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Consumer Test

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TROMBONE CONSUMER TEST

by Michael Stroehrer

INTRODUCTION

On Sunday at 9:00 a.m. at the recent ITF, three players and about 30 listeners took part in a Trombone Consumer Test in the University of North Texas Concert Hall. The consumer test was inspired by and based on a 1994 British Trombone Society trial of nine symphonic tenor trombones. In the British study, five professional trombonists rated the instruments for slide action, ease of playing, high and low registers, sound quality, and general impression. The intention of the

present study was not to rank the instruments, as was done in the British study, but to provide a profile of playing and sound characteristics.

PROCEDURE

The instruments examined were a Bach 42T with a standard slide, yellow brass bell and standard leadpipe and Thayer valve; a Conn 88HK with a rose brass bell, SL 4747 slide (straight .547 bore), standard leadpipe and CL 2000 valve; an Edwards T350 with an 8.5-inch yellow brass bell,

T1 leadpipe and Thayer valve; a Thein GIII with a 9 1/16 inch gold brass .014 inch thick bell with a Kranz, standard leadpipe and Hagmann valve; a Weill G. Gagliardi GG81 with a one-piece nickel-silver bell, no. 1 leadpipe and a closed-wrap rotary valve; and a Yamaha YSL 682B with heavy-gauge gold brass bell, standard leadpipe and new valve design. Each instrument was randomly assigned an identification letter from A to F.

To disguise the physical feel of the instruments, players wore work gloves while playing, and the instruments' neckpipes were wrapped with light pocking foam secured with tape. In order to prevent listeners from identifying instruments, players remained behind a screen until the conclusion of the study.

In order to prevent players from identifying the brand of the instrument, each player was blindfolded prior to testing an instrument and remained so until the instrument was removed by the monitor. After being blindfolded and handed an instrument, each tester played each instrument for about one minute using musical materials of his own choice. At the conclusion of the one-minute test, the player handed the instrument to the monitor, who replaced it on a stand. Only when the instrument was returned to the stand did the player remove the blindfold, turn around and fill out the rating sheet. The player then folded and stapled the sheet before handing it to the attendant, who placed the sheet in an envelope labeled with the instrument letter only.

Players rated each instrument on a 1–5 scale for the following factors: 1) Balance/Comfort; 2) Slide action; 3) Response at soft dynamics; 4) Response at loud dynamics; 5) Resistance at loud dynamics; 6) Resistance at soft dynamics; 7) Response consistency; 8) Tone quality; 9) Tone center; 10) Tone consistency.

Approximately 30 trombonists participated as listeners, rating the instruments on the same 5-point scale, but with respect to 1) Tone quality in the low register; 2) Tone quality in the high register; 3) Tone quality of soft dynamics; 4) Tone quality at loud dynamics; 5) Tone center at soft dynamics; 6) Tone center at loud dynamics; 7) Tone projection; 8) Tone consistency; 9) General impression.

DATA ANALYSIS AND RESULTS

While analyzing the data from the surveys, I had no knowledge of the correspondence between instrument brands and the assigned letters. Analysis was performed with Microsoft Excel; numbers indicate averages for each of the rated criteria. The accompanying graphs show the results of the surveys of both the players and the listeners.

INTERPRETATION AND IMPLICATIONS FOR FURTHER INVESTIGATION

The present study was an effort to develop a profile of the playing and tone characteristics of the instruments examined, not to rate or rank the manufacturers or the instruments. Different players look for different attributes; a trombonist who performs mostly solo or chamber music will look for a different set of characteristics from the second trombonist in a major symphony. The intention is to assist

