produce a hard attack or an accent (as in pronouncing a "tta"), first compress the bellows with force in silence, then strike the keys very quickly. The hand should drop from distance across to strike the keys, so the wrist will have to extend to let the hand use the space above the keys. You can highlight the attack by decreasing quickly the pressure of the bellows immediately after the attack. You will get a *sforzando - subito piano* effect.

**[\*AUDIO 2.6: "tta" attack]**



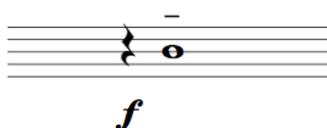
A lot of bellows compression followed by pressing the keys slowly sounds like a "tired clarinet" (a kind of "v" pronunciation).

**[\*AUDIO 2.7: "va" attack]**



Medium bellows pressure with medium speed of the keys sounds like "A or B or D or T" pronunciation, depending on the degree of pressure and the key's speed.

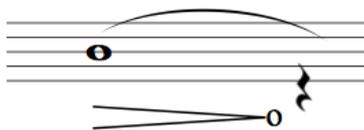
**[\*AUDIO 2.8: "A-B-D-T" attack]**



The same principles applies to sound decay.

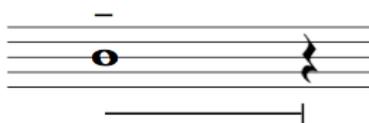
To fade out the tone ("ah"), decrease the pressure of the bellows to silence and only then release the keys silently.

**[\*AUDIO 2.9: "ah" decay]**



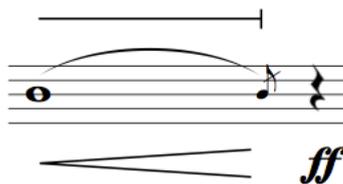
To get a clear-cut decay ("at", "ad"), release the keys quickly while continuing to apply pressure to the bellows beyond the end of the tone.

**[\*AUDIO 2.10: "at-ad" decay]**



A sharp decay ("attt") is created by releasing the keys very quickly while performing a fast and strong crescendo; the bellows pressure must continue beyond the end of the tone.

**[\*AUDIO 2.11: "attt" decay]**



For a vowel-like decay ("aa"), suddenly stop the bellows without depressing the keys.

**[\*AUDIO 2.12: "aa" decay]**



*note: pages 11 and 12 are quoted from the book "Mastering Accordion Technique" by Claudio Jacomucci and Kathleen Delaney*

### 3 - THE RIGHT KEYBOARD AND ITS REGISTERS



There are two common systems of right-hand keyboards for the accordion: the piano keyboard and the button keyboard. The button accordion has at least three types of different models, but they are almost identical from a composer's point of view. The most common are the C-griff (the C is on the first row) and B-griff (the C is on the third row). The third system is the Finnish keyboard, with the C on the second row.

It should be made clear that nowadays the majority (more than 90%) of classically trained accordionists plays the "button accordion", and it has also been confirmed as the standard from the *International Accordion Society* (1993). The button accordion is superior in range, hand configuration, fingering, regularity of the progressions, and variety of combinations between the two hands.

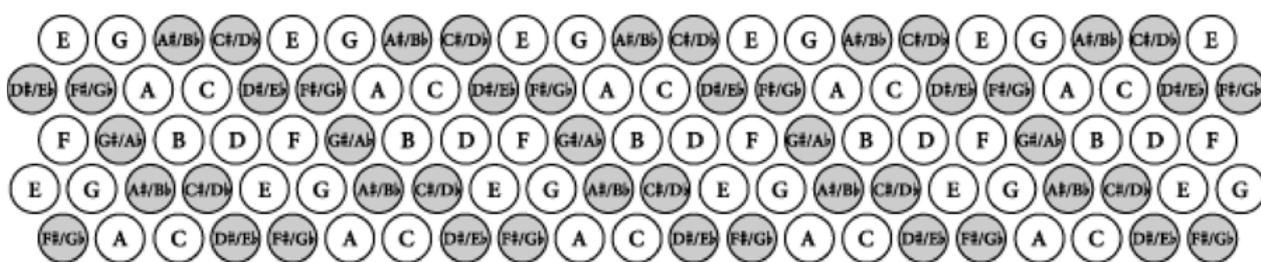
In my opinion the C-griff is a small step better than the B-griff, having a mirror-made disposition of the keys (which feels much more natural) and allowing a more natural adaptation of the hands.

Piano keyboard system is not as effective on accordion as it is on a piano, where both hands play on the same keyboard. Using two different keyboards on the two hands presents many limits in range, speed, crossing, and mental mapping.

This guide will focus primarily button accordions. The pictures and the examples will be on the C-griff system (my personal instrument) but as a composer, do not worry about the difference between the C and B griffs. They are completely interchangeable.

The only meaningful difference is that the C-griff has the lowest notes of the left hand on the top (near to the air button) while the B-griff has the lowest notes of the left hand on the bottom (very far from the air button!)

Right hand keyboard map (top side of the instrument on the left):



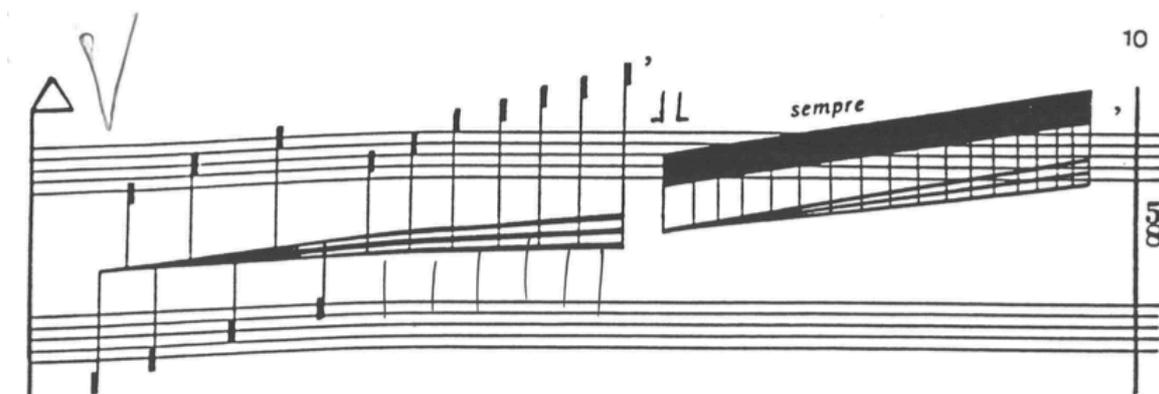
The right keyboard of the accordion has 105 buttons in five rows, with 3 effective rows. The 4th and 5th rows are repetitions of the 1st and 2nd. This gives us many possibilities with fingering and in tonality, when transposing. We have a chromatic scale with a considerable range, from the second lowest E to the highest G of a 88 key piano keyboard (64 notes). Also known as from E2 to G7.

