

Setup Guide for Your Modified GPZ 7000, GPX 6000 & GM 1000

How to get the best performance from your machine

Revision 1.0 · 18 June 2026 · Replaces all earlier instruction sheets

Welcome, and thank you for trusting us with your detector. Your machine is one we improve from the inside — by lowering the noise it makes to itself — rather than by adding new controls. This short guide explains what that means and, more importantly, how to get the most from it in the field.

There is no need to take it all in at one sitting. Most of it is plain common sense once you have seen the pictures, and the machine itself will teach you the rest.

The one idea behind every modification: signal-to-noise

Every metal detector — your SD, GP, GPX, GPZ or GM — is really just a machine for pulling a faint target signal out of a sea of noise. Almost everything we do when we modify a detector serves a single goal: lowering that noise, so the signal you actually care about stands out.

It helps to picture it as marbles. The signal coming up from the ground is marbles of one colour; the electrical interference (EMI) in the air around you is marbles of another; and the whisper from a piece of gold is a third. On top of all that, the detector tips in its own marbles — electrical noise made inside its own circuits. Your job in the field is to sort the gold out of the pile. We cannot change the ground, and we cannot change the interference around you — but we *can* clear out the marbles the detector throws in itself. That is exactly what our upgrades do, and it is why a quieter machine reads the ground more honestly.

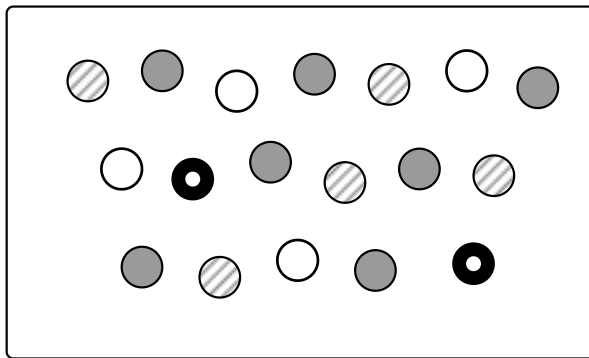
● Ground signal

○ Interference (EMI)

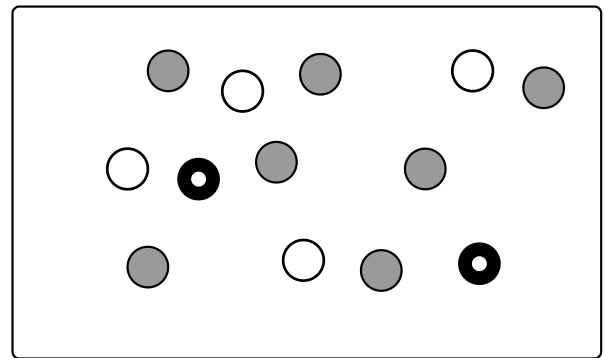
● Gold — what you want

● Noise we remove

What reaches the receiver



After we drop the noise floor



our
→
upgrade

Why a quieter machine finds more. The ground signal and the interference around you are fixed — you have to work with them. The detector's own internal noise is not: by lowering it, we take our own marbles back out of the pile, so the few that matter are far easier to pick out. Same ground, same gold — a cleaner view of both.

Where you stand matters as much as any setting

These detectors are built for remote country, well away from mains power, solar gear, and the electrical hum of town. Flood the front end with EMI and even the best upgrade can disappear. We have had people switch on a modified GM 1000 in the shed at home, hear no difference from standard, and assume nothing had changed — then take the same machine bush and find the difference was night and day. Near interference, the input stage is simply swamped, and modern auto modes quietly wind performance back to cope. So if you are testing your machine, test it where you actually intend to detect.

THE GOLDEN RULE OF SETTINGS

More is not better past a certain point. On any of these machines you can wind gain or sensitivity up chasing depth, and an obvious target may shout a little louder — but the noise climbs faster than the depth does, and the small or deep targets you are really after vanish into the racket. Across a day, working targets of all sizes, a machine set **just below its noise floor** will out-find the same machine cranked past it. Turn the settings up until the machine is just starting to get unpleasant to listen to, then ease back a touch. That edge — just below the noise — is where it performs best.

Your upgrade: a quieter machine

GPZ 7000 · GPX 6000 · GM 1000 — the improvement is inside, not on the panel.

What we changed — and what we didn't

On the GPZ 7000, GPX 6000 and GM 1000 we deliberately do not add controls. These machines are tightly designed and sealed in ways that make new knobs impractical — so instead we go after the noise floor itself. By quietening the electrical noise inside the unit, we let the receiving stage read the incoming signal more accurately. In the marble terms from the opening section: we take our own marbles back out of the pile, so the ones that matter are easier to find.

There is nothing new on the panel to learn. The machine looks and drives exactly as it did — it is simply working with a cleaner signal underneath. What you should notice is a steadier threshold, and fainter, deeper targets lifting more clearly out of the background, especially in good, quiet ground.

Getting the benefit in the field

Because there are no extra controls, getting the most from your machine comes down to one habit: find the noise floor with the detector's own sensitivity (or gain) control, and sit just below it.

- 1. Set up where you'll work.** Test in the kind of ground you intend to detect, away from obvious interference — not in the shed at home.
- 2. Start low.** Begin with sensitivity / gain wound down, and let the detector settle to a smooth, quiet threshold.
- 3. Bring it up gradually.** As it rises you gain depth — until the threshold starts to chatter and hiss. That hiss is the noise floor.
- 4. Back off a touch.** Drop to where the machine is stable and comfortable to listen to for hours. That point, just under the noise, is your sweet spot.
- 5. Re-check when things change.** The floor moves with the ground and the location, so reset it when either does.

HOW HIGH IS HIGH ENOUGH?

If a setting makes the machine harder to listen to but is not clearly finding more, it is too high. You are not chasing the loudest the machine can be — you are chasing the most it can *hear*. On auto-managed machines, give the auto modes clean ground to work in and they will hold a better level for you.

Questions? We are happy to help.

We would much rather an email than a frustrating afternoon —
if anything here is unclear, get in touch. We are always glad to help you get the best out of your machine.
Feedback on these instructions is always welcome by email — it helps us improve them for everyone.

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