Gerdran Modut

Bombarde, How to

Version 6.0

Cover Photography: the monument dedicated to the "Sonneurs bigoudens"(traditional bombarde and biniou players from the Bigouden region in SW Brittany), bronze made by René Quillivic (1879 - 1969). This sculpture was at fist made in plaster in 1907, then in bronze in 1908 or 1909, then erected as a public monument in Plozévet (29) in 1937.

About this English version

The original document was written in French and entitled "*Bombarde, mode d'emploi*" then I translated and adapted it myself from French to my broken English.

Many thanks to David Bateman, a Scottish musician, who polished my poor English translation and corrected my numerous mistakes (vocabulary, grammar, syntax, ambiguous wordings…). This correction was made while keeping in mind that this English text is not literature and must be easy to understand by all of its readers – the native as well as the non-native speakers of English. It's not so easy. Do, please, get in touch if some parts remain unclear for you.

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Bombarde, How To

or

Beginning the Breton Bombarde by teaching yourself;
it 's possible and not too complicated

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Foreword

The aim of this document is not to teach you how to play the Breton bombarde but to help you to learn by yourself how to play it.

This document is basically the English translation with slight adaptation here and there of "*Bombarde, mode d'emploi*" a free method for self-learning the Breton bombarde. This document was written by a Breton bombarde player mainly for Breton beginners, so all the useless stuff only concerned with learning and playing the bombarde in Brittany has been shortened or removed from the English version and some other parts have been modified to better suit learning in a foreign context.

The Breton bombarde in a few words

The bombarde is one of the traditional woodwind instruments from Brittany and often seen as the most typical one.

The bombarde is a small member of the oboe family (i.e. conical-bore and double-reed). It's a very powerful instrument needing a high breath pressure to play it, so the player needs short rests during playing and it's not really a solo instrument. Because of its very loud nature, it's absolutely not an indoor instrument; it is suited for playing marches and dances outdoor, traditionally as a member of the "soner pair" and more recently in the "bagads".

The player of the bombarde is called the *talabarder* in the Breton language but the word *soner* (*sonneur* in French) is more commonly used. A *soner* is a musician playing traditional instruments whatever the instrument, however in Brittany this word is now mainly used to name the players of the bombarde and the biniou.

The traditional Breton "soner pair"

The "soner pair" (*couple de sonneurs* in French, *sonerien daou ha daou* in Breton) is the traditional set made by one bombarde playing with one biniou. The *biniou* is the loud small Breton bagpipe playing one octave above the bombarde. Like the bombarde, the biniou is not really a solo instrument because of its very high pitch. The two instruments complement each other, so the "soner pair" might be considered as one single instrument played by two players more than two instruments playing together.

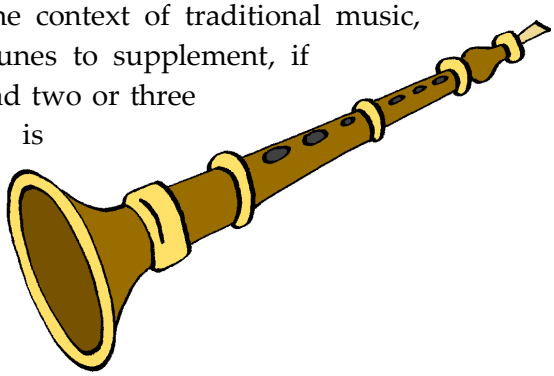
The Breton bagad

The bagad is the Breton copy of the Scottish pipeband with just a section of bombardes added to it. It's not a traditional Breton band, it appeared in Brittany after WW2 then quickly took a important place, a much too important place in the opinion of many soners, in Breton music in comparison with the traditional "soner pair".

Framework of this document

This document is within the framework of self-learning with the goal of becoming a musician more oriented towards the traditional Breton "soner pair" music than to the bagad music and therefore deliberately leaving aside the music theory.

Yes, it's quite possible to learn the basics of playing the bombarde through solitary practice, without necessarily slipping into bad habits and you can teach yourself the bombarde without any notion of music theory. The latter, in addition to being a very boring discipline represents the freezer of traditional music. In the context of traditional music, music theory has only one interest: archiving tunes to supplement, if needed, faulty memory, because being able to read two or three scribbled notes[1] of the beginning of a tune is sufficient to recover the remaining part of it. Learning a traditional tune by ear with the help of its score, why not? But learning a traditional tune from only its score, what an aberration!



Prerequisites

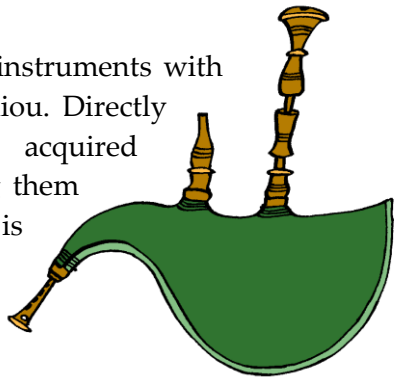
The only prerequisite for the self-learning way proposed by this document is the motivation, but turning to such characterful instruments as the Breton bombarde and the biniou without a strong attraction and thus a strong motivation is rare. The bombarde and the biniou are both instruments with strong personality, you love them or you hate them but they rarely leave you indifferent!

[1] In the palm of your hand, possibly!

In fact, a second requirement is very useful although not essential: it is to have heard and felt what "soner pair music" is really by feeling it live, close by and without sound system and played by good soners and not only coming from music box (CD, videos...) or sound system; you must have felt yourself immersed in this sound bubble, have physically felt the incredible presence of these two instruments which form one whole and you must have felt your guts vibrate deep within yourself. To be brief, you have to know what attracts you to this music and these instruments and not just have a fantasized vision of their reality, which could lead you to disappointment.

And the Biniou in all this?

This document is essentially talking about the bombarde and very little, in comparison, about its inseparable companion, the Binioù kozh[2]. Why?



Because in a self-learning context it is best to start these instruments with the bombarde to have then a smooth transition to the biniou. Directly starting the biniou needs too many things to be acquired simultaneously without the possibility of really separating them (fingering, breathing technique and blowing power) which is quite difficult, so after having loosened your fingers on the bombarde and having acquired a minimum of blowing power, getting started with the biniou becomes much easier and faster.

In addition, a good biniou player must understand well the way of playing the bombarde since the latter is leading in "soner pair music", or at least gives that impression because it does impose the theme and tempo.

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[2] *Binioù* (the Breton word for *bagpipe*; in French, it's the same word without accent) or *Binioù kozh / coz* (= old bagpipe) or *Binioù bihan* (= small bagpipe) are three ways for naming the same instrument. Adding an adjective to *Binioù* is just a modern way to avoid to confusing it with the Great Highland Bagpipe which is sometimes named *Binioù braz* (= great bagpipes) in Brittany, rather wrongly because *Binioù braz* or *Binioù nevez* (= new bagpipes) was originally the name of a local variant of the Scottish bagpipes created after the Second World War by the instrument maker Dorig Le Voyer; this instrument was played with an open fingering and not with the Scottish fingering; this instrument without much interest is now totally abandoned.

Some Breton soners are offended by the qualifier "*kozh*", arguing that it would be useless even contemptuous, tolerating only *biniou* tout court to designate the instrument. This view, although defensible, is questionable because there is nothing contemptuous in this qualifier and it is far from useless because the word *biniou* has always been ambiguous: in fact, in addition to confusion with other pipes mentioned above, it will be recalled that formerly a soner pair was simply named as "*Les binious*" in Brittany, without distinguishing the instruments and even without distinguishing the instrumentalists! In short, too much precision, and no matter the term used, does no harm.

The reverse is true and any bombarde player must know how to play the biniou correctly. A soner in pair is a soner in pair, the biniou and the bombarde form one indivisible whole and any soner in pair must be able to pass easily from one instrument to the other. In public performance, it's frequent that each partner of a soner pair, always plays the same instrument (bombarde or biniou) but in private practice the partners freely interchange. In addition, in a soner pair it is not always the best player of the two who takes the bombarde[3] (leading instrument), contrary to what is imagined by those who don't practice these instruments and even sometimes by some who practice them...

And afterwards?

Certainly, learning alone can only last for a limited time, the time needed for acquiring the basics, because the bombarde is not a solo instrument and, once you have acquired these basics, you will have to find one or more partners, preferably self-taught like you to play as a traditional soner pair – it's the best way if you have the opportunity to do that – or to join a modern folk band, etc., and then another story starts for which before long you won't need my advice any more...

[3] A good bombarde player can more or less compensate for a weaker biniou player, but the only one of the two who must play solo passages is the biniou! In the event of a significant level difference between the two players, if the best one takes the biniou that often gives a much better balanced pair than the opposite, without that being an absolute rule.

The myth of the technique

If beginners have great difficulty in controlling their bombarde, it would be due to lack of technical mastery and it is the gradual assimilation of the technique that would allow them to advance in the control of their instrument.

That's what you'll hear[4] and read often.

Do not believe it!

The first thing to do before starting the bombarde is to get out of your mind that old myth that will only delay you in your learning by giving false explanations to a real problem. But false explanations imply false solutions and thus worsening the problem...

The bombarde is a powerful instrument that cannot be mastered immediately. The risk is hence to overestimate the technical side of this learning time.

The origin of the myth

The memory of one's own beginning stages

When we start the bombarde without any experience of powerful wind instruments, we all have the same delicious impression: that of blowing into a clogged tube as our brain emerges from our ears. The groan of pain then emitted by the instrument is not very musical but fortunately the torture of the instrument, of its servant and of those around him stops quickly because the *talabarder*[5] newbie is generally not able to emit more than four or five

[4] Fortunately, as a foreigner living outside of Brittany, you will be partially protected from hearing that!

[5] Bombarde player in the Breton language.

notes before exhaustion and air leaks put him in a state of pre-syncope, making him regret not having chosen the recorder or the triangle instead...

Thereafter, it is a little better, but not as quick as the apprentice-soner would like: he often feels that he's standing still and wonders if one day he will come to play this loud and recalcitrant thing correctly. Noting that other beginners, who chose other instruments than the bombarde, often progress much faster than him at the bombarde, he gets annoyed and begins to ask himself questions about his capabilities and what is wrong. Discouragement is not far away...

Retrospection

Then time flows and with it the control of the instrument comes gradually...

This same soner then will remember his laborious learning curve and will explain his past problems always in the same way: the lack of technique, punctuating his speech by statements like:

> *"I didn't know how to select and correctly adjust the reed"*,
> *"I didn't know how to correctly position my lips on the reed"*,
> *"I didn't know how to pinch the reed correctly"*,
> *"I didn't know how to blow correctly"*,
> *"I didn't know how to manage my breath"*,
> *"I didn't know how to give the right impulse to my notes"*,
> and so on..

All that was certainly true, but the cause of the problem was not there!

The reality

The flaws mentioned above have indeed a consequence on the ***quality*** of the sound produced but not on the ***difficulty*** of producing it.

If getting started with the bombarde is difficult, it is mainly or only a muscular not a technical problem. As the technical mastery, within the meaning of the general mastery of the instrument, is progressing while the musculature is developing and because this muscle development is quite unnoticed, the soner comes to confuse the two and to qualify as *technical* that which is only from the domain of the muscles!

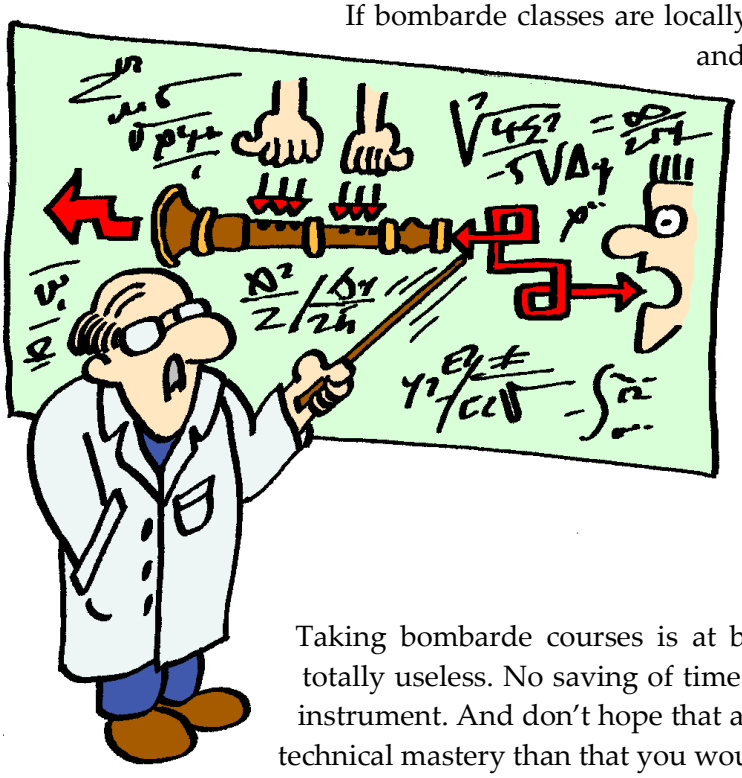
Which muscles are we speaking about? : the respiratory muscles and lip muscles. Indeed the bombarde is one of the most physical instruments among the wind instruments and its learning curve is not really the acquiring of a technique, it is 'body-building'!

Beginners have not to worry: no, the bombarde is not a very technical instrument. Instead, it is a very intuitive instrument whose technique has not to be learned actually but is got spontaneously and without any particular difficulty merely with regular practice. This last word is important: *regularity*, it is essential for learning any instrument and it is even more for the bombarde because of the physical work required. If in the beginning you cannot compel yourself to play a little every day or almost, you will not progress or with great difficulty, not by ignorance of the "technique" but because your muscle training and adaptation will be insufficient. In this case, your learning will be very long and punctuated by sharp regressions at each rather long stop (a few days are sufficient). Rather than saying you *learn* the bombarde it would be more accurate to say that you *train* yourself to play the bombarde, and regularity is the key to any physical training.

Learning the bombarde in a school-like way, as is usually the case when courses are taken in music school (or equivalent), is thus not very useful, because it does nothing to speed up the increasing of muscle and will too often only delay the awareness of it by hiding it under a pseudo-technical morass.

This does not mean that some tips are useless to start the bombarde, because the advice of those who have gone through it before you, allows faster progress. It is the purpose of this document: giving these tips and throwing away the others!

Am I wrong for not taking courses?



If bombarde classes are locally available (it's rare outside of Brittany and very rare outside of France), it's normal to ask yourself that question. It's also normal for you to feel unable to answer it. It's too much to hope that people and structures providing bombarde courses will answer you something other than *Yes, you are wrong...*

The correct answer is: No, you are probably not wrong for not taking courses.

Taking bombarde courses is at best unhelpful and often proves to be totally useless. No saving of time is to be expected for the control of the instrument. And don't hope that after your courses you will have a better technical mastery than that you would get by teaching yourself.

So if you made the choice to train on-the-job by yourself, don't regret that because you made the right choice! ... and if this choice was not really a choice but a constraint (due to the lack of opportunity to take courses locally), consider that this constraint is a chance that prevented you from following a curriculum which would have certainly slowed you in understanding the instrument and which would probably have quickly discouraged or disgusted you, it would have been a shame.

Save time in your Breton soner training thanks to this document: for that, paste your photo on this page to the places provided for this purpose then distribute it to all your friends.

Teachers and teaching

In many domains, particularly in music, a good "teacher" does not need to be a well of knowledge coupled with a virtuoso; he just needs to be only a little better than the one he addresses. And the closer the respective levels are the easier it will be for the teacher to imagine himself as the learner and the more he will know how to communicate with the right words, the right gestures, the right examples, the right metaphors, i.e. in the way he would have liked someone to have done for him a little earlier.

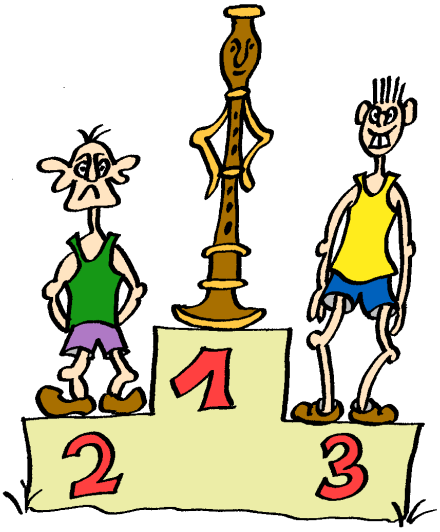
The best teacher for a bombarde beginner, if he actually needs a teacher, therefore, is not a good soner full of experience but simply a soner a little better than him in some domains and the roles may be reversed in other domains. You will never learn better than with your peers! If you know some others who are beginning the bombarde, make friends with them; you won't find a better learning environment that these meetings and better "teachers" of bombarde-playing than these *alter egos*! Playing in the company of your peers, mutual criticism and listening to good soners and singers; you will not need anything else.

But before having contact with your peers, you can rough out the work by yourself and acquire on your own the basics of the instrument. This document is here to help you.

Am I wrong to want to play the bombarde?

YES sometimes... The Breton bombarde is a very physical instrument, very sporty one might say. You should know before you embark on learning it that there are some contraindications. Yes, it's like all sports!

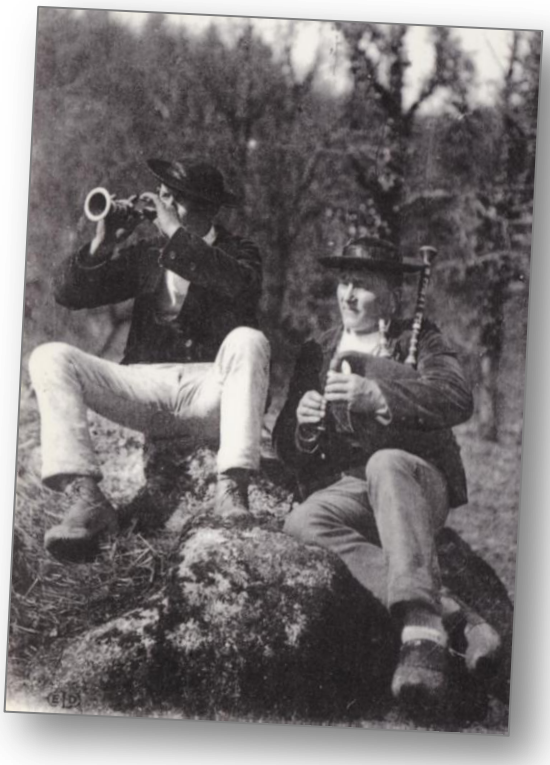
It is also a particularly noisy instrument (see: *What a noisy thing !*) which imposes some logistical constraints that are not always easy to solve...



The bombarde, athletic instrument

Bombarde and health problems

The purpose of this document is not to become a medical treatise, in addition dealing with such a topic needs a better knowledge of the English language than mine, sorry. So, refer to the French edition of this document for a list and comments if you can understand the French language and, if you need to, please consult your doctor who will explain to you why it is best to steer your choice to another instrument than the bombarde.

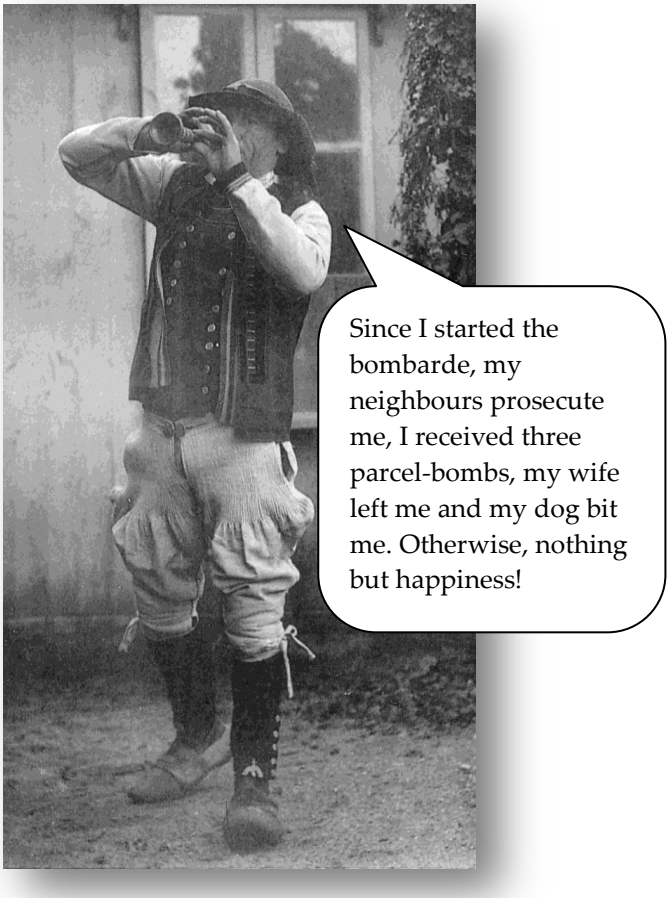


Bombarde and neighbourhood problems

Are you sure you have a room for you to practise without disturbing your neighbours? Playing the bombarde makes a lot of noise and prolonged hearing someone learning the bombarde is a punishment that you cannot wish even on your worst enemy.

If you live in an apartment, do not hope to practise at home because you will have immediately to suffer the whole building complaining to you. In a residential area the bombarde may cause serious problems with neighbours and that may limit the periods of time during which you can practise. It is always possible to go to practise in the fields or the nearest woods (you will generally not be welcome in public gardens...), but you will get tired quickly because of travel time, weather, etc. If you don't live in Brittany you won't get everywhere the possibility to register in a music school which teaches or accepts the bombarde to benefit from the course room...

Consider this noise problem before starting the bombarde, because it is far from being a secondary problem.

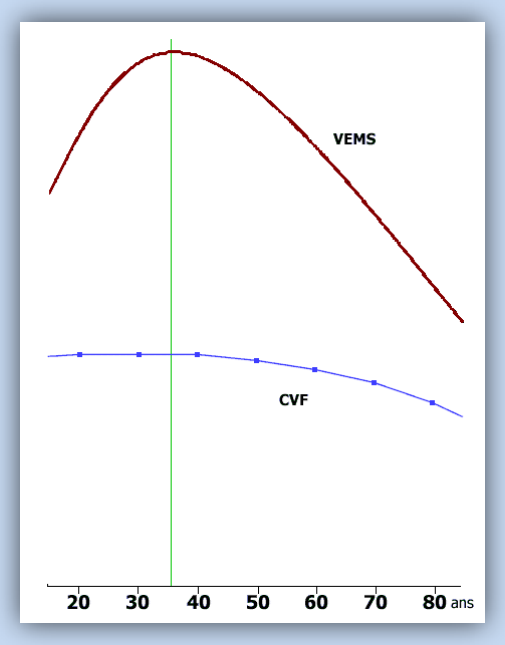


At what age should you start?

It is very difficult to accurately answer this question.

There are no medical contraindications to beginning the bombarde young, so we can answer: as soon as the child enjoys fun (it's the most important), as soon as his fingers are able to plug the holes and as soon as he has enough blowing power to get a sound with a soft reed, therefore about seven to eight years old roughly.

For the upper age limit to start, it doesn't really exist, but be aware that the physical more than technical character of the bombarde makes it not easy to begin this instrument when you are no longer quite young (say more than 45-50 years) unless you already play a powerful wind instrument (brass), otherwise the muscle adaptation will be slow and difficult to obtain. It will be in most cases illusory to hope to reach one day a quite good level, but if you are in this situation, that should certainly not prevent you from taking pleasure in learning this instrument.



There is nothing you can do against Nature...

Here are the average curves of variation of the main respiratory parameters according to the age, in a healthy person without any particular respiratory problem.

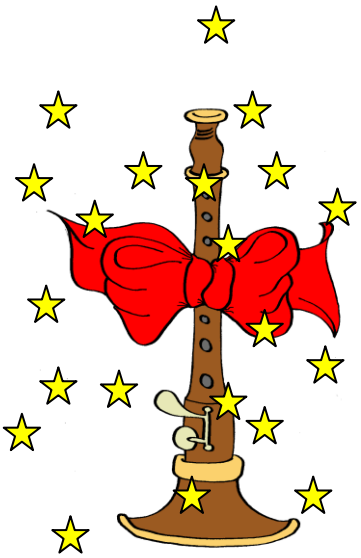
VEMS = **FEV1**: Forced Expiratory Volume in one Second. It represents about 80% of the following parameter

CVF = **FVC**: Forced Vital Capacity. The maximum total air volume that the person is able to expel.

There is an optimum between 30 and 40, then the decline in breathing capacity is inexorable...

NB: units on the y-axis are not indicated because these curves are shifted up or down according to size, sex and training. They shift but keep their general shape. It's not their absolute value that matters here, but their evolution according to age.

I choose my first bombarde



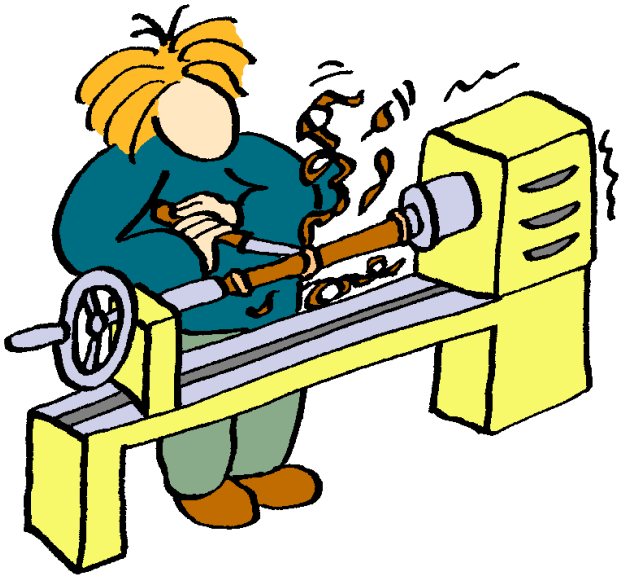
THAT'S it! You have decided to start the bombarde. Congratulations! But that's not all, now you need an instrument...

The choice of your first bombarde is very important because choosing a bad bombarde or a bombarde that does not suit you, may discourage you and definitely give you a false idea of what this instrument really is and what fun it can provide to anyone who plays it.

Choosing a bombarde is choosing the type of the instrument (pitch, mode, wood, number of keys...) and the instrument maker.

The choice of the instrument maker

Without being huge, the choice is wide enough to perplex the beginner... (for a list of addresses, see: *Appendix*)



When starting an instrument without being sure of your motivation, you tend to look for a cheap instrument of initiation "just to see", saying to yourself that if you do continue you'll replace it with an instrument of better quality.

This logical approach is possible for some more classical instruments but is risky for the bombarde. In fact, there are actually cheap bombardes, even very cheap ones: they are instruments of Pakistani origin, which are flooding the music stores and the Internet. Unfortunately, their quality is awful; these pseudo-bombardes have an awful sound and are almost unplayable, they only will make you definitely disgusted by this instrument. A first instrument must be an easy instrument; so, when you know that a Breton soner full of experience is unable to get a listenable sound (or even any sound) out of these "things" in firewood[6], don't expect yourself to be able to practice with that, even temporarily!

[6] Some "luxury" Pakistani bombardes are made of ebony; they are almost as bad as the others because as badly turned and holed, and they are more expensive! They can also be found made from polymer but these have a serious defect: they give off a toxic smoke if burned.

Pakistani bombardes: anything but that! That looks like a bombarde but it's not a bombarde and it does not even deserve the name of music instrument!

Unfortunately, there is no real "learner's bombarde"[7] between these very rough Pakistani imitations and the costly bombardes made more or less by hand by real instrument makers. Fortunately, the second-hand market is there to remedy this lack. It is a very active market and it is possible to obtain a good bombarde at a reasonable price, even if through the eyes of a beginner, their price may seem high for a simple "piece of wood with holes". There are also the solutions of rental or hire-purchase, often forgotten.

Once your choice is set on a craftsman bombarde, the choice of the instrument maker is relatively secondary. For your first bombarde: just select one of the best-known makers; which one is of no importance. You will then get a versatile instrument having a good standard of workmanship. If you make your choice among the lesser known makers, their instruments will be just as good or even better sometimes, but not always and especially they may be more typical, more temperamental, hence more difficult to choose and not necessarily very suitable for a beginner[8]. Now you are just getting started, so it is best to make your choice only from amongst to the leaders of the profession, especially if nobody is there to help you with your purchase; then you can buy with your eyes closed, you won't have unpleasant surprises.

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[7] There were formerly such bombardes, they were manufactured by the Camac company. They are still on the second hand market but be careful not to pay too much for them! Their weak point is their original plastic bell, but by replacing it with a wooden bell, you certainly will not get an excellent bombarde but a good cheap bombarde, which is incomparably better than a Pakistani copy.

[8] Thus, the experimented soner in pair appreciates a very expressive bombarde, i.e. which is very responsive to the slightest variations of blowing and reed pinching, while the beginner sees in such a bombarde only an unstable instrument playing out of tune and he rightly prefers a bombarde that is very stable on the note and with often more bugle-like sound. Only with time and once the mastery of the instrument has been acquired will he be able to really appreciate the first type of instrument and get the most out of it.

The choice of the pitch

The bombarde is not a chromatic instrument, although some bombardes for bagads get more and more close (cf. infra: *number of keys*). To play in various keys, you must change the instrument. Confirmed soners often have a whole set of bombardes in various pitches, but at first you probably will get only one.

Since the introduction of the Great Highland Bagpipe in Brittany, the "standard" pitch of the bombarde became Bb major[9], the current natural pitch of the GHB. If you have only one bombarde, it is thus this pitch that is to be preferred because it is the one that will allow you to play with the greatest number of other soners. However, if you start the instrument together with a partner on biniou, you can choose a different pitch. In this case, A major is particularly interesting because it combines the breadth, richness and roundness of the sound of lower bombardes with the brilliance and agility of higher ones.

To start, avoid too low-pitched bombardes (F or G), which consume significantly more air and whose holes spacing is rather large, hence less convenient for a beginner.

Similarly, the too high-pitched bombardes (D or C) are not the most appropriate for the beginner. They are usually pretty easy to play concerning the blowing but the sound quality control, and especially playing in tune, is more difficult. In addition, the bombardes in C and above use a specific slightly smaller reed than that of the lower-pitched bombardes (Bb and below), all the latter use the same type of reed[10]. Learning the bombarde with the C bombarde will require new adaptation when switching to lower pitches because your lips will have lost their landmarks.

Comparing the size of the reed of the C bombarde (right) with that of the reed of the Bb bombarde (left).

The blades of the C reed are shorter and a little narrower and its staple (inner tube) is also shorter and narrower.

Full length:

- Bb reed: ca. 4.5 cm
- C reed: ca. 4 cm

Length varies slightly according to the reed maker.

NB: the Bb reed is also used for lower-pitched bombardes.

[9] This pitch already existed in Brittany before the introduction of the GHB but was only one pitch among others.

[10] It is more accurate to say that all these bombardes can use the same type of reed, i.e. the standard reed of the Bb bombarde, instead of a specific reed for each pitch, which is always preferable but difficult or impossible to obtain.

Beware of the D bombarde, its small size makes it quite cheap, which can attract the beginner, but it is a very specific instrument strongly not advised for beginning. You cannot play in soner pair with it because there is no lévriad in D for the biniou[11] (moreover it would be too small to be playable by everybody). This very high-pitched small bombarde is only used in bands of several instruments to play with other instruments in that key (flute, violin, accordion, oboe...). Since the fashion of the "Breton" oboe in D (derived from the baroque oboe) the D bombarde has lost much of its usefulness and has become quite rare.

To start, in addition to Bb, you thus can choose, if you have a partner playing in one of these pitches: B natural, A, G sharp (A flat) and possibly G natural (especially if you have to play with a diatonic G/C accordion).

A few samples of modern bombardes (from left to right):

- G major, palissander, 7 holes, one key.
- G major, stained boxwood, 6 holes.
- A major, natural boxwood, 6 holes.
- Bb major, ebony and Brazil boxwood, 7 holes, one key.
- Bb major, natural boxwood, 6 holes.
- C major, ebony, 7 holes, without key.

[11] Some instrument makers, however, have made prototypes of D levriad. The instrument itself is makeable and playable and has a very correct sound, but its finalization stumbles on the problem of the reproducibility of its reed, which is very tiny and therefore extremely difficult to make (it must almost be made under a binocular loupe) with a considerable waste. This reed would therefore remain rare, very fragile and would be extremely expensive (it takes much longer to do it than the levriad itself!) and this makes that the D levriad is still today an experimental instrument, which has never left the workshops of the instrument makers.

The choice of the mode: major, minor or untempered?

For all available pitches, there is a variant of the bombarde in major and a variant in minor and sometimes an "untempered" variant.

Major and minor

You can easily play "in minor[12]" with a bombarde "in major" by transposing the melody up a tone (although it makes some purists scream...) or by using a fingering with forks (acrobatic) or, more simply, by partially taping the second and optionally the fifth hole. Conversely, playing "in major" with a bombarde "in minor" is not easy and is not possible for all tunes.

Untempered instrument

You will see more and more often bombardes for sale in "untempered scale", i.e. using a scale which, like that of all the old bombardes, does not use the tuning of the modern Western classical, major or minor, scale. This modern scale is called "tempered" because its intervals are a *compromise* allowing chords nearly in tune in various keys. However this compromise has little interest and even little meaning in Breton music since the latter is essentially monophonic and modal.

Old bombarde in boxwood, of untempered scale. Untempered instruments can be recognized, before playing them, by their usually roughly equidistant holes of uniform diameter for the same hand. [coll. E. Ollu]

[12] The quotes are there because Breton music, like most traditional music, uses in fact many other modes than classic major and minor. This is discussed here under *Modal music*.

Our ear is accustomed from childhood to the ubiquitous tempered scale, but there are other scales, many others[13], one might say countless... and our format is much more cultural than natural: what sounds “in tune” for us will sound “out of tune” for others, or, in this case, what sounded “in tune” for countryside people of the old time may sound “out of tune” for today’s urban people, but out of tune in relation to what? In relation to cultural habits and nothing more, because being in tune or not is not an absolute value but a relative one.

The sound of untempered instruments has a lot of charm, one might say magnetism, because their unusual intervals (for our modern ears) can generate a characteristic colour which is all their own. For some tunes, when sounding a low note, rising to a higher one then falling back to the low one, that low one, and the tune itself, can be wonderfully boosted if the instrument is untempered. That is impossible to reproduce with a tempered instrument. The global tuning of a untempered scale with the biniou drone is also often much better than the tempered scale of which some notes are very dissonant with the drone.

You must however know that an untempered bombarde is totally unusable with anything other than a biniou with its levriad[14] tuned in the same way. The purchase of such an instrument therefore makes sense only if you buy the full couple bombarde/levriad and this couple of instruments will only be usable to play a repertoire suitable for this particular scale. Don’t plan to use an untempered bombarde with tempered instruments and don’t even plan to use an untempered bombarde with other untempered instruments because the untempered scale used by one maker often differs substantially from that of another maker, and even differs depending on the models of a single maker, each bombarde maker copying the scales of old instruments and these scales are quite varied...

You also need to know that an untempered bombarde often requires a specifically adjusted reed (so-called "old-fashioned") and that you will need to be able to adjust and adapt a standard reed before you really can play it with the character that suits this type of instrument.

In addition, a good mastering of the tempered bombarde and its reed is necessary *before* approaching an untempered instrument, because playing with character and controlling the tuning of an instrument which, by definition, is not tuned in a classical way is not easy for a

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[13] Untempered scales in Breton music have been much debated. When examining an old, therefore untempered, instrument we often see that the holes are drilled equidistantly with a single drill diameter (or one diameter for the bottom holes and one for the top holes when the maker was fortunate to own two drills...), then the holes were eventually adjusted with a... knife! In brief, they are instruments drilled without great care with the means at hand and without real desire to reproduce a specific scale, whether or not tempered. The ancient soners then made the best use of the imperfections of these instruments to turn them into qualities and transform their approximations of tuning into “character” and they succeeded! ... but they did not have a choice... then musicologists and scholars of a tradition (often fantasized) arrived and analysed these instruments, determined to compare and theorize the relations of their scales and their fractional tones, unfortunately often creating themselves the object of their study, the only result being to talk with emphasis about nothing...

[14] The playing pipe of the biniou; it corresponds to the chanter of the Great Highland Bagpipe.

musician whose ear is accustomed to the modern equal-tempered scale. If the old soners could begin on such instruments, it was because they were not as habituated to equal temperament as we are, but for today's beginners this type of instrument must be strongly discouraged and should only be started once the control of a well-tempered instrument is acquired.

The best choice of mode

To begin with the bombarde, the choice is therefore simple: a tempered bombarde in major, much more versatile, is required.

The choice of material

Although the choice is wide, in practice it can be summed up as: boxwood or Mozambique ebony?

Boxwood

Common Boxwood (*Buxus sempervirens*, *Buxaceae* family) is a shrub from our regions that produces a golden yellow very hard wood that swells little from moisture. This wood gives a warm sound but is more sensitive to moisture, temperature and relative humidity changes than ebony. Boxwood instruments deform, banana-like, more easily (which has no impact on their sound quality) even after a long drying time of the wood before turning, because boxwood is a wood that never stops "working".

Boxwood is a highly branched shrub, so that the wood is very knotty. It is rare that a bombarde in boxwood does not have a few small knots here and there. As long as these knots are well adhering to the wood around them, they do not affect the quality of it. In order to minimize the number of knots and to have a wood with a straighter grain, and thus minimize the risk of deformations, the instrument makers select boxwood from undergrowth, generally less knotty and less tortuous than boxwood having growth in full light.

The instrument makers offer bombardes in boxwood in various colours: natural[15], stained or seasoned boxwood. Walnut-stain is often used to colour the boxwood but it marks the wood grain strongly. Artificial seasoning of boxwood is performed by a bath in nitric acid. It gives the boxwood a fairly dark and very homogeneous orange honey colour, too homogeneous in the opinion of many soners, but it is all a matter of personal taste. Note that staining bombardes in boxwood is quite traditional, many ancient bombardes in boxwood are stained, sometimes very dark.

[15] The very clear appearance of natural boxwood (but variable, depending on the piece of boxwood used, without the intensity of the colour being linked with the wood quality) will dissipate over time. Boxwood will gradually darken in response to light, being handled and, mostly, the repeated application of sweet almond oil (or other, see: *Oiling*), which will give it a beautiful amber colour.

Boxwood log of large diameter during drying. Three or four bombarde bodies will come from this log after sawing it into squared-off lengths, pre-boring these and allowing further stabilization time before the final turning.

It should be noted that most of the oldest bombardes that have survived are in boxwood [16].

Old bombarde in boxwood ornamented with pewter and ivory [coll. E. Ollu]

Other « boxwoods »

For turning quality bombardes in boxwood, only the Common Boxwood (*Buxus sempervirens*) should be used. Alas, this is not always the case.

[16] Caution, do not draw wrong conclusions from this fact: It does not prove that the majority of the Breton bombardes of this time were in boxwood. The excellent preservation of boxwood compared to most perishable woods (fruitwoods) may give this wrong impression.

Be careful not to confuse Common European Boxwood with "Brazil Boxwood" (syn. Amarelo, *Euxylophora paraensis*, family *Rutaceae*) which is not a boxwood, neither botanically nor according to its type of wood. It is a tropical wood roughly having the appearance of boxwood but it is much less dense and absorbs much more moisture than real boxwood.

Square cut of « Brazil boxwood », the fluffy appearance and its spaced veins of inhomogeneous density are not mistaken: this wood is very far from the quality of the real boxwood in the context of instrument making...

The only importance of Brazil boxwood is that it is cheaper than European boxwood! Bombardes made with this wood generally have much poorer sound than those of European boxwood and they behave as sponges... Brazil boxwood is only suitable for making bells, its light weight is in this case a useful quality. If you are offered a bombarde in "Boxwood" without specifying that it is in fact "Brazil Boxwood", that is a real fraud.

There is another European boxwood: *Buxus balearica*, the "Balearic Boxwood"; it is rare in nature but is frequently cultivated in gardens in Brittany and elsewhere. It is botanically very close to the common boxwood but it is larger and grows much faster, so it's usually a boxwood of second choice with regard to the quality of its wood (but if it has grown slowly, it's a quality wood). It is not certain that all the instrument makers, even the most serious ones, are able to certify that their boxwood is *Buxus sempervirens* not *Buxus balearica*...

Mozambique ebony

Mozambique ebony (*Dalbergia melanoxylon*, *Fabaceae* family), also called East African blackwood or granadilla, is an exotic wood of dark brown almost black colour, widely used for woodwind instruments. It is extremely hard and dense, swells little but is unfortunately quite brittle. It produces a sound that is less rich in low harmonics (which are a bit in the background) than boxwood for the low notes but sometimes a globally brighter and more stable sound, especially for the upper notes, and it is almost insensitive to moisture and all attacks, except shocks.

Mozambique ebony during drying. Notice the sharp contrast between the sapwood, the former living part of the wood, which is very light in colour, and the heartwood or duramen, which is very dark. The sapwood is worthless for instruments, it will be discarded at the sawing stage.

Palissanders and other ebonies

You'll find also many bombardes offered as being in "palissander".

You must understand that the word "palissander", as well as "ebony", doesn't refer to a specific wood, in the sense of a specific plant species, but refers either to a type of wood or a group of more or less close species producing woods with similar characteristics or appearance.

The word "palissander" refers to the wood of various species with colourful hard wood of the family *Fabaceae*, mainly but not exclusively members of the genus *Dalbergia*. This name even includes a few species of other families (e.g. the Rio palissander[17], *Jacaranda mimosifolia*, which is a *Bignoniaceae* not a *Fabaceae*).

***Jacaranda mimosifolia*, the "Rio palissander"**, an individual in cultivation under the sky of Brittany.

In fact Mozambique ebony IS a palissander: when a log of *Dalbergia melanoxylon* is very black at heart, it is named "ebony" and when it has a brown or reddish hue it is named "palissander" but it's the *same* wood with the *same* characteristics; it is even possible to sort from the same fallen tree some branches that can be named ebony and some others palissander. And *one* log of *Dalbergia* if its colour is not really black or really reddish, could be named palissander by some instrument makers and ebony by others! The hardness and density of the palissanders, in other words their quality, is not automatically linked to their colours. Choosing a bombarde in palissander or ebony is therefore only a matter of taste and that choice is not really one since it is most often the same thing!

"Real" ebonies (i.e. various species[18] of the genus *Diospyros*, *Ebenaceae* family) have a lower sound quality than palissanders and have now become rare, hence expensive, woods. They are practically no longer used for making binious and bombardes, palissanders having favourably replaced them. The use of real ebonies is now almost limited to repairs and copies of old instruments.

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[17] Caution, the vernacular name "Rio palissander" also applies to a *Fabaceae*, *Dalbergia nigra*, and these two taxa may also be found under the name of "Brazilian palissander/rosewood" and to crown it all, *Dalbergia nigra* is usually called "jacarandá" in Brazil… All this terminological mess about the name of the woods used in instrument making will end only when the makers finally begin to use only the scientific names (Latin binomials) instead of the vernacular names. It's not an insurmountable problem...

[18] Among those: *Diospyros crassiflora* (Gabon Ebony), *Diospyros ebenum* (Ceylon Ebony), *Diospyros mespiliformis* (African Ebony, but also sometimes "Mozambique Ebony" as duplicate like *Dalbergia melanoxylon*…). These are the main ones but there are many others.

Gabon ebony during drying. This is a "real" ebony (*Diospyros* sp., likely *D. crassiflora*), used for most of the old ebony bombardes. The difference in colour from that of the Mozambique ebony piece pictured above is true: these woods are distinguished relatively easily before their implementation because ebonies from the palissanders group, such as Mozambique ebony, have a dark chocolate colour with veining slightly highlighted while real ebonies have a dark smoky colour and inconspicuous veining.

It should be noted that talking about “real” ebony is a misnomer, because the word ebony, in the field of lumber, does not refer to one precise plant or even one precise group of plants, it is purely a descriptive term applied to wood of any tree whose heart wood is very dark, almost black, when dry. The darker and denser palissanders (mostly of the genus *Dalbergia*), among other woods, are hence named “ebony”, while they are botanically very far from ebony in the botanical sense (genus *Diospyros*) and the wood of the latter is not necessarily called ebony when it is clear shaded!

Two ebonies in cultivation in Brittany.
In Brittany, these trees require of course to be sheltered in a heated greenhouse (below, plants in cultivation in the *Serres d'agronomie tropicale* in Nantes).

Ceylon Ebony (*Diospyros ebenum*)

African Ebony (*Diospyros mespiliformis*)

In practice, you'll have only to remember that between a bombarde in "ebony" and a bombarde in "palissander", you will not find much difference except the tint of the wood.

Guaiac woods (Lignum vitae)

Among the other interesting woods used to turn bombardes, guaiac woods deserve a mention. They are very hard and dense oily woods. They are sometimes named "ironwood" which speaks volumes about their hardness (but they are not the only woods to be nicknamed so).

Although guaiac woods are very dense and non-fibrous, their superb veining remains clearly visible, much more so than for boxwood or Mozambique ebony. As they also take a fine polish and are very resistant to moisture, they are well suited for turning wind instruments.

About the sound of the instrument, guaiac woods are relatively intermediate between boxwood and Mozambique ebony, mixing a part of the qualities of the one and the other, but perhaps a little closer to ebony than

Guaiac wood during drying, (unknown species). As for the piece of Mozambican ebony photographed above, one notices the great difference of colour between the sapwood and the duramen, only the latter will be used.

boxwood nevertheless. This acoustic sensation is accentuated tactilely by the fact that a bombarde in guaiac wood is heavier than a boxwood bombarde of the same size and has the same weight, even a little heavier, than an ebony bombarde, guaiac woods being among the densest woods.

Despite their admirable qualities, guaiac woods are not much appreciated by some soners because of the unusual bronze green colour[19] of many of them and even less appreciated by instrument makers because these woods quickly blunt their turning tools... and, being oily, gluing them is difficult. Moreover, these woods produce during the turning a fine dust which can generate strong respiratory allergies, and finally they are quite expensive. In short, there are now fewer and fewer instrument makers offering bombardes in guaiac woods and that's a pity.

A bombarde in guaiac wood.
The guaiac wood of which the body of this bombarde is made is *Bulnesia*, most probably *Bulnesia sarmientoi*. The bell, with its superb veining, is turned in another guaiac wood whose precise species is not identified.

Be careful; as for ebonies, the word "guaiac wood" covers different woods at the botanical level, the real guaiac woods (various species of the genera *Guaiacum* and *Bulnesia*[20], both of the *Zygophyllaceae* family) from the New World and some others from the Old World also called guaiac woods (or false guaiac woods) belonging, as palissanders, to *Fabaceae*.

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[19] The green bronze colour of guaiac woods varies according to the species and provenances, some are not or barely greenish, some others have only greenish veins and others are uniformly greenish, but all are very beautiful woods!

[20] *Bulnesia sarmientoi* Lorentz ex. Griseb. The "Palo Santo" is a very aromatic guaiac (one gets from it the essence of guaiac wood) and deserves a particular mention. Its sweet smell is slightly reminiscent of incense and lasts a long time (years) after the turning of the instrument. The intensity of its smelling depends on the temperature and increases when you play with it and your hands remain scented a moment after playing. The olfactory pleasure is not the first that comes to mind among the pleasures offered by the bombarde, however in this case it is indeed present!

Other woods

You can also find bombardes made of fruitwood (apple and mainly pear tree), yew, holly, "rosewood" (vague and imprecise term covering very different woods including some palissanders), etc., but all these remain anecdotal and without great interest compared with boxwood and Mozambique ebony because their acoustic quality is lower and, except yew, they swell much more from moisture. They are also much more subject to the attacks of xylophagous insects, especially the apple tree.

The interest of most of these woods is limited to making bells because they are lighter than boxwood and ebonies and allow a good balance of the instrument in the hand. Indeed, for a bell the kind of wood is of little importance, unlike for the bombarde body, only its shape and stiffness are important.

For the record, let us mention the "service tree", *Sorbus domestica*, which belongs to the *Rosaceae* family as apple and pear trees but whose wood is much denser and harder than the latter. It was once commonly used in SE Brittany in the *Pays Nantais* (and near in *Vendée*) where it is relatively common in the natural state whereas it is extremely rare or absent in the rest of Brittany.

Bombarde in boxwood with its bell in pear.

Modern bombarde in nickel silver

Other materials

One can mention also brass and nickel silver[21]. Some makers (at least one presently) have attempted to make full metal bombardes. Apart from the surprising appearance of the instrument (very thin tube with bulges for fingers on each hole), getting a brass sound from a bombarde is not really what soners are looking for and it doesn't seem that was a big commercial success[22]. There was also formerly some tests of metal bells on a wooden body but it was anecdotal because unconvincing.

Bombarde of rubber (experimental model not yet quite finalized)

[21] Brass is an alloy of copper and zinc; nickel silver is an alloy of copper, zinc and nickel.

[22] In addition to the lack of interest in this metal bombarde among the soners in pair, the prohibition of its use in the bagads and its high price contributed to confine it to its curiosity status.

Among the other materials sometimes used, can be mentioned also bone, including sperm whale bone, or ivory (elephant or walrus, sometimes hippo) but, apart from the making of a few rings, they are luxurious materials for unique pieces and obviously we are no longer discussing now possible materials for the first bombarde and even for the following ones...

Anecdotally, we can also mention Delrin®[23] (polyoxymethylene) and, even more anecdotally, carbon fibre.

Still anecdotally today but perhaps not for a very long time, we can mention bombardes (and some other wind instruments) made by 3D printing. Is this a promising way? The future will answer, but if it turned out to be such, it would be a revolution and a profound upheaval of the profession of instrument maker since the instrument would then be only a computer file to print oneself!

