

Choosing a Euphonium

by David R. Werden

(from www.dwerden.com)

Professional-quality euphoniums are expensive but will last for many years with good care. Therefore, it is important to choose the right instrument from the several good models available. I have been evaluating euphoniums for many years, and have often done so intensely. While working with two different manufacturers (for about 20 years each), I often compared several horns at one time and went through periods of performing on a different prototype every few months during peaks of development. The following procedures and criteria have been very useful to help accurately identify characteristics and to determine weak and strong points in an instrument.

Environment - Euphoniums Like Space

Make every effort to get into a large room with decent acoustics to play-test the horns (I know how difficult this can be to arrange). In a small room, horns with a smaller tone will usually sound better to you. Horns with a large tone might sound unfocused or airy in a small room, but they may really shine in a larger room or in a concert setting. This phenomenon was troublesome for me while testing prototypes because I sometimes had to try a new sample in a hotel room or small practice room. I have always looked for a horn with a large, singing tone quality, but that is not the kind of tone that will be at its best in a small space.

In any medium-to-large-size room, listen for the sound coming back to you from the room (which will contain more overtones) rather than the fundamental sound directly from the bell. The overtones are critical component of every instrument's tone color. Also notice the degree to which a horn resonates the room around you -- more resonance means better projection.

Listening this way will give you a more accurate sensation of the sound that your audiences will hear.

But we don't live in a perfect world. Sometimes you will need to test the euphonium in a smaller space, perhaps even in a practice room. You may have the best results by trying a technique that [Arthur Lehman](#) recommended: stand in a corner with your bell facing into the room. This will give you a slightly better idea of the sound of the instrument.

Bring a Friend

Bring along a colleague to listen to you in the room. Choose someone who understands your concept of euphonium sound. If he or she is also a euphonium player of roughly similar abilities, you can each take a turn playing and listening. Even though your colleague may have a different style of playing than you, some of the characteristics of a horn will be audible no matter who is playing.

Variety is the Spice of Life

Pick out your music ahead of time. You should have several different styles at your disposal, and you should know the excerpts well enough to be able to play them consistently time after time.

My own choices might be:

- Solo from the Holst Second Suite in F (for full, lyrical playing)
- Carnival of Venice or similar (for technical style). I would use both slurred and tongued passages. It is important to use some excerpts that use a strong tongue. (The way horns respond to the attack can be significantly different between models; this is discussed more thoroughly below.)
- A march, using at least one *mf* strain and the *ff* breakup strain.
- A slow, lyrical song -- any number of vocal pieces will do. This is a good chance to try soft playing and to listen for smooth transitions between notes.
- Arpeggios or broken scales that will take you down into the range between low F (concert) and pedal Bb. You need to pay attention to the response and tone when using the 4th valve in combination with other valves.
- A contemporary solo with some dramatic passages, wide variations in dynamics, and some large leaps.
- Something jazzy.

As you go through the different styles in your play-testing, listen for the instrument that will adapt the easiest. For instance, a horn could have a nice sound on lyrical solos but might sound tubby on a jazz/commercial piece. Or a horn could sound lovely on soft music but sound strained on *ff* passages.

Choose or invent a passage that goes from very soft to very loud. You can even use a simple scale that goes from middle F to upper F, *pp* at the bottom to *ff* at the top. Push the upper dynamics as far as possible to find the limits of the horn. See how loudly you can play it before the tone breaks up, and try to do this without any more "edge" than necessary. This will tell you if the horn can project over a too-loud band even when you don't want to get "brassy" sound.

You need versatility in musical performance, especially with a euphonium. Because of the instrument's very dark tone, the capability of producing different tone shading is very important. Don't let an instrument force you into sounding the same on every style of music you play. This is one of the characteristics that is highly important to me -- I don't want to be constrained to a "monochromatic" tone quality. Some euphonium brands really limit the variety of sounds I can produce, and that is not acceptable for most players' needs. Evaluate the tone in all registers. You should be able to make the horn sing in the low, middle, and high registers.

Simplify

When comparing several samples, try to play on each of them for a while before you begin more serious testing and comparing. This will give you a feel for the horns and get them working

acceptably. Then do the serious comparisons in pairs only. Try two horns thoroughly and choose the best one. Set aside the one you don't like and start on another pair. As you begin to try each pair, start by playing the "new" one and warm it up a little before you resume comparing. Continue this process of elimination until you have gone through all the choices. When you have selected the best of the lot, be sure to try your old horn on the same tests to make sure you are really getting something better (but see the "Newness" topic below).

Mechanics

Pay some attention to the way a horn works mechanically, but don't get too distracted by it during your initial selection process. First narrow the field down to a couple winners. If one of them has some mechanical trouble, attend to it and see if it can be remedied. A horn that has otherwise good playing characteristics is worth exploring a little further. For example, if the valves are not smooth, disassemble them, clean every nook and cranny on the valve and the casing, oil carefully, and reassemble. If the action is still not smooth, repeat the process. New horns are often shipped with a thicker oil to protect the valves, and sometimes debris left over from manufacturing is caught in the valves. Also check all the pieces for tightness of assembly. If one of the caps on the bottom of a valve is not tight, that can cause a clanking sound when the valve is depressed. If a spring is not seated straight in the center of the valve, it can scrape when the valves move and may cause a "buzzing" sound on certain notes.

