

Getting Technical

Introduction

As a performer and teacher for the past 26 years and a regular reader and contributor to the Brass Herald since its inception, I feel very flattered and honoured to continue this column from my friend and esteemed colleague, John Miller. John's fascinating and thought provoking tips and advice illustrate perfectly the sometimes baffling complexities that affect our art and I hope that I can, as far as possible, provide an alternative, indeed complimentary guide, to making life easier and getting the best out of our playing at all levels.

Teaching any skill involves having a deep understanding of technical issues but is dependant on a subtle and unique style of delivery by the instructor. Therefore, the same technical point is often described in numerous ways using a combination of actual fact and human perception. In practical terms, brass playing is inextricably linked to acoustic physics and the manipulation of human anatomy, making the use of elaborate terminology inevitable. Given that the pursuit of musical understanding and technical progress appears to be a universal phenomenon, I hope to present fundamental and beneficial information with clarity and simplicity of language.

This first instalment is intended as a general introduction, covering a series of sometimes very obvious points that can easily affect the rate of progress. I know that some of this information might be considered as 'teaching your grandmother to suck eggs' by experienced players but in my opinion, there are surprisingly few very basic rules in acquiring a sound technique in order to facilitate the highest level of performance. In other words, by observing some elementary guidelines everyone can start from 'a level playing field'. I hope that subsequent instalments to this column covering breathing, embouchure formation and articulation will continue in this simplistic vain.

Choice of instrument

One of the most common dilemmas to confront beginners or indeed more advanced players is the choice of equipment. The fact that brass instruments can be found in such a wide range of musical combinations and styles can often make this choice rather daunting. It is true that manufacturers provide detailed specifications but the guidance of an experience player or teacher in this area can avoid costly mistakes.

In this age of awareness to authenticity, the choice of instrument must encompass the style of music one is intending to take part in but in the case of a beginner, a robust, well designed, all round instrument is a sound starting point. As a rule of thumb the larger the bore the fuller the sound but beware the less experienced player who may sacrifice flexibility and agility in the quest for a big warm tone. The greater the bell diameter, the more projection and sound defusion, while construction materials such as rose brass will darken the tone through to the brightness and brilliance created by a silver plated finish.

Choice of mouthpiece

To obtain a sound on a brass instrument, one must use a mouthpiece to facilitate the pursing of the lips (embouchure formation), which in turn encourages the vibration of air within the tube. The majority of brass instruments are played with a cup shaped mouthpiece (A).

However, the use of a 'horn type' funnelled mouthpiece (B) will produce a striking difference in tone and response.

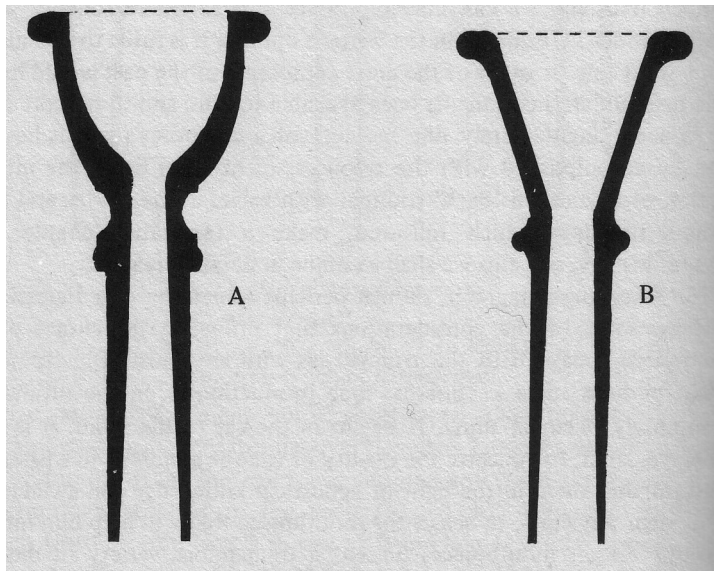


Fig. 1 Trombone Mouthpieces

Historically, the Tromba da Tirasi or slide trumpet (a forerunner to the modern trombone) was usually played with a cup shaped mouthpiece but was also known as the Corno da Tirasi when played with a funnel shaped mouthpiece, producing what was considered to be a softer tone more akin to the human voice.



Fig.2 Tromba da Tirasi

The choosing of a mouthpiece is probably the most sensitive decision players have to make, where design and dimensions will have marked impact on comfort and execution. As in the choice of audio equipment, the sensitivity and efficiency of apparatus at the very source of the sound can greatly influence the quality of the broadcast tone through the complete

instrument. Therefore, cup depth, cup curvature and breadth, taper of throat, taper of back-bore and compatibility with the dimension of the lead-pipe are crucial.

