Test Report C59355941

2N Telekomunikace a.s.

VoIP Intecom Speaker Phone

LiftIP 2.0 (921618BE)

Compliance Testing for Global Markets

Safety, Telecommunications and Energy Efficiency
Recognised Testing Authority, Certification Body & Conformity Assessment Body

Comtest LABORATORIES

Test Report C59355941

Laboratory Details

All tests were performed at :

Comtest Laboratories Pty. Ltd.
Unit 1 / 570 City Road
South Melbourne Victoria 3205
Australia

Telephone : +61 3 9645 5933
Email : comtest@comtest.com.au
Web Site : www.comtestgroup.com.au

Testing Environment

Tests were performed within the following environmental conditions:

Temperature: 22 ± 3°C
Humidity: 30% – 75% RH
Pressure: 950 hPa – 1050 hPa

Summary

Comtest Laboratories Pty Ltd states that the equipment **COMPLIES** with the requirements of the standards and/or specific clauses detailed on page 4.

The test results presented in this report relate only to the item(s) tested, as supplied by the client.

Approved by :

André Christodoulou
Technical Engineer

Checked by :

Neville Lynch
Senior Testing Officer

Accreditation No. 3148

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

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Client Details

Client :	2N Telekomunikace a.s.
Address :	Modranska 621 Praha 4 143 01 Czech Republic

Equipment Description

Test Item Details

Type:	VoIP Intecom Speaker Phone
Name:	LiftIP 2.0 (921618BE)
Serial Number :	52-2869-0020
Software Version :	Not Stated
Firmware Version :	2.35.0.45.0
Hardware Version:	Rel.2.0
Manufacturer :	2N Telekomunikace a.s.
Network Port(s) :	LAN
Other Port(s) :	DC in, other IO

Testing Overview

Tested was the LiftIP 2.0 (921618BE) VoIP Intecom Speaker Phone. It is an intercom phone for use inside an elevator.

For acoustic tests a type 3.3HATS artificial head was used.
The device was powered using PoE as per setup shown in photo appendix.

The sample supplied for the assessment did not include a mounting plate or housing for the microphone to simulate real world usage. The client indicated one would not be supplied for testing. As such the results recorded and presented in this report may not be indicative of the performance of the device once installed in a lift.

Regulatory Standard/s

AS/CA S004 - 2015	Telecommunications Technical Standard (Voice performance requirements for Customer Equipment – AS/CA S004) 2015

Tested Standard/s and/or Clauses

Specification	Clause(s)
AS/CA S004:2013	

Exclusions

Specification	Clause(s)
AS/CA S004:2013	Recommendation (non-mandatory)

Non-Compliances

None

Conditions of Compliance

None

Decision Rule

Where the measurand and the measurement uncertainty falls within the non-compliance limits, the result is FAIL or DOES NOT COMPLY.

Where the measurand falls within the non-compliance limits but the measurement uncertainty falls within the compliance limits, the result is FAIL or DOES NOT COMPLY and the measurement uncertainty is reported.

Where the measurand falls within the compliance limits but the measurement uncertainty falls within the non-compliance limits, the result is PASS or COMPLIES and the measurement uncertainty is reported.

Where the measurand and the measurement uncertainty falls within the compliance limits, the result is PASS or COMPLIES.

Measurement Uncertainty is reported at a confidence level of 95% and a coverage factor of $k = 2$.

AS/CA S004:2013 **TEST RESULTS**

Testing Officer: Andre Christodoulou

Test Date: 10/03/2023

Test Method: LAB-06, T80

LEGEND	
Complies	**C**
Does Not Comply	**DNC**
Not Applicable	**NA**
Not Tested	**NT**
Read and understood	**NOTED**
Recommendation (non-mandatory)	**/R (suffix)**

AS/CA S004:2013 **Voice performance requirements for Customer Equipment**

5 REQUIREMENTS

S004 / 5.1	**THIS CLAUSE LEFT BLANK**		

S004 / 5.2	**Maximum Signal Level to Line for Speech and Music**		
	Maximum Voltage into a 600Ω load [**Shall not** exceed 5.0 Vp-p]		**NA**

S004 / 5.3	**Non Electro-Acoustic Transmission**		
S004 / 5.3.1	**General**		
	Applicable to CE with speech or music not directly generated by acoustic input		**NOTED**

S004 / 5.3.2	**Normal Operating Level**		
5.3.2.1	The levels of speech or music, derived from pre-recorded media, line transmission, synthesised speech, synthesised music or other non-acoustic inputs **should** not be greater than –12 VU and **should** not be less than –36 VU.		**NT/R**
5.3.2.2	Where CE is capable of transmitting composite speech and music signals, the level of the music component **should** be at least 10 dB lower than the level of the speech component.		**NT/R**

S004 / 5.3.3	**Relative Frequency Response**		
	The send frequency response of speech or music, derived from pre-recorded media, line transmission, synthesised speech, synthesized music or other non-acoustic inputs **should** be within the limits of Figure 1 when used in accordance with the CE supplier's instructions.		**NT/R**

