



APPENDIX 11-2

CALIBRATION CERTIFICATE







0653

Date of Issue: 05 May 2020

Issued by:

ANV Measurement Systems

Beaufort Court 17 Roebuck Way Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

E-Mail: info@noise-and-vibration.co.uk Web: www.noise-and-vibration.co.uk

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Certificate Number: UCRT20/1392

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Approved Signatory			1	1				
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K. Mistry			_ 8					

Customer

AWN Consulting

The Tecpro Building

IDA Business and Technology Park

Clonshaugh Dublin 17

Order No.

RM/20/Cal019

Description

Sound Level Meter / Pre-amp / Microphone / Associated Calibrator

Identification

Manufacturer Instrument Type

Rion

Sound Level Meter

Serial No. / Version

Rion

NL-52

00186670

Firmware

2.0

Rion

Pre Amplifier

NH-25

76820

Rion

1

Microphone

UC-59

12816

Brüel & Kjær

Calibrator

4231

2205805 UC 0210

Performance Class

Test Procedure

TP 2.SLM 61672-3 TPS-49

Procedures from IEC 61672-3:2006 were used to perform the periodic tests.

Calibrator adaptor type if applicable

Type Approved to IEC 61672-1:2002

YES

Approval Number

21.21 / 13.02

If YES above there is public evidence that the SLM has successfully completed the

applicable pattern evaluation tests of IEC 61672-2:2003

Date Received

30 April 2020

ANV Job No.

UKAS20/04240

Date Calibrated

05 May 2020

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate

Dated

Certificate No.

Laboratory

20 April 2018

UCRT18/1435

0653

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Certificate Number UCRT20/1392

UKAS Accredited Calibration Laboratory No. 0653

Page 2 of 2 **Pages**

Sound Level Meter Ins			just the	sound	leve	els ind	icated			
SLM instruction manual			52							
SLM instruction manual		11-03								
SLM instruction manual	source	Manufacture	r							
Internet download date if	applicable	N/A								
Case corrections availab	le	Yes								
Uncertainties of case cor	rrections	Yes								
Source of case data		Manufacture	r							
Wind screen corrections	available	Yes								
Uncertainties of wind scr	een corrections	Yes								
Source of wind screen da		Manufacture	r							
Mic pressure to free field		Yes								
Uncertainties of Mic to F		Yes								
Source of Mic to F.F. cor		Manufacture								
Total expanded uncertain			2-1:200	2 \	Yes					
Specified or equivalent C		Specified								
Customer or Lab Calibra		Customers Calib	rator							
Calibrator adaptor type if	applicable	UC 0210								
Calibrator cal. date		06 December 2								
Calibrator cert. number		UCRT19/233	3							
Calibrator cal cert issued	by	0653								
Calibrator SPL @ STP		93.95	dB (Calibrati	ion re	eferen	ce sour	nd pres	sure le	evel
Calibrator frequency		999.97	Hz (Calibrati	ion ch	neck fr	equen	cy		
Reference level range		25 - 130	dB				·			
Accessories used or corr	ected for during calit	oration - Exten	sion Cal	ble & W	ind S	hield \	WS-15			
Note - if a pre-amp exten			een the	SLM ar	nd the	e pre-a	amp.			
Environmental conditions	during tests	Start		End						
W. B. C.	Temperature	22.56	2	23.46		±	0.30	°C		
	Humidity	36.7	35.9			±	3.00	%RH		
	Ambient Pressure	101.08	101.12		±	0.03	kPa			
Response to associated	Calibrator at the envi	ronmental condition	s above.							
Initial indicated leve			sted inc		evel	-	93.9		dB	1
The uncertainty of the as					_		0.10		dB	1
Self Generated Noise	This test is currently									,
Microphone installed (if re			no Lab.	N/A		dB A	A Weig	htina		1
Uncertainty of the microp				N/A		dB /	l Trong	iting		J
Microphone replaced with			Indor D				! [
Weighting	A	C C	Under R	ange in	ulcat Z			1		
	2.1 dB lUR	15.6 dB	UR	21.2		dB	UR			
Uncertainty of the electric				0.12	$\overline{}$	dB	UIV.	ĺ		
							l 	han lier)	حالمان
The reported expanded u				-	-					_
a coverage probability of	арргохіпіателу 95%.	The uncertainty eva	iuation i	nas bee	n car	nea o	ut iii ac	cordan	ice wit	11
UKAS requirements.		n namaguarh 40 sf IF	C 6467	2.000	C +L =	t	l mier-	nhe==	fros £:	ald
FOR THE TEST OF THE TRACILOR	TO MOIDDING OF DO	COSESORSON TO AT IL	nin/	1-3-71111	n $n \cap \Delta$	THE PARTY OF		THUM	TEND TI	

