

# *Orchestrating the World*

## *- a manual of intercultural music making*

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- **Danbau** (Vietnamese one string zither)



[ picture of danbau ]

### **Description**

**Dan Bau** is a one-string zither native to Vietnam. It is constructed of a long narrow sound box, with a tall curved stem made from water buffalo horn inserted at one end. The single string runs between the sound box and a small wooden gourd attached to the stem. The stem is bent to change the pitch of the string. The player touches the string lightly with the heel of the hand at harmonic producing nodal points while plucking with the fingers or plectrum. This produces the dan bau's characteristic high clear sound. As the sound box of the dan bau is very narrow, it is not a loud instrument, and was traditionally used in more intimate environments. In recent years an electronic version has been introduced to be played in ensemble and large concerts. The bass bau was adapted from the dan bau to provide a musical range equivalent to that of a bass guitar. It is simply an electric dan bau with a very thick string on it.

### **Origin and Construction**

The origin of the danbau is a bit obscure. It is associated with children playing on a string with a stick. Long ago the danbau was constructed from dried fruit (perhaps a gourd). Very long and narrow fruit (perhaps squash), once dried, could be used for the danbau's body. The resonator is the 'bau'. Danbau is the name of the fruit. The danbau is sometimes called 'a harmonic monochord'.

The bell resonator at the stem is made of wood today. Originally this bell was very big, but with the use of the amplifier today, size is unnecessary. On the danbau that this author studied, the stem was made of buffalo horn. Originally it was of bamboo. Horn is much more flexible. The basic resonating box is made of wood, with a sound hole at the bottom. A little pickup at the nut end is used for amplification.

### **Frets - an Innovation**

Frets - An invention by master musician Chi Khac, is to have little frets beneath the open string at the nut end of the instrument (not the stem end). These render notes with a wavy sound. There are 5 moveable frets, which are placed at nodal points, except for partial 8. The frets render a bit more open sound than the muted tones - a slightly muted shake or vibrato. Care needs to be taken to get them in tune with the harmonic series. The thumb (of the r. h.) is placed by a fret, and the other fingers hammer down to the right of this fret. The stem is free to be utilized as well, rendering the gamut of pitches.

### **Tuning, Range and Notation**

#### **Tuning**

The danbau is tuned in C (c - an octave below middle c) or sometimes in B (an octave and a minor 2<sup>nd</sup> below middle c).

*Keys for a C tuning:* **C, D, F, G, Bb** and related minors are best. These are keys from 2 sharps to 2 flats in their key signatures.

## Danbau

Keys for a B tuning: **B, Db, E, F#, A** and related minors are best. However, check the notation with the performer. The key signatures for these keys may look unfamiliar. Perhaps a transposed part (written in C) is best.

There is a machine screw for tuning at the nut end. It is possible to retune between one movement and another. As stated before the fundamental is either **c** or **B**. It could even be retuned while playing, though one needs to check this retuning idea with the performer. A benefit of tuning down to **B** from **c** is that one obtains a new set of harmonics.

### Range

A characteristic range is **g** (below middle **c**) to **e<sup>3</sup>** (two octaves and a major third above middle **c**). The open string, which is **c** (an octave below middle **c**) can be lowered yet an octave more, to **C** (2 octaves below middle **c**). Thus the full range is **C** to **e<sup>3</sup>**. A very flexible range is **c<sup>1</sup>** (middle **c**) to **c<sup>3</sup>**.

**Danbau range - C to e<sup>3</sup>**

characteristic range, **g** to **e<sup>3</sup>**

extended down to **C**

very flexible range, **c<sup>1</sup>** to **c<sup>3</sup>**

### Notation

The danbau can be notated in the treble clef. For the lowest octave (**c** to **c<sup>1</sup>**), one can use leger lines or perhaps a bass clef. Check with the performer about this.

### Technical Considerations

#### General

Basically, the danbau produces harmonic sounds. With the help of the stem (a lever/stick) the pitch can be moved up or down. The open string can be moved an octave down or a major 3<sup>rd</sup> up.

The open string sound is very nasal. The harmonic nodes used are: 2, 3, 4, 5, 6, 8. If the open string is **c** (an octave below middle **c**) the nodes will produce the following pitches: **c<sup>1</sup>**, **g<sup>1</sup>**, **c<sup>2</sup>**, **e<sup>2</sup>**, **g<sup>2</sup>**, **c<sup>3</sup>**.

The pitches are produced by plucking with a small bamboo stick (plectrum) or the finger. The palm of the hand that plucks is placed at a harmonic node on the string, while the other hand operates the lever/stick. These different harmonic pitches can be varied by moving the lever up or down, and thus the entire gamut of pitches can be produced. This makes the instrument chromatic.

#### Characteristic sound

Long, graceful notes, and lingering phrases with ornaments and vibrati are best. The danbau has a very long decay. An entire melodic line can be played on one pluck. Very expressive and flexible vibrati and grace notes can be produced.



## *Danbau*

### Special Techniques

- a) Use of a bow is possible; it sounds like a cello. Special practice and preparation is necessary.
- b) Using the fundamental (open string) as a pedal point to punctuate a melody is possible.
- c) In between nodes (any nodes), a 'bell' tone is obtained. This can be played with by stem manipulation. It is not a discrete pitch.
- d) A 'double harmonic' can be produced by playing a harmonic and then touching the upper octave node right away.

### Thoughts on Instrumental Combinations

The danbau goes well with the erhu, the yangqin and other Chinese instruments, generally. Traditionally, this has been done a lot - with zheng not so much, but with ruan, pipa, and dizi, yes. Danbau also goes well with choir and with bowed strings.

### Acknowledgments

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### References and Bibliography

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2. Audrey Seah, Charissa M. Nair, *Vietnam*, Marshall Cavendish, 2004. p. 74.
3. Dale Alan Olsen -*Popular music of Vietnam: the politics of remembering* 2008 Page 50 "In the summer of 2005 I specifically asked [Hồng Nhung](#) about my analysis of her style: D.O.: Are you influenced by ca trù, đàn bầu, the improvisatory instrumental style of water puppet theater, or other northern Vietnamese traditional music styles?"
4. Randy Raine-Reusch *Play the World: The 101 World Instrument Primer* Page 38 "Dan Bau - Vietnam The dan bau is a one-string zither from Vietnam that plays in harmonics. Dan in Vietnamese signifies an instrument, so often the instrument is just referred to as a bau. Some scholars believe that the dan bau is related to the Thai pin pia, while others believe that it is a uniquely Vietnamese instrument."

### Internet

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