# Finding the Perfect Fit (For You)

A Guide to Choosing A Brass Instrument

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# Preface

So, you are looking to buy a new horn? How exciting! It can be a rewarding process to search for your perfect instrument. It can also be incredibly frustrating and disheartening without a bit of help, especially if this is your first time trying. But fear not! In the coming pages, you will find philosophies, exercises, and all manner of considerations for evaluating these quirky objects we come to love so much.

I have been through this process many times, during and after embouchure changes, having wisdom teeth and tonsils removed... All of which is to say, that with a variety of experience comes perspective. Combine that with a deep pedagogical background, and this supplement is born. I want you to feel comfortable with your impressions. Confident in your choices. And with that, you may bring this understanding to others and we may all flourish in the joy of trying horns! Just as an aside, I am a horn player, so I will refer to horn as a default, but the very same principles apply to all brass instruments.

This supplement is broken into a few sections: philosophies, considerations and preparations, and testing. There is a survey in the back that combines all elements discussed within the text that you and others may use to help objectively narrow down potential purchases.

# Philosophies of Horn Testing

Some people reading this supplement may find this section a bit too erudite- plenty of useful information can be gleaned from that which follows in the considerations, preparations, and exercises. However, it is my belief that a brief understanding of philosophical foundations in music can help us to formulate our own unique, individual philosophies. This can be a powerful tool in our performance and creativity beyond the point of purchasing a horn as well.

The topic of individualism is a two way street with horns; for every individual playing the instrument and possessing particular strengths, a horn too has particular strengths. Therein lies a balancing act between your priorities as a musician and the tool you use to share it. This is perhaps the most complex aspect of horn purchasing because multiple horns of the exact same make and model can respond very differently. Further, if a player adjusts their production to get a more favorable result, then that is defeating the purpose of fitting the instrument to <u>you</u>, rather than the other way around. When tackling this internal debate (or external, if your teacher is pushy...) consider these few questions to help guide you:

- How would I define my ideal sound in 5 words?
- Is the horn I am testing supportive of these 5 words when I play it?

  (Key words "when I play it")
- If the sound is right, is it easy to play?
- How about comfortable to hold?

We will explore the realm of technicalities as suggested by the latter questions in the coming sections. For now, perhaps just focus on those first two questions. Adjectives to describe your sound qualities, way of playing, styles you like to play, ranges you prefer, dynamics you prefer, and so forth will define what I like to refer to as your "tone philosophy." Once you find those descriptives, you might choose to put them into a fancy sentence that is unique to you!

This individuality of tone philosophy is the first point of departure and very much overlooked in most cases. Think about it; how many of us when we are trying instruments bring a friend or a teacher to try the instruments alongside us? A second opinion can be very helpful if utilized properly. It can also easily lead us down the wrong path. If horns have their own unique characteristics even within the same makes and models, and the way that you provide your instrument information is unique to you, then why would the way anyone else plays it matter for your particular needs? For most horn purchasing endeavors, the defining questions are something along these lines:

- What kind of horn do other professionals play on?
- Can I win a job on this instrument?

Do you notice how these questions place the value and emphasis outside of the self? In this context, this means that your decisions are not meant to support your wishes, only the norms or values of something else. Namely, what we perceive is necessary to gain access to a professional orchestra. This is called a utilitarian philosophy, in that you are doing something for the express goal of something else. "I must play these excerpts because that is what will allow me to be a successful musician" would be an example of utilitarian philosophy. Adopting your tone philosophy puts you into a different camp; one which supports the art for the art or artist's sake, which is called aesthetic philosophy. It may also have these audition success outcomes, but they are not the primary focus. It speaks to the interaction. The connection, if you will. "I chose to arrange this popular music tune for horn solo because I enjoy it and want to play it" would be an example of aesthetic philosophy. Musicianship goes much deeper than achieving a playing

job, especially in our modern world examining the rigidity of classical traditions. This is not an academic paper that seeks to interrogate these constructs, but it would be silly not to recognize them when considering our work environments, our tools of the trade, and so forth.

