

1	1	S4500WA	<p>Optima MR450w 16-Channel 1.5T MR System with In-Room Display</p> <p>Optima MR450w 16-Channel 1.5T MR System with In-Room Display</p> <p>Patient expectations of MR have shifted in recent years, as patients have begun to demand a better, more comfortable scanning experience. Increasing the size of the bore is a good first step, but it's only the beginning. The right system should overcome traditional limitations of wide-bore MR, offering both excellent images and a user-friendly experience. Patients should be more comfortable during their scan, and clinicians more comfortable in making a diagnosis. All the while, organizations should expect their MR system to help them deliver solid financial returns, maintain a high standard of patient safety, and increase the quality of their care.</p> <p>GE has advanced the capabilities of wide-bore MR by delivering both uncompromised image quality and high productivity, all with an expansive clinical field of view. With the Optima MR450w 1.5T GE offers a range of new functionality, provides a more patient friendly environment and a clinical workhorse system for practices of all sizes and specialties.</p> <p>OpTix RF Receive Chain: GE's innovative Optical RF receive technology improves signal detection while simultaneously reducing electrical noise. By locating the receiver electronics on the side of the magnet and close to the origin of the MR signal, interference from external noise sources is reduced thus improving image quality and SNR. The result is a 27% SNR improvement over previous generation, non-optical systems for volumetric scanning.</p> <p>The use of optical transmission reduces the cabling footprint over conventional copper cable designs and enables high channel count configurations without requiring additional space. The OpTix technology can seamlessly route signals from any coil port to the receivers using a dynamic switching RF hub.</p> <ul style="list-style-type: none"><li>• Sampling Bandwidth 80MHz.</li><li>• Receive channels 16.</li></ul> <p>Volume Reconstruction Engine 2.0 (VRE): The backbone of any high-channel count system is the reconstruction architecture. The Optima MR450w utilizes the latest dual-core 2.6 GHz processing</p>
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technology with the VRE 2.0 recon architecture. With its 16 GB of memory, acquisition-to-disk technology, the VRE 2.0 delivers the processing power to quickly reconstruct high-resolution 3D volumetric data.

Included is a single channel transmit receive head coil.

Optima MR450w Site Collector: Optimally designed for patient safety, patient comfort, and efficient workflow, the external features of the MR450w also provide an aesthetically pleasing look and feel that can reduce patient anxiety. The wide-open flare of the covers increase the effective bore size and can reduce patient anxiety when entering the scan room or magnet bore. With patient-optimized lighting and air conditioning, the system can be ideally set for each individual, increasing their control of the environment.

Wide-Screen LCD Monitor: This flat-panel Liquid Crystal Display (LCD) monitor delivers 1920 x 1200 dot resolution at a refresh rate of 60Hz and an excellent 500:1 contrast ratio using a digital DVI interface, all significant improvements over conventional designs.

Also included is the host computer, keyboard and mouse.

Optima MR450w ScanTools 22.0: The Express Exam and Scantools of the Optima MR450 include a comprehensive suite of workflow features, advanced applications, and parallel imaging capabilities to enable the user to harness the Simply Powerful capabilities of the scanner efficiently and effectively. The patient

and technologist workflow of Optima MR450 automates many of the routine tasks that previously required user interaction, thus dramatically reducing the workload for the user and ensuring that consistent and repeatable images are presented for review.

Prescription, acquisition, processing and networking steps can be automatically completed throughout the exam. These automated steps can be saved in the Protocol Library to ensure consistent exam workflow for each type of patient.

The automated workflow features of the Express Exam interface includes the Modality Worklist, Protocol Library, Autostart, AutoScan, AutoVoice, Linking, and Inline Processing.

Modality worklist: The modality worklist (MWL) provides an automated method of obtaining exam and protocol information for

a patient directly from a DICOM Worklist server. For sites with full DICOM connectivity, once a patient has been selected from the MWL, a new session is opened on the host interface and the relevant exam details are highlighted for the user. The Optima MR450 MLW provides complete control of the exam protocol prescription.

**Protocol libraries and properties:** The Optima MR450 system provides the user with complete control of protocols for simple prescription, archiving, searching, and sharing. The protocols are organized into two main libraries, a GE optimized set that are included with the system and Site-Authored.

**ProtoCopy:** Standard on every Optima MR450 system, the ProtoCopy feature enables a complete exam protocol to be shared with the click of a mouse. The exam protocol can originate from either a library or previously acquired exam.

**Workflow Manager:** Once a protocol has been selected for an exam, it is automatically loaded into the Workflow Manager. The Workflow Manager controls image prescription, acquisition, processing, visualization and networking and may fully automate these steps if requested.

**AutoStart:** With AutoStart, once the landmark position has been set and the technologist leaves the room the Workflow Manager will automatically start the first acquisition in the exam.

**Linking:** Linking automates the prescription of images for each series in an exam. Once the targeted anatomical region has been located the Linking feature combines information from a prescribed imaging series to all subsequent series in the Workflow Manager. All series that have been linked may automatically be prescribed (Rx) and no further interaction will be needed by the technologist to initiate the scan. The user has control over which specific parameters can be linked together. Series can have common fields of view, obliquity, slice thickness, anatomical coverage, saturation bands, or shim volumes. Multiple series can be linked together and saved in the Protocol Library or edited in real time.

**AutoScan:** With AutoScan enabled, the Workflow Manager will sequentially go through the list of prescribed series without any user interaction.

**AutoVoice:** The AutoVoice feature ensures that consistent and repeatable instructions are presented to the patient for each and every exam. User selectable, pre-recorded instructions are presented at defined points in the acquisition. The AutoVoice feature includes instructions in over 14 languages and the user can create and include their own unique voice instructions for local needs.

**Inline processing:** To further automate an exam, the Inline processing feature can complete all tasks for a particular series. For certain tasks, the user must accept the results, or complete additional steps prior to saving the image to the database.

**Inline viewing:** Inline viewing allows the user to conveniently view, compare, and analyze images without having to switch to the Browser. Simply select the series to view from the Workflow Manager and the images are displayed along with standard image display tools.

**Image fusion:** To better visualize tissue and contrast, multiple images from separate acquisitions can be overlaid on one another. High-resolution anatomical images can be automatically fused with functional data or parametric maps for improved visualization by the user. The data is registered using translation and rotation and distortion correction to ensure accurate fusion. High resolution 2D and 3D data sets can be fused with reformats, parametric maps, 2D and 3D Spectroscopy maps, plus functional datasets and more.

Following is a list of the acquisition pulse sequences and parallel imaging capabilities for the Optima MR450 ScanTools 22.0.

The following sequences are Included for Fast Spin Echo based acquisitions:

**Spin Echo:** The single echo gold standard for generating T1, proton density and T2 images.

**Fast Spin Echo (FSE), Fast Spin Echo-XL (FSE-XL):** Uses a train of spin echoes to reduce total acquisition times and provide high resolution datasets. The XRB gradient performance of the Optima MR450 allows for very short echo spacing, thus maintaining image resolution and SNR even in long echo train acquisitions.