The best choice of material

To begin, a bombarde in Mozambique ebony (East African blackwood) will be the best choice unless you are purchasing a low-pitched instrument (A and especially G) for which boxwood provides an undeniable advantage with regard to sound presence. It is also possible to mix the woods by choosing a bombarde with the body in ebony and the bell made of lighter wood, boxwood or fruitwood, which moves the centre of gravity back towards the player so that the instrument is then better balanced and therefore more enjoyable and easy to play.

Numbers of holes and keys

The current fashion in many Breton bagads is to use multi-key quasi-chromatic or actually chromatic bombardes, even for beginners! Some Breton soners call them “orthopedic bombardes”; all those who have seen injured people bearing external fixators will understand the allusion...

They cost an arm and a leg, they weigh a ton, you lose your fingers in scrap and, even if the sound of some of these scrap heaps is correct or even very good, the playing fun, however, is close to absolute zero...

[23] Delrin® (or polyoxymethylene (POM), simple put, a ‘plastic’) is widely used for the chanter of the Great Scottish bagpipes or the transverse flutes, but it has never really established itself for the making of bombardes. The use of this material never exceeded the stage of tests or specimens; no real production followed.

If you start the bombarde outside the framework of a bagad (it's very likely because they are rare outside Brittany and very rare outside France) you'll probably have to buy your own instrument, which is always preferable because the relationship you have with YOUR instrument is important and irreplaceable. The best bombarde on loan will never have the charm of your own instrument.

To play in traditional soner pair, multi-key bombardes are totally useless, nearly ridiculous, regardless of the level of the soner.

For your first bombarde, one key (possibly two) or no key at all is the only reasonable alternative but which one to choose?

A bagad bombarde is hidden in this picture. Can you find it?

Six, seven or eight holes?

The majority of the older bombardes that have survived are 6-hole bombardes and among the more modern traditional instruments (early twentieth century), most of the bombardes from 'Bro Gwened' (Fr. 'Pays Vannetais', southern part of Brittany) retained this 6-hole formula.

Old bombarde from the *Pays Vannetais* (*Bro Gwened*). This instrument has only six holes as do most bombardes from this region; it also has a body in two separable parts which was also common in this region of southern Brittany. [coll. E. Ollu]

> Note: it would be a big mistake to consider a 6-hole bombarde as a bombarde which has *only* six holes in order to be simpler or less expensive; the 6-hole formula is a rational choice[24], with its advantages and disadvantages.

A 6-hole bombarde has no low subtonic[25] and therefore has no key. You compensate for the lack of a low subtonic by playing the high subtonic as replacement, which gives a very nice and punchy rendering while playing with the binioù kozh because the two instruments are then in unison on this subtonic (the biniou plays one octave higher than the bombarde). The absence of a low subtonic on a bombarde is not a deficiency, on the contrary, because the tonic in this case corresponds to the real root note of the 6-hole instrument (i.e. the note of the basic sounding pipe without any open hole) which gives much more richness and punch to the tonic compared to an instrument with a low subtonic.

However, with the Great Highland Bagpipe, which plays the same octave as the bombarde, playing the high subtonic is not beautiful, it sounds like a kind of hiccup. The bombarde with a low subtonic (therefore 7/8-hole) is preferable in this case. This applies in the same way for accompanying other instruments playing the same octave as the bombarde (accordion, violin, etc.).

The 6-hole bombarde is the preferred choice for playing with the biniou, but only if you limit yourself to that. In all other cases, the 7/8-hole bombarde is preferable. In addition, you can easily play in the 6-hole way with the 7/8-hole bombarde, although you cannot find the same feeling or the same sound quality than with a real 6-hole bombarde when playing the lower tonic, but the reverse is not true.

To begin, choose for preference the 7- or 8-hole bombarde, which is a more versatile instrument than the 6-hole bombarde.

One or two keys?

Below the tonic, there are often one or two keys; such bombardes then have seven or eight holes.

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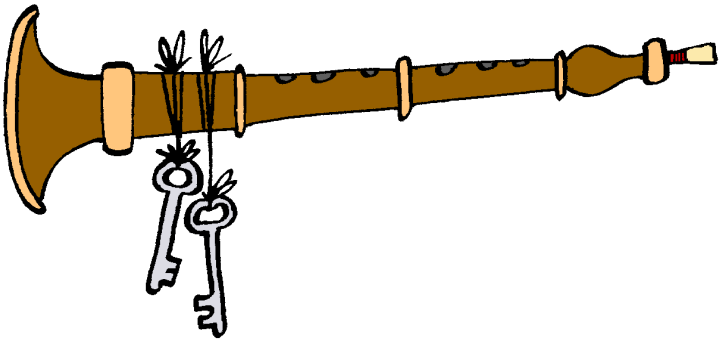
[24] The rational nature of this choice for the old bombardes is demonstrated by the fact that the contemporary *levriads* (chanters) had most often 7 holes and thus a low subtonic. The low subtonic was *purposely* substituted by the high subtonic in order to be in unison with the biniou.

[25] A purist would speak about *leading note* (or *sensible*) if the interval under the tonic is one halftone and *subtonic* if it is one tone. Who cares! Speaking of subtonic in both cases is clearer because one speaks of the "note under the tonic", the tonic being the base note of the instrument that comes out when closing the six main holes and by which the instrument is named.



Bombarde with two keys made by an instrument maker who had not yet fully mastered this new technology.

When there are two keys, they allow you to get the notes one semitone and one tone under the tonic, i.e., if one considers the Bb bombarde, the natural A and the Ab. In fact, this orgy of scrap is pretty useless, because on a well made single keyed bombarde, this note should be tuned between the natural A and the Ab (or more accurately a slightly too high Ab) and the techniques of air pressure variation and reed pinching will then allow (if the bombarde is sensitive enough) to get closer to one or the other as needed. Besides, the levriads of binious usually have only one single note below the tonic[26]. The second key is therefore useless when playing as traditional soner pair, where the important thing is not to get the natural or flat note, it is to get the same note as the biniou!

Modern key for playing right-handed.

7-hole Bombarde with a keyless subtonic hole; the hole is shifted to the right for right-handed playing.

Some bombardes have a subtonic and do not have a key but a plain hole, which gives a lighter and better balanced bombarde (its centre of gravity is further back). For high-pitched bombardes (B, C, D), the absence of the subtonic key is the rule because of the small size of these bombardes, but from the Bb bombarde and lower a key is much more comfortable for the beginner (and even later) because catching the bottom hole with the small finger requires flexibility and even gymnastics.

[26] It is now possible to see some levriads with mini-keys! That requires a real passion for scrap... and very small fingers!

Keyless 7-hole bombardes are not ambidextrous because the subtonic hole is shifted to the right or left according to you to play right-handed or left-handed.

You will also sometimes find for sale some bombardes equipped with a traditional "butterfly key", more expensive and more fragile than modern keys. In addition, the use of this type of key is less ergonomic (the key is less easy to catch with the small finger and its travel is longer). The only advantage of the butterfly key, other than its traditional look, is that it is ambidextrous.

Old bombarde with a butterfly key. This instrument in granadilla, ivory and pewter was made by Jean-Pierre Jacob from Lorient-Lanester in the 1900's. [coll. E. Ollu]

The best choice

Given what has been said above, the best bombarde to start will be a bombarde in Mozambique **ebony**, in tempered scale of **B flat major**, with 7 holes and equipped with **one key** for the subtonic, coming from a recognized instrument maker.

This model of bombarde is the most common and therefore it is also the easiest to find second-hand and the prices are relatively reasonable. Beware, however, when buying a used bombarde, to compare the price carefully with the price of a new instrument because the price asked by some sellers is sometime abusive...

If you are lucky enough to buy a new instrument, order it with a bell in boxwood, which will change nothing for the sound of your bombarde but will make it more enjoyable (and therefore easier) to play because it will be better balanced.

And then?

- "Okay, I understood what I need as a first instrument, but then, what can I choose as second bombarde? "

- "So there, no hesitation: a 6-hole bombarde in A major, in boxwood, maximum fun! "

Where to get my bombarde?

THAT'S it, now you know roughly what you want and you decided to break your piggy bank.

You have yet to decide where and how to get your bombarde: buying in a music store, direct purchase from the maker, buying second-hand, buying on the Internet or rental.

Each formula has its advantages and disadvantages.

Purchasing a new bombarde in a music store

Advantages:

1. You push the door of the store and you come out a few minutes later with your instrument.
2. I'm looking, I do not see any other...

Disadvantages:

A lot!

1. Finding a music store selling Breton bombardes is not easy outside France.
2. Very small choice, the store usually offers only one model, if it offers any at all.
3. The seller most often knows absolutely nothing (even in Brittany!) about this instrument and tells you a bunch of nonsense following his inspiration of the day...
4. The risk of being stuck with a Pakistani bombarde is high (even in Brittany!), and it is likely to be offered to you as coming from a "traditional instrument maker" and some cheeky vendors will specify "a Breton maker"!

5. The quality of the reeds that you can find in these general music stores usually goes from unplayable (Pakistani reeds) to very poor (general manufacturers of reeds for wind instruments), so you come away from the store with a bombarde under the arm but it is almost unusable until you to obtain a good reed...
6. Prices are generally even higher than for a direct purchase from the instrument maker.

However, some real bombarde makers (rather few) are selling through general music stores, even outside of Brittany, so you can sometimes find there good instruments. If you are afraid to be stuck with Asian rubbish at prohibitive cost, it is better to be accompanied by someone who knows a minimum about these instruments.

If you planned to take advantage of your next holiday in Brittany to buy a bombarde in a local music store without being accompanied by a connoisseur, it's not a good idea because you won't easily find one and you will rarely find a good one in this way.

Purchasing a new bombarde from the instrument maker

Bombarde in boxwood (tempered A major) during its manufacture with an instrument maker.

Advantages:

1. Large choice of instrument maker.
2. Large choice of model of your instrument (pitch, wood, keys, etc.).

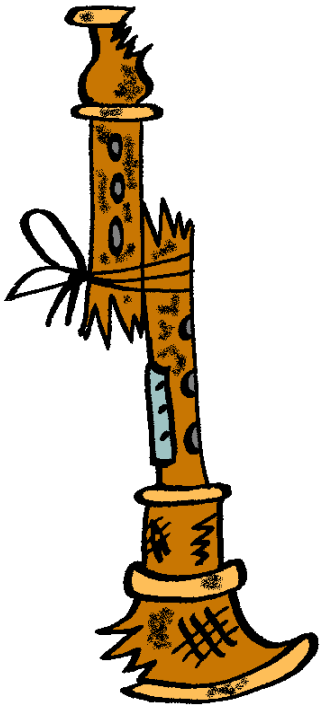
3. All makers sell by mail and nearly all have a website. Nearly all of them have sufficient knowledge of the English language for understanding foreign orders with short comments.
4. High-quality instrument, perfectly suited to your needs and your request, it may be customized according to your tastes, in short you'll get exactly the bombarde you want.
5. Plenty of useful advice before and after purchase (hey, it still depends on the maker...).
6. Quality after-sales service assured and often free (except postage) if it concerns only slight settings and small corrections and all the big and small defects that are not your fault. And all this without any time limit because, for the instrument maker, the instrument he has made remains always "his" baby and his only advertising is the quality of his instruments and word-of-mouth.
7. Direct contact with the person who made your instrument. Take the opportunity of your next holidays in Brittany! Receiving your bombarde in the workshop where it was born from the hand of the craftsman who made it, it is still something else than pushing the door of a shop!

Disadvantages:

1. Direct contact with the person who made your instrument, in some cases, because we must admit that there are a few not very pleasant persons in this profession... fortunately they are a minority and that does not affect the quality of their instruments.
2. Often long wait times, sometimes veeeeeery long...

Buying a second-hand bombarde

Today, buying second-hand is often synonymous with buying via the Internet, through online auction websites, classifieds websites, specialized forums, etc.



Advantages:

1. No wait time if you go to the seller, or very short delay when mailing.
2. You can sometimes have an opportunity to buy an excellent instrument for a very reasonable price.
3. You may find used instruments from makers who have now ceased their activity and you may even find very rare instruments and some real gems.
4. If later you realize you've got it wrong, it will be easy to resell your instrument at a price close to its purchase price.

Disadvantages:

1. You don't always find exactly what you want or else you have to wait a long time.
2. No warranty from the seller if he is a private individual.
3. Be careful not to get abused by the price. You can makes very good business by buying used but also very bad. If in doubt, don't hesitate to take advice from someone who knows a bit about these instruments.
4. The after-sales service from the instrument makers sometimes lack enthusiasm... and you will probably be charged at full price. This of course varies depending on the maker concerned.
5. When someone resells a bombarde, there is often a reason and it is obviously not his best instruments that a soner sells first. So beware of split instruments, banana-like, with tuning problems or just not very good without being able to know why because two woodwind instruments, even made in series, are never fully identical.
6. Beware of buying from an individual by mail. You send a cheque or an international payment order and then... nothing. Prefer more secure means of payment like Paypal®, SEPA credit transfer or cash-on-delivery sending.
7. Unless the price is low and justifies the risk, avoid buying a bombarde without trying it, and at least without seeing it. Try to be assisted by someone knowing already how to play it if it is your first bombarde.

Buying on the Internet

Buying on the internet is only a variant of the possibilities mentioned above.

If it is the **website of a music store**, you lose the only advantage which is to go out immediately with an instrument and there is a very good chance that you'll get an Asian bombarde. Flee!

If it is the **website of an instrument maker**, this equates to an order directly to the maker but it's much more impersonal. So, don't hesitate to call before ordering to make clear what you want and to answer the questions that the maker will certainly ask you and that you would probably not have thought of.

If it is a website of classifieds or online auction, much has been said above.

Rental or hire-purchase

The existence of this possibility is too often ignored or neglected, however it is excellent when you are not sure of your long-term intentions.

Some instrument makers or music stores offer bombardes for rent with an option to purchase them. If you then keep the instrument, the price of the rent or a part thereof will be deducted from the selling price.

If the instrument maker you have chosen doesn't spontaneously offers this possibility, it is always possible to ask for it.

If you want to start the bombarde and the purchase price makes you hesitate because you are not sure of your motivation, hire-purchase is probably the best choice.

Advantages:

1. If you stop after a few weeks or months, you give back the instrument and that's all.
2. A bombarde is generally cheap to rent. If you stop, it will not have been very costly.
3. If you realize that you made a mistake in your choice of the instrument model (wood, pitch, keys, etc.), you will be able to easily change it.

Disadvantages:

1. Less choice, because not all instrument makers engage in rental or they do not offer it for all their models of bombarde.
2. Impossibility in general to get a customized bombarde, only the standard models are available for rent.
3. This is not necessarily a new bombarde but sometimes a bombarde already previously rented that you may rent then buy. Although it is not satisfying for the mind, it is not a real problem because a bombarde doesn't wear when it is used, on the contrary! In addition, in the case of rental of an already used bombarde from the instrument maker, simply agree in advance if the purchased bombarde will be the rented one or if it will be replaced with a new bombarde.
4. Renting a bombarde requires buying a new reed. A reed is a fragile and perishable object that adapts to its user and therefore can't be rented, but it will not ruin you.
5. When only a part of the rent price is deducted from the purchase price, the final cost of the instrument is slightly higher than the immediate purchase.

Lending

You know someone who agrees to lend you a bombarde, and possibly a reed for your first attempts. Lucky!

Advantages:

1. Difficult to find a cheaper solution!
2. You can take your time to discover the instrument, test your motivation and better understand the instrument that you will buy thereafter.

Disadvantages:

1. Beware of theft, breakage, etc. If he's a professional, the renter will only charge you the damage, but if the person who lent you the bombarde is a friend he will add sulking to the bill and will have some tendency to strike you out of his address book...
2. It will cost however the price of one reed, because even if the owner of the bombarde lends you it with one reed, and even if you used it a very little time, the commonest courtesy is to give him back his bombarde with a quality new reed, the reed being a consumable object.

The great day: my first rendezvous

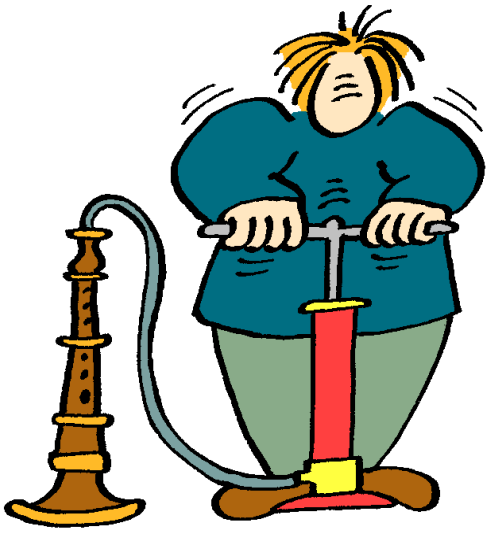
THE first meeting, you never forget it!

1. You just purchased a bombarde or someone lent you one.
2. You have a reed; otherwise you have to buy one (cf. infra: *Choose a reed* and *addresses of reed makers*). Many instrument makers sell their bombardes alas without reed[27]...
3. Soak the blades of your reed in water, wait a few minutes so that the reed is moistened and firmly press the cork into the mouth of the bombarde.
4. Firmly pinch the flat of the reed blades between thumb and forefinger to soften slightly the reed (be careful, it's fragile).

Now you're ready to French kiss your bombarde for the first time... sorry, to play it...

The first sound

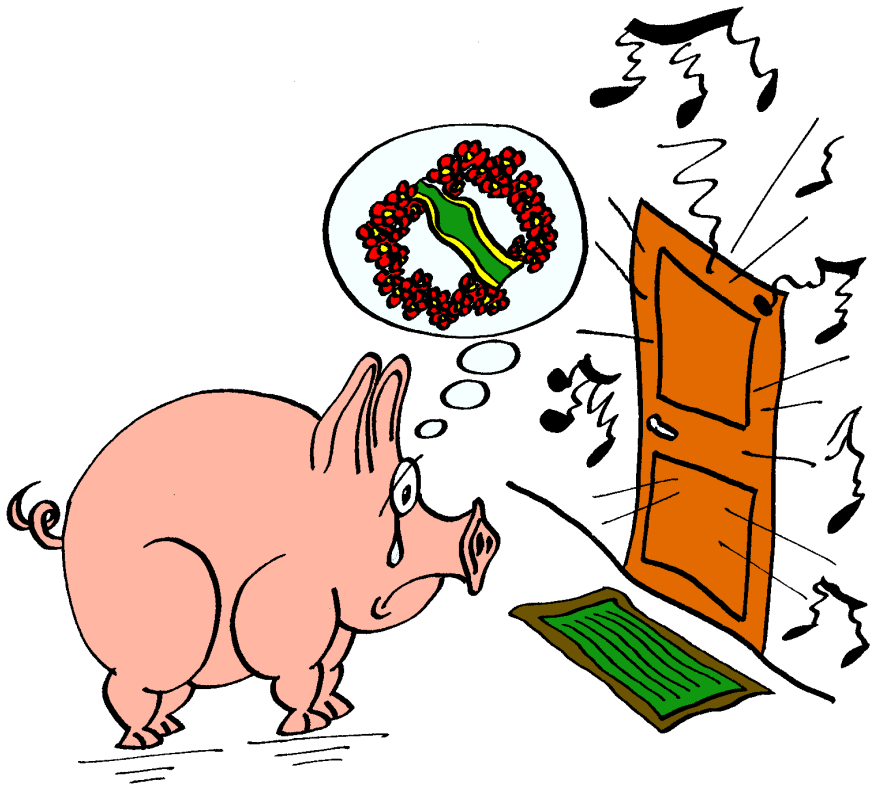
1. Put your fingers on the main six holes, take care to fully close them. Use the pad of your fingers rather than their tip or the phalanges.
2. Put the reed straight inside your mouth, not just the tip of the reed but your lips must stay away from the binding (twine).
3. Blow! ... hard! Go on! Harder than that!



[27] When you buy a biniou, the convention is that it is provided with reeds. By contrast, when you buy a bombarde, you usually receive it without a reed. Do not try to understand the logic, there isn't any...

It is a safe bet that the result will not be very exciting. In any case it is certain that the resulting sound, if so, will be quite brief and you can give it all qualifiers except musical...

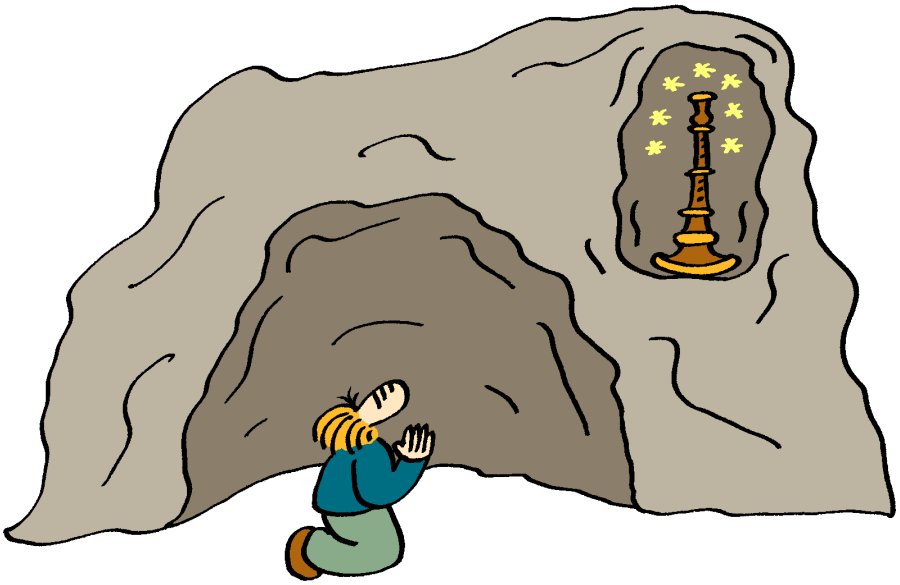
Disappointment and discouragement may already invade you and you're gazing at this screaming gadget while thinking about how much you are going to ask for it in your next ad. It is also possible that this moment of great perplexity will be disturbed by the sound of the bell, your neighbour coming to remind you that it is forbidden to kill a pig in the bathroom without permission.



Do not be demoralized, the best soners are all been there. The bombarde can be a pretty thankless instrument initially; you will now have to build a bit of muscle before you can reap all its potential and actually play it.

The click

In fact, the brief and horrible sour mash coming out of your instrument will be the most often not a cause for despair but a thunderbolt such as seldom happens in life and as few musical instruments can provide. The wayward instrument began to take life and to vibrate in your hands, you felt its reed shivering between your lips, you temples are beating and you're dizzy. What has happened? A moment that you will never forget: your bombarde is born and you with it, you've become a soner!



The click... or rather the Revelation!

Now you need to tame the beast, to make it roar or hiss at your command, to make it sing, laugh or cry as you like, to make it a part of yourself.

To help you with this, please read what follows.

How do I hold my bombarde correctly?

In spite of the fact that holding the bombarde is perfectly natural and intuitive, unlike some other musical instruments and even some other wind instruments, it is nevertheless necessary to consider it with a minimum of attention when starting for the first time.

Playing left or right handed?

"Playing right-handed" means placing the right hand on the bottom of the instrument and the left at the reed end. If the hand placement is significant for some instruments, the flute, for example, it is not for the bombarde regarding the quality or the ease of playing.

Common sense would tell you: if you're starting the instrument, hold it as you feel!

Unfortunately, no.

The main problem is the key(s) of the instrument (or the subtonic hole), which must be adapted to your hand placement. The modern bombardes with 7 or more holes are either "for left-handed" or "for right-handed". The ancient bombardes had a ambidextrous butterfly key, some instrument makers make still instruments in old style with this kind of key, but they are more expensive and less convenient than modern keys.

The butterfly key of an old bombarde [coll. E. Ollu]

When you buy a new bombarde, there is no problem, just ask the instrument maker for a bombarde "for left-handed" or "for right-handed" according to your taste and that's all. Unfortunately, some makers price their left-handed versions higher...

The big problem is the second-hand market, it is difficult to find a bombarde for left-handed and even rarer to find the one that you like, and conversely, a bombarde for left-handed may be more difficult to resell if necessary. In fact, this is true only if you look for bombarde with seven or more holes, because a 6-hole bombarde is an instrument perfectly ambidextrous! One more reason to enjoy this type of instrument, while other reasons are playing pleasure and sound quality.

Left-handed players, a small closed world

However, getting used to play as left-handed is a big mistake and it is better to force yourself to start as right-handed player even if it seems less natural if you are really left-handed.

On this old photo, one plays right-handed (Michel Bidan from Langonnet), the other (Guillaume Léon from Carhaix) left-handed... The old soners with their bombardes with butterfly key paid little attention to this detail, but times have changed, instruments have too, and what was only a detail is no longer one...

NB: when looking at old photos (old postcards most often), never lose sight of the fact that the photo could be mirrored by the card editor. The examination of several photos of the same soner is often necessary before asserting that he played right or left handed.

Why?

Because playing as left-handed is locking yourself in a musical ivory tower: traditional music is made of conviviality and meetings, testings and exchanges of instruments (not just Breton ones) which pass from hand to hand and, thus, of human and musical discoveries. What happens to the one who plays left-handed in such meetings: it is the ugly duckling in his corner who cannot lend his instruments or test-play those of the others, because the vast majority of musicians use instruments for right-handed (if we except the 6-hole bombardes,

which are ambidextrous by nature). Playing as left-handed is hence a factor of social isolation in the community of traditional music.

This former talabarder (Pierre-Marie Ollivier) here uses a 6-hole bombarde and plays as left-handed. This type of instrument was once common in the *Vannetais* area. No need for a fragile butterfly-key to make an ambidextrous instrument! The *levriad* (chanter) of the *biniou* (bagpipe, here held by Vincent Moëllic) had an offset hole for the subtonic note and was therefore for left or right hand, but often the instrument makers drilled two holes instead of one (one on each side) and the soner filled with wax one or the other according his way of playing, right-handed or left-handed. This habit has been lost and the modern levriads are therefore not anymore potentially ambidextrous as before.

Impact on the biniou

If you start to play the bombarde left-handed (I repeat, you are wrong), you will be bothered again when you pass to the biniou because you will need a left-handed levriad (chanter) of course but also a left-handed bag (because the sutell[28] is slightly displaced to the side of the body) and you will have to play with the bag under your right arm (a right-handed player puts the bag under his left arm) and therefore to reverse the position of your partner playing the bombarde (it's rather disruptive for your casual partners). To avoid all these complications, make it a habit right from the start of playing right-handed, even if you're left-handed.

Position of the fingers

In addition to the position as right or left handed, the position of each finger on the instrument is important.

[28] *Sutell* is the Breton word for le blowpipe (mouth piece), by which you inflate the bag of the biniou.

The playing fingers

The fingers should be placed naturally upon the six main holes without tension. You play the bombarde with the finger pads, not with the phalanges (pay attention to that if you come from the Great Highland Bagpipe).

The thumbs

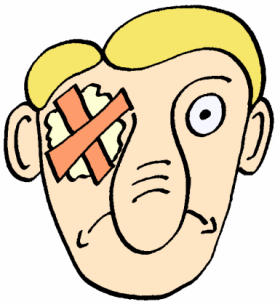
Your thumbs are placed under the instrument and balance it; their position may vary slightly depending on the type of bombarde, a 6-hole bombarde in boxwood is naturally better balanced than a multi-keyed one in ebony, for example. Indeed, the thumb of the bottom hand should try to get closer to the centre of gravity of the instrument but without twisting your hand for that. In practice, the right thumb is generally placed just in front of the central ring of the body of the instrument (when the latter is provided with a central ring, which is the most common).

It is mainly by the feeling in the lips that you'll find the best position of your thumbs under the instrument: the tendency of the instrument to tilt forward must be as light as possible and the position of your thumbs must be as comfortable as possible, this position is thus a compromise.

The finger lifting

A very important habit to develop early on: when you lift a finger to open a hole, don't lift it too high above the hole because, firstly, it is inelegant and, secondly, the more your finger keeps close to the hole the faster will be the closing of the hole when your brain will give the order to your finger.

No reverse excess either, because if you leave your fingers too close to the holes you misplay the note (it is too low). But, in practice, the problem doesn't arise for a beginner, who always tends to lift his fingers too much rather than not enough!



Soner raising his fingers too high while playing and regretting it bitterly.

It's true, that we can see some excellent soners who lift their fingers to the zenith while playing, but it is sure that if they lifted their fingers less high, they would play even better. This is the kind of small detail that sometimes makes the difference between excellent and exceptional.

There is only one circumstance in which you must lift your fingers high; it is to show the fingering of a tune to others. Thus, when you play with your partner at the biniou a tune he doesn't know well and has difficulty to following, you can lift your fingers a little higher during the problematic parts to help him visually to understand these passages and to put them in his fingers.

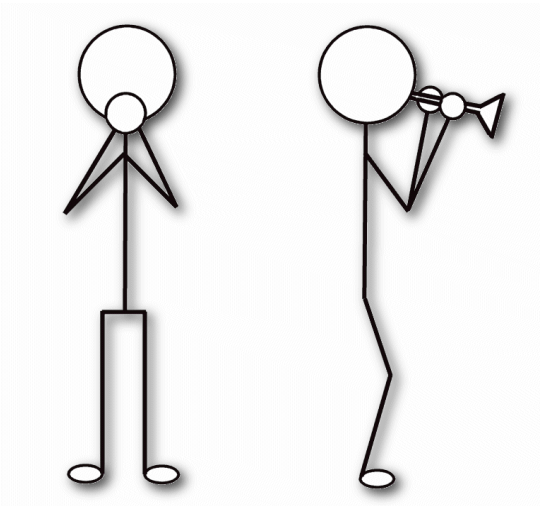
The little fingers

The position of the little finger of the bottom hand (right hand or left hand if you play left-handed) is not without importance. It may be helpful to put the little finger on the bottom of the instrument when all the fingers of the bottom hand are lifted up; it helps to not lift them too high by keeping a contact with the instrument. Putting down the little finger also helps to stabilize the instrument laterally, especially for the bombardes with heavy head like multiple-keyed ones.

Position of the arms

Whether you play sitting or standing, your arms should not be glued to your body but slightly away from it: seen from the front, your chest and your elbows should draw an arrow and, seen in profile, your arms should draw a roughly symmetrical V.

By doing so, you will breathe better, your arms will be less tense and your fingers will be more agile on the instrument which will be placed automatically in the best position for playing.



Position of the instrument

The position is inseparable from the blowing technique and the pinching of the reed and will be dealt below in connection with them.

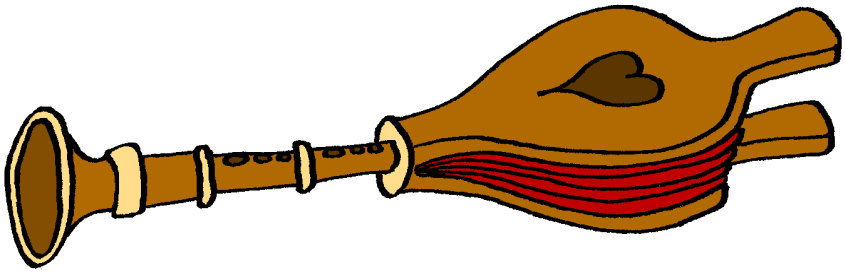
Holding the bombarde: the arms and forearms are slightly away from the body and focus above all on a comfortable position without tension. Therefore, the instrument can point, as here, *slightly* downward but remains strictly *perpendicular to the plane of the lips*. The holes are closed by the fingertips, without tension. The little finger of the bottom hand is not raised here but will lie on the instrument when the other fingers rise. Thumbs are under the forefingers or between forefingers and middle fingers.

Gaze direction

When you begin with the bombarde, you naturally tend to look at your fingers and later, even if you don't watch your fingers, you'll often have the tendency to watch the bell of your bombarde while playing, so when you look around you may have the impression (fake or real) of losing some of your bearings. However a soner must be able to make people dance and to be able to do this *well*, it is useful to be able to watch the dancers while playing.

So make it a habit *from the outset* to look neither at your fingers or your instrument but to look away while playing. This does not mean that you should constantly look away while you play but you have to be able to do it without stress or difficulty and without damage to the quality of your playing. Cultivating this good habit with the bombarde not only will ease your learning of it but also will be very useful when you move on to the biniou, because while playing the biniou you'll not only have to watch the dancers while playing but also sometimes to watch the fingers of your partner the *talabarder*, when you don't know a tune well!

How do I blow into my bombarde?



BLOWING into a bombarde is not like blowing into a recorder! Three important differences:

1. You must blow hard, and even very hard at the beginning of learning, when your respiratory muscles are not yet sufficiently developed.
2. You must blow tightly without any air leak despite the high pressure, and without crushing the reed either, hence the importance of managing the reed pinching.
3. The blowing power to provide is not the same throughout the range of the instrument: you must blow harder and harder while ascending; if you don't you'll play out of tune.

Blowing power is here a misnomer, we need to distinguish, on the one hand, the level of air pressure to provide and, on the other hand, the endurance needed to maintain this pressure. In order to get a sound from a bombarde and then to play it, you must maintain a high air pressure at the reed and hold it long enough.

Behaviour of the bombarde and its reed

The bombarde is a woodwind instrument with a rather narrow conical[29] bore but markedly tapering and short, stiff and bulging double reed. In the vast oboe family, it is distinguished mainly by its strongly tapering bore and its short stiff reed.

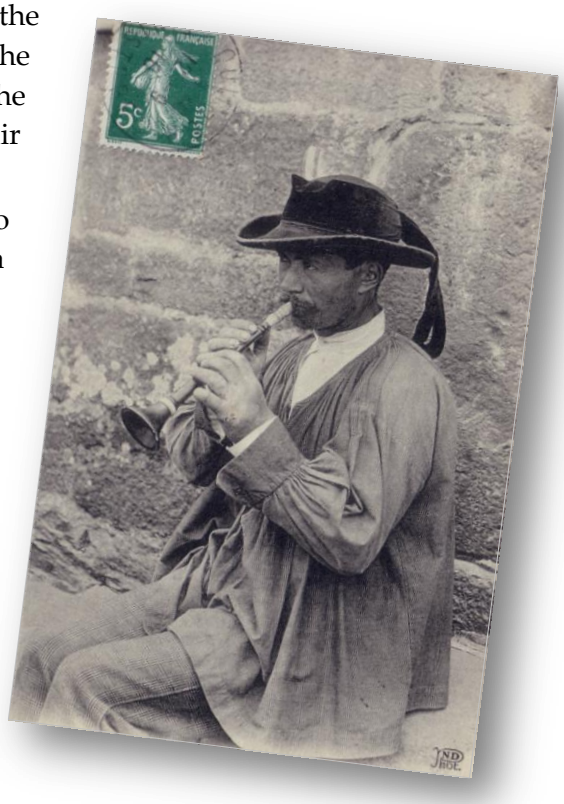
Consequently the bombarde is a powerful instrument that requires a very high air pressure but, by contrast, consumes relatively little air compared to some other less powerful wind instruments. You must blow hard in a bombarde but you don't actually expire a lot of air, significantly less than in a transverse flute for example. To vibrate the reed of the bombarde therefore requires *high air pressure* and *low airflow*.

[29] Many old bombardes have a bore that is not a regular cone but the union of two cones of different angles.

If you blow gently in a bombarde without pinching the reed, the pressure in the oral cavity is low and no sound is produced even though the airflow is relatively high.

If you blow progressively increasingly strongly, the airflow increases but the pressure in the oral cavity increases even more, due to the barrier to passage of air represented by the narrowness of the opening between the reed blades. From a certain pressure level, which depends on the distance between the blades and their flexibility, the airflow between the blades ceases to be linear and a vibratory phenomenon is triggered (the compression wave of the air resonates with the blades). As soon as the reed and the column of air behind it (the sound pipe) start vibrating[30], that creates a high backpressure at the level of the reed and the airflow decreases, giving the feeling at the beginning of blowing into a tube half-obstructed.

In fact, this low air consumption compared to the high noise level varies depending on the pitch of the instrument: the lower the bombarde is pitched the more air it consumes but the amount of air consumed remains moderate in absolute terms.



So when you play the bombarde, it is quite rare to find yourself with empty lungs in the middle of a phrase, which can easily happen with, for example, the transverse flute mentioned above. Breath management for the bombarde is simple compared to other wind instruments for which you have to think where you will breathe in the phrases and correctly integrate these breaths in your phrasing and therefore anticipate them. With the bombarde, breath management concerns only the pressure required: there is virtually no air taking during playing, you play or stop playing, it is one or the other. There is nothing complicated, you just need to maintain sufficient pressure while you are playing, that's all... but it is not so easy!

Physiological reminder

When you breathe calmly and automatically, you use nearly only your diaphragm and your rib cage remains almost motionless (abdominal breathing) but there are many other accessory respiratory muscles: the intercostal muscles, the scapular muscles and the neck muscles.

When you are short of breath from exercise, for instance, you breathe not only with your diaphragm but also by strongly expanding your rib cage and raising your shoulders during

[30] In fact a reed instrument like the bombarde is a resonant system in which the reed is the exciter and the sound pipe is the resonator. The physical phenomena involved are complex and beyond the scope of this document and... the field of knowledge of its author

inspiration and the reverse during expiration. All this being automatic, as a reflex action, there is no need to think about it.

In normal breathing, only inspiration is active (muscle contractions) and expiration is passive (simple muscle relaxation). Resistance to airflow in the respiratory tract being normally rather low, the respiratory muscles are relatively little developed (except in special cases as some asthmatics, cf. infra); the physiological respiratory adaptation in case of need is more by increasing the effective volume (increased muscle amplitudes and use of chest elasticity) than by increasing the pressure, positive or negative, potentially developed (which requires an increase in muscle strength).

The Breton former soners: real experts in respiratory physiology and physics of resonant systems. Here: Mathurin Guyomar (bombarde) and Kerguelen (biniou) from Clohars-Carnoët.

The high air pressure maintained in the oral cavity was noted above. The airflow of a bombarde being quite low, during playing this pressure is *the same at any point in the respiratory tract*, from the tip of the lips up to the furthest alveoli, whatever the way of breathing, abdominal or thoracic. This is mentioned here to prevent you from considering some nonsense without physical or physiological basis which you will hear or read about the benefits of one or the other (moreover some of these "those who know" have sometimes quite personal definitions or merrily confuse one with the other...).

How to exhale/blow into a bombarde?

Breathing, everyone knows how to do from birth, but as you know, all babies are not born with a bombarde in their mouth. So some tips are not useless to optimise the thing:

To maintain a high air pressure with the minimum of fatigue, you must use ALL your respiratory muscles and try to divide as much as possible the work between them.

Blowing into a bombarde is a major obstacle to the airflow during exhalation. The soner will have to maintain a high pressure associated with a relatively low but constant and steady airflow during the phases of playing. Normal respiratory muscles, not specifically trained, can provide such a pressure only for a brief moment, because doing so deviates from the usual physiological range and no circumstance of normal life requires it, unless you have the habit of inflating the tyres of your car with your mouth.

So you have to develop your respiratory muscles in power AND endurance. For this, there is only one way: playing regularly (a little bit daily is ideal), and, it's important, playing until muscle fatigue occurs and requires to you to stop, playing until exhaustion one might say. This stage is unsatisfying at first because the possibility of playing will be rather short or very short. The risk is thus that you say "*It's too hard, I would never get the breath power required to play this thing*", but gradually, imperceptibly, your playing time will lengthen and your bombarde and its reed will seem increasingly easy to play. You will then say "*Finally, the bombarde is not that hard, once you have understood the trick!*". In fact, you have understood nothing at all, the instrument and its reed are still as hard as before but your breathing muscles will have developed over time and then you will be able to generate sufficient respiratory pressure and maintain it for the time required without premature fatigue.

Calling reinforcements

To play the bombarde, it is necessary to use all your usual respiratory muscles: diaphragm, intercostal muscles, cervical and scapular muscles. You know how to do so instinctively. But when the main troops begin to let you down, you must call reinforcements: the muscles of the abdominal area and more incidentally the muscles of the pelvic floor.

Strongly contracting the abdominal and pelvic floor muscles (to put it simply: by pulling your stomach in and clenching your buttocks...) you will greatly increase the intra-abdominal pressure by compressing the viscera. The intra-abdominal pressure will also be exerted on the diaphragm, the latter forming the ceiling of the abdominal cavity and the pressure will therefore add to the pressure developed by the contraction of the diaphragm which begins to get tired. This additional pressure is often very useful for finishing a phrase when you feel your breath running out. So try that when you're tired playing a long phrase, first without tensing your abdominals then tensing them; the effect is clear.

This strong contraction of the abdominal muscles is also very useful, even essential, for playing the second octave, which requires a net increase of air pressure and flow.

It is important to note that the strong compression of the abdominal and pelvic floor muscles is not an automatic reflex, so you have to think about it, to force it, working at it if necessary[31]. You must also think to release this contraction during inspiration.

And that is why playing the bombarde after a good meal is not easy...

Asthma and bombarde

Another persistent legend: it's tough to play the bombarde if you're asthmatic! Yes sometimes, but most often no...

There are people better off by nature to play the bombarde, people that we would not expect: chronic asthmatics with more or less continuous dyspnoea. Indeed, their accessory respiratory muscles are extremely developed. Because of a moderate but almost permanent bronchospasm (asthma is that) they are not able to exhale with a strong flow but are able to

[31] Without descending into scatology, we could say that in this case you have to play as if you were constipated... Yes! It's almost the same thing from a muscular point of view! For women, we could also make the connection with the pushing involved in childbirth.

maintain a very high pressure at low flow, which allows them to counterbalance their bronchospasm. High pressure and low flow: we have just seen that this is exactly what is necessary to blow the bombarde!

Given the significant "blowing" requirements for playing this instrument, doctors, without any serious argument in support, often discourage asthmatics from playing the bombarde (if they know this instrument) if an asthmatic raises the question. Indeed, it is often the exact opposite, this instrument is a great exercise of respiratory control for an asthmatic and, above all, it is very easy for them *immediately*! This stupidity frequently uttered in the medical world proves that too few doctors practice this instrument and among them too few asthmatic doctors!

Because of its mild, wet and windy climate causing a high rate of respiratory allergens throughout the year, asthmatics are particularly numerous in Brittany. It would be interesting to know the proportion of asthmatics among Breton soners and compare it to that of the general Breton population, there might be surprises! Such statistics do not yet exist, it's a pity[32]...

Alternating play and rest

It is difficult or impossible to play the bombarde continuously because the muscular effort is too big and the intake of air is too slight for the playing to be sustained for very long. The *talabarder* then stops playing at times and lets the biniou answer alone. Doing that, one reproduces the traditional style of the Breton singers of *kan ha diskan*[33] but above all it allows the *talabarder* to rest briefly and to recover before tackling the next phrase.

Talabarder in resting phase

When someone starts the bombarde and begin to get familiar with playing in a soner pair, a common error is to try to do too much: he covers up the playing of the biniou as much as possible, leaving almost only the end of the second phrase for it to play solo. At the beginning of the tune, he is well and fresh and everything is fine but at the end of the tune things become increasingly difficult to the detriment of phrasing, energy and sometimes tuning... *To play the bombarde well, it is essential to predict and anticipate your fatigue*, thus allowing more time to the biniou alone at the beginning of the tune in order to be able to continue without excessive fatigue to the end of the tune. In addition, for the listener or dancer, a soner who spits out his guts on the

[32] Such a study, completed by pulmonary function tests of a sufficient panel of soners, would be an excellent subject for a PhD thesis in medicine. Concerned students, soners and non-soners as well, please note!

[33] Style of traditional singing from centre of Brittany: two singers sing alternately while overlapping one over the other, that is to say, the last syllables of each stanza are sung by both the one who ends the stanza and by the one who will start the next one.

end of the tune with a *crescendo* effect of the energy throughout the tune is much more pleasant to listen to than one bursting with energy at the beginning of the tune then fading...

Catching your breath

While playing the bombarde, you catch your breath in two circumstances: during the rest break at the end of the phrases while the bagpipe is playing alone and, more rarely, during brief intakes of air during the playing itself.

Break ending a phrase

It's the time to rest; you must try therefore to relax as much as possible from the breathing point of view then inhale slowly and *fully* before re-tackling the next phrase. At the beginning, one often makes the mistake of not taking enough air before re-tackling.

You can often use this break to wipe your lips and wipe the reed, if you salivate too much, because too wet lips tend to slip on the reed under the effect of pressure with consequent air leaks and poorly controlled pinching. The wiping of the lips and the reed is done in one quick gesture: pinch the reed gently between the thumb and forefinger of the upper hand slipping from the reed base to its top and *at the same time* the side of the forefinger or thumb base wipes your lips. The gesture is discreet and quick but is nevertheless very effective.

Taking air during playing

This is not a real break; you take air as briefly and as inconspicuously as possible during a phrase. This allows you to play a long phrase repeated without emptying your lungs and without too much fatigue because this brief taking of air relaxes the muscles and, especially, the taking in of air allows better muscle work: indeed, high air pressure is maintained with less effort with the lungs almost full than with lungs three-quarters empty.

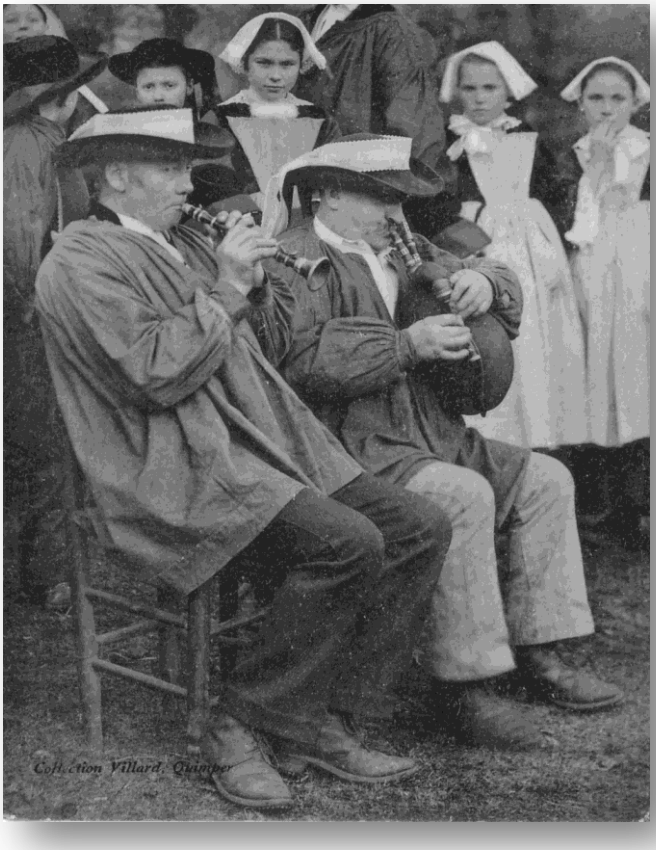
The taking of air must be fitted into your playing; it is a strong mark in the phrasing and therefore you cannot put it anywhere, and you can only do it if the tune being played fits this short cut well. In practice, the air takings are used mainly in slow airs and marches, for which, when they are well placed and well done, they give to the tune effective and interesting accents. They are also possible but more difficult during some dances with ample and relatively slow tempo (from *Vannetais* or *Léon*). To risk them in fast tunes is possible with

staccato notes but it needs to be done quickly and requires excellent control of the reed and the breath in order to not break the tempo and to keep a well-timed and well-tuned attack on the following note.

The taking of air during playing is of course more frequent when practising alone than in real playing because it allows you to go through the tunes when the biniou is not present to finish them.

How to do it? You must change the position of your lips as little as possible, taking the lower lip only slightly goes off the reed to allow the taking of breath, while keeping its tension and curving inward. *The upper lip keeps its position and should not lose contact with the reed*. You must resist the tendency to take the upper lip off to suck air faster and in greater quantities because if the upper lip also goes off, the air taking will be too slow, it will be therefore heard a lot and the following attack will be sluggish and imprecise, to say briefly: a break of the tempo followed by a false note...

To be exact, a few soners (a small minority) prefer to take air by slightly taking off the upper lip but keeping the contact with the lower lip, the principle remains the same. If you really find it more natural, why not try, but the upper jaw being fixed and the lower being movable it's therefore complicating things at the cost of speed.



Be careful, trying to play the bombarde continuously by doing short repeated air takings is possible but not without risk. While playing the bombarde, the venous blood return to the heart is reduced due to the pressure exerted on the large abdominal and cervical vessels (This is why your face reddens, your neck swells and the veins of your face and neck become prominent, for example). In addition such short air takings are very superficial, much of the lung capacity is not renewed and the cerebral oxygenation is not optimal. All this combines and can lead to discomfort with light-headedness and tachycardia if your playing continues too long. If you want to play continuously, take up the biniou or the flute, not the bombarde!

Lips and cheeks control

From your very first starting the bombarde, be careful not to inflate your cheeks and your lips while blowing. Playing the bombarde involves a high intraoral pressure and if you are not careful, your cheeks and your lips will distend over time, especially the cheeks, and you won't be able to go back.

Cheeks

A soner with inflated cheeks like two balloons is very ugly and a bit ridiculous, like a soner-hamster or Dizzy Gilespie trying the bombarde... In addition, this cheek distension, when it is very pronounced, may cause painful cracks of the buccal mucosa, which heal quickly fortunately but may need you to stop playing for a few days.

It's true, we can see some excellent soners inflating their cheeks like hot-air balloons, but again we can say that, if they didn't do so, they would play even better, because such inflation takes a fraction of a second that necessarily makes the attacks of notes to be less neat and less precise. Fighting against cheek inflation is thus a question of efficiency of playing as well as elegance.

Cheek inflating while playing is useful and even necessary only for some instruments with which it's possible to use the technique of playing with continuous (circular) breathing but this technique is inapplicable to the bombarde.