For the test of the frequency weightings as per paragraph 12. of IEC 61672-3:2006 the actual microphone free field response was used.

The acoustical frequency tests of a frequency weighting as per paragraph 11 of IEC 61672-3:2006 were carried out using an electrostatic actuator.

doing an electros	allo doldator.		
		END	
Calibrated by:	B. Bogdan		R 2

Additional Comments None

The results on this certificate only relate to the items calibrated as identified above.







Certificate Number: UCRT21/1237

Date of Issue: 17 February 2021 Calibrated at & Certificate issued by:

ANV Measurement Systems

Beaufort Court 17 Roebuck Way Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

E-Mail: info@noise-and-vibration.co.uk Web: www.noise-and-vibration.co.uk

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

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Approved S	ignatory		1		1	
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K. Mistry						

Customer

AWN Consulting Limited

The Tecpro Building

IDA Business and Technology Park

Clonshaugh Dublin 17

Order No.

2095

Description

Sound Level Meter / Pre-amp / Microphone / Associated Calibrator

Identification

Manufacturer Instrument Type NL-52 Rion Sound Level Meter

00386771 **Firmware** 2.0 Rion Rion Pre Amplifier NH-25 76921 Microphone UC-59 12273 Rion 2205805 Brüel & Kjær Calibrator 4231 Calibrator adaptor type if applicable UC 0210

Performance Class

1

Test Procedure

TP 2.SLM 61672-3 TPS-49

Procedures from IEC 61672-3:2006 were used to perform the periodic tests.

Type Approved to IEC 61672-1:2002

YES Approval Number 21.21 / 13.02

If YES above there is public evidence that the SLM has successfully completed the

applicable pattern evaluation tests of IEC 61672-2:2003

Date Received

03 December 2020

ANV Job No.

UKAS20/12673

Serial No. / Version

Date Calibrated

17 February 2021

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate

Dated

Certificate No.

Laboratory

04 October 2019

UCRT19/2106

0653

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Certificate Number UCRT21/1237

