



PRODUCT REPORT



Author Clive James Clynick tests the Racer 2 at a sports seating area.



This worn 1917 Canadian dime came from a heavily hunted site long since given up on. The Racer 2's fast response speed allowed the author to pick it out of the dense iron junk.

The Makro Detector Racer 2

By Clive James Clynick

When I was asked to review the Makro Racer last year, I wasn't at all ready for the performance of this detector. For a machine that runs on four AA cells it has a surprising amount of power and depth. As soon as I heard its clean, sharp audio and began to air test the machine, it became clear that this detector had a lot of potential. As I began to use the Racer in-ground, I saw that it also had great gold sensitivity and performed extremely well in iron.

Some of the best treasure hunting advice I've ever gotten was to begin by knowing where some treasure is— then work at recovering it. I knew lots of iron-infested places that have yielded old silver in the past but were just not worth that “one more try” anymore. With the Racer I was able to go into those locations and bring up quite a few more great silver finds. Basically, I started finding silver coins again— at the same places! I also used this

machine's extreme depth and 14 kHz gold sensitivity on the beach to go in behind other hunters and find some nice jewelry— even long past the season's end.

In the course of writing the Racer review, I traded notes with several seasoned hunters, one of whom manufactured machines and had tried just about every major detector released in the last 30 years. He was also very impressed with the Racer. As I began to monitor the forums, gather information, and see the results people were getting with this machine, my review soon became a book: *Mastering the Makro Racer* (2015).

One common theme emerged in customer feedback about the Makro Detector com-

pany. They had a great reputation for responding to customer concerns and making the needed changes to their products right away.

Now, in my opinion, this is a great way to think, in that the field experience of product users is a great resource for research and development. Makro has chosen to make good use of this information— the “wish lists” of dozens of seasoned hunters— to refine the Racer into a new version... the **Racer 2**.

While it’s generally agreed that the Racer itself is a great and innovative detector, there are some major improvements on the Racer 2. I’ve seen all kinds of “reboxed” machines in my day— add a sticker, come up with a sharp-sounding bit of “techno-jargon,” and market the machine as all-new. This machine is the opposite: the original Racer’s strongest, most effective features have been made even better in the Racer 2. The result is a highly practical new detector that has added discrimination features to especially help the novice, and some nice high performance touches for the seasoned treasure hunting enthusiast.

About The Platform

Both Racers feature a great interface that lets you cross-check signals in several modes very quickly. The display itself gives you all the machine’s information at a glance, including modes, settings, target ID, and ground conditions. The Racer’s 14 kHz operating frequency is extremely sensitive to gold or lead. Testing this machine at the bench, I found that it was the low conductor targets that responded best— even better than silver.

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I also like detectors that have more sensitivity than you can use. With the Racer 2, though, there are new All-Metal features aimed at giving the machine more stability in sand— allowing you to run it “hot” in this great beach search mode— and use more of the available sensitivity. The speed at which the machine retunes can also be adjusted. This is

called the iSAT or Self Adjusting Threshold control. This allows a smoother threshold when searching tough beach ground, such as black sand or areas where there are changing moisture levels. The threshold of this mode also adjusts to allow you to make the most of this sensitivity, to hear small and deep targets. You also see a digital target ID number displayed



The Racer 2's screen not only provides a lot of valuable target ID information, but also allows fast mode changes and adjustments.

as you search in All-Metal mode.

As well, I've seen several demos showing just how stable the Racer 2 is with salt waves running over the coil—a great edge or “wet sanding” machine.

In my experience, this is where most gold is to be found— within 10' of the shoreline.

What really got everyone talking when the original Racer came out was its performance in iron. The machine's lightning-



A variety of finds from hunts with the Racer 2 at iron-infested sites.

fast processing and Tone ID modes bring up deep silver that's mixed in with iron really well. All of a sudden, my worst sites were now my best, and I was traveling only blocks to hunt. Now, with the Racer 2, a new “Iron Audio” feature lets you modulate the noise of iron. This can give more distinction to good responses, or at higher settings allow you to better hear what's in close to the iron. Since many relic hunters were experimenting with ways to either mute or hear more iron (and thus more targets), this new Racer 2 feature is definitely a big help for those who specialize in finding relics and deep coins at old sites.

