Makro Racer 2: A Non-Believer Tries the machine.

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Anyone that has read my forum posts knows I am a die-hard Tesoro user and fanboy. I recently became involved in a discussion about reviews of the Makro "Racer 2" metal detector, on the Treasurenet forum. Several people were saying they believed many reviews of the machine were exaggerated, or biased, because the people doing the reviews were either dealers selling the Racer 2, or received free machines for their positive feedback.

I am always cynical when dealers review metal detectors they sell, especially when the machine they're reviewing affords them a high profit margin. I watched dozens of videos on YouTube, and my curiosity about the Racer 2, and it's supposed capabilities grew. The depth tests I watched were impressive, and several videos even showed the Racer 2 running smooth and finding deep coins in wet saltwater sand. Too good to be true? I thought so, and I decided to find out for myself.

I sent Makro Metal Detectors my credentials, my published reviews and metal detecting articles, and my pitch to independently review the Racer 2. Three-weeks passed before I got a call from the manufacturer's offices in Istanbul, Turkey. Dilek Gonulay, the Sales & Marketing Manager for Notka / Makro, began the conversation by letting me know she had been following the posts on Treasurenet, and was concerned some thought Makro was influencing the reviews of the Racer 2.

I confessed my own skepticism and expressed my reservations about purchasing a "foreign" machine, preferring to buy American when possible. Dilek told me she understood, then dropped her Dual-Citizenship (Turkish and American), on me. We talked about her life here in the States, where she served as Vice President of Product Development at Micro Innovations in New Jersey, and the LifeWorks Technology Group here in New York, where she worked closely with Hewlett Packard and Apple on various projects, before joining Notka-Makro in 2010.

As Dilek turned the conversation back to the technology and features Makro has engineered into the Racer 2, I asked her what she thought the three main

strengths of the Racer 2 are. She replied, "Discrimination and unmasking in trashy areas; Depth and speed; Price and ease of use." By the end of our 40-minute conversation Dilek had me excited about the Racer 2, and I had one on the way.

When the Pro-Package ($950.00) arrived, my first impression out of the box was, "sturdy build." The rods snap together cleanly and easily, locking down tightly with no wobble. The coils attach easily with a minimum of coil bolt wrestling, and the coil ears are thick and sturdy. When assembled, including batteries, the Racer 2 is surprisingly light at just 3-lbs (1.4-kg).

Ergonomically, the S-rod design works well for me, especially the adjustable upper arm cuff and strap. The balance centers forward as you would expect but, surprisingly, seems more neutral when swinging the machine. While park and woods detecting I never used the arm strap. The arm strap did prove invaluable on the beach, allowing me to use my sand scoop without putting the machine down.

The LCD display and programming keypad, as well as the ground balance, pinpoint, and flashlight "trigger," are all mounted perfectly for right or left hand operation. As a right-hander, I usually swing with my left arm, and dig with my right. I found that switching modes, adjusting gain, iron audio, or even saving custom programs was easy with either hand. The display screen features eight distinct tools and indicators:

The Target ID scale - ID Cursor and Notch Filter Indicator - Search Mode Indicator: All Metal; Two Tone; Three Tone; Beach; and Deep – The Menu, providing access to all settings and modes including: Gain; Notch Filtering; Audio Tone; Iron Audio; Tone Break; Vibration Settings; Threshold; ISAT; Ground Tracking; Backlight; and Custom Programming - Large Target ID Number readout in the middle of the screen - Ground Phase and Tracking – Magnetic and Mineralization indicator - Warning messages and Battery level indicator.

I found the 28-page instruction manual to be extremely well written and easy to understand. Instructions are laid out in easy to follow sections, highlighted by helpful diagrams and photos. The Racer 2 features Automatic and Manual Ground Balancing options, Push button Pinpointing, Five-channel Frequency Shift (for working near other machines or in noisy EMT conditions), and an LED flashlight

for pre-dawn or late evening hunting. The Vibration mode, which can be used with or without audio tones, can be set to five different levels, making it a good choice for hearing impaired metal detectorists.

I was eager to get the Racer 2 into the field, and for my first hunt chose a city park that has been pounded since the 1960s, with every machine known to man. A large battle occurred here between British and American armies in October, 1776, lasting several days. Over the years many artifacts have been recovered in and around the park, however, it is also infamous for canslaw, pull tabs, screwcaps, and iron.

I ground balanced in the "Three-tone" mode, and stayed with the factory settings using the 11" x 7" DD coil. After 45-minutes, and several targets dug, I was beginning to understand the TID numbers and feel more comfortable with the higher non-ferrous tones, versus the low iron tones in my headphones. I increased the gain slightly from 75 to 85, popped into the "Two-Tone" mode, and started hitting some deeper targets as my hunt went on.

I was delighted to find coins like a 1937 Mercury dime a few inches below a screwcap, at a depth of nine-inches. Some of my finds had undoubtably been walked over by other detectorists (including myself), who either couldn't get deep enough, or just didn't hear the target through the masking. One of the Indian Head pennies I dug was easily 10" deep, with a square-head nail in the same hole. As the targets added up, I grew more confident and impressed.