**[\*AUDIO 3.1: chromatic scale in the right hand]**

Within this range we can do anything a pianist can do with his right hand: scales, chords, polyphonic playing, glissandi, clusters and so on.

Remember that the chromatic keyboard has a minor third glissando (sound as a diminished arpeggio).

**[\*AUDIO 3.2: glissandi in different registers]**



[Sofia Gubaidulina - De profundis]

Furthermore the hand can cover a huge span of intervals. In our widest range we can reach a 3-octave distance, but only in a *largo* tempo. We are quite comfortable within 2 octaves, because within 2 octaves on the right hand almost everything is possible. With a larger hand extension there are some interesting possibilities, but be considerate of the hand position! The hand stretches out distancing the thumb from other four fingers. So this chord



looks hard but it is quite easily performed. While this,



which looks easier, is impossible to play because the 3rd and 4th fingers cannot reach that far. Yet it can be played by forming a small cluster with the thumb on the three lowest given notes. This last chord however,



is definitely impossible to perform.

**[\*AUDIO 3.3: big extensions on the right hand]**

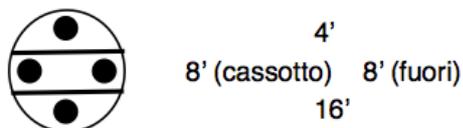
In writing large and difficult chords please remember that we can not see the keyboard. This means that when playing a series of dense chords, it can be difficult to find the right hand position, which then requires more study time than it would on a piano.

This is a very challenging passage even in medium tempo:



[Davide Ianni - Testa]

## The right hand registers (see also chapter "Notation")



The right hand has multiple options for different octave combinations and registers, just like the organ.

We have one low voice (16 foot) that sounds one octave lower than the pressed key. The lowest note is then the lowest E of the piano, with the right keyboard ranging from E1 to G6.

The 16 foot register is always in "cassotto" (see explanation below).

**[\*AUDIO 3.4: 16' foot register]**

The two central voices (8 feet) are the sounding pitch register.

The two 8 foot registers are very different in timbre. The one drawn on the right of the circle is very bright, while the other ("cassotto") is more muffled.

"Cassotto" in Italian means "box": this indicates that these reeds are inside a wooden or metallic box which softens the timbre.

**[\*AUDIO 3.5: 8 foot registers]**

The highest voice (4 foot) moves the majority of the keyboard one octave up, with the exception of the highest reeds, which are too difficult to keep in tune.

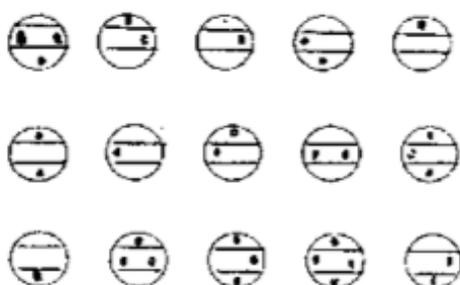
The 4 foot register usually stop to C#8, but some accordions stop around Bb 7. This register also has a "third sound" in the highest notes and at loud volume.

**[\*AUDIO 3.6: 4 foot register and third sound]**

In regards to timbre, 8 foot with cassotto and 16 foot both have a sweet, mellow sound, whereas 8 foot without cassotto and 4 foot have a brighter, sharper sound.

These registers can be used in all possible combinations, so there are 15 different register combination that can alter both pitch and timbre.

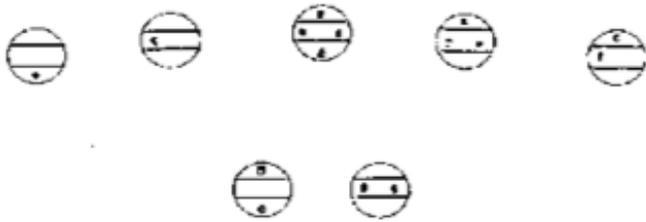
The standardized register symbols that are used in scores can be seen below.



When using registers that combine different octaves, it is always the lowest octave that defines the resulting sound

**[\*AUDIO 3.7: same pattern in different registers combinations, in the order displayed above - keeping the same hand position]**

Seven of these fifteen register can be selected with the chin. These are the most commonly used combinations within the accordion models:



The chin buttons can be selected easily and quickly, with no need to move the right hand for selection.

Changing a register with the hand can take a fraction of a second, depending on how far it is from the notes being played, while this option is really instantaneous.

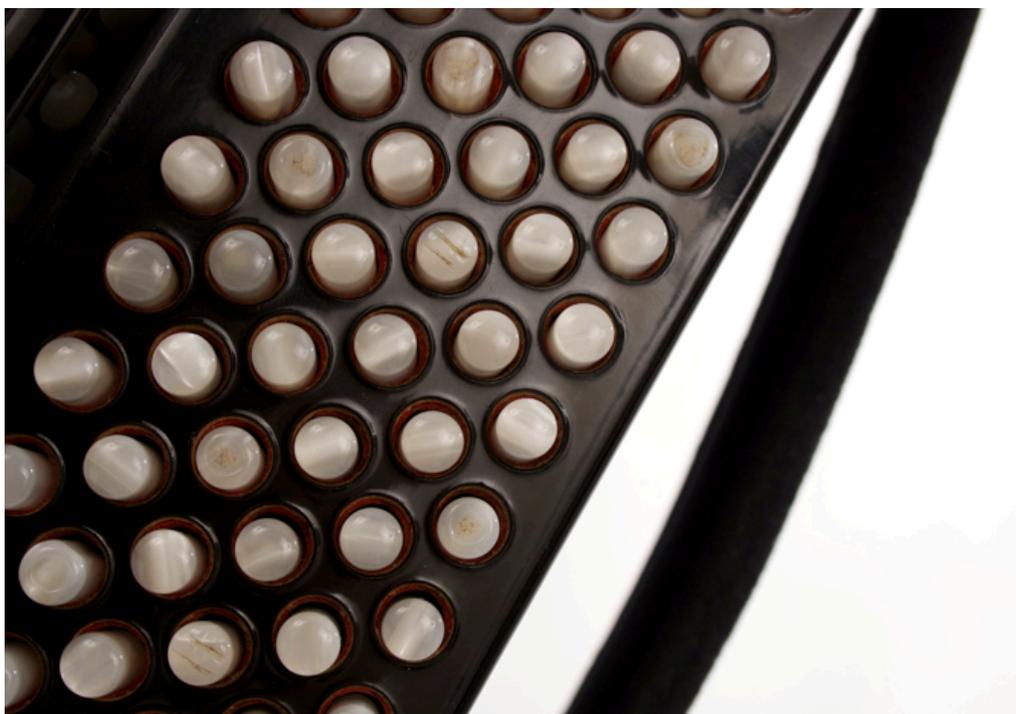
**[\*AUDIO 3.8: switching registers by hand and by chin]**

