

[The Tom Bearden Website](#)

The Astronaut's Magnetic Boots



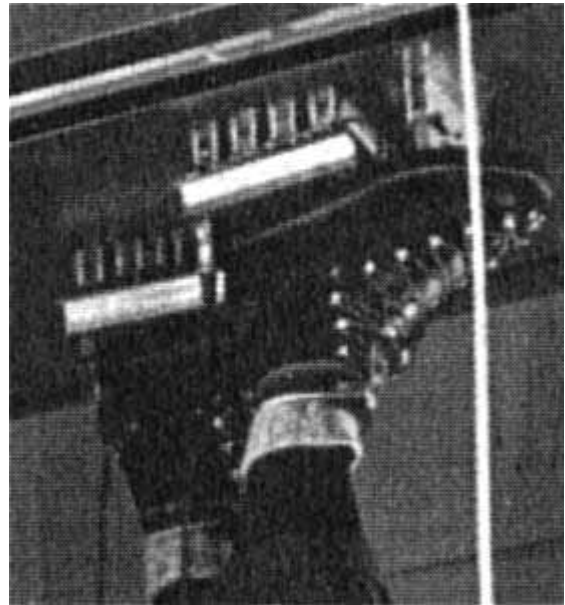
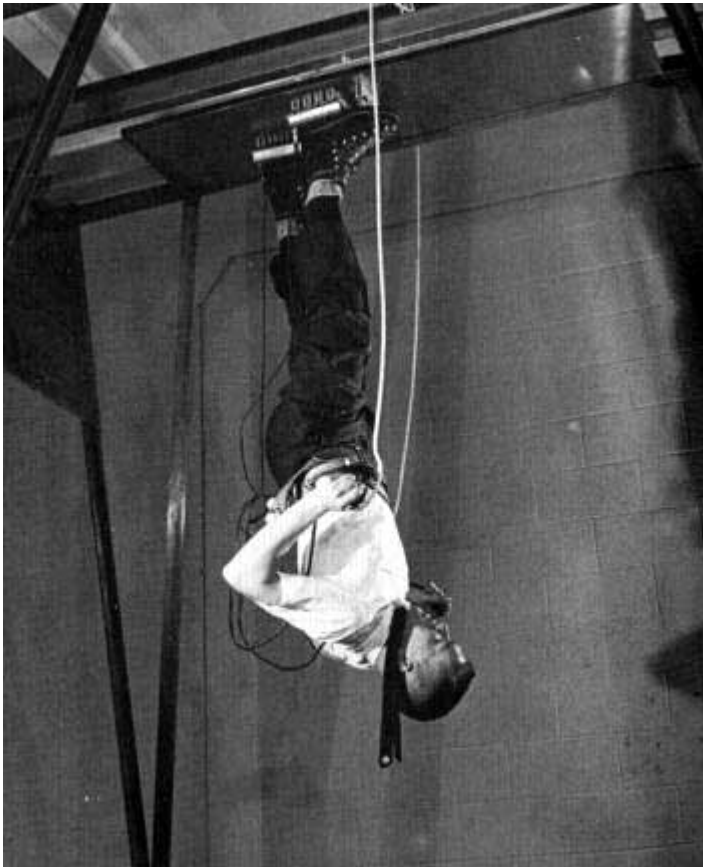
Try finding the original magnetic astronaut's boots that were developed by NASA. The original boots were excellent. For the acceptance tests, an engineer clad as an astronaut walked across the bottom of a steel beam in a high bay research area, upside down against the pull of Earth's gravity. He *stepped* as he walked, putting his foot "down" and then picking it "up".

There is no problem in finding magnets strong enough to hold the astronaut firmly in such an upside position. The problem with simple magnetic boots using such strong magnets is that, once the foot is planted, unless he is King Kong himself, the astronaut cannot pick up the foot again.

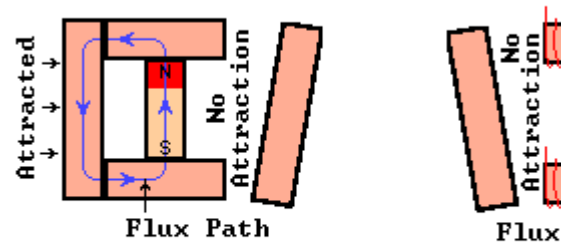
However, the Rarus boots completely solved that problem. If the permanent magnet fields are switched off for that foot that the astronaut wishes to lift, he can lift it easily and take another step. Then if the fields are switched on again as he places his foot down, this switching of the fields allows him to walk in a manner resembling normal walking, though a little slower.

To do that switching by normal "battery and coils" would be prohibitively bulky and heavy — and awkward to say the least.