Lips

If cheek inflating is usually the evidence of carelessness during learning the instrument, lower lip inflation is by contrast more difficult to control. This is indeed a function of the height of the lower lip and especially the height and the tension of the lip bridle[34]. The morphology of the lip bridle is extremely variable, depending on the individual and it is sometimes broken. The lower lip being less muscular than the cheeks, if it is long and poorly retained by its bridle, it is difficult to prevent it from forming an air pocket, but that is not a reason for not trying to fight against it.

Note that by inflating the lower lip you must mean inflating the lower part of the lip (the pocket under the orbicular muscle of the lip, therefore under the lip itself). Such inflating can be tolerated, but the presence of an air gap between the teeth and the lower lip can't be tolerated because that would prevent good control of the reed.

The problem arises much more rarely for the upper lip, generally better held by its musculature and its bridle.

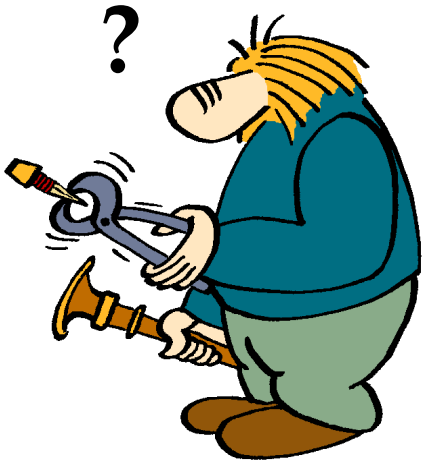
[34] The so-called *lip bridle* is a kind of natural fibrous link that holds the lip in the middle between the lip and gingiva and limits its spacing. In the mouth there is one bridle to the upper lip, one to the lower lip (the one that matters most here) and one under the tongue. Examine yourself in front of a mirror: by pulling your lips you will see them very well.

The neck

Some soners have necks which swell a lot when they blow into the instrument, but it doesn't seem that they can do anything to change that, it is a matter of individual anatomy more than negligence.

It should be noted however that if your neck starts to swell *secondarily*, especially in a particular area or asymmetrically, when it didn't do so before, this may be the sign of the emergence of a laryngocoele ("larynx hernia"), a typical pathology of high pressure wind instruments players, often benign and asymptomatic but sometimes having serious consequences and hence requiring medical attention.

How do I pinch my reed?



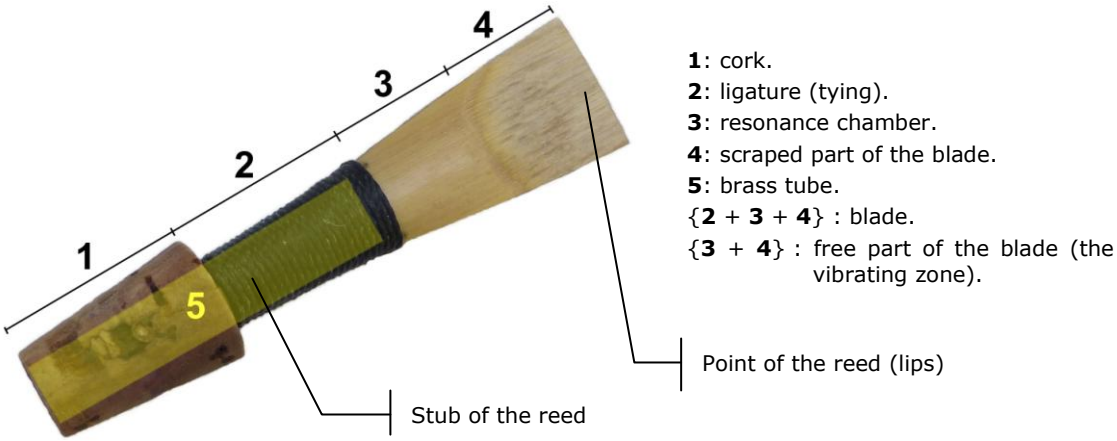
PINCH your reed as you want because only the result matters and the ways to pinch the reed are as numerous as there are soners...

This answer doesn't fully satisfy you? It's a pity, because it is the absolute truth!

Well; in a little more detail...

The reed of the bombarde

Double reed in natural cane[35] (neither the common cane nor bamboo, but the Provence cane, *Arundo donax*) mounted on a cylindrical-conical[36] brass tube which has one end, towards the blades, oval.



1: cork.
2: ligature (tying).
3: resonance chamber.
4: scraped part of the blade.
5: brass tube.
{**2** + **3** + **4**} : blade.
{**3** + **4**} : free part of the blade (the vibrating zone).

[35] Formerly, before the cane was readily available, the old soners used thin blades in boxwood, sometimes also boiled horn, bramble or common marsh cane (*Phragmites australis*). These uses are now anecdotal and almost completely disappeared.

There are also synthetic reeds for the bombarde, but their quality is still very far from that of cane reeds and they are paradoxically more difficult to use than cane reeds.

[36] At first glance, the tube of the reed, before its ovalization, may seem cylindrical but it is actually slightly conical. The geometry of the tube (length, width, cone angle) is of great importance for the proper functioning of the reed.

Pinching, what is it?

It is traditional to speak of reed *pinching* but it would be more appropriate to speak of reed *holding* because the term *pinching* can be misinterpreted. The term *pinching* suggests strength while the pinching of the bombarde reed must be both *lightweight*, *well positioned*, *precisely controlled* and *modulated*.

Each of these terms is important:

lightweight because the pressure exerted by the lips is very low in absolute terms. Excessive pressure disturbs the vibration, reduces the harmonic richness and muffles the sound.

well placed because if the pinching is too far forward or too far backward[37], the tuning and the sound quality may be spoiled (to be qualified in accordance with the reed and the soner).

precisely controlled because the lip pressure should be neither too high nor too low (but it's better if too low than too high) and must always remain under the control of the soner even when s(he) starts to get tired and thus tense and tending to pinch harder.

modulated because the lip pressure varies during the playing between one note and another and even on a single note.

> **Pinching thus does not mean pressing the reed like crazy but... accompanying its vibration while *letting the reed live* between your lips.**

Well-controlled reed pinching brings a lot of richness to the sound of the bombarde and is essential for being well in tune and for the expressiveness of the playing.

Why pinch the reed?

To play the bombarde properly, reed pinching is essential. Indeed, it allows:

1. Playing in tune.
2. Getting a sound that is rich, powerful, bright and pleasant.
3. Containing the trend of the reed to sizzle on the upper notes.
4. Preventing air leaks while blowing.

Just change the position of your lips on the reed (more forward or backward) and pinch more or less hard to understand how this factor is important and why different soners sometimes get a very different sound using the same instrument, because no two players pinch in exactly the same way.

[37] Throughout this document, pinching more "forward" means pinching while moving your lips closer to the twine of the reed and pinching more "backward" means moving your lips further from the twine and therefore closer to the free end of the reed.

How to pinch the reed?

This is still a matter where it is better not to listen to advice that some "experts" will give you, or that you read, sometimes with diagrams to support them, to explain how you need to pinch here or there and like this or like that and especially not here or there or not like this or like that...

Be glad that you live and play nowadays because the old reeds, such as this one, were most often in boxwood, a stiffer material than cane with much less regularly arranged fibres. Each reed was hence very singular and the pinching had to be adapted to its characteristics. All that belongs to the past now thanks to the modern reeds and their almost standardized construction. [coll. E. Ollu]

Listen to your instrument!

In fact, the technique of reed pinching can be summed up as: hold it between your lips *as feels best to you* – but *smoothly*; then the proper feeling of the reed will come along gradually. It can't be explained with words.

Try and find for yourself the position of the lips with which *you* are most comfortable and which gives *you* the best sound and the best tuning. This will be the right position *for you*. At first, don't hesitate to frequently and significantly change the way you are pinching during playing (location and intensity of the pinching); when you find the right way to do it, your instrument will tell you right away and this way of pinching will print gradually in your gestural memory.

Do not listen to the advice!

There is not a best place to put your lips on the reed. Some great soners pinch very forward[38], almost flush with the binding (if not downright flush with the binding with a reed adapted for that). Some others on the contrary pinch more backward or even very far backward. Some pinch relatively strongly, others much less so. Some will tell you that you must pinch symmetrically, others that you must move the upper lip more forward than the lower one or vice versa.

All this is nothing, *these advisors are explaining how THEY pinch their reed and not how YOU should pinch your reed*.

[38] Pinching deliberately very forward is seen especially in some old soners in pair. It requires a fairly strong pinching and a powerful blow, but, when it is mastered, it gives a particular sound with interesting modulations, far away from the "bagad sound"; to facilitate and optimise this type of playing, it is best to scrape your reeds in the "old style".

With long-reed instruments such as the classical oboe, the location of the lips can be relatively (very relatively...) codified and standardized, but it cannot be on the bombarde, a short-reed instrument. The reason is simple: *the brevity of the reed means that the anatomy of the soner needs to be taken into account*. For getting correct and well-controlled sound, a soner with thick lips will not pinch his reed in the same place or in the same way as a soner with thin lips, a prognathe will not pinch in the same way as a retrognathe, etc.

But listen to a bit of it anyway...

There are however a few tips which are not totally useless, as long as you are aware that listening to them does not mean that you have to follow all of them to the letter:

1. As beginners, we all tend to pinch too hard, both to prevent air leaks and "because it is hard". You must therefore fight against this reflex and think about moderating your pinching. Try to pinch as little as possible. You will begin to pinch a little more, if necessary, when you "feel" your reed better. It is better to pinch not enough than to pinch too much, as much for the sound quality as for the life expectancy of the reed. This advice should not stop you from trying to pinch harder to hear and feel the results.
2. Squareness of the reed against the lips is important. If the head is vertical, the instrument must be horizontal but in practice you rarely blow with perfectly vertical head (arms get tired and tensed), especially if you play sitting, and therefore the instrument slopes slightly towards the ground (see the photo on *the holding of the bombarde*). You cannot properly pinch the reed of a bombarde that slopes significantly towards the ground, except by bending the head forward which is quite unsightly and reduces breathing capacity. If squareness is not perfect, it is better to have the bombarde leaning slightly upward (no more than about twenty degrees) raher than downward; the control of the reed will be better. But this subject is not consensual[39].
3. If possible, place the reed in the centre of your mouth, but for some soners it will be more convenient and efficient to have the reed slightly off-axis (if there are dental articulation problems or strong prognathism, etc. – See the photo below).
4. At the beginning, you'll have a tendency to pinch sometimes very backward and very often very forward, probably a little too forward for a beginner. Don't hesitate to position your lips further back on the reed. Move forward, move backward, a little, a lot, and do it again and again... Try and feel the result.
5. Place your lips where you want to, but tense them slightly towards the inside of your mouth. Thus the control and sealing will be better. We talk about pinching

[39] Note, however, that those who advise the bombarde pointing slightly downward are mostly bagad musicians or musicians with classical instrument background (clarinet, oboe, saxophone...). The habit of playing while reading a score leaves traces in gestures... Do not listen to them too much!

by the lips but in fact the teeth are also involved[40]; by contracting your lips you will try to turn them slightly under the teeth, but the possibility and extent of this depends on the morphology of each player and it must remain light in order to not pinch the reed too much. Under no circumstances should your teeth touch the reed, of course.

6. While contracting your lips inwards, you must also pull their corners *very slightly* outward. It is important not to pucker the lips (In French this is called making a "fish nose").
7. As has been said already, it's necessary to play with greater air pressure as the notes rise in pitch. Similarly you must pinch *slightly* and *progressively* more strongly while going up in the scale, and correspondingly decrease the pinching as you go down. This varies depending on the reed and the bombarde you use, but the reed can sizzle on some bombardes if you don't do it. This additional pinching is especially needed to properly sound the top fork fingering (Ab on a Bb bombarde).
8. To play the second octave, it's necessary to pinch a little more firmly (without crushing the reed however, which would muffle the sound; firmly pinching does not mean squishing) and not to pinch too far forward. Those who tell you that you should not reinforce your pinching to shift the octave are soners who already have a fairly strong pinching on the lower octave, do not listen to them!
9. If you don't feel the reed vibrate clearly between your lips (it must tickle slightly, especially on the upper notes) that means you are pinching it too much; just relax your pinching a little and let your reed live!
10. The further back you pinch the lighter your pinching should be; the stiffness of the blades between the lips decreases from the binding up to the vibrant edge. Conversely, the further forward (i.e. closer to the binding) you pinch, the stronger your pinching can be.
11. The further backwards you pinch the more the pitch of the note played tends to fall.
12. The more low-pitched the bombarde the further back you need to pinch (the same soner will pinch a little further back with the G bombarde than with the Bb bombarde, for example).

Note that some soners complement the reed pinching by blocking their lower lip with the thumb of the upper hand resting on the mouth of the instrument. This can help the lip sealing in case of prognathism, but for the others it is useless, it forces the fingers to be crooked and it's pretty ugly, most of the soners having passed the age of sucking their thumbs. You can try that however if you have a lower lip which lacks holding, but this contortion is only possible with a high-pitched bombarde.

[40] Fear not for your incisors because the bombarde is not traumatic to the teeth as could be, for example, the trumpet or horn and other brass instruments.

About the relativity of the right way to do...

It is true that the old photos were very posed, due to technical constraints of cameras of this time: it was sometimes necessary to sit still for several seconds. Postures of soners on old photos are hence unnatural.

However, if this former *talabarder* holds his reed laterally in the mouth for the photo, it is likely to be because he used to play like that.

Nowadays, this soner would certainly received severe reprimands from modern teachers... But he would have certainly had a lot to teach to some of these ayatollahs of a tradition often reinvented!

Also note that this *talabarder* plays left-handed.

[old photo of the Le Runigo brothers, Jean-Vincent and Jean-Marie, from Locoal-Mendon]

The best verdict: the tuning

To find out if you are beginning to manage reed pinching properly, you have just to be able to answer this question "*Am I playing in tune or not?*". The quality and expressiveness of your sound, will be taken into account at a later stage. But how to be sure of your tuning as this document assumes that you are starting the bombarde alone in your corner?

To find out, your reaction may be to use a chromatic electronic tuner, but the inconsistent twitching of the needle of one of these things will not be of much use and, above all, it is difficult to train to play the bombarde, not only to play in tune but just play, with eyes fixed on this needle...

There is a much better way: practice the bombarde with a drone in the background, not a real biniou drone, since you're alone, but an instrument capable of playing, without your intervention, a continuous bass note of sufficient volume. If you have a synthesizer or electronic organ, great, otherwise your computer will do well: install a "host-VST[41]"program, there are various free ones on the Internet, and then associate it with a "VST Synthesizer" program. There are hundreds to freely download. Set the system to play a continuous note corresponding to the tonic of your bombarde or the note just above it. Get in tune with the drone by slightly varying the pitch of it or that of the bombarde (by moving the reed forwards or backwards); it will be good training for you later to get in tune with with real instruments, biniou or other. Playing with a drone will make you physically feel the tuning of your play and instinctively change the pinching of your reed to improve it gradually.

Another benefit of practicing alone with a drone: you'll play in tune not according to the tempered scale, but more exactly, according to the mode generated by your drone. If the notion of modality in music makes no sense to you, rest assured we'll talk about it further.

Inversion of the reed (that is turning it upside-down)

A reed is never perfectly symmetrical; its two blades are never perfectly identical (natural irregularities of the cane, of its gouging and scraping) especially if it has been corrected secondarily. Your upper and lower lips are not symmetrical either. Because of the combination of these two asymmetries, the position in which the reed is placed in the mouth is hence of some importance. For some reeds, the difference is not audible during playing, for some others it is sometimes slightly. Not only do you hear the difference, when it exists, but you often feel it physically: in its best position, the reed "tickles" your lips more sensitively than it does when using it in another position.

Please note that you can't say that a reed has a better position than another, you can only say that it sometimes has a *position that is best suited to the player who uses it. This position can be reversed between two different players*. If you find that one of your reeds (after careful cleaning) works better in one position than in another, put a small spot of coloured nail polish on its binding to recognize this position, and check it from time to time because reeds evolve…

This non-symmetry of the reeds (and of their user…), when you don't take it into account, is sometimes why a good reed doesn't sometimes "get the sound" while at other times it gets it; in such situations you might too often suspect the moisture level of the reed or its needing to be cleaned (or you accuse yourself...) while it would be often enough to turn it upside down!

[41] VST is a standard for communication between a host-program and its extensions (plugins). Some VST hosts are quite complex to use, you should choose a simple and intuitive program, the good old *Mini-Host* for example, it is no longer being developed but is always available and perfect for this use.

Another effect related to the turning over of the reeds concerns some reeds being a little tired, so that their sound fades if you play on them continuously for a long time. They soften when they become heavily dampened. Sometimes just turning them upside-down can temporarily restore a bit of their brightness. Their best direction can then be the inverse of their best direction at the beginning of playing!

The importance of these considerations on the direction of reeds should not be overestimated. To start playing the bombarde you can completely ignore them because it's perfectionism. Indeed, the differences between one inversion and the other, when they exist, are not obvious, but it is important to know that they can exist, even if they are extremely slight, and it's easy to take them into account. The quality of music is often made of the sum of tiny details!

The fingering of my bombarde

THE bombarde is an instrument with so-called "open" fingering; that means that, to play a note, all the fingers below the note played are lifted up and all the fingers above it are lying on the holes. As fingering, it cannot be easier!

Only the tonic note of the scale of the instrument, played at the upper octave does not entirely respect this rule: it sounds much more easily, and hence more in tune, if you lift up the finger of the top while all the other fingers are put down.

About the fingering charts

Although this document does not deal with solfeggio, it is best to memorize the names of the notes of the Bb major bombarde (the most common one) so you can easily refer to them when speaking with others, because it is easier to talk about the "F" than to say "*the note of the fourth open hole from the bottom*" or "*the note with the ring finger of the upper hand lifted up*"... and if your bombarde is not Bb major it doesn't matter because the note names of the Bb major bombarde are used in this case as Esperanto; regardless of the real note of the instrument, you'll be understood by other soners. It is also possible to designate the notes by their location within the natural scale of the instrument whatever it (the tonic, the second, the third, the fourth, the fifth, the sixth and seventh) but it is often ambiguous because you never really know if these terms refer to the natural scale of the instrument or to the scale actually used (see: *I play modal music*).

On the fingering charts below, the top of the instrument (the mouth) is the top of the chart and the holes shown out of alignment with the others are the keys operated by the little finger of the lower hand or the hole for the little finger if the bombarde is 7-holed without a key.

6-hole Bombarde

●	●	●	●	●	●	○	○	○	○
●	●	●	●	●	○	●	○	○	●
●	●	●	●	○	○	○	○	○	●
●	●	●	○	○	○	○	○	●	●
●	●	○	○	○	○	○	○	●	●
●	○	○	○	○	○	○	○	●	●
Bb low	**C**	**D**	**Eb**	**F**	**G**	**Ab** high	**A** high	**A** alt.	**Bb** high

Many Breton tunes have a low A, yet it is impossible to play this note with a 6-hole bombarde. With such a bombarde, a high A replaces the low A. You play the high A but you don't play it by lifting up all your fingers but only those of the upper hand, which gives much more speed and precision and avoids transition noise between high and low notes. Do not forget to slightly strengthen the blowing and the pinching to get this note in tune. For this note only, the bombarde plays in unison with the biniou (which plays its low A but playing one octave higher) and that sounds very well and give effectively punch to the tune. But take care to be in tune. This note is referred as "alternative A" ("A alt.") in the tablature above.

7-hole Bombarde

●	●	●	●	●	●	●	○	○	○
●	●	●	●	●	●	○	●	○	●
●	●	●	●	●	○	○	○	○	●
●	●	●	●	○	○	○	○	○	●
●	●	●	○	○	○	○	○	○	●
●	●	○	○	○	○	○	○	○	●
●	○	○	○	○	○	○	○	○	○
A low	**Bb** low	**C**	**D**	**Eb**	**F**	**G**	**Ab** high	**A** high	**Bb** high

The fingering is the same as that of the 6-hole bombarde, the fingering of the key[42] is just added without any other modification.

You can also play a high alternative A with the 7-hole bombarde instead by using the key, but the result is often less punchy than with the true 6-hole bombarde. Accompanying the Great Highland Bagpipe, which plays at the same octave as the bombarde, the low A by the

[42] Throughout the text, the word "key" is of course to be interpreted as the "lower hole" if the latter is not provided with a key.

key must be preferred. If you play accompanied by the biniou, using the key or not will be according to your taste and the rendering of the instruments, but also according to the "terroir"[43] interpreted. Indeed, using the key for playing the *Vannetais* repertoire would be an insult to the tunes you play. By contrast it is often preferable because more pleasing to the ear (and more traditional, which is important but secondary, whatever one thinks) to use the key with the repertoire of Southern Cornouaille.

Note that on well made 7-hole bombardes, the low A is often intentionally a little too low; that allows you, by varying the breath and the pinching to obtain either the natural A or the flat A or at least to approach them, the important thing being to be in tune with the biniou and not with the tuning fork.

8-hole Bombarde

●	●	●	●	●	●	●	●	○	○	○
●	●	●	●	●	●	●	○	●	○	●
●	●	●	●	●	●	○	○	○	○	●
●	●	●	●	●	○	○	○	○	○	●
●	●	●	●	○	○	○	○	○	○	●
●	●	●	○	○	○	○	○	○	○	●
●	●	○	○	○	○	○	○	○	○	○
●	○	○	○	○	○	○	○	○	○	○
Ab low	**A** low	**Bb** low	**C**	**D**	**Eb**	**F**	**G**	**Ab** high	**A** high	**Bb** high

The fingering is the same as that of the 7-hole bombarde, the fingering of the second key being merely added without any other modification.

The second key is useless when playing with the biniou, the latter having only one single note below the tonic.

Bombarde with more than 8 holes...

Here we enter a world of scrap with complicated fingering and beyond the scope of this document and its context: playing in pair. Only the Breton bagads use these complex things. Are they still bombardes? It is doubtful, although it still has a sound of bombarde but the pleasure of playing on these heavy and rattling things decreases in inverse proportion to their number of keys...

[43] "terroir" is the French word to name an area considered in CULTURAL and human terms and not in geographical or administrative or historical terms. Its geographical limits rarely match exactly the geographical or administrative limits of the area bearing sometimes the same proper name.

The upper octave

The range of the bombarde theoretically extends over two octaves.

The fingering of the upper octave is the same as the lower octave except:

- The tonic of the upper octave is obtained by lifting the top finger.
- You don't use the key(s) under the tonic because it would be an unnecessary duplication of the upper notes of the lower octave, moreover these notes generally do not sound well with the keys.

To obtain the upper octave you need to associate ***all*** of the following:

- You must attack the notes with a good muscular impulse (a kind of "glottal jolt").
- You must blow harder to increase the air pressure at the reed level. For that, don't forget to strongly contract your abdominal muscles.
- You must slightly increasing your pinching (not too much, otherwise you muffle the sound) and don't pinch too far forwards.
- You must try to increase the airflow: the flow must increase with pressure and you must hold this high flow to prevent the note falling to the lower octave. In fact the real flow increases little but you must get the impression that you expel more air to make your notes come out easily and shine at the upper octave.

Getting the upper octave with the bombarde is not very easy: it is *a little* of technique and *a lot* of physical effort. Do not listen to those who say otherwise.

Factors related to the bombarde used

The upper octave is fully accessible and usable only with high-pitched bombardes (Bb and above). With low-pitched bombardes (A and below), only the lower notes of the upper octave can generally be used (with large variation depending on the instrument).

For a given key, the ease of getting the upper octave is very variable depending on the bore of the bombarde and thus depending on the instrument makers. Some bombardes are really hard to play at the upper octave but none is really easy.

A very few modern bombardes have an octave key[44], a small key at the top of the instrument, which is operated by the thumb. The octave keys are supposed to reduce the effort needed to play the upper octave, but they are impractical, often not very efficient and reduce the quality of the sound, hence their rarity. However, on some bombards there are examples of effective octave keys and which do respect the sound; they are nevertheless always as inconvenient to use while playing…

Factors related to the reed used

The choice of the reed and its adjustment are also important. It is generally easier to get the upper octave with a soft reed than with a hard reed but the softness of the reed is not the most important criterion. In fact, the most important factor is to use a reed which is not too open; a little, hard fairly closed reed will be often easier at the upper octave than a more open soft reed.

In fact, it's not that simple, because the characteristics of a reed facilitating its use in the upper octave are not all known. Indeed it appears that some go up to the upper octave more easily than others without it being possible to know why. Test your reeds, know them, mark them.

Octave and tuning

Playing the upper octave with a bombarde is not very easy; playing the upper octave *in tune* is even more difficult. This requires a delicate balance between blowing and pinching and so it's necessary not to be "borderline" in blowing power; indeed, if you have no power reserve when you're playing at the second octave, you will struggle to play in tune. For this there's only one solution: training and training again because there is no miracle-tip.

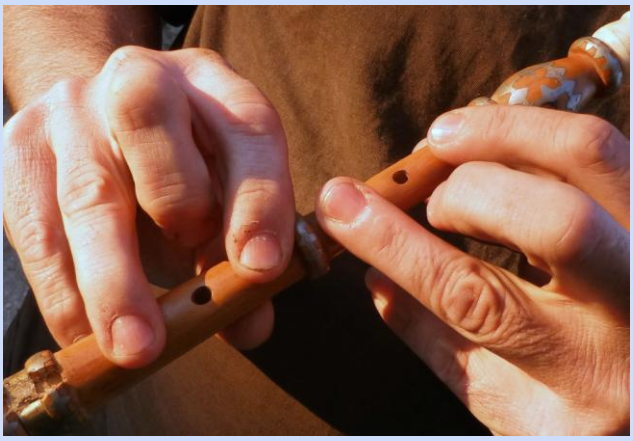
Paradoxically, the most problematic note of the second octave for its tuning is often the easiest to get (excluding the tonic): the C (on the Bb bombarde). The notes above it do or don't play out, but if they do sound, they do so roughly in tune. By contrast the C plays out relatively easily but tends to do so horribly out of tune... so you need a lot of training to find the right compromise blowing/pinching and assimilate it because between, on the one hand, playing the C in tune at the second octave while taking your time and premeditating it and, on the other hand, integrating it into the flow of your playing, there is a great difference...

[44] Octave keys were completely unknown on old bombardes. They appeared gradually after WW2 among the first makers of modern bombards under the influence of the design of classical instruments and as a consequence of the increasing importance of the bagads, because the bombarde playing the same octave as the bagpipes requires frequent mounting to its upper octave to break the sound monotony.

The third octave

It is theoretically possible to obtain the over-high tonic of the bombarde (the Bb of the third octave on the Bb bombarde).

It's more a playing effect, for marking an abrupt stop for example, than a note really usable during playing.



One of the more usual fingerings for getting the over-high tonic:

It is very important that the two holes are opened *suddenly* and perfectly synchronized for this fingering to work (you quickly slide your fingers on the instrument, somewhat as you would do on a guitar string).

A variant that works better on some bombardes uses only the upper middle finger, while on other instruments it will be the lower middle finger. Some others finally need to raise the two upper fingers and them alone. It can thus be seen that there is no precise rule in this matter and that the fingering of the over-high tonic depends essentially on the instrument in question.

Playing the over-high tonic generally requires, apart from a sudden impulse and strong blowing (this is often an euphemism), an unusual fork fingering. Above all it varies depending on the bombarde you use, some being reluctant to produce it. In fact, the difficulty is not so much that of getting the over-high tonic than of keeping it more than a short time...

Try various fingerings or ask the maker of your instrument and don't worry if you still cannot get the over-high tonic. You can do perfectly well without it!

Forks, half-holes and tapings

The standard bombarde is not a chromatic instrument, and that is what gives it much of its character. If it happens that you need some other notes than those provided by the natural fingering of the instrument, you must either use a scrap-heap-bombarde with additional keys everywhere and a user guide thicker than the telephone directory, or tinker around...

Forks

It is said that you make a fork when you lift one or more finger(s) between fingers put down. This allows lowering the pitch of a note.

You will soon find that many Breton tunes use the fork of the high A flat (on the Bb bombarde), especially when you play tunes in "minor" (tunes with the root note, the drone of the biniou, on the C) on an instrument in major but also when you play in "major" (you use in this case the mixolidian mode. See: *Musical modes*). This fork is so habitual that it is a part of the basic fingering of the bombarde and was included in the fingering charts above.

Some soners also sometimes use the fork of the low second note (i.e. X0XXXX instead of 00XXXX) to play "in minor" with an instrument "in major" but most prefer to transpose the music one tone up (the tonic on the second hole) or to replace the fork by temporarily partially taping the hole (cf. infra) which is much easier!

Half-holes

If you close half a hole, you raise the note compared to the same hole completely closed.

Half holes are usable during real playing but it is risky and acrobatic for fast tunes because the holes of the bombarde are not very large and the positioning of the finger on the hole must as a consequence be very precise. This is not simple to do and requires practice. One can hardly use half-holes for anything other than slow airs and rather slow dances, unless one abandons hope of playing in tune, especially for half-holes played toward the top of the bombarde.

In practice, the most common half-hole by far, concerns some tunes played in "minor" with their tonic on the C (with a Bb major bombarde) and having a *leading note* (that is to say, one semitone below the tonic) instead of a *subtonic* (that is to say, one tone below the tonic). This Bb half-hole for getting the leading note (you get a natural B) is not only the most frequent but also the easiest to get in tune[45], that's good!

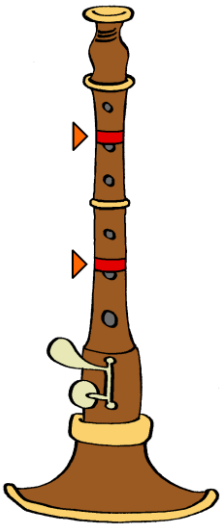
[45] In fact, it is not related to the fact that this half-hole is got more in tune than others, but rather to "musical psychology" which is such that the human brain is not very sensitive to the difference between a real subtonic and a leading note. If this note is played "between the two" it will be perceived as "in tune", especially in a Breton traditional music context where it will spoil the melody only slightly or not at all, unlike some other notes of the scale for which the slightest pitch variation will be immediately perceived as "out of tune".

Tapings

They replace the forks and half-hole fingerings permanently.

Aside from tweaking the tuning of the instrument, taping is mainly used to temporarily transform a bombarde "in major" to a bombarde "in minor". To do this, partially cover (about half or a little more) with adhesive tape the second hole from the bottom (by doing this, D is lowered and becomes D flat – on a Bb bombarde) and possibly the fifth hole (G is lowered and becomes G flat) from the bottom.

The taping is tuned by more or less decreasing or increasing the surface covered by the adhesive tape.



Taping to change a bombarde in major to one in minor.

I choose my reed

A GOOD reed is essential to play the bombarde well. You'll always get a better result with a good reed on a bombarde of average quality than with an exceptional bombarde equipped with a poor or tired reed.

Why deal here with the choice of the reed, then, after having dealt with holding the instrument, blowing and pinching the reed itself? ... when owning a reed is prior to all this! Simply because in your early stages, you will be able to make a reasoned choice of bombarde but you will have more trouble choosing a reed because having some knowledge of the instrument and having begun to play it are necessary to make a reasoned choice of the reed... but there is no reason to read this document in order!

A good reed, what is it?

There are bad reeds in absolute value but there are no good reeds in absolute value. There are only reeds well made initially, which then match well those who use them and the instrument in which they use them.

A good reed is always a *compromise* between multiple sometimes contradictory factors since the soner asks it to be at the same time easy, with a nice sound, reactive, powerful, easy to modulate, easily adjustable, solid and durable... For the moment, he doesn't ask it to be self-cleaning but one day who knows?

The reed+soner pair

The way to use a reed varies greatly depending on the player. As already mentioned above, some soners pinch relatively strongly, some others barely pinch at all, some pinch very far forward, some others very far backward. Some appreciate only hard reeds, some others don't. Some tire their reeds quickly while others keep them for a very long time in a good state. The reed is therefore gradually shaped by the type of playing of its user.

The consequence of this is that a reed is like a fountain pen, it cannot be lent to others or only exceptionally, in an emergency and only for a very short period of play[46].

The reed+bombarde pair

The behaviour of a reed is also a function of the bombarde you are using. Some muffled and relatively hard reeds in one bombarde can be brilliant and much easier in another and vice versa. It can be quite surprising. Similarly for the tuning; a bombarde can be perfectly tuned with some reeds and have a few notes out of tune with some other reeds.

These behavioural differences of the reed+bombarde pair regarding timbre and tuning are especially obvious when comparing reeds of different makers. It's the same for the bombardes. You'll often hear *"Reeds made by AAA are the best ones and those made by BBB are rubbish"*. Said in this way that's fully wrong. The only thing we can say is *"Reeds made by AAA are more suitable than those made by BBB for the bombarde made by CCC"* and, to be rigorous, we should add *"... when it is DDD who plays them!"*.

The soner+reed+bombarde trio

Considered in this light, things get even more complicated...

To avoid falling into complexities as unfathomable as subjective, it is necessary to directly arrive at this conclusion:

A good reed is a reed that allows *YOU* to get a sound that is at the same time rich, powerful, in tune and easy to modulate on *YOUR* bombarde while *YOU* feel comfortable.

Making your reeds yourself or buying them?

Players of classical oboe and bassoon, both double reed instruments related to the bombarde, watch bombarde players with eyes wide open when the latter tell them they buy ready-made reeds. For oboists and bassoonists, being able to finish and adapt one's reed starting from a raw reed mounted but not scraped or just planned, is an integral part of the practice of the instrument. For the player of a traditional instrument, having to buy ready-made reeds is therefore a shame! It's especially a shame because most of the ancient soners did make their own reeds themselves.

[46] If a soner has been kind enough to help you by lending you one of his reeds and if you used it over a long time, courtesy means that you give back him a new reed (in addition to the old reed, which, in this case, he might offer you to keep). If you don't do so, he probably won't ask for a new one but he will think of doing so... If the loan is made over a short time, give him back the clean reed after rinsing it properly... and of course, take care as the apple of your eye of any lent reed and respect it (moisten it well before playing, don't massage it too hard, don't play in the upper octave too long, etc.).

Historical reeds, the reed at left side is in boxwood, the three other ones are in cane [coll. E. Ollu].

The art of bombarde reed making

The problem is that a good bombarde reed is incomparably more difficult to make and adjust than an oboe or bassoon reed because it is 1) much shorter and stubbier, 2) much stiffer. The shaping of it is hence much more critical and there is no place for "more or less". The slightest error, the slightest hesitation in the gesture, the slightest excessive gouging and the reed becomes definitely mediocre at best and dead and irrecoverable at worst (you can nevertheless try to shorten it as last resort); the tiniest lacking of scraping here and there and the reed remains muffled and hard, even unplayable.

Stems of Provence cane (*Arundo donax*) of "luthery" quality. That means gauged, very straight, very round, very hard, very dry and making a clear sound when you beat them against the other. The more golden the cane, the more it is deemed sounding nice.

It now remains to make reeds, which is much easier said than done...

A good reed for the bombarde must balance two sometimes contradictory imperatives:

1. It must be sufficiently stiff to provide a powerful and harmonically rich sound.
2. It must be sufficiently flexible to be easy to play without too much fatigue and easy to modulate by pinching.

The great difficulty of making reeds for the bombarde is easily demonstrated by comparing the answers to these two questions:

1. *How many bombarde makers are there in Brittany and elsewhere?* A lot, and a lot of soners have made in a sporadic way if not excellent at least good quality instruments.
2. *How many bombarde reed makers are there in Brittany and elsewhere?* Very few, one hand is enough to count them, and if you add "good reeds" into the question then you can amputate a few fingers without problem.

Making a good reed for the bombarde is thus a subtle art requiring great skill and extensive experience and to not be afraid to fill garbage cans before producing something decent.

If you're not convinced, try to make some reeds yourself and you will soon understand the difficulty of the task and the reeds sold by reed makers will seem suddenly less costly.

Modern reeds, from five different makers. Their profile can seem quite different from the old reeds in the previous photo. In fact they are not so different. The impression comes especially from the binding of the old reeds which goes much higher up the blades.

It is true that most of the ancient soners were making their own reeds with limited means but they had no choice and the results were quite far from the quality and regularity of reeds from the best modern makers.

Beware of imitations!

Bombarde reeds made by professional makers are costly. However, you have just to browse the Internet to find dozens of dealers of cheap reeds, it's tempting...

Avoid them; these so-called “bombarde reeds” are all of Pakistani origin and are only vague copies of real bombarde reeds. Their quality ranges from bad to awful, light-years from that of real reeds and it is very difficult to improve them by re-cutting, even for someone experienced. Some are not even in cane but in softwood carved a bit anyhow. It is impossible to draw any sound from a large amount of these reeds and if you come across a good sample and succeed in drawing out a sound, the quality of it will soon make you regret it... especially if you use one of these pseudo-reeds with their natural complement: a Pakistani pseudo-bombarde. However, the Pakistani reed-and-bombarde pair is of great interest if you intend to have a career as a noisemaker for horror movies: for the sounds of creaking doors and remakes of Jack the Ripper, they are the accessories you need!

Joking aside, buy a real bombarde and real reeds, do not waste your money with all these cheap copies that are actually extremely expensive for the poor quality.

Synthetic reeds

There are also synthetic bombarde reeds (in plastic simply speaking).

Among their advantages one can register immediate availability: no need to moisten them before playing, no precaution for storage, insensitivity to weather conditions and... that's all.

The list of their disadvantages is much longer: a little less powerful sound than cane (but this can be an advantage for playing indoors), unpleasant and too homogeneous softness of the blades under the lips making pinching difficult to “feel” and control, location of the pinching imposed by the design of the reed and not adaptable to the habits and the morphology of the soner, no possible adjustment of tone or hardness (you can massage the reed if it is a little hard that's all), and especially a poor sound which is at the same time flat and squeaky and big tuning problems (variable however in relation with the bombarde used). In short, unpleasant sound, uncomfortable playing and approximate tuning... and to close this unattractive picture, a significantly higher price than that of a cane reed!

It is not the concept of synthetic reed that is in itself objectionable, the proof is that it is now possible to find correct synthetic reeds for the levriad of the biniou, but it is not yet possible to find for the bombarde a synthetic reed able to compete with cane reeds, even from far away. The result is that very few soners use these synthetic reeds, except occasionally as a curiosity but not for playing in public. It is nevertheless hoped that these synthetic reeds will improve and that the reed makers will persist with this still largely experimental enterprise.

As a beginner, you might think that a synthetic reed would facilitate your learning, it would not: *a synthetic reed is much more difficult to master than a cane reed*. You might like to try this type of reed only after you have learned the basics of controlling the cane reed, otherwise, on the one hand, you'll fail to use the synthetic reed, and, on the other hand, you will easily acquire with it some very bad habits for pinching and blowing and you will postpone your learning instead of speeding it up. *A synthetic reed is not a reed for beginners*.

Conclusion

As long as there are good reed makers for the bombarde in Brittany (or elsewhere), you should get your reeds from them; home-made reeds without a perfect mastery of the instrument and without a long apprenticeship are generally not worth the effort, the rare exceptions being related to the laws of chance.

Selecting a reed

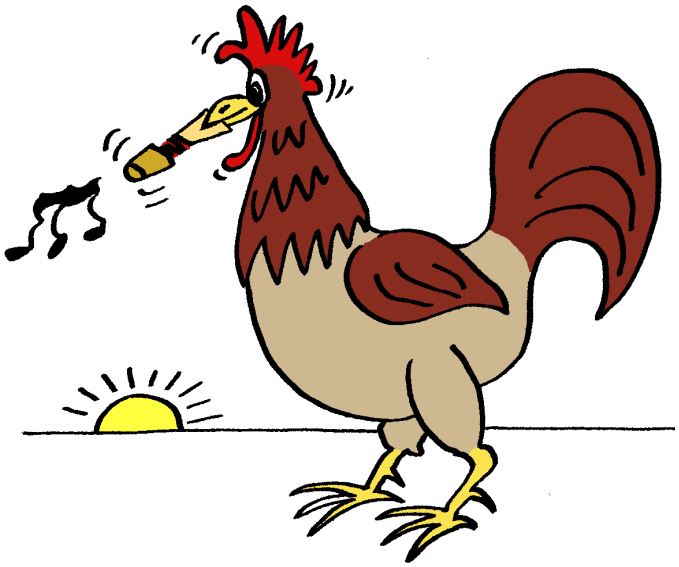
Direct selection of reeds is not always possible. Indeed, reed makers are not numerous and, unless you take an opportunity of a holiday in Brittany to visit them, the reeds will be ordered by mail, phone or the Internet and then received by post. The choice is then limited when ordering to specify if you want soft, medium or hard reeds, but as the meaning of these terms varies widely according to the soners as well as reed makers, this precision doesn't often make much sense…

The choice of material

Reeds in cane, boxwood or plastic? As mentioned above, a beginner should choose a reed in cane, but in fact this question rarely arises because very few makers will offer you reeds in any other material than cane.

How to test a new reed?

If you may actually select a reed from a stock of finished reeds, then it is often better to select the reed by trying it out of the bombarde that in it. Indeed, playing two or three notes with a new dry reed will not inform you much about it, and if you start to chew the reed to moisten it and to massage it vigorously before trying it in the bombarde then putting it drooling and softened in the box, the seller may give you a dirty look and he will be right.



To select your reeds, don't hesitate to call a real professional.

While blowing into the reed out of the bombarde without pinching or almost, the reed should not make a whistle sound but a sizzling sound and this sizzling must gradually become a whistle sound[47] when you increase your blowing while increasing the pinching. It's called traditionally the "cock's crow"; a reed that, in a dry state or almost, doesn't do the "cock's crow" is a poor reed or a reed needing to be adjusted but if a reed that has just been used no longer does the "cock's crow" it is not at all abnormal, the reed will do it again after drying.

You can also check the proper sealing of the reed by holding tightly the top of the blades (gently!) between your fingers and sucking and blowing through the tube (cork end). You should not feel the air flowing either in or out.

Rather hard or rather soft?

When you buy a reed, it is better to choose it a little too hard because it will soften gradually by using it, but "a little" means "a little" and the reed must remain playable without excessive difficulty.

For the first reed of a beginner, on the contrary it is preferable to buy a reed which, at first, is very soft (specify that to the reed maker, he will scrape it again a bit if necessary) knowing that this reed will be soon become over soft and muffled and then difficult to improve; then you'll replace it with a slightly harder reed but not too much. It is also advisable to begin to systematically buy two reeds (or more): a very soft one for your very first contacts with the instrument and a rather soft normal one.

For a very raw beginner, the best solution, unfortunately not always possible, is to buy normal reeds then ask a friend capable of doing it to soften and adjust them according to your capacity. This document will explain below how to do it yourself but doing it immediately without any previous experience of the bombarde is risky for your wallet (a reed is expensive!).

It should be noted that the hardness of the reed has an impact on the pitch of the bombarde. With the reed inserted to the same extent in the mouthpiece of the instrument, the same bombarde will play slightly higher with a soft reed than with a hard reed. Taking that into account can sometimes be useful when you have difficulty to being in tune with the biniou or other instruments.

The illusion of hard reeds

Even after you've acquired good blowing power, resist the temptation to select too hard reeds.

General rule: *Any hard reed is always **too** hard!*

[47] For the reed to be perfect, some say that the pitch of this note should be the dominant (the fifth) of the natural scale of the instrument, i.e. F for the Bb major bombarde, but the same reeds being generally used for bombardes from G to B, this is not actually important. In addition, you can widely vary the pitch of the note by the blowing and pinching.

Certainly, considered in isolation while playing one or two notes, the sound of a somewhat hard reed may seem powerful, rich and dense, but it is most often an illusion because, due to its hardness, the sound of this reed will be difficult to modulate by pinching and blowing and the quality of your sound and the expressiveness of your playing will therefore be lower than they would have been with a slightly softer reed, the sound of which, estimated with isolated notes, seemed to be less rich and powerful. With a too hard reed, you'll get most often a bugle sound quite chopped, hammered, too pinched and ultimately fairly flat; in addition, the global sound of the pair biniou-bombarde will be unbalanced because the bombarde will cover the biniou too much and the twittering ornamentations of the playing of the latter won't mix as harmoniously with the more sober playing of the bombarde (the goal is that the sound of the two instruments get mixed to make only one).

In short, by using a hard reed for trying to enrich your sound, most often you make it poorer and unpleasant.

The increased fatigue that this kind of reed brings is totally useless. In addition, being able to play with reeds in hardened steel has never been a criterion for judging the quality of a bombarde soner!

Reed and tuning

The tuning of the bombarde is not only a function of how it was made. As has been said, the choice of the reed is also relevant. For the same bombarde, the individual pitches of the intermediate notes of the same scale might be slightly different with reeds by different makers. The bombarde makers produce instruments in tune with a certain type of reed, you have just to ask them which one.

When you go slowly up the scale, you tend to instinctively correct each note and you don't always hear the difference in the pitches of scale notes between the reeds of different makers; you must really play with the reeds then wait to get a bit tired so that this instinctive control deteriorates and then you hear the difference, if it exists.

Caution, a tuning problem with one particular reed and not with the others is often due to a slight misalignment of the reed blades that it is barely visible (see: *Realign the blades)*

Tuning adjustment

If the tuning of your bombarde does not satisfy you with the reeds that you want to use, it is easy to remedy because the deviations are always small.

Lowering a note

To lower a note, simply tape the top of the hole adjusting the tape to find the right area to be covered.

Hole taping: to refine the tuning it is often sufficient to cover a very small area of the hole in question.

If stability problems of the note occur after taping, and only in this case, you can try to tape not the top but the bottom[48] of the hole or even its side or slightly obliquely.

Raising a note

To raise a note, it is more complicated because you must slightly enlarge the hole (with a drill or a tiny "rat tail" file), but be careful, it is often sufficient to remove a quarter of a tenth of a millimetre of wood to raise the note significantly, so you must proceed *very* gradually and test the result after each filing. At each pass of the drill, you simply remove a few specks of wood and certainly not a chip!

At the first pass of the drill, you often find that the too low note was not the consequence of a too small or too low hole but simply the result of a dirty hole!

[48] This is not quite equivalent because by taping the top of the hole you slightly elongate the column of air AND you reduce the air flow in the chimney hole, whereas by taping the bottom of the hole you only reduce the air flow without changing the length of the air column.

If you do the tuning yourself and if you enlarge a hole too much (the note has become too high) don't panic, just tape the hole or ask the instrument maker to make it smaller.

Having someone else carry out the tuning

Instrument makers can of course undertake this tuning job; this after-sales service is often free if you ask the maker of your instrument. The instrument maker is more accustomed to doing it than you are and will do a better job and especially a neater job, replacing tapes with a mixture of glue and sawdust that will decrease the size of holes in a permanent and almost invisible way. In addition, the reduction in the diameter of a hole with a filler material is often acoustically better (tone and stability of the note) than simply taping because the chimney of the hole is changed smoothly over its entire height.

Running-in reeds

A new reed requires a running-in period. By playing it, with time the reed will significantly soften by slightly closing and the cane will relax. The reed will change gradually depending on how you use it (location and strength of your pinching) and then it will stabilize.

How long is this running-in period? It is impossible to specify because it depends as much on the reed as on the player. Nevertheless, the softer the reed the shorter is its running-in period.

It is advisable to make a "rotation" and to run-in several reeds at a time. Thus, these reeds will be in a relatively close state and will be easily swappable, they will have time to dry well and to recover sufficient "energy" between two uses and their life will be prolonged since they will be less often used.

After the running-in period of the reed it will probably be necessary to adjust it. Vast subject…

I adjust my reed

A BOMBARDE reed changes with time and so you will be one day or another faced with the problem of adjusting reeds. Should you do it and if so how?

To adjust or not to adjust the reed?

Important: save for an almost unplayable reed, don't try to tinker with a new reed. It is sufficient to massage it (cf. infra), *after having evenly moistened it*, before playing or during playing, if the reed is really too hard.

If after the running-in period, once the reed has stabilized, its sound remains correct and it is not too hard, do not touch anything!

But often the sound of the reed is a little faded, and the reed needs to be adjusted. Especially, don't throw it away! Firstly because a reed is expensive then because *the best reeds are rarely new reeds but most often run-in and well-adjusted reeds*.

Prerequisites

Important: you will decide whether or not to adjust a reed only *after* cleaning it, otherwise you might screw up reeds that had just needed to be cleaned!

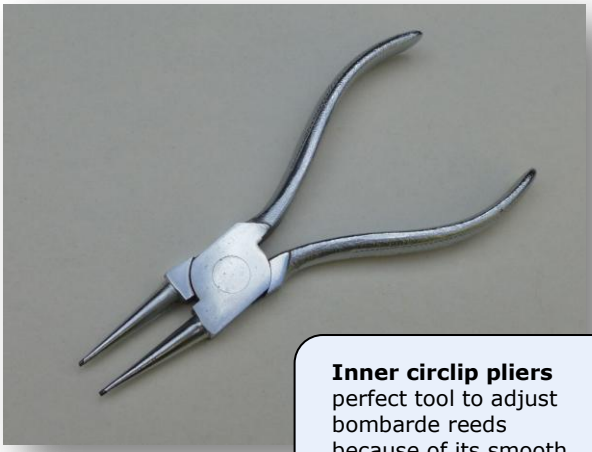
Important: the reed must be moistened before doing anything. The ideal is to have played on the reed for 5-10 minutes prior to adjusting it then to carefully wash it out before performing any adjustment.

Tools

Avoid damaging your reeds with unsuitable tools, such as adjustable pliers and kitchen knives...

To adjust your reeds you need two or three tools:

1. A pair of "inner circlip pliers"[49], pliers with tapered jaws used by mechanics. You'll find them in DIY stores or in automotive tools suppliers. Otherwise, small thin electrician' pliers will do the trick but the jaws of these have a flat profile and a grooved surface, which is less convenient and more traumatic for the reed.



