

**Volume**

**1**

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# ErHu Lessons and Guide

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# Er Hu Lessons and Guide

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## Introduction

*Er Hu is a string musical instrument that plays a major part in a Chinese orchestra and Chines Music History.*

**E**r Hu is a string musical instrument that plays with a bow. It has thousand years of history but until now, there are very little resources available in other languages except in Chinese.

Erhu is a bowing instrument made of wood and skin. It has the Sound box, The neck (stick), peg, bridge, string, bow, Qianjin as shown in figure X. Erhu uses the bow to rub the strings to create the vibration and through the bridge that pass the sound to the skin to enhance the sound and volume. Through the sound box, it further enhance the sound quality so that the sound can project to audiences. The quality and sound of the ErHu is affected by the wood, the skin, the string, the bridge, the sound box and also one of the most important this is maintenance of the instrument.

How to classify a good ErHu

- 1) The wood quality. One of the best wood is Sandalwood which is hard and the structure of the wood is very fine. The older the wood will stabilize the wood structure which produce better sound. Other good quality wood are Seasonal Rose wood and Ebony which is hard wood. Follow by that is new rose wood and new ebony. Some cheaper version of Erhu using box wood which is less refine in the structure will not produce good sound. Most of the less good quality wood uses paint to cover the quality of wood. Erhu that make using cheap wood can use for beginner practice and not suitable for performance.
- 2) The structure of the sound box. The older erhu sound box is mainly round cylinder shape. It is easier to make and produce loud volume but the quality of sound is not as refined. Some instrument makers explore difference shape of sound box to improve the sound quality. Hexagonal sound box has the next longer history because it produce a more refine sound as compare with round cylinder shape sound box. Sound box with flat oval shape sound box and flat Octagonal sound box was design and developed in the 70s to improve the sound quality. Both the flat oval shape and flat octagonal shape Erhu sound box have much louder volume but the quality of the sound is coast and raw. So it is normally uses in northern China music that are more lively, loud and fast. In the 80s, instrument maker from the north started an Octagonal front but round back sound box which produce loud sound but more refine quality. This type of Erhu sound box was widely accepted for soloist who would like to perform lively, loud, fast or violin likes music. Some of the southern music that is soft and slow, musician still prefer to use Hexagonal shape sound box erhu.

- 3) The skin. Erhu uses mainly Python snake skin as the membrane for the sound box. In the early day, Python is from the wild and the skin normally have a smaller scale but nowadays, Python are farmed with better nutrition. The scale of the skin is larger. Some who has used Synthetic membrane to replace snake skin to avoid killing. In general. Real snake skin with even size of scale and thickness product good sound. If the skin is too thick, the sensitive of the sound will be reduced. If it is too thin, then the sound will be too weak and sharp sound. The tineness of the The synthetic membrane has improved so much that some musicians and orchestra (eg Hong Kong Chinese Orchestra) has uses Synthetic membrane for their ErHu. Using Synthetic membrane will also avoid the custom issues with some countries who do not allow wild life products to bring into their country.

For new Erhu, normally it take some time to get the snake skin season to produce better sound. Player can keep the string and bridge on the skin and tune to the right note. Play often for a period of 2-3 months. This will improve the sound quality of the Erhu.

For very old Erhu that keep for long time, the skin might be too dry and will produce noise and cracking sound. Remove the bow and bridge from the Erhu and apply very thin layer of olive oil on the skin and leave it overnight. It will moisturize the skin and make the sound quality better. Avoid oil at the side of the sound box where it is glued to the wood. The oil will unbound the skin from the wood and damage the Erhu.

After practice, it is better to use a round cylinder pencil to place between the strings and skin above the bride so that it will protect the skin from constant pressure from the bridge and string. The thickness of the pencil should be more than the height of the bridge so that it can life the strings pressure away from the skin.

On top of that, if the Erhu is going to be used in topical countries, it is better to get a southern Erhu made in Shanghai or Suzhou because the skin is bound not too tide and suitable for topical environment. For cool countries, it is better to get Erhu that is from the northern China which is make for colder areas.

Since the skin is easily affected by the environment. It is best to take out the Erhu from the box and let the instrument accustom to the room temperature before any performance. This will stabilize the sound and instrument.

- 4) Erhu Neck or stick. It has to hold the strings, the pegs and sound box which needs to be strong and one piece wood. The wood should not have joint or crack which may weaken the Erhu and in longer term may break.
- 5) Peg. It is the structure that tune the Erhu string. There are mainly pure wood peg or mechanical peg. Mechanical peg has various designs but have to select the design that will not easily damage and affect the tuning. Most professional musician preferred to use pure wood peg so that the tune is more stable and no metal sound when perform. Mechanical Peg may produce metal sound even it might be easily tune but can also damage easily.
- 6) Strings: In the old day, most Erhu uses gut strings which is make of animal gut, dry up and roll into string. Some instruments may uses Silk strings which produce very smooth sound but both Gut and silk string break easily. Some uses nylon string which is stronger but the sound quality is not good.

In the recent year, most Erhu uses metal strings. It is strong, last longer and louder. There are northern China, Southern China and professional strings from various companies. Most Erhu is suitable to use the same string from the same producer of the companies. For example, Shanghai Erhu is better to use Shanghai string because the string is designed and tested for their own Erhu that is made for the same region. If an Erhu uses strings from other manufacturer, may need to take a few days or months to play and let the string and sound box sync-in well. For example, uses a professional set of strings for Erhu also needs to take a few days to Sync-in.

- 7) Bow: Erhu's bow is normally uses bamboo and horse hair as main material. Maker must select thin but elastic bamboo with no join or maximum one join to make the bow stick. It has to be dried and curve with heat to make the shape of a Erhu's bow. The hair are normally white or black horse hair. White horse hair is normally more refined than black horse hair. One end of the bow has hole for the hair to pass through and fasten. The other end will have an adjustable bow frog that will hold the hair and can adjust tightness of the bow hair. The frog is made of wood, plastic, horn or bone. Horn or bone is better because it does not break easily.

Some bow uses synthetic hair which is made of polymer. It looks nice and white but break easily and not easy to apply rosin. There is also hair that has gone through a chemical cleaning process which made the hair look extra white but breakable. The best way is to do a visual inspection and apply rosin on the hair to see if the rosin can stick to the hair.

Rubbing the bow on the string will generate sound. That is why the bow and the bow hair is very important. Bamboo if it is too thick and it will be too heavy, too thin will be too light. It must have the right balance so that the bow can easily learn staccato bowing which the bow hair jump between the two strings.

Normally bow that is made from northern China is longer and the bamboo is light. Those bow made from southern China are shorter and have a more elastic bamboo. It is mainly on the preference of the player to select the right bow for themselves.

The bamboo should be bent concave toward the hair so that when tighten the hair will still have the concave curve. A converted bow is too weak and needs to be corrected by expert.

Never apply any oil or cleaning liquid to the bow hair because once the hair touches oil, the rosin will not be able to stick on the hair and will not produce sound.

