

Zheng

Zheng, with a generic term for a long plucked boxed zither, is an ancient reformed instruments. It's fitted with strings of different lengths and thickness that are drawn across the long and boxed-like body of the instrument. The end of the string is bound to axles found at the extreme right of the instrument. Different pitches will be obtained by adjusting the tension which created by propping the strings using bridges. Thus, the bridge acts as a pivot for the string to be tuned to a desired pitch. The desired pitch is created on the right of the string (found at the right side of the pivot) by moving the bridges toward the left or right of the body of the instrument. As such, the string towards the right of the instrument and past the bridge is pitched and plucked by the fingers of the right hand. The player wears artificial fingernails made of bone, shell of some special nylon, which are bound by surgical tape onto the flesh of his fingers to pluck at the instrument.

The left of Zheng (or the side left of the bridge) is un-tuned and provides a space for the player to press at using the fore, middle and ring fingers of the left hand. Portamento effects are created by bending the left side of the instrument while the right hand plucks at the pitched side of the string. Glissandos can also be achieved on the left side of the strings, producing strange and non-musical sweeping sounds-- a result of playing a series of unfixed pitches. Fingernails are also worn on the left hand as they are sometimes used to aid the plucking of the pitched sides of the strings. This is especially seen in arpeggios performed on Zheng.

Zheng can't shift between key changes effectively as it commands a fixed scale. Instead, players must shift the bridges propping up the strings in order to change the pitches of the various strings, effectively re-tuning their instruments whenever there are changes in keys.

The number of strings, tuning structures, types of strings and playing techniques vary from region to region in China. Here we're introducing the most popular form of Zheng which is 21stringed Zheng.

The range of a standard 21stringed Zheng is D—d3. The strings of the standard 21 stringed Zheng correspond to the pentatonic scale. Each string produces a single pitch when played. Due to the pentatonic nature of the instrument, a player is required to use his left hand to press on the “mi” (mediant) and “la” (submediant) strings respectively to obtain the “fa” (subdominant note) and “si”(leading note) of a scale, bending the pitch of the string to obtain the required semitone. The bending of pitches can be done on all other strings, allowing portamentos to result from any of the fixed-pitched strings. The bending of pitches has since become an integral part of Zheng technique which are epitomized in folk repertoires.

However, progressive Zheng pieces do not follow the Zheng's pentatonic scale rigidly, with many scores altering the tuning structure of the instrument. The specific tuning scale of the piece should be notated in the score.

Techniques and tonal color

The lower ranges (D--a) of the 21-stringed Zheng produce sounds that have been described as full of depth, while the middle ranges (a—d2) which are the most commonly used are bright, clear and graceful. The higher note regions (d2—d3) produce clear and crisp sounds.

Zheng mainly uses the right hand's thumb, fore, middle and ring fingers to play. When fitted with artificial fingernails, plucking at the instrument produces solid, clear and crisp sounds.

Different plucking positions of the right hand produce different type of sounds. Generally speaking, sounds produced near the area where is at the extreme right of the instrument are bright and crisp. Sounds produced nearer to the bridge are soft and gentle.

Recent compositions for Zheng emphasize the left hand, which in traditional repertoire is seldom used to pluck the strings as it was used purely for pitch-bending.

As the left hand is becoming more independent, nails are sometimes worn on the left hand. Left hand is capable of playing melodies and even counterpoint, in the form of chords, rhythms, arpeggios and glissandos. It harmonizes and effectively compliments the right hand. The left hand has become essential in large arpeggios and is used for glissandos.

Zheng's techniques can be classified into **plucking techniques** and **string-pressing techniques**.

Although usually achieved with the right hand, the **plucking techniques** can also be applied to the left hand as well. **String-pressing techniques** are performed by the left hand.

Glissandos:

Glissandos are an important part of Zheng's repertoire. The speed and range of glissandos are according to the characteristics of Zheng's melody. There are generally two different kinds of glissandos: one is decorative, and the other is melodic. In a decorative glissando, the melody line is not changed. The glissando becomes an ornament for the basic melody line, glamorizing it. The glissando fills in gaps of sound formed in a melody. Thus, it don't affect the melody's tempo and rhythm. Such glissandos are usually short and fast, spanning over a small range of notes. The melodic glissando, in every sense of the word, demands large sweepings of strings that form the main melody of a piece. In this case, the glissandos themselves are the melody and form the phrase.

Pucking techniques:

As mentioned, playing Zheng requires the use of artificial fingernails like Pipa playing. However, the difference between them is that the artificial fingernails are worn on top of the Pipa player's actual fingernails; while Zheng's nails are worn on the fingertips as playing is effected through inward movements of the fingertips.

The thumb, forefinger, middle finger and ring finger of right hand are used to pluck the strings. The forefinger, middle finger and ring finger usually pluck in the direction toward the player, while the thumb plucks in the direction away from the player.

Both Pipa and Zheng use surgical tape to bind the nails to the player's fingers and have an extravagant use of symbols to represent various **plucking techniques**:

- ↵ (pi, 劈), the thumb plucks the strings in the direction towards the player in one movement.
- └ (tuo, 托), the thumb plucks the strings in the direction away from the player in one movement.
- \ (mo, 抹), the forefinger plucks the strings in the direction towards the player in one movement.
- / (tiao, 挑), the forefinger plucks the strings in the direction away from the player in one movement.
- ∩ (gou, 勾), the middle finger plucks the strings in the direction towards the player in one movement.
- ∪ (ti, 剔), the middle finger plucks the strings in the direction away from the player in one movement.

夕 (ti, 提), the ring finger plucks the strings in the direction towards the direction of the player in one movement.

The above techniques are all scored above the note. Techniques from the different fingers can be combined together to play chords. For example, ㄣ(tuo, 托) and U (ti, 剔) can be effected together, with the thumb exercising ㄣ(tuo, 托) on one string, while the middle finger plucks using the U (ti, 剔) on another string. Similarly, U (ti, 剔) and ˆ (gou, 勾), \ (mo, 抹) and / (tiao, 挑), ㄣ (pi, 劈) and ㄣ (tuo, 托), being techniques of the same finger, can't be done simultaneously.

The thumb and forefinger can play tremolos.

String-pressing techniques:

Besides plucking strings, the left hand is most responsible for portamentos. These bends in pitch are characteristics of the instrument and can be easily played on Zheng. The fingertips add pressure to the left side of the string, depressing it to various magnitudes to produce various inflections of sound. Every string can produce a note up to a third higher from the string's tuned note when the string is depressed on the left side of the bridge. As the instrument's lower regions have thicker strings, a performer will have to exert more force in bending the pitch of the strings. So, lower strings can usually produce portamentos that are of a second higher than the string's tuned pitch. Due to Zheng's pentatonic nature, bending pitches are the means to produce the "fa" and "si" of a scale. Similarly, other semitones are produced by bending pitches as well. Despite its need for a bend, Zheng doesn't require special scoring of a semitone.

Vibratos are very easy to play with string-pressing.

Zheng's harmonics are played by using the left hand to gently tap at half the length of the pitched string, while the right hand strikes at the string simultaneously. Harmonics can only be performed on tuned free strings. In Zheng's repertoires, harmonics occur mostly between the region of A to a1.

Chords:

Chords can be played on Zheng, with up to eight notes being played simultaneously. However, due to its pentatonic nature, chords containing five to eight notes must all be played on free strings. If a string is required to be depressed (to achieve a note that can only be produced while a string is depressed), a chord produced by the right hand can accommodate a maximum of only four notes. Arpeggios, on the other hand, can run continuously.