Fast Recovery Fast Spin Echo (FRFSE): is an extension of the Fast spin Echo sequence and incorporates an additional refocusing pulse and 90 degree excitation at the end of the echo train. This additional forced recovery of the long T1 and T2 spins increases T2 contrast with shorter acquisitions times.

Single Shot Fast Spin Echo (SSFSE): An ultra fast scanning technique that permits dataset acquisition within a single RF excitation period. That means it can acquire slices in less than one second, making it an excellent complement to T2-weighted brain and abdominal imaging, as well as MR cholangiopancreatography (MRCP) studies.

FLAIR: T1 and T2 Fluid Attenuated Inversion Recovery (FLAIR) pulse sequences have been designed expressly for neuro applications. FLAIR allows suppression of signal from cerebrospinal fluid (CSF). In addition to this capability, T1 and T2 FLAIR add extraordinary contrast between white and gray matter to T1- and T2-weighted brain and spine imaging.

Double/Triple IR: These pulse sequences are included to allow black-blood imaging for studies of cardiac morphology. Triple IR adds fat suppression to black-blood imaging.

3DFRFSE: A sequence for creating high resolution, three-dimensional T2-weighted images of all anatomies and is especially useful for MR cholangiopancreatography (MRCP) studies.

Single-Shot Fast-Spin Echo (SSFSE): An ultra fast technique that permits complete image acquisition following a single RF excitation. It can acquire slices in less than one second, making it an excellent complement to T2-weighted brain and abdominal imaging and MRCP studies.

The following sequences are included in Gradient Echo based acquisitions:

GRE, FGRE, SPGR, FSPGR: This suite of gradient echo techniques uses short TR and TE times to generate Proton Density-, T1-, T2-, T2\* tissue contrast, or a combination thereof, in far less time than conventional spin echo acquisitions. The ultra-short TR and TE times possible with these sequences also ensure the performance needed for state-of-the-art vascular and contrast-enhanced MRA studies.

2D and 3D Dual Echo Gradient Echo: A vital tool for abdominal

imaging. This variation on conventional gradient echo provides a pair of images for which the signals from water and fat either are in-phase or out-of-phase.

2D and 3D Time of Flight (TOF), 2D-Gated TOF: TOF Imaging and Enhanced 3DTOF Imaging are all ideal for MR angiography. Based on conventional gradient echo scanning, time of flight imaging techniques rely primarily on flow-related enhancements to distinguish moving from stationary spins.

2D Phase Contrast (2DPC), 3D Phase Contrast (3DPC): These techniques demonstrate flow velocities and directional property in vessels and other moving fluids such as cerebral spinal fluid and aortic flow. These acquisitions provide the data for quantitative flow analysis

2D MERGE: Multiple Echo Recombined Gradient Echo (MERGE) uses multiple echoes to generate high-resolution images of the C-spine with excellent gray-white matter differentiation. By combining early echoes with high SNR and late echoes with improved contrast, the result is improved cord contrast within the spinal column.

The 3D MERGE (Multi-Echo Recombined Gradient Echo) sequence has been optimized to generate clear tissue contrast in the cervical spine. By acquiring and summing multiple gradient-echoes at various echo-times, MERGE improves gray-white matter contrast within the cord and provides excellent visualization of the neuroforaminal canals.

COSMIC (Coherent Oscillatory State acquisition for Manipulation if Image Contrast): COSMIC is a 3D imaging technique specifically tailored for Cervical-Spine evaluation. The unique fluid-weighted contrast yields improved visualization of the cervical nerve roots and intervertebral disks. The high resolution images are easily reformatted for better tissue visualization from any orientation.

2D FIESTA (Fast Imaging Employing STeady-state Acquisition) is designed to produce high SNR images extremely rapidly. The technique features an extremely short TR and fully balanced gradients to rephase the transverse magnetization at the end of each TR interval. This pulse sequence accentuates the contrast of spins with a high T2/T1 ratio, such as CSF, water and fat while suppressing the signal from tissues with low T2/T1 ratio, such as muscle. This property enables high contrast between the

myocardium and blood pool.

3D FIESTA (Fast Imaging Employing STeady-state Acquisition) is a technique that uses an extremely short repetition time (TR) between RF pulses such that high-resolution 3D volume images can be acquired rapidly. The 3D FIESTA technique is especially useful for the rapid acquisition of high spatial-resolution images of static structures such as cochlea, internal auditory canal, or joints.

2D FatSat FIESTA: FIESTA (Fast Imaging Employing STeady-state Acquisition) is designed to produce high SNR images extremely rapidly and with unique contrast between tissues. FIESTA accentuates the signal from tissues that have a relatively high T2 / T1 ratio, such as cerebrospinal fluid, blood, and fat. This accounts for high contrast between the myocardium and blood pool. With the added capability to suppress the signal from fat, this sequence generates excellent contrast between the vasculature and surrounding tissues.

3D FatSat FIESTA is advanced software designed for imaging of the coronary arteries. The software acquires 3D images using FIESTA (Fast Imaging Employing STeady state Acquisition). Fat suppression is applied to accentuate the coronary arteries. The use of VAST (Variable Sampling in Time) technology greatly shortens breath-holding requirements or allows for higher spatial resolution.

BRAVO-BRAin VOlume Imaging: This IR-prepared 3D Gradient Echo imaging technique affords isotropic, whole-brain coverage with 1x1x1 mm resolution. Coupled with parallel imaging, this sequence produces superior gray white matter contrast in just 2 to 3 minutes.

Brain Volume imaging is a high-resolution 3D gradient echo imaging technique designed to produce heavily T1-weighted isotropic images of the brain in just two to three minutes. BRAVO uses an inversion pulse prior to a train of low flip angle gradient echo acquisitions to reduce scan time and optimize tissue visualization. Bravo is compatible with ARC parallel imaging to minimize scan time and provide whole brain coverage with 1mmx1mmx1mm isotropic resolution.

SPECIAL: Spectral Inversion at Lipids (SPECIAL) is a spectral spatial inversion technique for fat saturation in 3D FGRE pulse sequences.

**LAVA:** LAVA is a three-dimensional (3D) spoiled gradient echo technique designed specifically to image the liver with unprecedented definition, coverage, and speed in a single breath hold. Excellent fat suppression, through a version of the SPECIAL technique customized for the liver, is one of the reasons for the high definition of anatomical structures. The coverage and speed of LAVA are the result of short TR, innovative use of partial k-space acquisition, and advanced parallel imaging. LAVA is compatible with IDEAL imaging, sold separately.

**FastCINE:** This pulse sequence is included specifically for studies of cardiac function. Through the use of retrospective gating, it allows full R-R coverage with high multi-phase temporal resolution for excellent visualization of myocardial wall motion.

