The First Electronics Corporation
Manufacturing Custom Cable Assemblies Since 1955
About The First Electronics Corporation (FEC)

Founded in 1955 to address the engineering need for rapid prototyping of a specific design, FEC has grown to be the leading supplier of electrical wiring harnesses. FEC specializes in the production of over-molded, extra-flexible, multi-conductor, EMI-shielded cable assemblies and harnesses, as well as electro-mechanical assemblies, custom built for military applications.

FEC Core Capabilities:

- Polyurethane, Neoprene, Viton, EPDM Rubber Over-molding
- RFI/EMI Shielding
- Complex Shielded Harnesses
- Rapid Prototyping
- Short-Run Production of Custom Bulk Cable
- Quality Manufacturing to Military Specifications
- Extensive Mold Tool Inventory Eliminates Costly Tooling Charges
- 100% Electrical, Mechanical, and Visual Inspections
Over 50 Years of Fabricating to Military Specifications

Our products surpass the most stringent quality standards in the industry. FEC’s Quality Control and Inspection Departments constantly verify product reliability with automatic circuit analyzers. We also have the ability to meet and perform environmental tests including salt spray, humidity, flexibility, pull-testing, shielding effectiveness, electrical (Cabletest), hydrostatic and vibration testing.

Operating under the quality requirements of ISO, our Quality Control System uses Statistical Process Control throughout the entire manufacturing process to ensure uniformity and consistent quality. We pride ourselves on our ability to manufacture cables to within 1/10 of an inch tolerance.

FEC’s commitment to Total Quality Management assures that our products will always meet or exceed your requirements.

100% electrical testing, utilizing Cabletest automated circuit analyzers.
RFI/EMI/EMC Specialist

Electronics, for industrial or military applications, must meet stringent electromagnetic interference (EMI) requirements. Using the patented SCOLOR molded shield technique of 360° soldered metal-to-metal contact, our cables offer low RF impedance and high EMI shielding effectiveness.

The cost-effective SCOLOR process provides a metal-to-metal contact with the connector and copper braided shield. This construction allows your cable assembly to have a low-conductive path as well as a low-RF impedance from connector-to-connector with the resulting high shielding effectiveness.

When lives are on the line, reliable performance demands the superior shielding that only FEC can deliver.

SCOLOR Benefits:

- Direct metal-to-metal, one-step 360° conductive shield of cable to rear of conductive plug.
- Adds rigid, low-profile support and strain relief to terminated wires at rear of connectors.
- Eliminates bulky multi-part RFI-EMI back shells, cable clamps and use of conductive epoxies and tapes.
- Available in configurations of 90°, 45°, straight, and various custom angles.
- Can be applied to most connector types.
Engineering and Manufacturing

We manufacture prototype and production quantities for our customers. FEC Sales Engineers are available to offer technical support for prototype engineering and any other customer support requests. FEC assures that your final product meets the highest standards by working closely with Purchasing, Engineering and Manufacturing.
Cable Assembly Production:
- 48,000 Square Foot Fabrication Facility
- Design, Fabrication, and Final Assembly
- Manufacture of Customer-Designed Assemblies
- Large Selection of Composition Materials
- Multiple Planetary Cook Cabling Machines (up to 142 conductors)
- Automated Wardwell & NEB Braiding, Taping and Termination
- Injection, Compression, Transfer, and Low Pressure Over-Molding
- Prototype and Production Quantities
- Advance Quality Control Testing Equipment

Whether it is one unit or thousands, our customer commitment is not a novelty, it’s an Ideal.
Superior Component Jacketing & Overmolding

Overmolded connectors and transitions improve durability and provide the ultimate environmental seal. The raw materials used by FEC provide resistance to chemicals, ozone, wear, flame, and abrasion. We have more than 50 years of experience with Mil-Specification rubber and elastomers used for jacketing and overmolding. FEC manufactures cables that are the best solution for systems that require mechanical protection from harsh environments.

Advantages of FEC Molded Construction

- Flexibility of Design
- Lower Cost/Improved Lead-time
- Improved Durability
- Environmental/Chemical Resistance
- NBC/NBR Washdown Compliance
- Low Profile/Flexible Routing
- Tamper Proof
- Strain Relief at Connector Termination and Junction Areas
Aerojet
BAE Systems
BARCO
Boeing
Cobham
DRS Technologies
Elbit Systems
Enercon
General Dynamics
Goodrich Optical Corporation
Hamilton Sundstrand
L-3 Communications
Lockheed Martin
Millitech
Northrop Grumman
Raytheon
Textron/Bell Helicopter
US Department of Defense