

The Gold Bug[®]

SYSTEM

For Electrolytic Recovery of
Heavy and Precious Metals



There's only one
Gold Bug...

This is it,

THE ORIGINAL GOLD BUG[®]
SYSTEM

THE PROBLEM

- The steady loss of precious metals through rinse waters, strip solutions, spent plating baths and surprisingly, ion-exchange resin columns.
- The lack of accountability, both in house and with outside refiners.
- The cumbersome techniques of converting recovered precious metals back to productive and/or liquid assets.
- The presence of heavy metals in waste streams

THE SOLUTION

The Gold Bug[®] SYSTEM

the most efficient and cost effective electrolytic recovery system ever.



Inside: axial cartridge surrounds concentric anode



BEFORE

Typical replacement cartridge before use.



AFTER

Idealized representation of cartridge after use.



How does the Gold Bug[®] make accountability of precious metals easy?

By weighing, sampling or melting the cathode, in house, The Gold Bug[®] allows you to know exactly what has been recovered even before the refiner knows it. Since the cathodes are inexpensive and disposable, precise record keeping and metal extraction is easy.



How can the Gold Bug[®] reduce my solution processing costs?

You're taking the metals out in your own shop. The water stays in your plant. Hence, no drums of solution requiring hazmat documentation, no transportation costs for heavy drums, no insurance etc. Easy, inexpensive processing with full accountability. You're back in control.



How does the Gold Bug[®] achieve its remarkable efficiency?

The Gold Bug[®] employs a metallic matrix of enormous surface area which is formed into a cylindrical cathode. This, combined with the turbulence created by a dedicated pumping system, exposes the cathode to a continuously renewed concentration of fresh ions. This means fast plate-out to very low concentrations.

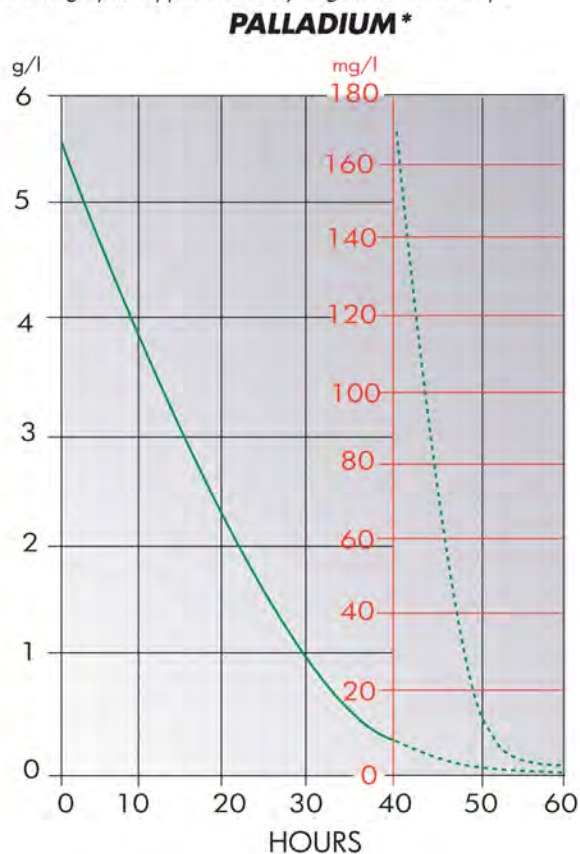
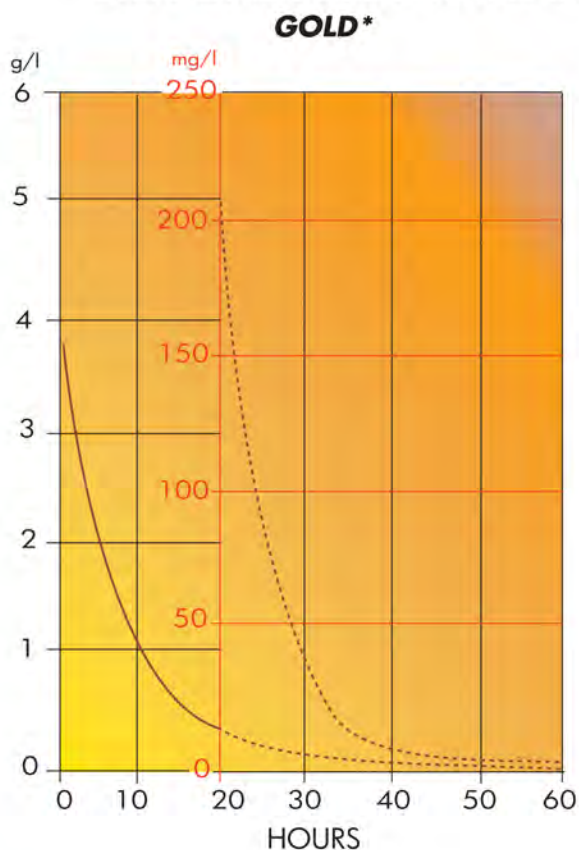


Of the precious metals, does the Gold Bug® work well just with gold?
And, what about non-precious metals?

