HOUSE NOTES













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ART, DESIGN AND SECURITY IN ONE

CURRENCY NEWS™



Time in Motion: Showcasing the Next Era of Banknote Innovation

'Time in Motion' is a new house note that brings together advanced security technology, material science, and design storytelling under a single, compelling theme. Developed through collaboration between Authentix, Kurz, Koenig & Bauer Banknote Solutions, and Landqart, the note serves as both a technical milestone and a creative exploration of how movement, integration, and durability can redefine overt security.

At its core, this house note marks the official launch of QUANTUM stripe™ animation effects, a new generation of nano-optic security features designed to deliver intuitive, dynamic visual authentication.

> *"The theme of Time in Motion provides the perfect narrative framework, allowing animated effects, printed design elements, and substrate architecture to work together as a cohesive whole.*



Collaboration as the Catalyst for Innovation

At the heart of this house note is collaboration not as a headline, but as a working principle. Each partner has contributed its core strengths to deliver a fully integrated solution that reflects real-world production conditions and issuing authority requirements.

Authentix brings its nano optics platform, QUANTUM stripe™, a plasmonic structural colour technology that creates dynamic, intuitive animation effects through nanoscale engineering.

Kurz, a long-standing leader in security feature manufacturing, serves as the manufacturing partner for QUANTUM stripe™, marking a significant step forward under the newly established partnership between the two companies.

Koenig & Bauer Banknote Solutions has designed the print concept and produced the house note on its AKTINA® Simultan offset machinery, demonstrating compatibility with established, high-speed banknote printing environments.

Landqart provides both the Durasafe® substrate and a companion paper version of the note, enabling a direct comparison of material performance and integration approaches.

The result is not a laboratory concept, but a credible, production-ready demonstration of next-generation banknote security.



QUANTUM stripe™ Animation Effects

The house note represents the first public launch of QUANTUM stripe™ animation effects, showcasing the potential of structural colour to create vivid, dynamic motion without the use of pigments or dyes.

The animation effects are designed to be immediately recognisable and intuitive for the public, while remaining extremely difficult to replicate. Moving from traditionally-seen simple two or three frame animation to multi frame animation allows for seamless, customisable movement that makes authentication more natural than ever before.

Importantly, QUANTUM stripe™ is designed as a platform, not a single effect. The animation demonstrated in this house note represents the next leap in a longer roadmap that includes expanded colour palettes, increased animation complexity, and future opportunities for machine-readable interaction.

Embedded Integration on Durasafe®

A key highlight of this house note is that alongside a traditional paper banknote with a surface applied stripe is an embedded integration of QUANTUM stripe™ within Landqart's Durasafe® substrate. Rather than being applied to the surface, the nano-optic feature is fully embedded into the substrate structure, supporting both security performance and long-term durability.

The Durasafe® unique hybrid construction combining paper and polymer layers enables a durability enhancement over traditional paper, and in addition a new level of integration for QUANTUM stripe™ while protecting the nano-optic structures from circulation wear. The result is a feature that maintains its visual impact over time.

The embedded approach also demonstrates how advanced overt features can be incorporated as an integral part of the banknote, rather than treated as an add-on, thereby supporting issuing authority priorities around lifespan, cleanliness, and robustness.

Print Credibility and Production Readiness

The print design has been carefully balanced to ensure harmony between substrate, security feature, and artwork, reinforcing the idea that innovation must coexist with manufacturability.

Both notes have been printed by Koenig & Bauer Banknote Solutions on the AKTINA® Simultan offset machinery, with the paper variant having QUANTUM stripe™ applied to the surface via a hot stamping machine for banknote production. The house note confirms that QUANTUM stripe™ and these new effects can be achieved within existing industrial workflows.

In addition to QUANTUM stripe™ in the main window, a secondary window is overprinted on both sides using AKTINA® Simultan offset, and the resulting SUSI Optics® JAZZ™ Image Switch feature produces a dynamic optical movement effect, with no additional production steps or lenses required.

A Platform for Future Banknote Design

This house note, issued in Q2 2026, is not intended for circulation, but for conversation. It provides issuing authorities, printers, and industry stakeholders with a tangible example of how animation, integration, and collaboration can redefine overt security.

By uniting Authentix, Kurz, Koenig & Bauer Banknote Solutions, and Landqart around a shared vision, the Time in Motion house note offers a clear signal of where banknote design is heading towards banknotes and security features that are intuitive, durable, and deeply integrated moving seamlessly between science, design, and production.

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