Presented another way, if we were to say that you would win a playing gig if you bought a Berg Double, which often sell for somewhere around \$20,000 USD, how many people could actually afford to do that? You can see where gear fallacies lead us astray in this process. Additionally, if the individual-instrument connection is balanced, then it is more likely that an audition panel will recognize your musicality and ease of production. Remember that very capable musicians with great aural skills sit behind these audition screens and they will recognize quality playing regardless of the tool used.

Next in regard to understanding the self in this process is to answer this question:

• What are your truths?

Truth is a difficult concept for philosophy to address, and can be quite polarized. To explain, first there is a **traditional** mode of thinking surrounding truth. That is to say, that truth is absolute, even if intangible or unknown currently. "There is a perfect horn out there, I just have to find it" would be an example of absolute truth and traditionalism. On the other hand, there is **non-traditional** philosophy (very creative titling!) which says that our truths are ever-changing and are determined by a singular person's values (you) or small group's mutually agreed upon values. "Orchestral musicians in America play Geyer wraps, therefore I need to play one if I am going to play in an orchestra here" would be an example of a non-traditional truth set by the orchestral horn playing culture of America.

There is often a spectrum between the two upon which people fall, but determining this for yourself is the second point for reflection. It would again be silly to say that our teachers, colleagues, and musics that we listen to do not influence our thinking. Critically examining and reflecting upon how much or

how little they influence your decisions will further hone where your place is upon this spectrum between traditional and non-traditional. What does this mean for our trialing and purchasing? That is not necessarily something that I can determine generally and include in writing here. What can be shared is that your values of self and contextual truth play a large role in you life as a whole. Further, as musicians, having a strong sense of what drives you as an artist has a powerful effect on the decision to choose particular tools for expression. Zoomed out, this could be instrument choice (such as saxophone, trombone, flute, etc.), voice, composition, improvisation, dance, or zoomed in further it can be our discussion of what kind of horn to purchase.

Allow me to summarize before getting into the next section:

- determining a tone philosophy identifies what makes your playing unique to you.
- How you wish to fit your playing into the musical community determines whether your instrument choice will be based on norms or not (utilitarian or aesthetic).
- Realizing your truths as self determined, small group determined (such
  as among horn players only), or absolute (fully in existence even if you
  can never attain them) can create the space for you to expel outside
  biases and standards, adopt them wholeheartedly, or somewhere in
  between.

This is no easy feat to be sure, and can feel overwhelming to consider all at once. My advice is to take it in phases: ask each question once per day, and if the answer alludes you, it is okay. Ask again the next day, and purely through thought and feeling the answers will become clearer over time. Be patient with yourself and others going through this process!

# Considerations and Preparations

Let us begin by discussing two of the questions mentioned in the previous section:

- If the sound is right, is it easy to play?
- How about comfortable to hold?

Most people will submit that sound quality is the most important aspect of horn purchasing, even if it is to the detriment of something else that is also important. For instance, I know a particular professional that plays on a very heavy triple horn. They sound great when playing on it! However, holding this instrument up over many hours slowly deteriorated their shoulders and necessitated surgery. Now, perhaps they were already genetically predisposed to requiring such surgery later in life, but it is very probable that the horn accelerated the need. My point here is to stress a balance of positives: our health and wellness do in fact need to come before, or at least in equal weight, with sound quality. If playing an instrument will cripple you for the rest of your life, perhaps that instrument really is not the best fit for you.

In order to accomplish this, we must reflect upon our unique body shapes and sizes. Are you tall and possess a long torso? Perhaps petite and have small hands? Maybe you are blessed with natural strength based on your body mass (lucky you!). Regardless, an instrument that compliments your body type will

help you get the best results. Pay particular attention to the weight of the instrument. Even if you are an "on the leg" player, the weight of an instrument will likely contribute to the amount of physical effort you need to get it to respond. When you play your first notes on it, this will become clearer to you and how it balances with your body. Perhaps you like the feeling of putting a bit more physical effort into playing, and that can be okay as long as it is not tiring. Constant physical exhaustion in performance will lead to injury. This is a point I must stress: WE DO NOT WANT TO INJURE OURSELVES. Be smart about your instrument choice and how it supports your health and wellness.

