INTERS●N

SeeMore
USB ultrasound

Software Installation Instructions
&
Quick Start Guide

Congratulations on your purchase of the Interson SeeMore USB Ultrasound Imaging Probe, the ultrasound probe that operates through the USB port of your computer. **Please view the SeeMore embedded help, or refer to the SeeMore User Guide for more detailed information.**

Please register your purchase within 7 days of receipt at:
http://www.interson.com/registration

Note: The sale of this item is subject to regulation by the U.S. Food and Drug Administration and other international, state, and local regulatory agencies.

Package Contents:

Probe Case   Sample Ultrasound Gel
SeeMore USB Ultrasound Imaging Probe   USB Memory Stick

Extended Warranty Registration – back page of this Quick Start Guide

Windows 7 software installer, user manual, reference images – on memory stick

Minimum System Requirements

Verify that your computer's performance is equal to or greater than:
Operating System - Windows 7 64 bit   CPU - 3 GHz   Memory - 3 GB

I: Software Installation

Do NOT plug in the USB ultrasound probe(s) until the software has been installed.

Software installation:

1. Plug in the Memory Stick to one of the computer's USB 2.0 ports.
2. The following file will be displayed once you have opened the Removable Disk: **SeeMoreSetup.exe**.
3. Click on the icon **SeeMoreSetup.exe**.
4. Follow the on-screen instructions - click **Next** when prompted.
5. When installation is complete, click **Finish**.
6. Remove the Memory Stick and store it in a safe place.
7. Do *NOT* launch the SeeMore application - the drivers need to be installed.
8. Connect the ultrasound probe to an available USB 2.0 port.
9. Wait for the first driver to install. Windows 7 will confirm the installation.
10. Launch the SeeMore application using the shortcut on the desktop.
11. The second driver will install. Windows 7 will confirm the installation.
12. The SeeMore application will now launch and you are ready to scan.

II. Quick Start Guide

After installing the SeeMore application, you will see two new shortcut icons on your computer desktop. The SeeMore icon is used to launch the SeeMore application. The other icon is a shortcut to the Patient Data folder – this contains patient folders, images and calculations.
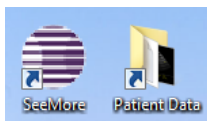
To begin scanning, first plug in your probe and wait a few seconds (you will hear 2 short quick beeps), then click on the SeeMore icon to launch the program. You may either use the default setting or select a preset tailored for the exam you are conducting. To begin scanning you may: **a)** depress and release the scan button on the probe; or **b)** click the green scan button on the screen; or **c)** press your computer's space bar. You may freeze an image using one of the same actions.

SeeMore Display

The computer monitor screen is divided into three major sections:

On the left side is the **Imaging Window** and **the Status Window.** The Imaging Window displays the ultrasound scan, and includes measurements, calculations and annotations. On the right side of the screen is the **User Interface Window**. It contains a number of tabs to adjust the image, input patient and exam information, set preferences, and perform measurements and calculations. Each of these tabs and their functions are described in detail in this Quick Start Guide.

Imaging Window
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**User Interface Window**
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Status Window

Note the blue dot on the upper left side of the image. This blue dot corresponds to the scan / freeze / image orientation button on the probe. The radiologist's convention is that the orientation mark on the image identifies the patient's right side or the patient's head. The image can be flipped and/or inverted in the ***Settings*** *tab.*

Introduction to SeeMore User Controls

The User Interface Section on the right side of the screen contains five tabs, **Auto Scan, Adv. Scan, Patient, Settings,** and **Measure.** Each of these tabs has its own page in this Quick Start Guide. Video Help and embedded help are also available for each of these tabs. To access **Video Help**, select a tab and then use the **Help** pull down in the upper left corner of SeeMore and select **Video Help**. To access embedded help, select **Help** in the upper left corner of SeeMore and select **Help Topics**.

The **Auto Scan** tab is the default view. You may select different presets and adjust basic functions such as depth, frequency, intensity and contrast from this tab.
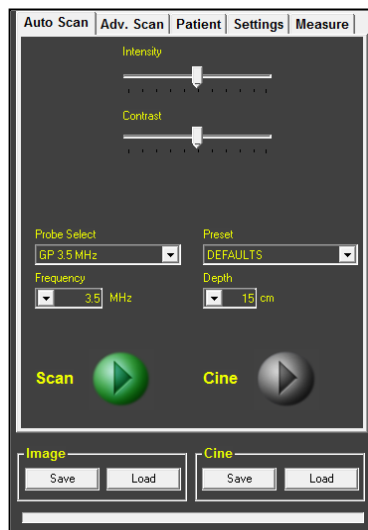
You may adjust the **Intensity** and **Contrast**. It is typically best to leave these in the center.

