

StarPerf[®]

Exploring new dimensions in banknote protection



orell füssli security printing ltd
security you can trust

At Orell Füssli Security Printing, tradition meets high-tech. StarPerf®, a security feature based on micro-perforation technology, is the latest proof of the company's innovative strength in the field of security printing. StarPerf® is a ground breaking security feature that can be detected and verified by smart phone applications, and hence opens up new perspectives in the way banknotes are handled by the public.

Microperforation created by laser technology Resistant to wear, tear, and soiling

StarPerf® is created by lasering distinct microperforation patterns, such as denomination specific information, into the banknote. The micro-perforations are resistant to soiling, wear, and tear, and provide long-lasting security to the banknote, even under harsh conditions.

Easy integration into any banknote design Makes copying and scanning impossible

StarPerf® can easily be integrated into any banknote design, as it is completely invisible in reflection. Only when the note is held against the light, the perforations become clearly visible.



StarPerf® consists of microperforations, which can vary in size and shape, and which are arranged in a denomination-specific pattern.

Two security levels in one security feature For easy identification and verification

StarPerf® is a security element that combines the characteristics of a level 1 and level 2 feature: while it can easily be detected by the naked eye, it can equally easily be verified by the simple use of an App installed on any smart phone widely available nowadays.

Size, shape, and pattern matter Guarantees maximum security

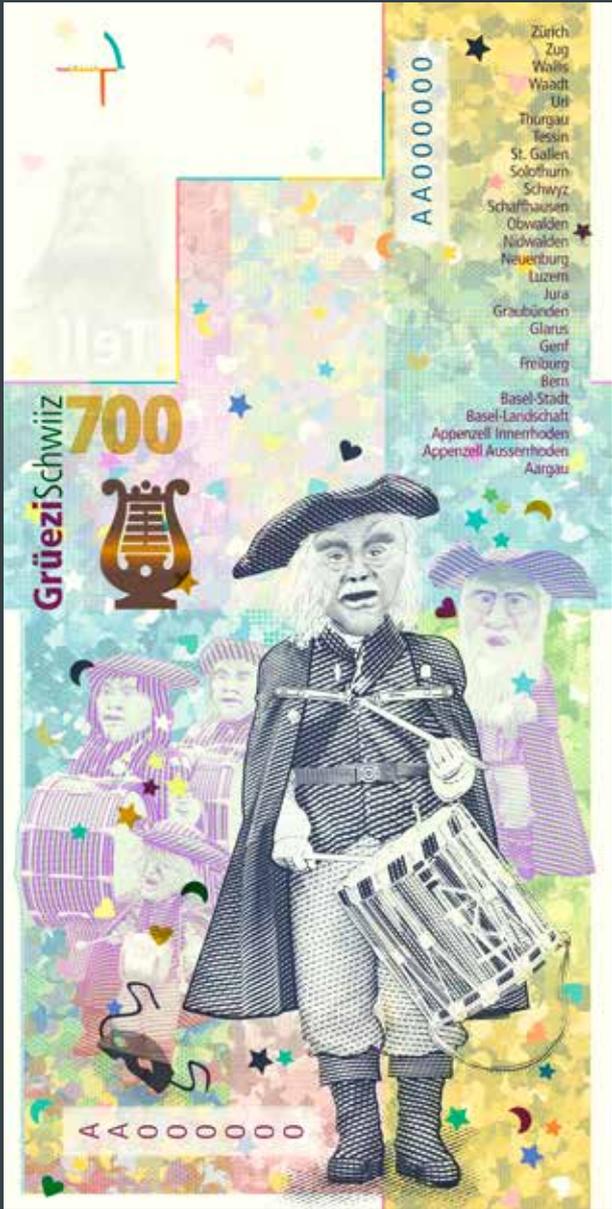
Both the size as well as the shape of every single perforation can be varied. Combined with the distinct and very precise pattern, and the possibility to verify the element with smart phones, it becomes virtually impossible to counterfeit StarPerf®.

Minimum impact on the environment An ever more important challenge

Environmental matters become more and more important and public awareness on this issue is on the rise. StarPerf® does not leave any residues when the banknotes are taken out of circulation to be destroyed, and hence leaves a minimum footprint on the environment.

Detection and verification with smart phone Apps A powerful authentication tool for the public

StarPerf® is designed in such a manner that commonly available smart phones can detect and capture the image of the StarPerf® pattern. A customized App, which is readily available, is capable of analyzing the pattern and thus verifying the authenticity of the banknote. The App is developed in such a way that it can identify StarPerf® both on the obverse and reverse side of the banknote, and regardless of the orientation of the banknote relative to the smart phone.





