

# User Guide

## HL 50-BT Acoustic Leak Locator

### Measuring and Locating Technologies

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Power Networks



Communication Networks



Water Networks



Sewer Systems



Line Locating



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**English**

Safety	3
Technical data	4
Scope of delivery and Optional accessories	5
Energy supply	5
Function and Design	6
Operation	8
Headphones	10
Using third-party Bluetooth headphones	11

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## Safety

**Safety precautions** This manual contains basic instructions for the commissioning and operation of the device / system. For this reason, it is important to ensure that the manual is always available to the authorised and trained operator. He needs to read the manual thoroughly. The manufacturer is not liable for damage to material or humans due to non-observance of the instructions and safety advices provided by this manual.

Locally applying regulations have to be observed!

**Safety instructions  
and warnings**



- To avoid hearing damage, you should not listen at high volume for prolonged periods.
- The limits described under Technical Data may not be exceeded.
- Do not drop the device / the system's components or subject it / them to strong impacts or mechanical shocks.
- The device / system must be in a technically perfect condition for measurement.
- The indicated degree of protection can only be ensured if plugs or the provided protection caps are put in all sockets of the device.
- The plugs of the supplied connection cables are only compliant to the indicated degree of protection as long as they are plugged in. Plugs which are not connected or which are connected in a wrong way are not protected from water and dust ingress.

**Check contents** Check the contents of the package for completeness and visible damage right after receipt. In the case of visible damage, the device must under no circumstances be taken into operation. If something is missing or damaged, please contact your local sales representative.

**Working with products  
from SebaKMT** It is important to observe the generally applicable regulations of the country in which the device will be operated, as well as the current national accident prevention regulations and internal company directives (work, operating and safety regulations).

Use genuine accessories to ensure system safety and reliable operation. The use of other parts is not permitted and invalidates the warranty.

**Repair and  
maintenance** Repair and maintenance work has to be carried out by SebaKMT or authorised service partners using original spare parts only. SebaKMT recommends having the system tested and maintained at a SebaKMT service centre once a year.

SebaKMT also offers its customers on-site service. Please contact your service centre if needed.

**Special transportation  
requirements** The lithium batteries of the device are dangerous goods. The transport of the batteries themselves and of devices which contain such batteries is subject to regulations based on the UN Model Regulations "Transport of Dangerous Goods" (ST/SG/AC.10-1).

Please inform yourself about the transportation requirements and follow them when shipping the device.

**Initial charging** Before initial use, a full charging of the HL 50 and the supplied headphones should be performed.

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## Technical data

*Technical data* The HL 50 is specified by the following technical parameters:

Parameter	Value
Sensor	Internal piezo microphone (noise recording via probe tip or other probe); Connection socket for external microphone
Display	LCD, 102 x 64 dots, transfective
Filter	3 settings selectable: 0 ... 540 Hz 0 ... 4000 Hz 540 ... 4000 Hz
Memory	Last measured value
Battery	Li-Ion rechargeable battery (3.6 V / 750 mAh)
Operating time	up to 15 h
Charging time	Max. 6 h
Charging energy	5 V / 150 mA
Operating temperature	-10 °C ... +50 °C (14 °F ... +122 °F)
Storage temperature	-25 °C ... +70 °C (-13 °F ... +158 °F)
Dimensions	230 x 90 x 70 mm (incl. standard probe tip)
Weight	400 g (incl. standard probe tip and battery)
Degree of protection	IP41

*Headphones* The bluetooth headphones are specified by the following technical parameters:

Parameter	Value
Bluetooth frequency	2.402 - 2.480 GHz
Bluetooth version	V4.0
Battery	Li-Ion-Akku
Operating time	Up to 10 h
Charging time	Max. 4 h
Charging energy	5 V / 300 mA
Operating temperature	-10 °C ... +55 °C (14 °F ... +131 °F)
Storage temperature	-20 °C ... +60 °C (-4 °F ... +140 °F)
Weight	Approx. 210 g

## Scope of delivery and Optional accessories

*Standard accessories* The standard scope of delivery includes:

