1 priedas

Uždaroji akcinė bendrovė „Biomedikos centras“
Adresas: Antakalnio g. 36, 10305 Vilnius
Įmonės kodas: 304943503. PVM mokėtojo kodas: LT100011966710.
Banko rekvizitai: A/s LT747300010155959883 Kodas 73000 AB bankas „Swedbank“

LSMU ligoninė Kauno klinikos

PASIŪLYMAS

DĖL DAVIKLIO KLAUSOS PATIKROS PRIETAISUI PIRKIMO

2021-05-18 Nr. 54
(Data)
_____Vilnius_____
(Sudarymo vieta)

TIEKĖJO REKVIZITAI

Tiekėjo pavadinimas */Jeigu dalyvauja ūkio subjektų grupė, surašomi visi dalyvių pavadinimai/*	UAB "Biomedikos centras"
Tiekėjo adresas */Jeigu dalyvauja ūkio subjektų grupė, surašomi visi dalyvių adresai/*	Antakalnio g. 36, LT-10305 Vilnius
Tiekėjo įmonės kodas, PVM mokėt. kodas	304943503, LT100011966710
Už pasiūlymą atsakingo asmens vardas, pavardė	Guoda Černiauskaitė
Įmonės vadovo pareigos, vardas, pavardė	Direktorius Kęstutis Liegus
Atsiskaitomosios sąskaitos numeris, bankas, banko kodas	LT747300010155959883, AB Swedbank, banko kodas 73000
Už sutarties vykdymą atsakingo asmens pareigos, vardas, pavardė	Pardavimo vadybininkė Guoda Černiauskaitė
Telefono numeris	+370 700 55440
Fakso numeris	-
El. pašto adresas	guoda@biomedikoscentras.lt

Šiuo pasiūlymu pažymime, kad sutinkame su visomis neskelbiamos apklausos sąlygomis, nustatytomis pirkimo dokumentuose ir jų prieduose.

1 lentelė

PASIŪLYMO KAINA

Eil. Nr.	Prekių pavadinimas	Modelis, gamintojo pavadinimas	Kiekis	Mato vnt.	Vieneto kaina EUR (be PVM)	Bendra kaina EUR (be PVM)	Bendra kaina EUR (su PVM)
1.	Daviklis klausos patikros prietaisui	Modelis 8503158, Interacoustics	1	vnt.	1.200,00	1.200,00	1.452,00
						Bendra pasiūlymo kaina EUR su PVM:	1.452,00

Tais atvejais, kai pagal galiojančius teisės aktus tiekėjui nereikia mokėti PVM, jis nurodo priežastis, dėl kurių PVM nemoka.

2 lentelė

PATEIKIAMŲ DOKUMENTŲ SĄRAŠAS

Eil.Nr.	Pateiktų dokumentų pavadinimas	Dokumento puslapių skaičius
1.	RC pažyma	2 psl.
2.	Instrukcija	23 psl.

3 lentelė

INFORMACIJA APIE SUBTIEKĖJUS*

Eil. Nr.	Subtiekėjo pavadinimas	Adresas

***Pildyti tuomet, jei pirkimo sutarties vykdymui bus pasitelkti subtiekėjai.**

Pasiūlymo konfidencialią informaciją sudaro: (tiekėjai **turi nurodyti**, kokia pasiūlyme pateikta informacija yra konfidenciali) (žr. Viešųjų pirkimų tarnybos išaiškinimą (**http://vpt.lrv.lt/lt/naujienos/priminimas-del-konfidencialumo-viesuosiuose-pirkimuose**), kuriame nurodoma kas negali būti laikoma konfidencialia informacija):

_____

_____

Pasiūlymas galioja iki 2021-08-18. Pasiūlymas turi galioti ne trumpiau kaip 90 kalendorinių dienų.

Pardavimo vadybininkė		Guoda Černiauskaitė
(Tiekėjo arba jo įgalioto asmens pareigų pavadinimas)	(Parašas)	(Vardas ir pavardė)

LIETUVOS RESPUBLIKA UAB „Biomedikos centras" REPUBLIC OF LITHUANIA

2 priedas

Daviklio klausos patikros prietaisui techninė specifikacija (kiekis 1 vnt.)

Eil. Nr.	Parametrai (specifikacija)	Reikalaujamos parametrų reikšmės	Siūlomos parametrų reikšmės
1.	Daviklis klausos patikros prietaisui	Siūlomas daviklis klausos patikros prietaisui turi būti techniškai suderinamas su LSMU ligoninėje Kauno klinikose naudojamu gamintojo „Interacoustics“ otoakustinės emisijos aparatu naujagimių klausos patikrai „OtoRead Clinical TE/DPOAE“ (inv. nr. 13711770, gamykl. nr. 2019050). *(firmos „Interacoustics“ daviklio klausos patikros prietaisui kodas 8503158 arba lygiavertis)*	Siūlomas daviklis klausos patikros prietaisui yra techniškai suderinamas su LSMU ligoninėje Kauno klinikose naudojamu gamintojo „Interacoustics“ otoakustinės emisijos aparatu naujagimių klausos patikrai „OtoRead Clinical TE/DPOAE“ Daviklio gamyklinis kodas 8503158 "Instrukcija" 5 psl.
2.	Prekei suteikiama garantija	Ne mažiau kaip 12 mėnesių.	12 mėnesių.
3.	Į pasiūlymo kainą turi būti įskaičiuotos siūlomos prekės pristatymo išlaidos	Būtina *(būtinas tiekėjo patvirtinimas, kad į pasiūlymo kainą įskaičiuotos siūlomos prekės pristatymo išlaidos)*	Į pasiūlymo kainą įskaičiuotos prekės pristatymo išlaidos

Pastabos, papildomi reikalavimai:

1. Lentelėje nurodytas firmos pavadinimas ir kataloginis numeris (kodas) jokios komercinės reikšmės neturi, tik nurodo perkamos prekės technines charakteristikas aprašantį informacijos šaltinį. Gali būti siūloma nurodyto gamintojo konkrečiu katalogo numeriu įvardinta prekė arba jai lygiavertis, atitinkantis lentelėje pateiktus reikalavimus, kitos firmos gaminys.
2. Pirkimo organizatoriui pareikalavus, įvertinimui turi būti pateiktas siūlomos prekės pavyzdys.