Inner circlip pliers perfect tool to adjust bombarde reeds because of its smooth and rounded jaws.

2. A big nail[50] with a diameter just less than the tube of the reed. This nail, inserted in the tube of the reed, will be used as a mandrel. The job of the nail can be done by the previous tool but having both at hand is preferable. The traditional nail can be advantageously replaced by an assortment of small so-called "precision" screwdrivers; they are available cheaply in all hardware stores. Be careful; the bevel at the business end of such screwdrivers is both convenient and very dangerous if used carelessly because it can scratch the inside of the blades (you can grind its angles if you fear your clumsiness).

[49] Be careful when buying these because there are also "external circlip pliers" the appearance of which is very similar, but the jaws of internal circlip pliers close when you clench them while those of the external circlip pliers open; the latter is totally useless for adjusting reeds.

[50] In order not to damage the reed, it is more prudent to grind its tip before use.

3. A very sharp blade: some scalpel blades[51] are ideally shaped because of their edge slightly curved. Binder points are also good instruments if properly sharpened (on oil stone) before each use. Otherwise, you may merely use a cutter blade or better, a modeller's scalpel[52] blade, or even a folding razor if well sharpened but these have straight cutting edges which do not allow such precise flat work as a curved scalpel blade held between two fingers. Using a scalpel handle is unnecessary and inconvenient.

Sometimes you'll read or hear people advise fine sandpaper, but working with a slightly curved scalpel blade is much cleaner and more precise and does not make micro-scratches. And there is no risk of embedding tiny abrasive particles in the cane.

Curved blade versus straight blade

The advantage of a curved blade for scraping[53] bombarde reeds is easy to understand: the contact point blade/reed in this case is actually a point, which allows high precision of both the location of the scraping and the magnitude thereof at the desired location. A straight blade will cover a larger portion of reed and will require high precision in its inclination relative to the reed for a less precise result. In addition, a curved blade allows you to work on the reed firmly flattened on a hard surface (therefore a reed which stays still) while the use of a straight blade requires you to work freehand on a curved reed, unless you have a curved plate to be inserted in the reed in order to maintain its curvature under the pressure of the straight blade. Working freehand is quite possible but requires a good technique that is acquired only after having massacred a few reeds...

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[51] There are many profiles and size of scalpel blades; push the door of a medical equipment store and you will find the profile that suits you. These blades quickly dull and cannot be sharpened again; you must throw them away when they begin to be dull (these blades are sold in packs of a hundred blades and are not very expensive).

[52] X-acto® is in this field a trade name used as a common name.

[53] Warning! Only the blades for *scraping* the reed are discussed here and not for *carving* the reed. Scraping is done at 90°, the blade grates the reed and produces dust while carving is made at less than 90°, the blade superficially slices the reed and produces small chips. Carving a reed with a curved blade is extremely difficult and most often destructive for the reed.

Preferring to work on the reed with curved blade or straight blade is a matter of personal preference. Those who prefer the straight blade and don't like the cutter or the folding razor will find all they're looking for among accessories sold for bassoon and oboe players: scraper knives and plaques of various shapes. Caution, scraper knives are not all ambidextrous. No plaque matches bombarde reeds exactly, so you will have to be happy with an approximation or make one yourself in a hard wood (ebony preferred) or a piece of synthetic resin.

NB: the cane (Provence cane) is a plant whose tissues and especially the epidermal areas (the parts used to make the reeds) are very high in silica. The consequence is that the scraping of reeds quickly blunts sharp tools.

Softening the reed

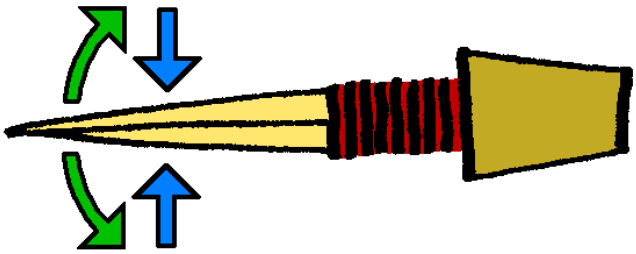
To soften a reed you can either *soak* it or *massage* it or *scrape* it or *close* it and usually a *combination* of all or part of that.

Soaking

You'll often read and hear the advice of prolonged soaking in water to relax and thereby soften the reed. Certainly, it is easy to do but do not expect too much of it. The effectiveness of soaking alone is relatively low; one might say it prepares the reed well for the massage and not much more and to be effective it must be prolonged (2-3 hours rather than 2-3 minutes). Soak only the blades and not the binding which otherwise might relax[54].

Massage

Take the reed between the thumb and forefinger just at the limit of the scraped zone and bend the blades slightly alternately up and down (green arrows) while pinching the reed between your fingers (blue arrows).



A gentle and periodic massage is a reversible method of softening the reed (it recovers its previous state during drying after playing) but a prolonged and insistent massage (meaning that you bend the blades strongly and several times) has a real physical effect on the cane fibres and causes a partially irreversible softening of the reed.

[54] Modern reeds are mounted with moisture insensitive synthetic yarn but prolonged immersion of the cane may cause its slight swelling followed by its retraction that may relax the binding if it is not sufficiently elastic, so be prudent.

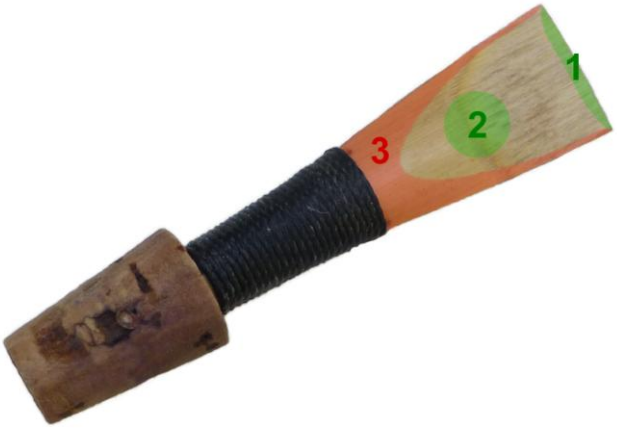
Scraping

Scraping is not just a way to soften the reed but also to improve its timbre (its richness in harmonics).

NB: Avoid if possible scraping reeds for the C bombarde until you have had your hands on some reeds for the Bb bombarde, which are larger and therefore less sensitive to small errors of scraping.

Absolute rules:

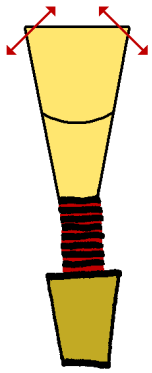
1. The scraping blade must be held perpendicular to the reed blade; *it must scrape the reed and not cut or carve it*.
2. Scraping must ALWAYS be done while following the grain of the cane, i.e. in the axis of the reed and going up from the ligature to the free edge of the blades.
3. Scraping must be symmetrical between the two blades of the reed. Do not scrape a blade then the next one but alternate every action from one blade to the other.



Scraping areas (in green): 1. the free edge of the blades (being particularly careful at the corners) – 2. the junction between the scraped area and the resonance chamber.
Areas to respect (in red): 3. except in special cases this area should never be scraped, otherwise you may "kill" the reed.
Intermediate areas (not coloured): be wary of these but they can be scraped carefully if necessary.

About the precise zones to scrape, if we go into details there are as many opinions as soners! The photo above is only a rough sketch and does not pretend to cover this entire complex subject but it will prevent you from making big mistakes.

During scraping the reed must be kept still. If you use a curved blade (which is recommended, see above), firmly press the reed on a flat and hard surface to both keep it still and flatten it.



The corners should be respected during scraping – more for reasons of strength of the reed than of sound. The highly trapezoidal shape of the bombarde reed means that the blade corners break off easily as strips if they are too refined.

The reed can also be slightly trimmed at the corners; this reduces the risk of damage and is also known to facilitate the ascent to the second octave, which is not always borne out in practice...

Checks during scraping:

The scraping must be *very* progressive and interspersed with checks of the result. These controls are of three kinds: auditory, tactile and visual.

- *Auditory check*: regularly test the sound, responsiveness and ease of your reed both outside the instrument and inside the instrument. This is the essential check, of course!

- *Tactile check*: it is often forgotten; yet the pulp of the fingers has a remarkable sensitivity to detect overthicknesses or asymmetries that the eye is struggling to see.

- *Visual check*: a beautiful scraping is not necessarily a good scraping... We will hence control the thickness of the blades and the regularity of scraping by transillumination to work more harmoniously and symmetrically. Feel free to compare by transillumination a reed "that works well" with a reed "that works poorly" to try to understand the reasons.

When you're getting started, only the combination of these three types of check will allow you to avoid many errors. With experience, you can scratch your reeds a little more instinctively but don't leapfrog these steps!

Transillumination of reeds

At your first tests, you can help yourself with a simple indoor lamp or a sunny window to control by transparency the scraping of the reed. This way is easy but very rough.

To control *independently each blade*, which is preferable, the ideal is to pass the light through the base of the tube of the reed. Here are some ways to do it, among many others:

Medical otoscope[55]. Choose a cheap one with a lamp (high-end models have fibre optic and are expensive and unusable for reeds). It's a tool perfectly suited because it is provided with a powerful thin tubular lamp on which the tube of the reed fits perfectly.

Flashlight type mini-Maglite®. Simply unscrew the front window and remove the reflector. The tube of the reed then fits easily on the tubular lamp.

[55] An otoscope is the small lamp with which your doctor examines your ears. It's available at every medical equipment vendor. The very cheap models, of Asian origin, are more than enough as "reedoscope".

Torch function of your smartphone. Its LED lighting is very powerful but the reed is in balance and the set is not very ergonomic. There are also some dazzling light leaks. Just tinker with a piece of thick cardboard with a hole to insert the reed and the problem is partly resolved.

NB: all the above means must be used in very attenuated light.

Closing

For closing the reed, i.e. reducing the space between the blade lips, take the pliers and slightly flatten the end of the brass tube, which is just below the limit of the ligature. Flatten the tube gently and *very gradually* by tiny and repeated movements while rotating slightly the pliers each time to maintain a regular elliptical shape to the end of the tube.

Bombarde reed rid of its blades

While working on the reed with the pliers, it is important to try to maintain the harmonious form of the brass tube hidden under the blades (cylindrical at its base, oval at its top). The shape of the tube called a "staple", largely determines the characteristics and qualities of the reed.

NB: the helical groove of the staple is intended to grip on the reed and to reduce the risk of blades slipping on the tube. Not all staples have one.

Try to reduce the gap between the lips of the blades without flattening the resonance chamber of the reed too much. If you flatten the resonance chamber too much, the reed is muffled without really being softened because the badly held blades tend to close while vibrating and the air hardly passes through.

Hardening the reed

Rounding the chamber

Try to give a bellied shape at the base of the reed (the unscraped part). For that, take your pliers and slightly pinch the sides of the tube covered by the ligature; press repeatedly, each pressing being spaced 1-2 mm from the previous one and take care to vary the angle to maintain the slightly oval circular section of the tube. Be careful not to make a "square tube"! The more the pressing of the pliers is away from the cork the more the reed will tend to open. Pressing closer to the cork has little effect on the opening or slightly closes the reed.

You can also use the big nail by pushing it as a mandrel into the tube (through the cork end) then pushing it up while gently forcing, which will "unovalize" at the blades end. Be careful not to push it too far so as to avoid damaging the blades by scratching them inside!

You can also first use the nail, then tweak with the pliers or, better, use the nail (or a set of nails of various diameters) as a mandrel while using the pliers, which will reduce the risk of too much deformation of the tube.

After rounding the resonance chamber, you will generally have to close the gap between the blades a little, as explained above.

Shortening the blades

This is the solution of last resort when a too soft reed is impossible to improve by other means; in this case there is no risk in trying.

1. Place the reed on a hard flat surface (glass plate, ceramic tile, trim bottom, etc.) or on a cutting mat used by model builders (found in creative leisure shops).
2. Press it with your finger to completely close its blades while holding it firmly.
3. Cut a very tiny portion of the blade lips, 1 or 2 tenths of a millimetre or slightly more, because you can always cut again if necessary but you cannot go back. You can make the cut freehand or use a metal ruler to help with pinching the reed. *Be careful not to break the corners of the blades* by strongly pressing with a very sharp blade *without dragging it.* The wet cane is then cut easily and cleanly.

Once shortened, the pitch of the reed will slightly rise up in the treble, which can be annoyingly out of tune with the biniou (you will have to move the reed of the bombarde back a lot and to push down the one of the levriad, sometimes too much). It should be noted that shortening often allows a tired Bb reed to make quite a good reed for the C bombarde! If you act with this aim, the slicing can be slightly larger (about 2 mm).

Restore the brilliance of the reed

You can rejuvenate a tired reed by combining the previous techniques. If the reed is really too dull and has been too soft from the beginning, though, you shouldn't expect miracles. However, for a normal reed, making this adjustment after its running-in period will stabilize the reed in a state which it will then keep for a very long time.

At first you harden the reed by rounding its chamber THEN you soften it by bringing the lips of the blades closer. Do this in progressive stages: slight rounding followed by a slight closing of the lips then new rounding etc.; each pressing of the pliers in one direction is followed by a pressing in another to maintain a smooth shape of the reed tube. Be very careful to not create any lateral offset of the blades during these actions. At the end, you may finish off if needed (i.e. if it has not already been done) by gently scraping the free edge of the blades for 1-2 mm (area 1 on the photo of the scraping areas), no more, while respecting the corners.

Try that, it's magic!

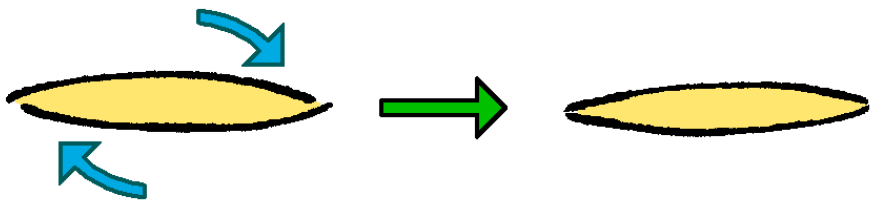
Realign the blades

Sometimes the strips get misaligned, shifted laterally, in a tiny way, sometimes following a bit of awkward adjustment with the pliers or, more rarely, by releasing of the ligature.

This shift has the effect of slightly narrowing the effective width of the reed, the outside edges being not functional. The reed becomes quite dull and causes problems of tuning, sometimes brutally and then you wonder why because the blade offset is often tiny and does not catch the eye.

Another consequence of the blade offset is that the part of the blade that is no longer supported by its opposite is easily broken, the reed being then permanently altered, often irrecoverably.

If the binding is not too stretched, the blade offset is often recoverable by massage between the fingers. One hand holds the cork and your other one pinches the blades between thumb and forefinger while trying to eliminate the offset by massaging laterally and asymmetrically (you will have often to force a little) while applying a high pressure towards the cork (as if you wanted to push the blades into the cork). You'll usually have to repeat this process several times.



Once realigned, the reed is reborn spectacularly! Unfortunately, the blades get often misaligned again during drying of the reed; if this is the case you should either repeat this process each time you will use this reed or slightly rectify the tube of the reed with the pliers to give it a truly symmetrical oval section.

If the binding is markedly distorted, you can try to remake it yourself with a fine braided fishing line or any other flexible and strong line that is not sensitive to moisture (reed makers generally use 3-strand polyamide line), but it is less simple than it seems[56] because the side contact edges of the blades must be well joined and sealed. It is therefore worth attempting such a reassembly only if the reed in question was truly exceptional (but there is no assurance that it will be again after its rebinding). Rather than rebinding, you can also double the binding and reinforced it tightly with a thin copper wire, for example.

"Old style" scraping

"Old style" scraping (at least some call it this) is a special way to adjust the reed that allows extremely expressive playing with a particular sound. This scraping method is not recommended initially for beginners because it requires excellent control of the reed to get a nice sound or even just to play in tune. When you have good control of the reed with your lips and tongue, you'll be able to try it.

To work out this adjustment, you have to:

1. Relax strongly the resonance chamber of the reed by scraping the middle of it almost to the binding. You have not or nearly not to scrape the part already scraped of a standard reed.
2. Compensate partly for this relaxation by a *slight* increase of the gap between the blades (open the reed *very slightly* with the nail or the pliers).

Area of the "old style" scraping (in green)

But that's not all, because if you then use this reed as a "normal" reed, you will feel that you have stupidly spoiled a good reed to make a slack and dull reed without any quality, in appearance good to throw away... In fact, to use a reed scraped like this and make use of the full potential of it, *you have to pinch very forward, your lips close to the binding*. You then get a deep, rich sound that is very sensitive to modulation by pinching, a modulated sound that would be impossible or very difficult to get with a reed adjusted "normally" whose resonance chamber is too stiff.

[56] When mounting a new reed, the blades are made of a single piece of cane that is folded. They are separated by slicing only *after* binding tied onto the tube, which is much easier than tying two separate blades.

An example of authentic "old style" scraping: this reed in cane was made and used by Auguste (Gus) Salaün (1897-1976) famous soner from Bannalec. You clearly see the extent of scraping on the heart of the reed with a strict respect of the margins and corners. This reed, even though very old, still works well! [coll. E. Ollu]

The sound produced by combining this type of scraping and this type of pinching is the antithesis of the "bagad" sound and fairly close to some historical records of ancient soners; it was also the sound of some modern soners of the previous generation[57] who played like that, while "chewing" their reed deeply driven in their mouth.

Modern reed
« old style » scraped

Using this type of reed adjustment, associated with the pinching that suits it, is a matter of personal taste, but if you scrape the reed in "old style", you should know that it will then no longer be possible to go back and that, if the scraping is quite pronounced, the reed won't be able to be played otherwise than close to the binding.

Note that such scraping is well suited to recycling reeds which appear to be in good condition but "tired" because their resonance chamber has become too relaxed to ensure the necessary rigidity for getting a good sound with normal, fairly backward pinching. Don't try to correct the problem. On the contrary, make it worse so that it will become a positive quality!

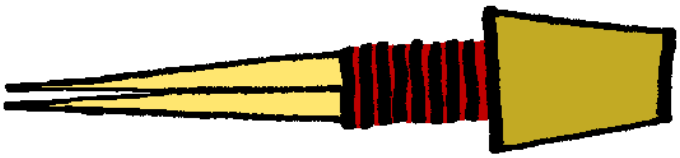
[57] Jean-Yves Blanchard (champion of Brittany 1971 and 1977) was, among others, a good example of that.

Always proceed in stages when you scrape a reed in "old style"; minimalist and rather superficial scraping, as here, may be sufficient to significantly soften the resonance chamber. If it's insufficient, deepen it and expand it slightly in a more pronounced V but do it *gradually* and regularly test the result by pinching close to the binding.

Unnecessary adjustments or things to avoid

Lateral disconnection of the blades

Partial disconnection

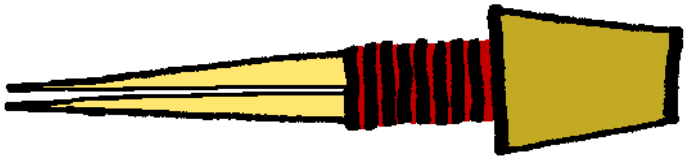


It happens that some run-in reeds, especially if they were the object of an adjustment with the pliers, show a slight side disconnection near their corners which do not meet perfectly. A disconnection one millimetre long is rather frequent and normal but this disconnection can sometimes reach half a centimetre long.

This may seem an anomaly to be corrected, it is not so! The reeds with this aspect often sound very well because, on the one hand, this disconnection is usually evidence of good internal tensions in the reed, on the other hand, the blades become perfectly joined as soon as you pinch the reed even slightly. So if this aspect is not accompanied by a misalignment of the blades (see above) and if the reed seems to work properly (this is usually the case) do not touch anything!

The only problem with this kind of separation of the blades is that the slightly separated corners easily catch fibres of your clothes or your fingers or lips, and chip easily. A reed with unjoined corners is hence a bit more fragile than one with joined corners and you should be careful when handling it, that's all.

Full disconnection



This can be seen in two circumstances:

- The first is very rare: it is the rupture or significant release of the binding, it must be redone (it's not easy, you usually have to discard the reed).
- The second is more common, although it almost never occurs in Brittany: it is a reed kept in warm and *very dry* conditions. In such cases, the reed has dried completely and strongly contracts while the copper tube expands and the blades are not perfectly joined along the whole length of their edges. The reed becomes hard and almost unplayable. There are air leaks, the sound is horrible and you cannot play in tune.

Do not try to correct that with the pliers! Just soak the reed in water or keep it in your mouth without playing it in order to get everything as it should be but it may take some time (about ten minutes). Avoid playing on the reed before rehydrating it. The reed is brittle and can crack when it is very dry.

The day you have to play in regions with warm and dry climate (southern Spain in the summer for example) you can expect to be confronted with this kind of problem. Keeping reeds in a overheated house in winter can also sometimes cause this problem of drying out of the reed but it's more rare.

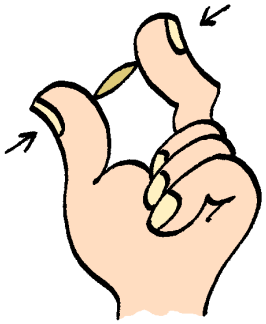
Adjustment during playing

You can make slight corrections to a reed during playing, when the bombarde stops and the biniou is playing alone. That leaves very little time so you must be fast and precise in your actions.

The reed is too hard

If the reed is too hard and tiring to play, you soften it by pinching the blades between the thumb and the forefinger of the upper hand and massaging them gently and quickly. Warning, this can sometimes slightly raise the pitch of the reed.

The reed is too closed



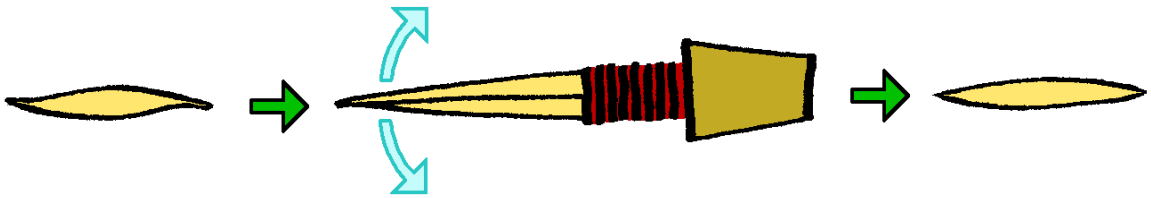
If you feel that your reed is too closed and that the air passes through with difficulty and that the sound is muffled, pinch your reed quickly between thumb and forefinger on the sides (the joints of the blades), just above the binding, to open the reed and restore the sound.

The result of this action is very temporary and must be repeated many times during the playing to maintain the proper opening of the reed.

Correcting the corner waves

This is done rather before you begin playing and generally concerns well run-in reeds that were adjusted to increase the roundness of their resonance chambers. The opening of such reeds tends while drying to take a wave profile at the corners and, when you reuse them, their sound will be a little dull with rather soft attacks. This waving deformation is generally barely visible with to the naked eye but you can feel it very easily with your fingers.

To fix that, most often you have just to massage the reed lightly by pinching it *rather high* and very little between your fingers to bend it just for one or two slight go-and-return movements, *as the goal in this case is not to soften the reed*. The opening of the reed then resumes a regular shape and the brightness of the reed is restored. This recovery is however only temporary and the waves will reappear after the drying of the reed.



If this kind of action has no effect and the deformation continues, that means that the cane is too soft and the reed is waiting for a well-deserved retirement after good and loyal service.

Reed lifetime

It is extremely variable and depends more on the player than the reed itself.

> **Firstly, do not forget that most of the reeds considered as tired are actually reeds that need to be adjusted and/or cleaned. A thorough cleaning can often give them a dramatic rebirth or at least improve and prolong their lives significantly.**

Criteria related to the reed

The only criterion related to the reed is that a very soft reed generally will age faster than a harder reed, although this is not an absolute rule. Cane is a natural material with variable characteristics, so some reeds tend to age faster than others without it being possible to know why.

Criteria related to the player

Even with similar use, some players thoroughly exhaust their reeds in a few weeks and others keep them for years!

Players who tend to pinch hard, especially when they pinch rather forward (these two criteria are often related) tire their reeds faster than others. Beginners also tend to mistreat their reeds and make them give up the ghost prematurely, especially at the very beginning; thereafter, the more the experience of the instrument accumulates the more the reeds last. Frequent playing at the second octave can also age reeds before their time, especially when it is practised with strong pinching.

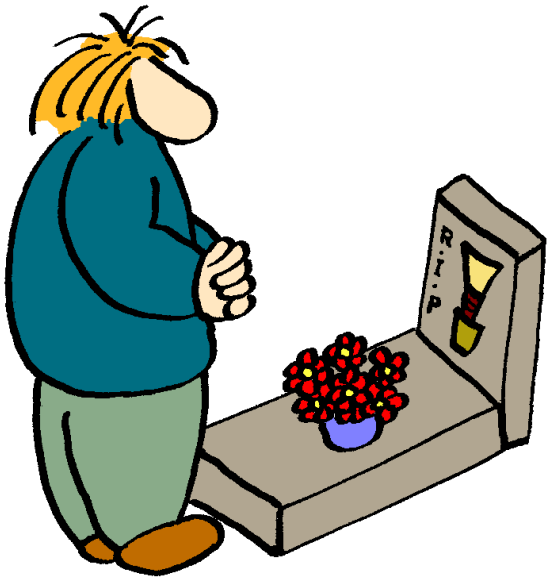
You also may hear about variations of "saliva acidity" between people that effect the rate of deterioration of reeds. This factor is if not fantasy at least marginal because saliva has a strong buffering effect that keeps the intraoral pH around neutrality. However, this pH may be temporarily significantly reduced after consumption of sweets...

If you want your reeds to last a long time, it is necessary to take great care of them. They need protection against shock, an aerated storage box[58], prompt and complete drying after playing, very regular cleaning and never being played dry.

[58] A reed box to download and assemble yourself is offered below in this document

Clinical death of a reed

Become forensic expert in reeds. For that, learn the clinical presentation necessary to sign the death certificate of a reed.



A reed is "dead" when it exhibits any of the following symptoms:

- The above actions aimed at increasing the reed's brightness have no effect and the reed continues, after cleaning, to have a dull and muffled sound, low in harmonics.
- It has a split[59] at the resonance chamber.
- It is conspicuously chipped at one corner.
- It has a chip on the margins of the blades.
- Blade lips are cracked[60] or split.

However a reed is often dead while at a glance it looks normal. A reed is not eternal, elasticity and tension of the cane fibres deteriorate over its use[61], regardless of the amount of care and attention that you bring to it.

A slow death surrounded by the affection of his family is not however the most frequent circumstances of death for a reed. Traumatic accidents are undeniably the most common way for it to end its life, often prematurely. That brutal tragedy is then usually accompanied by a self-flagellation session of its owner together with a poignant funeral oration based on profanities, because the rule is that it is always your best reed that you break; this rule is as old as the bombarde and is not subject to exceptions.

It should be noted that the notion of dead reed is not absolute. It is indeed surprising to note that some reeds that appear to have spent their entire lifetime in one bombarde have rediscovered their youth in another bombarde (other pitch, other maker...), sometimes dramatically! That is noted only when the reed sounds tired but without showing splits and cracks, because cracks are the first step on the way to the trash can and splits, especially splits in the resonance chamber (the belly unscraped part), are the ticket to enter it. Moreover, in this last case, the reed generally doesn't sound at all or makes a terrible noise like a creaking door, sometimes intermittently and rather randomly, that is to say that the

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[59] A split concerns the entire thickness of the reed and prevents it from vibrating normally; a simple surface crack of the reed varnish is of little consequence in the beginning but will tend to worsen over time until complete split develops right through the wall of the reed.

[60] When the splitting of the reed lip is single and very short, the reed can still operate rather well for some time but it is dying.

[61] This alteration is related to mechanical processes (damage and breakage of the fibres caused by vibration and stretching) and microbiological ones (using a biodegradable material in hot and humid conditions).

reed can suddenly go from a normal sound to a grinding one then operate almost normally again a little later then grind again etc., which makes it unusable in practice.

Therefore, never throw your tired reeds away as long as they are not split; they may be able to be reused, by you or someone else and then don't forget that you can make good C reeds by slicing tired Bb reeds, you can also try to convert them into levriad reeds in G[62], and finally you can try to scrape them in "old style" if you like this way of pinching and the sound that results.

[62] Transforming a tired Bb bombarde reed into a G *levriad* (chanter) reed requires a little more work because you have not only to shorten the blades but also to extend the scraping quite low and shorten the base of the reed tube, and finally you have to adjust the reed with the pliers. In addition, such reeds will not work correctly in all G levriads, but you can try, it costs nothing!

I get correctly my notes

IT IS not enough to control your blowing and reed pinching to get correctly the notes out of the bombarde. You must also manage their attack and vibrato, even their glissando/portamento[63] and harmonic content.

The attack: tonguing, legato, crescendo/decrescendo

Attacking a note refers to how you start it while audibly separating it from the previous note. The attack is the brief moment of transition from one note to another, or from silence to a note.

At the very beginning of our contact with the instrument, we all tend to attack the notes with the blowing alone, from where a delicious old car horn sound...

Remember that with the bombarde you never attack a note by only blowing (this is true for the majority of reed wind instruments, except bagpipes), you must *always* associate a work of the tongue or the lips or both.

Tonguing

To attack a note plainly, lightly touch the tip of the reed with your tongue as if you were pronouncing the sound "TE". It's called "tonguing" (giving a tongue hit). You can also give attenuated hits, that means less sharp and less brutal, by acting as if would pronounce the sound "DE" with the tongue a little further back.

Take care; tonguing is made with the tongue, not with the throat... Expressed differently, be careful in the beginning to act as if you pronounce a "TE" or "DE" but certainly not a "KE". This last often causes a mashed attack with an ugly fluctuation of the pitch of the note.

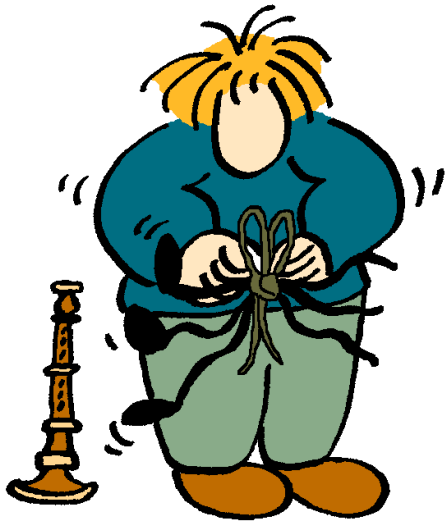
The difficulty is not in the tonguing itself but in the synchronism of fingers and tonguing: this synchronism must be perfect otherwise your attacks are porridge. The difficulty of synchronism is at the maximum while going up the scale and it is especially in this sense that you'll have to work at it. This synchronization of tongue/fingers is acquired by practice and there is no special trick to accelerate it.

[63] In the jargon of music, one names so the gradual slide from one note to another; if it's a stepping shift (that is to say, you can differentiate gradations) one speaks of *glissando* and if it's a continuous shift one rather speaks of *portamento*. With the bombarde, a true *portamento* is possible only with contiguous notes, but auditory difference between *portamento* and *glissando* is not very sensitive with this instrument and the term used is therefore irrelevant.

Virtually absolute rule: from silence you always begins with a tongue hit; otherwise you must start by a dashing on (cf. infra). If you start with an anacrusis (that is to say a note or a group of notes before the first beat[64]: ***and***-tra-la-la) tonguing will be attenuated by "DE" rather than "TE".

Slurred notes

Two notes of different pitches that are not separated by tonguing or silence are called 'slurred'. Be careful to control your blowing and pinching when playing slurred notes because tuning problems can arise if the slurred notes are not adjacent.



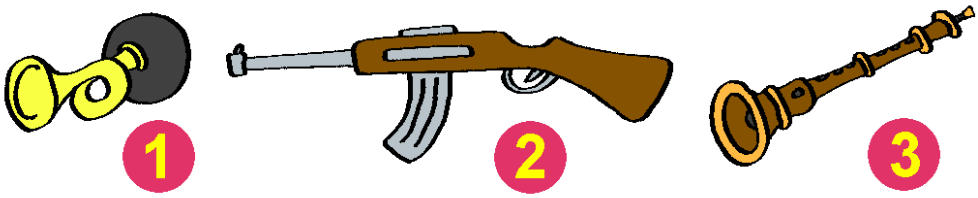
Beginner soner mastering imperfectly the technique of legato notes.

Contrasting tongued and slurred notes

At first contact with the bombarde, after the short phase of car-horn playing mentioned above, we tend to play all the notes legato then soon it is the opposite and we give a tonguing to each note. This is "machine gun playing" phase – as flat and unpleasant to listen to as the car-horn phase. This machine gun step tends to last a long time if you are not careful to avoid it.

Minimal expressiveness and phrasing on the bombarde contrasts tongued and slurred notes. *Tonguing brings something to the expressiveness only if it contrasts with legato playing and vice versa*.

Properly contrasting tongued with legato notes is the basis of the *phrasing*. But phrasing cannot be done unthinkingly; you must try to highlight the strong beats and create contrasts. Tonguing can be varied between none and spitting the notes out. You must not fall into repetitiveness and monotony: you must try to vary your phrasing in the same phrase, while respecting the rhythm and strong beats of the tune.



The three successive stages of the phrasing of the beginner soner.

[64] When you beat time from top to bottom with the hand or by stomping, the "beats" are when your hand and foot are down. Start with anacrusis simply means starting the music phrase when the hand and foot are up (on the "and") before the first beat of the phrase.

Sweeping tonguing

Once basic tonguing (tongue single strokes) has been well mastered, you can also try "sweeping tonguing".

"Sweeping tonguing" (as it's called in French = "*balayages*") consists of attacking a single note with several repeated strokes of the tongue. Be careful though, because one must not hear several hits but one *quick* "tacatac" or "tacatactac" very expressive for some strong beats of dance tunes. This requires a very fast round trip of the tongue and it is not easy to do cleanly and sharply, but you can cheat a little by adding a little ornament on the last hit (just lift and lower immediately the forefinger of the upper hand along with the tongue stroke). This effect sounds really well only for the higher notes and for tunes that suit it. If you fail to do it properly, don't worry because it is possible to play the bombarde perfectly without using it.

Crescendo and decrescendo (= diminuendo)

Crescendo is gradually getting louder, *decrescendo* or *diminuendo* is the opposite.

With the bombarde, these effects are created by greatly varying the reed pinching in combination with perfect blowing control. Playing good progressive crescendo/diminuendo is not very difficult but playing it while keeping from one end to the other the right pitch of the note is not easy, the ratio of blowing/pinching needs to be very precise. This ratio cannot be described in words, so you have to practice to find and master it.

Don't worry if at first you're struggling to make beautiful cresc./dim. because they are only useful for some slow airs. Abusing them or even just using them in dance tunes may often break rhythm more than anything else: in such tunes a few diminuendos are sometimes acceptable only to end some final notes held long while the biniou has already started to repeat the phrase. They are not appropriate anywhere else in Breton dance tunes!

In fact, practicing making beautiful very steady crescendos/decrescendos is mostly a good exercise for reed control which will then allow you to vary your sound pleasantly without there being any need for playing such effects here and there just for the satisfaction of displaying your virtuosity.....

Vibrato

Vibrato is cyclically and quickly varying the frequency of the note you're playing. In fact, not only the frequency must vary but also the harmonic content.

With the bombarde, you have various ways of unequal importance to obtain vibrato:

- Throat vibrato
- Instrument trembling
- Free fingers shaking
- Mandible vibrato
- High tonic vibrato

These various ways can be more or less combined.

Old untempered bombarde. It seems that the key has never been mounted. The hole initially intended for it has a symmetrical counterpart on the other side of the instrument. These two holes act as tuning holes and decrease the directivity of the instrument's sound. This bombarde in boxwood and pewter, which was owned by the soner Le Berre from Dinéault, has a truly remarkable sound and great capacity for expressiveness. [coll. E. Ollu]

Throat vibrato

This is the main way to get a deep, steady and easily modulated vibrato. To get it, your throat is mainly used and quite incidentally your lips.

When you have dirt in your throat and you want to clear it, you do it by making *humhumhumhum* quickly. This is exactly what you must do while blowing into the reed, with an important point, however: while clearing your throat you must try to lower your pharynx and thus increase the volume of your oral back-cavity.

If until now you blew in a linear and regular way, now try to do as directed. It is very easy and your sound will immediately have a magnitude and harmonic richness you maybe never imagined. Many advances in technique on the bombarde are progressive; by contrast this one is often immediate. Once the trick of throat vibrato has been understood, the quality of your sound and the expressiveness of your playing instantly make a great qualitative leap.

Once learned and automated, throat vibrato needs to be controlled and modulated, especially with some highly responsive bombardes, while some other bombardes, on contrary respond poorly to this type of vibrato and need to be assaulted to react properly.

Instrument trembling

This technique is of less importance and you might well never use it. It's a matter of taste, but if you like an intense and very "fat" even a little "dirty" vibrato that "spews", and *if you do not overdo it*, it would be a pity to do without it totally.

This vibrato is obtained by slightly but quickly shaking the instrument back and forth with low amplitude. Doing so, you move very slightly the location of the pinching on the reed, which produces a strong vibrato but moving the pinching can also cause tuning problems. Whatever the magnitude of the vibrato, the base note must keep in tune! Another major difficulty lies in the regulation of the amplitude of the oscillation front-rear and the frequency thereof, because if the latter is too slow the result is horrible. In fact, your hands should actually vibrate back and forth, watch the hand of a violinist making a vibrato and try

to adapt that to the bombarde. You will quickly find an additional difficulty: continuing to play at the same time...

On account of all these difficulties this kind of vibrato is mostly used with long notes such as notes which end phrases and especially high notes because instrument trembling has less effect on the lower notes.

The bottom hand doing most of the job of the trembling, you will find that a bombarde fitted with a turned ring in the middle of its body, in front of which the thumb rests, is more convenient for trembling than a bombarde without such a ring. In this context, the central ring is not merely aesthetic.

Instrument trembling is less easy to control than throat vibrato and you must therefore practice it a bit before getting a nice well balanced vibrato in this way, which, I repeat, must remain merely an accessory.

Free fingers shaking

This way of vibrato is an adaptation to the bombarde of the way to make a vibrato with the biniou: you shake the fingers of your bottom hand over the open holes. All bombardes don't react in the same way to this type of vibrato, which is usually quite difficult to control, much more difficult than on the biniou, because if your fingers are too far from the instrument there is almost no vibrato and if they are too close the effect is excessive...

As with instrument trembling, this vibrato technique is without great importance and a matter of taste; you may even never use it.

Mandible vibrato

To perform this vibrato, you use your mandible and lips. You make your lower jaw vibrate (you loosen then tighten it cyclically and quickly) with very low amplitude, which has two consequences: variation of lip pinching and variation of the volume of the oral cavity. In practice, mandible vibrato is always associated with throat vibrato of which it is a kind of amplification.

On account of the large variations of timbre and harmonic content that it allows, mandible vibrato is extremely expressive, but it is not easy to control because it's not easy to maintain the tuning of the note being played. But when it is mastered, it can be powerful enough to stir the listener deeply to the guts!

High tonic vibrato

The vibrato is special and has quite a limited interest since it concerns only one note: the high tonic (tonic of the second octave). It is however useful to know it because it is easy to perform. It is used mainly when stopping on the high tonic at the end of a phrase, or at least when this note is held. To get it, you lift the forefinger of the bottom hand (so you have the two forefingers lifted) and you shake it over the hole.

This vibrato is sounded more or less easily depending on the bombarde used. On some bombards it is difficult to use it. On others it is necessary to compensate by blowing especially powerfully to make the vibrato sound well and in tune. This especially true of low-pitched bombardes; for these, high tonic vibrato is not always possible.

In short, the value of this vibrato will depend on the bombarde you use: try it and your instrument will tell you immediately if it is possible or not and if so don't hesitate to use it because it is technically simple and sounds very well.

Note streaming and portamento/glissando

Note streaming is an effect that is close to the ornamentation of notes (cf. infra). When two notes are separated by an interval of several notes, rather than lifting or lowering as a block all the fingers involved, you can lift/lower them one after the other in a quick and flowing way, like a wave. If this is associated with any tonguing, you get a glissando and even portamento effect[65]; with tonguing it is rather an ornamentation of one or the other note.

You can also make a real portamento between two adjacent notes by closing or opening the hole gradually. For that, you slide the finger laterally on the hole. This effect can sometimes be effective with some slow airs but it is important not to overdo it because it easily gives the impression of "laying on with a trowel" and, above all, it sounds very Irish!

Ornaments

Ornaments are rigorously codified for the Great Highland Bagpipe, fortunately, but are not for the bombarde, fortunately too. Some maniacs of written music have tried to systematize that by classifying these ornamentations by categories (short or double appoggiatura, biting, gruppetto and I don't know what more). Bagad music added a layer by carefully setting them on scores.

Well, forget all that... Ornaments with the bombarde are an opportunity for freedom and expressiveness which it is important not to codify.

First, recall that there are excellent soners with very ornate playing and others with very little ornate playing and the ones do not play better than the others, it's just a matter of taste, personality and feeling of the player, that's all. Those who use plenty of ornaments are sometimes unable to describe exactly what they are doing (excluding those coming from the bagads) and they say "*That comes out my fingers like that and that's all*". This touches on the essential: the execution of an ornament with the bombarde in traditional pair playing should

[65] (See the note about that at the beginning of the chapter)

not be deliberate and thoughtful, it must be spontaneous, if it is not it is no longer an ornament and then you can hear it. Only this spontaneity will give it this lightning-like immediacy so that you no longer hear it and it becomes an integral part of the note not a small embellishment added to it to try to look pretty and to hide the dullness of your playing. Ornaments are not a way to beautify and enrich the attacks of the notes but to enhance the music's expressiveness; it's not the same!

The actual content of the ornament, the way you perform it, you have not to care at all, do what you want, or rather what you feel. Only the result is important. And if you are unable to disassemble precisely the ornaments that you bring to your playing, then it's perfect; go on! You've become a real soner!

That said, at first you must of course do some deliberate and thoughtful ornamentation, even a little analysed, before your reflexes start to to take control and manage on their own. To put it simply, you must know that the principle of ornamentation is to integrate/merge one or a few extremely short notes at the beginning of a note of the melody. To do that, the fingers bounce (while barely lifting) quickly on the holes: the hole for the main melody note or the one immediately above or below or even at a larger interval away. You are allowed to be inventive! (But please, don't imitate the ornaments of the Scottish bagpipe)

Note that you must clearly differentiate the notes called *anacrusis* and the ornamental notes. The anacrusis is a melodic addition *before* the note or the measure while an ornament starts *with* the note, certainly not before! From the point of view of the melodic line, the ornamentation notes do not exist, they must bring timbre and not a pitch modulation.

Raw melody	:		La–	–la–	–la–	–la
With anacrusis	:	(**and**)	–La–	–la–	–la–	–la
With ornaments	:		**Trr**a–	–la–	–la–	–**rr**la
With anacrusis and ornaments	:	(**and**)	–**Trr**a–	–la–	–la–	–**rr**la

Sorry if the example above is not very clear. The difference between anacrusis and ornament is simple to explain to a listener but more difficult indeed to set out on paper...

From deficiency to excess

At first, your ornaments will not really be ornamental because they will be too slow and poorly synchronized between blowing, tonguing and fingering, but ease and reflexes will come quickly and the risk will be then that of losing control of them and ornamenting a little bit all the notes indiscriminately.

Important: *Performing ornamentation must be spontaneous and thoughtless but the urge to ornament must remain under control.*

The sound, the first and ultimate goal

Fat sound or bugling sound?

The soner in a traditional pair will often tend to prefer a fat sound, "from the throat", a rather rough sound that complements perfectly the brilliant sound of the biniou, which plays an octave above it, while the bagad soner will prefer rather a brilliant sound "from the lip tips" that comes off well with the Great Highland Bagpipe playing at the same octave as him.

It's therefore a matter of taste and context, but in any case a rich sound!

Focusing on the content rather than on the container

> **<u>Absolute rule</u>: it is more important to try to enrich your sound than to try to enrich and ornament your way of playing**

When someone begins to play the bombarde, playing and sound are rather flat and lack roundness and presence, it's normal. The mistake often made is then to try to improve first the packaging (by adding notes and ornaments indiscriminately) rather than the content (the sound itself, its modulation, its amplitude and harmonic richness) whereas the opposite is what should be done. It is important not to hide the flatness of the sound with things and stuff everywhere; in this case not only you do not hide anything but you're just delaying the acquisition of a full, rich and expressive sound.

For that, it is important to work with the sound itself, by playing for example a few long notes, no matter which ones, slowly one after the other while trying to make the sound itself build the music and not the sequence of notes. Give life to your notes! A simple note isolated but well felt can be more musical and go deeper into the heart of the listener than a theme played flat and abundantly seasoned with ornaments whenever and wherever. Remember that you play the bombarde not the potato-masher!

Therefore, practice so that each of your notes is music in itself and not the medium of music and you will soon get a great sound!

The sound quality, inseparable notion from the context

Apart from the fact that the concepts of *good* and *beautiful* are a highly individual matter of taste, the two are also relatively independent, regarding bombarde playing. Indeed, a *good* sound is not always necessarily a *beautiful* sound of the bombarde, at least in some contexts. You must keep in mind that the bombarde is, historically and inherently, inseparable from the *binioù kozh* (Breton bagpipes) and the sound quality of the bombarde should be measured at the scale of this pair of instruments and not at that of the isolated instruments.

Thus, a thick and hoarse sound, with a strong vibrato, almost quavering, and notes pushed out, like coughed up and strongly modulated, ripping the instrument, will often be much less pleasant to listen alone than a clear, nearly fluted and well in place sound, BUT as soon as the biniou is added to the bombarde, its "beautiful" clear sound will become flat and uninteresting while the "ugly" raspy and quavering bombarde sound will become richer and will also enrich the biniou so that a sound alchemy will be set up that will give life to the whole by merging the two instruments to generate a true couple sound and unleash the trumpets of hell!

But if you consider again these two types of sound and if you replace the biniou by a church organ, a frequent modern association, it's then the clear and fluting sound that will become an expressive carrier of emotions while the rasping sound will create no more than a dissonant, aggressive and unpleasant mush in this context. If you replace the organ by a bagad, the result will be close enough... This is why the best compliment that a bagad soner can pay to a soner in pair is to reproach him that he plays "too dirty" while the worst criticism that this last can pay to a bagad soner is to say he plays "too clean" and they both will be right, but only in their own context!

Help! I have some notes that crackle!

On some notes (generally the top notes of the instrument, but not necessarily), it happens that you don't get a clean sound, but a more or less crackling, sizzling, not very nice sound... Don't panic! This means, first, that you have a good instrument and a well-adjusted reed; secondly, you have let your reed be "living" as you were advised above. So all is well but no it's not...

But then what?

You should know that the harmonic richness of the sound of your bombarde is at its best when playing just under the crackling level of the reed, a little below but not much. To rise to this threshold, you need to pinch *slightly* more strongly while slightly moving back your pinching on the reed; in short, you need to give the read a little less freedom and have to find the right mix of all that. At the beginning, this will be done by trial-and-error, then it will become a natural habit; you'll "feel" your reed and how it reacts to your blowing and your pinching.

One point to check if the problem persists despite your efforts: check the tightness of the cork of the reed (we'll talk again about that below).

But why don't I get the sound today?

You began to do well, your sound enriched each and every day and now it's the opposite. Despite all your efforts, you get a "leek sound" (see picture below) and it annoys you of course.

"Having a leek sound" is the meaningless English translation of a very old and strange idiomatic way ("*avoir un son de poireau*" in French) to designate, among the Breton soners, a wishy-washy, dull and muffled sound, without expression. Nobody knows its origin; maybe it is by assimilation to the form of the noble instrument with the no less noble vegetable whose the acoustics are not deemed to be the primary qualities...

What is happening? Assuming your bombarde is in good condition (a crack may have suddenly appeared?) and assuming you pinch the reed always in the same way, the reason is to look more towards the reed itself than towards yourself (although sometimes...):

- The reed gradually becomes dirty from being played: the first thing to do is to clean it! (cf. *reed maintenance*)

- A new reed evolves. After its running-in period, it is often muffled and must be adjusted (cf. *reed adjusting)*

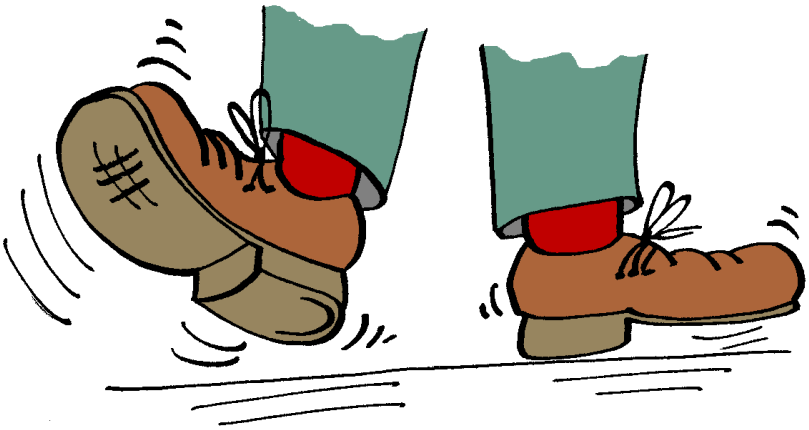
- A reed is not eternal and its lifetime will be even shorter if you are a beginner. Your reed may be too tired. If its adjustment does not improve it, put it aside (but don't throw it away!) and take another one.

- A reed is fragile; its blades may be damaged, check them with a magnifying glass if necessary. If this is the case, it is irrecoverable, take another one. If its blades are only misaligned, realign them (cf. *reed adjusting*).