Accessory part	Description	Art.Nr.
HLE 50-BT	Leak detection device, Bluetooth	1008373
	Bluetooth headphones	90019021
Tastspitze	Standard probe tip (thread M8)	820002715
Magnetadapter	Magnet probe (thread M8)	110030010
VST 2	2 x prolongation stick (thread M8)	820003336
	Micro USB charger, 1A dual output	90019020
HLE 50-BT-K	Transport case	90019296

*Optional accessories* The following accessories are available in different sets:

Accessory part	Description	Art.Nr.
PAM B-2	All-purpose piezo microphone; incl. connection cable	820013156
PAM W-2	Wind-shielded ground microphone; incl. connection cable and handle bar	128310702
PAM T-3-1	Robust sensor-rod microphone for soft grounds; incl. connection cable	1003846
LOG TP	Tripod adaptor	128309877
AD S-20	Valve adaptor (Ø 20 mm)	810000357
AD S-42	Valve adaptor (Ø 40 mm)	810000358

## Energy supply

The device is powered by an internal Li-Ion rechargeable battery.

With a fully charged battery, the device can be operated for up to 15 hours. The current battery status is indicated by the battery icon in the upper right corner of the display. When the battery is low, the battery icon starts flashing. The device turns off some time later without further warning.

To recharge, use the included USB charger. It is connected to the HL 50 via the USB socket **4** and connected to the general power supply. A full charge cycle takes about 6 hours. The progress of the charging process is shown in the display of the HL 50.

The battery is not replaceable.



Do not open the device yourself. If you experience problems with the battery, please contact your SebaKMT service partner.

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## Function and Design

**Function** The Hydrolux HL 50 by SebaKMT is an easy-to-use and handy device for acoustic leak detection on water pipes.

The HL 50 comes with an integrated acoustic sensor. The pipe noise is recorded via the probe tip, internally amplified, filtered (if needed) and played via headphones. At the same time, the measured noise level is shown on the display of the device.

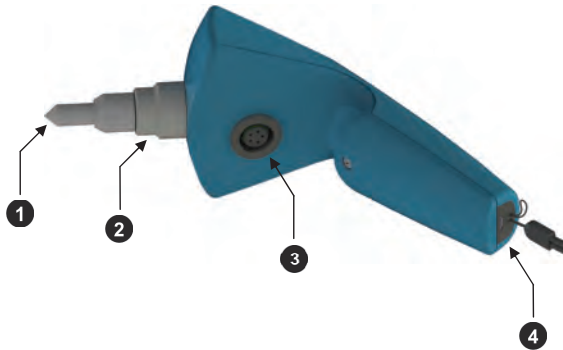
During the measurement, the user can select from three frequency filter settings.

The probe tip can be removed. This way, prolongation sticks or other probes can be installed.

Using the sensor socket, an external acoustic sensor can be connected to the HL 50, e.g. a ground microphone.

The connection between the device and the headphones functions via Bluetooth.


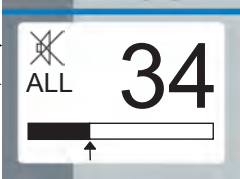



**Design** The following picture shows the probe tip, sensor and the connection sockets of the device.



Element	Description
1	Probe tip (replaceable, thread M8)
2	Acoustic sensor of the device (not removable)
3	Sensor socket for the connection of an external acoustic sensor (ground microphone or similar)
4	Micro USB socket for charging the battery

The following picture shows the control panel of the device.



Element	Description
<p><b>5</b></p>	<p><b>Display</b> On the screen you find the following information:</p> <div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: right;"> <p>Headphones OFF → </p> <p>Frequency Filter → <b>ALL</b></p> </div> <div style="text-align: center;">  </div> <div style="text-align: left;"> <p>← <b>34</b> Current Level</p> <p>← Current Level</p> </div> </div> <p>The currently measured level is displayed as a dimensionless numerical value between 1-99. The bar also reflects the current level. The arrow below the bar marks the most recently saved measurement value.</p>
<p><b>6</b></p>	<p><b>Operating keys</b></p> <p><b>Filter button</b>  Select frequency filter (3 settings <b>LOW</b> / <b>HIGH</b> / <b>ALL</b>)</p> <p><b>Volume buttons</b>  ... Increase / decrease headphone volume</p> <p><b>I/O button</b>  Long press ... switches the device on / off Short press ... starts / stops the ongoing measurement: mutes /unmutes the headphones at the same time</p>

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## Operation

*Measurement using the probe tip* When conducting a measurement with the internal sensor, the noise is recorded with the probe tip **1**.

