

THE MECHANISM OF SOUND -GAGAKU HAS IT'S OWN UNIVERSE-

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Official website of the Imperial Household Agency
<http://www.kunaicho.go.jp/culture/gagaku/gagaku-ph.html>



“和の心”
“WA NO KOKORO”
Spirit of Harmony

Teamwork and Harmony



The Basic Scales (Ritsu Scale)

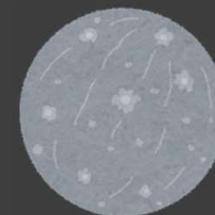
宮Kyu 商Sho 角Kaku 徵Chi 羽U

(Re Mi So La Si)

Earth Metal Wood Fire Water



Saturn Venus Jupiter Mars Mercury



Wind Instruments



Sho
(organ-like wind instrument)



Ryuteki
(flute-like wind instrument)



Hichiriki
(oboe-like wind instrument)

String Instruments



So
(Koto)



Biwa
(Japanese lute)

Percussion Instruments



Shoko
(Japanese gong drum)



Gakudaiko
(Japanese drum)



Kakko
(Japanese percussion)



Wind instruments



Stringed instruments



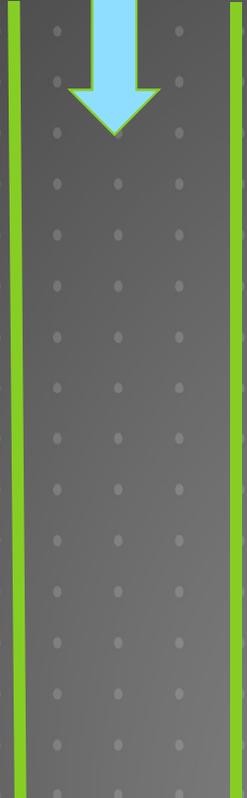
Percussion instruments

The world's oldest extant orchestra

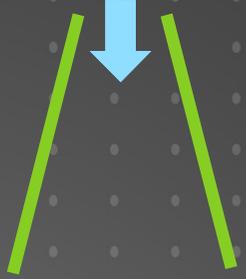


Wind Instruments The Mechanism of Sound

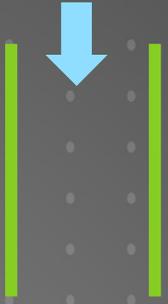
Blow



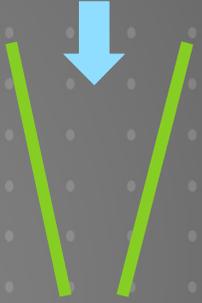
A



B



C



Blow

The air pressure drops
with faster flow

Two sheets are
pulled together



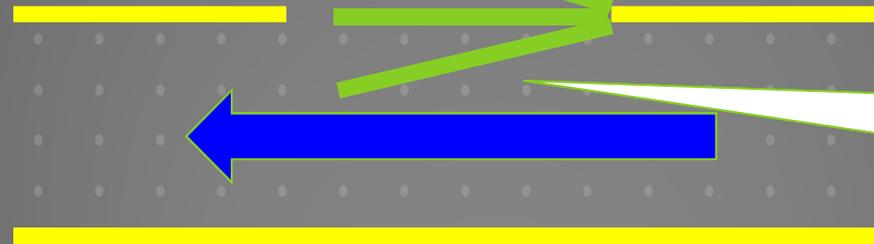
The mechanism of the sho (free reed)

(The voice of the heavens)



Returning force

Inhaling force



Sho (organ-like wind instrument)

Harmonica

Phoenix
The voice of
the heavens



Sho



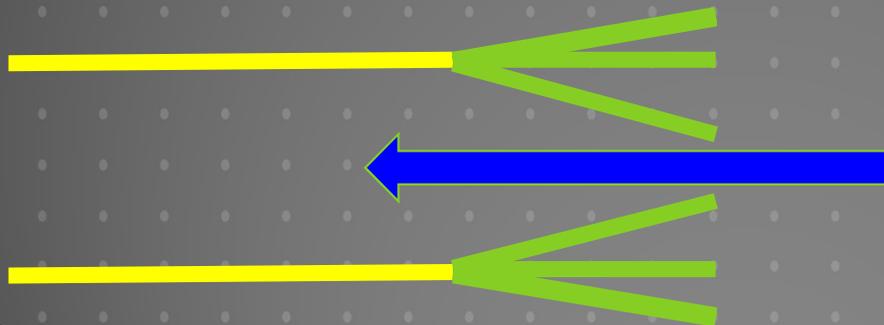
Higashimachi-matsuri-yatai Ho-o/Phoenix by Katsushika Hokusai

