# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\INVESTIGATORS\jcohen\spine_generic\Localizer

TA: 0:33 PAT: Off Voxel size: 2.2×2.0×6.0 mm Rel. SNR: 1.00 SIEMENS: gre

## Properties

| | |
|---|---|
| Prio Recon | On |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | On |
| Load images to graphic segments | On |
| 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 | 5 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| Rotation | 0.00 deg |
| Slice group 2 | |
| Slices | 3 |
| Dist. factor | 50 % |
| Position | Isocenter |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 500 mm |
| FoV phase | 100.0 % |
| Slice thickness | 6.0 mm |
| TR | 8.6 ms |
| TE | 4.00 ms |
| Averages | 2 |
| Concatenations | 8 |
| Filter | Distortion Corr.(2D), Prescan Normalize, Elliptical filter |
| Coil elements | HEA;HEP;NE1,2 |

## Contrast

| | |
|---|---|
| TD | 0 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 20 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 | 90 % |
| Phase partial Fourier | Off |
| Interpolation | On |
| PAT mode | None |
| Matrix Coil Mode | Auto (CP) |
| Image Filter | Off |
| Distortion Corr. | On |
| Mode | 2D |
| Unfiltered images | Off |
| Unfiltered images | Off |
| Prescan Normalize | On |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | Off |
| Elliptical filter | On |
| Mode | Inplane |

## Geometry

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

## System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | On |
| HEA | On |
| Positioning mode | ISO |
| 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 | 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 |
| Wash - In | Off |
| Wash - Out | Off |
| TTP | Off |
| PEI | Off |
| MIP - time | Off |
| MapIt | None |
| Contrasts | 1 |

Sequence

| | |
|---|---|
| Introduction | On |
| Dimension | 2D |
| Phase stabilisation | Off |
| Asymmetric echo | Allowed |
| Bandwidth | 320 Hz/Px |
| Flow comp. | No |
| Allowed delay | 0 s |
| RF pulse type | Normal |
| Gradient mode | Normal |
| Excitation | Slice-sel. |
| RF spoiling | On |

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\INVESTIGATORS\jcohen\spine_generic\T1w

TA: 4:52 PAT: 2 Voxel size: 1.0×1.0×1.0 mm Rel. SNR: 1.00 SIEMENS: tfl

## Properties

| | |
|---|---|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | On |
| 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 | L5.8 A17.2 F15.6 |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Rotation | 0.02 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 192 |
| FoV read | 320 mm |
| FoV phase | 81.3 % |
| Slice thickness | 1.00 mm |
| TR | 2000 ms |
| TE | 3.21 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Raw filter, Distortion Corr.(2D), Prescan Normalize |
| Coil elements | HEA;HEP |

## Contrast

| | |
|---|---|
| Magn. preparation | Non-sel. IR |
| TI | 1000 ms |
| Flip angle | 9 deg |
| Fat suppr. | None |
| Water suppr. | None |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Off |

## 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 | 32 |
| Accel. factor 3D | 1 |
| Matrix Coil Mode | Auto (Triple) |
| Reference scan mode | Integrated |
| Image Filter | Off |
| Distortion Corr. | On |
| Mode | 2D |
| Unfiltered images | Off |
| Unfiltered images | Off |
| Prescan Normalize | On |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | On |
| Intensity | Weak |
| Slope | 25 |
| Elliptical filter | Off |

## Geometry

| | |
|---|---|
| Multi-slice mode | Single shot |
| Series | Interleaved |
| Set-n-Go Protocol | Off |
| Table position | F |
| Table position | 16 mm |
| Inline Composing | Off |

## System

| | |
|---|---|
| Body | Off |
| HEP | On |
| HEA | On |
| Positioning mode | ISO |
| MSMA | S - C - T |
| Sagittal | L >> R |
| Coronal | A >> P |
| Transversal | F >> H |
| Save uncombined | Off |
| Coil Combine Mode | Sum of Squares |
| AutoAlign | --- |
| 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 | L5.8 A17.2 F15.6 |
| Orientation | Sagittal |
| Rotation | 0.02 deg |
| F >> H | 320 mm |
| A >> P | 260 mm |
| R >> L | 192 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 | Allowed |
| Bandwidth | 150 Hz/Px |
| Flow comp. | No |
| Echo spacing | 8 ms |
| RF pulse type | Fast |
| Gradient mode | Normal |
| Excitation | Slab-sel. |
| RF spoiling | On |

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\INVESTIGATORS\jcohen\spine_generic\T2w