I would actually suggest not bothering with registers symbols in the initial stages of composition, but to guide the player color indications such as *dolce*, *tutti*, metallic, nasal, flute, bassoon etc. The accordionist will choose a suitable registration to fit the description.

Toshio Hosokawa

[Toshio Hosokawa - Melodia]

## 4 - THE LEFT KEYBOARD AND ITS REGISTERS



The left hand of the accordionist is always tied to a strap pulling and pushing the bellows in order to obtain sounds and to control the dynamics. It simultaneously controls the left keyboard, which has 120 buttons distributed within 6 rows.

There are three common systems for the left hand:

- 1) C-griff: is the equivalent of the right hand system, mirror made;
- 2) B-griff: the "Russian" version, with lowest notes on the bottom;
- 3) Finnish: mirror made to the right hand Finnish system.

Again, the difference between models should not impact composers, with the exception of the position of the air button which is on the top of the body.

That means the air button is close to the lowest tones on the C-griff and Finnish models, but close to highest tones on the B-griff.

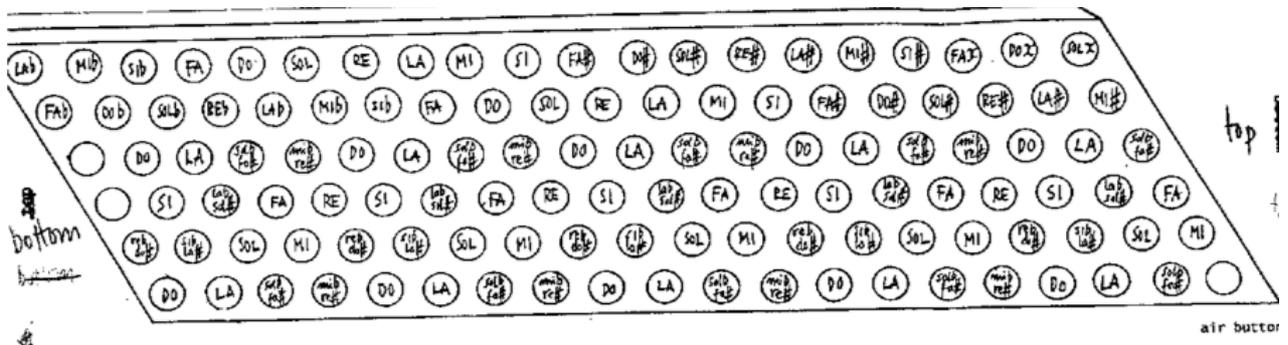
Another important thing to remember is that if you want us to use the left thumb (for a large interval) this will operate C-Eb-F#-A on the C-griff and B-D-F-Ab on the D-griff.

The extension of this keyboard goes from E1 to C#6



**[\*AUDIO 4.1: left hand range]**

This is the map of the left hand keyboard (C-griff)



As you can see, there are only 4 effective "chromatic" rows. The two internal rows do not vary between this keyboard and the "Stradella basses", the old "zum-pà-pà" keyboard. (See below for details)

These two rows are arranged by fifths and cover the lowest octave of the instrument. They usually have also a dedicated extra register (2-octave higher dubbing). By using these bass tones there you reduce the spacing between lowest note and upper notes, but you must still consult the chart to see the distance between notes.

**[\*AUDIO 4.2: first and second rows]**

[Winkel Holm - Troglodyte]

The 4 row chromatic keyboard is very similar to the right hand keyboard in that it is mirror-built, but is much less flexible because the left hand is strapped under the bass-strap for pushing and pulling the bellows, so we can not use the thumb for depressing buttons.

Moving the left hand under the strap takes time, and sliding it slowly while notes are sounding on the right hand often causes pulsations or vibrations in the sound.

***[\*AUDIO 4.3: vibrations in sliding left hand]***

The fingering possibilities can be compared to those of a pianist's left hand playing with the palm touching the body of the piano under the keys without the thumb.

We have the following limits in the left hand:

-No thumb. As mentioned above the only exception is the first row, which is different from system to system. We feel comfortable playing within one octave interval. 3-notes chords are possible, but not all 4-notes chords are possible. Arpeggios that cross several octaves are very difficult.

***[\*AUDIO 4.4: limited range and arpeggios]***

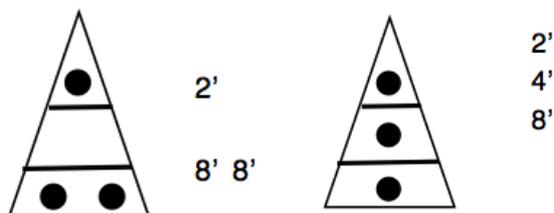
-No quick jumps over 1 octave, we need a pause to move the hand and keep in mind that we can not see the keyboard!

-No prestissimo passages: we can play comfortably fast in one position but problems arise when we need to change the hand position. It is better to avoid fast virtuosic runs. Or include pauses or a fermata to slide the hand under the strap.

-No glissandos: the shape of the buttons is not flat like the right hand, so the hand does not slide comfortably. You can simulate a glissando on the left hand with a fast legato chromatic scale or a small cluster moving within the fingers.

***[\*AUDIO 4.5: left hand glissandi]***

## The left hand registers (see also chapter "Notation")



The left keyboard has fewer register possibilities than the right keyboard and there are often large differences between individual instruments.

The most common combination is the one above on the left: two low reeds (similar to the 16foot for the right hand) from E1 to C#6 plus one very high (from E3 to C#8).

The lowest octave (E1-E2) has a low voice and one voice one octave higher. This is for practical reasons, they cannot fit more reeds inside the left body of the accordion.