With the Rarus boots, the astronaut could pick up his foot by simply switching off the permanent magnetic fields easily. They switched on again when he placed the foot down. And he did not have to carry a huge battery around with him, to furnish enormous current to do that.



FLUX SWITCH II



Once a magnetic circuit is made, little else is attracted to it

The flux be ch a sing electrici a

Tom Bearden comments: That is almost precisely one of the demonstration potential clients, to prove to them that a magnetic flux arrangement can be switched, and the magnetic path will "remember" which is supposed to change it again

Well, it doesn't take a genius to see that, when you can switch a permanent magnet's fields easily, and the magnet also has a built-in memory as did the Radus magnets, then with a little ingenuity in switching one could use such switchable magnets to produce a self-switching, self-powered permanent magnet motor. The magnet, being a permanent dipole, is already a particular kind of "free energy generator", since it continuously gates magnetic energy directly from the vacuum due to its asymmetry in the energetic vacuum flux.

From the energy barons' viewpoint, those Radus magnets and Radus boots had to go, and go quickly. And go they did.

So NASA then developed the present "shuffler" kind of magnetic boots where the astronaut can't pull his boot loose from the surface, but must "scoot" his feet along in a sliding and painfully awkward fashion. That way, you see, no one can use the boot magnets — which now are just rather ordinary permanent magnets, without memories and without switchable fields — to make an overunity device or a self-powering permanent magnet engine.



In the originals developed by Radus *et al.* at Westinghouse, the magnetic fields themselves — from *permanent magnets* — were simply switched! And the magnets had a memory. (So far as is known, even today no one tells you that in many virgin magnets fresh from the factory, their very first use conditions them with a memory! *That fact can be used, e.g., to create magnets whose fields appear normal, but which deviate from the normal behavior of ordinary magnets, including produce anomalies in their magnetic fields.*

That subject — the deliberate induction of magnetic memory into a virgin permanent magnet with its first use — cries out for a sharp young graduate student to do substantial, pioneering research on that phenomenon, and do his Ph.D. thesis on it. There is a Nobel Prize waiting there for a future sharp young scientist who fully deciphers that "magnetic memory conditioning" mechanism. The entire subject of making permanent magnets with memories, and how to use such in operational systems, is still a largely unexplored, extremely obscure territory. In fact, most researchers are not even aware that the phenomenon exists. The energy barons like it that way!

Anyway, back to the Radus boots. With them, the astronaut could actually lift his boot and take a rather normal-like step.

So obviously those boots vanished only a few years after their development.

How the True Magnetic Boots Information Was Recovered

It took some real doing to run down the true story of the vanishing Radus boots. Most of that marvelous work was done, unfortunately, before the big computer data bases really got going. Much of the earlier work is just not in there in the computerized databases. So one drew pretty much of a blank (except for the later "shufflers") when searching those databases on descriptors and terms related to the astronauts' magnetic boots.

An excellent researcher, John Reed, came to the rescue. John is a researcher of first rank. He actually found Radus' sister (Radus was deceased), who very graciously permitted access to some personal files Radus had left. With her permission, John copied the files. So that way much of the odd story of the *real* astronauts' magnetic boots was able to be reconstructed, before spin control was applied by you-know-who.

We certainly express our sincere appreciation to Radus' sister for her gracious assistance and kindness. We give full credit to John Radus for the invention of the switchable magnet and the conditioning of magnets with a memory. And we express our deep appreciation to John Reed for exerting so much effort to find something that was intended by certain parties to have disappeared from history, or at least to have faded into comfortable obscurity.

If you're interested in permanent magnet engines, be sure to check the [Radus' references](#) cited at the end of this article, and be sure to check the [Kawai](#) references.

The Researcher Must Understand Nonlinear Magnetic Materials Phenomena

And as an aside to the beginning magnetics engine researcher who does not have a good knowledge of magnetic materials, here's some advice. You must get beyond the shallow view of "a magnet has a north and south pole and a field between them" and beyond the notion of just "simple magnetic domains" — you know, the notion that "big magnets are made of littler magnets." You must get much deeper into magnetic materials and their behavior.

Magnetic materials are highly nonlinear. It's not as simple as just "aligning domains". There are lots of nonlinear phenomena going on in magnets other than what is induced by simple north and south poles! The field from every permanent magnet has an internal, hidden, dynamic structure. There are *dynamics* going on *inside* the field of a permanent magnet, and *comprising* that field. There are at least 14 kinds of magnetism — and in fact, more than that if you check Ehrenhaft's work on magnetic monopoles, as validated by Mikhailov and Barrett, and if you check Evans' and Vigier's work on the B(3) scalar magnetic field that arises from a topological magnetic monopole and is evidenced in interferometry, e.g. and other experiments.

