

Sinclair Transportation Solutions

We Set The Pace



www.sinctech.com

ANTENNAS
FILTERS
DUPLEXERS
MULTICOUPLERS
COMBINERS
SYSTEMS

Proven Transportation Solutions

At Sinclair we know that customer needs change and evolve rapidly. That's why we leverage our broad experience in manufacturing transportation antennas to deliver not just superior products but innovative communication solutions for the future.

The Sinclair Advantage

SUPERIOR QUALITY TRANSPORTATION SOLUTIONS

Our rail, aviation, marine and heavy transportation antenna and RF conditioning products deliver the same high quality that is associated with all Sinclair products.

The Sinclair Standard

Sinclair provides antennas, filters, combining systems and radio coverage solutions for RF tele-communication networks. Designed to function in extreme weather conditions, Sinclair's innovative products enjoy a reputation for high performance, reliability, durability and value.

Sinclair sets performance standards for the industry by building on four cornerstones:

1. The Broadest Range of Products in the VHF, UHF and 700-1000 MHz Bands. Sinclair designs products for the public safety, cellular, SMR, heavy transport, aviation and military sectors. Within these bands, we provide the most comprehensive range of high-quality antenna and filter products available in the industry.

2. Industry Leading Performance. Sinclair products are designed for mission critical applications, built to deliver industry-leading performance under the most extreme environmental conditions, year after year.

3. Understanding and Satisfying the Specific Needs of Our Customers. Sinclair takes pride in its ability to understand customer needs and provide state of the art solutions. Our Systems Engineers can design custom combining and multicoupling solutions for both base station and mobile applications. While our antenna engineers can deliver customized antenna products.

4. Excellent Service to all Customers. At Sinclair, we support our customers through a broad network of direct sales staff, manufacturers' representatives, leading distributors and dealers. When a custom system is designed by Sinclair, extensive support is provided to ensure complete customer satisfaction.

Custom Products

At Sinclair, we remain committed to meeting the specific needs of our customers. No matter how demanding the challenge, Sinclair System and Antenna Engineers can design custom RF solutions to meet your needs.

Sinclair Systems

With tower space at a premium and frequency congestion on the rise, many communication projects have turned into complex systems needing advanced combining or multicoupling, high levels of isolation or sophisticated interference protection. Sinclair provides custom system design services to meet even the most complicated systems requirements.

Broad Experience in Transportation Industry

Sinclair began operations in 1951 and has maintained its leadership role through the years by investing in an extensive R&D program and an unwavering commitment to product innovation. The following are a few milestones highlighting Sinclair's achievements in the transportation communication industry:

1953	Began design work on antennas used by fighter jets
1958	Developed wide-band antenna for Alouette I satellite
1960	Developed a two-way radio antenna disguised as a functioning side-view mirror for undercover work by the FBI and the RCMP
1965	Designed antennas used on the Gemini spacecraft
1969	Designed multicoupling network for ISIS I satellite
1969	Designed Excaliber antenna for Stealth Bomber- Avro Arrow
1975-80	New innovations lead the company to into new markets, supplying air-to-ground antennas in the 220 MHz
1999	Designed antennas for systems used in the precision landing of commercial aircrafts
2007	Began shipping 220 MHz Custom systems to a Class 1 railroad
2009	Introduced StealthWave™ covert antennas for undercover operations
2009	Released new wide-band heavy duty transport antennas: SM300 & SM600 series

Broad Spectrum Solutions

Automotive and Heavy Transportation Solutions

Sinclair's impressive line-up of automotive antennas consists of durable Excelsior™ mobile whip antennas. Featuring rugged components, these antennas are ideal for harsh environments. Similarly the SM series multifunctional transit antennas are truly versatile in their applications and are used by mass transit companies worldwide for dependable communications. For covert operations, the new StealthWave™ antenna builds on Sinclair's experience of developing disguised antennas. This series features a universal design that's ideal for covert operations.

We also offer customized combining and multicoupling solutions for your transportation communication needs.

Rail Solutions

Sinclair's Excaliber™ rail antennas have withstood extreme conditions such as harsh weather, vibrations and fast motion for years. These rail antennas have been the industry standard used by railway companies worldwide.

Over the years, Sinclair has supplied antennas and custom combining systems to many major railway operators worldwide. Our experience in railway communications includes designing special low profile VHF dipoles for London underground trains and customizing the Excaliber™ for the Egyptian railway. Similarly, Sinclair's UHF antennas have been used by Irish railways since 1997.

INNOVATIVE SOLUTIONS

With a broad spectrum of high quality communication solutions, Sinclair keeps you connected when you are on the move.

Aviation Solutions

Sinclair has been designing and manufacturing aviation antennas since its inception, when our engineers designed antennas for fighter jets and satellites. Today we continue to deliver superior quality col-linear, rugged dipole and durable base station antennas as well as combining and multicoupling solutions suitable for a variety of aviation applications. Sinclair's aviation grade antennas are used by major airports, helicopter operations, civil air patrol and the military.

Marine Solutions

Sinclair's ST321 and ST321R Excaliber™ antennas have been used by the Canadian Navy and Coast Guard for over 15 years. Private cruise companies in Western Canada have also used these antennas for over 50 years. We routinely customize several of our popular transport and base station antennas for marine applications. Moreover with our extensive custom designing experience we can also design state of the art combining systems suitable for marine applications.