Probe Select identifies all connected probes and enables you to select which probe you would like to use.

Preset enables you to select from an included preset of ultrasound parameters. A specific preset contains: Intensity, Contrast, Near Gain, Mid Gain, Far Gain, Frequency, Depth, and Power. The list of available presets changes based on the probe that is selected. Presets are saved and deleted in the **Adv. Scan** tab.

Frequency allows you to select from available pulse frequencies. Pulse frequencies are probe specific, and as such, different probes may have different pulse frequencies. As image resolution is better at higher frequencies, always use the highest pulse frequency that allows you to scan to your desired depth.

Depth changes the displayed depth range. Depth ranges are dependent on the probe and the selected pulse frequency.

Scan starts and stops the scan. The scan button on the probe and the keyboard's space bar will also start and stop the scan.

SeeMore automatically saves the most recent frames. After stopping a scan the most recent frames can be replayed by pressing the **Cine** play button. The number of frames that are automatically saved in the cine frames buffer is selected in the **Settings** tab.

Image Save stores the current displayed frame of native format scan data and also a jpeg with measurements and annotations. **Image Load** recalls a saved frame of native format raw scan data.

Cine Save stores the buffer of most recent scan frames. **Cine Load** recalls a previously saved buffer of the most recent scan frames.

The **Adv. Scan** tab has the same functionality as the **Auto Scan** tab, as well as the capability to adjust the image's gains and pulse power, and save presets.

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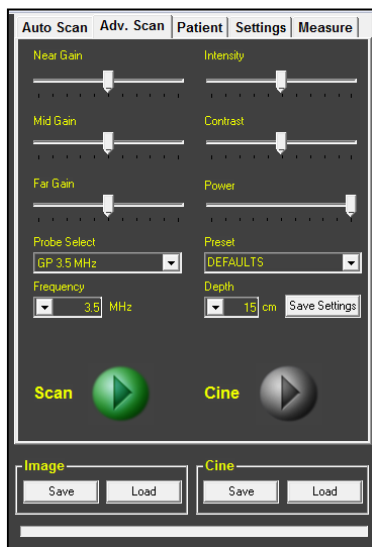
In the right hand column of sliders you can adjust the **Intensity** and **Contrast**. Typically you will leave these in the center. **Power** controls the probe's pulse power. Typically you will leave this at the maximum. If the displayed image is saturated, you may get a better image by lowering the pulse power.

In the left hand column of sliders you can adjust the three gains. The typical starting point is with all three gains in the center. **Near Gain** adjusts the first third of the image. **Mid Gain** adjusts the middle third, and **Far Gain** the last third. If the technique of starting with all gains in the middle doesn't seem to give you a good image, adjust all gains to the minimum (left), move pulse power to maximum (right) and intensity and contrast in the middle. Now raise the **Near Gain** until the first third of the image is just below saturation. Now, similarly, adjust **Mid Gain** and then the **Far Gain**.

Probe Select identifies all connected probes and enables you to select which probe you would like to use.

Preset enables you to select from an included preset of ultrasound parameters. A specific preset contains: Intensity, Contrast, Near Gain, Mid Gain, Far Gain, Frequency, Depth, and Power. The list of available presets changes based on the probe that is selected. To save a new preset, type a new name over an existing preset name (no spaces allowed) and select **Save Settings**. To delete a preset, select the preset name and then press **delete** on the keyboard.

Frequency allows you to select from available pulse frequencies. Pulse frequencies are probe specific, and as such, different probes may have different pulse frequencies. As image resolution is better at higher frequencies, always use the highest pulse frequency that allows you to scan to your desired depth.

Depth changes the displayed depth range. Depth ranges are dependent on the probe selected and the selected pulse frequency.
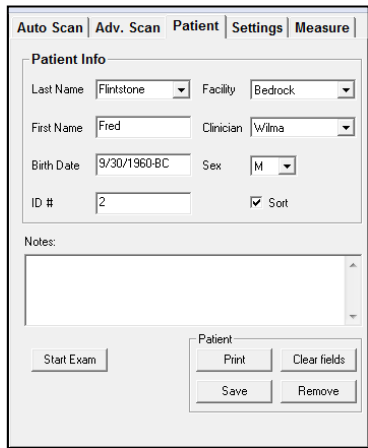
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Cine Save stores the buffer of most recent scan frames. **Cine Load** recalls a previously saved buffer of the most recent scan frames.