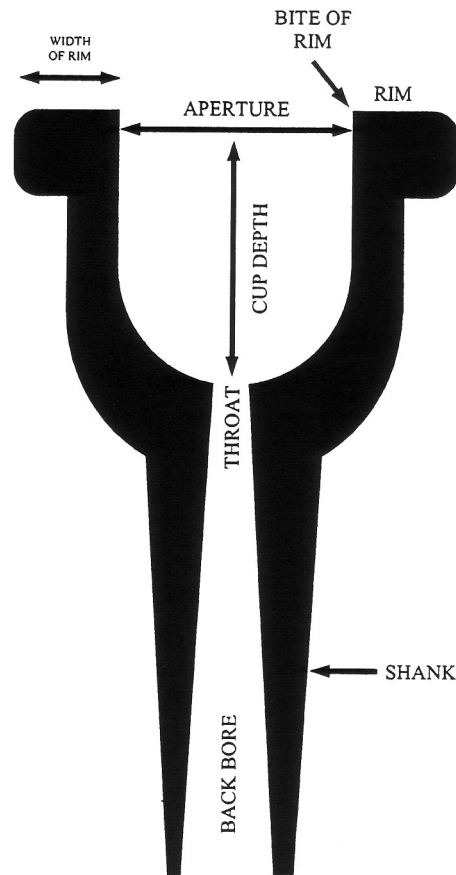


Fig. 3 Mouthpiece Anatomy

Tommy Dorsey, the legendary dance-band leader and trombonist gave the following advice; ‘the most suitable mouthpiece should be of medium proportions and one that feels comfortable and at ease with the lips’. Although perhaps not the most technical of advice, his recommendation of *medium proportions* highlights the most common dilemma faced in choosing the right mouthpiece. Every subtlety in mouthpiece design promotes a particular technical area whether it be, low register tone, high register facility, lip flexibility or endurance, hence it is very difficult to find a mouthpiece, which gives all round satisfaction. In short, the size and shape of the rim of the mouthpiece will affect flexibility; the cup, tone

and pitching and the throat and back bore, volume. In addition, the comfort of a rounded rim may offer too much support for a weak embouchure and make clean articulation difficult thus taking the edge off attack. The trend over the past thirty years has to been to recommend the use of the largest cup possible to allow greater vibration of the lips while maintaining range and clarity of articulation. However, more recently, opinion is more biased toward smaller cups and rim diameter to increase focus and aid stamina. Here is a brief guide to bear in mind when choosing a mouthpiece :

Light Music/Jazz : smaller cup diameter : shallow cup : narrow bore to promote a clear high register.

Band/Small Orchestra : medium cup diameter : slightly deeper cup.

Symphonic : larger rim diameter : deep cup ; larger throat and backbore.

Care & Maintenance

As with any mechanical tool, care and maintenance is of uttermost importance both for the professional, who requires unstinting reliability and especially for the student or amateur whose level of performance can be severely compromised by lack of respect for the instrument and failure to lubricate properly.

A variety of substances have been utilized over the years to lubricate valves and slides including the familiar standby that we all carry with us, saliva. A huge variety of oils, creams and other lubricants are on the market and some will obviously be more compatible with certain makes of instrument and may work better in different climatic conditions. Petroleum jelly or ‘good old’ Vaseline is still the preferred lubricant for tuning slides, which should always be kept in fine fettle. There is nothing more embarrassing and indeed annoying to colleagues in an ensemble, than failure to be able to get the instrument perfectly in tune.

Keeping the inside of your instrument clean provokes differing views although it has to be said that a build up of grease and food particles is an obvious health risk in extreme cases. I have found that certain makes of instrument appear to sound better with less frequent cleansing, a sudden spring clean causing a marked difference in tone, response and intonation. However, basic fact dictates that any matter adhering to the inside of the tubing will narrow the bore causing the possibility of tonal distortion, corrosion and mechanical fouling, particularly in the case of valves. Again a variety of brushes are available for cleaning purposes, a flexible type will be necessary for tight bends but a straight forward rod with a piece of 'four by two' (as in cleaning a rifle barrel) is very effective on straighter sections.

Tip : be very careful to only use a small amount of detergent and tepid water to avoid damaging lacquer and machined surfaces.

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- Fig 1 Trombone Mouthpieces
 Philip Bate
 The Trumpet and Trombone (p78)
 London: Ernest Benn, 1978
- Fig 2 Tromba da Tirarsi
 www.matthewparkertrumpets.com/periodin.html copyright 2001
- Fig 3 Mouthpiece Anatomy
 Buddy Baker
 The Buddy Baker Tenor Trombone Handbook
 (ed. K.Carroll) (p18)
 Texas: International Trombone Association Manuscript Press, 2001