

# MGH Adult Diffusion Data Scanning Protocols

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## Structural scans

SIEMENS MAGNETOM ConnectomA syngo MR D11

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\\USER\INVESTIGATORS\Default\AAHScout\_64

TA:0:14 PAT:3 Voxel size:1.6x1.6x1.6 mm Rel. SNR:1.00 :f1  
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### Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

### Routine

Nr. of slab groups	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A10.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
TE	1.37 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	BOT;TOP
AutoAlign	Head

### Contrast

Flip angle	8 deg
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude

### Resolution

Base resolution	160
Phase resolution	100 %
Phase partial Fourier	6/8
PAT mode	GRAPPA
Accel. factor PE	3

Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Accel. factor 3D	1
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
Slice resolution	69 %
Slice partial Fourier	6/8
Geometry	
Nr. of slab groups	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A10.0 H0.0 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
Multi-slice mode	Sequential
Series	Ascending
Nr. of sat. regions	0
Position mode	L-P-H
Special sat.	None
Table position	P
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	Isocenter
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm

F >> H	350 mm
Frequency 1H	123.256655 MHz
Correction factor	1
SRFExcit 1H	54.667 V
Gain	Low
Table position	0 mm
Img. Scale. Cor.	1.000
Physio	
Inline	
Distortion correction	Off
Sequence	
Introduction	On
Dimension	3D
Averaging mode	Short term
Multi-slice mode	Sequential
Asymmetric echo	Weak
Contrasts	1
Bandwidth	540 Hz/Px
RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
Mode	Off
BOLD	
Time to center	6.2 s
Subtract	Off
Save images	On
Autoscaling	Off
Scaling factor	1
Offset	0
Subtrahend	1
Subtraction indices	
StdDev	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Radial MIP	Off
Save original images	On
Distortion Corr.	Off
Contrasts	1
Save original images	On
Number of radial views	1
Axis of radial views	L-R
MPR Sag	Off

MPR Cor Off  
MPR Tra Off

SIEMENS MAGNETOM ConnectomA syngo MR D11

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\\USER\INVESTIGATORS\Default\MEMPRAGE\_pat2  
TA:6:02 PAT:2 Voxel size:1.0x1.0x1.0 mm Rel. SNR:1.00 :tfl\_me  
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Properties

Prio Recon Off  
Before measurement  
After measurement  
Load to viewer On  
Inline movie Off  
Auto store images On  
Load to stamp segments Off  
Load images to graphic segments Off  
Auto open inline display Off  
Wait for user to start Off  
Start measurements single

Routine

Nr. of slab groups 1  
Slabs 1  
Dist. factor 50 %  
Position R0.8 P18.4 F16.7 mm  
Orientation Sagittal  
Phase enc. dir. A >> P  
AutoAlign Head > Basis  
Phase oversampling 0 %  
Slice oversampling 0.0 %  
FoV read 256 mm  
FoV phase 100.0 %  
Slice thickness 1.00 mm  
TR 2530.0 ms  
TE 1 1.15 ms  
Averages 1  
Concatenations 1  
Filter Prescan Normalize  
Coil elements BOT;TOP

Contrast

Magn. preparation Non-sel. IR  
TI 1100 ms  
Flip angle 7.0 deg  
Fat suppr. None  
Water suppr. None  
Averaging mode Long term  
Measurements 1  
Reconstruction Magnitude  
Multiple series Each measurement

Resolution

Base resolution 256

Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Accel. factor 3D	1
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
Slice resolution	100 %
Slice partial Fourier	Off
Geometry	
Nr. of slab groups	1
Slabs	1
Dist. factor	50 %
Position	R0.8 P18.4 F16.7 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
Multi-slice mode	Single shot
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Water suppr.	None
Special sat.	None
Table position	P
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	Head > Basis
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off

Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	R0.8 P18.4 F16.7 mm
Rotation	0.00 deg
F >> H	256 mm
A >> P	256 mm
R >> L	176 mm
Frequency 1H	123.256655 MHz
Correction factor	1
SLoopIRns1 1H	552.817 V
Gain	Low
Table position	0 mm
Img. Scale. Cor.	1.000
Physio	
1st Signal/Mode	None
Magn. preparation	Non-sel. IR
TI	1100 ms
Dark blood	Off
Resp. control	Off
Inline	
Distortion correction	Off
Sequence	
Introduction	Off
Dimension	3D
Elliptical scanning	Off
Averaging mode	Long term
Multi-slice mode	Single shot
Reordering	Linear
Asymmetric echo	Allowed
Contrasts	4
Bandwidth 1	651 Hz/Px
Flow comp. 1	No
Echo spacing	9.4 ms
Turbo factor	176
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
Readout polarity	Positive
Readout trajectory	Bipolar
Add. scale factor	2.0
Gradient spoiling	Integral
Gradient moment factor	3.0
Siemens reconstruction	On
Save raw k-space data	Off
Averaging	RMS
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
Save images	On
Autoscaling	Off
Scaling factor	1
Offset	0
Subtrahend	1
Subtraction indices	
StdDev	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Radial MIP	Off
Save original images	On
Distortion Corr.	Off
Contrasts	4
Save original images	On
Number of radial views	1
Axis of radial views	L-R
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

SIEMENS MAGNETOM ConnectomA syngo MR D11

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\\USER\INVESTIGATORS\Default\t2\_spc\_WashU\_Connectome\_0p7iso  
TA:6:48 PAT:2 Voxel size:0.7x0.7x0.7 mm Rel. SNR:1.00 :spc  
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Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slab groups	1
Slabs	1
Position	R0.8 P18.4 F16.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Basis

Phase oversampling	10 %
Slice oversampling	0.0 %
FoV read	224 mm
FoV phase	100.0 %
Slice thickness	0.70 mm
TR	3200 ms
TE	561.0 ms
Concatenations	1
Filter	Raw filter, Prescan
Normalize	
Coil elements	BOT;TOP
Contrast	
MTC	Off
Magn. preparation	None
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Measurements	1
Reconstruction	Magnitude
Multiple series	Each measurement
Resolution	
Base resolution	320
Phase resolution	100 %
Phase partial Fourier	Allowed
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Accel. factor 3D	1
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
Bl filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off
Slice resolution	80 %
Slice partial Fourier	Off
Geometry	
Nr. of slab groups	1
Slabs	1
Position	R0.8 P18.4 F16.7 mm
Phase enc. dir.	A >> P
Phase oversampling	10 %
Slice oversampling	0.0 %
Slices per slab	256
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None



Water suppr.	None
Special sat.	None
Special sat.	None
Table position	P
Restore magn.	Off
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	Head > Basis
Auto Coil Select	Off
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	R0.8 P18.4 F16.7 mm
Rotation	0.00 deg
F >> H	224 mm
A >> P	224 mm
R >> L	180 mm
Frequency 1H	123.256655 MHz
Correction factor	1
SRFExcit 1H	307.500 V
! Gain	High
Table position	0 mm
Img. Scale. Cor.	1.000
Physio	
1st Signal/Mode	None
Trigger delay	0 ms
Magn. preparation	None
Dark blood	Off
Resp. control	Off
Inline	
Distortion correction	Off
Sequence	
Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Bandwidth	744 Hz/Px
Flow comp.	No

Allowed delay	30 s
Echo spacing	3.55 ms
Adiabatic-mode	Off
Turbo factor	314
Echo train duration	1111
RF pulse type	Normal
Gradient mode	Fast
Excitation	Non-sel.
Flip angle mode	T2 var
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
Organ under exam.	None
BOLD	
Subtract	Off
Save images	On
Autoscaling	Off
Scaling factor	1
Offset	0
Subtrahend	1
Subtraction indices	
StdDev	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Radial MIP	Off
Save original images	On
Distortion Corr.	Off
Save original images	On
Number of radial views	1
Axis of radial views	L-R
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