Service Manual

OtoRead

Standard, Clinical and Screening

Part number 8011595
Valid from 2019-04

Contents

Technical Specifications

Medical CE-mark:	The CE-mark indicates that Interacoustics A/S meets the requirements of Annex VI of the Medical Device Directive 93/42/EEC.	
	Approval of the quality system is made by TÜV – identification no. 0123.	
Standards:	**Safety:**	IEC 60601-1
	EMC:	IEC 60601-1-2
	Audiometer:	IEC 60645-3
Operation environment:	**Temperature:**	15 – 35 °C
	Rel. Humidity:	30 – 90%
	Ambient Pressure	98 kPa – 104 kPa
Storing/handling:		Temperatures below 0°C and above 50°C may cause permanent damage on the instrument and its accessories.

Test Specifications:		
Measurement Type	Otoacoustic Emissions.	
Frequency Range	**DPOAE**	1.5, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 10, 12 kHz.
	TEOAE	0.7, 1, 1.4, 1.5, 2, 2.5, 2.8, 3.5, 4 kHz.
Stimulus Intensity	**DPOAE**	40 to 65 dB SPL
	TEOAD	83 dB SPL
Maximum Output:		90 dB SPL.
(Protection):		(This level is well within OSHA permissible limits of 90 dBA for 8 hours).
Microphone System Noise:		-20 dB SPL @ 2 kHz (1 Hz bandwidth).
		-13 dB SPL @ 1 kHz (1 Hz bandwidth).

Instrument Specifications:		
Power Supply:		(4) AA/UM – 3/R6 – alkaline (6V total)
Battery Life		Approximately 300 tests
Dislpay:		LCD-display 4 line x 4 character
Probe Cables:	Standard	30cm
	Extension Cable	+ 100cm / 39 inches
	Extension Cable	+ 200cm / 79 inches
Instrument weight		300g / 10.6 oz. including batteries

Printer Specifications:		
Type:		Thermal dot matrix line printer
Speed:	>10 lines per second	Full printout both ears approx. 7 sec.
Operating Noise:		>50 dB SPL
Power Supply:	External Power Supply	Input: 100-240V, 50/60Hz, 0.8 A
		Output: 7.5V/ 3.3A
Paper:		Thermal roll 57mm/2,25” wide
Weight:		845 g/ 1.9lbs including power supply

Language Options:	English, German, French, Spanish

General about specifications

Interacoustics continuously strive to improve the products and their performance. Therefore the specifications can be subject to change without notice.
The performance and specifications of the instrument can only be guaranteed if it is subject to a technical maintenance at least once a year. This should be made by a workshop, authorised by Interacoustics.
Questions about representatives and products may be sent to:

Interacoustics A/S	Phone:	+45 63713555
Drejervaenget 8	Fax:	+45 63713522
DK 5610 Assens	email:	info@interacoustics.com
Denmark	http:	www.interacoustics.com

Servicing the Instrument

A technician qualified by Interacoustics must perform Service on the OtoRead Instrument. The warranty will be voided if non-qualified personnel open the handheld instrument, probe, cradle, or printer. Use of unauthorised replacement parts will void the warranty. All parts used for repair or replacement must be original factory parts or those specified otherwise in this manual. In order to maintain the quality operation of the instrument the procedures used for testing or repair must be performed exactly as described in this manual.

Please verify on a regular basis that the service manual being used is the most current revision available.
If problems are encountered that are not described in this manual the device must be returned to Interacoustics.

All repairs must be accompanied by a Complaint Form and a Return / Repair Documentation Form. This form may be found in the back of this manual. Please use a photocopy of these forms for each repair. These forms should accompany the instrument throughout the entire repair process. Once the instrument is repaired the forms must be faxed Interacoustics.

Precautions

The internal components of the OtoRead Instrument are ESD sensitive. Proper handling is required. The instrument should only be opened and serviced at an ESD safe workstation.

The printer power supply contains hazardous voltages when plugged into an electrical outlet.
Do not open or attempt to repair the printer power supply. Failed power supplies should be returned to the vendor.

OtoRead System Accessories and Parts

Item	# IA Item Number	Description
	8000282	OtoRead Instrument standard Fully assembled handheld unit w/o transducer
	8503158	OtoRead transducer - tested
 	8029304	Thermal Printer MPT-II (incl. 2 paper rolls)
	8006057	Power Supply 12V
	8011310	Serial printer cable MPT-II Mini-DIN 6p to D-SUB 9
	8013213	Printer kit 1020 8029304 Thermal Printer MPT-II 8029305 2x TPR MPT-II Thermal paper 8006057 Power Supply 12V 8011310 Serial printer cable MPT-I
	8011280	Extension Cable 1m - 8 pol
	8004645	Bag 020 ACC15 Carrying Bag for OtoRead (Complete with foam insert)
Manuals	8011597 8011609 8011607 8011595	Operation Manual Standard & Clinical Operation Manual Screener Instructions for Usel Service Manual

OtoRead Consumables

Item	# IA Item Number	Description
	8029305	TPR MPT-II Thermal paper
	8012839	Assortment box BET40
	8011348	Probe cleaning tool
	8012893	Assortment Box BET40 probe cleaning tool included
	8011226	Battery alkaline 8006 119354 Varta (4 pcs..)
	8012836	Otoread Probe tips (4 pcs.)
	8002523	Probe cap 020

OtoRead Parts

Item	# IA Item Number	Description
	8006081	OtoRead Cradle Complete
	8002098	Cover battery 020
	8006221	PCA Connection board 020

Service Procedures - Disassembly

The following procedures explain how to open and service the handheld instrument and the instrument cradle. The service procedures should only be completed when recommended by the troubleshooting section. Proper ESD protection must be used when servicing internal components. When the handheld unit have been opened for servicing the testing and calibration procedures must be performed to verify proper operation.

Opening the Hand Held Unit

Service Procedure 1 Handhold Instrument

This procedure describes disassembly and re-assembly of the handheld instrument. This procedure is required to service any internal components of the handheld instrument.

Step 1.
Open the battery cover and remove the batteries. Remove the case screws.

