SINCLAIR
Superior then, Superior now.

Still Standing.

www.sinctech.com

ANTENNAS
FILTERS
DUPLEXERS
MULTICOUPLERS
COMBINERS
SYSTEMS

58 Years of Experience and Innovation

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.

SINCLAIR®
Superior then, Superior now.

Who We Are. What We Do.

ABOUT SINCLAIR

At Sinclair we believe that exceeding our customers' expectations requires that we play a leadership role in our industry. To that end, Sinclair is committed to a strong R&D Program, development of Industry Standards, and employing an experienced and responsive team dedicated to deliver innovative and quality products.

Sinclair provides antennas, filters, combining systems, and radio coverage solutions for RF telecommunications networks. Designed to function in extreme weather conditions, Sinclair's innovative products enjoy a reputation for high performance, reliability, durability and value.
We have been serving our markets with new products for over 57 years.

Sinclair Technologies 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 focuses primarily on the VHF, UHF and 700-1000 MHz frequency bands, designing 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. Sinclair customers have access to an exceptionally broad and seamless product portfolio.

2. Industry Leading Performance at Value-Driven Prices Sinclair products are designed for mission critical applications, built to deliver industry-leading performance under the most extreme environmental conditions, year after year. We offer customers the best value in electrical performance, ruggedness and long-term reliability.

3. Understanding and Satisfying the Specific Needs of Our Customers Sinclair takes pride in its ability to communicate directly with major OEMs and carriers. Our Systems Engineers design custom combining and multicoupling solutions for both base station and mobile applications. When necessary, they will design new variants of standard products to meet specialized requirements.

We begin every relationship by taking the time to understand the customer's business goals and technical requirements. By listening from the outset, Sinclair is able to deliver solutions that meet current challenges and anticipate future needs.

4. Excellent Service to all Customers At Sinclair, we support our customers through a broad network of direct sales staff, manufacturers' representatives and leading distributors and dealers. A fundamental attribute throughout the company is a keen sense of urgency and a commitment to execute.

When a custom system is designed by Sinclair, extensive customer support is provided, ensuring the job gets done right the first time.

A History of Excellence

These cornerstones were inspired by the company's founder, George Sinclair, a pioneer in the development of antennas and filters for military applications. 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 and quality.

Leading with R&D

Sinclair maintains product design teams in the USA and Canada. We are at the leading edge of development in rugged, low-PIM (Passive Inter-Modulation) antennas and high-performance, low- profile filter system architectures for public safety and private wireless networking.

Sinclair is a Founding Signatory to the TETRA Memorandum of Understanding.

Leading with Quality

Sinclair has been registered to ISO 9001 since January 1997 and to ISO 9001-2000 since April 2002.

Custom Solutions TO DEMANDING TECHNICAL PROBLEMS.

Sinclair operates sales, engineering and manufacturing facilities in North America and Europe and has a global network of distribution partners.

Sinclair remains committed to staying on the forefront of innovation by tailoring solutions that meet our customers' specific requirements.

Custom Products

At a time when many companies are moving away from customized work, Sinclair remains committed to meeting the specific needs of our customers. No matter how demanding the challenge, Sinclair System Engineers can design a custom RF solution to meet your needs.

We have an extensive library of Special Assembly products including specialized variants of standard products as well as unique products designed for highly specialized applications. We can design derivative products or completely new product platforms to satisfy your specific requirements.

Sinclair Systems

Sinclair provides custom system design services to meet even the most demanding requirements. With tower space at a premium and frequency congestion on the increase, many communications projects have turned into complex systems needing advanced combining or multicoupling, high levels of isolation or sophisticated interference protection. For systems that involve combining and/or multicoupling, we analyze the frequencies for potential intermod interference, then examine allowable antenna spacing, radio types and physical space limitations. We then provide a design specifically tailored to the customer's requirement. For systems experiencing frequency interference problems, we can design practical and cost effective solutions to eliminate the interference.