New bow may need to spend more time to apply rosin on the hair. But on the other hand, old bow may not be easily to apply rosin on the hair because the hair has lost the scale and cannot hold another rosin. That is the time to change the bow hair or even change the bow.

Some violin bows can be as expensive as a violin because of the workmanship and is made of wood. The Erhu bow will not cost as much as violin bow because the process of making is simpler than violin bow.

The adjustable screw of the bow frog is normally made of iron and may get rusty. Apply little grease on the screw will help to prevent rust.

In cold weather, the environment may be too dry and the bamboo may crack. It is good to play in an indoor environment for Erhu.

Do not apply too much rosin because extra rosin may stick on the bamboo, the hair and the sound box. This will make it unsightly and difficult to clean. It is a good habit to use a dry cloth to clean up the rosin after used.

- 8) Bridge: Erhu's bridge is normally made of wood. The bridge will pass the sound from the string to the skin and the sound box. The quality of bridge will affect the sound of the Erhu.

Some uses soft wood like pine or maple wood. Some uses hard wood like sandalwood, rosewood. Some even soak the bridge in oil or cook in oil. Some uses bamboo, seashell, pencil or even metal spring as bridge. The base of the bridge can be round, narrow oval, or even rectangle shape. Recently year some maker create 3D printed Polymer, metal bridge some make composite bridge which uses many layers of difference wood.

The selection of bridge depend on individual musician and also the condition of the Erhu. In general, soft wood, oil soak or oil cook, bigger base bridge will produce mellow sound effect. It is more suitable for new Erhu which has a higher pitch tone may needs this type of bridge.

The older erhu may already have mellow sound and less elastic on the skin. Uses hard wood bridge or even Bamboo Bridge will correct the problem.

9)

Selection and Protection for Er Hu





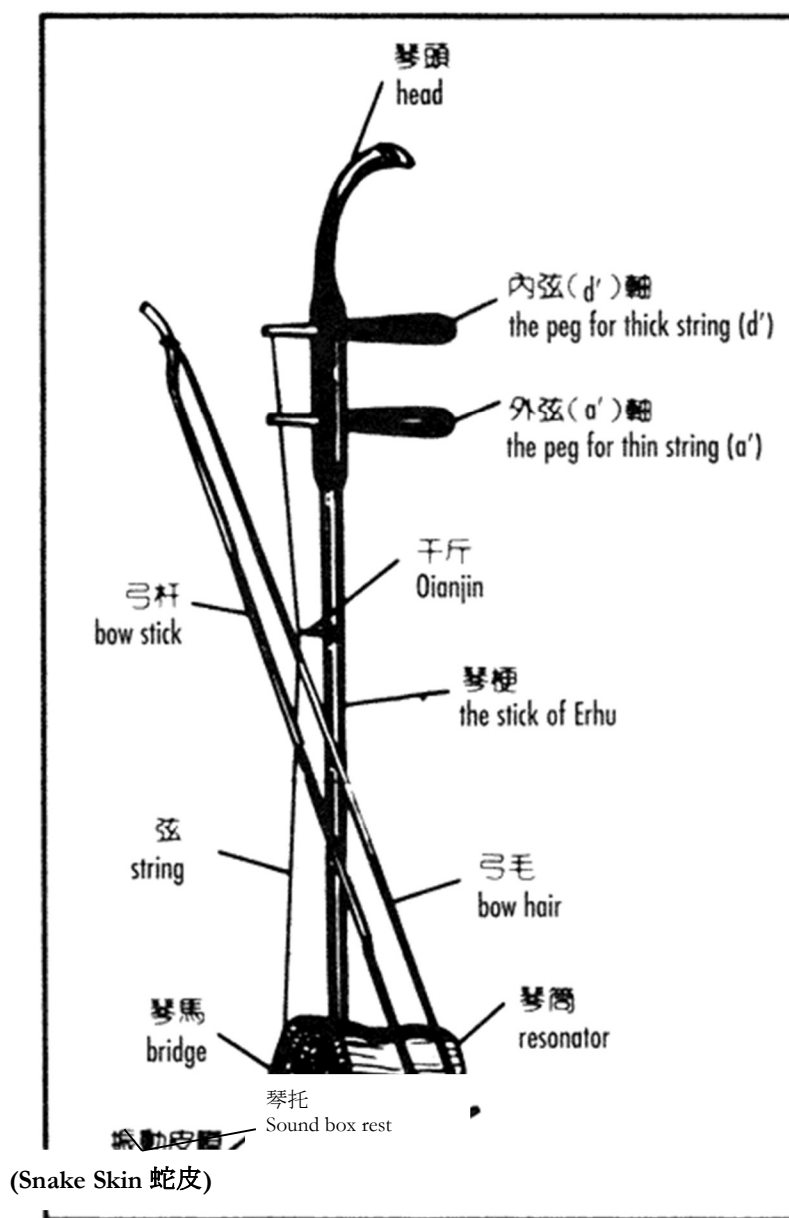


Figure 1: Structure of Er Hu

- Er Hu is the pushing and pulling instrument made from wood and vibration skin. It form by Resonator (琴筒) , Vibration Skin (皮膜) , The stick of Er Hu (二胡杆) , The peg for thick string (inner string) & thin string (outer string) (琴轴) , Bridge (琴馬) , Qianjin (千斤) , String (琴弦) , Bow (琴弓) and Sound box rest (琴托) . (Refer to Figure 1)
- The sound of Er Hu is the friction of pushing and pulling in between the Bow (琴弓) and the String (琴弦) go through the Bridge (琴馬) and Vibration Skin (皮膜) then out from the Resonator (琴筒) .

- The sound box or Resonator (琴筒)
  - Initial version of Er Hu Sound box is round cylinder shape. It was later developed into Hexagon shape. In the 70-80s there are other shape of Er Hu Sound box include the font is Octagon and the back is round, eggs shape, flat Octagon shape. Some makers also add another bamboo cylinder inside the sound box to increase the volume of the Er Hu.
  - The main purpose of changing shape of the sound box is to improve the quality of the Er Hu sound. It is more stable now and most Er Hu is in 2 type of sound box namely Octagon and Hexagon. Octagon shape sound box is still more popular in northern China because they like the louder sound effect. Southern China like more refine sound quality and still remind using Hexagon
- Er Hu head (琴头)
  - Er Hu head has 3 4 majors shape. It is mainly used for decoration but it does represent some background of the instruments
  - Some Er Hu head has dragon carving, wheat, flows carving; some are just simple flat round head. Dragon carving is common use on refine instrument or collector instruments that is more for display or with collection value. Wheat or flows carving mainly made during Cultural revolution because Agriculture is most important during that period. The round flat shape has 3 subtypes. Flat egg shape is mainly from Su Zhou. 2/3 egg flat sharp are mainly made in Shanghai area. 2/3 round flat shape is mainly from Beijing areas. Recently, some make also uses ladder shape for the head of Er Hu.
  - There is no effect on the sound quality with difference shape of the head.
- Snake Skin or Vibration Skin (皮膜)
  - This is one of the main and most important part of Er Hu. In most cases, the skin with even pattern and translucent thickness will have better sound quality.
- Wood (木料)
  - Normally Er Hu uses hard wood like black wood. Rose wood, and sander wood. This is because if the wood is hard, the vibration will be focus on the snake skin and the sound quality is better.
  - Some makers will add a piece of lead at the bottom of the sound box rest to add weight on the Er Hu. This will also help in stabilized the Er Hu when play but the sound quality may not improve a lot.
- String (琴弦)
  - The string that is closer to the human body is called the inner string. The other string is called outer string. Most of the time Er Hu is tune in D and A but it can also be tune to other notes.
- Note reading (琴调)
  - Since Er Hu is tune as D and A notes. We will read it difference in difference scale.
  - All the music scales are aligned to Western music. There are some traditional music will use other scale which will be discuss in the later lessons.