- The sealing of the cork is perhaps not perfect (one often forgets this important parameter), air micro-leaks between the cork and the reed seating can alter the sound. If the cork is a little tired, add yarn, because the reed must be firmly held to sound well and its base must be perfectly sealed.

I stomp my feet

WHY devote a chapter to something seemingly so peripheral? Precisely because it is not peripheral!

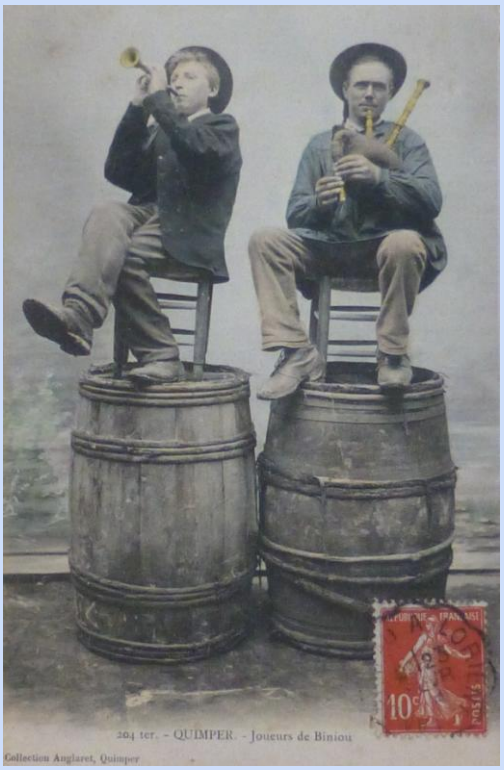


About the importance of stomping

The stomping of a soner is much more than just a metronome, it is a constitutive rhythmic element of the pair playing and is essential to playing dance tunes well. The instruments of the traditional soner pair are not just one bombarde, one levriad and one drone, there are also four feet. You should never forget that.

A soner does stomp and one must hear him stomping, even if your downstairs neighbours do not always share this opinion, but that's another problem...

Moreover, in the past soner pairs were sometimes accompanied by a drum that brought or reinforced this rhythmic element. Similarly, to lead the dances the soners were frequently installed on empty barrels, although it would be possible to settle them on a easier stage such as a cart or a table but the barrels sounded better under the stomping of their shoes or clogs.



In the past, the soners often settled on empty barrels not only as podium but also for the dancers hear the sound of their stomping well.

A soner pair accompanied by a drum.

All that shows well the importance given once to the rhythmic element, but no need of a partner with a drum when nature gave you two feet, just use them and try to use them correctly!

Another essential element of the stomping within the soner pair is the rhythmic synchronization between the two partners. It is facilitated by this visual, auditory and often proprioceptive element when you play on a platform or floor because you then feel the underfoot vibration throughout your whole body.

About the importance of stomping CORRECTLY

From the very beginning of starting to learn the instrument, you must force yourself to stomp, even while simply playing the tin-whistle or other practice flute. One could even say that you must start with that.


Stomping is an integral part of the playing of a good soner.

The goal is to obtain an automatic and fully independent control of your feet over your hands and your playing. You must completely uncouple the feet from the playing of the instrument, that is to say:

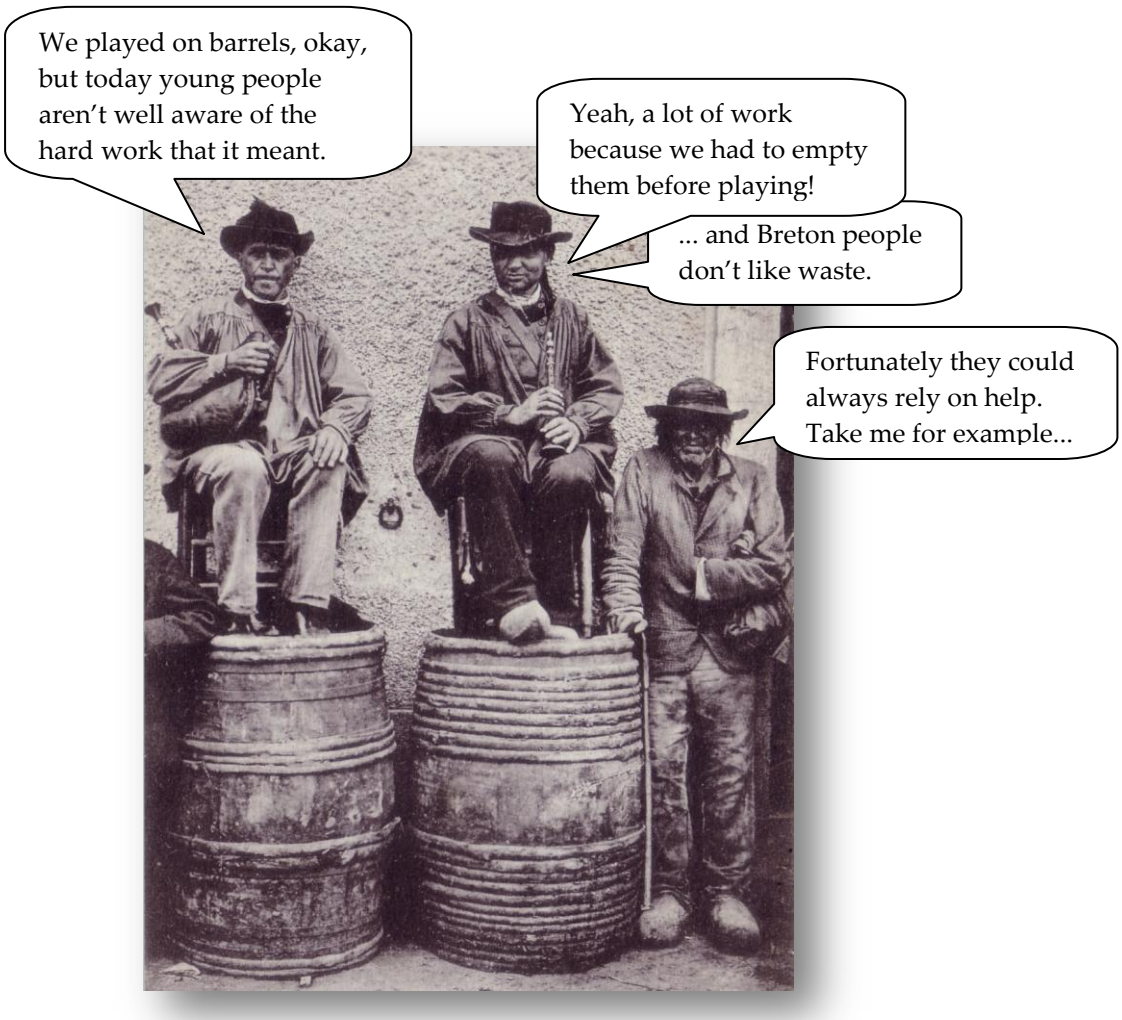
> **Your playing needs to follow the beat of your feet – not your feet to follow your playing.**

Understanding this distinction is essential to playing well; otherwise your feet will tend to follow some parts slightly syncopated or with false upbeats (common in tunes from *Vannetais*, for example) and, in turn, your playing will tend to readjust secondarily to your feet. This can be the beginning of a vicious cycle that leads to making "waves" and at worst to porridge-rhythm and always to poor danceability. Of course, while playing you'll become

aware of this rhythm problem. To avoid it, your natural reflex will be to play too "square[66]", in order not to confuse your feet too much... but by doing so you'll lose a lot of the character of the tunes you play.

By getting good footwork, you will enter, on the contrary, a virtuous circle: the rhythm of your feet will be more driving for dancers, it will provide you with a good rhythmic reference that will help you avoid making tempo oscillations and will allow you to mark the strong beats appropriately after melodic and rhythmic escapades and will facilitate your making these escapades by accentuating the strong beats in contrast to the weak ones. Ultimately, your footwork, in addition to its own rhythmic contribution, will allow you to play much better.

Conclusion: feet are important and must be practiced as well as the bombarde itself!



The origin of the tenacious and inglorious reputation, in Brittany, which combines soner = drinker is a mystery not yet solved. Historians are investigating...

[66] So-called "playing too square" means playing too regularly, too mechanically, like a metronome, with the notes falling exactly, too exactly, at their theoretical place in the melody line and lasting no more and no less than it should last. Listen to a MIDI file of any Breton tune and you will understand better what "playing too square" means!

Playing the bombarde with your feet

Initially, you simply tap the beat, nothing more, but for some dances it is soon preferable to adopt a rhythm modelled on the dance steps (the aim is not to duplicate these steps but to reproduce the rhythm), thus to be more leading for the dancers and more consistent with the strong beats of your playing. One may therefore speak of "playing the feet" as one might speak of playing the instrument. You are really playing a part of the bombarde by playing with your feet!

Here are some examples of common Breton dances for which stomping footwork modelled on the dance steps brings a definite plus. The beats below are based on a usual phrase of 8 beats (or 6 beats for the Hanterdro) and it is assumed that you stomp mainly with the right foot:

Andro and Kas-abarh, Tour gallo

Beats:	**1**		**2**	**3**		**4**	**5**		**6**	**7**		**8**
Feet:	R	R	R	R	R	R	R	R	R	R	R	R

Rarer variation :

Beats:	**1**		**2**	**3**		**4**	**5**		**6**	**7**		**8**
Feet:	L	R	R	L	R	R	L	R	R	L	R	R

This is the easiest and most instinctive Breton dance for stomping well and one of the most important because playing the *Andro* by simply stomping the beats there is really something missing! However, be careful not to match your playing to your stomping too exactly because these *Vannetais* tunes are the very type of tunes for which the main defect is playing "too square". You must play as if hovering above the tune you are playing, with some notes shifted slightly as if suspended in the air. Your feet then allow you to come down just where it is necessary and when necessary, by weighing down some notes that will then be contrasted with the aerial notes and will regularly give the dance impetus. Listen to good soners of *Vannetais* style and you will understand what all that means.

Hanterdro, Demi-tour gallo

Beats:	**1**		**2**	**3**		**4**	**5**		**6**
Feet:	R	R	R	R		R	R	R	R

Same remarks as for the *Andro* but at first your feet will be confused a little more easily by some tunes.

There are also a few *Andro-Hanterdro* (sometimes named *Trikot*) for which you alternate the stomping of *Andro* style with the stomping of *Hanterdro* style.

Dañs-tro Plinn

Beats:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Feet:	R	R	R	L_R	R	R	R	L_R

NB: this is the actual rhythm of the dance that you stomp but it does not reproduce the actual steps of the dance. Your right foot regularly beats and your left foot is added cyclically to this basic rhythm.

The *Dañs-tro Plinn* or *Dañs Fañch*[67] is the hypnotic dance par excellence among the Breton dances. When the two partners of the soner pair begin to stomp as indicated above in perfect sync and let themselves be carried along by the rhythm, hitting the ground increasingly strongly as the tune progresses. At the end the soners are sweating and more exhausted than the dancers... but they both realize that only after the tune has stopped!

Dañs Fisel

There are various "schools" of playing the *Fisel* with the feet; here are two examples:

Beats:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Feet:	.	R	.	R	.	R	R	R

Variation:

Beats:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Feet:	R L	**R**	R L	**R**	R	R	R	R

By stomping in this way you highlight the strong beats of the *Fisel* (beats 2 and 4, change of foot on "4-and-5") which are shifted by one beat compared to most more western *Gavotenn ar Menez* (Fr. G*avottes des montagnes*) (strong beats: 1 and 3, change of foot on "3-and-4"). Note that the first beat of a musical phrase is necessarily more or less strong, but in the case of the *Fisel* it is significantly less than the second beat and is therefore neglected.

With the bombarde[68],, the beginning of the *Fisel* tunes often has phrasing that looks like: *ONE—la-la-**TWO**—la-Three—la-**FOUR**—...*

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[67] The "Pays Plinn" does not exist, although this misnomer is often heard or read, its real name is "Pays Fanch" (Bret: *Vro Fañch*). The word plin(n) describes only the dance, it comes from the Latin *planus* meaning regular, flat, uniform, and is linked to the English "plain" and the old French "*plain*" that can still be found in heraldry (the banner of the Dukes of Brittany was described as "d'Hermine plain").

[68] Using biniou and bombarde for playing *Plinn* or *Fisel* is not fully traditional; so-called *kan-ha-dikan* song was once largely predominant in this area and, when the dance was played with instruments, it was usually by a pair of clarinets playing in *kan-ha-diskan* mode, especially in *Bro Fisel*.

In the traditional repertoire, many *Gavotte* tunes are also used as tunes for *Fisel* or for western *Gavotte* or for *Kost-er-hoed*[69].Your way of playing such a tune (phrasing and marking of strong beats rather than the tune itself and even less the announcement before playing it) should make the dance concerned recognizable. If you are forced to announce any dance before playing it, it's either because nobody in your audience knows this dance (it happens) or because you play it wrongly (it's the most common).

Rond de Saint-Vincent

Beats:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Feet:	R	.	R	.	R	.	R	.

Variation:

Beats:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Feet:	L	.	R	.	L	.	R	.

The *Ronds de Saint-Vincent* are danced at a tempo half as slow as the apparent tempo of the tunes used to support them. You therefore have to do the same by stomping only every second beat[70]. Without doing that, it is quite easy to skip or add a beat when the bombarde starts again. Even doing it correctly, it is easy to shift the pulse and the steps of the dancers... So these *Ronds* are not, despite their apparent simplicity, easy dances to play on the bombarde and singers are often more comfortable with them than soners...

Continuous pulsed tunes

We can refer in this way to the tunes that serve only to provide a line of regular and continuous pulses (in their rhythmic structure, all or almost all the beats are strong and the ends of the phrases are little marked). These tunes don't try to match the dance steps but to relaunch the dance as a continuous rolling pulse. This is the case of the tunes supporting the *Ridées* and many *Ronds* from Eastern Brittany, especially the tunes of 8 beats used to animate the 6-beat *Ridées* for which there is a temporary shift between the dance and the musical phrases. Only the pulse is important in this case (4 × 8 = 6 × 6, 6 × 8 = 8 × 6).

Beats:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Feet:	R	L	R	L	R	L	R	L

Stomping like that by alternating R and L rather than R, R, R... is rhythmically equivalent and therefore entirely optional but helps the regularity of the pulse and helps to keep the

[69] The tunes for the gavotte of the "*Bro Kost-er-hoed*" (*Kost-ar-C'hoat*) are most often characterized by the association of two double phrases (16 + 16 beats). The corresponding *Fisel* tunes are most often tunes of two phrases of 8 beats ("*ton simpl*") the phrases being joined to make phrases of 16 beats. So two *Fisel* tunes 8 + 8 which complement each other are needed to make one *Kost-er-hoed* tune 16 + 16, as follows: AABB + CCDD = [AB] [AB] [CD] [CD].

[70] The solfeggio addicts would say "beating the half note".

tune running well without marking the ends of the phrases too much, which for this kind of dance breaks the rhythm instead of highlighting it.

In practice

Be careful to not misunderstand: the above is not to say that you *must* stomp like that each time you play one of these dances and on all the duration of the dance in question[71], but that you *must be able to do it* when desired and on any tune used for the dance in question. If you only manage to do it on some tunes and not on the others then that means the decoupling between your fingers and your feet is not yet complete.

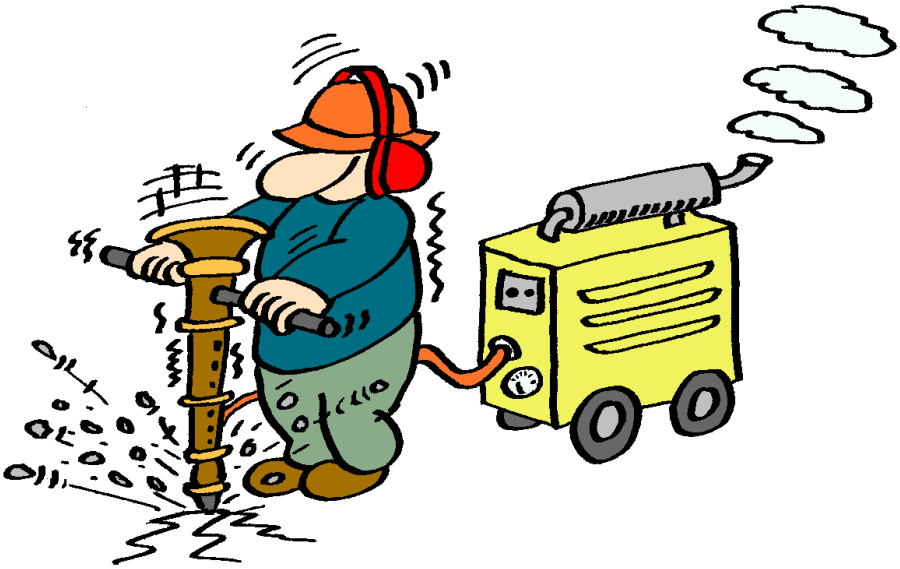
And with your whole body too

To keep a good tempo and good rhythm of a dance it is sometimes useful to use your whole body, not just your feet. There's no need to prance like a spring in your chair, you give yourself just a steady and contained pulse that is expressed in fact by only a few millimetres of movement, hence very little and not visible by others. If you have embedded in you, as a dancer, the rhythm of the dance that you are playing, you feel immediately if the steady pulse of your body is in tune with your gestural memory of this dance.

[71] Yes, soners also get older... stomping in boom-boom-bang-bang-bang all along a *Plinn* set that stretches in length, it is no problem when you're twenty, but later it gets tiring...

What a noisy thing!

THE bombarde is a powerful instrument, in other words it's a noisy instrument and even a *very* noisy one...



We should therefore not neglect the problem of noise trauma caused by practice or repeated listening to this instrument.

Why protect yourself?

Playing indoors in the long run is dangerous for the hearing, yours and that of others.

In this regard, it is interesting to parallel three things:

1. In most countries, the local labour regulations require protection of workers against noise trauma. For example, in France, providing hearing protection is obligatory and its utilisation is recommended from 80 dB(A) of average noise level on 8 hours and obligatory from 85 dB(A), with annual monitoring of hearing and the maximum average level of exposure must not exceed 87 db(A).

2. A bombarde measured at 1 meter, spits happily between 103 and 105 and even up to 110 db[72], regardless of its pitch, and that with transitional peaks able to exceed 130 db during the attacks of notes, far beyond the pain threshold (circa 120 db)!
3. A jackhammer measured under the same conditions generates about 105 db (the drawing of the chapter header is thus not only humour).

No comments...

The decibel (dB) is a logarithmic unit of measurement of sound level; from a purely mechanical point of view, the sound pressure (pressure generated by the air vibration) doubles every 3 db.

Decibels are not additive: if two bombardes each generate 105 db, they generate "only" about 108 db when they play together.

The sound level of a bombarde at short distance is not very dangerous for the hearing if the exposure is rare and very short, but, once you start to play it regularly, damage to hearing is un-avoidable if you don't protect your ears. Moreover, this damage is cumulative over time: what is lost is lost forever and a long period of musical abstinence will not make you recover, alas.

However, some factors limit the sound pressure actually undergone by the *talabarder*: firstly, the intraoral pressure is partially transmitted to the tympanic cavity by the Eustachian tube[73], which limits its vibration and, secondly, the bombarde is a fairly directional instrument and the *talabarder* stands in the acoustic shadow of the bell, in an area where the acoustic pressure is

[72] For the frequency ranges generated by the bombarde, measuring in dB (A) or dB (C) gives almost the same results. The (A) corresponds to a physiological weighting curve, the human ear being not sensitive in the same way to all frequencies. Variations in measured acoustic power are related to the instrument used (with the same reed all bombardes don't have exactly the same power) and especially to the reed used: a hard reed will generate significantly higher acoustic power than a soft reed. The power of 103 db is that with a soft reed, perfect for a beginner, but this power will be released only if the reed is used by an experienced soner; a beginner will badly master his reed and will therefore release slightly less power but sufficient, if he does not take some precautions, to soon destroy his hearing and that of his inner circle.

[73] Permeability of the Eustachian tubes and closure during high pharyngeal pressure is variable depending on the individuals and sometimes from one side to the other in the same individual.

lower. This last point is true only outdoors or in a large room, because indoors the reflections at the walls reduce much of this protection.

It is therefore imperative to protect your ears when you play the bombarde indoors, as much if you practice alone or as a pair, and especially if you play in a pair, of course.

How to protect yourself?

With earplugs, but not just any kind.

Standard earplugs

If you use standard foam plugs, most treble will disappear and you hear your instrument as in a cloud of cotton. It is difficult to be in tune and impossible to play properly with those in the ears because you hear yourself and the other players poorly. The problem is even worse while using an ear protection helmet. Such a helmet is perfect for playing the chainsaw but not the bombarde.

A standard foam earplug is therefore to be used only as an emergency solution, if nothing else is available.

So-called "linear attenuation" earplugs

These earplugs, often shaped like a small Christmas tree in silicone, attenuate in a somewhat similar way bass, midrange and treble, hence their name. Using them, you will hear less loud but the sound balance of ambient noise will be generally preserved or at least not too much changed.

Their nominal attenuation is usually -20 db but that assumes perfect adaptation to the ear canal, adaptation which is in fact variable depending on the anatomy of the canals and the frequencies. We note that this level of attenuation, when it is actually reached, reduces your bombarde's noise level to below that allowed by some Labour Codes, at least the French one!

These reusable plugs are cheap and can easily be found at all hearing care professional's premises and on the Internet and sometimes also in music stores and pharmacies. They come in two common sizes and must fit precisely to your ear canal (of which the shape and the diameter varies greatly depending on the individual).

Using such plugs, you can play indoors without quickly damaging your hearing and you will quickly forget that you have them in the ears (you will find yourself looking for them while they are in place...).

Custom-made earplugs

These protection plugs are moulded to the shape of your ear canals. Easy to apply, comfortable to wear and very effective, they are the Rolls-Royce of hearing protection. They are made from an impression of your canals produced by the hearing care professional. They are provided with an acoustic filter of variable level (usually three available levels, of various nominal value according to the manufacturer). Some earplugs have removable filters and it is possible to buy several filters for a single set of plugs.

Unfortunately, this qualitative leap is associated with a *large* tariff leap...

Breton soners formerly attached no importance to the protection of their hearing, which was probably highly altered over time. The last traditional soners who are known to us were actually hard of hearing but they were also very old, which puts this finding in perspective.

Protecting the others

Your inner circle

Those who are in the same room as you should be protected as much as you and even more than you because they are often subject to even higher sound pressure than you.

In practice this protection is rarely necessary because you'll quickly note that your inner circle has an irrepressible tendency to move to another room as soon as you take your bombarde in hand. Who knows why?

Pets are also to be taken into account. It is surprising how little time it takes for them to learn to recognize your bombarde as soon as your hand comes near it. You will be then able to note the obvious diuretic effect of this instrument on dogs and cats because your pets will instantly ask to go out to the garden...

The neighbourhood

In this case, it is not their hearing but their nerves which need protection...

You love playing the bombarde, it is your right, and your neighbours aspire to peace, it is their right also. Never forget it. Hearing a bombarde is nice when you accept or choose to hear it, but the powerful and aggressive sound of this instrument quickly becomes unbearable when it imposes itself on you.

For reducing noise pollution in the vicinity you will have therefore often either practise elsewhere than at home, and so find a suitable place for it, or acoustically isolate the room where you practise.

Sound insulation or soundproofing?

Be careful not to confuse acoustic insulation and soundproofing. A soundproof room can be very poorly acoustically isolated and vice versa.

Soundproofing is aimed at reducing the box effect. This means reducing reverberations at the walls by putting carpet on the floors and absorbtion materials on the walls and ceilings. The room then has much less sound *internally* because it is much less reverberant for those who are inside it and they can therefore play in a more comfortable and less traumatic way for their hearing.

Good soundproofing of the room diminishes only slightly the nuisance to the neighbourhood. For that, you must acoustically isolate the room.

Indeed, sound is a vibration phenomenon and what your neighbours hear is essentially the vibration component that is transmitted through the building structure. The air vibration component is relatively easy to stop or decrease (enclosed spaces, absorbent materials) but the vibration component of materials is very difficult or impossible to filter. You need to stop *it at its source*, i.e. prevent the acoustic vibration of the air of the music room being communicated to the building structure. For this, there is only one simple method (just a way of speaking...) it is the good old principle of the "box in the box": you must install in the

music room (= the outer “box”) a full lining (= the inner “box”) that is both fully enclosed and as independent as possible of its container. To prevent acoustic bridges, the only connections between container and content should be blocks of resilient materials with little ability of their own to vibrate. Achieving the construction of this kind of room is a big investment and a professional job because the slightest acoustic bridge can ruin the overall quality of the insulation.

So if you have problems with your neighbourhood, do not waste your time tinkering with rolls of carpets, drapery, egg cartons pasted on walls, etc. This may improve the internal acoustics of your room (it is not even sure...) that is to say, the soundproofing of your room, but this will not change its sound insulation and therefore the noise pollution suffered by your neighbours.

I maintain my bombarde

MAINTAINING your bombarde concerns the instrument itself but also the reeds. We start with the instrument itself then we'll deal with the maintenance of the reeds in the next chapter.

Running-in: a myth!

The need for a period of "running-in" of the instrument is an old belief still as much alive among the instrument makers[74] as among the soners.

So you should at first, as it is often said, play your instrument only for short periods and gradually increase the duration of the playing over time. To that is sometimes associated the advise of frequent oiling (cf. infra: *oiling*) during this "running-in" period. You can also be advised to do again this kind of "running-in" if your instrument is left for a long time without being played.

The reason given is twofold: optimising the acoustic qualities of the instrument and decreasing the risk of occurrence of cracks. Let's take a closer look:

Acoustic improvement?

About the acoustics, I would like an explanation of what physical data or what mysterious properties or anatomical peculiarities of wood these running-in instructions are based on and then I'll believe it, maybe. But in the meantime...

[74] As skilled as they are, the instrument makers are not immune to some old beliefs that run through the centuries and are not based on any law of physics or serious experimental protocol...

It should be noted that any woodwind instrument tends to improve acoustically during the initial period (which is measured in months or even years) after its being turned[75]. Although this improvement is not observed in every instrument and, when it occurs, it is not necessarily obvious, it is however very common.

This acoustic enhancement is a quite natural and spontaneous phenomenon, which will happen just as much if you leave the instrument above your fireplace as if you use it regularly. The gradual adaptation of the soner to his instrument also has a contribution to make. This can make him believe that the instrument has improved whereas it's *the soner himself* who has mastered it more completely.

Of course, all those who follow the instructions for "running-in" and find after it an (objective or subjective) enhancement of their instrument will be convinced of the importance of this practice and will preach in turn the need for "running-in" and so on... We are not out of the woods!

Similarly, if you don't practice "running-in" and you end up with a not very good bombarde (it happens even among the production of the best instrument makers), you will eventually come across someone "*who knows*" who will explain that it 's this lack of running-in that has "flushed" your instrument prematurely. It's not necessary to flagellate yourself because if your bombarde is poor you can be sure it would have been the same after a meticulous "running-in". Believing otherwise is autosuggestion.

Decreasing the risk of occurrence of cracks?

If your beautiful new or nearly new bombarde cracks prematurely despite its being carefully "run-in", you'll accuse fate, the wood, the instrument maker, the weather, your horoscope, the moon, or your mother-in-law and perhaps a bit of all of that... but if you have not subjected it to a "running-in" then it is certain that you'll accuse yourself of negligence and bitterly regret not having followed these wise running-in tips.

Once again, needless to cover your head with ashes and clothe yourself with a frock because the absence of "running-in" is certainly not the direct cause of your trouble. The processes leading the wood to crack are complex but well known and are discussed below in Chapter *Oiling*.

But then, who to believe?

In my opinion[76], you can let the instructions concerning running-in go in one ear and straight out the other[77]. If you follow them to the letter or a little or not at all, your bombarde will be the same, neither better or worse, at the end of this period of "running-in" and the

[75] Drilling and turning abruptly change the internal tensions in the wood. A new balance will gradually be created over time, usually to the benefit of acoustic properties.

[76] I know that all the instrument makers and soners don't share this opinion, but I have so far heard, from those who don't share it, no argument or experimental evidence that would oblige me to change my opinion.

[77] Let us be clear, we are talking here about bombardes and other wind instruments in hard, dense and weakly hydrophilic wood and not about some instruments in soft wood (some recorders, for example) that behave like real sponges at their first use and may therefore require special precautions.

risk of wood cracks (low but never zero) will be the same, except under very specific conditions.

In fact, a sort of "running-in" only makes sense if the wood of the instrument has become very excessively dry, that is to say in climates other than that of Brittany or if you keep it without using it in a place overheated in winter (permanent very low relative humidity in the air). It will be necessary, in this case, to play it regularly, but for a short time on each occasion to gradually make the wood recover sufficient moisture in its heart, but it will be especially necessary to avoid storing it in the open-air (cf. infra: *Protection against desiccation)* otherwise this "running-in" will no longer be one because it will start endless... Moreover, talking about "running-in" in this case is inappropriate since it has nothing to do with the fact that the instrument is new or old!

So, if you live in the Sahel or the Atacama, the instructions of "running-in" of the instrument can make sense, otherwise they don't.

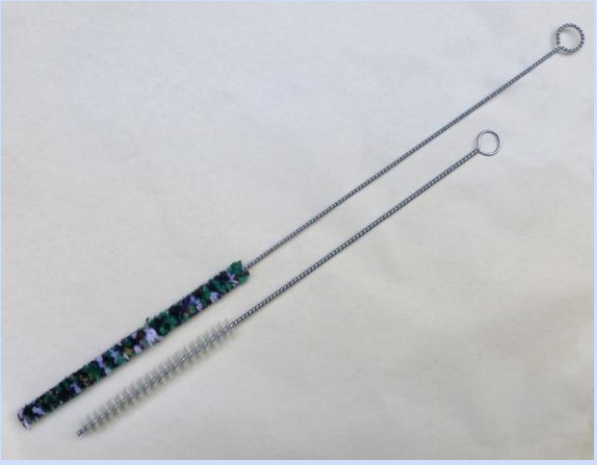
Swabbing

Regularly using a swab dries the instrument after playing and prevents it from clogging up.

You can find three kinds of swabs in the trade:

1. Swabs with a handle and a head of cotton or wool (natural or synthetic).
2. Hedgehog swabs with head of stiff plastic bristles.
3. Synthetic, absorbent fabric tape swabs to pull through.

The bombarde having a very narrow conical bore, the junction between the reed cone and the main cone is of very small diameter. Swabs found in the trade for flutes are not suitable because they are too broad. There are specific very thin swabs in wool for the bombarde but they are difficult to find elsewhere than in the specialized trade.



Swabs with diameter suitable for the bombarde.

A cotton wool swab (left) and a hedgehog swab in nylon (right).

These swabs are sold for the maintenance of the chanter of the Great Highland Bagpipe but are also perfectly suited to the bombarde. The hedgehog swab is very stiff and therefore slightly abrasive, you must not thus use it too frequently; moreover, it has utility only for cleaning the instrument and not for drying it.

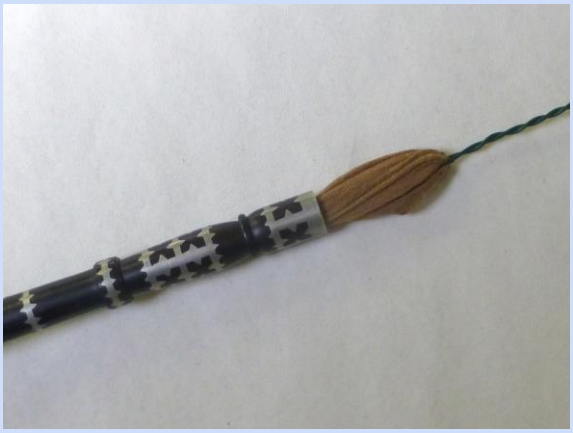
It is not necessary to buy ready-made swabs. In addition, some are either impractical (handle too short) or abrasive for the wood (too stiff plastic bristles) or badly made (end of the axis overflowing, risking to scratch the wood, to file!) or they lose their hair... Make your swabs yourself; it is very easy and almost free.

Making a swab

You will need: rather thin wire and old woman hosiery.

1. Cut a piece of wire 2.5 times the length of the longest of your bombardes.
2. Fold it at the middle and put there a piece of hosiery about 10 cm long.
3. Tighten the wire around the piece of hosiery.
4. Twist the two strands together to make a long and flexible handle[78].

That's all, 30 seconds done! Make several swabs at once. The piece of hosiery is not eternal but lasts for a very long time. It is changed generally because it is dirty, long before it wears out.



Home-made swab, cheap and effective!

Use

Insert the handle of your home-made swab into the bell; this handle, being longer than the bombarde, goes out through the reed end. Pull it gently. Due to its elasticity the hosiery piece will stretch and will adapt smoothly to the diameter of the tube, it is not abrasive, is very absorbent and lint-free. If the passage of the junction is too narrow, just reduce the width of the hosiery piece to fit the instrument concerned.

[78] Why twist a double length of wire rather than make a ring holding the piece of hosiery at the end of a single wire? To avoid having the folded end of the latter scratch the bore or catch an edge of one of the playing holes.

Keep some swabs for drying the instrument after playing and some others for oiling it (if you're a fan of this controversial practice). If you have bombardes in several pitches, you can make swabs adapted to each of them but in fact it is rarely necessary, the diameter of the narrowest part of the bore of the bombarde is relatively constant regardless of its pitch.

Cleaning the finger holes

For that, a cotton-swab moistened with water or sweet-almond oil is perfect. A twisted piece of paper towel will do the job just as well. If dirt has accumulated, you can scratch a little with a wooden match, a toothpick or similar, but not with a knife tip that might enlarge the hole; some letter cutters have a very fine tip perfectly suited for this purpose if used gently to not enlarge the holes. If dirt is encrusted, you can also use a twist drill of a diameter adapted to the diameter of the hole, taking care not to enlarge the hole.

Do not neglect regular cleaning of the tone- holes, because tiny deposits are sufficient to spoil the tuning of your instrument, especially for small diameter holes: the notes then become a little too low. What is misleading, is that fouling occurs very gradually, so you instinctively compensate for reduction in hole size by adjusting your blowing and pinching. Just after the cleaning your bombarde may seem no longer as tuned as before!

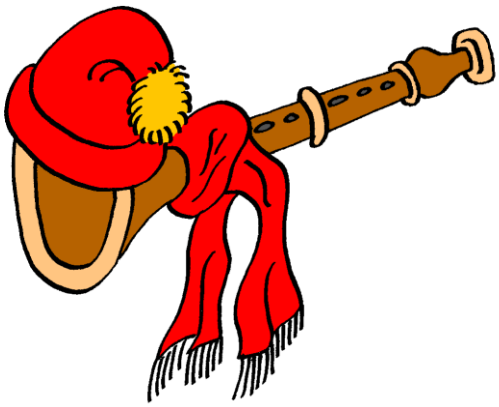
Oiling

To oil or not to oil your instrument?

This controversial topic is the subject of a separate chapter.

Protection against thermal shocks

If your instrument has been stored in a cold place (the trunk of your car in winter, for example), you must not play it directly. The big difference between the temperature inside the tube abruptly warmed and hence dilated by your breath and the still very cold outside of the tube will create strong internal tensions in the wood, which then may split. Always warm up your instrument and especially its outside before you use it: for that leave it in a warm place or under your clothes before use and rub it by turning it in your hands before playing.



Similarly, playing in a very cold environment (playing outside in winter) is not very good for wood because of internal tensions that may occur.

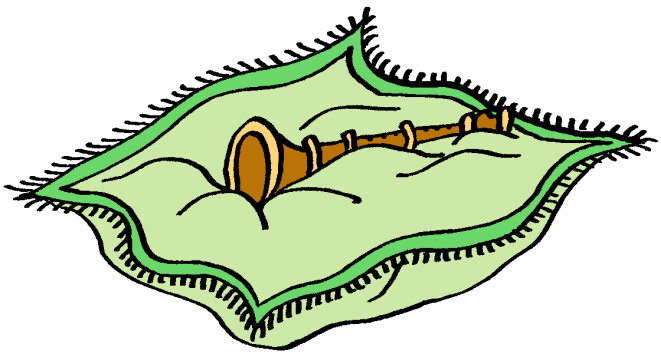
Note that playing with a cold instrument is more dangerous for it than taking an instrument from an overheated place to play outside in the winter, for example.

When a crack appears on the bombarde every owner tends to blame the quality of the wood: not sufficiently seasoned or too dry, or changes in relative humidity or whatever else. The most common cause of cracks is thermal shock because, as discussed in detail with regard to oiling, the wood splits only due to internal constraints and not only because of its contractions or expansions due to temperature and humidity.

It should be noted that instruments with pewter inlays are even more sensitive to thermal shocks due to the large difference in thermal conductivity between pewter and the surrounding wood.

Protection against mechanical impacts

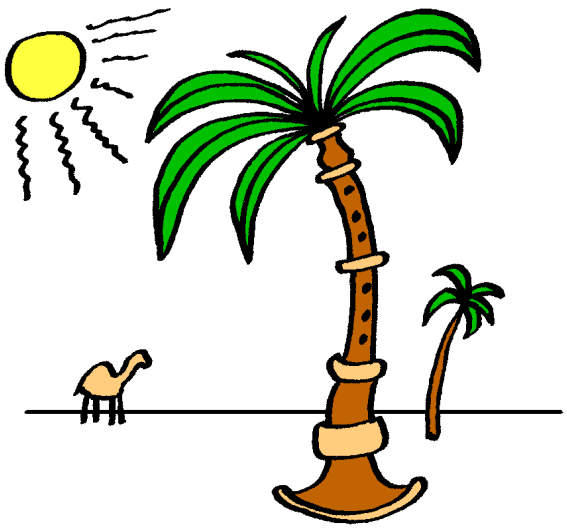
Hard woods are brittle; it is the counterpart of their hardness, and the harder they are the more brittle, especially ebony and guaiac woods. Breaking an ebony bombarde by dropping it on a tiled floor is therefore not an exceptional event; this is rarer with boxwood but it is also possible. The hardness of ebony and boxwood mean that the risk of breakage of these woods is seldom considered; in fact they are much more fragile if dropped than a vulgar piece of fir of the same size.



So, do not leave your bombarde on a table edge, especially laid on its bell, and do not allow children to play with it. It is sometimes possible to repair a bombarde broken into two parts by using cyanoacrylate glue (this is better done by the instrument maker because using the reamer is usually necessary afterwards) but it's just a workaround, the instrument is permanently altered. Another common injury from dropping the instrument is chipping or splitting the bell; it is less serious because without actual acoustic consequences and the repair with cyanoacrylate is quite easy.

Protection against desiccation

Brittany, the native region of your bombarde, has a very pronounced oceanic climate; even in the dry period the relative humidity in the air remains high[79]. This is not a good thing with respect to the risk of wood rot but is a good thing with respect to the risk of splitting because the average wood moisture balances the air moisture. The difference between the humidity of the outside of the instrument body (proportional to that of the ambient air) and that of its interior (increased by the hot breath saturated with moisture) remains reasonable and therefore the risk of appearance of cracks is low.



However, if you live in a dry climate or if you are travelling in a dry region with your instruments, this risk increases and Breton soners often underestimate it. Don't do the same!

In condition of low humidity (very dry air), you must absolutely store your instruments in a closed box, which will prevent them from drying out. Caution, they must not remain visibly wet, they must dry completely before locking them, that is to say, they must have a dry appearance but the wood must maintain a certain internal humidity level to prevent shrinking. In practice, careful swabbing before storing the instrument in a closed environment is usually sufficient.

Warning: these tips apply to the instrument itself not to the reeds; storing the latter in a very dry environment is ideal for their good preservation[80].

Bombarde and air-conditioning

Air-conditioning is a sneaky enemy of all woodwind instruments and therefore the bombarde. Indeed, it combines the various risks mentioned above: risk of thermal shock when you suddenly take your bombarde out of an air-conditioned room to the heat outside and risk of drying out the wood because air-conditioning doesn't only lower the temperature of the room air, it also dries it a lot. Some air-conditioners include a humidity control system and rehumidification of ambient air if necessary but they are high-end pieces of equipment and are therefore uncommon. So be careful.

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[79] The relative humidity level in the air is considered normal between 50% and 60%. Above that the air is considered wet, below that the air is considered dry.

[80] Do not confuse good preservation and ease of use. A very dry reed may need a lot of rewetting time before being playable (see: *Disconnection of the blades*).

Connections

The bombarde has at least one connection between the body and the bell, some have a second at mid-body (low-pitched bombardes, some bombardes from "Pays Vannetais / Bro Gwened"). These connections require minimal maintenance in order, on the one hand, to hold firmly and be watertight and, on the other hand, to be easily removed.

Two types of connections are used: cork or thread.

Cork

This is certainly the best system because it does not swell in moisture and does not shrink while drying and it rarely blocks. Unfortunately cork is not the most common system for bombarde connections.

The material used is either natural cork (sliced or reconstituted) or a kind of self-adhering synthetic cork of uncertain nature.

To maintain natural cork you rub from time to time a little cork grease (can be purchased in music stores) or lanolin (wool grease, can be purchased in pharmacies). Synthetic cork having naturally a greasy surface generally does not need to be greased.

Tenon covered with natural cork

Tenon covered with synthetic cork

Yarn / thread

This is the traditional system, consisting of a simple piece of yarn wrapped around the tenon. Now Teflon[81] tape from a roll (plumbing supply) is often used mainly in combination with yarn (yarn coated with Teflon).

Tenon covered with with yarn

Tenon covered with mixed yarn + Teflon

Beware, the yarn must be waxed (with pitch)[82], otherwise it swells too much with moisture and the connection could get stuck or even crack. You can easily replace the traditional waxed thread by thread dipped in melted paraffin wax or melted stearin[83] or simply pulled over the surface of a beeswax block. Once the piece of yarn has been wrapped around the tenon, it is useful to rub it with a candle, the watertightness and the durability of the yarn will be improved and the tenon will slide more easily in its socket.

To redo your yarn connections, prefer the yarns of natural fibers (hemp, flax, cotton) to those of synthetic fibers because, although they absorb less moisture, the yarn then tends to slip too much and loosen up.

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[81] Caution, all Teflon rolls are not equal. Paradoxically the cheapest Teflon (the one sold by batch without trademark) is the best for connections because it is narrower and thinner. The better quality Teflon (for the plumbing point of view) adheres only poorly to the yarn and makes shreds when disconnecting.

[82] Pitch is a resin, distillate of pine tar. It is actually rare today that waxed yarn is made with real pitch.

[83] Choose a rather thick absorbent yarn, possibly hemp or flax, otherwise cotton; sink it into melted paraffin/stearin then wipe off the excess by pulling the yarn between two fingers before it hardens. Paraffin wax is sold in sheets to cover jam, stearin is candle wax. The wax covering some cheeses can also be used but avoid using red wax which is really too colourful and makes stains.

The traditional "yellow yarn".

This rather stiff and very resistant hemp yarn is well known by all the soners of bombarde or GHB. The yellow colour is so traditional that it is enough to say "yellow yarn" for any soner immediately to know what kind of yarn it is.

Yellow yarn is sold either natural or already waxed.

It is difficult to find it in haberdashers but it is found easily, and in most countries, in shops selling supplies for pipers and on the Internet.

After playing...

Some good habits to cultivate for immediately after using your bombarde:

- **Remove the bell** to allow the tenon with its thread binding to dry much faster. The connection is indeed the part of the bombarde which is most susceptible to rot: condensation water in the bore of the instrument goes to the end of the section and wets the socket and its tenon. The tenon consists of end grain wood which absorbs moisture particularly easily. Furthermore, this thin ring of wood is wrapped with yarn, which acts as a sponge, or with Teflon, which prevents wood breathing, or both; it therefore gets very wet and dries hardly at all. All the conditions are present for rot to set in and do its work and one day, while removing the bell of your instrument, the tenon will come with...

- **Disassemble the two parts of the body**, if your bombarde has a junction at the middle of its body (some *Vannetaise* bombardes and some low-pitched bombardes). The preceding remarks about the bell connection apply too.

- **Swab the body** to dry it inside.

- **Wash out the reed** (see: *Reed maintenance*) to eliminate the inevitable deposits of mineral salts and organic matter within it and which would otherwise accumulate.

Let's be honest, few soners subject themselves to this ceremony after playing but they should!

Oiling your bombarde?

To oil or not to oil your instrument? If so, with what ? And how often? Wide debate...

The controversy

Even the instrument makers do not agree among themselves on this subject, not to mention the soners...

Between those vehemently favourable and those vehemently opposed, those doing it very frequently and those recommending that it be done only rarely, between the fanatics of thing oil and those of widget oil, and between the various oiling protocols as precise as they are different from each other, the apprentice soner no longer knows what to think... And that concerns only the answer to the question "Have you to oil?" Because to the question, "*Why* have you to oil?" there is vagueness in the dark, wacky considerations, hazardous interpretations of the laws of physics (or often their total incomprehension), briefly it's a big mess for such a seemingly simple question.

The existence of these various, sometimes contradictory, opinions, even when they try to rely on objective physical data proves one thing: to oil or not to oil your bombarde is not so important!

Brief reminders about the wood

To say briefly, wood consists of a dense bundle of parallel conducting vessels (the fibres) the walls of which are impregnated with a substance, lignin, which stiffens them. This parallel alignment of the fibres gives an orientation to the wood, called the grain.

In the heartwood (the only one used to make instruments), the vessels are no longer functional; they no longer carry raw sap. They are more or less (never completely) clogged with tannic deposits. So these fibrous vessels still exist anatomically. When the wood is cut at an angle to the orientation of the fibres, the section of these vessels in areas where they are not clogged makes what is called the wood pores. Even in the densest and hardest woods,

like ebonies or boxwood, these pores do exist[84]; just take a strong magnifying glass to see them. The pores absorb water (condensation or saliva) by capillary action but they can also absorb oil if it is sufficiently fluid.

Wood poses five problems:

1. It is a **hygroscopic** material: if the environment is wetter than it, wood gradually absorbs moisture from the air and if it is drier, wood will gradually lose water by evaporation.
2. It is a **biodegradable** material, subject to bacterial and fungal attacks.
3. It is a **dimensionally unstable** material: it swells by absorbing moisture and shrinks on drying[85].
4. It is a material with **non-symmetrical deformation**: the swelling or shrinking of the wood is variable according to the direction of the grain: very weak longitudinally, stronger radially and even more strongly tangentially. This deformation therefore generates strong internal tensions.
5. It is a material made of very strong long **parallel fibres** that are very difficult to break but they are not very coherent; splits may easily occur between fibres without breakage of these fibres.

Why oil the wood?

The supposed purpose of oiling is to apply to the wood a liquid that is easily absorbed by the pores, that does not evaporate too quickly once absorbed, that is not miscible with water, and that thus takes its place or even repels it, and that does not cause wood rot nor affect its acoustic qualities. Fluid oils appear to meet these requirements, I say "appear".

Those who oil their instrument have four reasons, more or less related, for doing it:

- Avoiding wood cracks.
- Avoiding wood rot.
- Improving the sound.
- Improving aesthetics.

Let's consider each of these reasons in turn:

[84] Except in conifers (gymnosperms), in which the perfect vessels of angiosperms are replaced by very many tracheids, imperfect vessels of very small diameter for which the phenomena of capillarity are slower and difficult, especially for oily liquids. As for the bombardes, it only concerns yew (*Taxus baccata*), the only resinous wood sometimes used to turn these instruments.

[85] There are two compartments of the water present in the wood: free water, contained in the pores, rapidly absorbed and rapidly eliminated by evaporation with little or no dimensional change of the wood and secondly, water impregnating the wood matrix, slowly absorbed and slowly removed, associated with swelling and contraction.

Avoiding wood cracks

The reason invoked for this supposed protection against cracks is that oiling results in a better balance of the internal tensions of the wood.

First, recall that it is a big mistake to believe that a piece of wood splits because it is too dry or because it dried too quickly.

A piece of wood splits when the internal tensions exceed the limits of its mechanical strength (that is to say, the limits of the coherence of the fibres to each other, which varies depending on the wood and is independent of the strength of the fibres). Wood shrinks as it dries, so if the outside or the end of the wood piece dries much faster than the inside or, equivalently, if the inside gets wet faster than the outside, the shrinkage of the outside of the piece of wood will be greater than that of the inside and the piece of wood becomes liable to crack, whatever its age and the quality of its drying.

It is essential to understand that it is not the level of dryness or moisture of the wood that makes it split; it is the *difference* between the surface moisture and the internal moisture and only that. A piece of wood extremely dry may not split when the same piece, moist, will split. All depends on the humidity differential between its various layers of fibres.

As a consequence: for the same diameter, a hollow piece of wood will crack less easily than a solid piece of wood and the thinner the walls of this hollow tube the less easily they will crack, at least spontaneously, contrary to what one might intuitively think. Turning instruments with thick walls is effective in terms of impact resistance (direct impacts, folding) but not for resistance to spontaneous splits...

In the context of avoiding wood cracks, oiling the inside of the tube and oiling the outside have totally opposite but complementary aims:

- Oiling inside the tube is theoretically intended to limit the absorption of condensation moisture produced when playing the instrument, thus to limit the moisture content of the inner layers of the wood.
- Oiling the outside of the tube is theoretically intended to conserve moisture by preventing the outer layers of wood from drying out too quickly.

Oiling only delays the absorption and evaporation of water, so oiling only the outside of your instrument may serve some purpose, or at least makes sense, in the context of avoiding wood cracks, but oiling only the inside serves little or no purpose, contrary to what you can often hear or read.