The **Patient** tab is where new patients are entered and selected prior to starting an exam. New patient information can be typed over current information, or **Clear Fields** will remove all displayed information without deleting a patient from the database.

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A new patient can be entered or an existing patient can be edited. After editing or entering the patient information, select **Save** and follow the prompts to add as a new patient or edit the current patient.

Facility and **Clinician** are selected and saved with the patient. They are entered and edited in the **Settings** tab.

Sort alphabetically sorts the database by **Last Name**. If **Sort** is not checked, patients are displayed in the order they were entered.

Start Exam posts the current patient information to the Status Window and makes a patient folder in the Documents/SeeMore Data/Patient Data directory. Images and calculations are stored to this folder. Images are automatically saved each time a scan is stopped until **Stop Exam** is selected. The method of saving is selected in the **Settings** tab using the **Auto Save** pull down.

After an exam is completed, **Print** will print a single page report for the selected patient **Last Name**. The report is driven from a customizable template. The standard template prints a single page report of the patient information and the first four automatically stored images.

Images, calculations and measurements that are conducted here in the **Patient** tab are automatically associated with a specific patient. To make a calculation or measurement that is not associated with a specific patient select the **Measure** tab; make calculations and measurements, and optionally save and print single images.

The **Settings** tab is used to configure the functions of SeeMore.

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In the Facility block you can **Add** and **Remove** either **Facility** or **Clinician** names. To remove a name, highlight the facility or clinician name and select **Remove**. To add a new name, type over an existing name and select **Add**. The previous entry is not edited, the new entry is added.

Duplicate report lists any connected storage drives and allows you to select a location to store a copy of patient exams.

Image Store specifies the default location to store images that are not associated to a patient exam. **Image Save** or **Cine Save** will save to this specified location. There is typically no need to change this default directory.

Grid displays reference marks on the left side of the Image Window.

Auto Save specifies whether the space bar or the probe button automatically saves images to the patient's folder during an exam.

Centerline displays a reference line in the center of the image.

A **Biopsy Guide** reference line can be displayed if an endocavity probe is the specified probe.

Cine Frames allows the user to specify the number of frames that are buffered for replay. 32, 64,128 or 256 may be selected. As the frame rate is approximately 15 frames per second, these equate to approximately 2, 4, 8, and 16 seconds of buffered frames.

Webcam outputs a webcam to Windows. This feature outputs the SeeMore Image Window as a webcam, allowing you to send a real-time image to a remote location. You can select this webcam in Skype or another video transport.

Splash Video enables an included video to be played when SeeMore starts.

Audio Prompt enables included audio measurement prompts to be played during a bladder volume calculation.

Display scaling controls the size of the SeeMore application window. Enter a value between the displayed numbers and follow the prompts. As the image data set is 800 x 512, for any image window that is larger than 800 x 512, extrapolated pixels are added in to develop the image. Therefore the smallest image window will provide the clearest image. Always set **Display scaling** to the smallest value that still allows you to see the image and adequately do your procedure.

Orientation flips the image right and left.

Invert Image flips the image up and down.

The **Measure** tab is used to add measurements and annotations to an image, as well as perform any included calculations. If calculations are not included, contact Interson about available calculations. Bladder Volume, Prostate Volume, Crown Rump, Gestational Sac, Femur Length, Head Circumference, Abdominal Circumference, and Bi-Parietal Diameter are all available.

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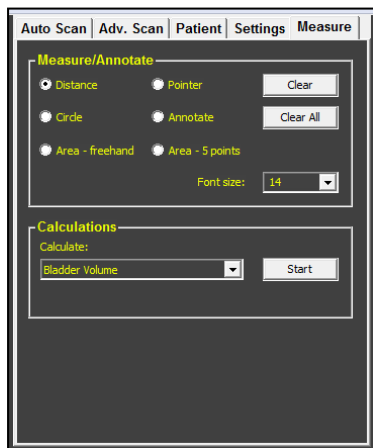
There are four types of measurements available: **Distance** is invoked by either placing and dragging your finger, or simply left click and drag on the image window. Similarly, a perfect **Circle** can be drawn, or a random shape with **Area-freehand**. To draw a smooth shape, use **Area – 5 points** and select five points on the image. SeeMore will smoothly connect the five points.

Annotate and **Pointer** are used to label items on the image. **Font Size** can be changed to suit your preference.