**iDrive Pro:** iDrive Pro brings real-time interactive imaging to the MR system, making it easier to generate detailed diagnostic information on just about any anatomy. This includes organs that are subject to motion artifacts, such as spine, heart, diaphragm and GI tract. The iDrive Pro technique allows the user to change scan parameters on the fly, during scanning, to evaluate the results immediately.

**SmartPrep:** SmartPrep uses a special tracking pulse sequence to monitor the MR signal through a user-prescribed volume to detect the arrival of an injected contrast bolus & to trigger the acquisition once the contrast agent has arrived in the target tissue. Use of SmartPrep provides optimum timing of contrast enhancement.

The following sequences are Included in Echo Planar based acquisitions:

An essential tools for any high throughput site employing advanced techniques. EchoPlanar imaging is what enables the rapid imaging required for such studies as functional brain mapping. And both EchoPlanar and FLAIR EchoPlanar techniques make it easier to generate neuro studies from patients who cannot or will not stay still long enough for conventional techniques.

**Diffusion EchoPlanar Imaging:** This Diffusion Weighted Single Shot Echo-Planar Imaging (EPI) technique is especially useful for detecting acute and hyper-acute stroke. Its functionality includes Single Shot EPI and FLAIR EPI, Multi-NEX capability, isotropic



Diffusion-Weighting imaging and on-line image processing.  
Diffusion EchoPlanar imaging is the basis for diffusion tensor imaging, sold separately.

Parallel Imaging Acceleration Approaches:

Array Spatial Sensitivity Encoding Technique: ASSET imaging option is an image-based parallel imaging technique used to speed data acquisition. For temporally sensitive acquisitions, ASSET reduces image blurring and motion, enables greater anatomical coverage, and reduces SAR. Parallel imaging acceleration factors up to 3.0 are supported in one dimension depending on the coil selected.

Auto-Calibrating Reconstruction (ARC): Is a GE exclusive self calibrated parallel imaging technique that eliminates breath-hold mismatch errors by imbedding the calibration data within the scan data. In addition, this unique reconstruction permits small FOV imaging by minimizing focal parallel imaging artifacts from the exam. Supporting both 1D and 2D acceleration, ARC supports high acceleration factors for reduced scan time.

IVI: The Interactive Vascular Imaging (IVI) user interface allows operators to quickly remove background from MRA images in order to generate angiographic and maximum intensity (MIP) projections in multiple scan planes. The resulting dataset can be automatically saved as separate series within a patients exam number, for quick recall in the future.

Multi-Projection Volume Reconstruction (MPVR): MPVR provides quick and easy generation of reformations through any 3D MR data sets.

FuncTool Performance: This package enables advanced MR-image post-processing using a wide range of sophisticated algorithms, including:

- eADC maps.
- Correlation coefficients for mapping of motor strip and visual/auditory stimuli.
- NEI (Negative Enhancement Integral).
- MTE (mean time to enhance).
- Positive Enhancement Integral.
- Signal Enhancement Ratio.
- Maximum Slope Increase.

- Maximum Difference Function.
- Difference Function.
- Diffusion Tensor Post-Processing.
- 3DCSI Post Processing.

Results can be displayed in a variety of user-defined formats, including time intensity curves, parametric color overlays and metabolite ratio maps.

Combine images from separate acquisitions into a single series with MR Pasting. MR Pasting is an image analysis software package that facilitates the display and filming of multiple station MR data sets in the body applications (total spine, total body), as well as peripheral MR angiography data. MR Pasting will automatically register and combine multiple acquisition stations into a single image of covered anatomy.

BrainSTAT software for time course analysis: The BrainSTAT post-processing application automatically generates parametric maps for neuro Blood Flow, Blood Volume, Mean Transit Time, and Time to Peak signal intensity. A Gamma Variant fitting algorithm is used to automatically estimate the arterial input function, then calculate the quantitative values for the four parametric maps. The maps may be saved in DICOM format and fused with high-resolution anatomic datasets for improved visualization of tissue and anatomy.

R2\* Tool: Generate quantitative relaxation maps with the R2 Star (R2\*) analysis tools in Functool. With the Express Exam workflow, this feature can automatically generate R2\* maps (in units of Hz) and T2\* maps (in units of milliseconds) after the multi-echo data has been acquired. The user can have complete control of analysis and may use either the default values to initiate the calculation, or specify specific starting parameter to generate the parametric maps. Input variables for edit include, but are not limited to: number of initial images/echoes to be skipped, lower and upper threshold levels, use of a two-parameter or three-parameter fitting model, confidence level.

The parametric maps may be saved in DICOM format and may overlay high resolution 3D images with Functool Fusion for better tissue visualization. No separate option is necessary to acquire the

data; it is included in Express Exam Scantools.

Performed Procedure Step (PPS) is an important automated connectivity capability - and a key component in film-less and paperless environments. Used in conjunction with the GE PACS broker, it automatically notifies the HIS/RIS and PACS systems of procedure status - in effect, closing the loop on the information gathered from patient arrival through billing. The results: Improved patient care and enhanced productivity.

#### Optima MR450w Express Patient Table

Unique to GE, the fully detachable Express patient table incorporates the Liberty 2.0 Docking System to improve safety, exam efficiency, and patient comfort compared to fixed-table solutions.

Easily docked and undocked by a single operator, the patient table is simple to move in and out of the exam room for patient transport and preparation. These become vital features in those instances where multiple patient transfers can negatively impact patient care or when emergency evacuation is required. The table can be undocked and removed from the scan room in under 30 seconds with just one technologist. In time-sensitive situations there is no need to remove or disconnect surface coils as the system will automatically disconnect the coils for you.

With one hand and with one simple motion, the integrated arm boards and IV pole can be optimally positioned to support the patient for injections or transportation.

- Patient table drive: Automated, power driven vertical and longitudinal.
- Longitudinal speed: 30 cm/sec (fast) and 0.5 cm/sec (slow).
- Total cradle length: 211 cm.
- Positioning accuracy: +/- 0.5 mm.
- Maximum patient weight for scanning: 227 kg (500 lbs).
- Maximum weight for patient guardrails: 227 kg (500 lbs).

2      1      S4500WE

#### Optima MR450w 1.5T Magnet, Gradient, RF Body Coil and Dock Collector for 16-Channel System

Optima MR450w 1.5T Magnet, Gradient, RF Body Coil and Dock Collector for 16-Channel System

To improve the patient experience and provide high image quality, no other component of an MRI system has greater impact than the magnet. The Optima MR450w system features a short, wide bore magnet that delivers a large field of view. The magnet geometry has been optimized to reduce patient anxiety by providing more space in the bore and more exams with the patient's head outside of the magnet. The 50cm field of view provides uniform image quality and can reduce exam times since fewer acquisitions may be necessary to cover large areas of anatomy. Complemented by GE's active shielding technology, the Optima MR450w has very flexible installation specifications to provide easy siting. And with zero-boil-off magnet technology, helium refills are effectively eliminated, thus reducing operating costs and maximizing uptime.

