Bowed Stringed Instruments
Fig. 9.1: The Erhu
Fig. 9.2: Qintong
**HISTORY**

Without a doubt, the 二胡 erhu (Fig. 9.1) is the chief bowed stringed instrument in the Chinese orchestra. Characterised by its versatile playing technique, the erhu, which is often associated with sorrow, is capable of producing the most heart-wrenching sounds.

The two-stringed fiddle is termed 二 er (second) 胡 hu (fiddle) as it plays secondary roles to many instruments (e.g. second to the 板胡 banhu in Northern music, second to the 京胡 jinghu in Peking opera, second to the 高胡 gaohu in Cantonese music etc).

The instrument comprises a 琴筒 qintong (instrumental body) (Fig. 9.2), 琴杆 qingan (instrumental stem), 琴轴 qinzhou (tuning pegs) (Fig. 9.3), 琴弦 qinxian (strings), 千斤 qianjin (Figs. 9.4 & 9.5), 琴马 qinma and 琴弓 qingong (bow).

This usually homophonic instrument is played with a bow which is trapped in between the instrument’s two strings (Fig. 9.6). The bow is usually made of bamboo and horsehair (Fig. 9.7). The rosin-lathered horsehairs’ movement against the strings produces soul-stirring sounds through left-right bowing actions. The absence of a fingerboard renders the instrument’s pitch more difficult to control when bowing, but at the same time allows the instrument to have greater gradations in tone and a richer palette of tone colours.

The erhu belongs to the 胡琴 huqin (the generic term for bowed stringed instruments) family, and it was only in the early 1900s that the erhu was developed and standardised. The development of the erhu today is largely credited to 刘天华 Liu Tianhua; it was with Liu that the erhu, previously an exclusive ensemble instrument, gained a stronger repertoire and playing technique.

With Liu’s new developments, the erhu quickly became the most outstanding and representative of all the bowed stringed instruments.

According to records, the huqin first appeared in the Tang Dynasty as an instrument called the 奚琴 xiqin; 宋陈旸 Song Chenyang’s <<乐书>> Yue Shu (Book of Music) describes the xiqin as being shaped like a 弦鼗 xiantao and having a bamboo strip in the middle of its two strings.
Fig. 9.3: Tuning Pegs
Figs. 9.4 & 9.5: Qianjin
Figs. 9.6 & 9.7: Bow is in between the two strings
Fig. 9.8: Absence of fingerboard
During the Song Dynasty, a *huqin* with a bow made out of horsetail hair was already in use around the North-west regions. During the Yuan Dynasty, the Mongolian tribes used the *忽兀儿* *Hu Weng Er* (a form of *huqin*) in religious festivals and in the military.

The Ming Dynasty’s painting of *麟堂秋宴 Lin Tang Qiu Yan* (Autumn Party at *Lin Tang*) portrays the *huqin* being played with a bow which has its horsehair trapped in between the instrument’s two strings. The painted instrument had a structure highly similar to the modern *erhu*.

Over the course of a thousand years from when it had been first played, the *huqin* has evolved and developed into numerous other variations like the *皮膜二胡* *pimo erhu* (skin-membrane *erhu*), *京胡* *jinghu*, *京二胡* *jing erhu*, *软弓二胡* *ruangong erhu*, *粤胡* *yu eb u*, *四胡* *sihu*, *板面板胡* *banmian banhu* and *椰胡* *yehu*.

**TUNING & STRUCTURE**

The two strings of the *erhu* are usually tuned a fifth apart, with the *内弦* *neixian* (inner string) tuned to the lower pitch and the *外弦* *waixian* (outer string) tuned to the higher one.

Currently, the standard method of tuning is *a*¹ for the outer string and *d*¹ for the inner string. These pitches are used in Chinese orchestras and in almost all *erhu* repertoires. However, possible ranges for the outer strings are from *d*¹ to *b*¹, while possible ranges for the inner strings are from *g* to *e*³. Hence, a possible tuning structure of the *erhu* can be *c*¹ for the inner string and *g*¹ for the outer string.

