Working on Sonority

– Low Register Forte / High Register piano

Low Register Forte

This time, the focus is **low register forte**. Just like in high register practice, we'll consider the three key elements of tone color:

- **Air Pressure** (support from the abdomen)
- **Air Speed**
- **Air Volume**

In addition to these three, we also have "material" elements like the **embouchure** and **tonguing** — for more details, see the section on high register practice.

General Image of Low Register Air

There's a common (and helpful) comparison:

- High register: blow like you're **cooling soup** (fast air)
- Low register: blow like you're **warming your hands in winter** (slow, warm air)

In the low register, the air speed is naturally slower, and the volume is often more moderate (depending on the situation).
Abdominal support is still essential — but here it's used not to increase pressure (as in high notes), but to **maintain stability** and **prevent the air from escaping too fast**.

Embouchure in the Low Register

A **relaxed** embouchure is key.
Many students try to help the tone by pulling their lips — but this often makes the sound **worse**.

Even when playing forte, the lips should be **relaxed and open**. Think of a soft, "droopy" embouchure — not tense.

Tonguing in the Low Register

Tonguing here is also **gentler**, using not just the tip of the tongue but the **entire surface**, almost like a "soft contact."

Think of the feeling when you burn your tongue on hot food — you can't pronounce clearly, and you go "ah-fii ah-fii!" instead of "ah-tsui!" That's the kind of softened, blurred contact we want.

Also, in this register, the air is **slower and less pressurized**, so **tonguing must match** this flow — soft and non-intrusive.

Resonance in the Body

Like singing, **internal resonance** is crucial for flute tone.
In the low register, aim for **chest resonance** — just like when speaking in a low voice.

Try producing your **lowest speaking pitch**, and feel the vibration in your **sternum**.
Look at tenor or baritone singers — they often drop the jaw and resonate through the throat, chest, and even lower.

The same applies to flute: imagine the sound *vibrating inside you*.

Low Register Forte – "Espressivo" and Expressive

Forte means more **air volume**, but **not necessarily more air speed**.

As with the high register, if you want a **warm, expressive tone**, don't push the air too fast.
Keep this ratio: **volume > speed** = soft, flexible tone.

That "generous but gentle" air requires strong **abdominal support**. Don't let your belly get lazy just because you're playing low — it must **actively stabilize** the air and **prevent it from escaping too fast**.

Low Register Forte – "Sharp, Powerful, Rhythmic" (or Staccato)

This is more difficult.
It's hard to make low notes "bite" with clarity and power.
For example, in *Syrinx* or *Linos*, the dramatic low notes often feel **resistant**, as if the more you try, the less comes out.

Exercise: No Tonguing, Just Abdominal Attack

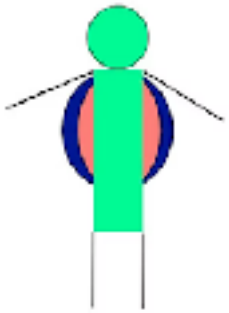
This is the most effective exercise for powerful low register playing.

Because low notes use **slower air** and **less direct pressure**, it's important to develop **a specific kind of abdominal "release"**.

Try playing **short notes using only your abdomen**, no tongue. This helps you develop the "low-register support reflex."

The goal is to produce a clear start to the note **without relying on embouchure or tonguing** — just abdominal support.

Visualizing the Air Pressure Range



You don’t need to empty your belly when doing a strong exhale — it's more about the **air reserve zone** you’re using.

Let’s define:

- 🟩 **Green** = neutral
- 🌸 **Pink** = lightly inhaled
- 🔵 **Blue** = fully inhaled

In **high register**, you often move from **blue to pink** — wide motion, fast air.

In **low register**, you stay in the **narrow zone between pink and blue** — it’s subtle and gentle.

If you use too much force, it produces a **burst** (explosive sound), which ruins the tone.
Only when that percussive effect is intended should you go there.
Most of the time, the **pink zone** support is ideal for a soft but full tone.

🎼 How to Play with a Rich Sonority in the High Register / *piano*

This time’s focus is on the high register!

“I want to soften the piercing sound of high notes!”
“I want to play with a fuller, richer tone!”

If these are your goals, you’re not alone—many flute players work on improving their high register.

