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There are many different types of graphic overlay used around the world. They vary in size, material, operation and construction. Unfortunately, there is no exact definition of a custom graphic overlay, but our concise interpretation would be...

Definition: A Graphic Overlay is usually the outermost protective layer used to graphically brand a product and share operational information for the product by defining the controls and displays.

This durable layer is an essential and aesthetic component in the design of many electronic products today. An overlay's primary function is to protect the electrical switches and controls housed behind this rugged surface. However, this surface is also the face of your company for the end-user. Therefore, it is crucial to make a product simple to understand while making a bold and memorable statement about your brand. Your graphic overlay, in many cases, will be the first interaction a customer has with your brand and products. Consequentially, the design and look of your interface will make its first impression before the customer even touches your product for the first time.

1. Protection: Putting a layer between the working environment and the controls.
2. Instruction: Giving the customer a clear understanding of the products functions.
3. Branding: Making your product stand out from the competition.

How are Custom Graphic Overlays used?

A custom graphic overlay has many different applications. Here at RH, we talk about membrane keypad construction as a focal point, as this is a common requirement from most of our customers. However, we have made overlays for many different uses.

These are some typical applications for a custom graphic overlay:

1. Membrane Keypads and Membrane Switches.
2. Protective Overlay – Adding a surface to traditional mechanical switches.
3. Key Labels – Where a button or switch comes through an opening in the overlay.
4. Laminated panels – Where graphics fix to an engineered plastic or metal plate.
5. Indicator Panel – Where backlighting displays operational status separate from control.
6. Label Sets – Batched stickers and overlays supplied for hand application.
7. Graphic Panels – Used to display information, branding or point of sale.
(This is sometimes used in conjunction with touch products to add a permanent graphic layer over a capacitive touch switch.)

What materials comprise a Graphic Overlay?

In theory, any printable material could be used in a Graphic Overlay, but it needs to be customisable, flexible and durable. Whilst considering most electronic products' longevity and operational parameters, the material needs then become pretty specific.

1. Polycarbonate: Polycarbonate is excellent for graphic overlays due to its high impact resistance and the ability to deform the material. It is used everywhere in the engineering world because it is rugged and transparent in nature. The material is easy to work with when it comes to tooling and ideal for printing and texture requirements.
2. Polyester: Polyester is the common name for polyethylene terephthalate (PET). PET is the most widely used plastic in the world due to the textile and plastic bottle industries. When used in graphic overlays, it is ideal for extreme environments. It is very durable versus chemical agents and biological contaminants, making it a logical choice for medical, scientific, and industrial use. It is a preferred substrate where you emboss a functional key. PET is the best material for membrane switch graphic overlays due to its improved flex characteristics over polycarbonate.

3. Acrylic: Poly(methyl methacrylate) (PMMA), also known as acrylic, is a clear or coloured plastic. Used when a thicker sheet type material is required, it has good scratch resistance.

Customising your Graphic Overlays.

There are unlimited ways to customise your overlays and be creative while meeting all the products operational requirements. Combinations of print technology, engineering expertise, and post-press finishing can make a product really come to life. With this in mind, we would like to direct you to a helpful checklist we have created to offer inspiration and cover a few primary considerations regarding your next design project. Alternatively, please feel free to pick up the phone. We will be happy to answer any of your questions.
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