Battery Cover Product code.34603601

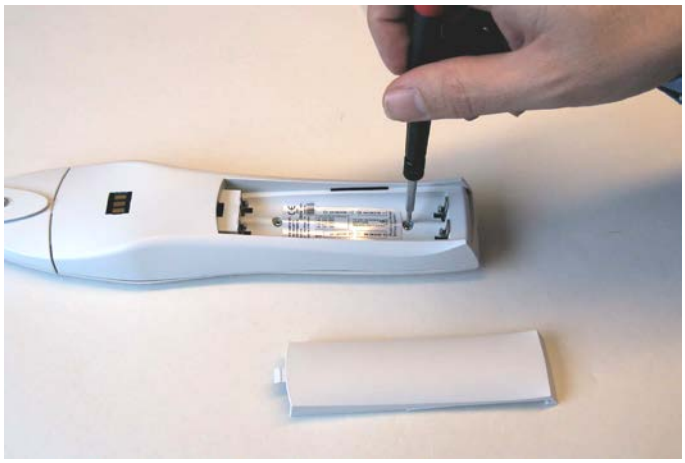


Figure 1 Opening the Hand Held Unit

Step 2.
Holding the instrument with the overlay facing down, carefully lift the bottom edge of the top housing Push the top housing forward to unlatch the front end of the top housing from the bottom housing. Lift the top housing carefully to expose the overlay connector on the digital board. Unhook the overlay connector from the digital board and remove the top housing. Place the open instrument onto a cradle to allow for servicing.

Front Part with Folio Overlay
Product code 34624201

Cabinet bottom - Product code 34603401

Figure 2 Removing the Front Part

Step 3

Lift out gently the Display Baord, which is placed between two moulded corners and dismount the Flexcable.
Display PCB product code 40001401

Flex cables
46mm product code 37203401

Remove by lifting up the digital PCB, which is placed fixed between the Battery springs and the Headphone jack.

Digital PCB product code 40001301

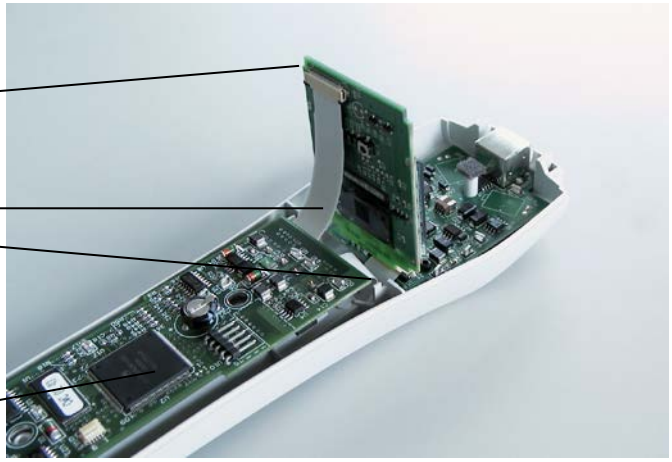


Figure 3 PCB Locations

Step 4

Loosen the Analog PCB by removing the 2 screws. The PCB can now be lifted out, and the flexcable underneath is connected o the Contact PCB

Analog Board product code 40001501

Figure 4 Removing the Analog PCB

Step 5

The Contact PCB is fixed by means of Jet Melt Hot Adhesive 3M 3764-Q

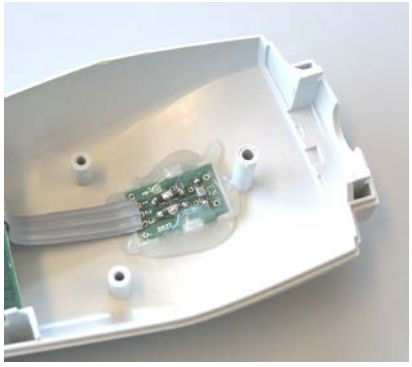


Figure 5 Contact PCB

The Contact PCB is situated in the frame under the clips

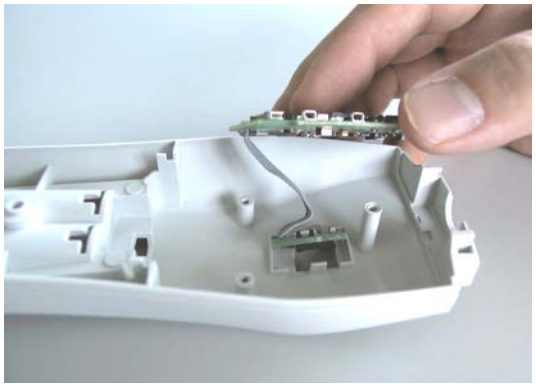


Figure 6 Placing the Contact PCB

Re Assembly the Hand Held Instrument

Step 6.

Remount all internal parts. Verify that all P.C. boards are mounted properly and all connections have been made. Attach the connector from the overlay to the connector on the digital board. Carefully hook the front end of the top housing on the tabs protruding from the front of the bottom housing. When the top housing is attached correctly the top housing will then close completely against the bottom housing. If the top housing is not seating correctly lift the top housing and verify that all internal components are in place and try again.

Step 7

Reinstall the case screws into the battery drawer. Replace the batteries and the battery cover.

Step 8.

Turn the instrument on and verify proper function by following the Test and Calibration Procedures.

Opening the Cradle

Service Procedure 2 Cradle

This procedure describes disassembly. This procedure is required to service any cradle connections.

Step 1.

Remove the 3 screws from the bottom of the cradle by means of a Torx Tool T10.

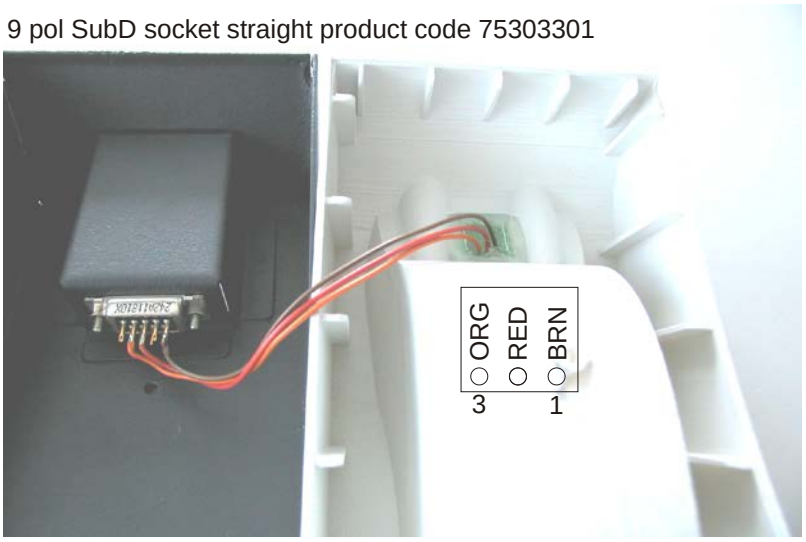
Cabinet bottom cradle 020 product code 33303801

