

Relia-Tek Engr/PM Support/Fab Capabilities

Engineering Support

- Custom Cable Assembly Design
- 3D Solid Modeling / Mechanical Design
- System Analysis / Interconnection Diagrams
- AutoCAD / Inventor Design/Drafting
- · Configuration Management
- Requirements Traceability Methodology

Rapid Prototyping

- Cable Assemblies Stocked material
 - Power / Data / Coax Cables
 - M27500 Twisted Pair / M3432 Jacketed / RG142 Cable
 - D38999 Series III Plugs / Jacks / SMA / TNC / Type N
- Sheet Metal / Machined Parts
- Electro-Mechanical Assemblies

Full Rate Production – ISO 9001 Facilities

- Cable / Electronic Assemblies
- Sheet Metal / Machined Parts
- Equipment Rack, Electro-Mechanical Assemblies
- Full Installation Kitting

Integration / System Test Support

- Integration consulting / full development
- System Verification / Test knowledge for numerous systems and applications

Existing System Knowledge

- OGPK / CROWS Systems
- VIC-3 / TOCNET Intercom Systems
- SINCGARS, EPLRS, PRC-117F/G, PRC-148, PRC-150, PRC-152, PRC-154 Radio Systems
- BFT II / JBC-P / DAGR Systems
- DUKE V3 / CVRJ Systems
- VOSS System
- DVE System

Tech Data Package (TDP) Support

- Ground/Sea/Air Vehicle Platform TDPs
- Drawing Change Control Process / Configuration Mgmt
- Physical Configuration Audit (PCA) Support

Systems Engineering/ Design Review Support

- SPRDE Level III Certified
- PDR/CDR Checklists / Exit Criteria templates/guidance

Project Management Support

- Microsoft Project expertise
 - Detailed experience creating and using MS Project Schedule for planning and execution
 - Tools established for Resource loading and EVM tracking
- Earned Value Management (EVM) expertise
- Risk Management Methodology



Relia-Tek Cable Assembly Design Approaches

- Raw Cable Selection
 - Pre-Jacketed Cable (M3432)
 - MIL-DTL-3432 Spec has wire arrangements, jacket materials with and without shielding.
 - · Streamlines assembly but may have long lead and cost constraints
 - Individual Twisted Pairs (M27500)
 - MIL-DTL-27500 has numerous wire types with and without shielding
 - Bundle of twisted pairs typically covered with braided shielding per A-A-59569
 - Wires/Shield typically covered with M23053/1 or /15 heavy wall sleeving
 - Readily available and ideal for prototyping, enclosed wiring harnesses, multi-legged cable assy's
 - RF (50 Ohm) or Video (75 Ohm) Coax Cables per MIL-C-17 or Heliax for long low loss runs
 - 50 Ohm selection dependent on Insertion Loss / VSWR requirement
 - 75 Ohm Video cable requires, coax termination for crimp/solder pinned connectors

Connector Selection

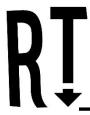
- D38999 Series 3, Self-Locking, threaded coupling preferred for most applications
- MIL-DTL-26482 multiple MS style bayonet series prevalent in many applications
- Cadmium finishes common but Zinc-Nickel and Electroless Nickel over Composite offer excellent RoHS compliant coatings providing similar corrosion protection

Backshell Selection

- Straight, 45-degree and 90-degree adapters provide shield termination mechanism
- Band-It style common for shield terminations but requires special tooling
- Spring Band termination ring preferred for ease of assembly and field servicing
- "Zero Length" terminations provide excellent 360 degree shielding of individual pairs and eliminates standing antenna for pigtails or drain-wires

Shrink Boots versus Over-Molding

- Environmentally rugged design alternatives in standard shrink boot or over-molded cable ends
- Over-Molding at backside of backshell nut allows for re-keying & reduces assembly labor costs



Relia-Tek Rapid Design / Prototypes

- Rapid Cable Design Capabilities
 - Extensive Experience with RF/Video coax and power, data cable design approaches and parts selection allows for Quick Turnaround of Cable Designs
 - AutoCAD Drawing Templates adjustable to customer needs
 - AutoCAD Source Files and Adobe Acrobat PDFs provided in Relia-Tek or Customer Assigned Drawing Numbers
- Rapid Cable Prototypes
 - M27500 Twisted Pair / M3432 Jacketed / RG142 Cable stocked
 - D38999 Series III A to E Shell Size Plugs / Jacks stocked
 - Spring Band Backshells for D38999 Series III connectors stocked
 - Straight/90-deg SMA / TNC / Type N RF connectors stocked
 - Prototype Cables available within days of approved design
- Rapid Mechanical 3D Modeling and Drafting
 - AutoDesk Inventor used to develop parametric designs
- Metal Work Prototypes
 - Sheet Metal / Machined Part Prototypes



Relia-Tek Full Rate Production Capabilities

- Cable Assembly / Wiring Harness Production
 - ISO-9001 certified 50,000 sq-ft facility
 - Implemented lean manufacturing with a modern highly mechanized production facility
 - Time and motion studies performed periodically with a work load leveling technique to determine manufacturing through put
 - For Standard Cable Assemblies, capacity to complete 2000 to 3500 cable assemblies per day
- Metal Work / Electro-Mechanical Assemblies
 - ISO-9001 certified 40,000 sq-ft facility
 - 250 specialized products for government / commercial applications around the country