S004 / 5.4	**Electro-acoustic Transmission and Reception**		
S004 / 5.4.1	**General**		
5.4.1.1	The requirements in Clauses 5.4.1 apply to CE that is transmitting to and receiving from line, speech or music that is directly generated by an acoustic input or delivered to an acoustic output.		**NOTED**
5.4.1.2	CE with digital (VoIP or ISDN) interfaces **should** support ITU-T Rec. G.711 coding. Note: This requirement is aligned with ITU-T Rec. P.1010.		**NT/R**
5.4.1.3	CE with digital network interfaces supporting ITU-T Rec. G.711 coding at that interface **shall** comply with all applicable clauses in this Standard.		**C**
5.4.1.4	CE with digital network interfaces using encoding other than ITU-T Rec. G.711 [8] coding at that interface (e.g. low bitrate encoding, speech optimized, etc.)— (a) **should** meet the standard test vectors associated with the codec in use; (b) **should** comply with the Frequency Response, Loudness and Sidetone Masking Ratings requirements of this Standard; (c) **shall** comply with the maximum sound pressure level and acoustic shock requirements of this Standard; and (d) **shall** comply with other applicable clauses in this Standard. Note: The use of echo control, voice activity detection, and automatic gain control may influence the test results.		**NT/R** **NT/R** **NA** **NA**
5.4.1.5	CE using any of the Wideband, Super Wideband, or Fullband frequency ranges as defined in ETSI Guide EG 202 518 — (a) are exempt from compliance with the Loudness Rating and Sidetone Masking Rating requirements of this Standard for those frequency bands; and (b) **shall** comply with the maximum sound pressure level and acoustic shock requirements of this Standard for all frequency bands in which the CE can operate.		**NOTED** **NA**
5.4.1.6	The performance of CE with acoustic input in addition to the handset or headset **should** be assessed in accordance to the requirements of Clause 5.4.2.		**NOTED**
5.4.1.7	The performance of handsets and headsets intended for use with one or more items of CE **shall** comply with the requirements of Clause 5.4.3, when connected to a representative sample of a suitable telephone instrument.		**NOTED**

S004 / 5.4.2	**Customer Equipment without a handset or headset**		
S004 / 5.4.2.1	**Normal Operating Level**		
	CE which operates for voice communication exclusively in a hands-free mode, the output level of transmitted signals **shall** be within – 6 VU to –18 VU when used in accordance with the CE supplier's instructions.		**NA**

S004 / 5.4.2.2	**Send Frequency Response**		
	CE which operates for voice communication exclusively in a hands-free mode, the send frequency response to acoustic input **shall** be within the limits of Figure 1 when used in accordance with the CE supplier's instructions.	FIG : A1	**C**

S004 / 5.4.3	**Customer Equipment with a handset and/or headset**		
S004 / 5.4.3.1	**Send Frequency Response**		
5.4.3.1.1	CE with analogue interfaces which incorporate a—		
5.4.3.1.1 (a)	Handset / Average 0.4 mm cable [**Shall** be within the mask of S004 / Fig. 2]		**NA**
5.4.3.1.1 (b)	Headset or cordless handset / Average 0.4 mm cable. [**Shall** be within the mask of S004 / Fig. 3]		**NA**

5.4.3.1.2	CE with digital network interfaces that has a G.711 codec and incorporates a—		
5.4.3.1.2 (a)	Handset / 0 km . [**Shall** be within the mask of S004 / Fig. 4]		**NA**
5.4.3.1.2 (b)	Headset or cordless handset / 0 km . [**Shall** be within the mask of S004 / Fig. 5]		**NA**

S004 / 5.4.3.2	**Receive Frequency Response**		
5.4.3.2.1	CE with analogue interfaces which incorporates a—		
5.4.3.2.1 (a)	Handset [**Shall** be within the mask of S004 / Fig. 6]		**NA**
5.4.3.2.1 (b)	Headset or cordless handset [**Shall** be within the mask of S004 / Fig. 7]		**NA**

5.4.3.2.2	CE with digital network interfaces that has a G.711 codec and incorporates a—		
5.4.3.2.2 (a)	Handset [**Shall** be within the mask of S004 / Fig. 6]		**NA**
5.4.3.2.2 (b)	Headset or cordless handset [**Shall** be within the mask of S004 / Fig. 7]		**NA**

S004 / 5.4.3.3	**Send and Receive Loudness Ratings**		
5.4.3.3.1	**Send and Receive Loudness Ratings (Analogue other than CAE)**		
	CE other than CAE, with analogue network interfaces **shall** comply with the Send Loudness Rating (SLR) and Receive Loudness Rating (RLR) requirements specified in Table 1. The ranges specified in Table 1 include allowance for production tolerances for SLR and RLR of telephones but make no allowance for measuring instrument tolerances.		
5.4.3.3.1	**Send Loudness Ratings for 0.4 mm Artificial Line**		
	Line length Short: [4 dB ≤ SLR ≤ 12 dB]		**NA**
	Line length Average: [4 dB ≤ SLR ≤ 12 dB]		**NA**
	Line length Limit: [8 dB ≤ SLR ≤ 16 dB]		**NA**

5.4.3.3.1	**Receive Loudness for 0.4 mm Artificial Line**		
	Volume at Nominal		
	Line length Short: [-8 dB ≤ RLR ≤ 0 dB]		**NA**
	Line length Average: [-8 dB ≤ RLR ≤ 0 dB]		**NA**
	Line length Limit: [-4 dB ≤ RLR ≤ +4 dB]		**NA**
	Volume at Maximum		
	Line length Short		
	Line length Average		
	Line length Limit		
	Volume at Minimum		
	Line length Short		
	Line length Average		
	Line length Limit		

5.4.3.3.1	**Send Loudness Ratings for 0.64 mm Artificial Line**		
	Line length Short: [4 dB ≤ SLR ≤ 12 dB]		**NA**
	Line length Average: [4 dB ≤ SLR ≤ 12 dB]		**NA**
	Line length Limit: [8 dB ≤ SLR ≤ 16 dB]		**NA**

5.4.3.3.1	**Receive Loudness Ratings for 0.64 mm Artificial Line**		
	Volume at Nominal Line length Short: [-8 dB ≤ RLR ≤ 0 dB] Line length Average: [-8 dB ≤ RLR ≤ 0 dB] Line length Limit: [-4 dB ≤ RLR ≤ +4 dB]		 **NA** **NA** **NA**
	Volume at Maximum Line length Short: Line length Average: Line length Limit:		
	Volume at Minimum Line length Short: Line length Average: Line length Limit:		

5.4.3.3.2	**Send and Receive Loudness Ratings (Digital Interface)**		
	CE with digital network interfaces **shall** comply with the short term limits for Send Loudness Rating (11 dB > SLR > 5 dB) and Receive Loudness Rating (5 dB > RLR > –1 dB) as specified in ITU–T Recommendation P.310		
	Send Loudness Ratings		
	[5 dB < SLR < 11 dB]		**NA**
	Receive Loudness Ratings		
	Volume at Nominal [-1.0 dB < RLR < 5·0 dB]		**NA**
	Volume at Maximum		
	Volume at Minimum		