Makro Detector has also added a special “Deep” mode to the Racer 2. This mode has a slowed response and is aimed at going deeper in open ground. I was very excited to try this search mode at the beach and see how deep it actually was.

In my book, one thing that I tried to teach hunters to do was to learn some solid detecting basics so they could handle the extreme high-gain power of the Racer. These skills include checking targets in Pinpoint or All-Metal mode to see if they are wide (iron) or narrow (non-ferrous), and to use the cross-sweep to check signal consistency, size, and shape— basically, to look for “sets” of target characteristics. With the Racer 2, new discriminate features have been added to help you zero in on the type of targets you are after.

**Let's Look At These:
1. The New Notch Filter Feature**

Notch Filter lets you block out any of the unit's 99 conductive scale increments. This can

be used to knock out undesirable responses altogether (for tabs this is from about “29” to “45”), or just to mute them by rejecting each one’s central numbers. You then listen for those signals that have “extension” in the sound. These ring or “anomaly” programs are a great way to knock out aluminum junk but not block out too much in the gold range. In my initial tests, I was able to get rid of about 90% of the small oval tabs (they’re everywhere on my beach) just by rejecting two digits: 31 and 32. This helped me to focus on the good signals. The next version of this program will target zinc cents and some ring-pulls as well. I’ve always been cautious of using notch programs, but with the Racer 2’s speed the problem of missing targets you want to find is eliminated.

2. The New Tone Break Change Feature

Even with preset Tone ID breaks the Racer was a formidable machine in iron. When you heard a high tone, you knew to take a look at the ID display to see if the signal was a coin or possibly silver. Mid tones could be gold. Now, with the adjustable Tone Break feature you have a way to control exactly where these tones change on the conductive scale. With Three Tone mode, for example, you can have a mid-tone that’s above most foils and a high tone that comes in up where many silver coins come in— around 81 or 82, or slightly higher— while for the most part knocking out modern pennies. While some trial and practice is needed to do this effectively, the potential is very exciting. With the original Racer, I relied on watching the display to see where the bottom of a coin target came in. If it was down in

the 70’s it was more likely to be copper. However, in wet ground or where there was electrical interference, it was very hard to tell what was what. With adjustable Tone Break, these lower responses can be identified by ear.

I’ve always favored this type of tone ID machine for the orderly, conclusive responses they give in old or trash-strewn sites. The Racer 2 also has clean, sharp audio to begin with. When you add Notch Filtering and adjustable Tone Breaks, it makes for a much more accurate park and inland site machine. These are both very quick and simple to use. What you have is a detector with pro-level, high-gain power but enough discriminate features so that a novice can manage it without digging an overwhelming amount of trash. I also noticed that a problem on the original Racer that made a lot of targets funnel into the 82 ID number has been solved on the Racer 2. As well, because each of the discrimination modes keeps its settings, you can cross-check targets with different Notch, Tone Break, and Sensitivity settings with a single button press. For the seasoned hunter, this new target ID menu gives you a larger set of tools to work with, translating into greater precision and better time usage in the field. It also lends itself to a lot more custom worksite or target-specific applications. For me, just having a high-sensitivity machine that can bracket the gold jewelry range at prime shoreline spots is a huge deal. Overall, the two new discriminate features have added more accuracy to the Racer 2— a huge plus. Another addition on the Racer 2 is that once you have a set-up for a particular site that targets exactly

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the kind of responses you are after, you can save it. If you want to restore the factory settings and start fresh, there’s also a reset feature.