Magnetism is intimately connected with the spins of the fundamental particles, and you need to understand that area as well. So unless you wish to be a very naïve experimenter, first do some heavy homework in the areas of magnetic material phenomena, different types of magnetism, multivalued magnetic potentials, magnetic monopoles, interferometry, spin waves and phenomena, etc. If you can find it, a very good book (one that's relatively simple for engineers and is straightforward and understandable) is the out-of-print book by Cullity (cited). If you're really serious, contact the publisher and get permission to legally reproduce it at the copiers for a small fee, as we did. You'll be very glad you did. It's probably the single most *understandable* book of its kind. Another very good book to obtain is Burke's "Handbook of Magnetic Phenomena" (cited). An extremely useful "quick reference" book for one's pocket is Kaganov and Tsukernik, "The Nature of Magnetism" (cited).

Why the Astronauts' Boots Were Changed

But back to the astronauts' boots. Hangar and Rosener (cited) will fill you in on the present "shuffler" boot. Just forget those; they are worthless to you as an enterprising overunity systems researcher. Reading Ratus' work (cited) will clue you in on the earlier, far better boots.

If you dig out some new reference background on Ratus' work and the *real* astronauts' magnetic boots, please share it with us, and we'll put it here in this section for everyone.

Why do you suppose NASA replaced that excellent Ratus boot with the far inferior "shuffler" kind later?

You see, if you can easily switch the fields of a permanent magnet as you wish, and make that magnet also have a memory that you deliberately conditioned into it, you could also build a permanent magnet self-powered engine by adapting such memory (asymmetrical behavior) and switching. It's perfectly

permissible by the laws of physics and the laws of thermodynamics, because one is using an open dissipative system far from thermodynamic equilibrium. Any dipole such as a permanent magnet is a legitimate open system freely receiving energy from its environment (the active vacuum) and re-emitting some of that energy in usable Poynting energy flow form.

The other compelling reason is that you don't use electrical currents back through the source dipoles to kill them! Zounds! That means you can have one half the solution already accomplished from the start; you don't have "spent current" to have to force back through the dipole or shunt it around freely by some extraordinary means. All you have to worry about is *understanding* and *very clever and precisely timed switching*. (And it does have to be clever; let's not belittle the skill and perseverance required to achieve that task!)

But the Radus boots represented a potent threat to the energy barons and energy cartels of the world. Therefore those "field switching" boots had to go. And go they did!

So those trainloads of coal and fleets of oil tankers kept on coming. And the byproducts of all that hydrocarbon combustion kept right on polluting the cities and the planet.

Here is an area crying out for Congressional and Senatorial action. Why not force some of those "government servants" we taxpayers send so many billions of dollars to, to go back in there and compile all the available Radus boots information and data from NASA? And openly release it?

Hey, environmental activists! Are you listening?

References:

- A. W. Hangar and A. A. Rosener, "The use of permanent magnets in zero-gravity mobility and restraint "footwear" concept," *IEEE Transactions on Magnetics*, Vol. MAG-6, No. 3, Sept. 1970, p. 464-467. These crude "shuffler" boots are quite a contrast to the elegant Westinghouse/Radus "stepping" boots earlier developed and used by NASA.
- "Human fly has magnetic sole," *Electrical Engineering*, Apr. 1963, p. 294.
- Raymond J. Radus and William G. Evans, "Apparatus Responsive to Direct Quantities," U.S. Patent No. 2,892,155, June 23, 1959.
- R. J. Radus, "Permanent Magnet Flux Transfer Principle," Internal Westinghouse paper, date unknown; ——— "Permanent-Magnet Circuit using a 'Flux-Transfer' principle," *Engineers' Digest*, date unknown (July 1963??), p. 86.
- J. Astleford, Jr. and R. J. Radus, "Distribution Transformer with Zero-Percent Impedance," *Westinghouse Engineering*, 23(5), Sept. 1963, p.

148-151; ——— "Zero Impedance Distribution Transformer," *IEEE Transactions on Power Apparatus & Systems*, 83(9), Sept. 1964, p. 918-926.