The probe tip can be removed. If needed, you can unscrew it (right-hand thread) and replace it with another probe, or you can install the supplied prolongation sticks between the probe tip and the sensor.



*Measurement using an external sensor* Via the 5-pole socket **3** at the bottom side of the device, an external sensor can be connected to the HL 50, e.g. the universal microphone PAM B-2. (There are more sensors available from the optional accessories by SebaKMT.)


When connecting an external sensor, the HL 50 needs to be switched off. Pay attention to the marks on the plug and the socket. The plug needs to lock tangibly.

When the HL 50 is switched on, it automatically recognises the external sensor. From that moment, the values of the external sensor are indicated on the display.

Alternating between the internal and external sensor while operating the device is not possible.

After removing the external sensor, the HL 50 does not automatically switch back to the internal sensor. The device needs to be switched off and on again for this purpose. Then the values of the internal sensor are shown in the display again.



### Frequency filter

By clicking the button  the user can switch between the three following frequency filter settings during the measurement:

Designation	Range	Description
LO	0 ... 540 Hz	High frequencies are cut; (for operation as ground microphone)
HI	540 ... 4000 Hz	Low frequencies are cut; (for operation as test rod directly on the pipe or valve etc.)
ALL	0 ... 4000 Hz	Broadband measurement without filter





*How to conduct a measurement* We recommend the following procedure in order to conduct a measurement:


Step	Description
1	Switch on the headphones, but do not put them on yet.
2	Switch on the HL 50.  <b>Result:</b> The Bluetooth connection between device and headphones is established. Once the connection has been established, the headphone status LED flashes blue at regular intervals. The screen of the HL 50 shows the current sound level.
3	Press the  button to mute the device.
4	Set the volume with the  button to a low level, for example, level 2.

The device is now ready for the measurement.

You may now put on the headphones.

Continue as follows:

Step	Description
5	Set the frequency filter initially to "ALL" with the  button.
6	Place the probe tip or the connected microphone to the desired measurement point.
7	Press the  button to switch off the mute function.  <b>Result:</b> The headphones are reactivated and the registered sound is played. The sound level is displayed on the screen. Modify the frequency filter as needed.

Before each use of the device or the connected microphone, press the  button again! The screen display is frozen and the headphones are muted.



*If Bluetooth is malfunctioning* If the existing connection between headphones and HL 50 is interrupted, the headphones begin searching for the Bluetooth signal of the HL 50. If the device is not detected within this time, the headphones switch off. The status LED goes dark.

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## Headphones

The HL 50 is delivered with Bluetooth-compatible headphones.

*Buttons & jacks* The following buttons and jacks of the headphones are important for HL 50 users:

Button / jack	Description
	<b>On/Off button</b> Hold pressed about 3 seconds to switch on/off.
	<b>Micro-USB port</b> for charging the battery

All other buttons and ports are not assigned functions or are not relevant to working with the HL 50.

*Status LED* With the headphones switched on, the light of a status LED can be seen on the left earpiece. The following statuses are indicated:



Status	Meaning
3x blue	when being switched on
alternating blue/red	Bluetooth search for HL 50
regularly flashing blue, every 3 seconds	connection to HL 50 successful
continuous red, then off	when charging until battery is full
briefly red, then off	when being switched off

*Switching on / Switching off* To switch on, hold the I/O button of the headphones pressed until a signal tone sounds. The status LED flashes blue 3 times, then shows an alternating red/blue light to indicate that the headphones are searching for the Bluetooth partner device.

Once the switched-on HL 50 has been detected, the headphone status LED flashes blue at regular 3 second intervals.

The search for the Bluetooth signal of the HL 50 is performed continuously for up to five minutes. If the device is not detected within this time, the headphones switch off again. The status LED goes dark.


To switch off, hold the I/O button of the headphones pressed until the status LED lights up red and then goes dark.