Cabinet top cradle 020 product code 34603301

Figure 7 Opening the Cradle

Cradle Wire Connections

9 pol SubD socket straight product code 75303301



BRN pin5
RED pin 3
ORG pin 2

Figure 8 Cradle wire connections

Servicing the Probe

Service Procedure 3 Probe

Fully assembled transducer unit product code 80300301

To exchange the Clip loosen the screw. Clip Product code 36001701

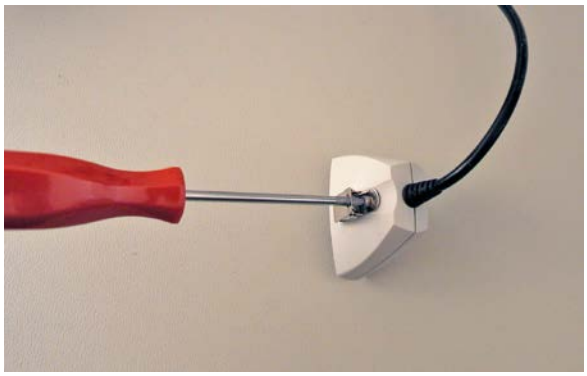


Figure 9 Dismounting the clip

Exchanging the probe tip

Loosen the tip dowels and pull the tip out. Probetip product code 81401901
When replacing the new tip, notice that the tip dowels are fixed in with a “click”

Probe Shaft

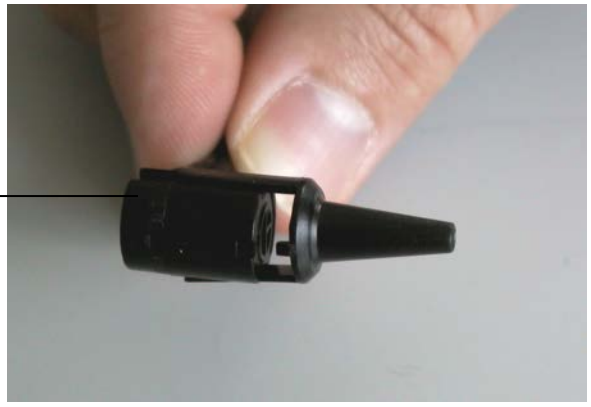


Figure 10 Exchanging the probetip

Service Procedure 4 Probe cap

Exchanging the probe cap

Remove the probe tip before handling the probe cap.

1. The end cap of the remote probe head should be replaced if any of the following conditions are met:
   - The cap has fallen off
   - The end cap can be easily removed
   - There is a visible gap between the end cap and the probe head

2. If the end cap shows no gap, and is firmly attached, leave the probe head as it is.

3. Remove the end cap with your fingernail or tool, being careful to not damage the probe head body or it internals

Fig.1

Fig. 2

Fig. 3

4. Clean any remaining adhesive occupying the circular depressions on the probe head

5. Check that the replacement cap # 34719301 fits the probe head before continuing.
   Place a small drop of cyanoacrylate cement at each circular depression in the probe head and the cap

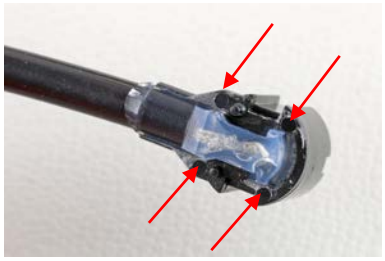


Fig. 4

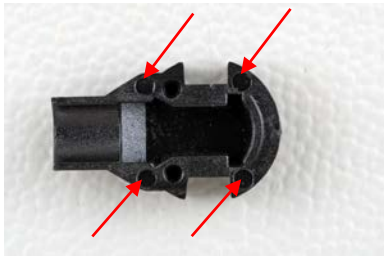


Fig. 5 a

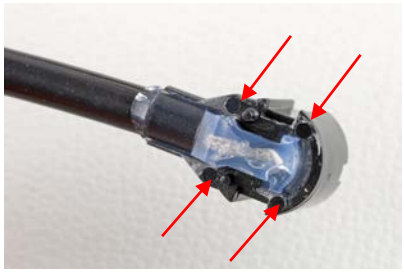
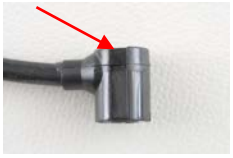


Fig. 5 b

Note! Do not allow the cement to wick into the probe tip indentations on the probe head.
This will keep the probe tip from sealing and is not reversible



6. Clamp the probe head and allow the cement to cure for one minute. Let the probe head sit overnight before handling or testing

Fig. 6

NOTE! The cyanoacrylate curing and out-gassing process creates fumes which are especially harmful to receivers and microphone contained in the remote probe.
Be sure to allow proper ventilation and curing time for the cement before handling or testing the remote probe

Instrument Troubleshooting

For Disassembly see description page 4 to 8

Spare Parts Product codes

Batteries	80406301
Digital PCB	40001301
Display PCB	40001401
Analog PCB	40001501
Flex Connection Cable	46mm 37203401
Probetip	81401901

1. **Instrument does not keep time or date correctly.**
   - Replace the batteries. Set to the current time and date. Turn off the instrument and remove the batteries. Let it sit for 5 minutes, replace the batteries then turn it back on.
     If the time has not advanced then replace the Digital PCB.

2. **Display does not work correctly.**
   - Replace the batteries and check the display again.
   - If neither the LED's nor the LCD functions then open the instrument and verify the proper alignment and seating of the flex connection in the sockets. If the problem persists then replace the flex connection to the display board.
   - The green LED should be on after the handheld instrument is turned on. The orange light should be on during the start-up with the probe plugged in. If one or more does not light then open the instrument and check the flex connection. If the problem persists then replace the Display PCB.
   - If the display still does not function then replace the Digital PCB.

3. **Buttons do not activate instrument correctly.**
   - Replace the batteries and verify the problem.
   - Replace the Front Part with Folio Overlay.

4. **Instrument does not turn on.**
   - Replace batteries with fresh batteries. Verify the cells are in the correct orientation.
   - Check the battery connection terminals. If the batteries are loose in the battery drawer the tongue on the terminals may require adjustment. Use a blunt screwdriver to pry the tongues away from the terminal body. Reseat batteries and check for function. If a battery terminal is physically broken the digital board will require replacement.
   - Open instrument and verify that both flex connections are seated correctly in sockets.
     Press the Down Arrow Key to turn the instrument on. Press the left or right key to select ear. Attach eartip and listen for tones. If tones exist then check the flex connection to the Display PCB. If the problem persists then replace the display board. If the tones do not exist then remove and replace Digital PCB.

