## \\USER\Bolin\QA\1.5mm\localizer

TA: 0:15 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

#### **Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	On
preparation	
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	1
Dist. factor	20 %
Position	L4.2 P7.8 F36.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L4.2 P7.8 F36.7 mm
Orientation	T > C-3.5
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L4.2 P7.8 F36.7 mm
Orientation	C > T3.5
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
TE	3.69 ms
Averages	2
Concatenations	3
Filter	Distortion Corr.(2D),
	Elliptical filter, B1 filter
Coil elements	AC

#### **Contrast - Common**

TR	8.6 ms
TE	3.69 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

## **Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

#### **Contrast - Dynamic**

Multiple series

Resolution - Common		
FoV read	250 mm	
FoV phase	100.0 %	
Slice thickness	5.0 mm	
Base resolution	256	
Phase resolution	100 %	
Phase partial Fourier	Off	
Interpolation	On	

Each measurement

#### **Resolution - iPAT**

ĺ	PAT mode	None
	1 7 (1 111000	140110

## **Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	On
Unfiltered images	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

#### **Geometry - Common**

Geometry - Common	
Slice group	1
Slices	1
Dist. factor	20 %
Position	L4.2 P7.8 F36.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L4.2 P7.8 F36.7 mm
Orientation	T > C-3.5
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L4.2 P7.8 F36.7 mm
Orientation	C > T3.5
Phase enc. dir.	R >> L
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	3

## **Geometry - AutoAlign**

Slice group	1
Position	L4.2 P7.8 F36.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P

## **Geometry - AutoAlign**

Slice group	2
Position	L4.2 P7.8 F36.7 mm
Orientation	T > C-3.5
Phase enc. dir.	A >> P
Slice group	3
Position	L4.2 P7.8 F36.7 mm
Orientation	C > T3.5
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	L4.2 P7.8 F36.7
L	4.2 mm
P	7.8 mm
F	36.7 mm
Initial Rotation	3.50 deg
Initial Orientation	Sagittal

## **Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

## **Geometry - Tim CT**

Tim CT mode	Off
Slices	1
Slice thickness	5.0 mm
Dist. factor	20 %
FoV read	250 mm
FoV phase	100.0 %
Segments	1

#### **System - Miscellaneous**

Positioning mode	REF
Table position	F
Table position	0 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Off - AutoCoilSelect

## **System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

## **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm

## **System - Adjust Volume**

R >> L	350 mm
F >> H	350 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slice-sel.

## System - Tx/Rx

Frequency 1H	297.191852 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	8.6 ms
Concatenations	3
Segments	1

## Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	250 mm
FoV phase	100.0 %
Phase resolution	100 %

## Physio - PACE

Resp. control	Off
Concatenations	3

## **Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

## Inline - MIP

MIP-Sag	Off	
MIP-Cor	Off	
MIP-Tra	Off	
MIP-Time	Off	
Save original images	On	

## Inline - Soft Tissue

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

## **Inline - Composing**

Off
On
2D
Off

# Inline - MapIt

Save original images	On
MapIt	None
Flip angle	20 deg
Measurements	1
Contrasts	1
TR	8.6 ms
TE	3.69 ms

# Sequence - Part 1

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

# Sequence - Part 2

Segments	1
Acoustic noise reduction	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

Mode	Off

## \\USER\Bolin\QA\1.5mm\localizer

TA: 0:15 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

#### **Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	1
Dist. factor	20 %
Position	L4.9 P10.5 F40.1 mm
Orientation	S > T-0.5
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L4.9 P10.5 F40.1 mm
Orientation	T > C-0.7 > S0.5
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L4.9 P10.5 F40.1 mm
Orientation	C > T0.7
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
TE	3.69 ms
Averages	2
Concatenations	3
Filter	Distortion Corr.(2D),
	Elliptical filter, B1 filter
Coil elements	AC

#### **Contrast - Common**

TR	8.6 ms
TE	3.69 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

## **Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

#### **Contrast - Dynamic**

Multiple series

Resolution - Common	
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	On

Each measurement

#### **Resolution - iPAT**

PAT mode None	П	PAT mode	None
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## **Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	On
Unfiltered images	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