Clear removes the most recent measurement or annotation one at a time. **Clear All** removes all calculations, measurements, and annotations.

If calculations are available they can be selected using the **Calculate** pull down. Pressing **Start** provides text prompts underneath the calculations window. If a patient exam is open the calculation images will be saved to the patient folder. If not, you can save the image with calculations, measurements, and annotations by using **Image Save.**

Techniques to obtain the best Image

Quality images are obtained through a combination of probe placement, proper probe pressure, adequate ultrasound gel, and proper SeeMore settings. Using the default settings and developing and saving your own presets for your specific procedures and computer display screen will produce quality images as long as you follow proper ultrasound technique of placement and pressure. There are specific imaging windows to view target organs and structures. Users will often place the probe where they think they can view the image and incorrectly start adjusting the gains and other controls to find the image. This is incorrect and will not work. If you are *not* experienced with probe placement, orientation and pressure, and how the target anatomy will look in an ultrasound image, we recommend you attend an ultrasound training class and then practice, practice, practice.

Always start with SeeMore's default settings. Then select the appropriate pulse frequency and depth. Use the highest frequency that allows you to achieve your desired depth. You are now ready to add gel to the probe or patient and place the probe on the patient. Light pressure is all that is needed. Slide, tilt, tip, and twist the probe slightly to obtain the desired image. You can now freeze the image and make any fine adjustments to the gains to optimize the image. Quality images are obtained from proper probe positioning and technique. Of course you will need to know your target anatomy and what it should look like in an ultrasound image. It will take some practice to obtain images similar to the images in our video gallery. Proper adjustment

technique is to start by setting pulse power to maximum, and centering both intensity and contrast. Set frequency to the highest frequency that gives adequate depth to view the target anatomy. Next, move all Gains to the left and then adjust Near Gain to the right until the first third of the image begins to show saturation (white pixels). Similarly, adjust Mid Gain for the middle third of the image, and Far Gain for the last third of the image. Finally, adjust intensity and contrast to optimize the display to your liking.

Saving, Viewing, and Printing Images

There are a variety of ways to save, view, and print images from the SeeMore application. As saved images are also stored in the jpeg format they can be viewed and printed with a variety of Windows applications.

Saving

There are many ways that images can be saved. At the bottom of each control tab, on the left, is the **Image Save** function. This automatically saves the current frame as a backscatter image, (raw data). **Image Save** also automatically saves the current image frame as a jpeg and includes any added measurements, calculations and annotations.

If a patient exam is started, images are saved automatically in the patient folder whenever you freeze the image with either the probe button or space bar. This **Auto Save** feature is configured in the **Settings** tab.

Viewing

To review jpeg images, minimize or close SeeMore and click on the desktop folder labeled **Patient Data**. You can select and open a specific .jpg image.

To Review backscatter images, in the SeeMore application, click on the **Load Image** button at the bottom of any Control Tab. Select a specific .bs image. The current image in the imaging window will be replaced by the retrieved image data. You can use the gain controls and intensity and contrast to adjust the image. You can add measurements and annotations and then resave the image as a jpeg for printing.

Printing

Jpeg images can be printed to any available Windows supported printer.

You can use Windows and any installed graphics program to open and print any previously saved jpeg image. Navigate to the Patient Folder using the shortcut on the desktop and select the .jpg file you would like to print.

You can also print the Image Window using the **File** pull down in the upper left corner of the SeeMore application window.

Viewing Reference Images

High resolution reference images, both static and cine loop images, are included in the patient data folder. These reference images are included for you to compare to your technique and to assure you are getting optimum image quality from your system.

Click either **Load Image** or **Load Cine** file button and double click on the static or cine image file you want to view. You can adjust intensity and, contrast, and perform measurements on any saved images. To single step through a cine loop use the arrow keys on your keyboard.

III. Cleaning Probes – Care and Handling

Although Interson probes are very durable, reasonable care must be taken to avoid damaging them. Handle the membrane on the tip of the probe and the cable attachment at the other end of the probe with care. Keep the probe membrane away from sharp objects to avoid damage.

To clean the probe between uses, wipe with a soft, non-abrasive cloth using any standard sterilizing /cleaning agent you use in your practice. In the case of sterile procedures, a sterile drape and sterile gel should be used. For endocavity scanning, a clean/non-sterile drape or condom covering may be used. Ultrasound does not penetrate through air, so you must put scanning gel on the inside of the drape, as well as some couplant (gel or water) between the outer surface of the drape and the region being scanned.