Hichiriki (double-
reed flute)

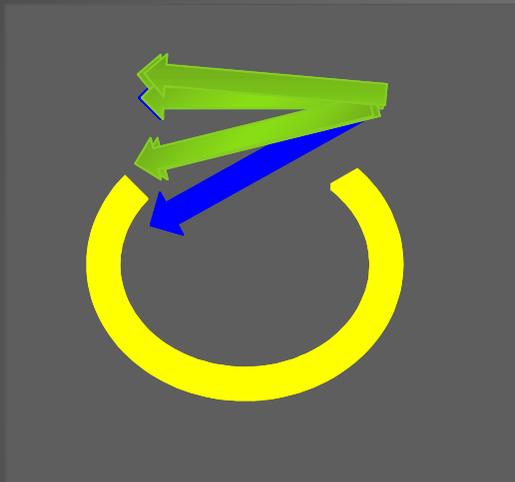


Oboe

The voice of humans
on the earth



Ryuteki (flute-like wind instrument)



Flute

The voice of the dragon
Moving between
heaven and earth

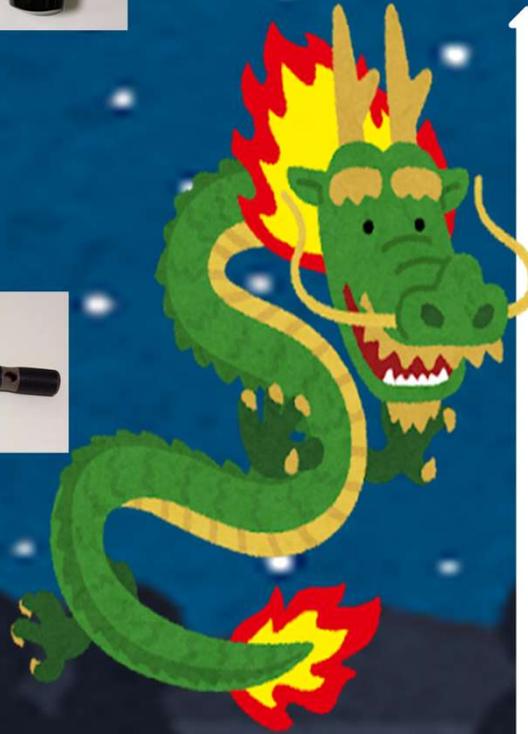
Ryuteki



Higashimachi-matsuri-yatai Ryu/Dragon by Katsushika Hokusai



Heaven
"Sho"



The dragon moves between
heaven and earth.
"Ryuteki"



The earth and human beings
"Hichiriki"