#### **Geometry - Common**

Geometry - Common	
Slice group	1
Slices	1
Dist. factor	20 %
Position	L4.9 P10.5 F40.1 mm
Orientation	S > T-0.5
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	L4.9 P10.5 F40.1 mm
Orientation	T > C-0.7 > S0.5
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	L4.9 P10.5 F40.1 mm
Orientation	C > T0.7
Phase enc. dir.	R >> L
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	3

## **Geometry - AutoAlign**

Slice group	1
Position	L4.9 P10.5 F40.1 mm
Orientation	S > T-0.5
Phase enc. dir.	A >> P

## **Geometry - AutoAlign**

Slice group	2
Position	L4.9 P10.5 F40.1 mm
Orientation	T > C-0.7 > S0.5
Phase enc. dir.	A >> P
Slice group	3
Position	L4.9 P10.5 F40.1 mm
Orientation	C > T0.7
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	L4.9 P10.5 F40.1
L	4.9 mm
Р	10.5 mm
F	40.1 mm
Initial Rotation	0.70 deg
Initial Orientation	S > T
S > T	-0.5
> C	0.0

## **Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

## **Geometry - Tim CT**

Tim CT mode	Off	
Slices	1	
Slice thickness	5.0 mm	
Dist. factor	20 %	
FoV read	250 mm	
FoV phase	100.0 %	
Segments	1	

#### **System - Miscellaneous**

•,••••	
Positioning mode	REF
Table position	F
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Off - AutoCoilSelect

## **System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

## System - Adjust Volume

! Position	L0.0 P8.1 F15.4 mm
! Orientation	T > C-1.7

## **System - Adjust Volume**

! Rotation ! A >> P ! R >> L ! F >> H Reset	0.00 deg
! A >> P	263 mm
! R >> L	350 mm
! F >> H	350 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slice-sel.

## System - Tx/Rx

Frequency 1H	297.191852 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	8.6 ms
Concatenations	3
Segments	1

### Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	250 mm
FoV phase	100.0 %
Phase resolution	100 %

## **Physio - PACE**

Resp. control	Off
Concatenations	3

#### **Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

#### Inline - MIP

MIP-Sag	Off	
_	0"	
MIP-Cor	Off	
MIP-Tra	Off	
	<del>-</del>	
MIP-Time	Off	
Save original images	On	

#### **Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

## **Inline - Composing**

Inline Composing	Off	
Distortion Corr.	On	ļ
Mode	2D	

# Inline - Composing

Unfiltered images	Off	

# Inline - MapIt

Save original images	On	
MapIt	None	
Flip angle	20 deg	
Measurements	1	
Contrasts	1	
TR	8.6 ms	
ITE	3.69 ms	

# Sequence - Part 1

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

# Sequence - Part 2

Segments	1
Acoustic noise reduction	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

Mode	Off

## \\USER\Bolin\QA\1.5mm\coilcheck

TA: 5.9 s PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

#### **Properties**

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	On
preparation	
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	1
Dist. factor	20 %
Position	L2.4 A3.6 F11.4 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
TE	3.69 ms
Averages	2
Concatenations	1
Filter	Elliptical filter
Coil elements	AC

#### **Contrast - Common**

TR	8.6 ms
TE	3.69 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

## **Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

#### **Resolution - Common**

FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	On

#### **Resolution - iPAT**

Mana
None

#### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	On	

## **Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	L2.4 A3.6 F11.4 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	L2.4 A3.6 F11.4 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	L2.4 A3.6 F11.4
L	2.4 mm
Α	3.6 mm
F	11.4 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

## **Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

## **Geometry - Tim CT**

Tim CT mode	Off
Slices	1
Slice thickness	5.0 mm
Dist. factor	20 %
FoV read	250 mm
FoV phase	100.0 %
Segments	1

Positioning mode	REF
Table position	F
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	On
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Off - AutoCoilSelect

## **System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

## **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slice-sel.

## System - Tx/Rx

Frequency 1H	297.191852 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	8.6 ms
Concatenations	1
Segments	1

## Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	250 mm
FoV phase	100.0 %
Phase resolution	100 %

## **Physio - PACE**

Resp. control	Off
Concatenations	1

## Inline - Common

Subtract	Off
Subilaci	Oli

#### **Inline - Common**

Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

#### Inline - MIP

MIP-Sag	Off
MIP-Cor	Off
	•
MIP-Tra	Off
MIP-Time	Off
Save original images	On

#### **Inline - Soft Tissue**

Wash - In	Off	
Wash - Out	Off	
TTP	Off	
TTP PEI MIP - time	Off	
MIP - time	Off	
Measurements	1	