Avoiding wood rot

Recall first of all that wood is resistant to water; but it is affected by humidity, which is not the same thing! Remember that the logging companies keep wood by sprinkling it continuously. Waterlogged wood does not rot, dry wood also does not, but constantly wet wood, even and especially slightly wet, rots quickly. Hard woods or woods rich in tannins rot slower than some soft woods but they still rot completely if they are allowed time.

Oiling not totally preventing moisture absorption by the wood but then delaying its elimination, I would like someone to explain to me how this protects the wood from rotting. Oiled wood and varnished wood should not be confused! A bombarde is not a tool handle but a tube receiving moisture from the inside.

In addition, the oils used are generally organic and therefore biodegradable. Degradation releases free fatty acids which are less hydrophobic than the oils and, being weak acids, are weakly ionized, therefore slightly aggressive for the wood, when the pH is not too low (condensation water layering the inside of the instrument has a neutral pH of 7).

The slowing down of water exchange between the wood and the atmosphere as well as the slow but inevitable biodegradation of vegetable oils are, then, factors that may potentially accelerate the biodegradation of the wood. Beeswax doesn't have this drawback because it naturally has antiseptic properties protecting wood against micro-organisms but it is usable in practice only for the outside of the instrument.

Improving the sound

Some soners find that their instrument sounds better after its inside has been oiled.

Frankly, this is called autosuggestion... And some explain that the decrease of the wood roughness enhances the flow of the air column so that the air slides better. Hmm... Some others highlight the fact that wood fibres "work" better when they are impregnated with oil. Re-Hmm...

In fact, the best explanation to date[86] must be sought in the field of thermodynamics and heat exchange between the peripheral layer of the column of air and the wall of the instrument. Don't forget that the vibration of the air column is physically a rapid alternation of compression and rarefaction of the air; when a gas is compressed it is heated and during its rarefaction it cools, but as it reabsorbs the heat generated by the previous compression the heat balance is zero, there is no energy loss and the process is called adiabatic. In reality, the process is not completely adiabatic because there is always a little heat exchange between the wall and the surface layer of the air column. These heat exchanges result in power dissipation that mainly affects the high frequencies (therefore the high harmonics so important for the tone of the bombarde). Roughness at the microscopic level is defined by multiple protrusions and hollows which increase the heat exchange between the air and the wall surface. Oiling the inside of the instrument thus would reduce its roughness, that is to say, would decrease the effective surface of heat exchange air/wall, to the benefit of the high harmonics. While the importance of this phenomenon is not entirely convincing and little reinforced through practice, this potential effect of oiling has nevertheless the advantage of being based on physical data and not on intuitive and farfetched explanations.

[86] This mechanism is explained in detail in the following document (in French) that requires some basis in physics and mathematics to be fully understood, but even without them it remains easily understandable: http://la.trompette.free.fr/Ninob/Rugosite.pdf (B.B Ninob, August 2006)

Improving aesthetics

About that, on the other hand, there is no doubt; oiling the outside of your bombarde gives it a shiny aspect very pleasing to the eye, regardless of the wood concerned. Rubbing a little with fluid oil is also a way to clean fingerprints and other traces of grease without damaging your instrument.

If you have a bombarde in natural (unstained)) boxwood, repeatedly oiling the outside of your instrument will gradually give it a nice honey shade which will be much more beautiful and natural than if the boxwood initially had been artificially stained.

The aesthetic is certainly the major purpose of oiling, at least the only indisputable one...

With what ?

Drying oils

Exposed to the air and light, these oils degrade more or less rapidly by oxidation and photo-oxidation: they polymerise and harden while losing their oily consistency (this is the principle of oil painting), forming a more or less impermeable "skin", like a varnish. Removing this film when dry is not simple...

- Linseed oil.
- Walnut oil.
- Sunflower oil (slightly drying).

In practice, for musical instruments, only linseed oil is used. It dries fairly quickly, in about ten days. It is mainly used to impregnate new instruments and the application is unique. Re-application would create a thick excess in the inside of the instrument and of the playing holes that could affect its tuning. To use linseed oil, it must be slightly warmed; without doing that linseed oil is too thick to penetrate the wood, but be careful while heating because this oil is highly inflammable! Due to its fast drying nature, linseed oil does not keep well; it must be kept cool and protected from air and light and renewed regularly. The use of oil that has begun to go rancid causes a permanently tacky result...

Non-drying oils

These oils do not dry out and remain fluid in air. They do not create an insurmountable barrier to moisture and they gradually disappear with time (biodegradation, volatility, mechanical removal by vibration and humidity).

Their persistent fluidity has one big downside: they easily create emulsions with water condensation ("mayonnaise" or "butter") inside the instrument, the role of the mayonnaise whisk being performed by the intense vibrations of the air column.

Sweet almond oil is easily found on the drugstore shelf of any supermarket.

***Vegetable oils*:**

They are fairly quickly biodegraded and their effect is temporary. They are food grade but some may be allergenic.

- Sweet almond oil, the most used by far.
- Olive oil, slightly thicker and more fragrant.
- Peanut oil.
- Grapeseed oil.
- Palm oil.

***Mineral oils*:**

They are odourless and biodegrade much more slowly than vegetable oils.

- Vaseline oil.
- Paraffin oil.
- "Bore Oil", fuzzy name covering a mixture of fluid mineral (and vegetable?) oils with various additives. In short, one does not know what's inside...

***Silicone oils*:**

They are very stable, non-volatile and relatively insensitive to variations in temperature (they remain fluid at very low temperature). Their high chemical inertness makes them virtually non-degradable on a human scale. Their use on a musical instrument should be carefully considered and, especially, their repeated application should be avoided because there is no solvent to eliminate, without damaging the wood, the greasy film created by their accumulation.

Some commercial oils "for woodwind instruments" contain silicone oils (and who knows what else, trade secret...). When the silicone percentage of these "soups" is more than just a commercial argument, one can be skeptical about the long-term safety of their use.

Waxes

Beeswax is a complex mixture of fatty substances which is solid at room temperature. It is used warmed or with a solvent (turpentine usually). It is quite suitable for the outside of the instrument (and only the outside). It gives a beautiful lasting shine. We must choose a pure quality without colorants; don't take any product for flooring! Get it from a cabinetmaker or directly from a beekeeper.

How to oil?

Outside oiling

Take a soft cloth or paper towel on which you pour a few drops, no more, of oil and wipe the entire surface of the instrument. Wait an hour or two, then wipe with a dry cloth to remove any unabsorbed surplus. Focus on the end grain wood, at the socket of the bell, which behaves as sponge. Do not hesitate to "increase the dose" at this level but at this level only.

If you use solventless beeswax, warm it before applying; if you use wax with solvent, allow it to evaporate before rubbing vigorously with a dry cloth.

Inside oiling

You must do it only on a perfectly dry instrument (wait at least 24 hours after having played it).

Pour a few drops of oil on a swab that you pull through the instrument. Wait an hour or two and then pull a dry swab through (so you must have two swabs). Be careful not to use too much oil otherwise quick formation of mayonnaise is warranted...

To oil or not to oil?

At first, let us recall that the answer to this question here concerns only the bombarde or similar instruments and for other woodwind instruments the answer could be different[87].

For a boxwood bombarde, the need for oiling depends on the preparation of the instrument by its maker. Some makers soak the new instrument in linseed oil before delivering it to you, others do not. If your instrument has not been soaked in linseed oil, then it seems best to do a few regular but *light* oilings at first, especially on the end-grain wood. However, if your bombarde has undergone a soaking in linseed oil, oiling later does not seem to be very important.

For an ebony bombarde, regular oiling seems without great importance. A bombarde oiled regularly will keep neither better or longer than a bombarde never oiled and it won't sound better, it will just be nicer to look at, that's all.

[87] For example, recorders, which are usually turned in soft wood which behaves like sponge, for which the oiling is required, or transverse flutes, which, even when they are in hard wood, don't know the phenomenon of "mayonnaise" but are very sensitive to condensation due to the stagnation of the resonant column and they can be freely and abundantly oiled without problems and often at a profit.

The value of oiling is at best slight. By contrast, its excess is very harmful. If the inside of your bombarde is too oily, “mayonnaise” will soon appear as a result of the vibration of the flow of warm air saturated with moisture, the mayonnaise will quickly become a dirty film, pasty and sticky, with bacterial overgrowth and wanting to protect the wood you will only encourage its being attacked! In addition, this greasy film, which resembles a sort of beige butter covering the inside of the instrument, is very difficult to clean with a simple swab. You will sometimes have to ask for help from the maker of your bombarde who will gently use a reamer to clean the dirty instrument. If you have a bombarde from a maker who has ceased activity, it will not be easy because it will be necessary to find a reamer having exactly the same angle; be careful with internal oiling in this case. In fact, be careful in all cases, because if your bombarde was slightly banana-like deformed (a very common phenomenon in the case of a bombarde in boxwood), even imperceptibly, it will be impossible to use the reamer without seriously damaging your instrument.

It does not appear that metaphysical debates on the importance or not of oiling have shaken a lot of the former soners...

Non-drying oils are thus a very weak bulwark against moisture, not to say null... Frankly, if you want to preserve your bombarde from moisture harm, swab it regularly and remove its bell after having played it, it will be incomparably more effective than oiling it regularly! But if it pleases you to pamper your instrument with sweet almond oil as if it were a baby’s bottom, there’s nothing stopping you if that makes you happy because, within the limits of reason, that won’t have any really negative impact on your instrument.

I maintain my reeds

Soners often maintain their bombardes a little too much (cf. *Oiling*) and their reeds not enough... We deal here with their maintenance not their adjusting.

Handling

The bombarde reed is very fragile and therefore you must handle it gently and carefully. You must hold and manipulate it by the cork or the ligature, never by the blades.

The only circumstances in which your fingers (clean ones!) are allowed to touch the blades are when massaging them if the reed is too hard, and when wiping them during playing if they are too wet and slide against your lips.

Utilisation

Never play with a dry reed[88] because of the risk of cracks in the cane. You must moisten your reed in water or saliva before you use it. The wetting effect of saliva on the reed is higher than that of pure water, but the big disadvantage of saliva is that it leaves organic and inorganic deposits; the reed becomes dirty more quickly, dries more slowly and is more prone to rot, so you must clean it more often. Therefore prefer to wet your reed with pure water before using it. There will be thereafter enough saliva wetting it during playing, no need to add it by drooling deliberately over it before playing.

It is strongly recommended that you rinse out your reed after playing (cf. infra).

Preservation

The cane making up the greatest part of the reed is very susceptible to rotting, much more than the wood of the instrument itself, so it must dry *quickly* and *completely* as soon as possible after playing. It will dry much faster if it has been washed out of minerals and organic deposits that necessarily impregnate it during playing.

Your reeds must thus be stored in well-ventilated boxes, made of wood or cardboard or any other breathable material. If the box is of wood, it must be equipped with ventilation holes. The best interior padding of the boxes consists of low density foam with open cells, you can also use toilet paper or paper towel; avoid cotton wool whose fibres hook in the blades and can damage them.

[88] Some double reeds in cane can work in dry conditions (those of bellows bagpipes for example) because they are designed to do that but not the bombarde reed. Because its resonance chamber is unscraped and strongly curved, the internal tensions when the reed vibrates dry are such that the reed can easily split longitudinally. A reed split at heart is irrecoverable.

Even using a well-ventilated box, it is best to leave it open until all the reeds are perfectly dry. If you cannot dry your reeds where you used them, put them to dry immediately when you get home.

Rapid drying is the secret of good conservation and longevity of reeds. A reed ages faster on account of persistent moisture than on account of intensive use. The problem of drying is especially marked in areas where the air is rarely very dry (as in Brittany); drying is relatively slow there.

If the reeds are loose in the box, the packing system of the box must block the reeds to prevent them from colliding, thus damaging the blades.

The reed box of an unidentified former soner. This box is basically a tobacco box in softwood, a naturally porous material allowing good preservation of reeds. We must recognize, however, that most of the historical reed boxes were only small metal boxes recycled [coll. E. Ollu]

If well preserved, your reeds must not present blackish dots and dashes on the scraped part of the reed or very few. These traces are fungi and are evidence that the cane has been allowed to stay moist for too long. They will contribute to the gradual degradation of the reed.

Your first reed box

You can download from the following link the PDF file of a small pocket reed box (capacity: 3 reeds) to print and assemble yourself. Made of strong paper (160 gr) laminated and reinforced, it is very solid and will effectively protect your reeds.

No, unfortunately the reeds can't be downloaded with the box...

http://secanda.stalikez.info/m=secanda_16_10_b31e_v_1_a [89]

Cork or twine

The cork of the reed also deserves some attention. If it was necessary to add twine to the cork to be in tune with the biniou, then remove it *immediately after playing* or it will tighten while drying and the cork will be definitely compressed and the next time you'll need to add more twine and so on...

If you have a bombarde whose the reed well[90] is very narrow or if you need to push the reed in a lot, either because the scale of your bombarde is a bit low or because that of the biniou is a bit high, you can scrape the cork of the reed a little in order to push it in more easily but it is often easier to totally remove the cork and replace it by twine, which will give you much more latitude for adjustment. Moreover, in the past the reeds had no cork, only twine.

Advice: *even if you do not have a bombarde whose the reed well requires the use of a twined reed, prepare in advance at least one of*

[89] Other models of reed boxes (other sizes, other decorations, multiple drawers) are available on the site http://secanda.stalikez.info.

[90] "reed well" is used in this document because it's the usual way to name this part of the bombarde in Brittany ("*puits d'anche*") but the technical English word for this part of similar woodwind instruments is "seating" instead of "well".

your reeds like that. You'll be happy to find it when the opportunity arises to try a bombarde needing such a reed or when you have to play with a partner using a biniou with too high a pitch. A twined reed can be used in any bombarde and in any circumstances, even when such a reed is not necessary; but a corked reed cannot.

If you use a reed with twine, remember to wet the twine a little before putting the reed into the bombarde, so the reed will stay in place much better and you will not risk ending up with the reed in the mouth without the bombarde, which can happen when you play with dry twine.

Reed cleaning

Regular cleaning of reeds is an element too often considered secondary when it is essential.

Why?

Because the accumulation of organic deposits on the inside gradually clogs a reed, especially on the side edges of the blades where they meet at an acute angle. These deposits are bad for several reasons:

- They affect the proper functioning of the reed. Even if the deposits are minimal, the sound gets muffled, the reed hardens slightly or more exactly gives this impression because it “starts” with difficulty. You must force the reed blades to vibrate immediately, as soon as they are tongued. Cleaning restores and maintains the acoustic qualities of the reed.

- They slow down the drying of the reed after you have used it; that causes microbial and fungal growth, which increases the deposits and can quickly alter the cane and thus the quality of the reed. Regular cleaning hence prolongs the life of the reed.

It is therefore necessary to clean your reeds, at least occasionally and very regularly if possible.

How?

Cleaning a reed is done in two phases: curage then rinsing.

Never clean a dry reed because the cane at worst could split and surely get scratched internally. You must at least soak the reed in clean water before cleaning it and it is best to clean it after playing it for long enough time for it to be at its maximum level of flexibility.

Cleaning out

Cleaning out consists of scraping off the deposits and getting rid of them using a tool.

Traditionally, a feather from a chicken's neck, preferably from an old rooster[91], was recommended as a cleaning tool. It is indeed an instrument perfectly suited for this purpose: flexible, non-traumatic for the reed and easy to slide between the blades. If the stem of the feather is a bit too thick, crush it a bit with a hammer before use.

If you cannot get this kind of feather, you can also use a very thin fine sewing needle but you must be VERY careful in your actions. A fragment of a sheet of rigid plastic for packaging ("blister") is also of use. A simple piece of paper slipped between the blades also does the job (an envelope for example, or better glossy paper or a piece of card, various transport tickets, etc.). You can also use a sewing needle not to clean the reed but to introduce a very fine non-abrasive thread through the reed in order to perform a delicate "pigging" of the side culs-de -sac of the reed.

Feathers from rooster neck
The generous donor is thanked here.

Rinsing

After having taken off and got rid of most of the deposits, there still remains a bit of them. You must therefore rinse the reed. Running it under water is not enough.

To rinse the inside of the reed, there are two main methods:

1. Fill up your mouth (clean mouth! Therefore not just after leaving the table...) with a glass of water and blow the water through the reed kept in the mouth by the cork. *Do not be afraid to blow strongly*. It can be useful to pinch temporarily and very slightly the end of the blades between your fingers so that the flow of water cleans out effectively the side margins of the blades.

2. Use a medical syringe (20 cc preferably, do not choose a too small syringe) because by chance the standard slightly conical tip of syringes perfectly fits the tube[92] of bombarde reeds! Fill the syringe with water and press the plunger sharply. Be careful to hold the reed firmly by its cork while pressing the plunger if

[91] From an *old* rooster and not simply a rooster because, with age, the rooster grows neck feathers which are provided at their base with a fluffy sleeve which grows bigger each year as the feathers are renewed; it's mainly this sleeve which is useful.

[92] At least the tube of standard reeds of Bb bombardes and lower-pitched ones; for reeds of high-pitched bombardes (C, D) it may be useful to slightly file the tip of the syringe to refine it.

you don't want to see it flying away... Then blow several times through the cork to blow all the remaining water out of the reed. Reed rinsing with a syringe is certainly not very traditional but very effective!

The best way and the best tool to rinse a bombarde reed!

Systematically rinsing your reed after playing is a good habit that takes only a few seconds. This slows the accumulation of organic matter and is a guarantee of longevity and preserved quality for your reeds, but you must nevertheless clean them more completely occasionally.

Water or alcohol?

For cleaning the reeds, water may in some circumstances be replaced by alcohol or alcohol and water mixture. Indeed, alcohol does not damage the reed even with repeated use. For instance, alcohol can be useful when using a feather as it wets the feather much better than pure water (a feather sheds water – at least when it is new).

The main advantage of alcohol is its ability to evaporate very quickly and as it has a great affinity for water, it binds to it[93] and accelerates its evaporation, that is to say, washing a wet reed with alcohol greatly reduces its drying time and makes it easier to dry thoroughly; this can be very useful if you have to play in an area with very humid climate in which reeds are struggling to dry and may become mouldy: a humid tropical climate, for example, but also the Breton climate when storing reeds in winter in an unheated room.

[93] The water-alcohol intermolecular bonding is effected by so-called hydrogen bonds.

Another advantage frequently attributed to alcohol is its behaviour as a solvent of deposits. This is both true and untrue: it actually behaves as solvent of some deposits (fat and mineral deposits) but for other types of deposit (organic deposits) it's quite the opposite, *it tends to fix them by drying them out and coagulates the proteins that constitute a significant proportion of the organic deposits clogging reeds*. Believing that you are using a cleanser you are in fact using a dirt fixer! Therefore, a water and alcohol mixture is preferable to pure alcohol, or better, proceed in two steps: careful cleaning with pure water and *then* using alcohol or water and alcohol.

You will notice that the disinfecting properties of alcohol are not cited. Indeed, they are very overrated and zero in practice. Indeed, to have a disinfecting effect, you should soak your reeds in alcohol for *a long time* because a brief washing with alcohol has little or no effect due to rapid evaporation. Also, disinfecting the reed for hygienic reasons (in case of lending the reed to others) makes sense but disinfecting it to protect it from attacks by microorganisms has none: indeed, the alcohol has no residual property after evaporation, which is very fast. To protect a reed against microbiological attack, it is much more effective to store it in a place and a state unfavourable to the growth of microorganisms than to "disinfect" it. From this perspective, alcohol can then be useful but it will act by its drying properties and not by its illusory disinfectant properties.

External cleaning

Cleaning a reed consists essentially of cleaning the inside of the reed but it is sometimes necessary to also clean the outside. Indeed, peeling of the lips sometimes leads to the formation of a fine translucent crust at the base of the scraped area of the reed (where the reed is the roughest). This accumulation is discrete and variable according to the soners. If it is present, it can easily be removed with the nail but by acting gently and only in the direction of the fibres of the reed from the base upwards to the tip of the reed.

Identification

Your first reed won't long remain alone and you'll soon have many others. Owning several is essential for several reasons:

1. If you play a long time or with short intervals with a single reed, it can soften and fade after a while because of the moisture that permeates it gradually. You must then let it rest for at least half a day or a day before it regains it springiness and behaves properly again (the exact duration of the needed rest depends on the reed and conditions of temperature and relative humidity). During this time, you need another reed.

2. The reed is fragile. The risk of breaking or chipping it seriously is not zero (this happened to all soners one day or another). It can also crack suddenly for no apparent reason (this also happened to all soners). It is therefore preferable to have reeds ready in advance in case of accident, knowing that the problems always come at the worst time...

What looks more like a reed than another reed? However each one has its peculiarities, it is therefore necessary to recognize them in the box to take this one rather than that other one.

Several methods of identification may be used:

1. Write a letter or a number on the cork, it is the simplest way.
2. Put small dots of nail polish or paint on the ligature, with various numbers and colours.
3. Wrap the ligature with pieces of thread of various colours.

In circumstances where it is better to "warm up" your reeds a little in advance (for instance public playing) having clearly identified your reeds allows you to change them on the fly if necessary.

You can never predict what will happen when you play in public. Always prepare several reeds!

I practice

The bombarde is a tiring instrument whose playing time is limited by the physical ability of the player. When you become tired, it is therefore a good idea to move on to something other than the bombarde itself. When you're a beginner tiredness comes quickly! In addition, it is quite difficult to learn tunes directly with the bombarde, especially when you're a beginner.

In addition to being a tiring instrument, the bombarde is also a very noisy instrument that quickly leads to serious problems with neighbours. Everyone does not have the luck to live in a house isolated in the middle of the fields, and even in this case, your family and pets do not necessarily appreciate the voice of your beautiful instrument as much as you do...

These reasons make it necessary, for easy learning of the bombarde, to have in parallel a practice tool that is both easier than the real bombarde and much less noisy.

There are two:

- The tin-whistle
- The electronic practice instrument

One could also mention a third instrument, although it is incorrect to speak in its case of it as a practice instrument for the bombarde; the bombarde may, conversely, be considered as a simple instrument to practice it:

- The "Breton" oboe

The tin-whistle

This is the simple 6-hole whistle often used to play Irish tunes.

This whistle is usually made of metal although some are made of wood, its beak is moulded in plastic for cheaper models, in metal for the more expensive ones (without always justifying the price difference).

Mass-produced versions are very cheap, a few Euros, and for this ridiculous price you will possess a real musical instrument and not just a toy. The usual keys are, from bass to treble: Bb, C, D, Eb, F, G. The most common in music stores are C and D. There are also tin-whistles in low G but they are rarer and more expensive.

Every soner has a few tin-whistles in addition to his bombarde(s). The keys most frequently used for training for the bombarde are Bb, C and D while biniou players prefer the tiny high G tin-whistle which is the nearest to the dimensions of the levriad.

A few tin-whistles from the trade

A tin whistle is very useful to learn the tunes and stretch your fingers, to train for ornaments or tonguing, but that's all. It is of no use to practice managing your blowing, reed pinching, playing the second octave, etc.

Skinflints can easily make their tin-whistles with electric wand and wax from cheese packaging as head plug.

You can easily practice the fingering of a bombarde in minor by taping the second hole from the bottom of a tin whistle (you must almost completely close the hole) and possibly the fifth hole. This instrument is so cheap that it is easy to have one permanently taped and another one not taped to avoid having to fight every time with the roll of tape.

The electronic practice bombarde

To date, only one maker produces this kind of instrument. The tin whistle is as cheap as an electronic practice bombarde is expensive. Expect about double the price of a good acoustic bombarde. However compared with the tin-whistle it is not at all the same thing, you can actually work on the bombarde with this practice instrument and that in absolute silence (if you plug in headphones), without completely replacing the work on the real instrument, of course.

The spacing of the "holes" (in fact capacitive sensors) of this practice instrument is exactly the same as a bombarde in Bb major with two keys but 6-hole playing (alternative A) is possible. It can play in minor (electronic "taping") or major in various pitches, the hardness of the reed is electronically adjustable but the main interest of this practice instrument, which makes it an excellent learning tool, is that, by its electronic nature, it is much more reactive than the acoustic instrument: all hesitations and transition noises between the notes that cannot be heard, or only barely, on the real bombarde are clearly heard on the practice instrument, so it allows you to get clean and precise fingering.

The audio is only a rough approximation of the sound of a real bombarde but the important thing is not that, because this type of instrument is not designed to be an electronic bombarde but in order to be an excellent instrument for silent practising of the bombarde.

The problem of the practice room

It is necessary to mix practising on the tin-whistle or the electronic practice bombarde with practising directly on the real instrument. This raises a thorny problem: the room.

This room should ideally be big and not very reverberant, that is to say as close as possible to the acoustic conditions of outdoor playing, because the bombarde and the biniou are essentially outdoor instruments.

For acoustic and neighbourhood problems linked with the practice room, see the chapter "*What a noisy thing!*".

Bombarde and "Breton" oboe

Another instrument exists to practice the bombarde while generating a much more bearable noise level for your entourage: the "Breton" oboe. Its acoustic power is about half to two thirds less than that of a bombarde; that allows you to play more comfortably indoors. Nevertheless this instrument is still a relatively powerful instrument that can create neighbourhood problems if you decide to fill your insomnia with the practice of this instrument...

Important: *the "Breton" oboe is not really a training instrument for the bombarde but a different instrument, with its own characteristics.*

However, the close kinship between these two instruments means that adaptation from one to the other is quick and any progress that is made in mastering one indirectly improves mastering the other. This is especially true for the small G oboe whose dimensions are close to those of the bombarde in the same key and may optionally use a reed of Bb bombarde instead of the specific oboe reed.

The few differences between the two instruments do not constitute an obstacle to learning both but, on the contrary, improve the adaptability of the player that is to say his ability to adapt to a different instrument than the one he plays usually in the large family of oboes, of which, you will recall, the bombarde is a part.

All this justifies the "Breton" oboe's being mentioned here in the context of learning and practising the bombarde but also justifies a chapter dedicated solely to it in its own right (cf. *I move on to the Breton oboe*).

I build my repertoire

PLAYING the bombarde is an intense pleasure but rehashing endlessly the same two or three tunes quickly becomes tiresome. Therefore you will have to begin to expand your repertoire.

Your memory, the essential resource

As a Breton music lover, maybe you have already many traditional tunes stuck in your head, accumulated over time. Try to reproduce them and even if is "not quite right" this is not very important, it is even better because it will be *your* version. Only the STYLE of a tune, its colour and its phrasing are important to reproduce, not the details of its melodic line.

Make it a habit to take a tin whistle with you each time you have the opportunity to hear living Breton traditional music (holidays in Brittany, tours of Breton musicians in your country, etc.). When you return to your car, while it is still fresh in your head, get to work immediately but wait before starting if you are the driver because it seems that the tin-whistle while driving is even more dangerous than the mobile phone...

The former soners could not read music (with a few exceptions) and had no recorder available. They had only their memory, nothing more than their memory, to store and transmit their vast repertoire.

Digital recorders

These modern memory prostheses are very convenient in the pocket. Not cumbersome, with large capacity and autonomy, good sound quality, you listen to something interesting and hop! It's in the box!

Imagine the hassle of your predecessors (it was not so long ago) who, to do the same, had to carry their bulky cassette recorders whose batteries were empty in ten minutes, and for a far less good recording quality, and even shortly before, tape recorders weighed several kilograms. A whole era!

Left side, the 1960s: 9,5 kg
Right side, the 2000s: 180 gr...

In the absence of a digital recorder, use the dictaphone function of your smartphone, the sound quality will be much lower and the recording time sometimes limited, but very sufficient to pick up a theme on the fly.

The problem of learning a traditional tune from a recording is that you often try to reproduce it exactly as you hear it, which is a mistake. The traditional themes must live and evolve. Listen to the tune you want to learn, listen to it again and again, let it soak in, then forget your recording and let the tune to go round in your head. Then, after a while, take your instrument and let your memory act; your fingers will follow.

The Internet

Online video websites are rich records of Breton music but hum... you need to separate the good from the (very) bad. It seems the worse and the more insignificant the faster online!

To date, we cannot say that these video websites are a rewarding showcase for traditional Breton music, for someone who is trying to discover it this way. Nevertheless, the situation gets a little better over time and you can now, by rummaging carefully, find some interesting things.

Books

Who says book says scores (unless a CD is attached). You say Yuck? You are right. This document has spared you any music notation so far; it is not now advising you to dive in!

We cannot however ignore the three volumes from Polig Monjarret[94] (see: *Bibliography*), an impressive compilation of various tunes collected at a time when portable recorders did not exist, so we forgive him for using paper and pencil to record them. It is hoped that these works will soon be available in a digital format with wider capacities than only printing a score on paper.

The three volumes of *Tonioù Breizh-Izel* of Polig Monjarret

Learning on the fly

You learned new tunes? Your contacts did the same… and they are often not the same tunes; share them! When you play with a regular or newly-met partner, do not try to play only the known repertoire of one *and* the other, because playing in pair also means impromptu following tunes little known or not known at all. This is especially true for the biniou. But while playing as a pair of bombardes you must also try to follow on the fly simple tunes introduced by your partner; at least you must practise trying to do so.

At first, this will be a big panic. You will feel completely lost when a tune that is unknown to you starts at normal speed. Your answer will be porridge music. Don't worry; this is normal. Just try to respect the number of beats if it is a dance tune and to be back on your feet for the strong beats and especially the phrase endings and that will do! The melodic line will be refined through the playing and if it differs slightly from the original then it doesn't

[94] This is not an apology for the man himself, his biography during the Second World War being controversial, but only the recognition of the importance of his compilation work.

matter as long as the strong beats are in line with those of the original. Gradually it will become easy for you and you will answer to an unknown tune as you respond by voice to someone humming a song. It is not necessary to know the theme of a song by heart to successfully hum it when you hear it; it's the same with a musical instrument once you master it. Of course you can train with a tin whistle to learn tunes on the fly and *at normal speed* but you must also train yourself to do it with the real instruments although it is initially much more difficult than with a tin-whistle.

The last gasps of the traditional impregnation

At all times, the strong and brilliant voice of the bombarde and biniou attracted Breton children who naturally absorbed tunes and rhythms. But in this picture from the early twentieth century, we already see by their costumes that they are no longer real rural people, the booming urban culture gradually supplanted the rural culture. Did some of the children in this picture become soners in turn? That's unlikely.

Storage

Tunes are accumulating in your head and soon that jostles a bit... and you realize that you are starting to forget just as much as you have learned. The need to archive all or part of your repertoire begins to be felt.

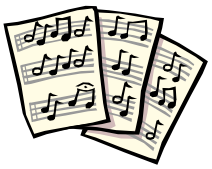
Audio storage

Archiving all this stuff in audio format (mp3, wma, etc.) is a possibility, but audio files take up lots of space and are not very convenient to manage (sorting, search). Because of their size, attaching them to emails is not always easy and is not suitable for a large amount of data. In addition, they are binary formats and such formats evolve with time, so you will have to regularly convert your archived data to avoid having your data become unreadable because stored in obsolete format.

MIDI format is somewhat special because it is a format for audio description and not really an audio format. It is therefore much lighter, but it has no interest as an archive format

because of its imperfect conversion to other formats[95]. It is best to archive in a purely digital format easily convertible to MIDI on the fly (cf. infra).

Paper storage



Archiving your repertoire as sheet music would be a solution but staff notation is not your best friend... In addition, the piles of paper that accumulate and become lost just as fast have today a smell of prehistory.

Digital storage

ABC format:

Don't worry, there is a much more flexible way than audio files and paper scores, and it requires only a rudimentary knowledge of music theory. This is ABC, a digital format that uses tiny text files. You can also type ABC code directly in an email because it is plain text. This simple format is readable and writable by humans while being easy to handle by software; this is a great part of its interest! With a little practice you can scribble the ABC code on a piece of paper while waiting for your computer to be to hand.

This is thus not only a perfect archive format but also a sensational exchange format, an enormous repertoire can be represented by a tiny text file. The ABC format is the representation of a score, so you would think that you must master music theory to use ABC. In fact it is not necessary because the pieces of software working with the ABC can show you on the fly the finger tablature AND the staff notation of the tune you're transcribing and can also play directly what you have just written (It's a very mechanical MIDI sound but enough to control what you write). Without real knowledge of staff notation, you can transcribe, while groping a bit and with a minimum of prior documentation, any tune you can play. Similarly you can, in addition to the generated staff notation, listen to and see the finger tablature of any ABC tune that someone sends you. Icing on the cake: most of these tools are free of charge. ABC has become THE standard format for archiving and sharing Irish traditional music but it is still very little used for Breton traditional music; it's a shame.

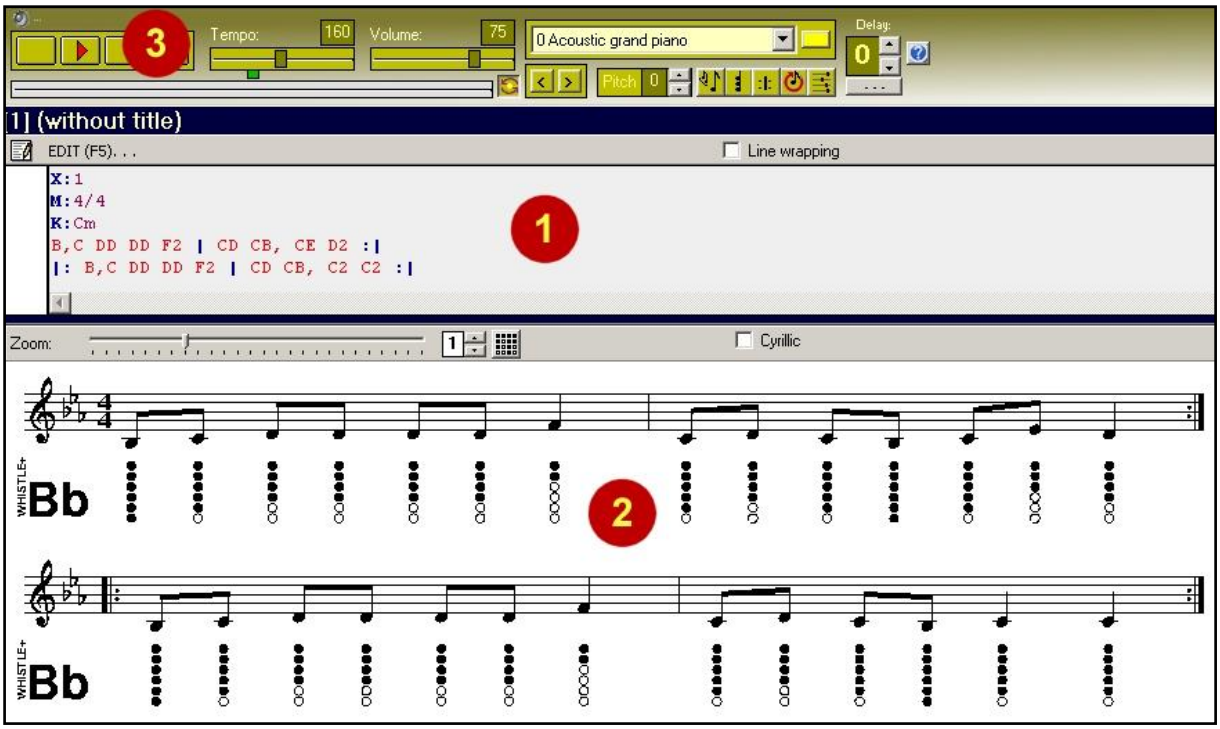
The website grouping all the various resources related to ABC notation is http://abcnotation.com/

[95] The parallel can be drawn with PDF format: it is easy to convert a document from word processor to PDF but it is difficult to recreate the original document from the PDF; it is the same for a MIDI file: it is easy to create it from a document in digital format describing a score but it will be impossible to return to the original formatting of the document from the MIDI file.

Example: this is the ABC code of a very simple tune of *Dañs plinn* using only four consecutive notes, this kind of theme is perfect for learning to play because the difficulty is not to play it but to give it style and rhythm and to vary its interpretation without altering its repetitive and hypnotic nature.

```
X:1
M:4/4
K:Cm
B,C DD DD F2 | CD CB, CE D2 :|
|: B,C DD DD F2 | CD CB, C2 C2 :|
```

Below is what happens if you type or copy the text above in software managing ABC (for the rules of ABC syntax, see the dedicated websites).



Typical interface of ABC management software (it is somewhat similar in all the programs) you type or paste your ABC text in the editing area (1). When you enter or edit the ABC text, the score and the tablatures (2) are updated on the fly (you can hide the tablatures and display only the score and you can zoom in) and using the audio player (3) you can listen to it while varying its tempo. Paper fanatics can also print the score or convert it to PDF.

Other digital formats:

There are many but all are very heavy and complex, the few which use text format (musicXML for example) are unreadable on the fly. They are much more suitable for creating complex scores of classical or jazz music than for archiving and sharing tunes of traditional music. Be wary of binary formats that can cause conversion problems in the future and are hence bad archiving formats.

Getting out of loneliness

Well, you begin to master your bombarde a little and you realize that the intense pleasure experienced during your first progress wanes a little: the feeling of going around in circles comes quickly or boredom at times. This means it is time for you to find a partner to go forward together and to finally use your bombarde as was intended: playing in pair with the biniou or, failing that, with another bombarde, accordion, etc.

It is of course a partner with the biniou you have to focus on, but without rejecting other opportunities if they arise, either as an alternative or addition to the biniou. The bombarde blends nicely with many other instruments, but the problem is its very powerful sound which tends to cover excessively other acoustic instruments or to give listeners an auditory feeling of stairs when it starts or stops.

Finding a partner

It sounds simple but it is now much less simple than it seems, even in Brittany. Of course, outside Brittany it is even more difficult and may be very difficult out of France, difficult but not impossible.

One of the causes and probably the main one in Brittany is the growing importance of the bagads which is such that today learning in bagads has become almost synonymous with learning Breton instrumental music...

Possible ways to find a partner are:

Chance encounters

They are always the best but can need a long wait... So do not rely on chance and adopt a more active search strategy!

Training courses in biniou/bombarde[96]

These courses are usually devoted to the study of style and repertoire of the music of one "(Fr.) *terroir* / (bzh) *bro*". They takes place in small groups on two or three days and are usually led by a soner pair, sometimes built for the course, familiar with that style or believing themselves to be[97].

Feel free to attend these courses if some exist in your locality. They often have little interest in themselves (that depends who leads them) but sometimes facilitate meeting people doing the same search as you and if you get along that's ok! The problems with this method are that it requires a significant amount of money (course teachers are rarely volunteers...) and that people you will meet will often live geographically too far away for you to form a regular pair.

To find such courses in Brittany and more widely in France, just visit websites, forums and social networks on the Internet or in specialized magazines (see: *Appendix*).

In Brittany, you will have no difficulty in finding this kind of course; you will sometimes be spoiled for choice. Outside Brittany, it will be more difficult, much more difficult... but there are still a few here and there from time to time. If you live outside Btittany, why not take an opportunity of holidays in Brittany to participate in such courses because they are planned well in advance for you to arrange. Of course, you need to understand a little French to really benefit from them but music is a universal language.

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[96] Including the training courses in bombarde reed making. That's the same for what concerns the participants, but these courses are much fewer.

[97] The problem with these so-called traditional styles is that they are often based on very few sources... and that the "style of *Someone*" (if we can talk about style because in a context of blissful collect, the word *style* is often synonymous with *clumsiness* and *hesitation*) was often treated haphazardly as the " style of the area of *Someone*", some personal and rather arbitrary opinions come then add to all this, the whole seasoned with some navel autocontemplations of those who love to play the "smugglers of memory" self-proclaimed and that's how we end up with all these "styles of terroir" sometimes set in stone, some of which are certainly quite phantasmagoric. Consider them carefully but from a distance...

The Internet

Regularly read the ads in the forums and social networks dealing with Breton music, fest-noz, etc. and most importantly, write ads on these forums and networks; do not wait passively to find the rare bird, attract him and catch him!

Of course, it will be longer and more difficult than in Brittany, especially since it is already long and difficult to find such a partner on the Internet in Brittany!

Each one in his place

The position of each player in the soner pair is not without importance.

If you play the bombarde, make it a habit to place yourself opposite to the drone, that is to say, to the right of the biniou if he plays right-handed (the vast majority of cases) or to the left if he plays left-handed.

This placement is not of great importance for the bombarde but it is much more for the biniou, because if you reverse places the biniou-player cannot hear the bombarde properly because the sound of the bombarde then mixes with that of the drone.

As seen, the former soners did not always place themselves in the "academic" way and it even varied for the same pair.

Don't be overly dogmatic about this, because the former Breton soners were not! Indeed, when looking at old photos of them, we see that this positioning was much less stringent than it is nowadays and playing with the drone between the two soners didn't bother them a lot. So there's no need to perform unsightly permutations if by accident or carelessness, you started to play at the wrong place.

If you play the bombarde accompanied by an accordion, you must do the same; that means placing the bombarde at the right hand side of the accordion. This time, it's not for the accordion (for

him, whether one side or the other, it is the same thing) but for you to hear better his melodic hand and not his bass accompaniment.

How to name a soner pair is also standardized: the name of the *talabarder* is always mentioned first. This way avoids specifying who plays what in the pair, and is absolutely not a mark of dominance of the bombarde in the minds of Breton soners. For example, in the famous pair Smith & Wesson, Smith plays the bombarde and Wesson plays the biniou...

1 + 1 = 1

Two players who never play in pair do not immediately make a soner pair. Having no experience of playing as a pair, your first attempts will probably be baffling and rather far from what you planned during your learning period alone:

- The bombarde will be hardly in tune with the biniou and you will hardly know if the pitch is too high or too low.
- The bombarde will usually play a little out of tune because it will not be in place over the entire scale of the instrument (you often tend to neglect to push your blowing in the top of the instrument when training alone for too long).
- Maybe the scale of each of the two instruments will not be exactly the same; you will then have to roll out the tape to refine the tuning.
- You will have trouble hearing what your partner is playing; the biniou will struggle to follow the bombarde.
- The bombarde will struggle to resume properly and on the beat, with or without "tiling"[98], after the repeated phrases.
- The biniou will tend to accelerate when he is playing alone.
- and so on...

But after this phase of discovery and realization that playing in pair "is not as easy as it looks" it will be pure bliss because your instruments will be used for what they are actually made for, playing together, and you too!

Swinger couples...

Playing in stable partnership is good, but to meet with other pairs or single soners is even better! Having a dedicated partner does not preclude seeking to play regularly or not, with other people and it is even strongly recommended!

[98] *Tiling* (*tuilage* in French) is the usual term in Brittany for the musical technique of the bombarde (or the singer of a *kan-ha-diskan* pair) playing the last notes of the preceding phrase at the same time as his partner (hence the term *tiling* – think roof tiles, not kitchen tiles) before starting his own phrase. The use of tiling is frequent and typical in Breton traditional music but its use is variable according to the terroir: for example it is constant and mandatory in central Brittany and is totally absent in Vannetais and is variable and optional in places.

The ideal is to successfully join together to form a kind of collective of soners in pair, who meet regularly, in which everyone is willing and able to play with everyone, without selectivity, but which does not preclude having a preferred partner. Well, let's face it, it is often wishful thinking or a utopia, even in Brittany, but a few examples here and there show that sometimes it works.

Soners, a still too male environment

The traditional Breton soners were all men, Breton traditional rural society reserving the instruments for men. Indeed, the women's domain was in practice restricted to singing – especially slow airs and ballads. Singing while dancing was generally regarded as being men's business.

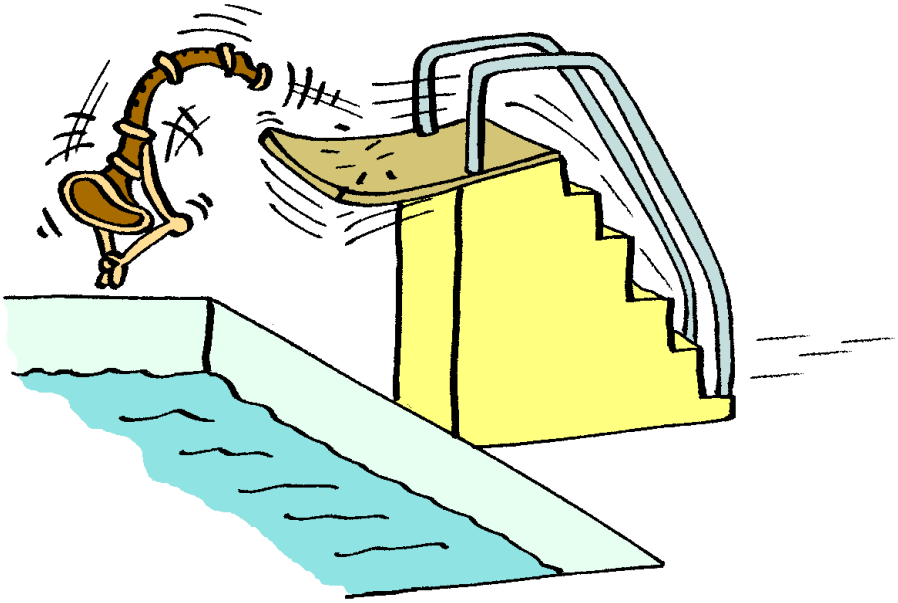
In some domains, the decline of traditional practices is a good thing, and the world of the soners is accordingly open today to women. But the fact that the door has been wide open for decades, doesn't mean that women have rushed through it...

In fact, the situation is quite different for the bagad soners and the soners in pair. Although soner-women still remain in the minority in the bagads compared to soner-men, the feminization rate there is nevertheless relatively high (I don't have the exact figures). By contrast, among the soner pairs, women are rare, very rare, too rare. What explanation can be given for this? It's difficult to answer without degenerating into junk sociology, but it nevertheless seems that the image of the traditional soner pair as men is deeply rooted in the

Breton collective unconscious while the bagad, being much more dissociated from the tradition (the first bagads appeared just after the Second World War), doesn't, or doesn't much, undergo this pressure of the imaginary; hence its more pronounced feminization.

Ladies, from Brittany and elsewhere, it is for you to make that paragraph obsolete as soon as possible!

I launch myself!



WELL, the hard part is over. You have found a partner with whom to start to work well, but again, like when you were starting out alone, you begin to feel somewhat weary and frustrated...

Playing in pair in your own corner or in front of your friends and family, is all very well but the biniou and the bombarde are not intimate instruments. The desire to play in public comes quickly. But between playing in your garage and playing in a giant *fest-noz* of three thousand people, there are still some differences and some intermediate steps. So how to launch yourselves?

Before going to play in public

Firstly, you must rehearse again and again the tunes you plan to play, because it's crazy how memory (both aural and gestural) deteriorates when playing in public without long experience of doing it.

Clean your instruments carefully and, above all, clean thoroughly two or three good reeds and prepare them by using them briefly a few hours before playing so that they will be immediately operational and at their best when the time comes.

The difficulty of playing in public

The first times you'll play in public, you will realize that it is much less easy than you ever imagined... Yes, stage fright and emotions also affect soners, even the most impassive ones. Moreover, a minimum of emotiveness is essential to be a good musician, but an excess makes playing in public uncomfortable.

Tempo

There is a rule that has no exception: the more you are emotional, subject to stage fright and inexperienced in playing in public the more you play fast, too fast, much too fast. Similarly, the more it goes wrong during the performance (out of tune, porridge sound, memory lapses, discords...) the more you tend to accelerate the tempo. Even when you realize that it is going too fast you fail to slow down. It's like that. Dirty looks from dancers struggling to follow your too fast tempo then accentuate your stress and make you speed up a little more instead of slowing down...

The solution: in your early public performances, if you feel stressed, do not try to adopt immediately the right tempo. You must have the sensation (a false sensation, don't worry) of playing a little too slowly, especially when starting the tunes because the tempo will gradually and unintentionally accelerate during your playing.

Tuning

To be well tuned is ESSENTIAL, you can play like a god with the bombarde but if you are not well in tune with the biniou, whatever your virtuosity the result will be poor and unpleasant to the listener.

Under the effect of stress it is sometimes difficult to get the biniou and bombarde in tune with each other. When the correct tuning is not immediate, you get nervous and you no longer know whether you are too high or too low pitched, then you rectify randomly and roughly and the tuning worsens and you panic...

Wrong solutions:

1. Tuning in advance quietly in a corner then waiting. Once the time comes to play, the instruments will then be perfectly out of tune, therefore panic and boom!
2. Using the electronic tuner discreetly before starting. This thing is already not easy to use in quiet context, but under stress the incoherent wriggling of its needle will only increase your stress and the bombarde is too sensitive to variations of blowing and pinching under stress for the electronic tuner to be of any use; you think you are well tuned then re-boom!

Right solution:

1. If you have an electronic tuner, drop it in the nearest trashcan.
2. Know well the behaviour of the reed that you will be using and therefore test and choose it carefully the day before. Prepare spare reeds.
3. "Warm up" the bombarde reeds a few hours before playing and let them rest. They will then be stable and at their best (not too dry or too wet or too open) when you use them in public.
4. "Warm up" carefully the biniou the day before then in the hour before playing, otherwise its tuning will not be stable and the tuning of the bombarde may have to be corrected during playing.
5. Get the instruments in tune immediately just before you start. Although it is not perfect, the tuning will always be better than after having let your previously tuned instruments rest.
6. The bombarde must keep silent during the time required for the biniou to get his drone in tune, otherwise he will not succeed. If stress causes the biniou-player to struggle to tune the drone, the *talabarder* rises from his seat and helps him!
7. To know if you are too high or too low: force your blowing while slightly increasing the pinching. If the tuning improves that means you are too low; move back on the reed and blow at minimum; if the tuning improves that means you are too high.
8. *Take all the needed time to get in tune!* Even some excellent very experienced soners often spend a lot of time getting in tune on stage before starting. So as beginners, it is normal that you still take more time, nobody will complain about the length of this "ceremony" but if you start badly tuned, everybody will!
9. To get in tune, mentally vacuum around yourself. You are alone, the biniou and you; the public does not exist and you should be aware of its presence only after you are properly in tune.
10. 9. If you fail to be perfectly in tune, it is preferable to be tuned with the bombarde a very little too low (barely) rather than a little too high[99]. It will then be easy to improve the tuning by forcing the blowing slightly whereas it will be impossible to fix the tuning of a bombarde which is tuned too high (You can pinch further back on the reed but the sound becomes muffled). In addition, it will be easy to sharpen the tuning during playing, by pushing the reed slightly further into its seating, while adjusting the reed outwards during playing is a high-wire act without a net because the reed can move back too much and you get totally out of tune, or it simply comes away in your hand and you look like an idiot!