The Gold Bug® is used very successfully with all of the precious metals including silver, palladium, palladium-nickel, platinum, rhodium and iridium. Various types of solutions of copper, cadmium, tin, tin-lead have all been successfully treated to concentrations of less than 5 ppm with the Gold Bug®. Undetectable levels are sometimes possible to obtain.

SPEED OF RECOVERY

EXAMPLE: 250 liters of solution @ 20 A. Actual test data and graphs supplied courtesy Engelhard-CLAL Corp.



Can I mount the Gold Bug® vertically if we do not have room at the bottom of the tank.

Yes. It is also helpful for servicing. You do not have to take the unit out of the tank. The gray bracket is available at nominal cost.



Once I remove the cathode, how do I convert this into a productive asset?

After the cathode is removed and either weighed, sampled or melted, you can ship it to your refiner via registered mail. Typical refining charges are a fraction of what they would be relative to solutions or resins.



What are some of the typical applications?

By far the most popular application is for point source recovery from drag-out tanks, plating baths and stripper solutions. Other applications include ion exchange regeneration, dummyming, and enhancement of existing ion-exchange systems.



Can I use the Gold Bug® to dummy any of my baths?

YES. When placed in a nickel bath at low voltage, the Gold Bug® is able to keep the copper concentration from ever building up to objectionable levels. It is particularly helpful because dummyming can be achieved at the same time the plating is taking place. Therefore, it is no longer necessary to wait until after-hours for maintenance. The same Gold Bug® system can be moved around to many different baths.

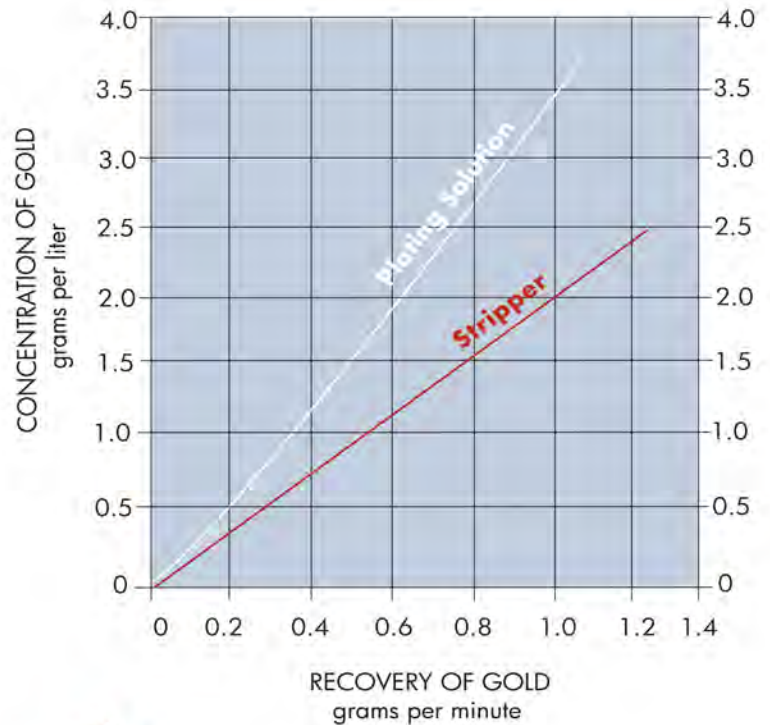


How is the concentration of cyanide affected by using the Gold Bug®?

Electrolytic dissociation of cyanide is a well-documented phenomenon. The Gold Bug® will continuously destroy total cyanide as it recovers metals, making total waste treatment that much easier.

SPEED OF RECOVERY

EXAMPLE: GOLD @ 25 A.



What about Safety?

All platers know that oxygen and hydrogen are generated at the electrodes. If not vented properly, this mixture is highly combustible and can explode. Any gas that accumulates in the Gold Bug® harmlessly floats to the surface of the solution. In over five hundred million machine-hours, we are not aware of one instance of any type of hazard ever occurring.

OPERATING INFORMATION

Power Requirements:	110,220 V. AC
Maximum Output Current:	25 A. DC
Optimum Output Voltage:	2.5-4.0 V., 6.0 V. Max
Dimensions of Collection Canister:	16" long, 5 1/2" O.D.
Total Cathode Surface Area:	Approx. 10 ft ²
Recovery Capacity:	Gold >100 Troy oz or 3 Kilos
Shipping Weight:	37 lbs.

THE CONCLUSION

The Gold Bug® is able to bring relatively large volumes of solutions with concentrations of metals all over the spectrum to environmental compliance levels in many cases. This is done quickly and inexpensively. In fact, do not let the price fool you. With confidence, we invite you to try it on us and match it against any other system available. Use it for thirty days and send it back if you are not satisfied. That is our guarantee!

The



Bug[®]

SYSTEM

Years ago, Precious Metals Processing Consultants, Inc. developed and patented a revolutionary type of recovery system, the Gold Bug[®]. Using an extremely high surface area cathode, the unit is small enough to fit into the smallest drag-out tanks and powerful enough to recover large tanks of concentrated cyanide strip solutions.