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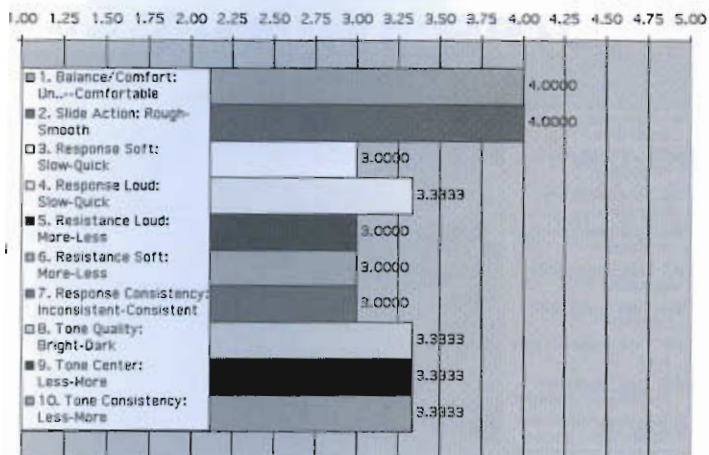
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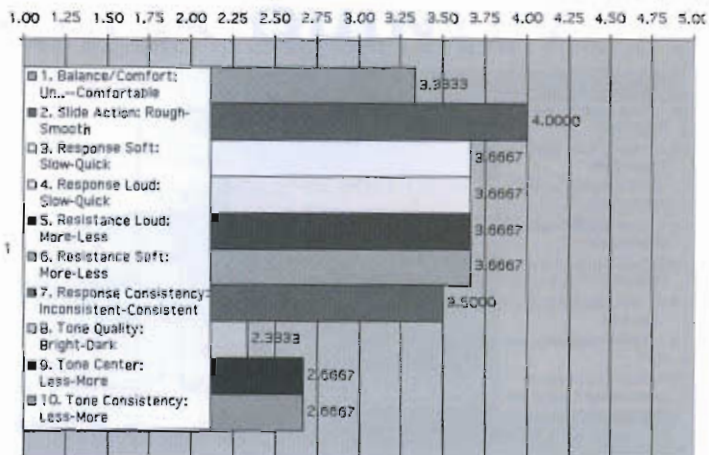
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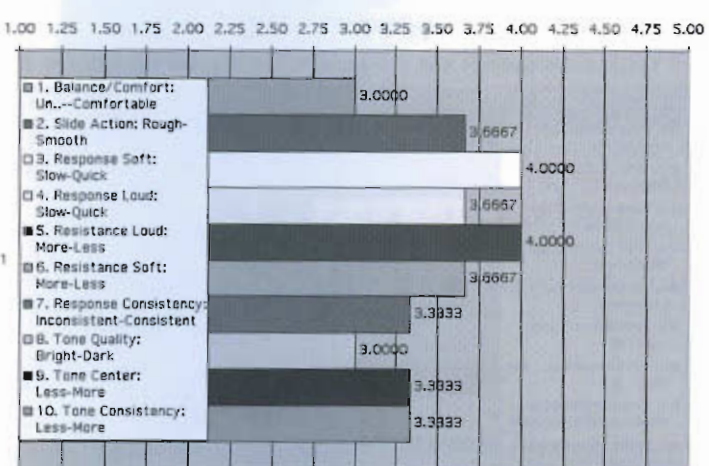
Player Evaluation: Bach