The *erhu* commonly uses the range *d*¹ to *d*³. Nonetheless, as the instrument does not have a fingerboard, it can reach screeching pitches of up to *d*⁴ (Fig, 9.8).

Most composers find the *erhu’s* most effective range to be from *d*¹ to *e*³, opting to compose melodies within this range as it allows the *erhu* to produce sounds that are strong in character, clear and exquisite.

The *erhu* tends to become much softer within the range of *a*² to *d*³. The *erhu’s* amplitude decreases with increasing pitch, especially from *d*³ and above.

---

*Common Tuning & Range of Erhu*
If a higher pitch is required of a bowed stringed instrument, composers tend to assign these parts to the *gaohu* or *banhu* (See *Gaohu* and *Banhu* below), as the effect produced by the *erhu* is not as penetrative.

**TECHNIQUES & TONAL COLOUR**

Bow techniques are sometimes called right-hand techniques as the bow is gripped at its right corner by the right hand. Pressure is applied to the rosin-waxed bow, which is drawn with the use of the fingers and wrists. The thumb is placed on the bamboo stick of the bow, and the middle and ring fingers are positioned on the bow hairs. The fingers pull at the bow with the fluid motion of the wrist and forearm in order to play (Fig. 9.9).

The bow hairs, trapped between the strings, are bowed along the *qintong* with smooth left and right bowing movements (Fig. 9.10).

Like Western stringed instruments that have upward and downward bowing, the *erhu* has 拉弓 *lagong* (pull bowing) and 推弓 *tuigong* (push bowing). Pull bowing is scored with a \( \text{\textdegree} \) above the note, and push bowing with a \( \checkmark \) above the note.

In every bowed stringed piece, the design of a bowing method is scored. This design is known as 弓法 *gongfa*. It facilitates coordination between the left and right hands, a piece’s speed, and a piece’s musical interpretation.

Below are some of the more common bowing techniques used by the *erhu*.

**分弓 Fengong (Separate Bowing)**

Fengong is the use of one bowing movement for a single note. Notes produced by this technique are clear and precise, regardless of speed.

Stronger notes are effected using the full extent of the bow in one clean sweep. This bowing effect is known as 大分弓 *da fengong* and is used to signify intensity.

Fengong is the most basic of huqin techniques and is often considered the most important as well. The *jinghu* uses fengong as its main form of playing. 广东音乐 *Guangdong yinyue* (Cantonese music) also emphasises this technique in its music.

The left and right hands require good coordination and must complement each other. The piece 听松 *Ting Song* (Listening to Pines) by 阿炳 *Ah Bing* uses fengong through the piece to emphasise the clarity and honesty of its notes.

**快弓 Kuaigong (Fast Bowing)**

Kuaigong is a fast version of fengong. Kuaigong ensures a rapid playing of notes to produce detached sounds. Thus, it is often used for semi-quavers in scores.
Fig. 9.9: Fingers pull at the bow

Fig. 9.10: Bow along qintong
Liangong (Slurred / Legato Bowing)

Liangong is the playing of two or more notes using a single pull of the bow. It is scored with a slur line ‘︵’ on top of the notes. Good liangong, as with the violin, requires consistent and fluid movements, especially during the movement of the bow.

The number of notes that can be played in one pull of the bowstring is dependent on the piece’s volume and speed. The lower the volume, the greater the number of notes can be played in one liangong.

刘天华 Liu Tianhua’s 月夜 Yue Ye uses the liangong technique to bring out the emotions of pain and sadness experienced during the revolution. In contrast, 宋国生 Song Guosheng’s 机轮飞转歌唱扬 Ji Lun Fei Zhuan Ge Chang Yang uses the liangong technique to bring out the vigour of China’s labour force.

Duangong

These are short breaks in the notes within one bow. There are three ways to effect this technique:

跳弓 Tiaogong (Spiccato) is the technique of the bow bouncing on the strings, with one note per bounce. This technique applies generally to the outer string and is continuous in nature. The notes produced are short and often used to express light-heartedness and happiness. This technique is scored with a ‘.’ above the note.

