BINEL – HOW IT WORKS

Binel is the acronym for: Binaural acoustic element, it is more simply called acoustic lectern. This object is new in form and function, and here you will find some news about it. (Binel is also a Piedmontese term that means "twin" or that may indicate the puppy of the deer until the age of 6 months. From the Latin origin of the term "bis" and then "bi", many words are derived composed in different languages , from the meaning of two, of double, composed of two, which has two, etc.)

Following studies on the acoustics of equipment to dampen the voices and sounds, to absorb them, to amplify them, make them clean and defined, at Lab Design (Woodmanproductions.it) we came to the creation of this article with a particular shape which is an acoustic reflector non-electronic, to be used individually or combined with an identical one.

The Binel is a device to be used in the music field to allow an artist (singer, actor, voice actor, musician, sound engineer) to self-evaluate and improve the performance of his vocal or instrumental output. The Binel has a mathematically calculated structure that allows the sound source - positioned in front of it - to capture and enhance its own emitted sounds, otherwise lost as harmonic content in a normal performance of voice or instrument. There is therefore a more crystalline rendering of the timbre and a richer amplification of the sound. This effect enables high quality stereophonic footage even when using a mid-priced microphone. The fact that all the environmental reflections are canceled and the intact characteristics of the sound emission are concentrated in a single ovoid acoustic focus, makes it an innovative tool for sound engineers and recording studios.

HOW TO USE IT?

The various models, by means of the rear knob, are designed to be mounted on a standard commercial microphone stand; this arrangement is preferable because it adapts easily to any place, to the needs of the people and to changes in the location.

Screw the microphone rod to the knob H (Fig.1) on the back of the Binel, and fully tighten using, if possible, the wheel locknut on the normal commercial auctions. The threaded hole of the knob is the American-universal std for the microphone bars, that is: 5/8 inch 27 turns - (UN 5 / 8-27-2B-HSS). For the old rods adapters are on the market to reduce the hole from 5/8 to 3/8 of an inch.

Look for the final position of the Binel: at the base of its neck, set the L inclination on the shaft. The lower part slides a little towards you, the upper part rises straight with the tip aligned to the direction at 90 degrees with the floor. Viewed from the side, the Binel forms an angle of about 30 degrees with the horizontal plane. The highest peak of the triangle goes up, the widest part at the bottom, the concavity smooth towards the person or the instrument.

