# New England Keyboard Inc.



NEK is an engineering and design company specializing in the design and manufacture of custom keyboards, keypads and membrane switch keyboards, including custom electronics and enclosures. NEK is committed to creating the ideal interface between the operator and your machine. By working together with your design team we can incorporate the latest displays, indicator LEDs, audio feedback, pointing devices, electronic output, shielding, touch panels, and backlighting into all of the technologies we supply – assuring you of the cutting edge appearance and functionality both you and your customers expect and deserve.

# Keypads & keyboards

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# **Full Travel Products**

Full Travel Keyboards are rugged, reliable, and designed to meet the most demanding applications and environments. Available with a linear feel or tactile feedback, NEK's sealed keyboards will stand up to liquid and solvent spills, dust, contamination, and extreme temperature. The waterproof full travel products feature a unique water tight "sleeve" under the keycaps to seal the bearing surfaces from water.



# Silicone Rubber Keypads

NEK's rugged, short stroke, silicone rubber keypads offer substantial design flexibility. Choose keypads only, complete assemblies, subassemblies with display, LED indicators, bezels, custom electronics, and more. Customer specified key dimensions (size, height and shape), color, legend and layout. The design flexibility of Silicone Rubber Keypads is almost limitless.



# Key Panels, Assemblies, and Terminals

NEK designs and manufactures terminals, stand-alone products and higher level subassemblies utilizing the following technologies: membrane, Kapton-membrane, elastomer rubber, full travel switches, discrete switches and touch panels. These complex products are typically panel mounted or in enclosures. Low profile sealed laptop style keyboards are available with or without backlight or a sealed, embedded pointing device such as a mouse touch-pad. Into all of these products, NEK can incorporate a combination of features, including displays, trackballs, LED Indicators, and more.



# **Ruggedized and Military**

NEK manufactures products used by the Military or in very harsh environments. They build products with foil shielding and conductive lenses that meet Mil 461E and Mil 462 specifications for radiated electromagnetic emissions. NEK also manufactures keypads with liquid crystal displays incorporated into them. NEK can use a combination of their in-house test lab and local test houses to perform qualification testing to verify that products are compliant to a large number of Mil specifications. Keypads & keyboards

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#### Kapton Membranes and Membrane Switches

NEK's flat panel membrane switches, with special solvent resistant textured overlays stand up to the harshest environments. They are suitable for most applications and can be manufactured to your specifications. They can also be supplied as complete turnkey assemblies that incorporate custom electronics and LED indicators, and can be packaged in standard or custom enclosures.



#### Kapton Cables and FFC/FPC Assemblies

Kapton cables, assemblies and flat flex cables from NEK help you to reduce assembly costs, reduce weight, meet dynamic flexing requirements and eliminate connectors, thereby increasing reliability and repeatability. FFC/FPC assemblies are used in place of round cables for easy cable management. They usually take up less space and offer better EMI/RFI suppression. NEK can provide you with a lightweight solution for most challenging requirements.



# LCD's and Liquid Crystal Modules

NEK manufactures LCD's and LCM's (Liquid Crystal Modules) for a variety of demanding applications. They build displays with wide temperature range fluids and shock absorbing inner layers. Some products incorporate integral heaters for operation to -45C. NEK offers many products with NVIS back lighting. Displays can be incorporated onto customers' controller card for cost savings.



#### **Touch Panel Displays**

NEK's standard touch panels are smart modules with integrated LCM displays and touch panels. To create the display graphics, a large library of graphic objects is available or you can create your own objects on your computer in a number of popular file formats and download to the module. Setting the touch sensor coordinates is straight forward and intuitive. Animated graphic objects are easily created. Complete custom LCD designs are available to fit your requirements.



#### **Metal Casting Capabilities**

NEK offers a variety of casting methods and materials. Part size, complexity, surface finish, and production lot size determine the method to be used. Complete, state of the art machining capabilities provide tight tolerance dimensional features, through holes, threaded holes, under cuts, etc. Painting, plating, powder coating, and printing operations complete the product offering.



#### **Custom Molded Plastic Components**

NEK can design your component and take your project from concept through part design, mold design, mold manufacture, and part molding. NEK can apply conductive spray coatings, decorative painting, rubberized paint, and printing. Vacuum metalizing, metal sputtering, and metal plating including 2 shot molded parts with metal plating and clear lenses are all available.



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