顿弓 Dungong is a short and detached note played at one note per bow. Unlike Tiaogong, this technique does not have bounce and is scored with a ‘▼’ sign above the note.

连顿弓 Lian Dungong is capable of producing numerous Dungong notes within a single bowing action. This technique uses repeated stunting, effected through intermittent releases of tension while bowing. This method of playing is rarely seen in traditional erhu repertoire.

Dougong (Tremolo)

Tremolos are effected using the wrists and arms in trembling motions to play the same note at fast speeds using the tip of the bow. This technique is also sometimes called 撺弓 changong or 碎弓 suigong. The position of the bow when this technique is effected must be beyond the bow’s middle, towards its tail. Notes produced by this technique are usually weak.

In the Chinese orchestra, the dougong is often used to provide harmonic backgrounds, with parts of the bowed stringed section of the orchestra playing separate notes of a chord. 刘天华 Liu Tianhua’s 光明行 Guang Ming Xing (March for Betterment) uses dougong to a full effect in its ending phrases.
右手拨弦 *You Shou Bo Xian (Pizzicato)*

This technique uses the fingers of the right hand to pluck at the *erhu*'s strings. The *pizzicato* performed on the *erhu*'s strings, compared to the *pizzicato* on Western bowed stringed instruments, are short and dry-sounding, with free strings producing the clearest sounds. The well-known piece 赛马 *Sai Ma* (Horse Racing) has a whole section dedicated to *pizzicato* notes. This technique, like its Western counterpart, is scored with ‘*pizz*’ above the note and ‘*arco*’ when bowing is required.

左手拨弦 *Zuo Shou Bo Xian (Pizzicato)*

Also termed *pizzicato*, this technique uses the left hand, which is predominantly controlling notes (by pressing on the strings), to pluck the strings. This technique is usually performed on the *erhu*'s free strings, as no pressing of strings is required. The *erhu* solo 二泉映月 *Er Quan Ying Yue* (Moon Reflecting on the Waters of Erquan) uses this technique. The technique is scored with a ‘+’ above the note.

弓杆敲击琴筒 *Gong Gan Qiao Ji Qin Tong*

This technique requires hitting the *erhu*'s *qintong* with the bamboo spine of the bow to produce woody, percussive sounds. This method of playing is scored with a ‘*†*’ above the note.

大击弓 *Dajigong*

*Dajigong* requires the bow to be lifted near the middle of the strings from the *qintong* and moved up and down rapidly without touching the *qintong*. The sounds produced using this technique are likened to the sounds of horses galloping and are used extensively in 陈耀星 Chen Yaoxing’s 战马奔腾 *Zhan Ma Ben Teng* (Galloping War Horses).

Double Stops

Double Stops can also be done on the *erhu* in the form of perfect fifths. The instrument’s strings cannot be separated when the double stops are in progression. This technique requires the pushing of the bow hairs downwards, allowing the hairs to cover a greater area to play both strings simultaneously. As the space between the *erhu*'s strings is extremely narrow, the left fingers can only press at one point on both strings.

Metallic scratchy sounds can also be produced by twisting the *erhu*'s bow and using its bamboo spine to bow at the strings. The resultant sound is low and not used...
in traditional erhu repertoire. Contemporary erhu repertoire, however, makes use of the bow’s scratchy sounds. Other contemporary sounds include intentionally lifting the bow towards the middle of the strings and bowing. The sound produced by such a technique is rough and scratchy.

**Left Hand Techniques**

The erhu uses the index, middle, ring and last fingers of the player’s left hand to play. The fingers are scored with numbers, with ‘1’ representing the index finger, ‘2’ the middle finger and so on. ‘0’ represents a free or open string. Different sets of fingerings affect the sound texture of the erhu, and certain pieces can be characterised by their fingering. Some left-hand techniques are detailed below:

**揉弦 Rou Xian (Vibrato)**

*Vibratos* can be effected by:

i. Using finger pressure to suppress the string, increasing and decreasing its tension. This technique is also known as 压弦 yaxian and this is possible as the instrument has no fingerboard;

ii. Moving the wrist up and down while pressing at the strings, affecting the finger surface that presses the string;

iii. Using the above two methods together;

iv. Using little or no finger pressure, but instead, locking one’s finger joints and lifting one’s elbow, and sliding the locked finger up and down the string. Such a technique is used in pieces like 河南小曲 He Nan Xiao Qu and 喜唱丰收 Xi Chang Feng Shou. This technique is commonly termed 滑柔 huarou.