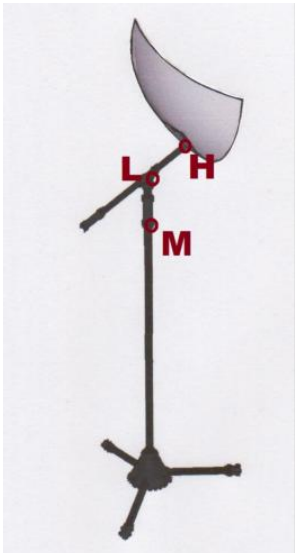

Fig. 1

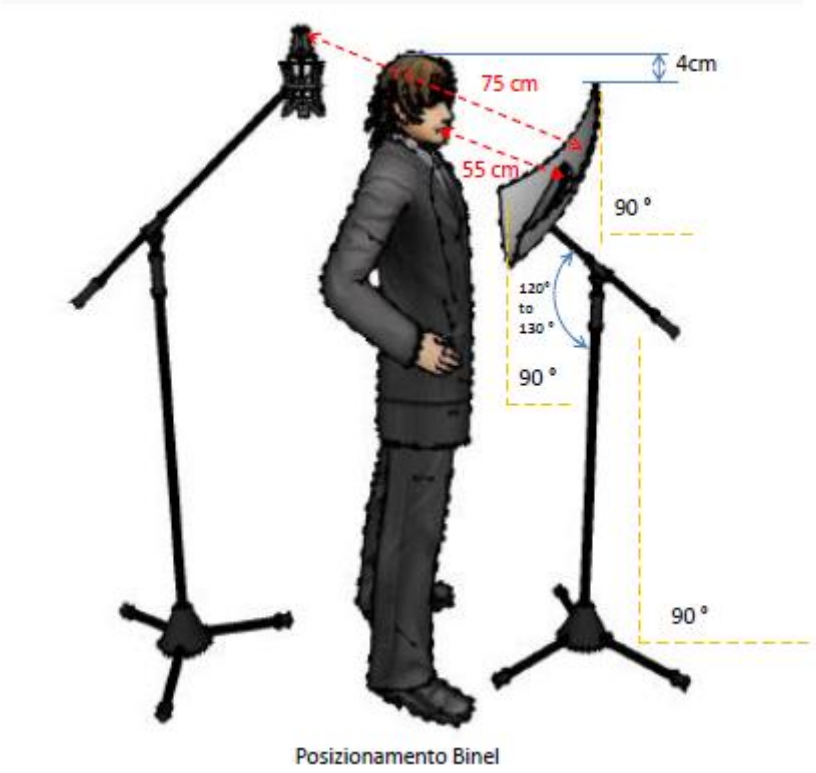

Fig. 2

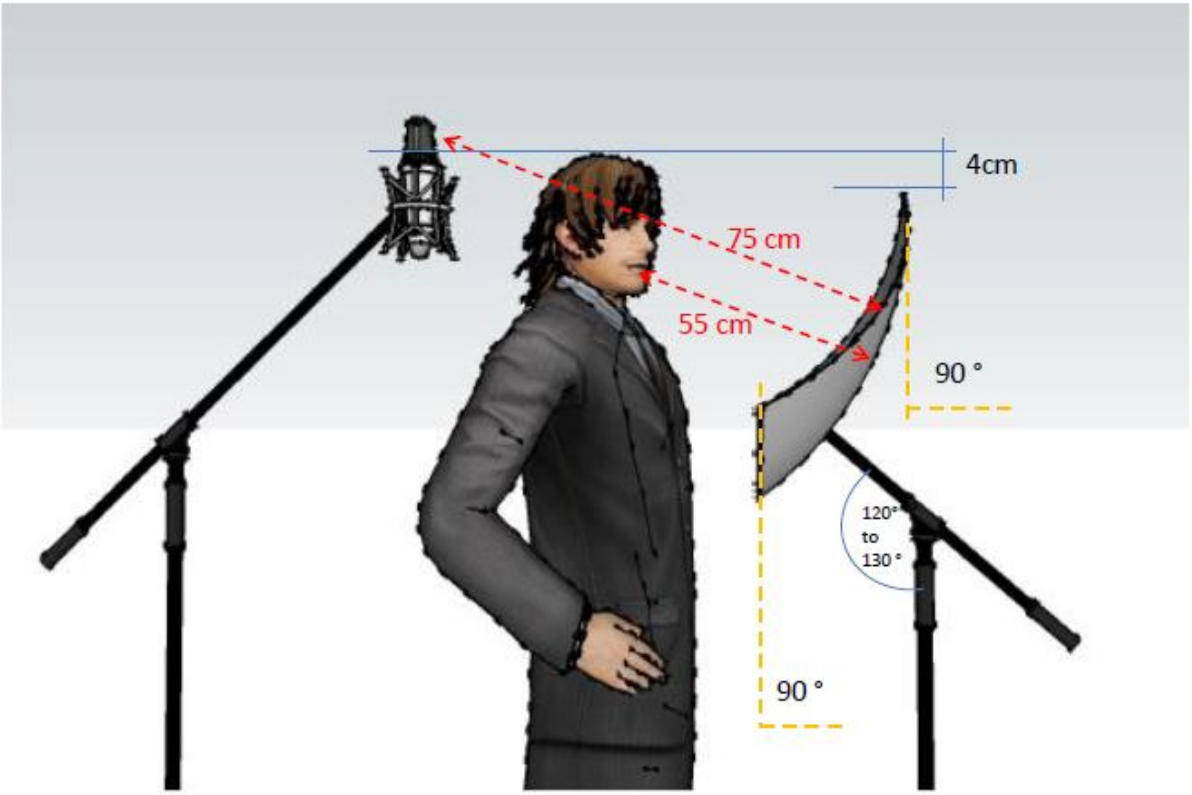

Fig. 3

1. **If you use it for the voice**, adjust the microphone stand M according to your height, with the top of the Binel corresponding to the forehead just above the eyes, but at a distance of about 50-55 cm from it. Settle in front of the Binel as indicated and speak below or phrased; when you feel that the sound reflection is perfect, remember the position without going too far. (Fig. 2)
The acoustic fire that you do not see but exists, is in the shape of an ovoid, with a length of about 40 cm and a height of 25 cm in section. This is the field within which the sound effect has its maximum intensity.
If you want to record with the microphone the effect on the voice, produced by the reflection of the Binel, place a microphone behind the singer's head: you are always in the focal oval and so you will get the maximum uptake of the clean sounds. (Fig. 3)
2. For individual vocal use or **with wind instruments such as the flute, the harmonica, and everything that sounds near the mouth**, the microphone CAN BE positioned also behind the head.

