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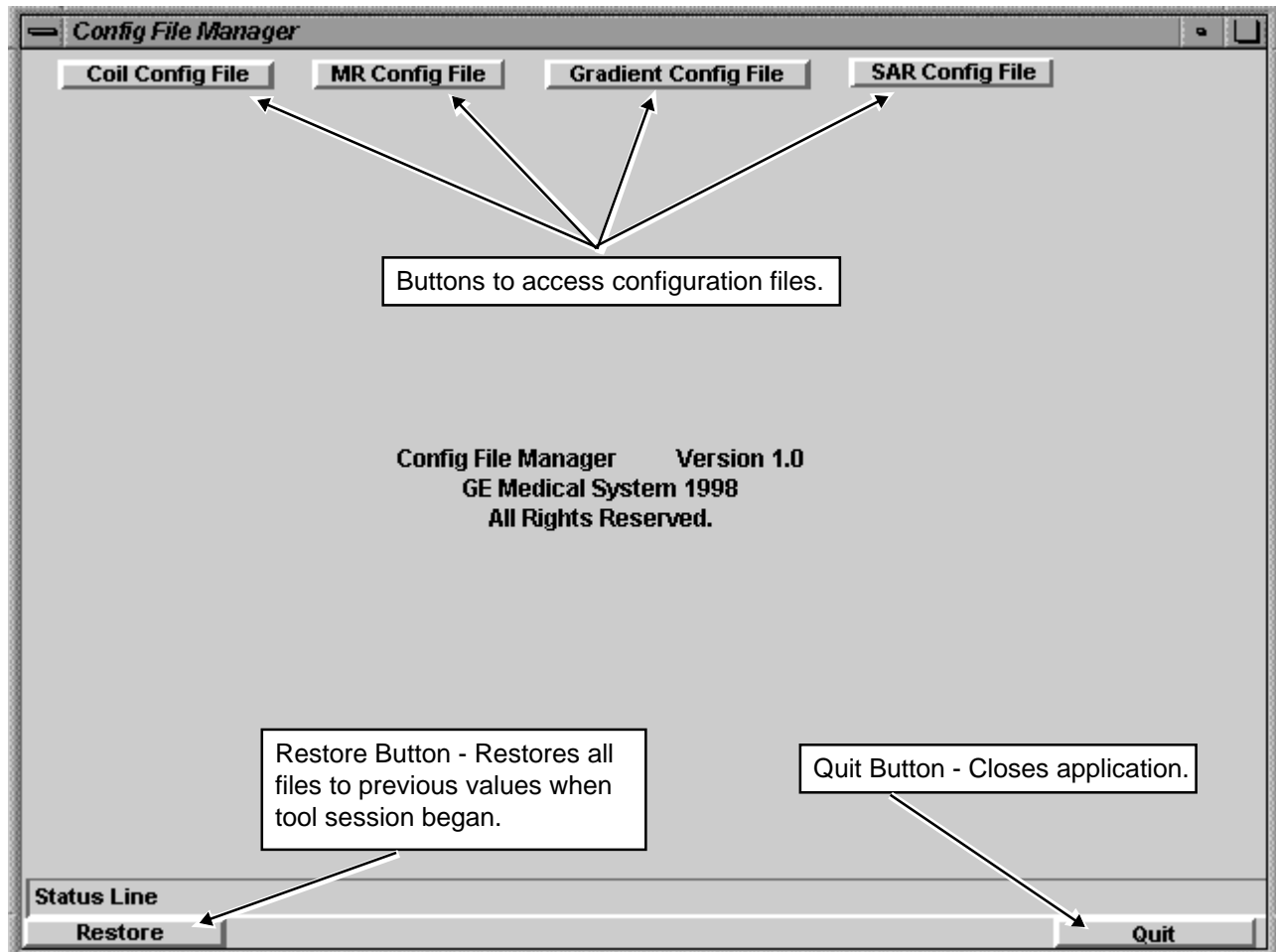
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## 1- OVERVIEW

The Configuration File Manager is a graphical interface used to change the contents of the Coil Configuration File, MR Configuration File, Gradient Configuration File, and the SAR Configuration File. The Configuration files customize the software to the present hardware configuration. (In this text, *configuration* appears as *config*.) It also contains pre-configured parameters for all GE coils, so adding a coil is as simple as “click to add”!