- Remember in Chinese Music, they use notation of 1, 2, 3, 4, 5, 6, 7 to represent Do, Re, Me, Fa, So, La, Ti, Do. 3 and 4 as well as 7 and 1 are semi tone
- The easiest scale for Er Hu is to start with D Major because Er Hu is tuned as D A string. The inner string will sing as 1 or Do and outer string will sing as 5 or So.
- For other Scale, it will be sung differently
- For A Major,
- Bow (弓)
  - There are 2 major difference type of bows. Northern Chinese Bow which is longer and southern China Bow which is shorter. This could be due to the size of the people who are taller in northern China and shorter in Southern China. Of course this is not the case now a day. There are also many difference grade of Er Hu bow.
  - The main selection critical is that there should be one join and the join should be near to the bow hill or bow handle part. This is to ensure that the weight of the bow is balance so that it will be easy to practice certain Bow technique in the future.
  - Bow hair is using Horse Tail hair. Make sure to use white instead of black horse tail hair because white is finer than black hair.
  - There are some man-made hairs and it not be good because of the sound effect.
  - There are also some wooden based bows instead of bamboo base. Wood based are heavier and less flexible.
- Er Hu bridge (二胡码)
  - Er Hu Bridge is made of a small piece of wood. Some use hardwood like rose wood, black wood. Some make like to use soft wood like maple wood. Some musicians even soak the bridge in oil to get a softer effect. This is all depending on the quality of Er Hu and the sound effect the musician like. A lot of fine tuning and matching is needed to get a better sound effect and preference.
- “Thousand Gold” or Qianjin (千斤)
  - It is the string that tie at 1/3 of the Er Hu. This is to cut off the noise from the string so that both inner and outer string will start from the same position.
- Sound box rest (琴托)
  - Some Er Hu will have a piece of wood place at the bottom of the Sound box. This will help to reduce the body contact to the sound box and affect the sound quality. Most newer Er Hu will have Sound box rest.
- Bow holding. (持弓)
  - It is like holding a Chinese Paint brush. Middle and unnamed finger should be in between of the horse hair and bamboo. These 2 fingers is to control the volume of the sound. When play inner string, both finger need to press the bow hair and control the strength to get a required sound effect. The same when playing the outer string, both fingers will push out toward the bamboo to control the strength and sound effect.



- The bow hair needs to be touching the sound box and middle wood stick. Using the earth gravity, the bow is moved along the sound box to create the sound effect.
  - At the bow hill, player needs to control the strength of the bow so that it will have less strength on the string and create a clearer sound.
- Seating position. (坐姿)
  - Now a day, most players will seat in the same position with both leg on the floor. The left leg is aligned with the Er Hu and left hand. If the leg is too short, can have a stool to raise the leg.
- In each Er Hu case or bag, it should have another set of Er Hu strings and Rosin. There are difference type of Er Hu strings. Some are made from the Northern China, Southern China and some are specially made for certain sound effect. Need to find the right match for your Er Hu and the piece. It also has to take some time to season it so that the sound quality is good.
- We have to concern a few points when select the Er Hu.
  - Wood of Er Hu
  - Shape of Er Hu
  - Vibration Skin of Er Hu

## Introduction

*Er Hu is a string musical instrument that plays a major part in a Chinese orchestra and Chines Music History.*

**E** Er Hu is a string musical instrument that plays with a bow. It has thousand years of history but until now, there are very little resources available in other languages except in Chinese.

### Selection and Protection for Er Hu

- Quick revised of the Lesson 1 on the sound box, Er Hu types, sharp, Head, Snake Skin, wood, scale in relationship to Piano
- Go thru practice 1 and introduce the bow direction. Pull bow  and push bow .
- The emphasis of the practice is to make sure that there is no unwanted noise when play both inner bow and outer bow. Here are some tips
  - Play with long and slow bow first.
  - Need to control the bow so that it is on the sound box and close to the vertical body of the stick
  - When the bow is at bow hill, need to control by lift the bow so that there is not too much weight
  - When the bow is at bow tip, need to apply pressure to create more sound.
  - Overall goal is to have constant sound and volume with no noise when play to bow.
- The note distance between both the strings are mostly 5 intervals. Some special piece may have tune the strings could be 4 intervals or less but these are rare.
- For example E major, the outer string will be call 4 (or Fa) and the inner string will be 5 intervals to 4 (Fa) which is 7 flat instead of 6 sharp even both 7 flat and 6 sharp are the same note.
- Chinese Music notations are using 1,2,3,4,5,6,7 which is from Europe. Some of the traditional Europe music are also using similar notation.
- Try to use line A4 paper for the scale drawing. Each scare draw on one page.

- The lessons are to share self-learning methods so that each participants should not have any pressure on the speed of learning. Any speed of progression is fine so long you enjoy it.
- One participant asking about Synthetic skin. Here are my view
  - Some China manufacturers already start selling Synthetic skin Er Hu but the quality is not very good. The cost is relatively lower than real skin.
  - There is a Singapore music shop who sell a lot of Chinese Musical instrument thru web. They do have Synthetic skin Er Hu. <http://www.easonmusicstore.com/webshaper/store/viewProd.asp?pkProductItem=3> (The price is in us\$. Can call them to ask for the price in Singapore \$)
  - Hong Kong Chinese Orchestra design their own Er Hu without using Snake Skin. [http://www.hkco.org/old/eng/learning\\_inst\\_2\\_3\\_eng.asp](http://www.hkco.org/old/eng/learning_inst_2_3_eng.asp). This type of Er Hu can travel to many countries and that is why HK Orchestra used them. Unfortunately, they do not sell them
  - Er Hu Musician George Gao also design his own Er Hu without using Snake Skin. This type is very specially made. George Gao selling it for about US\$6K each. The skin can be change to wooden type or with Sensor that can play like Electrical Guita. <http://www.georgegao.com/>

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Selection and Protection for Er Hu