UKAS Accredited Calibration Laboratory No. 0653

Page 2 of 2 Pages

R 2

Sound Level Meter Instruction man	ual and	data used	to adjust t	ne sound le	eveis inc	dicated.			
	Level N		42 / NL-52						
SLM instruction manual ref / issue		11	-03						
SLM instruction manual source		Manuf	acturer						
Internet download date if applicable		N	I/A						
Case corrections available		Y	es						
Uncertainties of case corrections		Y	es						
Source of case data			acturer						
Wind screen corrections available			es						
Uncertainties of wind screen corrections	S	Y	es						
Source of wind screen data		Manuf	acturer						
Mic pressure to free field corrections		Ye	es						
Uncertainties of Mic to F.F. corrections			es						
Source of Mic to F.F. corrections			acturer						
Total expanded uncertainties within the	requirer			002 Ye	s				
Specified or equivalent Calibrator		•	cified						
Customer or Lab Calibrator			Calibrator						
Calibrator adaptor type if applicable			0210						
Calibrator cal. date			ary 2021						
Calibrator cert. number		UCRT2							
Calibrator cal cert issued by			553						
Calibrator SPL @ STP		93.93	dB	Calibration	referen	ce sound	d pres	sure le	evel
Calibrator frequency		999.97	' Hz	Calibration	check f	requenc	у		
Reference level range		25 - 130	0 dB						
Accessories used or corrected for during	g calibra	ation -	Extension (Cable & Wind	d Shield	WS-15			
Accessories used or corrected for during Note - if a pre-amp extension cable is list									
Note - if a pre-amp extension cable is lis		n it was use		he SLM and				-	-
Note - if a pre-amp extension cable is lis Environmental conditions during tests	sted ther	n it was used Start		he SLM and End	the pre-	amp.	·c]		
Note - if a pre-amp extension cable is lis Environmental conditions during tests Temperature	sted ther	n it was used Start 23.91		End 24.16	the pre-	o.30 °			
Note - if a pre-amp extension cable is lis Environmental conditions during tests Temperature Humidity	sted ther	n it was used Start		he SLM and End	the pre-	0.30 °	%RH	-	
Note - if a pre-amp extension cable is list Environmental conditions during tests Temperature Humidity Ambient Pres	sted ther	Start 23.91 40.1 99.80	d between t	End 24.16 41.1 99.79	the pre-	o.30 °	%RH	-	
Note - if a pre-amp extension cable is list Environmental conditions during tests Temperature Humidity Ambient Pres Response to associated Calibrator at the	sted thereses a same services a same services a same services and same services are same services and same services are same services and same services are same services and same services and same services are same services and same services and same services are same services are same services and same services are	Start 23.91 40.1 99.80 enmental cor	d between t	End 24.16 41.1 99.79 ve.	the pre-	0.30 ° 0.03 µ	%RH <pa< td=""><td>- In</td><td>1</td></pa<>	- In	1
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Note - if a pre-amp extension cable is list Environmental conditions during tests Temperature Humidity Ambient Pres Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator	ssure e enviro d ator sup	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound lev	End 24.16 41.1 99.79 ve. indicated level meter ±	the pre-	0.30 ° 0.03 µ	%RH kPa	dB dB	
Note - if a pre-amp extension cable is list Environmental conditions during tests Temperature Humidity Ambient Pres Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cu	ssure e enviro dator supp	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this La	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab.	the pre-	0.30 ° 3.00 ° 0.03 µ 93.9 0.10	%RH «Pa		
Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cu Microphone installed (if requested by cu	ssure e enviro dator suppurrently r	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this La	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A	the pre-	0.30 ° 3.00 ° 0.03 µ 93.9	%RH «Pa		
Note - if a pre-amp extension cable is list Environmental conditions during tests Temperature Humidity Ambient Pres Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrated Self Generated Noise This test is cu Microphone installed (if requested by cu Uncertainty of the microphone installed selections)	e enviro dator suppurrently r stomer)	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this Later	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A N/A	the pre-	0.30 ° 3.00 ° 0.03 µ 93.9 0.10	%RH «Pa		
Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cu Microphone installed (if requested by cu Uncertainty of the microphone installed of Microphone replaced with electrical input	e enviro dator suppurrently r stomer)	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this Laten e ± UR = Under	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A	the pre-	0.30 ° 3.00 ° 0.03 µ 93.9 0.10	%RH «Pa		
Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cu Microphone installed (if requested by cu Uncertainty of the microphone installed: Microphone replaced with electrical input Weighting A	e enviro dator suppurrently r stomer) self gene	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this Laan e ± UR = Under	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A N/A r Range indicated	the pre-	93.9 0.10	%RH «Pa		
Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cultured Microphone installed (if requested by culture Uncertainty of the microphone installed of Microphone replaced with electrical input Weighting A	e enviro dator suppurrently restomer) self generat device	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this Laten e ± UR = Under	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A N/A r Range indic	the pre-	0.30 ° 3.00 ° 0.03 µ 93.9 0.10	%RH «Pa		
Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cu Microphone installed (if requested by cu Uncertainty of the microphone installed: Microphone replaced with electrical input Weighting A	e enviro dator suppurrently restomer) self generat device	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this Laan e ± UR = Under	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A N/A r Range indicated	the pre-	93.9 0.10	%RH «Pa		
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Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated by cu Uncertainty of the microphone installed Microphone replaced with electrical input Weighting A Uncertainty of the electrical self generated The reported expanded uncertainty is bar a coverage probability of approximately sets.	ssure e enviro dator suppurrently r stomer) self gene ut device UR ed noise	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this Laan e ± UR = Under C dB UR	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A N/A r Range indic	dB dB cated Z dB dB a covera	93.9 0.10 A Weigh	%RH «Pa ting	dB , provi	_
Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cultured Microphone installed (if requested by culture Uncertainty of the microphone installed: Microphone replaced with electrical input Weighting A 11.5 dB Uncertainty of the electrical self generated The reported expanded uncertainty is based on the set of the self-self generated.	ssure e enviro dator suppurrently r stomer) self gene ut device UR ed noise	Start 23.91 40.1 99.80 Inmental cor B	nditions abo Adjusted e sound level by this Laan e ± UR = Under C dB UR	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A N/A r Range indic	dB dB cated Z dB dB a covera	93.9 0.10 A Weigh	%RH «Pa ting	dB , provi	_
Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated by cu Uncertainty of the microphone installed Microphone replaced with electrical input Weighting A Uncertainty of the electrical self generated The reported expanded uncertainty is bar a coverage probability of approximately sets.	e enviro dator suppurrently r stomer) self generat device UR ed noise ased on	Start 23.91 40.1 99.80 Inmental cor B	d between t	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A N/A r Range indicated level meter ± ab. ab. N/A r Range indicated level meter ± ab. n/A r Range in	the pre-	93.9 0.10 A Weigh UR UR	ting	dB , provi	h
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Response to associated Calibrator at the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cumulated in the Initial indicated level 93.9 The uncertainty of the associated calibrator Self Generated Noise This test is cumulated in the Initial indicated level 93.9 The uncertainty of the associated calibrator in the Initial indicated level 93.9 The uncertainty of the associated calibrator in the Initial indicated level 93.9 The uncertainty of the microphone installed in Initial indicated level 93.9 The uncertainty of the microphone installed in Initial indicated level 93.9 The reported with electrical input Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 The uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the microphone installed in Initial indicated level 93.9 Uncertainty of the associated calibrator in Initial indicated level 93.9 Uncertainty of the associated calibrator in Initial indicated level 93.9 Uncertainty of the associated calibrator in Initial indicated level 93.9 Uncertainty of the associated calibrator in Initial indicated level 93.9 Uncertainty of the associated calibrator in Initial indicated level 93.9 Uncertainty of the Initial indicated level	e enviro dator suppurrently restomer) self generat device UR ed noise ased on 95%. The	Start 23.91 40.1 99.80 Inmental cor B	d between t	he SLM and End 24.16 41.1 99.79 ve. indicated level meter ± ab. N/A r Range indic 22.2 0.12 multiplied by on has been of	the pre-	93.9 0.10 A Weigh UR age factor out in accordal microp	WRH KPa ting or k=2 cordan ohone	dB , provi ce with	h eld

