

WILSON•HURD®**QUALITY ASSURANCE PROCEDURES
(PIEZOPANEL®)**

Wilson-Hurd's PiezoPanels® are custom designed to meet our customer specifications. Each panel is assembled, sealed and tested by our technicians in a class 10,000 clean-room.

Q: What measures are taken to be sure that silver conductors have been properly prepared?

A: All printed silver conductive traces are visually inspected for trace integrity and any non-conforming traces are marked out.

In addition, a test circuit is printed on each sheet and tested for conductivity. The batch must pass the criteria in order to remain in production. Traces are also tested for adequate cure of the conductive ink.

Q: How are adhesives checked?

A: All adhesives are inspected upon receipt and again during application to confirm the thickness and adhesive type.

Q: Do all switches go through an inspection process?

A: Yes, the final step in the manufacturing process is conducting a 100% final inspection of all custom electronic control products.

Q: Is Statistical Process Control (SPC) utilized at Wilson-Hurd?

A: Based upon the direction of our customers and/or process requirements SPC may be used in select jobs.

Q: Does Wilson-Hurd color match?

A: Yes, we offer 100% color match capabilities by utilizing a spectrophotometer. The color is visually inspected under the appropriate lighting conditions, as well as sent to our customer for their final approval prior to production.

Q: How is hard coat selectively applied, cured, and checked for adhesions?

A: Selective hard coating is applied during a screen press operation. It is then cured in a separate operation and final tested for adhesion with a cross-hatch tape test.

Q: Is life testing of switches available?

A: Yes, please call our Engineering Department at 715-845-9221 for further information.

Q: What equipment capabilities exist in Wilson-Hurd's Quality Assurance Department?

A: In our Decoration Department the following equipment is in place:

- Tabor Abrasion
- ACS Spectrophotometer Color
- Matching and Verification
- Densitometer
- Color-matching Light Booth
- In-process Light Tables

In addition, our Fabrication Department contains the following:

- Micro-Vu Measuring
- Comparator
- Calipers
- Height Gages/Surface Plates

Q: How is artwork and documentation controlled?

A: All artwork and documentation received from our customers is tracked by our Business Development Department. As new artwork or requirement are received, the Customer Service Representatives compare them to the previous version and highlight any changes. The revision number is then updated in our system and all outdated documentation is removed.

****NOTE:** All electronic control designs are reviewed by our Engineers prior to production.

Q: What capabilities exist in-house and which are sub-contracted?

A: Wilson-Hurd conducts all engineering and design work in house. We also decorated and fabricate aluminum or polycarbonate front panels, print and assemble switch packages and fabricate back panels.

Items such as circuit boards, stainless steel, glass and alumaprint front panels are purchased from outside suppliers.

Q: What qualification testing is performed on raw materials?

A: Quality procedures are established for the inspection of raw materials prior to productions. For example, hard coat polycarbonate is inspected to verify material thickness and must pass the steel wool scratch test.

Q: How are PiezoPanels sealed to prevent damage from moisture, chemical and cleaning agents?

A: All our our PiezoPanels are custom designed to out customers specifications. Depending on the build a UV adhesive, epoxies or other sealant system may be used.

Q: Does Wilson-Hurd have a Quality Manual?

A: Yes, if you would like to request a copy please contact our Quality Department and 715-845-9221.