

Euphonium, Baritone, or ??? by David Werden (from www.dwerden.com)

When I was in high school, my parents decided to buy a new instrument for me to replace the student model I had been using. The music store showed me a top of the line King 3-valve "baritone." The salesman said it was a fine instrument, but if I was a serious player, I should spend another \$80. For the extra money I would get not a mere baritone, but a genuine *****E*U*P*H*O*N*I*U*M*****. When I asked what the difference was he explained that a baritone has three valves, while a euphonium has four. He also told me that a euphonium has a different bore, and sounds nicer than a baritone. I ordered the more expensive instrument.

As the years passed, I learned that the **only** difference between those two horns was the extra valve. The salesman wasn't trying to mislead me--he was simply as confused as most people about the difference between a baritone and a euphonium. Over the years I have heard many incorrect explanations of this difference. Some are: a euphonium has four valves, a baritone three; if it's in a bass clef it's a euphonium, if it's in treble clef it's a baritone; a baritone is little euphonium; a baritone has the bell pointed forward, a euphonium points up; and (attributed to Robert King) a euphonium is a baritone played well.

This confusion of names may contribute to the somewhat anonymous nature of my chosen instrument. In the USA, the average man on the street doesn't know what a euphonium is. This is partly due to a lack of exposure to the horn, but if he ever has seen one, it may have been referred to as a baritone, a baritone horn, a tenor tuba, or a euphonium. Also, the name baritone is sometimes confused with baritone saxophone or the baritone voice.

I have consulted over two dozen reference books to understand the distinction between these two instruments. These sources included dictionaries, encyclopedias, music dictionaries, and music texts. All agreed on the general definition of these two horns, although none offered anything as specific as measurements. They agreed on the following: a baritone has a smaller bore and bell than a euphonium, with tubing that is mostly cylindrical. Its sound is lighter and brighter. The euphonium has a larger bell and bore, and its tubing is mostly conical. It has a larger, darker, more powerful sound. Four well-known sources have characterized the distinction as follows:

Source	Baritone	Euphonium
The New Grove Dictionary of Music and Musicians	narrow bore (accurate photo)	wide bore; warm, large tone; deep-cup mouthpiece; tenor of tuba family
International Cyclopedia of Music and Musicians	smaller bore & tone; semi-conical cup mouthpiece; 3 valves	larger bore & tone; semi-conical bore; deep-cup mouthpiece; 3 to 5 valves
New Harvard Dictionary of Music	smaller bore; tapered like a cornet	larger bore; tapered like a flugelhorn
New Oxford Companion to Music	narrower bore	wider bore; called baritone in USA

These statements are sufficient to categorize the instruments now on the market, yet there is a noticeable confusion about euphoniums and baritones.

The Conn American-style euphonium fits very well into the range of measurements of the other traditional-style euphoniums, yet this instrument is more often called "baritone" than "euphonium." The Conn line is interesting in this regard. Their various models all share the same dimensions of tubing, bell size, and taper, but Conn has usually listed their most expensive model as "euphonium" and their cheaper models as "baritones." Other American companies have followed the same path, apparently feeling that the name "euphonium" justifies a higher cost and connotes better quality.

An almost humorous example of the confusion of definitions is found in the nearly extinct double-bell euphonium. This was an instrument with an extra valve to send the sound either to its large euphonium-size bell or to a much smaller trombone-size bell. The smaller bell gave it a bright sound, similar to a true baritone horn. To the best of my knowledge, this instrument was never called a double-bell baritone. The same instrument minus the small bell was (and is) frequently called a baritone. The inconsistency is that the double-bell version was able to approximate the sound of a baritone, while the single-bell instrument could only sound like a euphonium.

My own instruments are made in England by Sterling and are typical of the horns made by many other manufacturers from Europe and Japan. My euphonium has an upright-bell, side-valves, and a bore of .592 inches. This type of horn is seldom called a baritone. I also use an upright-bell, side-valve baritone horn. This horn has a .522 inch bore and a bell only slightly larger than that of a trombone. It possesses a much brighter sound than my euphonium. This type of horn is virtually never called a euphonium. The tubing of the euphonium is almost entirely conical. The tubing of the baritone is much more nearly cylindrical. The nature of the baritone's bore can be demonstrated by pulling out the main tuning slide and reversing it. It will still fit into the horn reversed, but such is not the case with my euphonium" tuning slide.