## **Inline - Composing**

Inline Composing	Off	
Distortion Corr.	Off	

### Inline - MapIt

Save original images	On
MapIt	None
Flip angle	20 deg
Measurements	1
Contrasts	1
TR	8.6 ms
TE	3.69 ms

## Sequence - Part 1

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

## Sequence - Part 2

Segments	1
Acoustic noise reduction	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

## \\USER\Bolin\QA\1.5mm\gre\_field\_mapping\_tra\_1.5mm

TA: 2:35 PM: REF Voxel size: 1.5×1.5×1.5 mmRel. SNR: 1.00 : fm

#### **Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	513.0 ms
TE 1	3.07 ms
TE 2	4.09 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	AC

#### **Contrast - Common**

TR	513.0 ms
TE 1	3.07 ms
TE 2	4.09 ms
MTC	Off
Flip angle Fat suppr.	25 deg
Fat suppr.	None

#### **Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

#### **Resolution - Common**

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
Base resolution	150
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

#### **Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off

#### **Resolution - Filter Image**

Prescan Normalize	Off
Normalize	Off
B1 filter	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	513.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L5.3 P11.7 H16.8
L	5.3 mm
Р	11.7 mm
Н	16.8 mm
Initial Rotation	180.00 deg
Initial Orientation	T > C
T > C	-0.4
> S	0.3

#### **Geometry - Saturation**

Fat suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

- ,	
Positioning mode	REF
Table position	Н
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain

Coil Select Mode	Default

## **System - Adjustments**

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

## **System - Adjust Volume**

! Position	L5.3 P11.7 H16.8 mm
! Orientation	T > C-0.4 > S0.3
! Rotation	180.00 deg
! A >> P	140 mm
! R >> L	140 mm
! F >> H	119 mm
Reset	Off

## System - pTx Volumes

D4 01 1	<b>-</b> -
B1 Shim mode	TrueForm
Di Oliili illoac	Truct offfi

## System - Tx/Rx

Frequency 1H	297.191852 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

# Sequence - Part 1

Introduction	Off
Dimension	2D
Asymmetric echo	Off
Contrasts	2
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	1389 Hz/Px

# Sequence - Part 2

RF pulse type	Fast
Gradient mode	Fast
RF spoiling	On

Mode	Off	

## \\USER\Bolin\QA\1.5mm\ep2d\_bold\_m3p3\_1.5mm\_QA1

TA: 4:11 PM: FIX Voxel size: 1.5×1.5×1.5 mmPAT: 9 Rel. SNR: 1.00 : epfid

#### **Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	1160 ms
TE	21.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	AC

#### **Contrast - Common**

TR	1160 ms
TE	21.0 ms
MTC	Off
Flip angle exc	60 deg
Flip angle fat sat	110 deg
Fat suppr.	Fat sat.

#### **Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	200
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
Base resolution	150
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

## **Resolution - iPAT**

Accel. mode	Slice accel.
Accel. factor PE	3

#### **Resolution - iPAT**

Ref. lines PE	36
Accel. factor slice	3
Reference scan mode	EPI/separate

## **Resolution - Filter Image**

Distortion Corr.	Off	
Prescan Normalize	Off	

#### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	
Hamming	Off	

## **Geometry - Common**

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	1160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

#### **Geometry - AutoAlign**

Slice group	1
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L5.3 P11.7 H16.8
L	5.3 mm
Р	11.7 mm
Н	16.8 mm
Initial Rotation	179.00 deg
Initial Orientation	T > C
T > C	-0.4
> S	0.3

## **Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

Positioning mode	FIX
Table position	Н
Table position	0 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

## **System - Adjustments**

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

## **System - Adjust Volume**

! Position	L5.3 P11.7 H16.8 mm
! Orientation	T > C-0.4 > S0.3
! Rotation	179.00 deg
! A >> P	140 mm
! R >> L	140 mm
! F >> H	119 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.191852 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	1160 ms
Concatenations	1

## **BOLD**

DOLD	
GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active

## **BOLD**

Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	200
Delay in TR	0 ms
Multiple series	Off

