Sauter GmbH
Ziegelei 1
D-72336 Balingen
E-Mail: info@sauter.eu
Tel: +49-[0]7433- 9933-0
Fax: +49-[0]7433-9933-149
Internet: www.sauter.eu

Instruction Manual
TD GOLD 40

Operating Instructions
1. Text of the Instruction Manual in HELP Menu

A. Main function of the KERN SSG Software for the Gold Tester

With this software, the individual ultra sound velocity of your gold piece can be calculated.

Gold pieces as bars or coins are typically not made of pure gold with a sound velocity of 3240 meter per seconds (m/s). Often copper or other components are in small shares elements of gold pieces. This is necessary to obtain a better physical characteristics and it needs to be respected in the check of genuineness.

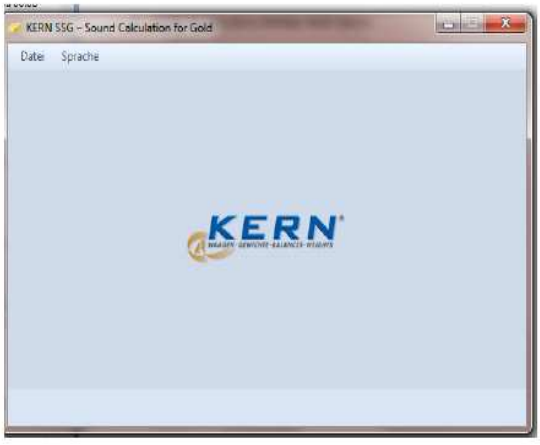
The components of the mixture of your gold piece can be taken off the expose that comes with the bar or the coin. Or it can be asked for at the manufacturer.

B. Start the software

Exctract	KERNSSG.zip
Start	KERNSSG.exe

C. Start of the procedure

Please select „File“ then „New“



D. Choice of the outer appearance

Selection between gold bar or gold coin

E. Weight and Dimensions

Fill in the weight and the dimensions of the piece of gold (test object)

The following procedure for the measurements is recommended:

Determination of the weight: Type approved balance, e.g. KERN KB 650-2NM
* Turn the balance on
* Warm up for approx. 30 minutes
* Place the test object on the weighing pan
* Read the result in grams

Determination of the length dimensions: Caliper, e.g. SAUTER LC 150
* Take the thickness dimension
* Read the result in millimeters

F. Safety level

Every measurement has its tolerance. A typical tolerance of e.g. 5% of the measured value represents a safety level

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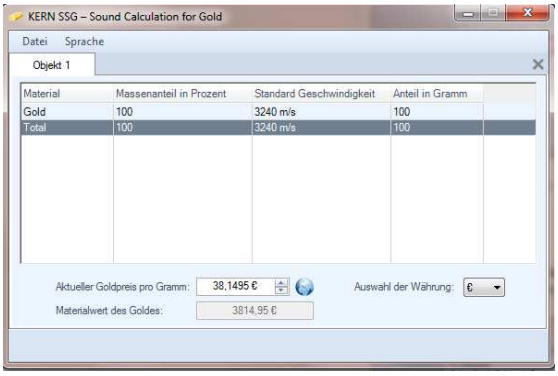
of 95%. This tolerance is the value by which the measured value may vary from the real or true value. As in this procedure, two measured values are compared with each other, it is recommended to use a broad tolerance.

Factory-provided is this software with a safety level of 95%. This can be overwritten by any other value.

G. Material Composition



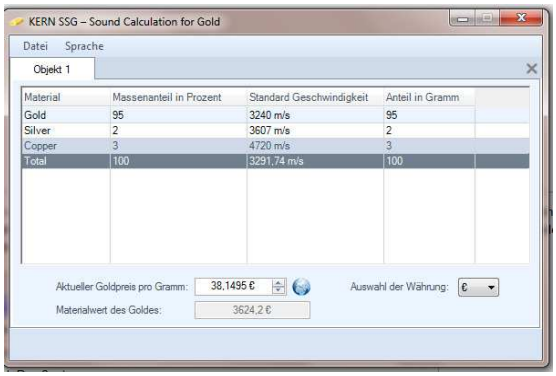
Pure gold bars or coins are rather uncommon. Typically, gold pieces are a composition of gold and other materials, e.g. to provide a higher stability. That means that other materials are added in the production process. Common are amongst others: silver and copper.

The exact composition of the gold piece can be seen in the exposé that typically is added with bars or coins. Alternatively, this composition can be inquired at the precious metals separation works, the mint or the refining establishment.

In this window, the composition is to be set in.

Please click into the line „new component“. Here please now select the first component of the composition – other then gold – and define the share of mass in percent of the composition. The software now adds automatically the relevant mass.

After adding all components, the software shows the exact and individual sound velocity of the test object.