Our solutions employ components from Sinclair's extensive portfolio of rugged and reliable products. If a component required for proper system performance is not part of Sinclair's product portfolio, we will select the appropriate item from a qualified third party vendor.

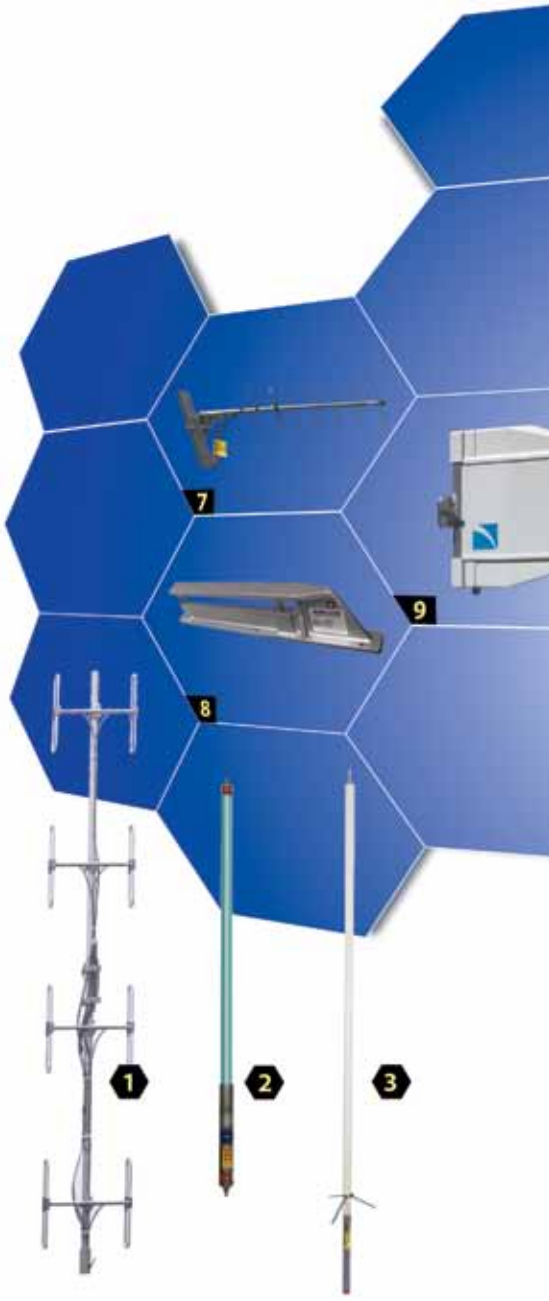
Each customized system is documented under a unique Sinclair model number. Customers are able to re-order the same system or have the system modified if requirements should change. All performance specifications are repeatable and all systems are backed by the full Sinclair warranty.

SINCLAIR®
Superior then, Superior now.

Products and Systems.

COMMITMENT TO PRODUCT DEVELOPMENT

Sinclair Technologies is recognized globally as an industry leader in the design and manufacture of high-quality base station antennas, filters, receiver multicouplers, transmitter combiners, and customized RF base station systems constructed from these elements.



1 Low PIM Dipole Antennas
Base Station VHF and UHF low PIM antennas ideally suited to multicoupled systems. Available in single, two, four or eight-bay configurations with gain values ranging from 2–11.5 dBd.

2 High Performance Omnidirectional Antennas
These antennas provide maximum coverage for TETRA, APCO P25, trunked radio, SMR and Paging systems and have gain values ranging from 2.5 –10.5 dBd.