Thanks to Darryl Morris in Australia for providing the photos of the original Radus boots from the publication:

"Attraction and Repulsion"
Author: Malcom McCaig Ph.D.
Publisher: Oliver and Boyd ltd - 1967

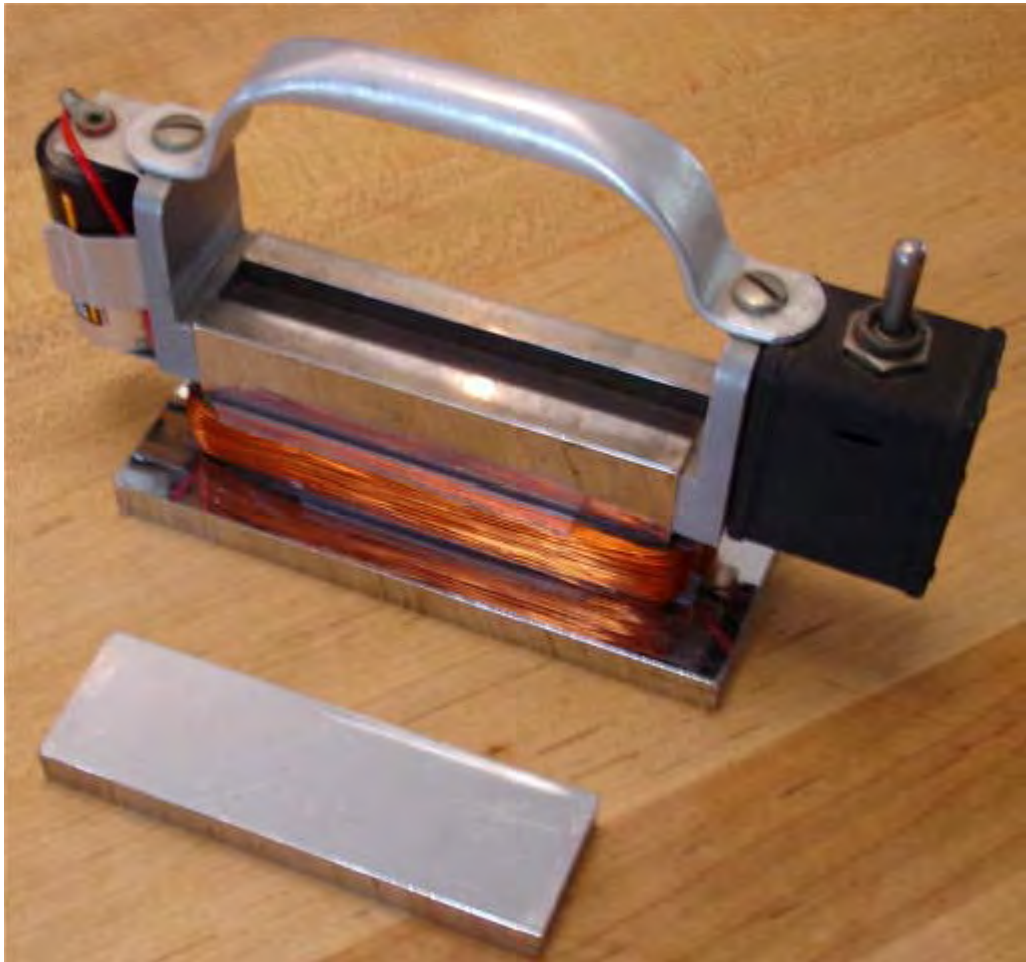
At the time of writing, McCaig was the assistant Director of Research for the 'Permanent Magnet Association', Sheffield.

Additional information from Radus family members

Regards to T. E. Bearden.

This device is what the family believes to be a portable demo of Dad's permanent magnet, with the "sandwich" and coil resting on one of the attached plates.

Simple, but elegant, as was much of his work.

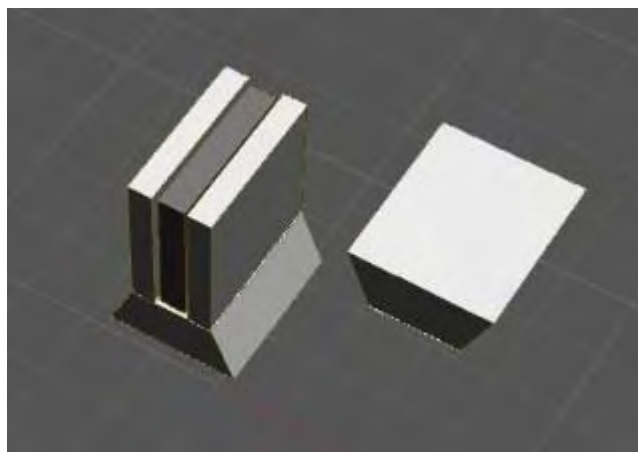


Photos of the original boot





These are drawings of models that we played with as children. The central sandwich is about an inch square. One of my brothers (out of town) has the actual. My son did the drawings from my description. He is trying to replicate the model.



They functioned the same way as did the powered models (shoe and battery powered test that I had sent previously). One wedge pulls off easily, with an increase in force required to move the second piece. No electrical power required.