The voice of the
heavens



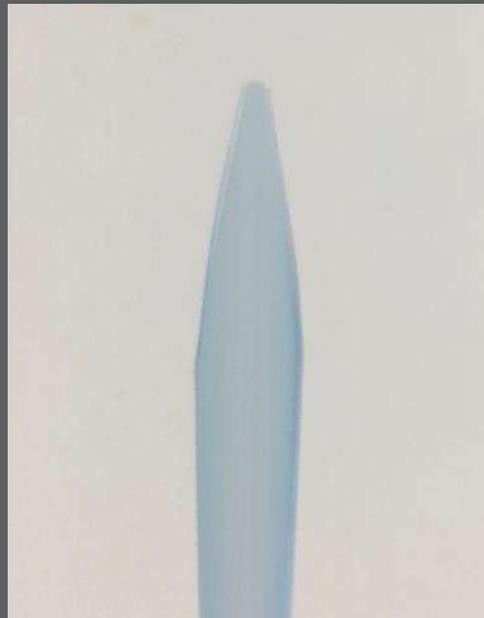
The voice of humans
on the earth



The voice of the
dragon



Free Reed

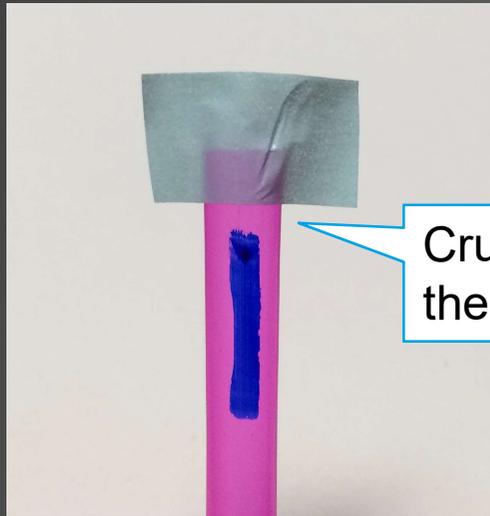


Double Reed

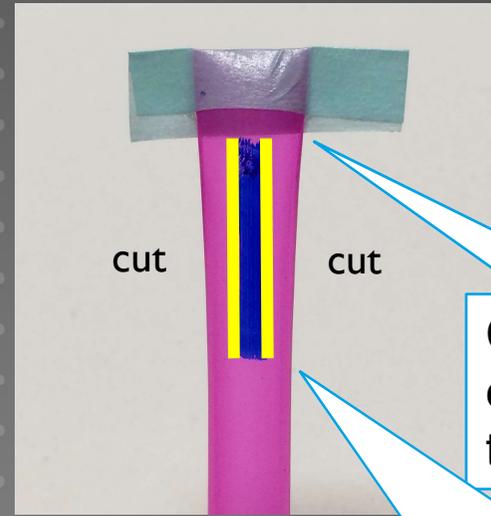


Air Reed

HOW TO MAKE THE VOICE OF THE HEAVENS (FREE REED)

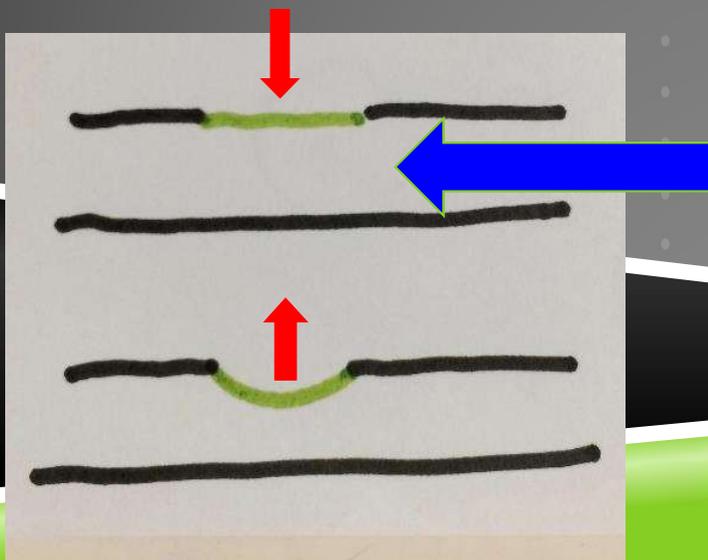


Crush the end of the straw.



Close it off with cellophane tape.

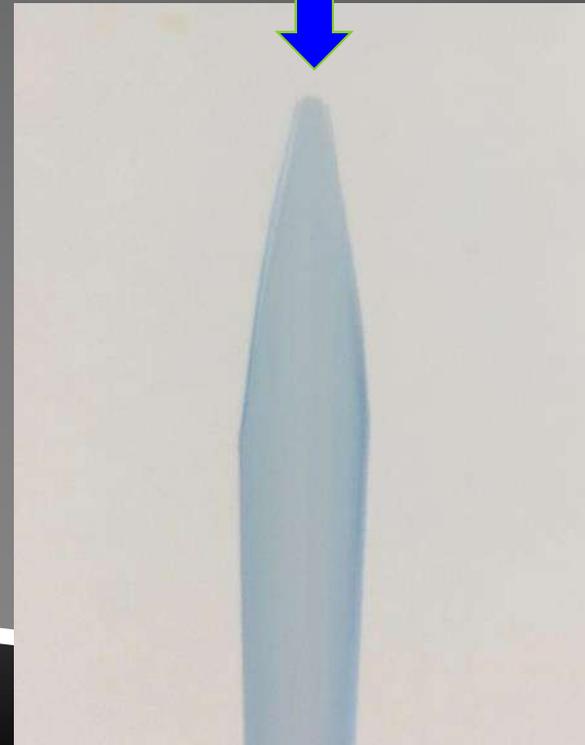
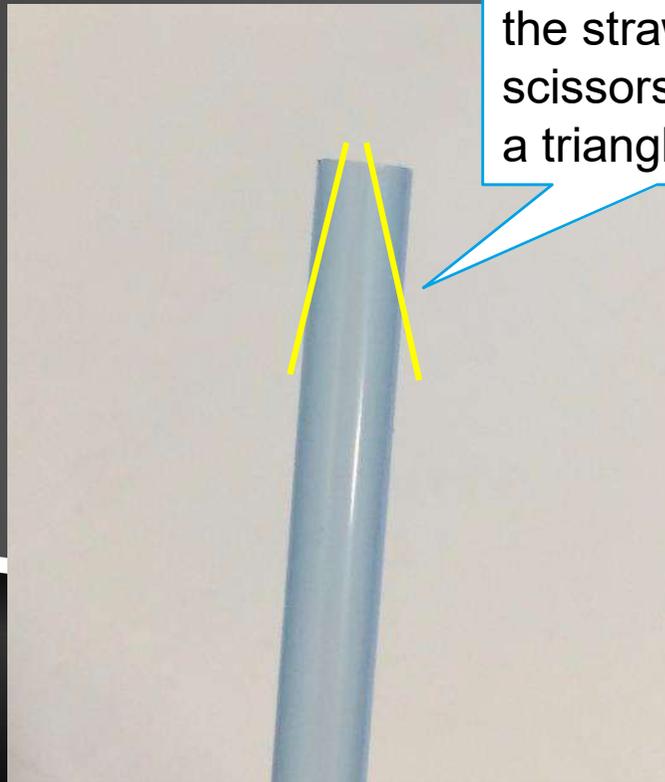
Make two cuts with a box cutter.
The space between the cuts should be about 2 or 3 mm.