## Diffusion scans

SIEMENS MAGNETOM ConnectomA syngo MR D11

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\\USER\INVESTIGATORS\Default\ep2d\_diff\_qb64\_blk  
TA:11:44 PAT:3 Voxel size:1.5x1.5x1.5 mm Rel. SNR:1.00 :epse  
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### Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Wait for user to start	On
Start measurements	single

### Routine

Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Orientation	T > C-25.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	8800 ms
TE	57.0 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	BOT;TOP

### Contrast

MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Delay in TR	0 ms
Reconstruction	Magnitude
Multiple series	Off

### Resolution

Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA

Accel. factor PE	3
Ref. lines PE	84
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	On
Normalize	Off
Raw filter	Off
Elliptical filter	Off
Dynamic Field Corr.	Off
Geometry	
Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Interleaved
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	Fat sat.
Special sat.	None
Fat sat. mode	Strong
Special sat.	None
Table position	P
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
AutoAlign	Head > Brain
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	R0.9 P15.0 F0.4 mm
Rotation	0.00 deg
R >> L	210 mm
A >> P	210 mm
F >> H	144 mm
Frequency 1H	123.256655 MHz
Correction factor	1

ACS SincRFPulse 1H	62.446 V
Gain	High
Table position	0 mm
Img. Scale. Cor.	1.000
Physio	
1st Signal/Mode	None
Magn. preparation	None
Resp. control	Off
Inline	
Distortion correction	Off
Sequence	
Introduction	Off
Averaging mode	Long term
Multi-slice mode	Interleaved
Bandwidth	1984 Hz/Px
Optimization	None
Free echo spacing	Off
Echo spacing	0.63 ms
EPI factor	140
RF pulse type	Low SAR
Gradient mode	Fast
Directions	HCP_xc_64_cnst
Preparation	1 TRs
Init. Low-B Reps	1
Dynamic B0 Correction	Off
Complex Coil Combine	On
Grad Min Rise	10 ms.m/T
Max Diff Grad	243 mT/m
RO/PE Grads	Standard
Auto-scale images	On
RO ramp sampling	On
Force segmented ACS	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
BOLD	
Delay in TR	0 ms
Diffusion mode	Free
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Distortion Corr.	Off
b-Value >=	0 s/mm <sup>2</sup>
Exponential ADC Maps	Off
Invert Gray Scale	Off
Calculated Image	Off

SIEMENS MAGNETOM ConnectomA syngo MR D11

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 \\USER\INVESTIGATORS\Default\ep2d\_diff\_qb64\_b3k  
 TA:11:44 PAT:3 Voxel size:1.5x1.5x1.5 mm Rel. SNR:1.00 :epse  
 -----

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Wait for user to start	On
Start measurements	single

Routine

Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Orientation	T > C-25.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	8800 ms
TE	57.0 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	BOT;TOP

Contrast

MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Delay in TR	0 ms
Reconstruction	Magnitude
Multiple series	Off

Resolution

Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	84

Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	On
Normalize	Off
Raw filter	Off
Elliptical filter	Off
Dynamic Field Corr.	Off
Geometry	
Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Interleaved
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	Fat sat.
Special sat.	None
Fat sat. mode	Strong
Special sat.	None
Table position	P
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
AutoAlign	Head > Brain
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	R0.9 P15.0 F0.4 mm
Rotation	0.00 deg
R >> L	210 mm
A >> P	210 mm
F >> H	144 mm
Frequency 1H	123.256655 MHz
Correction factor	1
ACS SincRFPulse 1H	62.446 V
Gain	High