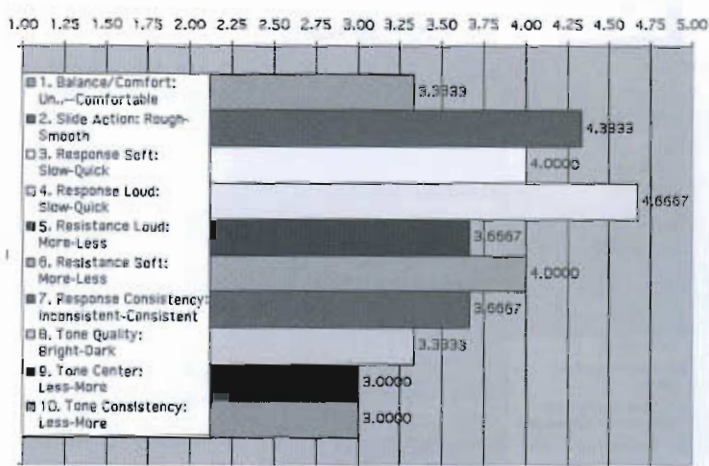
Player Evaluation: Their



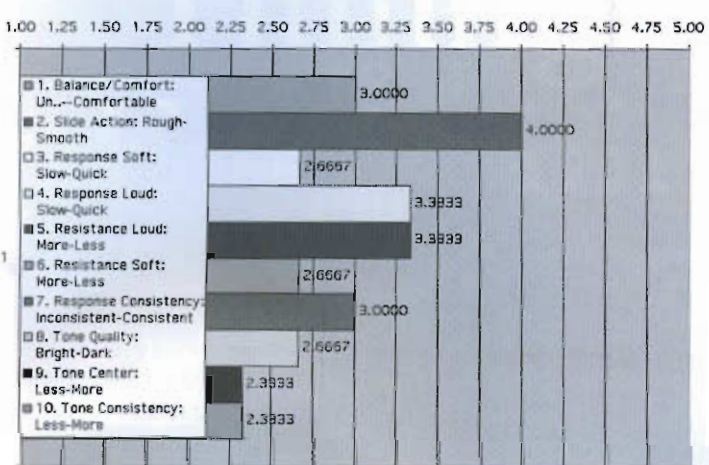
Player Evaluation: Conn



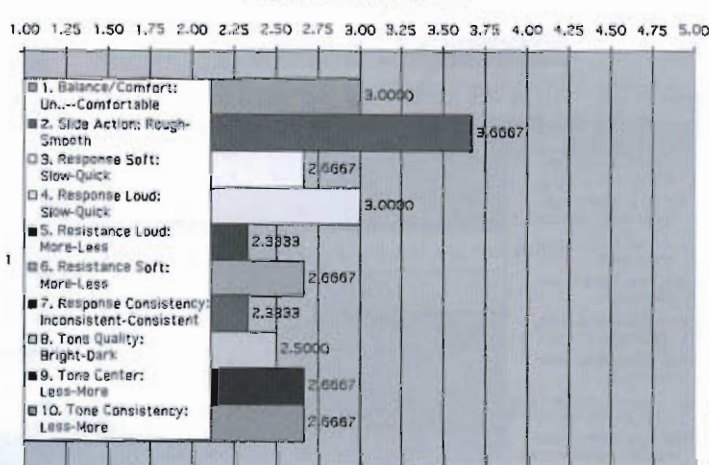
Player Evaluation: Weril



Player Evaluation: Edwards



Player Evaluation: Yamaha



trombonists in making informed choices when shopping for an instrument. Perhaps manufacturers will be able to use these results to continue improving instruments.

In interpreting the numbers and graphs, the reader should not assume higher numbers are good and lower numbers are bad. The values indicate a location on a continuum of less to more resistance or bright to dark, for example. The ideal instrument is not necessarily the one with the highest numbers, either on the listener or the player scale. The ideal instrument is the one which best meets the individual player's needs.

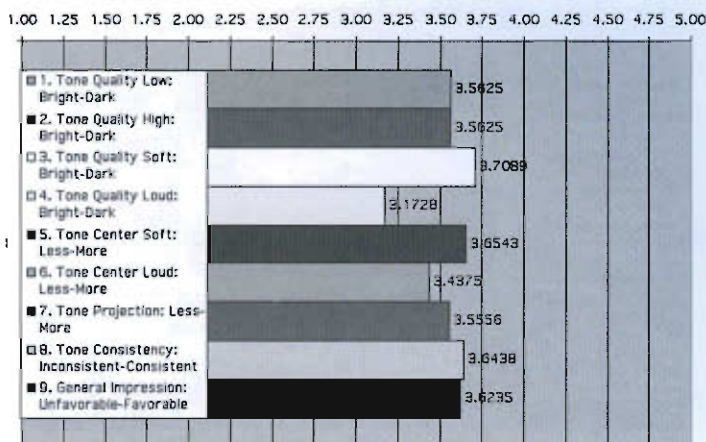
In an effort not to compare "apples and oranges," this study was limited to .547 bore symphonic trombones, evaluated by symphonic trombonists. The same procedure and design can be applied to small- and medium-bore studio/jazz instruments, bass trombones, and alto trombones.

The results of this test should not be considered a conclusive or definitive description of the characteristics of the different brands. Indeed, the number of options available from some manufacturers makes it possible for the buyer to design a custom instrument. It would be another interesting survey to test the effect that bell material, leadpipe design,

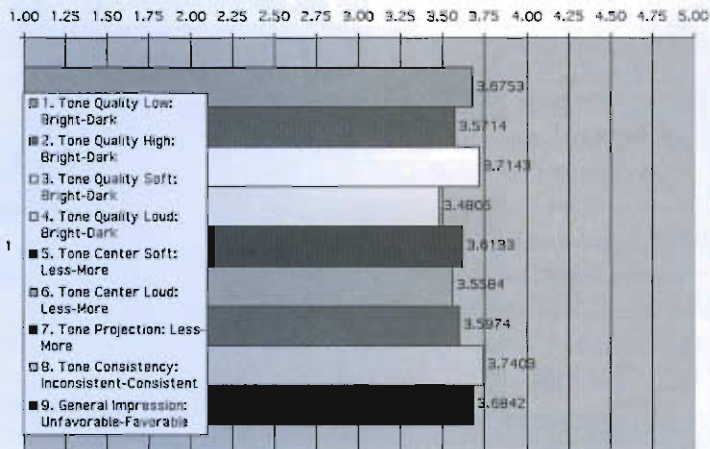
slide weight, dual vs. single bore has on sound and playing characteristics.

Time constraints in the execution of this consumer test, limited as it was to approximately one hour, made it necessary to limit the number of player-testers to only three. In order for such an investigation to be statistically valid, the number of player-testers would have to be greater than the number of instruments tested. Therefore, the player results cannot be considered conclusive. I would urge I.T.A. and the manufacturers to cooperate in a statistically valid investigation at some future conference.