As for the hold of an instrument, this generally pertains more to wrap type. Standard Geyer wraps tend to have a wider body than the more compact Alexander 103, for instance. Some people like the feeling of a lead pipe that is shorter or when the receiver for the mouthpiece is closer to the body. What is important for your considerations here is to pay attention to the way that holding the instrument spreads your arms, wrists, and shoulders apart and/or away from your body. Your body is strongest the closer you can hold the instrument to it. Mechanical advantage exists in organic systems as well. It stands to reason that your body will exhibit less stress on joints and musculature if the horn is held more closely. This will improve your endurance and breathing in addition to keeping your body from hurting. Some people hold their horns up and outwards from their bodies in a rigid, almost militaristic fashion. This is not a practice that will support your body's health and wellness, and also can contribute to a very bright and rough sound.

For players that hold their horn off of their leg, the body is perpetually utilizing an isometric lift. This is when you do not complete the natural, cyclical motion of a normal movement where you start at rest, move to a place of heightened strength or activation, and go back to rest in a smooth fashion. Holding that middle step puts the body under more strain. Now, a great many people play this way and make it work okay. There are even attachments you can

put on the instrument to take the weight off of the body! That being said, your instrument choice must reflect an ease in playing off the leg if that is your choice. This harkens back to instrument weight certainly, and it also includes the way you hold it. Be keen to any discomfort you feel within your first minutes playing a particular horn, as it will only compound over time.

### Sound Concept and Mouthpieces

Now, the moment we have all been waiting for: let us consider sound qualities of various wraps. Horn is most special for its sound, this is a known fact. There are so many choices, where do you start? The best way to determine the type of sound that you want is to know the type of horns your heroes play on. If you love the Berlin Philharmonic, then an Alexander 103 is your go-to. Start there and see what happens! But perhaps you like all kinds of players all over the world: London, Germany, America.... What then? Nobody can simultaneously play a Paxman, Alexander 103, and a Geyer to my knowledge (if you can, let me know because I would love to see it!) I would encourage you to make a similarities/differences chart for yourself to compare the sounds that you listen to regularly. By finding the qualities in the performances you like and value the most, you will be able to narrow your pool of options.

Sound for horn also changes drastically depending upon the room you play in. Remember that if you are going to be playing mostly in large performance halls, it will be imperative that the horn helps you project to the back of the space. If you are only teaching or performing in small rooms, this is naturally less important. Therefore, part of your considerations should be application in certain room sizes, and if possible you should test it in such spaces before purchasing. I will return to this point in the testing section.

Mouthpiece choice is also important. It is much easier to change a mouthpiece than a horn, and a bad mouthpiece fit can make even a great instrument play terribly. It is likely that the salesperson that is aiding you will be able to tell you whether an instrument accepts an American or European shank mouthpiece if you are unsure. If these terms are unknown to you, then let me define them quickly:

<u>American shank</u>- slightly thinner outer diameter causing the mouthpiece to seat further into a lead pipe.

<u>European shank</u>- slightly thicker outer diameter causing the mouthpiece to seat shallowly into a lead pipe.

These two shank types correspond to the two types of horns of the same name. Their lead pipes have different positions for the venturi, which is the smallest point in a tube for air to flow, and plays a vital role in the way an instrument slots into the harmonic series and responds to player input. The ideal line-up for a mouthpiece should have the very end of the shank right on the venturi. Too far past or not close enough and the instrument will not feel quite right to play. If you are looking to try many American and European instruments, having mouthpieces of both types with you will be very helpful. Consider also with your mouthpieces where your strengths are as a player- go back to your philosophy. If you play high wonderfully and your mouthpiece has a shallow cup, perhaps the low range of an instrument being just okay is fine for you. Put your gear into context and adjust it to fit your tone philosophy.

