

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADNI\MAIN-PHASE\Human Protocol\Localizer

Scan Time: 9.2 [s]    Voxel size: 2.2x1.1x10.0 [mm]    Rel. SNR: 1.00    SIEMENS: gre

## Routine

Slice group 1	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Slice group 2	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Slice group 3	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0 [deg]
Phase oversampling	0 [%]
FoV read	280 [mm]
FoV phase	100.0 [%]
Slice thickness	10 [mm]
TR	20 [ms]
TE	5 [ms]
Averages	1
Concatenations	3
Filter	Elliptical filter
Coil elements	HE

## Contrast

TD	0 [ms]
MTC	0
Magn. preparation	None
Flip angle	40 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

## Resolution

Base resolution	256
Phase resolution	50 [%]
Phase partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	On
Interpolation	1
-----	
PAT mode	None

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
-----	
Saturation mode	Standard
Special sat.	None

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	1
Body	0
-----	
Shim mode	Tune up
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

## Physio

1st Signal/Mode	None
Segments	1
-----	
Tagging	None
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1
-----	
Wash - In	0
Wash - Out	0
TTP	0
PEI	0
MIP - time	0

## Sequence

Introduction	1
Dimension	2D
Phase stabilisation	0
Averaging mode	Short term
Asymmetric echo	Off
Contrasts	1
Bandwidth	180 [Hz/Px]
Flow comp.	No
-----	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	1

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADNI\MAIN-PHASE\Human Protocol\MPRAGE

Scan Time: 9:38    Voxel size: 1.3x1.3x1.2 [mm]    Rel. SNR: 1.00    USER: tf1\_ADNI

## Routine

Slab group 1	
Slabs	1
Dist. factor	50 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	0 [%]
Slice oversampling	30 [%]
Slices per slab	160
FoV read	240 [mm]
FoV phase	100.0 [%]
Slice thickness	1.2 [mm]
TR	3000 [ms]
TE	3.54 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 [ms]
Flip angle	8 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

## Resolution

Base resolution	192
Phase resolution	100 [%]
Slice resolution	100 [%]
Phase partial Fourier	Off
Slice partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0
-----	
PAT mode	None

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	1
Body	0
-----	
Shim mode	Standard
Adjust with body coil	0

Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Sagittal
Rotation	0 [deg]
F >> H	240 [mm]
A >> P	240 [mm]
R >> L	192 [mm]

## Physio

1st Signal/Mode	None
-----	
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

## Sequence

Introduction	1
Dimension	3D
Elliptical scanning	0
Averaging mode	Long term
Asymmetric echo	Off
Bandwidth	180 [Hz/Px]
Echo spacing	8.5 [ms]
-----	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	1

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADN\MAIN-PHASE\Human Protocol\MPRAGE Repeat  
 Scan Time: 9:38    Voxel size: 1.3x1.3x1.2 [mm]    Rel. SNR: 1.00    USER: tfl\_ADNI

## Routine

Slab group 1	
Slabs	1
Dist. factor	50 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	0 [%]
Slice oversampling	30 [%]
Slices per slab	160
FoV read	240 [mm]
FoV phase	100.0 [%]
Slice thickness	1.2 [mm]
TR	3000 [ms]
TE	3.54 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 [ms]
Flip angle	8 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

## Resolution

Base resolution	192
Phase resolution	100 [%]
Slice resolution	100 [%]
Phase partial Fourier	Off
Slice partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0
-----	
PAT mode	None

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	1
Body	0
-----	
Shim mode	Standard
Adjust with body coil	0

Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Sagittal
Rotation	0 [deg]
F >> H	240 [mm]
A >> P	240 [mm]
R >> L	192 [mm]

## Physio

1st Signal/Mode	None
-----	
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

## Sequence

Introduction	1
Dimension	3D
Elliptical scanning	0
Averaging mode	Long term
Asymmetric echo	Off
Bandwidth	180 [Hz/Px]
Echo spacing	8.5 [ms]
-----	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	1

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADNI\MAIN-PHASE\Human Protocol\B1-calibration Head

Scan Time: 0:42    Voxel size: 2.3x2.3x2.5 [mm]    Rel. SNR: 1.00    USER: gre\_ADNI

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	0 [%]
Slice oversampling	0 [%]
Slices per slab	96
FoV read	300 [mm]
FoV phase	100.0 [%]
Slice thickness	2.5 [mm]
TR	3.3 [ms]
TE	1.08 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE

## Contrast

MTC	0
Magn. preparation	None
Flip angle	2 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

## Resolution

Base resolution	128
Phase resolution	100 [%]
Slice resolution	100 [%]
Phase partial Fourier	Off
Slice partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0
-----	
PAT mode	None

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
-----	
Saturation mode	Standard
Special sat.	None

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	1
Body	0

Shim mode	Standard
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Sagittal
Rotation	0 [deg]
F >> H	300 [mm]
A >> P	300 [mm]
R >> L	240 [mm]

## Physio

1st Signal/Mode	None
Segments	1
-----	
Tagging	None
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1
-----	
Wash - In	0
Wash - Out	0
TTP	0
PEI	0
MIP - time	0

## Sequence

Introduction	1
Dimension	3D
Elliptical scanning	0
Phase stabilisation	0
Averaging mode	Long term
Asymmetric echo	Off
Contrasts	1
Bandwidth	980 [Hz/Px]
Flow comp.	No
-----	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	1

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADNI\MAIN-PHASE\Human Protocol\B1-calibration Body

Scan Time: 0:42    Voxel size: 2.3x2.3x2.5 [mm]    Rel. SNR: 1.00    USER: gre\_ADNI

