



Monetary Authority of Singapore

# KNOW YOUR MONEY

Notes

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## THE CURRENT SERIES NOTES – THE PORTRAIT SERIES

### 2.1 The Development

As with most countries, Singapore adopts a policy of changing its currency design periodically so that new security features can be added to deter any attempt to counterfeit the notes and make it difficult and unprofitable. The development of the Portrait notes began in the nineties. The use of portrait on the notes serves two purposes, it provides the opportunity to honour national figures and portrait is also a unique anti-counterfeiting feature.

The front design of the Portrait notes features the portrait of Singapore's first President, the late Encik Yusof bin Ishak. He is remembered for his contributions to Singapore. The back of each denomination bears a secondary theme design based on the biography of Encik Yusof bin Ishak. The seven themes are Education, Garden City, Sports, Arts, Youth, Government and Economics. Together, these themes depict the aspirations of modern Singapore and the different facets of our multi-racial society. The Portrait notes were issued on 9 September 1999 to usher in the new millennium.

## 2.2 The Portrait Notes

### Specifications of Portrait Notes

Deno	Front Design	Back Design Theme	Size of Note (mm)	Predominant Colour	Secondary Colours	Braille Codes
\$2	Portrait of Late President Yusof bin Ishak	Education	126 x 63	Purple	Blue and Brown	•
\$5		Garden City	133 x 66	Green	Dark Green and Red	• •
\$10		Sports	141 x 69	Red	Purple and Brown	••
\$50		Arts	156 x 74	Blue	Dark Blue and Red	•• •
\$100		Youth	162 x 77	Orange	Brown and Green	• •
\$1,000		Government	170 x 83	Purple	Blue and Red	•• •
\$10,000		Economics	180 x 90	Gold	Yellow and Brown	•• ••

## Designs of Paper Portrait Notes



## Designs of Polymer Portrait Notes



### 2.3 Security Features of the Paper Portrait Notes

Security features in currency notes act as a safeguard to minimise the risk of counterfeiting. It is important for the public to be aware of the security features incorporated in genuine currency notes and to be able to distinguish between genuine and fake notes.

Incorporated in each currency note is a multiplicity of security features which makes the counterfeiting of the currency notes extremely difficult. The best method of detection is to compare a suspect note with a genuine note.

**FRONT**



**BACK**



## Features recognisable under transmitted light



### Portrait Watermark

A three dimensional multi-tone portrait watermark of the late President Yusof bin Ishak can be seen when the note is held up to the light. The watermark has a three dimensional appearance with areas in varying tones of dark and light.



### Highlight Watermark

This monotone watermark is located below the Portrait watermark on the front of the note. It corresponds with the Braille pattern at the top right-hand corner of each denomination. The primary characteristic of the highlight watermark is that its extra thin area makes it appear clear and distinct when the note is held up to the light



### Perfect Registration

The Singapore Lion symbol appearing near the watermark is printed simultaneously with the same image on the front and back of the note. When the note is held up to the light, the Singapore Lion symbol on the front registers perfectly with the image on the back.



### Security Thread

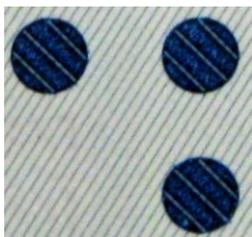
The windowed machine-readable thread is interwoven in the paper running vertically down the back of the note. When held up to the light, the thread appears as a bold continuous line and it shows a series of text featuring the denomination numeral of the note and the word SINGAPORE in the four official languages. The holographic images of the Singapore Lion symbol and the MAS logo can be seen on the silver-coloured thread when the viewing angle is varied.

## Features recognisable under reflected light

### Intaglio Prints



The intaglio (raised) printing gives the note an embossed feel. Widespread use of this intaglio printing on the Singapore Arms, the engraved Portrait, the word SINGAPORE and other areas offers good overall tactility. The prints are finely done so that tiny details are clearly defined.



The intaglio printing of the denomination numeral of each note also helps recognition by the visually handicapped. Each note has a Braille code printed in heavy intaglio ink at the top right corner of the front of the note, so that visually handicapped users can recognise the different denominations by touch.