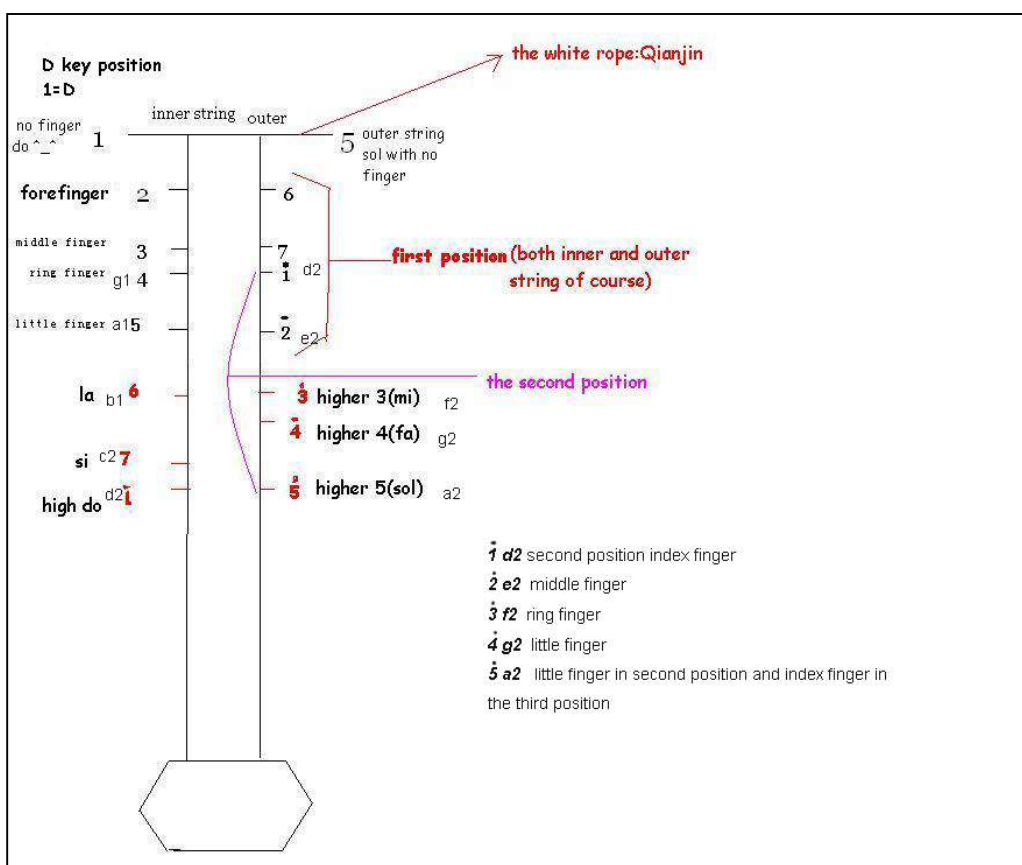
## ER HU GUIDE AND LESSONS

- Scales learning and Er Hu tuning. (Download “g-string tuner” from the Apps)
- Er Hu is tune @ “D” as “Do” and “A” as “So” (二胡内外弦的關係为五度 = 1 – 5 弦) .
- “D” is for inner string (內弦) and “A” is for outer string (外弦) .  
Below table is the Er Hu tuning list

附：定音DA与各调定弦关系表

1=D	1—5 弦	1=E	<sup>b</sup> 7—4 弦
1=G	5—2 弦	1= <sup>b</sup> E	7— <sup>b</sup> 4 弦
1=F	6—3 弦	1=B	<sup>b</sup> 3— <sup>b</sup> 7 弦
1=C	2—6 弦	1= <sup>b</sup> A	<sup>*</sup> 4— <sup>*</sup> 1 弦
1= <sup>b</sup> B	3—7 弦	1= <sup>*</sup> F	<sup>b</sup> 6— <sup>b</sup> 3 弦
1=A	4—1 弦	1= <sup>*</sup> C	<sup>b</sup> 2— <sup>b</sup> 6 弦

注：表的左侧是二胡常用的调和定弦，右侧使用较少。





## ER HU GUIDE AND LESSONS

- Go thru the practice for pushing and pulling the Er Hu. Practice for the lesson on page 10 – Empty String Practicing (空弦练习).
- Learning on how to select the good and perfect Er Hu.
  - Wood must be firm and natural without any paint.
  - Body must be heavy
  - Snake skin must be equally in sharp

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Selection and Protection for Er Hu

**Date:** Friday, 4<sup>th</sup> July 2014

**Session Focuses:**

The focus of the session are as follows:

- A. Er Hu Tuning
- B. “Empty String” with Loudness and Softness Control
- C. String Pressing Method 按弦法

**A. Er Hu Tuning**

(1) Start up a free mobile application called “*gStrings*”. (This is available in android-based platform. You can also download something equivalent from iOS platform). The application serves as a tuner for tuning your string instrument).

(2) Please the mobile phone next to you.

(3) There are two tuning pegs, namely upper tuning peg (for ‘D’ string) and the lower tuning peg (for ‘A’ string).

**(4) Positioning of left hand.**

- a. If you are right handed person, use your left-hand index finger, middle finger and ring finger to cup around the tuning peg.
- b. Place your thumb on top of the tuning peg.
- c. Place your pinky/little finger at the other side of the tuning peg. Please ensure that no extra force is asserted on the main support of Er Hu.
- d. Make sure you have a firmed grip on the tuning peg.

**(5) Tuning.**

- a. With a firmed grip from step 4, loosen the string and gradually tightening the string until the “D” key or “A” key is reached as shown in the “*gStrings*” application.

**(6) Refined Tuning.**

- a. Sometimes, it may not be easy to tune the string to the exact “D” or “A” key. One way is to utilize a small device (or fine tuner) to refine the tuning of the string until satisfaction.



Figure 1.

- b. Alternative, you can gently press the string lightly to create some tension to the string for better tuning result.

### B. “Empty” String with Loudness and Softness Control

Two extra musical symbols for expressing the strength of tone have been introduced in empty string exercise. They are:

	Crescendo (渐强). From soft (weak) to loud sound
	Diminish (渐弱). From loud to soft (weak) sound

The introduction of these two musical symbols is to ensure you are able to use strength control on the bow to emit the softness and loudness of sound.

**Exercise 1.** Repeat the exercises 1 and 2 for empty string to include the control of loudness and softness sound control.

### C. String Pressing Method (Scale)

This session is to show you the method of string pressing (scale pressing).

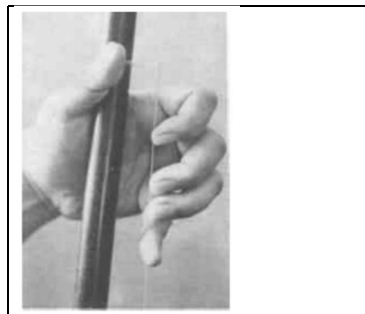
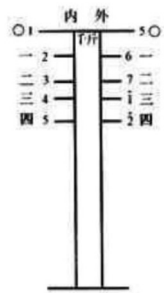


Figure 2



Please refer to the Figure 2 for the proper string pressing.