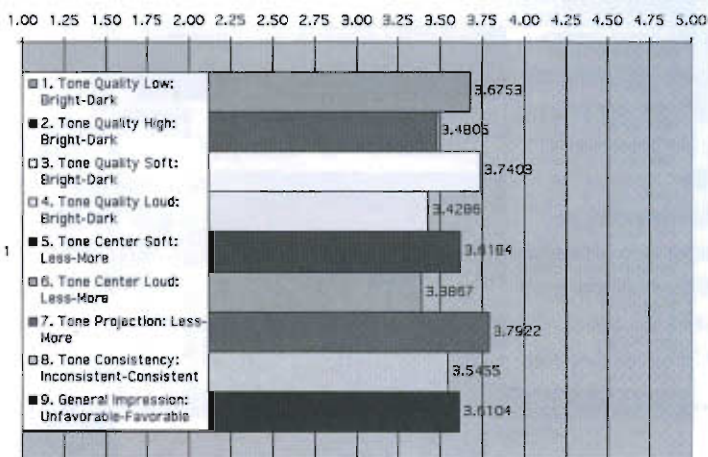
Listener Evaluation: Bach



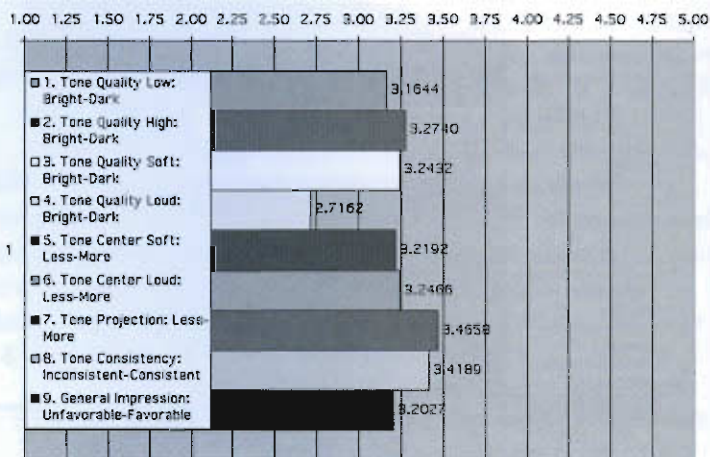
Listener Evaluation: Thein



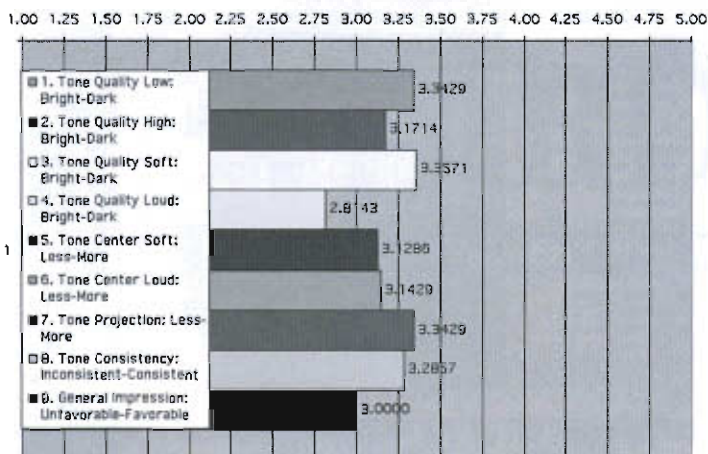
Listener Evaluation: Conn



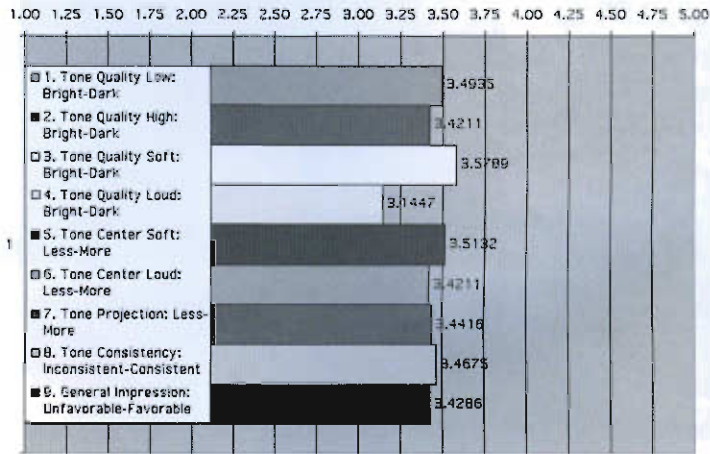
Listener Evaluation: Weril



Listener Evaluation: Edwards



Listener Evaluation: Yamaha



ACKNOWLEDGMENTS

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