5. **Handheld Instrument will not auto-start.**
   - Replace the batteries.
   - Replace the probe tip. See description on page on page 10
   - Listen for the low-frequency tone being emitted from the probe. If the tones are not present then remove the probe tip and check the tubes on the shaft for obstruction.
   - Open the instrument and check the flex connection to the Analog PCB.
   - If the tones do not exist then remove and replace the Analog PCB

6. Instrument does not print.

A. Printer does not respond.

- Replace the batteries in the instrument.
- Replace printer power supply Product code 50001301.
- Plug in the printer. The light on the front of the printer should light steadily. If it does not light steadily then check if the connection into the mains cable (Product code 80473001) is seated fully and in the correct orientation. Check that the connection (Product code 80416801) to the cradle is seated correctly and fully.
- Replace the printer cable (Product code 80416801).
- Replace the printer (Product code 80416501).
- Replace the cradle (Product code 50200701) or check for shorts or opens in the cradle wiring. See Description on page 9
- Check the contacts on the instrument just above the battery drawer. Clean the contacts.
- Check the contacts on the cradle. Clean the contacts.

B. Printer prints erroneous characters.

- Replace printer power supply (Product code 50001301).
- Replace the printer cable (Product code 80416801).
- Replace the printer (Product code 80416501).
- Replace the cradle (Product code 50200701) or check for shorts or opens in the cradle wiring
- Check the contacts in the instrument just above the battery drawer. Clean the contacts.
- Check the contacts on the cradle. Clean the contacts.

C. Paper comes out blank.

- Make sure paper roller lever is in closed position.
- Paper will print on only one side. Flip paper roll and refeed.

7. Probe does not function properly.

- Turn off hand held instrument, dis-connect and then re-connect probe to handheld instrument. Turn on handheld instrument and make sure the orange light comes on during startup, indicating that it has detected the probe.
- Replace the probe tip (Product code 81401901) See description on page 10
- Hold the probe up to the ear and listen for the low frequency test tones during the autostart phase.
- If a slow siren tone is heard then replace Transducer Part (Product code 80300301) or return for service.

Test Procedures

The following test procedures explain how to test for normal operation of the handheld unit, probe, printer, and instrument cradle. These procedures must be completed after any servicing of the handheld unit, probe, or instrument cradle. These procedures must be performed in a quiet environment (less than 60 dBA). The test procedures must be performed exactly as outlined and with the exact same equipment, which is listed below. If there is any question on the validity of the function of any instrument, send it back to Interacoustics for repair or exchange.

Equipment Required:

1 Knowles DB-100 Zwislocki Coupler with Teflon Spacer
1 Knowles DB-050 Canal Extension
1 Bruel & Kjaer ½" Pressure Field Microphone (or equivalent ½" microphone)
1 Bruel & Kjaer Type 2669 Preamplifier (or equivalent)
1 Red 8mm eartip

Equipment Setup:

Attach the DB-050 canal extension to the top of the DB-100 coupler, insert the white Teflon spacer into the bottom of the DB-100 coupler and attach the ½" microphone. Insert the Red 8mm eartip onto the probe tip. Make sure the eartip is inserted completely onto the probe tip (See Figures below)

Figure 11 Eartip Insertion Right

Figure 12 Eartip Insertion - Wrong

Insert the eartip into the DB-050 canal extension until it stops, and mount the Preamplifier onto the coupler. (See Figure below)

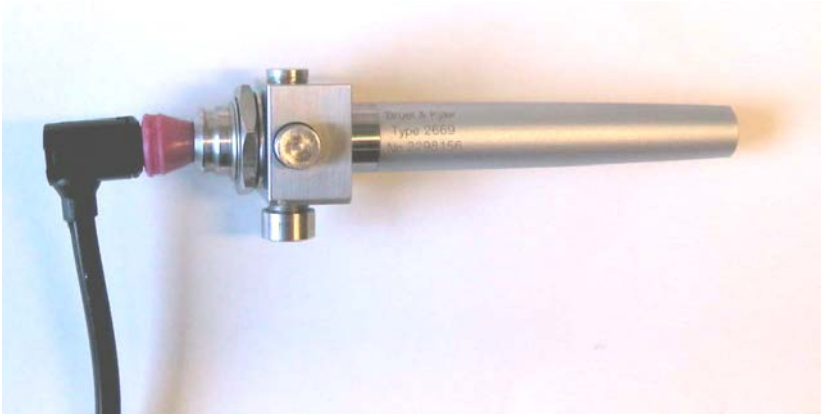


Figure 13 Proper Coupler Insertion

Test Procedure 1: DPOAE Test

Probe

Step 1.
Attach the probe to the handheld instrument. Insert the eartip into the coupler. Turn on the instrument and enter Basic Setup to make sure that it is in its Default DP or Basic DP mode. Return to the main menu and select an ear. The instrument should start the autostart test sequence and then run a test. If the instrument will not autostart then reseat the tip into the coupler.

Step 2.
Once the test is complete set the instrument on a cradle and obtain the printed results. The test should be a refer (See Figure Figure 14 below), with little to no S/N (Average S/N $\leq$ 3 dB). Repeat this procedure several times and verify that the S/N ratio is consistently less than or equal to 3 dB.

Step 3.
Remove the probe tip from the cavity and select the appropriate size eartip to perform a test in a normal hearing ear. Turn the unit on and select the ear to be tested. Place the probe in the ear and let the unit autostart in the ear. When the test is complete perform a printout. The test should be a pass (See Figure 14 below), with S/N greater than 5 dB. Repeat this procedure several times and verify that the DP results are consistent.

Zwislocki Coupler

OtoRead

OTOACOUSTIC EMISSIONS TEST

Left 26-Oct-97 12:00 PM
DP 4 sec avg V7.61

NAME:.....

F2	P1	P2	DP	NF	SN	
2.0	66	55	-16	-18	2	
3.0	65	55	-22	-22	0	
4.0	65	55	-22	-22	0	

F2 ┼─┼─┼─┼─┼─┼─┼
2.0
3.0
4.0
F2 ┼─┼─┼─┼─┼─┼─┼
-15 -10 -5 0 5 10
Level (dB) ▒-NF ▪-DP

Left : Refer

Normal Hearing Ear

OtoRead

OTOACOUSTIC EMISSIONS TEST

Right 26-Oct-97 12:07 PM
DP 4 sec avg V7.61

NAME:.....