This individual sound velocity is to be set into the SAUTER TD Ultrasound instrument.

H. Setting in the instrument TD special gold

Please turn the instrument on. Then please press the VEL key. Now a sound velocity appears, e.g. 5000 m/s. By pressing the arrow keys ▲ and ▼the sound velocity can the changed in 10 m/s steps. Please round the calculated sound velocity accordingly.
By pressing VEL again, this setting is stored.

I. Measurement with the TD special gold

Please put a little bit coupling gel (ATB-US 03, can be reordered) onto the test object. Place the sensor on the gel, gently pressed by hand. The sensor has to be connected with the TD display unit.

If the connection is fine, in the display can now be seen:

((•)) This symbol shows the successful coupling. This means, that the ultra sound travels regularly through the material, is reflected and captured with its echo.

Value (mm) This number indicates the thickness in mm of the test object

J. Interpretation of the measured value

The measured value of the TD ultrasound instrument shall be within the tolerances calculated by the SSG software.

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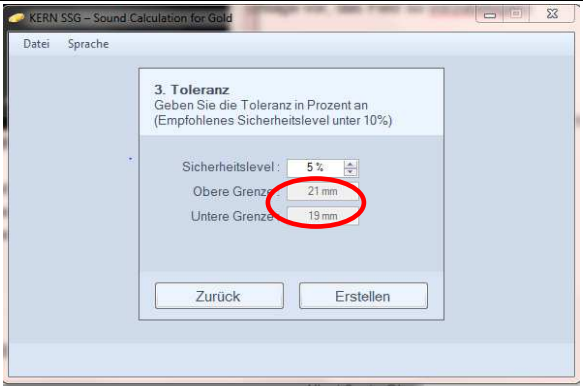


If the measured value of is below or above the tolerance range, it is recommend to perform a second measurement at another position of the gold piece. At a bar, this second measurement could be taken at different sides.

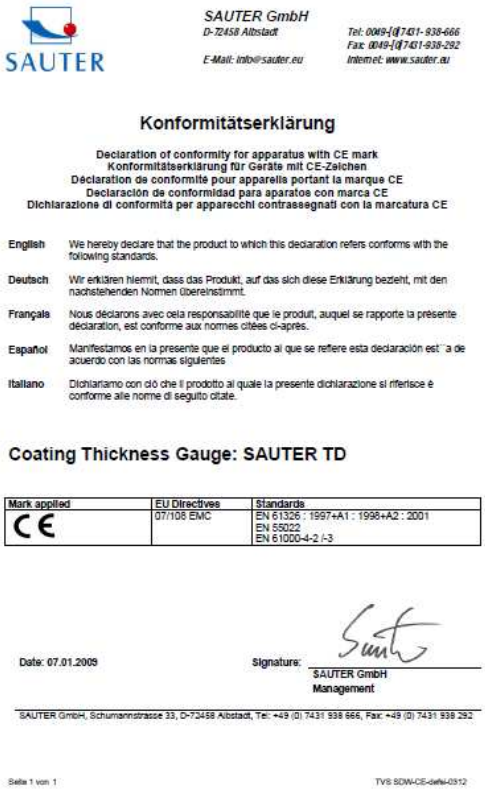
If then there are still differences, which are out of the tolerance range, there is a suspicious fact, that there might by a false core.

K. Alternative measurement procedures

The most traditional procedure to check the genuineness of gold pieces is the determination of density in a liquid.

Here we offer at www.kern-sohn.com in the segment “Laboratory balances” attractive instruments and solutions.

L. CE Declaration of Conformity



SAUTER

SAUTER GmbH
D-72458 Albstadt
E-Mail: info@sauter.eu

Tel: 0049-[0]7431- 938-666
Fax: 0049-[0]7431-938-292
Internet: www.sauter.eu

Konformitätserklärung

Declaration of conformity for apparatus with CE mark
Konformitätserklärung für Geräte mit CE-Zeichen
Déclaration de conformité pour appareils portant la marque CE
Declaración de conformidad para aparatos con marca CE
Dichiarazione di conformità per apparecchi contrassegnati con la marcatura CE

English We hereby declare that the product to which this declaration refers conforms with the following standards.

Deutsch Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.

Française Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.

Español Manifestamos en la presente que el producto al que se refiere esta declaración est˜a de acuerdo con las normas siguientes

Italiano Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.

Coating Thickness Gauge: SAUTER TD

Mark applied	EU Directives	Standards
CE	07/108 EMC	EN 61326 : 1997+A1 : 1998+A2 : 2001 EN 55022 EN 61000-4-2 /-3

Date: 07.01.2009

Signature:

SAUTER GmbH
Management

SAUTER GmbH, Schumannstrasse 33, D-72458 Albstadt, Tel: +49 (0) 7431 938 666, Fax: +49 (0) 7431 938 292

Seite 1 von 1

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