*Volume* The headphone volume can be adjusted in 15 steps. You can adjust the setting with the **V+** / **V-** buttons on the headphones or with the  and  buttons on HL 50.

*Pairing* "Pairing", or the initial connection of the HL 50 with the supplied headphones, has already been performed at the factory. The HL 50 is saved as a "connected device" in the headphone data storage. The two devices detect each other and automatically connect upon being switched on.

*Battery* The headphones are powered by an internal rechargeable battery, which cannot be replaced.

When the battery level is low, a warning signal sounds. Several minutes later, the headphones switch off without further warning.

To recharge, use the supplied charger. This is connected with the headphones through the USB port  and plugged into the mains power supply. Alternatively, the headphones can be charged using a USB cable connected to a computer or USB power supply. The status LED lights up red during the charging. It goes dark once the battery is fully charged.







Do not open the device yourself. If you experience problems with the battery, please contact your SebaKMT service partner.

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## Using third-party Bluetooth headphones

It is possible to use third-party Bluetooth headphones instead of the supplied ones. For this purpose, the HL 50 and these headphones must be connected to each other - so-called "pairing".

*Pairing* For the pairing, proceed as follows:

Step	Description
1	The HL 50 must be switched off.
2	Press the buttons  and  simultaneously and hold until the display shows the word <b>Configuration</b> . <b>Result:</b> The device is switched on and now searches for all available Bluetooth devices in its surroundings.
3	Put the headphones in the "pairing" status. (For more detailed information on this, please refer to the operating manual of the headphones.) <b>Result:</b> Once the headphones have been detected by the HL 50, the name of the headphones appears in the display. At the bottom right in the display, <b>OK</b> is shown. If no headphones were detected, you can press the  button to restart the search process.
4	To confirm, press the  button directly under <b>OK</b> .

Once the pairing process has been successfully completed, an audio connection is immediately established between the HL 50 and the headphones. The HL 50 is now ready for the measurement.

The two devices detect each other and connect automatically each time upon being switched on.



Tento symbol indikuje, že výrobek nesoucí takovéto označení netže likvidovat společně s běžným domovním odpadem. Jelikož se jedná o produkt obchodovaný mezi podnikatelskými subjekty (B2B), netže jej likvidovat ani ve veřejných sběrných dvorech. Pokud se potřebujete tohoto výrobku zbavit, obraťte se na organizaci specializující se na likvidaci starých elektrických spotřebičů v blízkosti svého působistě.



Dit symbool duidt aan dat het product met dit symbool niet verwijderd mag worden als gewoon huishoudelijk afval. Dit is een product voor industrieel gebruik, wat betekent dat het ook niet afgeleverd mag worden aan afvalcentra voor huishoudelijk afval. Als u dit product wilt verwijderen, gelieve dit op de juiste manier te doen en het naar een nabij gelegen organisatie te brengen gespecialiseerd in de verwijdering van oud elektrisch materiaal.



This symbol indicates that the product which is marked in this way should not be disposed of as normal household waste. As it is a B2B product, it may also not be disposed of at civic disposal centres. If you wish to dispose of this product, please do so properly by taking it to an organisation specialising in the disposal of old electrical equipment near you.



Този знак означава, че продуктът, обозначен по този начин, не трябва да се изхвърля като битов отпадък. Тъй като е B2B продукт, не бива да се изхвърля и в градски пунктове за отпадъци. Ако желаете да извърлите продукта, го занесете в пункт, специализиран на изхвърлянето на старо електрическо оборудване.



Dette symbol viser, at det produkt, der er markeret på denne måde, ikke må kasseres som almindeligt husholdningsaffald. Eftersom det er et B2B produkt, må det heller ikke bortskaffes på offentlige genbrugsstationer. Skal dette produkt kasseres, skal det gøres ordentligt ved at bringe det til en nærliggende organisation, der er specialiseret i at bortskaffe gammelt el-udstyr.



Seielse symboliga tähistatud tooted ei tohi käeldada tavalise olmejäätmena. Kuna tegemist on B2B-klassi kuuluva tootega, siis ei tohi seda vial kohaliku jäätmekäitluspunkt. Kui soovite selle toote ära viia, siis viige see lähimasse vanade elektriseadmete käitmetise spetsialiseerunud ettevõtetse.



