



ADDENDUM / ERRATUM

PM.LAB.026 (Rev A)



AixplorerUltimate

This addendum applies to the following Aixplorer® User Guides:

- SSIP01123-12A July 2017
- SSIP01154-12B November 2017
- SSIP01125-12A August 2017
- SSIP01131-12A August 2017
- SSIP01127-12A August 2017
- SSIP01129-12A August 2017

This addendum applies to the following Aixplorer® Ultimate User Guides:

- SSIP03819-1A July 2017
- SSIP03718-1B November 2017
- SSIP03820-1A August 2017
- SSIP03821-1A August 2017
- SSIP03822-1A August 2017
- SSIP03823-1A August 2017

Soaking Limits

According to the IEC 60529 standard:

The SL10-2, SL15-4, SL18-5, SMC12-3, XC6-1, SC6-1 and SLV16-5 transducers are IPX1.

The SE12-3, SEV12-3, XP5-1 and SLH20-6 transducers are IPX7.

SL15-4 Transducer

Operating Mode: B + CD Doppler

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
Maximum index value			1.7	(a)		(a)		(a)
Index components value				#	-	#	-	
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	CD: 3.55 B: 3.82					
	P	(mW)		#		#		#
	P_{1x1}	(mW)		#		#		
	z_s	(cm)			-			
	z_b	(cm)					-	
	z_{MI}	(cm)	CD: 1.6 B: 1.41					
	$z_{pii,\alpha}$	(cm)	-					
	f_{awf}	(MHz)	CD: 7.38 B: 5.25		#		#	
Other information	pr	(Hz)	CD: 176 B: 16					
	srr	(Hz)	14					
	η_{pps}		CD: 11 B: 1					

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	CD: 26 B: 310					
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	CD: 123 B: 12					
	I_{spta} at z_{pii}	(mW/cm ²)	CD: 279 B: 21					
	p_r at z_{pii}	(MPa)	CD: 4.41 B: 4.59					
Operating control conditions	Condition 1		MI					
	Condition 2							
	Condition 3							
	Condition 4							

(a) The maximum index value is less than 1.0

Condition 1: UpExtVeinous, B mode Fundamental, Focal zone 22 mm, GEN, Acoustic Power 0 dB

Operating Mode: B + SWE

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
Maximum index value			1.7	3.29		3.29		4.5*
Index components value				P: 0.24 F: 2.51 B: 0.38	P: 1.62 F: 0.73 B: 0.38	P: 0.24 F: 2.51 B: 0.38	P: 1.99 F: 0.51 B: 0.38	P: 2.62 F: 2.1 B: 0.36
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	P: 4.05 F: 2.93 B: 3.76					
	P	(mW)		P: 212 F: 70.3 B: 16.6	P: 212 F: 70.3 B: 16.6			P: 272 F: 131 B: 16.6
	$P_{1 \times 1}$	(mW)		P: 19.1 F: 42.4 B: 7.4	P: 19.1 F: 42.4 B: 7.4			
	z_s	(cm)			P: 1.79 F: 2.4			
	z_b	(cm)					P: 1.79 F: 1.5	
	z_{MI}	(cm)	B: 1.41					
	$z_{pii,\alpha}$	(cm)	P: 1.92 F: 1.35					
	f_{awf}	(MHz)	P: 6 F: 5.63 B: 5.25	P: 5 F: 7.5 B: 7.63	P: 5 F: 7.5 B: 7.63	P: 5 F: 5.63 B: 7.63		
Other information	prr	(Hz)	P: 2 F: 84 B: 24					
	srr	(Hz)	2					
	η_{pps}		P: 1 F: 42 B: 12					
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	P: 452 F: 288 B: 310					
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	P: 383					

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
			F: 27 B: 34					
	I_{spta} at z_{pii}	(mW/cm ²)	P: 490 F: 49 B: 52					
	p_r at z_{pii}	(MPa)	P: 5.42 F: 3.65 B: 4.59					
Operating control conditions	Condition 1		MI					
	Condition 2			TIS		TIB		TIC
	Condition 3							
	Condition 4							

* Sum of TI from worst case of each composing mode is higher than 4.5, however, the system controls the voltage in order to limit the TI to 4.5