The numbering of fingers as shown in Figure 4 should map to the numbers as shown in Figure 3.

From the position of 千斤 to '2' is about an inch distance.

For 3 and 4, the distance is about 1/2 inch.

**Exercise 2:**  
Practice your very first "D" scale based on the

Figure 3 D Scale

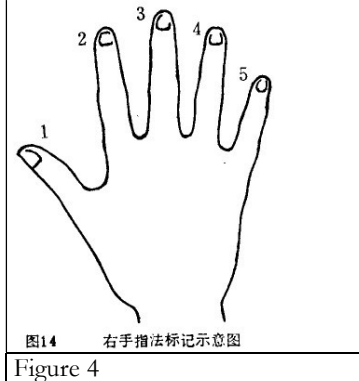




图14 右手指法标记示意图

Figure 4

To save time in the future, print a copy of this document. Click **Print** on the **File** menu, and press ENTER to receive all eight pages of examples and instructions. With the printed document in hand, position yourself in normal view to see the style names next to each paragraph. Scroll through the document, and write the style names next to the paragraphs (press CTRL+HOME to reposition yourself at the beginning of the document).

#### ICON KEY

 Valuable information

 Test your knowledge

 Keyboard exercise

 Workbook review

To create a drop cap for the lead paragraph, like the example above, select the letter T, and then type a new letter.

## How to Customize This Manual

The “icon key” at left was produced by using the Heading 8 style for the words “icon key” and the List Bullet 5 style for the text below—which uses a Wingdings symbol for the bullet character. To change the bullet symbol, click **Bullets and Numbering** on the **Format** menu. Click **Modify**, and then click the **Bullet** button. Select a new symbol, and then click **OK** twice.



#### About the “Picture” Icons

The “picture” icons are Wingdings typeface symbols formatted in white with a shaded background. To insert a new symbol, select the character and then click **Symbol** from the **Insert** menu. Select a new symbol, click **Insert**, and then click **Close**. To create new icons, format a one-character paragraph as the Icon 1 style.

To change the shading of the Icon 1 style, click **Borders and Shading** on the **Format** menu. Select a new shade or color, and then click **OK**.

## Section Breaks Are Key

In this manual, section breaks are the secret to success. Double-click the section break above to activate the **Page Setup** menu. Click the **Margins** tab.

**Using the Break**  
command, you can insert a page, column, or section break.

As you can see, this section (page) has margins of 1.25 inches top and bottom, 2.33 left, and .83 right—with headers and footers of .67 inches. Special section margins make it possible

for this manual to use framed Styles—such as the Icon 1 style—which will move with the text.

- Breaks in a Word document appear as “labeled,” dotted double-lines.
- To insert a section break, click **Break** on the **Insert** menu. Select one option, and then click **OK**.

## About Pictures and Captions

Assuming that you see your paragraph marks, you'll notice a paragraph mark attached to the lower-right corner of the picture. Click the picture, and notice too, the name of the style—not surprisingly, the Picture style. Pictures attached to paragraph styles make it possible for pictures to act like paragraphs.



FIGURE 21.1 uses this caption text. In Word, the Caption style can be automatically numbered and labeled. Click **Caption** on the **Insert** menu to access and control the caption settings. Press the F1 key to search for additional information and Help on captions.

**This is Heading 5. Like all styles in this margin, it can flow with the text.**

**To change the picture,** first click it to select it. Point to **Picture** on the **Insert** menu, and then click **From File**. Clear the **Float over Text** check box. Select a new picture, and then click **Insert**. To change the color of the picture, double-click the graphic to activate the drawing layer—where you can group or ungroup picture objects, and re-color or delete objects. Click an object, and then click **Drawing Object** on the **Format** menu. Select a new shade, and then click **Close**. To delete an object, select it, and then press **DELETE**. Click **Close Picture**.

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**Try this:** Click in the framed text below, and choose **Body Text** from the **Style** list on the **Formatting** toolbar. The headline should now appear as the paragraph below this paragraph. To change the paragraph back to Heading 5, click the **Undo** toolbar button, or click **Heading 5** from the **Style** list.

**Framed text, like this heading, can be cut, copied and pasted like regular paragraph text.**

To cut and paste framed text, click on the bounding border of the frame to reveal the frame handles. Press **CTRL+X** to cut the frame from the page. Place your cursor before the first letter of the paragraph that you want the frame to appear next to. Press **CTRL+V** to paste the frame next to the paragraph.

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## How to Change the Headers and Footers

#### Written exercise

pages 121 - 123 in your workbook.

In print layout view, double-click the header or footer to activate it, or click **Header and Footer** on the **View** menu. You can change or delete the text just as you would regular document text. To specify placement and whether the header or footer should be different on odd and even pages, or different for the first page only, click **Page Setup** on the **File** menu, and then click the **Layout** tab.

## How to Create a Numbered Paragraph

To create a numbered paragraph:

1. In the **Font** list on the **Formatting** toolbar, click the **List Number** style;  
or
2. Click the **Numbering** button on the **Formatting** toolbar.

If you choose to format more than one paragraph, Word will automatically number the paragraphs.

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When you save the manual template with your changes, it will be easier to create documents in the future. To customize this manual:

1. Insert your company information in place of the sample text on the cover page, as well as the inside-cover
- To link a picture to** your template, link the picture when you insert it by clicking on the Link to File box.



page. If you plan to use styles such as the “Icon Key” or Icon 1 style, set them now (see instructions, page 1).

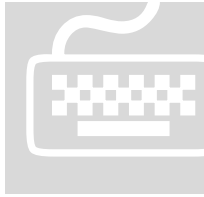
2. Click **Save As** on the **File** menu. In the dialog box, click **Document Template** in the **Save File as Type** box. (The file name extension should change from .doc to .dot.)

#### **How to Create a Document**

To create a manual from your newly saved template, click **New** on the **File** menu to re-open your template as a document. If you followed the steps above, your company information should appear in place. Now, you are ready to type your manual.

## **More Template Tips**

There are three ways to view the various style names of the template sample text:



1. In normal view, click **Options** on the **Tools** menu. Click the **View** tab. In the **Style Area Width** box, dial a number, and then click **OK**;
2. In any view, click a paragraph and view the style name on the **Formatting** toolbar; or
3. On the **Format** menu, click **Styles and Formatting** to display the **Styles and Formatting** pane.