Probe may be soaked up to the probe's cable connector. It is best not to soak for more than one hour.

IV. Warnings, Safety Information

Do not plug in the Ultrasound Probes until the Software has been installed.

Please refer to the SeeMore User Guide for more detailed safety information.

Probes must be cleaned after each use. Cleaning the probe is an essential step prior to effective disinfection. Follow the manufacturer's instructions when using disinfectants. Do not use heat or radiation to sterilize the probe. This will permanently damage the probe and void the warranty.

Interson probes use very low acoustic power output. Ultrasound imaging has been found to be safe when used correctly. However, as with all medical procedures, risks and benefits must be weighed. It is important to use the lowest power settings and the shortest scan times possible while attaining the needed clinical information.

Do not allow sharp objects, such as scalpels or cauterizing knives, to touch the probe or cable.

Equipment is not suitable for use in the presence of flammable mixtures.

If the probe is used with other devices, current leakage may increase and electric shock may be caused. It is the user's responsibility to ensure safety when the probe is to be used with other devices. If safety cannot be ensured, use of the probe with other devices is not allowed.

The use of a Non-Medical grade AC Adapter could potentially cause harm to the system, the probe, the operator and/or the patient.

Do not use in the presence of flammable anesthetics or other flammable materials.

V. Software Updates and Frequently Asked Questions

Software updates can be downloaded on-line. Launch the SeeMore application, go to the **Help** pull down, and select **SeeMore Update**. The system will automatically check to see if you have latest software, and ask permission to download the latest version.

Answers to Frequently Asked Questions can be viewed at:
http://www.interson.com/seemore-usb-faqs

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Interson Customer Warranty
SeeMore™ USB Ultrasound Imaging Probes

Interson ("the Company") warrants that the SeeMore USB Ultrasound Imaging Probe (the "Product") will perform in accordance with its specifications, and is free from material and manufacturing defects. Loss or damage caused by misuse or abuse is not covered by this warranty.

The Company agrees to replace or correct any defects or errors in the Product for a period of one (1) year from the date of purchase from an authorized Interson dealer. The Company's sole liability and the exclusive remedy shall be, at the Company's option, the repair or replacement of the Product. The Company makes no additional representations or warranties, express or implied, regarding the Product and/or its use. By way of example, but not of limitation, the Company makes no representations or warranties of merchantability or fitness for a particular purpose. Purchaser assumes the responsibility for the selection of the Product as being adequate for and appropriate for purchaser's purposes.

In no event will the Company be liable for any special, incidental, indirect or consequential damages whatsoever arising out of the use of or inability to use the product, even if the company has been advised of the possibility of such damages.

The warranty does not extend to defects to: (i) the Product arising out of material or workmanship not provided or furnished by the Company; (ii) the Product resulting from abnormal use of the Product or use in any manner other than as specified in the Product's operating manual; (iii) components or parts warranted by another party;(iv) parts which are subject to normal wear and tear, including, but not limited to, cables, cable connectors, or switches.

Product may be returned only upon issuance of a Return Materials Authorization ("RMA") number by the Company. The RMA number must appear on all packages and paperwork.

All shipping costs incurred in shipping Product to the Company for warranty and non-warranty repair will be borne by the purchaser.
The Product must be sent pre-paid freight, and clearly marked "Attention: Service."
Please include the nature of the problem along with all contact information.

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Interson Warranty Registration
and optional
Extended Warranty Registration

Warranty Registration

Interson probes come with a standard one-year warranty.   You can register your probe(s) online at http://www.interson.com/registration or make a copy of this form, fill out your information, and mail to Interson.

Extended Warranty

An extended warranty may be purchased for up to two additional years. This protection includes: repair of damaged probes as well as elective yearly maintenance. We clean, calibrate, and repair as may be necessary. Interson pays return domestic shipping. International customers may incur additional return shipping charges.

Extended warranty must be purchased within 30 days of ownership.

To register your probes for an extended warranty: copy this page, fill out your information, and send to Interson with payment.

Customer _____

Address _____

Address _____

City _____ **State** _____ **Zip** _____

Phone _____ **E-mail** _____

Purchase Date _____

Additional One year coverage: $300 USD per probe
Additional Two years coverage: $600 USD per probe

Probe Model Name	Serial Number	Year(s) additional coverage (circle one)	
		1 YEAR	2 YEARS
		1 YEAR	2 YEARS
		1 YEAR	2 YEARS
		1 YEAR	2 YEARS

Amount enclosed: _____

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