While most agree on the names of my particular instruments, such is not the case with the instruments in many of our public school bands in the USA. They are similar to the Conns mentioned above, and generally have a .560 bore and forward-facing bells of about 10.5 inches diameter (although many are

made with upright bells as well). Even a casual examination of the tubing will show that it is almost entirely conical. I believe the breed was originally designed to let a single instrument play both euphonium and baritone music. While the early samples of this type of "hybrid" instrument may have had a sound nearly centered between a baritone and a euphonium tone, the desire for a smoother, fuller sound has led the manufacturers to gradually change the instrument's characteristics. The modern version have a sound very close to that of the European and Japanese euphoniums. They sound slightly brighter, but not nearly as bright as a true baritone horn. Also, compared to my own horns, their .560 bore is somewhat closer to the .592 euphonium than to the .522 baritone bore.



Measurements aside, my experience from playing most brands of this bell-front breed is that they sound like euphoniums. There is an old saying that goes something like "If it looks like a duck and waddles and quacks, then call it a duck." These bell-front type instruments should certainly be called euphoniums. All the definitions I found would support this title based on the characteristics these

horns possess. The fact that they are slightly smaller in bore and sound than the euphoniums commonly found in Europe and Japan certainly shouldn't disqualify them from the title "euphonium." Consider the modern trombone. Most symphony players use trombones with large bores (around .547 inches) and large bells. However, many trombones are made with bores in the range of .500 to .515 and smaller bells. They sound somewhat smaller and brighter than their larger brothers, yet they are still called trombones.

Music publishers share the confusion. As a professional euphonium player I read a large quantity of music each year. Roughly 80% of the music I played was marked "baritone," and yet about 1% of it was actually intended to be played on a true baritone.

While it may seem more awkward to have to say "euphonium" instead of "baritone," let us help others get into the habit of using the correct names for these instruments. It is time to end the confusion.

Dimensions of several popular baritones and euphoniums:

	BARITONE			EUPHONIUM		
	bore	bell	taper	bore	bell	taper
Yamaha	0.504	8.25	narrow	0.571	11	wide
Besson	0.515	8.38	narrow	0.580	11-12	wide
Willson	0.512	10.00	narrow	0.592	11.5	wide
Sterling	0.522	9.60	narrow	0.592	12	wide
Amati	0.488	8.75	narrow	0.559	11.75	wide
Conn American-style euphonium				0.563	11	wide
All measurements are in inches. Bore size is an INTERNAL tubing measurement						



David Werden

A graduate of The University of Iowa, Mr. Werden was the euphonium soloist with The United States Coast Guard Band for more than 20 years. He has performed throughout the United States, as well as in Canada, England, Japan, and the former Soviet Union. Through FM and TV broadcasts, his solos have been heard in dozens of countries around the world. He is a recitalist and clinician, and has performed at local, national, and international symposiums. He was a member of The USCG Band Euphonium/Tuba Quartet, the Atlantic Tuba

Quartet, and the Classic Brass Band. He previously taught at the University of Connecticut and is listed in the 1996 edition of Marquis' Who's Who in American Education.

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His efforts to expand the role and recognition of the euphonium led the British magazine Sounding Brass in conjunction with the American publication Euphonia to name him "Euphonium Player of the Year" in 1980. He is the first American awarded this honor. In 1981 he was elected to the post of Euphonium Coordinator for the Tubists Universal Brotherhood Association (T.U.B.A). In 1987 he was appointed to the Board of Directors of T.U.B.A. His many solo performances and his efforts to expand the role of the euphonium in music earned him the prestigious Coast Guard Commendation Medal. He has also been awarded two Coast Guard Achievement Medals, the Coast Guard Special Operations ribbon, two Coast Guard Unit Commendations, and three Coast Guard Meritorious Unit Commendations.

He has published articles in *Euphonia* magazine, *The Instrumentalist* magazine and the *T.U.B.A. Journal*. He is the author of *The Blaikley Compensating System, Scoring for Euphonium*, and is co-author with Denis Winter of the *Euphonium Music Guide*. He compiled and edited a series of papers by Arthur Lehman into the book *The Brass Musician*. He has also published over three dozen arrangements for a variety of solo instruments and ensembles, and published an article on the world wide web explaining the difference between baritone and euphonium.

David Werden is currently living in Minnesota and working as a computer consultant. He continues to work with Custom Music Company and Sterling Musical Instruments to develop and improve the Sterling compensating euphonium. Since moving to Minnesota he has performed with the Sheldon Theater Brass Band and has appeared on A Prairie Home Companion. He is in constant demand as a guest artist and clinician.

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