Calibrated by: B. Bogdan

Additional Comments The results on this certificate only relate to the items calibrated as identified above. Prior to calibration the instrument's microphone was replaced and the meter was re-aligned.

END







Date of Issue: 15 September 2020

Calibrated at & Certificate issued by:

ANV Measurement Systems

Beaufort Court 17 Roebuck Way

Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

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Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Certificate Number: UCRT20/1867

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Approved Signatory		1	•	1	
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K. Mistry			_		

Customer

AWN Consulting Limited

The Tecpro Building

IDA Business and Technology Park

Clonshaugh Dublin 17 Ireland

Order No.

2074

Description

Sound Level Meter / Pre-amp / Microphone / Associated Calibrator

Identification

Manufacturer Instrument Type Serial No. / Version Rion Sound Level Meter NL-52 00564808 Rion **Firmware** 2.0 Pre Amplifier NH-25 64933 Rion Rion Microphone UC-59 09446 Calibrator NC-74 34536109 Rion Calibrator adaptor type if applicable NC-74-002

Performance Class

e Class 1

Test Procedure

TP 2.SLM 61672-3 TPS-49

Procedures from IEC 61672-3:2006 were used to perform the periodic tests.

Type Approved to IEC 61672-1:2002

YES

Approval Number

21.21 / 13.02

If YES above there is public evidence that the SLM has successfully completed the

applicable pattern evaluation tests of IEC 61672-2:2003

Date Received

14 September 2020

ANV Job No.

UKAS20/09501

Date Calibrated

15 September 2020

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate

Dated

Certificate No.

Laboratory

22 August 2018

UCRT18/1862

0653

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Certificate Number UCRT20/1867

UKAS Accredited Calibration Laboratory No. 0653

None

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Sound Level Meter Inst				nd levels in	dicated.	
SLM instruction manual tit		Meter NL-42 / NI	L-52			
SLM instruction manual re	ef / issue	11-03				
SLM instruction manual so	ource	Manufacture	r			
Internet download date if a	applicable	N/A				
Case corrections available		Yes				
Uncertainties of case corre	ections	Yes				
Source of case data		Manufacture	r			
Wind screen corrections a	vailable	Yes				
Uncertainties of wind scre	en corrections	Yes				
Source of wind screen dat		Manufacture	r			
Mic pressure to free field of		Yes				
Uncertainties of Mic to F.F		Yes				
Source of Mic to F.F. corre		Manufacture				
Total expanded uncertaint			2-1:2002	Yes		
Specified or equivalent Ca		Specified				
Customer or Lab Calibrato		Lab Calibrato	or			
Calibrator adaptor type if a	ipplicable	NC-74-002				
Calibrator cal. date		19 August 202				
Calibrator cert. number		UCRT20/1789	9			
Calibrator cal cert issued b	у	0653				
Calibrator SPL @ STP		94.02	dB Calibr	ation refere	nce sound pres	sure level
Calibrator frequency		1001.89	Hz Calibr	ation check	frequency	
Reference level range	2021	25 - 130	dB		•	
Accessories used or corre	cted for during calib	ration - Exten	sion Cable &	Wind Shield	I WS-15	
Note - if a pre-amp extens	_					
Environmental conditions	during tests	Start	End			
	Temperature	23.62	23.52	±	0.30 °C	
[Humidity	57.7	53.9	±	3.00 %RH	
	Ambient Pressure	100.73	100.74	1 ±	0.03 kPa	
Response to associated C	alibrator at the envir	onmental conditions	s above.	1		ı
Initial indicated level			sted indicate	d level	94.0	dB
The uncertainty of the asso	18 18 18 1				0.10	dB
					0.10	<u> </u>
		not performed by t		٩D	Λ \Λ/oighting	
Microphone installed (if red Uncertainty of the microphe			N/A N/A	dB dB	A Weighting	
					=	
Microphone replaced with	electrical input devic		Under Range	indicated		
Weighting	A LID LUD	C	LUD 00	<u> </u>	Tup	
11.		15.8 dB		2.1 dB	UR	
Uncertainty of the electrica			0.12	dB	J	
The reported expanded un a coverage probability of a						
UKAS requirements.						
For the test of the frequence	y weightings as per	paragraph 12. of IE	C 61672-3:2	006 the actu	ıal microphone	free field
response was used.						
The acoustical frequency to using an electrostatic actua		weighting as per par	ragraph 11 of	IEC 61672-	3:2006 were ca	arried out
		END				
Calibrated by: B. Gile	·····	LIND				R
	:s The results on this c	ertificate only relate	to the items	calibrated a	s identified abo	







Date of Issue: 16 September 2020

Calibrated at & Certificate issued by:

ANV Measurement Systems

Beaufort Court 17 Roebuck Way

Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

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Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Certificate Number: UCRT20/1875

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Approved S	ignatory		1	*	1	
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K. Mistry						

Customer

AWN Consulting Limited

The Tecpro Building

IDA Business and Technology Park

Clonshaugh Dublin 17 Ireland

Order No.

