COBHAM

Cobham Antenna Systems

Coaxial Cable Assemblies

The most important thing we build is trust


AIRBORNE


SPACE


SHIPBOARD


GROUND

Cobham Antenna Systems – Your Mission-Critical Cable Connection

MARKETS

Cobham has supplied robust, high performance cable systems to a wide variety of markets for more than 50 years.

Cobham cable products have a clear focus on military and high performance commercial applications as well as a long standing commitment to the space market. Our cable products are known for their excellent electrical performance, proven reliability and overall mechanical strength. Because we design and manufacture both cable and connectors, we can offer custom assemblies developed specifically for our customers' challenging applications.

We have expertise in the areas of radar (airborne, ground, shipboard, and missile), EW, CNI and C4ISR, SatCom, etc., and can recommend the cable that satisfies your system requirements.

For phased array or synthetic aperture radars, signal location systems, and similar demanding applications, assemblies can be supplied as phase- and/or amplitude-matched sets.

Our cable systems meet or exceed the requirements for multiple markets:

EW Airborne

- Very high power
- Low loss
- Durable
- Phase-stable
- Phase-matched
- Amplitude-matched
- Equalized runs

Military Ground

- Long flexure life
- Crush resistant
- Flame retardant
- Reels

Shipboard

- Low smoke
- Halogen free
- Phase-matched

Missiles

- Flexible
- Wide temperature ranges
- Small diameter

Commercial Aircraft

- Low weight
- Low PIM
- Low loss
- Radiating cables

Space

- Lightweight
- Low outgassing
- Low CVM

RF CABLE SOLUTIONS

Electronic Warfare

Cobham has a coaxial cable assembly for you if your application is related to EW or C4ISR. We cover DC to 50 GHz over the temperature range from -65°C to +200°C.

Airborne – High Performance, Very Low Loss and Lightweight

Our cable assemblies, designed to satisfy MIL-T-81490 and MIL-DTL-87104, offer the optimum balance of electrical, mechanical, and environmental specifications to satisfy the most demanding applications.

When reduced loss is required we offer our high performance assemblies with solid, rather than stranded, center conductors without sacrificing their inherent ruggedness.

For lightweight applications, silver-plated, copper-coated aluminum can be used to achieve > 30% reduction in weight. Electrical and environmental parameters are unchanged.

Military Ground

Coaxial cable systems for ground mobile communications require low flexure force and the ability to withstand repeated flexures and/or spoolings. Cobham mast cables with flame retardant elastomeric jacket are available on reels with pulling/hanging grips ready for use in your system. Since these cables may be deployed directly on the ground, they can be protected with our integral wire-wound crush resistant layer.

Shipboard

Coaxial cable assemblies can be supplied for shipboard systems with halogen-free jackets that are low smoke and do not generate toxic gases when burned. Any of our cable constructions can be adapted to this application.

Missiles and Precision Guided Weapons

Cables in this group feature small size, very low flexure force, stability, and extended flexure life along with low VSWR and low loss considering their size.

Although initially intended for scanning or tracking radars, their stability over wide temperature ranges has allowed their usage as jumper cables and interconnects in beam former networks and other system applications.

General Purpose

These cables offer many of the same features as the EW cables, including double or triple shielding and a wide variety of jackets including Teflon (FEP or PFA) and Nomex.

Commercial Aircraft and CNI

Cobham offers lightweight cables in bulk with separate connectors and as complete, fully tested assemblies. These cables are often referred to as "improved RG" cables and are ideal for all CNI applications. Incorporation of design features used in our EW assemblies saves approximately 25% in both size and weight compared to RG cables.

Very low loss, very low PIM assemblies are offered for a variety of applications including on board WiFi and cellular service.

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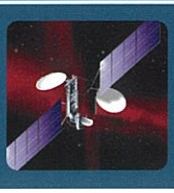
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General Test Cables: 18 & 26.5 GHz

Customer-replaceable interfaces permit a single cable to interconnect a variety of interfaces, either male or female, while maintaining the assembly's low VSWR and insertion loss.

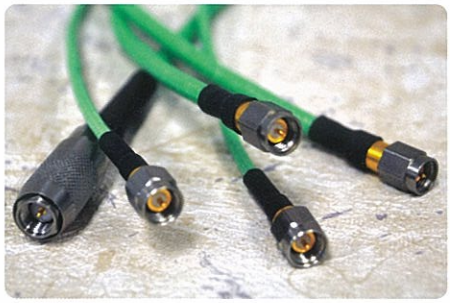
Several jackets are offered: extruded Teflon, Nomex and stainless steel armor for use in a variety of environments.

Phase Stable Test Cables: 26.5 & 50 GHz

26.5 GHz assemblies offer customer-replaceable connector heads in all common interfaces. In addition, the phase length of the male and female heads of each interface are phase matched so male and female heads can be interchanged without disturbing the calibration.

50 GHz assemblies offer factory-replaceable interfaces.

Test cable assemblies are provided in a storage case to prevent damage when not in use.