Condition 1: General, SWE Box position 20 mm, PEN, Acoustic Power 0 dB

Condition 2: Breast, SWE Box position 45 mm, RES, Acoustic Power 0 dB

Operating Mode: B + Trivu

Index Label		MI	TIS		TIB		TIC
			At surface	Below surface	At surface	Below surface	
Maximum index value		1.7	4.19		4.19		4.5*
Index components value			P: 0.24 F: 2.51 CDF: 0.9 B: 0.38	P: 1.62 F: 0.73 CDF: 0.26 B: 0.38	P: 0.24 F: 2.51 CDF: 0.89 B: 0.38	P: 1.99 F: 0.51 CDF: 0.18 B: 0.38	P: 2.62 F: 2.1 CDF: 0.75 B: 0.36
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	P: 4.05 F: 2.93 CDF: 2.93 B: 3.76				
	P	(mW)		P: 212 F: 70.3 CDF: 25.1 B: 16.6	P: 212 F: 70.3 CDF: 70.3 B: 16.6		P: 272 F: 131 CDF: 46.8 B: 16.6
	P_{1x1}	(mW)		P: 21 F: 24 CDF: 8.57 B: 11.1	P: 21 F: 24 CDF: 8.57 B: 11.1		
	z_s	(cm)			P: 1.79 F: 2.4 CDF: 2.4		
	z_b	(cm)				P: 1.79 F: 1.5 CDF: 1.52	
	z_{MI}	(cm)	B: 1.41				
	$z_{pii,\alpha}$	(cm)	P: 1.92 F: 1.35 CDF: 1.35				
	f_{awf}	(MHz)	P: 6 F: 5.63 CDF: 5.63	P: 5 F: 7.5 CDF: 7.5	P: 5 F: 7.5 CDF: 7.63		P: 5 F: 5.63 CDF: 5.63

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
			B: 5.25	B: 7.63		B: 7.63		B: 7.63
Other information	pr _r	(Hz)	P: 1 F: 420 CDF: 160 B: 24					
	s _r	(Hz)	2					
	η_{pps}		P: 1 F: 420 CDF: 160 B: 12					
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	P: 452 F: 288 CDF: 288 B: 310					
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	P: 383 F: 27 CDF: 10 B: 34					
	I_{spta} at z_{pii}	(mW/cm ²)	P: 490 F: 49 CDF: 19 B: 52					
	p_r at z_{pii}	(MPa)	P: 5.42 F: 3.65 CDF: 3.65 B: 4.59					
Operating control conditions	Condition 1		MI					
	Condition 2			TIS	TIB		TIC	
	Condition 3							
	Condition 4							

P: Push component; F: Flat component; CDF: Flat Color Doppler component; B: B component

* Sum of TI from worst case of each composing mode is higher than 4.5, however, the system controls the voltage in order to limit the TI to 4.5

Condition 1: General, SWE Box position 20 mm, PEN, Acoustic Power 0 dB

Condition 2: Breast, SWE Box position 45 mm, RES, Acoustic Power 0 dB

Operating Mode: PW Doppler

Index Label		MI	TIS		TIB		TIC
			At surface	Below surface	At surface	Below surface	
Maximum index value		1.4	1.09		2.44		1.84
Index components value			0.85	0.78	0.86	2.44	
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	3.2				
	P	(mW)		43.6	32.7		20.3
	P_{1x1}	(mW)		43.6	32.7		
	z_s	(cm)			0.84		
	z_b	(cm)				1.35	
	z_{MI}	(cm)	-				
	$z_{pii,\alpha}$	(cm)	1.29				
	f_{awf}	(MHz)	5.125	5.38	5.25		5
Other information	pr	(Hz)	1064				
	sr	(Hz)	-				
	n_{pps}		1				
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	243				
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	549				
	I_{spta} at z_{pii}	(mW/cm ²)	881				
	p_r at z_{pii}	(MPa)	3.89				
Operating control conditions	Condition 1		MI				
	Condition 2			TIS			
	Condition 3				TIB		
	Condition 4						TIC

Condition 1: General, Focal zone 22 mm, SV 1.5 mm, Scale 8 cm/s, Acoustic Power 0 dB

Condition 2: General, Focal zone 68 mm, SV 2 mm, Scale 65 cm/s, Acoustic Power 0 dB

Condition 3: General, Focal zone 52 mm, SV 2 mm, Scale 65 cm/s, Acoustic Power 0 dB

Condition 4: General, Focal zone 7 mm, SV 0.5 mm, Scale 65 cm/s,
Acoustic Power 0 dB