## 2- CONFIG FILE MANAGER MAIN SCREEN

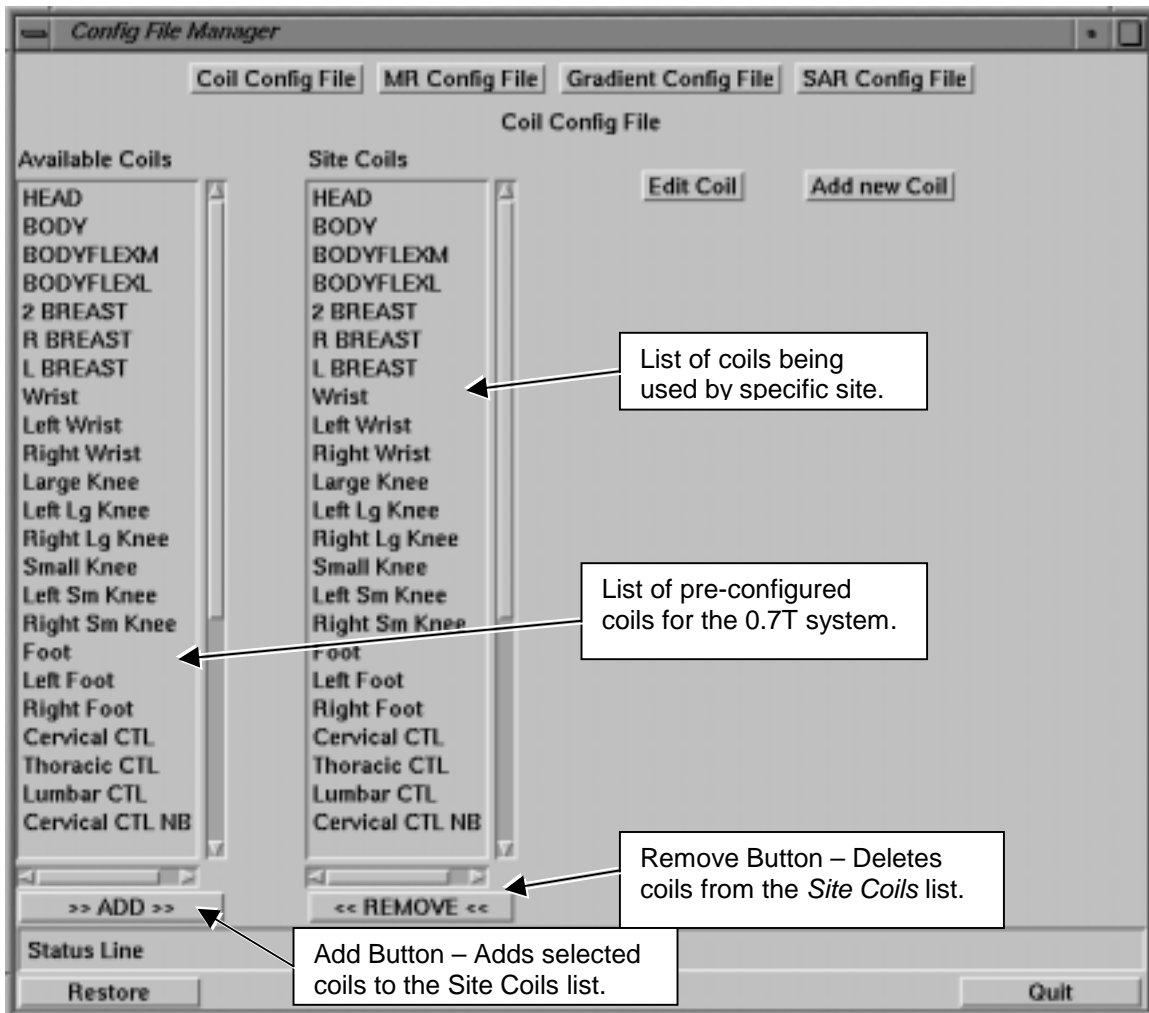
To start the Configuration File Manager, on the Service Desktop, select **[Utilities]**, then **[Config File Manager]** and click **[Start]**. The interface allows the user to make changes to the system configurations for the Coils, MR System, Gradients and SAR in one application. All of the default values are in these files. Options for editing and adding to the config files are available in each configuration category. See Illustration 2-1.



**CONFIG FILE MANAGER MAIN SCREEN**  
ILLUSTRATION 2-1

### 3- COIL CONFIG FILE

The Coil Config File allows for the addition, removal and editing of coils being used by a specific site. See Illustration 3-1.



**COIL CONFIG FILE SCREEN**  
ILLUSTRATION 3-1

The pre-configured coil list for the Config File Manager tool are in Directory /w/config:

- CoilConfig.df.0.7T

Cable and coil loss values are different for each system. During software install, the system copies the appropriate coil definition file above to the CoilConfig.df (in /w/config). The CoilConfig.df file is then used by the Config File Manager tool when adding an "Available Coil".