HOW TO MAKE THE VOICE OF THE EARTH (DOUBLE REED)



Cut the end of the straw with scissors to make a triangle.



HOW TO MAKE THE VOICE OF THE DRAGON (AIR REED)



Fasten from above with cellophane tape.



The voice of
the heavens



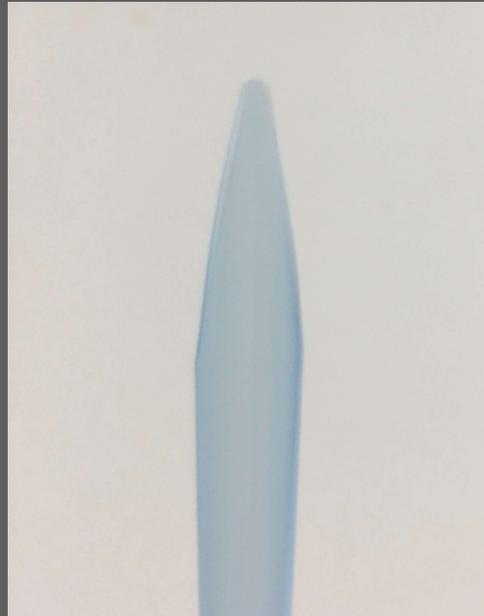
The voice of humans
on the earth



The voice of the
dragon



Free Reed



Double Reed

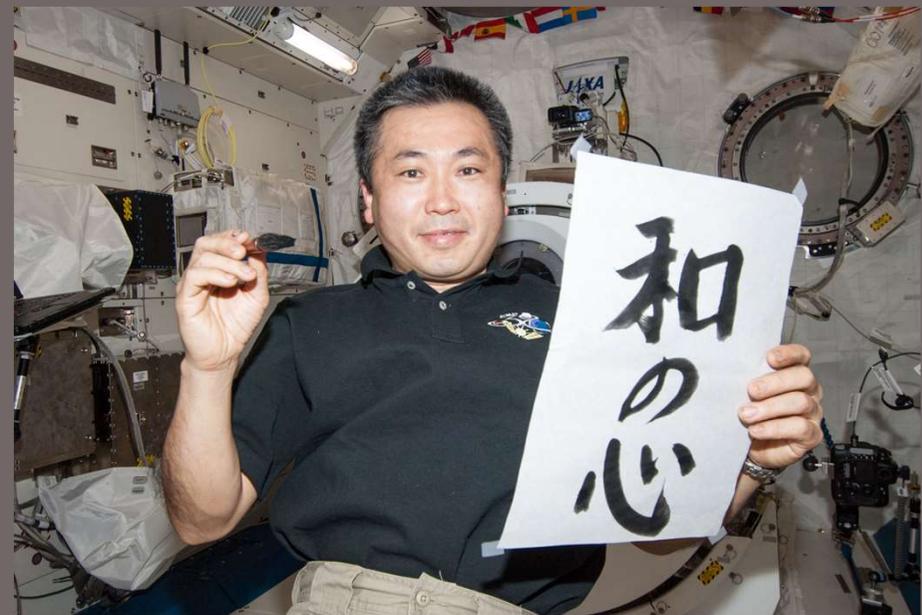


Air Reed



“和の心”
“WA NO KOKORO”
Spirit of Harmony

Teamwork and Harmony









Air

Pitch
Volume
Tone

“WA NO KOKORO”
Teamwork and Harmony

[Reference]

- Takeshi Sasamoto
 - “Introduction to Gagaku,” Tokyodo Shuppan, 2003
- Toru Endo
 - “Glossary of Gagaku,” Tokyodo Shuppan, 2013
- Official website of the Imperial Household Agency, Japan

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