SL18-5 Transducer

Operating Mode: B + CD Doppler

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
Maximum index value			1.6	(a)		(a)		(a)
Index components value				#	-	#	-	
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	CD: 2.88 B: 3.34					
	P	(mW)		#		#		#
	P_{1x1}	(mW)		#		#		
	z_s	(cm)			-			
	z_b	(cm)					-	
	z_{MI}	(cm)	CD: 1.4 B: 1.43					
	$z_{pii,\alpha}$	(cm)	-					
	f_{awf}	(MHz)	CD: 7.5 B: 5.25		#		#	
Other information	pr	(Hz)	CD: 288 B: 70					
	sr	(Hz)	18					
	n_{pps}		CD: 16 B: 4					
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	CD: 311 B: 41					
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	CD: 94 B: 15					
	I_{spta} at z_{pii}	(mW/cm ²)	CD: 96 B: 54					
	p_r at z_{pii}	(MPa)	CD: 4.41					

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
			B: 4.59					
Operating control conditions	Condition 1		MI					
	Condition 2							
	Condition 3							
	Condition 4							

(a) The maximum index value is less than 1.0

Condition 1: B: Thyroid, B mode Harmonic, Focal zone 14 mm, PEN, SuperCompound on, HD/FR med, Acoustic Power 0 dB

COL: Breast, Focal zone 14 mm, PEN, HD/FR med, Acoustic Power 0dB

Operating Mode: B + SWE

Index Label		MI	TIS		TIB		TIC
			At surface	Below surface	At surface	Below surface	
Maximum index value		1.8	2.84		3.21		4.0
Index components value			P: 0.24 F: 1.64 B: 0.31	P: 1.61 F: 0.91 B: 0.31	P: 0.24 F: 1.64 B: 0.31	P: 1.99 F: 0.91 B: 0.31	P: 2.62 F: 1.37 B: 0.26
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	P: 3.99 F: 2.54 B: 3.34				
	P	(mW)		P: 125 F: 79 B: 7.3	P: 125 F: 79 B: 7.3		P: 125 F: 79 B: 11.6
	P_{1x1}	(mW)		P: 9.9 F: 79 B: 9.7	P: 9.9 F: 79.9 B: 7.3		
	z_s	(cm)			P: 1.79 F: 2.34		
	z_b	(cm)				P: 1.79 F: 1.34	
	z_{MI}	(cm)	B: 1.37				
	$z_{pii,\alpha}$	(cm)	P: 1.42 F: 1.55				
	f_{awf}	(MHz)	P: 5 F: 7.5 B: 5.25	P: 5 F: 7.5 B: 7.63	P: 5 F: 7.5 B: 7.63	P: 5 F: 5.63 B: 7.63	
Other information	pr	(Hz)	P: 2 F: 624 B: 70				
	sr	(Hz)	1				
	η_{pps}		P: 2 F: 624 B: 70				
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	P: 21.9 F: 10.5 B: 41				
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	P: 471				

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
			F: 99 B: 15					
	I_{spta} at z_{pii}	(mW/cm ²)	P: 490 F: 221 B: 54					
	p_r at z_{pii}	(MPa)	P: 5.2 F: 3.8 B: 4.6					
Operating control conditions	Condition 1		MI					
	Condition 2			TIS		TIB		TIC
	Condition 3							
	Condition 4							

P: Push component; F: Flat component; B: B component

Condition 1: PUSH and FLAT: Breast, SWE Box position 20 mm, Std, Acoustic Power 0 dB

B: Thyroid, B mode Harmonic, Focal zone 14 mm, PEN, SuperCompound on, HD/FR med, Acoustic Power 0 dB

Condition 2: PUSH and FLAT: Breast, SWE Box position 45 mm, Std, Acoustic Power 0 dB

B: Thyroid, B mode Harmonic, Focal zone 14 mm, PEN, SuperCompound on, HD/FR med, Acoustic Power 0 dB

