



PROCESS COLOR

The Hologram originators

Protects Identity. Guards Quality. Ensures Profitability. By fighting counterfeits and forgery.

Website: www.processcolor.in



Holography & Holograms.

Holography is the most efficient, cost effective and fool proof brand and product security system in the world, that successfully prevent counterfeiting and forgery. In its technical definition, holography is the method of producing a 3 dimensional image of an object by recording on a photographic plate or film the pattern of interference formed by a split laser beam and then illuminating the pattern either with laser or with ordinary light.

The Masters of Holography.

Holography dates from 1947, when British scientist Dennis Gabor developed the theory of holography. The pioneering works of Emmett Leith and Juris Upatnieks from the university of Michigan in 1962, led to standardization of the equipments used to make holograms. Dr. Yuri N. Denisyuk from Russia combined holography with Nobel Loreate Gabriel Lippmann's work in natural color photography. Denisyuk's approach produced a white-light reflection hologram which, for the first time, could be viewed in the light from the ordinary bulb. Another major advance in the holography occurred in 1968 when Dr. Stephen A. Benton invented holograms that create a rainbow image when viewed in ordinary white light.



Dennis Gabor



Emmett Leith



Juris Upatnieks



Dr. Yuri N. Denisyuk



Dr. Stephen A. Benton

Processcolor salutes the Masters of holography and fondly remembers Dr. Yuri N. Denisyuk, the father of white light holography, with whom the company's Chief Executive, Mr. T.M. Rajan shared a special rapport, and was his friendly guide and patron in modern holography concepts and technology.

Security hologram


Recent market review reveals that forgery is widespread and the manufacturers and buyers across the world are equally robbed by counterfeits and duplicates. The Annual DOPIP global counterfeit monitor report alone accounts for a loss of 200 billion US dollars last year. Intelligence reports gathered from Law enforcement, customs, Nodal agencies, Brand owners etc also agree with this figure. Now the world has widely accepted the Science of Holography and mainly depends on security holograms to effectively check and prevent unauthorized manufacturing, sales or distribution of counterfeit products, copyright and Trademark infringements, forging of documents etc.

Growing importance of protection against brand piracy

Everything is forged nowadays, from cosmetic & luxury goods to medicines and even vehicle spare parts. In Information Technology alone, one in every ten software products is forgery and this costs over 10,000 jobs. It is impossible to measure the personal harm to people who take counterfeit medicines. This makes the issue of piracy protection particularly important in the pharmaceuticals industry, especially if products are intended for export.

Recently Pakistani authorities tipped by the US Federal Bureau of Investigation (FBI) busted a 15 member gang that printed a high quality counterfeit bank notes including foreign currency. The national exchequer suffered a loss of 30 to 35 billion rupees (more than 500 million US dollars) due to the illegal activities of the gang. The group that operated in a number of major cities of the country had printed and used Pakistani and Indian Rupees, US dollars, British pounds and UAE dirhams worth billions over the past seven years.

Now 17 countries in the world are using Hologram on their currencies to prevent counterfeiting.

A close-up photograph of a pair of human hands, one palm up and the other supporting from below, gently cradling a small, brown, downy bird chick. The bird is positioned in the center-left of the frame, facing right. The hands are light-skinned and appear to be of an adult. The background is plain white.

Why Security holograms?

Ahologram with its various visible and invisible security elements is the most effective protection tool against piracy of products or brands and forgery of documents.

Security holograms are preferred by the most as a perfect mean for authentication of a product since it is practically impossible to counterfeit it.

We at Processcolor accomplish this by producing high quality and high security 3D holograms incorporating state-of-the-art security features. This makes us to ensure the identity and security features. This makes us to ensure the identity and security of our hologram labels. By way, our clients are made sure that safety and virginity of their products and commodities are effectively guarded and guaranteed.

ProcessColor-Pioneers in flying colors

The first and still the finest prepress house in Kerala. Process Color-Kochi, was established in 1989. This highly reputed company under the inspiring leadership of Mr. T. M. Rajan branched out to offset printing in 2001 through Jaann Offset Printing (P) Ltd. at Padivattom , Cochin which is now one among the leading quality printing houses in Kerala. Then after Process Color ventured into hologram production and became a name to reckon with in high security hologram manufacturing. Process Color have the rare capability among the Indian Holographers to produce high resolution (12000 DPI) high security features like 2D -3D, hidden micro text, raster image, kinetic and refracting animated guilloche patterns, Pearl Effect with Hidden Micro Text, Four Channel Effect, Washed raster Image, Concealed Animated Image , Multiple Laser viewable animated covert image, Two different laser viewable effect at same point, 2D & 3D Animations, Real Photo Effect, Hidden multi level Animation, Shrink image, Watermark Effect, Embossed Effect, Smudge Effect etc., to prevent counterfeiting and counterfeiting becomes more difficult, almost impossible.