TA: 4:30 PAT: 2 Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 SIEMENS: tse_vfl

## Properties

| | |
|---|---|
| Prio Recon | Off |
| Before measurement | |
| After measurement | |
| Load to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load to stamp segments | On |
| 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 | L0.0 A16.3 H36.1 |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 0.0 % |
| Slices per slab | 64 |
| FoV read | 256 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.80 mm |
| TR | 2000 ms |
| TE | 118 ms |
| Averages | 1.4 |
| Concatenations | 1 |
| Filter | Raw filter, Distortion Corr.(2D), Prescan Normalize |
| Coil elements | HEA;HEP;NE1,2 |

## Contrast

| | |
|---|---|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 180 deg |
| Fat suppr. | None |
| Water suppr. | None |
| Restore magn. | On |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

## Resolution

| | |
|---|---|
| Base resolution | 320 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | Allowed |
| Slice partial Fourier | 6/8 |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 24 |
| Accel. factor 3D | 1 |
| Matrix Coil Mode | Auto (Triple) |
| Reference scan mode | Integrated |
| Image Filter | Off |
| Distortion Corr. | On |
| Mode | 2D |
| Unfiltered images | Off |
| Unfiltered images | Off |
| Prescan Normalize | On |
| Normalize | Off |
| B1 filter | Off |
| Raw filter | On |
| Intensity | Weak |
| Slope | 25 |
| Elliptical filter | Off |

## Geometry

| | |
|---|---|
| Special sat. | None |
| Set-n-Go Protocol | Off |
| Table position | H |
| Table position | 36 mm |
| Inline Composing | Off |

## System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | On |
| HEA | On |
| Positioning mode | ISO |
| 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 | 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 |
| 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 |
| Bandwidth | 625 Hz/Px |
| Flow comp. | No |
| Allowed delay | 30 s |
| Echo spacing | 4.14 ms |
| Adiabatic-mode | Off |
| Define | Echo trains |
| Turbo factor | 87 |
| Slice turbo factor | 1 |
| Echo trains per slice | 2 |
| Echo train duration | 290 |
| RF pulse type | Normal |
| Gradient mode | Fast* |
| Excitation | Slab-sel. |
| Flip angle mode | Constant |

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\INVESTIGATORS\jcohen\spine_generic\DWI_b0

TA: 0:30 PAT: Off Voxel size: 0.9×0.9×5.0 mm Rel. SNR: 1.00 ! SIEMENS: ep2d_diff

## 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 | 15 |
| Dist. factor | 0 % |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 86 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.0 mm |
| TR | 600 ms |
| TE | 99 ms |
| Averages | 4 |
| Concatenations | 5 |
| Filter | None |
| Coil elements | NE1,2 |

## Contrast

| | |
|---|---|
| MTC | Off |
| Magn. preparation | None |
| Fat suppr. | Water excit. normal |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Delay in TR | 0 ms |
| Multiple series | Off |

## Resolution

| | |
|---|---|
| Base resolution | 96 |
| Phase resolution | 100 % |
| Phase partial Fourier | 5/8 |
| Interpolation | Off |
| PAT mode | None |
| Matrix Coil Mode | Auto (CP) |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

## Geometry

| | |
|---|---|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Sat. region 1 | |
| Thickness | 93 mm |
| Position | L0.0 A72.8 H0.0 |
| Orientation | Coronal |
| Sat. region 2 | |
| Thickness | 59 mm |
| Position | L0.0 P56.8 H0.0 |
| Orientation | Coronal |
| Special sat. | None |
| Set-n-Go Protocol | Off |
| Table position | F |
| Table position | 18 mm |
| Inline Composing | Off |

## System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | Off |
| HEA | Off |
| Positioning mode | ISO |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| AutoAlign | --- |
| Auto Coil Select | On |
| 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 | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 86 mm |
| A >> P | 86 mm |
| F >> H | 75 mm |

## Physio

| | |
|---|---|
| 1st Signal/Mode | Pulse/Trigger |
| Average cycle | No Signal ms |
| Acquisition window | 2600 ms |
| Trigger pulse | 1 |
| Trigger delay | 0 ms |
| Phases | 1 |
| Resp. control | Off |

## Diff

| | |
|---|---|
| Diffusion mode | MDDW |
| Diff. weightings | 1 |
| b-value | 0 s/mm² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | Off |
| Tensor | Off |
| Noise level | 10 |
| Diff. directions | 64 |