You may already be using Marcel Moyse’s *De la Sonorité* (Leduc editions) as a foundation for tone exercises. It’s a classic method indeed.

But sound doesn’t come from the embouchure alone—it comes from breath. And not just *any* breath.

Beginners often produce weak sounds because they can’t yet generate strong airflow. As diaphragmatic breathing develops, the sound naturally becomes more stable and rich.

Even high notes that used to be piercing can transform into bird-like, clear, and beautiful tones as your breathing becomes deeper and more stable.

To help you develop a beautiful tone through deeper breathing and relaxation, here are **three exercises** you can try:

High Register Relaxation Exercise

We'll use a wall for this exercise. You'll also need a non-slippery floor (take off socks if needed at home to prevent slipping).

- Stand with your feet slightly apart and lower your hips as if you're about to sit on a chair.
- Press your tailbone gently against the wall.
- Lean your upper body slightly forward, like in a skiing stance.

Make sure it's not too physically demanding—you're not doing a wall squat or training leg muscles. The focus is relaxation and posture, not muscle endurance.

The key is to find a "comfortable low position" using light pressure from your tailbone against the wall (not from your legs).

This posture lowers your center of gravity and allows for deeper breathing. Try inhaling—if it feels deeper than usual, you're in the right position.

Now try practicing tone exercises (like Moyse's) or difficult high register phrases in this posture. Let your body *remember* the feeling of smooth, unrestricted airflow.

Flute is held high, so we often unconsciously tense the shoulders and upper body. During difficult passages, the body becomes stiff—maybe even your knees crack when you try to bend them!

This can lead to tight, strained high notes, both physically and aurally unpleasant.

In contrast, this wall posture naturally relaxes the upper body and keeps the knees bent. The tailbone becomes a center of support, allowing for natural release of tension and smooth, deep breathing.

Of course, you can't lean against a wall during concerts or lessons—so the point is to train your **body's memory** of what this relaxed, deep-breathing posture feels like.

Don't overdo it, though. Even relaxed posture, if held too long, can strain your thighs. Avoid muscle pain or knee issues by practicing in moderation.

🎵 Practicing High Notes Using Abdominal Muscles

Flute playing may look elegant—but in reality, it's a rather physically demanding instrument.

Almost half of the air we blow doesn't actually become sound—it just flies off into the air. Still, this air is essential for tone production.

What's most important is how we **push air from the abdomen**. This is especially true for high notes. If you try to produce high notes with just mouth tension, the result will often be a piercing, harsh tone—something no one wants to hear. This is even more true for the piccolo, where abdominal support is critical.

There's another downside to pushing with the lips: **intonation problems**. The pitch of high notes often becomes too sharp. This is a common problem for beginners or for students in wind ensembles where precise tuning is essential—particularly with the piccolo, where the pitch can get ridiculously high.

In this exercise, the goal is: **don't rely on the mouth—support high notes from the abdomen**! This is a core exercise I've been doing since high school.

➤ How to practice:

Start by playing middle-range "H" (B natural) **without tonguing**, using only abdominal pulses.

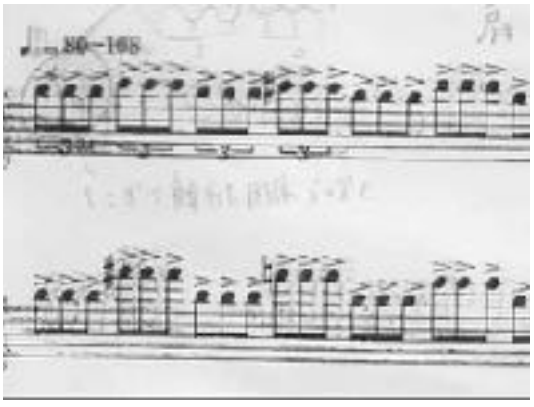
- Begin with quarter notes, then move on to eighth notes and triplets.
- Blow each note as a short "Fuh!" and inhale between notes (not consciously, just allow the belly to return naturally).

We're not focusing on beauty of tone here—just muscle training. Keep your **mouth relaxed**. The sound comes from the **abdomen, not the mouth**. With repetition, you'll naturally develop control and understanding.