2075

Description

Sound Level Meter / Pre-amp / Microphone / Associated Calibrator

Identification

Serial No. / Version Manufacturer Instrument Type Rion Sound Level Meter NL-52 00998411 2.0 **Firmware** Rion Pre Amplifier NH-25 98625 Rion Rion Microphone UC-59 17215 Rion Calibrator NC-74 34536109 Calibrator adaptor type if applicable NC-74-002

Performance Class

1

Test Procedure

TP 2.SLM 61672-3 TPS-49

Procedures from IEC 61672-3:2006 were used to perform the periodic tests.

Type Approved to IEC 61672-1:2002

YES

Approval Number

21.21 / 13.02

If YES above there is public evidence that the SLM has successfully completed the

applicable pattern evaluation tests of IEC 61672-2:2003

Date Received

15 September 2020

ANV Job No.

UKAS20/09503

Date Calibrated

16 September 2020

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate

Dated

Certificate No.

Laboratory

22 January 2020

UCRT20/1094

0653

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Certificate Number UCRT20/1875

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UKAS Accredited Calibration Laboratory No. 0653

Sound Level Meter Ins	truction manual an	nd data used to ad	just the so	und level	s indi	cated.		
SLM instruction manual t	itle Sound Leve	Meter NL-42 / N	L-52					
SLM instruction manual r	ef / issue	11-03						
SLM instruction manual s	source	Manufacture	er					
Internet download date if	applicable	N/A						
Case corrections availab	le	Yes						
Uncertainties of case cor	rections	Yes						
Source of case data		Manufacture	er					
Wind screen corrections	available	Yes						
Uncertainties of wind scre		Yes						
Source of wind screen da	2455.00	Manufacture	r					
Mic pressure to free field		Yes						
Uncertainties of Mic to F.		Yes						
Source of Mic to F.F. cor		Manufacture		- I V - I				
Total expanded uncertain			/2-1:2002	Yes				
Specified or equivalent C Customer or Lab Calibrat		Specified Lab Calibrate						
Calibrator adaptor type if		NC-74-002)I					
Calibrator cal. date	аррисавіе	19 August 202	20					
Calibrator cert, number		UCRT20/178						
the second desired and the second sec	b.,	0653	9					
Calibrator cal cert issued	ру		4D 0 !!!		0			
Calibrator SPL @ STP		94.02				e sound pre	ssure le	vel
Calibrator frequency		1001.89		bration ch	eck fre	equency		
Reference level range		25 - 130	dB					
Accessories used or corr			sion Cable 8					
Note - if a pre-amp exten	sion cable is listed th	en it was used betw	een the SLI	M and the	pre-a	mp.		
Environmental conditions	during tests	Start	End	d			_	
	Temperature	23.61	24.2		±	0.30 °C		
	Humidity	55.1	50.		±	3.00 %RH		
	Ambient Pressure	101.47	101.4	47	±	0.03 kPa		
Response to associated (Calibrator at the envi	ronmental condition	s above.					
Initial indicated leve	94.0	dB Adju	usted indicat	ted level		94.0	dB	
The uncertainty of the ass	sociated calibrator su	applied with the sour	nd level met	er ±		0.10	dB	
Self Generated Noise	This test is currently	y not performed by t	this Lab.					
Microphone installed (if re			N/A		ВА	Weighting		
Uncertainty of the microp	none installed self ge	enerated noise ±	N/A	۸ d	В			
Missanhana ranlagad with		LID -	Under Ranc	e indicate	d			
iviicrophone replaced with	electrical input device	ce - UR =	Officer Traffy					
Weighting	Α	C		Z				
Weighting 1	A 1.5 dB UR	C 16.4 dB	UR 2	Z 21.2 d	В	UR		
Weighting	A 1.5 dB UR	C 16.4 dB		Z 21.2 d		UR		

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

For the test of the frequency weightings as per paragraph 12. of IEC 61672-3:2006 the actual microphone free field response was used.

The acoustical frequency tests of a frequency weighting as per paragraph 11 of IEC 61672-3:2006 were carried out using an electrostatic actuator.

using an electrostatic actuator.

END

Calibrated by: C. Hirlav

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Additional Comments The results on this certificate only relate to the items calibrated as identified above. Prior to calibration the instrument's microphone was replaced and the meter was re-aligned.