## Sequence

| | |
|---|---|
| Introduction | Off |
| Bandwidth | 964 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 1.14 ms |
| EPI factor | 96 |
| RF pulse type | Normal |
| Gradient mode | Fast |

\\USER\INVESTIGATORS\jcohen\spine_generic\DWI

TA: 3:18 PAT: Off Voxel size: 0.9×0.9×5.0 mm Rel. SNR: 1.00 ! SIEMENS: ep2d_diff

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 | 15 |
| Dist. factor | 0 % |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 86 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.0 mm |
| TR | 600 ms |
| TE | 99 ms |
| Averages | 1 |
| Concatenations | 5 |
| Filter | None |
| Coil elements | NE1,2 |

Contrast

| | |
|---|---|
| MTC | Off |
| Magn. preparation | None |
| Fat suppr. | Water excit. normal |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 96 |
| Phase resolution | 100 % |
| Phase partial Fourier | 5/8 |
| Interpolation | Off |
| PAT mode | None |
| Matrix Coil Mode | Auto (CP) |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Raw filter | On |
| Elliptical filter | Off |
| Hamming | Off |

Geometry

| | |
|---|---|
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Sat. region 1 | |
| Thickness | 93 mm |
| Position | L0.0 A72.8 H0.0 |
| Orientation | Coronal |
| Sat. region 2 | |
| Thickness | 59 mm |
| Position | L0.0 P56.8 H0.0 |
| Orientation | Coronal |
| Special sat. | None |
| Set-n-Go Protocol | Off |
| Table position | F |
| Table position | 18 mm |
| Inline Composing | Off |

System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | Off |
| HEA | Off |
| Positioning mode | ISO |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| AutoAlign | --- |
| Auto Coil Select | On |
| 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 | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 86 mm |
| A >> P | 86 mm |
| F >> H | 75 mm |

Physio

| | |
|---|---|
| 1st Signal/Mode | Pulse/Trigger |
| Average cycle | No Signal ms |
| Acquisition window | 2600 ms |
| Trigger pulse | 1 |
| Trigger delay | 0 ms |
| Phases | 1 |
| Resp. control | Off |

Diff

| | |
|---|---|
| Diffusion mode | MDDW |
| Diff. weightings | 2 |
| b-value 1 | 0 s/mm² |
| b-value 2 | 800 s/mm² |
| Diff. weighted images | On |
| Trace weighted images | Off |
| Average ADC maps | Off |
| Individual ADC maps | Off |
| FA maps | Off |
| Mosaic | On |
| Tensor | Off |
| Noise level | 10 |
| Diff. directions | 64 |

Sequence

| | |
|---|---|
| Introduction | Off |
| Bandwidth | 964 Hz/Px |
| Free echo spacing | Off |
| Echo spacing | 1.14 ms |
| EPI factor | 96 |
| RF pulse type | Normal |
| Gradient mode | Fast |

\\USER\INVESTIGATORS\jcohen\spine_generic\GRE-MT1

TA: 2:12 PAT: 2 Voxel size: 0.9×0.9×5.0 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 | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 18.2 % |
| Slices per slab | 22 |
| FoV read | 230 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.00 mm |
| TR | 35 ms |
| TE | 3.50 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Distortion Corr.(2D) |
| Coil elements | NE1,2 |

Contrast

| | |
|---|---|
| MTC | On |
| Magn. preparation | None |
| Flip angle | 9 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 % |
| Slice resolution | 100 % |
| Phase partial Fourier | Off |
| Slice partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 32 |
| Accel. factor 3D | 1 |
| Matrix Coil Mode | Auto (Triple) |
| Reference scan mode | Integrated |
| 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 | Interleaved |
| Saturation mode | Standard |
| Special sat. | None |
| Set-n-Go Protocol | Off |
| Table position | F |
| Table position | 18 mm |
| Inline Composing | Off |
| Tim CT mode | Off |

System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | Off |
| HEA | Off |
| Positioning mode | ISO |
| 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 | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 230 mm |
| A >> P | 230 mm |
| F >> H | 110 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 | Allowed |
| Bandwidth | 260 Hz/Px |
| Flow comp. | No |
| Allowed delay | 0 s |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |

\\USER\INVESTIGATORS\jcohen\spine_generic\GRE-MT0

TA: 2:12 PAT: 2 Voxel size: 0.9×0.9×5.0 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 | On |
| Wait for user to start | Off |
| Start measurements | single |