#### Note

All coils currently available for Signa OpenSpeed will be pre-configured as part of a software load. If no Restore Info is done to the system, It will be necessary for the installer to remove coils that are not being used by the site. Coils will only need to be added if the coils are not GE standard.

**IMPORTANT! Do not multiply** a surface coil's Recon Scale Factor times the Head Coil Recon Scale Factor! Scan does this automatically. With the new Configuration File Manager, only the surface coil multiplier is pre-configured in the CoilConfig.cfg as the "Recon Scale Factor". When adding new coils, **only update the Recon Scale Factor for Head and Body coils**, depending on Sytem Gain Calibration results.

### 3-1 Adding Coils

#### Note

All coils currently available for Signa OpenSpeed will be pre-configured as part of a software load. If no Restore Info is done to the system, It will be necessary for the installer to remove coils that are not being used by the site. Coils will only need to be added if the coils are not GE standard.

To add coils to the Coil Config file, perform the following steps:

1. On the *Config File Manager* main screen, select [**Coil Config File**]. See Illustration 2-1.
2. Select the coil(s) to add to the site's configuration by clicking on the desired coil name(s) in the *Available Coils* list. See Illustration 3-1.
3. Click the [**>>ADD>>**] button to add the selected coil(s) to the *Site Coils* list. You must reboot Signa for scan to recognize that a coil has been added to the list.

### 3-2 Deleting A Surface Coil

To delete coils from the Coil Config file, perform the following steps:

1. On the *Config File Manager* main screen, select [**Coil Config File**]. See Illustration 2-1.
2. Select the coil(s) to delete in the *Site Coils* list by clicking on the coil name(s). See Illustration 3-1.
3. Click the [**<<Remove<<**] button to delete the selected coil(s) from the *Site Coils* list. You must reboot Signa for scan to recognize that a coil has been deleted from the list.

### 3-3 Editing Coil Values

To edit or view coil values perform the following steps:

1. On the *Config File Manager* main screen, select [**Coil Config File**]. See Illustration 2-1.
2. Select the appropriate coil(s) (you can select more than one coil) in the *Site Coils* list by clicking on the coil name(s) and then click the [**Edit Coil**] button. See Illustration 3-1.
3. The *Coil Edit* screen displays the present values of the selected coils. See Illustration 3-2. To change a value, click in the field to enter text or tab through fields and make necessary changes. (Use the **<Delete>** key to edit text; the **<Backspace>** key does not work. Click [**Ok**] to close the screen. You must reboot Signa for scan to recognize that a change has been made to a coil configuration.

**IMPORTANT!** Do not multiply a surface coil's Recon Scale Factor times the Head Coil Recon Scale Factor! Scan does this automatically. With the new Configuration File Manager, only the surface coil multiplier is pre-configured in the CoilConfig.cfg as the "Recon Scale Factor".

**Note**

Remember to reboot Signa for scan to recognize any changes made to the coil lists or configurations.

The image shows a dialog box titled "Coil Edit" with a list of configuration parameters for "coil1". Each parameter is followed by a text input field containing a value. At the bottom of the dialog are "OK" and "Cancel" buttons.

coil1 Coil Name	HEAD
coil1 Coil Code	MRIDHEADPA
coil1 Coil Type	1
coil1 Extremity Coil	no
coil1 Cable Loss	1.129
coil1 CoilLoss	0.0224
coil1 Recon Scale Factor	1.0
coil1 Attenuation-l	0
coil1 Select Quadrature Shifter	0
coil1 Linear(0) vs. Quadrature(1)	1
coil1 Multiple Receiver Coil?	yes
coil1 Multi Coil Channel Selection	15
coil1 Number of Receivers	4
coil1 Starting Receiver ID	0

COIL EDIT SCREEN  
ILLUSTRATION 3-2

### 3-4 Adding New Coils to Config File Manager

To add a coil that is not in the *Available Coils* list, perform the following steps:

1. On the *Config File Manager* main screen, select **[Coil Config File]**. See Illustration 2-1.
2. Click the **[Add new Coil]** button. See Illustration 3-1.
3. The *Add a New Coil* screen displays coil value fields for a new coil. See Illustration 3-3. Values for new coils are in the service manual provided with the coil. For new "Multi Coil Recon Enable" field, enter **0** as the default unless instructed otherwise. Either click in the fields or tab through the fields to enter values. (Use the **<Delete>** key to edit text; the **<Backspace>** key does not work. Click **[OK]** to close the screen.