Magnet:

- Manufactured by GE Healthcare.
- Operating field strength 1.5T (63.86 MHz).
- Active magnet shielding.
- Zero boil-off Cryogenics.
- Magnet length 145cm.
- Patient Aperture 76 cm.
- Patient Bore Diameter 70cm.
- Patient Bore Length 105cm.
- Maximum Field of View 50 cm.
- Magnet Homogeneity at 47 cm x 42 cm (R x Z) volume  $\leq 1.25$ .
- Fringe field (axial x radial).
- 5 Gauss = 4.0 m x 2.5 m.
- 1 Gauss = 6.2 m x 3.7 m.

eXtreme Gradient Platform: The powerful gradient performance of the Optima MR450w system enables high resolution and fast acquisitions. The gradient platform includes the eXtreme Gradient Driver (XGD) and the optimized large field of view gradient coil. The eXtreme Gradient Drive (XGD) is housed within a single cabinet to simplify installation. Each axis is driven by a dedicated power supply and amplifier to ensure consistent performance for all image orientations. By incorporating a water-cooled architecture, this system supports continuous peak operation with a 100% duty cycle and excellent stability for both long-term serial studies and

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advanced applications.

- Peak Gradient Amplitude of 34 mT/m per axis.
- Peak Gradient Slew Rate of 150 T/m/s per axis.

Quiet Technology: GE has implemented Quiet Technology on critical components of the Optima MR system to reduce acoustic noise and improve the patient environment. This technology enables full use of the eXtreme Gradient Platform for excellent image quality, while maintaining a safe environment for the patient. The technology encompasses the gradient coil, RF body coil, and magnet mounting.

The Optima MR450w Dock and Switch Collector is critical for the detachable table. The MR450w Liberty Dock provides the interface between the magnet and Express Patient table.

3            1        S4500WL

Optima MR450w Preinstallation Collector

Optima MR450w Preinstallation Collector

The Preinstallation Collector delivers to the site in advance of the magnet and main electronic components. This facilitates the later delivery and installation of supporting electronics. The following are the main components in the Preinstallation collector:

- Heat exchange cabinet for distribution of chilled water.
- Primary Penetration wall panel for support of the penetration cabinet.
- Secondary Penetration wall panel for support of gradient filters, helium cables, and chilled air and water.
- Helium cryocooler hose kit.
- Cabinet Dollies are provided to install the System Cabinets. Dollies remain the property of GE to be returned after cabinets are in place at customer site.

4            1        S4500WH

Optima MR450w Cable Configuration - A

Optima MR450w Cable Configuration - A

To accommodate various electronic and scan room configurations and sizes, the MR450w has preset lengths of cables and connector kits to speed system installation. This cable collection is compatible with fixed and relocatable building configurations.

5            1        M1060MA

Vibroacoustic Damping Kit

#### Vibroacoustic Damping Kit

Material in the Vibroacoustic Damping Kit can significantly attenuate the transmission of gradient-generated acoustic noise through the building structure to nearby areas, including adjacent rooms and floors above or below the MR suite. If this kit is applied during the installation of a new magnet, no additional service charges are necessary. However, installation of the Vibroacoustic Damping kit under an existing magnet requires special steps. The steps to prepare the site and steps to install, such as modifications to the RF screen room, and other magnet rigging, modifications to the RF screen room, and other finishing work, are not covered in the pricing.

6            1        M7000WL

MR450/MR750 Main Disconnect Panel

MR450/MR750 Main Disconnect Panel

The Main Disconnect Panel safeguards the MR system's critical electrical components, by providing complete power distribution and emergency-off control.

7            1        M7000WT

IRD - In Room Display Controls - English

IRD - In Room Display Controls - English

English version of the control panel for use with the seven segment digital display on the front of the MR450w magnet. The digital display shows patient landmark and scan location, scan time, and connection of patient respiratory, cardiac, and peripheral triggering devices. The control panel includes backlit buttons for easy visualization in darkened rooms. In addition, the buttons include rim-enhancing LEDs to signal which button to press for simplified workflow and ease of use.

This hardware interface includes the ergonomically designed keyboard, two-way communication and voice command module between the technologist and patient, activation buttons for patient table control, acquisition interface to initiate the scanner, and emergency stop switch.

8            1        M1000LH

MR Safety Warning Kit - English

MR Safety Warning Kit - English

Maintaining awareness around both patient and personnel safety is of paramount concern. This versatile kit contains signage in the English language that can be posted around the MR suite to heighten awareness of a high field MR system and the special precautions that ensure the safety of patients, technologists, and other people who come into close proximity with the MR system.

9	1	M1000MW	Operator's Console Table Operator's Console Table Wide table designed specifically for the color LCD monitor and keyboard.
10	1	M3335CB	1.5T Calibration Phantom Kit 1.5T Calibration Phantom Kit This 1.5T calibration kit contains a large volume shim phantom, a daily quality assurance phantom, an echo-planar calibration phantom, and the associated loader shells.
11	1	M3335CA	Calibration Kit Phantom Holder Cart Calibration Kit Phantom Holder Cart
12	1	M7000YR	Optima MR450w Curtain Kit Optima MR450w Curtain Kit The MR450w ceiling curtain kit option accommodates a wide-range of scan room ceiling heights and is designed to provide a clean-look installation by concealing the overhead cabling from view.
13	1	S7505YN	Discovery/Optima Applications Pak-7 Discovery/Optima Applications Pak-7 The Applications Pak 7 includes the following: <ul style="list-style-type: none"> <li>• IDEAL and Flex</li> <li>• PROPELLER 3.0</li> <li>• TRICKS</li> <li>• Inhance with Delta Flow</li> <li>• Cube</li> <li>• Ready Brain</li> <li>• eDWI</li> </ul>

## IDEAL

Generate consistent tissue contrast and reduce the number of series in an exam with IDEAL. The IDEAL acquisition and reconstruction methods can generate a water-only, fat-only, in-phase and out-of-phase data sets for clear tissue differentiation in a single series. In addition susceptibility artifacts common to MR imaging such as incomplete or inaccurate fat saturation, and chemical shift can be eliminated as well. The IDEAL application acquires multiple echoes and uses unique reconstruction routines to generate the four image contrasts and correct for errors due to tissue susceptibility. IDEAL is ideally suited for imaging anatomical regions such as the brachial plexus, neck, spine, chest, foot, ankle, and axilla where inhomogeneous magnetic fields may yield failures with traditional fat saturation techniques. IDEAL is compatible with Fast Spin Echo, 3D Gradient Echo and parallel imaging.

For fast T1w multi-phase imaging of the abdomen and pelvis, LAVA Flex acquisition uses 2D ARC parallel imaging to reduce artifacts from breath hold misregistration and incorrect FOV placement while providing up to four types of T1w-based tissue contrasts: water-only, fat-only, in-phase and out-of-phase. LAVA Flex requires LAVA which is included in the Express Exam ScanTools and is standard with the MR750, MR450, and MR450w system.