Lastly, the aspect that many hornists do not like to talk about: prices. Our instruments are expensive, end of story. Purchasing one is often a burden, especially for students looking to finance it without the aid of their retired and financially comfortable grandparents. I would like to offer a couple of points for consideration in this regard, as well as some small suggestions. One consideration is that this is a lifetime purchase. If you are patient and discerning (I will return to this momentarily with the preparations), you will assuredly make a great

decision, and then you will not have to do it again if you do not wish. Because this is such an important decision for a musician, do not consider the prices as you would with more typical shopping. If you love everything about a horn and it is \$1,000 USD more than one that is alright, get the one that you love! Ask if the vendor does payment programs if you cannot pay for it in full. Additionally, many institutions of higher education will offer music students the ability to purchase an instrument and put that money on their student loans. If you are currently in school and are going to buy an instrument, I suggest you check to see if this is a possibility. The final consideration is the crafted nature of many horns. These instruments are one of a kind, even if they look the same as others. If you have a Sorley double, that handmade instrument will likely sell for as much as you bought it for if you do choose to move to another instrument over the course of your career. This is quite different than a factory made instrument such as a Yamaha or a Conn. If you sell one of those secondhand, it will likely not retain the same value as when you initially purchased it. That does not mean that those instruments are worse or will not fetch you a pretty penny, only that the investment is different. Please keep this in mind as you move forward finding your perfect fit.

### **Preparations**

Preparations refer to what you will likely want to do leading up to your first instrument trials. Like everything else in this supplement, these are merely suggestions to aid in your success! Let us start with something mentioned in the previous section: patience and discernment. It is entirely possible that it will take weeks, months, even years to find your perfect fit, and therefore you must steel yourself mentally and emotionally for it. Patience and objectivity in your scrutiny of what each individual instrument has to offer you will be incredibly important. You want to be able to compare everything fairly and equally, otherwise a horn that is really wonderful for you may not get its best chance to shine. We will discuss this also in the next chapter on how to test the instruments. For now, a

simple mantra of "I want the best fit for me, and I will be diligent for as long as it takes" will serve you well.

You will also benefit from having a person who's ears and artistic opinions you trust to help you decide If not during the initial testing, then certainly in the subsequent testing. Prepare by contacting someone, or multiple people, to join you. Set aside a day or two to visit a vendor, or perhaps sign up for a summertime IHS where all of the major vendors will be to maximize your trialing. It might be harder to bring specific people with you to events such as this, but it is also a possibility that they will already want to go! Or, maybe your favorite artist will be there and you can ask them to help you- many hornists are incredibly nice and supportive. Do not be afraid to ask them if this is a possibility.

Physically, there are a few small preparations you can do. One is to practice lightly the day before you do your trialing. It will be physically as well as mentally tiring to be so focused when testing these horns for hours on end, especially if it is over the course of multiple days. Be kind to yourself with light practice the day beforehand to encourage a supple embouchure and easy warm-up the next day. On the topic of warm-up, do it on your own horn before going to trial other instruments. This allows your body to be conditioned to what you are used to and compare everything else objectively to that. It can also be helpful for when you start testing horns to have your own with you and switch between them on the fly. And of course, get good sleep and eat a good meal before and between these sessions. Heavy, overly fatty meals will likely make you feel tired and unfocused-keep it lean for the time being. Of course, you know yourself best in this regard. Food acts as our fuel, so food quality will influence your energy quality.

### Summary

This was a longer section, so hopefully this summary will provide an easy reference for later:

- Consider your body type and how you hold the instrument, comfort and ease here help to support the best sounds and physical health
- Does the wrap of the horn fit in your arms in such a way that you can keep it closer to your body? How about its weight? These directly correlate to fatigue.
- What groups/artists do you normally listen to? What kind of horns do they play? Perhaps start your search there.
- Create a spreadsheet or chart on the qualities of many players and groups you like to see where the overlap lies. This will help to identify qualities in the instrument you will want to purchase.
- Remember that sound can be deceiving in a small room- play for feel and
  intonation in small spaces, then listen for sound and projection in larger
  ones. Important also is to consider where you know you will be playing
  the majority of the time.
- Is your mouthpiece and American Shank or European Shank? Make sure it fits the horn you are trialing to give it the best chances.
- Is your mouthpiece shallow? Deep? What are your strengths as a player? Keep these in mind while you play- a horn may be better at these ranges than you think, it might just be you.
- ALWAYS pay the extra amount to get the horn you love and will cherish
  forever. These are lifetime investments for your future, and there are
  often ways of spreading out the payments or getting a loan through your
  school.
- Steel yourself before the process starts that it may take a long time and that you must remain diligent and objective in your observations.
- Have someone you trust give you aural feedback, only you play the horn.
- Practice lightly the day prior to your testing period to encourage a supple embouchure and ease of production.
- Warm-up on your horn and have it there for the trialing to switch back and forth, if possible.
- Always get a good night's sleep and eat lean to maximize your focus.