## Sequence - Part 1

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.62 ms
Bandwidth	1960 Hz/Px

## Sequence - Part 2

EP	I factor	150
RF	pulse type	Fast
Gra	adient mode	Fast
Ex	citation	Standard

# Sequence - pTX Pulses

## \\USER\Bolin\QA\1.5mm\ep2d\_bold\_m3p3\_1.5mm\_QA2

TA: 4:11 PM: FIX Voxel size: 1.5×1.5×1.5 mmPAT: 9 Rel. SNR: 1.00 : epfid

#### **Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	1160 ms
TE	21.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	AC

#### **Contrast - Common**

TR	1160 ms
TE MTC	21.0 ms
MTC	Off
Flip angle exc	60 deg
Flip angle fat sat	110 deg
Fat suppr.	Fat sat.

## **Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	200
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
Base resolution	150
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

## **Resolution - iPAT**

Accel. mode	Slice accel.
Accel. factor PE	3

#### **Resolution - iPAT**

Ref. lines PE	36
Accel. factor slice	3
Reference scan mode	EPI/separate

## **Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

## **Geometry - Common**

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	1160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L5.3 P11.7 H16.8
L	5.3 mm
Р	11.7 mm
Н	16.8 mm
Initial Rotation	179.00 deg
Initial Orientation	T > C
T > C	-0.4
> S	0.3

## **Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

<u> </u>	
Positioning mode	FIX
Table position	Н
Table position	0 mm
MSMA	S-C-T
Sagittal	R >> L
Coronal	A >> P

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

## **System - Adjustments**

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

## System - Adjust Volume

! Position	L5.3 P11.7 H16.8 mm
! Orientation	T > C-0.4 > S0.3
! Rotation	179.00 deg
! A >> P	140 mm
! R >> L	140 mm
! F >> H	119 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.191852 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	1160 ms
Concatenations	1

## **BOLD**

Off
Off
0
0
On
On
4.00
20
Baseline
Active

## **BOLD**

Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	200
Delay in TR	0 ms
Multiple series	Off

## Sequence - Part 1

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.62 ms
Bandwidth	1960 Hz/Px

## Sequence - Part 2

EP	I factor	150
RF	pulse type	Fast
Gra	adient mode	Fast
Ex	citation	Standard

# Sequence - pTX Pulses

## $\verb|\USER\Bolin\QA|1.5mm\ep2d\_bold\_m3p3\_1.5mm\_FA10|$

TA: 4:11 PM: FIX Voxel size: 1.5×1.5×1.5 mmPAT: 9 Rel. SNR: 1.00 : epfid

#### **Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	1160 ms
TE	21.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	AC

#### **Contrast - Common**

TR	1160 ms
TE	21.0 ms
MTC	Off
Flip angle exc	10 deg
Flip angle fat sat	110 deg
Fat suppr.	Fat sat.

## **Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	200
Delay in TR	0 ms
Multiple series	Off

#### **Resolution - Common**

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
Base resolution	150
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

## **Resolution - iPAT**

Accel. mode	Slice accel.
Accel. factor PE	3

#### **Resolution - iPAT**

Ref. lines PE	36
Accel. factor slice	3
Reference scan mode	EPI/separate

## **Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

## **Geometry - Common**

Slice group	1
Slices	69
Dist. factor	15 %
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.5 mm
TR	1160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	L5.3 P11.7 H16.8 mm
Orientation	T > C-0.4 > S0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L5.3 P11.7 H16.8
L	5.3 mm
Р	11.7 mm
Н	16.8 mm
Initial Rotation	179.00 deg
Initial Orientation	T > C
T > C	-0.4
> S	0.3

## **Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

Positioning mode	FIX
Table position	Н
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

## **System - Adjustments**

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

# System - Adjust Volume

! Position	L5.3 P11.7 H16.8 mm
! Orientation	T > C-0.4 > S0.3
! Rotation	179.00 deg
! A >> P	140 mm
! R >> L	140 mm
! F >> H	119 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.191852 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - Signal1

1st Signal/Mode	None
TR	1160 ms
Concatenations	1

## **BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active

## **BOLD**

Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	200
Delay in TR	0 ms
Multiple series	Off

## Sequence - Part 1

Introduction	On
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.62 ms
Bandwidth	1960 Hz/Px

# Sequence - Part 2

EPI factor	150
RF pulse type	Fast
Gradient mode	Fast
Excitation	Standard

# Sequence - pTX Pulses