For fast T1w multi-phase imaging of the breast, VIBRANT Flex acquisition uses 2D ARC parallel imaging to enable higher acceleration factors over ASSET parallel imaging, and reduce artifacts from breath hold misregistration and eliminates artifacts due to incorrect FOV placement, while providing up to four types of T1w-based tissue contrasts: water-only, fat-only, in-phase and out-of-phase. VIBRANT Flex requires VIBRANT, which must be purchased separately.

The IDEAL method is compatible with ASSET and ARC parallel imaging and is optimized based on the anatomy of interest.

## PROPELLER 3.0

PROPELLER 3.0 uses an innovative k space filling technique and post processing algorithms to help reduce and correct for motion and minimize magnetic susceptibility artifacts. Radial k space filling



pattern causes oversampling of the k space center, generating more SNR and providing excellent tissue contrast. Radial k space filling is inherently less sensitive to motion compared to the Cartesian method. In addition, a sophisticated motion correction post-processing algorithm is deployed to reduce effects of motion originating from CSF flow, breathing, patient tremor or voluntary movements. PROPELLER 3.0 has been enabled for all anatomies, and T1 FLAIR, T2, T2 FLAIR, DWI as well as PD contrasts in all planes.

#### TRICKS

TRICKS (Time Resolved Imaging of Contrast KineticS) provides high resolution multi-phase 3D volumes of any anatomy for fast accurate visualization of the vasculature. With segmented complex data recombination, TRICKS can accelerate 3D dynamic vascular imaging without compromising spatial detail. TRICKS also uses elliptic centric data collection for optimized contrast resolution and auto-subtraction for optimized background suppression. The result is time course imaging that does not require timing or triggering, provides high temporal and high spatial resolution, and enables the extraction

of optimum phases of data. As a result, TRICKS enables reliable, high quality vascular imaging.

TRICKS is compatible with surface coils and supports parallel imaging for even higher temporal resolution.

#### Inhance (Inherent Enhancement) Suite Non-Contrast MRA

The Inhance application suite consists of several sequences designed to provide high-resolution images of the vasculature with short-acquisition times and excellent vessel detail. These sequences include:

**Inhance Inflow IR:** Inhance Inflow IR is a new angiographic method, which has been developed to image renal arteries with ability to suppress static background tissue and venous flow. This sequence is based on 3D FIESTA, which improves SNR, as well as produce bright blood images. A selective inversion pulse is applied over the region of interest, which inverts arterial, venous, and static tissue. At the null point of the venous blood, an excitation pulse is applied to generate signal. The net result is an angiographic image with excellent background suppression and without venous

contamination. Uniform fat suppression is achieved using a spectrally selective chemical saturation (SPECIAL) technique to provide uniform fat suppression, while respiratory gating compatibility reduces respiratory motion artifacts during free-breathing renal exams.

**Inhance 3D Velocity:** Inhance 3D Velocity is designed to acquire angiography images in brain and renal arteries with excellent background suppression in a short scan time. By combining a volumetric 3D phase contrast acquisition with parallel imaging, efficient k-space traversal, and pulse sequence optimization, Inhance 3D Velocity is faster than previous generations and is capable of obtaining complete neurovascular imaging in 5-6 minutes. Furthermore, background suppression is improved by the optimized pulse sequence design, resulting in better visualization of small branches. Respiratory trigger is also compatible with 3D Velocity to enable abdominal angiography, especially renal arteries. The result is the Inhance 3D Velocity technique offers improved productivity and image quality.

**Inhance 3D DeltaFlow** is a 3D non-contrast enhanced MRA application for peripheral arterial imaging. Inhance 3D DeltaFlow is based on the 3D Fast Spin Echo technique and it utilizes the systolic and diastolic flow differences to help generate arterial signal contrast. A subtraction of the systolic phase from the diastolic phase images results in arterial only images, with good venous and background suppression. Interleaved acquisition and parallel imaging (ASSET) with optimized k-space trajectory helps reduce motion misregistration and improve vessel visualization respectively. In addition, with the use of partial-Fourier and coronal plane acquisition, the scan time is considerably reduced. Inhance 3D DeltaFlow is a robust 3D NCE MRA technique that provides excellent, high SNR visualization of peripheral arteries.

**Inhance 2D Inflow:** The Inhance 2D Inflow pulse sequence is designed to acquire angiography images of arteries, which follow almost a straight path, i.e. femoral, popliteal, carotid arteries, etc. Arterial blood flow is faster during systolic phase and slows down during diastolic phase. Inhance 2D Inflow is designed to acquire data during systolic phase and offers the following:

- Optimized spatial saturation gap to improve fat suppression and background suppression. With this saturation gap

optimization, higher views per segment (vps up to 48) could be used, resulting in significant scan time reduction.

- Peripheral Gating that minimizes the pulsatile artifacts.
- Optimized View Ordering to improve arterial signal.
- ASSET acceleration compatibility to reduce scan time.

#### Cube 3D

The Cube technology can eliminate multiple independent two-dimensional datasets with a single three-dimensional volume (or cube) of high resolution data to provide better image quality in shorter exam times. Compared to traditional 3D fast spin echo acquisitions, Cube uses a combination of optimized echo train pulses and ARC parallel imaging to reduce SAR, extend the duration of the acquisition echo train, and reduce the echo spacing. The system automatically adjusts the echo train flip angle amplitudes to provide optimized tissue contrast based on the specific tissue T1 and T2 characteristics and prescription parameters. To further reduce exam time and improve image quality, Cube is compatible with ARC self calibrating parallel imaging.

Isotropic Cube datasets may be automatically reformatted from a single acquisition into any plane, without gaps, and with the same resolution as the original plane for improved anatomical review and tissue visualization. The maximum parallel imaging acceleration is dependent upon the surface coil in use.

High resolution Cube data can be acquired with T1, T2, T2 FLAIR, or Proton density weighted tissue contrasts for neuro, abdominal, pelvic, and musculoskeletal imaging.

#### Ready Brain

Ready Brain automates scan prescription for brain exams, improving precision, repeatability and workflow. The steps involved are (A) Whole brain localizer with 3D slabs (B) Automatic detection of mid sagittal plane (C) 2D-registration of mid sagittal plane to high quality reference image (D) Computer transformations for standard axial, sagittal and coronal views and (E) Prescribe views to GRx and scan automatically.

#### eDWI

The eDWI application includes the acquisition sequence and

post-processing tools. It is designed to provide high signal-to-noise-ratio diffusion images of the brain and liver with short-acquisition time. Its multi-B feature is designed to provide measurement of apparent diffusion coefficient (ADC) map with reduced effect of perfusion. In addition, "3 in one" B value combining technique, applies diffusion weighting to all three gradients simultaneously, helping improve sensitivity. Built in tetrahedral feature applies four different diffusion weighing combinations of x, y, and z gradients simultaneously to acquire isotropic diffusion weighted images with high signal to noise ratio and shorter TE. Its smart NEX feature significantly reduces the acquisition time. Inversion recovery has been deployed to provide robust fat suppression.