**IMPORTANT!** Do not multiply a surface coil's Recon Scale Factor times the Head Coil Recon Scale Factor! Scan does this automatically. With the new Configuration File Manager, only the surface coil multiplier is pre-configured in the CoilConfig.cfg as the "Recon Scale Factor".

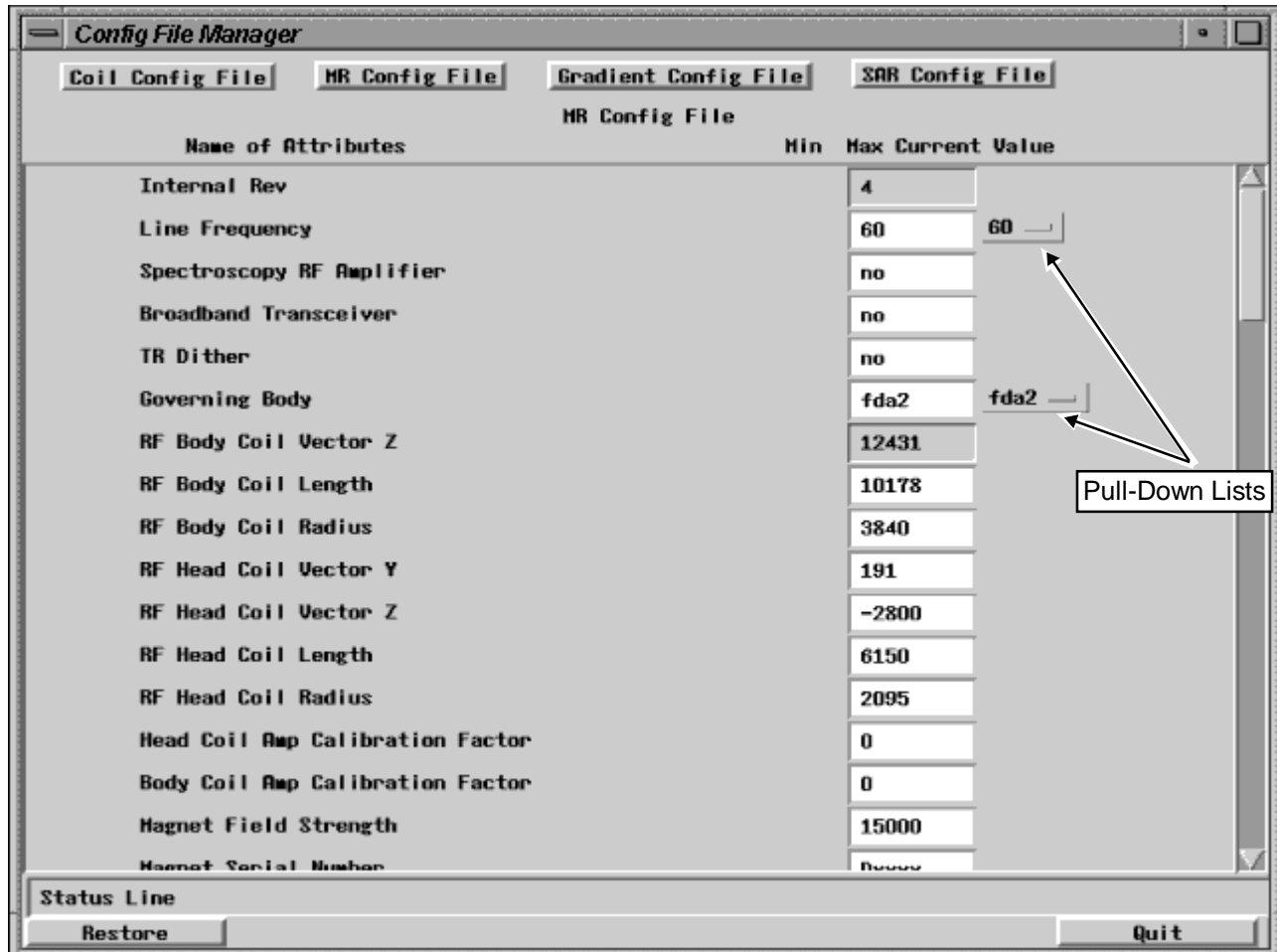
Field Name	Input Type
Coil Name	Text
Coil Code	Text
Coil Type	Text
Extremity Coil	Text
Cable Loss	Text
CoilLoss	Text
Recon Scale Factor	Text
Attenuation-I	Text
Select Quadrature Shifter	Text
Linear(0) vs. Quadrature(1)	Text
Multiple Receiver Coil?	Text
Multi Coil Channel Selection	Text
Number of Receivers	Text
Starting Receiver ID	Text

ADD NEW COIL SCREEN  
ILLUSTRATION 3-3

### 4- MR CONFIG FILE

To edit and/or view the values of the MR Config File, perform the following steps:

1. On the *Config File Manager* main screen, select **[MR Config File]**. See Illustration 2-1.
2. The *MR Config File* screen is displayed. See Illustration 4-1.