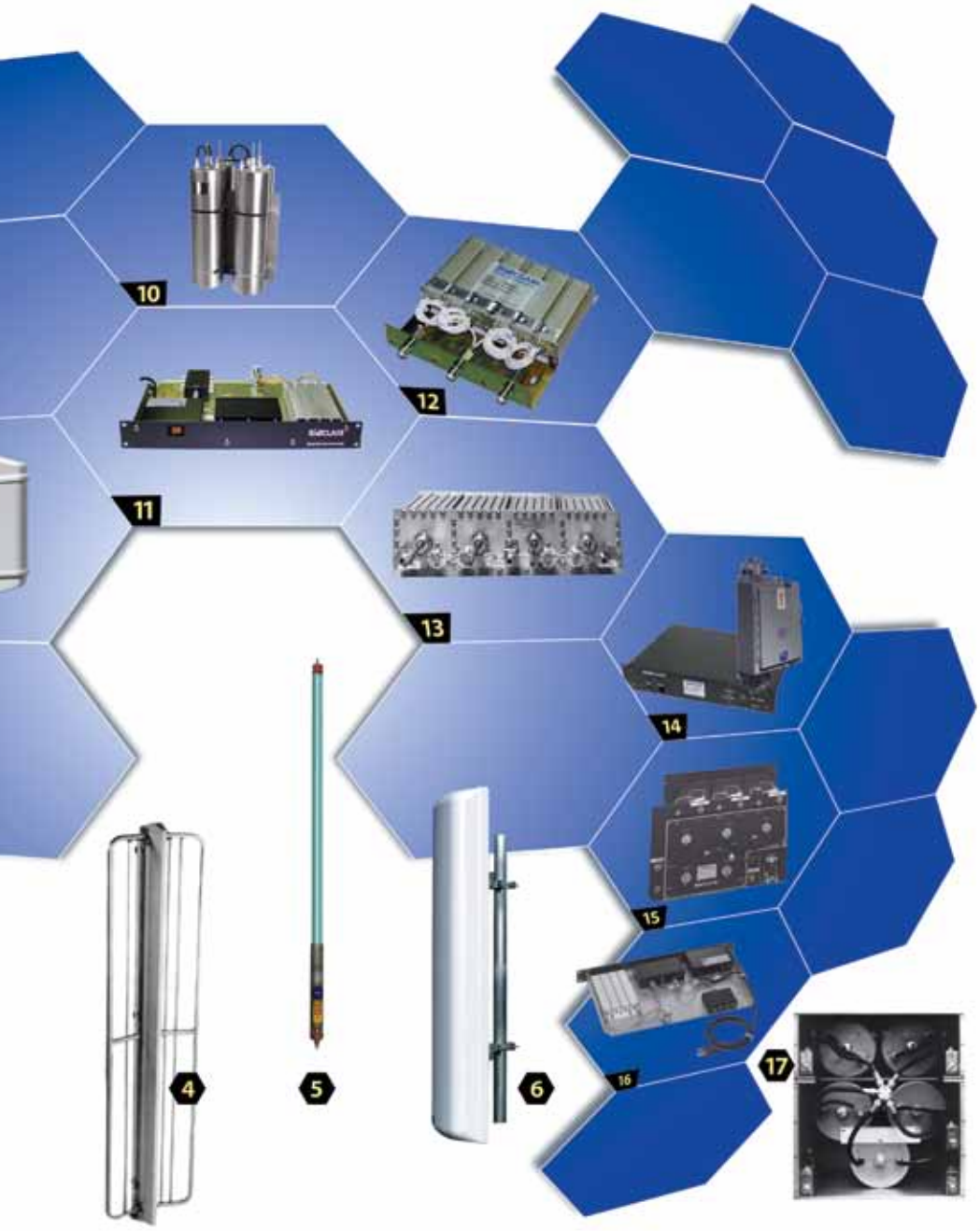
3 Fiberglass Low PIM Collinear Antennas
These easy-to-install antennas are designed to withstand severe environmental conditions and operate in the VHF, TETRA, UHF and 700 – 1000 MHz frequency range.

4 Enclosed Dipole Array Antennas
This versatile series of antennas is well suited to cellular and public safety applications where specific coverage patterns and highly dependable service are required. The adjustable reflector models allow for various horizontal beamwidths.

5 Cellular Antennas
This versatile series of antennas is well suited to applications where omni coverage pattern and high gain are required in the 806 – 960 MHz frequency range.