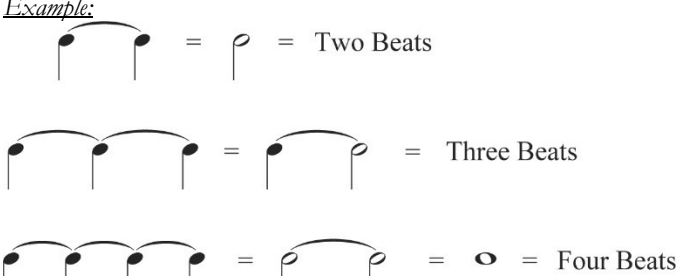


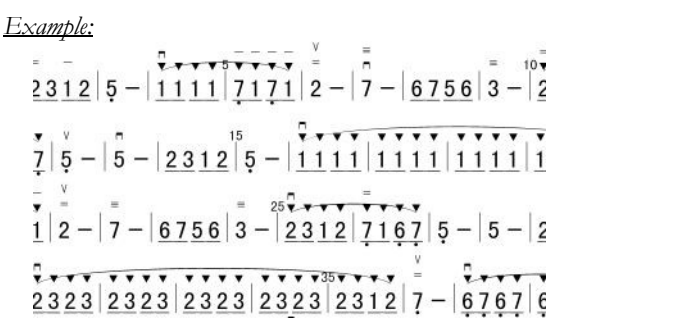
## Introduction

*Er Hu is a string musical instrument that plays a major part in a Chinese orchestra and Chines Music History.*

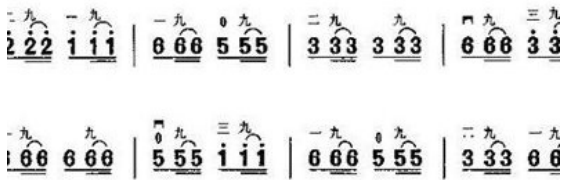
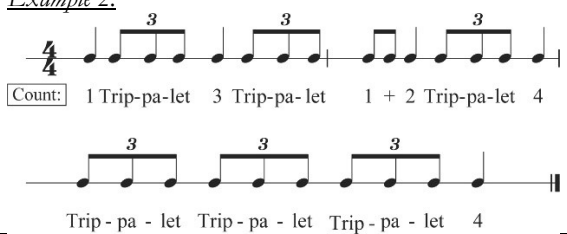
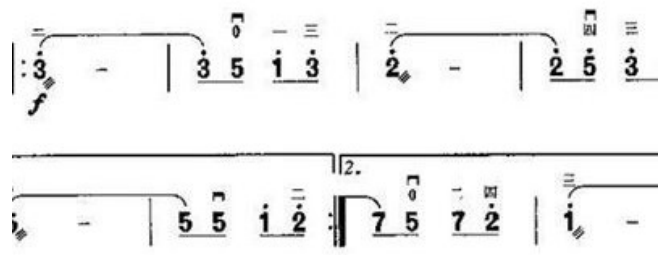
**E**r Hu is a string musical instrument that plays with a bow. It has thousand years of history but until now, there are very little resources available in other languages except in Chinese.

Documented by: Wilson Yao Weilin

## 1. Bowing techniques

a.	<p>Tie/Legato (连弓)</p> <p><i>Example:</i></p> 	<ul style="list-style-type: none"> <li>• Join 2 or more notes together</li> <li>• Play all notes in a bow <ul style="list-style-type: none"> <li>○ If not, control the bow such that it sounds like a single bow, even if multiple bow is been played</li> </ul> </li> </ul>
b.	<p>Staccato (断弓)</p> <p><i>Example:</i></p> 	<ul style="list-style-type: none"> <li>• Opposite of legato</li> <li>• Notes is play sounds like plucking(short duration for single notes).</li> <li>• Sequence of fast martelé strokes in the same bow direction</li> </ul>
c.	<p>Spiccato (跳弓)</p> <p><i>Example:</i></p>  <p>Handwritten musical notation for Spiccato, showing a sequence of notes with slurs and accents.</p>	<ul style="list-style-type: none"> <li>• Bow bounces lightly upon the string, resulting in a series of short, distinct notes</li> <li>• Needs special way of holding the bow</li> <li>• Depend on the weight of the bow</li> <li>• Jump in between the string</li> </ul>
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## ER HU GUIDE AND LESSONS

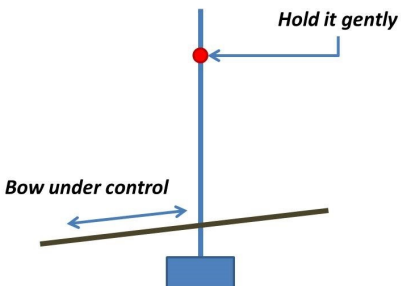
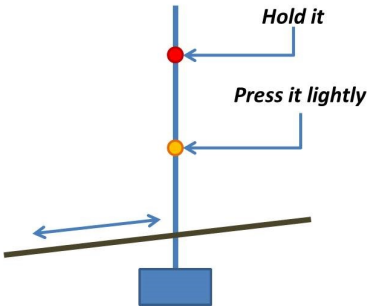
e.	<p>Ricochet (抛弓)</p> <p><i>Example 1:</i></p>  <p><i>Example 2:</i></p>  <p>Count: 1 Trip-pa-let 3 Trip-pa-let 1 + 2 Trip-pa-let 4</p> <p>Trip - pa - let Trip - pa - let Trip - pa - let 4</p>	<ul style="list-style-type: none"> <li>When bowing, relax and drop the bow in a certain height</li> <li>It sounds like triplet</li> </ul>
f.	<p>Tremolos (颤弓)</p> <p><i>Example 1:</i></p> 	<ul style="list-style-type: none"> <li>Moving the bow back and forth in very short strokes extremely rapidly, not in measured rhythm.</li> </ul>

## 2. Points to note when Tuning

- Too much strength it will break
- If too tight, release and tighten the string until it sounds right
- Press too hard will affect the tune, normally drop half a tune.

## 3. Playing techniques

a.	<p>Detache</p>	<ul style="list-style-type: none"> <li>Stopping the bow on the string deadens the vibrations and thus</li> </ul>
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		<p>creates a muted accent</p> <ul style="list-style-type: none"> <li>• Hold the notes gently, not too hard and not too soft</li> <li>• Play using finger tips</li> </ul> <p><b>Note:</b> Close eye and listen to the notes, control the bowing speed and strength as well as the strength of holding the notes.</p>
b.	<p>Ponticello/Sul Pont(乏音)</p> 	<ul style="list-style-type: none"> <li>• Gives a more intense sound than usual, emphasizing the higher harmonics.</li> <li>• Hold the main notes on the 1<sup>st</sup> index of the finger and press lightly on the last index of the finger.</li> <li>• Sounds like high pitch flute if the control is right</li> </ul>

#### 4. Arranging music

- Navigate to baidu.com for music
- Search for score/music by name or song title
- Get the lowest notes
- Identify the major(Chords family)
- Adjust to tune to appropriate major accordingly if needed(*normally for group performances*)



#### 5. Applying Rosin

- Let Er Hu lie flat on the ground with snake skin facing upwards
- When rubbing the inner string, open the inner string by holding at the bow head and gently open with the help last 2 index fingers.
- When rubbing the outer string, use thumb to control.

