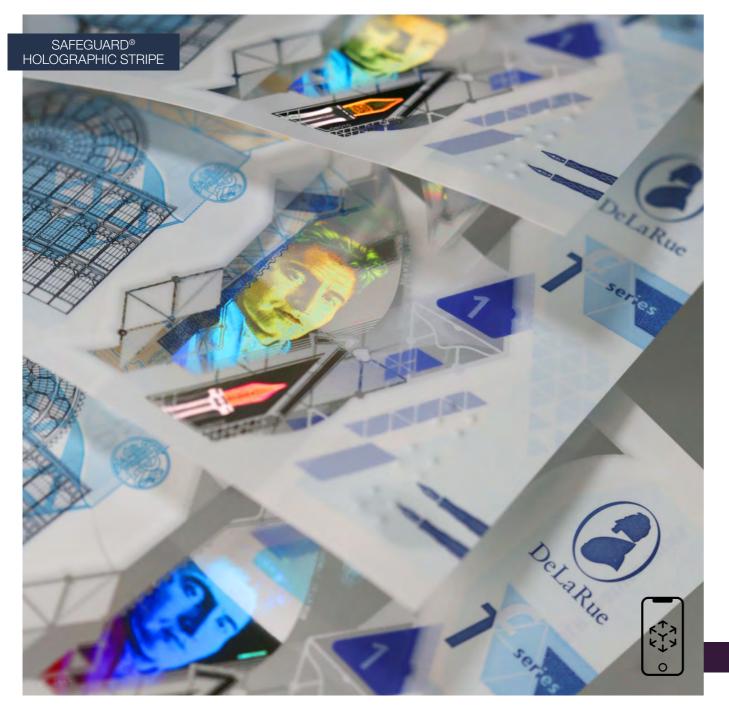




# Holographic Features



### De La Rue Currency

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Holographic Features

Holographic Features

We provide banknotes that central banks and issuing authorities can be proud of.

More than half of central banks, banknote issuing authorities and state printing works around the world choose De La Rue. We provide market-leading security features, polymer substrate and fully finished banknotes.

De La Rue banknotes are more than just currency – they are secure, functional and inspiring products that countries can take pride in. They represent the very best of British design and innovation by capturing the richness of the cultures they represent with originality and creative flair.

Today, De La Rue is a progressive global company and international manufacturer, building on a heritage of customer focus, invention and expertise. We value our role as a trusted and long-term partner to banknote issuing authorities and respect this role by striving to offer the best products, support and services via a seamless experience from start to finish.



### Holographic Expertise

De La Rue Currency has created one of the most diverse and comprehensive holographic feature portfolios commercially available.

Our holographic origination techniques have created features and effects that are clear, visually striking and secure.

Classical, image based holography offers the ability to display detailed images and effects that provide a unique security barrier to counterfeiters.

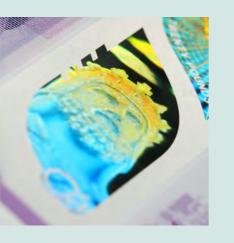
Digitally originated, effect based holographic features are increasing in popularity. These utilise movement, animation and colour, producing vibrant effects that are easy to explain and understand.

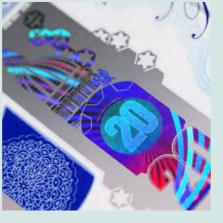
Combinational holograms maximise the benefits of both classical and digital origination techniques in holographic stripes. When combined with polymer windows they offer an integrated, premium security feature for polymer banknotes.

## **Holographic features**

Classical - Image based







#### DEPTH<sup>™</sup> Image

A major effect that simulates the appearance of three dimensional movement below the surface plane of the hologram. *e.g* cloud movement behind an image.

### **TRUEIMAGE**<sup>TM</sup>

A very high resolution with cinematographic animation effects used to capture people, animals and objects in full three dimensions.

#### DUAL<sup>™</sup> Image

Displays a clear switch between two distinct images in the same position on a hologram. The user can see one of the two images, that switch when the banknote is tilted. With a simple switch between two strong images, this feature is easy to explain and easy to understand.



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### Holographic features

Classical - Image based (continued)



### MULTI<sup>™</sup> Image

Used in combination with DUAL<sup>™</sup> Image. MULTI<sup>™</sup> Image provides a clear colour switch using a repeating pattern of icons or numerals. These change colour when the banknote is tilted giving a further layer of authentication with the DUAL<sup>™</sup> image switch. The MULTI<sup>™</sup> image repeating pattern additionally adds a larger area of holographic effect giving greater resistance to circulation damage.



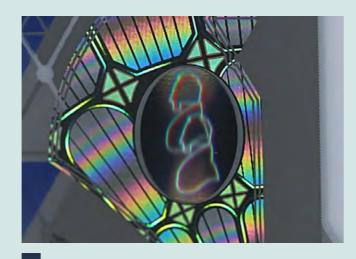
### RGB Photo realistic portrait

Used for creating highly detailed and accurate colour representations of iconic figures, the photo realism within the effect serves as a point of crossover between the holographic and the print design elements of the banknote.

