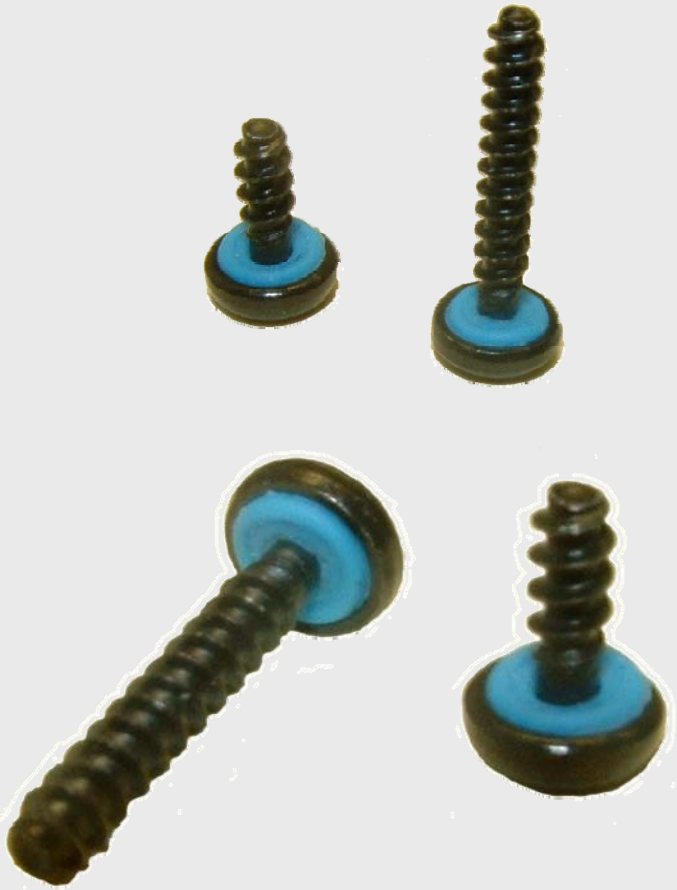


Custom O-Ring Seal Screws

- Custom designed and tooled.
- Discrete low durometer silicon o-ring seal.
- Recessed screw head for mating o-ring means no compression set - Maintains a reliable seal over the life of the product.
- Nickel plated to protect against corrosion in harsh environments.
- Standard Torx drive throughout for positive, repeatable engagement torque during installation.
- Reusable.



Speaker & Installation



- High quality Mylar speaker.
- Heavy duty magnet and construction.
- Miniature connector interface.
- Attached to front cover with custom designed and tooled pressure sensitive adhesive (PSA) component.
- Hermetically sealed via robotically dispensed engineering adhesive compound.

Dynamic Transfer Bars



- Overmolded dynamic transfer bars for emergency and PTT buttons.
- Ensures positive actuation over entire button user interface surface.
- Maintains tactile response throughout product life.
- Custom “ball and socket” mating interface - Ease of assembly and repair.

Custom Snap Dome Switches



- Custom designed and tooled.
- 100% gold plated.
- Side actuating snap domes in 200 gm. and 320 gm. contact force.
- Pogo pin printed circuited board (PCB) interface-No soldering/no wires.
- Allows Z-axis assembly.
- Facilitates repair.
- Custom “ball and socket” mating interface - Ease of assembly and repair.
- Extensively tested in house and verified to one million actuations minimum.

Transmit Audio System



- Four component custom designed and tooled proprietary microphone acoustic gasket assembly.
- Custom designed and tooled silicon rubber acoustic boot.
- High sensitivity omni directional microphone.
- Miniature connector interface for ease of assembly and repair - No soldering.
- Custom designed and tooled silicon rubber sound port.
- Superb transmit audio and clarity.

Rear Cover Assembly



- PC/ABS custom engineered polymer.
- Compression molded, custom designed and tooled low durometer silicon rubber environmental seal.
- Low compression set speaker support component.
- Labyrinth design venting system with waterproof gaskets.
- 100% of all seal interface surfaces are highly polished for reliable environmental sealing.
- Discrete sub assembly supports Z-axis assembly - Ease of repair.

Main PCB Assembly



- Self aligning via integrally molded mating geometry in the front cover.
- 100% surface mount technology (SMT) components.
- 100% gold plated for optimum conductivity, performance and reliability in harsh environments.
- No hand soldering - Easy to repair.
- All Main PCB's will accommodate every SML cable/accessory option with existing SMT connectors - Easy to upgrade.
- Clean, efficient design.