F2	P1	P2	DP	NF	SN	
2.0	66	55	-9	-18	9	P
3.0	67	56	-11	-22	11	P
4.0	65	54	-5	-22	17	P

F2 ┼─┼─┼─┼─┼─┼─┼
2.0▪▪▪▪▪▪▪
3.0▪▪▪▪▪
4.0▪▪▪▪▪▪▪▪▪▪▪
F2 ┼─┼─┼─┼─┼─┼─┼
-15 -10 -5 0 5 10
Level (dB) ▒-NF ▪-DP

Right : Pass

Figure 14 DPOAE Printout

Test Procedure 2: TEOAE Test

Probe

Step 1.
Attach the probe to the handheld instrument. Insert the eartip into the coupler. Turn on the instrument and enter Basic Setup to make sure that it is in its Default TE or Basic TE mode. Return to the main menu and select an ear. The instrument should start the autostart test sequence and then run a test. If the instrument will not autostart then reseat the tip into the coupler.

Step 2.
Once the test is complete set the instrument on a cradle and obtain the printed results. The test should be a refer (See Figure 15 below), with little to no S/N (Average S/N $\leq$ 0 dB). Repeat this procedure several times and verify that the S/N ratio is consistently less than or equal to 0 dB.

Step 3.
Remove the probe tip from the cavity and select the appropriate size eartip to perform a test in a normal hearing ear. Turn the unit on and select the ear to be tested. Place the probe in the ear and let the unit autostart in the ear. When the test is complete perform a printout. The test should be a pass (See Figure 15 below), with S/N greater than 5 dB. Repeat this procedure several times and verify that the TE results are consistent.

Zwislocki Coupler Normal Hearing Ear

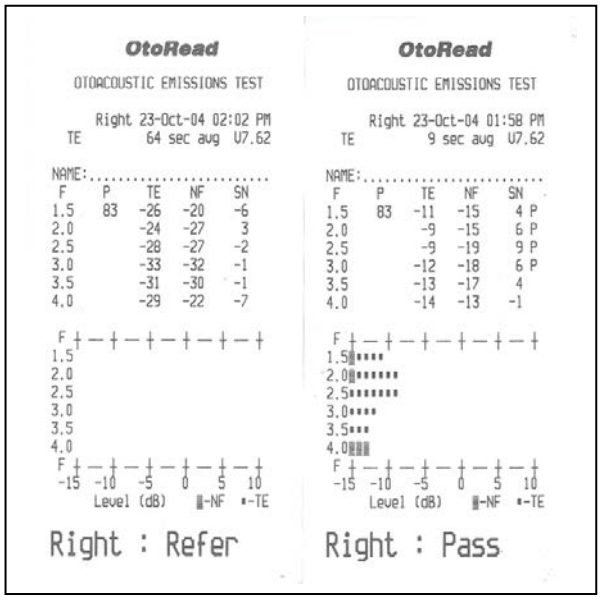


Figure 15 TEOAE Printout

Test Procedure 3: Printer, Cradle, Printer Cable

Step 1.
Connect the printer to the printer cable; connect the other end of the printer cable to cradle. Connect the ac adapter to the ac mains and the other end to the printer. Insert printer paper into the printer.

Step 2.
The green led should be on and not flashing. If flashing, replace ac adapter and then the printer cable. Double click the green button on the printer, which should print out a demo feed. On the top of the printout is a listing of settings. The battery voltage should read above 6.3V. The baud rate should read 19200,N,8,1. If it reads any other setting, then the printer needs to be sent back for reprogramming.

Step 3.
Obtain a normal operating handheld unit with a saved test. Place the handheld unit in the printer, which should invoke the printer to printout the test result. If the printer does not printout correctly, replace the cradle, then the printer cable, and then the printer to eliminate the problem.

Calibration Procedures

The following calibration procedures explain how to calibrate the handheld unit and the probe. These procedures must be completed after any servicing of the handheld unit or the probe. These procedures must be performed in a quiet environment (less than 60 dBA). The calibration procedures must be performed exactly as outlined and with exactly the same equipment, which is listed below. If there is any question on the validity of the function of any instrument, send it back to Interacoustics for repair or exchange.

Service, Adjustment and Repair

This instrument can be serviced, adjusted and repaired without losing the validity of the CE-marking provided the measuring equipment used is fulfilling the demands below, the adjustment procedure are followed and the personnel is having the necessary qualifications approved by Interacoustics.

Equipment Required:

1 Bruel & Kjaer Sound Level Calibrator Type 4231
1 Bruel & Kjaer DP0774 1/8" Insert
1 Knowles DB-100 Zwislocki Coupler with Teflon Spacer
1 Knowles DB-050 Canal Extension
1 Bruel & Kjaer Type 4134 ½" Pressure Field Microphone (or Interacoustics ER-11 ½" Microphone System)
1 Bruel & Kjaer Type 2669 ½" Microphone Preamplifier
1 Bruel & Kjaer Measuring Amplifier
1 True RMS Digital Multi-meter
1 Red 8mm eartip
1 Calibration Cable (Supplied by Interacoustics) (or equivalent) (See Figure 16 below)

Equipment Setup:

Attach the microphone to the microphone preamplifier cable. Attach the other end of the preamplifier cable to the power supply or measuring amplifier. Connect the ac output of the power supply or measuring amplifier to the DMM. Insert the microphone into the sound level calibrator (94 dB SPL @ 1kHz) and calibrate the measuring system for sensitivity of 50 mV/Pa (-46 dB re 1V/μBar) so that 0 dB SPL = 0 dB μV. At this calibration the DMM should read 50.12 mV ac for a 94 dB SPL sound level input. Attach the DB-050 canal extension to the top of the DB-100 coupler, insert the white Teflon spacer into the bottom of the DB-100 coupler and attach the ½" microphone.

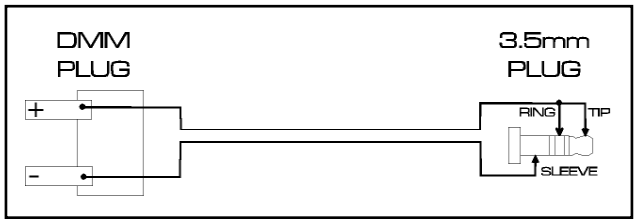


Figure 16 Calibration Cable Wiring Diagram

Calibration Procedure 1: Microphone Level Validation

Probe

Step 1.
Set up the equipment as shown in

Figure 17 below. Insert the 1/8” insert into the sound level calibrator. Insert the probe tip into the 1/8” insert until it stops. Plug the Calibration cable into the headphone jack on the bottom of the instrument and plug the other end into the DMM. Set the DMM to read mV AC.