5.4.3.3.3	**Send and Receive Loudness Ratings (CAE)**		
	CAE with analogue network interfaces together with their Industry Based Proprietary Terminals **shall** comply with the loudness rating requirements applicable to lines of short length.		
	Send Loudness Ratings		
	Line length Short: [4 dB ≤ SLR ≤ 12 dB]		**NA**
	Receive Loudness Ratings		
	Line length Short: [-8 dB ≤ RLR ≤ 0 dB] Volume at Nominal		 **NA**
	Volume at Maximum		
	Volume at Minimum		

S004 / 5.4.3.4	**Sidetone**		
5.4.3.4.1	**Sidetone Masking Rating (Analogue other than CAE)**		
	CE which have analogue network interfaces **shall** comply with the STMR requirements specified in Table 2. Where two values are shown in the table, the requirement is that the CE has a measured value of STMR numerically greater than the lesser of the two values.		

5.4.3.4.1	**Sidetone Masking Rating (STMR)** **For 0.4 mm Artificial Line**		
	600 Ω		
	Volume at Nominal Line length Short: [> 7 dB or > (SLR0+RLR0+8dB)] Line length Average: [> 7 dB or > (SLR0+RLR0+8dB)] Line length Limit: [> 7 dB or > (SLR0+RLR0+8dB)]		 **NA** **NA** **NA**
	Volume at Maximum Line length Short Line length Average Line length Limit		
	Volume at Minimum Line length Short Line length Average Line length Limit		
	Complex		
	Volume at Nominal Line length Short: [> 7 dB or > (SLR0+RLR0+8dB)] Line length Average: [> 7 dB or > (SLR0+RLR0+8dB)] Line length Limit: [> 7 dB or > (SLR0+RLR0+8dB)]		 **NA** **NA** **NA**
	Volume at Maximum Line length Short Line length Average Line length Limit		
	Volume at Minimum Line length Short Line length Average Line length Limit		

5.4.3.4.1	**Sidetone Masking Rating (STMR) 0.64 mm Artificial Line**		
	600 Ω		
	Line length Limit : [> 3 dB or > (SLR0+RLR0+8 dB)] Volume at Nominal		**NA**
	Volume at Maximum		
	Volume at Minimum		
	Complex		
	Line length Limit : [> 3 dB or > (SLR0+RLR0+8 dB)] Volume at Nominal		**NA**
	Volume at Maximum		
	Volume at Minimum		

5.4.3.4.2	**Sidetone Masking Rating (Digital Interfaces)**		
	CE with digital network interfaces **shall** comply with the minimum short term limit for Sidetone Masking Rating (STMR > 10 dB) recommended in ITU–T Rec. P.310 [13].		
	Volume at Nominal [>10 dB]		**NA**
	Volume at Maximum		
	Volume at Minimum		

5.4.3.4.3	**Sidetone Masking Rating (CAE)**		
	CAE together with its Industry Based Proprietary Terminals **shall** comply with the STMR for lines of average length.		

5.4.3.4.3	**Sidetone Masking Rating (STMR) For 0.4 mm Artificial Line**		
	600 Ω		
	Line length Average: [> 7 dB or > (SLR0+RLR0+8dB)] Volume at Nominal		**NA**
	Volume at Maximum		
	Volume at Minimum		
	Complex		
	Line length Average: [> 7 dB or > (SLR0+RLR0+8dB)] Volume at Nominal		**NA**
	Volume at Maximum		
	Volume at Minimum		

S004 / 5.4.3.5	Weighted Terminal Coupling Loss (TCLw)		
S004 / 5.4.3.5.1	**For VoIP CE**		
	(a) The Weighted Terminal Coupling Loss (TCLw) **should** exceed the 55 dB limit of ITU-T Rec. P.1010 [15]; and		**NT/R**
	(b) Echo cancellers **should** be provided.		**NT/R**

S004 / 5.4.3.6	Howling		
5.4.3.6.1	The CE shall be stable (i.e. not howling) in the on-line condition when the volume control is at the normal volume setting and with its handset:		
	(a) Lying with the transducers facing a flat glass surface.		**NA**
	(b) Being returned to its cradle.		**NA**
5.4.3.6.2	For a cordless CE, the handset **shall** be stable (i.e. will not howl) at any distance from its base station when the volume control is at the normal volume setting.		**NA**
5.4.3.6.3	For a cordless CE, the handset **should** be stable (i.e. will not howl) at any distance from its base station when the volume control is set to maximum volume.		**NT/R**
5.4.3.6.4	If a cordless CE has a loud speaking function on the base unit that can be active at the same time that the cordless handset is in use, the user instructions **should** include a warning notice against bringing the handset close to the base when this feature is in use.		**NT/R**

S004 / 5.4.3.7	Acoustic Shock Protection		
	Acoustic shock is a multi-faceted phenomenon that has a number of contributing factors. A sudden loud sound may cause a person to be startled and can result in significant physical and emotional discomfort. The degree and duration of the effects can depend on factors including but not limited to: (a) the health stress and emotional state of the person; (b) the frequency of the sound; and (c) the loudness of the sound • Note: Devices that comply with the maximum sound pressure levels specified in Clause 5.4.3.8 provide some protection against acoustic shock when compared with devices that do not meet this maximum level. Acoustic shock may, however, still occur in some circumstances regardless of whether the device complies with the maximum level specified in Clause 5.4.3.8. Communications Alliance has published the G616 [5] Guideline on acoustic safety for telephone equipment.		**NOTED**

S004 / 5.4.3.8	**Maximum Sound Pressure Level**		
S004 / 5.4.3.8.1	**General**		
	The maximum RMS and instantaneous output sound pressure levels **shall** be less than the value specified in Table 3 when any user-adjustable receiver volume control is set to maximum when measured—		
5.4.3.8.1 (a)	using 'RMS', 'Fast' settings of sound level meters as defined in IEC 60651 or equivalent for short term RMS SPL; or		**NOTED**
5.4.3.8.1 (b)	using 'Peak', 'Max Hold' settings of sound level meters as defined in IEC 60651 or equivalent for instantaneous SPL.		**NOTED**