ProcessColor has started its Branch at Coimbatore, Tamil Nadu to cater the hologram requirements of most of the other Indian and foreign states. Process Color is one among the two Indian Holographic Company having the full facility of artwork creation to conventional and high resolution dot-matrix origination, mastering and other various production facilities under one roof.



Processcolor - The full spectrum of Holography.

Banking on its unbeatable track-record in meeting security, delivery schedules and quality standards, and its reputation as one among the most trusted hologram manufacturer in India, Process Color a world-class full-service hologram production center, offering the entire spectrum of holography services from design to manufacturing, including mastering, under a single roof. This ensures credibility and additional security for your holograms, making counterfeiting more difficult and least likely. For developing unfailing high security holograms, processcolor is one among the very few companies in Asia that can make a special combination mastering, incorporating all the holographic mastering systems- Conventional, Dot-matrix Technology. processcolor's exclusive Dot-matrix mastering system can provide up to 12,000 DPI Quality, a rare feat in Indian holography Industry.

Specialities of Security Holograms

- ★ Almost effective and attractive security device
- ★ Impossible to copy or reproduce by conventional Digital tools
- ★ Even by the originator, most difficult to re-create
- ★ Image is formed through diffraction method
- ★ Very cost effective

Mr. T.M.Rajan, Proprietor of processcolor, after his meritorious service from IAF, migrated to USA. He is a graduate in Printing Technology and has acquired knowledge in Holography during his 20 years of service in USA. In 1989 he returned to Kerala and started Process Color at Cochin. It is still rated as the finest and complete pre-press house in the state. Soon he floated another company Jaann Offset Printing, one of the finest quality printing press in Kerala and gradually opened branches of Process Color at various strategic centers like Calicut, Trivandrum and Kottayam. Subsequently he entered in to the field of TV Serial production and started a Cine Editing unit in Cochin. In the year 2002, in association with C-DIT- a Government of Kerala Institution, Process Color Holograms was commenced at Trivandrum



Mr. Rajan sharing a lighter moment with Dr. Yuri N. Denisjuk, the Father of white light holography

for high security hologram manufacturing. Mr.T.M.Rajan is serving as Genaral Council member of All India Federation of Master Printers, office bearer of a number of Social and Industrial Forums and is a well known planter too.



Technical and creative brilliance.

To cater to the emerging needs of the fast growing holography industry, the company has a carefully selected team of highly qualified, experienced holographers, scientists and technicians, in its well equipped Research & Development wing. Moreover, the company's design department, passionate about the depth and brilliance of the holographic image and its rainbow spectrum, is capable to give you world class design options for your holograms. Hearty welcome to the world of high quality, high security, eye- catching 3D holograms.

processcolor-Products & Services

Hologram Origination

Security holograms

High security holograms

Hard embossing holograms

Soft embossing holograms

Making of narrow Web master

Making of Wide Web master up to 1.2 mtr.

Making of Dot-matrix master

Making of Combination master

Holographic cartons

Holographic pouches

Holographic scratch cards etc.,

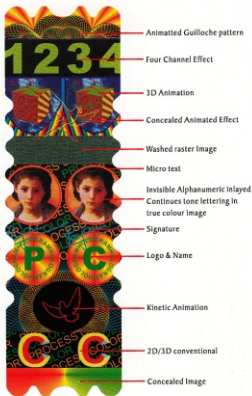
Holographic high security combination paper labels.

SAMPLE OF HIGH SECURITY FEATURES



1. Pearl Effect 2. Background Modulation 3. 3D Animation 4. Concealed Animated Image
 5. Kinetic Effect 6. Shrink Effect 7. Guilloche Pattern 8. Washed raster Effect 9. Real photo Effect
 10. 4 Channel effect 11. Messo Effect 12. 2D Animation 13. Hidden Animation 14. Embossed Effect
 15. Watermark Effect 16. Micro text.

A Typical Design for High Security Hologram



Sample of Holographic Scratch Film

First Prize

\$100,000

123456789

Laser Marking

Inkjet Marking



PROCESS COLOR

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Hologram Manufacturers Association of India.



Asian Anti - Counterfeit Association