

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\localizer\_v2\_200V

TA: 8.8 s PAT: 2 Voxel size: 1.0x1.0x3.0 mm Rel. SNR: 1.00 SIEMENS: gre

## 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
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	5
Dist. factor	20 %
Position	L0.0 A30.0 H0.0
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	5
Dist. factor	20 %
Position	L0.0 A30.0 H0.0
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	5
Dist. factor	20 %
Position	L0.0 A30.0 H0.0
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	4.5 ms
TE	2.15 ms
Averages	1
Concatenations	15
Filter	None
Coil elements	A32

## Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %

Phase partial Fourier	6/8
Interpolation	On
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off
Tim CT mode	Off

## System

V32	Off
A32	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Off
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	250.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Physio

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

## Inline

Subtract	Off
Liver registration	Off

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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
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
<hr/>	
MapIt	None
Contrasts	1

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth	560 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\gre\_NoiseScans\_A32\_withNoise\_250V

TA: 0:29 PAT: Off Voxel size: 5.6x5.6x5.0 mm Rel. SNR: 1.00 USER: gre\_NoiseScans

## 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
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	72
FoV read	360 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	6.0 ms
TE	1.52 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	5 deg
Fat suppr.	Water excit. normal
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	64
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off
Tim CT mode	Off

## System

V32	Off
A32	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	On
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	250.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Physio

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

## Inline

Subtract	Off
Liver registration	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
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

MIP - time	Off
MapIt	None
Contrasts	1
Sequence	
Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth	1000 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
Noise prescans	50
Noise Bandwidth	10000 Hz
Noise length	20000 points

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\gre\_NoiseScans\_V32\_noNoise\_250V

TA: 0:29 PAT: Off Voxel size: 5.6x5.6x5.0 mm Rel. SNR: 1.00 USER: gre\_NoiseScans

## 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
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	72
FoV read	360 mm
FoV phase	100.0 %
Slice thickness	5.00 mm
TR	6.0 ms
TE	1.52 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	V32

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	5 deg
Fat suppr.	Water excit. normal
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	64
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off
Tim CT mode	Off

## System

V32	On
A32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	On
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	250.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Physio

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

## Inline

Subtract	Off
Liver registration	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
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off

MIP - time	Off
MapIt	None
Contrasts	1

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth	1000 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
Noise prescans	0
Noise Bandwidth	6000 Hz
Noise length	10000 points

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\gre\_field\_mapping\_4mm\_250V

TA: 1:22

Voxel size: 4.0x4.0x4.0 mm

Rel. SNR: 1.00

SIEMENS: gre\_field\_mapping

## 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
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	64
Dist. factor	0 %
Position	L0.0 A30.2 H9.6
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	4.0 mm
TR	620.0 ms
TE 1	4.08 ms
TE 2	5.1 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

## Contrast

MTC	Off
Flip angle	39 deg
Fat suppr.	None
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Table position	H

Table position	0 mm
Inline Composing	Off

## System

V32	Off
A32	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Off

Shim mode	Advanced
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	250.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L0.0 A30.2 H9.6
! Orientation	Transversal
! Rotation	0.00 deg
! R >> L	200 mm
! A >> P	200 mm
! F >> H	200 mm

## Composing

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Off
Contrasts	2
Bandwidth	730 Hz/Px
Flow comp.	Yes
RF pulse type	Normal
Gradient mode	Whisper
RF spoiling	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\3DREAM\_B1\_250V

TA: 6.9 s PAT: 2 Voxel size: 4.5x4.5x4.5 mm Rel. SNR: 1.00 USER: db\_3dream

## 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
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Position	L2.2 A30.6 F13.1
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Slice oversampling	0.0 %
Slices per slab	44
FoV read	288 mm
FoV phase	87.5 %
Slice thickness	4.50 mm
TR	5000 ms
TE 1	0.90 ms
TE 2	1.55 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D)
Coil elements	A32

## Contrast

Flip angle 1	60 deg
Flip angle 2	8 deg
Flip angle 3	3 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

## Resolution

Base resolution	64
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	7/8
Slice partial Fourier	7/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	30
Accel. factor 3D	1
Ref. lines 3D	12
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off