6 TETRA /APCO P-25 Panel Antennas
Designed for high performance in a lightweight, durable package, these dual polarized antennas are ideal for TETRA base station applications in the 380 – 470 MHz range.

7 Yagi Antennas
Sinclair offers a wide range of reliable and durable base station directional yagi antennas that operate in various frequency ranges from low band VHF up to 1GHz. Anodized and alodine coated models are available.



8 Excaliber™ Mobile Antennas
Low profile, cast aluminum or radome-enclosed VHF, UHF and 800MHz-900MHz band antennas designed for emergency vehicles, buses, trucks, trains and materials handling equipment. The VHF and UHF excaliber have become a North American standard for railroad locomotive service in the 38-512MHz frequency range.

9 Log Periodic/Data Antennas
Designed for use in data systems, these rugged but lightweight antennas operate in the 800 – 1000 MHz frequency range.

10 Expandable Multicouplers
Sinclair's two key architectures, Pass-Reject and Pass-Thru , provide the industry's broadest range of expandable multicoupling solutions for 132 – 512 MHz.

11 Combining and Multicoupling
We develop, assemble and test custom systems using our extensive portfolio of VHF, UHF and 700 – 1000 MHz filter components including state of the art combiners, cross-coupled filters, low noise receiver multicouplers and high selectivity combline filters.

12 Mobile Duplexers
Compact, lightweight and housed in a durable aluminum extrusion, these units are available in frequency ranges from 138 – 960 MHz.

13 Base Station Duplexers
Sinclair's Q-Circuit reject and band pass designs, coupled with our Res-Lok modular construction, result in a series of extremely versatile duplexers offering exceptional performance in frequency ranges from 66 – 960 MHz.

14 Tower Top Amplifiers
Designed to enhance receive system sensitivity by compensating for losses encountered in long feed cable runs. These units are available in the 406 –512 and 806 – 960 MHz frequency ranges.

15 Trunking Transmitter Combiners
Highly versatile units available in expandable 5 and 10 channel models, as well as a fully expanded 20-channel version, for the 406 – 512 and 851 – 869 MHz frequency ranges.

16 Receiver Multicouplers
Designed to conserve valuable tower space and lower system maintenance costs by allowing for 2 to 32 channels to be connected to a single antenna line. Units are available with various power supplies and preselectors that operate in frequency ranges from 138 – 960 MHz.

17 Cavity-Ferrite Transmitter Combiners
Sinclair TJ and TN series of cavity-ferrite combiners are available in 2 to 5 channel configuration for use in systems from 132 – 960 MHz.

SINCLAIR®
Superior then, Superior now.