S004 / 5.4.3.8.2	**CE with analogue PSTN interface**		
5.4.3.8.2.1	RMS Output levels		
	The maximum output sound pressure level for continuous input voltage **shall** be determined when the source voltage to the CE is varied between 100 mV r.m.s. and 30 V r.m.s. from a 600 Ω source impedance while—		
5.4.3.8.2.1 (a)	varying the frequency between 100 Hz and 8 kHz in a swept or continuous manner Handset at ERP: Output SPL [≤ 120 dB_{SPL} at 20 mA] : Output SPL [≤ 120 dB_{SPL} at 80 mA] :		 **NA** **NA**
	Headset at ERP: Output SPL [≤ 118 dB_{SPL} at 20 mA] : Output SPL [≤ 118 dB_{SPL} at 80 mA] :		 **NA** **NA**

5.4.3.8.2.1 (b)	varying the frequency in a stepped pulsed manner by applying 500 ms pulses in accordance with the method detailed in Appendix B		
	Handset at ERP:		
	Output SPL [≤ 120 dB_{SPL} at 20 mA] :		**NA**
	Output SPL [≤ 120 dB_{SPL} at 80 mA] :		**NA**
	Headset at ERP:		
	Output SPL [≤ 118 dB_{SPL} at 20 mA] :		**NA**
	Output SPL [≤ 118 dB_{SPL} at 80 mA] :		**NA**
5.4.3.8.2.2	Instantaneous output level		
	The maximum instantaneous output sound shall be determined by subjecting the CE to a single pulse of energy		
	Handset at ERP:		
	Output SPL [≤ 123 dB_{SPL} at 20 mA] :		**NA**
	Output SPL [≤ 123 dB_{SPL} at 80 mA] :		**NA**
	Headset at ERP:		
	Output SPL [≤ 123 dB_{SPL} at 20 mA] :		**NA**
	Output SPL [≤ 123 dB_{SPL} at 80 mA] :		**NA**

S004 / 5.4.3.8.3	CE with Digital interface - RMS output levels		
	The maximum output sound pressure level **shall** be determined by varying a digitally encoded sinusoidal signal with a level—		
5.4.3.8.3 (a) (i)	over the range –9 dBm0 to +3.14 dBm0. While varying the frequency between 100 Hz and 8 kHz in a swept or continuous manner in accordance with the method detailed in Clause 6.3.5.4 [≤ 120 dB_{SPL}]; Handset [≤ 120 dB_{SPL}] : Headset [≤ 118 dB_{SPL}] :		 **NA** **NA**
5.4.3.8.3 (a) (ii)	While varying the frequency in a stepped pulsed manner by applying 500 ms pulses in accordance with the method detailed in Appendix B. [≤ 120 dB_{SPL}] Handset [≤ 120 dB_{SPL}] : Headset [≤ 118 dB_{SPL}] :		 **NA** **NA**
5.4.3.8.3 (b) (i)	at +10 dBm0. While varying the frequency between 100 Hz and 8 kHz in a swept or continuous manner in accordance with the method detailed in Clause 6.3.5.4 [≤ 120 dB_{SPL}]; Handset [≤ 120 dB_{SPL}] : Headset [≤ 118 dB_{SPL}] :		 **NA** **NA**
5.4.3.8.3 (b) (ii)	While varying the frequency in a stepped pulsed manner by applying 500 ms pulses in accordance with the method detailed in Appendix B. [≤ 120 dB_{SPL}] Handset [≤ 120 dB_{SPL}] : Headset [≤ 118 dB_{SPL}] :		 **NA** **NA**

S004 / 5.4.3.8.4	Handsets and/or headsets supplied independently for use with one or more host CE		
5.4.3.8.4.1	**General**		
	Handsets and/or headsets supplied with detachable amplifiers **shall** be tested with and without the amplifier. The compliance levels, both with and without the amplifier, **shall** be recorded in the report. Handsets or headsets supplied with dedicated or non-detachable amplifiers **shall** be tested as complete units.		**NA** **NA** **NA**

5.4.3.8.4.2	**RMS output Levels**		
	The maximum output sound pressure level for continuous input voltage **shall** be determined when the source voltage to the CE is varied between 100 mV and 10 V r.m.s. from a 220 Ω source impedance while.		
5.4.3.8.4.2 (a)	varying the frequency between 100 Hz and 8 kHz in a swept or continuous manner and Handset with amplifier: Output SPL [≤ 120 dB_{SPL}] Handset without amplifier: Output SPL [≤ 120 dB_{SPL}] Headset with amplifier: Output SPL [≤ 118 dB_{SPL}] Headset without amplifier: Output SPL [≤ 118 dB_{SPL}]		**NA**
5.4.3.8.4.2 (b)	varying the frequency in a stepped pulsed manner by applying 500 ms pulses. Handset with amplifier: Output SPL [≤ 120 dB_{SPL}] Handset without amplifier: Output SPL [≤ 120 dB_{SPL}] Headset with amplifier: Output SPL [≤ 118 dB_{SPL}] Headset without amplifier: Output SPL [≤ 118 dB_{SPL}]		**NA**

5.4.3.8.4.3	**Instantaneous output level**		
	The maximum instantaneous sound pressure level **shall** be determined when the CE is subjected to a single pulse of energy using the circuit illustrated in Figure 22. Handset with amplifier: Output SPL [≤ 123 dB_{SPL}] Handset without amplifier: Output SPL [≤ 123 dB_{SPL}] Headset with amplifier: Output SPL [≤ 123 dB_{SPL}] Headset without amplifier: Output SPL [≤ 123 dB_{SPL}]		**NA**