Racer 2 At The Beach

Since I already have a Racer, I knew that the Racer 2 would be a superb beach machine. I immediately noticed that the two normal search modes, Two Tone and Three Tone, had a faster, crisper sound to them than with the old Racer. In-ground, the machine seemed livelier as well. As mentioned, in my hunting area the parks and the beaches are littered with small oval tabs, so I took a minute to use the Notch Filter to knock these out by rejecting numbers 31 and 32. I then tested several and they now sound-ed clipped— not at all diggable



The RC13 DD 5" coil combines well with the Racer 2's tone ID features to bring up silver signals in iron-infested sites.



The RC40 15.5" x 13" coil for the Racer 2 has impressive depth and great coverage.

signals anymore. The 14 kHz operating frequency was also great: the machine hit low conductors really well and at good depths. I especially wanted to try the new All Metal features (iSAT, which lets you adjust the machine's retuning speed) and Deep Mode.

I began with the Deep Mode. The first thing I noticed was that the audio sounded completely different— more relaxed and smooth. The manual told me to slow my sweep speed when using Deep Mode, and by doing this I began to hear targets at sections of beach that had been heavily worked all last season and now into early spring. Although it took some getting used to slowing down my sweep so as to hear targets, the machine was going deeper.

Quite a few green coppers and several deep quarters came up while I was using this mode. Deep Mode was also handy as a “checker” for signals that wouldn't ID in the other discriminate modes.

Next I wanted to try the Racer 2's All Metal mode. The iSAT control was preset to 8, and at this setting the machine was very stable. I was able to run the Gain setting at the preset 70 and even higher— to 80.

I also did a few more experiments with All Metal mode, running the iSAT down lower, and could hear that the Racer 2 was now really “opened up” and going really deep on responses. Lowering the threshold allowed me to balance any fluctuation this caused and get more distinct sounds from the signals I was hearing. Even in tough gray/black sand I could tell that the potential was there to run even higher Gain levels, and still have stable operation and good, distinct sounds on deep



targets. This was one hot-running beach machine with great beach gold-hunting potential! I also got a digital indication on the display of each target's general conductive range. Bottlecaps jumped wildly around the scale, making them obvious even in All Metal mode. With the more solid targets, a single press brought me into Two Tone mode for a more detailed and stable ID. A second press into Three Tone mode let me check to see if a signal was a solid middle tone— possibly gold.

I plan to experiment with customizing this middle tone, using Tone Break or Notch Filter (if there are any problem tabs present). You can also alter the two or three actual tones themselves to suit your hearing characteristics or preferences, or how you think gold or silver sounds off best. I also liked how the pinpoint mode had VCO audio that gave me a quick bit more information on the depth and size of each response.

RC40 At The Beach

I also had the opportunity to test the RC40— a large coil for the Racer 2. This 15.5" x 13" coil made a deep machine even deeper. I'd seen YouTube air tests that showed this coil

responding to a gold ring at 43 cm. (almost two feet) and wanted to see what it would do in-ground. Although air and in-ground tests are two different things, I was not disappointed at all.

As with all large coils, I had to slow down and allow it to process a larger chunk of sand. I also had to listen hard to what the machine was telling me— also a result of the larger area of ground being looked at. Once I got this technique down, the great depth of this coil became apparent. I dug the faintest, most marginal signals to see just what this coil would do, and in Two Tone mode it hit small, pear-shaped tabs around one foot deep in packed wet sand! These were clean, loud middle-tone signals. Larger, low conductors like a folded foil catsup packet came in even deeper— around 18". The RC40 was also very good on small targets— something many big coils struggle with. I dug several tiny objects that I could not locate in the sand pile... quite surprising.

Overall, the weight and balance were great, too— owing to the light weight of the detector itself.

Because there's so much competition at the sites I hunt, I've looked for a long time to

find or configure a detector that has extreme depth in tough sand and some target ID as well. To be able to approach pulse induction depths while knocking out tabs and caps is a very effective way to hunt.

The combination of the Racer 2 and the RC40 coil accomplishes this well. It has huge beach and inland site potential.