Getting tired toward the end of the park hunt, I experimented with the Notch Filtering. I "notched out" the most common numbers I was seeing when digging pull tabs (34-36), and bottle caps (62-64), and was delighted with the results. Notch filtering is a fantastic custom discrimination tool, and is very easy to use and save on the Racer 2.

My next Racer 2 test hunt, was a farm field near Kingston, NY. I've hunted several fields in this historic area, which pre-dates the American Revolution, with several Tesoro machines including the Cibola; Vaquero; Tejon; and even the pulse induction Sand Shark. While those hunts were both fun and successful, I dug a lot of old nails and rusty iron. With that in mind I began the hunt leaving the Iron Audio setting (0-10) at 10, so that I could still hear deeper iron signals but, most importantly, ignore them if I chose to.

After experimenting with the different modes for several hours, I found the "Deep" mode to be extremely advantageous in two respects – it requires a slower swing speed, which makes you slow down and assure coil overlap with each swing; and it gives 2"-3" of additional depth on a dime-sized target (1923 silver dime recovered at a legitimate 13") over the "Two-Tone," which is the next deepest discrimination mode. With the optional 15.5" x 13" DD coil ($250.00), you'll add several more inches in depth over the stock 11" x 7" DD coil I was using.

Pinpointing with the stock 11" x 7" coil is very easy compared to some of the other DD coils I've used, centering directly under the coil ears. While testing the Racer 2 on various terrains I rarely used the pinpointing mode because I never felt I needed it. When I did use it, out of curiosity, it was precise as expected.

For my next test of the Racer 2, I travelled to the southern shore of Long Island, NY, to see how it would handle the black, and wet saltwater sands of the Atlantic. All the single-frequency machines I've used on saltwater beaches in the past have suffered a loss of sensitivity and depth, to varying degrees, on the wet sand. They have been chatty or unstable, unable to handle highly mineralized and conductive saltwater and wet sand.

I've tried the Garrett AT Pro; Whites MX Sport; Fisher F75; DetectorPro Head Hunter; and several Tesoro, Bounty Hunter, and Teknetics machines, on Atlantic and Long Island Sound beaches over the last few years. I was not confident the Racer 2 would fare any better than the machines I had tried before.

After detecting the dry sand and towel line while waiting for low tide, I moved down into the wet sand and popped the Racer 2 into "Beach" mode. The machine easily ground balanced, and I was even able to increase the gain (sensitivity) which surprised me.

After swinging in the wet sand for a few minutes I thought the machine was malfunctioning because I wasn't hearing any signals at all. I ran the coil over my sand scoop and got the Racer 2's distinctive "overload siren" signal, loud and clear in my headphones.

Continuing my grid pattern on the wet sand the machine only gave a false signal when going into, or coming out of, the water. Over the wet sand, or when the coil

was fully submerged it ran smooth. I recovered modern coins, fish hooks, and some lead weights at very respectable depths.

In example, I dug a #4 lead fishing weight between 14"–15" deep in the wet sand from a strong signal. My deepest coin was a 1967 Nickel, at about 10-inches. The Racer 2 honestly outperformed every other single-frequency VLF I have tried on saltwater beaches.

My last test hunt took me to a Colonial-era foundation in the Connecticut woods for some relic hunting. I have hunted this site with several machines, including the Minelab Explorer, CTX 3030, GPX 5000; and the Tesoro Tejon, and Vaquero. I started the Racer 2 in "Two Tone" mode, and raised my Gain to 93 (0-100), before my threshold became jumpy in the iron-rich soil, so I dropped it back to 90 and started swinging.

I detected for several hours and was pleased by the overall performance of the Racer 2. I tried different Notch Filter settings, saving custom discrimination programs while playing with the Frequency shift to see if I could eliminate more trash metal without losing gold.

Part of the foundation is littered with aluminum, tin, and bullet casing metals from hundreds of campfires built over the years by hunters. Using the small 5" DD coil included in the Pro Package, I found three Colonial-era buttons and part of a shoe buckle I somehow missed in the past. Quite a testimonial to the small coil, and the machines ability to recover almost instantly in heavy trash areas while separating the targets audibly.

I put the Makro Racer 2 through its paces at the park, in farm fields, on the beach, and deep in the woods. I found it to be sturdy, ergonomically comfortable, balanced and lightweight. It features easy to use and understand controls offering more custom programming options and tools than machines costing hundreds-of-dollars more.

It is deeper than any metal detector in its price range, and has more customized tones and enhanced audio choices. The Racer 2's recovery speed and separation abilities are among the best offered at any price, and four Costco AA batteries easily operate it for 20-22 hours.

I believe the Makro Racer 2, punches well above its weight class in depth and customization options. I encourage you to add it to your list whether you are considering your first metal detector, or are considering an upgrade from your Garrett AT Pro; Fisher F75; Tesoro Tejon; Teknetics T2; Minelab 705; or Whites MXT.