S004 / 5.4.3.9	**Audible Incoming Signal**		
5.4.3.9.1	**Cordless handset Incoming Call Signal loudness**		
	If an audible Incoming Call Alert Signal is emitted anywhere on the cordless portable telephone or cordless portable part of a cordless telephone system, the maximum sound pressure level **shall** not exceed 120 dB SPL at ERP or equivalent at DRP irrespective of the transducer producing the sound		**NA**
5.4.3.9.2	**Headset interface Incoming Call Alert Signal**		
	Where an Incoming Call Alert Signal is directed to a physical electrical interface/connector for a headset or earphone, the signal level **shall** not exceed the maximum level for voice signals applied to the same interface when any user-adjustable receiver volume control is set to maximum, minimum and any intermediate value. Note: Non-voice signals applied to the headset or earphone interface (such as confidence tones, alert signals or DTMF digit signals) should be of a similar electrical level as the voice signals. Receiver volume control set to minimum Receiver volume control set to Receiver volume control set to maximum		**NA**
5.4.3.9.3	**Ring trip on a corded telephone**		
	Where ring trip on a corded telephone is achieved by manual operation of a switch or press button, the audible incoming call signal **shall** not be emitted via the receiver (earpiece) of the telephone.		**NA**

S004 / 5.4.3.10	**Distortion**		
5.4.3.10.1	**Sending distortion**		
	For CE, the total harmonic distortion (summed up to the 5th harmonic) **shall not** be greater than 7 % when measured with an input of –4.7 dBPa, at a loop current of 20 mA.		**NA**
5.4.3.10.2	**Receiving distortion**		
	For CE, the total harmonic distortion (summed up to the 5th harmonic) **shall not** be greater than 7 %, when measured with an input signal level of 251 mV r.m.s. at a loop current of 20 mA.		**NA**

S004 / 5.4.3.11	**Retention of Dangerous Objects**		
	The CE **shall not** hold any dangerous objects in the mouthcap or earcap regions unless the CE is provided with a suitable warning notice. Mouthcap Region: Earcap Region:		 **NA** **NA**

S004 / 5.5	Acoustic Coupling		
5.5.1	Acoustic coupling devices **shall not** emit sound pressure levels exceeding 100 dBA SPL (2 Pa) Level :		**NA**
5.5.2	All acoustic signals emitted by the equipment **should** be in the range 300 Hz to 3.4 kHz with at least a 12 dB/octave rolloff below 300 Hz and above 3.4 kHz, relative to 100 dB SPL at 3.4 kHz.		**NT/R**
5.5.3	Where equipment generates DTMF signalling frequencies:		
5.5.3 (a)	the frequency allocation and tolerance **should** be in accordance with AS/CA S002		**NT/R**
5.5.3 (b)	the sound pressure level (SPL) difference between high and low group frequency tones **should** be < 4 dB with the levels of the lower frequency being the lesser High group frequecy tones Low group frequecy tones Difference		**NT/R**