3. **For the violin, or similar instruments that involve a certain movement of the artist**, so that the sounds are picked up and amplified by a microphone, it is preferable to place two Binels either horizontally, or vertically, with the special care to position the two Binel to form a continuous wedge of curvature on the outside, placing the instrument on the ovoid focus of the first Binel, while the mono or stereo microphone is placed on the ovoid focus of the second Binel. (Fig. 4) This positioning slightly changes the ovoid shape of the two acoustic foci which tend to become spherical but always of good size. This allows the sound to be transmitted directly from one focus to another simultaneously.

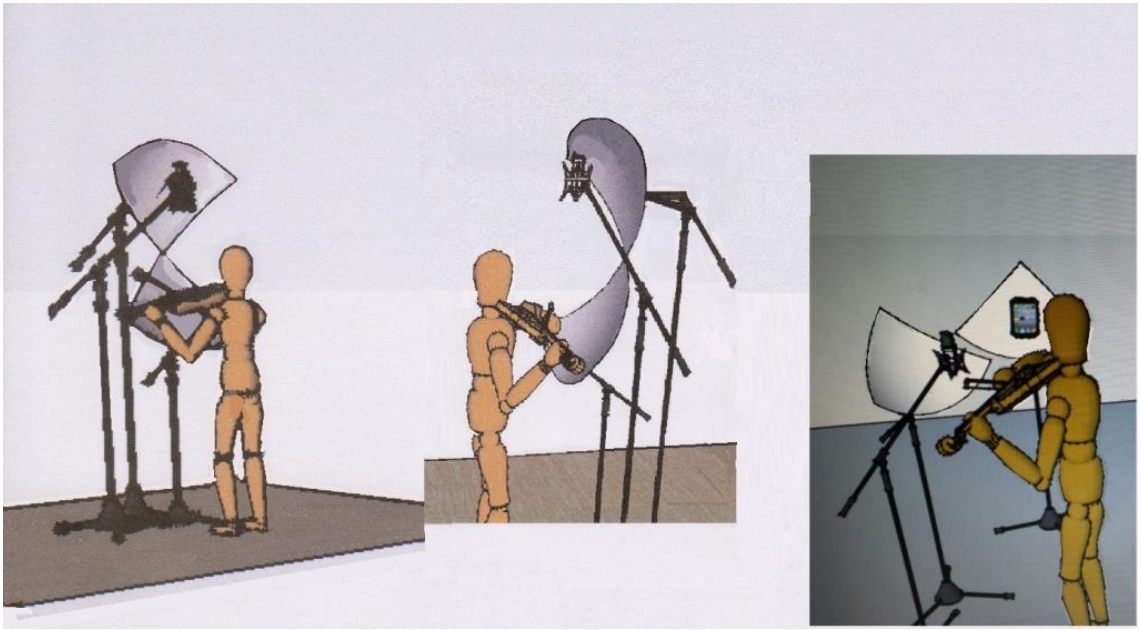

Fig. 4

4. For instruments in which the point of emission is very far from your ears - more than 40 cm -, such as the trumpet, the saxophone, the cello, the double bass, etc., it is always necessary to have 2 Binels carefully positioned to form outside a continuous curve (Fig. 5), and as already seen in Fig. 4.
For the classical guitar and the clarinet it is also possible to use only one Binel (the Daghè), the largest double compared to the classic Binel for singing, to overcome the limit that the position of the acoustic screen becomes too precise and does not allow much movement to the musician. In the case of classical guitar, played from a sitting position, a supporting accessory supporting the Binel or a double-jointed microphone stand, not easy to find, should be used.