14            1        S4500WW

MR450w 1.5T Surface Coil Pak

MR450w 1.5T Surface Coil Pak

The MR450w 1.5T Surface Coil Pak contains the following:

- 16-channel Head Neck Spine Array Coil
- 12-channel Body Array Coil
- 8-channel Knee Array Coil
- Quad Extremity Coil
- 3-channel Shoulder Array Coil

**1.5T 16-Channel Head/Neck/Spine Array:** The 1.5T Head/Neck/Spine (HNS) Array delivers convenience with quality. Compatible with new 16-Channel MR450 systems, this 29-element coil serves as a high-resolution brain coil, high-density neuro-vascular array, and a multi-element spine coil in one convenient package. Designed to accommodate multi-dimensional parallel imaging in any scan plane, this coil yields unprecedented imaging speed and superior image quality, thanks in large part to a unique element arrangement that focuses the signal over the anatomy of interest.

**1.5T High Density Body Array:** The 12-Channel quadrature Body Array with a single connector is designed for high-definition MR imaging of the chest, abdomen and pelvis on the new 16-channel 1.5T MR system. This 12-element phased-array coil provides extensive coverage, enabling multi-station anatomical and vascular imaging of the chest-abdomen or abdomen-pelvis without repositioning the coil. The array is optimized for use with ASSET

acceleration in enhanced breath-hold imaging procedures.

The 12-ch Body Array is not compatible with E8801RG-Interface Device, E8801R-Endorectal Prostate Probe, E8801RC-Endorectal Cervix Probe, or E8801RD-Endorectal Colon Probe.

**1.5T High Density Knee Array:** This Knee Array is designed for high definition MR imaging. The array uses unique hybrid technology and incorporates a dedicated birdcage coil for transmission, and an anatomically tapered 8 channel receive array for receive functions. The dedicated transmit coil eliminates phase wrap from the opposite knee. Designed uniquely for GE, the 8-element receive coil delivers 30% to 100% more SNR than the standard extremity coil. The array is compatible with PURE for uniform Signal intensity, and ASSET and ARC parallel imaging.

**1.5T Quad Extremity Coil:** The transmit/receive design of the Quad Extremity Coil helps ensure optimal results in studies of the knee, ankle and foot. Its unique anterior extension increases the imaging volume for thorough evaluations in dorsi-flexed foot and ankle studies, covering FOVs up to 30 cm for the foot and ankle, and up to 20 cm for the knee.

**1.5T High Density Shoulder Array:** The 1.5T 3-channel Shoulder Array offers the increased signal-to-noise characteristic of phased-array technology, along with a unique sleeve design that delivers exceptional joint-imaging capabilities. The coil provides clear definition of the shoulder joint, specifically the head of the humerus, clavicle, acromion, supraspinatus muscle and ligaments. Patient comfort pads and restraining straps are included.

15        1        M3335LZ

1.5T 8-Channel Brain Array - Invivo

1.5T 8-Channel Brain Array - Invivo

The Brain Array is designed for high-definition MR imaging of the brain. This 8-element quadrature phased array provides 24 cm of coverage, facilitating both anatomical and vascular imaging of the brain. The coil is optimized for use with ASSET acceleration for enhanced neuro imaging.

16        1        M1085GF

1.5T General Purpose Flex Coil

1.5T General Purpose Flex Coil

This coil can be used to optimize imaging of irregular anatomy such as the neck, shoulder, elbow, brachial plexus, hip, thigh, knee, ankle, and foot, and to facilitate dynamic joint imaging. Its generous sensitive volume helps ensure uniform signal intensity, and therefore superior soft-tissue imaging throughout the area of interest.

17        1        M7000EP

1.5T GP Flex Coil Adaptor for MR450/MR450w

1.5T GP Flex Coil Adaptor for MR450/MR450w

This adaptor provides the necessary interface between the general-purpose flex coil and the MR450 and MR450w system.

18        1        E8912CA

MR Heat Exchanger for MR450w - Standard Ambient Temp

GE Optima MR450w Heat Exchangers - 49kW (20 Tons)

Cooling for your GE Healthcare MR system has never been so easy. GE Healthcare has partnered with the Glen Dimplex Group, a world leader in cooling systems, to offer heat exchangers designed to meet the needs of your Discovery MR System. Now you can look to GE Healthcare for your entire MR purchase and support.

This heat exchanger is highly reliable and the only unit verified to perform with the new platform of GE Healthcare MR systems. As part of your integrated GE Healthcare solution, you'll work with a single contact throughout the whole installation. A Project Manager of Installation will help with building layout, room designs, delivery and installation - every step until your system is ready to scan. Our team will work seamlessly with architects, contractors and your internal team to help ensure timely, cost-effective completion.

Once your cooling system is running, you'll get fast, highly-skilled service support managed through GE Healthcare - with the same quality and response time you expect from your MR system.

#### FEATURES AND BENEFITS

- Designed to provide stable fully dedicated cooling for your MR system's needs
- Water/glycol outdoor-air-cooled heat exchangers to support your highest exam volumes and your full range of diagnostic procedures
- Redundant fluid pumps with automatic switchover let you

keep operating with no loss of cooling even if one pump goes down

- Quad compressor, dual tandem refrigeration circuit design saves on energy while your system smoothly transitions through the 10% to 100% heat load capacity cycles of patient scanning and idling
- Quiet operation between patient exams and overnight - ideal for facilities in residential areas
- Comes with installation support, installation visits, preventative maintenance visit and 1 full year of parts and labor warranty
- Installation support includes: support through GE's Project Manager of Install, GE's Design Center, technical support from the Glen Dimplex company, two (2) installation visits
- Comprehensive and quality service rapidly delivered through our CARES service solution
- 65 gallons of 100% glycol concentrate for complete system filling and diluting
- Wall mounted remote display panel provides the ability to monitor the system's operation and indicates possible system errors
- Filter kit with flow meter helps to ensure purity of water prior to entry to the MR system
- Highly recommended that Vibration Isolation Spring Kit (E8911CJ) be added for systems that will be roof top mounted

#### SPECIFICATIONS

- Net Cooling Capacity: 49 kW / 20 Ton
- Maximum Coolant Flow: 35 gpm (132 l/m)
- Coolant Outlet Temperature: 48 F (8.9 C)
- Coolant Temp Stability: E 1.8 F ( E1.0 C)
- Max Coolant Pressure : 70 Psi (4.8 Bar)
- Refrigerant: R407C
- Ambient Temp Range: -20 to 120 F (-30 to 50 C)
- Condenser Air Flow (Approx): 18,000 Cfm
- Tank Capacity: 100 gal (378 l)
- Flow Meter Range: 4-40 gpm

- Filters: 50 micron cartridge filters
- Supply Voltage: 460v / 3 phase / 60 Hz
- Coolant Connections: 2" NPTF
- Overall Size (L x W x H) 44" x 136" x 84.5"

COMPATIBILITY:

- GE Optima MR450w 1.5T MR System

NOTES:

- Item is NON-RETURNABLE and NON-REFUNDABLE

19      1      E9200AF

MR Basic Positioning Pads, 1 Chair, Narrow and Wide Straps

MR Accessories Kit

The Accessories Kit combines a physician's chair, a complete set of positioning pads, and a set of Velcro security straps.