# Trials and testing

It is an exciting day! You are off to try horns and hopefully find your perfect fit! And if you have looked through these pages prior, hopefully you are feeling confident with the whole process. Now, you and potentially your trusted "extra ears" are heading to your place of initial trials. Here are some exercises and questions to be asking yourself as you start. At the end of this section are notational examples that correspond to the text, as well as rating scales that correspond to the topics discussed throughout this supplement. You may choose to use the rating scales during each testing session: one for the initial small room and one for trial in a larger space such as a hall. Additionally, giving the rating scales to your "extra ears" helper to compare your answers can be revealing as well! All are here to help support you in making the most informed decision.

# **Initial Testing**

The first thing to do is just play a few quality notes on the horn. Something easy that you know you can do really well. Provided the slides are in a fairly normal place, this should be easy and comfortable. Use a little lift at the end and see if the horn itself continues to vibrate at all, even just momentarily. If the space you are in is more resonant, you may listen for the ring in the room after a nice long tone. Ring in the instrument and the room are desirable qualities overall. If they do not or you do not like the qualities present, then do not waste your time with it. This is the scrutinous process that must take place, and it is very sequential. These initial notes allow you to feel how the horn responds to

your unique way of playing, as well as how it feels to hold. If that all feels okay, try a few notes in the high and low ranges as well. How similar are they to the mid range? Does it still feel comfortable? It is okay if they are not the same, as long as they are still relatively comfortable, as this might relate directly to your personal strengths and weaknesses too.

Intonation testing is also important. In part, this is down to the player, but more so this is down to the instrument. Musicians have good ears, and will often adjust their production to compensate for an instrument not performing with decent pitch. Doing this will tire you out more quickly and reduce flexibility. The harmonics to try and tune are 8th and 4th, both of which should be nicely in tune with a tuner and each other. Place the slides in a reasonable spot (if you are unsure because the wrap is unfamiliar, ask the vendor or someone else to help you), and begin with shorter quality notes. Switch between the octaves. This can give you a sense of the note starts and clarities across the mid range as well. Two additional patterns you can test octave intonation with are flexibly slurring between the two quickly, which is the easiest way to hear where the pitch lies. You might also bend the pitch up and down in the slot to make the sound go in and out of center. This is helpful to know where the instrument wants to put the note, and you can then adjust the slides if necessary. These techniques are more advanced, so if you are not comfortable with doing them that is okay. Keep checking the 8th and 4th harmonics on both the Bb and F sides of the horn. Go from an open horn down to fingering 2 and 3 together with and without the thumb valve. Following this same process, you may also try 12th, 6th, and 3rd partials together. Each of which will play slightly sharp, that is natural. The point is to see if they are similar to one another. If they are not, your mouthpiece may be out of alignment and the horn may not be the best fit for you. If you really like the response, resonance, and overall sound, you may need to consider a new mouthpiece. That topic could be its own supplement! Not for rumination here.

Next is the bop exercise. Take a quick inhale and release a loud, staccato note. How fast did that work for you? Did it feel like it required you to tongue really hard or push? Repeat this in multiple ranges and multiple valve combinations. The horn may respond well with no fingers down, but very poorly with multiple fingers down or vice versa. This has to do with the openness of the blowing, which most players actually feel an inverse relationship towards. This means that a horn that is too open or free blowing can feel restrictive and unresponsive. It is a balance between what the instrument provides and how the player responds to it. If you have response issues playing this exercise, then that particular horn will likely require too much effort for you to play and you should consider other options. You will also be listening for clarity on these note starts- if the loud releases are working nicely and sound clear, then try some soft ones as well. Are there any burrs or grittiness on the fronts of the notes? This may require slight playing adjustments, but nothing extreme. Be objective in how you change to accommodate any instrument, as too much will not be fitting the horn to you. Ideally, you should play exactly the way is most natural, so horns that support that functionality are the ones you want to spend more time testing.