[99] To tell the truth, when you start a tune with the instruments and reeds little or not at all "warmed up" and the bombarde tuned a little too high and if you do nothing, the tuning between the biniou and the bombarde often tends to improve itself while playing (as a result of complex and interrelated physical factors such as dimensional change of the instruments and reeds, the temperature of the air column in vibration, etc.), nevertheless the fact remains that the starting configuration with the bombarde tuned a little too low is easier to compensate or correct *during playing*, the best configuration remaining to be well tuned of course!

Regulation and playing in public

Regulations and administrative rules are as numerous as countries, so they cannot be discussed here.

If the constraints and rules are numerous and complicated in your country, be assured that in France and therefore in Brittany it's worse!

– Dura lex sed lex –

The various ways of playing in public

In Brittany, there are numerous ways for playing the bombarde in public:

- Fest-noz and fest-deiz (Breton traditional dancing events).
- Animations of public or associative festivities.
- Animations for private institutions.
- Demonstrations.
- Weddings.
- Soner competitions
- "Cercles celtiques" (associative groups of dancers and musicians).
- Bagads (Breton pipe-bands including bombardes).
- "Triomphes des sonneurs" (musical jams such as street parades ending Breton summer feasts).
- Musical flashmobs.
- Breton sessions.
- etc.

A soner pair of *Bro vigouden* (Yves Boissel and Jean-Louis Le Roux) leading a wedding procession in the 50's. This tradition is not as strong now but it does live on.

... but these opportunities are rarer in the rest of France and of course very rare outside France. However the Breton Diaspora is fairly numerous all around the world and it is often possible to find structures or associations

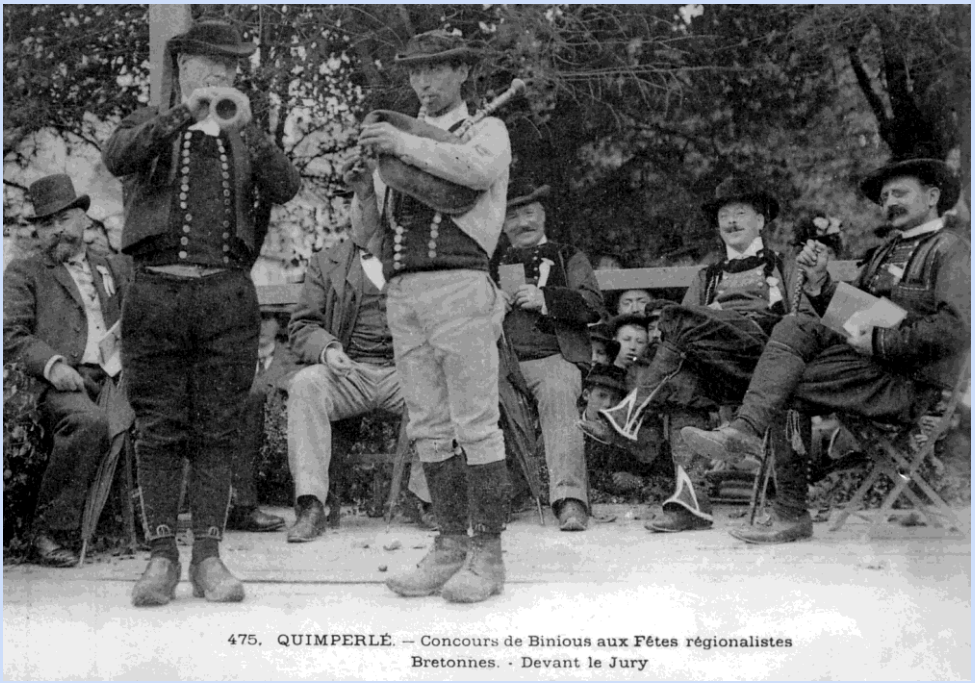
allowing playing Breton traditional music in very unexpected countries! So you will have to prospect yourself to find the available possibilities in your country.

Fest-noz in Brittany are numerous, often very crowded and bring together people of all ages joining together for hours and hours of endless dancing to traditional music.

At least, don't forget that Breton people are considered generally as warm and welcoming (we are not Parisian!) and Breton traditional musicians are always very happy to meet foreigners who enjoy playing Breton music, whatever their technical level, so don't be shy to get in touch with local musicians – they are numerous – and take the opportunity of your next holidays in Brittany to play the bombarde and the biniou with them on the native soil of these instruments!

Don't worry, you will be welcomed in Brittany as a real Breton soner among the soners community because if you like and play the bombarde or the biniou you ARE a real soner and you ARE a Breton soner if you want to be, because the only definition of "*Breton*" in Brittany is "*any people willing to be considered so*".

[100] Welcome to Brittany! (in Breton)



As far as we know, soner competitions have always been deeply embedded in the Breton instrumental music scene and even today this tradition is still alive and active. Here a contest in the early twentieth century.

If you speak a little French without mastering this language, maybe you often wonder if you must use "*vous*" or "*tu*" for translating "*you*" when you meet someone and in such a case you use generally "*vous*" to avoid unintentional rudeness. Once in Brittany, as a soner meeting another soner, you would be wrong to do so because in Brittany or elsewhere when a soner meets another soner they use always "*tu*" even if they meet each other for the first time, showing their community spirit regardless of their nationality or musical level.

Once in Brittany, don't be shy to ask every Breton soner you pass or meet for advice. It is always easier for them to explain technique and especially style with the instrument in their hands.

Don’t worry, no need for you to have Breton roots for ten generations to be real and excellent Breton soners. One of the best examples is the famous Breton soner pair Tanguy Josset and Yannick Martin, Champions of Brittany in 2012.

I carry and store my bombarde

A bombarde is not a grand piano, it's a portable instrument that you carry around everywhere with you, but carrying your instrument around is not enough, you also have to carry around all its reeds and a small annex kit (yarn, stuff for scraping reeds, pliers, swab, etc.).

What to choose for carrying and storing things with your bombarde?

The picture above (taken on Breton roads) is a solution but there is more convenient.

The soner bag

As traditional as an indispensable accessory, the old goody soner bag that is worn on the shoulder is a part of the Breton soner image – and not without reason.

You can easily store two or three bombardes and one biniou, with their accessories, in your bag and you can wear it while playing and walking without any disturbance. No need to search for something more convenient, it does not exist!

The bag of the traditional soners

Formerly, the soners used either recycled bags (eg military bags or rather heterogeneous boxes) or specifically crafted bags. Thus in South *Cornouaille*, the former soners frequently used superb bags crafted with crochet and generally lined inside with fabric. Some also used cloth bags thoroughly embroidered, including a shoulder strap, in a style close to that of embroidery adorning Breton costumes. These were perishable items and subjected to harsh treatment; unfortunately relatively few of them have survived.

The bag of the modern soners

Today, as before, it's hard to find real soner bags for sale, even in Brittany. Many soners use various types of bags ("reporter" bags or bags found in a military surplus store, for example) but many still prefer to make, or more often to order[101], their own soner bag.

With some ultra-minimalist sewing notions[102], it's possible to make a basic soner bag: a rectangular pocket with a large flap and a shoulder strap. This is not rocket science. The most complex part will be the adding of a lining (but you can do without it) and a zip under the flap (little infringement to the tradition that prevent you from losing any of the contents of the bag).

Of course, a real dressmaker will be able to make for you a custom soner bag of much better quality but making your own bag is a definite plus for the sentimental attachment that every soner has to his bag because a soner often keeps the same bag throughout his career, or even his life – good reason to choose a quality, strong fabric.

In the 70's-80's, during the revival of interest for the music in pair in Brittany, a little drowsy from WW2 and the creation of the bagads, some soners began to reuse crochet-crafted bags. Unlike a bag made of simple fabric, making such a bag cannot be improvised, because you need expertise in crochet and... a lot of time! One sees fewer and fewer of these beautiful bags, it seems, as, too, fewer bags of embroidered cloth[103], it's a pity...

Decorating your soner bag

Many old soner bags were richly decorated: crochet, knitting, embroidery, fringes. Regarding embroidery; people able to embroider a bag are certainly fewer than in the past but the revival of interest in traditional embroidery in Britanny does mean that their number is increasing... while the number of embroidered bags is decreasing; spot the error!

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[101] If no one around you is capable of this, you can try to contact the dressmakers of a Breton *Cercle celtique*. Then your soner bag and its eventual decoration will be made by the same hand.

[102] If you have no one to show you how to do it, the Internet will come to your rescue.

[103] This is to be compared with the gradual disappearance of embroidered fabric covers for the biniou. As for the embroidered bags, soners using embroidered covers tend to be of a certain age...

If decoration with crochet requires training and experience, it is however relatively easy to embroider your bag without any prior experience if you limit yourself to drawing lines[104] and to arranging them in simple geometric patterns. Of course, embroidering floral patterns with filler is less simple and, unless embroidery is your hobby, you will certainly have to hand over to someone else.

The soner case

A soner bag is not very big, so if you have a lot of instruments and want to carry all them with you that's not enough, you also need a soner case.

Homemade case

Just a few years ago, most soners were making their own case by assembling thin plates of plywood, soon covered with stickers. Then edged cases appeared in DIY stores and more or less replaced the hand-made ones.

Ready-made case

Edged cases come in multiple sizes and shapes and have interior flexibility. They are actually very practical, but all have the same appearance and don't have the charm of a case tinkered with the soner himself. Moreover, their surface is generally embossed so that their "customization" with stickers is difficult and uniformity reigns supreme...

In the wake of the many cases dedicated to the Scottish bagpipes, there are some cases dedicated to the bombarde in specialist retailers. They are expensive, often too small and bring nothing more than a general purpose case purchased in any DIY store.

There is another type of case perfectly suited to the bombarde and other wind instruments that are rarely thought of, at least in France and more generally in Europe[105]. These are the cases for firearms! Generally made of a rigid plastic shell and a cosy interior of corrugated foam, they exist in multiple sizes and shapes (from the pocket pistol to the heavy machine gun, the range is wide...). They are easily found for sale on the Internet; that will save you from having to enter an armoury.

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[104] If you limit yourself to the "back-stitch" and the "chain-stitch" or (not necessarily very orthodox) variations thereof, it is easy and won't need much training.

[105] It is a foreign musician who made me think of it. His nationality is easy to guess ☺

Warning!

A perverse side effect of using of a case rather than a soner bag, when the latter would be sufficient, is the upsurge of instrument thefts. You keep your bag on your shoulder, but you leave your case in a corner of the room and then...

The reed box

This topic has already been mentioned above (see: *I maintain my reeds / Preservation*).

Transportation by air

All your wooden instruments *must* travel in the cabin!

A trip in the hold exposes them to a high risk of thermal shock in addition to mechanical shocks.

If you cannot avoid having them transported in the hold, you must install them in a package that not only protects against impacts but is also strongly isothermal so that the intense cooling that will occur during the flight is as slow as possible and therefore the more homogeneous in the thickness of the wood to minimize the occurrence of dangerous internal tensions. Similarly, out of the hold, the warming of the instruments must be very progressive, they will not be taken out of their isothermal packaging for several hours, which can be difficult to explain to a customs officer...

I customize my bombarde

EVERY instrumentalist likes to have *his* instrument, slightly different from the one of the neighbour even if they were initially identical. Every instrumentalist also aspires to *improve* his instrument, even if this improvement is not obvious objectively; again it's more a desire to differentiate his instrument, to customize it, to make it his.

The bombarde is organologically a very simple instrument (a body, a bell, a reed and possibly one or a few keys), so there is very little that can be replaced, modified or added.

NB: this chapter is a little beyond the scope of self-learning the bombarde and the concerns of the beginner, but if you persist in the practice of this instrument, it will take soon more importance.

Customisation possibilities

Example of customized bombarde:
The bulb (reed end) and the middle part of the body of this bombarde in ebony (Bb) were turned again and greatly thinned and the bell initially in ebony was replaced by one in pear-tree with a ring in boxwood. The poor and ugly original bombarde, looking like the stretcher of a chair and sounding the same is now unrecognisable and greatly improved in terms of the sound and aesthetic. To improve the harmony of the instrument's appearance, the ugly metal ring should also have been replaced with a ring in boxwood or horn but the metal ring wouldn't be taken off!

Replacing keys

Replacing key(s) doesn't change the sound of the instrument in the slightest and is best thought of in the context of repair rather than customisation.

However the case of the replacement of a traditional butterfly key with a more ergonomic modern key should be noted; but due to the high position of the hole for a butterfly key the new key will not be a standard key and making such a key is difficult (key-making is a real job). In practice, you'll have to seal the original hole (with mixed sawdust + cyanoacrylate or simply sealing wax) and then drill another hole shifted to the side to be able to put a modern

standard key (recovered from a poor[106] or broken instrument, for example). If moulding impedes the fixing of the new key, you'll have to correct the turning of the instrument foot before fitting the new key (cf. infra).

The level and diameter of the original hole being known, the shifting of it can be carried out by an amateur handyman.

This key replacement can also transform a bombarde for a right-hander into a bombarde for a left-hander and vice versa.

Adding keys

You can add keys to a bombarde, for example to use the subtonic with a key rather than covering the hole with the small finger. One can also add keys to avoid taping and fork-fingering for some notes, but for that you'll have to drill intermediate holes in the body of the instrument. Again, you'll have to recover proper keys by cannibalising another instrument. It is not easy to determine exactly where to drill the new holes (then for their diameter it's easier because you can enlarge them very gradually) and it is best to ask an instrument maker and more accurately the maker of your own instrument who will know exactly where to drill.

Replacing the body

Replacing the body of the instrument is obviously not to be considered here as it would mean changing your bombarde!

Modifying the inner bore

Modifying the inner bore of your bombarde yourself is not possible because the bombarde bore is narrowly conical and requires a reamer that is not easy to make and not easy to use. Moreover, once the instrument is rebored it will likely be excruciatingly out of tune and will require sealing its finger holes (sawdust + cyanoacrilate) and redrilling them or, at the very least, their re-boring. All that belongs to the domain of a confirmed instrument maker.

Re-turning the outside of the instrument

Turning the outside of a bombarde again is much easier than correcting its inner bore and without great risk for the instrument if you are careful and prudent (be careful to leave a sufficient thickness of wood!). You need simply a small lathe (a simple adaptable accessory on a drill is enough).

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[106] Buying an Asian manufactured bombarde is justified in this case, just to get its key. The quality of these bombardes is awful but they are so cheap that it is profitable considering the high price of a key purchased alone. Once you have recovered the key, possibly keep the bell and throw the rest of the instrument into a fire!

The new turning of the foot or the bulb is only aesthetic[107] but the new turning of the body (its thinning) has an impact on the tone (it improves it in most cases) and the tuning (it alters it constantly). Indeed, the thinning of the wall thickness reduces the height of the chimney of the finger holes, with the result that the range of the scale stretches upwards: the pitch of the low notes changes little but the high notes at the top of the instrument become clearly too sharp. Re-turning a bombarde body and consequently thinning its wall therefore usually necessitates taping the top holes to restore its tuning or, better, reducing their diameter with a mixture of sawdust + cyanoacrylate.

Pewter inlays

Chiselled pieces

These pieces were carved over their entire surface and are ready for getting pewter.

They are not pieces of bombarde but pieces of a biniou drone, but the principle and technique are exactly the same.

[107] Some instrument makers say it's better to leave "enough wood" at the bulb (reed end of the body) to get a good sound, but some others say it does not matter. We can therefore conclude that even if it has an influence on the sound, it does not have much!

Bombarde bulb in boxwood.

Note that all this is the result of the work of a trained professional. For your first tests, be more modest...

[carving: E. Ollu]

If the bulb or the foot of your bombarde have *a sufficient wood thickness* (important!) and a not too fussy turning, you can try pewter inlays, a very common traditional decoration of ancient and modern instruments. Prefer inlays on the bulb, which rebalance your instrument by moving its centre of gravity backwards (in that respect they are not purely aesthetic) while the inlays on the foot or the bell unbalance it and decrease the playing comfort by moving its centre of gravity forwards.

To cut into the wood you need suitable wood chisels (thin and narrow) and a support immobilizing the body of the bombarde because it is made in very hard wood that resists and rolls under the tool if it is not gripped well.

To cast pewter, there are two principal ways:

1. The traditional way: make a flexible cardboard sleeve around the part of the instrument to be inlayed; melt pewter in an old container then cast the molten metal into the sleeve. Be careful not to overheat molten pewter to avoid burning wood.
2. The modern way: insert pewter by melting the top of the pewter bar with a big soldering iron (not an iron for electronics!) while going ahead into the incision and pushing pewter well into it (being careful to remove air bubbles), without worrying about the extra thickness.

The extra thickness of metal is then removed on the lathe; a small handyman lathe is sufficient.

As for the quality of the pewter: use pewter bars used by roofers, pewter rolls for electronics or plumbing can also be used but it is more expensive and less easy because it contains a stripper to be eliminated by a first melting followed by hardening before you can use it to cast inlays.

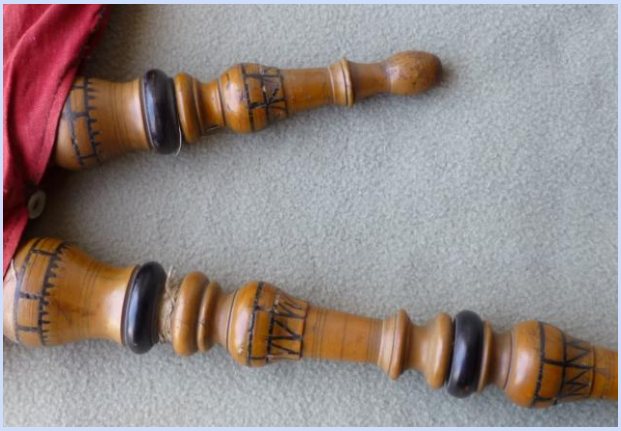
Large-scale pewter inlay designs (i.e. beyond a simple ring of wolf-teeth) require some dexterity and training to avoid gaps and touch-ups in the tin. Practice beforehand on scrap wood and do not hesitate to have them done by a professional rather than damaging a good instrument!

Wax inlays

Pewter can be replaced with sealing wax. The implementation is much easier and colours are various. Excess of wax is removed with a simple sharp knife, no need for a lathe.

The subsequent renovation of wax inlays is easy, unlike those made with pewter. Prior chiselling can be much thinner because the narrower the incisions the better the wax will hold, unlike pewter. Wax is much less common than pewter on old instruments[108] but some examples exist that attest to its traditional character.

Unlike tin, wax inlays are quite accessible to every amateur not too clumsy with his hands.



Biniou decorated with wax

A rare example of an old biniou in boxwood with wax inlay. This wax decor is old but its examination shows, however, it was applied secondarily on this instrument, probably by his owner who has wanted to customize his instrument to his liking.
[coll. E. Ollu]

Replacing the bell

Replacing the bell is the only way of customizing your bombarde that will not need from you handyman talent, if you use a pre-existing bell.

[108] Wax inlays were once very commonly used, particularly in *Basse-Cornouaille*, to decorate spoons called "wedding spoons"; these latter sometimes also received a decoration of pewter which was very similar to that of musical instruments.

By replacing the bell is meant not only changing the bell *model* but also changing the bell *type*.

In seconds, your bombarde will change in appearance but also in tone. The subject is hence important enough to focus a bit on the bell of the bombarde and its importance for the character of the instrument:

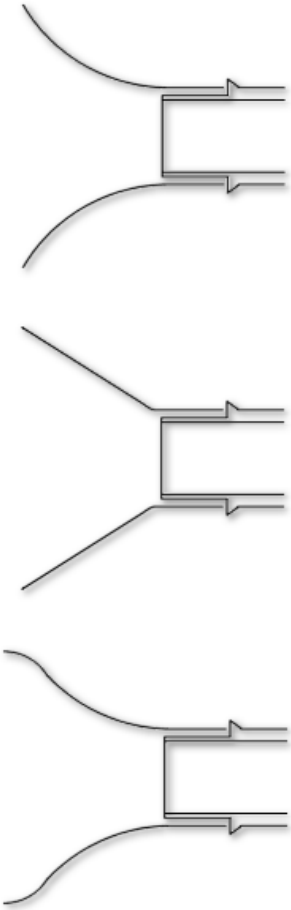
The bell, essential element for the sound

In the chapter "*I choose my first bombarde*", the importance of the bell has deliberately not been addressed. Indeed, when buying your first instrument, whether new or second-hand, you did not have the choice of the bell, except in cases where you have ordered a custom-made bombarde, which is rarely the case for a first instrument and has not much interest for a beginner, in addition this requires a good understanding and mastering of the instrument that the beginner of course does not possess.

The very flared bell of the bombarde is not a simple amplifier of the instrument sound, it also has an important influence on the tone of it. This influence is more based on its geometry than on the material used to make it. Contrary to the main body, the wood used for the bell has little or no influence on the tone, it simply has to be wood hard enough to not vibrate and to take a neat surface polish and to not behave as a sponge and that's it.

Bells: two bells of same diameter but different profile for Bb bombarde. Left, a bell with "parabolic" bore; right, a bell with conical bore.

We can classify bombarde bells into three main types according to their geometry and this geometry matches generally a specific character of the instrument and thus a preferential use of it:



Main types of bells:

Bell with "parabolic" profile

Bell with conical profile

Bell with double-curved profile

Bells with "parabolic" inner profile

The quotation marks are there to indicate that the so-called bells do not always follow a strictly parabolic inner profile in the mathematical sense of the term but are near to it. We can also talk simply of 'bells with regular curved profile'.

This type of profile often gives to the instrument a warm, full sound in the bass with precise but slightly less prominent treble. It is rather the type of sound you want for playing in combination with the *binioù kozh* because in this case the two instruments (an octave separates them) complement each other and blend thoroughly: the biniou provides chirping and the brilliance of its treble while the bombarde provides the fullness and the warmth of its bass, both making one whole, in perfect harmony.

Bells with conical inner profile

These bells are inwardly shaped in a very flared regular cone.

This type of profile often gives to the instrument a colder but flashy and trumpeting sound with less prominent bass.

It is rather the type of sound you want for playing in combination with the Great Highland Bagpipe or playing in a bagad or in a multi-instrumental group in general, because in this case the metal attacks and the high harmonics are very present and display the shine of the bombarde among the other instruments playing the same octave as it.

Bells with double-curved inner profile

These bells have a particular profile, shaped in “S”. The base of the bell has a “parabolic” profile then the profile is reversed while approaching the opening, the second curvature is always much shorter and with a smaller radius than the first one.

This type of profile is generally only used for the low-pitched bombardes (from A and below). It has features of character near those of a single curved bell but would have a richer and brighter sound. Some instrument makers give great importance to this profile for the tone quality of their low-pitched bombardes, some not, so it is likely that the benefit of this double curvature is expressed only in association with some geometries of the main body (bore angle, location and size of the finger holes) and less or not at all with some other ones.

Let’s relativise that…

The above information is general in nature and you will find some excellent bombardes for playing in pair with conical bells and, less frequently however, some excellent bagad bombardes with curved bells. It's your ears, your taste and testing of the instrument which must guide your choice and not a mere glance at the turning of its bell. In addition, these bell categories are not rigid and some bells are unclassifiable, with almost flat or parabolic curvature at the base and then becoming conical or vice versa, etc.

… but not too much

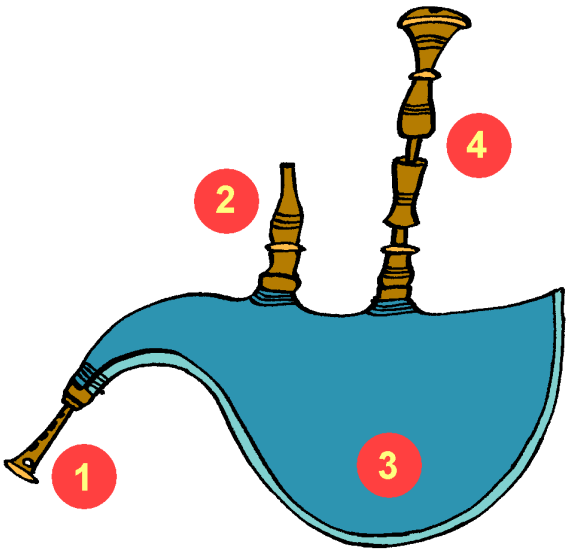
However, these general characteristics related to the profile of the bell are useful to know. For example, if you have a good bagad bombarde the sound of which does not completely satisfy you for playing in pair, knowing that you have sometimes just to replace the original bell (usually conical or almost so) by a bell with a curved profile to fix the problem can enable you to save a lot of money!

I move on to the biniou

And now, you begin to master your bombarde and really express yourself with it. You made your first steps in pair playing with a partner at the biniou and even if these first tests were laborious, the desire to try and feel a little this strange baggy instrument takes you and you're right.

Here are some tips to smooth the transition from the bombarde to the bagpipe.

Anatomy of the biniou



1: Levriad (chanter)
2: Sutell (blowpipe)
3: Sac'h (bag)
4: Korn-boud (drone)

NB: When speaking French, Breton soners keep the Breton words *levriad* and *sutell*, but use *poche* (bag) and *bourdon* (drone) in preference to their Breton equivalents.

The levriad

This is the sound pipe (the chanter) with which you play. It is tuned one octave higher than the bombarde, so it is very small but the finger holes are rather large; it generally has two facing lateral tuning holes at its bottom, allowing a less directional sound. Structurally, apart from the size, there is no difference from the bombarde: conical bore with marked conicity and double reed (very small).

Initially, coming from the bombarde, playing on the levriad will be confusing because your fingers will almost touch each other but it is easy to get used to this small size and you will quickly find your way about.

The drone

This is somehow the third member of the soner pair...

This sound pipe produces a continuous bass sound one octave below the bombarde, so two octaves below the levriad. The bombarde, the levriad and the drone make therefore a whole occupying simultaneously three octaves of the sound space.

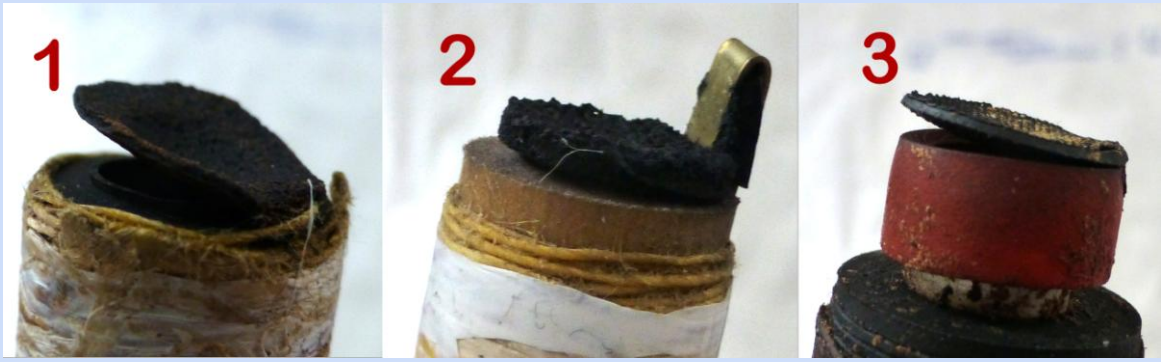
The drone is fitted with a single reed, which is very different from the double reed of the levriad. This reed is usually of cane[109]. The drone is composed of three nested sliding elements that allow it to be tuned by adjusting its length.

The sutell

This is the blowpipe, a pipe with a one-way valve that prevents the bag emptying by the sutell when you catch your breath. The valve is of various types depending on the instrument's makers: leather valve (traditional system that needs to be moistened before playing), patch of bicycle tyre inner tube, piece of washer glove, small captive ball, Canadian valve[110]...

[109] Drone reeds were once made from elder but this material too sensitive to moisture is now nearly abandoned. However reeds in synthetic material are now frequently used but variously appreciated and always very easy to adapt to the biniou drone because of their larger diameter.

[110] Rubber valve held by a plastic body provided with a conical connection pressed into the base of the sutell. This valve is primarily fitted for the GHB but can be adapted to the sutell of the biniou by tinkering a little.



Three models of sutell valve (among others):
1. Traditional system: a leather washer the tongue of which is held by the twine of the sutell tenon.
2. Modern variant of the traditional system: a brass jumper holds the tongue and is held by the twine. The washer is thus easier to change and the elasticity of the leather tends to close the valve instead of open it as with the preceding assembly.
3. Rubber ring on a short aluminium tube and rubber washer glued on an edge of the ring. Reliable, cheap and virtually indestructible.

The bag

It is made in reversed leather (full-grain leather with the grain inside the bag). Traditionally the bags were sewn but many modern bags are not only sewn but glued-sewn and now sometimes just glued[111].

For sewn bags and often for glued-sewn bags, it is essential to complete the sealing of the bag with a non-putrescible fat product (various recipes based on seal fat, petrolatum and lanolin; some soners, there is not so long ago, even used mixtures based on beer and egg white, or even flour...). An air-tight seal is the first requirement of the bag because the accumulation of micro-leaks results in a significant overall air leak that makes playing difficult, unstable and tiring.

The shape of biniou bags has evolved over time: in the old binious, as this biniou of the late nineteenth century from the "Pays Vannetais", the sutell and the drone are often located far back. On modern bagpipes they are much more forward [coll. Château des Ducs, Nantes].

[111] Gluing using technical glues for leather. Seamless gluing is supposed to improve the initial seal of the bag but probably not its durability. The future will answer and it is still a very experimental technique; it is for the moment very unlikely that you are offered an unsewn bag for sale.

The stocks

Tied in to the bag, they receive the levriad, the sutell and the drone. The stock of the drone dives deep into the bag to protect the reed from shocks and contact with the sealing grease.

Starting the biniou up

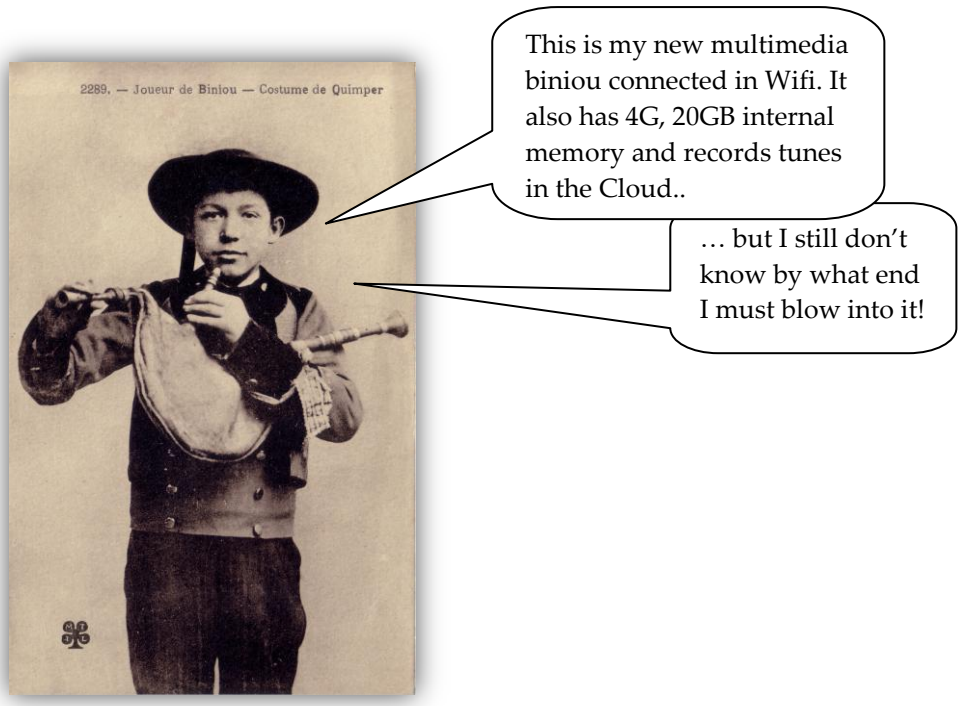
1. Moisten the levriad reed before playing (and massage it slightly if needed). However, the drone reed can start dry without risk, but it will sound more stable if it has been moistened beforehand.
2. Moisten the valve of the sutell, if it is in leather, to soften it.
3. Put the bag under your arm and inflate it by blowing through the sutell.
4. Hold the levriad while inflating the bag because otherwise it can jump out like a champagne cork and break.
5. When the pressure increases in the bag, the drone starts first, usually with a plaintive high-pitched sound. Give a flick at the air outlet (obstruct it then open it abruptly) to lower the sound of the drone to its normal pitch.
6. When the pressure in the bag is sufficient the chanter starts in turn.
7. At this time, usually you stop... empty lungs. Now you have to learn how to catch your breath while continuing to play.

The blowing

The main difficulty of the biniou is blowing it but it is a bit like riding a bike: it comes suddenly or almost and then it is never forgotten.

Coming from the bombarde, you will tend to mechanically synchronize your fingers and your breath, you will have now to completely desynchronise that.

When you catch your breath while playing the biniou, you maintain a constant pressure inside the bag by the pressure of your elbow and your forearm (both, otherwise you will be brutal and will get tired) and then you *gradually* release (the whole technique is in this progressivity) the pressure of your arm when you start to blow again into the bag, but *without releasing it totally* (important +++).



Settings

Drone adjusting

Drone tuning

You tune the drone by moving its two sliding elements. The more you elongate the drone the lower the sound is pitched, the extension of the lower slide has much more influence on the pitch than the top one. The position of the top slide however has more influence on the stability of the drone note than the lower one (while reducing the stretch of the top of the drone, you often minimize the tendency to make "waves").

The drone must be tuned to the tonic of the tune that is about to be played. In practice it is most often the note that ends the tune. This is only possible when the tonic is Bb (tuning "in major") or C (tuning in "minor") for a Bb major biniou. For tunes based on another tonic, equivalences are used: D> major or minor depending on the tune, Eb> major, F> major, G> minor.

To get in tune, you have only one hand on the levriad, the other adjusting the drone; so it is necessary to replace the tonic by its fifth: G (one finger down) for tuning in minor and F (two fingers down) for tuning in major. The fifth – it is also called the dominant – sounds perfectly in tune with the tonic, thus you seek tuning with the disappearance of audible beats when approaching the point of tuning. You quickly put your fingers down on the tonic to check the tuning, then you return to the fifth to refine it and so on.

The bombarde must keep mute while the tuning of the drone of the biniou. The *talabarder* may help his partner and perform tuning directly on the tonic of the levriad, it is fast and precise but it is not recommended, because the *biniaouer* must be able to tune alone and quickly and to rectify the tuning as soon as it is necessary because the stability of the tuning is not perfect along the playing time. The pitch of the levriad and, particulary, the drone vary depending on the wetness and the temperature of reeds (a temperature of about thirty

degrees and a relative humidity of 100% reign within the bag: the conditions of the rainforest!).

Drone reed adjusting

The behaviour of the bombarde reed is understandable and almost predictable, but the behaviour of the drone reed opens an abyss of confusion. This type of single reed does only what it wants: it works, it does not work or it works badly or it does not work anymore in spite of your having changed nothing... all that without your really understanding why. The geometry of the drone is important for selecting a suitable reed, some drones, for the same note, work better with a reed of large diameter, some others with a reed of small diameter; you have to test[112].

Drone reed in cane

Reed in place at the base of the drone

You can adjust the drone reed in various ways: if the drone shouts and consumes a lot of air, you can move the bridle of the reed forward and move it backward if the reed shuts off constantly. To reduce this tendency to close or shut off, you can introduce one or two hairs in the slot of the reed while slightly bending the blade as you push the hair toward its base. The blade may also be slightly scraped or, conversely, it can be weighed down by depositing a few drops of molten candle wax (techniques of last resort to keep for very recalcitrant reeds). Moving the bridle backward also makes the reed sound slightly more low-pitched and vice versa, but to change the pitch of the drone (for an identical position of the slides and for the same reed) it is mainly the adjustment of the reed in its seating that will be effective. If the pitch is unstable and "makes waves" or jumps from one note to another, often the problem is improved by advancing the bridle and trying to reduce the elongation of the upper slide (prefer in this case the extension of the lower slide).

In fact, many drone problems come not from a drone reed problem but from a bad pairing between the levriad reed and the drone reed: it is necessary that these two reeds both operate optimally for the *same* pressure in the bag, a drone reed that works perfectly with moderate pressure will never work well if paired with a levriad reed that is a little hard and vice versa. In practice, one seeks a good reed pairing by changing the drone reed (test several of them) rather than changing the levriad reed.

[112] In theory, the drone reed must have the same internal diameter as that of the first slide.

Levriad adjusting

Reed adjusting

It is possible without too much risk to act, if necessary, on the bombarde reed by scraping it and deforming its tube with pliers. Venturing to do this without training with the levriad reed is risky for the beginner because this reed is tiny and tiny changes result in significant and often irreversible consequences.

It is thus easier to "kill" by unfortunate scraping the levriad reed than the bombarde reed, therefore, until you acquire a good knowledge and understanding of the biniou, do not risk tinkering with a levriad reed. Your wallet will thank you because a levriad reed is even more expensive than a bombarde reed.

Levriad reeds (C and Bb), right side a bombarde reed gives the scale. Levriad reeds never have cork and are held in place by twine (fine string).

At most, you can use the pliers to open or close the reed slightly but scraping the cane is not recommended if you are a beginner, except if the reed is so hard that it is impossible to play with it, and even in this case, scrape sparingly because the reed will soften a lot after serving some time.

Note that there are also levriad reeds in plastic, they are usually fairly soft and can't be adjusted (pinch them between your fingers to open or close them, that's all). The sound of these reeds is pretty decent or even very good (unlike synthetic reeds for the bombarde) but they don't work well with all levriads; to be tested.

Finally, note the levriad reeds in boxwood. These are usually "Rolls" made to measure for a particular levriad by someone who can do it; such a person is rare today... These reeds are therefore rare and expensive but because of their generally excellent sound quality you quickly forget their price. Just massage this kind of reed after moistening if it is too hard. Avoid scraping them even if you master the scraping of cane reeds; to do this, contact their maker or, at a minimum, ask him for advice before starting.

Levriad tuning

The general tuning of the levriad is very dependent on the reed you are using, much more than for the bombarde. A levriad right in tune with one reed becomes often totally out of tune with another one. In addition, if one deviates slightly from the theoretical tonic of the levriad (reed too deeply or not deeply enough sunk in its seating) the scale expands or contracts very significantly. The consequence of this is that many levriads are adorned with many pieces of tape partially plugging their holes (see photo).

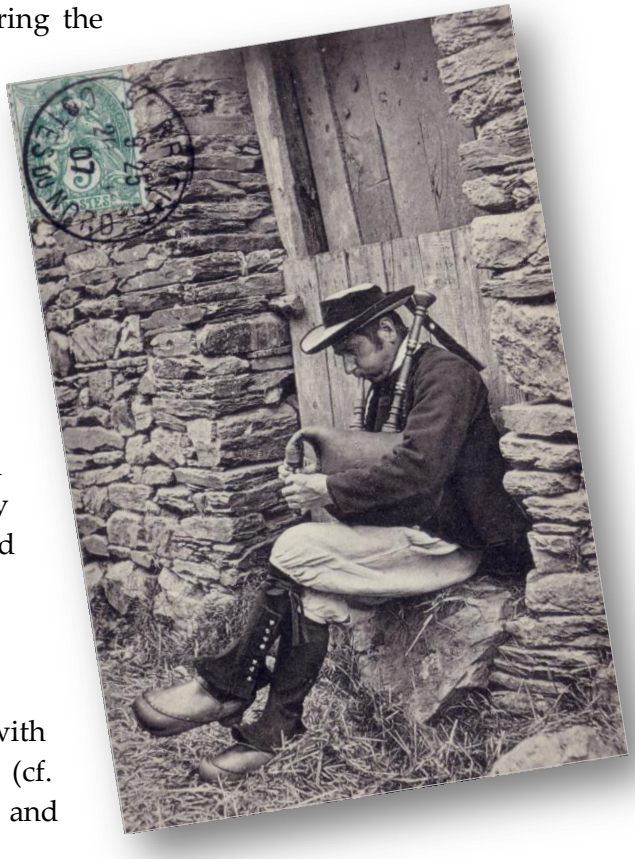

Levriads:
Left: C
Right: Bb

Do not question the quality of your levriad if you have to tape many holes, it is usual. To tape, you take as a basis the lowest (too low-pitched) note in the scale and you tape those that are too high-pitched. Do not use an electronic tuner but better your partner with the bombarde, because the instruments must be perfectly in tune with each other. To strictly respect

the tempered scale, though, is of little importance and that of the tuning fork has no importance except in the rare situation that you have to play with several binious together.

Enriching your playing

As with all the bagpipes with open fingering the biniou can only play tied notes and the *biniaouer* has no control over the chanter reed during playing. Ornaments related to the fingering are therefore essential to give life and expression to the continuous and uniform sound of the biniou.



Unlike the bombarde, you should not be afraid to "do too much" with the biniou because the very sharp pitch of this instrument means that very ornate and chirping playing suits it well and perfectly complements the soberer and lower pitched playing of the bombarde.

Ornamentation

Ornamentation of the notes is the same with the biniou as with the bombarde (cf. Ornamentation) plus the "*piqués*" or note cuts and the "*frappés*".

Piqués for note cuts are made by the forefinger or the middle finger[113] of the top hand briefly and barely rising between two notes. You must train the timing of this cut with the movement of the other fingers for the cut to match well the attack of the notes. *Piqués* are used to separate two identical notes but also at times to give an impression of staccato.

Frappés are made by moving down as quickly as possible a few fingers on a low note (the tonic usually) while attacking a higher note. These hits can be used to separate two identical notes or as simple ornamentation.

It is possible to associate *piqué* and *frappé* for a strong attack of a single note.

Rhythmic playing

While the bombarde is playing, the biniou may sometimes play something other than the melody. It can make a purely rhythmic phrasing with the levriad by using the note tuned with the drone (the tonic) and rhythmically cutting this note with the forefinger of the top hand. The pace adopted may be that of the dance, the bar beat or a rhythmic copy of the phrasing of the melody or a mixture of a bit of everything.

[113] The choice of the finger depends on the levriad and the note to cut; the forefinger is generally used but with some levriads and for some notes, cuts with the middle finger sound better.

Skipping from melodic playing to rhythmic playing effectively boosts the dances, but be careful of abusing it (that is to say, too long or too often) because that would lead to the opposite effect. You must also be very careful to have returned to melodic playing before the bombarde stops and lets the biniou play the end of the melodic phrase on its own.

Shifted playing

When the bombarde plays a part of the tune at the top of the instrument, with only the left hand, the biniou may play the same air with the right hand on the lower part of the levriad. The biniou plays in this case at an interval of a 4th lower than it should play, but because of the octave difference between the two instruments, the biniou actually plays the melodic line with a difference of a 5th higher than the bombarde, which sounds great for some parts of tune which “trample” on one hand. On the other hand, shifted playing in the other direction (bottom hand for the bombarde and upper hand for the biniou) rarely sounds nice.

Warning, do not abuse shifted playing, it can occasionally boost some tunes that fit it well but that's all.

Vibrato

You perform vibrato by waving the free fingers of the bottom hand over the open holes. At the start, the challenge is to play with vibrato at the same time as you are playing the melodic notes but this ability comes quickly.

The precise position of the hand, the distance thereof from the holes and the amplitude required of the movement is highly variable depending on the chanter, some easily producing vibrato and some others needing to be more vigorously jostled. The movement must be practiced to get a true vibrato pleasantly modulated and not a hiccup alternating between two notes.

The vibrato on the tonic of the chanter is difficult (using only the small finger) and the vibrato on the sub-tonic is impossible (all fingers are already down). It can be done, when playing seated, by quickly moving the bell of the levriad towards and away from your thigh. This can be useful for some held notes in slow airs but do not abuse it and try to do it quietly because this movement is not very attractive.

I move on to the "Breton" oboe

AFTER the introduction of Great Highland bagpipes to Breton music following the Second World War, the mid-80s saw the arrival of the so-called "Breton" oboe. Unlike the introduction of the Great Highland bagpipes, which was indisputably carried out at the expense of the traditional instrument, the biniou, and the traditional practice of soner pair music, the introduction of the oboe to Breton music has been relatively smooth, with some reservations.

This instrument being closely related to the bombarde, it is now quite common for a bombarde player, whatever his level, to seek to expand his instrumental horizon to the "Breton" oboe or at least to make some tests of contact with this instrument.

Practising the "Breton" oboe is therefore in the natural course of the bombarde player and justifies the succinct approach that follows.

What is the "Breton" oboe?

What is this instrument and why these quotes?

In fact the so-called "Breton" oboe is basically nothing other than the Baroque oboe and is neither Breton nor even a traditional musical instrument.

However the organological relationship of this instrument with the Breton bombarde led many bombarde makers to be interested in this instrument and they began to make it, by reproducing the proportions of the Baroque oboe but adapting it, in a more or less pronounced way, to Breton music, so justifying the usual but somewhat usurped name of "Breton" oboe.

The bombarde being essentially the traditional Breton oboe, the bretonization of the Baroque oboe was unfortunately accompanied by an anarchic renaming of this instrument, each instrument maker using a different name from that of his colleagues; so it's a bit of a terminological mess between *hautbois baroque*, *hautbois breton*, *pistoñ*, *subois* etc., to name what is little more than the Baroque oboe used in Breton music.

Differences between the "Breton" oboe and the Baroque oboe

Baroque oboe of traditional making, with double holes and butterfly-key.

The differences are *very small* and mainly related to the absence of the need to use complex fork or half-hole fingerings that are part of the usual playing technique of the Baroque oboe. The maker of the Breton instrument no longer needs to be concerned about these fingerings. He can hence adjust his instrument for open fingering only (the same as that of the bombarde) which makes it possible, if necessary, to have slightly bigger finger-holes[114] than those of the real Baroque oboe, to the benefit of the power and tone of the instrument. For the same reason, a "Breton" oboe doesn't have the double holes on some baroque oboes (two holes very close to each other to play a note or its flat).

One can also note that the Baroque oboe *stricto sensu* has (one or more often two) keys which are of the articulated type (Baroque key = "butterfly-key") while the "Breton" oboe uses modern rocking keys, but a Baroque oboe fitted with a modern key remains a Baroque oboe. It's the same for a "Breton" modern oboe fitted with a butterfly key.

All the rest is only cosmetic…

Differences between the "Breton" oboe and the bombarde

The Baroque/Breton oboe and the bombarde are both "hautbois". "Hautbois" is the French generic word for the oboe and all the instruments related to the oboe, that is to say, woodwind instruments with conical bore and double reed. The "Breton" oboe and the bombarde are however two different types of "hautbois", although very close.

[114] In general, the smaller the finger holes of an instrument the more satisfactory the forked fingerings. But larger finger holes generate fewer downstream residual vibrations to interfere with and stifle the sound. Knowing 1. that the smaller the diameter of a finger hole the more it interferes with the holes above it and 2. that the placement of the hole on the instrument varies depending on the diameter, all that is far from simple and the art of the instrument maker is to find the right compromise.

These two types of instruments are differentiated "anatomically" by:

- *The bore*: that of the bombarde is a little wider and more conical than that of the Baroque/Breton oboe.

- *The finger holes*: those of the bombarde are larger for the same pitch of the instrument, and slightly more spaced from each other.

- *The bell*: that of the bombarde is much shorter and much more flared.

A small G "Breton" oboe between two G bombardes (7 et 6-holed) to show the outer differences between the two types of instruments.

These differences result in a more fluted and more woody sound for the Baroque oboe and a sound richer in high harmonics, more aggressive, for the bombarde and a significantly higher volume.

There are other apparent differences but they are not always real ones:

- *The clarity holes on the bell*: they are always present on the Baroque oboe but they are also present on some low-pitched bombardes.

- The reed : the traditional oboe reed is much longer and narrower, less flared than the bombarde one, but some Breton oboes (unfortunately not all) can use either oboe reeds or bombarde reeds (reed for F bombarde or reed for Bb bombarde, depending on the tonality of the oboe).

The Breton/Baroque oboe and the Breton music

Interest of the Breton oboe

The reasons for the success and the rapid integration of this oboe in Breton music as a possible alternative to the bombarde are:

- **The available keys**: Breton/Baroque oboes are mostly in D, which facilitates playing in multi-instrumental groups with instruments whose natural key (or the easiest key to use) is D, such as Irish flutes or violins. The D oboe has in this context almost entirely supplanted the small soprano D bombarde once used in such groups because the latter plays an octave higher than the oboe and is very high-pitched, often too sharp and twangy for harmonious interpretation of some parts of the Breton repertoire (that from *Vannetais* for example) and the rare alto low D bombarde (which plays the same octave as the oboe) has a heavy and sizzling sound which is not always very pleasant and which explains its rarity. An alternative previously utilised was that of lowering the overall key for playing to C or Bb, keys better suited to the bombarde than D, but at the cost of painful digital contortions for some other instruments. The D oboe, with its warm, woody tone in this key which is its most natural one, has provided the solution to playing Breton music in D, and violinists and flutists thank it for that!

- **The sound**: softer and less aggressive than the bombarde. The warmth of the oboe sound is well suited for some tunes and some styles and agrees better with some other acoustic instruments that it crushes less than the sometimes too bright bombarde. The oboe blends with other instruments without dominating them while a bombarde, regardless of its volume, always give the impression of leading and the others of accompanying it or trying to do so...