Urban Transit Relies on Sinclair

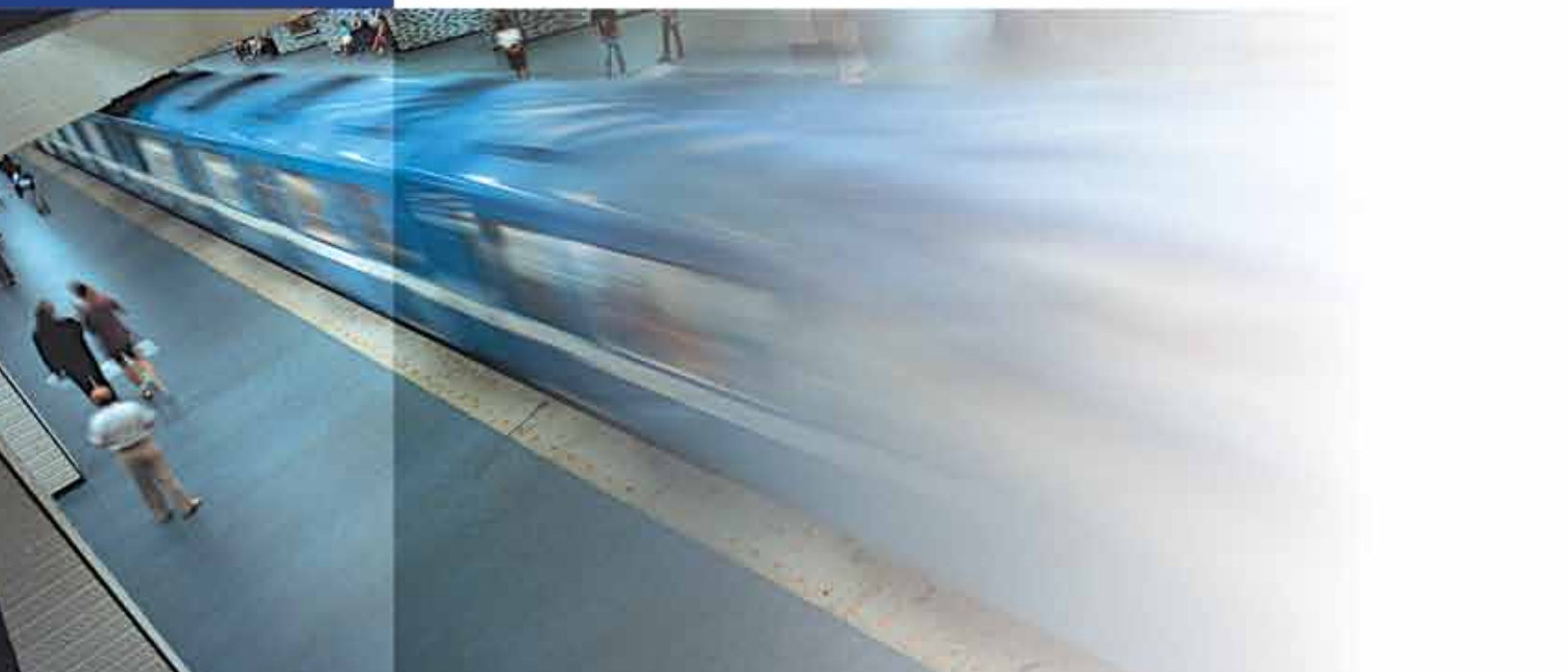
The largest urban transit agency in the United States employs more than 45,000 people and operates over 468 subway stations. One of the most extensive and complex public transportation systems in the world, it provides 24-hour-a-day bus and subway service. With more buses than any other public agency in North America, and the largest subway car fleet in the world, this urban transit system is used by more than six million people each day.

This transit agency has been a Sinclair customer since the early 1970s when GE first installed the mission-critical radio system that is still in operation today, including a custom combiner that was subcontracted to Sinclair. Today the transit agency has approximately 110 Sinclair custom CTR2-24463 combiners installed in base stations that facilitate communications for the city's entire subway system and transit police.

Each base station uses four different frequencies: two for the transit police, and another two for communication among trains, dispatchers, mechanics, conductors, system supervisors, and other system employees. Sinclair's CTR2-24463 combines the transmit and receive frequencies onto one antenna or leaky radiating cable, depending on the location within the system. While it is a physically compact VHF transmitter/receiver combining system, the CTR2-24463 combiners are also known for their high isolation and low insertion loss.

A 29-year veteran superintendent for the city's subway radio group clearly recalls when the first Sinclair antenna was installed. According to this superintendent, even 30 years later, Sinclair continues to deliver reliable products and service. "Sinclair Technologies not only delivers economies of scale by combining two frequencies into a single antenna, but we also benefit from lower wind loading, and transmission noise and carrier filtering to minimize receiver desensitization."

Today, approximately 5,000 employees of the transit agency rely on Sinclair's CTR2-24463 series combiner for 24x7 communication, and will continue to do so in the foreseeable future.



Motorola and Sinclair Team to Deliver Voice Radio System for Niagara Regional Police Service


Photo Credit: Motorola, Inc.

Motorola, Inc. is a global leader in providing integrated communications solutions. Motorola Canada has several hundred employees and offices in major urban centers across the country. Four design centers specialize in developing hardware and software products for Motorola's worldwide markets.