Following response and clarity are dynamics with swells. The slow versions are often called hairpins, and take place over a longer duration. The shorter versions happen rapidly, even 2 or 3 per second! Being able to handle them at the fast speed reveals the your ability to control the variety of colors the horn has with good centering and tone. While this is not a supplement about pedagogy and playing technique, the faster swells may be something more challenging for the player, and that is okay. The slower hairpins will reveal the color palette that the horn has as well. Pay attention to the way the instrument develops in the different ranges- some horns will feel easy to play loudly in the high range, others in the low, some may not feel comfortable to play loud anywhere in the range. All of this information is important to consider.

The last exercise you will want to do for an initial test is for smoothness when crossing over the range. This can be accomplished by glissandi over each harmonic in between your starting and ending pitches and with a simple slur between. Start in the mid range and expand outward. What is important here is how similar the information you give is between the notes. If the horn requires a great deal of change, either you are doing 2+ octave slurs (good for you, that's impressive!) or the horn requires too much manipulation to get the result you want. Ideally, notes in wider intervals should feel as close together as possible, requiring the smallest changes in your playing mechanics to achieve the change.

### **Completion of the Initial Test**

If you have made it through all of those steps and are enamored with a particular instrument, then congratulations! Chances are you have entered the "honeymoon stage" with this horn. That is to say, everything will be wonderful while playing it for a time. This is my one caution in this regard- it is possible that after a couple of weeks playing the instrument that this phase will wear off and it will become just like any other instrument for you, and this is why patience is necessary! If a vendor is okay with you keeping the instrument for a while before buying, this allows you to live with it every day and see what happens. It also opens up the possibility of taking it to halls and larger spaces to try if you have not already done so. I will not dissuade you from purchasing the horn if you are very objective in the way you have considered your philosophy, made appropriate preparations, and tested the instrument methodically. However, we as humans all have a tendency to get overly excited and lose the core of our judgement slightly. Being distracted by the shiny thing, so to speak. Be aware that this may happen to you and give yourself the space to let this clouding of judgement give way to logic and reason.

## Supplemental testing

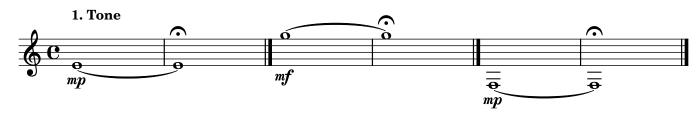
This is your time to be much more musical. I know it is a little counter intuitive to hold off playing solos or orchestral excerpts when trialing a horn initially. These few steps outlined in the initial testing do not take very long to complete. Maybe 20-30 minutes if you are really discerning. You now know the instrument plays well, is comfortable to hold and responds to the way you provide information. Now, let us hear that music that makes you special! Is your voice amplified? Diminished? Do your listener's jaws drop when they hear you? If other people are in the venue, do they stop what they are doing to listen? It is really moving to witness this happening, much more so to be the cause of it! This would also be a strong indicator that this instrument is the right one for you.

I commend your effort in this whole process, and stay positive if you need to continue searching. This is well worth the time and energy, so stick with it!