Appendix A

Appendix A : Plotted / Tabulated Results

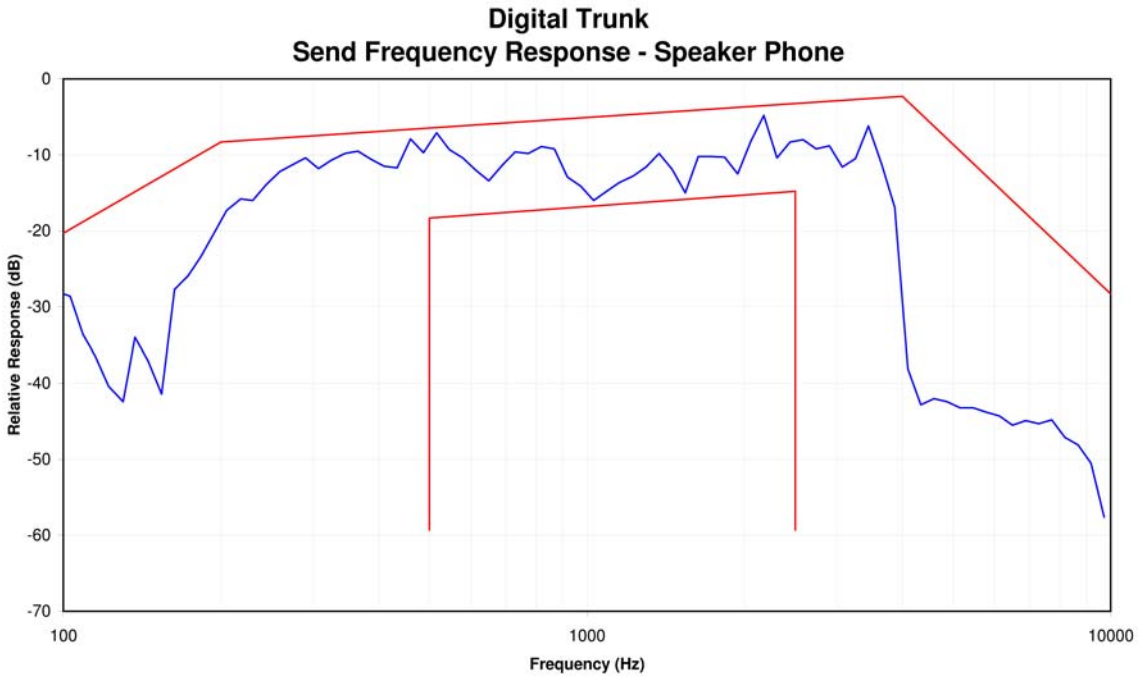
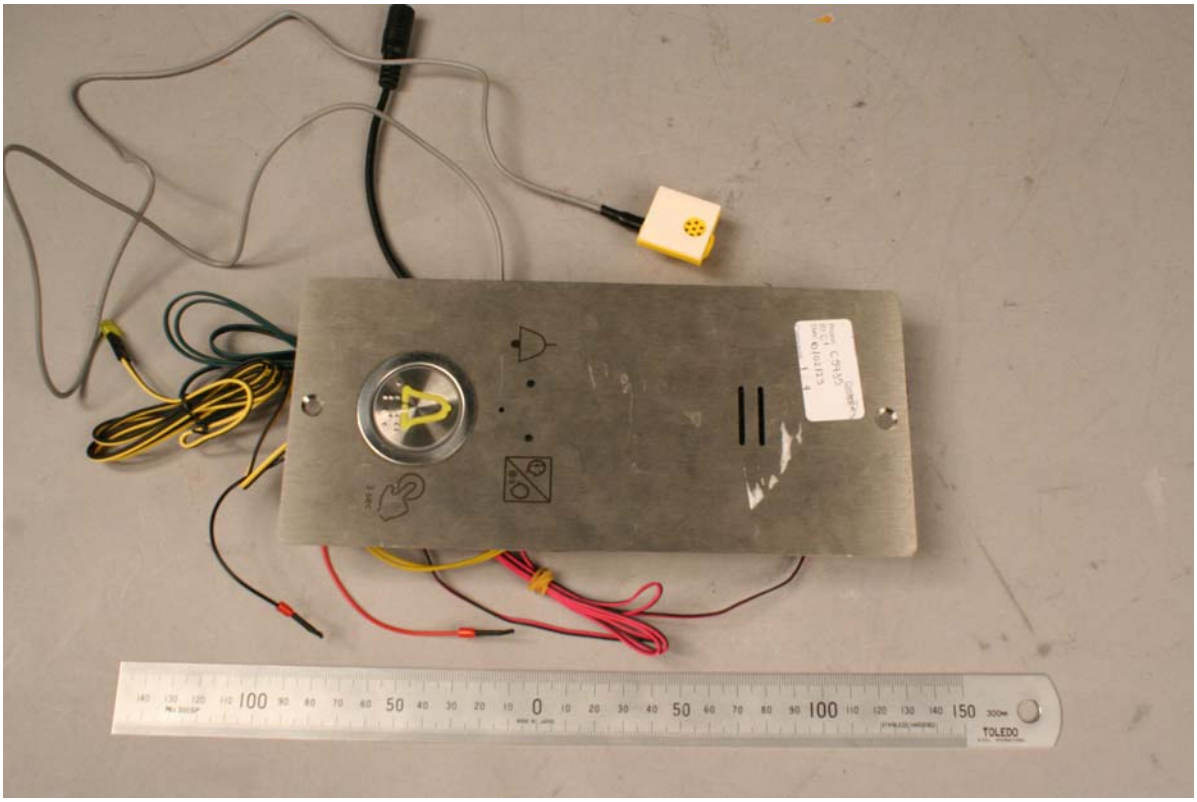
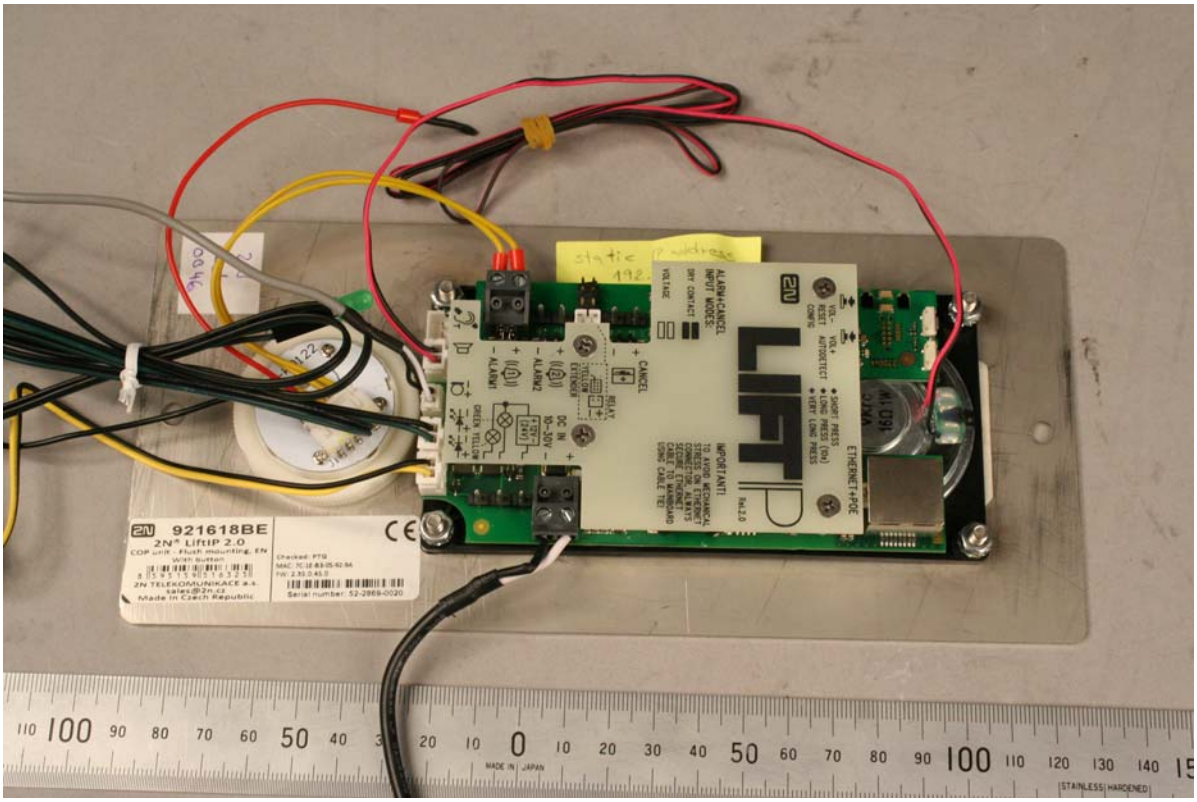