StarPerf® is an innovative solution that enables the verification and authentication of the feature by smart phones. This pioneering approach opens up new dimensions in the handling of cash by the public.

The detection process of StarPerf® A simple sweep across the banknote

StarPerf® can easily be detected by positioning the smart phone at a short distance from the banknote, which is hold against a light source. The App scans the banknote for StarPerf® and displays a confirmation message if the scan was successful. This entire process takes only a few seconds to complete.

The smart phone as an education platform To readily provide denomination-specific information to the public

As the App can identify distinct denominations, it becomes possible to explain further security elements and other features of the specific banknote in the App, by displaying text, pictures and animations. Hence, smart phones become a very powerful platform for the education of the public.



Step 1: The user starts the App



Step 2: The user can choose between the «verification» or «description» mode. To verify the banknote, the user selects the «verification» button.



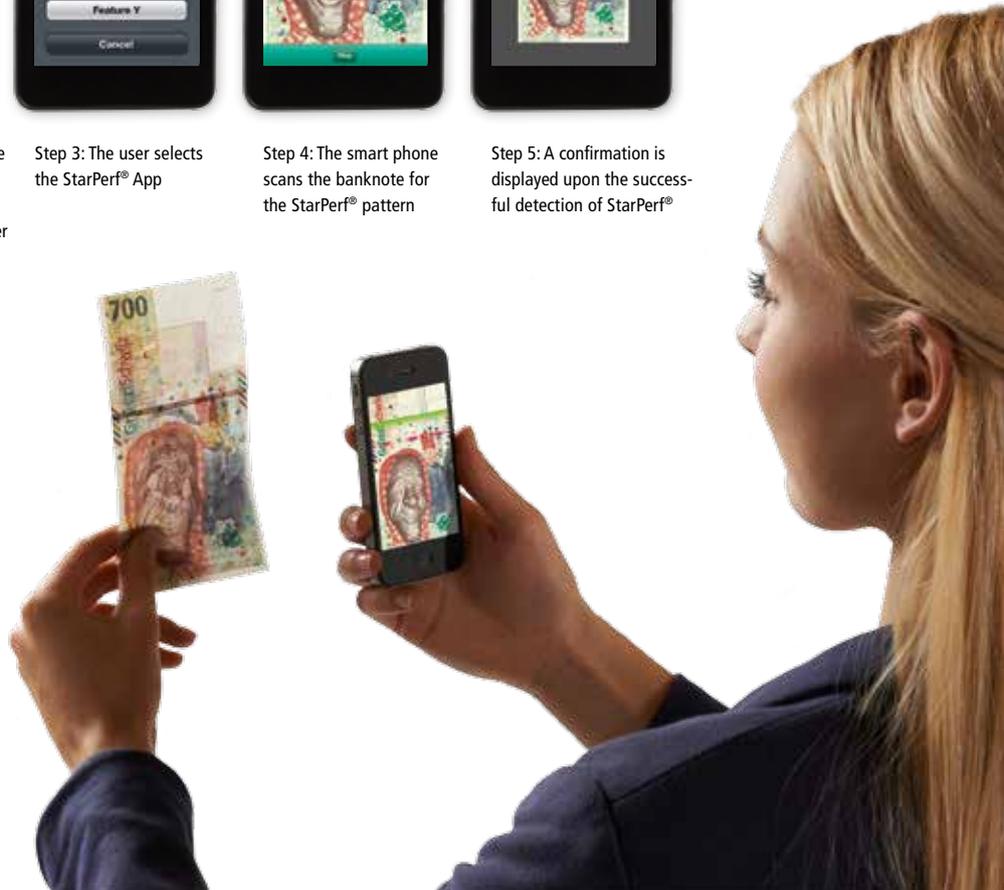
Step 3: The user selects the StarPerf® App



Step 4: The smart phone scans the banknote for the StarPerf® pattern



Step 5: A confirmation is displayed upon the successful detection of StarPerf®



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By choosing Orell Füssli Security Printing Ltd you benefit in numerous ways

- Decades of experience and competence in printing banknotes
- Comprehensive support and advice, from the first draft to delivery of the banknotes
- Cutting-edge production technology and highly skilled personnel secure consistently high quality
- A choice of paper or polymer substrate – we supply whichever you prefer
- All banknotes produced by Orell Füssli Security Printing Ltd are printed in Switzerland
- Very personalised customer care is our philosophy

Orell Füssli's history began in Zurich in 1519. The company first produced paper securities in 1827. In 1911, Orell Füssli began working with the Swiss National Bank on the design and production of banknotes. This marked the beginning of the company's long experience as a printer devoted to quality and security. Orell Füssli Security Printing Ltd is a member of the Orell Füssli Group, which is based in Zurich and listed on the SWX Swiss Exchange stock market.