

## My Question

I play guitar through a Valeton GP-5. I bought a second GP-5 and now run one into the other. I am using one of them as my amp and IR/cabinet. And I am using the second one for modulation effects only. Someone asked me if I hear double the amount of latency when I play. They think that each GP-5 could add 5 ms of latency. But I am not hearing a delay. I'm quite sure I would be able to tell if there really were 10 ms of latency. Maybe there isn't latency if you only use modulation effects without an amp and IR/cabinet?

## Chat GPT's Response

Great question—and your instincts here are actually pretty solid.

Short answer: **no, you are not “stacking” anything like 10 ms of audible latency**, and the person who suggested that is oversimplifying how these units work.

Let's break it down in a musician-practical way.

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### 1. Yes, every digital unit has latency... but it's small

Any digital multi-FX has **A/D → DSP → D/A** latency. For modern floor units like the **Valeton GP-5**, this is typically on the order of:

- **~1.5–3 ms total**, depending on processing
- Amp modeling + IR/cab tends to be the *largest* contributor
- Modulation (chorus, phaser, flanger, tremolo) adds **very little** extra system latency

Even if someone claims “5 ms per unit,” that's already on the high side.

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### 2. Latency *does* add—but not the way they think

Yes, technically:

- GP-5 #1 latency + GP-5 #2 latency = total system latency

But:

- If each unit were ~2 ms, you'd be around **4 ms total**
- Even at a pessimistic **3 ms + 3 ms**, that's **6 ms**

For context:

- Standing **6 feet** from a guitar amp = ~5–6 ms acoustic delay
- Most players don't notice latency until ~**10–12 ms**
- Many don't *feel* it until **15 ms+**

So your reaction—“*I'd definitely hear 10 ms*”—is correct.

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### 3. Modulation effects do NOT double perceived latency

This is the key misunderstanding.

**Modulation effects:**

- Chorus
- Phaser
- Flanger
- Tremolo
- Rotary

These **intentionally delay part of the signal internally**, but:

- That delay is **part of the effect**
- It does **not** increase the *input-to-output system latency* in a meaningful way
- Your dry signal path still exits as fast as the converter allows

So running:

GP-5 #1 = amp + cab

GP-5 #2 = modulation only

...is actually a **best-case scenario** for keeping latency low.

If *both* units were doing amp modeling + IRs, then yes—you'd be closer to the worst case.

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### 4. Why you don't hear it (and would if it were real)

Your experience is the strongest evidence:

- You play guitar regularly

- You know what “laggy” feels like
- You are not compensating or “getting used to it”
- You’re not hearing pick-to-sound separation

If you truly had ~10 ms:

- Fast funk rhythm would feel smeared
- Tight country picking would feel rubbery
- Muted strums would feel disconnected

You’re not describing *any* of that.

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## 5. Real-world takeaway

- You are **not crazy**
- You are **not imagining things**
- You are **well below the latency threshold**
- Using one GP-5 as amp/IR and the other for modulation is **a smart routing choice**

If you want a one-liner for that person:

“Even if latency adds, modern units are closer to 2–3 ms. Two of them is still less than standing a few feet from an amp—and modulation effects don’t double system latency anyway.”