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	0 [%]
Slice oversampling	0 [%]
Slices per slab	96
FoV read	300 [mm]
FoV phase	100.0 [%]
Slice thickness	2.5 [mm]
TR	3.3 [ms]
TE	1.08 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	0
Magn. preparation	None
Flip angle	2 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

## Resolution

Base resolution	128
Phase resolution	100 [%]
Slice resolution	100 [%]
Phase partial Fourier	Off
Slice partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0
-----	
PAT mode	None

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
-----	
Saturation mode	Standard
Special sat.	None

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	0
Body	1

Shim mode	Standard
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Sagittal
Rotation	0 [deg]
F >> H	300 [mm]
A >> P	300 [mm]
R >> L	240 [mm]

## Physio

1st Signal/Mode	None
Segments	1
-----	
Tagging	None
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1
-----	
Wash - In	0
Wash - Out	0
TTP	0
PEI	0
MIP - time	0

## Sequence

Introduction	1
Dimension	3D
Elliptical scanning	0
Phase stabilisation	0
Averaging mode	Long term
Asymmetric echo	Off
Contrasts	1
Bandwidth	980 [Hz/Px]
Flow comp.	No
-----	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	1

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADNI\MAIN-PHASE\Human Protocol\Axial PD-T2 TSE  
 Scan Time: 6:50    Voxel size: 0.9x0.9x3.0 [mm]    Rel. SNR: 1.00    SIEMENS: tse

## Routine

Slice group 1	
Slices	48
Dist. factor	0 [%]
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90 [deg]
Phase oversampling	0 [%]
FoV read	240 [mm]
FoV phase	89.1 [%]
Slice thickness	3 [mm]
TR	3000 [ms]
TE[1]	12 [ms]
TE[2]	96 [ms]
Averages	1
Concatenations	4
Filter	Elliptical filter
Coil elements	HE

## Contrast

TD	0 [ms]
MTC	0
Magn. preparation	None
Flip angle	150 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Fat sat. mode	Strong
Water suppr.	None
Measurements	1

## Resolution

Base resolution	256
Phase resolution	100 [%]
Phase partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	On
Interpolation	0
-----	
PAT mode	None

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
-----	
Special sat.	None

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	1
Body	0
-----	
Shim mode	Standard

Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	90 [deg]
A >> P	240 [mm]
R >> L	214 [mm]
F >> H	144 [mm]

## Physio

1st Signal/Mode	None
-----	
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

## Sequence

Introduction	1
Dimension	2D
Compensate T2 decay	0
Averaging mode	Long term
Contrasts	2
Bandwidth	163 [Hz/Px]
Flow comp.	No
Allowed delay	30 [s]
Echo spacing	12 [ms]
-----	
Turbo factor	7
RF pulse type	Low SAR
Gradient mode	Normal

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADNI\MAIN-PHASE\Phantom Protocol\QC Phantom-Localizer

Scan Time: 9.2 [s]    Voxel size: 2.2x1.1x10.0 [mm]    Rel. SNR: 1.00    SIEMENS: gre

## Routine

Slice group 1	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Slice group 2	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Slice group 3	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0 [deg]
Phase oversampling	0 [%]
FoV read	280 [mm]
FoV phase	100.0 [%]
Slice thickness	10 [mm]
TR	20 [ms]
TE	5 [ms]
Averages	1
Concatenations	3
Filter	Elliptical filter
Coil elements	HE

## Contrast

TD	0 [ms]
MTC	0
Magn. preparation	None
Flip angle	40 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

## Resolution

Base resolution	256
Phase resolution	50 [%]
Phase partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	On
Interpolation	1
-----	
PAT mode	None

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
-----	
Saturation mode	Standard
Special sat.	None

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	1
Body	0
-----	
Shim mode	Tune up
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

## Physio

1st Signal/Mode	None
Segments	1
-----	
Tagging	None
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1
-----	
Wash - In	0
Wash - Out	0
TTP	0
PEI	0
MIP - time	0

## Sequence

Introduction	1
Dimension	2D
Phase stabilisation	0
Averaging mode	Short term
Asymmetric echo	Off
Contrasts	1
Bandwidth	180 [Hz/Px]
Flow comp.	No
-----	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	1

# SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ADNI\MAIN-PHASE\Phantom Protocol\QC Phantom Sagittal MPRAGE

Scan Time: 9:38    Voxel size: 1.3x1.3x1.3 [mm]    Rel. SNR: 1.00    USER: tf1\_ADNI

## Routine

Slab group 1	
Slabs	1
Dist. factor	50 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	0 [%]
Slice oversampling	30 [%]
Slices per slab	160
FoV read	240 [mm]
FoV phase	100.0 [%]
Slice thickness	1.3 [mm]
TR	3000 [ms]
TE	3.54 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 [ms]
Flip angle	8 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

## Resolution

Base resolution	192
Phase resolution	100 [%]
Slice resolution	100 [%]
Phase partial Fourier	Off
Slice partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0
-----	
PAT mode	None

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Head Array / HE	1
Body	0
-----	
Shim mode	Standard
Adjust with body coil	0

Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	Use Default Value [V]
Adjust volume	
Position	Isocenter
Orientation	Sagittal
Rotation	0 [deg]
F >> H	240 [mm]
A >> P	240 [mm]
R >> L	208 [mm]

## Physio

1st Signal/Mode	None
-----	
Dark blood	0
-----	
Resp. control	Off

## Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

## Sequence

Introduction	1
Dimension	3D
Elliptical scanning	0
Averaging mode	Long term
Asymmetric echo	Off
Bandwidth	180 [Hz/Px]
Echo spacing	8.5 [ms]
-----	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	1