This first registers combination has some great qualities, with a powerful bass notes and wide range (the same as the right hand). And of course you can choose different combinations of registers.

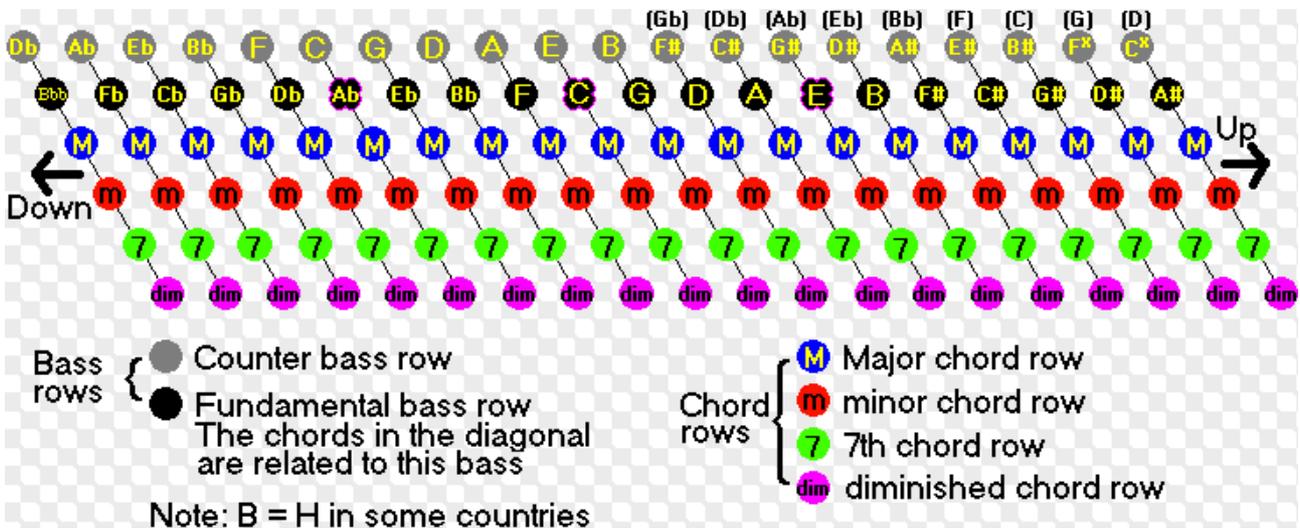
The second possibility is the picture above on the right: one low reed (E1-C#6), one central (E2-C#7), and one high (E3-C#8).

This model in my opinion is a bit worse: less powerful and effective.

Unfortunately there are considerable differences between different accordions. For example my accordion has only the two lowest reeds and no high register, so I can only play within E1-C#6. However, my accordion has better control over key pressure and I can also use a "sordina", a thin metal foil which slides to give a softer, mellowed sound.

Furthermore I cannot play with just one reed, I always have the two of them sounding. This means absolutely no pitch bending on the left hand with my accordion.

## The Stradella Basses



One important feature the left side of all the accordions is the possibility to switch between the free basses keyboard ("Bariton basses") and the "Stradella basses".

The "Stradella basses" (or "standard basses") has two rows for single bass notes and four rows for fixed chords.

In order to switch to this keyboard we press a long register button called "converter" which acts on the four external rows, turning each button into a chord selector.

Because the converter is quite long it is easily accessible from every position on the left keyboard (picture on the right).

The standard notation for "free basses" and "stradella basses" is **BB** (bariton basses) and **SB** (stradella basses).

Be aware that this key is quite noisy.

**[\*AUDIO 4.6: converter noise]**

Remember that you can not use the two keyboards (free basses and Stradella) at the same time!



The bass notes are lowest octave of the instrument (usually starting from the lowest E of the piano). They are arranged for intervals of fifth (C-G-D-A-E and so on), following the popular origins of the instrument.

**[\*AUDIO 4.7: bass and counterbass]**

Every bass note has four dedicated fixed chords: major, minor, seventh and diminished. The chords are notated with these symbols:

Major:M                      Minor:m                      Seventh:7                      Diminished:d

**[\*AUDIO 4.8: chords and Stradella basses patterns e.g. waltz, tango, polka, beguine...]**

This makes it very easy to accompany traditional melodies but this keyboard can also be explored in a more creative and contemporary way:



[Luciano Berio - Sequenza XIII - Chanson]



[Salvatore Sciarrino - Vagabonde blu]

## 5 - THE BELLOWS



The bellows is a paper and silk extendible element that links the right and the left bodies of the accordion.

It is the lungs of the instrument, which pulls and pushes the air through the reeds to produce sound.

Remember that we have one bellows for two keyboards, this means that the air flow is the same for both hands.

The accordion has a large dynamics spectrum from *niente* to *fortissimo*, but it is important to bear in mind that the air pressure produced by the bellows influences both of the manuals with the same power. A *fortissimo* in the right hand means automatically a *fortissimo* in the left hand as well.

It is not possible to play *pianissimo* on one keyboard and at the same time *forte* in the other hand!

Therefore, it is not possible to emphasize one note dynamically above the others.

It is possible to compensate to some degree for this limitation of the instrument through registers, octave-doubling and articulation.

***[\*AUDIO 5.1: same dynamics for both hands]***

The changes in opening and closing the bellows is completely different from the movement of a bow. If we open a certain amount of air we have to close exactly the same amount, we cannot lift our "bow", move it in silence to the opposite side and then play again.

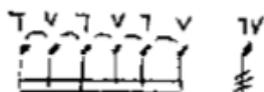
The amount of air needed can vary depending on:

- volume,
- number of played notes,
- and register.

We can sustain a single *pianissimo* note for up to 2 minutes, but a huge cluster with both hands will run out of air in less than half of a second. This means that we need to change the bellows direction to continue the sound and the notes will be re-articulated.

**[\*AUDIO 5.2: long single pp note - very short clusters]**

## Bellows shake



The accordion has no endless tones. It “breathes” like a wind-player or a singer. If you change the bellows direction while playing a note, the tone is interrupted and re-articulated. This is because there are two reeds per note: one for opening bellows, the other for closing it.

This re-articulation by bellows lead us to a very interesting technique, the “bellows shake”. Bellows shake means to re-articulate the note not by the fingers but by the bellows, opening and closing. The fingers are free to play single notes, chords, scales, clusters, basically anything.

We can use this to obtain an effect similar to a string tremolo, with many possibilities for sound, chords, volume, note change, speed and so on.