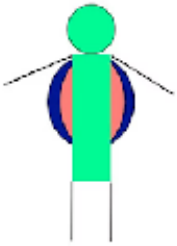
Once you can handle the triplets, move on to the next sheet. There are no rests written in, but you will still **inhale briefly after each note**, just as before.

So it goes:
Fuh (inhale) – Fuh (inhale) – Fuh (inhale) and so on.
Because you breathe after every note, you shouldn't need a separate breath point.

Start at a tempo where you can do this without feeling out of breath.



Breathing Range:



You do **not** need to empty your lungs completely when exhaling.

- Green = normal state
- Pink = lightly inhaled
- Blue = deeply inhaled

Think of breathing **between pink and blue**, not between empty and full. My teacher used to say:

"Never let your lungs go completely empty during performance."

Breathing and sound always need **flexibility**. If you're fully empty, there's no flexibility left. So don't think in extremes—just gently move between "lightly full" and "fully full."

This exercise, as I recall, was adapted from a method by **Akiyasu Miyamoto**.
I've used it for over 20 years. It's refreshing, easy to remember, and incredibly effective.
He also published a great book titled *"Practical Flute Lessons: Learning Correctly from the Beginning."*

🎵 How to Play High Notes with a Rich Piano (p) Tone

Have you ever studied the primary colors in art—red, blue, and yellow? Just like colors, sound also has **elements**. For the flute, tone is determined by the balance of **air pressure (abdominal support)**, **air speed**, and **air quantity**. Of course, things like embouchure shape matter too—but those are details. The mouth is ultimately just the *exit point*. (As Emmanuel Pahud once said—so I can say this confidently!)

In this section, I'd like to think about tone color in terms of these "three primary elements"—our palette of tone colors.

We often hear that we should "expand our tone palette." But how exactly do we do that?
If only sound had actual color, it would be easier to analyze—but unfortunately, sound is colorless and odorless. We have no choice but to listen. Having an image of sound is very important, but let's be honest: no matter how strongly you will a beautiful tone into existence, it doesn't happen by magic.

So instead of stopping at "ah, what a lovely red," let's take it one step further:
"What proportions of the three primary colors make up this red?"
Just like that, we can analyze tone with a calm and thoughtful mindset—and expand our palette.

📌 Playing high notes softly (p):

- **Use strong abdominal pressure**
- **Maintain high air speed**

- **Reduce air quantity**

In high registers, **air speed is essential**.
To play "piano" in the high register, we must **maintain speed** but **reduce quantity**.
However, when you reduce quantity, speed often drops too—which can cause pitch or range problems.

Beginners often lack abdominal support and rely on "mouth pressure" (like squeezing the tip of a hose) to gain speed. This makes it hard to reduce the air quantity. That's why **playing high notes at p is difficult**.

🎨 Tone color palette in the high register at p:

Just saying "high note at p" isn't enough—it might be functional, but not musical.

Let's say the score calls for **"espressivo," or expressive and lyrical** playing, and the melody is deeply emotional.

Even if it's still "p," the **balance between air speed and quantity** will change the character:

- **Speed > Quantity** = A sharper, edgier tone
- **Quantity > Speed** = A warmer, softer tone

If we use **speed > quantity** in this espressivo moment, the tone may sound too sharp—like blurting out a romantic phrase in a rush. Instead, we cover the speed with breath quantity, keeping the **balance at quantity > speed** to soften the tone.

On the other hand, if you want a **sharp, piercing pianissimo** (like in Kazuo Fukushima's *Mei*), that intense, cutting p is all about **quantity < speed**.

Since we're playing at p, breath quantity must be used sparingly. But increasing speed often leads to more air escaping. That's where **abdominal pressure** helps hold it back—saying "don't go yet, air!" Like bassoon and oboe players who struggle with air buildup, high-register p also builds internal pressure.

Thinking through these **three elements** helps you create a variety of tones.

Of course, this isn't everything—you can also consider **internal resonance**, **nasal cavity resonance**, and more. There are many layers to creating a **rich high-register p**.

But the most important ingredient is this:

"I want *this* sound!"
Your **inner desire for tone** is what truly expands your palette.

So to expand your tone palette—cultivate your emotional and artistic sensitivity. 😊