FIG : A1

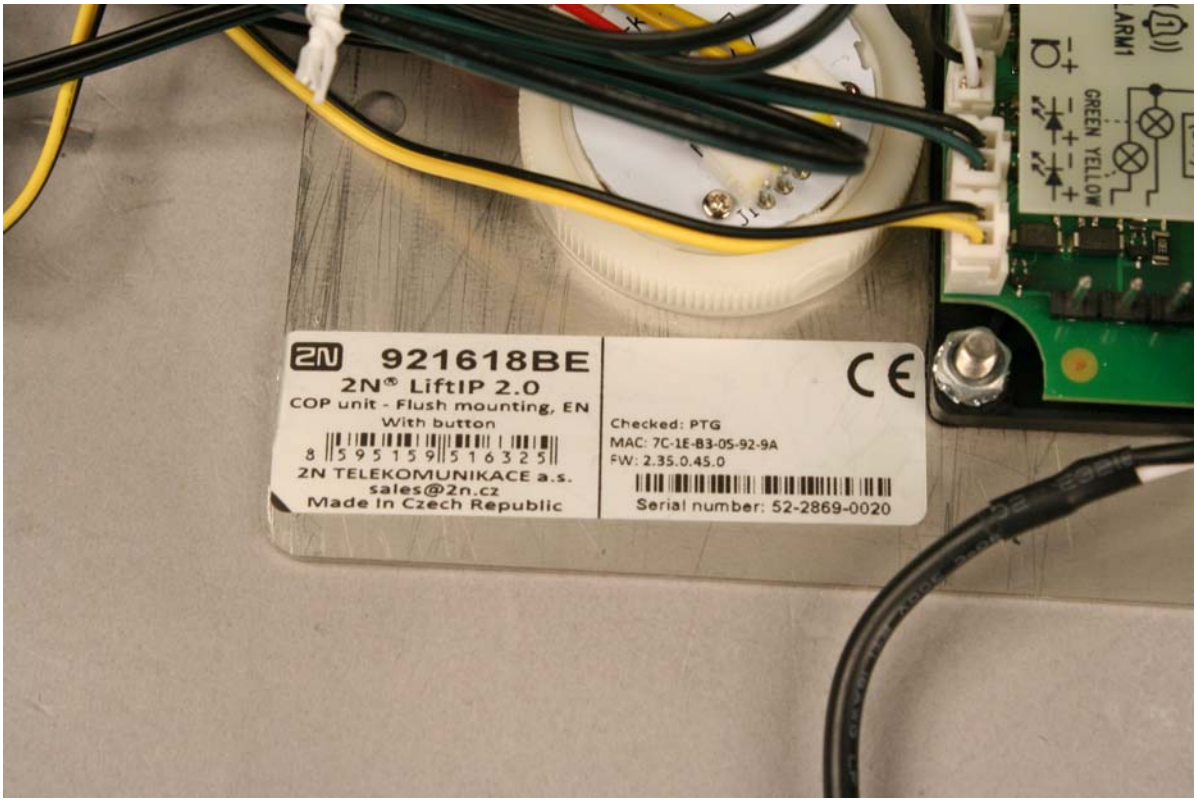
Appendix B

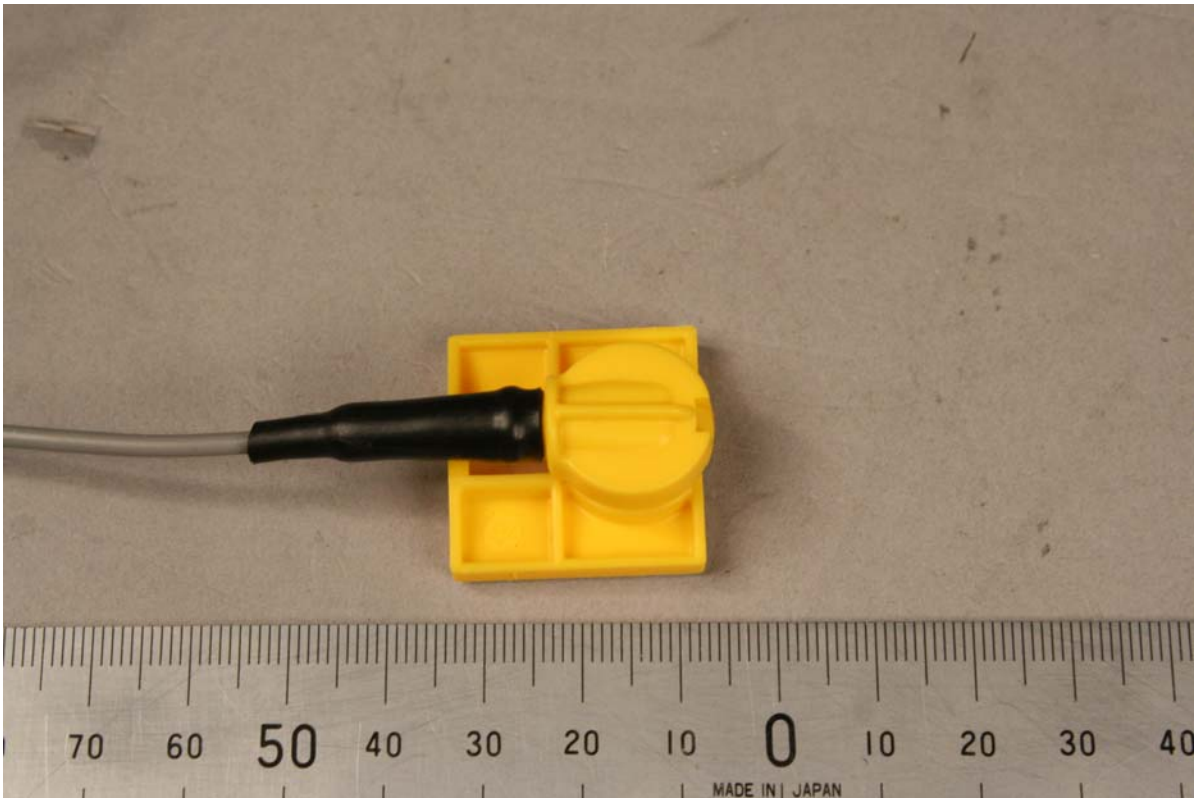
Appendix B : Photographs

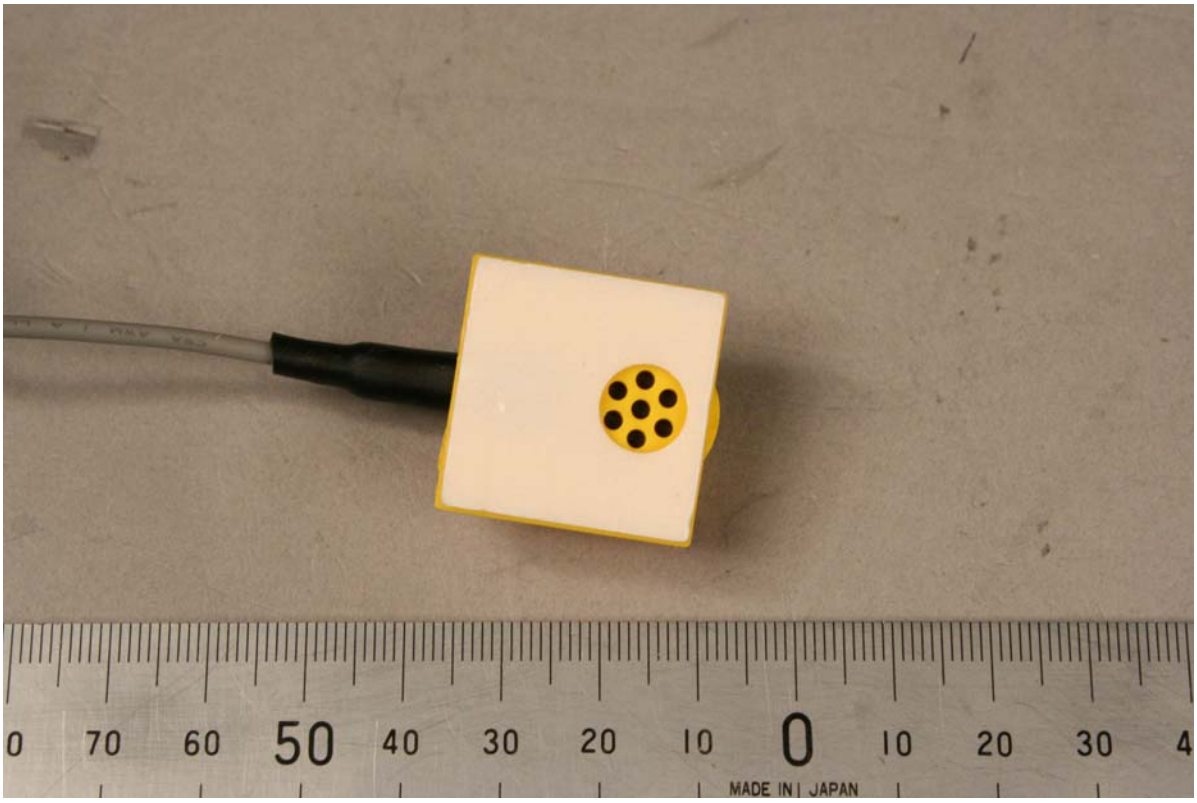