The Physician's Chair has padded arms for comfort and comes in a charcoal gray color that blends with any environment.

The MR Accessories Kit contains a complete set of coated positioning pads in a lightweight tote case that can be a permanent fixture in an MR suite or can be easily carried from room to room.

The following pads are included: 1 knee rest, 1 knee coil insert, 1 extremity rest, segment table pads, 4 body wedges, 4 rectangle stack pads, and 2 rectangle elbow pads.

The Velcro Security Straps include one 14 inch wide set and one 6 inch wide set.

20      1      E9200AB

MR Fast Start Package

MR Fast Start Package includes:

- 4 E8801BA Disposable Earplugs
- 1 E8807AB Signa Log Books
- 1 E8819RG Conmed Electrodes
- 1 E8802MC Wide Security Straps
- 1 E8802MD Narrow Security Straps
- 1 E8801MR Head Coil Set
- 2 E8819A MR Warning Sign - Large
- 10 E8819B MR Warning Sign - Small



			<ul style="list-style-type: none"> <li>• 1 E8804EG MR Safety DVD</li> </ul>
21	1	E9200AC	<p>MR Room Readiness Package</p> <p>MR Room Readiness Package includes:</p> <ul style="list-style-type: none"> <li>• 1 E8805AE MR Wheelchair</li> <li>• 1 E8805BA Non-Magnetic Gurney</li> <li>• 1 E8805BF IV Pole for Mobile Gurney</li> <li>• 1 E8806DC MR Hamper with Wheels</li> <li>• 1 E8810BC Hand-held Metal Detector</li> <li>• 1 E8806AB Non-Magnetic Footstool</li> <li>• 1 E8806CB MR IV Stand with Wheels</li> <li>• 1 E8812CF MR CCTV System</li> </ul>
22	1	E8804SB	<p>Medrad Spectris Solaris EP Injector w/ICBC - NOT FOR MOBILES</p> <p>Medrad Spectris Solaris EP MR Injection System</p> <p>Medrad Spectris Solaris EP MR injector for use use in all MR scanner field strengths up to and including 3.0T. Optimized touch-screen for fewer keystrokes, KVO (keep vein open) allows patient to be prepared before beginning the scan. Larger 115 ml saline syringe for longer KVO or multiple flushes. Includes cables and starter kit...E</p> <p>NOTE: GE is responsible for unpacking, assembly, and installation of equipment. Medrad will be available for technical assistance by phone at (412)767-2400. An additional charge will apply for on-site installation assistance. Medrad will be responsible for operational checkout, final calibration, in-service of the equipment, and initial applications training. Please contact the local Medrad office two weeks in advance of installation.</p>
23	1	E8823M	<p>Magnacoustics Genesis Ultra Music System for MR</p> <p>Magnacoustics Genesis ULTRA Communication &amp; Music System</p> <p>The Magnacoustics Genesis ULTRA is the only MRI Communication &amp; Music System to interface directly with GE's MRI hardware and software. This allows software driven Auto Voice Commands from GE's computer to be delivered directly into the patient's ears for breath-hold sequences. This same interface allows the Technologist to talk directly to the patient through the console Mic even while the scan is in progress. The Genesis ULTRA also features an exclusive</p>

Patient Ready Signal. By simply depressing a small button on the handheld control an audible and visual signal is transmitted to the Technologist indicating the patient's readiness for the scan to begin. This simple step streamlines the breath-hold exam which amounts to approximately 30% of all exams. Patient Handheld Volume and Media Selection Controls with Voice Feedback interface with an FM/AM stereo, CD player, and iPod interface. This distracts even the most apprehensive of your patients by allowing them to be in control of their own environment. Additionally, the Auto Gain feature automatically raises and lowers the volume level for the patient based on the Sound Pressure Level of the MRI. Magnacoustics also provides the only patented 8-driver transducer that provides the highest sound directly to the patients ears with the MagnaLink Headset System. This patented system includes a stethoscope-style headset with the MagnaPlug (replaceable earplug) that provides 29dB of attenuation and complies with GE Healthcare MR Safety Guide Operator Manual.

The Genesis ULTRA's See-In-the-Dark GUI Electroluminescent Backlit Technologist Control Unit enhances operation in the normally low-lit MRI environment allowing the Technologist to operate the entire system with the touch of a button.

The Genesis ULTRA includes an integral interface for fMRI with built-in input for audio stimulation and output for responses...E

24 1 E4504FM

700 VA Partial System UPS - MR

700 VA Partial System UPS - MR

Tested with all MR system computers, the 700VA Partial System UPS provides reliable, clean, consistent power for the data processing portion of the MR imaging system. The use of the double conversion UPS enables the MR system data processing portion electronics to operate when there is a power anomaly or total power loss. Valuable data and the system operating software are protected, if there is an extended outage the UPS allows for an orderly shutdown of the system.

#### FEATURES/BENEFITS

- True double-conversion, online technology provides reliable operation and uninterrupted glitch free power
- Automatic frequency selection eases startup, i.e., 50 or 60 Hz

compatible

- Integral Electronic Static Bypass switch means zero transfer time
- Improves user productivity, system reliability, reduces service costs and increases system uptime
- Advanced Battery Management (ABM) software monitors / indicates battery health and improves battery service life

#### SPECIFICATIONS

- Dimensions (H x W x D): 9.09" x 6.3" x 13.9"
- Weight: 26 lbs.
- Input Voltage Range: Single Phase 80-138 V
- Input Frequency Range: 47-70 Hz
- Rating: 700 VA / 630 W

#### COMPATIBILITY

- MR Systems

#### NOTES

- This is a partial system UPS - it covers only the computer, not the entire MR imaging system. After a power event portions of the system will have to be reset before operation can resume
- Customer is responsible for rigging and arranging for installation with a certified electrician
- ITEM IS NON-RETURNABLE AND NON-REFUNDABLE

25      1      E4502SE

18 KAIC 28 Amp MR Maximum Constant Lighting Level System

18 KAIC 28 Amp MR Maximum Constant Lighting Level System

The GE DC Lighting Control Panel converts three-phase 208 V, AC to 115 VDC for lighting power used within the MR shielded suite. Use of DC powered lighting is required in GE Signa System exam rooms and eliminates RF noise generated by 60 Hz incandescent lamps. The DC Lighting Controller System is compatible with any imaging system or application requiring 115 VDC lighting. The use of variable DC lighting also offers additional comfort to the patient.

