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Lip control of brass instruments

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Brass instruments are frequently described in the acoustics literature as "lip reed" instruments, emphasising the fact that the sounding mechanism of this instrumental class is flow modulation by the vibration of the player's lips. As well as providing the source of sound, the lips act as the major interface through which the performer controls the intonation, dynamics, articulation and timbre of the performance. Indeed, on instruments such as the natural trumpet and the alphorn, the player's lips form the only control interface. This paper reviews recent studies which have examined the vibrational properties of brass players' lips, the types of motion which they undergo when playing different instruments, and the nature of the interaction between the lips and the instrument. It also considers the extent to which current physical models of the lips are capable of encompassing these control processes.