Appendix B : Photographs



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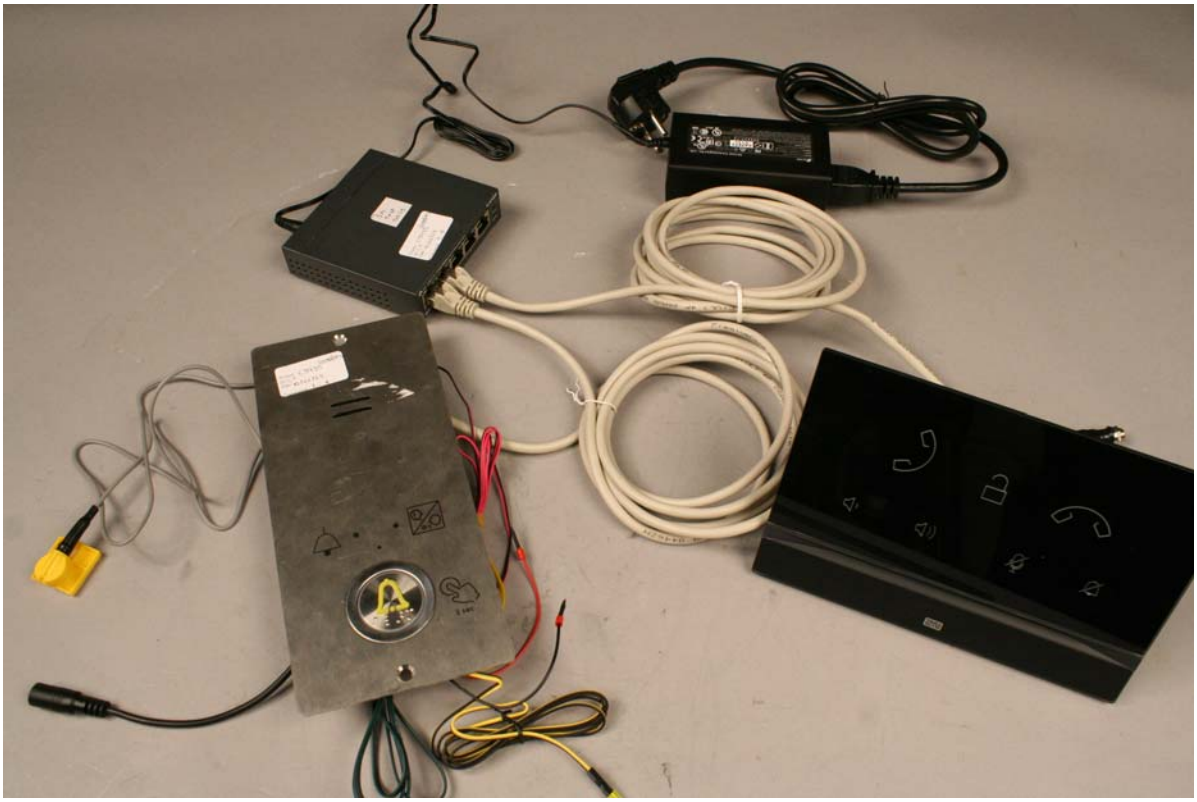
MADE IN JAPAN



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