

MEDNOVUS™

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SAFESCAN® TARGET SCANNER™

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The American College of Radiology (ACR Guidance Document for Safe MR Practices: 2007), the Joint Commission (Sentinel Event Alert #38), and the Veterans Administration now recommend ferromagnetic detection for MR Safety.



SAFESCAN® Target Scanner™

- Intended for ambulatory patients and patients on stretchers
- Sophisticated hand-held ferromagnetic detection instrument with exceptional price/value
- The most sensitive ferromagnetic detection product for MR Safety on the market when positioned close to a threat object
- Conforms to ACR, Joint Commission, and VA recommendations for ferromagnetic screening

"I will give the SAFESCAN® Target Scanner the rave reviews it deserves!"

Allan White, RT(MR,CT,R)
LPCH MRI/CT Technical Supervisor
Lucile Packard Children's Hospital / Stanford
Palo Alto, California

The SAFESCAN® Target Scanner™ is designed specifically for MR Safety and alarms ONLY on ferromagnetic threat objects, providing an excellent second line of defense to help protect your MRI patients and your magnet from ferromagnetic accidents. (Dr. Emanuel Kanal at UPMC calls these threats "Public Enemy No. One.")

The Target Scanner™ is achieving excellent marketplace acceptance, including by some of the world's finest hospitals and medical centers, because it is very sensitive, cost-effective, and easy to use. It is especially suited for MR Safety in busy hospital-based facilities, free-standing MRI centers, and mobile units. Facilities having one Target Scanner™ frequently order more instruments.

"I am most pleased with the sensitivity, portability, performance, and affordability of the SAFESCAN® Target Scanner handheld ferromagnetic detector and will continue to use it as an integral part of my patient safety screening."

Emanuel Kanal, MD, FACR, FISMRM
Professor of Radiology and Neuroradiology
University of Pittsburgh Medical Center
Pittsburgh, Pennsylvania

Dr. Emanuel Kanal, the lead author of the *ACR Guidance Document for Safe MR Practices: 2007*, has 18 Target Scanners at the University of Pittsburgh Medical Center (UPMC).

"We at the New York Presbyterian Hospital are delighted with your Safescan® Target Scanner of which we are using 14 of these instruments. Thank you for putting an outstanding product on the market."

Steven M. Herrmann, MS, RT, CRA
Director, Imaging
NYP / Weill Cornell Medical Center
New York, New York

Increasing Sensitivity/Detectability:

"The SAFESCAN® Target Scanner has caught a number of safety pins and such so I'm very pleased with your instrument. I also appreciate your attention to your customer. You've actually knocked my socks off with customer service. I've actually used your company in reference to the kind of customer service that hospitals should deliver to patients and physicians."

Burke Hagen
Supervisor, Magnetic Resonance Imaging
Virginia Mason Medical Center
Seattle, Washington

A small non-radiating passive (i.e., DC) field is provided by the Target Scanner™, as this greatly increases sensitivity and detectability.

The use of this DC field is important to help find small ferromagnetic threats which may have no inherent initial magnetization (that is, they have not been pre-magnetized). Non-premagnetized ferromagnetic threats, especially if they are small and "ferromagnetically-hard," have a tendency to be missed with ferromagnetic detection systems. The Target Scanner™ minimizes the possibility of these false negative misses.

The DC field (100 G. at one inch – 1 G. at one foot) generated by the Target Scanner's™ small DC magnet source is significantly less than that of a pacemaker DC magnet (such as from Medtronic) – and much less than the DC permanent magnets of several thousand Gauss used for ferromagnetic threat detection. And the Target Scanner's™ DC field is many times less than the DC field of the MRI instrument itself (such as 15,000 – 30,000 G.) for which the patient has already been medically cleared.

It is emphasized that the Target Scanner's™ DC field emits NO RF and does NOT radiate. It will NOT affect imaging quality in any way, nor will it erase credit cards or affect cell phones.