#### FEATURES/BENEFITS

- Standardized design and testing improves product quality and

system reliability

- Prevents AC interference when using radio frequency imaging
- Uniform factory design eliminates individual project design, delays and engineering costs of obtaining a locally manufactured panel
- 20 Amp or 28 Amp continuous current rated units to fit any imaging application
- Internal current limiting fuses and branch circuit breakers protects individual DC circuits and rectifier
- OSHA lockout/tagout padlock provisions
- Surface or semi-flush mounting

#### SPECIFICATIONS

- Dimensions (H x W x D): 30.37" x 20.5" x 9"
- Weight: 171 lbs.

#### NOTES:

- Customer is responsible for rigging and arranging for installation with a certified electrician
- ITEM IS NON-RETURNABLE AND NON-REFUNDABLE

26 1 W0106MR

TiP Discovery and Optima Family Training 10 Days Onsite Plus 10 Hrs TVA

TiP Discovery and Optima Family Training 10 Days Onsite Plus 10 Hrs TVA

The TiP Training Choices program is designed for CURRENT GE customers WITHOUT HDx experience who purchase a Discovery or Optima system. Training is delivered onsite at the customer's facility and instructs students in start-up operation of the system and introduces participants to the system design, workflow, new options and clinical applications included. Extended TVA support ensures learners maintain performance over the long term.

This training program must be scheduled and completed within 36 months after the date of product delivery.

27 1 W0004MR

4 Days MR TiP Onsite Training

4 Days MR TiP Onsite Training

			<p>Four Days MR Onsite Training provided from 8AM to 5PM, Monday through Friday. Includes T&amp;L expenses. Days provided consecutively.</p> <p>This training program must be scheduled and completed within 12 months after the date of product delivery.</p>
28	1	W0012MR	<p>TiP Applications Onsite MR Training 2 Days per year over 3 years</p> <p>TiP Applications Onsite MR Training 2 Days per year over 3 Years</p> <p>Two consecutive days of TiP Applications Onsite MR training presented during the 2nd, 3rd, and 4th year after system purchase.</p> <p>Onsite training provided from 8AM to 5PM, Monday through Friday. Includes T&amp;L expenses.</p>
29	1	R0080MR	<p>MR Signa LX and EXCITE Full Service (Class and Lab)</p> <p>MR SIGNA LX/EXCITE FULL SERVICE (CLASS/LAB)</p> <p>The MR SIGNA LX/EXCITE FULL SERVICE COURSE will teach the skills needed by the MR Engineer to configure, maintain, troubleshoot, and repair the MR SIGNA LX, EXCITE 2, HD, and HDx systems. This course must be taken within 2 years from the purchase date.</p>
30	1	R0081MR	<p>Discovery MR750 Full Service Class and Lab</p> <p>MR DISCOVERY MR750 Full Service Class/Lab</p> <p>The Discovery MR750 System class/lab provides the instructional and hands-on opportunities for the student to acquire the fundamental competencies to effectively and safely service the Discovery MR750 System. This course must be taken within 2 years from the purchase date.</p>
31	1	R0083MR	<p>MR Basic Service Readiness Class and Lab</p> <p>MR BASIC SERVICE READINESS (CLASS/LAB)</p> <p>The MR Basic Service Readiness in-resident course will equip the Engineer with the theory and physics of MR and the ability to identify, operate and PM systems at a basic service level. This one-week in-residence course will provide classroom instruction as well as practical application of Basic Service skills on a variety of GE MR systems. This course is prerequisite to all of the other MR training courses. This course must be taken within 2 years from the</p>

purchase date.

32        27    R0100CM

#### Meals And Lodging Expense

Meals and Lodging Expense has been developed to allow the customer the convenience of prepaying for their meals and lodging expenses when attending Technical Service Training at the GE Healthcare Institute located in Waukesha, WI.

The price of this convenience is based on a per day basis. Thus a quantity of 1 is equal to 1 day's meals and lodging expense. When purchasing the meals and lodging expense please be mindful of weekend days during the training stay and include 2 days to cover a weekend in the purchase quantity.

Examples: A 5-day course needs a quantity of 5. Any course longer than 5 days should include 2 days to account for the weekend stay. Any course longer than 10 days will require an additional 4 days of the meals and lodging expense to cover the 2 weekends of the stay. Thus a 15-day course would have a quantity of 19 days to cover the 2 weekends of the stay. This expense must be used within 2 years from the purchase date.

Three meals a day Monday thru Thursday, 2 meals on Friday, plus breakfasts are provided in the onsite cafeteria. The GE Healthcare Institute cafeteria closes Friday after lunch and reopens Monday morning for breakfast. Weekend meals are the responsibility of the customer.

Only for In-resident courses to be taken at the GE Healthcare Institute.

33        3       R0101CM

#### Airfare Expense

The AIRFARE EXPENSE has been developed to allow the customer the convenience to prepay their roundtrip Airfare expenses when attending Technical Service Training at the GE Healthcare Institute located in Waukesha, WI. To be used for engineers attending In-Resident Class/Lab courses for Diagnostic Imaging.

Customer will make their Airfare arrangements thru the GE Travel Center. Specific directions will be provided to the customer upon confirmation of class. Please note that this expense must be used within 2 years of the purchase date

34

3

R0102CM

Lodging Weekend Expense

Lodging Weekend Expense

Weekend Lodging Expense is to cover Saturday and Sunday lodging expenses for those engineers who are staying at the Rivers Edge Condos while attending Diagnostic Imaging Biomed training at the Healthcare Institute. Please note that there are no meals included on the weekend. Must be used within 2 years from the purchase date.

## Options

35	1	E8800RA	<p>1.5T Small Extremity Wrist Coil for HDx &amp; MR750 (DV)</p> <p>1.5T Small Extremity Wrist Coil- Mayo</p> <p>The Mayo Clinic Small Extremity Wrist Coil is a Transmit/Receive quadrature coil that has been optimized for specialty high-resolution musculoskeletal imaging. This design is notable for its demonstrated long-term reliability, low transmit RF power, high image uniformity, and high image SNR. The coil dimensions are approximately 10 cm diameter and length. Includes: wrist coil, phantom, load phantom alignment rings, operator's manual and service manual. Warranty Code: L</p>
36	1	E8819ZA	<p>Invivo 3160 Precess Monitor Standard Configuration</p> <p>Invivo 3160 Precess Monitor Standard Configuration Accurate, continuous monitoring of all critical vital signs, with Large color LCD display. Unique design allows operation up to the 5,000 Gauss line thus not restricting placement in the MRI room. Precess is the first MRI monitor to debut a smart battery management system. This system displays the battery life for each device, which eliminates problems while increasing patient safety. Patient Parameters include: Sedation, Gating, Cardiac, Basic Anesthesia, Critical Care, ECG, SpO2, NIBP, ETCO2, Recorder, Cardiovascular ECG, Wireless Remote Monitor.</p>