##### Er Hu Lesson 2

20 Jun 2014 12:00 to 1:30 pm

By Goh Kiah Mok

- Quick revised of the Lesson 1 on the sound box, Er Hu types, sharp, Head, Snake Skin, wood, scale in relationship to Piano
- Go thru practice 1 and introduce the bow direction. Pull bow  and push bow .
- The emphasis of the practice is to make sure that there is no unwanted noise when play both inner bow and outer bow. Here are some tips
  - Play with long and slow bow first.
  - Need to control the bow so that it is on the sound box and close to the vertical body of the stick
  - When the bow is at bow hill, need to control by lift the bow so that there is not too much weight
  - When the bow is at bow tip, need to apply pressure to create more sound.

- Overall goal is to have constant sound and volume with no noise when play to bow.
- The note distance between both the strings are mostly 5 intervals. Some special piece may have tune the strings could be 4 intervals or less but these are rare.
- For example E major, the outer string will be call 4 (or Fa) and the inner string will be 5 intervals to 4 (Fa) which is 7 flat instead of 6 sharp even both 7 flat and 6 sharp are the same note.
- Chinese Music notations are using 1,2,3,4,5,6,7 which is from Europe. Some of the traditional Europe music are also using similar notation.
- Try to use line A4 paper for the scale drawing. Each scale draw on one page.
- The lessons are to share self-learning methods so that each participants should not have any pressure on the speed of learning. Any speed of progression is fine so long you enjoy it.
- One participant asking about Synthetic skin. Here are my view
  - Some China manufacturers already start selling Synthetic skin Er Hu but the quality is not very good. The cost is relatively lower than real skin.
  - There is a Singapore music shop who sell a lot of Chinese Musical instrument thru web. They do have Synthetic skin Er Hu.  
<http://www.easonmusicstore.com/webshaper/store/viewProd.asp?pkProductItem=3> (The price is in us\$. Can call them to ask for the price in Singapore \$)
  - Hong Kong Chinese Orchestra design their own Er Hu without using Snake Skin. [http://www.hkco.org/old/eng/learning\\_inst\\_2\\_3\\_eng.asp](http://www.hkco.org/old/eng/learning_inst_2_3_eng.asp). This type of Er Hu can travel to many countries and that is why HK Orchestra used them. Unfortunately, they do not sell them
  - Er Hu Musician George Gao also design his own Er Hu without using Snake Skin. This type is very specially made. George Gao selling it for about US\$6K each. The skin can be change to wooden type or with Sensor that can play like Electrical Guita. <http://www.georgegao.com/>

**Er Hu Lesson 3**

27 Jun 2014 12:00 to 1:30 pm

By Goh Kiah Mok

- Scale
- Photos
- Practice 2, 3

**Date:** Friday, 4<sup>th</sup> July 2014

**Session Focuses:**

The focus of the session are as follows:

- D. Er Hu Tuning
- E. “Empty String” with Loudness and Softness Control
- F. String Pressing Method 按弦法

## A. Er Hu Tuning

- (7) Start up a free mobile application called “*gStrings*”. (This is available in android-based platform. You can also download something equivalent from iOS platform). The application serves as an tuner for tuning your string instrument).
- (8) Please the mobile phone next to you.
- (9) There are two tuning pegs, namely upper tuning peg (for ‘D’ string) and the lower tuning peg (for ‘A’ string).
- (10) **Positioning of left hand.**
  - a. If you are right handed person, use your left-hand index finger, middle finger and ring finger to cup around the tuning peg.
  - b. Place your thumb on top of the tuning peg.
  - c. Place your pinky/little finger at the other side of the tuning peg. Please ensure that no extra force is asserted on the main support of Er Hu.
  - d. Make sure you have a firmed grip on the tuning peg.
- (11) **Tuning.**
  - a. With a firmed grip from step 4, loosen the string and gradually tightening the string until the “D” key or “A” key is reached as shown in the “*gStrings*” application.
- (12) **Refined Tuning.**
  - a. Sometimes, it may not be easy to tune the string to the exact “D” or “A” key. One way is utilize a small device (or fine tuner) to refine tuning of the string until satisfaction.
  - b. Alternative, you can gently press the string lightly to create some tension to the string for better tuning result.



Figure 1.

## B. “Empty” String with Loudness and Softness Control

Two extra musical symbols for expressing the strength of tone have been introduced in empty string exercise. They are:

	Crescendo (渐强). From soft (weak) to loud sound
	Diminish (渐弱). From loud to soft (weak) sound

The introduction of these two musical symbols is to ensure you are able to use strength control on the bow to emit the softness and loudness of sound.

**Exercise 1.** Repeat the exercises 1 and 2 for empty string to include the control of loudness and softness sound control.

### C. String Pressing Method (Scale)

This session is to show you the method of string pressing (scale pressing).



Figure 2

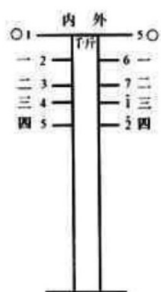


Figure 3 D Scale

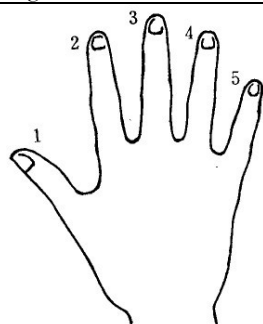


图14 右手指法标记示意图



Figure 4

Please refer to the Figure 2 for the proper string pressing.

The numbering of fingers as shown in Figure 4 should map to the numbers as shown in Figure 3.

From the position of 千斤 to '2' is about an inch distance.

For 3 and 4, the distance is about 1/2 inch.

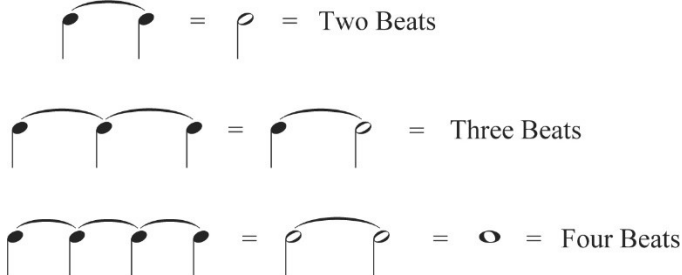


## Exercise 2:

Practice your very first "D" scale based on the

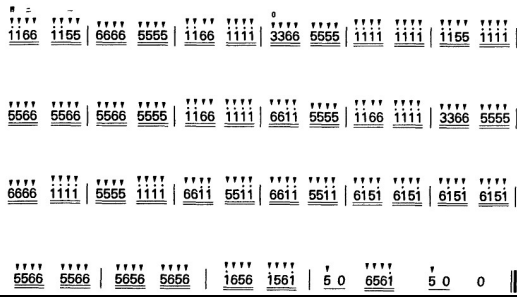
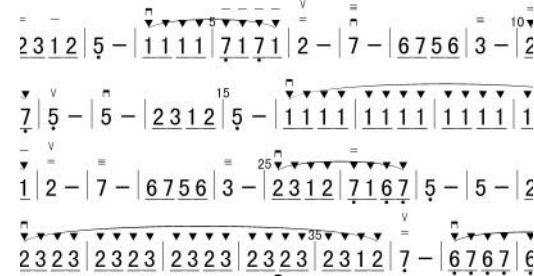