For patients who have been medically cleared by the MR Technologist to enter the huge field of the MRI magnet, it is not problematic to use the Target Scanner™ with pacemakers for ferromagnetic screening.

“The Target Scanner is worth its weight in gold. We use it for every single patient.”

Carol Finn
Director, Imaging
NYP / Columbia Medical Center
New York, New York

The Target Scanner™ is properly used as a double-check safety precaution after the patient has been medically cleared to enter the magnet room / Zone IV.

Advantages:

The Target Scanner™ is especially suited for finding threat objects on the person of the patient, such as nail clippers, bobby pins, cell phones, etc., alarming ONLY on ferromagnetic threats. In several seminars, Dr. Kanal demonstrated that with proper usage and positioning the Target Scanner™ very close (such as 1/2 inch), a single staple can be found. However, it is not intended for detecting deeper threats, such as aneurysm clips or deeply-embedded shrapnel.

The signal being detected by any ferromagnetic detection system diminishes as the cube of the distance. This law of physics becomes very important when searching for small ferromagnetic threat objects. For instance, the signal being detected at 1/2 inch is $20 \times 20 \times 20 = 8,000$ times larger than at 10 inches. (Certainly, the signal in a portal can be amplified, but, even with filters, etc., the noise is also amplified, which tends to nullify the signal amplification.)

When the Target Scanner™ can be positioned close to a ferromagnetic threat object, it is the most sensitive ferromagnetic detection product for MR Safety on the market; and, when used as indicated, it is more sensitive than ANY portal from any vendor (including our own portal products).

Screening Patients on “MRI-Safe” Gurneys / Carriages:

Most “MRI-safe” gurneys and carriages have ferromagnetic components that trigger alarms on a ferromagnetic detection portal. This causes great frustration to the MR Technologist, as he/she cannot determine if the alarm is related to a real threat, or to the ferromagnetic components of the “MRI-safe” gurney or carriage.

For screening patients on “MRI-safe” gurneys or carriages, the Target Scanner™ has proven to be very helpful, with the caveat that the Target Scanner™ will not alarm on a distant object, such as a small threat underneath the patient. (And current 48” Entry-style portals will most likely also miss this small threat, especially if it located toward the portal’s midline – i.e., 24” from the nearest sensor).

The Target Scanner™ is excellent for screening the top aspect of the patient, and it has found many otherwise undetected and potentially dangerous ferromagnetic threats.

“As the Lead MRI Technologist here at Landstuhl Regional Medical Center, I can say we have been very pleased with the MRI Safescan® Target Scanner. We have been better able to serve our Soldiers and Defenders of the US who have had unfortunate traumatic events in the Middle East because of the Target Scanner. Having this instrument has allowed us to proceed with MRI scans which would have been deferred to other modalities based on the radiographic evidence of metal. We have on many occasions used the Target Scanner to make a determination on the safety of performing an MRI exam. This product is a great asset to any MRI facility, and the amount of customer support from Mednovus has been remarkable.”

Timothy G. Roberts R.T. (RO (MR) (CT) Y1-02
Lead MRI Technologist
US Army Hospital / MRI Clinic
Landstuhl Regional Medical Center / Germany

vs. Metal Detectors:

The problem with conventional metal detectors is that it is unclear whether an alarm is from a harmless magnet-safe metal, or from a ferromagnetic threat which could cause great harm. The *ACR Guidance Document* now recommends ferromagnetic detection, but NOT metal detectors.

Reliable ferromagnetic detection must address noise levels sometimes 500 times greater than the signal from a small ferromagnetic threat. This requires layers of complexity in the product. Our mission is to deliver a truly superior instrument – and NOT a simple airport wand.

“I unpacked the Target Scanner and, to my delight, it works perfectly.”

Robert Lyons, Senior MRI Research Technologist
Brain Research Imaging Center / University of Chicago

Why We Do Not Use A Battery Pack:

The Target Scanner is tethered to a standard 110 volt wall outlet with an AC/DC stepdown transformer, rather than using a battery pack. As the instrument of necessity contains ferromagnetic components, we want no mishap. The instrument itself is entirely DC, emitting no electromagnetic radiation.