B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending
Table position	H
Table position	0 mm
Inline Composing	Off

## System

V32	Off
A32	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	250.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L0.0 A30.2 H9.6
! Orientation	Transversal
! Rotation	0.00 deg
! R >> L	200 mm
! A >> P	200 mm
! F >> H	200 mm

## Composing

## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	On
Asymmetric echo	Off
Contrasts	2
Bandwidth	1630 Hz/Px
Echo spacing	2.4 ms
Turbo factor	936
Echo train duration	2037
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Encoding	On
Preparation Loops	0
Sample T1	1400 ms
Shots	1
RF-Duration	150 us
Prep RF-Duration	300 us
Timing Schme	STE* First
TS	650 us
Var FA	Off



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Ref Scan Delay	1000 ms
Prep pTX Scheme	Disabled
Acq pTX Scheme	Disabled
Calculate FlipMap	Off
Acoustic Check	Off
RF Spoil Prep	Off
Image PhaseCorr	On
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TX/RX Nucleus	1H
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz

## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\MPRAGE\_0.7

TA: 6:35 PAT: 2 Voxel size: 0.7x0.7x0.7 mm Rel. SNR: 1.00 USER: mp2rage\_wip602B

## 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
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	224
FoV read	224 mm
FoV phase	100.0 %
Slice thickness	0.70 mm
TR	2200 ms
TE	3.02 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

## Contrast

Magn. preparation	Non-sel. IR
TI 1	1050 ms
Flip angle 1	7 deg
Fat suppr.	None
Water suppr.	None
2nd Inversion-Contrast	Off
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	40
Accel. factor 3D	1
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off

Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending
Table position	H
Table position	0 mm
Inline Composing	Off

## System

V32	Off
A32	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
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 Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Sagittal
Rotation	0.00 deg
F >> H	224 mm
A >> P	224 mm
R >> L	157 mm

## Physio

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

## Inline

Subtract	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
Save original images	On

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Bandwidth	240 Hz/Px
Flow comp.	No
Echo spacing	7.1 ms
RF pulse type	Fast
Gradient mode	Fast*
Excitation	Non-sel.
RF spoiling	On
FFT Scale Factor	200 %
Line/Partition Swap	Off
Homodyne Phase Filter	Off
ExtInvPulseOn	On
OffResFreqInv	0
Invflipangle	700

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\MP2RAGE\_0.7

TA: 7:51 PAT: 3 Voxel size: 0.7x0.7x0.7 mm Rel. SNR: 1.00 USER: mp2rage\_wip602B

## 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
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	224
FoV read	224 mm
FoV phase	100.0 %
Slice thickness	0.70 mm
TR	3500 ms
TE	2.64 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

## Contrast

Magn. preparation	Non-sel. IR
TI 1	725 ms
TI 2	2150 ms
Flip angle 1	5 deg
Flip angle 2	2 deg
Fat suppr.	None
Water suppr.	None
2nd Inversion-Contrast	On
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	40
Accel. factor 3D	1
Reference scan mode	Integrated

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Single shot
Series	Ascending
Table position	H
Table position	0 mm
Inline Composing	Off

## System

V32	Off
A32	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
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 Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Sagittal
Rotation	0.00 deg
F >> H	224 mm
A >> P	224 mm
R >> L	157 mm

## Physio

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

## Inline

Subtract	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
Save original images	On

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Asymmetric echo	Off
Contrasts	1
Bandwidth	300 Hz/Px
Flow comp.	No
Echo spacing	6.3 ms
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RF pulse type	Fast
Gradient mode	Fast*
Excitation	Non-sel.
RF spoiling	On
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FFT Scale Factor	200 %
Line/Partition Swap	Off
Homodyne Phase Filter	Off
Flat Image	Off
T1 Map	Off
Division Image	Off
ExtInvPulseOn	On
OffResFreqInv	0
Invflipangle	900

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\T2star\_0.7\_single

TA: 12:38 PAT: 4 Voxel size: 0.7x0.7x0.7 mm Rel. SNR: 1.00 USER: wtc\_gre

## 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
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	224
FoV read	224 mm
FoV phase	100.0 %
Slice thickness	0.70 mm
TR	31 ms
TE	20.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	40
Accel. factor 3D	1
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off

Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off
Tim CT mode	Off

## System

V32	Off
A32	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Physio

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

## Inline

Subtract	Off
Liver registration	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
Save original images	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
<hr/>	
MapIt	None
Contrasts	1
<hr/>	
Sequence	
Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth	70 Hz/Px
Flow comp.	Slice/Read
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\T2star\_1.4\_8echo

TA: 5:58 PAT: 4 Voxel size: 1.4x1.4x1.4 mm Rel. SNR: 1.00 USER: wtc\_gre

## 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
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	120
FoV read	269 mm
FoV phase	81.3 %
Slice thickness	1.40 mm
TR	43 ms
TE 1	4.00 ms
TE 2	9.00 ms
TE 3	14.00 ms
TE 4	19.00 ms
TE 5	24.00 ms
TE 6	29.00 ms
TE 7	34.00 ms
TE 8	39.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	192
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA

Accel. factor PE	4
Ref. lines PE	40
Accel. factor 3D	1
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off
Tim CT mode	Off

## System

V32	Off
A32	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Physio

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

## Inline

Subtract	Off
Liver registration	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
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
<hr/>	
MapIt	None
Contrasts	8

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth 1	260 Hz/Px
Bandwidth 2	260 Hz/Px
Bandwidth 3	260 Hz/Px
Bandwidth 4	260 Hz/Px
Bandwidth 5	260 Hz/Px
Bandwidth 6	260 Hz/Px
Bandwidth 7	260 Hz/Px
Bandwidth 8	260 Hz/Px
Flow comp. 1	No
Flow comp. 2	No
Flow comp. 3	No
Flow comp. 4	No
Flow comp. 5	No
Flow comp. 6	No
Flow comp. 7	No
Flow comp. 8	No
Readout mode	Monopolar
<hr/>	
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\FMRIB Developer\Will\UK7T\_THS\_Structural\Highresolution\_TSE\_PAT2

TA: 4:10 PAT: 2 Voxel size: 0.4x0.4x1.0 mm Rel. SNR: 1.00 USER: tse\_UHF\_WIP729C

## 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
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	55
Dist. factor	10 %
Position	Isocenter
Orientation	C > T-29.3 > S-0.3
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	224 mm
FoV phase	100.0 %
Slice thickness	1.0 mm
TR	8020 ms
TE	76 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	A32

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	60 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	512
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	27
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On

Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

## System

V32	Off
A32	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Physio

1st Signal/Mode	None
Dark blood	Off

## Inline

Subtract	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
Save original images	On

## Sequence

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	155 Hz/Px
Flow comp.	No
Allowed delay	0 s

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Echo spacing	15.2 ms
Define	Turbo factor
Turbo factor	9
Echo trains per slice	30
RF pulse type	Low SAR
Gradient mode	Normal
Equal Dur. Excit.+Refoc.	Off
Advanced Options	On
VERSE	On
Duration Excit. RF	4000 [us]
Duration Refoc. RF	6000 [us]
Grad Reversal	Off
FFT scale factor	1.00
Fat/Water CSD	3.1 [mm]
Refocussed Fat	-50.5 [%]

## Table of contents

\\USER

FMRIB Developer

Will

UK7T\_THS\_Structural

====Structural Scans====

localizer\_v2\_200V

+Run these two sequences at isocentre as is, tune up shim+

gre\_NoiseScans\_A32\_withNoise\_250V

gre\_NoiseScans\_V32\_noNoise\_250V

Run the Siemens Tx calibration sequence for a first pass.

gre\_field\_mapping\_4mm\_250V

3DREAM\_B1\_250V

Repeat 3DREAM with FA map turned on. On Special Card.

Use 3D viewer to draw ROI on B1 map. Calibrate V ref per guide.

2 x T1 weighted sequences. Expect Approx 1 min recon delay.

MPRAGE\_0.7

MP2RAGE\_0.7

2 x T2star sequences. Expect Approx 1 min recon delay.

T2star\_0.7\_single

T2star\_1.4\_8echo

T2w hippocampus. Align along long axis, see guide.

Highresolution\_TSE\_PAT2