Tällä merkinnällä ilmoitetaan, että kyseisellä merkinnällä varustettua tuotetta ei saa hävittää tavallisen kotitalousjätteen seassa. Koska kyseessä on yritysten välisen kaupan tuote, sitä ei saa myöskään viellä kuluttajien käyttöön tarkoitettuihin keräyspisteisiin. Jos haluatte hävittää tämän tuotteen, otaakaa yhteys lähimpään vanhojen sähkölaitteiden hävittämiseen erikoistuneeseen organisaatioon.



Ce symbole indique que le produit sur lequel il figure ne peut pas être éliminé comme un déchet ménager ordinaire. Comme il s'agit d'un produit B2B, il ne peut pas non plus être déposé dans une déchetterie municipale. Pour éliminer ce produit, amenez-le à l'organisation spécialisée dans l'élimination d'anciens équipements électriques les plus proche de chez vous.



Cuireann an siombail seo in iúl nár cheart an táirgeadh atá marcáilte sa tsí seo a dhíuiscáir sa chóras fuoil teaghlaigh. Os rud é gur táirgeadh ghnó le ghnó (B2B) é, ní féidir é a dhíuiscáir ach airead in ionaid dhíuiscártha phobail. Más mian leat an táirgeadh seo a dhíuiscáir, déan é a thógáil ag eagraíocht gar duit a sainiúidhmíonn i ndíuiscáir sean-fhearas leictigh.



Dieses Symbol zeigt an, dass das damit gekennzeichnete Produkt nicht als normale Haushaltsabfall entsorgt werden soll. Da es sich um ein B2B-Gerät handelt, darf es auch nicht bei kommunalen Wertstoffhöfen abgegeben werden. Wenn Sie dieses Gerät entsorgen möchten, bringen Sie es bitte sachgemäß zu einem Entsorger für Elektrogeräte in Ihrer Nähe.



Αυτό το σύμβολο υποδεικνύει ότι το προϊόν που φέρει τη σήμανση αυτή δεν πρέπει να απορρίπτεται μαζί με τα οικιακά απορρίμματα. Καθώς πρόκειται για προϊόν B2B, δεν πρέπει να απορρίπτεται σε δημόσια σημεία απορρύψης. Εάν θέλετε να απορρίψετε το προϊόν αυτό, παρακαλούμε όπως να το παραδώσετε σε μία υπηρεσία συλλογής ηλεκτρικού εξοπλισμού της περιοχής σας.



Ez a jelzés azt jelenti, hogy az ilyen jelzéssel ellátott termékét tilos a háztartási hulladékokkal együtt kidobni. Mivel ez vállalati felhasználású termék, tilos a lakosság számára fenntartott hulladékgyűjtőbe dobni.Ha a termék ki szereneti dobní, akkor vigye azt el a lakóhelyéhez közel működő, elhasznált elektromos berendezések begyűjtésével foglalkozó hulladékkezelő központoz.



Questo simbolo indica che il prodotto non deve essere smaltito come un normale rifiuto domestico. In quanto prodotto B2B, può anche non essere smaltito in centri di smaltimento locale. Se si desidera smaltire il prodotto, consegnarlo a un organismo specializzato in smaltimento di apparecchiature elettriche vecchie.



Ši zīme norāda, ka izstrādājumu, uz kura tā atrodas, nedrīkst izmest kopā ar parastiem mājaiņniecības atkritumiem. Tā kā tas ir izstrādājums, ko cits citam pārdod un lieto tikai uzņēmumi, tad to nedrīkst arī izmest atkritumos tādās izgāzūvēs un atkritumu savākūvēs, kas paredzētas vietējiem iedzīvotājiem. Ja būs vajadzīgs šo izstrādājumu izmest atkritumos, tad rīkojieties pēc noteikumiem un nogādāiet to tuvākajā vietā, kur īpaši nodarbojas ar vecu elektrisku ierīču savākšanu.