Quite often, battery packs have long-term unreliability, another reason militating against their use.

Mednovus' Alliances:

Mednovus, Inc. is in alliance with Quantum Magnetics, the “*Center for Excellence for Magnetics*” for the world leader in mission-critical detection applications. Using the scientific skills of our research team, the SAFESCAN® ferromagnetic detection systems are designed solely for MR Safety with the goal of providing superior, affordable, and easy-to-use technology.

Mednovus, Inc. was recently awarded a National Institutes of Health grant to further develop the field of ferromagnetic detection for MR Safety. In addition, Mednovus has an ongoing development project with the National Research Council, Canada (NRC), equivalent to the NIH, and Mednovus is a member of the AHRA Leadership Council (by invitation).

Distribution is now available through Siemens Medical Solutions.

In-The-Field Experience (partial list):

University of Pittsburgh Medical Center (UPMC)
Johns Hopkins
Landstuhl US Army Hospital (Germany)
The National Institutes of Health (NIH)
Lucile Packard Children’s Hospital/Stanford
Catholic Healthcare
Cornell
Columbia
University of Chicago
UCLA
Harvard
Scripps Health System
Shell Oil International Exploration
VA Hospital System

Henry Ford Hospital
University of Massachusetts
Methodist Healthcare System
Inova Health System
Banner Health
Yale University
Virginia Mason Medical Center
Louisiana State University
Kaiser Permanente
Lenox Hill Hospital
University of Wisconsin
University of Colorado
University of Texas
Bronx Lebanon Hospital
Sick Kids Hospital/Toronto

Why Ferromagnetic Detection?

You have invested millions in your MRI Center. When accidents occur, your image in the community and your investment suffer.

Our goal is to help your Center protect your patients, your magnet – and your responsibility to your investment’s bottom line.

Mednovus has a deep commitment to providing the most advanced technology for MR Safety. We have an equally deep commitment to a partnering relationship with our customers to give them superior value.

Working together with your staff, our goal is to help you implement the safest possible program to defend against ferromagnetic missile-threat accidents.

A patient accident can be a very expensive financial disaster. A magnet quench is also an expensive proposition, in addition to causing downtime, inconvenience, and scheduling snafus.

The cost of even one accident is usually far greater than *all* the SAFESCAN® products combined, including our SAFESCAN® Entry Sentinel® GS portal, Patient Sentinel® GS portal, and SAFESCAN® Target Scanner™.

Our focus is to deliver the best quality ferromagnetic detection systems for MR Safety in the marketplace, and to excel in customer service. We welcome the privilege of helping you protect your patients, your magnet – and your bottom line.

Patient Safety, Our Top Priority:

Representing years of research by world-class scientists, the SAFESCAN® ferromagnetic detection instruments are designed to make the safety of your MRI patients our absolute top priority. However, it is a fact that no technology, no matter how sensitive, is 100% effective. The sequence of conscientious medical screening protocols followed by properly-used ferromagnetic detection systems is better than each alone in helping to make an MRI center safer.

“We are delighted with the performance of the Mednovus SAFESCAN® Target Scanner and with Mednovus.”

Charlotte Johnson, RN, BSN, CRNA
National Institutes of Health
Bethesda, Maryland

We are a company with a deep commitment to problem solving through innovation and technology. Nevertheless, the conscientiousness of your MR Technologist is the single most important consideration in protecting your patients. Your MR Technologist is the patient’s best friend!

This is a preliminary introduction, with the goal of providing meaningful and realistic information upon which to base your mission-critical decisions.

It would be a pleasure to discuss your MR Safety program. We can do our best for you when we learn about your exact requirements and specifications.

THANK YOU!

**Ferromagnetic detection is intended to supplement -
but NOT to replace conscientious medical screening protocols.**