

Jewell Instruments

*Your Manufacturing Partner
for Precision Sub-Assemblies
and Complete Products*



*DECADES OF EXPERIENCE
In Precision Manufacturing*

Partnership Manufacturing: The cost-effective approach to today's precision products

Outsourced manufacturing: The cost-effective alternative

Today's uncertain economy has created a marketplace where windows of opportunity are small, competition is brutal, and the need to control costs and improve quality is relentless.

In response, more and more companies are choosing to outsource much of their production – even their engineering – in an effort to focus on what they do best. Outsourcing manufacturing enables companies to increase flexibility and versatility while reducing overhead and controlling costs in the face of an ever-changing market. Thin margins and constant, market-driven product improvements make it difficult for many OEMs to achieve ROI when they have to continually invest in new-and-improved manufacturing capabilities. And that's where we can help.

Complete, turn-key manufacturing
We offer state-of-the-art, turn-key manufacturing of precision sub-assemblies and complete products. More than just a contract manufacturer, we can provide design, engineering, and manufacturing expertise that can make the difference in your product design. Both at our Manchester, NH headquarters and our low-cost offshore facility in Barbados, West Indies, the Jewell Partnership Team excels at high quality electro-mechanical and electro-optical assemblies as well as circuit boards and cables and harnesses. Our manufacturing-partner approach offers an ideal, low-cost, high quality outsourcing solution for everything from analytical and scientific instruments, medical devices, audio and camera equipment, to computers and even avionic instrumentation.

Whether you need complete product development or simply want to outsource the manufacturing of current products, the Jewell Partnership Manufacturing program makes it easy with:

- No capital investment
- Fewer vendors to qualify and work with
- Reduced inventory costs
- Less part numbers
- Lower headcount requirements
- Low-cost manufacturing with our own offshore facility
- Material and inventory control for flexible and changing markets

Precision component manufacturer

We've built our reputation as a provider of precision instrumentation, manufacturing our own line of accelerometers, inclinometers, analog and digital panel meters, solenoids and avionic products. If your product includes a sensor, solenoid or a display, Jewell can provide even more value and has experience integrating our own products into a wide variety of instruments including:

- Test and measurement equipment
- Scientific instruments
- Medical devices
- Sensing and positioning products
- Avionic products
- Semiconductor equipment
- Flow measurement instruments
- Photography equipment
- Copiers and printers

Engineering Know-How

Whether you're looking to control costs by outsourcing manufacturing of an existing product or you need help designing and

developing a new product, the Jewell Engineering Team has the experience and expertise to bring your product to market quickly and cost-efficiently.

We provide:

- The ability to work with AutoCAD, SolidWorks, Electronics Workbench, and PC Draw, as well as import documents and drawings from a wide range of applications, including CorelDraw and Illustrator
- In-house design and fabrication of tools and fixtures
- Complete in-house testing; all test and measurement tools and equipment are calibrated in accordance with ANSI Z-540 and are traceable to NIST standards
- Expertise for in-house UL and CSA submissions and approvals
- The ability to write and maintain technical manuals
- A wide range of engineering expertise through engineering partners specializing in ergonomic and overall design, as well as electronic, firmware, and software design.



Cost-effective, streamlined product manufacturing



Purchasing and Material Control

Our large and well-established international network of distributors and manufacturers provides us with the most competitive pricing and assures availability of virtually any materials. By consolidating your purchasing and manufacturing with us, you reduce your list of suppliers to just one – Jewell Instruments.



We offer:

- Conversion of your current BOMs or creation of BOMs for complete purchasing and materials management
- Complete sourcing of machined sheet metal, stamped and molded parts; circuit boards; optics; and commercial items.
- Complete support of your flexible and changing production needs by stocking at both our Barbados and Manchester, NH facilities

Commitment to Quality

Our commitment to quality is not just an empty marketing slogan. Everyone at Jewell knows that companies live or die by the quality of the products they produce. That's why you'll find the kind of top-to-bottom commitment to quality at Jewell that other companies envy.



- All test tools and equipment are calibrated to ANSI Z-540 and are traceable to NIST standards
- All soldering is done to ANSI-J standards and training is done by our in-house certified ANSI training team
- All manufacturing personnel are given ESD training by our certified in-house ESD training team
- Manufacturing to MIL-I-45208 and AN 9100

Precision Manufacturing

We've been manufacturing our own products and helping our customers develop better ways to manufacture theirs for over fifty years. Our customer list includes some of the premier names in the avionic, telecommunications, analytical and industrial equipment, and consumer electronics markets.

Capabilities include:

- Thru-hole and surface mount circuit boards and thru-hole to surface mount conversion
- Chip-on-board wire bonding for ICs, LEDs, and other components

- High quality and cost-effective electro-mechanical and electro-optical assembly
- Certified emulsion clean to MIL standards
- Design and assembly of cables and harnesses
- Precise wire handling for diameters as small as 20 μm to large gauge wire, including wire winding for magnetics
- Laminar flow booths for clean room level assembly
- Workbenches include microscopes for precision assemblies
- Complete in-house design and fabrication
- Temperature, humidity, centrifuge, shock, and vibration testing for either "proof of design" or routine QC
- In-house silk screening and printing
- Ability to apply epoxy and paint finishes for prototype and production quantities
- Production lots from one to thousands



Jewell Instruments

Facilities

We offer two, fully modernized manufacturing facilities in Manchester, New Hampshire and Barbados, West Indies. Both are fully capable of handling the most stringent manufacturing requirements while our Barbados facility also provides the extremely cost-competitive advantage of an offshore manufacturer.

Manchester, New Hampshire

- 60,000 square foot headquarters facility features R&D, engineering, and manufacturing personnel dedicated to Jewell's products and Partnership Manufacturing
- Located at Manchester Airport, one hour north of Boston



Barbados, West Indies

- 30,000 square foot offshore manufacturing facility features a dedicated Jewell team experienced at providing low-cost, high-quality manufacturing



Products



Sensors

Precision accelerometers and inclinometers for a wide range of industrial, commercial, avionic, and military applications.



Meters

A complete selection of panel meters for virtually every use, from simple analog power meters to complex selectable-function digital meters



Solenoids

High performance, cost-effective frame and tubular solenoids



Avionics

Indicators and instrumentation for aviation, including complete instrument clusters



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