These portraits can be combined with various other holographic effects, including DEPTH<sup>™</sup>, DUAL<sup>™</sup> and MULTI<sup>™</sup>. The quality of the image and combination with other effects facilitates public recognition and creates a point of engagement and authentication.

### Holographic features Digital - Effect based





### **PUREIMAGE<sup>™</sup> PATCH**

A new dynamic effect utilising the latest high-resolution origination techniques to produce unique movement and animation effects that can include contraction and expanding effects.

Movement appears when tilted and with a wide viewing angle. PUREIMAGE<sup>™</sup> is available for threads, patches and stripes.

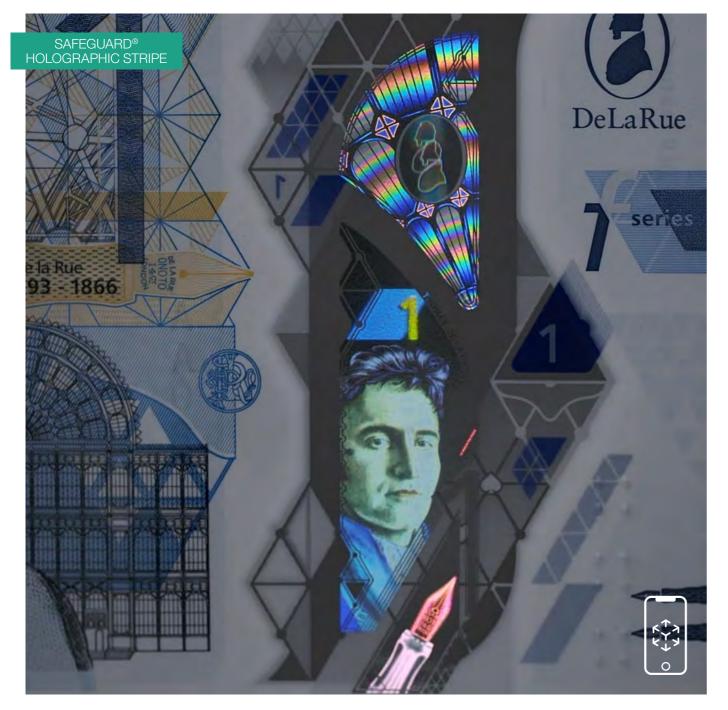
#### **SPOTLIGHT**<sup>TM</sup>

An interactive effect with rotating images that appear above and below a plane, the rotating images are blurred under a diffused light and sharpen under a focussed light such as a mobile phone torch. Movement appears when tilted on any axis and with a wide viewing angle.



FeaturePolymerPaperAvailabilityPaper

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### **Holographic features**

Digital - Effect based (continued)



#### **PSEUDO RELIEF**

A high resolution effect which creates an optical illusion of raised surfaces. This feature can incorporate achromatic or colour effects, or Fresnel effects to bring images to life.

Paper



#### FRESNEL

An interactive effect with patterns that rotate above and below a point that is below the plane of the holographic surface. It can be combined with PUREIMAGE<sup>™</sup> and achromatic (black and white) effects to enhance security. public recognition and creates a point of engagement and authentication.

## **Holographic features** Stripe

Holographic stripes are a large, secure, striking and sophisticated security feature for both polymer and paper banknotes. Stripes are best used as primary security features due to their large size and the ability to combine digital (effects) and classical (image) based effects within them.

For polymer banknotes, holographic stripes offer enhanced security when positioned within the polymer window. A feature unique to polymer is the capability to register the holographic stripe when printing SAFEGUARD® substrate so that the holographic stripe appears clearly on both sides of the banknote. Holographic stripes within a window have been chosen for the current series of banknotes by multiple issuing authorities who have transitioned to polymer including the Bank of England.

The detail and movement of classical holographic effects is extremely difficult to replicate on commercially available equipment, making it ideal for the selection of unique, detailed images that can be easily authenticated by the public.

Digital holograms enable new movement and animation techniques across all axes, that are intuitively activated making them easy to describe and easy to understand.

Holographic stripes provide a platform that enables highly customised holographic images and effects in close proximity to one another to be combined within a large, clear and obvious part of the banknote.



**ST**27 denominations use De La Rue's holographic features"





### Holographic features Patch

Holographic patches are typically applied to paper banknotes and are frequently used to support embedded primary features such as threads. Holographic patches can be used to carry design elements using either digital or classical holographic techniques.

Modern digital holographic techniques permit the usage of striking and vibrant movement and colour effects. Developments in digital origination techniques and application processes during manufacturing mean that digital holographic images appear brighter, offer new intuitive movements and will have a greater resistance to degradation over time.

Patches are a popular supporting feature to vivid, eyecatching threads and stripes. They allow for engaging designs and offer a platform for easily recognisable designs and motifs across a banknote series.

"Holographic stripes or patches were selected for 38% of new De La Rue designs issued in 2020"











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