SINCLAIR
Superior then, Superior now.



Communication Antennas For Transportation Applications

Antennas

Excelsior™ Antennas

Ideal for automotive, public safety, heavy transport and railway applications, the Excelsior™ mobile whip antennas are known for their superior components and rugged construction. All Excelsior™ whips are made of durable rust resistant stainless steel, with longer whips tapered to minimize impact damage. The Excelsior™ mobile whip series features 132 different models offering narrowband, wideband models as well as no ground plane versions. These versatile antennas cover a frequency range of 40-970 MHz and offer gain from 0 to 6 dBd.



Excelsior™ Series

StealthWave™ Covert Antennas

Building upon its experience in developing covert antennas, Sinclair has released the innovative StealthWave™ concealed antenna. This disguised antenna is universally mountable and provides excellent coverage for covert operations of any kind. A fine-tuning adjustment permits performance optimization during installation thus eliminating the need to cut cables.

The StealthWave™ has been successfully road tested and found to perform as well as any VHF ½ wavelength fender mounted antenna. Applications include undercover law enforcement operations, private covert operations, military operations, non-covert commercial transportation systems, etc. Available in VHF, UHF and 800 MHz ranges.



StealthWave™ Series

Omni Directional Antennas

The SM503 and SM500 Omni directional antennas are rugged and compact antennas offering reliable coverage in a wide range of voice and data applications. Typical applications include heavy transport, public safety and emergency services.

The SM503 is used extensively for advanced train control systems, heavy transport applications and public safety and is available in 806-1800 MHz.

The SM500 is designed to provide reliable communication for rail and heavy transport applications. This antenna is ideal for rail, public safety, rooftop mounting and in-building applications.



SM500

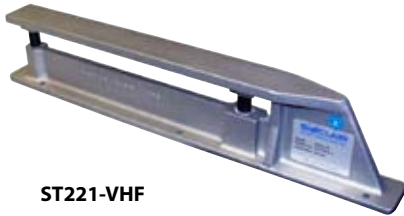
Multifunctional Transport Antennas

Sinclair's new SM300 and SM600 series multifunctional antennas are specifically designed to address the need for compact, low profile broadband antennas that are truly universal.

The SM300 covers 350-2500 MHz and the SM600 covers 746-2500 MHz. These antennas offer the ultimate coverage flexibility when used with our new cross-band coupler expansion kits. These kits enable the use of one antenna to operate several discrete radio systems.



SM600



ST221-VHF



ST50404



ST331

Excaliber™ Antennas

The Excaliber™ line is known for its classic design and legendary performance. These antennas have been recognized as the industry standard in North America and other regions for rail and heavy transport applications. The Excaliber ST121R, ST221 and ST321 feature low-profile, cast aluminum designs to achieve maximum durability and performance. The ST421R series meets the GSM-R European Rail Standard for Radio Communication in the 870-960 MHz range. This low profile antenna is enclosed in a rugged radome only 53 mm in height, using minimum mounting space and maximum head room clearance. This versatile series can also cover 764-806 and 806-870 MHz ranges.

The heavy duty 380-400 MHz train antenna, ST331 was especially designed to withstand severe climate, vibrations and shock conditions. Our end of train antenna, ST50404 is designed for wireless telemetry applications that enable the train operator to track critical information for safe operation of the train. This rugged omni directional antenna covers the 452-458 MHz railway band.



ST421R

Aviation Band Collinear Antennas

Sinclair's rugged omni directional antennas are ideal for airport applications due to their strong construction, superior lightning protection and ability to withstand severe weather conditions. SC229 series omni collinears feature 6 dBd gain and 138-225 MHz range coverage.

SC6172D, SC6175D and SC6185 series wideband collinears feature 1 to 3 dBd gain, dual or single feed and offers 118-137 and 225-400 MHz full range coverage. The SG208 is a VHF ground plane omni antenna, which covers the full 225-400 MHz range with unity gain. SD219-SWBSNF (SRL219) is a rugged Military grade wideband unity gain antenna, covering the full frequency range of 225-400 MHz. This antenna is also integrated with side mount support bar.

Marine Grade Collinears

Sinclair's SC329-H series broadband collinear, omni directional antennas feature a fiberglass radome and offer 6 dBd gain in 20 MHz band splits ranging from 380-480 MHz. The SC323 series antennas cover 311-512 MHz range in 20 MHz band splits offering 3 dBd gain. These antennas can be customized and ruggedized to meet marine requirements. Please contact our customer service department to find out how these antennas can best meet your requirements.

Base Station Antennas

Sinclair's SD series dipole antennas feature a wide variety of coverage options and gains. Their rugged construction makes them ideal for aviation and marine applications. In addition, Sinclair offers a wide variety of base station antennas that can be used for supporting transportation systems. Please contact our customer service department to find out how our base station products can fit your needs.



SC6175D



SD212

SINCLAIR[®]
Superior then, Superior now.



RELIABILITY
SECURITY
CUSTOMIZATION
COVERAGE

Sinclair provides antennas, filters, combining systems, and radio coverage solutions for RF telecommunications networks. Designed to function in extreme weather conditions, Sinclair's products enjoy a reputation for high performance, reliability, durability and value. We have been proudly serving our markets with new innovative products since 1951.

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