The instruments of the orchestra

Arie van Hoek

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)**.

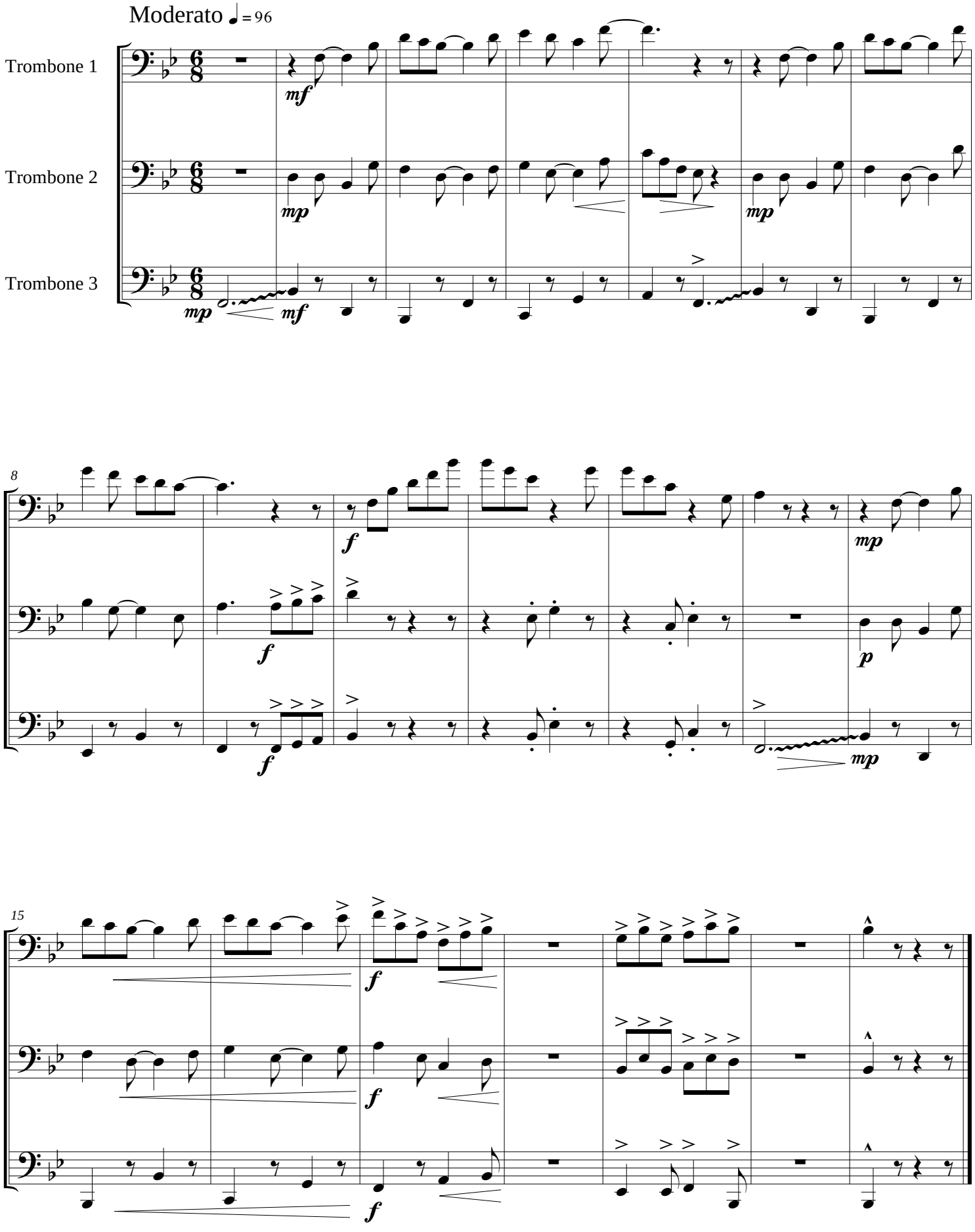
Then, *very important*, after the mouthpiece a piece of tube is mounted. And the air column inside that tube might vibrate as well, the so-called *resonance*. That only happens when the vibrations in the mouthpiece are at a pitch that is able to resonate in the specific length of air column. A much louder 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 trombone

The standard trombone is twice as long as the trumpet and the valves are replaced by a slide **(show trombone)**. That enables not only the playing of notes at specific pitch but at every pitch in between **(trombone plays glissando)**. And some trombones have been equiped with valves as well for a further extension of the tube length. Trombones are built in different sizes and now the most common trombones are the tenor trombone and the bass trombone **(show different trombones)**.

Because of the different trombone sizes a broad spectrum of notes can be waited from this trombone section. The tenor trombone can play the mellow mid-range parts and the bass trombone feels easy at the lower pitch, enriching the bass notes. And because the trombone sound is directed straight into the audience it delivers a welcome contribution when more sound volume is awaited.

(Now the trombones play the trio).


Moderato ♩= 96
Trombone 1
Trombone 2
Trombone 3
mf
mp
mf
mp
mp
8
f
mp
f
f
p
f
mp
15
f
f
f

Finale

Allegro maestoso, ♩ = 112

Trombone 3