Table position	0 mm
Img. Scale. Cor.	1.000
Physio	
1st Signal/Mode	None
Magn. preparation	None
Resp. control	Off
Inline	
Distortion correction	Off
Sequence	
Introduction	Off
Averaging mode	Long term
Multi-slice mode	Interleaved
Bandwidth	1984 Hz/Px
Optimization	None
Free echo spacing	Off
Echo spacing	0.63 ms
EPI factor	140
RF pulse type	Low SAR
Gradient mode	Fast
Directions	HCP_xc_64_cnst
Preparation	1 TRs
Init. Low-B Reps	1
Dynamic B0 Correction	Off
Complex Coil Combine	On
Grad Min Rise	10 ms.m/T
Max Diff Grad	243 mT/m
RO/PE Grads	Standard
Auto-scale images	On
RO ramp sampling	On
Force segmented ACS	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
BOLD	
Delay in TR	0 ms
Diffusion mode	Free
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Distortion Corr.	Off
b-Value >=	0 s/mm <sup>2</sup>
Exponential ADC Maps	Off
Invert Gray Scale	Off
Calculated Image	Off



SIEMENS MAGNETOM ConnectomA syngo MR D11

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 \\USER\INVESTIGATORS\Default\ep2d\_diff\_qb128\_b5k  
 TA:21:51 PAT:3 Voxel size:1.5x1.5x1.5 mm Rel. SNR:1.00 :epse  
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Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Wait for user to start	On
Start measurements	single

Routine

Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Orientation	T > C-25.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	8800 ms
TE	57.0 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	BOT;TOP

Contrast

MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Delay in TR	0 ms
Reconstruction	Magnitude
Multiple series	Off

Resolution

Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	84

Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	On
Normalize	Off
Raw filter	Off
Elliptical filter	Off
Dynamic Field Corr.	Off
Geometry	
Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Interleaved
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	Fat sat.
Special sat.	None
Fat sat. mode	Strong
Special sat.	None
Table position	P
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
AutoAlign	Head > Brain
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	R0.9 P15.0 F0.4 mm
Rotation	0.00 deg
R >> L	210 mm
A >> P	210 mm
F >> H	144 mm
Frequency 1H	123.256655 MHz
Correction factor	1
ACS SincRFPulse 1H	62.446 V
Gain	High

Table position	0 mm
Img. Scale. Cor.	1.000
Physio	
1st Signal/Mode	None
Magn. preparation	None
Resp. control	Off
Inline	
Distortion correction	Off
Sequence	
Introduction	Off
Averaging mode	Long term
Multi-slice mode	Interleaved
Bandwidth	1984 Hz/Px
Optimization	None
Free echo spacing	Off
Echo spacing	0.63 ms
EPI factor	140
RF pulse type	Low SAR
Gradient mode	Fast
Directions	HCP_xc_128_cnst
Preparation	1 TRs
Init. Low-B Reps	1
Dynamic B0 Correction	Off
Complex Coil Combine	On
Grad Min Rise	10 ms.m/T
Max Diff Grad	243 mT/m
RO/PE Grads	Standard
Auto-scale images	On
RO ramp sampling	On
Force segmented ACS	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
BOLD	
Delay in TR	0 ms
Diffusion mode	Free
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Distortion Corr.	Off
b-Value >=	0 s/mm <sup>2</sup>
Exponential ADC Maps	Off
Invert Gray Scale	Off
Calculated Image	Off

SIEMENS MAGNETOM ConnectomA syngo MR D11

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 \\USER\INVESTIGATORS\Default\ep2d\_diff\_qb128\_b10k\_set1  
 TA:21:51 PAT:3 Voxel size:1.5x1.5x1.5 mm Rel. SNR:1.00 :epse  
 -----

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Wait for user to start	On
Start measurements	single

Routine

Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Orientation	T > C-25.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	8800 ms
TE	57.0 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	BOT;TOP

Contrast

MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Delay in TR	0 ms
Reconstruction	Magnitude
Multiple series	Off

Resolution

Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	84

Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	On
Normalize	Off
Raw filter	Off
Elliptical filter	Off
Dynamic Field Corr.	Off
Geometry	
Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Interleaved
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	Fat sat.
Special sat.	None
Fat sat. mode	Strong
Special sat.	None
Table position	P
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
AutoAlign	Head > Brain
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	R0.9 P15.0 F0.4 mm
Rotation	0.00 deg
R >> L	210 mm
A >> P	210 mm
F >> H	144 mm
Frequency 1H	123.256655 MHz
Correction factor	1
ACS SincRFPulse 1H	62.446 V
Gain	High