The bellows open and close but we can put accents on any rhythmic patterns, 2-3-4-5-6 and so on. However even patterns are much easier to play.

Please remember that our left hand is moving a 8 kilograms box, so there are limits to duration and volume. The more *fortissimo* and fast the passage is, the more tiring it will become. Performers are trained for this but please do not exaggerate the gesture.

See the chapter “notation” for some tips on how to notate the bellows shake.

**[\*AUDIO 5.3: Bellows shake examples]**

## Ricochet



The accordion ricochet is similar to the ricochet of a bow.

It is obtained by bouncing the left body of the instrument on the almost-closed bellows (about 1 or 2 cm open).

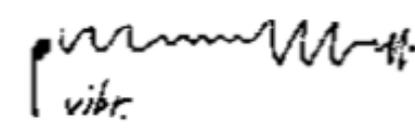
Though the “bow” is very heavy, ricochet is actually much less tiring than the bellows shake.

It is possible to ricochet in duplets, triplets and quadruplets. Some very talented players can even play it in quintuplets.

The difference with the bellows shake is that in ricochet the stress position is very evident, while in bellows shake notes are much more even and detached. Triplets are the easiest, and can also be played considerably fast.

**[\*AUDIO 5.4: Ricochet examples]**

## **Vibrato and impulses**



The accordion can easily create vibrato in many different ways; by moving the hands in contact with the instrument’s body, by shaking the left knee, and by vibrating the left hand near the bass strap. The oscillation can easily vary in speed and rhythm.

Any touch or movement on the accordion will generate a variation in the regularity of a sustained sound, unfortunately (and very often) even movements that are not made on purpose.

Vibrato is much more effective and controllable in the softest dynamics.

If one hand is free (not playing any note) we can use it to perform a very high quality vibrato.

**[\*AUDIO 5.5: Vibrato with one hand]**

The louder the sound is, the slower and harder the vibrato becomes. If we emphasize the dynamic contrast, we can sustain some evident impulses.

**[\*AUDIO 5.6: Vibrato and impulses]**

Vibrato on the accordion is essentially a variation in volume, unlike strings, and the pitch does not change at all.

Beautiful transitions can be obtained using vibrato, impulses, bellows shake, ricochet, and finger rearticulation.

**[\*AUDIO 5.7: transitins within different ways of re-articulating notes]**

The image shows a musical score for an accordion. The top staff is a single line with a treble clef, containing a series of notes with 'V' marks above them, indicating bellows shakes. Above the staff, it says 'bellows shake, poco a poco impulsivi (♩ = ca 72)'. Below the staff, there are 'niente' markings. The bottom staff is a bass clef with notes and a 'rallentando' marking. A dynamic marking 'mf' is at the start, and 'p' is later, with a 'niente' marking at the end. On the right side, there are vertical lines and the letters 'G P'. Handwritten notes '5/12/2010' and '20" 25"' are visible at the top left, and '3" 4"' is at the top right.

[Krzysztof Olczak - Pantasmagorien]

See the chapter on "Notation" for more tips about vibrato notation.

### Air button sound



Originally born as a "polite" way to close the bellows without playing a note, the air button sound has an important role in contemporary writing for accordion, as it sounds almost like a human breath.

To make it audible the performer has to pull and push with great force, but the resulting volume will be *piano* (maximum *mezzoforte*).

Very important: the air button must be used alone, and if it is played with any other accordion sound it can not be heard. It will also not be heard within an ensemble.

In many accordions this sound is different between opening and closing.

**[\*AUDIO 5.8: air button and its volume]**

Air can be used as a beautiful transition to *pianissimo* notes.

**[\*AUDIO 5.9: transitions air - notes]**

The air button is located on the top side of the left keyboard, so for a C-griff and Finnish system it is nearest the lowest tones. Our left hand is located near to the lowest octave, so time is needed to move the hand to higher octaves.

## 6 - MICROTONAL TECHNIQUES



*[Nildo Sanvido - Due piedistalli]*

Note: both staves are played with the right hand.

### Pitch bend glissando

By slowly, partially raising the key and increasing the bellows pressure we can de-tune the note. The tone goes slightly flat and then can be raised back to the original note.

There are many possibilities with this technique but also some very clear limitations:

- It only works on one reed at a time. This means one note in one register (see below for additional information).
- It is possible to lower a note and hold the detuned pitch, or to lower a note and then bend it back up to the original position. We can also start the note in the detuned position, which works best in low registers.

***[\*AUDIO 6.1: bending down and up]***

- The lower the note, the more the pitch can be bent. It can range from dropping a semitone around the middle C, to dropping a fourth on the lowest E of the instrument. It is still audible one octave above middle C (C5-D5), but the range in this register is very narrow, and we need to strongly increase the bellows pressure. The maximum range for the pitch bend can vary a lot from instrument to instrument.

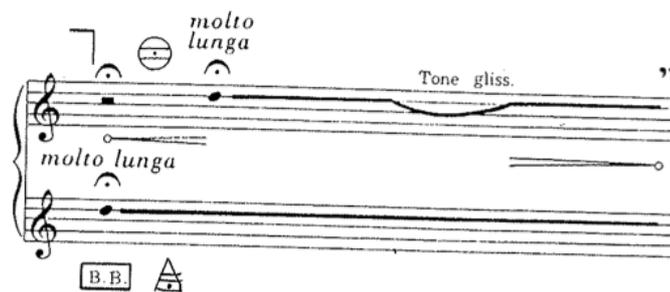
***[\*AUDIO 6.2: width of bending]***

- Remember, to make this effect speak, keep the passage at a slow tempo! Bending takes time to activate, especially on high notes.

- A pitch bend glissando works best on the right hand. On some instruments (like mine) it does not work at all on the left hand, because there are two active reeds per note at all times.

**[\*AUDIO 6.3: not good bending on L.H. for some accordions]**

- For instruments which can perform a pitch bend on the left hand, the range of the glissando is larger in lower registers, but even the lowest notes are usually not able to bend more than a tone. This is because the left hand reeds are usually much stiff to obtain a "solid" tone in accompanying.
- This effect can be used in a very convincing way when combined with static notes in the left hand, giving way to beatings or oscillations.



[Arne Nordheim - Flashing]

**[\*AUDIO 6.4: beatings]**

- It is possible to perform a pitch bend glissando while also holding sustained notes in the right or left hand. Remember that while voicing the bend we strongly increase the bellows pressure, which results in a large crescendo of any non-bending notes.