**MR CONFIG FILE SCREEN**  
ILLUSTRATION 4-1

3. Either click in the fields or tab through the fields to enter values. For “Attributes” with defined values, click the pull-down list next to the current value. (Use the **<Delete>** key to edit text; the **<Backspace>** key does not work.

**Note**

Clicking in the field displays the same information about the selected field as is displayed on the “Status Line”.

**Note**

To apply changes made to the MR Config File, exit the config file manager. Make sure to click the [SAVE] button when the save dialog box appears. Then, shut down Signa and reboot the computer. (Refer to Section 7, *Exiting the Config File Manager*.)

## 5- GRADIENT CONFIG FILE

To edit and/or view the values of the Gradient Config File, perform the following steps:

1. On the *Config File Manager* main screen, select [**Gradient Config File**]. See Illustration 2-1.
2. An example of the *Gradient Config File* screen is displayed. See Illustration 5-1.



**GRADIENT CONFIG FILE SCREEN**  
ILLUSTRATION 5-1

3. Either click in the fields or tab through the fields to enter values. (Use the **<Delete>** key to edit text; the **<Backspace>** key does not work.

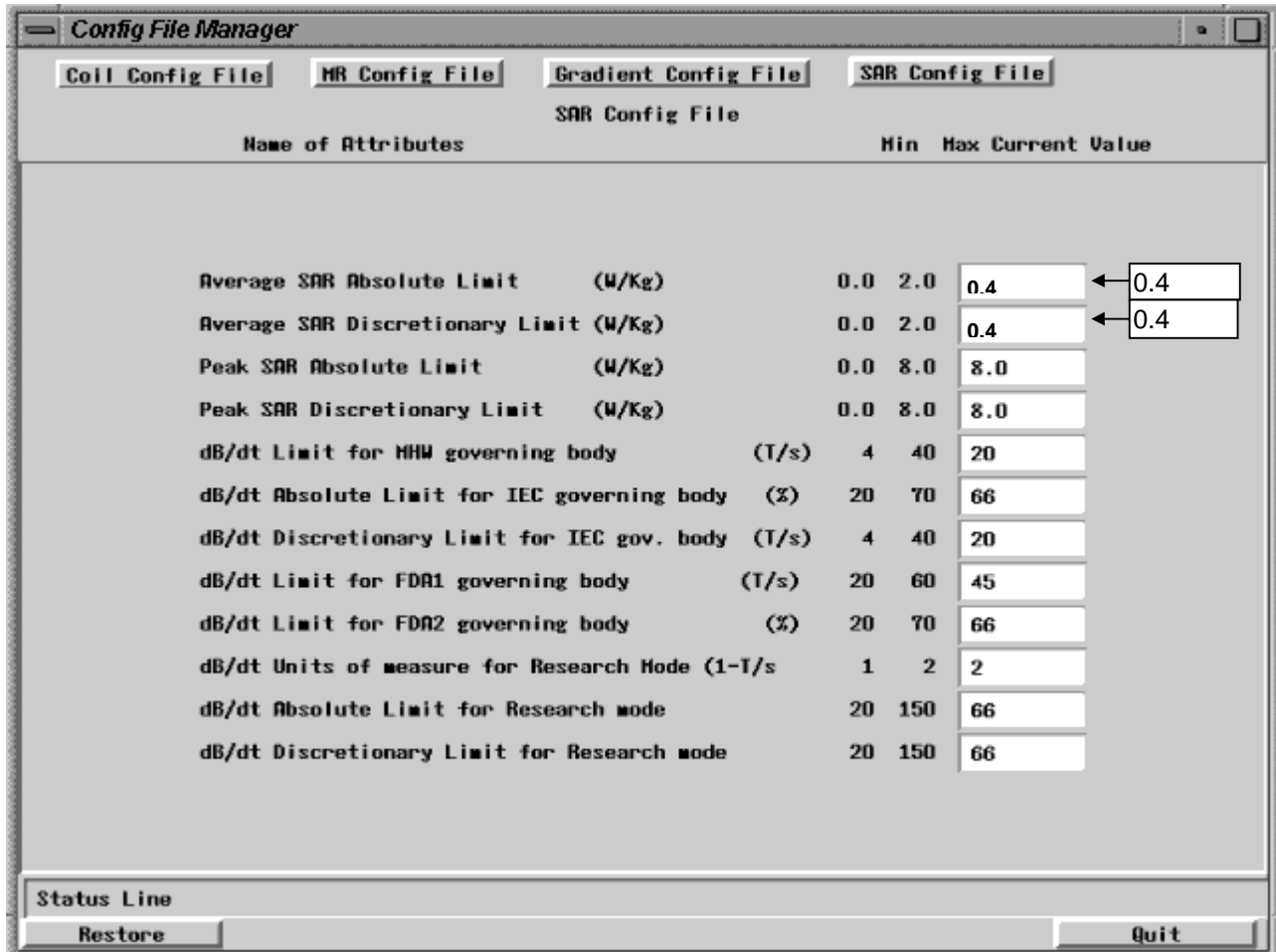
### Note

To apply changes made to the Gradient Config File, exit the config file manager. Make sure to click the [**SAVE**] button when the save dialog box appears. Then, shut down Signa and reboot the computer. (Refer to Section 7, *Exiting the Config File Manager*.)

### 6- SAR CONFIG FILE

To edit and/or view the values of the SAR Config File, perform the following steps.

1. On the *Config File Manager* main screen, select **[SAR Config File]**. See Illustration 2-1.
2. The *SAR Config File* screen is displayed. See Illustration 6-1.



**SAR CONFIG FILE SCREEN**  
ILLUSTRATION 6-1

3. Either click in the fields or tab through the fields to enter values. (Use the **<Delete>** key to edit text; the **<Backspace>** key does not work and inserts bad characters in the field!)

**Note**

To apply changes made to the SAR Config File, exit the config file manager. Make sure to click the **[SAVE]** button when the save dialog box appears. Then, shut down Signa and reboot the computer. (Refer to Section 7, *Exiting the Config File Manager.*)