Move the valve slides in and out while holding down the corresponding valve. The slide should move smoothly over the range of travel, but it needs to fit tightly enough so that it has a good air seal. For the 2nd-valve slide, it needs to fit snugly enough so it does not fall out, but it still must work smoothly so you can remove it to empty out the water that accumulates there.

If the horn has a trigger, check its operation as well. Do not be too concerned if the action seems sluggish. Many triggers need to be broken in a bit before they will operate smoothly and quickly. And it may take some experimentation to get the right combination of type and amount of lubricant for the slide action. If you are not used to a trigger, it probably won't feel comfortable at first. You need to get used to holding most of the horn's weight with your left hand and still keep your hand free enough to operate the trigger's paddle.

With or without a trigger, make sure your left hand can hold the horn comfortably. There can be considerable difference in the distance from the 3rd valve tube to the other side of the large branch -- your "grip" reach. If you have large hands this may not be an issue, but if you have smaller hands this can be an important factor in avoiding muscle/tendon strain..

Attack

As mentioned before, the attack is a very important criterion to test. Much research has been done on the acoustic properties of instruments. In one test from decades ago, instrumentalists played long tones, which were recorded on audio tape. The tape was later played back for musicians to identify. The panel members were able to identify each instrument with little trouble. Then the technicians used a razor blade to cut off the attack of each note (this was

obviously before digital recording technology). When this cut version was played, the panel had great difficulty differentiating between any two instruments playing the same exact pitch. A trumpet could not be distinguished easily from a clarinet without being able to hear the attack.

This same phenomenon comes into play when listening to different models of euphonium. The way the horn responds to an attack can give it a unique sound. Usually, a horn with a large dynamic range will do the best in this test. The attack is the loudest part of most tongued notes; if the horn doesn't have much dynamic "headroom" it will constrain the attack.

Intonation

This is a difficult area to assess in any reasonable amount of time. No horn has perfect intonation. You have to find one that has made acceptable design compromises for your needs and playing abilities. However, your impression of the new horn's intonation will be dramatically affected by the intonation of the horn you are used to playing.

USE A TUNER. This is your only hope of judging a new instrument accurately. (*They are not expensive, so if you do not own a good tuner, look on the [chromatic tuner](#) page of Amazon's Tuba-Euphonium Store.*) Be very sure you get each horn warmed up thoroughly before judging the intonation (five minutes will not do it). Then tune it carefully to a concert Bb in the middle register.

Notice three things with any pitch discrepancy:

1. Is it in a range that will be noticeable or problematic?
2. How far is it from true pitch?
3. How easy is it to adjust?

Work with intonation long enough that you begin to feel familiar with each horn. If you are judging a particular note, approach it from above and below melodically to see how that affects it. Remember, you may be used to lipping a certain note up or down because of the horn you have been playing (when you are really used to one instrument, you may not even be aware you are doing it). You may perceive problems in the new horn that aren't there. In order to work around this, you need to find out where the horn wants to play the note. Stay on the note in question; play it loud and soft to get a feel for it. Bend the pitch grossly up and down. This will help you disassociate your previous notion of where to put the pitch. As you bend the note, listen to where it is most resonant -- this is where the horn wants to place it. As you are doing all this in front of your tuner, start with your eyes closed. When you feel like you have found the horn's true pitch on a given note, open your eyes and see what the tuner reports.

There is one more characteristic to observe. Some horns make it easy to adjust pitch by lipping; others make it quite difficult. If the horn is too easy to "bend" on pitches, that *may* be because it doesn't have a good, solid center. You want a horn that has well-centered notes. However, some horns are so well centered that it can be very difficult to bend a note up or down. That is the point of #3 above -- you have to be able to adjust the pitch as much as necessary to play in tune with a section.

Slurs

An instrument with superior response can make all slurs easier and cleaner (slurs can be one way to judge response). You will be able to play slurred arpeggios with more facility. For this area of testing, you will probably judge as much by feel as by sound. As with many of these factors, test slurs in various ranges. I suggest testing with melodic slurs, slurs over small intervals (such as arpeggios), and slurs over wide intervals.

Response

Compared to euphoniums of 40 years ago, today's models have better response in general. You may find several brands that feel better than your "old" horn this way. It is easy enough to detect the improved response in a general sense, and much harder to evaluate differences in response between two brands if you are not already used to today's standards. I often use soft playing to help me evaluate this. Try playing a piece at a consistent *p* (piano). As you go from note to note, and as you play over intervals, see how easy it is for you to make all the notes speak evenly and still stay within the *p* volume. Instruments with better, more even response will help you do this.