### Routine

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 18.2 % |
| Slices per slab | 22 |
| FoV read | 230 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.00 mm |
| TR | 35.0 ms |
| TE | 3.50 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Distortion Corr.(2D) |
| Coil elements | NE1,2 |

### Contrast

| | |
|---|---|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 9 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 % |
| Slice resolution | 100 % |
| Phase partial Fourier | Off |
| Slice partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 32 |
| Accel. factor 3D | 1 |
| Matrix Coil Mode | Auto (Triple) |
| Reference scan mode | Integrated |
| 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 | Interleaved |
| Saturation mode | Standard |
| Special sat. | None |
| Set-n-Go Protocol | Off |
| Table position | F |
| Table position | 18 mm |
| Inline Composing | Off |
| Tim CT mode | Off |

### System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | Off |
| HEA | Off |
| Positioning mode | ISO |
| 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 | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 230 mm |
| A >> P | 230 mm |
| F >> H | 110 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 | Allowed |
| Bandwidth | 260 Hz/Px |
| Flow comp. | No |
| Allowed delay | 0 s |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |

\\USER\INVESTIGATORS\jcohen\spine_generic\GRE-T1w

TA: 0:57 PAT: 2 Voxel size: 0.9×0.9×5.0 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 | On |
| Wait for user to start | Off |
| Start measurements | single |

Routine

| | |
|---|---|
| Slab group 1 | |
| Slabs | 1 |
| Dist. factor | 20 % |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| Slice oversampling | 18.2 % |
| Slices per slab | 22 |
| FoV read | 230 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.00 mm |
| TR | 15.0 ms |
| TE | 3.50 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Distortion Corr.(2D) |
| Coil elements | NE1,2 |

Contrast

| | |
|---|---|
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 15 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 % |
| Slice resolution | 100 % |
| Phase partial Fourier | Off |
| Slice partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 32 |
| Accel. factor 3D | 1 |
| Matrix Coil Mode | Auto (Triple) |
| Reference scan mode | Integrated |
| 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 | Interleaved |
| Saturation mode | Standard |
| Special sat. | None |
| Set-n-Go Protocol | Off |
| Table position | F |
| Table position | 18 mm |
| Inline Composing | Off |
| Tim CT mode | Off |

System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | Off |
| HEA | Off |
| Positioning mode | ISO |
| 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 | 0.000 V |
| Adjustment Tolerance | Auto |
| Adjust volume | |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 230 mm |
| A >> P | 230 mm |
| F >> H | 110 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 | Allowed |
| Bandwidth | 260 Hz/Px |
| Flow comp. | No |
| Allowed delay | 0 s |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |

\\USER\INVESTIGATORS\jcohen\spine_generic\GRE-ME

TA: 4:50 PAT: 2 Voxel size: 0.5×0.5×5.0 mm Rel. SNR: 1.00 SIEMENS: medic

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 | 15 |
| Dist. factor | 0 % |
| Position | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Rotation | 0.00 deg |
| Phase oversampling | 0 % |
| FoV read | 224 mm |
| FoV phase | 100.0 % |
| Slice thickness | 5.0 mm |
| TR | 600 ms |
| TE | 13 ms |
| Averages | 2 |
| Concatenations | 1 |
| Filter | Distortion Corr.(2D) |
| Coil elements | NE1,2 |

Contrast

| | |
|---|---|
| MTC | Off |
| Flip angle | 30 deg |
| Fat suppr. | None |
| Water suppr. | None |
| Averaging mode | Short term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Off |

Resolution

| | |
|---|---|
| Base resolution | 448 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |
| PAT mode | GRAPPA |
| Accel. factor PE | 2 |
| Ref. lines PE | 32 |
| Matrix Coil Mode | Auto (Triple) |
| Reference scan mode | Integrated |
| 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 | Interleaved |
| Special sat. | None |
| Set-n-Go Protocol | Off |
| Table position | F |
| Table position | 18 mm |
| Inline Composing | Off |

System

| | |
|---|---|
| Body | Off |
| NE2 | On |
| NE1 | On |
| HEP | Off |
| HEA | Off |
| Positioning mode | ISO |
| 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 | On |
| 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 | L0.0 P0.0 F17.6 |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| R >> L | 224 mm |
| A >> P | 224 mm |
| F >> H | 75 mm |

Physio

| | |
|---|---|
| 1st Signal/Mode | None |

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 |
| Bandwidth | 260 Hz/Px |
| Flow comp. | Yes |
| Combined echoes | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |

| | |
|---|---|
| RF spoiling | On |

Table of contents