**[\*AUDIO 6.5: bending plus non bending notes]**

- It is at times possible to lower two pitches at once. This can include either two played notes - or one note within a double reed register. The effect will be quite uncertain, as we cannot control which note will bend down first.

**[\*AUDIO 6.6: pitch bend glissando of two notes]**

- Similar to the above points, keeping the key half down and giving impulses with the bellows will lower and raise the pitch rhythmically. This can be called a "microtonal shake".



**[\*AUDIO 6.7: microtonal shake]**

-Microtonal registers effect: when holding a note and slowly switching register there will be a crossing point where the old reed will be gradually closed (with the pitch bending down) and the new reed will be gradually opened (with the pitch raising from a de-tuned note to the fingered note). This requires slow tempo and long tones. The effect varies depending on the registers you are switching.

**[\*AUDIO 6.8: microtonal register effects]**

Fig. 193

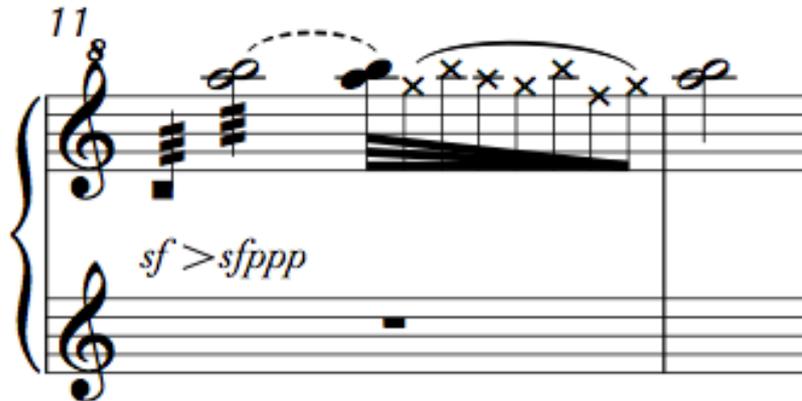
The musical score for Figure 193 shows two staves. The top staff is in treble clef and contains a whole note with a slur over it. Above the staff, there is a delta symbol (δ) in a box. The bottom staff is in bass clef and contains a whole note with a slur over it. Below the staff, there is a delta symbol (δ) in a box. The score is marked with dynamics: *pp*, *p*, *mf*, and *f*. There are also some musical notations like a triangle and a circle with a dot.

[Stefano Trevisi - *Breaking a curtained haze*  
for accordion, sax, guitar and cello]

-Interesting effects can be obtained combining pitch bending and air button

**[\*AUDIO 6.9: bending plus air button]**

## 7 - NOISES



[Lesley Hinger - *In lightness*]

The accordion is a very noisy instrument, and can produce some noise even by just shaking it.

**[\*AUDIO 7.1 shaking an accordion]**

These noises can be incidental (similar to the keys noise, register switching noise, and the creaks of the bellows) or they can be produced intentionally.

This is a list of the most common noises that can be performed on the accordion:

- buttons noise (like a typewriter)

**[\*AUDIO 7.2 button noises, right and left hand]**

- slapping sound on the bellows (semi-open) - followed by scratching bellows

**[\*AUDIO 7.3 slapping bellows - scratching bellows]**

- knocking on the accordion body (wooden sound)

**[\*AUDIO 7.4 knocking on the body]**

- knocking on the bellows (drum sound, the more open the bellows is the more effective it is)

**[\*AUDIO 7.5 knocking on the bellows]**

- register switches clicking

**[\*AUDIO 7.6 registers noises]**

- air sound (see chapter on bellows)

**[\*AUDIO 7.7 air, simple, re-articulated, bellows shake]**

There is no standard notation for noises, so you may use your own preferred notation. Try to be as clear as possible in the legend.

Please notate air sounds on the left staff, as they are performed by the left hand).

All the other noises are usually performed by the right hand, so it is better to put them on right staff unless you intentionally want them in the left hand.

The image shows a musical score for an accordion. It consists of two staves: a right-hand staff (treble clef) and a left-hand staff (bass clef). The right-hand staff contains several measures of music with various notations for noise, including 'f', 'b.s.', and 'p'. The left-hand staff contains corresponding notations for air sounds, including 'p < mf > 0'. The score is marked with 'A1' and a circled 'F'.

[Stefano Trevisi - Breaking a curtained haze, for accordion, sax, electric guitar and cello]

In the above example the noise in the first bar is the scratching of right hand nails on the bellows; in second bar there is a glissando with only key click noises, plus bellows shakes on the air button; the last bar has a trill on two keys of the right hand, with just click sound.

The image shows a musical score for an accordion. It consists of two staves: a right-hand staff (treble clef) and a left-hand staff (bass clef). The right-hand staff contains several measures of music with various notations for noise, including 'ff', 'f', 'mf', 'mp', 'p', and 'pp'. The left-hand staff contains corresponding notations for air sounds, including '3' and '2 3/4 4'. The score is marked with '(m.d. knocking on the bellows)', '(sempre accel.)', and '(Press Air-button until the bellows are closed)'. The score is marked with '3' and '2 3/4 4'.

[Arne Nordheim - Dinosaurus]

## 8 - NOTATION

The notation for accordion is similar to the piano. We use two staves, where the upper staff is always for the right hand and lower staff is the left hand. Sometimes the score is notated in more than two staves for more clarification, given the large range we can play with the right hand.



The image shows a musical score for accordion, consisting of three staves. The top two staves are for the right hand, and the bottom staff is for the left hand. The score includes dynamic markings such as *p*, *f*, *mf*, *sfpp*, and *sf*, and articulation marks like accents and trills. The piece is numbered 31.

[Giorgio Tedde - Ballu]

Cross-staff notation is not used with the accordion. In the next example, A is much better than B, provided all the notes are intended to be performed on the right keyboard.



The image shows two musical examples, labeled a) and b), illustrating different ways to notate a sequence of notes. Example a) shows the notes on a single staff, while example b) shows the notes on two staves, with the lower staff having a '5' written below it.

[example quoted from: "Handbook on accordion notation"  
by Geir Draugsvoll and Eric Højsgaard]

For more specific indications you can refer to the right hand and keyboard using **R.H.** and to the left with **L.H.**

On the left manual the code for free basses (bariton basses) is

**B.B.**

while the symbol for Stradella basses (chords) is

**S.B.**

If you want us to use the two inner rows while on free basses the code is often the same, or just **S**.