Step 2.
Place the OtoRead in diagnostic mode by pressing the down arrow key , and then immediately press and hold down the left and right arrow keys. If the key sequence was performed correctly the LCD screen should display the “Diagnostic Test Programs Vx.xx” for a brief moment. When this message appears, release the two arrow keys. If this message does not appear, turn the unit off by pressing the up arrow and repeat the key sequence. Once you see the "Remote Program" screen push the right arrow until the "Microphone Mode" screen appears.

Step 3.
Press the down arrow key to enter the microphone mode and press the down arrow again to select 0 dB gain. Record the DMM reading. It should read between .490 Volts and .520 Volts RMS (94 dB SPL +/- 0.3 dB). If not proceed to Calibration Procedure 2 Microphone Sensitivity Calibration.

Figure 17 Probe Microphone Calibration Setup

Calibration Procedure 2: Microphone Sensitivity Calibration

Probe

Step1.
Setup the equipment as shown in

Figure 17 above. Insert the probe tip into the 1/8” insert of the sound level calibrator until it stops. Plug the probe into the top of the handheld unit.

Step 2.
Place the OtoRead in diagnostic mode by pressing the down arrow key , and then immediately press and hold down the left and right arrow keys. If the key sequence was performed correctly the LCD screen should display the “Diagnostic Test Programs Vx.xx” for a brief moment. When this message appears, release the two arrow keys. If this message does not appear, turn the unit off by pressing the up arrow and repeat the key sequence. Once you see the "Remote Program" screen push the right arrow until the "Adjust Mic Gain" screen appears.

Step 3.
Press the down arrow and then the left arrow to enter the calibration mode. Turn on the sound level calibrator. The display on the OtoRead instrument will indicate three different readings. The RAW reading is the actual un-calibrated reading that the OtoRead is measuring. The CAL reading is what the OtoRead should read after the calibration factor is applied, hence this value should always be 94 dB in a calibrated 94 dB SPL sound level calibrator. The ERR reading is the calibration factor that the OtoRead uses to obtain the correct reading.

Step 4.
Hold the unit stable for a moment and press the down arrow key to set the sensitivity. The next screen will display the old and the new calibration factors. Press either the left or right arrow keys to save the calibration factor. If the next screen displays "Mic Gain Saved", then press the down arrow to get back into the diagnostic programs menu. The ERR reading must be in the range of ±3dB, if the reading is out of this range, then the screen will display "Mic Failed". If this occurs repeat steps 1 through 4. If the ERR reading is still out of range, then the OtoRead needs servicing.

Calibration Procedure 3: Sound Channel Frequency and Intensity Validation

Probe

Step 1.
Insert the Red 8mm eartip onto the probe tip (See Figure 11 on page 14). Insert the eartip into the DB-050 canal extension until it stops (See Figure 13 on page 14). Setup the equipment as shown in Figure 18 below.

Step 2.
Place the OtoRead in diagnostic mode by pressing the down arrow key , and then immediately press and hold down the left and right arrow keys. If the key sequence was performed correctly the LCD screen should display the "Diagnostic Test Programs Vx.xx" for a brief moment. When this message appears, release the two arrow keys. If this message does not appear, turn the unit off by pressing the up arrow and repeat the key sequence. Once you see the "Remote Program" screen push the right arrow until the "Calibrate Mode" screen appears.

Step 3.
Press the down arrow to enter the receiver calibration mode. Use the left and right arrow keys to switch between the left and right receiver. Use the up and down arrow keys to increment and decrement the frequency. Record the frequency and level that appears on the DMM and or Measuring Amplifier at each frequency and for each receiver.

Step 4.
Compare the obtained frequency and magnitude results to the ranges in Table 1 below. If the results are out of range then change the probe tip and repeat steps 1 through 3. If the readings are still out of range the instrument needs to be serviced.

Figure 18 Probe Receiver Calibration Setup

Output Frequency (Hz)	Minimum Frequency (Hz)	Maximum Frequency (Hz)	Minimum Magnitude (dB SPL)	Maximum Magnitude (dB SPL)
732.4	727	737	75	85
1037.6	1033	1043	79	89
1464.8	1460	1470	81	91
2075.2	2070	2080	84	94
2929.7	2925	2935	87	97
4150.4	4145	4155	81	91
5859.4	5855	5865	72	82

Table 1– Probe Receiver Calibration Limits

Programming Procedures

The following programming procedures explain how to program the handheld unit and the printer. These procedures must be performed exactly as outlined and with the exact same equipment, which is listed below. If there is any question on the validity of the function of any instrument, send it back to Interacoustics for repair or exchange.

Equipment Required:

1 Pentium Class (or above) Computer with COM 1 available
1 Instrument Cradle
1 9-pin Male to 9-pin Female RS-232 Cable
1 Null Modem Adapter (for printer programming only)
1 Printer Cable (for printer programming only)
1 Printer Setup Program Diskette (Supplied by Interacoustics) (for printer programming only)
1 Firmware Program Diskette (Supplied by Interacoustics)

Equipment Setup:

Connect the male end of the 9-pin serial cable to the connector on the bottom of the instrument cradle. Connect the other end of the 9-pin serial cable to COM 1 port on the back of the computer. Insert the program diskette in the floppy drive of the computer run the install program.

Programming Procedure 1: OtoRead Firmware Updating

Step 1.
Place the OtoRead in diagnostic mode by pressing the down arrow key , and then immediately press and hold down the left and right arrow keys. If the key sequence were performed correctly the LCD screen would display the "Diagnostic Test Programs Vx.xx" for a brief moment. When this message appears, release the two arrow keys. If this message does not appear, turn the unit off by pressing the up arrow and repeat the key sequence. The next menu screen should display "Remote Program". Press the down arrow key, but the unit will not change state.

Step 2.
Place the unit in the cradle. If the cradle is properly connected, to the computer, the green LED should immediately turn on and the screen should display "Remote Program Mode". If the screen does not display this message check the connections of the computer and repeat step 1.

Step 3.
Open "My Computer\A\BurnRxxx.xx". This process should open a DOS box, which displays "Write Flash version 1.01…programming in Progress – Please Wait…". If this message does not appear or there are any error messages repeat steps 1 through 3. The programming process will range from 1 to 10 minutes depending on the CPU speed and the firmware version.