Yaxian is more popular in folk music while the wrist method is more commonly used by stringed instruments in the Chinese orchestra.

Rouxian is considered the pivot of some erhu repertoire. In the piece 江河水 Jiang He Shui (River Waters), a combination of rouxian is used. The fingers apply a lot of pressure on the strings but strong wrist movements are in place simultaneously, creating a melancholic sound texture. The usage of rouxian is determined by the erhu player himself, it may be indicated on a score with a ～～～ above the note.

**滑音 Huayin (Portamento)**

There are four types of 滑音 huayin on the erhu – 上滑音 shang huayin (upward glide), 下滑音 xia huayin (downward glide), 回滑音 hui huayin, and 垫指滑音 dianzhi huayin.
A *huayin* is played using an upward glide followed by a downward glide, or vice versa. The upward and downward glides are scored with ‘↗’ and ‘↘’ respectively, and are effected by the fingers gliding up or down the string.

In 垫指滑音 *dianzhi huayin*, fingers are literally stacked on top of each other and are made to roll up and down the string. This technique is used in 江南丝竹 *Jiangnan sizhu* music and in many of 陈耀星 *Chen Yaoxing’s* pieces. It is represented by 陈北抒怀 *Shanbei shuhuai*. This technique is normally used at an interval of a minor 3rd (e.g. from mi to so, or so to mi, and from la to do or from do to la).

*Huayin* is one of the more important *erhu* techniques, as each glide on the strings is capable of changing the style of the piece. On the score, the *huayin* signs must be properly shown. In modern scores, signs like ‘↑’ have been added above notes that have to be emphasised during the *huayin*.

The *huayin* can be used together with *rouxian* to mimic the 琴 *qin’s* (zither) *portamento* effect.

Increasing pressure on the strings can deliver an effect similar to *huayin*, but it is not to be confused with *huayin* done by the sliding of fingers.

**打音 *Dayin***

Similar to the *mordent*, it is scored with ‘丁’ and adds ornamentation to a melody.

**颤音 *Chanyin***

*Chanyin* are trills. Like their western counterparts, they are scored with a ‘tr’. The piece 渔舟唱晚 *Yu Zhou Chang Wan* (Song of Fishing Boats at Dusk) uses *chanyin* extensively to portray waves and ripples.

**泛音 *Fanyin* (Harmonics)**

Harmonics are found at the 1/2, 1/3, 1/4, 1/5 marks of a string (a², e³, a³ and c♯⁴ on the outer string, and d², a², d³ and f♯³ on the inner string).

Artificial harmonics are created by completely stopping the string using the forefinger on the left hand while placing the last finger delicately on a fourth (or a fifth) away from the note touched by the forefinger. The resultant sound is exactly the same as the note placed by the forefinger while the artificial harmonic played by placing the last finger a fifth away from the forefinger would result in the note pressed by the last finger. Harmonics on the *erhu* are akin to those of the violin.
THE ERHU & ITS EXTENSIONS

It is a known fact that the current erhu used in the Chinese orchestra is a modified instrument. However, it is not common knowledge that the instrument was modified after the revolution by a gathering of musicologists, performers, enthusiasts, teachers and students to increase the potential of the erhu. The unmodified erhu was considered defective in many ways. Notes between octaves were inconsistent in terms of volume. Its range was extremely small, and lacked the clarity found in most other instruments.

Through the process of reformation, other forms of huqin were created or modified to fill the gaps of sound that were missing in the developing Chinese orchestra. The new huqin developed or reformed include the 高胡 gaohu, 二胡 erhu, 中胡 zhonghu (Figs. 9.11 & 9.12), 大胡 dahu and 低胡 dihu among others. Some of the modified instruments were shelved while others are still used in the Chinese orchestra today.