Operating Mode: B + Trivu

Index Label		MI	TIS		TIB		TIC
			At surface	Below surface	At surface	Below surface	
Maximum index value		1.8	3.06		3.43		4.3
Index components value			P: 0.24 F: 1.64 CDF: 0.39 B: 0.31	P: 1.61 F: 0.91 CDF: 0.22 B: 0.31	P: 0.24 F: 1.64 CDF: 0.39 B: 0.31	P: 1.99 F: 0.91 CDF: 0.22 B: 0.31	P: 2.62 F: 1.37 CDF: 0.30 B: 0.26
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	P: 3.99 F: 2.54 CDF: 2.54 B: 3.34				
	P	(mW)		P: 125 F: 79 CDF: 18.8 B: 7.3	P: 125 F: 79 CDF: 18.8 B: 7.3		P: 125 F: 79 CDF: 18.8 B: 11.6
	P_{1x1}	(mW)		P: 9.9 F: 79 CDF: 11.1 B: 9.7	P: 9.9 F: 79.9 CDF: 11.1 B: 7.3		
	z_s	(cm)			P: 1.79 F: 2.34 CDF: 2.34		
	z_b	(cm)				P: 1.79 F: 2.34 CDF: 2.34	
	z_{MI}	(cm)	B: 1.37				
	$z_{pii,\alpha}$	(cm)	P: 1.42 F: 1.55 CDF: 1.55				
	f_{awf}	(MHz)	P: 5 F: 7.5 CDF: 7.5	P: 5 F: 7.5 CDF: 7.5	P: 5 F: 7.5 CDF: 7.5		P: 5 F: 5.63 CDF: 7.5

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
			B:5.25	B: 7.63		B: 7.63		B: 7.63
Other information	pr _r	(Hz)	P: 2 F: 624 CDF: 200 B: 70					
	s _r	(Hz)	1					
	η_{pps}		P: 2 F: 624 CDF: 200 B: 70					
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	P: 21.9 F: 10.5 CDF: 10.5 B: 41					
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	P: 471 F: 99 CDF: 32 B: 15					
	I_{spta} at z_{pii}	(mW/cm ²)	P: 490 F: 221 CDF: 71 B: 54					
	p_r at z_{pii}	(MPa)	P: 5.2 F: 3.8 CDF: 4.6 B: 4.6					
Operating control conditions	Condition 1		MI					
	Condition 2			TIS		TIB		TIC
	Condition 3							
	Condition 4							

P: Push component; F: Flat component;CDF: Color Doppler Flat component; B: B component

Condition 1: PUSH and FLAT: Breast, SWE Box position 20 mm, Std, Acoustic Power 0 dB

B: Thyroid, B mode Harmonic, Focal zone 14 mm, PEN, SuperCompound on, HD/FR med, Acoustic Power 0 dB

Condition 2: PUSH and FLAT: Breast, SWE Box position 45 mm, Std, Acoustic Power 0 dB

B: Thyroid, B mode Harmonic, Focal zone 14 mm, PEN, SuperCompound on, HD/FR med, Acoustic Power 0 dB

Operating Mode: PW Doppler

Index Label			MI	TIS		TIB		TIC
				At surface	Below surface	At surface	Below surface	
Maximum index value			1.5	0.92		2.21		1.4
Index components value				0.91	0.65	0.91	2.18	
Associated acoustic parameters	$p_{r,\alpha}$ at z_{MI}	(MPa)	3.3					
	P	(mW)		36.4		36.4		21.8
	$P_{1 \times 1}$	(mW)		5.94		5.94		
	z_s	(cm)			1.1			
	z_b	(cm)					1.35	
	z_{MI}	(cm)	-					
	$z_{pii,\alpha}$	(cm)	1.41					
	f_{awf}	(MHz)	5.125	5.38		5.37		5.125
Other information	pr	(Hz)	1093					
	srr	(Hz)	-					
	n_{pps}		1					
	$I_{pa,\alpha}$ at $z_{pii,\alpha}$	(W/cm ²)	186					
	$I_{spta,\alpha}$ at $z_{pii,\alpha}$	(mW/cm ²)	536					
	I_{spta} at z_{pii}	(mW/cm ²)	801					
	p_r at z_{pii}	(MPa)	4.24					
Operating control conditions	Condition 1		MI					
	Condition 2			TIS		TIB		
	Condition 3							TIC
	Condition 4							

Condition 1: General, Focal zone 22 mm, SV 1 mm, Scale 8 cm/s, Acoustic Power 0 dB

Condition 2: General, Focal zone 68 mm, SV 0.5 mm, Scale 110 cm/s, HPRF on, Acoustic Power 0 dB

Condition 3: General, Focal zone 2 mm, SV 1.5 mm, Scale 190 cm/s, Acoustic Power 0 dB