Step 4.
When the programming process has completed the message at the end of the screen will be "…Please turn OtoRead off now, then restart in remote program mode". At this prompt, take the OtoRead out of the cradle and turn it off by pressing the up arrow key. Restart the OtoRead in remote program mode by repeating steps 2 and 3. Press any key on the keyboard of the computer to complete the programming process. Turn the OtoRead off by pressing the up arrow key.

Step 5.
Perform the calibration procedure 2 to set the microphone sensitivity, and test the new code version by performing the Test Procedures 1 and 2 and Calibration Procedures 1 and 3.

Programming Procedure 2: OtoRead Operating Mode Upgrade

Note: This procedure only applies to Standard firmware V7.62 and above, and is only for upgrading a Standard DP/ Standard TE to Clinical version. For upgrading Screener version please return to Interacoustics.

Step1.
Obtain upgrade keycode from Interacoustics. Turn the handheld unit on and press the down arrow to enter setup. Press and hold the down arrow until the green light turns off to enter Basic Setup. Press and hold the down arrow until the green light turns off to enter Advanced Setup. Press and hold down the down arrow until the green light turns off to enter Keycode mode.

Step 2.
The serial number displayed in keycode mode should match the serial number on the label in the battery drawer. If not send the unit back to Interacoustics for repair. Press the down arrow and enter the keycode using the up and down arrow keys to increment and decrement from 0-9 and the left and right arrow keys to move back and forth digits.

Step 3.
Once the keycode is entered, press the right arrow to accept. If the correct keycode is entered the unit should revert to the main menu. If the wrong keycode is entered, it will give an error and prompt for another keycode.

Step 4.
To check if the keycode was accepted, enter Basic Setup and verify that the upgraded operating mode is present.

Programming Procedure 3: Printer Setup

Step 1.
Connect the serial cable to the computer and the other end to the null modem adapter. Connect the null modem adapter to the printer cable. Connect the printer cable to the printer (with battery and ac adapter). Insert the program diskette in the floppy drive of the computer run the install program.

Step 2.
Click on the desktop icon labeled “OtoRead Printer Setup”. This will open a menu where changes can be made to the settings, such as baudrate, power off time battery charging option, etc.

Step 3.
Make the appropriate changes and exit the program. Verify the changes have made by testing the printer.

VALSTYBĖS ĮMONĖ REGISTRŲ CENTRAS
Lvovo g. 25-101, 09320 Vilnius, tel. (8 5) 268 8262, faks. (8 5) 268 8311, el. p. info@registrucentras.lt

KOMPETENTINGŲ INSTITUCIJŲ TVARKOMŲ JUNGTINIŲ DUOMENŲ APIE VIEŠŲJŲ PIRKIMŲ PROCEDŪROJE DALYVAUJANTĮ TIEKĖJĄ (JURIDINĮ ASMENĮ) PAŽYMA

2021-04-29 Nr. 544042

Tiekėjo pavadinimas	**UAB "Biomedikos centras"**
Tiekėjo kontaktinė informacija:	
telefono numeris	**870055440**
mobilusis telefonas	**865781992**
elektroninio pašto adresas	**info@biomedikoscentras.lt**
interneto svetainės adresas	**www.biomedikoscentras.lt**
Buhalterio (buhalterių) ar kito (kitų) asmens (asmenų), turinčio (turinčių) teisę surašyti ir pasirašyti tiekėjo apskaitos dokumentus, vardas, pavardė	
Juridinių asmenų registras:	
kodas	**304943503**
teisinė forma	**Uždaroji akcinė bendrovė**
teisinis statusas	**Teisinis statusas neįregistruotas**
buveinė (adresas)	**Vilnius, Antakalnio g. 36**
Vadovo, kito valdymo ar priežiūros organo nario ar kito asmens, turinčio (turinčių) teisę atstovauti tiekėjui ar jį kontroliuoti, jo vardu priimti sprendimą, sudaryti sandorį, vardas, pavardė	**KĘSTUTIS LIEGUS**
įregistravimo data	**2018-10-31**
Valstybinė mokesčių inspekcija prie Lietuvos Respublikos finansų ministerijos:	
duomenys apie tiekėjo atsiskaitymą su valstybės, savivaldybių biudžetais ir valstybės pinigų fondais	**Atsiskaitęs**
Duomenų suformavimo data	**2021-04-28**
Valstybinio socialinio draudimo fondo valdyba prie Socialinės apsaugos ir darbo ministerijos:	
duomenys apie tiekėjo atsiskaitymą su Valstybinio socialinio draudimo fondu	**Neįsiskolinęs**
Duomenų suformavimo data	**2021-04-27**
Įtariamųjų, kaltinamųjų ir nuteistųjų registras:	
duomenys apie tiekėją	**Dėl UAB "Biomedikos centras", kodas 304943503, per pastaruosius 5 metus nėra priimtas ir įsiteisėjęs apkaltinamasis teismo nuosprendis už nusikalstamas veikas, nurodytas Lietuvos Respublikos viešųjų pirkimų įstatymo 46 straipsnio 1 dalyje ir 3 dalyje.**
duomenys apie tiekėjo vadovą, kitą valdymo ar priežiūros organo narį ar kitą (kitus) asmenį (asmenis), turintį (turinčius) teisę atstovauti tiekėjui ar jį kontroliuoti, jo vardu priimti sprendimą, sudaryti sandorį	**Kęstučiui Liegui, g[illegible] pastaruosius 5 metus nėra priimtas ir įsiteisėjęs apkaltinamasis teismo nuosprendis ir jis neturi neišnykusio ar nepanaikinto teistumo už nusikalstamas veikas, nurodytas Lietuvos Respublikos viešųjų pirkimų įstatymo 46 straipsnio 1 dalyje.**
duomenys apie tiekėjo buhalterį (buhalterius) ar kitą (kitus) asmenį (asmenis), turintį (turinčius)	**[illegible] per pastaruosius 5 metus nėra priimtas ir įsiteisėjęs**

teisę surašyti ir pasirašyti tiekėjo apskaitos dokumentus	**apkaltinamasis teismo nuosprendis ir ji neturi neišnykusio ar nepanaikinto teistumo už nusikalstamas veikas, nurodytas Lietuvos Respublikos viešųjų pirkimų įstatymo 46 straipsnio 1 dalyje.**
Duomenų suformavimo data	**2021-04-28**

Pažymą išspausdino:

Juridinių asmenų registro departamento JAR Vilniaus skyriaus Vilniaus 3 juridinių asmenų registro grupės Vyriausiasis registratorius BORISAS JAKOVLEVAS

A. V.