Motorola has been a Sinclair Technologies' customer for more than 40 years and the two companies have worked together on more than 100 projects, primarily in the public safety arena. Motorola designs and provides the communications systems and equipment, and Sinclair provides the antennas, filters and related components.

Customers have included regional police departments, emergency health services and Corrections Canada.

Sinclair Technologies and Motorola also worked together on a voice radio system that Motorola designed and is implementing for the Niagara Regional Police. When the Niagara Regional Police wanted to replace their voice radio system with one that featured more advanced technology, including digital encryption, they turned to Motorola. Motorola's engineering department designed the 21-site voice radio system, which included specifications for multicoupler systems that enable up to eight frequencies to work together on one antenna. Of the system's 21 antenna sites, 14 were designed to receive only signals, while the remaining seven were designed to receive and transmit radio signals. Motorola turned to Sinclair to build the custom systems, and in less than eight weeks, Sinclair delivered. Sinclair's standard RM-21204N bipolar receiver multicouplers were used in 18 of the custom systems. These multicouplers allow between 1 and 12 receivers to be connected to a single antenna line, conserving valuable tower space and reducing system maintenance costs.

Three sites use Sinclair's 'C' Series combining/multicoupling systems, which have built-in redundancy for high reliability.

According to the Motorola project manager, Sinclair's combining/multicoupling systems minimize interference across the network.

He also explained that Motorola continues to appreciate Sinclair's "high-quality products, and skilled engineering and design services."

Sinclair's antennas will allow an estimated 600 mobile radio users to communicate through five dispatch consoles across the Niagara Region, which covers a 900 square mile area.

SATISFIED CUSTOMERS

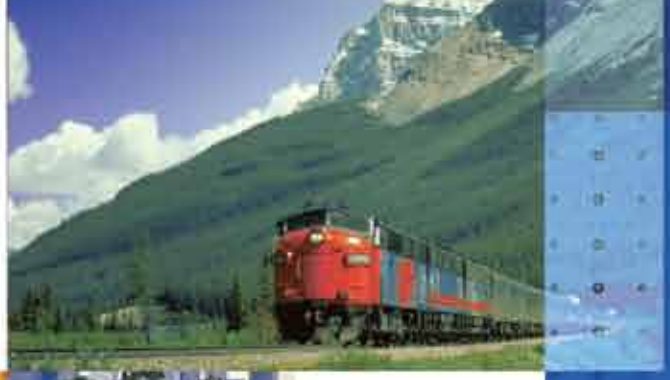
The project manager also explained that Motorola continues to appreciate Sinclair's "high-quality products, and skilled engineering and design services."

MOTOROLA

SINCLAIR
Superior then, Superior now.

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 serving our markets with new innovative products since 1951.

Distributed in the United States by:

Tessco Technologies
Tel: (800) 508-5444
www.tessco.com

Primus Electronics Corp
Tel: (800) 435-1636
www.primuselectronics.com

Talley Communications
Tel: (800) 949-7099
www.talleycom.com

Motorola U.S.A.
Tel: (800) 422-4210 x 6883
www.motorola.com

Distributed in Canada by:

Mobile Trends
Tel: (800) 665-2955
www.mobiletrends.ca

Omni Provincial Electronics
Tel: (877) 291-9633
www.omnipro.ca

Production électronique inc.
Tel: (877) 359-0523
www.productionelectronique.com

Waverunner Communications
Tel: (888) 561-1113
www.waverun.net

Sinclair Technologies
www.sinctech.com

U.S.A.
Tel: 1(800) 263-3275
Fax: 1(716) 874-4007

Canada
Tel: 1(800) 263-3275
Fax: 1(800) 668-7416

Europe, Middle East and Africa
Tel: 44(0)1223 42 03 03
Fax: 44(0)1223 42 06 06

Asia
Tel: 1(905) 727-0165
Fax: 1(905) 841-6255

Caribbean and Latin America
Tel: 1(905) 726-7676
Fax: 1(905) 841-6255