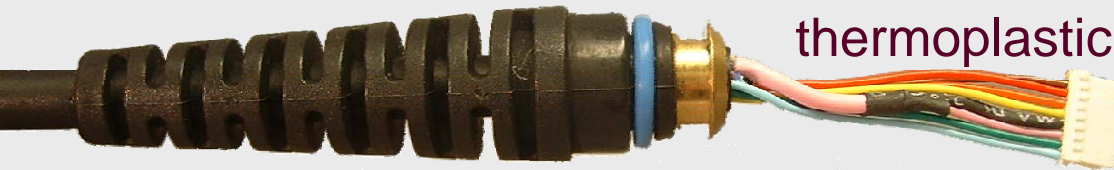
Cable Attachment & Accessories



- Supports system accessory option upgrade.
- Aircraft aluminum grade cable clamps, includes holes for easy release and repair.
- Integrally overmolded waterproof accessory interfaces in the cable.
- Options include 2.5 mm, 3.5 mm. and 6 pin Hirose.
- Miniature connectors throughout - No soldering.

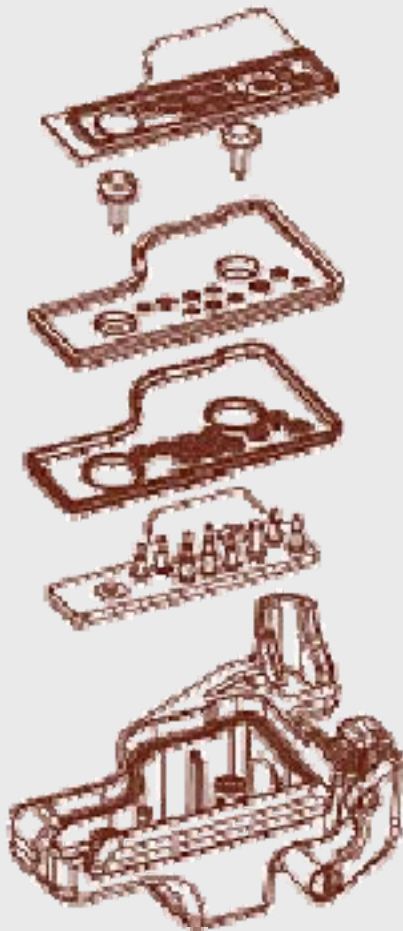


Cable – Strain Relief, Sealing & Performance



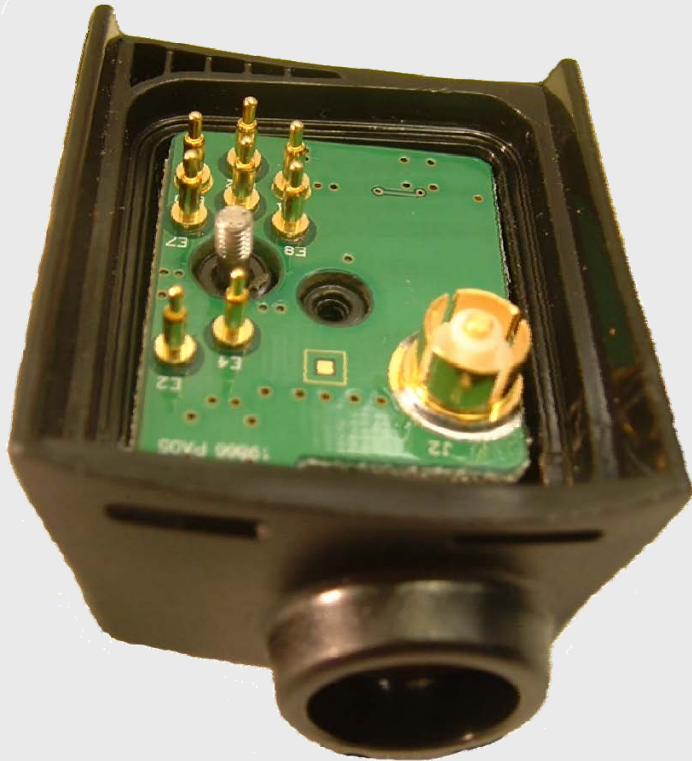
- Custom designed, machined high strength brass ferrules, crimped to the cable.
- 50K cycle endurance rating.
- Overmolded with custom engineered thermoplastic polyurethane (TPU).
- Designed using finite element analysis (FEA) for optimized strength to weight ratio.
- Integrally molded o-ring seal interfaces with high quality silicon rubber o-ring seals.
- Integrally molded locking geometry prevents rotation of cable and subsequent damage to the electrical connections.
- 200 Newton minimum rated pull strength.

Radio Connector (RC) Design



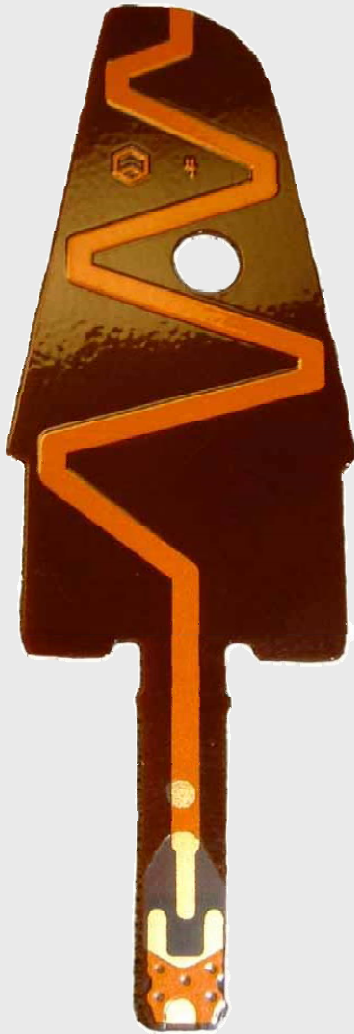
- All RC's are either custom tooled by SML or sourced from quality OEM RC suppliers.
- Most SML tooled RC's are fastened together using seal screws - No snap fits.
- All SML tooled RC's include miniature connectors - No soldered wires.
- Most SML tooled RC's include multiple molded silicon components for redundant environmental sealing.
- Custom three layer PSA includes silicon and acrylic adhesive components.
- All seal surfaces 100% polished.