### Engraved Portrait



The portrait of the late Encik Yusof bin Ishak dominates the front of the "Portrait" series notes. Hand-engraved and printed in intaglio ink, the portrait serves as a unique anti-counterfeiting feature. The fine lines of the engraving are difficult to imitate or reproduce.



The background on both sides of the note is printed by the lithographic process. The smooth, rainbowed and anti-photographic background makes camera counterfeiting difficult and photographic separation virtually impossible.

## Features recognisable under magnification

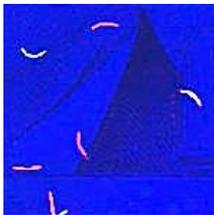
### Micro-Printing



The text “BOARD OF COMMISSIONERS OF CURRENCY SINGAPORE” or “MONETARY AUTHORITY OF SINGAPORE” is in micro-letters above the four official languages of the word SINGAPORE on the front of the note. To the naked eye, this appears as a single line but the details can be seen legibly with the aid of a magnifying glass.

## Features recognisable under fluorescent light

### Invisible Fluorescent Fibres



When the note is viewed under ultra-violet (UV) light, more security features show up. Unlike most commercial papers, the paper of the note does not reflect UV light at all. Fibres which are invisible to the unaided eye are incorporated on both sides of the note surface. The fibres which cannot be seen in ordinary light will glow under UV light.

### Invisible Feature



This feature, in the form of the denomination numeral of the note, is present on the front of the note. It is invisible under ordinary lighting condition but glows brightly under UV light.

### Fluorescent Ink



The fluorescent pigment on the serial numbers and the seal on the front of the note glows brightly under UV light. This feature also appears on some parts of the designs on both the front and back of the note.



### Asymmetrical Serial Numbers

The asymmetrical serial numbering style has progressively larger digits in adjacent positions. One set of serial numbers appears horizontally, the other vertically. The serial numbers both glow under UV light.



### Latent Image

Two distinctively different latent images bearing the BCCS or MAS logo and the Singapore Lion symbol become visible alternately when the note is tilted at various angles. The latent image also glows brightly under UV light.



### Anti-Colour Copying Features

#### Line Structures

These line structures appear at the right of the front design and on the areas above and below the portrait watermark on the back of the note. Hidden distortions will appear in these areas when the note is colour-copied.



#### Kinegram

The kinegram appears as an octagonal foil on the front of the note. It contains an image of the denomination numeral which shifts as the note is tilted. On varying the viewing angle, one can also see the logo of BCCS or MAS transforming into the letters “BCCS” or Singapore Lion symbol. The background of the kinegram is composed of shapes representing electron orbitals which change from bright to dark as the note is rotated. This background shimmers in an array of colours when rotated. These features are unique properties to the kinegram and cannot be replicated.



## 2.4 Security Features of the Polymer Portrait Notes

As part of MAS' commitment to improve the durability, quality and security of currency notes, polymer Portrait notes of \$2, \$5 and \$10 denominations have been introduced into circulation. The polymer notes are well accepted by the public with a 100% machine acceptance. The polymer Portrait notes are printed on Guardian® polymer substrate, which is a unique polypropylene plastic material used for the specialised requirements for the harsh usage and handling of notes.

To preserve public familiarity and minimise modifications to note handling machines, the design and dimensions of the polymer notes are similar to the paper Portrait notes. There are some design changes on the polymer Portrait notes to incorporate security features unique to the polymer technology.

### FRONT



### BACK





### **Complex Clear Window**

A see-through window with a multi-tonal image of the Singapore Arms.



### **Shadow Image**

A watermark-like image of President Yusof bin Ishak is visible when viewed with transmitted light.



### **Singapore Lion Symbol With Hidden Image**

A stylised gold patch with the image of the Singapore Arms appearing at varying angles.



### **Security Thread**

A security thread in the shape of the Singapore island.



### **Embossed Clear Window**

A clear window with the denomination numeral embossed in it. At the top and bottom of the window is a repetitive pattern of the denomination numeral.