高胡 Gaohu

The gaohu (Figs. 9.13, 9.14 & 9.15) is often considered the higher-pitched version of the erhu and is commonly associated with Cantonese music. Smaller than the erhu, its free strings are tuned to $d^2$ (outer string) and $g^1$ (inner string), and its invention is largely credited to the Cantonese musician 郭文成 Lu Wencheng, who modified the gaohu based on the erhu.

Orchestral pieces often use the range of $g^1$ to $e^4$ on the gaohu. However, in solo pieces the instrument has displayed capabilities of reaching notes $e^4$ and higher. Reaching higher pitches than the erhu, the instrument sounds brighter and more piercing though the same techniques used on the erhu can be employed on the gaohu. Usually, the instrument assumes the higher-pitched ranges in the bowed stringed section of the Chinese orchestra and takes over the pitches the erhu will have difficulty with or cannot reach.

Arguably, the most representative repertoire for the Gaohu is 梁祝 Liang Zhu (The Butterfly Lover’s Concerto), composed by 何占豪 He Zhanhao and 陈钢 Chen Gang.

中胡 Zhonghu

This instrument plays the middle to lower note ranges among the huqins in the orchestra (Figs. 9.16 & 9.17). Larger than the erhu, the zhonghu is tuned to $d^1$ (outer string) and $g$ (inner string). Often called the Viola of the Chinese orchestra, the notes used by the zhonghu usually range from $g$ to $d^3$. The instrument goes higher in pitch with increasing difficulty.
Figs. 9.11 & 9.12: Gaohu, erhu & zhonghu

Figs. 9.13, 9.14 & 9.15: Gaohu

Figs. 9.16 & 9.17: Zhonghu
Within the range of $g$ to $d^2$, the zhonghu's sounds are well developed, with a slight nasal quality. Notes $d^2$ and higher possess thinner sounds.

The zhonghu employs the same techniques as the erhu but is not as flexible as its strings are tenser. 刘明源 Liu Mingyuan's 草原上 Cao Yuan Shang (On the Grasslands) expresses the zhonghu's capabilities effectively.

双千斤二胡 Shuang Qianjin Erhu

This erhu has an additional qianjin attached to it and allows a performer to interchange between two different tuning structures. Often, the tuning pitches that are interchangeable are $a^1$ (outer string) and $d^1$ (inner string), and $e^1$ (outer string) and $a$ (inner string). As such, the range of pitches is more comprehensive. This instrument is seldom used in orchestras.

大胡 Dahu

This is a larger version of the erhu. The two strings are often tuned to $d$ (outer string) and $G$ (inner string), or $e$ and $A$, respectively. The instrument’s range spans almost two octaves (from $G$ to $e^1$). Relatively large with wide positions, great energy must be used in pressing the strings, rendering the instrument unsuitable for playing fast pieces. This instrument is seldom used in the Chinese orchestra.

REPRESENTATIVES & REPERTOIRE

Erhu repertoire can be split into five broad categories – traditional pieces like 华彦钧 Hua Yanjun’s 听松 Ting Song (Listening to Pines), modern pieces like 刘文金 Liu Wenjin’s 三门峡畅想曲 San Men Xia Chang Xiang Qu (Sanmen Gorge Capriccio) and the erhu concerto 长城随想 Chang Cheng Sui Xiang (The Great Wall Capriccio), folk pieces like 江河水 Jiang He Shui, and pieces that have been adapted from violin repertoire such as Pablo De Saraste’s Zigennerweisen.

Contemporary repertoire includes 陈庆恩 Chan Hingyan’s 月谜 Yue Mi, 谭盾 Tan Dun’s 火祭 Huo Ji (Fire Sacrifice) and 关迺忠 Kuan Naizhong’s 第一二胡协奏曲 Di Yi Erhu Xie Zou Qu (The First Erhu Concerto).

