

# The instruments of the orchestra

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to Angela Colbers

# The wind instruments

At the back of the orchestra the wind instruments have found a place (**play winds, 5 sec**). Some wind instruments have been made of wood (**show**) and others are made of metal (**show**). Just like the string instruments the different wind instruments vary in size from very small (**show piccolo**) to big (**show tuba or contrabassoon**).

With string instruments, the vibrating string is the source of the sound, with wind instruments different ways are used to force the air to vibrate. At the flute mouthpiece (**show flute**) with the lips some airflow from breathing-out is directed towards a rather sharp edge causing some sound. With the so-called reed instruments (**show reeds**) a thin reed is forced to vibrate, and with the brass instruments a slight air flow between the lips causes vibration (**show brass mouthpiece**).

Then, *very important*, after the mouthpiece a piece of tube is mounted. And the air column inside that tube might vibrate as well, the so-called *resonance*. That only happens when the vibrations in the mouthpiece are at a pitch that is able to resonate in the specific length of air column. A much louder and more defined sound is then generated (**play trumpet mouthpiece separately and mounted**). That resonance happens at a *short* tube for *high pitch* (**play piccolo**) and at a *long* tube for *low pitch* (**play tuba**).

# The horn

The horn is a clearly a brass instrument (**show horn**). Here sound is generated by a tiny air flow through the narrow space between the lips into the mouthpiece (**horn player makes glissando on a single mouthpiece**). When the mouthpiece is mounted on the horn a limited number of notes can be played, called natural harmonics (**horn plays harmonics/hunting call**). Furthermore, the instrument is equipped with valves, allowing the adding of some specific lengths of tubing. By controlling the valves, the resonance length of the tube is varied, allowing many more different notes to be played (**horn plays some scales**).

When all hoops of the horn are stretched, the total length of tubing reaches up to almost 4 m, thus the horn can play very low notes as well. The right hand of the player is partly in the bell of the horn (**show to the audience**) and the direction of the bell is rather backwards from the audience. All that results in the singular horn sound that is very suitable for performing as well the enchanting horn calls as the romantic lines in music. (**Now the horns will play a trio or quartet, depending on the availability**).

Allegro maestoso  $\text{♩} = 58$

Horn in F 1

Horn in F 2

Horn in F 3

Horn in F 4

7

*dolce*

*mp*

*p*

*mp*

*p*

*mp*

*p*

*mp*

*p*

15

pp f

pp f

pp f mp fp f mp fp f

pp f mp fp f mp fp f

# Allegro maestoso, ♩ = 112

## Finale

Horn 4 in F

9 1 2 3 4 13 8 1 2 3 4

25 5 6 7 8 1 2 3 4 1 2

35 3 4 1 2 3 > 41 1 2 3 4

45 1 2 3 4 1 2 3 4 1 2

55 3 57 mf f

65 f

75 1. 2. Slow blues, ♩ = 72 3 82 trombone pp

84 8 98 trombone mp

102 mp

113 Allegro maestoso, ♩ = 112 horn 114 mf

120 f f

128