Racer 2 At An Old Park

Having had some practice with the Racer 1, I decided to test the Racer 2 at the toughest site I knew. This park had been a "truck grove" in the '20s and '30s, a spot where locals would bring their vehicles into the shade to work on them. The amount of iron here makes detecting very difficult, as there are falses everywhere. However, the treasure is there, too. I found my only Victorian half dollar there, as well as an 1870 dime last year. So, I was excited to see how the Racer 2's new sharper audio, discriminate, and iron silencing features would perform at this site. In Three Tone mode right away I was impressed by how clean and solid the Racer 2 sounded as it processed the ground— transitioning cleanly between the various nonferrous ranges and the sound of iron. I experimented with various levels of Iron Audio to decide whether I wanted it loud to better hear what was mixed in, or quieter to give more definition to the nonferrous objects that were present. I

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NEW

“The Racer 2 is also light to use and travels really well, even in a carry-on. Add a plastic sand scoop, trowel, and find pouch, and you are ready to hunt.”

settled on a setting of 2, based on the instruction of an online post I had read. This brought the iron sounds down to a series of short “tics.”

In Three Tone mode I made sure to examine the middle tones by using a cross sweep. The Racer’s clean audio told me that many of them were not round, but newer “can slaw” and misshapen ring pulls. The jumping cursor at the top of the screen also gave me a quick way to spot these inconsistent signals. This grove has yielded several rings, even a gold coin was not impossible here since it was a site of busy auto repair commerce. The higher coin tones also sounded very clean and sharp. I went to the new Audio Tone adjustment feature to bring these coin sounds up to a slightly higher pitch so that they would stand out more. These now sounded even more distinct, and among the first ones I dug— one that came in around 79 on the display— was a thin 1917 dime at about 7-8". The 99-year-old coin’s date was barely legible, but it was a great find nonetheless.

Overall, the response tone of the Racer 2 gave a lot of information. The manual also suggested that I slow my sweep to better ID targets. This worked very well, narrowing the range of numbers that showed on-screen.

As described above, when I

had a questionable deep target, I was often able to bring up an ID by switching to Deep mode. At this location I didn’t use any notch except to knock out the highest number (99) to reduce any iron “wrap around”— more of an experiment than anything, as this didn’t present a problem. I did raise the upper Tone Break to try to narrow the high tone in on silver coins, and this allowed me to focus on them better. One thing I had learned from my experience with the Racer 1 was to check my targets in another mode with lowered Gain. I set up Two Tone to do this with a setting of 49 and was able not to dig several targets that sounded broken in the second mode. One that fooled me was an old gas cap— not that big, and it probably would have been more obvious if I had tested its pinpoint mode width. One of the last signals of the day gave no ID but read at 11". I dug down to find a small round (1/2") brass watch part at that depth— quite impressive. There was no question that this machine was capable of finding coins at these depths with ease.

In both tests I really liked the Racer 2’s performance and new features. The new discriminate features in particular gave me a lot more flexibility and choice in how to work with this detector. I also liked being able to adjust the

iron response level, and in All Metal mode the retuning (iSAT).

As touched on above, I’ve heard it said that the key in detecting is knowing where some treasure is— and then working at recovering it. I’m a big fan of this “focused” type of hunting, and with this machine there was always something else effective to try at difficult sites.

The Racer 2 is also light to use and travels really well, even in a carry-on. Add a plastic sand scoop, trowel, and find pouch, and you are ready to hunt.

The Racer 2 comes with a two-year warranty, and Makro Detector has a great reputation for fast service returns both in Europe (where they are based) and North America. My pre-order arrived here in Canada in five days from the shipping date.

You could say that the Racer 2 loves tough sites! This machine allowed me to go back to some of my worst iron-infested groves and bring up the deepest, oldest finds there. These were places that no longer even merited a “quick try”— long since given up on. For the beach, park, or relic hunter, this detector offers a wide range of very effective features— ones that are only found on much higher priced machines. These features are also very simple for the novice to use but allow pro-level results. For more information or to order, contact Makro Detector’s North America Distributor, **Detector Electronics Corp.** Phone (800) 446-0244 toll-free U.S.; (888) 627-5295 toll-free Canada; (508) 460-6244 U.S. & International. Online: <http://www.metaldetector.com>

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