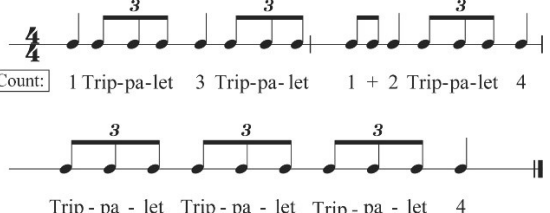
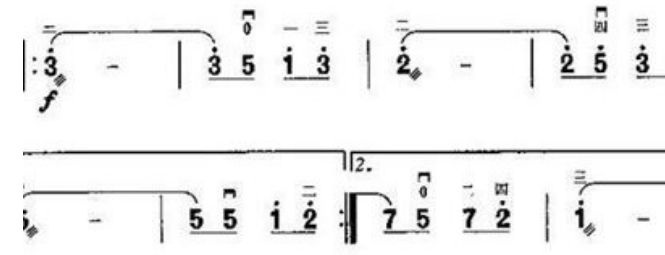
### Er Hu Lesson 5

Documented by: Wilson Yao Weilin

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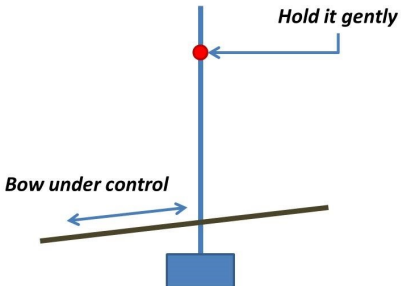
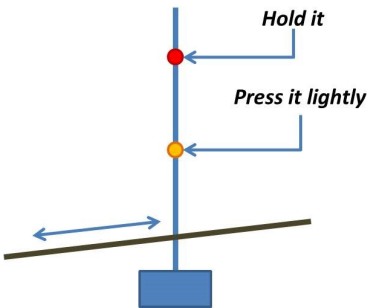
# ER HU GUIDE AND LESSONS

		
d.	<p>Solid Staccato (頓弓)</p> <p><i>Example:</i></p> 	<ul style="list-style-type: none"> <li>Same as Spiccato(跳弓), but play it much heavier.</li> </ul>
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a.	<p>Detache</p> 	<ul style="list-style-type: none"> <li>• Stopping the bow on the string deadens the vibrations and thus creates a muted accent</li> <li>• Hold the notes gently, not too hard and not too soft</li> <li>• Play using finger tips</li> </ul> <p><i>Note:</i> Close eye and listen to the notes, control the bowing speed and strength as well as the strength of holding the notes.</p>
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- Let Er Hu lie flat on the ground with snake skin facing upwards

## ER HU GUIDE AND LESSONS


- When rubbing the inner string, open the inner string by holding at the bow head and gently open with the help last 2 index fingers.
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## Seven Keys to Creating a Professional Manual


*Like the Chapter Title Style above and the Chapter Subtitle you're reading, preset styles in Microsoft Word are just a few clicks away.*

**T**o save time in the future, print a copy of this document. Click **Print** on the **File** menu, and press ENTER to receive all eight pages of examples and instructions. With the printed document in hand, position yourself in normal view to see the style names next to each paragraph. Scroll through the document, and write the style names next to the paragraphs (press CTRL+HOME to reposition yourself at the beginning of the document).

### ICON KEY

 Valuable information

 Test your knowledge

 Keyboard exercise

 Workbook review

**To create a drop cap** for the lead paragraph, like the example above, select the letter T, and then type a new letter.

## How to Customize This Manual

The “icon key” at left was produced by using the Heading 8 style for the words “icon key” and the List Bullet 5 style for the text below—which uses a Wingdings symbol for the bullet character. To change the bullet symbol, click **Bullets and Numbering** on the **Format** menu. Click **Modify**, and then click the **Bullet** button. Select a new symbol, and then click **OK** twice.



### About the “Picture” Icons

The “picture” icons are Wingdings typeface symbols formatted in white with a shaded background. To insert a new symbol, select the character and then click **Symbol** from the **Insert** menu. Select a new symbol, click **Insert**, and then click **Close**. To create new icons, format a one-character paragraph as the Icon 1 style.

To change the shading of the Icon 1 style, click **Borders and Shading** on the **Format** menu. Select a new shade or color, and then click **OK**.

## Section Breaks Are Key

In this manual, section breaks are the secret to success. Double-click the section break above to activate the **Page Setup** menu. Click the **Margins** tab. As you can see, this section (page) has margins of 1.25 inches top and bottom, 2.33 left, and .83 right—with headers and footers of .67 inches. Special section margins make it possible for this manual to use framed Styles—such as the Icon 1 style—which will move with the text.

**Using the Break**  
command, you can insert a page, column, or section break.

- Breaks in a Word document appear as “labeled,” dotted double-lines.
- **To insert a section break**, click **Break** on the **Insert** menu. Select one option, and then click **OK**.

## About Pictures and Captions

Assuming that you see your paragraph marks, you’ll notice a paragraph mark attached to the lower-right corner of the picture. Click the picture, and notice too, the name of the style—not surprisingly, the Picture style. Pictures attached to paragraph styles make it possible for pictures to act like paragraphs.



FIGURE 21.1 uses this caption text. In Word, the Caption style can be automatically numbered and labeled. Click **Caption** on the **Insert** menu to access and control the caption settings. Press the F1 key to search for additional information and Help on captions.

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**Written exercise**  
pages 121 - 123 in your  
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**To link a picture to your template, link the picture when you insert it by clicking on the Link to File box.**

3. Insert your company information in place of the sample text on the cover page, as well as the inside-cover page. If you plan to use styles such as the “Icon Key” or Icon 1 style, set them now (see instructions, page 1).

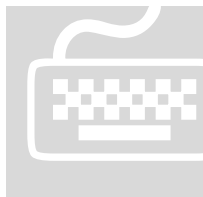
4. Click **Save As** on the **File** menu. In the dialog box, click **Document Template** in the **Save File as Type** box. (The file name extension should change from .doc to .dot.)

### How to Create a Document

To create a manual from your newly saved template, click **New** on the **File** menu to re-open your template as a document. If you followed the steps above, your company information should appear in place. Now, you are ready to type your manual.

## More Template Tips

There are three ways to view the various style names of the template sample text:



4. In normal view, click **Options** on the **Tools** menu. Click the **View** tab. In the **Style Area Width** box, dial a number, and then click **OK**;
5. In any view, click a paragraph and view the style name on the **Formatting** toolbar; or
6. On the **Format** menu, click **Styles and Formatting** to display the **Styles and Formatting** pane.



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