On Stradella basses the notation is NEVER the sounding pitches, but is written as follows:

- the bass note is notated in the lower half of the F key staff
- the chord (just the root note) is notated in the upper half of the F key staff
- the abbreviation for the chord quality (M m 7 d) goes above the chord note

esempio

S e SB      accordi      SB

### Real pitch - loco tastatura

As the accordion is an octave-transposing instrument through the use of registers, there would be two possibilities in notating the octaves:

- "real pitch" means that you write the sounding pitch and we choose the hand positioning depending on the selected register. This is the clearest approach and becoming increasingly popular. Please use this approach. In the following example (bar 3) the written register will actually lower the perceived sound by one octave, so the performer must move the hand one octave higher to avoid this effect. Pay attention that when using registers with a 16 feet root our keyboard will be an octave lower in the highest register. Likewise, you lose the lowest octave when using the 4 foot register alone.

A musical score for an accordion piece titled "Discotoccata" by Petri Makkonen. The score is written for two staves, treble and bass clef. It features a complex rhythmic pattern with many sixteenth and thirty-second notes. Above the treble staff, there are numerous fingering numbers (1-5) and dynamic markings such as *f*, *ff*, and *mf*. There are also some circled symbols above the staff, possibly indicating register changes or specific performance techniques. The piece is in a minor key, as indicated by the flat sign on the first staff.

[Petri Makkonen - Discotoccata]

- "loco tastatura" (or local tessitura) means that you write the hand position rather than the sounding pitches, keeping in mind that different registers will effect on the resulting octave. This notation is very common in Russian literature and in pieces that are more than twenty years old. In the following example the hand of the performer is on the written octave but the selected register will lower the resulting sound by one octave.

A musical score for an accordion piece titled "Sonata n°3 - IV movement" by Vladislav Zolotaryov. The score is written for two staves, treble and bass clef. It features a rhythmic pattern of eighth and sixteenth notes. Above the treble staff, there is a circled symbol with a cross inside, possibly indicating a register change. The piece is in a minor key, as indicated by the flat sign on the first staff.

[Vladislav Zolotaryov - Sonata n°3 - IV movement]

My great suggestion is to use real pitch notation, and make a note of it in the legenda!

## Register notation

Right hand registers are written as a circle with two horizontal lines and they must be written above the staff. All 15 registers are combinations of these 4 main registers,



8 feet with cassotto (mellow sound)



8 feet without cassotto (sharper sound)



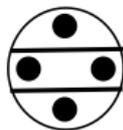
16 feet (always with cassotto, mellow sound)



4 feet (always without cassotto, sharper sound) "piccolo"

In registers combining multiple octaves, it is always the lowest octave which defines the resulting sound.

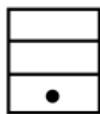
This is the "tutti" register:



4'  
8' (cassotto) 8' (fuori)  
16'

Left hand registers are written as a triangle or a rectangle with two horizontal lines, and they must be written below the staff.

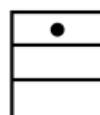
These are the possible combinations in most common instruments.



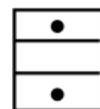
8 feet register. This actually sounds as the 16 feet register in the right hand. They call it 8 because it is the main register for L.H. with real pitch sounds.



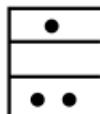
8-8 feet. In the lowest octave this register sounds actually as a 8-4 (equivalent 16-8 of the R.H) because it is technically impossible to fit into the left box two 8 feet rows of reeds.



2 feet (sounds as the 4 feet R.H. register.) "*piccolo*"

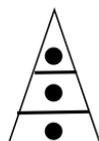


8-2 feet



8-8-2 feet "*tutti*"

As said some accordions have different combinations on the left hand:



2'  
4'  
8'

This is a common combination.



And this another common combination, particularly for Russian-built instrument. However there is no *piccolo* register, so the high register is limited.

### Bellows notation:

I strongly recommend (unless you really need it for some peculiar effects) that you let the performer choose the most suitable bellows changes throughout the piece. The bellows changes are TOTALLY different from that of a bow. If we open a certain amount of air, we have to close exactly the same amount. We cannot at all lift our "bow", move it in silence to the opposite side and then play again.

Our bellows changes depend on the size of the instrument, on the muscular strength of the performer, on the amount of played notes, on the position of the bellows at the moment, and on personal tastes and preferences. It is best to let the player choose what will work best for you.

The bellows can be notated on a dedicated line:

The image shows a musical score for two parts: **Mantice** and **Accord.** The **Mantice** staff is a single line with a double bar line at the beginning, marked **105 F**. It features a bellows dynamics line starting with **BS legato - dolce** and ending with **con fuoco**. The **Accord.** part consists of two staves (treble and bass clef) with a **CUE11** marker. The dynamics range from **pp** to **ff**, with a **p** dynamic in the middle. The time signature is 2/4.

[Davide Ianni, Testo, for accordion and live electronics]

Or, more commonly, the indications are on the staff (open - close - vibrato - bellows shake)

The image shows a handwritten musical score for an accordion. It features two staves (treble and bass clef) with various performance instructions. The top staff includes **gliss.**, **vibr.**, **mp**, **pp**, **sffz**, and **V** (vibrato) markings. The bottom staff includes **gliss.**, **vibr.**, **pp**, **sffz**, and **V** (vibrato) markings. The time signature is 4/4.

[Adriana Hölszky - Miserere]

**Bellows shakes** can be notated using the following signs:

⌋ for "out" (in some Russian edition this is used for "in"),

∨ for "in" (in some Russian edition this is used for "out"),

or, even better, with the tremolo symbols.

When you want us to end the bellows shake, write **N.B.** (natural bellows).

Keep in mind that we can re-articulate notes with the same finger, with different fingers (even on different buttons for a couple of rows), or with the bellows.

Usually if you write a re-articulation of the same note, we are default to finger movements.