Radio Connector (RC) PCB



- All RC PCB's are either custom tooled by SML or sourced from quality OEM RC suppliers.
- All SML tooled PCB's are 100% surface mount technology (SMT).
- All SML tooled PCB's are 100% gold plated for optimum reliability in harsh environments.
- All SML tooled PCB's are fully connectorized for ease of assembly and repair.
- High strength, gold plated pogo pins for long, reliable life.

ProBand Antenna Technology



- Printed Circuit Flex Film Technology (PCFFT) allows miniaturization of the physical antenna envelope.
- High RF performance.
- Bendable and durable.
- Will not corrode or rust.
- Waterproof.
- Low profile.
- Light weight.
- Supports 800MHz., with 700MHz and 900MHz. pending.

ProBand Assembly



- Custom engineered thermoplastic elastomer alloy overmolded antenna assembly.
- High quality, low durometer discrete silicon o-ring sealing component.
- Antenna included with speaker microphone - No need to dismantle radio antenna.
- No soldered connections for ease of repair and high reliability.
- Micro miniature, low loss coax connectors and cable allow full six foot extended coil cord.

TruBand Assembly



- Replaceable injection molded 1/4 wave helical antenna.
- High quality, low durometer discrete silicon o-ring sealing component.
- No soldered connections for ease of repair and high reliability.
- Replaceable gold plated surface mount RF PCB.
- Micro miniature, low loss coax connectors and cable allow full six foot extended coil cord.
- VHF, UHF, 800MHz. and 900MHz. antennas.

RF Plating



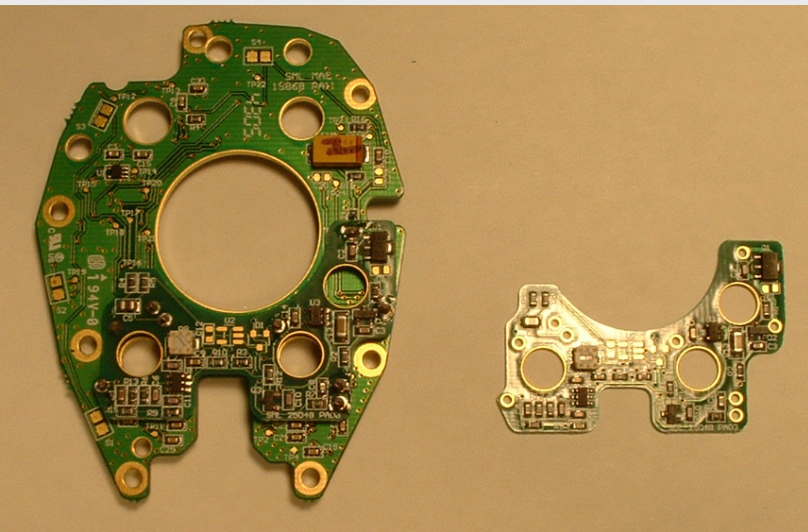
- Cutting edge vacuum metallization plating process using copper and nickel materials.
- High conductivity.
- Excellent shielding.
- Will not rust, corrode or degrade in corrosive environments.
- Highest quality.

Cable Assemblies



- Six foot fully extended cable assembly.
- 100% fully connectorized signal and coax interface to speaker mic head and all SML tooled radio connectors - No soldered connections.
- Integrally overmolded, environmentally sealed accessory interfaces in the cable.
- Options include 2.5 mm., 3.5 mm. and six pin Hirose.
- Rugged 5.5mm. diameter OD cable – Industry's largest.
- Absolute highest quality, most rugged cable assembly available.

OutLoud™ System



- Powerful remote accessory Tx audio amplification circuitry.
- Mounts to main speaker mic PCB.
- 100% gold plated, full surface mount PCB.
- Includes sealed adjustable gain potentiometer.
- Provides loud and clear Tx audio when using remote communication systems such as breathing masks, hazmat suits, throat mics, etc.
- Available on Sword, Juno and Utah.

Stainless Steel Thumb Screws



- Custom designed for each radio connector application.
- Includes aggressive knurled geometry for excellent grip.
- Machined from the highest quality high carbon stainless steel.
- Allows fast and easy attachment and removal of the radio connector.
- Reduces occurrence of over-tightening and fastener breakage.