## 7- EXITING THE CONFIG FILE MANAGER

1. When finished editing values, click the **[Quit]** button to exit application.
2. Click **[Yes]** in the dialog box question, “*Really Quit?*” See Illustration 7-1.



**QUIT DIALOG BOX**  
ILLUSTRATION 7-1

3. Next, a Save dialog box appears for each configuration file that has changed, (**Example:** The following message will appear, “*Coil Config File has been changed.*” To save changes click the **[Save]** button. To not save changes click the **[Do Not Save]** button.
4. To apply changes made in the config files: shut down Signa software and boot computer.
  - Shutting down the software: on the Service Desktop Manager, click on **[Shutdown]**.
  - Booting the computer: Refer to the procedure for *Bringing the System Up/Down*, Section 5.

## APPENDIX A - SITE CONFIGURATIONS/OPTIONS INFORMATION

Site Name: \_\_\_\_\_

Date: \_\_\_\_\_

### System Configuration Data Sheet

PARAMETER	DEFAULT [OPTIONS]	SITE VALUE
File Format Rev	4	
Line Frequency	60, [50, 60]	
Spectroscopy RF Amplifier	no [yes, no]	
Broadband Transceiver	no [yes, no] yes, for spectroscopy option	
TR Dither	no [yes, no]	
Governing Body	Mhw1 [iec, mhw1, mhw2, fda2] Selection based on governing body of country where scanner located	
RF Body Coil Vector Z	12431	
RF Body Coil Length	10178	
RF Body Coil Radius	3840	
RF Head Coil Vector Y	0	
RF Head Coil Vector Z	-4100	
RF Head Coil Length	8000	
RF Head Coil Radius	1350	
Head Coil Amp Calibration Factor	0 [0, xxxxx] 0, for RF cabinets with APB Board	
Body Coil Amp Calibration Factor	0 [0, xxxxx] 0, for RF cabinets with APB Board	
Magnet Field Strength	3000 (0.35T)	
Magnet Serial Number	[YCxxxx]	
Room Shielding	no [yes, no] yes, for shielding no, if none	
MagnaShield	no [yes, no] yes, for MagnaShield no, if none.	
Shield Cooler Type	0 [0-6]	
Resistive Shim Power Supply	0 [0-6]	
External Passive Shim	no [yes, no] yes, if external passive shim no, if none.	
Resistive Shim Power Supply	0 [0-9] 0 = none	
Passive Shim Drum	no [yes, no] yes, if passive shim drum no, if none.	
Line Conditioner Type	0 [0-2] 0: None	