Table position	0 mm
Img. Scale. Cor.	1.000
Physio	
1st Signal/Mode	None
Magn. preparation	None
Resp. control	Off
Inline	
Distortion correction	Off
Sequence	
Introduction	Off
Averaging mode	Long term
Multi-slice mode	Interleaved
Bandwidth	1984 Hz/Px
Optimization	None
Free echo spacing	Off
Echo spacing	0.63 ms
EPI factor	140
RF pulse type	Low SAR
Gradient mode	Fast
Directions	HCP_xc_128_cnst
Preparation	1 TRs
Init. Low-B Reps	1
Dynamic B0 Correction	Off
Complex Coil Combine	On
Grad Min Rise	10 ms.m/T
Max Diff Grad	243 mT/m
RO/PE Grads	Standard
Auto-scale images	On
RO ramp sampling	On
Force segmented ACS	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
BOLD	
Delay in TR	0 ms
Diffusion mode	Free
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Distortion Corr.	Off
b-Value >=	0 s/mm <sup>2</sup>
Exponential ADC Maps	Off
Invert Gray Scale	Off
Calculated Image	Off

SIEMENS MAGNETOM ConnectomA syngo MR D11

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 \\USER\INVESTIGATORS\Default\ep2d\_diff\_qb128\_b10k\_set2  
 TA:21:51 PAT:3 Voxel size:1.5x1.5x1.5 mm Rel. SNR:1.00 :epse  
 -----

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Wait for user to start	On
Start measurements	single

Routine

Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Orientation	T > C-25.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	8800 ms
TE	57.0 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	BOT;TOP

Contrast

MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Delay in TR	0 ms
Reconstruction	Magnitude
Multiple series	Off

Resolution

Base resolution	140
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	84
Reference scan mode	Separate

Distortion Corr.	Off
Prescan Normalize	On
Normalize	Off
Raw filter	Off
Elliptical filter	Off
Dynamic Field Corr.	Off
Geometry	
Nr. of slice groups	1
Slices	96
Dist. factor	0 %
Position	R0.9 P15.0 F0.4 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Interleaved
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	Fat sat.
Special sat.	None
Fat sat. mode	Strong
Special sat.	None
Table position	P
System	
Body	Off
TOP	On
BOT	On
Position mode	L-P-H
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
AutoAlign	Head > Brain
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	R0.9 P15.0 F0.4 mm
Rotation	0.00 deg
R >> L	210 mm
A >> P	210 mm
F >> H	144 mm
Frequency 1H	123.256655 MHz
Correction factor	1
ACS SincRFPulse 1H	62.446 V
Gain	High
Table position	0 mm



Img. Scale. Cor.	1.000
Physio	
1st Signal/Mode	None
Magn. preparation	None
Resp. control	Off
Inline	
Distortion correction	Off
Sequence	
Introduction	Off
Averaging mode	Long term
Multi-slice mode	Interleaved
Bandwidth	1984 Hz/Px
Optimization	None
Free echo spacing	Off
Echo spacing	0.63 ms
EPI factor	140
RF pulse type	Low SAR
Gradient mode	Fast
Directions	HCP_xc_alt_128_cnst
Preparation	1 TRs
Init. Low-B Reps	1
Dynamic B0 Correction	Off
Complex Coil Combine	On
Grad Min Rise	10 ms.m/T
Max Diff Grad	243 mT/m
RO/PE Grads	Standard
Auto-scale images	On
RO ramp sampling	On
Force segmented ACS	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BOT;TOP
Acquisition duration	0 ms
BOLD	
Delay in TR	0 ms
Diffusion mode	Free
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Distortion Corr.	Off
b-Value >=	0 s/mm <sup>2</sup>
Exponential ADC Maps	Off
Invert Gray Scale	Off
Calculated Image	Off