*Con spirito* ♩ = 84

*leggiere*

(1 2 3 4 1 2 3 4)

*pp*

**B.B.**

[Petri Makkonen - *The flight beyond the time*]

Tremolo lines on a longer note suggest us to move the bellows:

57

*mp*

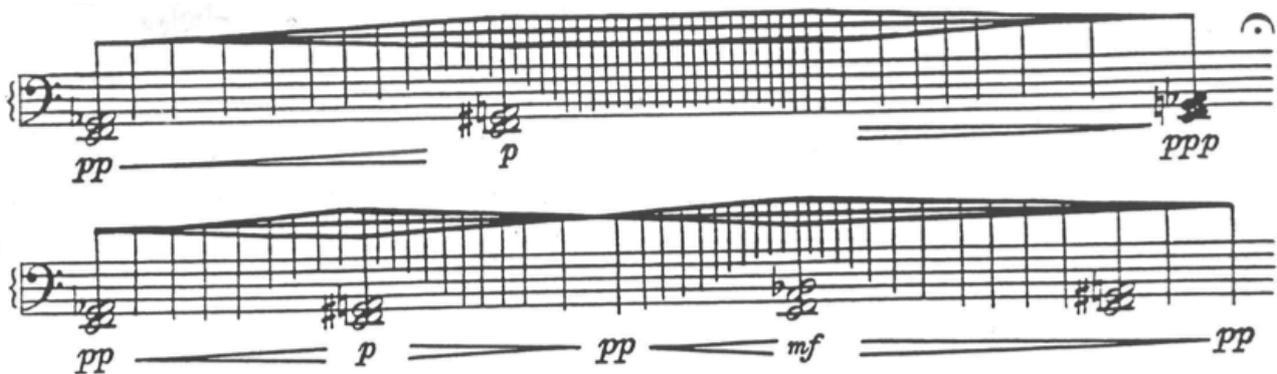
*f*

5

5

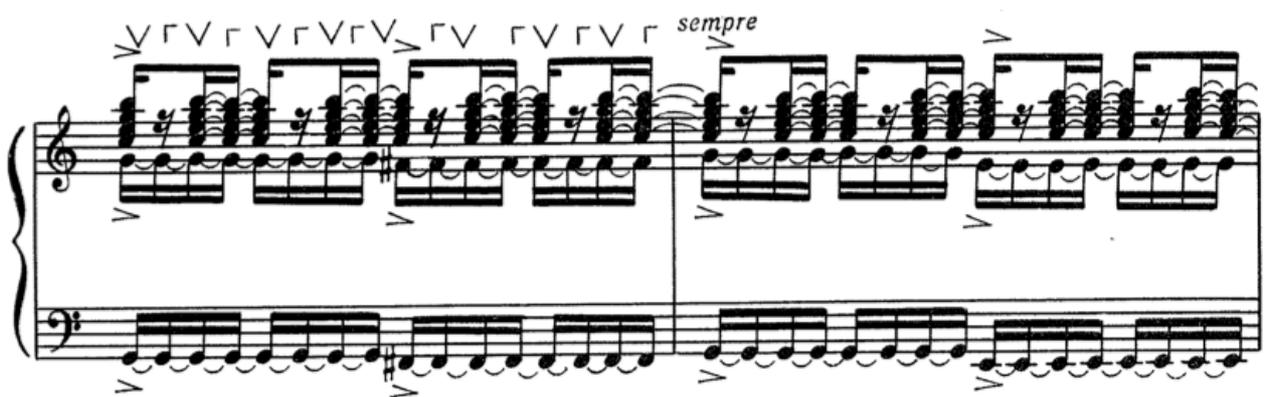
[Lesley Hinger - *In lightness*]

Unless you would like an accelerando or decelerando as in the beginning of De Profundis:



[Sofia Gubaidulina - De profundis]

Or unless you need a very specific notation in the division of the beat:



[Vladislav Zolotaryov - Sonata n.3 - IV movement]

Honestly there are many different possibilities, and this is just a general suggestion.



## 9 - MIC'ING TECHNIQUES AND ELECTRONICS

These are the possible mic'ing techniques for the accordion:

1 - Two mics on two stands near the two keyboards. Remember 3:1 rule! The distance between the two microphones should be three times the distance between every mic and the source.

Pros: detailed sound and not too much bleed

Cons: the left hand moves, so its volume will change during the movement.

I suggest putting the microphones approximately in the center of the arc that the left hand will draw.

2 - Stereo middle distance miking (e.g. ORTF position).

Pros: More balance between the two hands; sounds similar to the real perception of a listener in front of the accordion.

Cons: less detail on the direct sound; more mixing of the two sources (pay lots of attention to the phases!)

3 - Mics on clips attached to the instrument, or taped.

Pros: greatest balance within the two hands, very low bleed from speakers and from the other hand.

Cons: the sound is slightly artificial, with the left hand always maintaining same volume. With very sensitive microphones the area near the mic will be slightly louder than others octaves of the keyboard.

4 - Internal microphones.

This possibility has been utilized and it is actually quite popular on jazz and folk instruments with a jack output. NO contemporary accordion has this system. It is very practical and fast-wiring but the sound is too much "in the box", and is not suitable for "classic" sound.

**Studio recording:** in my recording studio I primarily use the first technique, sometimes incorporating the second one (ORTF) or adding it and using 4 microphones.

**Live miking:** in my experience the most common live miking technique for contemporary accordion is the first suggestion, as it is the easiest to request from technicians.

I should note that I am quite sure that the best solution for live performance, and for using of electronics is the third option, but it is not common for an accordionist to own those mics (I personally do not own them, but I hope to in the future).

### Accordion and live electronics:

Using a pedal controller and a pair of microphones is the most common setup for pieces with electronics. However, there are some limits to our foot movement in regards to triggering:

- we cannot use our left foot, as it is firmly placed on the floor and sustaining the whole weight of the accordion
- many movements of the right foot will effect on the sound of the instrument through vibrations or impulses, so try to avoid cues on long *pianissimo* notes. Rather, put them on sudden changes or in a *forte* passage.

This is a common use of live electronics: a Max patch acting on live material performed by the accordionist. Here we only need to have the cues notated in the specific points they have to be set, and we will press the midi pedal.

[Davide Ianni - Testo, for accordion and electronics]

This next example is a much more difficult combination:

- accordion
- pedalboard
- expression pedal

This setup could lead to a number of possibilities in the future, but I have to admit that studying the actions of the feet has been almost as hard as studying the accordion part!

[Lorenzo Troiani - Beta, for accordion and pedalboard]



Please send feedback to help me improve this work, and I will take your suggestions into consideration on the next release.

If you have found this book to be useful, please consider donating a small amount on my PayPal account (my account is *info@lucapiovesan.it*) or by buying one of my albums (contact me for more details).

This work is the result of hundreds of hours thinking, writing and recording, along with decades of experience.

I would be very grateful for your help.

Good Music to You.

Luca

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