**System Configuration Data Sheet (continued)**

PARAMETER	DEFAULT [OPTIONS]	SITE VALUE
Isocenter Vector Along Z-axis	Initial Values: 8500(0.35T)  (Final values determined in procedure for Electrical Isocenter Calibration)	
Table Movement Limit	19850	
Beginning of Travel (mm)	0	
End of Travel (mm)	32400	
Max Grad Shim Value	280	
Head Plate Dissipation Limit	5000	
Body Plate Dissipation Limit	5000	
Head Power Supply Limit (watts)	400	
Body Power Supply Limit (watts)	4000	
Head Plate Voltage	6000	
Body Plate Voltage	6000	
Head Quiescent Plate Current	0.7	
Body Quiescent Plate Current	0.7	
Head Load Line Resistance	394	
Body Load Line Resistance	394	
Network Loss Value	1.0715	
Fixed Hardware Trigger Delay	10	
Additional CINE Filter Trigger Delay	28	
Minimum Bandwidth for VBI	2	
Maximum Bandwidth for VBI for Receiver 1	125 [62.5, 125] 62.5, for 62.5 KHz Bandwidth Receivers 125, for 100 KHz Bandwidth Receivers <i>(Not displayed, use Install GUI – Hardware button to change)</i>	
Maximum Bandwidth for VBI for Receiver 2	125 [62.5, 125] 62.5, for 62.5 KHz Bandwidth Receivers 125, for 100 KHz Bandwidth Receivers <i>(Not displayed, use Install GUI – Hardware button to change)</i>	
Maximum Bandwidth for VBI for Receiver 3	125 [62.5, 125] 62.5, for 62.5 KHz Bandwidth Receivers 125, for 100 KHz Bandwidth Receivers <i>(Not displayed, use Install GUI – Hardware button to change)</i>	
Maximum Bandwidth for VBI for Receiver 4	125 [62.5, 125] 62.5, for 62.5 KHz Bandwidth Receivers 125, for 100 KHz Bandwidth Receivers <i>(For Rel. 8.2.5 not displayed, use Install GUI – Hardware button to change)</i>	
Extended Dynamic Range Threshold	63	
CERD Pre-Amp Warm Up Time (s)	900	
CERD ADC Warm Up Time(s)	1200	

**System Configuration Data Sheet (continued)**

PARAMETER	DEFAULT [OPTIONS]	SITE VALUE
CERD Ov Osc Warm Up Time(s)	300	
Multi Coil T/R Driver Brd Present	yes [yes, no]	
Header Body Single Line Present	yes [yes, no]	
Bore Monitor Level 1 Trip Point	29 [28-31] 31, for Wide Open Enclosure 29, for other Enclosures	
Bore Monitor Level 2 Trip Point	33 [32-36] 36, for Wide Open Enclosure 33, for other Enclosures	
Hysteresis Value For Bore Temp Mon	2 [0-10]	
Offset Value For Bore Temperature	0 [-9 to 9]	
Rated Output Power (body), Watts	6000 (0.35T)	
Rated Output Power (head), Watts	600 (0.35T)	
Max Average Power (body), Watts	600	
Max Average Power (head), Watts	60	
Max Pulse Energy (body), Joules	30.0 (0.35T)	
Max Pulse Energy (head), Joules	3.0 (0.35T)	
Max Pulse Width (body), ms	60 (0.35T)	
Max Pulse Width (head), ms	60 (0.35T)	
Max Duty Cycle (body)	0.60	
Max Duty Cycle (head)	0.60	
RF Amplifier Type	[0,1,3,4,5,6] 6	
Power Monitor Type	0 [0,1] 0 = EFB 1 = APB	
Image Compression Value	73 [50-100]	
Gradient GAP or GIP Board Present	no [yes, no] no, for SGD Base	