- **The smaller volume**: again the advantage of the oboe versus the bombarde is obvious when it comes to playing acoustically (without sound system) with less powerful instruments than the bombarde and this benefit persists in an amplified context. Indeed, when the bombarde is playing its sound blends beautifully with that of an accordion, a violin or a flute but the transitions are often unpleasant, that is to say, when the bombarde starts or stops, there is a sudden step-like change in the sound volume, which is clearly audible and unpleasant for the listener. With the oboe, these transitions are more harmonious and the balanced sound is easier to obtain and to maintain throughout a multi-instrumental piece (the sound engineers appreciate...). The moderate volume of the oboe also allows harmonious playing in pair with other instruments than the biniou: accordion, violin, etc. Moreover, this moderate volume allows you to play at home in a less disturbing way than with a bombarde. Your ears and those of your neighbours will thank you for your choice!

- **The (sometimes) a little less "athletic" playing**: the oboe requires less air pressure than the bombarde, without consuming much more air, and you can usually play it longer than the bombarde. However the oboe remains a demanding instrument for breath and lips: if less breath is required, the lips are perhaps even more used than with the bombarde (the needed pinching remains weak but the lip tension is important and permanent). With the bombarde the blowing power is usually the first to fail, with the oboe it's often the lips. All this is of course relative, depending on the instrument and the reed used., An oboe with a hard reed may indeed be more demanding in blowing power than a bombarde with a soft reed, but an oboe with a soft reed is a delight of playing sweetness, so much that once used to the bombarde you may have to keep yourself from blowing too hard! Well, all the above is true for

the G oboe but it is much less for the large D oboe, which is not less tiring than a bombarde.

Disadvantages of the "Breton" oboe

They mostly appear when you want to use this oboe for what it's not: a bombarde!

Some soners playing in multi-instrumental groups use the oboe when they could or *should* use the bombarde. It is foolish and unrealistic to try to ape the sound and phrasing of the bombarde with the oboe; it is better in this case to use a real bombarde, the result will be a hundred times better and vice versa. So, trying to get a "fat" or hoarse sound which "spits well" is often a quality with the bombarde (especially when you play in pair) but this is a ridiculous flaw with the oboe, of which you have to seek instead to exploit the naturally sweet and woody tone (this does not mean that you should not put into that all your guts and all your energy!).

Another drawback, or rather risk, in a Breton music context, is the abuse with the oboe of some stylistic elements which are easy to get with this instrument but rare with the bombarde or in the traditional Breton song and the excess of which damages the character of Breton music more than it enriches it (for example, abuse of decrescendo at the end of dance phrases).

A final drawback is the price of the instrument. The oboe, whether sold as "Baroque" or "Breton" is a relatively expensive instrument[115], and, if you must or want to use it with reeds made specifically for it, these are also very expensive and not always easy to obtain.

G oboe in ebony (left handed model): if the alternative between ebony and boxwood arises for the bombarde, it does not really arise for the oboe. If you want a true oboe with a real oboe sound, take it in boxwood! The sound of the ebony oboe is a bit more flashy but much less rich and lacking in "woody" character versus boxwood. Besides, even if the instrument maker that you choose makes ebony oboes on request, it is likely that he will advise you to choose one in boxwood!

[115] This difference in price, for a same key, reflects a more complex manufacturing process: the presence of a metal (brass) tube inset inside the reed well, additional connection at mid-body, long bell that "consumes" a big piece of wood and thinner body boring therefore with more delicate finish.

Playing the oboe vs. playing the bombarde

It is similar but not identical.

The risk of abuse of decrescendo, very easy with the oboe, was mentioned above. Similarly, you should not abuse ornamentation (mordants and so on) which, properly used, enrich the playing of the bombarde but most often spoil that of the oboe. This instrument requires a more restrained fingering than does the bombarde, a more sonorous, more legato, calmer way of playing with slower vibrato where "lip-work" matters more than throat vibrato. However the work of the throat is important with the oboe. Try to open your throat as if yawning and thus make use of the volume of your pharynx by using its resonance to create as full and rich a sound as you can, especially with the D oboe.

With regard to pinching of the reed with the lips, it was advised above to allow the bombarde reed to "live" in the mouth. The oboe reed, though, needs to be more restricted (but not crushed!). Unleashing the bombarde reed gives richness and brilliance to your sound, too much unleashing of the oboe reed makes it sound nasal. Restricting the bombarde reed too much gives it a poor, muffled sound while containing that of the oboe gives it warmth and a pleasing woody sound.

Keys and reeds

The Baroque oboe exists in the keys of C, D, G and A, in alto and bass scales, but the most widespread key for the Baroque oboe and therefore for the "Breton" oboe, is D major. The instrument is used in this case with a Baroque oboe reed (slightly wider than a reed for the modern oboe) or, for some oboes which allow it, with a reed for an alto bombarde in D (or F). However, using the latter gives the oboe a sound a bit too brassy and bombarde-like (apparently, because I have no personal experience of this association).

There are also a few rare "Breton" oboes in Eb major and some in soprano G major.

The small soprano G oboe is a relatively unknown instrument and yet particularly interesting in the context of Breton music because it is a little easier to play than the big D major oboe and is perfectly suited to accompany the diatonic accordion in G/C (the most frequent model). Another advantage of the G oboe is that you can easily use it with the standard bombarde reed (reed for Bb to G bombardes) while keeping its oboe-like sound. The G oboe is even an interesting way to recycle your bombarde reeds when they become a little tired, while eliminating one of the major problems of the oboe: getting and adjusting its reeds.

How to adjust a bombarde reed to use it in the G oboe:
Left side: a Bb bombarde reed. Right side: an identical reed after adjusting for the oboe. For adjusting, you must *significantly flatten the resonance chamber of the reed with the pliers*, then, still with the pliers, slightly open the reed (increase the distance between the blade lips). Without this quick adjustment, the reed will malfunction in the oboe and you'll have to pinch it like a madman.

In addition to the setting with the pliers you may make a superficial V-like scraping towards the base of the reed.

The shape of the cork is related to the cylindrical reed seating of the oboe; after entering the reed by forcing two or three times, the cork takes and retains its new shape.

An oboe is not a bombarde, the reed pinching is slightly different: more contained and a little firmer (barely) without crushing the reed so far.

However, playing the G oboe with a bombarde reed reaches its limits when playing the upper octave, not because the octave will be difficult to obtain (it's easier than with the bombarde), but the tuning will be more problematic because needing particularly accurate joint control of the reed and blowing in a difficult balance to find and, mainly, to keep. If you want to play the upper octave with your oboe, use reeds designed specifically for it.

Reed specific to the G oboe

The reeds specific to the oboe are sometimes available in three pitch categories for the same key: standard, slightly lower- or slightly higher-pitched. All the reed makers do not offer this choice which, moreover, is mainly useful for the small G oboe because of its shorter body and therefore more sensitive to the position of the reed in its seating. This choice is made according to the characteristics of the soner (his way of pinching) more than those of the instrument itself and knowing that the instrument is considered to be at its optimum when the reed is pushed in fully to the bottom of the seating, which is not always confirmed by practice.

Bombarde and oboe reeds :

1: Bb to G bombarde reed.

2: F bombarde reed.

3: G oboe reed.

4: D oboe reed.

5: reed of Oboe d'amore.

First contact with the oboe

The large D oboe

Skipping from the bombarde to the D oboe requires some learning because the pinch of the reed and the response of the instrument to it are quite different and you won't master them immediately. Even with a good mastering of the bombarde, you probably won't play the oboe well in tune and your sound will be muffled or otherwise nasal and, in both cases, poor.

Another difference with the bombarde is the "warm-up time" that this long instrument requires before operating in an optimal way, clearly longer than that of a bombarde; you have to consider that if you have to play with it in public. It is also much more subject to phenomena of excessive condensation, for example if you have to play outdoors at night (*fest-noz*).

The small G oboe

On the contrary, with the G oboe, coming from the bombarde, you won't be too much disoriented because of its similar dimensions to the G bombarde and its identical reed (if you choose to use it with a standard bombarde reed) or near one (with a true oboe reed); learning will be hence faster.

However, this is not the G bombarde and the feel of the instrument under your fingers and especially your lips is different (even with a bombarde reed). Fingering can also be slightly adapted: the top fork is possible by putting down the ring finger of the top hand instead of putting down the middle finger; however, it remains possible to use the middle finger (as in the bombarde) but you must then blow slightly harder and pinch (with the lips) a bit more strongly relative to the fork of the middle finger.

An unknown, because useless, thing with the bombarde, but important to do if you use a standard bombarde reed with the G oboe: remove moisture that accumulates in the reed and gives a “wet” or “bubbly" sound. For this, take your reed and blow into it upside down before replacing it; do this regularly at each playing break or even during playing because, when you have the habit of doing it, it only takes a split second (of course you have to visually locate the position of the reed in its seating in order to not have to retune each time!). You can also suck through the reed without removing it (as some talabarders do, if they salivate a lot in the reed of their bombarde) but this “kiss” at the reed lacks sound discretion and is often insufficient in the case of the oboe.

I move on to the Veuze

The veuze is *the other* bagpipe of Brittany, often forgotten or put into the background, or even despised, however as equally inseparable from the Breton musical heritage as the biniou and the bombarde, best known and thus more emblematic instruments.

Many if not most current soners of the veuze are soners of the bombarde and the biniou who have come secondarily to the veuze. Sometimes also they are soners of the Scottish bagpipes. It is therefore likely that, as a bombarde player, your itinerary in Breton instrumental music will lead you too one day to approach this instrument.

What is the veuze ?

This is the biniou from before the biniou !

Indeed, the oldest representations of Breton soners show them with this type of bagpipe accompanying the bombarde: a bagpipe with a blowpipe, a single drone and a long chanter playing the same octave as the bombarde.

This type of bagpipe is nothing particularly original or Breton because it matches a type of bagpipes spread all over Western Europe in the medieval and the Renaissance times and which then gradually disappeared or evolved into other types of bagpipes. This old type has however been maintained in Brittany when it disappeared from the neighbouring regions.

Chanter of a modern veuze: wave-like turning on the lower end of the chanter was present on the former veuzes and was taken up on almost all the modern ones. It constitutes a kind of "signature" identifying the instrument as a veuze.

In the western and central part of Brittany, this primitive type evolved to give birth, probably in the eighteenth century[116], to the present biniou (jumped up an octave and with the hole for the thumb suppressed) which

[116] The old documents, text or graphic, are too few and too uncertain to determine precisely the date of creation of the biniou. Only one thing is certain: such a development of the instrument can only be sudden and there cannot be intermediate type between the old type, near of the veuze, and the new type, the current biniou. Nevertheless, the diffusion of this new type may have been more or less slow, again documents testifying to that are lacking. All that we can say is that no document supports the hypothesis that both types have lived together in the same area, suggesting without certainty that the biniou became quite rapidly dominant in the area that is today "its area".

supplanted the old type while the latter persisted in the eastern and southern part of Brittany (areas of Guérande, Nantes and Retz) and a little further south, in the *Marais Breton* (which, as its name does not indicate, is in *Vendée*) before finally being extinguished at the beginning of the twentieth century, supplanted by more "fashionable" instruments (accordion, violin, etc.).

Famous photograph of one of the last traditional *veuzous*: François-Marie Moranton known as *Le Rouge de Bréca* (*The Red of Bréca*) (right side), born in 1863, here in the habit of saunier (worker in a saltworks) of the area of Guérande. His veuze is now kept (unfortunately incomplete) in the *Musée des Marais salants* (*Museum of the salt marshes*) of Batz-sur-Mer.

The making and traditional use of the biniou and the bombarde have never completely stopped (although having strongly regressed at the end of the first half of the twentieth century) but making and using the veuze had completely stopped in Brittany. The current use of the veuze in Brittany is therefore the result of the desire to artificially resurrect this forgotten instrument, by recreating modern veuzes from the few instruments or fragments of old instruments that have been found.

But there is a big BUT, or rather three:

- There are no old recordings of traditional veuzous[117].
- There are no direct or indirect testimonies of their way of playing.
- No old reed was found, so we have no direct knowledge of their geometry.

[117] *Veuzou* is the traditional word for naming a veuze player. In oldest documents, the word *Veuziou* is also found.

As a consequence, the following items are unknown:

1. The exact sound of the former instruments.
2. The style and playing techniques (fingering, ornamentation) of the former veuzous.

Therefore the modern veuzes take the *appearance* and *dimensions* of the former veuzes, however do they sound in the same way? It cannot be stated, and are we using them in the same way as the traditional veuzous? It's hard to say but pretty unlikely...

First contact with the veuze

Coming from the biniou, you will not be disoriented by the veuze!

Playing the veuze

Compared to the biniou, you will have only to provide a little more air volume but the pressure to maintain is often lower than with the biniou; playing the veuze is hence less tiring over time (it all much depends on the reeds[118] used, of course).

The fingering of the veuze (at least the fingering that is used on modern veuzes...) is an open progressive fingering like that of the bombarde and the biniou, the only difference is the use of the thumb of the top hand for the high tonic. As regards ornamentation, modern veuzous do more or less what they want, following their feeling, because nothing is codified and that's good! Modern veuzous usually also use a lot of vibrato, to which the veuze chanter responds very well and beautifully, by “flapping” the fingers of the bottom hand up and down above the holes, as with the biniou.

The modern veuzes are available in various keys, from G to C, a similar range to that of the bombarde.

With its more “normal” size than the biniou and its open fingering the veuze is hence quite an easy bagpipe to play and getting started with it is without problems if you have experience of another bagpipe, but, as with every instrument, between being able to play it and playing it well, there is a gap that may require some time to fill...

[118] It should be noted that reeds made of synthetic materials are increasingly used for the chanters of the veuze.

Neither a biniou nor Scottish bagpipes!

The main organological differences between the veuze and the biniou are the larger size of the chanter (for the veuze we don't say a *levriad* but a *chalumeau*) and the presence of a thumb hole at the top, to obtain the high tonic, as the Scottish bagpipe and many other bagpipes have.

The main mistake not to commit with the veuze concerns the pipers used to playing the Great Highland Bagpipes, who tend to transfer some Scottish ornaments to the veuze, but some other soners also have this defect so the "bagad" sound has damaged the mind and the ear of some Breton soners. Needless to say that the result on a veuze is ridiculous and anachronistic. Of course, as has been said, there is no audio or testimony about the playing of the traditional veuzous, so it would be stupid to criticize any veuze playing by reference to a "tradition" totally reinvented, but it remains nevertheless highly unlikely that the former veuzous played in Scottish-like style, if only because, for the most part, they had probably never heard Scottish bagpipes in their lives and because their instrument was hardly suited to this playing style.

Another danger of creeping "Scottishization" of the veuze is in the making of its reeds and the choice of them by the soners because, in the absence of ability to refer to former reeds (cf. supra), the neo-reeds of the modern veuze were at the beginning a lot inspired by the reeds of the Scottish bagpipes and that led to a sometimes too "Scottish" sound of the instrument, even if the player doesn't try particularly to play "Scottish". This was especially true with the first modern veuzes because the best current makers of veuze and reeds have now managed to individualize well the sound of the veuze and to define a "veuze sound" far removed from that of its cousin from across the Channel. Is it for that reason much closer to that of the old veuzes? It is not certain.

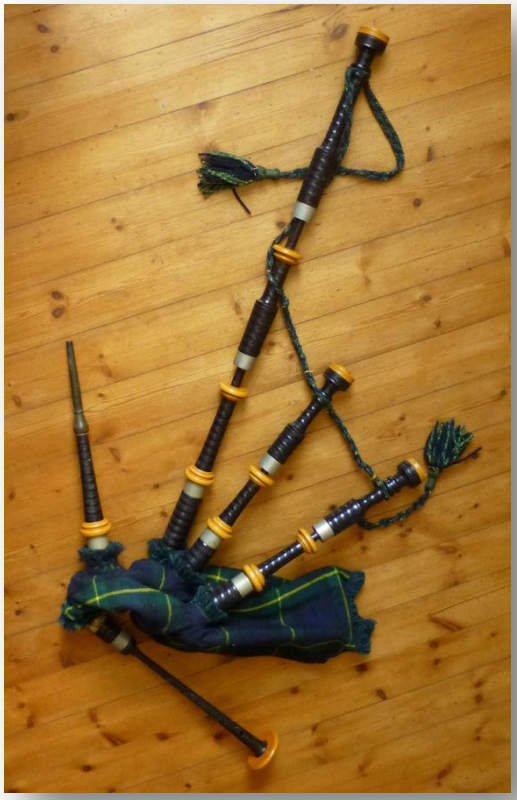
Veuze reed (here a C veuze) in cane: As all the modern veuze reeds, this is a modern recreation without historical support, because no former veuze reed was found. What were the size and the actual proportions of the blades of the former reeds? the dimensions of their tube? We are limited to assumptions. Knowing that the double reeds are subject to certain laws and constraints from which they cannot escape, the geometry of the modern reeds is probably not very different from those of the former reeds but nothing proves that it is similar and in the domain of double reeds, some minute details have sometimes huge effects on the sound and the way of playing.

Using the veuze today

It was reported above that the former "veuze-biniou" was played with the bombarde in past centuries. The couple bombarde and modern veuze would seem logical, however the result is often flat and quite disappointing, far, far away from the powerful fusion of the biniou-bombarde couple. Moreover, no graphic material or testimony indicates the combination of the veuze with the bombarde in the area of the last traditional veuzes (those from after the appearance of the biniou with small chanter).

On the other hand, the modern veuze is a superb solo instrument and often integrates much better in a multi-instrumental group than the biniou and, in a Breton music context, sounds still more original and carries more emotion than the omnipresent Scottish bagpipes (mis)used indiscriminately by these groups. The reasonable sound level of the veuze and its lower register than that of the biniou also makes it more suitable for indoor playing but it still remains a relatively powerful instrument which can cause problems with neighbours.

I move on to the Scottish bagpipes?



WITHOUT the question mark, the title of this chapter would be a sham because this beautiful instrument is itself a sham in the context of traditional Breton music and the point in moving on to the Scottish bagpipes to play Breton music can seriously be questioned[119]…

The symbol of the *bagads*

The use of the Great Highland Bagpipe(s) spread into Brittany at the end of WW2 with the creation of the bagads. The Breton bagad is originally a paramilitary ersatz of the Scottish pipe-bands vaguely "bretonized" by adding a bombarde section and by sticking on it a Breton repertoire.

The result is a sort of totally artificial hybrid, the bagad, which remains tolerable even pleasant when it parades in the streets while playing (its first feature) but for the remaining... uh... let's say that all tastes are in nature, but that it's not mine and that the rejection of the GHB and the bagad formula by some soners (whatever the technical level of the GHB bagad players) is not without reason.

In fact, the Scottish bagpipes had previously been introduced in Brittany but in a very occasional and anecdotal way, just as an exotic curiosity. But with the creation of the bagads, we assisted in a widespread and coercive raw transplant...

[119] To prevent some criticism, I would note that in this chapter, I'm not trying to attack this instrument but only its use in Breton music, NUANCE! And to those who think that thus criticizing the Scottish bagpipe shows that one has no experience of it, I would say that in addition to having played the bombarde in pair together with various GHB pipers, I have owned a GHB for more than thirty years, with a small batch of chanters. I only confesses that my instrument spent more time in the back of a closet than under my arm...

Breton music and Scottish bagpipes

Has the transplant taken? By observing the illustrations on biscuit boxes and trinkets for tourists, one might think so, the Breton biniou having almost disappeared from this iconography to the benefit of the Scottish instrument. But if you listen to Breton music played on the latter, you quickly realize that no, whatever the talent of the player. And if then you listen to Scottish music played on this instrument you immediately hear the difference: the clumsy, flat and expressionless instrument when he plays Breton music becomes again incisive, twirling and a carrier of emotion when used with a repertoire allowing the exploitation of its full potential...

In the wake of the bagads, one has also seen the emergence of soner pairs using the Scottish bagpipes instead of the biniou. Such soners come most often from bagads, you guessed it. Again, it's difficult to discuss about tastes and colors but frankly, when you listen to the outcome, the listener has only one desire, especially for good soners: snatching the bagpipes out of the hands of the piper to put a biniou instead! The only interest of this kind of pair is to be a transitory way for some bagad soners to leave it to approach the pair music then quickly storing their cumbersome thing for an instrument a bit more suitable: the biniou. Unfortunately, some pairs long stagnate in this hybrid formula of little interest and don't overcome this stage of "bagad for two".

Chanters of Scottish bagpipes (from two different Scottish makers: once the "bells » of the chanters were flat and very wide. It was convenient to steady them against falling down and breaking. Today this fashion has passed, and the chanters no longer have a bell and many are... plastic!

It should be noted that this formula bombarde + Scottish bagpipes is in no way an "enrichment" of the expression of Breton music but a big step backwards, since it is now two centuries since the biniou made the jump to the upper octave and stayed there. During that time, no soner or instrument maker has ever had the desire to bring it down again, which shows that this setback wouldn't have had any interest for them. Moreover the couple bombarde and Scottish bagpipe locks the music into a single key or almost (that of the Scottish bagpipes: Bb, sometimes C), while the biniou exists in a wide range of keys.

It would not occur to anyone to massacre Scottish music with a Breton biniou so why insisting on massacring Breton music with the Scottish bagpipes? It's a splendid instrument but it's not made for this[120], that's all. Moreover, this eagerness to try the transplant doesn't respond to a therapeutic need of Breton music, which is doing well, thank you, and will do still better without the Scottish bagpipes.

Far be it from me to try to establish a scale of values between Breton and Scottish instruments or between Breton and Scottish music; these are just two foreign areas to each other and the instruments that have co-evolved with these musics are today hardly interchangeable. Who would have the idea of playing the repertoire for hunting horn with a harpsichord? or the harpsichord repertoire with a hunting horn? No one, except perhaps some *Penn-soners*[121] of Breton bagads...

A worldwide invasive instrument

Just as in biology there are invasive species that install and diffuse themselves into an ecosystem, in which they were foreigners so far, causing indigenous animal or plant species to dangerously regress[122], so there are invasive musical instruments. The Scottish Highland bagpipes, is a good example of a local instrument becoming global [123].

Many other instruments were integrated harmoniously into Breton music (oboe, rock instruments, harp, etc.) because they were replacing nothing, they only joined the existing instrumentarium, enriching it[124]. However, the great bagpipe is immediately entered into direct competition with the Breton bagpipes, the biniou, and made the latter significantly regress, both in the collective imagination (that is perhaps the most serious) and in the reality of the instrumental practice of the Breton soners.

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[120] Its half-open fingering is the main constraint, while Scottish music instead fully exploits the possibilities of this fingering. In Breton music, the melodic lines are very rich in adjacent notes and jumps of several degrees are much rarer than in Scottish music and Gaelic music in general. A chanter with open fingering, so more suited for Breton tunes, had once been created by the Breton instrument maker Dorig Le Voyer but the instrument, although being logical, was too poor and was soon abandoned.

[121] The *Penn-soner* is the leader of a Breton bagad section (while specifying which one) or of the whole bagad (if unspecified). Until recent years, they fused in the band, but now you recognize them easily because a lot of them no longer hesitate to gesticulate in front of *their* bagad during public performances; ridicule does not kill anyone... but the collegiality of these groups still goes away a bit more.

[122] For example, the Breton coast suffers the increasing damage of "Sea figs" (*Carpobrotus* sp.), creeping plants introduced from South Africa and increasingly invading the narrow coastal strip while stifling and doing away with the local flora.

[123] The extent of the British colonial empire was the first reason of this distribution, but the instrument then widely circulated beyond the confines of the empire.

[124] With just a few reservations about the accordion and the violin during the second third of the 20th century, but it's minor compared to the invasion of the Scottish bagpipes.

So with invasive instruments as with invasive biological species, their introduction is usually voluntary and at first you pay little attention to the consequences, if you don't experience them as charms, and then one day, too late, you realize the irreversible damage, in this case the collective symbolic renunciation of a traditional instrument, the *binioù kozh*, and the fading/trivialization of the character of a music, the instrumental Breton music.

And don't tell me, as one hears too often, that the Breton music has now fully appropriated the Scottish bagpipes and that it has now become an authentic Breton instrument and other nonsenses. No, the Scottish bagpipes is not and will never be a Breton instrument because it is unable to give the character of the Breton music and it will never be anything else, in Breton music context, than a sub-biniou totally useless except to march through the streets during the great Breton summer feasts for the tourists!

First contact with the Scottish bagpipes

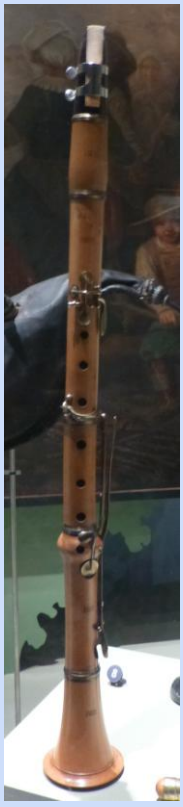
For that, sorry, there is a fear that you are at the wrong address and this document is irrelevant to you.

If you still want to approach Breton music with this instrument, take courage and register in a Breton fanfare, sorry, a bagad... There someone will lend you the instrument, which is no small advantage because it is rather expensive[125] ! There one will also lend you the traditional training tool for the real bagpipe, the *practice-chanter*, a thing with atrocious sound and approximate pitch, but fortunately some electronic practice-pipes have recently emerged and are now increasingly being used.

[125] If you want to buy a Scottish bagpipe, beware of Pakistani imitations. Like Pakistani bombardes, Pakistani bagpipes are cheap but their quality is dreadful.

I move on to the clarinet

THE clarinet was and still is widely used in traditional Breton music, but unlike the bombarde, the biniou and the veuze, it's not a real folk instrument but rather a classical instrument used in folk music. Indeed, there were never traditional clarinet makers in Brittany. The old clarinet soners used classical clarinets, generally somewhat outmoded and therefore cheap models because of the constant progress of the instrument, the increase in of the number of keys caused the earlier models to be discarded.



Old clarinet
Clarinet of an unidentified Breton soner of the nineteenth century, found in the area of St-Brieuc. (coll. MUPOP)

Moving from the bombarde on to the clarinet, is like changing one's world; it's passing from the world of the double reeds (the large family of the oboe, to which the bombarde belongs) to the world of the single reeds (clarinet, saxophone, folk muses...). Suffice to say that perfect as your mastery of the bombarde reed might be, your mastery of the bombarde reed, the clarinet will seem confusing at first contact and you will have to relearn everything when you have its beak between your lips! But the sense of phrasing and agility of fingers you have got with the bombarde will serve you for the clarinet, as well as the control of breath and lips, because even if the clarinet is less demanding than the bombarde in this respect, it still requires a strong blowing, especially in the context of Breton music where everything is done for this instrument to sound as strong as possible (by the choice of the mouthpiece and reed) because the early soners already did so.

With no experience of the clarinet (except laboriously sounding two or three notes when the opportunity occurs), I won't speak further about it and refer the reader to those more competent than me.

I play modal music

Want to be considered as a bombarde specialist by other newbies? Then, discuss with them the topic of the importance of modality in Breton traditional music!

Want to impress a casual partner? Ask him, for example, to tune the drone of his biniou to play Mixolydian!

Want to get an aura of expertise? Adopt a sceptical attitude while listening to other soners and affirm with aplomb that they make a big mistake in interpreting this *Plinn* tune in Phrygian whereas it is obviously a Locrian theme.

Aaaah, modality in Breton music, how many heads and ankles got swollen because of it! Conversely, it is a pity that some soners totally neglect this concept on the grounds that it is only a trick to impress... Certainly they are not wrong, but they are not completely right either.

The first thing to know is that when you play a tune of traditional music, either Breton or something else, you are most often playing modal music and you juggle with virtuosity with modes such as Mixolydian, Dorian, Lydian and so on, like Molière's *Bourgeois Gentilhomme* who practised prose without knowing it...

What is a musical mode?

The notion of musical mode applies to the way in which the intervals between the notes are distributed to form a scale. There are many possible ways and each of these ways is one of the so-called modes.

Classically, intervals are tones or semitones, but in traditional music the intervals are quite elastic, especially if you play with an untempered bombarde... It is therefore more accurate to define each note of a mode by the interval that separates it from the base note of the mode rather than by the interval between the preceding note and the following one.

The different modes of Western music are traditionally named with pompous names of Greek origin whose historicity is questionable (Ionian, Dorian, Phrygian, etc.), but no matter because these names are now enshrined in use. They can also be designated by the name of the base note in relation to the C major scale (mode of C, mode of D, mode of E, etc.).

Western classical music only uses two modes, major and minor[126], but there are many others. Plainchant used them widely and had even codified their purpose. The use of several modes was gradually lost during the Baroque era with the growing importance of harmony and musicians began to consider some modes as mere "alterations" superimposed. Only popular music, at least most of it, remained modal because modal music is totally natural and instinctive, while the so-called tonal minor/major music is only very slightly so (In tonal music the "colour" is given by complex chord systems and not by the scale itself).

Modes used in Breton music

No question of getting to tedious concepts of music theory and musicology and explanations such as the third of that mode is like this or like that and that its fifth is this or that while its thingummy is I don't know what. No practical interest!

Only one thing is interesting: feeling the difference of the "colour" between the modes; for that, just take a bombarde or a flute and play up and down the full scales while starting from any note of the instrument as the base note. You will feel the difference immediately, especially if you associate with each scale a drone note corresponding to its base note.

The principle of modality is that you can start a new scale (therefore another mode) from any note of any mode.

The following table gives the names of the main modes depending on the base note of the relevant scale of a tempered bombarde (so-called "in major") and depending on whether or not you use the fork fingering at the top of

[126] In fact, the major and minor of Western classical music *are not* real modes because they are used in context of tonal music (i.e. based on harmony) and not of modal music (based on monody). It is more exact to say that they correspond to two modes: Ionian mode (for major) and Aeolian mode (for minor). And to be exact, modal music has not completely disappeared from classical and art-music because it is still used in "recycling" of popular themes or in some often rather "intellectual" or experimental works.

the instrument (natural A or flat A on the Bb major bombarde. The fork is symbolized by the underscore symbol in the table below).

Location (fingering) on the bombarde
of the base note (beginning the scale) of each mode

Ionian (= Major)	**D**orian	**P**hrygian	**L**ydian	**M**ixolydian	**A**eolian (= Minor)	**L**ocrian
Mode of **C**	Mode of **D**	Mode of **E**	Mode of **F**	Mode of **G**	Mode of **A**	Mode of **B**
●	●	●	●	●	●	○
●	●	●	●	●	○	○
●	●	●	●	○	○	○
●	●	●	○	○	○	○
●	●	○	○	○	○	○
●	○	○	○	○	○	○
●	●	●	○	●	●	●
●	●	○	○	●	●	●
●	○	○	○	●	●	●
○	○	○	○	●	●	●
○	○	○	○	●	●	○
○	○	○	○	●	○	○

Remembering the names of the modes has little importance in itself, but it can potentially help you to classify tunes according to their mode, if you use scores or equivalent (tablature, ABC notation).

Which mode is this tune in?

If you are curious about the mode of any tune you play, you just have to memorize the ordered list of the initials of the modes: IDPLMAL (try to find a mnemonic in your language to memorize that more easily and to differentiate the two Ls).

Then, you must determine what is the base note of the scale of the tune. It's easy, remember that it is almost always the note which ends the tune.

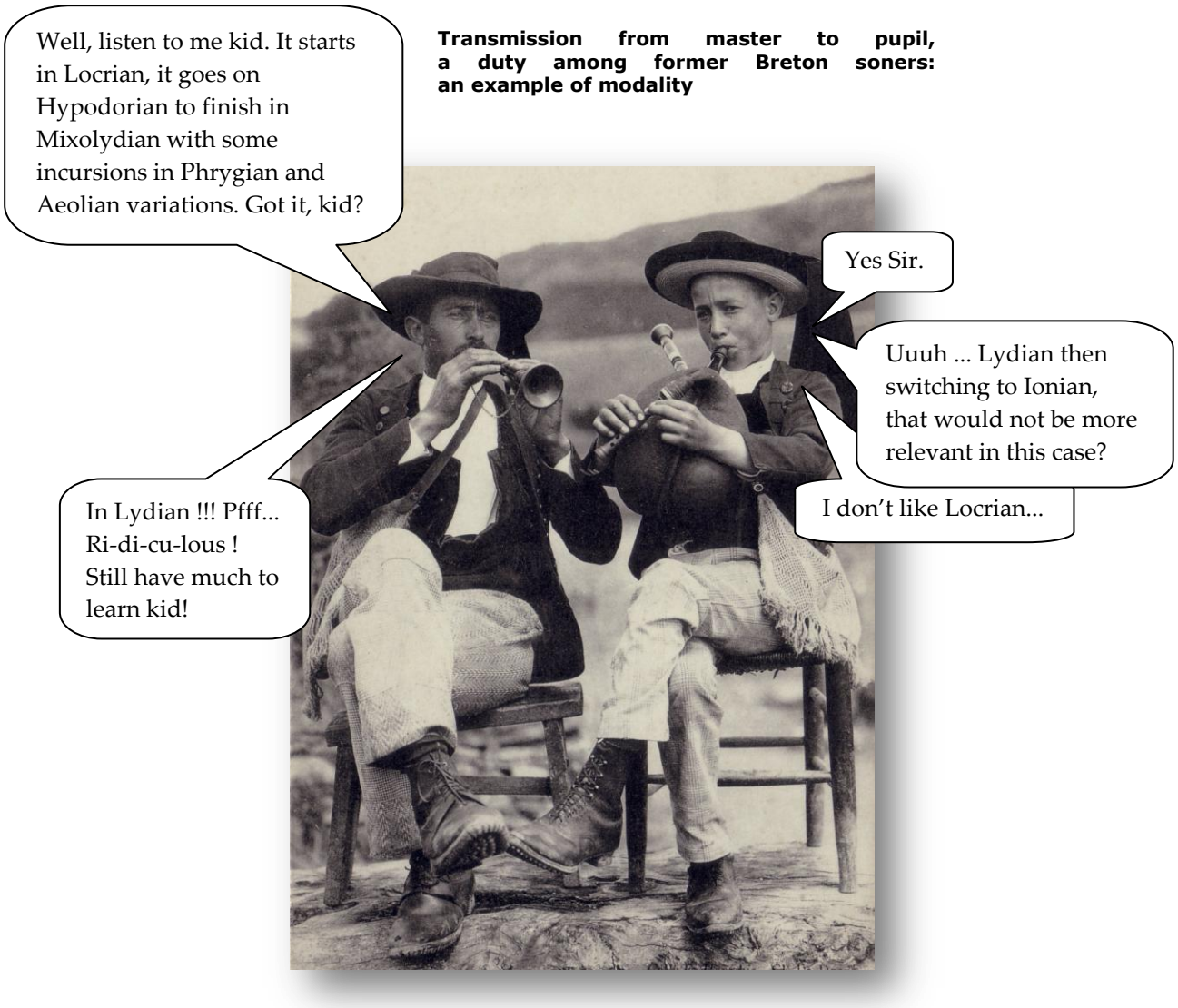
Finally, recite mentally I-D-P-L-M-A-L while raising your fingers from the instrument one by one. If the tune does not use the fork of the top note, this recitation begins at the bottom hand and it begins at the top hand if the fork is used. When you get to the base note of the tune, the letter is the initial letter of the name of its mode.

To get the alternative name of style "mode of C/D/E/etc." just recite C-D-E-F-G-A-B instead of I-D-P-L-M-A-L.

This may seem complex to explain but it's actually very simple to do and you'll be able to know the name of the mode of any tune without having the slightest notion of music theory.

As you will soon realize, many Breton tunes that you play do not fit into the classical pattern major/minor or their modal counterparts Ionian/Aeolian.

Transmission from master to pupil, a duty among former Breton soners: an example of modality



Some readers have questioned the veracity of that dialog. We report it here, however, as our informant told us he had collected it himself from former soners. Our informant had a good memory despite his twenty years in psychiatric hospital.

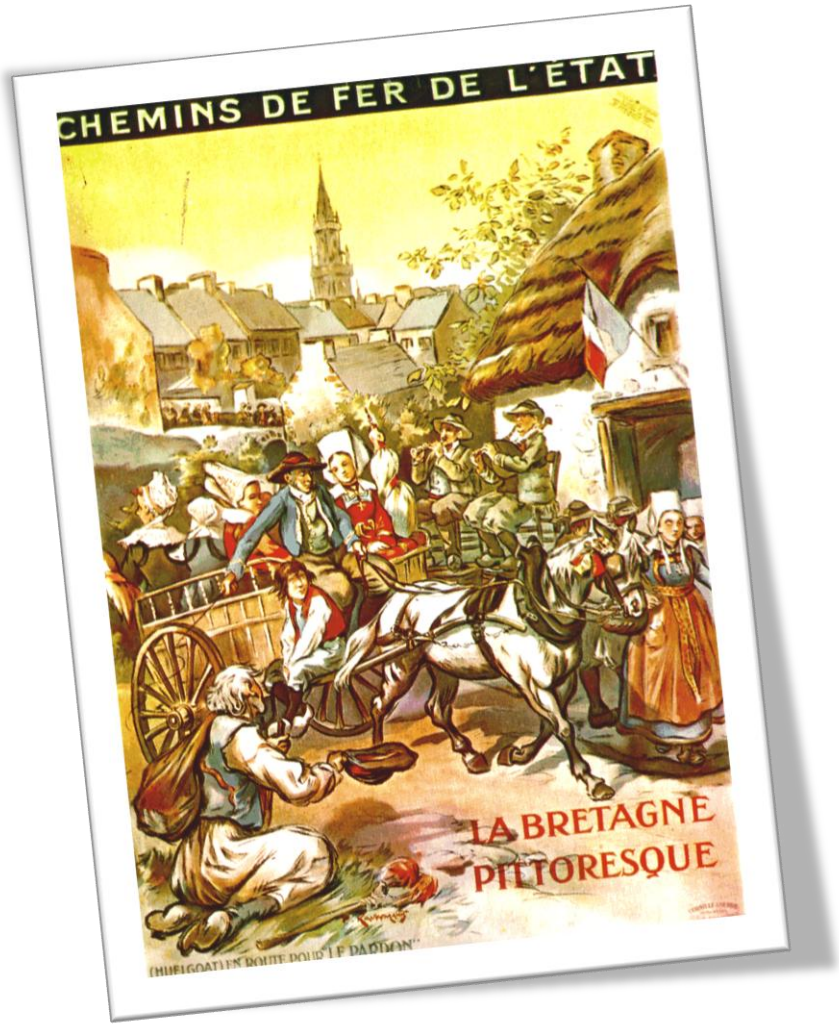
In closing…

THE initial period of learning a musical instrument is sometimes thankless but always a source of great pleasure alternating with passages of discouragement. The bombarde is no exception to this rule but, more than any other, it is an instinctive instrument that is hence a lot easier to deal with without a teacher than is generally thought.

I hope some of the tips provided in this document have been helpful for you, but remember that these tips are not intended to be followed to the letter! Do as you feel, and most importantly, be yourself. Do not listen to those who say "You MUST do it like this or like that" because *copying what others are doing while making mistakes, that is the only good definition of tradition*.

It's your turn now to give advice to others and keep alive this continuous link that connects you to the soners who came before you and those who will follow you, in Brittany and elsewhere, so that the music of this small spot on the earth and its instruments that are used there continue to live and evolve.

Appendix



Some useful links and addresses

Other free methods for the Breton bombarde

- **Méthode interactive de bombarde**: free online method (in French), with solfeggio. http://bombardencharente.chez-alice.fr/APPbombardencharente.htm
- **FROGER Simon – Théorie musicale adaptée au jeu de la bombarde**: the natural complement of the present document for those wishing to learn music theory. PDF document (in French) under free licence. http://simonfroger.wordpress.com/documents/theorie/

Discussion Forums and Small Ads

- **Le Forum des sonneurs** (archives): http://forum.lixium.fr/cgi-bin/liste.eur?waner, now inactive (available as archive), was replaced by the following…
- **Forum divroet**: http://divroet.org/forum/, seems in turn to agony...
- **Small Ads Tamm-kreizh**: http://www.tamm-kreiz.bzh/petitesannonces

Databases of Breton traditional music

(under various formats: audio, PDF, MIDI, abc, etc.)

- **Breizh partitions**: http://www.breizh-partitions.fr/
- **Dastum** – The memory of Brittany (online access only very partial, alas): http://www.dastum.net/
- **Musik-e-Breizh**: many old 78-rpm discs digitalised and various articles: http://musikebreizh.wordpress.com/
- **Son ha Ton**: http://per.kentel.pagesperso-orange.fr/

Biniou and bombarde makers (and other instruments)

(this list in alphabetical order is not selective; the mention of a maker is therefore by no means a guarantee of the quality of his production)

- **AXONE** (see Ollivier J.-L.)
- **BESRECHEL, Christian** – 3, place Butter, F-22150 Ploeuc-sur-Lié: christianbesrechel@orange.fr
- **BOTHUA, Jorj** – 16, rue du Guern, F-56400 Sainte Anne d'Auray: http://www.botuha.com/
- **BOUGÉ, Dominique** – Le Vieux Bourg, F-22230 Saint-Vran: http://cornemusite.free.fr/
- **LE COANT, Yvon** – 6, rue des fontaines, F-22520 Binic: http://www.lecoant.com/
- **LE DOYEN, Rudy** – Keradennec, F-22780 Plougras: http://www.ledoyen-luthier.com/
- **HERVIEUX, Tudual** – Le Val Bodudal, 56350 Rieux : https://www.tudual-hervieux.com/
- **JAILLARD, Guy** – 2, Rue Ferdinand Buisson, F-60340 Saint-Leu-d'Esserent: http://jaillard.guy.free.fr/
- **KELTELEC** (voir Le Pimpec M.)
- **LÉHART, Gilles** – Kernijen, Trézélan, F-22140 Bégard: http://lehart.free.fr/
- **OLLIVIER, Jean-Luc** (AXONE) - ZA de Quillihuec, rue Nicolas Le Marie, F-29500 Ergué-Gabéric: http://bombarde-biniou-sonorisation-luthier.axonemusique.com/
- **OLLU, Éric** – 4, rue Pascal, F-29770 Audierne: http://ericollu.bzh/
- **LE PIMPEC, Michel** (KELTELEC) – practice électronique Kbomb ; 9, avenue du Parc, F-78180 Montigny-le-Bretonneux: http://perso.numericable.fr/keltelec/

Reed makers

(this list in alphabetical order is not selective; the mention of a maker is therefore by no means a guarantee of the quality of his production)

- **BESRECHEL, Christian** – 3, place Butter, 22150 Ploeuc-sur-Lié : christianbesrechel@orange.fr (only plastic reeds for biniou and veuze)
- **BODERIOU, Xavier** – 13, Brunguen, F-29510 Landrevarzec : http://www.boderiou.com/
- **LE BOHEC, David** – 92400 Courbevoie : https://www.anchemaisongradlondebretagne.com/
- **BOTHUA, Jorj** – 16, rue du Guern, 56400 Sainte Anne d'Auray : http://www.botuha.com/
- **LE BRAS, Yves-Marie** – 12, rue Garenn C'hlas, F-22300 Logivy-Lannion: +33 (0)2 96 23 36 91
- **CESBRON, Guy** – Guernaven, F-29650 Plouégat-Moysan: http://www.anchecesbron.fr/
- **GLOTIN** – 68-ter, rue Jacquard, F-77400 Lagny-sur-Marne: http://www.glotin.fr/
- **GOUDÉDRANCHE, Thierry** – Kerroc'h, F-29300 Guilligomarc'h : http://www.goudedranche.fr/
- **OLLU, Éric** – 4, rue Pascal, F-29770 Audierne : http://ericollu.bzh/

Makers of handmade soner bags

- **TRÉGUIER, Karen** – 2, rue du Stade, F-29530 Plonevez-du-Faou http://confectionkarentreguier.blog4ever.com/articles/musettes-de-sonneurs/

Stores of instruments and various stuff for soners

- **KELTIA MUSIC** – 1, place au Beurre, 29000 Quimper: http://keltiamusique.com/ (uncertain future, being in liquidation)

- **TI AR SONERIEN** – Rond-point de Keramporiel, 29900 Concarneau: http://www.sonerien.com/

Paper magazines

- **MUSIQUE BRETONNE** – édited by *Dastum*: http://www.dastum.net/FR/musique-bretonne.php
- **AR SONER** – edited by *Bodadeg ar Sonerion* (B.A.S.): http://www.bodadeg-ar-sonerion.org/2013/10/30/abonnez-vous-a-la-revue-ar-soner/

Web radios of Breton music

- **CANAL BREIZH**
  http://www.canalbreizh.bzh/

Soner competitions

Soner competitions are a very active and living tradition in Brittany.

Below is a list of soners competitions holding regularly each year at a date almost specified, but some other competitions can take place in relation to one-off events (birthdays or bagads or celtic circles, etc.). Other competitions than those mentioned are also held each year but do not have a fixed place (Gourin qualifiers for Bro-Leoñ or Bro-Dreger, for example).

Bombarde & organ

- **CHANTEPIE** (35), competition of the bombarde playing with the church organ:
  http://www.orgue-chantepie.info/bo/

Bombarde & biniou

Non-exhaustive list, in alphabetical order of the municipalities. Most of these competitions serve as qualifiers for the soner competition of Gourin (Brittany Championship).

NB: a competition for bombarde and Great Hihgland Bagpipe is generally associated with each competition for bombarde and biniou, for those who appreciate this combination...

- **BOURBRIAC** (22) 15 August, *Festival plinn du Danouët*:
  http://danouet.free.fr/
- **BUBRY**, village of St-Yves (56), *Trophée Pierre Bédard* (terroir Pourlet) during the *Pardon* of St-Yves, last sunday of May: http://bagad.santewan.free.fr/index.php?page=bedard
- **CARNAC** (56), Competition of *Kas-ha-barh*, during the *Festival An Houlenn*, first sunday of November:
  http://www.tidouaralre.com/association-culturelle-mein-mor-ha-lann-e-bro-karnag-member-18.html
- **CONCARNEAU** (29), *Trophée des Filets bleus* (terroirs Aven-Glazik-Rouzik) :
  http://trophee.bagadbrokonkkerne.bzh/

- **GOURIN**, château (*Castle*) de Tronjoly (56), *Championnat de Bretagne de musique et danse traditionnelles*, first weekend of September:
  http://championnat.des.sonneurs-gourin.over-blog.com/

The monument erected in 1996 on the site of Gourin competition to celebrate the 40th anniversary of this competition.

Tronjoly Castle at Gourin (18th century)

A free paper model (1:100) of this castle
(to print and build yourself)
can be downloaded by this link :

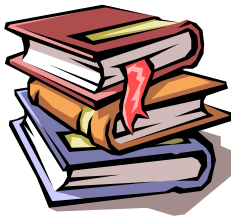
http://secanda.stalikez.info/m=secanda_16_6_v_1_a_tronjoly

- **LANRIVAIN** (22) mi-juin, *Concours plinn* (terroir fañch)
- **LOKOAL-MENDON** (56), *Trophée Roñsed-Mor* (terroir Vannetais), second Sunday of May: http://www.ronsedmor.org/RonsedMor/fr/le-trophee/presentation
- **LORIENT** (56), *Trophée Matelin an Dall / Paysan Breton*, during the *Festival Interceltique de Lorient*, beginning of August: http://www.festival-interceltique.com/
- **MONTERFIL** (35), *la Gallésie en fête* (gallo competition), last Sunday of June: http://www.gallesie-monterfil.org/Concours-de-musique
- **MÛR-DE-BRETAGNE** (22), *Fête de la ronde du pays de Loudéac*, second half of November: http://cercle.mur.free.fr/index.php?option=com_content&view=article&id=96&Itemid=99
- **PONTIVY** (56), Competition of *Laridé-gavotte*, during the *Kan ar Bobl*, end of April: http://kerlennpondi.org/
- **PONT-L'ABBÉ** (29), *Trophée Yann-Kaourintin ar Gall* (terroir bigouden), during the *Fête des brodeuses*, second Saturday of July: http://www.fetedesbrodeuses.com/
- **QUIMPER** (29), last Saturday of July, *Trophée Hervé le Meur* (Sud-Cornouaille only), *Trophée de la plume de paon* (Sud-Cornouaille + other terroir), *Trophée Pierre Pulvé* (beginning soners), during the *Festival de Cornouaille*: http://www.festival-cornouaille.com/
- **REDON** (35), competition of the terroir gallo-vannetais, during the *Bogue d'Or*, last Saturday of November: http://www.gcbpv.org/?page_id=108
- **ROSPORDEN**, Kernével (29), *Joutes de l'Aven*, *Trophée Gus Salaün*, mid-April: http://joutesdelaven.blogspot.fr/
- **ROSTRENEN** (22), *Festival Fisel*: http://www.fisel.org/
- **SPÉZET** (29), *Trophée Iffig Com* (terroir Montagne), dans le cadre de *Faites de la Montagne*, first weekend of June: http://www.bagad-osismi.com/fr/faites-de-la-montagne/concours
- **VERN-SUR-SEICHE**, *Fête du Printemps de Vern* (terroirs gallos), middle of May.

Competitions out of Brittany

- http://divroet.org/nos-activites/championnats-concours/

Selected bibliography



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The parking disk of *Bombarde How to*

Essential for your next stay in Brittany!

This parking disc to build yourself is at French standard (150 × 150 mm) and is bilingual French/Breton.

Download it freely at the following address and print it.

http://secanda.stalikez.info/m=secanda_16_14_v_1_a_disque

Remember to check if a new version of this document is available for download at the following address:

http://biniou-bombarde.stalikez.info

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contact@biniou-bombarde.stalikez.info