Šis simbols rodo, kad juo paženklinto gaminio negalima išmesti kaip paprastų buitinių atliekų. Kadangi tai B2B (verslas verslui) produktas, jo negalima atiduoti ir buitinių atliekų tvarkymo įmonėms. Jei norite išmesti šį gaminį, atlikite tai tinkamai, atiduodami jį arti jūsų esančiai specializuotai senos elektrinės įrangos utilizavimo organizacijai.



Dan is-simbolu jindika li l-prodott li huwa mmarkat b'dan il-mod m'ghandux jintrema bhal skart normali tad-djar. Minhabba li huwa prodott B2B , ma jistax jintrema wkoll f'centri civici ghar-rimi ta' l-iskarik. Jekk tkun lixtaq tarmi dan il-prodott, jekk joghgbok ghamel dan kif suppost bihi tiehdu ghand organizzazzjoni fil-qrib li tispjalizza fir-rimi ta' taghmir qadim ta' l-eletriku.



Dette symbolet indikerer at produktet som er merket på denne måten ikke skal kastes som vanlig husholdningsavfall. Siden dette er et bedriftsprodukt, kan det heller ikke kastes ved en vanlig miljøstasjon. Hvis du ønsker å kaste dette produktet, er den riktige måten å gi det til en organisasjon i nærheten som spesialiserer seg på kassering av gammelt elektrisk utstyr.



Ten symbol oznacza, że produktu nim opatrzonego nie należy usuwać z typowymi odpadami z gospodarstwa domowego. Jest to produkt typu B2B, nie należy go więc przekazywać na komunalne składowiska odpadów. Aby we właściwy sposób usunąć ten produkt, należy przekazać go do najbliższej placówki specjalizującej się w usuwaniu starych urządzeń elektrycznych.



Este símbolo indica que o produto com esta marcação não deve ser deixado fora juntamente com o lixo doméstico normal. Como se trata de um produto B2B, também não pode ser deixado fora em centros civicos de recolha de lixo. Se quiser desfazer-se deste produto, faça-o correctamente entregando-o a uma organização especializada na eliminação de equipamento eléctrico antigo, próxima de si.



Acest simbol indică faptul că produsul marcat în acest fel nu trebuie aruncat ca și un gunoi menajer obișnuit. Deoarece acesta este un produs B2B, el nu trebuie aruncat nici la centrele de colectare urbane. Dacă vreți să aruncați acest produs, vă rugăm s-o faceți într-un mod adecvat, ducându-l la cea mai apropiată firmă specializată în colectarea echipamentelor electrice uzate.



Tento symbol znamená, že takto označený výrobok sa nesmie likvidovať ako bežný komunálny odpad. Keďže sa jedná o výrobok triedy B2B, nesmie sa likvidovať ani na mestských skládkach odpadu. Ak chcete tento výrobok likvidovať, odnesť ho do najbližšej organizácie, ktorá sa špecializuje na likvidáciu starých elektrických zariadení.



Ta simbol pomeni, da izdelka, ki je z njim označen, ne smete zavreči kot običajne gospodinske odpadke. Ker je to izdelek, namenjen za druge proizvajalce, ga ni dovoljeno odlagati v centrih za civilno odlaganje odpadkov. Če želite izdelek zavreči, prosimo, da to storite v sklašu s predpisi, tako da ga odpeljete v bližnjo organizacijo, ki je specializirana za odlaganje stare elektrifne opreme.



Este símbolo indica que el producto así señalado no debe desecharse como los residuos domésticos normales. Dado que es un producto de consumo profesional, tampoco debe llevarse a centros de recogida selectiva municipales. Si desea desecharse este producto, hágalo debidamente acudiendo a una organización de su zona que este especializada en el tratamiento de residuos de aparatos eléctricos usados.



Den här symbolen indikerar att produkten inte får blandas med normalt hushållsavfall då den är förbrukad. Eftersom produkten är en så kallad B2B-produkt är den inte avsedd för privata konsumenter, den får således inte avfallshanteras på allmänna miljö- eller återvinningstationer då den är förbrukad. Om ni vill avfallshandla den här produkten på rätt sätt, ska ni lämna den till myndighet eller företag, specialiserad på avfallshandling av förbrukad elektrisk utrustning i ert närområde.