**System Configuration Data Sheet (continued)**

PARAMETER	DEFAULT [OPTIONS]	SITE VALUE
Gradient Amplifier's Type	8290 [8645,8250,8251,8280,8290,8645,8651,9090]	
X-axis GRAM	no-gram [no-gram, gram-0 gram-1, gram-2] no-gram, for Base	
Y-axis GRAM	no-gram [no-gram, gram-0 gram-1, gram-2] no-gram, for Base	
Z-axis GRAM	no-gram [no-gram, gram-0 gram-1, gram-2] no-gram, for Base	
X-axis ASM Present (Only for 8645 amp)	no [yes, no] yes or no, for SGD yes, for 8645	
Y-axis ASM Present (Only for 8645 amp)	no [yes, no] yes or no, for SGD yes, for 8645	
Z-axis ASM Present (Only for 8645 amp)	no [yes, no] yes or no, for SGD yes, for 8645	
X-axis GASM Present (Only for 8645 amp)	no [yes, no] yes or no, for SGD yes, for 8645 HiSpeed or EchoSpeed no, for 8645 Base	
Y-axis GASM Present (Only for 8645 amp)	no [yes, no] yes or no, for SGD yes, for 8645 HiSpeed or EchoSpeed no, for 8645 Base	
Z-axis GASM Present (Only for 8645 amp)	no [yes, no] yes or no, for SGD yes, for 8645 HiSpeed or EchoSpeed no, for 8645 Base	

**System Configuration Data Sheet (continued)**

PARAMETER	DEFAULT [OPTIONS]	SITE VALUE
X-axis Series (Only for 8645 amp)	no [yes, no]	
Y-axis Series (Only for 8645 amp)	no [yes, no]	
Z-axis Series (Only for 8645 amp)	no [yes, no]	
X-axis Number of Power Modules (Only for 8645 amp)	2[1, 2] 1 or 2, for SGD 2, for 8645 Base or EchoSpeed 1, for 8645 HiSpeed	
Y-axis Number of Power Modules (Only for 8645 amp)	2[1, 2] 1 or 2, for SGD 2, for 8645 Base or EchoSpeed 1, for 8645 HiSpeed	
Z-axis Number of Power Modules (Only for 8645 amp)	2[1, 2] 1 or 2, for SGD 2, for 8645 Base or EchoSpeed 1, for 8645 HiSpeed	
Gradient Digital Tuning	no [yes, no] no, for Base	
Gradient Real Time Monitoring ON	no [yes, no]	
Gradient Coil Type	9 [1, 2, 9,101,102,103]	
maxB1 strength (uTesla) <i>(displayed for Rel. 8.3)</i>	24.0	
Maximum integrated (B1) ^2 per pulse (uT^2sec) <i>(displayed for Rel. 8.3)</i>	8.0	
MaxRMS B1 strength for headcoils (uTesla) <i>(displayed for Rel. 8.3)</i>	4.0	
Faster Prescan on/off <i>(displayed for Rel. 8.3)</i>	1 [0, 1] 0, Off 1, On	
CERD Type	002, Universal CERD	

**APPENDIX A - SITE CONFIGURATIONS/OPTIONS INFORMATION (continued)**

Site Name: \_\_\_\_\_

Date: \_\_\_\_\_

PARAMETER	DEFAULT	SITE VALUE
File format revision number	(Revision number of file)	
S/W Gradient Update Time	4 [4,16]	
H/W Gradient Update Time	4	
S/W RF Update Time	2	
H/W RF Update Time	2	
S/W SSP Update Time	1	
H/W SSP Update Time	1	
Smart Coil ID	1 [0,1] 0 = no ID 1= ID supported	
Scanner Mode	2 [0,1,2]	
Fixed Table	n [ "n" or "y" ]	
X angle Axis (Option 1 from the UI Table Entry)	270 [0-360]	
Y angle Axis (Option 1 from the UI Table Entry)	0 [0-360]	
Z angle Axis (Option 1 from the UI Table Entry)	25 [0-360]	
X angle Axis (Option 2 from the UI Table Entry)	270 [0-360]	
Y angle Axis (Option 2 from the UI Table Entry)	0 [0-360]	
Z angle Axis (Option 2 from the UI Table Entry)	0 [0-360]	
X angle Axis (Option 3 from the UI Table Entry)	270 [0-360]	
Y angle Axis (Option 3 from the UI Table Entry)	0 [0-360]	
Z angle Axis (Option 3 from the UI Table Entry)	-25 [0-360]	
Lateral X-offset	0	
Lateral Y-offset	0	
Lateral Z-offset	0	
dfm	0	
dfm TG	200	
dfm R1	13	
dfm DX	0	
coldHeadEOSDly	30	
dfmXshim	0	
dfmYshim	0	
dfmZshim	0	
DtmZ2shim	0	
isZ2	0	
dfm_shim_scale	300	
X-Axis Gradient Setting to Obtain cfxfull	28037	
Y-Axis Gradient Setting to Obtain cfyfs	same as X-Axis	
Z-Axis Gradient Setting to Obtain cfzfs	same as X-Axis	

## REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
0	Oct 30, 2001	Y. Masumo	Initial Release