There are numerous representative huqin musicians. Among the most prolific are:

华彦钧 Hua Yanjun

Hua Yanjun (1893 – 1950), a Jiangsu native, studied traditional music and instruments under his father 华清和 Hua Qinghe, who was a Taoist priest. Through intensive training, he studied and mastered Taoist music, as well as Jiangnan folk music. He
later studied various minority folk music and Jiangnan songs, grasping the mechanics and uniqueness of various traditional Chinese instruments. He believed that artistic invention had to have its basis in traditional music. At age 21, Hua contracted an eye infection and by 35, he had lost his vision entirely. During that time, society was chaotic, and life was difficult. As such, he took to performing in the streets, drifting from place to place, to earn a living.

Having travelled extensively, he made many friends with labourers and members of the lower castes of society. His understanding of the pain that these people went through became an influence in the characteristics of his later pieces.

Hua’s pieces are characterised by their short bowings rather than the conventional long ones, with one note played with each pull or push of the bow; he rarely used the liangong method.

Hua’s fingering method is often called 定把滑音 dingba huayin. When performing, the position of his left hand was almost always fixed at the second position; as such, notes that occurred on the first or third positions were likely portamentos.

Hua’s most famous pieces are 二泉映月 Er Quan Ying Yue (Moon Reflecting on the Waters of Lake Erquan), 听松 Ting Song (Listening to Pines) and 寒春风曲 Han Chun Feng Qu (The Song of a Bitter Spring Wind).

刘天华 Liu Tianhua

Liu Tianhua (1895 – 1932) was a popular Chinese instrumental composer. A Jiangsu native, Liu’s first foray into music came about when he was a member of his high school’s military band. Having learnt to play various brass instruments like the trumpet, he went on to learn to play the琵琶 pipa and erhu from 周少梅 Zhou Shaomei and 沈肇州 Shen Zhaozhou. In 1922, he entered Peking University and majored in Music. Besides studying folk music, he learnt western theories of music and instruments like the Violin and Piano.

Greatly influenced by the May Fourth Movement, Liu was a strong advocate of nationalism and political revolution, believing that music belonged to the people and was a form of cultivation.

Liu’s entire life was centred on developing folk music. He possessed strong opinions and goals and believed that the fusion of East and West would cause new artistic inroads. Due to his perseverance, he made huge steps in developing Chinese musical and artistic roads. He once likened Chinese music to hidden gold, which needs to be dug before it could prosper2.

A significant individual in modern Chinese music, he fought for the erhu’s place in high schools in China and was a pioneer in combining Eastern techniques and rules with Western influences. Liu’s representative erhu pieces include 病中吟 Bing Zhong Yin and 光明行 Guang Ming Xing (Yearning for Betterment). Till today, Liu is highly respected as a composer and Chinese music reformist.
刘文金 Liu Wenjin

Liu Wenjin (1937 – Current), born in Hebei and an outstanding graduate of the Central Conservatory of Music in 1961, is known as the father of modern erhu compositions. Among his first few works were 三门峡畅想曲 San Men Xia Chang Xiang Qu (Sanmen Gorge Capriccio) and 豫北叙事曲 Yu Bei Xu Shi Qu.

In 1982, his composition 长城随想 Cheng Cheng Sui Xiang (The Great Wall Capriccio) broke through conventional erhu repertoire, creating a revolution in erhu composition and performance. The composition later championed the third Chinese National Composition Competition.

Liu, a strong advocate of the Chinese orchestra, has also composed numerous orchestral pieces like 难忘的泼水节 Nan Wang De Po Shui Jie (The Unforgettable Water Sprinkling Festival), 茉莉花 Mo Li Hua (Jasmine), 太行印象 Tai Hang Yin Xiang (Impressions of Taihang) and 音乐会序曲 Yin Yue Hui Xu Qu (Concert Overture). His compositions are characterised by recurring triplets and strong folk flavor.

Today, Liu conducts numerous orchestras and has led ensembles like The Central Chinese Orchestra and The China Song and Dance Chinese Orchestra to America, Australia, Japan, Singapore and many other countries.

1弦鼗 Xiantao refers to an ancient string instrument that could have been percussive despite its stringed nature. Its shape and form is not fully known (See Sanxian and Pipa).

2‘国乐之在今日, 有如沙里面藏着的金, 必须淘金出来, 才能有用’.