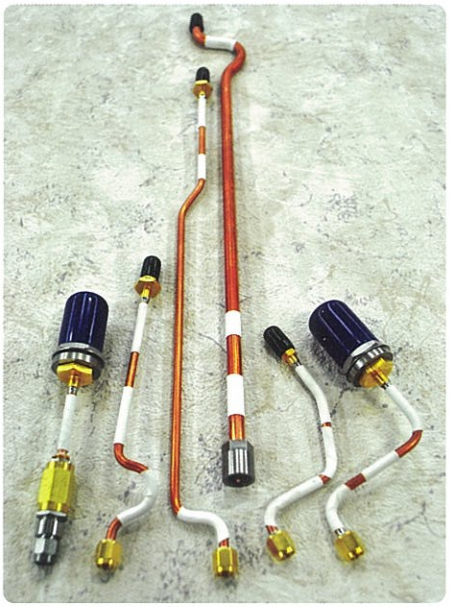
Semi-Rigid Cables

Cobham offers copper and stainless steel semi-rigid assemblies both straight and pre-bent to precisely fit your installation. Repeatability is assured by our computer-controlled bender and custom bend tools.

Space

Cobham cables meet or exceed the strigent demands of space. Our low mass efficient designs provide low loss, low VSWR, improved phase stability over temperature cycling, and very long life. All materials are selected for low outgassing without sacrificing reliability. Tefzel jackets are used for assemblies that may be exposed to radiation. High power systems incorporate our unique multipaction-free interfaces.

Cobham offers a large selection of space cable sizes and connector interfaces that are available in both phase matched and insertion loss matched sets with unique multipaction-free connectors.



Cobham Antenna Systems

MANUFACTURING

Cobham maintains a complete in-house cable assembly manufacturing capability and has been producing quality coaxial cable assemblies for more than 50 years.

Our production department is equipped to efficiently fill any order from a single, custom, high-rel assembly to a high volume, mass production job. The manufacturing process is closely monitored to ensure consistency of yield and to maintain the high quality that is synonymous with Cobham cables.

Unique design features in our connectors provide superior electrical, mechanical and environmental performance.

To maintain the excellent characteristics of our cable assemblies, we test and characterize each bulk cable lot. This assures you of receiving the best combination of cable and connector characteristics optimized for your application.

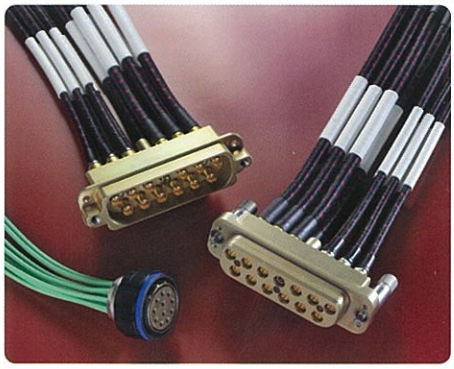
Assembling the connector/cable junction is key to maintaining excellent electrical and mechanical specifications. We utilize precision state-of-the-art equipment to test all cable assemblies and have the capability to perform complete qualification testing to MIL-T-81490, MIL-DTL-87104, and customer-defined specifications. We can provide actual measured acceptance test data with each cable assembly.

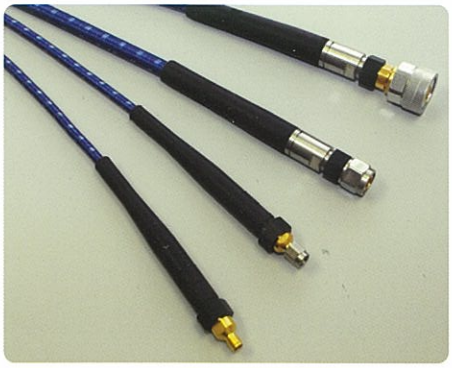
Cobham has one of the largest collections of high-power signal sources in the U.S. for use in power-handling tests. These sources provide power levels to 10 kW, pulsed and CW, across the various frequency bands.

Computer controlled network analyzer systems are used for the high volume measurements at frequencies up to 50 GHz.

Tests include:

- VSWR
- Insertion Loss and Loss Matching
- Phase, Phase Matching and Phase Tracking
- Delay and Delay Matching
- Smith Charts
- Torque and Tensile Loads
- Temperature Testing
- Stability
- Uniformity





Customers around the world depend on Cobham

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Cobham Antenna Systems
11 Continental Drive
Exeter, New Hampshire 03833
United States
Tel: 603.775.5200
Fax: 603.775.5201
Email: exeter.receptionist@cobham.com

Torshamnsgatan 9
P.O. Box 1134, SE-16 422
Kista
Sweden
Tel: + 46 (0) 8 477 68 00
Fax: + 46 (0) 8 751 00 19
Email: siversinfo@cobham.com

The Cobham Centre
Fourth Avenue
Marlow, Buckinghamshire SL7 1TF
United Kingdom
Tel: + 44 (0) 1628 472 072
Fax: + 46 (0) 1628 482 255
Email: info@cobham.com

Visit us at **www.cobham.com**

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