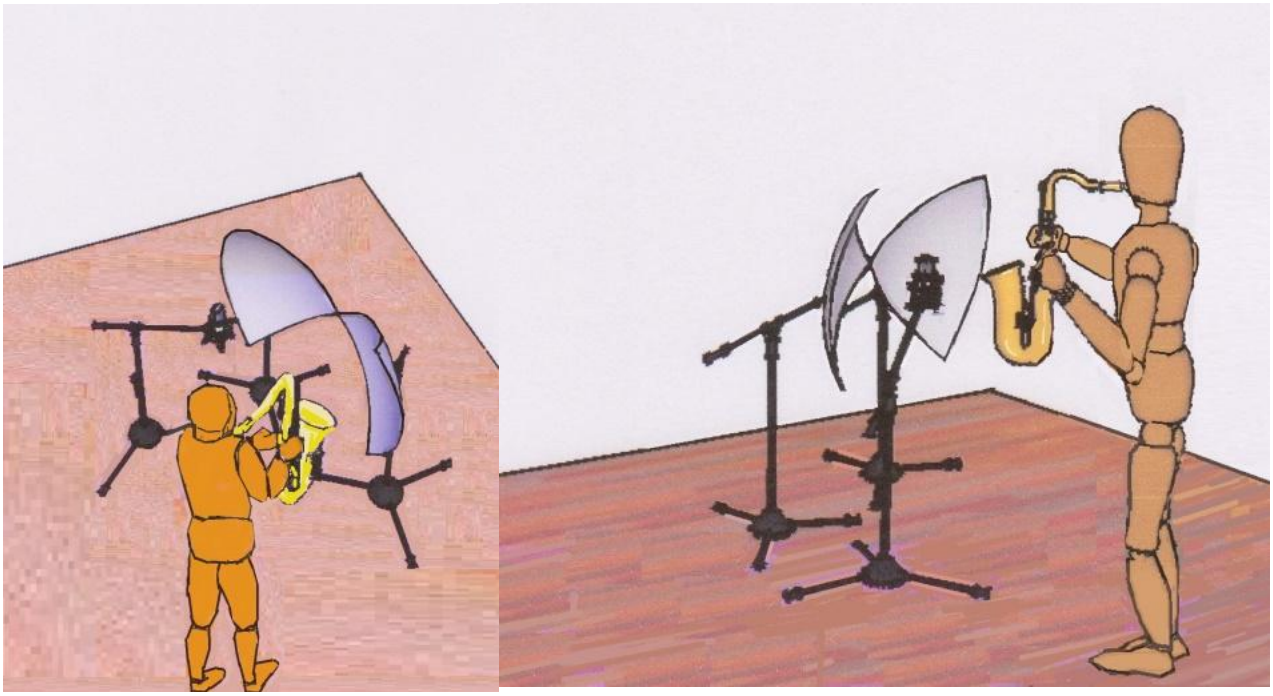

Fig. 5

7. If you want to record with the microphone the sound completely reflected from the Binel, you must position the microphone as sterophonic as possible, or two microphones crossed at 90 degrees, behind the singer's head, at a suitable height (Fig. 3). Together with microphone A it is also possible to mix the direct sound of a traditionally directional second microphone B (this however will not have an effect of enriching the sound), placed in front of the singer and just above the upper tip of the Binel (Fig. 6).

Fig. 6

Precautions for use

The Binel can also be used resting on a table on false supports, or by means of a special support (Aragn) that we supply as an accessory, but in order for it to work, the indications above must be respected.
When disassembled it is very handy and can be easily transported with its Bursét case. If fitted we recommend screwing it well to the microphone stand. Therefore we decline the responsibility for chipping on the edges.
There are several models of Binel and although they are of a very resistant aeronautical material it requires some attention:

- do not lean on or under hot things, especially weights,
- do not drop it even when it is inside the case.

The Bursét on the ground could tip over, and although the case is protective, there is the possibility that some damage will occur especially for models that include the seat for the Tablet.
When you do not use it and it is unhooked from the pole, never leave it resting on the edges or on the belly: its weight could lead the curve to flatten and deform it; in the other sense, that is, resting on the back is always good. The material of which it is made is a very rigid aeronautical resin in maintaining its shape and it does not seem that a deformation has occurred so far in the various pieces made. To store it, either simply leave it on the rod, or place it in the hanging Bursét on any hook.

Technical certifications

Since Binel is currently a handcrafted item, it is not subject to the obligation to provide European certifications. Regarding the adaptation to the technical data sheets of compliance with EU regulations, since Binel is an object devoid of devices, it is therefore not included in the list of items bound to be equipped.

The material with which the different models are produced is an automotive resin. In the yield of the product this material is comparable to plastic, therefore thermoset by a chemical reaction in a mold, such as the body parts. It is therefore smooth, light, resistant and easy to clean, but it can crack and chip if subjected to an eccentric and anomalous force.

Binel is not a dangerous product for users or the environment. Protective and finishing varnishes are water-based. Being the resin polymerized (hardened), the Binel cannot be recycled, but eliminated with household waste.

Guaranties

According to the provisions of the Consumer Code (Legislative Decree No. 206 of 6/09/05 in implementation of Directive 1999/44 / EC), the purchased item will have a guarantee in accordance with the law. Within this time, if the consumer possesses a non-compliant article, he has the right to restore the object that must be repaired, or in particular cases, replaced by a similar good.

The consumer is obliged to notify the retailer of the lack of conformity within two months from the time it was discovered, under penalty of forfeiture of the right to the remedy. (If the lack of conformity occurs within six months of delivery, it is assumed that this defect was already present at the time of purchase. If the lack of conformity occurs beyond six months, the consumer will have to prove that the damage is connectable to a defect existing at the time of delivery.)

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