# **Horn Testing Exercises**

\*\*Notes written are only suggested\*\*

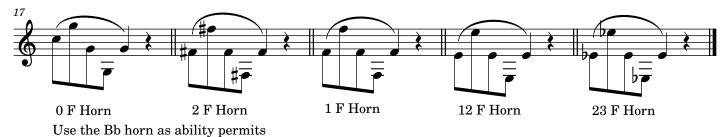
Jacob Factor







### 2. Intonation Cont'd. (12th, 6th, and 3rd partial)





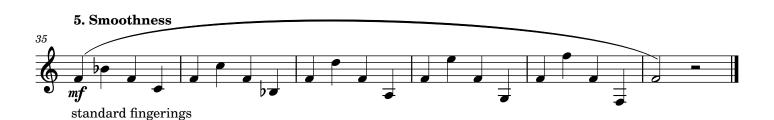
# 3. Response and Clarity (Bopping)





# 4. Dynamics and Color





# 5. Smoothness Cont'd. (Harmonic Series) All on 1 F horn



# **Horn Testing Self-Survey**

# **Information**

Horn 'l'ype:				
Age of the instru	ıment:			
Damage or repai	rs known:			
Cost:				
Tone (Comforta	ible long tones v	vith lift at the e	nd to check for	resonance)
Low Range:				
1	2	3	4	5
Thin/Lacking overtones				Rich/Many overtones
Mid Range:				
1	2	3	4	5
Thin/Lacking overtones				Rich/Many overtones
High Range:				
1	2	3	4	5

Total:\_\_\_\_/15

Rich/Many

overtones

Comments:

Thin/Lacking

overtones

# Intonation (Related to tone; is the horn in tune with itself?)

Octaves Bb side (	(8th/4th partial)	١:
		,.

1	2	3	4	5
Poor/Not the Same				Excellent/Exactly the Same
Octaves F side (8	8th/4th Partial):			
1	2	3	4	5
Poor/Not the Same				Excellent/Exactly the Same
Octaves Bb side (	(12th/6th/3rd Pa	artial):		
1	2	3	4	5
Poor/Not the Same				Excellent/Exactly the Same
Octaves F side (1	l2th/6th/3rd Pai	rtial):		
1	2	3	4	5

<b></b>	100
Total:	/20
TOUGH.	/ ∾ ⊂

Excellent/Exactly the Same

Comments:

Poor/Not the Same

# Response (Speed of sound production upon the release of initial articulation)

Low R	ange:
-------	-------

1	2	3	4	5
Slow				Fast
Mid Range:				
1	2	3	4	5
Slow				Fast
High Range:				
1	2	3	4	5
Slow				Fast

Total:\_\_\_\_\_/15

# Clarity (Related to response; is the tone immediately produced clear?)

ange:	•
	ange:

2	3	4	5
			Pristine
2	3	4	5
			Pristine
2	3	4	5
			Pristine
	2	2 3	2 3 4

Total:\_\_\_\_\_/15

# Dynamic (Hairpin swells, slow and rapid)

Low ]	Range:
-------	--------

1	2	3	4	5
Narrow				Colorful
Mid Range:				
1	2	3	4	5
Narrow				Colorful
High Range:				
1	2	3	4	5
Narrow				Colorful
Ease of Changes:				
1	2	3	4	5
Effortful				Effortless

Total:	/20
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# Smoothness (Cross multiple harmonics in a gliding slur, with and without sounding harmonics in-between)

Low and Mid Range	Low	and	Mid	Range
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1	2	3	4	5
Rough/Uneven				Seamless
Mid and High Ra	ange:			
1	2	3	4	5
Rough/Uneven				Seamless
Within Range(s)	):			
1	2	3	4	5
Rough/Uneven				Seamless

Total:\_\_\_\_/15

# Weight (Does it stress your shoulders, arms, and/or back?)

1	2	3	4	5
Heavy				Light

Total:\_\_\_\_\_/5

# Blowing Resistance (how does it respond to the way that YOU use air?)

1	2	3	4	5
Difficult				Easy

Total:\_\_\_\_\_/5

# Comfort (Does the angle that the wrap puts the lead pipe and keys fit your hand and body?)

1	2	3	4	5
Painful/Does not fit				Fluid/Fit is optimal

Total:\_\_\_\_\_/5

Comments:

Sum of Scores:\_\_\_\_\_/115

Key

- 0-85 Do not purchase the horn, offer feedback to owner/vendor.
- 86-105 Negotiate price based on observations or do not purchase.
- 106-115 Purchase the horn before it is purchased by someone else.