Compensating horns are inherently more "stuffy" (less responsive) in the compensating register from the B natural just above pedal B-flat (played 1-2-3-4) up to the 4th-valve F. But modern horns have improved that area dramatically. Larger bores and better construction have contributed to less stuffiness, but you still find differences between brands. Test this range by playing scales, including chromatic scales, through this area. It may feel easier on some brands. Also test by playing a note in the octave above, then gently tonguing the same note in the compensating octave. The horn that gives you the best accuracy percentage probably has the best compensating response.

Physical Considerations

Notice if the horn is comfortable to hold. Try it while sitting and while standing. Notice the reach from the right hand-brace (behind the valves) to the valve tops, and notice the reach for your left hand to wrap around the slides as you play. Also, make sure the angle of the mouthpipe is comfortable. Any of these factors can vary between samples within the same brand; try several if necessary. If you have small hands or strength issues, the weight can be an important factor, and it can vary a great deal from brand to brand and even model to model. Compensating euphoniums are preferred for serious players, but they are also heavier than non-compensating euphoniums. A trigger adds considerable weight. Some brands offer options for metal thickness; thicker metal may give you a more substantial sound, but will also be harder to hold in playing position, especially while standing.

Newness

Don't be too distracted by the "newness" factor. No brand new horn plays as well as it will when it is a year old. New horns will be stuffier, less clear, and won't respond as well in the 4th valve

register as when they are well broken-in. If you can get a horn to try for a couple weeks, it will play noticeably better at the end of that time, and may give you some idea what it will be like when broken in.

In my work helping manufacturers develop their euphoniums, I invariably found that if I had played one for a few months and then got a new one to try, the new one seemed stuffier. It was only after considerable playing that the new sample began to feel like a comfortable old shoe. By then it was time to trade for a newer version, and I had to start breaking in a horn all over again.

This is somewhat easier to deal with when comparing all brand new horns. They will all be stuffy because of newness so the playing field is level. Be aware, though, that sometimes one of the new horns may have been played much more than the others (because of being on display at a show, for example) and may have better characteristics because of that. I haven't found a good way to deal with this; just be aware that it may be a factor.

Mouthpiece

Most professional euphoniums use a bass trombone size receiver for the mouthpiece, but some popular horns use the middle size receiver (similar to the size Besson used before 1975), and at least one uses the smaller tenor trombone size receiver. If you can, bring along your model mouthpiece with the shanks you will need. Most mouthpiece manufacturers can supply you with a mouthpiece of any shank size. It might be worth the expense to obtain a set of varied shank sizes. You may find that you have a use for them in the future, and they will be extremely helpful in trying out different brands of euphoniums. If you use a standard mouthpiece, the euphonium dealer may be able to supply you with acceptable duplicates of yours in different shank sizes for trying out horns. If you are going to use the dealer's mouthpiece for any of the horns, use his for all of them -- your comparisons will probably be more valid.

Summary

Obviously, preparation is very important. Make sure you are in the best playing condition possible. Know what music you will be using and learn it well. Arrange for mouthpieces to use. Attempt to secure a large room. Bring along a tuner and use it wisely. Bring a friend. Take your time. When you have made a tentative choice, arrange to keep the horn for a couple weeks to really test it. Don't be too put off by the prices of professional euphoniums -- they are long-term investments.

There are many high-quality euphoniums on the market today. If you observe the professionals from around the world, you will know that the market is not limited to one or two top choices. If you can get to a large music event that has many manufactures displaying their wares, try as many horns as you can. Just because your favorite soloist plays a particular brand, that doesn't mean you will like that brand the best. Keep an open mind!

David Werden Biography



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 has taught at the University of Connecticut and the University of Minnesota, and he is listed in Marquis' Who's Who in American Education.

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 [International Tuba-Euphonium Association](#) (formerly called Tubists Universal Brotherhood Association: T.U.B.A). In 1987 he was appointed to the Honorary Board of Advisors of ITEA. 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. In 1993 he was inducted into the [Pi Kappa Lambda](#) honors society.



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](#), co-author with Denis Winter of the [Euphonium Music Guide](#), and a co-author of the [Brass Player's Cookbook](#). He compiled and edited a series of papers by Arthur Lehman into the book [The Brass Musician](#). He has also published over four dozen arrangements for a variety of solo instruments and ensembles, and published a popular and authoritative article on the world wide web explaining the difference between [baritone and euphonium](#).

David Werden is currently living in Minnesota, working as a computer consultant and teaching tuba and euphonium. 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 [Symphonia](#) (America's Premier Large Tuba-Euphonium Ensemble), the [Minnesota Orchestra](#), the [Sheldon Theater Brass Band](#), was a special guest artist

at the [International Euphonium Institute](#), performed for the International Trumpet Guild, and has been heard on live national broadcasts of [A Prairie Home Companion](#). He is in constant demand as a guest artist and clinician.